EMORY | medicine
WINTER 2007

A home where the future lies

A new building and a new curriculum emerge to become a national model for training physicians

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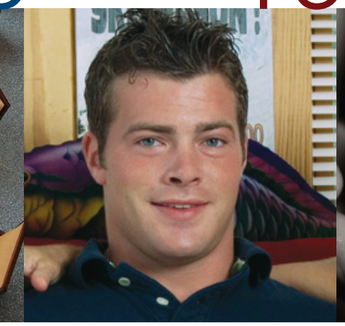
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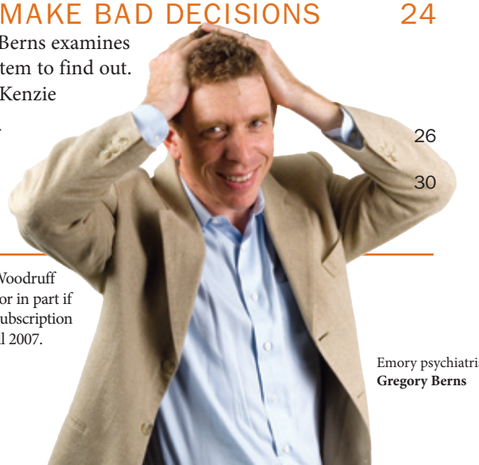

Emory psychiatrist
Gregory Berns

Dean's Message

Wow! We finally did it! Nearly 100 years after Atlanta Medical College became part of Emory, the School of Medicine has a permanent home for students, faculty, and alumni. I love everything about our new building. It is a beautiful and inviting place where the past and the future reside together in traditional and wi-fi style. It is a visible sign—locally and nationally—that we have never been more committed to medical education nor more determined to be a model for training the very best physicians.

The curriculum emphasizes active learning to create physicians who embrace healing and discovery in new and different ways to address the complex issues surrounding patients, families, and communities.

The building is an architectural gem. A new central wing connects the anatomy and physiology buildings, which first opened in 1917. Almost four times the size of the historic buildings, the enlarged complex allows us to grow our student body and make our newly minted curriculum come to life.

Several years in the making, the curriculum emphasizes active learning to create physicians who embrace healing and discovery in new and different ways to address the complex issues surrounding patients, families, and communities. Instead of focusing on large classroom lectures, the new curriculum places greater emphasis on small-group learning and interaction between students and their faculty mentors who grow and learn together during all four years of medical school. Students learn the fundamentals of science within clinical settings and are immersed in clinical experiences from the very beginning. They also benefit from experiential learning through high-tech simulation labs, realistic patient exam rooms, a dissection facility equipped with computers for instant access to information and imaging, and much more.

Given the rigors of medical education, we hope our students will feel at home in the new building, which is open to them 24/7. As they study late into the night, they just might hear the voices of students past who once serenaded the entering class from the steps of the physiology building. The time has come to raise our voices again, as we celebrate and define the future of medicine.

Sincerely,

Thomas J. Lawley, MD
Dean

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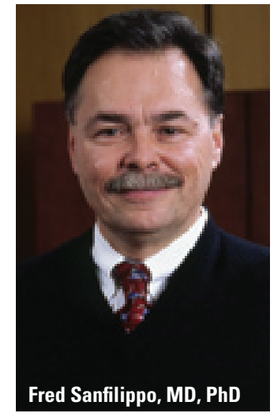
New leadership in the health sciences



Fred Sanfilippo, MD, PhD

Fred Sanfilippo, MD, PhD, took the helm of the health sciences at Emory on October 1 as executive vice president for health affairs, CEO of the Woodruff Health Sciences Center, and chairman of Emory Healthcare. He succeeds Michael Johns, who became university chancellor this fall.

Sanfilippo comes to Emory from Ohio State University, where he was senior vice president and executive dean for health sciences and CEO of the medical center. He also served as dean of the College of Medicine and Public Health from 2000 to 2006. A specialist in transplant immunology, he began his medical career in 1979 at Duke, where he taught pathology, immunology, and experimental surgery. In 1993, he joined Johns Hopkins University School of Medicine, serving as Baxley Professor of Pathology, pathologist-in-chief of Johns Hopkins Hospital, and chair of pathology in the medical school.

Last year, Sanfilippo was a keynote speaker at Emory's predictive health symposium. He helped launch a similar program at Ohio State.

"Fred Sanfilippo will be a driving force as he continues the momentum of the health sciences at Emory," says Johns. "In coming to Emory and the Woodruff Health Sciences Center, he is joining the academic center with the greatest potential in the nation."

What about Grady?

What will happen to Grady Hospital? That question weighs heavily on the minds of Emory and Morehouse medical faculty, students, residents, alumni, and a host of Atlanta community leaders, patients, and citizens concerned about Grady's future.

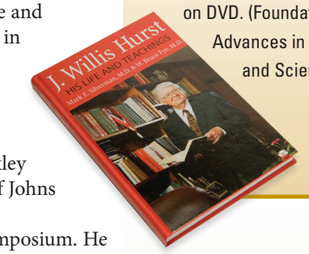
The hospital is expected to lose $55 million in 2007, a shortfall that could force Grady to close its doors before the end of the year. As of early November, the Grady Health System owed a cumulative total of more than $60 million to Emory and Morehouse for physician services.

Leaders from Emory, Morehouse, and the Atlanta community are working hard to keep that from happening. Supporters have stressed Grady's importance as a Level I trauma center, a health care provider for low-income patients, and a teaching hospital. "We want to help find the way for Grady to survive and flourish," says Emory medical dean Thomas Lawley.

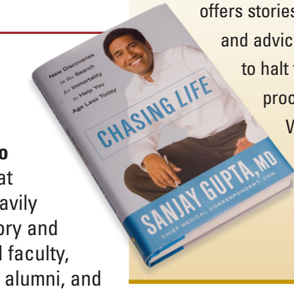
Efforts to put Grady on firm financial footing are unfolding daily. For news coverage and updates from Emory, visit www.whsc.emory.edu.

BOOKSHELF

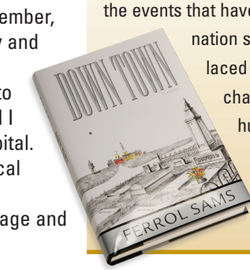
Physicians **Mark Silverman** and **Bruce Fye** collaborated on *J. Willis Hurst: His Life and Teachings*. In addition to the life story of the famed Emory cardiologist and teacher, they include selected essays by and about Hurst and a one-hour interview on DVD. (Foundation for Advances in Medicine and Science, 2007)



In *Chasing Life*, **Sanjay Gupta**, Emory neurosurgeon and CNN medical correspondent, offers stories, research, and advice on how to halt the aging process. (Warner Wellness, 2007)



Down Town, a novel by **Ferrol Sams, 45M,** begins after the Civil War. The book's characters provide a new perspective on the events that have shaped the nation since 1865, laced with Sams' characteristic humor. (Mercer University Press, 2007)



In Brief

Top dollars in scientific discovery

Researchers working on new vaccines and therapies for influenza and AIDS, innovative strategies for treating type 1 diabetes, molecular triggers of head and neck cancer, genetic variations in schizophrenia, and better ways to diagnose and treat Alzheimer's disease are among the Emory scientists who last year earned a record $383.9 million in research funding. That's more than any other university in Georgia.

Photo courtesy of CDC

Researchers working on new flu and AIDS vaccines are among the Emory scientists who last year earned the most research funding of any Georgia university.

Of that total, researchers in the Woodruff Health Sciences Center—including those in the School of Medicine—received nearly $358.7 million, or more than 93% of the university total. Additionally, 72% of the university's annual awards came from federal funding sources. Funding from the NIH made up approximately 62% of annual awards to Emory and about 86% of total federal funding.

"In an era in which funding from the NIH has been essentially flat each year, or has even decreased relative to inflation, this is an extraordinary achievement for our investigators," says Emory President James Wagner.

In the School of Medicine alone, NIH funding increased by 9% and exceeded $200 million in grants and contracts. The school ranked 18th in 2007 among all medical schools in the country in total NIH research grants awarded. In 1996, the school ranked 31st with $55 million. Since then, the medical school has grown in NIH funding at the second-fastest rate in the nation.

> "In an era in which funding from the NIH has been essentially flat each year, or has even decreased relative to inflation, this is an extraordinary achievement for our investigators."—Emory President James Wagner

The number and size of NIH grants also have increased substantially. In 1996, five researchers received grants of $1 million or more totaling $7.1 million. Last year, 65 medical school researchers received comparable grants totaling $162.8 million. This growth reflects the school's strategic effort to secure a larger share of NIH program grants involving multiple investigators.

One example is a $32.8 million contract to establish a National Center of Excellence for Influenza Research and Surveillance. The contract was one of six awarded last year by the National Institute of Allergy and Infectious Diseases (NIAID).

The National Cancer Institute awarded a $12.5 million Specialized Program of Research Excellence grant in head and neck cancer to Emory's Winship Cancer Institute. The first of its kind awarded in Georgia, the grant will help bring laboratory findings to the bedside more quickly.

Medical researchers at Yerkes received a $10 million grant from the National Institute on Aging to compare the aging changes that occur in humans with those in nonhuman primates. The researchers will examine changes related to normal aging as well as those related to mild cognitive impairment or Alzheimer's disease. The study is the first anywhere to examine chimpanzee cognition in correlation with other aspects of aging.

Other major awards last year include a $7 million grant from NIAID to the Emory HIV/AIDS Clinical Trial Unit, which was designated as a primary site nationally in both the AIDS Clinical Trials Group and the HIV Vaccine Trials Network. Both are among the nation's premier NIH-funded clinical trials networks for HIV treatment and vaccine prevention.

Not included in Emory's 2007 research total is a new $31 million NIH grant to establish the Atlanta Clinical and Translational Science Institute (ACTSI). Led by Emory along with Morehouse School of Medicine, Georgia Tech, and Children's Healthcare of Atlanta, the institute will speed up the translation of laboratory discoveries into patient care innovations and help reduce health disparities. ACTSI will engage both academic and community physicians, supported by one of the largest NIH grants in Georgia history.

Also this fall, Emory was awarded $25.5 million to participate in the National Children's Study to examine the effects of environmental and genetic factors on child and human health. Emory is one of 22 U.S. study centers that will follow 100,000 children from before birth to age 21. The study will seek information to prevent and treat major health problems, including autism, birth defects, heart disease, diabetes, and obesity. The School of Medicine, the Rollins School of Public Health, Morehouse School of Medicine, and Battelle Memorial Institute are collaborators in the Emory study site.

SUPERSIZED NUMBER CRUNCHING

Emory has supersized its computing ability, making it one of the world's 500 most powerful computing sites. Its high-performance computer cluster allows researchers to conduct simulations deemed too costly or impractical using conventional laboratory methods.

For Andrew Karellas of the Winship Cancer Institute, the new cluster provides unprecedented research opportunities in early detection of breast cancer through the use of new imaging techniques.

Karellas, a Georgia Cancer Coalition Distinguished Scholar, and radiologist Ioannis Sechopoulos are exploring the level of radiation that patients receive from two new types of breast imaging techniques—digital tomosynthesis and computed tomography. Although not yet commercially available, these techniques may some day provide more detailed views of breast tissue than previously available.

As Karellas notes, clinicians need accurate knowledge of how much radiation the breasts and other areas of the body receive during imaging procedures. This information helps determine the appropriate imaging procedure for each patient. With proper management of radiation dosage through accurate dosimetric information and good communication between medical physicists and physicians, the radiation dose and risks to patients can be minimized.

Previously, some of the simulations that Karellas wanted to undertake would have taken months and even years of computation time. Now those computations will take no more than a few days.

The new computer cluster also enables Andrew Jenkins to improve patient safety and treatment by creating more effective general anesthetics.

"We do not yet really understand how anesthetics work at the molecular level," says Jenkins. "The only way we can efficiently simulate the anesthetics' effect on the central nervous system is by using brute-force computational methods, which the new cluster allows us to do."

PREPARED FOR ANYTHING

There's no such thing as being overly prepared when it comes to a disaster. In light of concerns regarding a possible flu epidemic and the recent tragedy at Virginia Tech, Emory has formed an Office of Critical Event Preparedness and Response (CEPAR). Emergency medicine physician Alexander Isakov, who has extensive experience in emergency response and disaster medicine, heads that office.

CEPAR's formation evolved from a recommendation by Emory's Avian Influenza Task Force, which examined the ability of the university and Emory Healthcare to respond to pandemic flu or other events. However, CEPAR covers a much wider spectrum of possible crises, including natural disasters, catastrophic events, and public health emergencies. In addition to bridging various components of the university, the office works with the broader community to improve outcomes during and after an emergency. Notes Isakov, "The resulting collaboration and capacity to engage our local, state, and federal partners with one voice affords a new opportunity for Emory to have regional and global impact in this discipline."

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The School of Medicine Building is designed **to maximize students' medical education experience and encourage interaction with faculty, other students in the health sciences, and each other.**

A home where **the future lies**

A new building and a new curriculum emerge to become a national model for training physicians

By Sylvia Wrobel

The School of Medicine is finally home. It now resides in an elegant marble building—the first on campus to bear the school's actual name. As intended, it is filled with life, light, history, and the most high-tech amenities in medical education today.

In the eyes of Dean Thomas Lawley, the building is a beacon to students, with every space designed to maximize their medical school experience and encourage interaction with faculty, other students in the health sciences, and each other. The School of Medicine Building is a visible sign, he says, that Emory has never been more committed to medical education nor more determined to be a model for training physicians in 21st century medicine.

Medical school staff moved into the $58.3 million, 162,000-square-foot building this summer. Class of 2011 students will be the first to know only this building as home and the first to complete their medical education within the new curriculum the building was designed to accommodate. The building also made possible an immediate 15% increase in class size to help alleviate the U.S. physician shortage projected by decade's end.

"THE STUDENTS LOVE IT!," SAYS DEAN THOMAS LAWLEY OF THE SCHOOL OF MEDICINE BUILDING.

1. THREE AUDITORIUMS, SEATING 160 STUDENTS EACH, FEATURE HIGH-DEFINITION SCREENS AND COMPUTER MONITORS AT EACH PODIUM. ONE AUDITORIUM HAS THEATER-STYLE LIGHTING TO ENHANCE PRESENTATIONS WITH PATIENTS AND MEDICAL SCENARIOS, MAKING THEM MORE REALISTIC. **2. THE SCHOOL OF MEDICINE BUILDING PROVIDES** AMPLE SPACE FOR STUDENTS TO MINGLE AND STUDY, INCLUDING A GIANT SOFATORIUM.

"In the past, it was difficult to find enough small rooms the right size, and you had to bring your own equipment and hope it worked. But now it's fantastic!" **Jane Gilmore**, assistant professor of neurology

The new curriculum fully integrates basic and clinical sciences. From their first week on campus, students acquire clinical experience and skills through interaction with real and simulated patients and medical scenarios. Half of the large, one-way lectures have been replaced by more interactive small-group sessions and greater emphasis on becoming lifelong learners. Mentoring is paramount, built around a "society" system that fosters greater interaction between students and faculty. Each student is assigned to one of four societies and one of 16 society advisers who guides them through all four years of medical school.

Faculty members are eager to take advantage of the new building. "We have been working on the new curriculum for three years," says Bill Eley, who oversees medical education and student affairs. "Our first walks through the building inspired us to create classes that fit the new mode."

There is no building like this anywhere, says Lawley. Darrell Kirch, president of the Association of American Medical Colleges, agrees. A handful of medical schools with recently built facilities contain some of the same resources. That's no surprise, since Emory leaders and architects with SLAM Collaborative toured all of these schools and borrowed from the best, as Emory hopes other schools will now do. But, as Kirch notes, few if any schools have combined so many innovative elements in one beautiful, cohesive, user-friendly space. And none have gone to more lengths to enhance the lives of students.

Nomads no more

The formal entrance of the building is through an atrium lined with warm walnut paneling and tall elegant windows that overlook a courtyard facing Emory Hospital. The "grand space" can accommodate an entire medical class at one time. Marble stairs lead to a dais where the dean and others can address students gathered on the main floor and on an open, second-floor walkway that links the newly renovated anatomy and physiology buildings.

Classrooms are equally ample and well appointed, sized to fit the new curriculum, with space-age audio-visual and information technology. Three auditoriums, each seating 160, feature high-definition screens that students can see in full daylight. Computer monitors at each podium record the material the lecturer is showing on the screen, including his or her responses to questions in class, so that students can review the material later. In one auditorium, theater-style lighting enhances

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The students' new home is replete with **spaces for solo or group study, from cozy spots to spacious lounges, including one with a fireplace.**

The way students are educated and treated **will affect how they take care of patients and interact with other people throughout their lives.**

Not just for medical students

The School of Medicine Building is going to make a difference for everyone in medicine. Gordon Churchward (below), course director for microbiology and immunology, recalls how the Rollins Research Center, which opened in 1990, inspired student-faculty interactions in the basic sciences. He believes the same thing will happen in the School of Medicine Building, a communal space where students from multiple disciplines, residents, fellows, alumni, and other practicing physicians will meet and interact. "If the building doesn't do that," says Dean Thomas Lawley, "we will have failed."

Thanks to ample classrooms and simulation and anatomy facilities, the school expects to markedly expand opportunities for continuing medical education. The building will also be used by Emory clinicians to plan for emergencies for which providers must be ready at all times.

1. BILL ELEY IS ONE OF THE KEY ARCHITECTS OF THE NEW MEDICAL CURRICULUM, WHICH THE BUILDING WAS DESIGNED TO ACCOMMODATE. **2. SEMINAR AND SMALL-GROUP ROOMS** COMBINE THE OLD (EXPOSED BRICK WALLS IN THE RENOVATED ANATOMY AND PHYSIOLOGY BUILDINGS) AND THE NEW (THE LATEST TECHNOLOGY) TO FACILITATE LEARNING FOR SMALL GROUPS OF STUDENTS AND INTERACTION BETWEEN STUDENTS AND FACULTY. **3. STUDENT AMENITIES** INCLUDE A CAFÉ, COFFEE SHOP, KITCHEN SPACE WITH MICROWAVES AND REFRIGERATORS, AND PLENTY OF LOCKER SPACE.

presentations by patients, real or simulated, and dramatizations of medical scenarios.

Big is good but small is more exciting for faculty like Jane Gilmore, who runs the second-year pathophysiology neurology section. Four seminar rooms are designed for up to 40 students, with wireless networks linked to the hospital and other facilities. (These rooms also serve as meeting spaces for each of the class societies.) Eighteen small-group learning rooms, designed to facilitate both active learning and student/faculty/resident interaction, hold up to 20 students. "In the past," Gilmore says, "it was difficult to find enough small rooms the right size, and you had to bring your own equipment and hope it worked. But now it's fantastic!"

Two state-of-the-art computer/teaching labs are open 24/7, each with space for up to 75 students and a control room for IT support. Both labs are hard-wired, providing an extra layer of capacity in the first completely wireless building on campus.

> "When students are as good as ours, they learn a lot from each other." **Bill Eley**, executive associate dean for medical education and student affairs

For years, Emory medical students referred to themselves as "nomads," always in search of a decent place to study, often settling for empty classrooms or local coffee shops. Their new home is replete with spaces for solo or group study, from cozy spots to spacious lounges, including one with a fireplace.

1. THE SCHOOL OF MEDICINE BUILDING IS THE FIRST WIRELESS FACILITY ON CAMPUS, ENHANCING STUDENTS' ABILITY TO TAKE NOTES AND STUDY VIA THEIR LAPTOPS. **2. A NUMBER OF PATIENT SIMULATORS ALLOWS STUDENTS AND PHYSICIANS TO ACQUIRE AND HONE THEIR MEDICAL SKILLS** IN THE EMORY CENTER FOR EXPERIENTIAL LEARNING, DIRECTED BY DOUG ANDER (SECOND FROM LEFT).

"Please don't call this part of the building the simulation center. It doesn't do it justice." **Doug Ander,** director of the Emory Center for Experiential Learning

Other spaces encourage interaction with faculty and each other in informal settings. "When students are as good as ours, they learn a lot from each other," says Eley. The building has a café serving simple meals, a coffee shop, kitchen space with microwaves and two refrigerators, eating areas inside and out (one for students only), lots of comfortable chairs and couches (including a gigantic sofatorium), and chair-and table-groupings throughout.

A porch over the courtyard inevitably will attract sun worshippers every spring. And there are other amenities: showers, lockers, indoor parking for bikes, several LCD monitors that display an ever-changing array of announcements and campus activities, even a soundproof music practice room. The only thing missing, by design, is television.

While students come first, the building also includes headquarters for the dean, five executive associate deans, the chief information officer, and the offices of development and alumni relations, business and finance, and graduate medical education. Admissions space has more than doubled, a welcome change for prospective students who used to wait for interviews in a makeshift area in a hallway. The building and curriculum are having a positive impact on 2012 applications.

More than simulation

"Please don't call this part of the building the simulation center," says director Doug Ander, in reference to the new Emory Center for Experiential Learning (ExCEL). "It doesn't do it justice." Indeed, the building has an unprecedented number of simulators that allows students and physicians to acquire and hone technical skills. Here they learn basic suturing, resuscitation, intubation, IV placement, and how to deliver a baby. Patient mannequins respond to various therapeutic measures and mimic physiologic and anatomic parameters, including heart, lungs, and airway.

But the secret of being a great doctor, says Ander, is the ability to use everything you have learned—and some things you haven't—in real medical situations calling for speed, accuracy, teamwork, and sensitivity to patients and families. That is the overriding goal of ExCEL. Four simulation suites can be rearranged to create almost any hospital setting—one suite is fully equipped with operating room lights and medical gases—or almost any medical situation, even large-scale disasters.

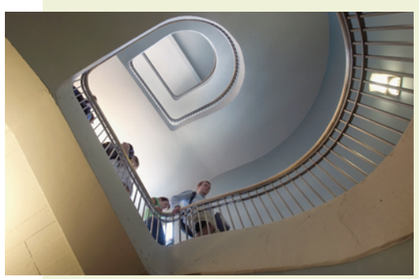
When the door opens, students are immersed in realistic medical experiences. A patient may be resting in intensive care when his heart suddenly stops, bringing the code team racing to the bedside. Resuscitation techniques learned in a calm setting now become part of a complex choreography as doctors, nurses, and other clinical colleagues learn to work together.

From their first week on campus, **students acquire clinical experience and skills through interaction with real and simulated patients and medical scenarios. Half of the large, one-way lectures have been replaced by interactive small-group sessions and an emphasis on becoming lifelong learners.**

Link to the past

The School of Medicine Building flows seamlessly among three buildings. The airy "grand space" of the new central wing unites mirror wings that retain the structure and soul of the original anatomy and physiology buildings. Constructed soon after the medical school was formed at Emory in 1915, these structures have been renovated and renamed in honor of the late Charles and Peggy Evans.

Founding fathers would recognize much in the architectural details of the new facility. The original red tile roofs and pink marble walls melding with new gray marble. Tall, elegant arched windows. Warm interior walls of exposed brick. The winding marble stairway, where new medical students entered the anatomy building on their first day of class almost a century ago, serenaded by upperclassmen on the second floor—a tradition the school plans to resume.



Teaching has always been the jewel of the medical school—and the first mission to be set aside when clinical care or research demanded more time. No more, proclaims this building. If the ghosts of early faculty members are walking the halls of the School of Medicine Building today, they surely must feel welcome. The medical school, they would say, has come home.

Feedback is critical. Faculty watch from behind one-way mirrors, while video cameras record the action to show students how they performed.

Emphasis on learning in a simulated environment continues in the 16 clinical exam rooms, arranged in pods of four. Here students take histories and conduct physical examinations under the watchful eye of Alan Otsuki and other faculty standing behind observation windows. The "patients" in these OSCEs (observed standardized clinical examinations) are actors specially trained to represent realistic symptoms and responses in scripts illustrating dozens of medical conditions. Video cameras provide good feedback and so do the patient actors: "You had great eye contact," one actor-patient told a student, "but too much cologne."

Learning more from the human body

Anatomy faculty were probably the first to truly understand the impact of the new building. They never left. As the Anatomy and Physiology buildings were being hollowed out, faculty, students, and cadavers moved between dissection laboratories set up, torn down, and set up again. "Even these temporary laboratories were a big improvement," says Kyle Petersen, the cell biology professor who directs the human anatomy course. The new dissection facilities, he says, are arguably the best anatomy space in any medical school.

Each of the 26 dissection tables is equipped with a computer for Internet access, magnetic resonance and other images, study guides, and lecture notes. Students note observations and questions on electronic whiteboards. Working in groups of six, first-year students use 22 tables. Allied health students use the other four tables, along with faculty and residents learning new techniques and continuing medical education participants. The expanded, improved body preparation area also provides space for the fresh tissue increasingly needed for faculty and continuing education studies.

Like the first patient encounter, the dissection laboratories mark a milestone in each student's journey into medicine. With help from the university chaplain's office, whose members spend time in the laboratory throughout the year, Emory's anatomy program works to make the experience a meaningful one, from the time students "meet" their first cadaver to their final service of thanksgiving and gratitude. The beauty and design of the new building add to that respect, says Petersen.

> "The building is everything we wanted and needed for our students, and it's going to make a huge difference for them, the faculty, and others. That's a tremendous accomplishment." **Jack Shulman**, senior adviser for curriculum development

A place for teaching

According to J. Willis Hurst, one of Emory's legendary teachers (and whose grandson is a first-year medical student), a good building, by itself, does not make good doctors. Teaching does. That, says Lawley, is what the School of Medicine Building is all about. "The true strength of the medical school is its faculty. They wanted this building, and they helped design it. I've never seen them more energized."

Perhaps no one wanted the building more than Jonas "Jack" Shulman, who directed medical education and student affairs for nearly two decades and remains the primary adviser on the curriculum and the building.

"The building is everything we wanted and needed for our students," says Shulman, "and it's going to make a huge difference for them, the faculty, and others. The way students are educated and treated will affect how they take care of patients and interact with other people throughout their lives. That's a tremendous accomplishment."

The Promise of Progesterone

For 40 years, neuroscientists have sought to develop an effective treatment for traumatic brain injury. Emory researchers may have found a successful treatment that's safe, inexpensive, and occurs naturally in the brain.

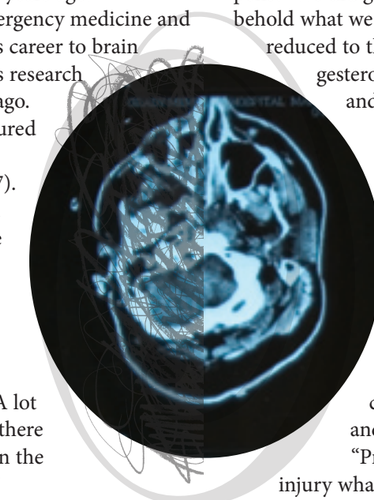
Marc Baskett has made remarkable progress following a car accident that injured his brain. His parents, Jeff and Johanna Baskett, enrolled Marc in a clinical trial to test the effectiveness of progesterone in treating traumatic brain injury.

By Robin Tricoles

Twenty-two-year-old Marc Baskett doesn't remember the catastrophic car accident that nearly claimed his life three years ago. Nor does the strapping former high school athlete remember being flown by helicopter to Grady Memorial Hospital. Baskett arrived at the hospital's trauma unit in critical condition. He had extensive injuries to his femur and ankle and blunt force trauma to his brain. Baskett's parents rushed to Grady shortly after learning of the accident, if only to say good-bye.

Fortunately for Baskett, a group of Emory physicians and researchers was in the midst of conducting ProTECT, a clinical trial to assess the promise of treating traumatic brain injury (TBI) with natural progesterone. With his parents' consent, Baskett was enrolled in the study. Thus began his extraordinary road to recovery, rooted in neuroscience research that began in Donald Stein's laboratory some 20 years ago.

Stein, Candler professor of emergency medicine and a neurobiologist, has dedicated his career to brain injury and recovery. He moved his research lab to Emory more than 10 years ago. Just recently, Stein's work was featured in a front-page story in *The Wall Street Journal* (September 26, 2007).



"This work started when I first began to see anecdotal, single case reports that after stroke or TBI, women tended to recover better than men," says Stein. "But when I began to look at this question more systematically, it was during the women's equality movement. A lot of people didn't want to hear that there might be brain differences between the sexes. It wasn't politically correct."

Stein tried to replicate others' clinical observations using brain-injured rats in his laboratory. "I first looked to see whether female rats with brain damage recovered better on learning and memory tasks than male rats with the same brain injury," he says. "The female rats did, but it depended on where they were in their estrus cycle at the time of the injury."

Like the menstrual cycle in women, the estrus cycle in many female mammals causes fluctuations in hormonal levels, including progesterone. "In the young adult female rat, this cycle is fairly easy to measure," Stein explains, "so we could precisely time the surgery to the phase of the estrus cycle.

"When the females were brain-injured at the time their progesterone level was high, their behavioral outcomes were much better than if the same injury occurred when their estrogen levels were high. Traumatic brain injuries tend to cause cerebral edema. But we noticed a lot less swelling of the brain when progesterone levels were high."

Stein subsequently gave progesterone to male rats to see if there were any benefits. He remembers his colleagues' reaction like yesterday.

"They thought, 'Are you nuts? You're going to give this female hormone to male rats and see what happens?' We did give it to males by injection, and lo and behold what we found was their brain swelling was reduced to the levels seen in the females. The progesterone virtually eliminated cerebral edema, and the animals performed better as well."

More than a sex hormone

Although widely considered a "sex steroid" because it was first detected in women, progesterone is a true neurosteroid since—unlike estrogen or testosterone—it is synthesized in the brain itself. Laboratory researchers in reproductive physiology have long known that progesterone is critical for normal development of neurons and helps protect brain tissue.

"Progesterone basically does in brain injury what it does during fetal development," says Stein. "It protects the fetus from all those slings and arrows of outrageous fortune that would cause inflammation, swelling, immune rejection, and fetal death if the progesterone wasn't there.

"Many people don't realize that men and women make progesterone in their brains and that men make progesterone in other tissue as well. Men clearly don't make as much of it as women do."

That may be one reason why females tend to recover better under certain conditions of brain injury. "Progesterone," notes Stein, "is a growth and development hormone, and when you have a brain injury, the process of repair is in many ways similar to the process of growth and development."

Paging Dr. Wright

Armed with years of data on progesterone's beneficial effects on TBI and recovery, Stein eventually partnered with emergency medicine physician David Wright. Having seen the protective effects of the hormone on brain-damaged animals, Wright wanted to explore progesterone's effects on TBI in emergency room patients. Like others, Wright thought Stein's research was fascinating. "I took a sabbatical and starting working in Don's lab," he says.

Wright eventually noticed that lab cultures of neurons did not grow or survive unless they contained progesterone. "We knew progesterone had a critical function in the brain," he says. "We just didn't know how it worked to provide neuroprotection."

Only since the mid-1960s have physicians and scientists recognized the validity of neuroplasticity—the brain's ability to recover structurally and functionally after an injury or from a disease. That may explain why TBI treatments have been so long in coming. Following a TBI, a sequence of events known as a neurotoxic cascade begins. The cascade involves a dramatic increase in the level of excitatory neurotransmitters that can damage and destroy nerve and support cells in the brain.

Normally, these chemicals enter the neurons in a controlled fashion, enabling nerve cells to communicate with one another. But after a brain injury, the nerve cells become hyperexcitable and die or become further injured by inflammatory and oxidizing factors that can cause a lot of swelling—even if those cells are not part of the original injury.

"The lesion may have begun as a small contusion, but it can expand significantly and involve a large portion of the brain," Wright explains. "If we could stop the neurotoxic cascade and the inflammation that occurs, we could probably preserve more function because the original injury probably accounts for 25% of the dysfunction, and the cascade the majority of the injury."

In the past, experimental treatments sought to block the excessive release of neurotransmitters and other inflammatory agents. However, this approach has not worked well in humans because the compounds that have been tried cause adverse changes in brain chemistry and morphology. The pharmaceutical industry has long tried to develop new synthetic molecules that can be controlled and patented and have very specific molecular effects. "Unless you happen to be very lucky and hit that one molecule that works," Stein says, "the treatment fails because a lot of these agents turn out to have very nasty side effects."

"Progesterone basically does in brain injury what it does during fetal development. It protects the fetus from all those slings and arrows of outrageous fortune that would cause inflammation, swelling, immune rejection, and fetal death if the progesterone wasn't there."—Donald Stein

"There have been so many failures," Wright adds. "The graveyard is full of neuroprotectants—as well as patients. That's why there's been so much buzz about the progesterone treatment. This could be the first successful TBI treatment in 40 years."

That's great news, given TBI's harmful effect on thinking, language, learning, emotions, behavior, sensation, and movement. TBI can also increase the risk of epilepsy, Alzheimer's disease, Parkinson's disease, and other brain disorders. In the United States, 5.3 million people live with disabilities resulting from TBI.

The CDC and brain injury associations estimate that TBI costs the nation $60 billion per year in lost productivity and medical care. In fact, head injuries are the No. 1 cause of death and morbidity in young adult males. Second to falls, motor vehicle accidents are the leading cause of TBI, as in Marc Baskett's case.

Thus Baskett became one of the 100 patients enrolled in ProTECT (Progesterone for Traumatic brain injury—Experimental Clinical Treatment)—the first clinical trial of its kind in the world. Funded by the National Institute of Neurological Disorders and Stroke, the study aimed to assess the promise, practicality, and safety of using progesterone to treat TBI.

"The graveyard is full of neuroprotectants—as well as patients. That's why there's been so much buzz about the progesterone treatment. This could be the first successful TBI treatment in 40 years."—David Wright

To qualify for the double-blind study, patients had to reach the hospital within 11 hours of their injury. Four out of every five patients enrolled received intravenous progesterone, and one of every five received placebo. Patients had an initial Glasgow Coma Scale score ranging from 4 to 12. A score of 4 to 8 indicates severe TBI or coma, whereas a score of 8 to 12 signals a moderate TBI. Baskett's score was, alarmingly, a 4.

So far, ProTECT has shown that giving progesterone to trauma patients shortly after brain injury appears to reduce their risk of death and degree of disability. "We found encouraging evidence that progesterone is safe in the setting of TBI, with no evidence of side effects or serious harmful events," says Wright. "We also found a significant improvement in the functional outcome and level of disability among patients who were enrolled with moderate brain injury."

What's more, progesterone is inexpensive, widely available, and has a long track record of safe use in humans in treating other diseases.

The road back

Baskett and his parents and doctors eventually learned he was one of the patients who received progesterone. Although Baskett's doctors credit his athleticism and youth with helping him recover from his injuries, they believe progesterone played a big role. Baskett spent seven weeks in the hospital. Physicians originally thought he would be hospitalized for a year.

Since the accident, Baskett has undergone several surgeries, mostly to his legs and feet. He lives on his own and has returned to work. He rarely notices that he suffered a near-fatal brain injury. Instead, he views the world differently. "I appreciate my parents more. And I see now that this is such a big world, with so many amazing things to offer."

Baskett hopes to travel to California and New York City and eventually enroll in college. He's considering a career as a personal trainer. He'd also like to spend time talking with seriously ill children, especially those who must spend time in hospitals.

"I want to tell them never to give up," he says. "I never stopped fighting. And I'm grateful to be alive."

To learn more about the ProTECT study, contact David Wright at david.wright@emory.edu. For information about Donald Stein's research, send an email to donald.stein@emory.edu.

Saga in the Making

By Valerie Gregg

Emory's alliance with a genetic powerhouse in Iceland shakes out the causes of restless legs syndrome and other diseases

Emory neurologist David Rye was about to leave for vacation when he received a call this past spring. "Remember those guys in Chicago that held you up with the sawed-off shotgun?" said Kari Stefansson, CEO and founder of deCODE genetics, on the other end of the phone. **"If you don't get your data over here by Tuesday, you're going to wish they had shot you."**

Rye cut short his vacation, locked himself in his office for four days, and put the finishing touches on the clinical data of Emory patients with restless legs syndrome (RLS). He then jetted to Iceland, headquarters for deCODE, and worked day and night with Stefansson to match the patients' clinical results with their genetic codes.

The result was discovery of a common gene variant responsible for RLS, published this year in the July 19 online and the August 16 print editions of the *New England Journal of Medicine*.

Although collaborating with someone often described as a modern-day Viking can sometimes be trying, the rewards for Emory scientists have been great. Heart disease, Alzheimer's disease, Parkinson's disease, and amyotrophic lateral sclerosis are all under the genetic microscope for deCODE and Emory researchers.

DAVID RYE

Emory is one of deCODE's most important sources of clinical expertise in neurology, says Allan Levey, chair of Emory's neurology department. While at the University of Chicago as MD/PhD students in the 1980s, both Rye and Levey trained with Stefansson and deCODE co-founder Jeffrey Gulcher. They went their separate ways for a while—Stefansson and Gulcher to Harvard and Levey and Rye to Emory—but stayed in close touch.

They reconnected in a formal way at Rye's home in 2002, when Emory and deCODE signed a formal strategic alliance. In 2003, Levey and other collaborators received a two-year grant of $500,000 from the Robert W. Woodruff Health Sciences Fund—a program that encourages innovative science among health sciences researchers—to assist in starting the Clinical Research in Neurology (CRIN) effort, a data repository of clinical and DNA samples from Emory patients. CRIN now holds nearly 7,000 samples.

The relationship now stretches across several disciplines and has proved fruitful for everyone. This past May, Emory cardiologists Arshed Quyyumi and Viola Vaccarino and Levey co-authored a study published in *Science* with deCODE collaborators, most notably Stefansson. They discovered a gene variant that is perhaps the most significant genetic risk factor for heart disease.

"We provided one-third of the data for this study," says Vaccarino, director of the epidemiology core of the Emory Genebank, a repository of blood samples from more than 3,000 Emory cardiac patients. "We have provided them access to genetically diverse population samples. In turn, deCODE has provided advanced DNA and biomarker testing of these samples at no cost, which has been a huge help to us."

Icelandic origins

Rye's *saga* (an Icelandic word meaning "what is said" or a "story, tale, or history") began in 1997 when he first traveled to Iceland to consider working on a narcolepsy study with deCODE, founded just the year before. The company's mission: to conduct population-wide genetic linkage studies to uncover genetic factors in common diseases.

"When I first saw the setup, I wasn't quite sure it would pan out, but I was intrigued and interested," he says. "The study was very small and very focused. Narcolepsy is not a disease that affects a lot of people.

INFORMATION GATHERED FROM BIRTH IN THE ICELANDIC POPULATION IS PART OF A WIDELY RESPECTED GENETIC DATABASE LEADING TO NEW TREATMENTS FOR DISEASE.

The study got us started and provided a proof of principle. In 1999, other researchers discovered the cause of narcolepsy, but we were all over it quickly and published a paper shortly thereafter."

The original concept behind deCODE was to shake disease-related genes out of family trees. "We look for a cluster of cousins with a certain disease, say restless legs syndrome, and then ask the family to participate," explains Rye. "That allows us to concentrate our efforts on pockets of the disorder where the transmission of an offending gene between generations could be easily tracked. We then match the genetic data to the phenotype—hair color, eye color, height, length of life, or whatever trait or disease we're interested in studying."

Iceland is an ideal place to study the intersection of genetics and disease. The country's fanatic zeal for genealogy—most people can trace their family trees back to the year 1,000 A.D.—and deCODE's concentration of the most powerful genetic fingerprinting equipment in the world have made it the epicenter for genetic study of disease. About 97% of the Icelandic population that has ever lived is now recorded in the national database, and the deCODE campus has grown to include a clinical research center and a biopharmaceutical research center. Translating new discoveries in human genetics into new drugs and diagnostic tools is deCODE's ultimate aim.

It took an act of the Icelandic Parliament to resolve ethical and privacy concerns regarding mapping the genome of the entire country, but deCODE was successful in the end.

"Icelanders can go online, type in their social security number, and within milliseconds, track their family tree back to the 9th century," says Rye. "They had to condense vast amounts of genealogic information into a database. Then came the process of genotyping individuals and matching gene variants in family groups to clusters of disease."

The uniformity of the Icelandic population, totaling only about 300,000, helps isolate and connect genes with clusters of disease. Indeed, phone books in Iceland list people by first names because so many people have the same last names. Emory and other American population samples add power to deCODE's Icelandic data.

ICELAND, HOME OF deCODE GENETICS

"Our U.S. subject samples confirm, validate, and in some instances add information to what is found in the Icelandic population," says Rye. "Essentially, we started capturing as much information as possible, including DNA from patients coming through neurology and cardiology. DeCODE has provided tremendous support with the logistics, just because they have a wealth of experience, having collected more than 140,000 blood samples. The integrity of the process is important to making sure the information is reliable and valid all the way through the process, both clinically and genetically."

DeCODE operates 24/7, crunching more genetic data than all the rest of the world combined, and has found genes for 15 disorders thus far. It has perfected the art of valid information transfer—rendering a clinical diagnosis, taking DNA samples, genetically processing the samples, and ultimately assimilating the data. "The information technology side is spectacular," says Rye. "DeCODE developed its own software from scratch in a high-throughput manner to generate the highest-quality information. That's how they have gotten to this point."

ICELAND IS AN IDEAL PLACE TO STUDY THE INTERSECTION OF GENETICS AND DISEASE. THE COUNTRY'S FANATIC ZEAL FOR GENEAOLOGY AND deCODE's CONCENTRATION OF THE MOST POWERFUL FINGER-PRINTING EQUIPMENT IN THE WORLD HAVE MADE IT THE EPICENTER FOR GENETIC STUDY OF DISEASE.

EMORY RESEARCHERS ARSHED QUYYUMI, VIOLA VACCARINO, AND ALLAN LEVEY COLLABORATED WITH deCODE ON A HEART DISEASE STUDY PUBLISHED IN *NATURE GENETICS*. THE RESULT WAS DISCOVERY OF A COMMON GENETIC VARIANT THAT DRAMATICALLY INCREASES THE RISK OF HEART ATTACK.

Too many clues on the train

Ironically, the usefulness of a thousand years of genealogy no longer matters as much in light of powerful new genomic technology. Most genetic research these days looks forward, not backward, and is less reliant on familial clustering. But because of deCODE, Iceland remains the center of the world for sheer capacity of genome processing. Academic and government scientists are just now starting to catch up in the game of genetic discovery. In turn, deCODE needs more diverse genetic data.

"There are too many clues on this train," says Rye, quoting the book *Murder on the Orient Express*. "They have all this wonderful clinical and genetic data and would benefit greatly from more statistical geneticists and genetic epidemiologists to mine the wealth of information on hand and to manipulate, interpret, and communicate the data to the world. They also need ever larger and more diverse genetic samples."

Because of both new technology and international data samples, results have been coming especially fast and furious in the past year. Emory most definitely is on board.

In January 2006, Quyyumi, director of the Emory Genebank, joined with Vaccarino and Levey in collaborating with deCODE on a study of heart disease published in *Nature Genetics*. A new method of analyzing huge amounts of genetic material yielded the more definitive results published most recently in *Science*. This new technology—genome-wide association on Illumina chips—allows scientists to probe for gene variants in more than 300,000 single nucleotides of the genome.

The result was discovery of a common genetic variant that dramatically increases the risk of heart attack. The variant, an SNP (a single-letter variant in the genome) on chromosome 9p21, was discovered through genome-wide SNP analysis in Iceland and replicated in three cohorts of European descent from Philadelphia, Atlanta, and Durham, North Carolina. The variant is estimated to account for approximately one in five heart attacks in people of European origin, and nearly one in three of early-onset cases, making it one of the most significant genetic risk factors found to date for heart attack. Of more than 17,000 patients and control subjects in the study, more than 20% of participants carry two copies of the variant, conferring a more than 60% increase in the risk for heart attack. Those carrying two copies of the variant are twice as likely as noncarriers to suffer a heart attack before age 50.

ARSHED QUYYUMI AND VIOLA VACCARINO

The Illumina chips at deCODE were also key to Rye's success in tracking down a gene contributing to at least 50% of all RLS cases. He developed the clinical diagnostic tools for RLS to use in the study. To verify RLS diagnoses, Rye made use of a tool that accurately measures the number of times a person's legs twitch during the night. This objective measurement backs up the more subjective clinical diagnoses determined by simply talking with patients. "We wanted our data to be as clean and informative as possible," says Rye.

Graduate student Amanda Freeman and research assistant Joseph "Max" Beck spent a month in a sleep lab that Rye set up at deCODE in the winter of 2003, working through the long, sunless winter days to validate an accelerometer, an instrument attached to the foot to measure the number of movements. "We had to validate the utility of the instrument and then use it to verify our clinical diagnoses," Rye says.

After a patient was diagnosed, nurses interviewed extended family members to trace familial records of RLS. In many cases, these family members were relieved and grateful to have someone recognize their problem and to realize they could receive treatment with medication. That in itself is gratifying to Rye. But finding the RLS gene?

"It is just starting to really sink in," Rye says. "I'm amazed. We've got a slam-dunk. I never imagined that this is how the story was going to end. Yet it is only one chapter of the saga. More questions will arise and even more work will be required to translate these findings into improved patient care."

To learn more about Rye's work with deCODE genetics on restless legs syndrome, view the podcast at www.whsc.emory.edu/multimedia.cfm.

Why do teens make such bad decisions?

By Martha Nolan McKenzie

Brain researchers are confirming what parents and auto-insurance adjusters have long known—**teenagers tend to make really bad decisions.** Whether they are experimenting with methamphetamine, engaging in unprotected sex, slipping behind the wheel while drunk, or picking up a knife to join in a fight, teens often seem bound and determined to test their own mortality.

Many fail the test. About 30,000 kids between ages 10 and 24 die each year from accidents, homicide, or suicide. The vast majority of these deaths are believed to be preventable. "The biggest killer of kids is bad decision-making," says Gregory Berns, a psychiatrist and biomedical engineer in the School of Medicine. "The next biggest killer of kids—cancer—is way down on the list. It's not even close."

Why are teens often so lousy at making decisions? Parents blame teens' lack of life experience. Scientists point the finger at an immature prefrontal cortex, the area of the brain involved in executive decision-making, judgment, organization, and planning. The prefrontal cortex does not fully mature until the mid-20s.

Berns believes a third culprit may share blame. He contends that teens suffer from a hyperactive reward system fueled by a deluge of dopamine. To test the theory, he is leading a study using functional magnetic resonance imaging (fMRI) to measure brain activity in the reward system of adolescents ages 12 to 17. Funded by the NIH, the four-year study will involve up to 200 participants. More than 50 teens have enrolled thus far.

"Greg is absolutely right about the hyperactive reward system in adolescence," says child psychology researcher Jay Giedd of the National Institute of Mental Health. "The implications of understanding adolescent decision-making are far-reaching, from driving safety to substance abuse to unplanned pregnancy."

Dopamine, the leading role in Berns' drama, is the pleasure chemical of the brain. Scans have shown that dopamine floods the brain during pleasurable activities, such as eating, having sex, or taking recreational drugs. More recently, scientists have learned dopamine is also released when we encounter something new, programming us to crave novelty and new experiences.

At no time in our lives do we have more dopamine in our brains than during our teens. "It's no coincidence that dopamine levels peak at a time in human development that coincides with a peak in novelty-seeking, risk-taking, and the drive to leave home," says Berns.

Dopamine primarily acts on the two areas of the brain that are responsible for decision-making—the prefrontal cortex and the striatum. The prefrontal cortex is the part of the brain that mulls over what a person is going to do, weighing benefits and consequences. The striatum—the pair of arches that straddles the brain stem in the geographic center of our skull—is the part of the brain that is all about instant gratification and short-term rewards. "Decision-making is a balance between the two—short-term rewards and long-term consequences," says Berns.

Since the prefrontal cortex in teens has not yet matured, the striatum exerts more than its fair share of influence, he believes. That means instant gratification tends to win out over thoughtful deliberation.

pants are asked to guess the outcome on a roulette wheel. If they guess correctly, they get a squirt of a juice that they like. Incorrectly, a squirt of a juice they don't like. Sometimes the roulette wheel is half black and half red, so chances of a correct guess are even. Other times the wheel is almost all red with very little black.

"Our interest is in seeing how they respond to the odds of winning or losing," says Berns. "Some people respond very strongly to risk itself—they get a rush off the risk. Others don't like the risk and focus on the outcome. By looking at how the teens respond to all of these tasks, we can calculate their risk attitude."

In another part of the study, Berns is looking at how peer pressure can change behavior. "We know a lot of bad decisions teens make are the result of peer pressure," says Berns. "One of the things we want to know is, How does that happen in the brain? To find out, we make them do the tasks again but show them what the most popular choices are and then observe how they change their behavior. The key question is, Do people change the way they behave because what other people say makes them see outcomes differently, or does it somehow change the way they perceive the risks? Those are two very different mechanisms."

At no time in our lives do we have more dopamine in our brains than during our teens. "It's no coincidence that dopamine levels peak at a time in human development that coincides with a peak in novelty-seeking, risk-taking, and the drive to leave home."—Gregory Berns

A sure thing versus taking a gamble

To test this theory, Berns' research is examining how teenagers weigh risk and reward for different types of things that motivate behavior: money, music, and food.

While their brain activity is monitored using fMRI, participants complete different decision-making tasks, all of which involve weighing risks and rewards. The fMRI measures blood flow in the brain—a step beyond regular MRI, which captures the structure of the brain.

In one task, participants are given a series of choices to make involving money. They may have to decide, for example, between taking a sure win of $10 or a 50:50 chance of winning $20. In another task, participants are asked to guess the outcome on a roulette wheel. If they guess correctly, they get a squirt of a juice that they like. Incorrectly, a squirt of a juice they don't like. Sometimes the roulette wheel is half black and half red, so chances of a correct guess are even. Other times the wheel is almost all red with very little black.

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In the end, Berns hopes to identify which types of interventions are most likely to influence teen decision-making. "I'm interested in understanding how social messages, whether from peers, mass media, or authority figures, can mitigate teens' propensity to take on sometimes insane risks," he says. "We might find that certain types of messages are more effective than others in tamping down this activity."

If so, parents of teens everywhere would be able to rest a little easier.

To learn more about Berns' study, visit www.whsc.emory.edu/newsitem_teenbrain.cfm.

Gifts & Support

Honoring teaching—past, present, and future

If you ask Carter Smith Jr., 56C, 60M, what he values most about the School of Medicine, he comes to the point quickly: "Teaching."

As a medical student and cardiology resident, Smith "learned from the best," including Evangeline Papageorge, J. Willis Hurst, Bruce Logue, Robert Schlant, J.D. Martin, and Edgar Fincher. "They emphasized the personal care of patients and being available to meet their needs," says Smith.

So did his father, Carter Smith, 24C, 26M. Carter Smith Jr. followed in his father's footsteps by serving on the clinical faculty at Emory, teaching at Grady Hospital, and practicing at Piedmont Hospital. He was also responsible for establishing the Carter Smith Sr. Chair in Medicine in honor of his father and funded by a gift from Reunette Harris. Carter Smith was physician to Mrs. Harris from the mid-1950s until 1980; his son then cared for her until her death in 1994.

Carter Smith Jr. also took cues from his father in serving his profession and community. The younger Smith, for instance, served on Emory's Board of Governors and chaired Emory's Board of Visitors. And like his father, Smith was president of Emory's Medical Alumni Association.

Now retired from teaching and private practice, Smith serves on the boards of the Piedmont Foundation and the Emory Medical Alumni Association. He also co-chairs the medical school's annual fund and serves on the Emory Annual Fund Board with Thomas Schoborg, 73M.

Smith is a huge fan of the new School of Medicine Building. Teaching lies at the heart of the facility, which is designed to support the new medical education curriculum and which incorporates the historic Anatomy and Physiology buildings. "The new structure is very meaningful to alumni, many of whom took anatomy and biochemistry in these buildings," he says.

The building and its importance to teaching are among the reasons Smith chose to give to the medical school. For the past two years, Smith has made several charitable IRA rollover gifts, making Carter and his wife, Laura, 77L, Supporting Sponsors of the building. "The charitable IRA rollover appealed to me because the money goes directly from your IRA to Emory and you're not taxed on it," he says.

Laura and Carter Smith, at home with their beloved cat Pete, are Supporting Sponsors of the School of Medicine Building.

A by-product of the Pension Protection Act of 2006, the charitable IRA rollover provision allows otherwise taxable distributions of up to $100,000 per person made to a charitable organization from a traditional IRA or a Roth IRA to be excluded from gross income. The amount rolled over can satisfy the required minimum distribution. IRA owners must be 70½ to qualify for the IRA rollover. This limited opportunity remains in effect through December 31, 2007, unless Congress extends the provision.

Smith sees the charitable IRA rollover as a practical way to support medical education, whether by contributing to the building, student scholarships, or other programs. "The tax advantage makes it easy to give out of your IRA," he says. "It's a great way to show your loyalty and devotion to the school and reach out to the next generation of Emory-trained physicians.

"We are all grateful to the Woodruff family and foundation for helping shape and grow the school," he adds. "But it will take alumni giving to help Emory reach the top tier of the nation's medical schools."

To learn more about the charitable IRA rollover and other planned giving opportunities, contact Stephanie Frostbaum (404-712-2155 or stephanie.frostbaum@emory.edu) in the Emory Office of Gift Planning or Heather Pharris (404-727-5932 or heather.pharris@emory.edu) in the School of Medicine Office of Development and Alumni Relations.

Improving donor organ awareness and outcomes

For many Georgians with end-stage liver and kidney disease, transplantation is the only treatment option. But donor organs are scarce, and nearly 2,000 patients are on the waiting list. Those who do receive transplants face a different battle: Their immune systems treat the new organs as foreign objects and work overtime to reject them.

Two major gifts totaling more than $2 million from the Carlos and Marguerite Mason Trust are helping Emory and Children's Healthcare of Atlanta tackle both of those problems.

With $975,000 from the Mason Trust, the Emory Transplant Center at Emory and Children's has created the Mason Living Donor Program. The new initiative will help educate the public about living organ donation to encourage more Georgians to donate a kidney or liver segment during their lifetime. The program also makes becoming a living donor easier and identifies more eligible donors.

To support these efforts, Emory has recruited kidney surgeon Nicole Turgeon from the University of Massachusetts. Additionally, Emory and Children's will continue to provide transplant care for underserved patients in Georgia.

The Mason Living Donor Program is similar to an initiative in Florida that has increased living donor transplants 100% in recent years. Research shows that living donation improves survival rates. Living donor organs usually function better and last longer than cadaveric donor organs.

A second commitment of $1.35 million from the Mason Trust will support the Emory Transplant Center as scientists search for ways to keep the immune system from rejecting transplanted organs. In particular, this award will help scientists better understand the immune response so they can develop better treatment strategies for patients at greatest risk for rejecting organs.

These highly sensitized patients are likely to develop antibodies to the proteins that determine the immune system's response to transplanted organs. Such patients include those who have received multiple blood transfusions before their transplants, those who have been pregnant, and those receiving a second organ transplant.

Discovery made possible by the Mason gift will build on Emory's groundbreaking research into improving outcomes for sensitized patients. Emory immunologists and transplant surgeons recently developed the "Emory Algorithm," a scientific method to determine whether a kidney from a deceased donor is a compatible match for a sensitized patient.

To date, the Mason Trust has awarded more than $15 million to Emory for patient care and research.

—Terri McIntosh

The Mason Living Donor Program will help educate the public in order to encourage more Georgians to donate a kidney or liver segment during their lifetime. The program also makes becoming a living donor easier and identifies more eligible donors.

Gifts & Support

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Safeguarding health for Georgians

Pete and Ada Lee Correll had the health of their fellow Georgians in mind when they pledged $2.5 million to the School of Medicine. Their gift through the Correll Foundation supports student scholarships as well as faculty research and teaching in specific areas.

In several respects, the Corrells' gift parallels their own experience with health issues, beginning more than a decade ago when Ada Lee had a cardiogram as part of her annual physical at Emory which led to open heart surgery the next day. Five years later, physicians at Emory Hospital revived Pete after a major heart attack. More recently, doctors detected an early-stage cancer and removed one of his kidneys.

"The doctors at Emory saved my life twice and my wife's once," says Correll, former chairman and CEO of Georgia-Pacific. "The medical school is a resource to Atlanta and the state and deserves our support."

Toward that end, the Corrells' gift will fund four professorships named in their honor. The Ada Lee and Pete Correll Professorship in Urology will enable a faculty member to improve targeting of tumors during imaging and develop other agents to further treatment of kidney cancer and other urologic disorders.

Another professorship will support teaching and groundbreaking work to improve emergency cardiac care throughout metro Atlanta and the United States, advance research to save lives, and set a model of emergency care for the nation. The Ada Lee and Pete Correll Professorship in Biomedical Engineering will fund a faculty member involved in Emory and Georgia Tech's joint venture in nanomedicine and cardiovascular disease, in particular the early detection of plaque in atherogenesis. A teaching professorship named for Ada Lee, a former K-7 teacher, will recognize a faculty member who inspires and mentors students and who furthers Emory's vision of producing doctors who will transform health and healing.

Medical students also will benefit from the Corrells' generosity. For the next five years, the Correll Scholars Fund will provide $200,000 a year for scholarships to help defray education costs for students.

Ambassadors for AIDS research

The Emory Vaccine Center has a growing army of ambassadors, thanks to the center's new advisory board. Already, the national board has generated three grants for HIV/AIDS vaccine research.

Concerned Parents for AIDS Research (CPFA) of New York provided a $250,000 grant—its largest to date—for a joint project led by Rafi Ahmed at Emory and Bruce Walker at Harvard. By studying chronic infection in mice, Ahmed discovered how to reverse the immune "switch" that causes infection-fighting cells to shut down. Ahmed and Walker will take his research further by studying how the process affects people with HIV/AIDS.

CPFA also awarded $25,000 to Emory scientist Rama Amara for his work to develop a therapeutic AIDS vaccine in monkeys. Amara has received three CPFA grants totaling $135,000 thus far, leading to a $3 million grant from NIH for his efforts to develop a therapeutic HIV vaccine for humans.

Debbie Rechler, an advisory board member from New York, provided an additional $50,000 for the vaccine center. Andrew Lipschitz, a longtime friend of Rechler's and scientific adviser for CPFA, announced the grants in Atlanta as chair of the advisory board.

Both have long been familiar with the Emory Vaccine Center. When Rechler's son Ben celebrated his bar mitzvah, he donated a portion of the money he received to the center in honor of Lipschitz, one of the nation's first physicians to contract HIV from a needle stick in the mid-1980s.

Sharon Umphenour (third from right) recently held a reception for the Emory Vaccine Center. Barry Baker (left), Debbie Rechler, Alex Brown, Dixon Taylor, Michael Aycock, and Andrew Lipschitz hosted the reception on behalf of the center's advisory board.

Pepetuating mental healing and health

In his lifetime, J.B. Fuqua made his way from poor farm boy to multimillionaire through hard work and careful planning. He knew his circumstances easily could have been different.

"I am so very grateful for my wealth, and I have tried to share it in a manner that reaches many who are not so fortunate," he wrote in his memoir, *Fuqua: How I Made My Fortune Using Other People's Money.*

Although Fuqua died in 2006, his concern for others lives on. A recent gift of $3 million from his estate will be used to create the J.B. Fuqua Fund. The fund will allow the Fuqua Center for Late-Life Depression to expand psychiatric care to older adults in rural and medically underserved regions of Georgia.

Emory has been a beneficiary of Fuqua's generosity since 1999, when he gave $1 million to establish the center at Wesley Woods. He went on to contribute an additional $4 million to the center to fund initiatives in awareness and treatment of depression in older adults and to endow the J.B. Fuqua Chair in Late-Life Depression.

"Mr. Fuqua was always very interested in how many lives would be impacted and how many people would be treated through his support."— William McDonald

An entrepreneur who built a multimillion-dollar business empire that included television and radio stations and nearly two dozen other companies, Fuqua became well known in his later years as a philanthropist, donating more than $100 million to education, health care, and cultural causes.

"Mr. Fuqua was always very interested in how many lives would be impacted and how many people would be treated through his support," says William McDonald, who directs the Fuqua Center and holds the Fuqua chair.

The patients whom McDonald and his colleagues treat also benefit from Fuqua's generosity.

"When you are really depressed, you want to hide and creep into the doctor's office. You don't want anyone to see you," says Aubrey Lunsford, who suffered with clinical depression for five months before seeking treatment at the Fuqua Center in 2004.

Her doctor in Florida told her she was looking at life through gray glasses and saw everything as negative. "When I began to recover, I'd find myself in the same type of situation or the same space as I was before but, instead of feeling hopeless, I felt great, or good, or at least peaceful," Lunsford recalls. "I realized he was so right. When you are seriously depressed, you don't believe anyone who says that you will be better."

In retrospect, Lunsford realizes she'd been "sliding" for about three years before her depression reached a critical point. As a result of her treatment at the Fuqua Center, she has been able to examine her own experience and has been trained as a peer counselor.

"I consider myself extremely fortunate to have been guided to the Fuqua Center," Lunsford says. "There are experts in so many different fields of medical and physical health. They see a great big picture when they look at you."

J.B. Fuqua's compassion for patients like Lunsford extends to his own family. "He very much wanted to make sure the money he contributed was really directed at healing people, and so he took a great interest in making sure the programmatic elements would be enhanced or improved by his gifts," says his son, J. Rex Fuqua.

Rex learned about the importance of caring for others while growing up. Emory was the beneficiary of that lesson in 2006 when he gave $2 million to endow the J. Rex Fuqua Chair in Child Psychiatry in the Emory Childhood and Adolescent Mood Disorders Program.

"Giving has always been a core value of our family," he says. "It is something we have continued in this generation, and we hope our family can pass it on to the next."—*Maria M. Lameiras*

J.B. Fuqua (left) instilled a concern for others in his son Rex.

Class Notes | alumni news

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Growth factor

The scholarship seed planted by 1961 alumni is flourishing. Contributions to the Class of 1961 Scholarship Fund now total more than $111,000. In addition to providing scholarship funds for medical students, the fund honors class members who have passed away.

For more information about contributing to the 1961 class fund or creating similar Class Scholarship funds, contact Heather Pharris at 404-727-5932 or heather.pharris@emory.edu.

1940s

Goodwin M. Breinin, 43M, retired in 2006 after serving 50 years as Kirby Professor of Ophthalmology at NYU School of Medicine and 41 years as chair of ophthalmology. "As professor emeritus, I will continue teaching and maintaining my research lab as long as my health holds up," he writes. "I served on the staff for 56 years and greatly enjoyed the experience."

Ferrol A. Sams Jr., 45M, was inducted into the 2007 Georgia Writers Hall of Fame in April. Other inductees included **John H. Stone, 68MR,** Caroline Miller, Anne Rivers Siddons, and the late Celestine Sibley.

1960s

Peter G. Bourne, 62M, produced the award-winning documentary *¡Salud!*. The film explores the Cuban health care system and how Cuban doctors around the world are dealing with the global health crisis. Bourne is a visiting scholar at Green College in Oxford, England. He lives in Washington, DC.

Gwynne Brunt, 66M, received the 2006 John McCoy Award at Atlanta's Northside Hospital, where he practices. The award honors a physician who consistently demonstrates outstanding leadership, dedication, and service.

Charles R. Rosenfeld, 66M, retired as director of neonatal-perinatal medicine at UT Southwestern Medical School after 30 years. He will remain as professor of pediatrics and director of postdoctoral training in pediatric subspecialities.

Roslyn Taylor, 67M, retired from family medicine after 30 years of clinical practice and teaching. In 2006, she was named the Georgia Family Physician of the Year by the Georgia Academy of Family Physicians. Her last appointment was associate professor at Mercer University, Department of Family Health, in Savannah. She currently chairs the Chatham County Board of Health.

1970s

Charles Zapf, 75M, recently volunteered at the Ankaful Psychiatric Hospital in Ghana under the auspices of the Edward A. Ulzen Memorial Foundation. "It was a powerful experience to work with friendly people in such a foreign world that struggles with even the most basic of medical services," writes Zapf.

Goodwin Breinin, 43M, and his wife, Rose-Helen

Ferrol A. Sams Jr., 45M

Roslyn Taylor, 67M

Charles Zapf, 75M

Mark Steves, 84M, and wife Stacey

Randolph B. Capone, 97M

Ethan, Amelia, and Adam Jakum

1980s

MARRIED: **Mark Steves, 84M,** and Stacey Feldman on April 14, 2007, in Arlington, VA. They met in 2000 at Washington Hospital Center, where they continue to work. He has a surgical oncology and general surgery practice.She is a nurse practitioner at the Washington Cancer Center.

1990s

Scott Isaacs, 93M, has published *The Leptin Boost Diet: Unleash Your Fat-Controlling Hormones for Maximum Weight Loss* (Berkeley: Ulysses Press, 2007.) He is a clinical instructor of medicine at Emory and also medical director at Intelligent Health Center in Atlanta for the treatment of endocrine disorders and obesity.

BORN: To **Janelle M. (Bell) Love, 94M,** and her husband, William, a son, William Matthew II, on Oct. 13, 2006. He joins big brother Connor. Janelle is a biomedical consultant with Autism Busters in Pasadena, MD.

Randolph B. Capone, 97M, received the 2007 American Medical Association Young Physician Community Service Award at the AMA's annual meeting in Chicago. He accepted the award on behalf of the Greater Baltimore Cleft Lip & Palate Team. Co-founded by Capone in 2004, the team includes academic and private practice providers from multiple disciplines who provide care to families affected by congenital facial deformities within 24 hours after birth.

BORN: To **DeAnne (Harris) Collier, 98M,** and her husband, Gregory, a son, Bradley, on Oct. 30, 2006, in New York City. The family now lives in Jupiter, FL, where she opened a dermatology practice.

BORN: To **Joshua A. Jakum, 98M,** and his wife, Erin Brand Jakum, 97PH, a daughter, Amelia Flaherty Brand Jakum, on Nov. 17, 2006. She has two older brothers, Ethan William and Adam Edward. Joshua is a partner with Piedmont Pediatrics in Warrenton, VA, and Erin is development director for the Fauquier Free Clinic.

2000s

MARRIED: **Alison Sisitsky, 01M,** and Edward-Curcio, on Sept. 3, 2006, at Cape Cod, MA. They both practice emergency medicine and live outside of Boston.

Residency Notes

Michael B. Alexander (internal medicine) of Doylestown, PA, was named medical director of CIGNA Healthcare.

Steve Carpenter (internal medicine) was appointed chair of the department of internal medicine and residency program director at Mercer University School of Medicine and Memorial Health University Medical Center in Savannah, GA.

John C. Hagan III (opthalmology) is the editor of *Missouri Medicine*, which won the first Ranly Award for the Best Association Magazine Writing earlier this year. The peer-reviewed medical journal has been published for more than a century.

BORN: To **David Lawrence** (medicine) and his wife, Gay, a son, Harrison Gray, on Dec. 5, 2006.

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Alumni Honors x 3

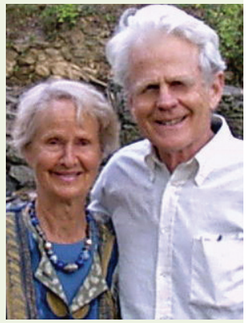
An Emory alumnus credited with saving the eyesight of millions of babies received a new award named in his honor. The Arnall Patz MD Lifetime Achievement Award, created to recognize national and international leadership and accomplishment, was presented to Patz, 45M, during Medical Alumni Weekend this fall.

As a young ophthalmologist, Patz noticed a disturbing pattern among premature infants treated in incubators with high levels of oxygen. Many babies who spent weeks in a highly oxygenated atmosphere suffered from infant blindness. Patz conducted his own clinical trials and discovered the condition known as retinopathy of prematurity. His willingness to pursue his convictions led to the revision of the medical protocol used to treat premature infants. Patz currently is a professor emeritus at Johns Hopkins, where he founded the Retinal Vascular Center and pioneered the management and treatment of diabetic retinopathy.

Arnall Patz, 45M

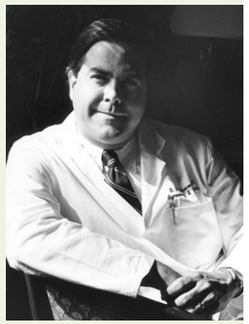
Two other physicians were honored during Medical Alumni Weekend. Stanley C. Topple, 57M, received the 2007 Distinguished Medical Achievement Award for his efforts to care for those isolated by poverty, disease, and disability. Formerly chief of orthopaedics at the VA Medical Center in Atlanta and an orthopaedic surgeon at Charlotte Medical Center and McDowell Hospital in North Carolina, Topple is a longtime medical missionary with the Presbyterian Church.

For 22 years, Topple was a surgeon, then medical superintendent, for the Wilson Leprosy Center and Rehabilitation Hospital in South Korea. There, he transformed the isolated colony into a fully functioning medical facility, helping return patients to mainstream society. Topple later became the first orthopaedic surgeon in East Africa at Kikuyu Hospital in Kenya. While at Kikuyu, Topple brought refugees from neighboring countries to the hospital for corrective surgery. More recently, Topple and his wife Mia, a dermatologist, have worked with hospitals in Afghanistan and Ethiopia.



Stanley C. Topple, 57M, and his wife Mia

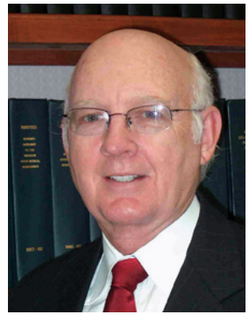
The Medical Alumni Association also presented Ramon Suarez, 78M, with the 2007 Award of Honor for his leadership in the gynecology and obstetrics community. Suarez completed his medical residency at Emory and launched a successful private practice at Piedmont Hospital in 1984. Since that time, he has come to be regarded as an outstanding surgeon and champion for women. As a clinical professor at Emory, he is dedicated to educating the next generation of GYN/OB physicians. Suarez serves as program director for the Emory/Piedmont residency program and also leads Piedmont's continuing education program. Additionally, he has held a number of leadership roles locally and nationally and currently serves on the Emory School of Medicine Alumni Board.



Ramon Suarez, 78M

Alison Sisitsky Curcio, 01M, and husband Edward

Steve Carpenter



John C. Hagan III

John H. Stone

Foad Nahai (plastic surgery) is president of the American Society for Aesthetic Plastic Surgery. He is a plastic surgeon at Paces Plastic Surgery in Atlanta, specializing in breast and facial surgery. He is also associate editor of the *Aesthetic Surgery Journal*.

Bernard P. Scoggins (internal medicine) received the "Heroes in Health Care Ethics" award from the Health Care Ethics Consortium of Georgia. He is the first clinician in the state to receive the award in its four years of existence. Scoggins, a specialist in geriatrics, helped organize the ethics committee at Phoebe Putney Hospital in Albany, GA, nearly 20 years ago and now serves as co-chair.

Harrison Gray Lawrence

John H. Stone (cardiology) was inducted into the 2007 Georgia Writers Hall of Fame in April at the University of Georgia. **Ferrol A. Sams Jr., 45M,** was also inducted.

Deaths

1930s

Irving Greenberg, 35M, of Atlanta, on Aug. 13, 2006, at age 95. He practiced general surgery for more than 40 years and pioneered early ambulation. He co-founded the Greenfield Hebrew Academy, helped establish the first blood bank in Atlanta, and co-chaired the Jewish Federation's first annual campaign, which raised more than $1 million. In 2002, he received the Jewish Federation of Greater Atlanta's Lifetime Achievement Award.

Richard Jackson, 35M, of Myrtle Beach, SC, on Nov. 20, 2006.

1940s

Eugene G. Brunson, 42M, of Pensacola, FL, on Dec. 28, 2006.

Courtney Brooks, 43M, of Loganville, GA, on Dec. 16, 2006, at age 87. After serving with the U.S. Army, he practiced medicine and surgery in Cumming, GA; owned and operated a general hospital in Blue Ridge, GA, and the Toney Valley Medical Clinic in Decatur, GA; and practiced medicine in Marietta, GA.

Charles E. Brown, 43M, of Atlanta, on Feb. 26, 2007, at age 96. He practiced internal medicine for 48 years and served five more years as a consultant to the Social Security disability determination service. During WWII, he was stationed in occupied Germany in the Public Health Branch of the military until 1947. After returning to Atlanta, he served on the medical staffs of Emory, Crawford Long, Grady, St. Joseph's, and Georgia Baptist hospitals. In 2001, at age 91, Brown was honored for a lifetime of service to the medical profession by induction into the American College of Physicians.

Jeffress Palmer, 44M, of Chapel Hill, NC, on Dec. 19, 2006. After serving in the U.S. Army, he completed a fellowship at the University of Utah College of Medicine. He then joined the medical school faculty at the University of North Carolina in 1952 and served as the first chief of the division of hematology.

Tom Duke, 45M, of Dallas, TX, on Feb. 3, 2007, at age 84.

Thomas A. Harris, 45M, of Stone Mountain, GA, on Nov. 22, 2006, at age 85. He practiced obstetrics-gynecology from 1951, establishing the

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Atlanta OB-GYN Group practice, until he retired in 1987. He served on the clinical faculty at Emory and was a founding member of the Atlanta OB-GYN Society.

Roger Jay Reynolds, 46M, of Baton Rouge, LA, on Jan. 12, 2007, at age 84. He practiced internal medicine at the Baton Rouge Clinic from 1955 to 1985.

Sidney Zorab Gellman, 47M, of West Hollywood, CA, on Oct. 20, 2006, at age 82.

Robert Ross McBryde, 47M, of Montgomery, AL, on Oct. 11, 2006, at age 83.

James Morgan Bloodworth Jr., 48M, of Madison, GA, on Sept. 22, 2006, at age 81. He wrote the textbook, *Bloodworth's Endocrine Pathology* and received several awards for his work on diabetes.

1950s

Wallace McLeod, 52M, of Atlanta on Dec. 4, 2006, of cancer at age 85. He was the first dermatology resident to train at Emory and maintained a private practice at the Atlanta Medical Center from 1963 to 1994.

Charles E. Wells, 53M, of Nashville, TN, on Aug. 8, 2006.

Robert Graham ("Dutch") Kirkland, 54M, of Orlando, FL, on Dec. 17, 2006, after a long illness. He was 77. Graham served on the staff at Florida Hospital for 35 years and was chairman of the psychiatry department from 1989 to 1992. He received the hospital's Outstanding Clinician Award in 1990.

Bealer T. Rogers Jr., 54M, of San Antonio, TX, on July 31, 2006.

1960s

F. Conyers Thompson, Jr., 63M, of Atlanta, on Dec. 31, 2006, at age 69. He was a psychoanalyst in Atlanta for more than 40 years.

W. Earl Bobo, 64M, of Snellville, GA, on March 8, 2007, due to complications from Alzheimer's disease. He practiced general surgery at DeKalb Medical Center until his retirement.

R. Beauvais Randall Jr., 65M, of Decatur, GA, on Nov. 11, 2006. He served as chief resident at Grady Hospital under J. Willis Hurst and then entered private practice in internal medicine and cardiology in Decatur for 25 years.

1970s

Robert C. Parker, 71M, on June 9, 2006, at age 61.

Charles E. Brown, 43M

W. Earl Bobo, 64M

Leonard Oscar ("Buddy") Sidler Jr., 74M, of High Point, NC, on Jan. 31, 2007. He was 57.

Residency Deaths

Harold E. Adair (urology) of Atlanta on May 1, 2007, at age 70. He served as a captain during the Vietnam War, heading the urology department at Ft. Devens, MA, and received the National Distinguished Service Award. After leaving the military, he joined private practice and served on the medical staff at Crawford Long, Doctors Memorial, and St. Joseph's hospitals in downtown Atlanta. He later served on the staff at St. Joseph's and Northside hospitals after his practice moved to north Atlanta.

Carroll Beasley (medicine) of Marietta, GA, on Feb. 5, 2006, at age 85.

Huddie Lee Cheney Jr. (medicine) of Thomasville, GA, on Jan. 7, 2007, at age 79. He served as J. Willis Hurst's first chief resident at Emory. Cheney practiced internal medicine from 1958 until 1992 in Thomasville, where he worked with heart patients at the Crippled Children's Clinic and established the first cardiovascular center at Archbold Memorial Hospital.

Frank Dempsey Guillebeau (medicine) of Albany, GA, on Jan. 9, 2007, of cancer. He was 77. Guillebeau entered private practice in Albany in 1960; co-founded Palmyra Park Hospital, now Palmrya Medical Center, in 1971; and served as a trustee for several years. He also served a term as president of the Dougherty County Medical Society.

Stanley W. Hall Jr. (medicine) of LaGrange, GA, on Nov. 22, 2006. He was 61.

Thomas Slade Hogan (medicine) of Sacramento, CA, in February 2007. Hogan and his wife Frances completed residencies at Emory and the General Medical Hospital of Fresno. The couple practiced in Fresno for 40 years.

Abraham M. Oshlag (medicine) of Newnan, GA, on Jan. 22, 2007. He was 89. He graduated from New York University Medical School in 1941 and served as a medic with the U.S. Marines in the South Pacific and Japan, for which he won a Purple Heart.

Alexander F. Saker (OB/GYN) of Decatur, GA, on Jan. 19, 2007. He was 76. Born and raised in Cuba, he graduated from Havana University. He immigrated to the United States in 1961 and went on to practice OB/GYN in East Point for 33 years. Saker completed his Emory residency at Piedmont Hospital in 1967.

Dorothy White Sherrer (medicine) of Marietta, GA, on Dec. 1, 2006, at age 79. She graduated from the Medical College of Georgia in 1952 and practiced family medicine until 1965. She returned to medicine, completing an Emory residency in psychiatry in 1978. She practiced with the Brawner Psychiatric Group in Smyrna from 1981 to 1991. In recent years, she was a volunteer physician

Huddie Lee Cheney Jr.

Frank Dempsey Guillebeau

Abraham Rosenberg

at the Good Samaritan Health and Wellness Center in Jasper, GA.

B. Gray Taylor (surgery) of Merritt Island, FL, on Jan. 30, 2007, at age 82.

Isom C. Walker (medicine) of Gallipolis, OH, on May 16, 2006, at age 80.

Henry Wise Wood Jr. (medicine) of Norfolk, VA, on March 2, 2006.

Faculty Deaths

Herbert Birch (professor of gynecology/obstetrics emeritus) on Dec. 20, 2006, in Rome, GA. He practiced as a gynecologic oncologist at Emory for 40 years and was a founding member of the Gynecological Oncologist Society.

Woodfin Cobbs Jr. (professor of cardiology emeritus) on Nov. 18, 2006, at age 79. He joined the School of Medicine in 1958. Cobbs was regarded as an excellent physician and teacher whose research focused on mitral valve prolapse.

Albert Rauber (professor of pediatrics emeritus) on March 7, 2007, of abdominal cancer. He was 84. When Emory developed a pediatric program in 1959, he was one of the first four physicians on the faculty. After the general pediatric clinic closed in 1968, Rauber became director of Ambulatory Pediatrics at Grady Hospital. Two years later, he established what became the Georgia Poison Control Center at Grady. He retired in 1987.

Abraham Rosenberg (professor of psychiatry and behavioral sciences) on Dec. 23, 2006, after a long battle with prostate cancer, at age 82. He joined the department several years ago after "retiring" from the Neuropsychiatric and Brain Research Institute at UCLA. Rosenberg was an expert in the mechanisms underlying behavior-altering organic brain disease. Late in his career, he studied cellular alterations after viral infection of the brain, with a focus on HIV neuropathology, and he also contributed to current understanding of the effects of alcohol on the brain. He was one of the most senior of all NIH-funded investigators in the United States.

Roger Sherman (professor of surgery emeritus) on April 9, 2006, at age 82. After earning his medical degree from the University of Cincinnati in 1948, he served in the U.S. Army and subsequently became associate professor of surgery at the University of Tennessee at Memphis. In 1972, Sherman was appointed chairman of the department of surgery at the University of South Florida Medical School in Tampa. He joined Emory as professor and chief of surgery and trauma at Grady Hospital in 1982.

Class Notes | alumni news

Garland D. Perdue

Garland D. Perdue, 52M (professor of surgery emeritus), on Sept. 11, 2007. A pioneer in vascular surgery and a respected leader in health care, Perdue served on the Emory faculty for more than 40 years.

After receiving a scholarship to Emory University at age 15, Perdue eventually earned his medical degree and became director of the division of vascular surgery in 1957. He performed Georgia's first kidney transplant in 1966 and established Emory's first vascular surgery training program, the first in the nation to receive accreditation. Since Perdue's landmark transplant, Emory has become the most extensive transplant program in Georgia and a leader in the Southeast. Perdue also was a co-author with the late J.D. Martin of *The History of Surgery at Emory University School of Medicine* (1979).

In addition to a successful surgical career, Perdue was appointed medical director of Emory Hospital in 1983 and director of The Emory Clinic in 1984. He served in that role until 1993, when he became executive director of the Emory University System of Health Care.

An active leader in professional organizations, Perdue received several honors during his lifetime. Among them were the 2004 Award of Honor from the Emory Medical Alumni Association and the 2006 Rudolph Matas Lifetime Achievement Award from the Southern Association of Vascular Surgery. Just recently, the School of Medicine established the Garland Perdue Lectureship in Vascular Surgery in his honor.

Perdue's survivors include his wife, Brenda, four daughters, two sons, and 11 grandchildren.

Joseph Patterson

Correction

In the Summer 2007 *Emory Medicine*, the photograph in the obituary on Joseph Patterson (above), professor of pediatrics and co-founder of Egleston Hospital for Children, was identified incorrectly. The photograph in that issue showed Jim Carson, retired fund-raising executive for Egleston. Our apologies for the error.—*The editors*

Ellis L. Jones (professor emeritus of cardiothoracic surgery) on Feb. 6, 2007, of cancer at age 68. When he joined the Emory faculty in 1972, Jones worked with Charles Hatcher, then director of cardiothoracic surgery, and others to help Emory become one of the nation's top heart programs.

An Atlanta native, Jones completed his medical degree at Emory in 1963 and continued his training at Johns Hopkins as a Halsted intern from 1963 to 1964 and as a resident from 1964 to 1965. He then trained at the Walter Reed Army Institute of Research and subsequently served with the Second Mobile Army Surgical Hospital in Vietnam. He returned to Johns Hopkins to complete his residency in cardiothoracic surgery under cardiac surgery pioneer Alfred Blalock. Jones served there as chief resident from 1971 to 1972.

Jones was known for his perfectionism in the OR and his compassion for patients—traits he instilled in residents like Emory cardiothoracic surgeon John Puskas. "He was among the first in the nation to embrace stentless aortic valve replacement and to identify the important technical challenges that it posed," says Puskas. "He conclusively demonstrated the importance of complete revascularization to long-term survival after coronary bypass."

Among other accomplishments, Jones developed a set of surgical instruments for small arterial grafting. He pursued several research interests, including the use of arterial grafts for coronary bypass operations, the use of cryopreserved human heart valves in high-risk patients, and the prevention of stroke during heart operations.

Jones' concern for patients sprang from his belief that "everybody counts," says Beth Coleman Jones, his wife of 47 years, "He loved people from all walks of life." In addition to his wife, Jones is survived by two daughters, a son, and five grandchildren.

Ellis L. Jones

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Saga in the Making

Iceland is the land of glaciers. It is also home to deCODE genetics, a company that shakes disease-related genes out of family trees. Emory researchers are collaborating with deCODE, resulting in discoveries for restless legs syndrome and heart disease. To learn more, see page 20.