

Watershed Year

EMORY UNIVERSITY SCHOOL OF MEDICINE

ANNUAL REPORT 2007



EMORY





A new home

FROM THE DEAN

In this watershed year, the School of Medicine experienced the satisfactions, excitement, and confidence in the future that faculty and students must have felt almost a century ago. Our forefathers were members of the Atlanta Medical College, who decided on the basis of the Flexner Report to become part of the new Emory University rising on the outskirts of Atlanta.

The move took them out of space in ramshackle buildings downtown into two buildings of their own and promised them a modern hospital and clinic on site. An incredible amount of

work lay ahead, but there was never a doubt that a new era had begun for the newly named Emory University School of Medicine. Now, in 2007, another new era starts—with its own transformations and promises.

A new home. The new School of Medicine Building is a beacon to students, designed to enhance and celebrate outstanding teaching, a visible sign that Emory has never been more committed to medical education nor more determined to be a model for training physicians uniquely prepared for the challenges and opportunities of the 21st century.

A new way of teaching. The building made possible the inauguration of a dramatic new curriculum. It teaches fundamentals of science within clinical settings and immerses students in clinical experiences from week one. A large number of our faculty participated in design of the new program, and I have never seen them more energized or excited.



A new future for clinical care. Even as clinical care advances—with the opening of a new model-of-its-kind neurointensive care unit in Emory University Hospital, for example—we are break-

ing ground for a new outpatient complex. This is part of an ambitious plan to create a new model of patient- and family-centered care, to improve service and access across the board and integrate research with treatment to provide the best care available anywhere.

Continuing growth in research. Immensely strengthened by new research facilities built over the past decade (more than 650,000 square feet of space, with more in the works), the school has reached new heights in funding and in new discoveries that translate to new ways of helping patients.

I want to thank the extraordinary faculty who are leading us into this new era, for the benefit of our students, patients, city, state, and world community. We have indeed come home.

THOMAS J. LAWLEY, MD

Dean, Emory University School of Medicine



EDUCATION:

Creating the ideal physician

In the summer of 2007, the medical school moved into its new home, a \$58.3 million, 162,000-square-foot building—the first edifice on campus with the School of Medicine name on it.

The new building serves as the anchor between two historic buildings that have undergone complete renovation. The new central building includes an airy atrium, designed as the medical school’s “living room,” where an entire medical class can gather easily at one time.

The building in the center unites mirror wings that retain the external structure—pink marble, red tile roofs—of the anatomy and physiology buildings constructed soon after the already well-established Atlanta Medical College joined Emory and moved to campus in 1915. This graceful structure curves around a courtyard that faces Emory University Hospital and is filled with plants and trees.

Almost four times the size of the historic buildings and filled with state-of-the-art technology and gloriously abundant classroom space, the new building made possible a 15% increase in the size of the entering class, to 133 students. That should help alleviate the severe U.S. physician shortage projected by the time they graduate in 2011. Another 15% increase in class size is planned within the decade.

But more important than the number of students entering the new building each year is the kind of physician these young men and women will be when they leave four years later. The class of 2011, the first to know only this building as home, also will be the first to complete their entire medical education within the totally revamped curriculum that the building makes possible.

The new curriculum, the culmination of years

New patient simulators are multi-talented.



of planning, is designed to create physicians who are passionate about medicine and making a difference and who appreciate the complex, sociologic, psychologic, and economic issues surrounding patients, families, and communities.

The new building was designed in tandem with this new curriculum, while maintaining flexibility to evolve along with the fast-moving school.

Space to learn, study, mingle

The number of classrooms, the range of classroom size and type, and the technology available to students in each room reflects the curriculum’s emphasis on active learning. Three large auditori-

ums, each able to seat 160, feature high-definition screens, visible even in natural light, with acoustical panels and theater-style lighting to enhance presentations involving patients. The note-taking service for which medical students are famous is now complemented by automatic recordings of audiovisual and spoken components of each presenter. Four seminar rooms are designed for up to 40 students, with wireless networks linked to the

fireplace. Other spaces encourage informal interaction, between students and between students and faculty: a café, coffee shop, kitchen space with microwaves and refrigerators, eating areas inside and out (one for students only), and lots of comfortable chairs and couches (including a gigantic “sofatorium”). The building also has showers, lockers, indoor parking for bikes, LCD monitors that display an ever-changing array of announcements and activities across campus, even a small soundproof music practice room. (For whatever reason, Emory always has attracted a sizable number of musically talented students, making the big annual talent show an event worth watching.) The only thing missing, by design, is television.

Most of the administrative offices of the school, from the dean’s headquarters to graduate medical education, are also in the new building, with

space for the Admissions office almost doubling. Last year, prospective students nervously waited for interviews in makeshift areas in a hallway. This year, they have a spacious lounge with its own terrarium.

Practicing technique and real medicine

The Emory Center for Experiential Learning (ExCEL, for short) contains an unprecedented number of high-fidelity simulators that allow students to acquire and hone technical skills, from basic suturing and resuscitation to intubation, placement of IVs, and delivering a baby. Multi-talented mannequins respond to various therapeutic measures and mimic physiologic and anatomic parameters, including heart, lungs, and airway.



A group of 60 faculty will serve as mentors to each class, following them throughout the curriculum.

hospital and other facilities. Nineteen rooms hold 20 or fewer students, essential spaces for a new curriculum that has replaced fully half of the old large-group lectures with interactive small-group sessions. Two computer/teaching labs are open around the clock, each with space for up to 75 students. These are hard-wired, an extra layer of capacity in a building that is the first on campus to be completely wireless.

Personal space abounds. For years, Emory medical students referred to themselves as the nomads, always in search of a decent place to study, often settling for empty classrooms or local coffee shops. Their new home has space for any study style, solo or group, from cozy spots to spacious lounges, including one with a

THE CURRICULUM IN PHASES

Foundations of Medicine, the first 18 months of the curriculum, is a whole-person approach combining clinical medicine and basic fundamentals of science, social science, humanities, and public health, co-taught by basic scientists and clinicians working together. It begins with a section on the Healthy Human and concludes with one on Human Disease, in which each organ system is introduced with simulated or real case presentations and matched with the appropriate basic science.

Within this phase, students begin acquiring clinical experience and skills early on, beginning with a popular “week on the wards” rotation. Students gain increasing in-depth clinical experiences in primary care and in specialty care settings as well.

After taking part I of the U.S. Medical Licensing Exam, students enter an Applications phase, with training in basic clinical areas such as internal medicine, surgery, obstetrics/gynecology, pediatrics, psychiatry, and neurology. One week inter-sessions prior to each block of clinical rotations will highlight basic science knowledge, clinical skills, and ethical issues related to each specialty.

An in-depth, closely-mentored, mandatory Discovery phase, based on an individual student’s interests, is designed to enhance creativity, curiosity, and leadership abilities. As long as it is related to medicine, students may spend

this phase in any field. They may do basic or clinical research, work in public health, or focus on such areas as medical humanities, medical anthropology, or sociology. Five months is the minimum, but some students will elect to spend up to one extra year in Discovery.

The Translation phase includes clinical rotations in intensive care and emergency medicine and a sub-internship in medicine, surgery, or pediatrics, followed by a Capstone course during the last month of medical school. The Capstone course wraps up and reinforces lessons of the previous four years and prepares the medical student for residency.

Throughout the entire curriculum, students participate in an extensive mentoring program. Each student is assigned to one of four “societies” and to one of 16 society advisers, who remain matched to their respective students throughout their medical school experience.





But good doctors must learn to use everything they have learned—and some things they haven't—in real, often chaotic medical situations calling for speed, accuracy, teamwork, and sensitivity to patients and families. The building's four simulation suites are flexible spaces that can be manipulated to include a multitude of scenarios, ranging from an emergency room or intensive care unit to a labor-delivery suite or operating theater.

Students also learn the complex choreography required when doctors, nurses, and other members of the health care team work together. Faculty watch from behind one-way mirrors, while video cameras record the action for later critique.

Emphasis on learning in a simulated environment continues in the 16 clinical exam rooms, where students conduct "OSCEs" (objective standardized clinical examinations) with actors trained to represent realistic symptoms and to follow scripts illustrating dozens of medical conditions.

Unprecedented learning opportunities are not just for medicine and allied health students and their counterparts in nursing and other health care professions. Emory's continuing medical education

(CME) program, already one of the largest in the country, will expand in use of simulation—and in the human anatomy facilities described further on. Clinicians in this program can use the experiential center to prepare for rarely seen conditions or events. The center also has resources to develop a multidisciplinary approach to preparedness for natural or bioterrorism disasters.

Learning more from the human body

The new dissection facility in the building is arguably the best anatomy space in any medical school in the world. Each of 26 dissection tables is equipped with computers with access to the Internet, magnetic resonance and other images, study guides, and lecture notes to accompany specific dissections. First-year medical students, working in teams of six, use 22 of the tables, in a revised human anatomy course that reflects the new curriculum's system approach. The other four are for health professions students, faculty, and residents learning or developing new techniques and for weekend symposia and other CME courses.





DOING WELL

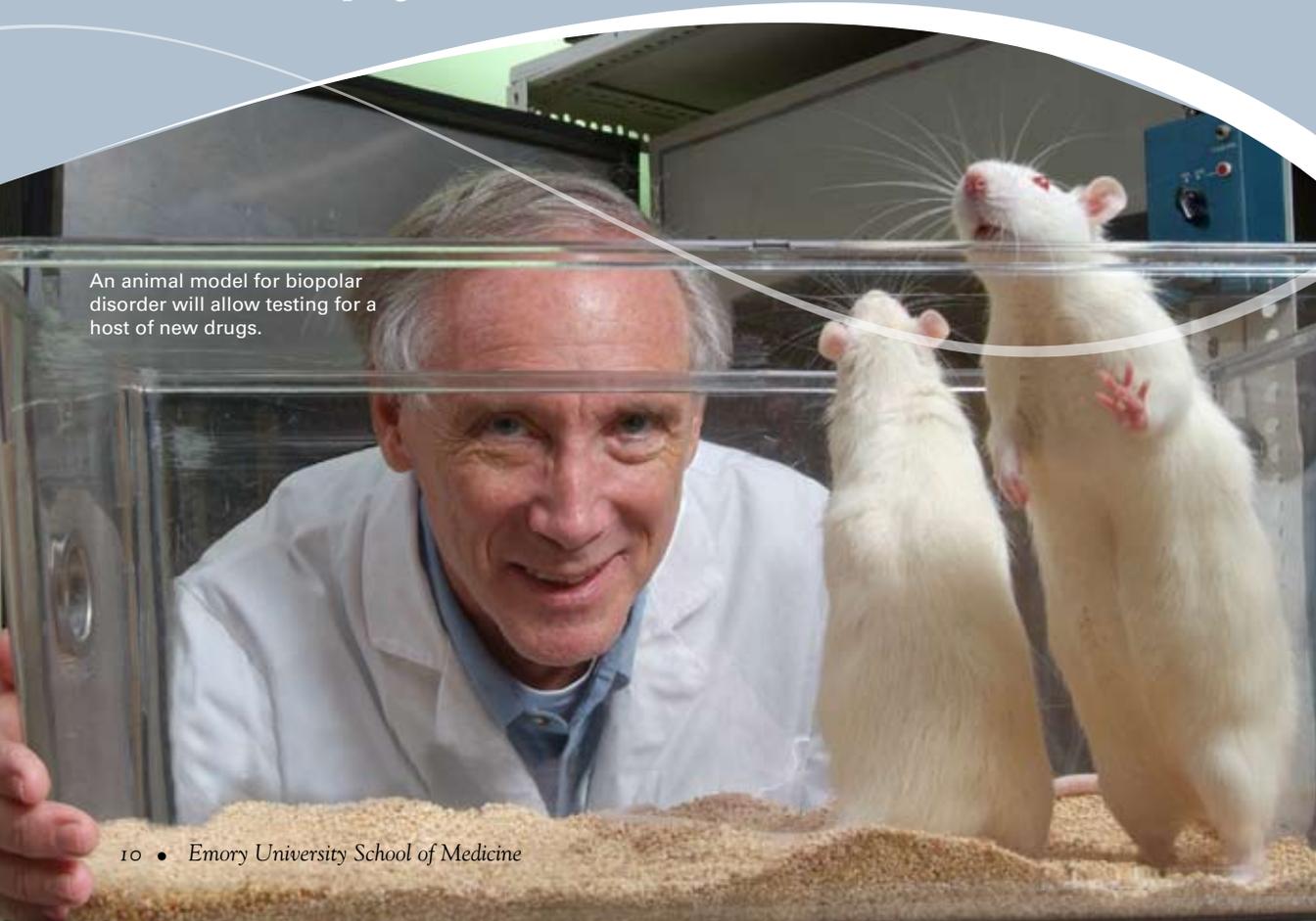
As average MCAT scores keep rising among entering classes, Emory's 475 students continue to perform extremely well compared with their peers. The most recent pass rate for first-time takers of part 1 of the U.S. Medical Licensing Exam was 99%, and the majority of this year's graduates received their top choices for residency training.

Emory now has 66 MD/PhD students (including those in a top-ranked biomedical

engineering department shared by the medical school and Georgia Tech). The medical school also has 14 MD/MPH students and 420 students in five health professions programs, including a physician assistant program and physical therapy doctoral program ranked third and eighth, respectively, by *U.S. News & World Report*. In 2007, *The Scientist* magazine ranked Emory as the eighth best place in the country for postdoctoral fellows to work.

During the past year,

an Emory-designed AIDS vaccine moved forward in human clinical trials, and the Emory Vaccine Center joined forces with the leading genetic engineering and biotechnology center in India to create a new center to enhance vaccine development for HIV/AIDS and other infectious diseases, especially those that disproportionately affect the developing world.



An animal model for bipolar disorder will allow testing for a host of new drugs.

RESEARCH:

Creating the health care of tomorrow

Emory's investments in a strong research infrastructure over the past decade have continued to pay off. Even as the pool of available research dollars remained flat nationwide, the medical school's funding from the National Institutes of Health continued to increase, with the school ranking 18th in 2006 among all medical schools in the country in total research grants awarded. Medical school faculty, including those at Yerkes National Primate Research Center, received 503 NIH grants, for a total of \$188 million, more than triple the total from a decade ago when the school ranked 31st. These awards addressed some of the most scientifically exciting and challenging issues of our time.

Seasonal and avian flu

Building on decades of success in infectious disease and vaccine development, the medical school was awarded a \$32.8 million contract in the past year to establish one of six NIH centers of excellence for influenza research and surveillance. Center leadership comes from the Department of Microbiology and Immunology, the Emory Vaccine Center, and the animal health vaccine development program at the University of Georgia. The Georgia Research Alliance added \$2.5 million in recognition of this significant milestone in furthering Georgia as a national leader in vaccine and antiviral research and development. Current research studies in the NIH-designated center include the following:

- how flu viruses mutate to infect different species,
- how vaccination affects human immune response to infection, especially to new strains of flu, and
- how such knowledge can help identify novel targets for antiviral medicines and improved vaccines, including how human genes might be "silenced" to decrease or eliminate flu infection.



Avian flu virus

HIV/AIDS clinical trials

The NIH selected Emory's HIV/AIDS Clinical Trials Unit as a major component of both the premier national clinical trials group for new AIDS treatments and the national network for AIDS vaccine prevention trials, a multi-site effort that includes clinical trial units on five continents.

HIV/AIDS research has been a strength at Emory for years, both in terms of treatment and in efforts to develop more effective vaccines. At the Ponce Center, one of the largest, most comprehensive HIV/AIDS treatment facilities in the world, Emory medical faculty continue to conduct



Emory is part of a network for HIV vaccine trials that spans five continents.

numerous clinical trials, while the Hope Clinic, the clinical arm of the Emory Vaccine Center, remains one of the nation's top enrolling sites for HIV/AIDS vaccine trials.

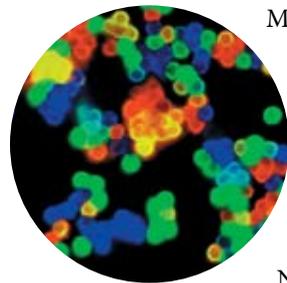
During the past year, an HIV/AIDS vaccine developed at Emory moved forward in human clinical trials, and the Emory Vaccine Center joined forces with the leading genetic engineering and biotechnology center in India to create a new center to enhance vaccine development for HIV/AIDS and other infectious diseases, especially those that disproportionately affect the developing world.

Big support for small things

Nanotechnology for DNA repair—

Medical faculty in the Coulter Department of Biomedical Engineering, a joint department between Emory and Georgia Institute of Technology, are involved in a new Nanomedicine Center for Nucleoprotein Machines, funded

by a major grant to Georgia Tech, Emory, and the Medical College of Georgia. The center, the third NIH-established nanomedicine and nanotechnology center involving Emory faculty and colleagues in less than two years, focuses on understanding how the body repairs damage to DNA. (The other Emory centers focus on cardiovascular



plaque and personalized cancer treatments.)

Cancer and bioterrorism—Researchers at the Emory/Georgia Tech Center for Cancer Nanotechnology developed and shared clinical protocols for the use of bioconjugated quantum dots—luminescent nanoparticles linked to biologic molecules—to track molecular biomarkers in cancer tissue. The tour de force project, which took two years and involved 12 investigators in five academic departments at Emory and Georgia Tech, is expected to help clinicians diagnose and determine cancer prognosis based on a patient's individual molecular profile. The dots also are expected to be useful in detection of bioterrorism agents such as anthrax and plague, even at low concentrations.

Aging, memory, and Alzheimer's

Medical school faculty at Yerkes National Primate Center received \$10 million from the National Institute on Aging to compare changes that occur in aging humans—some normal, others indicating mild cognitive impairment or Alzheimer's disease—with those that occur in nonhuman primates. The study is the first anywhere to examine chimpanzee cognition in correlation with other aspects of aging. And Yerkes, with its well-established colony of chimpanzees, on-site state-of-the-art imaging facilities, and extensive experience in cognitive research, is one of the few research centers that could even undertake such an extensive study. The goal is to develop methods of earlier

Molecular protein work is helping illuminate why plaques form in the brain to cause Alzheimer's.



Maps of insertions and deletions in the human genome will help account for mutations causing various types of cancer.

diagnosis and new treatments based on specific physiologic changes.

Genome variations in schizophrenia

Scientists believe that each individual has as many as 100 DNA copy-number variations—a recently discovered category of differences in the human genome. While these previously unrecognized deletions and duplications of DNA segments generally cause no problems on their own, they may combine with other genetic changes and/or environmental factors to contribute to overall risk of specific diseases, including schizophrenia. Using new high-performance supercomputing technology available only to a few major research centers and supported by a \$3.6 million award from the National Institute of Mental Health, Emory geneticists are now searching for identifiable differences in the entire genome of 500 schizophrenia patients and 500 controls.

Gene for restless legs syndrome

A team of scientists at the Emory Sleep Center worked with deCODE Genetics, a genomics company in Iceland,

A genetic variation found in 21% of people of European descent causes a two-fold risk of heart attack early in life.



to identify the first gene associated with restless legs syndrome (RLS), a sleep disorder affecting one in every 10 Americans. The finding provides concrete evidence that RLS is a genuine disorder with a definable phenotype and biologic basis and is the result of a four-year international study of genome-wide scans of nearly 1,500 Icelanders and 400 Americans.

Study results suggest that multiple genes contribute to RLS, but one copy of a newly discovered variant confers nearly double the risk for developing RLS, while two copies increase a person's risk to four times that of the general population.

Common genetic variant and risk for heart attack

In a study of almost 5,000 patients who had suffered myocardial infarctions (along with almost 13,000 controls), a team from Emory, deCODE Genetics, and University of Pennsylvania discovered a common genetic variation that causes a two-fold increase in risk of heart attack early in life (before age 50 for men and 60 for women). Approximately 21% of people of European descent carry two copies of the variation, found on chromosome 9p21. This is the first common variant found to be consistently linked to substantial risk of heart attack in multiple case-control groups in this population.

Faster, more accurate genetic tests

Lysosomal storage diseases—Clinicians throughout the country now have access to a new set of Emory-developed genetic tests that can yield more accurate and rapid diagnosis of 24 different types

of these diseases. Potentially life-threatening, lysosomal storage diseases cause enzymes to malfunction, leading to the accumulation of waste products that damage organs and tissues. Early diagnosis is critically important to prevent such damage, but these diseases are difficult to identify clinically because symptoms often

mimic those of more common diseases.

Muscular dystrophy—A new genetic test developed at Emory that targets mutations in the dystrophin gene is far quicker and more accurate than existing tests for the most common types of this disorder. It can be used to confirm clinical diagnoses, test female family members who may be carriers, and perform prenatal testing.

Pig islets for transplant

The Juvenile Diabetes Research Foundation (JDRF) gave the Emory Transplant Center \$2.5 million to use a nonhuman primate model at the Yerkes National Primate Research Center to develop a porcine islet transplant strategy. This research focuses on ways to circumvent immunologic rejection of the xenograft as well as minimizing risk of transmission of porcine pathogens. The grant is in addition to last year's \$8.5 million grant renewing the Emory JDRF Center for Islet Transplantation, one of a handful of such centers in the country dedicated to addressing large-scale strategies to replace the insulin that people with Type 1 diabetes are unable to produce. Emory was the first and remains the only center in Georgia that performs human islet transplants and is a leader in efforts to develop less toxic immunosuppressant drugs for both islet and solid organ transplants.



Emory has one of six NIH centers for flu research and surveillance.

Brain tumor biomarker

Medical school researchers at the Winship Cancer Institute identified a biomarker for brain tumors—a protein known as soluble attractin that is elevated in the cerebrospinal fluid of patients with malignant astrocytoma. They also uncovered the role that attractin may play when astrocytoma spreads or recurs after treatment. Being able to detect attractin gives physicians a new minimally invasive method to monitor how well a tumor is responding to specific treatments. That's now. In the future, since the protein induces cancer cells to migrate and possibly recur, attractin may prove to be a good target for therapeutic intervention.



Five initial areas (transplant, neuroscience, lung health, heart and vascular disease, and cancer) are being targeted to integrate research and patient care, with new faculty recruited based on their credentials in translating discoveries to the bedside.

Invented here

The Association of University Technology Managers ranked Emory first in the nation this year in commercialization revenue of research discoveries. The report compared institutional data from 2005, a year in which Emory created four start-up companies from medical school research, executed 30 licenses, filed 54 new patent applications, and earned more than \$585 million in licensing revenue.

New companies developing therapies based on Emory research include one focused on blocking a protein that promotes cancer metastasis and one developing small-molecule drugs that can protect brain tissues from damage following stroke.

Much of the huge licensing revenue for the year came from sale of future royalties from the Emory-discovered HIV/AIDS drug Emtriva. This widely used AIDS drug is one in a long list of Emory discoveries now commercially available for patients and physicians. Emory continues to reinvest revenue from technology transfer into research and science education, assuring that discoveries will continue to be moved along the pipeline to the marketplace.

Still growing

During this past year, the medical school markedly expanded and centralized its clinical trials office, with the aim of improving quality and efficiency

and making more clinical trials available for patients, especially those in cancer. It also added two new Institutional Review Board committees, with the aim of speeding up the process of getting research projects approved and under way. Clinical trial efforts also got a recent major boost from a Clinical and Translational Science Award from the NIH, which Emory received in partnership with Georgia Institute of Technology, Morehouse School of

Medicine, and Children's Healthcare of Atlanta.

Individual departments expanded structures to help their researchers and colleagues across the scientific community. These include establishment of a DNA databank for autism, one of 11 in the nation, and development of a gene-resequencing technique that allows small labs to rapidly and inexpensively compare genetic differences.

Perhaps most striking, the acquisition of a new high-performance computational cluster this year placed Emory on the list of the world's 500 most



Emory is developing a fast, cheap alternative to genome sequencing.

powerful super-computing sites and immediately began making possible a variety of experiments that would have been impractical, impossible, or too costly using conventional laboratory methods. The technology is being used in the schizophrenia DNA study described

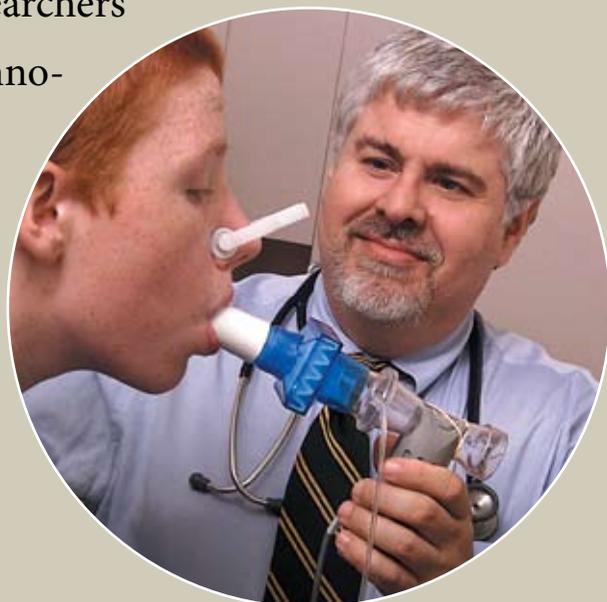
earlier as well as to explore the amount of radiation patients receive from two new breast-imaging techniques that someday may provide clinicians with more detailed views of breast tissue than available ever before.



A high-throughput molecular screening center at Emory can screen hundreds of thousands of compounds with potential as drugs against protein targets.

Emory is dedicated

to creating a new model of care, one with a patient- and family-focused service culture that maximizes collaboration among researchers and clinicians to speed innovations to prevent and treat disease.



PATIENT CARE:

Creating a new model of health and healing

Emory medical faculty are Atlanta's doctors. Last year, they were responsible for more than 3.6 million patient visits (up 9% over the previous year), which represents a substantial proportion of all health care in the city. Services cover the full spectrum, from fetal to geriatric medicine, from primary and preventive care to the most complex diagnosis and treatment available anywhere.

In addition to making Emory Healthcare the largest and most comprehensive health care system in Georgia (see inside back cover), Emory medical faculty provide the majority of physician care at three affiliated hospitals: (1) Children's Healthcare of Atlanta at Egleston, recently named the third best children's hospital in the nation by *Child* magazine, (2) Grady Memorial Hospital, the city's 953-bed public hospital, and (3) Atlanta Veterans Affairs Medical Center.

In both Emory's own and affiliated facilities, Emory physicians head essential programs, including many unavailable elsewhere in the city, state, or region. Examples include the most comprehensive AIDS program in the country, one of the most comprehensive multiple organ and tissue transplant centers in the nation (and one of the few providing islet cell transplants), a cancer institute on track to become the state's first NCI-designated comprehensive cancer center, the region's only comprehensive geriatric health system, and the oldest stroke center in the Southeast.

Patient-centered care

Emory is dedicated to creating a new model of care, one with a patient- and family-focused service culture that maximizes collaboration among researchers and clinicians to speed innovations to prevent and treat disease.

This past year, five initial clinical/research areas (transplant, respiratory health, neuroscience,



Doctors at Wesley Woods Center care for 36,000 patients annually.

cancer, and heart/vascular care) were targeted to exemplify what patient-centered care should be. In addition to new discoveries, these centers are expected to set new standards for patient safety and quality and will also drive new standards in use of electronic medical records, continuous feedback programs to provide real-time data on needed system improvements, and technology that allows on-demand sharing of such information among caregivers, researchers, students, patients, and families.

Key faculty have been recruited in the past year in several of these centers, including transplant, neuroscience, and cancer, and a vice president for clinical and academic integration was named to lead the entire initiative for patient-centered care.

Neuro ICU

An illustration of the patient-centered model in action can be seen in Emory University Hospital's new neuro intensive care unit, where clinical care is led by neuro-intensivists, a relatively new breed of MDs who specialize in treating critically ill patients with brain injuries, and where nurses assume larger responsibilities than in the past. The center's space was designed based on what evidence has shown to be most beneficial to the patient—consolidating equipment to eliminate the need for moving patients long distances for procedures and accommodating family members who want to remain with their loved ones around the clock.



In Emory Hospital's new neuro ICU, evidence-based design is shaping evidence-based medicine, with integrated teams of professionals working to provide patient- and family-centered care.

Quality and safety

Under the direction of the chief quality officer (CQO) for Emory Healthcare, new CQO positions were added at Emory Hospital, Emory Crawford Long Hospital, and The Emory Clinic, with responsibility for scrutiny and revamping of policies and procedures at all levels. Emory also has adopted the LEAN process-improvement program originally developed by Toyota, standardizing processes to prevent human error.

Assessing epidemiology, predictors, and outcomes of heart failure in the elderly will help identify risk levels and clarify prognosis for individuals with the disease.



Some changes have been simple: Walk-Rounds, for example, in which senior officers drop by unannounced to talk with staff about any problems or suggestions, or the creation of ready-made packs with everything needed to start a central line under the most stringent of septic techniques.

Others are more process- and technology-oriented. For example, by thinking more like manufacturers, Emory clinicians have been able to cut turnaround time in getting specimen results from pathology by two-thirds, improving speed of diagnosis and onset of treatment. Perhaps the biggest boost in quality of care comes from Emory's electronic medical record system (EeMR for short), which has been implemented in stages over the past four years.

Predictive health

Emory continued its leadership role in predictive health with the opening this year of the Center for Health Discovery and Well-Being at the Emory Crawford Long campus in midtown Atlanta. The center is part of the Emory/Georgia Tech Predictive Health Institute, whose focus is on maintaining health and preventing or delaying rather than treating disease.

The center initially will enroll several hundred healthy individuals from whom staff will collect

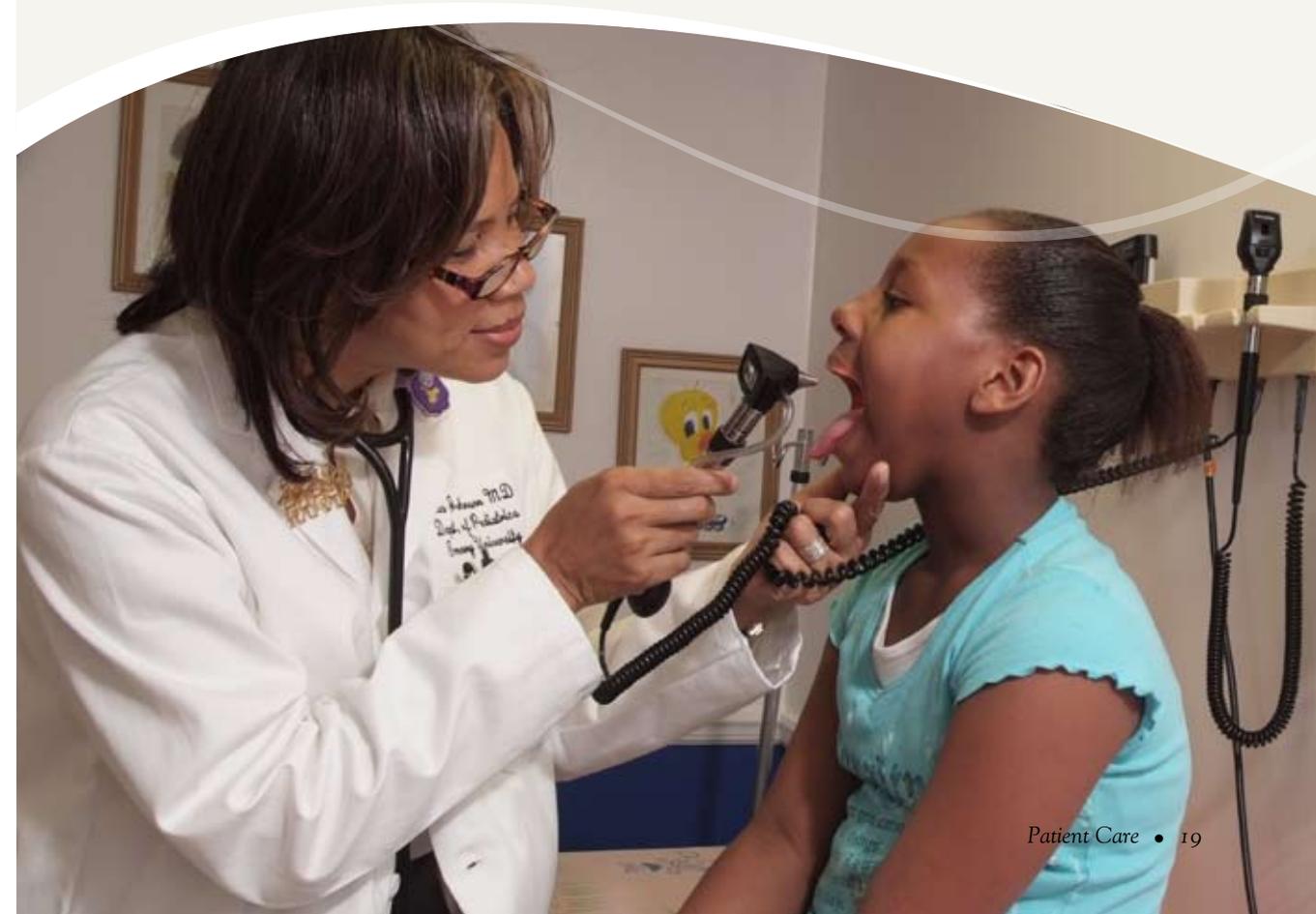
physical, medical, and lifestyle histories, and the results of up to 50 different blood and plasma tests that target known critical predictors of health and illness. Measures of inflammation, immune-system health, metabolic health, and DNA analysis for genes that confer risk will be used to construct a definition of a person's current health to help predict future health. Based on these profiles and on predictive risk models, each participant will be prescribed a personalized health program addressing individual risks, with the goal of remaining healthy.

New clinic complex

This fall marks the groundbreaking for a new facility complex for The Emory Clinic. The architects are HKS Inc, the largest health care architectural firm in the world, with Staubach Company, a global real estate advisory firm, providing project management. Located near the original Emory Clinic site, the facility will rely on evidence-based design to help integrate research and clinical care in an "ideal" patient experience, from parking, arrival, and check-in to examination and



treatment. The Robert W. Woodruff Foundation contributed \$240 million toward this facility, continuing the legacy that Coca-Cola magnate Robert Woodruff began when he helped establish The Emory Clinic more than 50 years ago. Completion of the new complex is expected by 2012.



Every year,

physicians in The Emory Clinic, Emory University Hospital, Emory Crawford Long Hospital, Emory Children's Center, and Wesley Woods Center provide tens of millions of dollars in charity care in addition to unreimbursed care provided in affiliated facilities such as Grady Memorial Hospital.



COMMUNITY SERVICE: Sheer heart, shining through

This past March, a charter bus carrying an Ohio college baseball team en route to Florida plunged over an overpass and landed on another interstate below. When the Emory physician who directs emergency medical services for Grady Memorial Hospital arrived on the site as primary triage officer, he found passengers who had been ejected when the bus hit the overpass barrier, others who were thrown when the bus landed on the highway below, others wounded inside the crumpled vehicle. Four students, the bus driver, and his wife died at the site, and another died later.

As the injured students arrived at Grady's level 1 trauma center, the team of Emory emergency medicine physicians and trauma surgeons went into high gear, the pace at which they so often operate. They and the dedicated nurses and other health care professionals remained as shifts ended, began, and ended again. They saved lives, comforted families, handled an army of reporters, and also cared for the endless stream of regular patients. Times like this, when the sheer heart of Emory medical faculty shines through most dramatically, serve as a reminder of the steady contributions they make to the community all throughout the year.

Lifeline to a struggling public hospital

While Grady Memorial Hospital struggles to provide care to ever-growing numbers of uninsured patients despite a persistently flat budget, Emory continues to provide essential lifelines to this long-time affiliate. Emory medical faculty and residents make up 85% of the physicians at Grady, with Morehouse School of Medicine providing



Grady's trauma team sprang into action when a bus carrying the Bluffton University baseball team crashed through an exit ramp early one morning last March.

the remaining 15%. These physicians provide a substantial amount of charity care to Grady patients. In addition, any reimbursement received for Emory physician services to Grady patients who do have Medicare or other coverage is invested back into Grady via the Emory Medical Care Foundation.

Moreover, Emory specialists make Grady unique in a variety of ways. They offer specialty care (in the hospital's burn unit, for example) that is unavailable elsewhere in the area. Other services that keep Grady in the forefront of medical care include the most comprehensive AIDS program in the country, a regional perinatal center for high-risk moms and babies, a sickle cell center named an NIH Center of Excellence, a nationally lauded TB control program, Georgia's first and only lupus registry, and the Georgia Cancer Center of Excellence clinic.

New ties with an old partner

Children's Healthcare of Atlanta at Egleston has been affiliated with Emory's medical school and staffed primarily by Emory pediatricians throughout its history. But this relationship was strengthened last year when the Emory Children's Center (the largest pediatric multispecialty group practice in Georgia) entered into a joint venture with Children's Healthcare to create a joint faculty physician practice plan.

The relationship between Emory and Children's Healthcare was further enhanced last

At the publicly funded Grady Hospital, 85% of physician care is provided by Emory.



Emergency medicine services at Grady provide a lifeline to the community day in and day out.

year when the latter assumed operation of the pediatric hospital on the Grady Hospital campus where Emory pediatricians have long provided care. Shortly thereafter, Children's Healthcare announced plans to build a new facility for this hospital, which is expected to open in 2009.

New outreach to older adults

Last year, as in every year, thousands of elderly patients came to Emory as inpatients or outpatients. But last year, for the first time, Emory clinicians went to some of them via a new tele-psychiatry program launched by the Fuqua Center for Late-Life Depression.

The center's mission is to improve community awareness regarding depression in older adults while improving their access to treatment. The new program uses video-conferencing to connect Emory psychiatrists to older adults living in rural and underserved communities, many of whom otherwise would not enter or remain in treatment because of distance. Patients who call the Fuqua Center in Atlanta are given the option of going to one of more than 30 sites equipped for telemedicine at various locations throughout Georgia. There, a nurse remains in the room until each session is completed, and family members and the patient's general practitioner also can be present if desired.

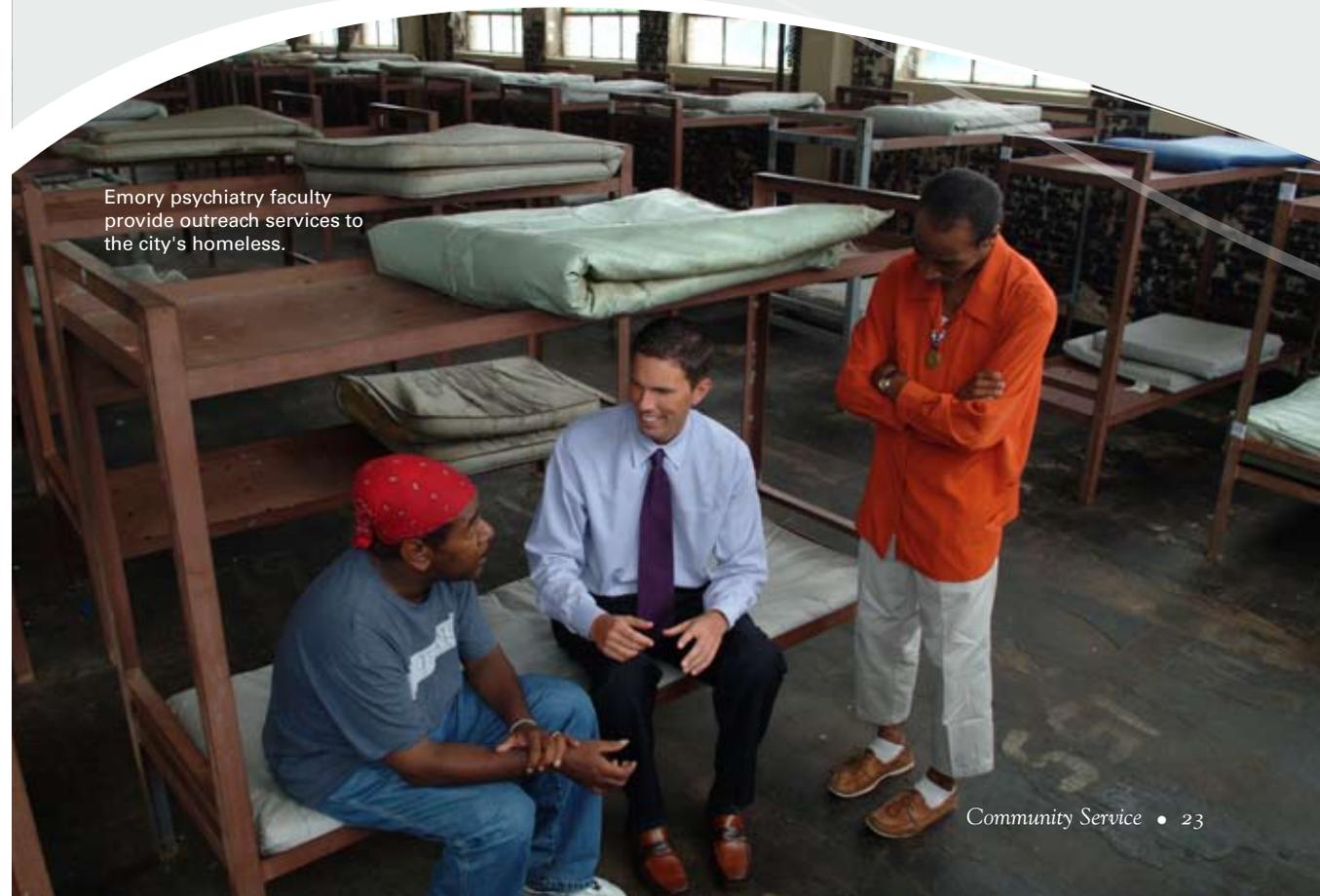
Preparing for catastrophe

One of the recommendations of a task force created last year to examine how Emory University and Emory Healthcare would respond to pandemic flu or other threats was formation of a new office to improve the ability to deliver a coordinated and effective response to all hazards, including natural disasters, human-caused catastrophic events, and public health emergencies. The new Office of Critical Event Preparedness and Response (CEPAR) opened in May, headed by an emergency medicine physician and involving many other medical faculty. Designed to orchestrate a unified and effective response to catastrophic events, CEPAR bridges Emory's catastrophe-related resources, from health care to security to communications, and enhances collaborations with community partners such as sister health care institutions and the U.S. Centers for Disease Control and Prevention.

Reaching out to the world community

The medical school has long been involved in international outreach, including faculty work in the Eurasian nation of Georgia, which has been vital in building the medical education and health care system there. Projects like this recently have been undergirded by Emory's new Global Health Institute (GHI), a university-wide initiative intended to extend and amplify Emory's impact on worldwide health and healing.

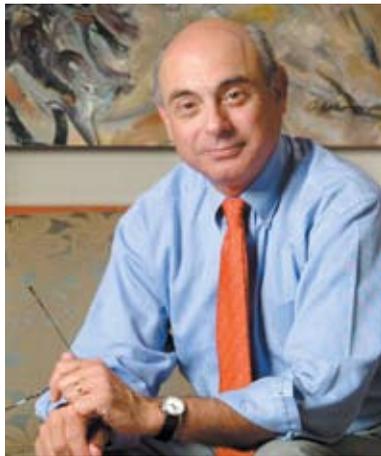
This year, the GHI provided funds to the medical school for a research project focusing on improving global control of tuberculosis. The project is focusing on new drugs, new diagnostics, and an effective vaccine as well as research training for physicians and scientists in Zambia. Faculty in infectious diseases are working closely with colleagues in the Rollins School of Public Health to partner with colleagues in a medical school and teaching hospital in that country to address this serious threat to global health.



Emory psychiatry faculty provide outreach services to the city's homeless.

FROM THE CEO

Dean Thomas Lawley was right when he called this a watershed year for the School of Medicine, with its new curriculum and a new building unmatched anywhere in the country. Even while undertaking the challenge no less of transforming medical education, the school never missed a beat in



advancing its other missions. Its unbroken rise as a research power continued, in funding and in results. Emory physicians are helping create a new model for patient-centered care that will help shape the school's programs, buildings, education, research, and patient outcomes for decades to come.

The school's faculty recruitments this past year (as well as some equally powerful retentions) confirmed the excitement and drawing power of what is happening in the medical school today and the promise of what is to come. We have assembled a critical mass of world-class people who are making world-wide impact.

Indeed, this is a watershed year not just for the medical school but for all of Emory. We have an opportunity few institutions ever get: to become the model of a vital center of learning and care for a new era, to set a new standard for what a major research university can be, to transform health and healing

locally, nationally, and around the globe. The opportunity, in my estimation, is no less than to make this century Emory's century.

I offer my congratulations to Dean Lawley and to the medical faculty as well. I look forward to the school's leadership in creating the health care and health care providers of tomorrow.

Michael M.E. Johns
CEO
Executive Vice President for Health Affairs
Chairman of the Board, Emory Healthcare

HOSPITALS AND CLINICS

Emory medical students and residents benefit from a wide variety of public and private training facilities, ranging from pediatrics to geriatrics.

This includes Emory Healthcare, the largest and most comprehensive health care system in Georgia, which consists of the following:



- **The Emory Clinic**, made up of 900 Emory faculty physicians, the largest, most comprehensive group practice in the state
 - **Emory Children's Center**, the largest pediatric multispecialty group practice in Georgia
 - **Winship Cancer Institute**, with more than 100,000 patient visits annually, 115 ongoing therapeutic trials, and recent research grants totaling more than \$55 million
 - **Emory University Hospital**, a 573-bed adult, tertiary care facility staffed exclusively by 954 Emory faculty physicians
 - **Emory Crawford Long Hospital**, a 511-bed community-based, tertiary care center in Atlanta's midtown, staffed by 600 medical school faculty and 800 community physicians
 - **Wesley Woods Center**, a geriatric center including a 100-bed geriatric specialty facility
 - **Emory Adventist Hospital**, a community hospital located in a rapidly growing suburban county of Atlanta and jointly owned by Emory and Adventist Health System
 - **EHCA, LLC**, a joint venture between Emory and Hospital Corporation of America, including Emory Johns Creek Hospital and Emory Eastside Medical Center
- Affiliates for patient care, teaching, and research include the following:**
- **Grady Memorial Hospital**, a 953-bed facility in downtown Atlanta, staffed primarily by Emory physicians and residents, in collaboration with Morehouse School of Medicine
 - **Children's Healthcare of Atlanta at Egleston**, 239 beds (Emory campus) and Children's Healthcare at Hughes Spalding, 82 beds (Grady campus). Both staffed primarily by Emory pediatricians, including specialists and subspecialists.
 - **Atlanta Veterans Affairs Medical Center**, with 173 hospital beds and 100 nursing home beds, staffed primarily by Emory physicians



THE NEW SCHOOL OF MEDICINE BUILDING IS A BEACON TO STUDENTS,
DESIGNED TO ENHANCE AND CELEBRATE GREAT TEACHING,
A VISIBLE SIGN THAT EMORY HAS NEVER BEEN MORE COMMITTED
TO MEDICAL EDUCATION NOR MORE DETERMINED TO BE
A MODEL FOR TRAINING PHYSICIANS UNIQUELY PREPARED
FOR THE CHALLENGES AND OPPORTUNITIES OF THE 21ST CENTURY.



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