



Bright lights, bigger dreams

ANNUAL REPORT | 2008



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

Contents

- 2 Research: The value and promise of partnership
- 8 Education: The year of the curriculum
- 12 Patient care: Pioneering innovations
- 16 In the community: Meeting vital needs
- 20 From the executive vice president
- 21 Hospitals and clinics



From the Dean

Bright lights, bigger dreams

Last year, our school moved into a beautiful new building and inaugurated a completely revamped curriculum. We received a record amount of research support and made truly remarkable progress in new discovery and innovation as a result. We worked with community leaders to help save a public hospital that provides vital clinical services to Atlanta and beyond. And we are moving forward with plans to construct a new clinic that will help us translate research more easily into care and serve our patients better.

Some might argue that our dreams already have come true. Certainly our forefathers would be amazed and humbled by how far we've come in a short 154 years.

When I interact with those who surround me daily here at Emory, however, I can't help but say that we must keep on dreaming.

I am inspired beyond words, for example, when I look into the bright young faces of the next generation of doctors, when I see not just their smarts but also their eagerness to take action to make health care better and more accessible to all.

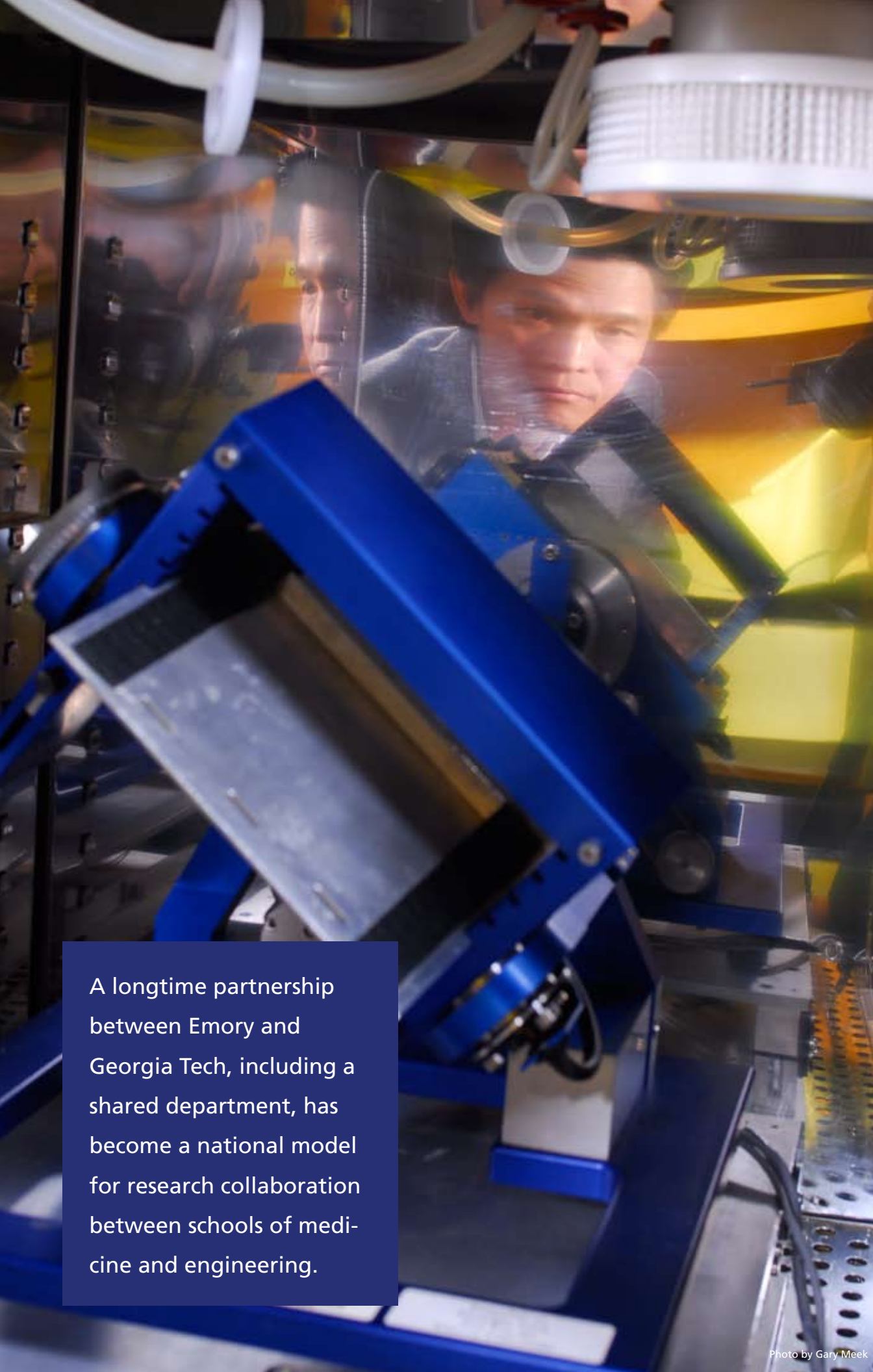
I am inspired by our hard-working faculty—by the unexpected turns their work can take when they collaborate across disciplines, by the creativity and enthusiasm they invest in teaching, by the concern and commitment they show their patients.

And I am grateful to those who partner with us, to organizations like Georgia Research Alliance and Georgia Cancer Coalition, to Georgia Institute of Technology (with which we share a department), and to Children's Healthcare of Atlanta, Atlanta VA Medical Center, Grady Hospital, Morehouse School of Medicine, the Centers for Disease Control and Prevention, the NIH—the list goes on and on.

Together, all these make it possible for us to dream bigger dreams for tomorrow.

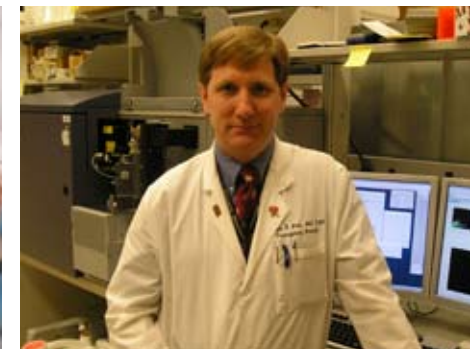
A handwritten signature in black ink that reads "Thomas J. Lawley MD". The signature is fluid and cursive.

Thomas J. Lawley, MD, Dean
Emory University School of Medicine



A longtime partnership between Emory and Georgia Tech, including a shared department, has become a national model for research collaboration between schools of medicine and engineering.

Photo by Gary Meek



Research: The value and promise of partnership

Emory medical researchers made outstanding, sometimes dramatic scientific advances last year. They received \$332.7 million in sponsored research, including awards received by medical faculty at Yerkes National Primate Research Center and at the Atlanta VA Medical Center. From the NIH, Emory's medical researchers received 501 awards (including Yerkes), for a total of \$218 million. The work funded by these awards is premised on the value and promise of partnership.

Unparalleled investments in pediatrics The medical school's long-term partner in pediatric care, Children's Healthcare of Atlanta (which includes Egleston, Scottish Rite, and Hughes Spalding hospitals), recently designated \$430 million of its endowment to pediatric research, citing a desire to leverage partnerships with Emory and Georgia Tech. This investment takes advantage of the large patient base in the Emory-Children's Center, a joint venture between Emory and Children's that forms the largest pediatric multispecialty group practice in Georgia.

In a collaborative effort with the U.S. Department of Health and Human Services, Emory was awarded \$25.5 million to participate in the National Children's Study. Medical school researchers, together with Emory colleagues in public health, are partnering with Morehouse School of Medicine and a technology development company to follow a representative sample of 100,000 children from birth to age 21, seeking information to prevent and treat problems such as autism, birth defects, diabetes, heart disease, and obesity.

The potential of predictive health The Center for Health Discovery and Well-Being, part of the Emory-Georgia Tech Predictive Health Institute, began enrolling its first wave of 700 participants, collecting biologic, imaging, and survey data to learn how to predict, prevent, and reduce specific diseases.

The first areas of focus are oxidative stress, inflammation and other immune responses, and stem cell counts in the body's circulatory system. The institute supports more than 20 research projects on topics including biomarkers to predict risk of cardiovascular and neurodegenerative disease and cancer, prediction of drug treatment toxicity, and predictive health modeling in early infancy.

Top: Emory and Children's Healthcare of Atlanta are teaming up to find new ways to make kidney transplants more tolerable for children. Kids are often over-immunosuppressed, according to transplant surgeon and Georgia Research Alliance eminent scholar Allan Kirk, who is seeking ways to achieve immune tolerance without immunosuppressant drugs.



▲ Emory and its partners together form one of 36 U.S. study centers selected to take part in the National Children's Study, which is examining the impact of environmental and genetic factors on the health of children in this country.

Expansion of clinical trials *New collaborative*—The NIH awarded \$31 million to Emory to support the Atlanta Clinical and Translational Science Institute (ACTSI), with the goal of speeding development of new treatments and getting them into clinical application more efficiently. The ACTSI is led by Emory in partnership with Morehouse School of Medicine, Georgia Tech, and Children's Healthcare of Atlanta. Other collaborators include the Georgia Research Alliance, Georgia Bio, Kaiser Permanente of Georgia, Centers for Disease Control and Prevention, and Atlanta VA Medical Center.

HIV and other infectious diseases—The Emory HIV/AIDS Clinical Trials Unit was selected as a component of both the premier national clinical trials group for new AIDS treatments and the national network for AIDS vaccine prevention trials. The Emory Vaccine Center's Hope Clinic was one of the top-enrolling sites for clinical trials of HIV vaccines sponsored by the HIV Vaccine Trials Network. Emory also was named one of the newest members of a group of vaccine and treatment evaluation units funded by the NIH to conduct clinical trials for all infectious diseases other than AIDS.

Global partnerships The Emory Vaccine Center and the International Center for Genetic Engineering and Biotechnology (ICGEB) joined forces to launch a joint vaccine center in New Delhi. The center's research is focused on AIDS, tuberculosis, hepatitis C, dengue virus, malaria, and other infectious diseases that disproportionately affect the developing world. Emory will provide the funding to support scientific staff in the New Delhi center, and ICGEB will provide space and infrastructure. The new center is a primary focus of the Emory Global Health Institute, a university-wide initiative that fosters international partnerships to address health problems around the world.



Improving transplantation *Increasing the odds of success*—About one-third of the patients on the national waiting list for kidney transplants have only a small chance of receiving a new organ. Because of prior transplants, pregnancies, or blood transfusions, they have developed antibodies that make matching them with donor organs very difficult. The Emory Algorithm, a decision process developed by Emory immunologists and transplant surgeons, uses assay technology—one that identifies a single antibody at a time versus general groups of antibodies—to predict which sensitized patient will be compatible with any given donor.

A recent study found that use of the algorithm raised the rate of transplant in these patients from 15% to 25% and that their survival rate was almost identical to that of nonsensitized patients.

New data library—A newly established Georgia Research Alliance-Emory Transplant Center Biorepository for Translational Science is helping researchers better link their discoveries in the laboratory to the care of organ transplant recipients. The biorepository allows for processing, storage, distribution, and clinical correlation of samples such as blood, tissues, and fluids critical for evaluating new clinical therapies and will become a robust library of conditions that can lead to organ failure.

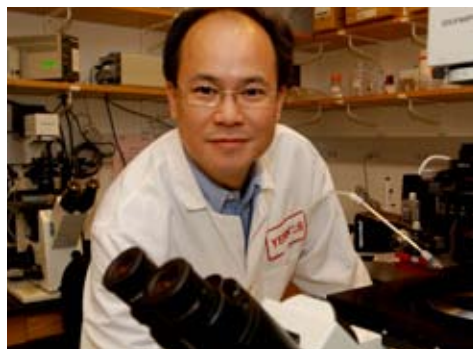
The carbohydrate connection Glycomics, or the study of carbohydrates, may hold keys to understanding what can go wrong in diseases ranging from flu to Alzheimer's. Researchers in Emory's glycomics center, which is part of the NIH Consortium for Functional Glycomics, are using glycomics as a window onto a wide range of inquiries. They have devised what they call "shotgun glycomics" to create microarrays to probe interactions of carbohydrates with other molecules. They are forming collaborations in glycomics to focus on predictive health and disease diagnostics. They plan to use carbohydrates found in the schistosomiasis parasite to develop vaccines against this and other diseases. And they are beginning to probe carbohydrates in the brain, a huge, unexplored universe of glycobiology.

Protecting the mind *Fragile X syndrome*—Emory scientists now understand how a gene mutation alters the way brain cells communicate in this disorder, the most common form of inherited mental retardation. With drugs, they were able to reverse the effects of the mutation in neurons cultured from laboratory rats. They now are screening and identifying the best drugs to try and correct the deficiencies in fragile X in humans.

Autism—The same researchers working on fragile X also head a project funded with support from the Simons Foundation to uncover genes on the X chromosome that may contribute to autism. The ability to examine the entire X chromosome for abnormalities was technically infeasible until re-

Top (l to r): The Georgia Cancer Coalition supports research throughout the Emory Winship Cancer Institute to facilitate collaboration between researchers and clinicians.

The Emory Vaccine Center, directed by Georgia Research Alliance eminent scholar Rafi Ahmed, has teamed with the International Center for Genetic Engineering and Biotechnology to launch a joint vaccine center in New Delhi.



cently. Now, thanks to genomic technology developed at Emory, the researchers are performing a comprehensive search of the X chromosome in 300 patients with autism. If an X-linked variation for autism susceptibility exists somewhere among the 155 million base pairs of this chromosome, this survey should find it, an important first step to uncovering the true basis of this disease and developing diagnostic tests and therapies.

Emory's autism work got a recent boost from affiliation with the Marcus Development Center, which combines resources at Emory, Marcus, Children's Healthcare of Atlanta, and Georgia Tech to diagnose, treat, and support children with autism.

Alzheimer's—A vaccine designed to slow the accumulation of amyloid plaques in the brains of Alzheimer's patients is now in testing at Emory, one of the first of a small number of medical centers across the United States and Sweden to offer the new vaccine developed by Merck. All medications now available to treat Alzheimer's aim to improve the function of the nerve cells that remain alive after others are destroyed. This vaccine aims to prevent or slow the damage in the first place. Using a small piece of naturally occurring beta-amyloid protein, the vaccine is designed to harness the patient's own immune system to produce antibodies against the protein.

Huntington's disease—Working with Emory geneticists, researchers at Yerkes National Primate Research Center developed the first transgenic nonhuman primate model of this disease, one of the most devastating of all neurodegenerative disorders, destroying physical, mental, and emotional control for 10 to 15 years before causing death. In the past, researchers had to rely on mouse models to study Huntington's. The primate model, coupled with powerful neuroimaging capabilities at Yerkes, is providing a more comprehensive view of the disease.

Fighting flu *Vaccine patch*—Researchers from Emory and Georgia Tech received \$11.5 million from the NIH to develop a product that can deliver flu vaccine through painless micro-needles in patches applied to the skin. Using patches instead of needles would not only reduce discomfort but also decrease costs and production time for vaccines. It could also make them more widely available in developing countries.

Stop-gap measure—Emory flu researchers also partnered with scientists from Oklahoma Medical Research Foundation to generate high-affinity monoclonal antibodies against flu virus, using blood samples obtained from human volunteers a month following vaccination. This method could be used to quickly generate human antibodies against a pandemic flu strain as a stop-gap therapy or to protect people from infection. In the face of a disease outbreak, the ability to quickly produce infection-fighting human monoclonal antibodies could be invaluable.

Top (l to r): Yerkes scientist Anthony Chan collaborated with Emory genetics researchers to develop the first nonhuman primate model of Huntington's disease.

Immunologist Cornelia Weyand, co-director of the Lowance Center for Human Immunology, works to define disease mechanisms in chronic inflammation, particularly in blood vessel disease and rheumatoid arthritis.



▲ In neurons cultured from laboratory rats, researchers reversed effects of the genetic mutation in fragile X syndrome, and they now are screening drugs to correct the deficiencies in fragile X in humans.

Strategies against cancer *From quantum dots to colloidal gold*—Emory and Georgia Tech have long collaborated in work with light-emitting semiconductor crystals as a tool to detect cancer. These quantum dot crystals, each 100,000 times smaller than the diameter of a human hair, are fused with antibodies and released into the circulatory system where they grab onto tumor cells with matching antigens and then light up in response to a simple laser light. When translated to humans, this technology may allow doctors to detect and diagnose cancer earlier and less invasively.

Now the scientists believe that colloidal gold—gold particles in suspension—offers some advantages over quantum dots. They are more than 200 times brighter and have a long history of medical use in people with rheumatoid arthritis, greatly reducing concern over potential toxicity. The researchers have been able to detect human cancer cells coated with the gold particles in a mouse at a depth of 2 cm. The goal is to adopt the technology for use in detecting deeper cancers as well and eventually to use the gold to selectively deliver drugs to cancer cells.

Mapping the cancer genome—Researchers in the Emory Winship Cancer Institute are participating in the Cancer Genome Atlas project sponsored by the NIH, supplying cancer tissue and blood samples to be analyzed for genetic alterations. The project aims to collect 500 cases per tumor type. Emory is supplying samples to catalog genetic alterations in glioblastoma, the most aggressive form of brain cancer. A goal of Emory's brain tumor program is to identify characteristic features of subtypes of brain cancer, enabling doctors to design targeted treatment.

New drug therapy—In other cancer work, Emory researchers developed an anti-tumor compound that targets an important "intercept point" for cancer cells, a class of enzymes called PI-3 kinases that occupy valuable real estate in almost every cell in the body. The compound is active against prostate, breast, and renal tumors as well as multiple myeloma, neuroblastoma, glioblastoma, and rhabdomyosarcoma. Doctors in Arizona and Indiana began testing the compound in a clinical trial in people with solid tumors in 2007. Another phase I trial, for multiple myeloma patients, will begin soon at Emory and other locations.



Education: The year of the curriculum

After years of planning and implementation, it finally arrived—the year of the curriculum. In fall 2007, entering Emory medical students were the first to be immersed in a dramatically revamped curriculum designed to shape them into physicians and leaders ready to meet the changing, challenging needs and opportunities of the 21st century.

Students in the class of 2011 are working as hard as those in earlier classes who followed the traditional first-year curriculum of intense basic science lectures. But there are three big differences.

First is that students going through the new curriculum have only half as many large, one-way lecture-style classes and an unprecedented number of small, interactive, group learning classes.

Second is that the new students begin acquiring clinical experience and skills almost from day 1, not only in realistic simulations with patient actors and robots but also in a biweekly outpatient clinic session where they work one-on-one with a mentor physician. No more lockstep progression through basic science lectures for two years before clinical rotations begin. The basic science is still there, but the new curriculum artfully weaves it with real-life patient applications.

The third striking difference is that students in the class of 2011 are jazzed about what they are doing and learning. Based on what practicing doctors and medical students everywhere had told them, they had expected to be tired and miserable during their first year of medical school. Instead, in the words of one student, they find themselves understandably tired but also “ridiculously happy.” Even the hardest work—and there is plenty of it—is infused with purpose. Interactions with patients send students to classes, the anatomy laboratory, the library, and Internet-available teaching materials, with enhanced determination to learn what they need as physicians. Increased faculty interactions, individually and in an extensive society mentoring program, encourage them to raise questions and model behaviors that will make them compassionate, curious, and committed physicians and leaders in their communities.

*Top (l to r): Emergency medicine faculty member **Doug Ander** heads simulation training in the medical school and helps lead team training of medical students with nursing students.*

Emory educators believe that the school's brand of teaching doctors will earn its graduates some of the best residency placements in the country.



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



The building that makes it possible Last year was also the year of the new building, the medical school's new home, designed to accommodate the new curriculum and to maximize students' interaction with faculty, students in other health sciences professions, and each other.

Filled with life, light, and history, the building joins the architecture and soul of flanking anatomy and physiology buildings constructed in 1915. It is the first building on campus to bear the school's name and is a beacon to students that Emory has never been more committed to medical education nor more determined to be a model for training physicians.

The building made possible an immediate 15% increase in class size, with another such increase anticipated in the next decade to help alleviate a projected U.S. physician shortage.

The building also makes the curriculum go, with spaces designed for small-group learning, wireless technology, state-of-the-art computer-teaching labs open around the clock, anatomy space believed to be the finest in any medical school anywhere, and simulation space designed to immerse students in situations calling for speed, accuracy, teamwork, and sensitivity to patients and families.

If it's not broken. . . Emory medical students have come from among the most highly-ranked, competitive college graduates in the nation, routinely scoring in the top 5% of the MCAT. Once here, they have always done well by all the usual measures. In 2007, for example, the pass rate for first-time takers of part 1 of the National Board Exam was 99%, a figure consistent with previous years. The vast majority of each year's graduates receive their top choices for residency training.

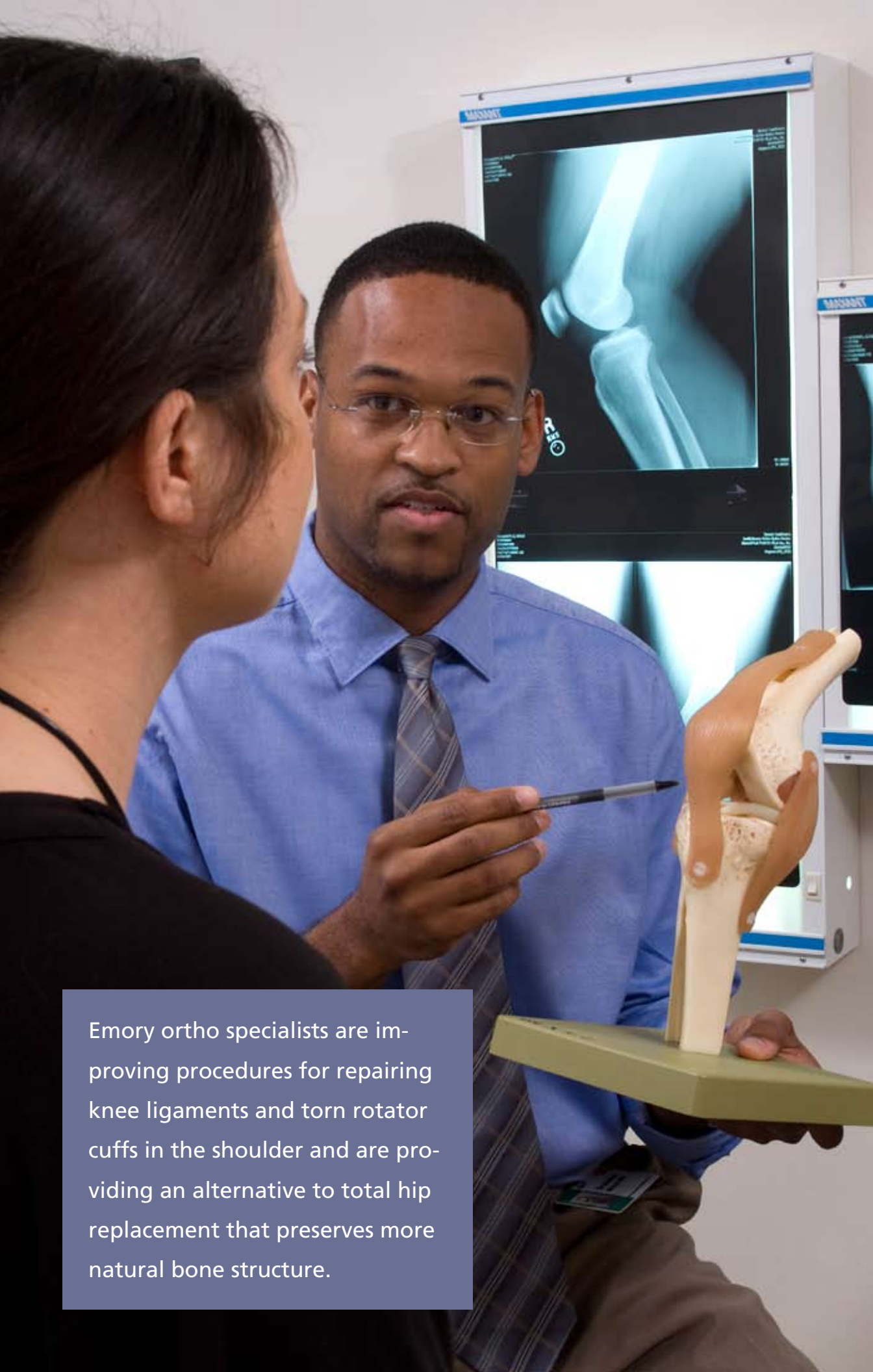
With such good results, why did the medical school want to change the curriculum in the first place?

With research breakthroughs making their way to patients' bedsides ever more expeditiously, medical students must absorb more, more quickly—and become lifelong learners, at ease with change. They must have knowledge that equips them to provide revolutionary health care. And they need a firm grounding in the social sciences and humanities and in working in multidisciplinary, patient-centered teams.

First-year students love the new curriculum, but they admit to concern that its nontraditional approach takes them to board exams after only a year and a half of schooling, spent largely in learning the basic sciences not in isolation but as they apply to clinical situations.

Will that mean they perform less well on the boards than generations of their predecessors? Possibly. But the medical school's philosophy with the new curriculum is that preparing good doctors is more important than teaching to the boards. Emory educators believe that their students will do better than well enough and that Emory's brand of teaching doctors in the end also will earn its graduates some of the best residency placements in the country.

Curriculum and building are critical, but teaching is what makes good doctors. The way students are educated and treated will affect how they take care of patients and interact with others throughout their lives. Teaching is where Emory most excels, as it has done throughout its history. If the building was designed for the students, the faculty are its heroes, the ones who are using the facility to move their new curriculum forward and to make their students all that they can and should be.



Emory ortho specialists are improving procedures for repairing knee ligaments and torn rotator cuffs in the shoulder and are providing an alternative to total hip replacement that preserves more natural bone structure.



Patient care: Pioneering innovations

Each year, Emory medical faculty are responsible for approximately 3.6 million patient visits, providing care that covers the full spectrum of medicine, from fetal to geriatric, from preventive and primary care to the most specialized care in the region. They practice in both public and private facilities, including those within Emory Healthcare, the largest, most comprehensive clinical system in Georgia.

Refinements in heart care *Valve replacement*—Emory interventional cardiologists are moving forward with clinical trials of nonsurgical aortic valve replacement in high-risk patients with aortic stenosis. They place the valve via catheter through a small incision in the groin or chest wall. Thus far, they have done 24 such procedures, with a success rate of 100%. The procedure is easier on the patient, offers quicker recovery time, and may extend the lives of people too ill or frail to endure open-heart surgery. The hospital is one of five nationwide and the first in the Southeast to participate in this trial.

Improving electrophysiology—In other heart work, Emory cardiologists are using a new robotic catheter system, called Sensei, to improve treatment of arrhythmia. The system improves precision and stability for the electrophysiologist in guiding a catheter to destroy heart cells whose electrical misfires stimulate the abnormal heart rhythm. The system is remote, minimizing physician exposure to radiation and allowing the physician to sit during the procedure, which helps reduce fatigue during long or multiple cases.

Repairing tissue—Colleagues in cardiology and hematology/oncology are collaborating in clinical trials in which patients receive varying doses of bone marrow stem cells that have shown promise in improving circulation around damaged heart muscle. Their work focuses on a signaling molecule released by damaged tissue to help guide stem cells to sites where tissue repair is needed.

Treatment advances in cancer *Better breast imaging*—In an Emory clinical trial of more than 1,000 patients at elevated risk for breast cancer, stereoscopic digital mammography reduced false-positive findings by 49% and missed lesions by 40%, compared with standard

Top (l to r): Emory's diverse clinical environment provides rich testing ground for medical faculty to pioneer advances enhancing quality of care, patient access, and affordability as well as innovations in diagnosis and therapy.

Georgia Cancer Coalition scholar Carl D'Orsi, director of breast imaging, led a clinical trial of stereo mammography, which reduced false-positive findings by 49% and missed lesions by 40%.



▲ Georgia Cancer Coalition scholar **Walter Curran** (far right) is principal investigator of the national Radiation Therapy Oncology Group, which gives patients access to clinical trials for treatments for various cancers, including brain, head and neck, lung, gastrointestinal, genitourinary, cervix, and breast.

digital mammography. Stereo mammography, which allows radiologists to see the internal structure of the breast in three dimensions, may change standard mammography. Increasing its use would require only simple upgrades to existing digital mammography equipment and software, and such images take no more time to read than standard mammograms.

Taking better aim—This year Emory's Winship Cancer Institute implemented several new technologies to improve radiation therapy. Winship became the first cancer facility in Georgia, for example, to use a new localization system allowing radiation oncologists to detect and monitor slight movement of prostate tumors and thereby deliver higher doses of radiation while minimizing or avoiding irradiation of adjacent healthy tissue.

Winship also was the beta test site for a new state-of-the-art system for radiation of tumors deep within the brain. The system can be used also for primary lung cancers, liver and pancreatic cancers, and bone metastases.

Inside the brain *Depression*—Emory clinicians were pioneers in use of deep brain stimulation (DBS) in Parkinson's and other movement disorders and now are using DBS in patients whose depression has been unresponsive to other therapies. They helped pinpoint a location in the brain called area 25 that regulates depressed mood and found that this region responds to DBS, opening a promising new line of treatment for depression.

Alzheimer's—Working with colleagues at Georgia Tech, Emory clinicians developed a new helmet device that can quickly and cheaply detect the impaired memory and reaction



time associated with the earliest stages of Alzheimer's disease. The device, called "Detect," includes an LCD display in a visor with an onboard dedicated computer and noise-reduction headphones. The test takes only 10 minutes and costs so little and is so simple to administer that it could be part of a routine medical check-up in virtually any setting.

Preliminary studies at Emory's Wesley Woods Center have shown that the test is similar in accuracy to the "gold standard" pen and paper test that requires 90 minutes and must be given by a trained technician in a quiet environment. The device is expected to become available commercially soon. Another version is being tested to detect mild concussions during high-impact sports or on a battlefield.

Stroke—Time is tissue. After stroke, time lost is tissue lost, which is why quick intervention is so imperative. Recently, Emory became one of the nation's first "neuro rescue" training and certification facilities, hosting physicians from around the country for an interactive, simulation-based stroke intervention course, launched by the Society for Cardiovascular Angiography and Interventions. Using hands-on simulation, cardiologists were able to practice removing a clot from the brain, using a newly FDA-approved catheter-based clot-retrieval device.

Top (l to r): Neuroscientist Helen Mayberg is using deep brain stimulation in patients with treatment-resistant depression, with clinical trials indicating thus far that DBS is generally safe and provides significant improvement. Using hands-on simulation, cardiologist Christopher Cates teaches physicians how to capture and remove blood clots in the brain via catheter. Emory recently hosted an inaugural "neuro rescue" course for more than 20 physicians around the country.

New facilities, present and planned Emory University Orthopaedics & Spine Hospital, an extension of Emory's acute care hospital on Clifton Road, opened in suburban Atlanta in fall 2008. The six-story facility, with 208,000 square feet of space including a medical office building, concentrates orthopaedics and spine surgery at one location to facilitate better recovery times, safety, and patient satisfaction. The hospital joins Emory Healthcare's other hospitals and clinic as part of the largest and most comprehensive health care system in Georgia (see inside back cover).

Construction of a new 395,000-square-foot Emory Clinic facility, adjacent to current clinic buildings on the Emory campus, is slated to begin in 2009. Construction of a new 250-bed hospital facility, including 100 replacement beds for the current Emory University Hospital, is slated to begin in 2010. Plans also call for eventual new clinic and hospital space at Emory's midtown campus as well as new research space on both sites that will facilitate collaboration between clinicians and scientists.

Planning for all of these facilities involves input from a diverse range of stakeholders—from clinicians, researchers, educators, administrators, and staff to patients and their families.



In the community: Meeting vital needs

In addition to the millions of dollars provided by Emory physicians in charity care each year at each of Emory's own clinical facilities, Emory faculty provide 85% of physician care at Grady Memorial Hospital. This safety net public hospital has Atlanta's only level 1 trauma center and burn center, Georgia's only poison control center, and one of the country's largest and most comprehensive HIV/AIDS programs, among other lifesaving services.

Throughout the past decade, as indeed throughout the past century, Emory has provided a solid rock of support to Grady Hospital, making possible a huge amount of high-quality care, much of it to patients with little or no resources or medical coverage.

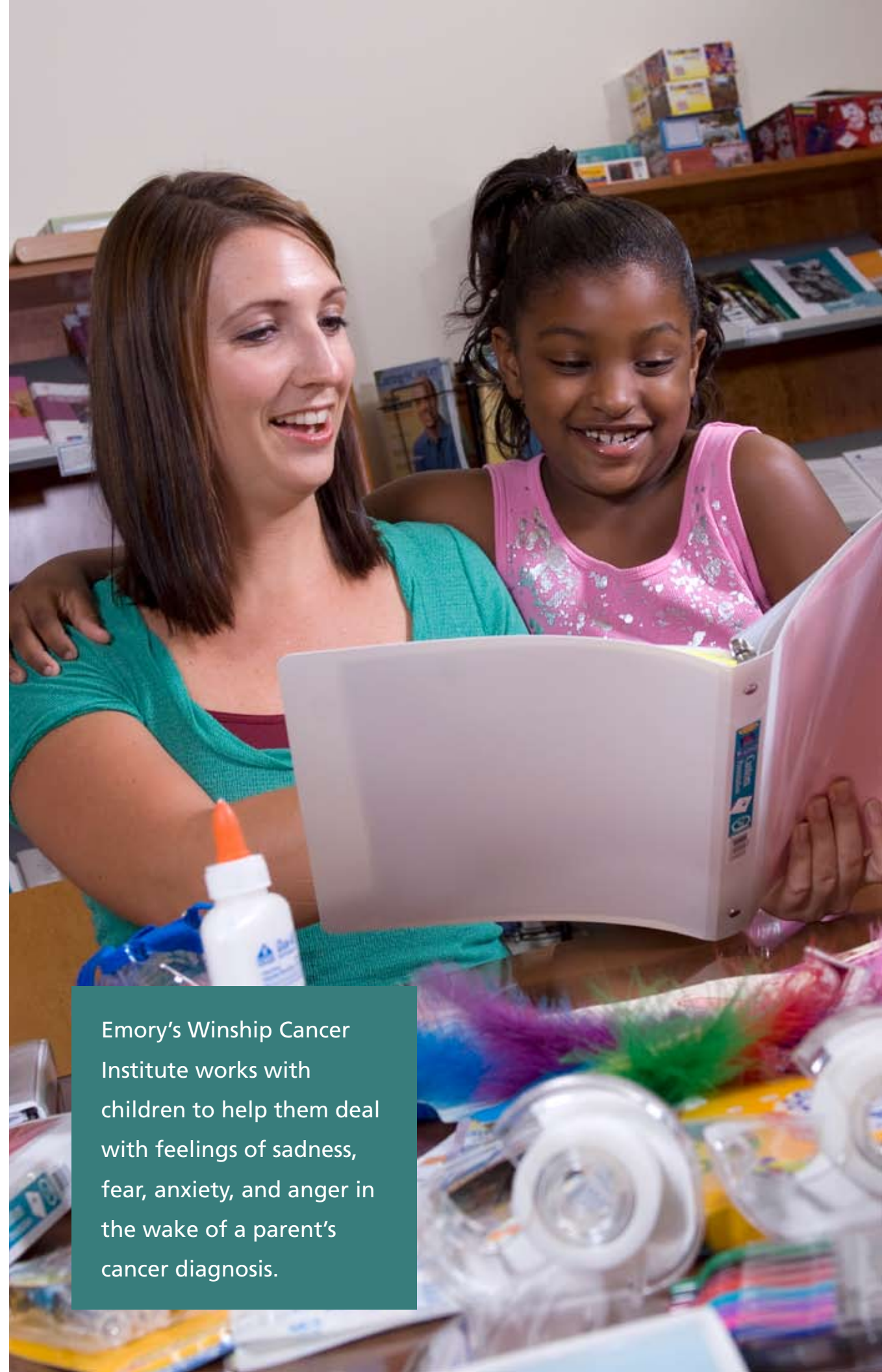
Grady has long been in dire financial straits, operating at a loss in 10 of the past 11 years. This past year, Grady was in grave danger of closing its doors. Leaders at Emory and Morehouse School of Medicine, which also provides care at Grady, worked closely with Atlanta business and other leaders to help resuscitate this vital facility.

Today, with a new nonprofit status, a new private board of business and community leaders, and a consequent infusion of private and government funding, Grady appears to be on the way to recovery.

Student work on behalf of Grady A pivotal force over the past year in discussions about how to save Grady Hospital was a student lobbying/advocacy nonprofit group founded at Emory. HealthSTAT (health students taking action together) began in 2001 when a handful of medical students from Emory and Morehouse decided to hold a candlelight vigil to raise awareness of the plight of the uninsured.

HealthSTAT's "Grady Is Vital" campaign this year showed the sophistication and organizing power the group has attained during its seven years of existence. Students from schools throughout Georgia in medicine, nursing, pharmacy, physical therapy, and public health prepared fact sheets, delivered handwritten letters to the governor, mailed 5,000 postcards to the general public, organized tours of Grady for legislators, and held a rally attended by 350 students, residents, and faculty. HealthSTAT isn't through, however. The students see

Top (l to r): Emory pediatrician Robert Geller directs Grady's Poison Control Center, which provides 24/7 care and guidance in potentially dangerous situations. Emory medical students helped found HealthSTAT (health students taking action together), which led a "Grady Is Vital" campaign this past year to help save the financially endangered public hospital.



Emory's Winship Cancer Institute works with children to help them deal with feelings of sadness, fear, anxiety, and anger in the wake of a parent's cancer diagnosis.



▲ Last fall, several medical students and faculty traveled to Casse, a small town in Haiti, to provide care in a mobile clinic. Many of the 1,000 patients the team saw had never seen a health care provider before.

Grady's problems as the canary in the coal mine and plan to continue advocating both for the hospital and for the uninsured.

Other student community efforts *Pipeline Program*—Created by Emory medical students, this program helps disadvantaged high school students learn more about science and medicine with the hope that they will consider possible careers in these fields. Medical students have worked with students at South Atlanta High School, 90% of whom live in households with income below the federal poverty line. Now, with medical students as teachers, these young people are learning how to use epidemiologic concepts to solve case studies. As one excited high-schooler said, "I never knew I was so smart!"

Emory MediShare—This is an offshoot of Project MediShare, which provides care to people in Haiti. Last year, students and faculty traveled to the town of Casse, whose residents typically must walk half a day on roads that often are flooded and impassable to access any medical care. Based on their work in a mobile clinic there, the students decided to create Project Casse in collaboration with students from Morehouse. The project's goal is to transform a run-down dispensary in Casse into a permanent medical and maternity clinic.

Outreach in cancer *Project CLIMB*—Emory is known for its programs to help children with cancer and adults who had childhood cancer. Last year the Emory Winship Cancer Institute was certified by the Children's Treehouse Foundation to provide a program known as Children's Lives Include Moments of Bravery, or CLIMB, that works to help children deal with feelings of sadness, fear, anxiety, or anger in the wake of a parent's cancer diagnosis. A separate program provides support to the parents themselves, who do not have to be Emory patients.



Navigating the system—The higher cancer burden of low-income minorities stems largely from their low screening rates for cancer. That changed when Emory provided a patient navigator to patients referred for screening colonoscopies. The patients were uninsured or had public insurance; many had other barriers. But those who were assigned a patient navigator to help facilitate the process of scheduling a colonoscopy and answer questions about the procedure were much more likely to get the screening—more than half compared with just 13% of patients without the navigator. The study was the first randomized trial to evaluate the effectiveness of patient navigators in increasing colonoscopy screening in low-income minorities.

Extending care throughout the state—Last year Emory doctors coordinated the first state-wide cancer clinical trial in Georgia for early-stage breast cancer, working with the Georgia Center for Oncology Research and Education (Georgia CORE). The study also was the first of its kind in Georgia in which an investigator from an academic medical facility enrolled patients in collaboration with community-based oncology practices and other academic centers.

The Georgia CORE is an independent collaboration of clinicians, scientists, educators, public health practitioners, and those affected by cancer.

Top (l to r): Breast cancer surgeon Sheryl Gabram has found that an outreach program to help African American women navigate the health care system helped double the proportion of cases of breast cancer caught at early stage.

Emory pediatrician Yuri Okuizumi-Wu helps run health clinics at elementary and middle schools in an underserved community near Grady Hospital.

Bringing hope via the marketplace More than nine of every 10 Americans receiving treatment for AIDS this year—and many AIDS sufferers around the world—benefit from an AIDS drug developed by Emory scientists. Now an Emory start-up named GeoVax has developed an HIV/AIDS vaccine for which phase 1 clinical trial results have been so promising that the company plans to begin phase 2 trials a year ahead of schedule.

Another Emory biotech start-up, NeurOp, is developing a novel drug treatment for stroke victims. The drug blocks a protein responsible for as much as half of the brain damage caused by stroke and could fill an enormous unmet medical need. Clot busters, the only drug therapy currently available for stroke, can be used only if the stroke is caused by a clot and not by hemorrhage. This new drug could be used regardless of

stroke type and could be administered by paramedics on the way to the hospital.

Products like these can benefit not only patients but also the economy. Emory has launched 46 biotech start-up companies over the past decade, with eight therapeutic products in the marketplace and 20 others in development or approval.



From the executive vice president

Bigger dreams, together

It is truly appropriate that our partnerships within and beyond Emory are highlighted throughout this annual report because they illustrate our vision in the Woodruff Health Sciences Center: transforming health and healing ... together. That last word, “together,” is crucial. Without it, the “transforming” part just is not possible.

The medical school is helping us all achieve our vision. By working together with the other components of the health sciences center—the schools of nursing and public health, Yerkes National Primate Research Center, and Emory Healthcare—the whole is greater than the sum of its parts.

As you can read in the preceding pages, for example, medical faculty have worked with colleagues in public health to help lead the Georgia arm of the National Children’s Study. They worked with scientists at Yerkes in developing the first nonhuman primate model of Huntington’s disease. They joined with nursing colleagues to teach students from both schools to work as a team in simulated cases to prepare for real patients. And they are working throughout Emory Healthcare to translate new innovations like stereoscopic mammography more quickly to patient benefit and to enhance quality of care by involving patients and their families in the process.

I am proud of what we have accomplished together in the past year because it helps predict how well we will achieve our goals, which in turn will benefit those we serve: our students, patients, and community.

Fred Sanfilippo, MD, PhD
Executive VP for Health Affairs
CEO, Woodruff Health Sciences Center
Chairman, 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, and several affiliate hospitals:

EMORY HEALTHCARE

- **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
- **Emory 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 579-bed adult, tertiary care facility staffed exclusively by 960 Emory faculty physicians
- **Emory Crawford Long Hospital**, a 511-bed community-based, tertiary care center in Atlanta’s midtown, staffed by 930 medical school faculty and 530 community physicians
- **Wesley Woods Center**, a geriatric center including a 100-bed hospital
- **Emory University Orthopaedic & Spine Hospital**, a 120-bed hospital staffed by Emory faculty
- **Emory Adventist Hospital**, a community hospital located in a rapidly growing suburb 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

- **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**, 235 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



Bright lights, bigger dreams ANNUAL REPORT | 2008



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE



| | |
|--|---------------|
| | NONPROFIT ORG |
| | U.S. POSTAGE |
| | PAID |
| | EMORY |
| | UNIVERSITY |