

WINTER 2007

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THE MAGAZINE OF WEILL CORNELL MEDICAL COLLEGE AND WEILL CORNELL GRADUATE SCHOOL OF MEDICAL SCIENCES

**SPECIAL
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REPORT**

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to improve health around the world

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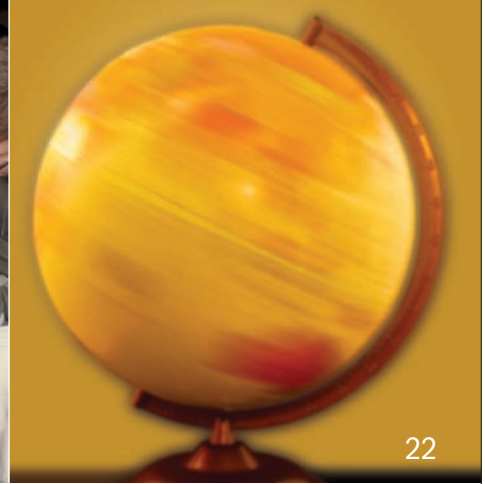
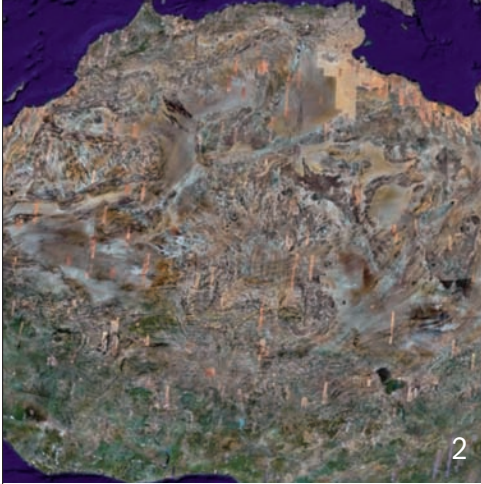
Weill Cornell Medical College

DISCOVERIES
THAT MAKE A DIFFERENCE

THE CAMPAIGN FOR WEILL CORNELL MEDICAL COLLEGE

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THE MAGAZINE OF WEILL CORNELL MEDICAL COLLEGE AND WEILL CORNELL GRADUATE SCHOOL OF MEDICAL SCIENCES



18 GOING GLOBAL

JENNIFER ARMSTRONG

The number of medical students who study abroad is on the rise, with many opting to visit underserved regions. For some, it's a life-changing experience—as they see firsthand how health care is delivered in places where doctors are few, resources are meager, and modern diagnostics are all but unheard of.

22 INTERNATIONAL INTRIGUE

BETH SAULNIER

Early one morning in October, Dean Antonio Gotto and Board of Overseers Chairman Sanford Weill sat down with *Weill Cornell Medicine* to discuss the Medical College's international interests. With the Qatar branch hitting its stride and a new affiliation in Tanzania, where will Weill Cornell focus its next global efforts?

26 OASIS OF KNOWLEDGE

BETH SAULNIER

Weill Cornell Medical College in Qatar is about to graduate its inaugural class, sixteen men and women from the Middle East and beyond. In less than a decade, Cornell University and the emirate have gone from tentative steps toward collaboration to a partnership that will grant the first MDs from an American medical school on foreign soil.

32 25,000 : 1

TOBIN LEVY

It's the ratio of patients to physicians in Tanzania—compared with 400 to 1 in the U.S. But a new collaboration with the Weill Bugando medical school and hospital aims to narrow that gap. By helping to train the next generation of medical professionals, Weill Cornell hopes to improve health care in a severely underserved country.

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An extraordinary gentleman

Cover photograph provided by NASA

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All the World

Antonio M. Gotto Jr., MD, DPhil, Dean of the Medical College

■ IN THE PASTORAL COMEDY *AS YOU LIKE IT*, William Shakespeare's Jaques famously declared: "All the world's a stage." Although the oft-quoted passage relates life to a play and those doing the living as the players, we at NewYork-Presbyterian Hospital/Weill

Many of WCMC-Q's first students have already embraced a spirit of international collaboration. Muhamed Baljevic, Class of 2009, has become the first Qatar student to take a year out of the program to pursue a research project. Thanks to the generosity of Ambassador Hushang Ansary, member of the Board of Overseers and chairman of the International Affairs Committee, he is working in the Ansary Center for Stem Cell Therapeutics on our New York City campus. When Muhamed returns to Doha, his burgeoning medical career will have been enriched because of his willingness to follow an academic path that stretched beyond traditional borders.

One of Weill Cornell's missions is to ensure that such opportunities for research and partnership are available to all who seek them. Currently, Weill Cornell enjoys affiliations with ten international institutions, including the Weill Bugando Medical Center in Tanzania, American Hospital in Paris, St. Luke's Medical Center in the Philippines, and the Nightingale Hospital in Turkey. Next year, NewYork-Presbyterian Hospital/Weill Cornell Medical Center will celebrate ten years of collaboration with the Vehbi Koç Foundation American Hospital in Istanbul, a relationship that has its roots in my own thirty-year friendship with Mr. Koç. Also, construction of the new Cornell-GHESKIO Institute of Infectious Diseases and Reproductive Health is well under way in Haiti. Placed in the heart of the communities they serve, these facilities not only administer care to the local population but allow for promising students to remain home for their medical studies.

As health care and disease prevention are very much global concerns, Weill Cornell must remain a global institution, positioned at the forefront of the international medical community. We must realize that the scope of our work extends far beyond our own laboratories and clinics. We must seek remedies for the many diseases that afflict our entire planet. Enlisting physicians, researchers, and students from around the world can only advance that goal.

— Dean Antonio Gotto



GOOGLE EARTH

Cornell Medical Center can deduce more from those words. We know that all the world is our hospital, our laboratory, and our classroom.

Our presence in the global health community was established long ago and has enjoyed continued growth and prominence. This fall, Weill Cornell Medical College in Qatar (WCMC-Q) enrolled its fourth class of students. The thirty-strong group is larger than its three predecessors and welcomed students from Qatar, India, Lebanon, Jordan, and the United States who are taking their first steps toward becoming physicians. Our Qatar campus is the first American medical school to be established overseas, joining the clinical and academic excellence of Weill Cornell with the brightest international minds.

Beyond the Lab

David P. Hajjar, PhD, Dean of the Graduate School of Medical Sciences

RESearchers are a tireless sort, striving to construct meaningful analysis and theories from thousands of bits of data. Often, studies conducted at our medical and graduate schools will yield medicines and treatments that will be of greatest benefit to populations thousands of miles away. That is one of the vows of medicine—to offer aid wherever the need is greatest—and that often means leaving the comfort of your own lab.

Basic laboratory and patient-centered research can be even more effective when carried out in the heart of those needy areas. The Division of International Medicine and Infectious Diseases in the Department of Medicine boasts a number of accomplished physician-scientists who conduct research in such varied locations as Brazil, Haiti, India, and Tunisia. The work at these international facilities involves prevention, pathogenesis, and the treatment of bacterial, viral, and parasitic infectious diseases.

Our presence and ability to extend ourselves beyond the traditional laboratory setting has been invaluable from a research standpoint, since we are able to study disease and prevention where the burden of sickness is heaviest. That means malaria and sexually transmitted diseases in Haiti, leptospirosis and bacterial meningitis in Brazil, and immunoregulation of host response to antileishmanial therapy in India and Tunisia.

In Brazil, researchers were able to single out a protein located on the surface of the bacterium *Leptospira interrogans*, which is responsible for leptospirosis, a major public health threat in the urban slums of developing countries like Brazil. The disease is passed from animals to humans through close contact. Epidemics of rat-borne leptospirosis occur annually in Brazil during the rainy season. Contributing researchers like our Dr. Albert Ko were able to discover the active agent causing the disease—which was previously unknown—where it wreaks the most havoc.

Perhaps no institution exemplifies the benefits of conducting research on the front lines better than GHESKIO, the clinic in Haiti that works directly with



GOOGLE EARTH

the Haitian population as it struggles with HIV and other diseases. “The beauty of the work we do,” says Dr. Jean Pape, the director of GHESKIO and a professor of medicine, “is that we’re able to do the research and implement the results right away.”

Poorer nations are especially affected by infectious disease, and by conducting research in those stricken areas we are giving a more immediate hope to those who will prosper most through our discoveries. This winter, a delegation from our New York City and Ithaca campuses will travel to India in search of increased and deeper collaborations with the medical community there. The hope is to study the links among agriculture, nutrition, and infectious disease. Better farming could mean better food and, ultimately, better health.

Indeed, the research will tell us.

— Dean David Hajjar



NEIL SHAH

Former Surgery Chairman Dies

IN OCTOBER, FORMER WEILL CORNELL PROFESSOR AND DEAN G. Tom Shires, MD, passed away in Henderson, Nevada. He was eighty-one and suffering from gastrointestinal cancer. An accomplished surgeon and trauma expert, Shires chaired the Department of Surgery from 1975 to 1991, serving as dean and provost for medical affairs from 1987 to 1991. He was a driving force behind the establishment of the William Randolph Hearst Burn Center at NewYork-Presbyterian/Weill Cornell in 1976.

Shires came to national attention following the assassination of President John F. Kennedy when—as medical director of trauma services at Parkland Memorial Hospital in Dallas—he issued a statement about the gravity of the president’s injuries, noting, “I am absolutely sure he never knew what hit him.” He performed emergency surgery on Texas Governor John Connally, who had been shot along with Kennedy.

Born on November 22, 1925, Shires grew up in Texas; at the time of his death he was director of the



G. Tom Shires, MD

Dr. Photographer: This image of a Tanzanian marketplace was among the entries in the 2007 Medical Complex Art Show. It was taken by Neil Shah, MD '07, during his six-week rotation to Weill Bugando Medical Centre. Shah will return to Weill Cornell for a radiology residency in July.

Trauma Institute of the University of Nevada School of Medicine in Las Vegas. He is survived by his wife, three children, and three grandchildren.

Schafer Heads Department of Medicine

ANDREW SCHAFER, MD, HAS BEEN NAMED CHAIRMAN OF THE Department of Medicine and physician-in-chief of NewYork-Presbyterian Hospital/Weill Cornell Medical Center. Schafer, a hematologist, joins the Medical College from the University of Pennsylvania School of Medicine, where he served as chairman of medicine for the past five years. An authority on coagulation, thrombosis, hemostasis, platelet function, and vascular cell biology, Schafer has nearly three decades of experience as an educator and physician. President of the American Society of Hematology, he has authored more than 200 papers in the field. Says Dean Antonio Gotto: “His research expertise, administrative skill, and commitment to education and clinical acumen make him an ideal choice.”

Diagnosing a Maestro

MEDICINE HELPED EXPLAIN ART DURING A PRESENTATION ON THE psychology of composer and conductor Leonard Bernstein in September. Richard Kogan, MD, a clinical instructor in psychiatry, offered a lecture and performance entitled “*West Side Story* at 50: The Mind and Music of Leonard Bernstein,” in which he examined Bernstein’s history of depression and analyzed the relationship between the composer’s mental health and his creativity. A classically trained pianist, Kogan also performed selections from Bernstein’s oeuvre, including a medley of *West Side Story* classics. Bernstein, Kogan noted, had a difficult relationship with his father, who severely disapproved of his career choice. “He could easily access ecstatic states when he performed,” Kogan said. “That seemed to make him vulnerable to depression as well.” The event was held under the auspices of Weill Cornell’s Humanities and Medicine program.

Emergency Notification System Updated

A NEW, MORE EFFICIENT EMERGENCY NOTIFICATION SYSTEM HAS BEEN put into effect for the Medical College. Called MessageOne AlertFind, the system will allow the Emergency Operations Team to quickly communicate with the Weill Cornell community via e-mail, cell phones, and text messaging. Leaders from each department and administrative unit have been added to the system, along with all medical students. The system is also connected to NewYork-Presbyterian Hospital to ensure coordination of emergency operations. For more information, go to emergency.med.cornell.edu.

T-Shirts Do No Harm

GRADUATING MDs MAY HAVE LESS TROUBLE MEMORIZING WEILL Cornell’s revised Hippocratic Oath, thanks to Adelino Guimaraes, manager of the Medical College bookstore. Guimaraes has created a T-shirt with the oath printed on it, with some of the proceeds going to support student financial aid. (Crafted by a committee of students and faculty, the new oath debuted at the 2005 commencement.) The popular design is Guimaraes’s second T-shirt creation; the first one, emblazoned on baby and toddler clothes, declared, “Be Nice to Me. I Could Be Your Doctor Someday.”

Design Kudos for Weill Greenberg Center

THE WEILL GREENBERG CENTER, LOCATED AT THE CORNER OF YORK Avenue and 70th Street and dedicated in January, has garnered awards for several of the architecture and design firms that helped create it. In June, the Greater New York Construction User Council named the Center the year’s outstanding health-care project. Ballinger, the Philadelphia firm that did the interior work, was also recognized by *Interior Design* magazine, which chose the Center as the best of 2007 in the health-care division. Another magazine, *New York Construction*, gave contractor Bovis Lend Lease an award of merit for its role in building the Center. And Polshek Partnership

Architects was recognized with a Best of 2006 Award from *Healthcare Design* magazine. “The design of this new world-class center creates an environment that promotes health and healing,” the magazine said, “while recognizing the stature of the Medical College’s eminent physicians and state-of-the-art clinical services.”

White House Lauds Psychologist

IN NOVEMBER, ASSOCIATE PROFESSOR OF PSYCHOLOGY BRUCE McCandliss, PhD, was honored at the White House with the nation’s highest award for young scientists. McCandliss received a Presidential Early Career Award, recognizing his research into the biological basis for language development and dysfunction. Using brain imaging and other techniques, McCandliss is working to develop ways to treat dyslexia and other language disabilities. A co-founder of Reading Works, a program in the New York City public schools that aids students struggling with reading skills, McCandliss was one of fifty-six scientists and engineers honored in the ceremony.

Diabetes: A Surgical Approach

ONE OF THE NATION’S FIRST ACADEMIC PROGRAMS DEDICATED TO THE surgical treatment of Type 2 diabetes has opened at Weill Cornell. Led by Francesco Rubino, MD, an authority in the field, the new section of Gastrointestinal Metabolic Surgery will focus on procedures to treat diabetes directly—not simply via weight-loss surgery. In a study in the *Annals of Surgery*, Rubino reported that a procedure in which the small intestine is rerouted—but the stomach left intact—can dramatically reduce diabetes in animals. (The technique is known as Rubino’s Procedure.) He also has expertise in laparoscopic approaches to gastric bypass, gastric banding, and other related surgeries, and has done research on mechanisms of appetite control following such procedures. “As one of the world’s leaders in the research, teaching, and practice of metabolic and weight-loss surgery, his approaches hold an enormous promise for the millions in America and worldwide living with obesity and diabetes,” says surgery chairman Fabrizio Michelassi, MD.

Cardiologist Stephen Scheidt, 67

STEPHEN SCHEIDT, MD, WHO TAUGHT CARDIOLOGY AT WEILL CORNELL for nearly four decades and helped pioneer the field of cardiac psychology, died in August after a fourteen-year battle with prostate cancer. Scheidt’s various posts during his tenure at the Medical College included director of the Cardiology Training Program, assistant dean for Continuing Medical Education, and associate dean for Student Affairs. “If our children are our greatest legacy,” says colleague Peter Okin, MD, “then Steve’s is particularly rich, having left nearly 200 of us whom he raised and trained to be outstanding cardiologists.” A graduate of Princeton and Columbia and a Fulbright fellow, Scheidt was a longtime co-director of the Salzburg-Weill Cornell Seminars for Adult Medicine, held annually in Austria to train physicians from Eastern Europe and Central Asia. He is survived by his wife, Andrea, two children, and four grandchildren.

from the bench

Smaller Heart, Healthier Heart

Preventing or reducing left ventricle hypertrophy (LVH) cuts the risk of heart failure in high blood-pressure patients, says an article published in *Annals of Internal Medicine* in September. Cardiologist Peter Okin, MD '80, led the study, which followed nearly 8,500 high blood-pressure patients. Of those who were hospitalized, reduction of LVH caused a 36 percent drop in risk for heart failure, when adjusted for other factors. "From a public health perspective, our findings suggest that blood-pressure therapy targeted at regression or prevention of LVH may help to blunt the increasing incidence of heart failure," says Okin. Nationwide, about 20 percent of all high blood-pressure patients—12 million Americans—have LVH. Okin's co-authors include medicine professor Richard Devereux, MD.

Tarring Nicotine

Nicotine may be the leading cause of atherosclerosis in smokers, says a study in *Cardiovascular Toxicology* that examined atherosclerotic lesions in mice exposed to cigarette smoke. It found that low-nicotine cigarettes—such as those sold under the brands Quest and Eclipse—caused significantly smaller lesions than those with regular nicotine levels. Cigarettes with the same tar yield but different nicotine levels also caused variations in lesion size. "Right now, the general consensus is that the problem with cigarettes is tar and that nicotine is safe. That's why you can buy nicotine gum or patches to help you stop smoking," says principal investigator Daniel Catanzaro, PhD, a physiology professor. But, he says, "our study presents new evidence that nicotine may not be safe at all, especially for your heart."

tip of the cap to . . .

Jack Barchas, MD, chairman of the psychiatry department, awarded the Walsh McDermott Medal by the Institute of Medicine for his distinguished service.

Frank Chervenak, MD, chairman of the obstetrics and gynecology department, awarded the Erich Saling Perinatal Prize at the Eighth World Congress of Perinatal Medicine. He was also named president-elect of the World Association of Perinatal Medicine.

Joseph Fins, MD '86, professor of medicine and public health, named a fellow of the Hastings Center, a bioethics research institute.

Stanley Goldsmith, MD, professor of radiology and medicine and director of the Division of Nuclear Medicine, winner of the Babbott Memorial Award from the SUNY Downstate Alumni Association.

Marc Goldstein, MD, director of the Center for Male Reproductive Medicine and Microsurgery, winner of a lifetime achievement award from the American Fertility Association for his work in vasectomy reversals and microsurgical repair of varicoceles and blockages.

Gunnar Gouras, MD, associate professor of neurology and neuroscience, recipient of the Zenith Fellows Award from the Alzheimer's

Association. The award includes a \$250,000 grant for his study of the mechanism of beta-amyloid-induced synaptic dysfunction.

Amos Grunebaum, MD, assistant professor of obstetrics and gynecology, elected to the board of the World Association of Perinatal Medicine.

Beatrix Hamburg, MD, and David Hamburg, MD, both DeWitt Wallace Distinguished Scholars, recipients of the 2007 Sarnat International Award from the Institute of Medicine, recognizing their achievements in improving mental health.

Ira Jacobson, MD, professor of clinical medicine and chief of the gastroenterology and hepatology division, named Physician of the Year by the American Liver Foundation's Greater New York Chapter.

Daniel Knowles, MD, chair of the pathology and laboratory medicine department, recipient of the Levine Award for Outstanding Research from the American Society for Clinical Pathology.

Harvey Lincoff, MD, professor emeritus of ophthalmology, named guest of honor at the Academy of Ophthalmology's annual meeting. A specialist in retinal diseases, Lincoff pioneered the modern treatment of

retinal detachment.

Dina Mody, MD, professor of pathology and laboratory medicine, elected president of the American Society of Cytopathology.

Anne Moore, MD, professor of clinical medicine, recipient of a lifetime achievement award from Manhattan's Healthcare Chaplaincy.

Nicholas Schiff, MD '92, associate professor of neurology, winner of the Research Award for Innovation in Neuroscience from the Astellas USA Foundation for his work with severely brain-injured patients.

Daniel Skupski, MD, associate professor of obstetrics and gynecology, elected to the board of the World Association of Perinatal Medicine.

Shankar Vallabhajosula, PhD, professor of radiochemistry and radiopharmacy in radiology, recipient of the 2007 Berson-Yalow Award from the Greater New York Chapter of the Society of Nuclear Medicine.

Gary Wadler, MD '64, a former clinical associate professor at Weill Cornell and a specialist in the field of drug use in athletics, named one of the 100 most influential sports educators by the Institute of International Sport.

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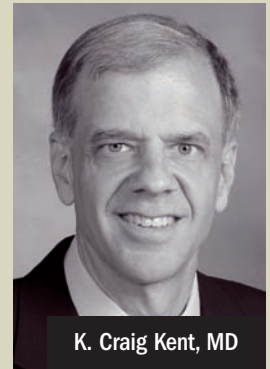
from the bench

Vascular Surgery Deficit for Hispanics

Hispanic patients undergo fewer vascular surgeries and tend to have worse outcomes than the general population, says a study by surgeons at NewYork-Presbyterian Hospital, Columbia University Medical Center, and Weill Cornell. The team looked at 2000–04 medical records from New York and Florida for patients who had three common vascular surgery procedures; they found that Hispanics had higher rates of amputation following lower extremity revascularization and greater risk of death following elective repair of abdominal aortic aneurysm. The researchers—who also found that Hispanics are more likely to seek treatment when their disease is further advanced and often require more recovery time in the hospital—posit that cultural, socioeconomic, and genetic factors may be involved. “These are significant disparities,” says principal investigator Nicholas Morrissey, MD, an assistant professor of surgery at Weill Cornell, “and the reasons for them must be determined in order to make improvements.”

Older Women at Risk for Aneurysms

Although men are the most common victims of abdominal aortic aneurysms (AAA), older women may be at higher risk than once assumed. A study of 17,540 patients led by K. Craig Kent, MD, chief of vascular surgery, has found that women over sixty-five—especially those with a history of smoking or heart disease—can see their risk of AAA increase as much as six-fold. For all patients, the aneurysms are usually fatal, with 85 percent dying before they get to the hospital. But guidelines from the U.S. Preventive Services Task Force recommend screening (a ten-minute ultrasound that costs about \$40) only for men aged sixty-five to seventy-five with a history of smoking. “The bottom line, in terms of the cost-effectiveness of screening older women, is that these tests are probably not useful for the general population, but are certainly warranted for women over sixty-five with risk factors,” says Kent. “We hope that this data provides the evidence that the task force and others in the field have needed to push for screening of AAA in at-risk females.” The work was reported in the *Journal of Vascular Surgery* in November.



K. Craig Kent, MD

A Critical Look at Triage

Weill Cornell researchers have conducted the first-ever study of the triage system that used computer models. Their findings challenge a long-held belief: that “over-triage”—errring on the side of giving emergency care to patients who might not need it—is inherently negative and costs lives. Public health professor Nathaniel Hupert, MD, and his team have found that over-triage can actually be beneficial in some circumstances, such as when the risk of death over the short term is high and resources are plentiful. They also found that there is no straightforward rule for designing the best triage strategy during a mass-casualty event; rather, it depends on local and regional factors such as trauma capacity in emergency departments. “No triage system is 100 percent accurate,” Hupert says, “so the key issue to define from an outcomes perspective is, ‘How good is good enough?’” Their work was reported in a special October supplement to *Disaster Medicine and Public Health Preparedness* that focused on the Virginia Tech shootings.



Nathaniel Hupert, MD

Into Africa

A trip to Ghana yields life lessons, malaria, and proposals of marriage



PROVIDED BY MELISSA FREY

aNTHONY ROSSI '08 AND CLASSMATE MELISSA Frey have been roommates throughout medical school. But it wasn't until they spent six weeks in Ghana last spring that the two native New Yorkers sat down to have breakfast together on a regular basis, feasting on the fresh fruits that grew in their host family's backyard. "It was so nice to relax and talk and then go to work," says Rossi. "We're used to New York, where everything's very quick, and we love that. But life moves at a different speed in Ghana, which was refreshing. We both miss that slower pace."

Rossi and Frey spent most of May and June in Elmina, a town on the Atlantic coast three hours from the capital city of Accra. As part of a third-year elective, they worked in a small clinic, treating everyone from expectant mothers to malaria patients. "I've never seen people wait so patiently," Rossi says. "They'd line up at six in the morning to be seen hours later. Their whole day is about

going to see the doctor."

When they first got there, Frey says, they acted as though they were still in New York: taking full histories, asking about medications and the illnesses of family members. "The nurses laughed at us and said, 'Why are you asking this? You just have to get through the patients,'" she recalls. "We were spending at least thirty minutes on a patient, which is what we had been taught to do at Weill Cornell, but by the end we were getting through most of them in five minutes."

Living in a house that lacked running water during the dry season—they used buckets of rain water to wash themselves and fill the toilet tank—Rossi and Frey soaked up the local culture, enjoying the welcoming atmosphere and a primarily plant-based diet. Before the trip, Frey had heard that she'd be offered endless proposals of marriage; it turned out to be true. "When men from Ghana see a woman alone, the first thing they ask is if you're

Good health: In Ghana, medical student Anthony Rossi (above) got some invaluable experience—and a case of malaria.

Worth the wait:
Patients lined up for
hours to be seen at a
leprosarium (right).
Below: Melissa Frey
(top) and Rossi perform
vaccinations in a
remote community.

single. If you say yes, they'll ask you to marry them," says Frey, who's taking a year off to do oncology research before completing medical school. "I'm not sure why; maybe they hope they can come back to the U.S. with you. And it was serious—not a joke." Rossi, on the other hand, didn't get a wife; he got malaria. "I had fevers, chills, sweating, nausea," recalls Rossi, who was successfully treated after a three-hour trip to the national hospital. "It took over my whole body. I couldn't move; I couldn't do anything."

In addition to the clinic, the pair worked at a leprosarium, home to some two dozen patients. While leprosy, now known as Hansen's disease, has all but been eradicated in the U.S., it remains endemic in parts of the developing world. "It is treatable, but you have to use combination therapy for a long time," says Rossi. "It's a slow onset, but once you have it, it's hard to get rid of." Many of the patients they saw were older, having contracted the disease before treatment was widely available. "Even there, it's disappearing, so we were seeing some of the last patients who were going to be affected," Frey says. "But for the most part there was nothing that could be done—most of them were missing fingers or had their feet or legs amputated and were wheelchair-bound. It was sad to think that if they had been in the United States, they probably would have had medical care right away, but these patients are forever handicapped."

For Frey, even more difficult was a situation she encountered on rounds in the obstetrics ward at the local hospital. Women who had delivered babies by C-section but were unable to pay for the surgery were essentially being held prisoner until their relatives settled the bill. "That was one of the most shocking moments," she says. "There was a room packed with women on the floor, crammed in next to each other with newborn babies, given one meal a day. It was a horrifying sight, but I know it wasn't really the hospital's fault. It's just the way things are run there."



PHOTOS THIS PAGE PROVIDED BY MELISSA FREY

Throughout their time in Ghana, Rossi and Frey came face to face with the lack of basic resources that American doctors take for granted. In fact, they had given the clinic the first clean gloves it had ever had, along with masks and alcohol swabs. "They had one blood pressure cuff that was used on more than 200 people a day," Frey says. "Coming back to a place with X-rays, CTs, and MRIs was pretty incredible." In Elmina, their host family was a young couple expecting their first baby—and they saw first-hand how Ghanaians prepare for a hospital birth. Says Frey: "When the woman goes into labor, they pack a bag that has clean sheets, food, and a flashlight—because the hospital doesn't have electricity all the time."

Like many students who have worked in developing countries, though, Rossi and Frey also saw the lack of resources as an opportunity to hone their diagnostic skills and learn to rely on their instincts. One of those low-tech lessons came in handy when Rossi was visiting a friend after returning to New York, and he noticed that she was pale and lethargic. "In Ghana, a quick way to check for anemia is to look underneath the eyelids," he says. "They taught us that by grades of color you could tell grades of anemia. So I did that and said, 'Wow, you look very anemic. You should get that checked out.' A week later, she was in the hospital getting blood transfusions."

— Beth Saulnier



Have Stethoscope, Will Travel

Fogarty fellows explore medicine in the developing world

ONE OF THE FIRST PLACES Ashita Batavia visited during her one-year fellowship in India was an AIDS outpatient clinic. The facility was hardly what she expected. "It's literally a plastic table and three plastic chairs that you'd find on a lawn—but everything you need is there," says the third-year medical student. "It was a wonderful experience, seeing how it's managed in a resource-limited setting. So much of the discussion revolves around a plan of care that the patient can afford."

Batavia is in Chennai (formerly Madras) as the first Weill Cornell student to receive a Fogarty Fellowship, a prestigious award that gives graduate students the chance to do mentored clinical research in a developing country. Since the NIH founded the fellowship program in 2003, nearly a hundred Americans have done research at institutions around the world, including at sites in Haiti and Brazil overseen by Weill Cornell. Although Fogarty fellows must take the year off from their studies, it's a small price to pay for the hands-on experience. "The concept was to put the student in a place that was already conducting a high-quality, NIH, peer-reviewed study," says Warren Johnson, MD, chief of the Division of International Medicine and Infectious Diseases, who oversees placement of Fogarty fellows at Weill Cornell's sites. "There's already a framework in which they can participate. It's a unique opportunity to be part of a team, and they're doing it in a different culture—and for many of them, in a different language."

Although she is of Indian descent, Batavia doesn't speak either Tamil or Telugu, the main languages in Chennai. But she usually can find someone who speaks at least fractured English. "It's a test of patience," she says, "but I've come to learn that, in India, time is always on



PROVIDED BY ASHITA BATAVIA

'Loose time' and spicy food: Ashita Batavia '09 on rounds in Chennai, India

your side." She's working at the Y. R. Gaitonde Centre for AIDS Research and Education, a tertiary-care HIV hospital at which Brown University is researching AIDS epidemiology. One of the more exciting aspects, Batavia says, is working with her mentor, Dr. Suniti Solomon, a microbiology professor emerita at Madras Medical College and the hospital's founder, whose lab documented the first evidence of HIV in India in 1986.

In just the first few months of her fellowship, Batavia helped write a quality-of-life study on infection management in HIV-positive populations in south India.

She also analyzed data from the site's last Fogarty fellow, which showed that patients who get free medicine are the most adherent. And every morning she participates in clinical rounds; with the cost of antiretroviral medication dropping significantly, she says, it's rare to see a patient in India hospitalized for HIV. "It tends to be only the interesting presentations of HIV that warrant admission. It's not the sort of stuff you'd see unless you were working in an HIV hospital in the States—here, I see ten interesting cases per day."

The program, sponsored by the NIH's Fogarty International Center, aims to

encourage students to pursue careers in global health research. Officially known as the Fogarty International Clinical Research Scholars Program, it covers travel and living expenses for two fellows—one American and one from the host country—at each site. Each year, about eighteen fellows are chosen. They start with a three-week orientation at the NIH campus in Bethesda, Maryland, where they are matched with a site that fits their interests. Then they've got four months to finish the academic year, begin learning a new language, put their affairs in order, and head overseas.

Johnson notes that the cultural differences aren't always easy to navigate. "It's not like sending somebody to Oxford or Cambridge," he says. One of the biggest changes for Batavia is her living situation. In New York, she shares a suite in student housing; in Chennai, she rents a room in an elderly couple's home. Then there's the slow Internet connection, the daily haggle with her autorickshaw driver as she commutes to work, the noise of India's fourth largest city, the six-day workweek, and occasional frustration with Indians' traditionally "loose" sense of time. They're often late—or don't show up at all. "And," she says, "the food here is insanely spicy."

Most fellows do acclimate, Johnson says, thanks to having previous international experience, a strong interest in a host country, or a passion for fighting health-care inequality. Batavia has all three. Born in Singapore to a family originally from India, she lived in Hong Kong until she was fifteen. After getting a BA in economics from Johns Hopkins, she worked as a Peace Corps volunteer in Madagascar, on projects like improving health-care access for commercial sex workers. At the time, Madagascar was the third-poorest country in the world—and she worked in its poorest province. "I realized that economics and health are so completely enmeshed in developing countries," she says, "that I could make use of both of my passions at the same time."

At Weill Cornell she helped found a student-run health clinic for uninsured New Yorkers—but it was a childhood trip to India that put her on her present path. During a visit to Mumbai, she and her family drove past Dharavi, one of Asia's largest slums, where more than a million people squeeze onto 550 acres. "I remem-

ber my mom covering my eyes and saying, 'Don't look at that. That's not India.'" While trying to shield her, her mother instead piqued her curiosity. "That fraction

of a moment could have meant nothing in the scheme of my life," Batavia says. "But it stuck with me."

— Susan Kelley

A Passage to India

Ida Scudder was a women's health pioneer

■ DA SCUDDER, MD 1899, IS REVERED AS almost a deity in Vellore, India. The faithful light candles at the Vellore Christian Medical College and Hospital's chapel and pray to "Aunt Ida," pioneering medical missionary and the facility's founder. What began more than a century ago as a roadside clinic for women and children has grown to become one of the largest Christian hospitals in the world, a 1,700-bed medical center with thousands on staff. And while Scudder's influence can still be seen today in the many lives saved at the hospital, her remarkable story was shaped by three lives that she couldn't save.

As a young woman, Ida Scudder—the daughter of a missionary mother and a physician-missionary father—was at home in Vellore when there was a knock at the door. A Brahmin was seeking medical help for his wife during a difficult childbirth. Scudder offered her father's services, but was told that, for religious reasons, only a woman could tend to his wife in labor. Scudder, not yet trained as a physician, could not help. The man left the house. Twice more that night, husbands came in search of help—and both also refused to allow a male physician to tend to their wives. The next day, Scudder learned that all three women had died. "She realized that God was calling her to help the women of India," says Edwina Youth-Scudder, RN, a distant cousin. "If women couldn't be cared for by men, then Ida had to care for them herself."

After becoming one of Cornell Medical College's first female graduates, Ida Scudder returned to Vellore, treating 5,000 patients in her first two years. In 1918 she opened a medical school exclusively for Indian women, and twenty-nine years later it became a co-ed institution. Today, the Christian Medical College is one of the top three medical schools in India.

The relationship between the institution Scudder founded and her alma mater remains strong, says Madelon Finkel, MD, professor of clinical public health and director of Weill Cornell's Office of International Medical Education. Working with colleagues in Vellore, Dr. Finkel has initiated a cervical cancer screening program focused on treating and trying to prevent this disease, the leading cause of cancer deaths among women in India. "Ida Scudder was an important force at the Medical College at the turn of the [twentieth] century," says Finkel, "and the strong bond between Weill Cornell and the Christian Medical College is an enduring testament to her dream to provide medical care to the neediest."



Aunt Ida: Scudder in 1899, when she earned her MD in the Medical College's first class.

— Meghan Ownbey

Lost & Found

Medical student aims to improve health care in Sudan

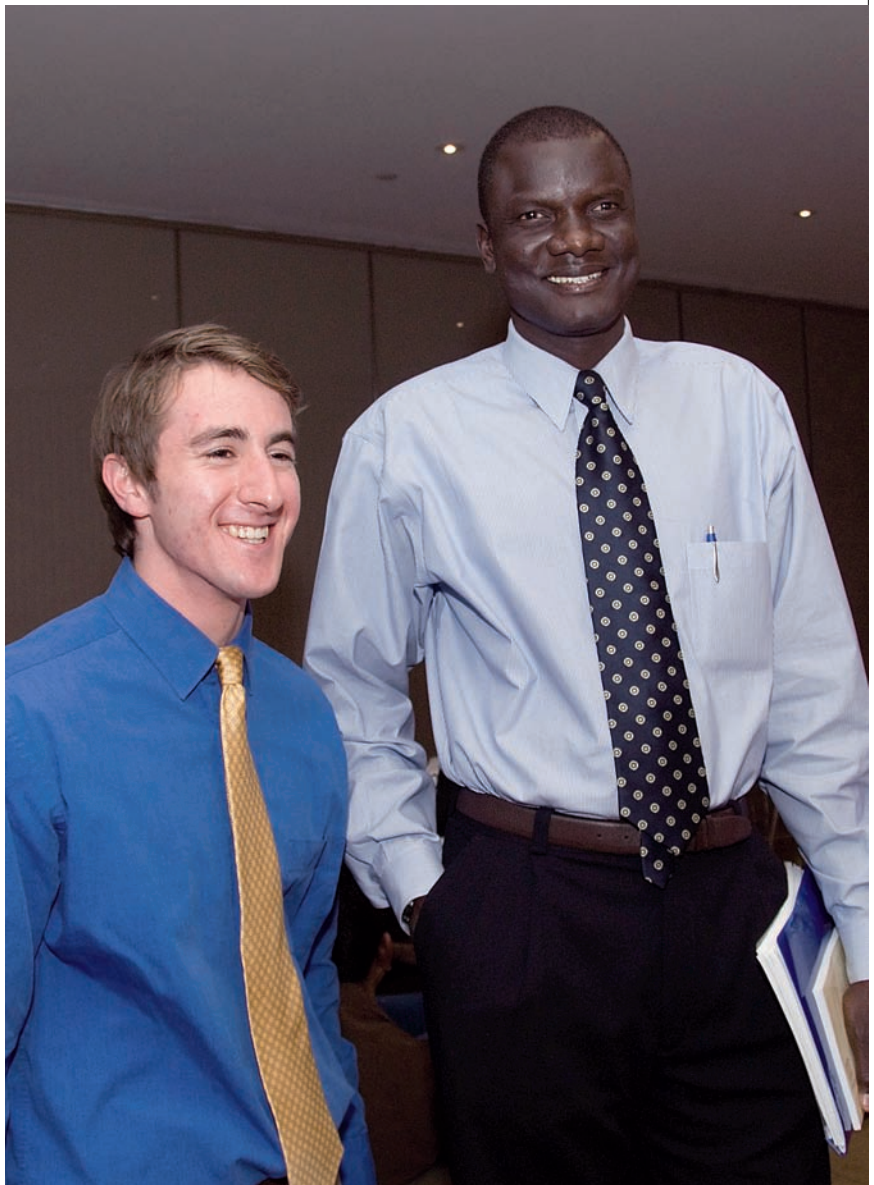
dAN FRIEDMAN '10 WAS VOLUNTEERING IN THE psychiatric emergency room at St. Joseph's Hospital in Syracuse when he met John Bul Dau. It was 2004, and Friedman was a Cornell undergrad, working over summers and breaks in anticipation of applying to medical school; Dau was a security guard. But there was much more to the six-foot-eight man with the lilting African accent than met the eye. Dau, Friedman learned, had been one of the "Lost Boys"—20,000 children who walked more than a thousand miles across Africa to flee civil war in Sudan, existing on whatever they could find, many dying by the side of the road. After spending his youth in a Kenyan refugee camp, Dau had been resettled to Upstate New York, struggling to earn a living and desperate to find out if any of his family had survived.

Dau has since become the public face of the Lost Boys in America: he was the main character of *God Grew Tired of Us*, a documentary that won both the Grand Jury Prize and Audience Award at the 2006 Sundance Film Festival. He has used his unexpected celebrity to improve medical care in his native country; in May, his American Care for Sudan Foundation opened the Lost Boys Clinic in his home county of Duk, made possible by \$450,000 Dau helped raise. "John has a huge heart, and he's very modest," Friedman says, "but he's also very determined."

Inspired by Dau's efforts, Friedman has devoted much of his spare time to the foundation over the past year, garnering a grant to work on it full time last summer. Though he'd barely finished his first year at Weill Cornell, Friedman was a driving force on the medical operations subcommittee; his contributions included finding a lower-cost drug supplier that will save the clinic some \$15,000 a year. "When Dan says he wants to do something, believe him—he'll do it," says Dau, now a married father who juggles college, philanthropy, and professional speaking engagements. "When you work with Dan, you'd better be prepared, because he'll leave no stone unturned. I've told him, 'When you become a doctor, I want you to be my doctor.'"

On campus, Friedman co-founded Cornell Health Advocates for Southern Sudan, a group dedicated to supporting the Duk clinic as well as other medical initiatives in the war-torn country. Last January, Friedman brought Dau, along with *God Grew Tired of Us* director Christopher Dillon Quinn, to Weill Cornell to screen the movie and talk about their experiences. "Dan is totally involved,"

AMELIA PANICO



'A huge heart': Dan Friedman '10 (left) with John Bul Dau, the former child refugee who inspired Friedman to help in Dau's quest to establish a clinic in Sudan.

says Carlyle Miller, MD '75, associate dean for student affairs and equal opportunity programs and an adviser to the Cornell group. "I'm surprised how he can maintain his course work and at the same time meet with people from the United Nations and government officials from Sudan. He's always sending out e-mail updates: 'The U.N. has decided we can do this' or 'We've got funding from this place.' He's very committed to people who are underserved, on an international level."

The clinic in Duk, a remote area in the Upper Nile region of Sudan, treats more than fifty patients a day; previously, residents faced a seventy-five-mile walk to seek medical attention. Its staff includes nurses, a lab technician, a pharmacist, and a clinical officer (akin to a physician assistant), and plans are in the works to launch an eye care program in 2008. Although Friedman has yet to visit the clinic—he hopes to go either during spring break or on a third-year elective—he's heard some of its success stories. One of his favorites involves a woman who walked eighteen miles during the rainy season to get to the clinic; she had given birth a few weeks earlier, and came in



profoundly anemic and with malaria. "We had the anti-malarials, but we had run out of iron sulfate, and if her anemia wasn't addressed, she was going to die," Friedman says. "So our clinical officer convinced one of the locals to slaughter a goat on her behalf and fed her the liver, and it saved her life."

Although Dau was the driving force behind the clinic, he hasn't had the chance to see it either, though he plans to visit sometime this winter. For the local residents, he says, the newfound access to medical care almost feels more like a dream than reality. "The clinic is not only treating disease and helping expectant mothers, it is also giving people dignity," he says. "The children born there will be the first to know for sure the time and date they were born—they'll celebrate their birthdays like any child in America." And he notes that the clinic is also playing another role: peacemaker. "The neighbors around my hometown, who were enemies to our people, now are coming to be treated," he says. "So it's not only providing services, it's bringing people together."

— Beth Saulnier

Foreign Exchange

Fourth-years from abroad experience medicine, American style

THE MEDICAL STUDENTS COME from around the globe—Pakistan to Australia, Venezuela to Austria, some two dozen countries in all—and for a few weeks they are an integral part of clinical teams in nearly every specialty at Weill Cornell. They are participants in the Global Health Education Program, an initiative to expand the Medical College's global reputation by inviting roughly a dozen international students a month to learn from Weill Cornell physicians and take fourth-year electives with their American colleagues.

For many, the opportunity to provide hands-on patient care while still in school leaves the strongest impression. "Medical students are far more a part of the clinical team in the U.S. than they are in Ger-

many," said Veig Stoecklein, a student from the University of Munich who spent five weeks at Weill Cornell last summer. "In Germany, when you are on the service, you are more like a guest; usually the resident doesn't much care about us. But here the medical student is really part of a team effort." For Stoecklein, that included an intense, two-and-a-half-hour interview with a patient at the Parkinson's Institute, where he worked

when he wasn't shadowing a resident and an attending on the neurology service. "I started out taking a normal history, and as I asked more questions about her disease, she began telling me a lot about her personal life. I got a real insight into her background," says Stoecklein, who will deliver a written report on the experience when he returns home.

The international students take part in every aspect of care. They examine patients and take histories, confer with residents and attendings during shift changes, and participate in case conferences on individual patients. "Here they tell me, 'This patient is yours; take a physical history and an examination and then come to us and discuss,'" says Ashraf Al-Azzoni, a twenty-two-year-

'In Germany, when we are on the service, usually the resident doesn't much care about us. But here the medical student is really part of a team effort.'



BRAD YEO

old from the University of Jordan who spent October working with the vascular surgery service. "In my country usually it's not 'your patient.'" Al-Azzoni also found that there's much more give-and-take between American physicians and the people they treat. "Patients here attempt to learn much more about their diseases," he says. "In Jordan, the patient looks to the physician as though he's the one who should know everything."

Students like Stoecklein and Al-Azzoni have been coming to Weill Cornell in increasing numbers. Four years ago, the Medical College accepted only twenty-seven international students for fourth-year electives—but in the first nine months of 2007, the program had already taken more than 100. Historically, Weill

Cornell's ranks of foreign students have been dominated by Western Europeans like Stoecklein, who arrived through the United States–European Union Medical Education Exchange, which is well-established at his home university. But for the past few years—and especially since the Pakistani president, General Pervez Musharraf, visited Weill Cornell in September 2006—applications have been pouring in from such places as Jordan, Pakistan, and India; Dianne Young, the program's coordinator, says that Pakistan alone now provides about 20 percent of the applicants. Al-Azzoni discovered the elective not through a formal exchange, but by searching the *U.S. News & World Report* rankings online. Says Young: "We've grown exponentially because of the Web and also

word of mouth from students who have completed the program."

For fourth-year electives in highly sought-after specialties such as surgery and neurology, there's now competition among Weill Cornell students, international students, and students from other U.S. medical schools. The Medical College is currently working to expand the number of elective courses offered and develop a formal ranking system among the competing student groups. Despite the challenges, the program's benefits mean that Weill Cornellians will likely see more international students in the future, according to professor of clinical public health Madelon Finkel, MD, the program's director. "As a medical college, we get an enrichment and globalization of our campus," says Finkel. "And in return we give the students first-class training where they can see—and experience—how care is delivered in the U.S."

International students are at Weill Cornell for at least a month, but many stay up to three, the limit set by the State of New York. Finkel teaches a two-week clerkship on the social, economic, political, and clinical aspects of the U.S. health-care delivery system and takes international students on field trips to community-based clinics throughout New York. For Stoecklein, a trip to Brownsville, Brooklyn, showed him a side of the health-care system he had never seen in Germany: the gulf between the well-off and the less so. "When you see the treatment of so many uninsured patients, it's a stark contrast," he says. "At Weill Cornell it's cutting-edge medicine, and then there is this very basic kind of health care."

Students from social democratic countries are typically the most critical of America's health-care problems, Young notes. "The northern Europeans generally are the most shocked and disturbed that our system, in a First World country, leaves so much to be desired," says Young. "They always ask, 'When will America offer universal health care?' Of course, we cannot answer that question—we can only help them understand our plight."

— Gabriel Miller

Mother's Helper

Delivering babies in Tanzania, a student learns that drugs are out (and power is optional)

bY THE TIME ANASTASIA GRIVOYANNIS STARTED her second year of medical school, she'd already helped deliver hundreds of babies—some of them by flashlight. Grivoyannis spent the summer after her first year at the foot of Mount Kilimanjaro in Tanzania, where she worked in the obstetrics ward of a 450-bed referral hospital and conducted research on HIV transmission from mother to child. "It made me realize that the medicine we learn in the U.S. just touches the tip of the iceberg, because there are so many dis-

eases that you never see," says Grivoyannis, who is contemplating a return to Tanzania for a fourth-year elective. "I saw complications in obstetrics and gynecology—like pregnant women presenting with malaria—that residents in American hospitals only read about."

Sponsored by Weill Cornell anatomy professor (and Tanzanian native) Estomih Mtui, MD, Grivoyannis worked at Kilimanjaro Christian Medical Center under the direction of ob/gyn chairman Olola Oneko, MD. She conducted a study of the more than 3,000



PROVIDED BY ANASTASIA GRIVOYANNIS

In the OR: At Kilimanjaro Christian Medical Center, Anastasia Grivoyannis '10 helps perform surgery on a woman whose fetus died in utero. Grivoyannis's summer-long stint on the hospital's ob/gyn service included conducting an HIV study of more than 3,000 mothers.

women who had given birth there in the previous year, trying to determine whether they had been tested for HIV before delivery and, if they were positive, whether they and their babies had been given the appropriate drug cocktail according to WHO guidelines. When the mother's HIV status was unknown—as in more than one-sixth of the cases—Grivoyannis tried to track her down and find out if she had since been tested.

On the maternity ward, Grivoyannis was initially entrusted with the job of receiving the baby after birth—moving it to the warming area, taking measurements, and presenting it to the mother. Toward the end of her rotation she was allowed to run the delivery, bringing nearly three dozen children into the world. “Mentally, I was trying to prepare for every second of it,” she says. “But I realized after a while that once a woman's cervix is entirely dilated, it's pretty much automatic—the baby's coming out and you have to get a good grip on it. But there's nothing quite as rewarding as being the first to handle the baby, hearing it cry, getting to the cut the cord.”

In America, mothers debate whether to have “natural childbirth”; Grivoyannis learned that, at least for vaginal deliveries, in Tanzania there's no other kind. “I asked whether women were given any pain medication,” she says, “and the nurse looked at me like—well, not like I was out of my mind, but it's just not done, or even considered.” When she was on call overnight she also learned that, even in a busy obstetrics ward, there's no guarantee that the power will be on. “We would hold up big flashlights so the nurses could see what they were doing,” she says. “It was remarkable how people worked around the lack of resources.”

During cesareans, nurses often used manual ventilators or shuffled equipment into rooms where the power was working. Even when high-tech apparatus had been donated, the hospital

often did not have the staff or resources to maintain it. “We had a CT scanner, but we didn't order scans because the machine had been broken for months,” she says. “Halfway through my time there, we ran out of reagent to do the CD-4 counts that help evaluate a patient's stage of HIV and we had to wait weeks to get more. Stuff like that made it difficult to practice medicine by the standards we're used to.”

But as Mtui sees it, facing such obstacles—unheard of in American hospitals except during disasters like Hurricane Katrina—has an upside: it helps medical students become better doctors. “When you work under such conditions, it makes you improvise,” says Mtui, who practiced in his home country for two decades before moving to the U.S. “If you're in a C-section and the power cuts, you can't leave the woman on the table and run away—you have to find alternatives. I'll tell you, if you can practice medicine in this part of the world, you can practice anywhere.”

Kilimanjaro Christian Medical Center is located in Moshi, a popular stop for travelers visiting Mount Kilimanjaro. Grivoyannis, who lived in a doctor's compound a ten-minute walk from the hospital, found that being Caucasian initially prompted the locals to brand her a tourist and treat her accordingly. “People who saw you in the streets generally assumed that you were there to climb the mountain or go on safari, and they often tried to sell you things,” says Grivoyannis, who bought her food in the local shops rather than the high-priced supermarkets aimed at foreigners. “Your acceptance into the culture depends almost entirely on your knowledge of Swahili, so I made an effort to learn it. Eventually I was accepted as a member of the hospital who was living in the town and aiming to do good, rather than coming to their country to take something away from it.”

— Beth Saulnier

Inquiring Mind

Qatar student wins research award

SUBHI ALAREF '08 GOT HIS FIRST taste of bench-to-bedside research when he spent the summer of 2005 in the New York lab of physiology and biophysics professor Olaf Andersen, MD. Al'Aref and his colleagues investigated the effect of BDM, a compound used in heart transplants, to determine if it can also be used to facilitate other types of organ transplant. “I could clearly see the clinical significance of what I was doing,” says Al'Aref, one of four Palestinian students at the Qatar branch.

The work earned Al'Aref co-author credit in *Molecular Pharmacology*, and in



Subhi Al'Aref '08

JOHN ABBOTT

November 2006 he published a peer-reviewed paper on digitalis toxicity in the *Qatar Medical Journal*. His affinity for research also prompted him to do a public health project mapping the global prevalence of diabetes and a case report on a patient with idiopathic cystic artery aneurysm. His efforts garnered a 2007 Tamayoz Award, given by Harvard Medical School—

Dubai Center to recognize excellence in medical research and clinical care by Gulf Region health professionals under the age of forty. The prize included a month-long, all-expenses-paid elective in cardiology at Harvard's Cambridge campus, which Al'Aref completed last fall. “Once I tasted research,” he says, “I could not get enough.”

— Susan Kelley

Don't Drink the Water

Clinic equips travelers for adventures abroad

KAREN AND JOHN ERICKSON HAD ENOUGH TO do for their upcoming trip to China—packing, researching, learning how to pronounce the names of the towns on their itinerary. They didn't want to worry about bringing unfamiliar diseases back to New York with them as well. Luckily, they had been to Cambodia, Thailand, and Vietnam in their six years of post-retirement travel, so they knew exactly where to go: Weill Cornell's International Health Care Service (IHCS). "China is so vast, it's hard to know what you need," says Karen, a writer and mother of two grown children. "They knew what we'd gotten before and exactly what we'd need for this trip. That was comforting."

IHCS has been calming travelers' fears for twenty-eight years, dispensing preventive shots and pills as well as conducting post-trip consultations. About 4,500 patients visit the Upper East Side office each year, seeking pre- and post-travel consultations and vaccinations for the likes of hepatitis A, typhoid, and yellow fever. "It's becoming more and more popular to experience other places," says John L. Ho, MD, the service's medical director. "And people are now more prone to go off the beaten path, which means a potential risk of encountering infectious agents."

International travel has indeed exploded: last year 842 million people traversed borders, up from 694 million in 2003. Ho and his staff have also seen a shift in destinations—from Europe in the Eighties and early Nineties to Africa, South America, and Southeast Asia these days. And because IHCS is one of the few New York clinics certified to dispense yellow-fever shots, a large chunk of business comes from South American and African travelers. Also big: hepatitis-A preventions for retirees heading on cruises to the Amazon—and plenty of pre-trip counseling to minimize the problems caused by the most common ailment of all: traveler's diarrhea.

IHCS prides itself on its full-service philosophy and extensive operating hours, with lots of evening appointments available. Those traveling for more than three months—another increasingly common phenomenon, especially for younger people—get a full briefing from a staff nurse or physician about proper precautions, from taking anti-malaria pills to avoiding water that might carry parasites (even ice and droplets on washed lettuce). And not only is IHCS the oldest clinic of its kind in New York City, it's also the only one affiliated with a teaching hospital and medical school, and the only one that serves children as well as adults. It's exactly that history and expertise that endears the clinic to repeat customers like the Ericksons. "They get the job done," Karen says. "It's a relief to be in a doctor's office that isn't elaborate and huge."

All of the clinic's constantly rotating staff of about ten doctors are trained in infectious diseases (medical students can observe

but can't do hands-on work). In addition to ordering shots and pills, staff physicians offer consultation and treatment for patients whose unusual diseases or complications have baffled their regular physicians or emergency rooms. "We do it because it's interesting," Ho says of himself and his staff, who tend to work there as a side job to research or other clinical posts. "If you think of medicine as being fun, this is another avenue to derive pleasure from your profession."

One recent patient was a stock analyst who had just returned from his honeymoon in Indonesia with a severe fever and rash that turned out to be hepatitis. Another, a ten-year-old girl, came in when she developed skin lesions six months after a trip to Costa Rica; the condition was eventually diagnosed as a parasite transmitted by a sandfly. Despite increasing globalization, business at IHCS has remained steady over the last several years, Ho says—mainly because the clinic was already booked almost to capacity. The biggest changes have come in the types of conditions the clinic treats, as diseases such as chicken fever, malaria, and dengue fever have spread from developing countries. "Certainly I think it's more complicated than it used to be," Ho says, "in terms of the knowledge base we need and what we're potentially facing."

The clinic also sees its share of domestic travelers, whether for tropical diseases brought in by foreign travelers or for strange variations on familiar conditions. Case in point: seventy-eight-year-old Helen Becker, who thought she had a simple case of food poisoning until she fainted in her New York apartment the day after she returned from an August trip to Florida. She spent the next twenty days bedridden, unable to recover despite taking standard antibiotics, then developed lumps in her lower legs. That was when her primary care doctor sent her to IHCS to see if she had picked up a rare disease—but a battery of tests reassured her it was just a rash of complications due, perhaps, to diarrheal illness acquired in Florida. "They checked me for everything possible," says Becker. "I was relieved to have someone tell me that whatever I had was not so dangerous."

'It's becoming more popular to experience other places, and people are now more prone to go off the beaten path, which means a potential risk of encountering infectious agents.'

— Jennifer Armstrong



GOLDSTEIN / STOCKXPRT

going global



Madelon Finkel, MD

JOHN ABBOTT

For many medical students, study abroad is a life-changing experience. As one professor says: ‘If it *doesn’t* affect you, there’s something wrong with you.’

by Jennifer Armstrong

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Denise Fernandez had been working at the Kilimanjaro Christian Medical Center in Africa all of two weeks when she met the patient she’ll never forget.

Fernandez was still learning about her new surroundings,

trying to figure out where the bathrooms and supply closets were—not to mention getting used to the fact that everyone around her spoke Swahili, a language she didn’t understand. Then the patient, a twenty-six-year-old woman, was admitted to the hospital after she showed up crying and foaming at the mouth. The staff doctors determined that she had tried to commit suicide with some sort of poison, and that she was HIV positive. Although Fernandez was never able to communicate with the woman, she checked in on her every

day until she left Tanzania four weeks later. “She wasn’t ever awake,” the fourth-year medical student recalls now, a year later. “I would talk to her, but it wasn’t like she could understand me. I have no way of knowing how she did, but I still think about her.”

ABBOTT



Denise Fernandez '08

It's that kind of lasting impact that Fernandez and increasing numbers of American medical students are experiencing by studying abroad. One recent survey showed that more than 20 percent of U.S. medical school graduates in 2003 had some kind of international experience during their training, up from just 6 percent in 1984. At Weill Cornell, those numbers are even higher: by graduation, about 40 percent of the student body will have shadowed doctors, investigated health-care systems, or otherwise cared for the ailing far beyond U.S. borders—a figure that's been rising over the last couple of years, due in large part to burgeoning interest among first-year students. About 15 percent of last year's graduating class had gone abroad during the summer after their first year, a figure that jumped to 25 percent for the Class of 2007. That follows national trends in study abroad: in 2006, more than 205,000 U.S. students (including undergraduates) took their education global, an 8 percent increase over the previous year.

Credit the Internet for shrinking our world or call it the Brangelina-and-Bono Effect—either way, there's an ever-increasing awareness of both global issues and the benefits of international experience. Studies have shown that going abroad has a wide variety of benefits, from the calculable (hikes in grade-point average) to the more subjective (leaps in personal growth). "The students uniformly come back and say it's a personally rewarding experience," says Madelon Finkel, MD, director of the Office of Global Health Education.

Study abroad doesn't just help students find themselves, though—it also leads to much greater understanding of global health problems. The World Health Organization says such awareness is a must among Western doctors, who are in the best position to help when disaster strikes; HIV/AIDS, influenza, and bio-terrorism agents like anthrax are among the group's chief worries. The United Nations, too, has registered its concern, listing the reduction of child mortality as well as the fight against HIV



Oliver Fein, MD

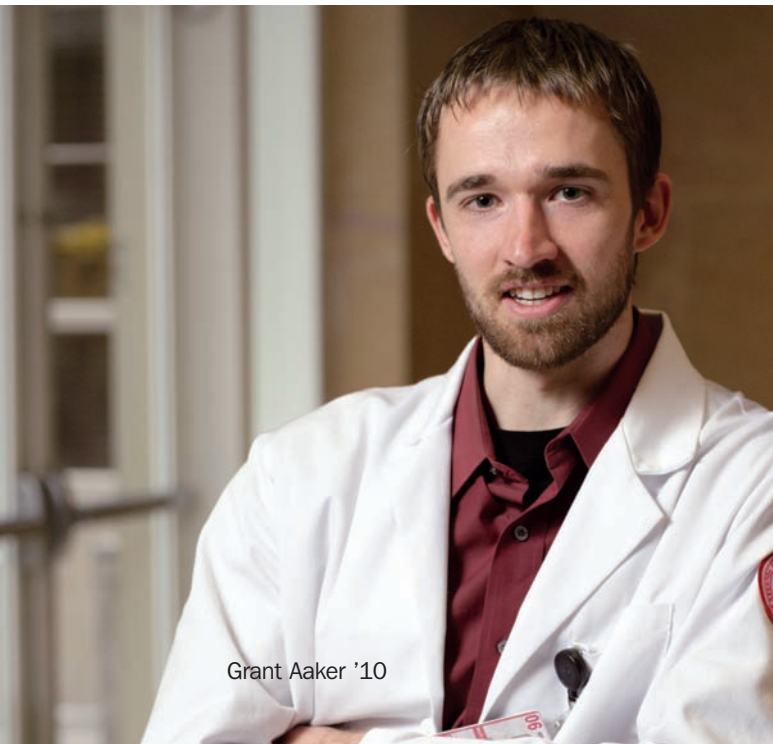
and malaria among its goals for 2015. And Weill Cornell administrators expect that some of the students who go abroad will be inspired to tackle just such issues. "No matter what subspecialty they go into, there's room for doing it globally," Finkel says. "We hope they become advocates for and proponents of global health."

Weill Cornell is doing everything it can to make that happen—another reason its international study statistics are so high. Two projects underscore the school's zeal for globalization: Weill Cornell Medical College in Qatar, the first American university offering a medical degree abroad, and an ongoing partnership with Tanzania's Weill Bugando University College of Health Sciences (recently renamed in honor of supporters Joan and Sanford Weill). There's also the Global Health Program, launched last winter in conjunction with Cornell's Ithaca campus, which includes a graduate program, an undergraduate minor, internships, and a lecture series focusing on such issues as HIV and malnutrition.

The Office of Global Health Education, which started in 2001 as an offshoot of the financial aid department, serves as the hub of international opportunities at Weill Cornell, reviewing students' study-abroad proposals and making sure their trips run smoothly. (It also coordinates the visits of exchange students; eighty international students did elective rotations at Weill Cornell last year.) If students want to do more than the standard summer abroad or fourth-year elective—as five students are currently doing by spending an entire year overseas—the Office can help them find and apply for fellowships. Weill Cornell also offers support for travel expenses through an endowment. "The cost of transportation can be prohibitive," says Oliver Fein, MD, associate dean for affiliations at the Medical College, "especially with all the student loan debt that med students have. Our international endowment program allows all Weill Cornell students—not just those who can afford it—to have a global health education experience."

The staff is constantly working to forge new partnerships with schools and hospitals all over the globe, from Australia to Haiti to Brazil. Lately, they've seen growing interest in India, where many students participate in epidemiologic studies, and South Africa, where HIV/AIDS is a priority. "They get to see how medicine is financed in other countries," Finkel says. "They get to see different sociocultural and ethnic groups. And most important, they get to see how low-tech medicine has to be practiced. They can't just keep screaming for an MRI or a CT or a full blood panel. They have to use their wits."

That's exactly why Fein and Finkel, their staff, and fellow faculty encourage students to think long and hard before hopping on a plane. Anyone considering study overseas must either choose



Grant Aaker '10

from the Office of Global Health Education's extensive list of projects or come up with one of their own. Either way, they write a proposal and submit it to the International Committee, a group of faculty that reviews and approves all trips. A post-trip follow-up report is also required. Once the students have the official go-ahead, they also need confirmation that a mentor/host will receive them when they arrive. Still, the best-laid plans can unravel. Second-year student Shaka Bahadu's proposal had him investigating post-operative outcomes for cardiothoracic patients at Weill Bugando in Tanzania, but when he arrived, he found his supervisor was on the road raising money for the hospital. "You definitely have to be flexible if you're going abroad," says Bahadu, who ended up splitting his time between clerking and shadowing surgeons. "Right from the get-go there was always something else to do."

But being busy and feeling at home are two very different things, as most students learn quickly. Fernandez, for instance, felt lost in the system at Kilimanjaro at first. She doesn't blame the program or the hospital staff where she worked; the local doctors just seemed so used to the constant churn of foreigners coming and going, she says, that they forgot new arrivals might need some assistance. "We didn't have that much direction when we got there," Fernandez says. "They have outsiders come in all the time, so it's hard for them to open up and be receptive." There are also the more basic adjustments—like dealing with such standard travel issues as jet lag and gastrointestinal distress. "The hardest part was getting my body acclimated to the parasites," Bahadu says. "I just had to fight through it."

Second-year student Grant Aaker found himself struggling to overcome a large communication gap when he spent two months in Japan this summer. While he speaks Spanish and Swahili, he got through only the most basic teach-yourself-Japanese tape. "Everything looks the same on the surface," he says. "Hospitals look like hospitals, stethoscopes look like stethoscopes. But it was difficult for me to interpret things like body language. It was difficult to understand what was going on even when I was standing right there." In fact, his host doctors took to hooking him up to pieces of non-invasive medical equipment to show him how they worked rather than trying to explain them. "It was their universal way of communicating with me, I guess." But after a period of adjustment, many students find the experience to be life-altering. After all, how could immersion in a foreign culture while tending to the



Shaka Bahadu '10

ABBOTT

troubled, poor, and ailing—often desperately so—not change a person? As Finkel says, "If it *doesn't* affect you, there's something wrong with you."

Bahadu couldn't agree more. He found himself reconsidering his life plan—if not the entire Western approach to medicine—every few days during his two months in Tanzania last summer. While rooming and dining with local medical students, he discovered that they learn much differently than their American counterparts. "They focus on memorization, and their body of knowledge is amazing," he says. "You can mention a chemical and they'll tell you what neural pathways it travels down and how it synthesizes this and breaks down that. I'm not sure if their way is better than ours, but just drawing comparisons is useful."

Not only did Bahadu's trip prompt him to rethink his approach to studying, he also began to consider other specialty options—and even if he doesn't pursue them, he says he appreciated the chance to broaden his perspective. Bahadu had just settled into his clerkship in Weill Bugando's medicine department, learning to read charts and X-rays by shadowing doctors, when a team of plastic surgeons from Australia arrived to do charity work on patients with cleft palates. "I had never even thought of that as a career option," he says, "but I scrubbed in, and they let me assist." In the end, it was his day-to-day work on the medical wards in Tanzania—a hotbed of infectious diseases like tuberculosis and malaria—that showed him the depth of problems that modern medicine can solve with the right resources. "I found myself attracted to this idea that there's a bug, it's the enemy, and we have to figure out how we're going to kill it," says Bahadu, who had spent the previous five years focused on becoming a transplant surgeon. "I'm open to a whole different career path now." ■



INTERNATIONAL INTRIGUE

BY BETH SAULNIER

Weill Cornell Medicine: In addition to the Qatar branch and the new partnership in Tanzania, the Medical College has affiliations around the world—from an HIV/AIDS program in Haiti to a seminar series for Eastern European and Central Asian physicians held annually in Salzburg, Austria. Why is it important for Weill Cornell to reach out across borders?

Sanford Weill: We live in a global world, and it's becoming a smaller and smaller place. Health care is a global issue and a global problem. Through education and research in medicine, we have an opportunity to bridge cultural differences, improve understanding between peoples, and create a better life.

Antonio Gotto: We have a long history of involvement in international medicine and almost 40 percent of our students take an elective abroad. Our efforts continue a tradition that goes back to the first class in 1899, when one of our first woman graduates, Ida Scudder, went to Vellore, India, and started a medical school that still exists today.

WCM: How do American students benefit from studying abroad?

AG: Last weekend I met with the thirty-two Rhodes Scholars elected this year. I was there with my group from fifty years ago; we were asked to speak about what the Oxford experience had meant to us. I talked about the relationship between biochemistry and medicine and how it had affected my career—but the other impact was the opportunity to study in a different educational system, a different society, a different culture. That exposure—looking at America from another perspective, living outside it—was a very valuable experience.

WCM: What are some of the keys to international success?

SW: We have to be flexible. For instance, our medical school in Qatar has the same rigorous standards for admission and graduation that we have here in New York, but what we're doing in Tanzania is entirely different. The MD degree there is more like an equivalent of a combination of a high school and a college degree. There's something like one doctor for every 30,000 people and life

ONE MORNING IN OCTOBER,
MEDICAL COLLEGE BENEFACTOR
SANFORD I. WEILL AND DEAN
ANTONIO M. GOTTO JR. SAT DOWN
WITH *WEILL CORNELL MEDICINE*
TO DISCUSS WEILL CORNELL'S
EFFORTS ABROAD—
PAST, PRESENT, AND FUTURE.



RICHARD LOBELL

Medical partners: Antonio M. Gotto Jr., MD, dean of Weill Cornell Medical College (left), and Sanford I. Weill

expectancy is only forty-four years, so there's a tremendous need. We have to understand that you have to learn how to walk before you run. If we were going to be strict and say that "it's our way or the highway," we wouldn't be able to have any impact and improve health care there—we'd just throw up our hands.

AG: Another key factor is creating a feeling of partnership. First of all, what are their needs? In Tanzania, they told us the greatest needs are in ob/gyn and pediatrics—70 percent of the children in the perinatal ICU are dying. So the first two doctors we've sent are in those areas.

WCM: Because their goals are humanitarian rather than political, do you think that physicians can sometimes serve as *de facto* diplomats?

AG: At times when governments were at loggerheads, exchanges involving research and education in medicine have continued. In fact, when President Carter cancelled American participation in the 1980 Olympics and all of the cultural and scientific exchanges with the U.S.S.R. after they invaded Afghanistan, I was involved in a cardiovascular exchange. When you visit the Middle East today, or Europe, you hear a lot of complaints about the

contact with the Rhodes Scholars, America benefited because these individuals represented the United States.

SW: The students in Qatar come from about thirty different countries all around the region. For us to teach young people who not only come from Qatar but places like Bosnia or Bangladesh—even having ten Iraqi kids in one of our premed classes, whose lives are in danger because of what they're doing—it's a terrific thing that they will remember forever. It's really made a difference in their lives. We can be ambassadors in bridging our differences—so we work together rather than shooting each other, and we stop saying that everybody has to believe in democracy exactly as it works in the U.S., because everybody's different.

WCM: In May, the Qatar branch will graduate its first MDs. How did the project come about?

AG: We didn't seek out the Qatar opportunity; it was presented to us, and we looked into it thoroughly. A proposal came to us from two New York congresswomen who had been over as observers for local elections where women were allowed to vote for the first time. They had met with Sheikha Mozah about her vision for Education City. We

then had to take it up with Cornell University, and as far as I know Cornell had not given a degree of any kind outside of the country—and it would be not only a degree but a medical degree in a potentially volatile part of the world.

SW: And a place where a lot of people felt, why should we do something in an Arab country until there's peace between the Palestinians and the Israelis? And we worked our way through those arguments to become a leader. Texas A&M followed us, and Carnegie Mellon, and Georgetown, and now Northwestern is building a campus there. None of that would have happened if we hadn't been the first mover. Robert Gates, the former president of Texas A&M and current secretary of defense, told me as much. He said we gave them the courage to do it. Our entering class this

year is four times the size of the original one. It's been a phenomenal success, to a point where we now have a base to build something that can really make a difference in the world.



Here to help: Weill and Gotto meet with representatives from the Weill Bugando medical complex in early 2007 to discuss ways in which students from the New York campus can help fill the desperate need for health-care professionals in Tanzania.

American government and its policies. When you go abroad, they look upon you as an individual—but you also are an American. I know that I got a lot out of my experience in Oxford, but I also think that when people came in

WCM: When you go to the Qatar campus, how does it make you feel? What's the atmosphere like?

SW: (Laughs.) It's hot.

AG: Obviously we take pride in it, but what brings us the greatest pleasure, both here and in New York, is when you interact with the students, and you see their quality. These are the people who are going out and saying, "This is Weill Cornell."

SW: We've been watching these young people develop and have seen the results, which are statistically indistinguishable from our students here in New York. I think one of the most moving events I've ever been to was the first white coat ceremony that ever took place outside the U.S., which we held in Qatar in 2004.

WCM: What lessons have you learned through the establishment of the Qatar branch that you could use in Tanzania and elsewhere?

SW: (Laughs.) Patience.

AG: Much of the success depends on interpersonal relationships. It takes a while to develop trust. You can't go charging in to the first meeting and say, "This is how it's going to be." The cultures in Qatar and the U.S. are very different. We've now been working with them for seven years, and we've listened to the issues that are important to them: how to get more Qatari students involved in the program, how we can help in attracting other institutions to Education City, how we can expand the research program there so we continue to attract top-flight doctors and teachers. I think we've gone beyond the point of, "Do we trust?" and really created a partnership.

WCM: With the branch in Qatar and now Weill Bugando in Tanzania, Weill Cornell has major presences in the Middle East and Africa. Where might our next international affiliation be?

AG: We'll probably do something in Asia, but we haven't worked it out yet.

SW: Tony has a continuing affiliation in Russia—that's one possible place. Another is Mexico, tying in with our connection with the Methodist Hospital in Houston.

WCM: How can working in a place like Tanzania, which has much more limited resources than America, make our students and residents better doctors?

SW: They don't have the same equipment, and results don't come in from the various tests that quickly, so they learn to practice common-sense medicine. They're not

watching some great doctor all the time, they're learning to do it themselves. They're being reminded of what medicine is all about in the first place and why they chose it as a career. Why should the life expectancy in the United States be up in the eighties while in a country in Africa it's in the forties?

WCM: How do international affiliations enhance Weill Cornell as an institution?

SW: When we're looking to recruit the best and brightest minds, if we have a school that is expansion-minded—that is looking at how we can impact not just the region we're in but the world—more people are going to want to work at an institution like that. Over the last five years that's happened in spades, to the point where, if you look at our affiliation with NewYork-Presbyterian Hospital and how people rank, we have the best doctors by far.

WCM: More and more fourth-year students from foreign medical schools are coming to Weill Cornell for two-month electives. What are the benefits to those students and their home countries?

AG: They learn our methods and they take those things back with them. Maybe ten years later, the head of their government needs an operation and they know a doctor here who's best suited to perform it. But ultimately we want to train physicians so they're able to practice in their own countries. Many of the doctors who attend the Salzburg seminar program are heads of departments, hospitals, or health services in Eastern Europe, so the people that we train are in leadership positions.

WCM: What about the challenges of recruiting Weill Cornell faculty to teach abroad?

SW: Dean Daniel Alonso committed to Qatar for five years—and re-upped for another five. We have professors that have agreed to go to Tanzania for three-year stints, not just one month and home. It's exciting, and it turns other people on, and they want to be involved. I know doctors at the Hospital for Special Surgery who would love to be part of what's happening in Tanzania. I am a firm believer that change creates opportunity.

WCM: Why do you think top-notch faculty are willing to make such long-term commitments abroad? What's the attraction?

SW: It's fun to be on the leading edge of changing how one thinks about education—how it's more than medicine, it's how we can be a cultural ambassador to keep this country a leader in trying to make the world a better place. I'm thrilled that we've taken a leadership role in that mission. We have put together something unique, and I don't think any other medical school has gone this far. ■

Oasis of Knowledge

At the Weill Cornell Medical College in Qatar, students from around the world soak up Western-style medical education (and even 'Seinfeld').

By Beth Saulnier

Photographs by Martin Marion

Daily rounds: Students and faculty commute to class through the Qatar campus's sunny South Hall.



nowledge



In May, sixteen people will take the Hippocratic Oath and formally become Weill Cornell-educated MDs. But when they raise their right hands and promise to “serve the highest interests of my patients through the practice of my science and my art,” they’ll be nearly 7,000 miles from New York. The ten women and six men comprise the inaugural class of Weill Cornell

Medical College in Qatar (WCMC-Q), and their commencement has been hotly anticipated for six years. “There is great excitement, because this is a milestone,” says WCMC-Q Dean Daniel Alonso, MD. “We’ve been working hard, implementing one new year at a time, and now we have six medical classes simultaneously for the first time. But we have to continue to look forward. It’s a work in progress.”



Tradition meets modernity: WCMC-Q's main building blends a variety of architectural elements. Four lecture halls are built in geometric shapes, like this twenty-sided auditorium that seats 160. Wind towers (center) offer echoes of classic Middle Eastern design.

‘They have something that most New Yorkers never have—space. In Doha, the Medical College has all this bench-research lab space, which is like gold in New York City.’



Mentoring: Samar Al Emadi, MD, (left) meets with Mashael Al Khulaifi '08 during Al Khulaifi's clerkship with Hamad Medical Corporation's department of medicine.

Masha'el Al Khulaifi will be among the neophyte physicians donning academic garb—including the green velvet hood symbolizing medicine—at the May commencement. The twenty-three-year-old, who plans to specialize in anesthesiology, has been part of Weill Cornell's Qatar project almost from the start: she joined the first premedical class in 2002. "We do sometimes face difficulties as the first class, the ground-breakers," says Al Khulaifi, one of four Qataris in the Class of '08. "But at the same time it is such a privilege to be in the inaugural class. My colleagues and I have grown together. We've had good and bad experiences, and we've become a family."

Today, the Qatar branch has 203 students from thirty-two countries. At 18 percent, Qatar is the most heavily represented, followed by the U.S. (12 percent) and India (11 percent). But young people have come to Doha from around the globe; in addition to Middle Eastern countries such as Lebanon, Jordan, Iran, and Bahrain there are students from Russia, Nepal, Nigeria, Bosnia, South Korea, Mauritius, and Australia, and ten of the future doctors hail from Iraq. The program is growing: with thirty students, the Class of 2011 is nearly double the size of '08, and the premedical portion has reached its target capacity of sixty students. But from the outset, growth has been secondary to ensuring that applicants meet the same standards in Doha as in New York. "Ultimately, it's hard to measure the quality of a doctor—you don't have good quantitative ways of doing it," says Weill Cornell Dean Antonio M. Gotto Jr., MD. "But you can measure and compare their grades on standardized tests, and the students in Qatar are indistinguishable from their New York peers."

With the medical education program fully up and running, the Qatar branch can now focus on its next mission: establishing a world-class research program. WCMC-Q aims to hire eighteen new science faculty, twelve of whom will be junior professors affiliated with established labs on the New York campus; it will also have to recruit and train support staff. "We postponed the start of the research program by common decision," Alonso says. "But the time has come."

Alonso arrived in Qatar in May 2002 along with Havva Idriss, the vice dean for administration, who was among the branch's first hires. "There was nothing here," Alonso recalls. "Absolutely nothing." In early 2001, Cornell University and the Qatar Foundation for Education—chaired by Her Highness Sheikha Mozah Bint Nasser Al-Missned, wife of Qatar's emir and an avid proponent of the project—had signed an agreement to offer the first degree granted on foreign soil by an American medical school. From the outset, the ground rules were clear: the school would be co-educational, and it would have the same standards for admis-

sion and graduation as the Manhattan campus. Although the ultimate goal was for 70 percent of the available slots to go to Qataris, academic rigor took precedence and admission would be blind to nationality. "We had conversations with the Emir and Her Highness for a little over a year," says Sanford Weill, chairman of Weill Cornell's Board of Overseers. "We saw that here were people who could be very good partners, who were willing to make major changes to make something happen."

The Qatar branch is housed in a 335,000-square-foot academic building, which includes more than 38,000 square feet of lab space. Part of the 2,500-acre Education City complex outside Doha, its neighbors include four other American universities offering specialized degrees: Texas A&M (bachelor's and master's in engineering), Virginia Commonwealth (BFA in design), Carnegie Mellon (undergraduate degrees in business, computer science, and information), and Georgetown (bachelor's in foreign service). They will soon be joined by Northwestern University, which has announced plans to launch degree programs in journalism and communications in 2008.

"It's an oasis of American universities in an area where you would never expect it," says medicine professor Mark Pochapin, MD '88, who has been to Doha twice to run the Basis of Disease module in gastroenterology. "They have something that most New Yorkers never have—space. In Doha, the Medical College has all this bench-research lab space, which is like gold in New York City."

WCMC-Q's facilities are state of the art, with high-speed broadband links that allow live video streaming of lectures from the Manhattan and Ithaca campuses. Although the library has 4,000 bound volumes, its main collection is electronic, available from any of the 350 computer terminals distributed throughout the building; instead of asking students to tote boxes of glass slides, WCMC-Q opted for virtual microscopy, with the slides viewed on twenty-three-inch monitors.

In founding the Qatar branch, administrators didn't have to build a medical college from the ground up, since it would be governed by Weill Cornell and follow the same curriculum as the New York campus (albeit, for logistical reasons, two weeks later). But they faced their share of challenges—not least among them,

attracting qualified students to the new endeavor. "Early on, we didn't realize that we needed to do so much recruitment because we thought the name would draw a lot," says Maya Hammoud, MD, associate dean for admissions and student affairs. "But it's taken a little time to explain to people who we are. So we do the same things we do in the U.S.—college nights, college fairs, road shows where we and the other schools go out as a group to advertise Education City."

In general, application numbers have been on the rise—especially for the premedical program, which had 320 hopefuls for the Class of 2013, compared with ninety-nine for the Class of '08. Although pre-med admission is run by the Qatar branch,



Dean Daniel Alonso, MD



Hands-on training: Fouad Otaki '09 (left) examines a patient as Prof. Bakr Nour, MD, looks on. Above: Vice Dean Hawa Idriss.

“There was nothing here,” Dean Alonso recalls. “Absolutely nothing.”



Chemistry professor Terrance Murphy, PhD, works with pre-med students.

applicants to the MD program are also vetted by the admissions committee in New York. Increasing the percentage of Qataris remains a challenge, Hammoud says, because of the nation's small size—at 5,000 square miles, roughly that of Connecticut. "The whole Qatari population is maybe 250,000," she says. "And if you take that and divide by age, there are not that many high school students." Furthermore, considering the nation's striking economic prosperity—fueled by its vast reserves of oil and natural gas—the long road to a medical career can be a tough sell. "Most students, especially males, tend to want to go into faster-track professions like engineering," Hammoud says. "You're competing with all the other choices that these potential students have. This year we're trying to do a motivational campaign about how great it is to be a doctor."

The second major hurdle, Alonso says, is attracting qualified professors. "It's been a challenge, and remains a challenge," he says. "You have to find a person who has a special spirit, to be uprooted from where he or she is—North America, Europe, Australia—and become a faculty member here." WCMC-Q has about sixty resident faculty, with another several dozen who are based in New York and travel to Qatar to teach for a few weeks each year. (Like admission to the MD program, faculty appointments are approved by the appropriate departments in New York; the Qatar branch maintains no academic departments of its own.) Some courses are, in part, taught via pre-recorded lectures and supplemented with live Q&A sessions. For pre-meds, one such class is Prof. James Maas's Psych 101, one of the most popular courses on the Ithaca campus. "I think Prof. Maas has 1,400 students in Ithaca, so doing it over video doesn't seem that different," says second-year pre-med Petro Kostandy, a nineteen-year-old Egyptian raised in the United Arab Emirates. "We probably get more time than the students over there do, because every two weeks we sit down with him in a video conference to ask questions."

For Pochapin, who plans a third visit to Doha in January, the experience of teaching in Qatar has made him a "champion" of the branch and its mission. But before he made his first trip, he says, he was fearful of traveling to the region. "Our media is flooded with images of the Middle East, and before I left, on the TV in my office was the image of a hostage being held at gunpoint on the Al Jazeera network—and Al Jazeera is broadcast from Qatar. I thought, *What am I doing going to Qatar?* But I decided that rather than having preconceived notions I would go there and see for myself. And I have to tell you, it couldn't be more opposite."

Concerns about living in the Middle East are a hurdle for many potential hires, Alonso says, but other people are actually lured by the location. Though pediatrics professor Marcellina Mian, MD, is Italian, she was born in Egypt; she joined the Qatar faculty on a three-year contract after twenty-five years at the University of Toronto. "When I saw the ad from Cornell it seemed perfect," says Mian, who lives in a three-bedroom apartment with a view of the Persian Gulf. "It was in the Middle East, it was a good university, and it offered a challenge because it was a new medical college." Although Doha doesn't have the cultural riches of Toronto or New York, she says, it has its own attractions, including a more relaxed lifestyle. "There are opportunities to travel to places that seem much too far when you're in Toronto, but are more accessible here—Southeast Asia, East Africa, Bhutan, Jordan." Like Pochapin, Mian stresses that life in Qatar bears no

resemblance to the fraught Middle East that Americans see on the nightly news. "In terms of crime, even in terms of the political situation, I have not felt even an iota of tension," she says. "It is perfectly safe."

In addition to faculty and student recruitment, the Qatar branch has faced another significant challenge: bringing Western-style medical education to the Middle East. Students from the region, Mian says, "are used to much more didactic teaching," so the problem-based learning concept is often new to them. And for physicians at the Hamad Medical Corporation, the health-care provider with which WCMC-Q is affiliated, there has been a learning curve as well. "It's hard for them to conceive of teaching third-year students by giving them patients as opposed to lecturing," Mian says. "So it's been a bit of a struggle getting the students access to patients, allowing them to write histories and orders." In 2011, the Qatar Foundation will open the 382-bed Sidra Medical and Research Center in Education City. The hospital is key to developing WCMC-Q's clinical program—and its mission is a first for the region. "It will be here on campus, and together with the medical school branch it will be an academic medical center," says Alonso. "In the Middle East, such a thing does not exist. But in the U.S. and Canada, wherever there is a medical school, there is a teaching hospital."

for the vast majority of students at the Qatar branch, English is a second language, which inevitably presents something of a hurdle in the classroom. But as Pochapin found, neither language nor culture has proved much of a barrier to WCMC-Q's future doctors. When asked if there are major differences between them and their New York peers, he answers "a resounding no"—and goes on to describe a scene that ensued when he advised a female student to speak more forcefully. "I said, 'When you're presenting to the chief of service, you're going to have to speak up. You can't be such a soft talker, not in medicine.' There was some laughter in the corner, and I said, 'What's so funny?' The students said, 'It's like the soft talker on "Seinfeld."' I said, 'You mean the show "Seinfeld"?' I was stunned, because the cultural difference between 'Seinfeld' and a traditional Arab country is night and day—'Seinfeld' is New York humor. And they said, 'Yeah, "Seinfeld" is funny. We love it.'"


A few weeks after graduation, the sixteen members of the Class of '08 will travel to New York together; all hope to do their residencies in the U.S., some at Weill Cornell. The experience won't be entirely new, as they've all spent time in the city doing research or electives. But Al Khulaifi says she "absolutely" plans to practice in Qatar when she has completed her residency. "I believe that I've had a great education," she says. "It's been obvious from the feedback we've gotten from the local hospital that we function at a high level in terms of medical knowledge." While the past six years haven't allowed much time for a social life or extracurriculars, she has tried to attend the weekly family gatherings at her grandmother's house—and soak up the academic and cultural offerings at the nearby campuses. "It's brilliant," she says of Education City. "Such a great educational force has been brought into this country, and it can only bring good." ■

25,000:1

By Tobin Levy

tanzania elicits idyllic images of wild game, snow-capped Kilimanjaro, savannah grasslands, white-sand beaches, lush tropical forests, and shimmering bodies of water. But the country is in the midst of a health crisis so severe that even its natural wonders—such as the largest tropical lake in the world—are losing their luster. “Lake Victoria looks beautiful,” says Father Peter Le Jacq, MD ’81, a physician and priest who has worked intermittently in Tanzania for more than twenty years. “But after taking care of people bitten by crocodiles or suffering from parasites, as doctors we often say it’s too bad we know the lake’s whole story or we might be able to enjoy the view.” The nation’s largest problem, however, is not dangerous wildlife or parasites but a startling lack of medical resources.

Along with partners from academia, medicine, and government, Weill Cornell is working to improve health care in the East African nation. Its collaborators include the TOUCH Foundation—the acronym stands for Training Our Underdeveloped Countries’ Healers—the Tanzanian government, the Roman Catholic Church, and the Weill Bugando medical complex in Mwanza, the nation’s second-largest city. (The complex, which includes Weill Bugando University of Health Sciences and Weill Bugando Medical Centre, was officially renamed in 2007 to honor the ongoing support of Joan and Sanford Weill.) To an outsider, it may seem a Sisyphean endeavor. While only 11 percent of the



That's the ratio of patients to physicians in Tanzania—compared with 400 to 1 in the U.S. The new Weill Bugando collaboration aims to narrow that gap and improve health care in a desperately underserved nation.

world's population lives in Sub-Saharan Africa, the part of the continent south of the Sahara desert, it is home to 25 percent of global disease and has only 2 percent of the world's health-care workforce. Tens of millions of people die there each year, due in large part to the grave shortage of health professionals available to provide proper diagnosis and treatment, and to educate the population about disease prevention.

In Tanzania, there is one doctor for every 25,000 people, compared with one for every 400 in the United States; under current conditions, 85 percent of Tanzanians will never see a physician in their lifetime. As a result, the average life expectancy is forty-four years (versus seventy-eight in the U.S.). Of the roughly 38 million Tanzanians, 13 million are served by Weill Bugando Medical Centre, an 850-bed teaching hospital on the shore of Lake



TOUCH FOUNDATION

Dedication: In honor of the commitment and support of Joan and Sandy Weill, the Bugando medical complex, including both the Bugando medical university and the Bugando Medical Centre, was officially renamed "Weill Bugando" on February 17, 2007, with a celebration of songs, dance, speeches, and the unveiling of a new entrance sign.

Victoria in Mwanza. "Sometimes you'll see two people sleeping head to foot in one bed," says Daniel Fitzgerald, MD, an assistant professor of medicine at Weill Cornell who made his second trip to Bugando in September. "You'll go into the wards—there's Patient A and Patient B in the first bed, and then you go to the next bed and there's two more. I don't think anyone who's just gotten out of surgery or who's sick enough to be in a hospital should have to share a bed—but the patients who made it to Bugando are the lucky ones."

Providing long-term relief in such a resource-poor setting is a monumental undertaking—which is why Weill Cornell formed an affiliation with the Bugando complex in 2006. "It's a broad agreement, in that it says we will establish collaborations that will be mutually beneficial and strengthening for our respective institutions," says Warren Johnson, MD, chief of the Division of International Medicine and Infectious Disease at Weill Cornell. "It doesn't have specific commitments in any area, but we're developing a program that we're envisioning over a decade. We'll help make the Bugando medical school the best in East Africa, which will have ramifications far beyond the university."

In June, the TOUCH Foundation sent a team of Weill Cornell faculty to Bugando for

ten days; they included Estomih Mtui, MD, associate professor of clinical anatomy in neurology and neuroscience; Randi Silver, PhD, associate dean, Weill Cornell Graduate School of Medical Sciences; and Thomas Maack, MD, professor of physiology, biophysics, and medicine. They've since submitted a report to the foundation on how Weill Cornell could help Bugando improve its teaching of both clinical skills and basic science by training junior faculty. "It's a similar model to the one Weill Cornell uses in Qatar," says Mtui, who also serves as a liaison among Weill Cornell, TOUCH, and the government of Tanzania. "There's been a lot of collaboration and things are moving forward."

Fitzgerald, who took his first trip to Bugando in October 2006, was amazed at the advances in both teaching and patient care that had been made in less than a year. For example, there are now routine teaching rounds on the medical wards in the mornings and afternoons, and a handbook on how to diagnose and treat the most common illnesses has been created. "It's not that the Tanzanian doctors didn't know those things existed," says Fitzgerald. "There just wasn't the manpower. You had a handful of physicians trying to provide all of the patient care and teach the medical students. I view Weill Cornell's role as giving them a little breathing room, so they can have the time to train more people and bring up another generation of physicians to build that critical mass of faculty."

another highlight of the partnership is a program for visiting fellows and residents that has been sending Weill Cornell physicians to Bugando since January for rotations as clinical instructors in the departments of medicine and pediatrics. During its first eighteen months, the program is expected to include roughly fifty senior residents; their primary agenda is to work with interns and medical students, augmenting the number of senior physicians available to provide clinical instruction and guidance.

Weill Cornell is affiliated with numerous hospitals around the globe and has major programs in Haiti and Brazil, but Johnson stresses that the Bugando affiliation is unique. "It encompasses all aspects of the medical school and the hospital. It's not limited to infectious diseases or research. It's really everything." Weill Cornell physicians and administrators have learned lessons from their long-standing HIV/AIDS collaboration with GHESKIO in Haiti that can be applied to their work in Bugando, the first being that their most valuable resource is patience. "Do not expect to make recognizable changes in a short period of time," says Johnson. "But persevere, listen more than you talk, and over time you'll get something done."

Although the affiliation agreement was not signed until 2006, the relationship between Bugando and Weill Cornell goes back to 2001. It was then that the Roman Catholic Church—which had been working with the Tanzanian government since the early 1990s to establish the country's fifth fully accredited medical school—asked Le Jacq to develop academic, professional, and financial partnerships with institutions in the U.S. After graduating from Weill Cornell and earning a master of divinity degree from Maryknoll Seminary, the Long Island native had been assigned to Bugando Medical Centre as both a priest and a doctor. At the time, he was one of only twelve physicians in the area and the only fully trained MD in the department of internal medicine. For more than a decade, Le Jacq witnessed the suffering of the African people and wrestled with Tanzania's lack of trained medical professionals. "You couldn't expect to have the facilities or the treatment that would be best for your patients," he says. "So you had to give up what you knew as the practice of medicine and just take care of the sick."

The Bugando affiliation is unique, says Dr. Warren Johnson. 'It encompasses all aspects of the medical school and the hospital. It's not limited to infectious diseases or research. It's really everything.'



NEIL SHAH

Uphill climb: Two men on their way to the Weill Bugando hospital, with the building in the background.

'Malaria is one of the greatest killers [in Africa], along with malnutrition, tuberculosis, and HIV. By training the appropriate individuals to deliver health care, all of these things could be eradicated,' says Dr. Estomih Mtui.

It's discouraging, because the sick and the staff always suffer."

With significant financial contributions from Weill Cornell, Joan and Sanford Weill, and the Citigroup Foundation, among others, the Bugando medical school opened in September 2003. In February, the Weills were honored in Mwanza with a lively celebration of songs, dances, speeches, and the unveiling of a new sign bearing their name. Several Weill Cornell faculty members attended, along with government officials and hundreds of staff and students from Bugando. "It was nice," Sanford Weill says. "But the really important experience was meeting our residents and faculty there—and seeing how they're impacting the students working to improve the delivery of medicine to people very much in need."

twenty-five-year-old Stella Mongella, from the capital city of Dar es Salaam, is one of the ten students in the medical school's inaugural class. Her days begin at 7:30 with a morning report, during which she discusses the previous day's admissions with Bugando physicians; that's followed by rounds and lectures until 5 p.m. Her nights are spent admitting patients to the ER, attending lectures, and studying. It's a rigorous schedule, and Mongella is well aware of the challenges that lie ahead—and thankful for the guidance Weill Cornell continues to provide. "My colleagues and I have found their presence and teaching greatly useful," says Mongella, who hopes to focus on child health. "I spent time with Cornell residents while I was in pediatrics. They were very helpful, always willing to teach and emphasizing the importance of patient follow-up. That's vital to learn as a medical student."

Because the Tanzanian educational system is modeled on that of England—where earning a medical degree requires a five-year undergraduate program followed by a one-year internship—the first class of medical students will graduate in 2008. (In Tanzania, children attend primary and secondary school through grade twelve, followed by two years of high school; students with high marks in physics, chemistry, and biology are then eligible to study medicine.) In 2004, as Bugando expanded, TOUCH was established to oversee development and fundraising. "There are diseases in Africa that could clearly be eliminated with the proper number of health-care providers," says Mtui, a native of Tanzania. "Malaria is one of the greatest killers, along with malnutrition, tuberculosis,

and HIV. By training the appropriate individuals to deliver health care, all of these things could be eradicated."

In September, fifty new medical students joined the eighty-five current ones across Weill Bugando's four classes of future doctors. The school will reach its operational capacity by 2009, with a total of 250 medical students and hundreds of others studying to be paramedical professionals such as nurses, pharmacists, and lab technicians. According to the World Health Organization, each new health professional will save approximately 150 lives over the course of his or her career. And WCMC is also helping Weill Bugando to train teachers who will pass on their knowledge to future generations.

Johnson emphasizes that the collaboration between Weill Cornell and Weill Bugando is not one-sided. From the earliest stages of the relationship, he says, it has been clear that the students and faculty from New York can learn much from their experiences in Tanzania. "They are learning a different culture, a different approach to medicine, how to practice without the benefit—or sometimes the encumbrance—of all the technology that we have grown so used to



JOHN ABBOTT

Estomih Mtui, MD

here," he says. "They're relying on the basic skills of taking a quality history, doing a good physical examination, and synthesizing those into a diagnosis and a treatment plan. They don't have CT scans or MRIs. They have plain X-rays, everyday laboratory tests, a blood count—and oftentimes not much more."

Interested in international health as a career path, Anna Jackson '08 took time off between her third and fourth years to get exposure to practicing medicine in a resource-poor setting. Weill Cornell's Division of International Medicine and Infectious Diseases suggested she go to Tanzania, though the official exchange program was not yet in place. Jackson was in Tanzania for nine months, three of which she spent at Bugando, where she lived in a dorm and learned about the country and its medical practices largely from her fellow students. "The Tanzanians were open and receptive to me," says Jackson. "And of course we were all curious and had lots of questions for each other." For example, whereas Jackson had never seen a case of malaria, many of the interns she met didn't know how to read an EKG. "It was great because we learned a lot from each other and benefited from the exchange."

Jackson credits Weill Bugando with strengthening her physical-exam skills as well as her ability to take a thorough history, making her more discerning when it comes to ordering diagnostics. She now applies these lessons at the

Dan Fitzgerald, MD (left), and Warren Johnson, MD



AMELIA PANICO



NEIL SHAH

Spread the health: A medical assistant (left) training at Bugando weighs a baby at a rural clinic.

student-run clinic in Manhattan where she works, trying to provide quality health care to uninsured patients in an economical way. "It reaffirmed my interest in international health and taught me that, while an impact can be made by taking care of patients in a resource-poor setting, a larger impact can be made by working with the doctors who are already teaching medical students and interns."

For Mtui, who returns to Tanzania every summer to do *pro bono* work, the Bugando project offers another opportunity to help his native country. "When the President of Tanzania visited here last October, he said that I've been of more assistance to Tanzania while in the U.S. than I would have been if I still lived there," he says. "It is a great honor to be able to give something back to my motherland." ■



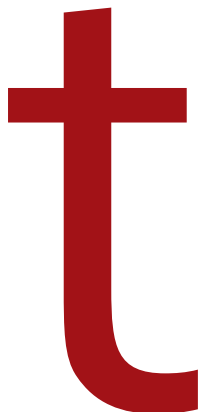
JOAN AND SANFORD I. WEILL MEDICAL COLLEGE OF CORNELL UNIVERSITY

the year in. review

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his past year has been rich with historic milestones for Weill Cornell Medical College's Development program. In October 2006, Weill Cornell made history with the announcement of its largest capital campaign to date—an effort to raise an unprecedented \$1.3 billion toward a roster of groundbreaking projects. As part of an overall \$4 billion University-wide initiative, the Board members, leadership, and major benefactors of Weill Cornell Medical College and Cornell University gathered both in New York City and Ithaca to celebrate the ambitious undertaking.

“One of the most important aspects of this campaign—*Discoveries that Make a Difference*—is the commitment to expand the collaborative research across disciplines and across campuses to produce lifesaving advances in science and medicine,” said Dean Antonio M. Gotto Jr., MD. The interdisciplinary theme is one that resonates throughout the campaign, whether speaking to the collaboration between Ithaca-based researchers and New York City-based physician-scientists, or to the cornerstone of the Weill Cornell campaign—a planned thirteen-story biomedical research building that is being designed to foster communication among scientists and between departments.

As the plans developed for Weill Cornell's newest building project, the Medical College celebrated the dedication of the latest new building constructed on campus. The Weill Greenberg Center, an ambulatory care and medical education building on the corner of York Avenue at 70th Street, was dedicated on January 26, 2007, in honor of its leading benefactors: Joan and Sanford Weill and Corinne and Maurice Greenberg. With the Honorable Michael Bloomberg in attendance, a robust crowd gathered to celebrate the completion of the award-winning facility, as well as the overall success of the Medical College's most recently completed campaign, *Advancing the Clinical Mission*. The campaign closed at the end of 2005—a year ahead of schedule—having achieved its goal of \$750 million. As a result of the campaign, the Weill Greenberg Center was funded fully through the generosity of private philanthropy.

The power of philanthropy soon resonated again as Weill Cornell hosted a press conference on June 13, 2007, to announce a series of milestones in the current *Discoveries that Make a Difference* campaign. Having launched a mere eight months earlier, the campaign, as Dean Gotto announced to a room full of reporters and friends, had already reached the halfway point toward the \$1.3 billion goal thanks in large part to \$400 million in leadership commitments. Leading the way, Joan and Sandy Weill announced what is believed to be the largest gift ever to a medical college, as they committed an unprecedented \$250 million to Weill Cornell—bringing their lifetime giving to over a half-billion dollars. A gift of \$100 million was announced from an anonymous friend, made in support of the construction of the new biomedical research center. Corinne and Maurice Greenberg announced their gift of \$25 million, as well as an additional \$25 million gift from the Starr Foundation.

In alumni news, on June 19 more than eighty alumni and guests gathered at the New York Yacht Club to celebrate the 10th anniversary of the Dean's Circle. Founded by Kenneth G. Swan, MD '60, the Dean's Circle honors Weill Cornell Medical College's most generous alumni contributors. At the event, Dean Gotto acknowledged the members of the Dean's Circle for their personal generosity and leadership in rallying fellow alumni to contribute more than \$16 million in scholarship support as part of the *Advancing the Clinical Mission* campaign. The members of the Dean's Circle will continue to play a key role in providing funding for Weill Cornell's most pressing needs during the *Discoveries that Make a Difference* campaign.

The combined impact of hard work and overwhelmingly generous benefactors provided the Medical College and the University with the best year ever for their Development programs—and set the campaign on a course for continued success. Working under the leadership of campaign chairman and Weill Cornell Overseer Robert Appel, the Campaign Steering Committee continues to work diligently in support of its ambitious goal. Steering Committee members include Madelyn Antoncic, PhD; Robert Belfer; Sanford Ehrenkrantz; Israel Englander; Jeffrey Feil; Dean and Provost for Medical Affairs Antonio Gotto Jr., MD; Dean David Hajjar, PhD; Peter Meinig (Chairman of Cornell University's Board of Trustees); Ronay Menschel; David Skorton, MD (President of Cornell University); Daisy Soros; and Sanford Weill.

We are grateful to all the generous friends who have supported Weill Cornell over the past year. Special thanks are extended to the following donors whose gifts of \$1,000 or more were recorded during the fiscal year July 1, 2006, through June 30, 2007:

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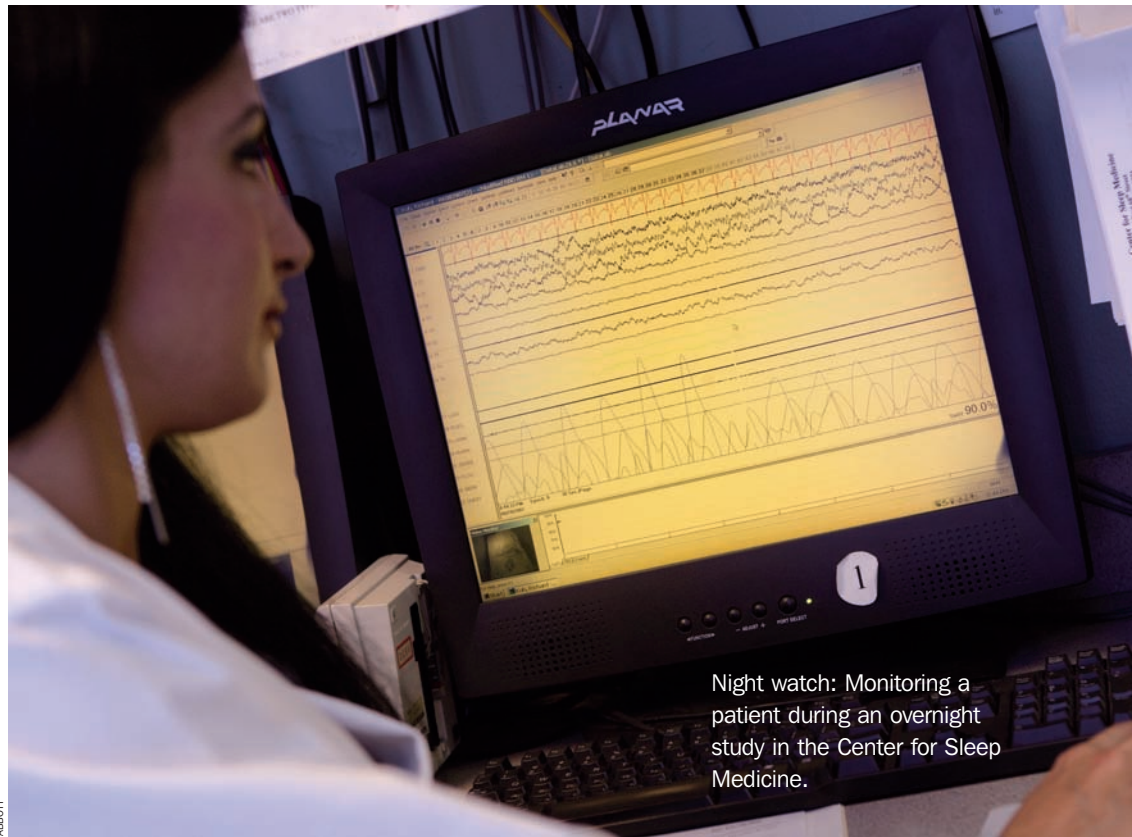
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Next generation: Seventh graders from East Side Middle School visit the Medical College for the Cornell Science Challenge.

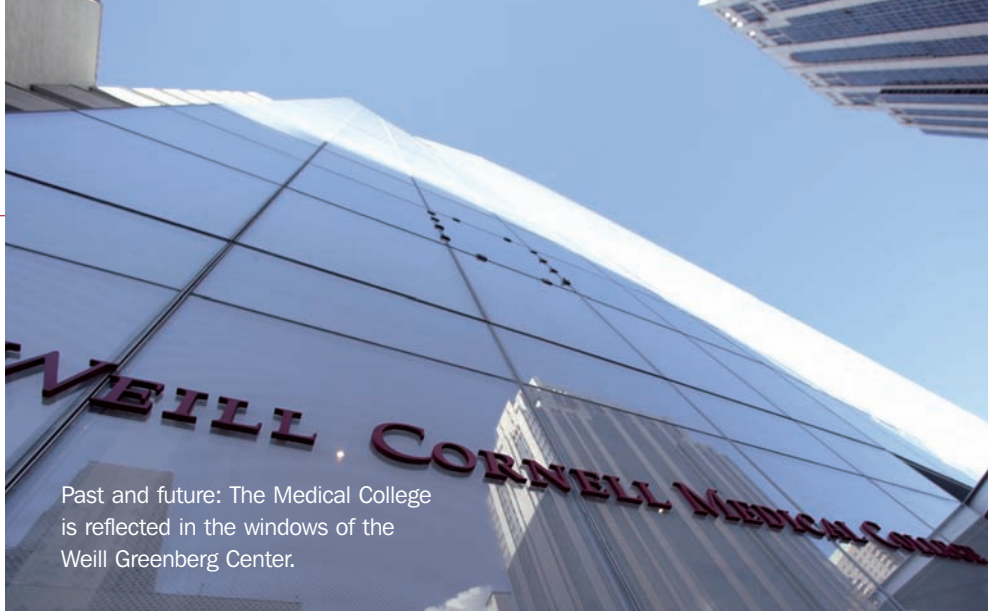


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Kean Insights

A flamboyant teacher, a lasting legacy, and a very long tapeworm

dR. BENJAMIN KEAN'S 1993 OBITUARY IN THE *New York Times* described him as the Shah of Iran's physician and the expert on tropical diseases who helped discover the cause of traveler's diarrhea. But ask any of the 5,000 students he taught over his four-decade career, and they'll tell you he was something even more special: a lecturer who never bored. The professor of tropical medicine and public health often taught with a cigar in one hand and a Pimm's Cup cocktail in the other, with his Highland terrier, Carnoustie, by his side. On occasion he'd bring in poisonous snakes or roll out a tapeworm measuring thirty feet. Top students were rewarded with cigars and Dom Pérignon. "In any given lecture, half the time he told funny stories," remembers Steve Meshnick, MD '79, an epidemiology professor at the University of North Carolina School of Public Health, "some of them about movie stars with tapeworms." Celebrity patients in Kean's Park Avenue practice included Oscar Hammerstein, Edna Ferber, and Gertrude Lawrence. Salvador Dali reportedly stormed out of his first appointment, disgusted with the artwork in Kean's office. Kean's autopsy of Sherwood Anderson determined that the writer died from a colon punctured after he had swallowed a toothpick (along with the olive it impaled, and several martinis).

But underneath the garrulous doctor to the stars lay a serious scientist. With a colleague at Tufts, Kean identified *E. coli* as the culprit behind traveler's diarrhea. (He once advised tourists to eat lettuce only if it had been "sterilized with a blowtorch.") An expert on malaria and toxoplasmosis, he also helped develop a treatment for schistosomiasis.



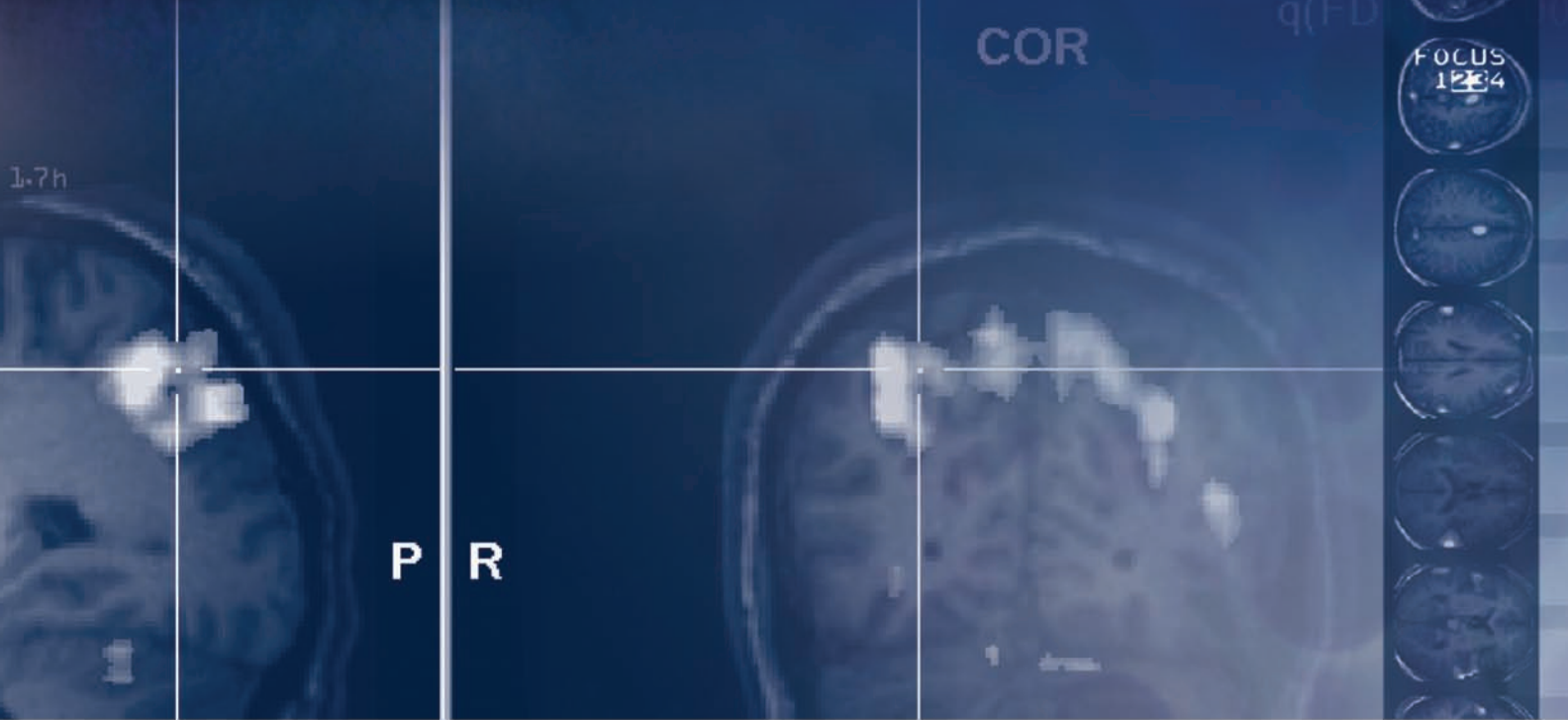
COURTESY OF MEDICAL CENTER ARCHIVES OF NEWYORK-PRESBYTERIAN/WEILL CORNELL

Man of the world: Tropical medicine professor Dr. Benjamin Kean with his faithful terrier, Carnoustie.

Kean wrote 175 scientific articles and six books, including the authoritative 1968 two-volume text *Tropical Medicine and Parasitology*.

At the Medical College, Kean was instrumental in establishing overseas research programs in Haiti, Brazil, and Cuba; he founded the Tropical Medicine unit in 1963, directing it until 1978. His name still reverberates, with a professorship, fellowship, scholarship, and course all established in his honor. But perhaps Kean's biggest legacy was his ability to inspire students. "Not only was tropical medicine exciting and a frontier, but you could help so many people being overlooked by modern medicine—he conveyed that with real passion," Meshnick remembers. "Ben was a once-in-a-century kind of person."

— Susan Kelley



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*With gratitude for being a part of our mission of excellence.
Best wishes for the New Year.*

Antonio M. Gotto

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