

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



Juggling Act

Young doctors figure out how to balance life and medicine



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



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BETH SAULNIER

He has battled AIDS in the laboratory and the legislature, toured Uganda by motorcycle to assess drug delivery, and even made dinner for a rock star. Anthony S. Fauci, MD '66, director of the NIH's National Institute of Allergy and Infectious Diseases, talks to *Weill Cornell Medicine* about life on the front lines of public health.

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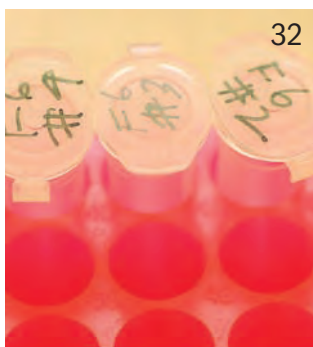
SHARON TREGASKIS

Everyone knows that medical school costs tens of thousands of dollars. But there are expenses beyond the financial: the toll on one's personal relationships, outside interests, even health. A look at how Weill Cornell students and alumni are coping, and why having a life makes for an even better physician.

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JENNIFER ARMSTRONG

While stem cells offer hope for patients suffering from everything from paralysis to Parkinson's, their use remains controversial—and government funding limits the scope of research. But with independent support from Hushang Ansary, vice chairman of the Weill Cornell Board of Overseers, the Ansary Center for Stem Cell Therapeutics is on the cutting edge.



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Cover illustration by Martin Mayo

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In Praise of...

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

WEILL CORNELL MEDICAL COLLEGE HAS been training the world's finest physicians and researchers for more than a century. And as technology and discovery have radically altered the landscape of medicine as we know it, so too has Weill Cornell had to shift and adapt.

We are always on the cutting edge, our faculty and staff proven brilliant in matching—and often setting—the swift pace of discovery. But as our equipment and methodologies improve, there are basic themes that remain firmly in place.

We study relationships at Weill Cornell. We examine the relationships among the body's cells, organs, and systems, and the viruses that infiltrate them. But there is another symbiosis that permeates our labs and classrooms—a partnership as vital to a young doctor as any observable through a microscope. It is the relationship between student and teacher.

The wise, experienced teacher doling out lessons to the young, eager student—this is a stereotypical and antique scenario. A life dedicated to medicine cannot rely on such a passive model. To a Weill Cornell student, learning is not the stagnant practice of accepting knowledge from a trusted source. First-year students are expected to contribute right away—in the hospital and in the lab—and must continue to immerse themselves in the learning process throughout their time here.

You can hear it in our offices, hallways, and classrooms: students are not only absorbing material but challenging what we know today and what we might know tomorrow. These students contribute as much as their professors to the rich educational and cultural landscape of the Medical College. Weill Cornell students understand that medical education is not a collection of credits and grades. They conduct vital work in the name of discovery, and that work is often the foundation for new treatments and medicines. At times, some of our students voluntarily interrupt their regular curriculum, taking a year or more off to conduct outside research. And when they come back to us, they are wiser, sharper, and



JOHN ABBOTT

MD-PhD student Ankit Patel, a 2004 graduate of the Ithaca campus, was elected student overseer in 2006.

even more committed to the study of medicine.

The enthusiasm of our students serves as a renewable source of energy and inspiration for the faculty. Medicine is a dynamic field, and the pursuit of knowledge and answers is constant. We look to the students to fuel that pursuit.

Weill Cornell attracts the brightest young minds from across the world. They come to us from varied backgrounds, but their goals are consistent: to become leaders in their fields and to provide compassionate care. They've entrusted those goals to our world-class teachers, who hold that trust dear. But as our faculty pass on the knowledge and skills that have propelled them to the highest reaches of medicine and research, they do so in the knowledge that their students will ultimately give back as much as they receive.

— Dean Antonio Gotto

... Our Students

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

STUDENTS ALWAYS WANT TO KNOW WHAT their teachers say about them. That was true back when the teachers' lounge was a smoky den of mystery where instructors were known to gossip and trade stories. These days, you can't smoke in the buildings of the Weill Cornell Graduate School of Medical Sciences—but the professors still trade tales. And as a special gift, I'm going to let you know what they are saying.

They are proud. They are pleased. They are often overwhelmed at the dedication and talent on constant display in their labs.

That is heavy praise, considering the source. The Graduate School boasts a world-renowned faculty that comprises the brightest minds in many fields of medicine. Consider, for example, Neil Harrison, PhD, director of the C. V. Starr Laboratory for Molecular Neuropharmacology, where he and his staff study synaptic transmission and the processing of information in the mammalian brain. The contributions that Harrison and others on our faculty make may be difficult, if not impossible, to fully comprehend or appreciate. But one of their most important missions is to inspire and provoke equally vital contributions from our graduate students.

Throughout our history, Weill Cornell has been successful in recruiting graduate students who are as skilled as they are driven. To cite just one example, there is Jeanne Farrell, a fifth-year student in pharmacology, who works in the laboratory of the program's director, Lonny Levin, PhD '83. The dynamic, challenging lab environment has allowed her to make great strides toward her professional goals. "The faculty here is truly outstanding," she says. "At Weill Cornell, there is a great mesh of scientific minds in one place."

We have designed the curriculum and coursework of the Graduate School so students will be fully challenged in the laboratory and fully supported by the faculty. These students are coming to us after years of intense study. They may already be accomplished researchers and



ABBOTT

Eli Berdough, a fourth-year graduate student in the Allied Program in Molecular Biology

physicians, but they still have steps to take before reaching the full embodiment of their professional aspirations.

When Eli Berdough came to the Graduate School, he had already published the findings from his research as an undergraduate. While many students have taken similar initiative throughout their educational careers, Berdough—a fourth-year student in the Allied Program in Molecular Biology who works in the laboratory of Prasad Jallepalli, MD, PhD—represents the model of an active, contributing member of our campus. "This provided me with my first laboratory experience, and I was immediately taken with it," Berdough says. "I was able to see, firsthand, just how exciting an experiment can be."

I can't tell you how satisfying it is to hear these stories from our students. They come to us with great ambition and great drive, and while our professors are able to harness that ambition and guide that drive, it is the hard work of the students themselves that proves the equation in the end. And that isn't just office gossip.

— Dean David Hajjar



RICHARD LOBELL

Life saver: Nina Hubbard thanks Mohammed Islam, who donated a kidney to her five-year-old son, Evan.

Gifts from the Heart

ON VALENTINE'S DAY, A FIFTY-ONE-YEAR-OLD ACCOUNTANT from California gave much more than chocolates and roses—she donated a kidney to a stranger. Cindy Marshall's unselfish act was the first link in a chain of three transplants, performed simultaneously in six operating rooms at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, that could ultimately lead to hundreds more. A week after the surgeries, the recipients met their donors for the first time in an emotional press conference at the hospital.

Known as never-ending altruistic donorship (NEAD), the system is a new approach to transplants; the chain initiated at Weill Cornell was one of the first in the U.S. In NEAD, a friend or family member of each recipient donates a kidney to someone else, keeping the chain going. Marshall's kidney went to Queens resident Ana Maria Berdeja, whose husband then donated to Rubina Parvin of Long Island City. Parvin's husband gave a kidney to five-year-old Evan Hubbard of Manhattan; the chain will continue when Hubbard's father—a longtime data clerk at NYPH/WCMC—acts as a bridge donor for the next cluster of transplants.

"This approach could revolutionize the way we do living-donor transplants," says chief of transplant surgery Sandip Kapur, MD '90, "greatly reducing, even eliminating the organ shortage in this country and ultimately saving the lives of those in desperate need of a kidney."

\$50 Million Gift for Cardiac and Reproductive Centers

IN LATE FEBRUARY, IT WAS ANNOUNCED THAT A \$50 MILLION GIFT FROM Ronald Perelman will support Weill Cornell's Center for Reproductive Medicine and establish a new cardiac care institute at NYPH/WCMC. "Reproductive medicine is a field of scientific discovery that holds remarkable promise for the future," says Sanford I. Weill, chairman of Weill Cornell's Board of Overseers, "and Ron Perelman's gift will advance an already outstanding department that conducts cutting-edge research and translates research results into life-changing advances for patients here in New York and around the world." The facility will be renamed the Ronald O. Perelman and Claudia Cohen Center for Reproductive Medicine in honor of Perelman and his late wife.

The gift from Perelman, chairman of MacAndrews & Forbes Holdings Inc. and a member of Weill Cornell's Board of Overseers and New York-Presbyterian's Board of Trustees, will also create a "medical town square" for the treatment and prevention of heart disease. Based at NYPH/WCMC's Greenberg Pavilion, it will include a patient welcome center, a clinical trials enrollment center, and an educational resource center. The facility will be known as the Ronald O. Perelman Heart Care Institute. "The cardiac institute will not only treat patients," Perelman says, "but also educate and advocate—particularly to women, who still falsely believe they are at less risk—about preventive measures to reduce heart disease."

World-Class Cancer Center Created

IN WHAT DEAN ANTONIO GOTTO, MD, CALLS A “BOLD INITIATIVE,” NewYork-Presbyterian Hospital and Weill Cornell Medical College have launched a joint effort in the battle against cancer: a world-class center dedicated to advancing research, prevention, and treatment. Led by physician-scientist Andrew Dannenberg, MD, the newly established center will offer expanded research programs and promote multidisciplinary efforts. “The key to the success of this initiative will be collaboration and team science,” Dannenberg says, comprising researchers not only from hematology, oncology, and radiology, but also surgery, urology, genetics, pediatrics, immunology, and pharmacology. The initiative will include the addition of lab space and ten new faculty in cancer biology. “Cancer is the second leading cause of death in the U.S.,” notes David Hajjar, PhD, Weill Cornell’s senior executive vice dean. “While scientific progress continues, close to 1.5 million people will be diagnosed this year. Many of these cases will be found after the cancer has spread to other parts of the body. New ideas are desperately needed to understand why cancers form, grow, and spread, and how to contain them, predict them, and ultimately prevent them.”

Class of 2008 Makes ‘The Best Match’

CHAMPAGNE AND A TABLE LADEN WITH SEALED ENVELOPES GREETED the ninety-six members of Weill Cornell’s fourth-year class on Match Day in March. Dean Antonio M. Gotto toasted the students before they descended on their letters and learned that they’d matched to some of the nation’s most prestigious residencies. “From a historical perspective,” said senior associate dean for education Carol Storey-Johnson, MD, “this year’s match is the best match we’ve had since we’ve been keeping statistics.” For the first time, students from the Qatar campus participated in the match,



with fifteen members of the inaugural class obtaining residencies in the U.S. Some of the future doctors will continue their training at Weill Cornell—such as classmates Vivian Lee and Conor Liston, who matched in psychology at the Payne Whitney Clinic. Said Tiffani McDonough, bound for a pediatrics residency at NYU: “I’m so happy I feel like I’m going to faint.”

Härtl Offers Innovative Spine Surgery

ASSISTANT PROFESSOR OF NEUROLOGICAL SURGERY ROGER HÄRTL, MD, is the first in Manhattan to perform a new spinal procedure for degenerative disc disease that cuts recovery time. The technique, called AxiaLIF, is less invasive than traditional spine surgery, in which doctors must dissect muscle and nerve to get to the affected area—taking hours and leaving the patient at risk for significant blood loss. AxiaLIF takes less than an hour and requires only a small incision near the tailbone; the affected area is accessed via a ten-millimeter-wide channel, and the discs are fused with a rod. Patients are generally released within twenty-four hours; after a few weeks, they can return to normal activity. “With the less invasive technique, I can do the same surgery but access the area with less trauma to muscles, nerves, and surrounding tissue,” Härtl says.

Is Health Care a Human Right?

IN THE LATE 1980S, PHYSICIAN AND PRIEST PETER LE JACQ, MD '81, was working in Tanzania—where 30 percent of pregnant women were HIV-positive. One day, he was called upon to deliver a baby, gloveless, in the middle of a street. The episode tested Le Jacq’s ethics, as he knew that treating the mother would put him at risk. Ultimately, he did not contract HIV—but, he says, “even if I was positive, it would have been worth it.”

Le Jacq shared his story with the audience at an interactive workshop, Health Care & Human Rights: A World in Need, held in February and sponsored by Weill Cornell and the Fifth Avenue Presbyterian Church. The workshop, which had more than 200 attendees, explored a major concern: in a world where 60 percent of the population holds only 6 percent of the wealth, what responsibility do physicians have to alleviate poverty and widen access to medical care? The seminar posed questions about health care’s status as a human right, the need to make medicines available to the poor, and the role of physicians in protecting victims of war and torture. The event was moderated by Dean Antonio Gotto, MD, and Joseph Fins, MD '86, chief of the Division of Medical Ethics.

Science vs. Politics

THE INTERSECTION OF SCIENCE AND POLITICS IS A PERILOUS PLACE, says professor of clinical public health Madelon Finkel, PhD. In her latest book, *Truth, Lies, and Public Health: How We Are Affected When Science and Politics Collide*, Finkel examines the role ideology has played in scientific progress and the funding of research in recent years. “While political activists and the government can bring much-needed attention and money to a public health problem, politics can also poison science,” says Finkel, director of the Office of Global Health Education. “Over the last two decades, politics and ideology have increasingly hijacked and distorted science to serve their own purposes—often ignoring incontrovertible evidence and preventing much-needed policies to improve public health.” The book, published by Praeger Press, cites such examples as the debates over public policy regarding contraception, AIDS, medicinal marijuana, needle exchange, and breast implants.



LOBELL

Bigger and better: Enjoying their expanded Griffis Faculty Club kitchen are (from left) Robert Galuzzi, chef, Walter Revels, assistant chef, and Robert Barnes, line cook.

Faculty Club Gets a Makeover

AFTER AN ELEVEN-MONTH RENOVATION, THE GRIFFIS FACULTY CLUB HAS reopened with a brighter atmosphere—along with a new bar, expanded kitchen, and private dining area. David Hajjar, dean of the Graduate School of Medical Sciences, presided over the opening ceremonies and singled out Anita Gotto and Joan Weill for their design input. “They have helped to transform the club into an important part of the daily life of Weill Cornell.” Established in 1962, the club is not only a place for faculty to relax and hold meetings, but also serves as an important fundraising venue.

When Depression Is a Family Affair

THE WIDOW OF ACTOR AND MONOLOGIST SPALDING GRAY RECALLED THE painful weeks between his suicide and the time his body was found; the daughter of novelist William Styron shared memories of growing up with a famous father who suffered from mental illness. Kathleen Russo and Alexandra Styron spoke in Uris Auditorium in January as part of the ongoing Humanities and Medicine Program, in a session on coping with a family member’s depression. “If he had his way, he would just sit in this one chair in the living room, slumped over and not talking,” Russo said of Gray. “You don’t see a light at the end of the tunnel.” Both women said that navigating the medical system was often difficult and unpleasant—from uncooperative insurance companies to doctors who seemed uncaring or uncommunicative. The lecture was moderated by professor of clinical psychiatry Richard Friedman, MD.

\$13 Million for Vascular Disease Research

CONTINUING ITS FUNDING OF WEILL CORNELL’S CENTER OF VASCULAR Biology, the National Heart, Lung, and Blood Institute has given the Medical College a \$13 million grant for biomedical research into vascular disease. The award to cell biologist Katherine Hajjar, MD, and biochemist David Hajjar, PhD, is a renewal of support for five

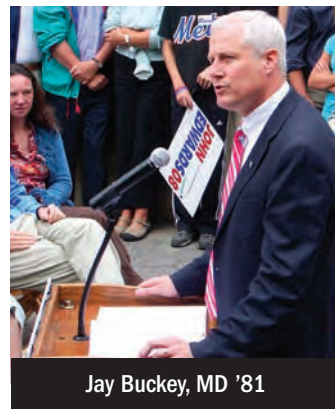
ongoing investigations into the interactions between blood cells and vessels. The ultimate goal is to identify the molecular links that define the two major risk factors for coronary artery disease, heart attack, and stroke: atherosclerosis and thrombosis. The twenty-year effort is hoped to be completed in 2011.

Major Gift for Prostate Cancer Research

A \$5 MILLION GIFT TO LEADING SCIENTISTS AT FOUR INSTITUTIONS, including Weill Cornell, will support research to develop an innovative nanomedicine for prostate cancer. The award, from the Prostate Cancer Foundation and disease survivor David Koch, is one of the largest-ever individual donations for prostate cancer research. At Weill Cornell, the effort will be led by Neil Bander, MD, an authority on antibody-targeted therapy in urological cancers; his team developed the first antibodies to prostate-specific membrane antigen (PSMA), considered a promising target for drug development and the subject of current clinical trials. Other recipients of the grant include pioneering MIT chemical engineer Robert Langer, PhD, an undergraduate alumnus of Cornell’s Ithaca campus and recent National Medal of Science winner.

Alumnus Cancels Senate Bid

IN FEBRUARY, JAY BUCKEY, MD ’81, ANNOUNCED THE END OF HIS EIGHT-month campaign for the U.S. Senate. Buckey, a 1977 alumnus of the Ithaca campus, had been seeking the Democratic nomination for the New Hampshire seat currently held by Republican John Sununu—running on a platform of global economic competitiveness, alternative energy resources, and improvements to the health-care system. “I remain committed to the goals of our campaign,” Buckey said in a statement on his website, “but I do not have the financial resources needed to campaign full-time for the next nine months, which is what would be required to beat John Sununu.”



Jay Buckey, MD '81

WIKIMEDIA

A professor of medicine at Dartmouth, Buckey is best known as a former astronaut who flew on the shuttle Columbia in 1998, serving on NASA’s sixteen-day Neurolab mission. “Going up in space gave me a lot of confidence in America’s ability to do things,” Buckey told *Weill Cornell Medicine* during the campaign. “It also gives you the perspective of looking at the Earth, seeing just how thin the atmosphere is, and realizing that we have a responsibility to leave the place in better shape than when we entered it.” Buckey’s NASA experience also inspired an unusual piece of political swag: supporters who gave at least five dollars to his campaign got a squishy stress toy shaped like a space shuttle.

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from the bench

Drug Could Fight Potential Bioterror Agents

A drug derived from a manipulated peptide of the parainfluenza virus can combat the deadly and highly infectious Hendra and Nipah viruses, both listed by the CDC as potential bioterror threats. In a study published in the *Journal of Virology*, Weill Cornell researchers showed that the peptide effectively inhibits the live viruses from entering animal cells. "We have been urgently working on this," says microbiology and immunology professor Anne Moscona, MD, "because right now, there's absolutely nothing that can be done to stop this fatal, transmissible illness." The team's next step is to develop a method of sustained release for incorporation into a drug that could be stockpiled to combat an outbreak.



Anne Moscona, MD

WEILL CORNELL ART AND PHOTO

Help for Hepatitis C Patients

New drug therapies could help optimize treatment for the 170 million people worldwide infected with hepatitis C, say two studies by Weill Cornell researchers. In one, Samuel Sigal, MD, and colleagues found that the drug eltrombopag is effective in treating low blood-platelet counts, a common complication of the virus. The work, conducted at NYPH/WCMC and twenty-one other sites, was published in the *New England Journal of Medicine*. In a separate study, published in *Hepatology*, researchers found that weight-based dosing of the hepatitis C drug ribavirin was essential to successful treatment in patients weighing more than 105 kilograms (231 pounds). "In my opinion, the larger dose provides an opportunity for very heavy patients to have the same chance of a cure as lighter patients without compromising safety," says clinical medicine professor Ira Jacobson, MD, the study's principal investigator.

Enzyme Constricts Airways, Causes Asthma

Work led by pharmacology professor Roberto Levi, MD, and physiology and biophysics professor Randi Silver, PhD, could pave the way for new asthma treatments. In an article in the January issue of the *Proceedings of the National Academy of Sciences*, they reported that the disease's main culprit is an enzyme released by mast cells in the lungs. The enzyme, called renin, produces angiotensin, which tightens airways and leads to respiratory ailments. The finding parallels the team's 2005 discovery that renin constricts passageways in the heart and leads to arrhythmias and high blood pressure. Although medications are available to restrict angiotensin systemically, the researchers hope to develop a more targeted approach. "If we could find agents that dampen this renin-angiotensin cascade *locally*—in the heart or the lung, for example—that could prove to be a formidable new weapon against disease," Levi says.

Two Genes Key to Regulating Immune Response

To be healthy, the body's immune system must maintain a proper level of a compound called interleukin-10 (IL-10); too much or too little can increase susceptibility to such illnesses as lupus, Type 1 diabetes, cancer, and AIDS. Immunology and microbiology professor Xiaojing Ma, PhD, and colleagues have discovered that two genes, known as Pbx-1 and Prep-1, could be crucial players in producing IL-10 by transcribing proteins that help recognize dead or dying cells. The genes were previously known as players in embryonic development and in several forms of leukemia. "We still haven't figured out

from the bench

exactly how Pbx-1 and Prep-1 are involved in regulating IL-10 transcription," Ma says. "I hope this study opens up new avenues for immunologists to find out whether there's a brand-new biochemical pathway to be discovered."

Solving the Taurine Puzzle

The taurine mystery is closer to being cracked, now that Weill Cornell researchers have uncovered a prime site of activity for the molecule. Taurine is one of the most plentiful amino acids in the brain, but its function remains unknown. However, as the *Journal of Neuroscience* reported, pharmacology professor Neil Harrison, PhD, and colleagues have discovered that taurine is a strong activator of gamma-aminobutyric acid (GABA) receptors in the thalamus, the regulatory part of the brain. "Finding taurine's receptor has been like discovering the missing link in taurine biology," Harrison says. Because GABA is important in forging new cell-to-cell connections, the researchers believe that taurine may play a role in neurological development.

An Inside Look at Borderline Personalities

Brain abnormalities underlie an element of borderline personality disorder, according to findings published in the *American Journal of Psychiatry* in December. The work, by psychiatrist David Silbersweig, MD '86, offers insight into a condition that affects 1 to 2 percent of Americans. With a special fMRI activa-

tion probe that eliminates much of the signal loss in neuroimaging, Silbersweig and colleagues were able to more clearly observe activity in parts of the ventromedial prefrontal cortex, the region of the brain that has been associated with borderline personality disorder because it is linked to impulsivity. "These areas are thought to be key to facilitating behavioral inhibition under emotional circumstances, so if they are underperforming, that could contribute to the disinhibition one so often sees in borderline personality disorder," Silbersweig says.

A New Front in the Bacteria Battle

With doctors increasingly concerned about the emergence of drug-resistant bacteria, Weill Cornell researchers have been working on a new weapon against tuberculosis and other deadly bacterial infections. They have been focusing on the so-called "virulence factors" that allow bacteria to thrive inside a host by undermining its defenses. In *Chemistry and Biology*, the researchers described how they developed the first inhibitor of a key small molecule from *Mycobacterium tuberculosis* and *Mycobacterium leprae* (which causes leprosy)—offering what microbiology and immunology professor Luis Quadri, PhD, calls a "paradigm shift" in infectious disease research. "We are not saying that anti-infectives will ever replace antibiotics," he says, "but with pathogens as deadly as *M. tuberculosis* or as debilitating as *M. leprae*, you'd ideally like to have as many pharmaceutical weapons in your armamentarium as you can, either alone or in combination."

tip of the cap to . . .

Dean Antonio Gotto, MD, and **Herbert Pardes, MD,** president and CEO of NewYork-Presbyterian Hospital, awarded the Austrian Cross of Honor for Science and Art for their work with the Salzburg-Weill Cornell Seminars. The seminars, held in conjunction with the American Austrian Foundation, are open to mid-career physicians and researchers from Eastern Europe, central Asia, and the former Soviet Union.

Joseph Cooke, MD, associate professor of clinical medicine and clinical public health, winner of the 2007 Outstanding Service Award from the NewYork Weill Cornell Medical Center Alumni Council.

Lewis Drusin, MD '64, professor of clinical public health and clinical medicine, winner of the Bruce Memorial Award from the American College of Physicians for his contributions to preventive medicine.

Kenneth Griffin, PhD, associate professor of public health, awarded a \$1.6 million grant from the National Institute on Drug Abuse to examine the long-term effects of a school-based drug-abuse prevention program in New York City middle schools.

Ira Jacobson, MD, the Vincent Astor Distinguished Professor in Clinical Medicine, guest editor for the November 2007 issue of *Clinics in Liver Disease: Chronic Hepatitis B* (Elsevier).

Sebastian Schubl, research fellow in the Department of Surgery, selected for a resident research award by the Association of Academic Surgery and the Society of University Surgeons.

Richard Silver '50, MD '53, professor of medicine, who served as chairman of the

Fourth International Patient Symposium on Myeloproliferative Diseases, sponsored by the Myeloproliferative Disorders Foundation and the Cancer Treatment and Research Fund. The meeting was held in New York in November.

Mark Souweidane, MD, professor of neurological surgery and neurological surgery in pediatrics, winner of a Clinical and Translational Science Center Pilot Award to investigate the treatment of diffuse pontine gliomas in children.

Ahmad Teebi, MD, professor of pediatrics and genetic medicine at Weill Cornell Medical College in Qatar, who served as keynote speaker at the first Qatar International Conference on Newborn Screening. The meeting, held in November, was organized by the Qatar branch's affiliated hospital, Hamad Medical Corporation.

Trauma Service

An orthopaedic surgeon operates on young casualties of war

THE PATIENT WAS A SPECIAL-OPS soldier fresh from Iraq, where he'd been wounded by an improvised explosive device. The IED, as the jury-rigged streetside bombs are known, had caused significant soft-tissue injuries and nerve damage to his left leg, and he'd been medevaced to Landstuhl Regional Medical Center in a C-5 transport plane. At the U.S. Army hospital, located on a hilltop in southwestern Germany, orthopaedic trauma surgeon Dean Lorich, MD, laid out his options. "I said, 'There are two ways to go,'" Lorich recalls. "We can try and reconstruct you—that's many surgeries, and you would have a fairly useless limb, but it would be your limb. Or we could amputate.' And he looked me in the eye and said, 'Whatever gets me back to my comrades fastest.'"

Lorich, who is associate director of the orthopaedic trauma service at the Hospital for Special Surgery and an assistant professor of orthopaedic surgery at Weill Cornell, was at Landstuhl as a visiting scholar, training military surgeons and operating alongside them. For two and a half weeks in October, he treated combat casualties from Iraq and Afghanistan—primarily American troops, but also soldiers from Poland, Czechoslovakia, and Great Britain. The experience, he says, was nothing short of life-changing. "You learn what is important," he says. "For me, prior to this trip, work was the most important thing. My life revolved around it. After this it's, 'When can I go home and see my family?'" Even his residents, he says, tell him that he came back from Germany a different person. "To me the biggest issue was tolerance—don't sweat the little things. The residents aren't doing what they're supposed to? There's



PROVIDED BY DEAN LORICH, MD

Incoming wounded: Surgeon Dean Lorich, MD, and other medical personnel receive a patient at the U.S. Army's Landstuhl Regional Medical Center in Germany.



PROVIDED BY DEAN LORICH, MD

Surgical service: Lorich (front row, center) poses with some of his Landstuhl colleagues.

no reason to yell, just figure it out.”

Lorich was moved, first and foremost, by the awful scope of the injuries he treated—working seventeen days straight, performing as many as fifteen surgeries in a single shift. “You operated all day, and you’d see what’s happening to these poor kids. And they really are kids; they’re twenty-one, twenty-two years old. On two of them we amputated three limbs, and one lost both legs at the hip. And there were burns—terrible burns.” But equally striking were the attitudes of both the soldiers and the surgeons, from the amputees who refused to indulge in self-pity to the physicians who put aside ego to do whatever needed to be done. “These patients are being scooped right out of the desert. They still had sand on them, and many times they were still in their battlefield gear,” Lorich says. “What the doctors would do, which I thought was incredible, was they would bathe them. The orthopaedic surgeons would scrub the patient down so he got clean and went back to his bed with some semblance of dignity.”

Lorich took vacation time to travel to Germany; he flew home on a Saturday,

spent Sunday with his wife and three daughters, and was back seeing patients on Monday. The contrast with his usual practice, he says, was wrenching. “You look at a patient with a broken hip, and you know it’s just a matter of time before she’s back to normal. Yes, there’s an inconvenience, but based on what I see on X-ray, if she bides her time she’s going to be OK. But these soldiers, their lives are totally changed. Every patient who was hit by an IED seemed to lose a testicle. So even from the standpoint of being able to have children, something simple like that, these guys’ lives are irreparably changed.”

Developed in conjunction with the Orthopaedic Trauma Association and the American Academy of Orthopaedic Surgeons, Landstuhl’s visiting scholar program requires at least a decade of trauma experience. It’s designed to supplement the training of military surgeons—who, Lorich notes, are not necessarily well-versed in trauma. “In peacetime, injuries in the military tend to be sports medicine injuries, so their orthopaedic surgeons are trained to do ACLs, Achilles tendons, shoulder surgery, hand surgery, things like that,” he says. “With the war, they more or less

signed up for something they weren’t prepared for.” Lorich’s own practice tends toward broken bones, geriatric injuries, and motor-vehicle accidents; the most violent trauma he’s treated in recent memory was the Manhattan window washer who survived a forty-seven-story fall in December (see page 12). “That’s as bad as it gets from a civilian trauma standpoint,” Lorich says. “And he was in good shape, relative to what our troops look like after they’ve been hit by an IED.”

During his tenure in Germany, Lorich never saw a patient die. That fact reflects a fundamental truth about the Iraq war compared to previous conflicts: due to advancements in body armor, fewer troops are killed—but more are surviving with lost limbs and severe head injuries. Lorich was a child during Vietnam—he says that his father, a World War II veteran, would have expected him to serve if the conflict had lasted until he reached draft age, while his mother would have sent him to Canada—but he says that his time at Landstuhl didn’t change his opinion of whether U.S. soldiers should be in Iraq. In short: he doesn’t know. But he did learn that the troops are much less ambivalent than the folks back home. “We hear politicians say that they’re over there fighting a potentially useless war,” Lorich says. “But the soldiers truly believe that what they’re doing is making a difference and they are appreciated by the Iraqis.”

Lorich nearly went to Iraq as part of the trip—he didn’t, in the end, due to insurance issues—and says he’d jump at the chance to go back to Germany. But asked if the Landstuhl surgeries were the most challenging of his career, he shakes his head. “The problem is that amputation is not hard,” he says. “The man I did yesterday was as challenging as it gets—a sixty-year-old who was struck by a car, with a crush injury to his knee. It took six hours. The bone was pushing on the nerve and the blood vessel. But it was a pleasure, because I can put the jigsaw puzzle back together. There’s no jigsaw puzzle with these soldiers, because there’s nothing left.”

— Beth Saulnier

Hot Topic

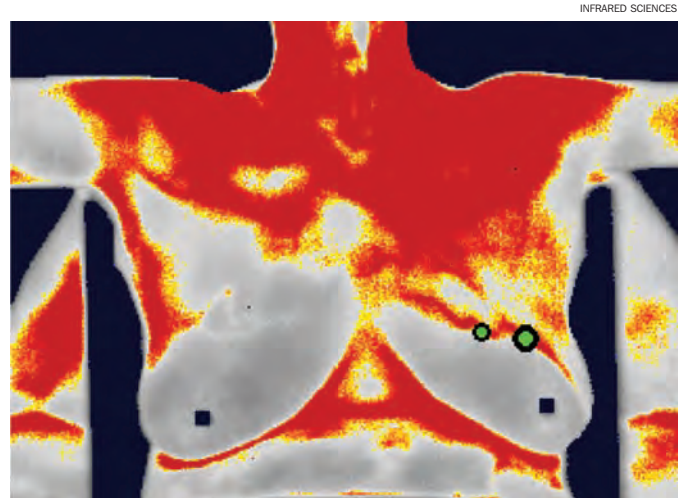
Will thermography replace the mammogram?

a MAMMOGRAM MAY BE THE BEST TOOL IN THE fight against breast cancer, but many women over forty come to dread the annual procedure. That reality has made mammography the punch line in a host of cringe-worthy, if amusing, cartoons and stand-up routines. "The squeezing, the compression can be uncomfortable," admits Rache Simmons, MD, an expert in minimally invasive breast cancer surgery and the Weiskopf Associate Professor of Surgery at Weill Cornell. "The caveat is that because mammograms can be uncomfortable, some patients who should be getting them don't." And that means they don't benefit from the best weapon against breast cancer: early detection and intervention.

Since the Fifties, physicians and scientists have speculated that another form of screening might actually facilitate greater patient compliance and earlier detection than the mammogram. Known as thermography, the technique requires only the analysis of temperature gradations within the breast tissue. The strategy draws on a long-acknowledged fact: even before a tumor begins growing, cancerous cells bump up blood flow to the region in a process known as neovascularization. Detect the increased temperature associated with greater blood flow, the theory goes, and you can catch the cancer—potentially even before it's visible on a mammogram. "It was an interesting idea," says Simmons, "but it never really panned out to be effective."



Rache Simmons, MD



Heat wave: Infrared imaging is more comfortable for patients, but its results may be less definitive than mammography.

Part of the problem is execution. In thermography, the patient disrobes before an infrared camera, which takes a series of readings, documenting relative temperature throughout the breast and nearby lymph nodes. The temperature gradations between an active tumor and normal tissue are subtle, and it doesn't take

much to spoil the readings—an air-conditioning vent, a radiator, a draft. "We haven't had equipment precise enough to detect such minute differences," says radiologist Ruth Rosenblatt, MD, director of women's imaging at Weill Cornell. Historically, analysis of the associated data has presented its own problems. A hot spot might indicate cancer—or it might just reveal a cyst, an active infection, or the site of a recent surgery, each of which can affect blood flow and metabolism. "It's a computerized read," says Simmons. "It draws the physician's attention to certain areas. Then the physician uses clinical judgment to say, 'Yes, that makes sense,' or override and say it's not significant."

But as computer processing speed and sophistication have increased in recent years, thermography has improved. This spring, Simmons and colleagues completed a two-year, ninety-eight-patient study of a new infrared imaging system. "This is the same idea, but with a whole lot better technology, looking at more subtle changes," she says. "It's more computerized, more objective." Based on prior mammogram or ultrasound results, each of the study subjects had already been diagnosed with a lesion suspicious

enough to warrant a follow-up biopsy. Before the surgery, each had an infrared scan, which the scientists compared with her pathology report. The team analyzed two settings offered by the software—one in which the algorithm incorporates additional clinical data provided by the physician, and one that considers only the infrared readings. In both cases, the software accurately identified 92.5 percent of the malignancies.

The numbers look good—but for Simmons, the study raised more questions than it answered. “We don’t know what this would mean in terms of screening,” she says. “If we did this test on 10,000 women in a year, and we saw something, does that mean that all of them would need a biopsy? Should they be followed? How often would it really be a cancer? How often would it be a false positive?” While infrared equipment manufacturers urge women to have a baseline screening before they turn twenty-one with frequent follow-up scans throughout adulthood, Rosenblatt and Simmons say the jury is still out—especially when it comes to the vast majority of women, who aren’t likely to develop breast cancer until after age sixty. Effective screening and early intervention have been critical to the decreasing mortality associated with a breast cancer diagnosis, says Rosenblatt,

whose own research explores the promise of magnetic resonance imaging for distinguishing between benign and malignant breast tumors. “Right now, thermography isn’t a practical screening tool,” says the radiologist. “There’s a limited amount of time, effort, and expense, and you have to economize. What will be the greatest yield?”

At the moment, Rosenblatt says, mammograms are still the best bet for routine screening, especially since the improvements in computer analysis that have finally made thermography worth further investigation have also enhanced mammographic analysis. “You can usually perform the exam in less than ten minutes, end up with four or five images to analyze, and get robust information about what’s going on inside that breast tissue,” she says. “You can’t beat that.”

Simmons agrees. “I won’t be replacing mammography with thermography,” says the surgeon. “I don’t think it’s ready for prime time.” Even so, she doesn’t dismiss the concept entirely. “Maybe ten years from now, as the technology improves and we obtain more data, we could replace mammograms with this. Patients would love it.”

— Sharon Tregaskis

Road to Recovery

Window washer survives forty-seven-story fall



Promising prognosis: Rosario Moreno (center) with the medical team that treated her husband

RUTH FREMSON / THE NEW YORK TIMES / REDUX

ON DECEMBER 7, WINDOW washer Alcides Moreno plummeted from the forty-seventh floor of an Upper East Side high-rise. Five and a half weeks later, after sixteen surgeries, he was discharged

from NewYork-Presbyterian Hospital/Weill Cornell Medical Center to a local rehabilitation center. He’s expected to make a substantial recovery within a year. “We are very pleased—dare I say astonished—at the level of recovery that this patient has

enjoyed so far,” said chief of critical care Philip Barie, MD. “And although there is more work to be done, we are optimistic about his prospects for survival.”

Moreno, a thirty-seven-year-old father of three, suffered swelling and bleeding of the brain as well as a broken arm, two broken legs, and injuries to his spine, chest, and ribs, but escaped paralysis or serious head trauma. Doctors theorize that he may have survived by lying flat on his platform and riding it down, as window washers are trained to do in case of emergency. Moreno’s brother, Edgar, who had been working alongside him the day of the accident, fell from the platform and was killed instantly.

Word of Moreno’s survival attracted media from all over the world—including television news programs in India and China—who converged on the Weill Cornell campus in January for a press conference held by Moreno’s wife, Rosario. Turning to Herbert Pardes, MD, president and CEO of NewYork-Presbyterian, and the trauma team who treated her husband, she wiped away tears and said, “What can I say, except thank you, thank you, thank you!”

— Kara Cusolito

Say 'Ahh,' With Feeling

Actor-patients help students hone their bedside manner

NEAL AND MERET BROUGHT THEIR INFANT SON to the emergency room, and after an agonizing forty-five-minute wait a pediatrician gave them the worst news of their lives: the child was dead. In his grief, Neal lashed out in anger at the doctor, while Meret was so devastated she could barely comprehend what was happening.

It's a moment many physicians will face: the awful duty of telling family members a loved one has died. Fortunately, though, the above scenario never actually took place—and the sick baby was the stuff of fiction. Neal Mayer and Meret Oppenheim are professional actors, among the more than 100 performers who make up Weill Cornell's corps of standardized patients. In the Clinical Skills Center, the actors portray everyone from grieving parents—as in the exercise to train pediatrics interns in coping

with bereavement—to patients undergoing an annual physical. "It's an amazing opportunity to use your improv skills in a one-on-one setting," says Mayer, sitting in a diner off Times Square that's a popular actors' hangout, eating a bagel before performing in the Off-Broadway musical *Walmartopia*. "It's very different from theater—realistic, up close, and personal."

The actors range in age from their early twenties (though many look young enough to portray teenagers) to their seventies. Some have been standardized patients at various New York medical schools for more than two decades, earning income between acting gigs with work that's more satisfying than temping or waiting tables. "I feel like I'm doing something positive," says Mayer, whose credits include a four-year stint in Broadway's *Les Misérables*. "Between jobs I could be catering, but this way I can

Playing the part: Actor Neal Mayer is examined by second-year medical student Caitlin Snow in the Clinical Skills Center.



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help future doctors deal more effectively with their patients.”

Before the actors work with students, they undergo extensive training, both an overview of the standardized patient program and specific instruction about each medical condition they are asked to simulate, from atrial fibrillation to thyroid disease. To prepare Mayer to play a patient with meningitis, Clinical Skills Center director Yoon Kang, MD, wrote a six-page description of what his character would be experiencing, from head to toe. When the medical student first came in, Kang told him, Mayer should complain of a severe headache and lie on the bed, unable to move comfortably. “Dr. Kang explained that during the exam someone is going to move you, and when you’re bent at a particular angle, your knees would come up,” says Mayer. “She’ll work with you until you react as if you’ve really got meningitis.”

The actors are instructed to take their cues from the students, and react accordingly—essentially, to behave as if they were speaking with their own doctors. How Mayer acts during the pediatric bereavement scenario, for example, depends on how the intern delivers the tragic news. “If someone says something that infuriates you, you just go with that,” he says. “You may shock the student and he or she may be thrown for a moment, but better that it happens with an actor than a real patient.”

Oppenheim, who trained in acting at the Atlantic Theater of NYU’s Tisch School of the Arts, has extensive standardized patient experience at Weill Cornell and elsewhere, portraying everything from a pancreatitis sufferer to a victim of domestic violence. “You have to be comfortable and know your character—all the background,” says Oppenheim, a journey-

man actor whose credits include commercials for Ethan Allen furniture. “I focus on the medical student, because when I’m a patient in real life, what I’m doing is watching the doctor and seeing his or her response to what I’m saying. If I say, ‘I have a pain here,’ do I see a quiver of alarm, or do I see ‘Oh, that’s nothing?’”

Located on the tenth floor of the Weill Greenberg Center, the Clinical Skills Center has ten outpatient and two inpatient rooms, situated around a central command station. They’re equipped just like their real-world counterparts, down to blood-pressure cuffs and tongue depressors, though each room has one-way glass so instructors can watch the students in action. The interactions are recorded—both students and actors can review their performances—and after each session, the ersatz patients give feedback on how the students did. Among the most common criticisms, Mayer says, are basic issues of bedside manner. “They’re minor things like eye contact, looking down at their list and not paying attention to you, asking too many questions at one time and not giving you the opportunity to answer.”

The sessions are a mandatory part of the medical curriculum, though students are not graded. Kang calls the mock exams “incredibly valuable” and says that student reaction has been overwhelmingly positive. “We’re able to give them patient-centered feedback, which is something that they don’t receive in any other portion of their clinical training, and we can also put them into clinical situations earlier than they normally would be,” she says. “It’s a safe setting where folks can feel comfortable practicing and even making a mistake.” The majority of students, Kang says, are able to suspend their disbelief and treat the actor like a real patient—though Mayer recalls one notable exception. “Not at Weill Cornell, but at another school, I had a student who stopped after a few seconds, started laughing, and said, ‘I can’t do this.’ I said, ‘What are you talking about? You’re my doctor.’ And she said, ‘I saw you play George Bush in a musical review the other night, and I just can’t take you seriously.’”

— Beth Saulnier



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Yoon Kang, MD

Hard Choices

Ethics experts aid patients and families

IT'S A CASE THAT PHYSICIAN-ETHICIST Elizabeth Nilson, MD, remembers well. A man in his mid-sixties came to the emergency room with wet gangrene on his foot, a complication of diabetes. Stagnant blood and bacteria saturated the dead tissue. Without treatment it would likely lead to sepsis—and eventually death. Surgeons wanted to amputate the foot, Nilson recalls, but the patient said no. He would not speak with psychiatrists, who determined that his refusal was proof he lacked the capacity to decline treatment. Meanwhile his family gave the go-ahead. “The physicians wanted to do the surgery, the patient was saying no, the family was consenting,” Nilson recalls. “It was, ‘What do we do here?’ So they called us.”

Nilson is a member of Weill Cornell’s Ethics Consultation Service, founded and directed by Joseph J. Fins, MD ’86, chief of the Division of Medical Ethics at Weill Cornell. The service is a team of physician-ethicists and staff who help patients, families, and clinicians navigate the sometimes murky waters of medical decision-making. In the case of the diabetic man, Nilson arranged for a social worker to ask the patient why he was refusing the surgery. It turned out that he spent much of his retirement playing the organ—using the diseased foot to work the pedals. “Here we were trying to save his life,” says Nilson, an assistant professor of public health and medicine. “But as far as he could tell, we were about to take away the one thing that gave his life meaning.” Once he understood that a prosthetic would allow him to play, he agreed to the amputation. “A lot of what we do is make sure that good communication is happening,” she says, “and everything else just works itself out.”

Part of the Weill Cornell Division of Medical Ethics, the Ethics Consultation Service handles approximately 200 consults each year, making it one of the busiest in the country. And the volume is increasing, says Susan Mascitelli, vice president for patient services administration at NewYork-Presbyterian Hospital. “As technology grows, and as our ability to keep people alive and provide potential treatment grows,” she says, “hospitals will necessarily be faced with these kinds of situations.” While all hospitals are



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Joseph Fins, MD '86, and Elizabeth Nilson, MD

required to have a process to address ethical issues in clinical practice, NYPH/WCMC’s service takes a unique approach, based on a method of moral problem-solving called clinical pragmatism. The method, developed by Fins, was inspired by the philosophy of John Dewey and emphasizes collecting information and reaching consensus. Fins and colleagues have published articles about clinical pragmatism in the peer-reviewed literature and teach the method to medical students and residents.

When an ethics consult is requested by patients, families, or

staff, a member of Mascitelli's staff gathers clinical and narrative information about the case, including the patient's values and wishes. A physician-ethicist—one is available at any time, day or night—reviews the case with patient services staff, then with the clinicians. A hospital lawyer will participate if a potential legal issue is involved, and the patient's family may be invited to join the discussion. Ethically problematic situations, Nilson notes, typically emerge when a patient or family members "are caught between two choices that both seem reasonable. For example, stopping care can be looked at as ending someone's suffering. But some people view it as giving up."

Consultations often center on patients at the end of life. The toughest cases involve what Nilson calls family pathology: "adult children estranged from their parents who feel guilty because Mom is dying, or siblings who never got along and are trying to make decisions together." When there is a family dispute, Fins and Nilson try to move the discussion forward. "One trick is to get them to agree about something. You can say, 'It sounds like you all really love your mother,'" Nilson says. "And usually everybody will nod to that." Fins says that he will try to get the family to "let the goals drive the therapy, and the therapy drive the goals."

Fins notes that patients and families often misunderstand the clinical situation due to fragmentation of care, in which subspecialization and complex technology divide responsibility for treatment among several clinical teams—and sometimes the cli-

nicians themselves are at odds over the appropriate course of action. "There may be multiple quarterbacks, and there may be multiple teams," he says. "One of our great privileges is convening people across specialties."

Given the end-of-life context, religious concerns often come into play. A Roman Catholic family didn't want to withdraw care for their relative because they assumed their faith forbade it. So Fins brought in a nun who explained that Catholicism does not require that a patient be given extraordinary care if the burden exceeds the benefit. Helping families understand religious practices often resolves the conflict—and diminishes grief, Fins says. "It keeps them vested in the religious traditions that will hopefully help them address their bereavement after they leave the hospital."

Cultural misunderstandings can surface as well, as when a Japanese businessman fell ill while vacationing in New York City. At NYPH/WCMC his condition progressed to brain death—his brain stem and entire cerebral cortex had ceased to function—but his family objected to that definition of death. "They didn't want to do anything that wouldn't be proper in Japan," Fins says. So he contacted a bioethicist colleague in Tokyo and discovered that Japan's Diet had just passed brain death legislation. With that information, the family accepted that the man had died. "It was a great help to them," Fins says, "because they felt that their actions were consistent with their community."

— Susan Kelley

Rubino's Revolution

A surgical cure for Type 2 diabetes?

fOR MANY PATIENTS SUFFERING from lingering illness and disease, surgery feels like a last resort. An extended course of medication, improved diet, rigorous exercise—almost any option seems more attractive. But one of Weill Cornell's newest doctors has found surgery to be the best option for treating a chronic and progressive condition that has long been controlled only through strict diet and daily injections of insulin: Type 2 diabetes. Through a study he began while at the European Institute of Telesurgery, Francesco Rubino, MD, has found that a new procedure not only aids

diabetes patients but may also help reveal the molecular origins of the disease—and even point to a cure.

The procedure, called duodenal-jejunal bypass, is the first of its kind to treat Type 2 diabetes without involving weight loss. The operation, which Rubino himself designed, leaves the stomach intact—maintaining its endocrine and digestive function—and reroutes nutrients away from the duodenum and first part of the jejunum. "I was trying to avoid restricting food intake," Rubino explains, "so I decided to preserve the stomach." (The study, which Rubino and colleagues published in

the *Annals of Surgery* in 2004, confirmed that the bypass ameliorates Type 2 diabetes without affecting diet.) The cutting-edge technique has not yet been performed on human subjects in the U.S.; however, Rubino's colleagues have seen great success with the procedure overseas, where less stringent approval standards for new surgeries have allowed about 100 patients to undergo the operation. Rubino, who was named head of the newly created Section of Gastrointestinal Metabolic Surgery at NewYork-Presbyterian Hospital/Weill Cornell Medical Center in November, hopes to begin clinical trials there this year.

Perhaps even more striking than the surgery's ability to treat diabetes is the fact that it has begun to shed light on the cause of the disease. Scientists have not yet been able to pinpoint where diabetes originates, but the effects of a duodenal-jejunal bypass hint that excluding the duodenum "silences" some of the determining factors of Type 2 diabetes. "That suggests that diabetes may be a disease of the small bowel," Rubino says. He notes that while the procedure represents a new model of treating a chronic and progressive condition, its roots can be traced back a century. "If you go back to the medical literature, you find a few scattered reports that when patients underwent operations that were similar to gastric bypass—for instance, the one that surgeons used to do for peptic ulcers and gastric cancer—you had case reports here and there that diabetes was improved with surgery."

In recent years, various gastrointestinal operations have been reported to dramatically ameliorate diabetes in obese patients. Adjustable gastric banding has shown a remission rate of 45 percent, while traditional gastric bypass yields rates as high as 84 percent; biliopancreatic diversion—in which a portion of the stomach is removed—can remit diabetes up to 95 percent. These data show that procedures that have in common a bypass of the proximal small bowel are the most effective. Still, because of insurance restrictions and clinical regulations, a patient must be morbidly obese—with a body mass index (BMI) of 35 or higher—and at considerable risk of death to qualify for such procedures. Yet there is no scientific evidence, Rubino says, that any clear BMI cutoff point can be used to predict which patients can benefit from the surgical treatment of diabetes.

Meanwhile, Rubino is pushing for a complete overhaul in attitudes toward diabetes. Like many of his colleagues in the field, he considers the term "adult-onset diabetes" to be obsolete, since the disease is increasingly seen in children and adolescents. Even the obesity that commonly contributes to the disease isn't necessarily a determinant: only 70 percent of patients with Type 2 diabetes are overweight or



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Francesco Rubino, MD

obese. The key factor to examine, he says, isn't subcutaneous fat, but visceral fat—the kind that is stored deep within the abdomen and has been associated with insulin resistance. "Therefore it is clear that BMI is not an ideal parameter to accurately evaluate the risk-benefit ratio of a surgical approach to diabetes," says Rubino. "We need further research to define new criteria for surgical indication, and our future work will also focus on tailoring the choice of the surgical procedure to the individual patient's characteristics."

The most important lesson we have learned from diabetes surgery, says

Rubino, is that the search for the cause and cure of diabetes is not a hopeless endeavor. "There are many places in the body where there are effects of diabetes—the liver doesn't work well, the pancreas doesn't work well, the muscles don't work well. But what is the origin of diabetes?" he asks. "Nobody knows. Our experience with diabetes surgery suggests that we should take a closer look at the small bowel. By understanding what's going on there, we might be closer to the cause. That's why surgery could lead to the concept of a cure."

— Joshua Hammann

Mind Over Matter

A psychologist explores the intersection of biology and cognition

BRUCE MCCANDELISS HAS MADE HIS CAREER AN exercise in consilience, the Enlightenment-era idea of linking concepts from different scientific fields to form a comprehensive theory. For McCandliss, those fields are psychology and neuroscience, which he has used to study cognition from its biological origins in the brain to real-life behaviors—employing new technologies to see how tiny neural differences correlate with abstract intellectual functions. “Cognitive neuroscience is creating a bridge from previous animal work in neuroscience to the more psychological human work,” says McCandliss, PhD, an associate professor of psychology in psychiatry at Weill Cornell. “These bodies of knowledge that were once quite separate are now becoming more and more integrated.”

In November, McCandliss received a Presidential Early Career Award for translating his research into efforts that help children overcome learning disabilities; a program he co-founded, called Reading Works, is currently being used in two New York City public schools. His nomination letter cited his “intelligence, appreciation of cross-disciplinary research, and deep curiosity and interest in science and its applications,” adding that McCandliss “is on his way

to be a leader in the field of speech and language development.”

Though McCandliss’s field is a bridge between psychology and neuroscience, he notes that he began his career firmly grounded on the behavioral side. “I didn’t consider myself a brain scientist,” he says. “I started off studying psychology and was interested in these unconstrained ways of thinking about cognition.” As a graduate student at the University of Oregon, he first found the tools to connect neuroscience with psychology thanks to Michael Posner, PhD, now an emeritus professor at Weill Cornell. “He showed me that the topic I was interested in—how the brain represents ideas—mapped beautifully onto available techniques in cognitive neuroscience,” McCandliss says. “He showed me the relationships, and I was blown away.”

Following a postdoctoral fellowship at the University of Pittsburgh, McCandliss came to Weill Cornell’s Sackler Institute for Developmental Psychobiology, where he has been refining tools that show how minute neural differences can have dramatic effects on processes such as comprehension, decision-making, planning, and learning. Most recently, he and MD-PhD student Sumit Niogi published a series of papers that link individual connective networks in the brain to specific cognitive tasks, such as



Bruce McCandliss, PhD

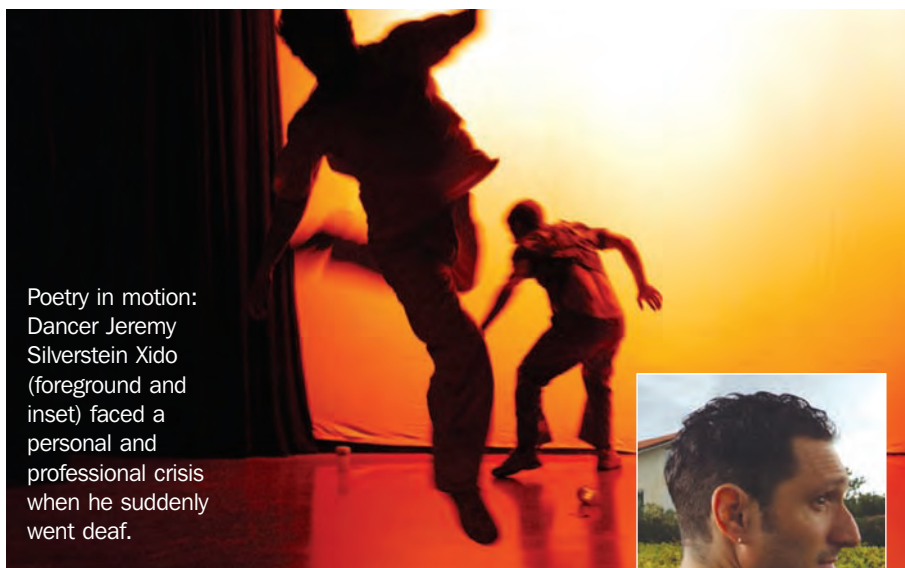
reading. Perhaps more fundamentally, his work is now showing that these networks and their corresponding cognitive domains function separately—and that poor performance in one area does not necessarily mean poor performance in another.

McCandliss began by using a relatively new tool, diffusion tensor imaging (DTI), to measure the properties of white matter tracts. These brain structures serve the function of “cables” connecting regions to each other, allowing them to communicate. He found that small differences in these structures are systematically related to differences in mental abilities, accounting for as much as 30 percent of the variance in standardized test scores. Yet rather than finding a global relationship between white matter and general cognitive performance, he uncovered very specific relationships between particular tracts and particular skill domains.

While the strength of children’s frontal white matter tracts was tied to differences in short-term memory, a different tract was related to reading skills in these same children. The findings contradict a long and popularly held belief that a brain-related weakness in one mental ability should predict weakness in others. “People often assume that if a child struggles while learning to read, that this child is mentally slow or is likely to be equally disabled across all cognitive domains,” McCandliss says. “There is a common intuition that differences in children’s brains will relate to global mental function or ‘brightness,’ yet much of brain science paints a different picture.”

Exploring how mental abilities develop independently, he says, could be the first step toward aiding people who struggle with learning disabilities like dyslexia. Insights gleaned through his cognition studies have already shown practical benefits in the form of Reading Works, which improves students’ reading skills an average of 1.2 grade levels after twenty computer-assisted training sessions. “The idea,” McCandliss says, “is that by studying the brain we can also understand the mechanisms that drive change.”

— Gabriel Miller



Poetry in motion: Dancer Jeremy Silverstein Xido (foreground and inset) faced a personal and professional crisis when he suddenly went deaf.

WOLFGANG KIRCHNER

CLAUDIA HEU

The Sound of Silence

Microsurgery restores dancer’s hearing

WHILE TAKING A RIGOROUS KUNG FU CLASS LAST NOVEMBER, JEREMY Silverstein Xido heard a mysterious ringing in his right ear. Xido, a professional dancer and former Fulbright Scholar who lives in Manhattan, had already suffered the unexplained loss of hearing in his left ear fifteen years before. Faced with the prospect of total deafness, he rushed to a nearby hospital—but standard treatments, such as anti-inflammatory steroids, didn’t help.

Xido is the founder of the performance company Cabula6, which makes documentary films in addition to mounting contemporary dance shows. The prospect of going deaf was both personally and professionally devastating to him. “I felt terror, fear, and a sense of extreme isolation,” he says. “A lot of my work is based on language—all of it is predicated on being able to talk with people. I started to imagine that pretty much everything that I had prepared to do in my life, I wouldn’t be able to do.”

Two days after his hearing loss, Xido came to NewYork-Presbyterian Hospital/Weill Cornell Medical Center, where Samuel Selesnick, MD, diagnosed him with a perilymphatic fistula; perhaps due to increased pressure, the membranes separating Xido’s middle and inner ear had ruptured. To restore Xido’s hearing, Selesnick and his surgical team worked their way down the ear canal making incisions and moving the eardrum out of the way to expose the middle ear. They then grafted pinhead-sized pieces of fat to patch the membranes. By Selesnick’s standards, this was fairly routine microsurgery—but he notes that, while audiologic testing shows that Xido’s hearing has returned to normal, it may not be a permanent cure. “His hearing is back,” says Selesnick, vice chairman of the Department of Otolaryngology. “But could it go out again over time? That’s possible.”

Two months after the surgery, Xido was able to resume his schedule of intense exercise and recently flew on a plane—activities that were forbidden during his recovery. Although the pressure changes during air travel present a potential medical risk, Xido says he’s willing to take the chance for his work. “None of us knows what happened,” he says. “It’s a bit like being struck by lightning. I’ve had it twice already, so I’m banking on it not happening again.”

— Bekah Grant



Anthony S. Fauci, MD '66

NUBAR ALEXANIAN

the greater good

As director of the NIH's National Institute of Allergy and Infectious Diseases, immunologist Anthony S. Fauci, MD '66, has become the public face of AIDS research and efforts to combat bioterror. Fauci spoke to *Weill Cornell Medicine* about the earliest days of the epidemic, his motorcycle tour of the Ugandan bush—and whipping up dinner for Bono.

By Beth Saulnier

Weill Cornell Medicine: How have attitudes toward HIV changed since the epidemic began?

Anthony Fauci: There is a much greater openness and tolerance of infected individuals, less stigma than in the early years. But we have to be careful that we are not victims of our own success—namely, as we get better drugs that allow people to live relatively normal lives, that the perception of HIV being a serious problem is dampened and people might be less vigilant. In fact, there are indications that certain subsets of our society—particularly young gay men who do not have the history of seeing so many friends and loved ones deathly ill—may perceive that getting infected is not a serious problem. That is a dangerous situation. So we have to be vigilant against complacency.

WCM: What have been the greatest gains in AIDS research?

AF: Since recognition of AIDS as a new disease—and then after the discovery of HIV as the causative agent in 1983–84—the most important advances have been in the area of understanding pathogenesis and the development of drugs that have transformed the lives of HIV-infected individuals. When you talk about the relationship between investment and research, that is probably one of the most impressive success stories in biomedical research. We now have between twenty and twenty-five FDA-approved drugs for HIV. They have completely transformed the lives of infected individuals, resulting in millions of years of life saved—not only in this country but also in the developing world.

WCM: What are the most promising fronts in combating the virus?

AF: Just in the last year we have learned that circumcision is playing a major role in preventing HIV infection. We have challenges, particularly the development of topical microbicides to empower women to prevent infection themselves without having to rely on the permission of a

male partner who may or may not want to use a condom. Probably the greatest challenge is the development of a safe and effective HIV vaccine. That has been quite problematic and will continue to be for a number of reasons that are peculiar and specific for HIV—namely the body's inability to develop a protective immune response against the virus. So the promising areas are the ones where we have already had success: understanding pathogenesis, developing a continual pipeline of new and better drugs, and implementing prevention modalities such as behavioral change, needle exchange, circumcision, and pre- and post-exposure prophylaxis.

WCM: Could you describe your earliest inklings of the epidemic?

AF: I was at the NIH as an infectious disease specialist, as well as doing studies on the immune system. I remember very clearly, in the summer of 1981, the first five cases of what turned out to be AIDS were reported in the *Morbidity and Mortality Weekly Report*: five gay men in Los Angeles with pneumocystis pneumonia. And then a month later there were more than twenty additional cases, not only of pneumocystis but also of Kaposi's sarcoma in Los Angeles, San Francisco, and New York. I had no idea what was going on after the first report, but after the second I became anxious, realizing it was likely that we were dealing with a new disease. I was skeptical that it would remain restricted to the gay population, and as it turned out I was unfortunately correct. Twenty-six years later, this has turned out to be one of the most devastating pandemics in the history of our civilization.

WCM: What was that period like for you as a physician?

AF: Those early years were difficult, because we were operating in the dark. We knew it probably was an infectious agent that we had not yet identified, and even when we

did identify it, we did not have any treatment for it. We were in the difficult situation of having patients come to us when they were advanced in their disease, and it was frustrating to see the vast majority get critically ill or die before we could do anything about it. It was not until 1996, when the triple combinations of drugs became available, that we finally saw a dramatic turnaround.

WCM: How had your training prepared you to cope with the epidemic?

AF: Retrospectively, it almost seems as if by an accident of the career path that I chose, everything I was doing since I

‘This was a disease that was, in reality and in perception, virtually a death sentence. There was a rigidity to the approach to drug testing that the gay community felt needed to be loosened up.’

got out of medical school—including my internship and residency at New York Hospital—was inadvertently geared toward my entering the arena of HIV/AIDS, because I was a board-certified infectious disease specialist and a board-certified clinical immunologist.

WCM: You have said that one of the best things you have done in your career was agreeing to meet with activist groups like ACT-UP.

AF: This was a disease that was, in reality and in perception, virtually a death sentence. There was no therapy, there were very few clinical trials of experimental agents, and there was a rigidity to the approach to testing that the gay community felt needed to be loosened up. So they tried to get the attention of public officials, and they did it in theatrical ways—and that turned off most of the scientific establishment. But I began to listen to some of the things that they said, and in many respects they made perfect sense. So when they did a massive demonstration at the NIH, I told the police not to arrest everybody but instead to bring the leaders of the demonstration to my conference room. We spent a couple of hours talking, and I vowed that I would go to bat for them, that I would try to get them incorporated into the planning process so that their concerns could be heard.

WCM: How did the development of a “parallel

track” for HIV drug testing come about?

AF: The classical way of doing a clinical trial, particularly when you are testing initial safety and efficacy, is to stringently restrict the number of people as well as the criteria that allow them to enter. Some HIV-infected people could not participate in the trials because they lived hundreds of miles away from the nearest medical center that was conducting a trial, or they were not the right age or had some disqualifying laboratory abnormality. So they said, “We do not want to interfere with the integrity of the trial process, but why not develop a parallel track? You have the trial that enrolls people who fit the strict criteria, but once the trial is fully accrued, you should also allow people into the trial who understand the risk of toxicity but are willing to receive the drug.” The activists were pushing to allow that to happen through the FDA, which was resistant. I went out to San Francisco in the late Eighties and made a major speech to a rally of activists and publicly endorsed the parallel track, which created quite a stir back in Washington, because the FDA was taken by surprise. I took the position that it is better to ask for forgiveness than permission. And as soon as I endorsed it, everybody started to endorse it, and it turned out to be a success.

WCM: At a time when the conventional wisdom said it was impossible to offer drug therapy to HIV

HIV virus: The organism that causes AIDS was first identified in the mid-1980s, several years after the first cases emerged.





BETTMANN / CORBIS / MAI DO

Acting up: In March 1990, more than 1,000 AIDS activists demonstrated at the New York State Capitol in Albany, staging a sit-in in a bid to make officials increase funding for AIDS research and treatment. At a similar protest at the National Institutes of Health, Fauci requested to meet with the group's leaders rather than have them arrested.

patients in developing countries, you went to bat for it. Why?

AF: The two major excuses for not getting drugs to developing nations such as those in sub-Saharan Africa were that the drugs were too expensive and you could not logistically get them to people in rural areas—it just was not practical. I rejected both of those hypotheses. Drug prices were starting to come down, particularly with the use of generics; instead of a regimen for a year of three drugs being \$15,000–\$18,000, you could do it for as little as several hundred dollars. The other thing is that people were prejudging what could be done in developing countries. So at the request of President George W. Bush, I went to Africa; I came back and said, “It can be done.” I put together the \$15 billion, five-year program that is now called PEPFAR, for the President’s Emergency Plan for AIDS Relief, which the president announced in his State of the Union address in January 2003.

WCM: Did you really cruise around rural Uganda on a motorcycle?

AF: That was part of my trying to test whether you could actually get drugs to people in the bush. I joined a group of young volunteers and we went out in jeeps and motorcycles, and I saw first-hand that with rather low-tech infrastructure you could get drugs delivered deep in rural areas.

WCM: Presumably, when you were in medical school you never imagined your scientific pursuits would have you meeting rock stars. Is there an element of surrealism to, say, making dinner for Bono?

AF: Yes, there is. I tell students who want to know how my career evolved that a lot of things are out of your control. You have to be open to the opportunities that present themselves. I had classical training at Cornell in internal medicine and at the NIH in infectious diseases, and then HIV came along. My interests got me involved in the plight of people in the developing world with infectious diseases—malaria, TB, and particularly HIV—and I was lucky enough to have access to people in the White House. Then I started running into people like Bono, who heard that I was working on a program with President Bush. He



DOUG MILLS/THE NEW YORK TIMES/REDUX

Kudos: President George W. Bush greets Fauci after a presidential address in February 2003 in which he unveiled a bioterror defense plan that included boosting the resources of the NIH. In the speech, Bush thanked Fauci for his dedication and commitment to his job.

‘Bono flew to Washington on his private jet, got into his limo, brought a couple of bottles of wine over to my house, and said, “Let’s talk.” And I figured, as long as we were going to talk, we might as well eat.’

called me up and said, “I want to see if there is any way I can help you by talking this up, by getting support from the rest of the world.” He flew to Washington on his pri-

vate jet, got into his limo, brought a couple of bottles of wine over to my house, and said, “Let’s talk.” And I figured, as long as we were going to talk we might as well eat, so I put together a pasta dinner with some Italian bread, and we spent hours and hours into the night talking about how we can make this program work.

WCM: How have you been involved with efforts to combat bioterrorism?

AF: After 9/11 and the anthrax attacks in the fall of 2001, the White House called upon me to help put together a program that would use scientific and medical expertise to develop countermeasures against the commonly associated threats—for example, things that we knew the Soviet Union had been working on during the Cold War: anthrax, smallpox, Ebola, and other weaponized microbes. I was tasked with putting together a research and development program to provide diagnostics, therapeutics, and vaccines against the category-A agents, the agents that intelligence told us were the high-

est risk of being used in an attack, and that is what we did.

WCM: What naturally occurring infectious diseases are you most concerned about?

AF: There are several. Extensively drug-resistant TB is one. Methicillin-resistant *Staphylococcus aureus* is another. There is a persistent threat of the evolution of a pandemic influenza. I just wrote an article for the *Journal of the American Medical Association* on the threat of dengue fever in the United States. It generally is a disease that is considered to be restricted to tropical climates, but now there is evidence to indicate that it is a growing threat in the Caribbean and the southeastern part of the U.S.

WCM: You have been in public service through both Republican and Democratic administrations. How do you talk science to politicians?

AF: You have got to make science understandable to them. You have got to be consistent in your principles of what needs to be done. You have got to be honest. You cannot inject any political agenda, because administrations change, Congresses change. You have got to be perceived as an honest broker for the science, and that is what I have been able to do. I do not have a political agenda. I am purely involved in what is best for the country vis-à-vis science and public health.

WCM: Have you ever felt under political pressure to make a particular call?

AF: Not really. I have always resisted it. Sometimes there were situations where there were some subtle pressures, but I have a reputation that I do not bend to political pressure, so now people do not even try.

WCM: You often appear on TV. What's your strategy for explaining science to laypeople?

AF: Know your audience—that is my motto. Do not talk to an audience that wants general concepts by speaking to them in gibberish about specific details of science that they have no interest in. Make it simple and understandable. Do not talk down to people. Pretend you are talking to your sister or brother, who is not a scientist; do not act like you are talking to a bunch of hardcore scientists, because you might sound smart, but no one will have any idea of what the heck you are talking about. Then, you will have defeated the purpose of the conversation.

WCM: Do you still spend time with patients?

AF: I make rounds at our hospital on the NIH campus

every Wednesday and Friday. My primary identity, despite all I have done over the years, is still as a physician. I would never veer away from that.

WCM: You're known for your legendary work hours.

What's a typical workday?

AF: I get up around five, get to work around a quarter to seven, and I usually work till seven-thirty or eight on a reg-

'I make rounds at our hospital on the NIH campus every Wednesday and Friday. My primary identity is still as a physician. I would never veer away from that.'

ular night. When things get tight, when we have crises, it might go to ten or eleven. I work Saturdays, and I work at home on Sundays.

WCM: You attended a Jesuit high school and college. How do you think that influenced you?

AF: There is a certain intellectual discipline associated with Jesuit training. I often use the terminology "precision of thought, economy of expression," which means you have got to precisely know what you are talking about, get it clear in your own mind, and express it in a succinct manner. If your thoughts and concepts are not clear in your own mind, you will never be able to explain them to anybody else, because you are probably confused.

WCM: You have described yourself as an unapologetic perfectionist.

AF: When you are dealing with problems that are as important as people's lives and the health of the nation and the world, you have got to pay attention to the big picture as well as to the details. I am a perfectionist, and I am rarely satisfied with what I do. I hold myself to a high standard, and sometimes it gets uncomfortable because you never get the feeling that you have done enough—but I have learned to live with that. I think it pushes me to always try to do better. ■



Setting priorities:
Third-year student
Allison Schulman and
husband Jakob
McSparron '01, MD
'07, try to balance life
and medicine by mak-
ing sure they have
dinner together—even
if it means eating at
midnight.

The Cost of an MD

By Sharon Tregaskis

Photographs by John Abbott

At first, Tiffani McDonough didn't love medical school. In fact, by the time she finished her first year of classes at Weill Cornell, the former University of Rochester English major was so uncertain about her future that she took a leave of absence. While she did some soul searching, she worked a few blocks away as a research assistant at Memorial Sloan-Kettering Cancer Center, where she split her time between a lab and an outpatient clinic. It was an auspicious placement. "What really drew me to medicine was the people, the excitement of dealing with many problems, many individuals, and many stories a day," says the twenty-seven-year-old, who cherished the continuity of her work with patients in the clinic. "I thought, 'This is the point. It's not just about the quizzes and the boards.'" McDonough decided that if she could make it through her second year of academics, she'd thrive in the more patient-focused training to come, and she returned to Weill Cornell. "And I had a blast," she says. "The experience of medical school I had anticipated finally happened in the third year."

Beyond the financial price, there's a personal toll—on relationships, exercise, families, hobbies, even health.



Tiffani McDonough '08

McDonough expects to receive her MD this spring and pursue a career in pediatrics. With a minimum of three more years of training before she launches a practice, McDonough still has an array of hurdles to overcome: the sleep deprivation, the vast quantity of material to master, the emotional intensity, the struggle to maintain an intimate relationship and family connections. And she'd like to have a baby—but despite the risks of delayed maternity, she's decided that motherhood will have to wait. Yet, like every physician since Hippocrates, McDonough figures that her job will make it all worthwhile. "It's just good work. You're learning all the time, you're giving back, you're doing good for others," she says. "I know at some point, I'm going to get there."

a career in medicine has always come at a price. As tuition costs have skyrocketed in the last decade, the financial realities have taken center stage: young doctors managing nearly \$200,000 in debt as they launch their practices, choosing to delay marriage or a mortgage, opting for specialties likely to expedite their payment schedules. Meanwhile, another story has taken shape—a growing desire among aspiring physicians and those early in their careers to buffer the non-financial sacrifices associated with a career in medicine. "What does it cost to become a doctor?" asks Laura Forese, MD, NewYork-Presbyterian Hospital's senior vice president, chief operating officer, and chief medical officer of the hospital's Weill Cornell campus. "I thought, 'I want to be a physician, this is what it's going to take, no problem.'" That was nearly thirty years ago—before her training converted her twenties into a sleepless blur, before she met her thoracic surgeon husband, before she gave birth to twin daughters during the final year of her residency, before she had a son soon after getting her first faculty position. Says Forese: "I think kids today are much more savvy about what life is going to look like at the end of all of this."

Charles Bardes, MD, Weill Cornell's associate dean for admissions, frequently fields questions from applicants who are concerned about how they'll balance their training with starting a family or retaining outside interests. "The idea that a person is expected to have a life should be applauded," says the internist. "We have a mythical idea of a doctor who is wedded to his patients and lives his entire life for their benefit." It's a flawed model, Bardes argues. "A doctor who is too exclusively dedicated to patients may be insufficiently dedicated to his or her family and his or her own development as a person."

Today's students seem to have taken the concept to a new level. When Forese meets with prospective residents and fellows, their desire for clear-cut breaks from their duties stands out. "There's a lot more interest in this ability to turn it on and off," she says, and she's frequently

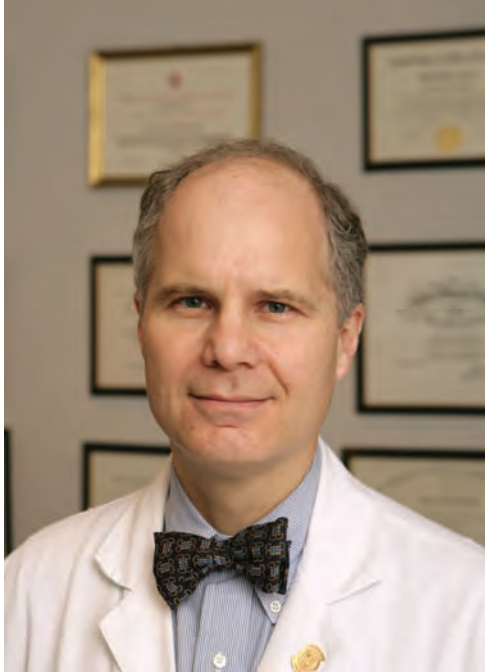
surprised when young physicians ask about vacation time. "I would never have entertained asking in any interview, 'How much time off do I get?'" says the orthopaedic surgeon. "I think that our culture has changed to a more balanced view of 'I'm not just my job, there are other things I'm interested in.' I think that's healthy."

Still, every physician knows the realities of answering a page in the middle of the night, reading the latest journal articles over the weekend, being delayed by a procedure that takes longer than anticipated. There are missed events in children's lives, strained relationships—and fewer novels read, symphonies attended, or meals cooked at home. "This is a calling," says Mark Pecker, MD, program director for Weill Cornell's residency in medicine. "When you do this, you're chopping a lot of things out of your life. Is that a cost? Well, if you're at the hospital helping people, you're not at the park." Perhaps a greater surprise than the choices constrained—an experience common to many demanding careers—is how much many medical students and residents accomplish besides their studies, says Pecker. "The training is rigid and requires manic dedication. It's hard—yet many people manage to do a wide variety of things besides medicine."

In 1996, Weill Cornell overhauled its curriculum, replacing the lecture-based format with an approach known as problem-based learning (PBL), in which students pursue more self-directed studies and have greater autonomy to control their schedules. "We like our students to have a life," says Carlyle Miller, MD '75, the associate dean for



Laura Forese, MD



Clockwise from upper left: Charles Bardes, MD, Brian Rebolledo '10, and Mark Pecker, MD. Rebolledo gets a break from the intensity of medical school by studying at a coffee shop amid NYU undergrads.

student affairs. "On any given day, their medical education is not the only thing that should consume them. They should be consumed about having three meals a day, the exercise they can do, or the music they want to play. It's up to the student to figure out the way to have time."

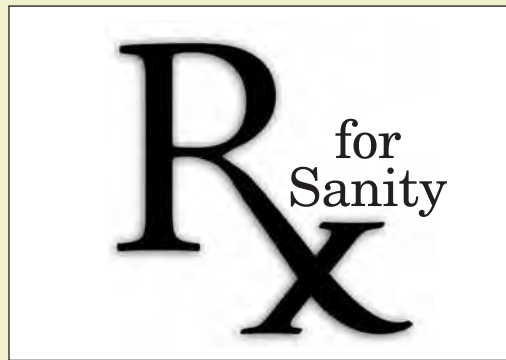
Second-year student Brian Rebolledo, a California native who managed to surf nearly every day during his undergraduate studies in San Diego, has carved out time for a daily two- to three-mile run, plus the occasional basketball game and a place in the medical student dodge-ball league. ("It's very intense," he says. "Put medical students in any kind of competitive scenario, and it's like they're playing for life or death.") Weekly get-togethers for dinner or a glass of wine with friends provide a break from the books, and at least once a month he studies at a coffee shop near the NYU campus for a change of scenery. "I live vicariously through them," he says of the NYU undergrads. "They look like they're having fun."

Jakob McSparron '01, MD '07, and Allison Schulman, a third-year student, put a priority on eating dinner together—even if it means waiting until nearly midnight, when he's done at the hospital and she's finished studying. After dating for seven years, the couple married last June in an

out-of-town celebration they planned themselves, scheduled around McSparron's Weill Cornell graduation, Schulman's boards, and the start of McSparron's internship. "The people with children are more stressed than we are," says McSparron, who plans to specialize in pulmonary and critical care. "My mom went to med school when I was six and my sister was eight. Any time I feel like complaining, I think of that. It's helped to keep things in perspective."

Yet even in a PBL curriculum, there's no getting around the incredible volume of material to be mastered and the limited number of hours in a day. "I'm giving up most of my twenties," says Rebolledo, whose close-knit extended family includes cousins and siblings a few years his junior. "They're engaged, having a baby, and that is not even close to what I'm ready for at this point in my life. My goal right now is becoming the best doctor that I can possibly be. Learning the material is a big task, so it would be hard to give yourself to both at the same time. You sort of put everything else on hold."

As both the first college graduate and the first medical student in the family, New York City native Edgar Figueroa, MD '00, found that his place in his extended



ILLUSTRATIONS BY MARTY MAYO

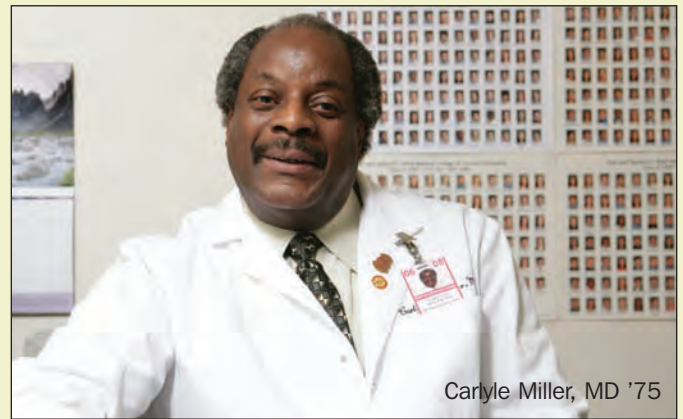
Tips for having a life during medical school

as a student, Carlyle Miller, MD '75, spent his Tuesday afternoons at the Metropolitan Museum of Art. As soon as classes ended, he'd pack up his books and head across town to study. Each evening, as closing time approached, he'd walk the floors with the guards, in what became something of a weekly tutorial. "I learned a lot about art that semester," says Miller, now associate dean for student affairs at Weill Cornell.

In his current role, Miller sees a fair number of students struggle to balance academics with the pursuits that make them well-rounded people. "We put tremendous pressure on ourselves to be studying all the time," says Tiffani McDonough '08. "There's so much to know and there's always something to learn. It's hard sometimes to stop, and be OK with stopping."

Miller's tips for finding balance:

- **Make a clear assessment.** Any time a student complains about stress, Miller asks how things are going academically. If the student is passing, he urges him or her to take a break. "Two hours is not going to kill you when you get out of class at one in the afternoon," he says. "I try to make them look at the reality of the thing. If you're getting 90s and you've been studying all this time, maybe you can still get 90s and study two hours less."
- **Sweat it out.** The New York City marathon runs along First Avenue, near the Medical College. There's a gym in Lasdon Hall and another in Olin. And Central Park is an easy walk. "We encourage them to live healthy lifestyles," says Miller, who walks across the park to his home on the West Side and often spots students playing football or taking a walk. "Medical students are self-selected to study, and motivated to study," he says. "It's good that they have that in them, but that doesn't mean they have to sacrifice simple things."
- **Mix it up.** A change of scenery—like Miller's weekly art museum foray—can make a big difference, says the physician, who encourages the students to get out, even if they take their books with them. "I say, 'Where do you study? Maybe you should study someplace different. Maybe you should study with a group, maybe you should go out with the group.'"
- **Ask for help.** Besides consultation with faculty mentors and college administrators, Miller urges students to take advantage of campus mental health services. "When they come talk to me, one of the questions I always ask myself is, Does this student need to talk to someone else? We make recommendations all the time, and the students are good at following up."



Carlyle Miller, MD '75

- **Maintain non-medical interests.** When he applied to medical school, Miller hedged his bets: he also filed applications for graduate study in conservation biology, his other love. To this day, he retains an avid interest in butterflies, which he collects from around the world. As a student, he read voraciously. During fifteen-minute study breaks, he'd clear his head with a bit of fiction, a habit that added up to a novel a week, a pace he maintains to this day. "Students find that when they're able to do other things besides medicine, they're able to learn better."



McDonough, whose boyfriend lives in New York, says she didn't want their relationship transformed into a long-distance affair by her residency match. 'It seems like only in medicine—and maybe in the military—are relationships defined by geography and the career milestones that are forced on someone's life.'

clan shifted as his training progressed. "All of a sudden there were a bunch of people I couldn't relate to anymore," says Figueroa, Weill Cornell's director of student health services. "I couldn't hang out as much. I couldn't run home every time there was a family crisis."

Later, when he met his future wife, he scheduled dates around his rotations. "As in everything," he says, "if it's important to you, you find balance, you find time."

Figueroa trained in family medicine, but with toddlers at home, when Weill Cornell announced its search for a new student health services director, he applied. "My kids are really cute right now and I wanted to be present," says the father of two, who took the position in 2006. "Certainly this is an atypical lifestyle, but it's one that allows me the flexibility and opportunity to play with my kids, tuck them in at night, and not worry about running back to the hospital."

Forese and her husband started talking about marriage when she was a medical student and he was a surgical resident; even before they wed, they tackled the questions of when to have kids and how they'd manage the responsibilities of child-rearing. "We understood that we would need to have wonderful help for when we couldn't be there ourselves, and talked about how we would prioritize our time," says Forese, who was a twenty-nine-year-old senior resident when her daughters were born. "My husband intuitively knew that I wasn't going to be able to do my job if I was worried about the kids all the time."

The couple also determined that they would always make just one of their careers a priority. "It helped us make decisions," says Forese. "We didn't just say, 'This could be an issue'; we talked about it openly." Committed to raising their children together, the couple wanted to be sure that they had a strategy for determining whose job to follow if they had to make a choice. "When we were first married, we were clear that we were going to follow my husband's career," says Forese, whose training was complete before her husband's lengthy fellowships. "When I first finished and was looking for a job, I was pretty upfront about saying, 'I'm here now, but I don't know that I'll be here in two years.'"

Schulman and McSparron started grappling with similar challenges when she was living in New York, studying in a post-baccalaureate pre-med program, and McSparron was working in Boston and applying for medical school. Schulman plans to delay her own graduation, devoting the year after her clerkships to research, so that by the time she's applying for residency and he's pursuing fellowships, their job transitions will be on the same schedule. Tiffani McDonough, whose boyfriend works as a visual artist in New York, says that even though they haven't formalized their relationship, she didn't want it transformed into a long-distance affair by her residency match. Instead, she ranked only training options within greater metropolitan

New York. "It seems like only in medicine—and maybe in the military—are relationships defined by geography and the career milestones that are forced on someone's life," says McDonough. "I'm limiting myself geographically, which they say you shouldn't do. But my boyfriend's work is here, my family is within commuting distance, and I love New York. I want to be here. But I definitely made the decision based on my relationship. You end up saying this grand thing: 'I'm staying here because of you.'"

At the student health center, Figueroa says he's seen many relationships challenged by the demands of training, especially the rotation schedules that can tax entire families. Bardes, who married before med school, says his wife considers his internship the year he was simply not present. "In her view, I was sort of in a trance from which I rarely emerged," he recalls. "Of course, in those days we had only one day off a month, so I'm sure she's right." Recently, Figueroa treated the wife of a student whose irregular hours at the hospital were disrupting her sleep. "They found a way where he slept someplace else," says Figueroa. "For that month, he was on the sofa." Students, he says, tend to drive themselves even harder as exams or the conclusion of a rotation draws near, then celebrate such milestones with equal fervor. " 'Work hard, play hard' is a sentiment that certainly ran across my med school class, and I've heard students I take care of use the same mantra," says Figueroa. "It's not inconceivable that there's more coffee, more drinking, more smoking, less attention to self-care."

During Figueroa's own student days, he says, it was a struggle even to admit that he should call in sick, or see a doctor himself. "It's not a mystery why my patients were raising their eyebrows and saying, 'Don't you want to lie down?'" he recalls with a wince. "It's part of the culture. You have a lot of intense individuals, some of them training with the old guard, where you only call in sick if you are the patient." It's a culture Weill Cornell administrators are bent on transforming. As Bardes stresses: "Doctors are biological creatures who need to attend to needs like food, sleep, rest, comfort, companionship, and all the rest." For Laura Forese, the trials of residency still resonate—especially the sheer exhaustion and its effect on her life beyond the hospital. Today she has the chance to do something about it, and she's used her position as a senior executive at NewYork-Presbyterian Hospital to champion restricted work-hours in residency programs. "The joke is that I think eighty hours is a good work-week," Forese says. "That tells you what it used to be like." ■

the stuff of life



PATRICIA KUCHARIC

Research at the Ansary Center for Stem Cell Therapeutics offers hope for everything from paralysis to Parkinson's.

By Jennifer Armstrong

for the most part, it looks like your average lab: sinks full of glass beakers, researchers in white coats mixing with colleagues in jeans and sweaters and flannel shirts. Atop long, silver tables, blue contraptions resembling blenders are breaking down blood into its component parts. And across the hall, in a room full of freezers, backup generators protect animal embryos. It doesn't look like the site of a scientific revolution—but someday stem cells culled here could be turned into new and potentially lifesaving nerve endings, muscles, tissue of all kinds. They could regenerate damaged lungs and broken blood vessels, or even lead to more effective treatments for Parkinson's disease, diabetes, and spinal cord injuries. In a dish in this very lab, in fact, stem cells have already been transformed into beating heart tissue.

In short, the twelve-person staff at the Ansbary Center for Stem Cell Therapeutics does some rather amazing work. Their pioneering research addresses some of humanity's most vexing medical problems, including cancer, paralysis, cystic fibrosis, and Down syndrome. For nearly four years, the Ansbary Center has been bringing together Weill Cornell scientists from many disciplines to study the intricacies of stem cells, those primitive bits that have the potential to become any kind of tissue or organ. Thanks to a \$15 million grant in

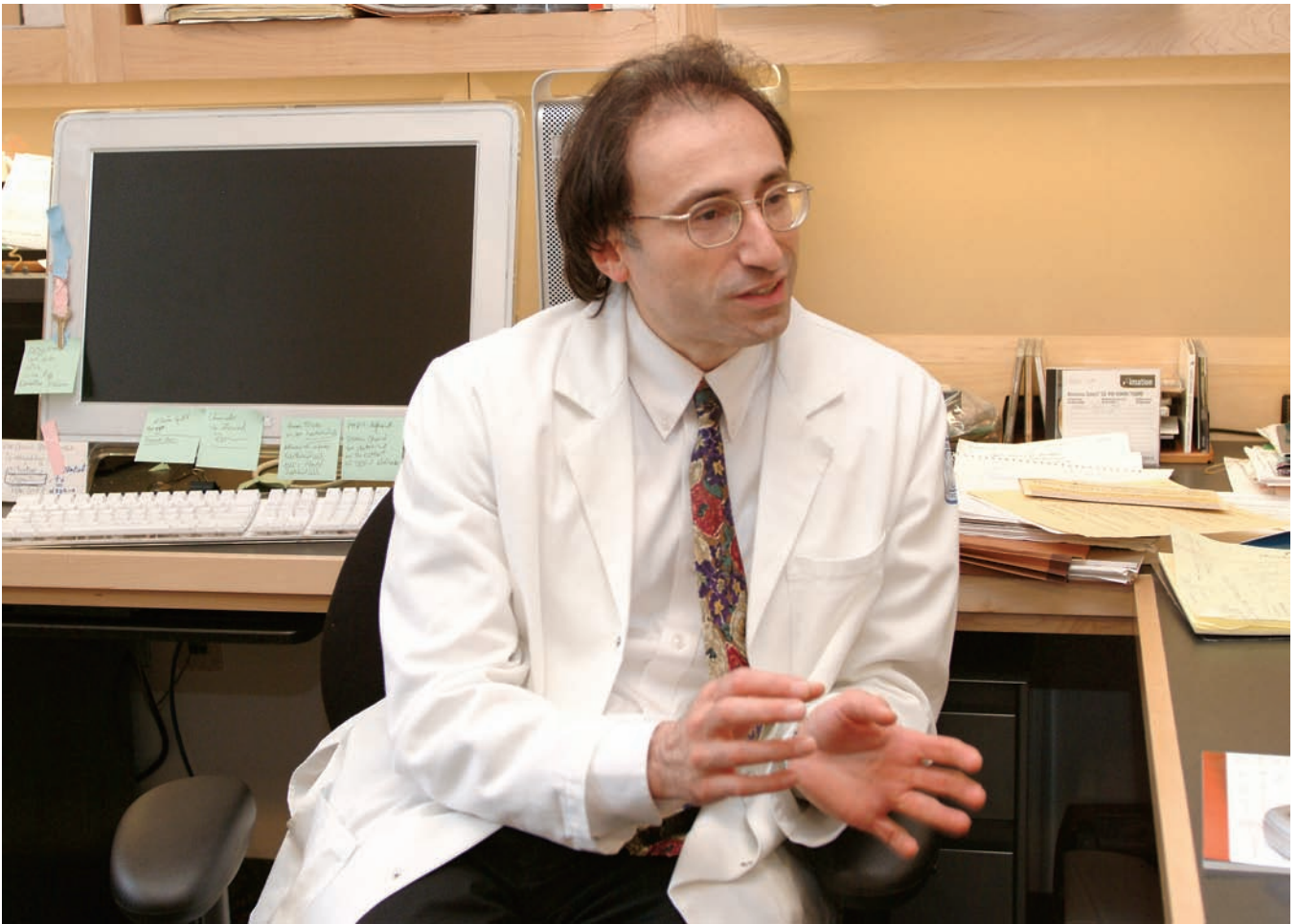
2004 from Hushang Ansbary—vice chairman of the Weill Cornell Board of Overseers and former Iranian ambassador to the United States—and his wife, Shahla, the Center can conduct research using both adult and embryonic stem cells, free of the restrictions on government-supported projects. "We have the liberty to execute basic science and pre-clinical projects involving non-registered human embryonic stem cells that are excluded from federal government funding," says Ansbary Center Director Shahin Rafii, MD, the Arthur Belfer Professor of Genetic Medicine and a 1982 graduate of the Ithaca campus.

As the field moves forward, such freedom could make all the difference. In the years since the Ansbary Center was established, public debate has raged over the politically charged practice of using discarded embryos (with the patient's permission) as a source of the cells, with high-profile advocates such as the late Christopher Reeve,

No ordinary lab: At the Ansbary Center, researchers have coaxed stem cells to transform themselves into beating heart tissue.



PATRICIA KUCHARIC



PATRICIA KUCHARIC

Shahin Rafii, MD

whose foundation continues to fund such research, and Parkinson's-afflicted actor Michael J. Fox. Meanwhile, recent advances have fueled new hope, including the Ansary-led discovery of a way around such ethical questions: taking stem cells from adult testes instead of embryos. "The Ansary Center came at a time when there were no other sources of funds available for embryonic stem cell research, and other institutions weren't being too aggressive about pursuing it," says Dean Antonio M. Gotto Jr., MD. "Before it became the popular thing to do, we and Ambassador Ansary decided it would be worthwhile to pursue." One thing is for sure: no one at the Center takes Ansary's contribution in the face of such controversy for granted.

When Ansary decided to finance the Center, stem cell research was relatively new to the public and even more controversial. The President's Council on Bioethics had just issued a report on the practice because of its reliance on embryos, while promising discoveries were driving the field forward. But, Gotto asserts, the potentially enormous benefits seemed to outweigh the ethical questions. "We were concerned about it, but we thought it was defensible and a good investment," he says. "Also, Weill Cornell has the largest and probably best center for infertility and

reproductive medicine. Unviable embryos that would have otherwise been discarded can be repurposed for research that will undoubtedly revolutionize this field of medicine."

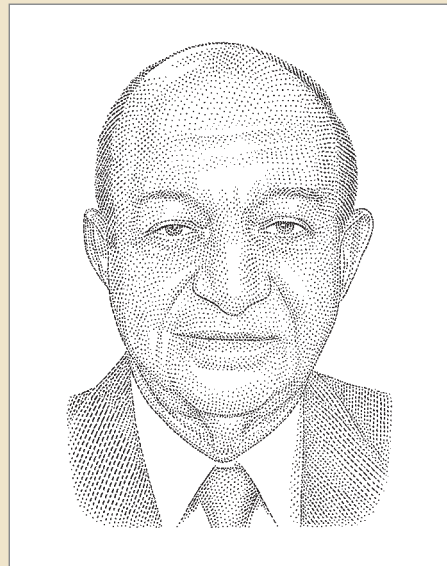
Even before the Center opened, Weill Cornell researchers were making advances in the field. Rafii discovered vascular stem cells in adult bone marrow that can help heal injuries and that contribute to tumor revascularization—a process that, if reversed, could help stop regrowth after cancer treatment. His work also showed how marrow stem cells begin the regeneration process, which could help cancer patients recover from chemotherapy more quickly. Meanwhile, Neeta Roy, PhD, an assistant professor of neuroscience, had already identified progenitor cells similar to stem cells in fetal spinal cord tissue, which could help repair damaged nerve and brain cells.

The Ansary Center has helped speed such developments by bringing together teams from across departments and other affiliated institutions. Since its inception, the Center has published sixteen studies in peer-reviewed journals, including ones detailing discoveries of new adult stem cell sources and investigations into stem cells to

understand brain tumor growth. Administrators hope to build on that success by involving even more departments, including life sciences in Ithaca, and plan to add five new professors of developmental biology and stem cell biology in the near future. "It's beneficial for students and post-doctoral fellows to be training in stem cell research," says David Hajjar, PhD, the Medical College's senior executive vice dean and dean of the Graduate School of Medical Sciences. "These days, if it's not nanotechnology, it's stem cells coupled with gene therapy being used in the cutting-edge field of regenerative medicine."

But the increasing excitement over the field's possibilities hasn't erased the ethical landmines of such research. For years, pro-life advocates have questioned the use of embryos, voicing concern that such practices could lead down a slippery slope to harvesting viable fetuses. Supporters of stem cell research have argued that they only

'These days, if it's not nanotechnology, it's stem cells coupled with gene therapy being used in the cutting-edge field of regenerative medicine.'



KEVIN SPROULS

THE ANSARY CENTER FOR STEM CELL THERAPEUTICS WAS FOUNDED IN 2004

THANKS TO THE GENEROSITY OF SHAHLA AND HUSHANG ANSARY. HUSHANG ANSARY WAS BORN IN IRAN AND SERVED AS THAT COUNTRY'S FINANCE AND ECONOMIC MINISTER AS WELL AS ITS AMBASSADOR TO THE UNITED STATES. HE BECAME A U.S. CITIZEN IN 1986 AND A MEMBER OF WEILL CORNELL'S BOARD OF OVERSEERS IN 1998. ANSARY IS CHAIRMAN OF THE PARMAN GROUP, A PRIVATELY HELD GLOBAL INVESTMENT ENTERPRISE, AND A DEDICATED PHILANTHROPIST WHO HAS SUPPORTED MANY SIGNIFICANT EDUCATIONAL PROJECTS IN THE U.S. AND AROUND THE WORLD. HE HAS DEFINED HIS GOAL AS A PHILANTHROPIST AS "SIMPLY LOOKING FOR THE OPPORTUNITY TO BE HELPFUL."



JOHN ABBOTT

Neeta Roy, PhD

use embryos—usually ones left over from fertility treatments—that would be discarded anyway, and their use always requires signed consent from the patients they belong to. Federal funding guidelines prohibit their use, though a recent \$1 million grant the Center received from the State of New York can be used for either adult or embryonic research because it takes place in a part of the lab that is not federally funded. Other potential funders monitor—without ruling out—human embryo use. For instance, the Starr Foundation, a New York-based philanthropy and longtime Medical College benefactor, gave Weill Cornell, Rockefeller University, and Memorial Sloan-Kettering Cancer Center \$50 million in 2005 to work together on stem cell research. Pre- and postdoctoral fellows can apply for grants in the field, though they

must be reviewed by a committee that includes lawyers, medical ethicists, and community leaders.

Such rules mean that the Ansary Center must carefully track the use of funds with different restrictions. But much of its latest research, which focuses on promising new sources for adult stem cells, could eventually make such distinctions obsolete. Embryonic stem cells, which exist in the mass of cells that forms right after sperm and egg meet, have long been recognized as capable of developing into any type of cell in the body. Adult stem cells, on the other hand, can generate some, but not all, cell types. And until recently, they have come mostly from umbilical cord blood, bone marrow, and blood.

the Ansary Center made finding other sources of adult stem cells one of its founding goals—and a study published in the September issue of *Nature* showed how its researchers did just that. They discovered that stem cells in adult mouse testes could produce a wide range of tissues, including

heart muscle. The finding, if duplicated in humans, could lead to an alternative to embryonic stem cells. It also solves major, medically based problems that often come with the other adult stem-cell sources—such as the fact that, as previous research showed, reprogrammed cells taken from connective tissue carry an increased risk of becoming cancerous. And even embryonic stem cells could pose rejection problems. “You deal with the immune barrier because they’re not from you,” says Marco Seandel, MD, PhD, a medical fellow from Memorial Sloan-Kettering who was part of the research team.

The newly discovered spermatogonial progenitor cells come from deep within the testes, where the precursors to sperm are produced. “These are primitive cells, from early in the maturation process,” Seandel explains. “They’re very, very, very early pre-sperm. Not the earliest, but close.” A future goal is to find ways to harvest the same kinds of cells from women—though researchers believe men might be able to donate them to genetically compatible female relatives. First, though, they are concentrating on figuring out the gene-level processes that allow these



KUHARIC

cells to turn into usable stem cells—and on duplicating the study's findings with human sources. "We're still trying to understand how they change from one state to another," Seandel says. "Then they can do all these amazing things. When we can understand all those steps, we can apply it at will."

Those applications could play into the Ansary Center's other primary research areas as well, including the regeneration of blood vessels, insulin-producing cells of the pancreas, lung cells, and nerve cells. Center scientists have determined, for instance, that cells taken from human airway tissue can be used to generate more of the same, which could help to repair damaged lungs. "Whether those cells

'The current theory is that brain tumors come from uncontrolled stem cells. We want to identify characteristics of those stem cells and then kill them instead of growing them.'



Philip Stieg, MD, PhD

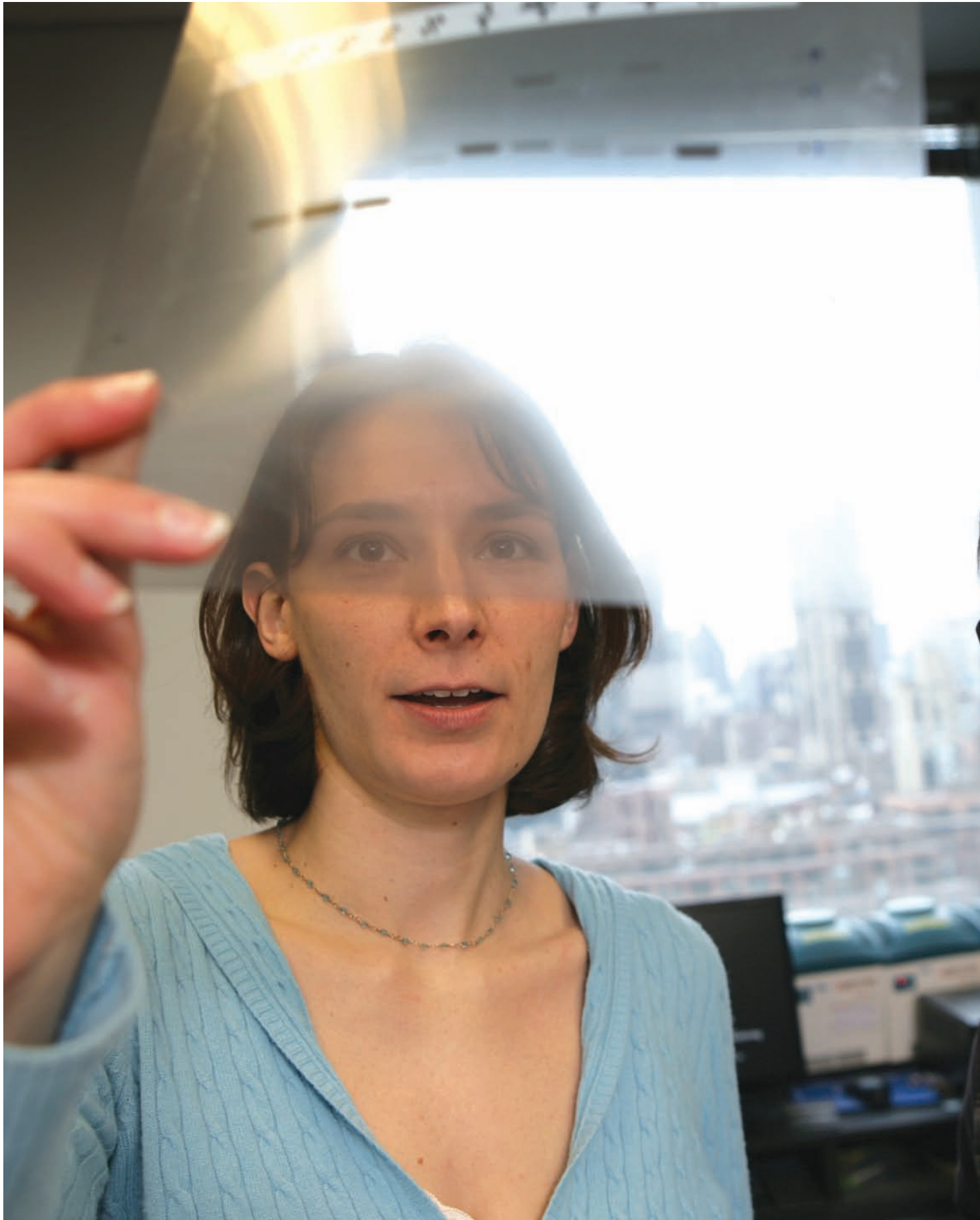
can become brains or hearts is another theoretical possibility," says pulmonary expert Ronald Crystal, MD, Bruce Webster Professor of Internal Medicine and chairman of the Department of Genetic Medicine. "We don't know yet." Crystal's team has shown that, in mice, when one lung is removed the other will grow to double its size to compensate. "So we use that model to assess the function of stem cells," he says. "We've been using that in combination with putting genes into the lung to stimulate the process."

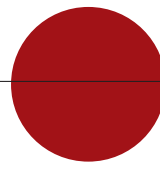
Neuroscientists hope they can find similar ways to fire up damaged dopamine-producing cells in the brain (which could help fight Parkinson's disease), re-grow the cells destroyed by spinal-cord injury, or cultivate new neurons to replace damaged ones. But at the Ansary Center, the most promising recent neurosurgery research involves

actually reversing the regenerative process. "The current theory is that brain tumors come from uncontrolled stem cells," says Philip Stieg, MD, chairman of the Department of Neurological Surgery. "We want to identify characteristics of those stem cells and then kill them instead of growing them."

Likewise, Ansary researchers recently made progress toward clearing another hurdle on the way to widespread clinical use of stem cell therapy: controlling the outcome by stopping re-growth. "One of the major challenges is, what if you get too many cells?" Crystal says. "Or, worse, what if they become cancerous?" To that end, his team recently implanted what they call a "suicide gene" into stem cells that were then

injected into mice. When those cells became cancerous—by design—the doctors fed the mice a substance that activated the gene, and the cancer dissipated. The concept is that such techniques could serve as a failsafe in future stem cell therapies. And while this sounds as if it could also lead to a cure for cancer, Crystal emphasizes that such a breakthrough is still merely theoretical. In fact, though all of the Ansary scientists are bullish on the potential of stem cell research, they stress that current science is a long way from fulfilling that promise—a long way, even, from use in patients beyond clinical trials. "The applications are pretty broad, but they're far off," Seandel says. "We're years, maybe even decades, away from clinical use." Still, he adds, "in terms of what we can do, we've seen only the tip of the iceberg." ■





NOTEBOOK



Test results: Graduate students Kelly Yule and Eli Berdougo at work

ABBOTT

Dear fellow alumni:

What a couple of years it has been, with fantastic developments and innovations at WCMC and the Medical Center. Let me recap some headlines:

A three-year campaign to raise \$125 million for the Medical College and Medical Center was launched.

A topping-out party was held for completion of the steelwork for the C. V. Starr Pavilion, spanning East 71st Street.

A nuclear magnetic resonance scanner—the world’s most advanced diagnostic imaging device—was installed at the Medical Center.

The Medical College received \$50 million from an anonymous benefactor.

Daniel Alonso, MD, was named associate dean of admissions.

The snack bar in Olin Hall was refurbished, with a daily breakfast special for \$1.

Of course, these are some of the highlights from twenty-five years ago, 1982–83. Don’t many of them seem like they happened just yesterday? Today, in contrast:

We have embarked on a \$4 billion university development effort, with \$1.3 billion targeted for the campaign for WCMC.

We have a sparkling new clinical sciences building on East 71st Street.

Cutting-edge diagnostic imaging programs are under way in conjunction with the Ithaca campus and the Methodist Hospital in Houston.

Magnificent philanthropy from the Weills, Greenbergs, and others allowed Dean Gotto to announce in June a \$400 million gift to WCMC, the single largest ever given to a U.S. medical college.

Dan Alonso is dean of Weill Cornell Medical College in Qatar, formally established in 2001, and is preparing to graduate the first class in May.

(Sadly, the snack bar closed a number of years ago. Fondly remembered as the Betty Bar, it served delicious hamburgers requiring a side order of statins.)

The progress at WCMC is astounding,

with hardly a pause in the pace of change. Transformative strategic planning implemented by Dean Gotto has brought new faculty and facilities to the campus, and collaborations with Ithaca are thriving after decades of dormancy. Our students

and faculty are involved in research and clinical care programs on East 69th Street, throughout the United States, and in sixty-two countries on six continents, enhancing the global reputation and achievements of WCMC. Plans are in place for a new biomedical research building

on East 69th Street and upgrades of existing laboratories and residential space. It is an exciting time.

As alumni, we have the ability to impact the college and its students through participation in alumni programs, interaction with students and faculty across the country, and tangible philanthropy. We make a real and significant difference to the students and their families supported by our scholarships, so alumni participation in the Campaign for Weill Cornell is important at any level that we each can afford. I have had the chance to meet several of the students whose education has been facilitated by alumni scholarships, and their gratitude is deep and genuine. I hope you will join me in actively supporting the campaign.

By the time you read this, I will have had the pleasure of seeing many of you at the Palm Beach reception and cardiovascular update by Dean Gotto in February. We will have a chance to meet on April 8 at the Ninth Annual Cornell Silicon Valley Presidential Event in Palo Alto, featuring faculty from WCMC. And I very much look forward to seeing many of you at Reunion in New York on October 24–25. Please make plans to attend, and look for our communication about the details.

*With my very warmest regards,
Gene Resnick, MD '74*

*President CUWMC Alumni Association
gene.resnick@alumni.med.cornell.edu*



MARTIN MAROON

1930s **Fayette K. Stroud, MD '37**: "At age 95, I still enjoy working in my extensive gardens and spending time with my children and grandchildren."

1940s **Robert M. Kiskaddon, MD '42**: "At age 91, I have lived to see my namesake become president of the medical staff of Massachusetts Eye & Ear Hospital and teach at Harvard Medical School for more than 25 years. My sons James and Bruce are both eye surgeons. I have been unable to contact old Cornell roommate **Dick Donaldson** and wonder if he has died. It makes me wonder how many of the Class of 1942 are still with us."

Francis S. Greenspan '40, MD '43: "I am pleased to report that I am still active, as chief of the Thyroid Clinic at the University of California, San Francisco, and still seeing patients and teaching about half time. The eighth edition of *Greenspan's Basic and Clinical Endocrinology* has just been published by McGraw-Hill and is an excellent textbook of endocrinology. I am still enjoying the art and practice of medicine as taught at Weill Cornell Medical College."

Robert E. Healy, MD '44: "Audrey and I have moved to 15 Cedar St., Unit 42, Amesbury, MA 01913, to be close to our two older children. Our third lives in Los Angeles and gets east now and then. We go out there about once a year."

Rudolph W. Jones Jr., MD '45: "I am writing to stimulate interest in all Weill Cornell Medical College graduates to maintain contact and function with their Alumni Association and Medical College activities. I had a wonderful experience with the privilege of serving as the Class of 1945 and 1940s-decade coordinator in the Reunion activity of October 2006. The Reunion and associated functions have been well described by Alumni Association presidents **Kenneth Swan, MD '60**, and **Gene Resnick '70, MD '74**, in previous issues of this magazine. The Class of 1945 dinner included the following classmates and two spouses: **Charlotte Brown, David Brown, Douglas Johnstone, Hugh Lena**, and myself. Drs. Charlotte and David Brown were very helpful with the Class of 1945 living alumni contacts. The beginning list of living classmates yielded the following results: humbling telephone contacts with 26 classmates, family member conversations with four impaired classmates, three deceased members, and three no contacts. Multiple pleasing notes and letters developed prior to the event. A gratifying letter came from **Malcolm Towers**. I was most fortunate to talk to **Frances Murray, MD '40**, who functioned as class coordinator and

Correction to Donor List

In our last issue (Winter 2007), we mistakenly omitted the names of **Ian** and **Margaret Smith** among our list of 2006–07 donors. We are most grateful for the long-standing, generous support of the Smiths and sincerely regret this oversight.

In addition, we misspelled the name of **Geri Cuiule** in our donor list. We regret this error, and also extend our deepest thanks to Ms. Cuiule for her loyal support.

reported only four living classmates."

George W. Wood III, MD '46, has retired.

Charles F. Reeder, MS '43, MD '47: "I retired several years ago after practicing family medicine for 23 years and directing an FP residency program for 16 years. Still enjoying gardening and wood-working. Recently moved from Johnstown, PA, to Alexander, PA, to be near one of our four children and near our alma mater, Juniata College."

Gilbert I. Smith '44, MD '47: "Happily retired with lovely wife. Visited New York City and had dinner with **Les Schnell, MD '47**, and wife Marge. Later visited **Tom Hedges, MD '47**, and wife Ann in West Falmouth. All doing well."

R. B. Cubberley, MD '49: "My usual brief note from Mississippi: remain in good health with no untoward events. Last May, spent 15 days in Afghanistan accompanied by a guide and an armed driver-guard. Security measures were obvious. Dining and hotel facilities were usually guarded by a burly soldier with body armor and an AK-47. After inspection and some conversation in Farsi, entry was permitted. In some areas a step backward in time: no rural mail service, water, medical units, or even records of birth and death. Many cars in the cities, but traffic lights were absent except in Herat where they had been installed by the Russians. As for the women, a long sad story of rights deprivation. The Taliban residue is constantly present. **Bob King, MD '49**, sends an occasional note. It was of great interest to read the article on Dr. George N. Papanicolaou in the Summer 2007 issue of this magazine. In 1946, he lectured to us (Class of '49) in histology: 'Today we study the estomacha.' A great teacher, his Greek accent was easily understood. That was a long time ago, to say the least."

Robert J. Haggerty '46, MD '49, professor emeritus of pediatrics at Golisano Children's Hospital at Strong University of Rochester Medical Center, recently published *Charles A. Janeway: Pediatrician to the World's Children*.

1950s **Allan M. Levy, MD '51**: "As of July 31, 2007, I retired after 53 years in practice and 31 years as a New York Giants team physician. I was also team physician for the New Jersey Nets for 18 years. I still see **Bob Boyer, MD '52**, regularly. We practiced at the same hospital."

Roger P. Lochhead, MD '51: "Still living in South Burlington, VT, and have a nice view of the Green Mountains. Have had a number of medical problems 'related to aging' and am pretty much confined to my condo."

Kenneth C. Archibald, MD '53: Thanks to his philanthropic contributions, the former chair of Rehabilitative Medicine at California Pacific Regional Rehabilitation Center helped to make possible the construction of a terrain park for patients recovering from serious orthopaedic injuries, stroke, and other neurological conditions. The park will be known as the Archibald–Ehrenberg Rehabilitation Terrain Park.

Robert P. Singer '50, MD '54: "At 77, I enjoy excellent health. In addition to being an assistant scoutmaster, I am active in my local community and library, build HO railroad structures and cars, add to my HO circus, and find time for reading and painting. During

the past year I have continued my extensive traveling. I toured and hiked in the Western states (3,000 miles), hiked the Inca Trail to Machu Picchu, sailed to the Galapagos Islands, spent five weeks hiking and touring Ireland, and was with my Boy Scout troop at camp. Future plans include a visit to New England and two weeks touring and hiking in Iceland. I plan a summit attempt on Kilimanjaro in January 2008. I would enjoy hearing from other members of my class and seeing them if they are in or near Richmond, VA."

Ronald A. Arky '51, MD '55, celebrated his twentieth year as Master of the Francis Weld Peabody Society at Harvard Medical School last November.

Joseph E. Johnston, MD '55, had a street named after him in his local town of Mt. Olive, MS, in honor of his dedication to providing health-care services to the area for more than 50 years. Joe is still in practice with his son, Dr. Word Johnston. In his free time he enjoys playing the violin.

Herman R. Matern, MD '55, returned to Nepal and says there have been major improvements in health care. He was kept busy with consultations and is no longer riding his motorcycle while in Nepal. "The horns and traffic are not to be believed." His wife, Willie, stayed in Phoenix minding her grandson, Kai.

Gunter R. Meng '51, MD '55, keeps active with his wife, Hilde, and is happy in retirement despite a stroke in 1983 that left him with left-side weakness. He still enjoys going back to

Sanibel, his old homestead. He keeps up with old classmates through the mail.

Artemis G. Pazianos, MD '55: "As always, I have been blessed with wonderful visits with family, good friends, and fabulous trips. In February 2007, a friend and I rented an apartment overlooking the beach in Juno, FL. The weather was cool but sunny, and we traveled up and down the coast, visiting various friends and enjoying concerts, movies, and lectures at a local college. The International Osteoporosis meeting took place in Washington, DC, in April; although it was too late for cherry blossoms, I combined learning with a visit with my brother and his wife. Despite my many travels, I had never been to Spain. Harvard offered a trip in May and, accompanied by my daughter, we visited a number of cities, largely in the north, staying in *paradors* and tramping daily for hours on cobblestones. I have seen enough cathedrals to last a lifetime! The highlights were visits to some of the major museums including the Prado, Guggenheim, Picasso, and Dali. During the summer I had two lovely visits, as usual, with my children and grandchildren—a week over July 4th in Brooklin, ME, and ten days at my cottage in Connecticut. Artemis, the younger, is currently working on a master's degree in film studies at Columbia University and is receiving many kudos. I am proud of her. I spent much of the year organizing a mini-reunion for 50 of my Wellesley classmates in Providence and Newport, RI, the last weekend in September. The weather was glorious, meals fan-



Library science:
MD-PhD student
Ankit Patel
(standing) and
classmates



Thesis adviser: MD-PhD student Ankit Patel consults with professor of physiology and biophysics Lawrence Palmer, PhD.

ABBOTT

tastic, and sightseeing excellent, including mansions in Newport and museums in Providence. Finally, I went west in October to visit a number of our national parks, including Yellowstone and Mount Rushmore. We covered 3,600 miles. It was one of my best trips. Thanksgiving was spent with my Washington family and daughter. We stayed at the Mayhurst Inn in Virginia; ate too much at the Meander Inn; visited James Madison's home, Montpelier; and just had a good time. By the way, I am still working one day a week."

Cedric J. Priebe Jr., MD '55: "I retired on July 11, 2007, after 25 years as professor of surgery and chief of Pediatric Surgery at SUNY at Stony Brook and the Stony Brook University Medical Center. My wife, Cynthia, and I continue to live in nearby Old Field, NY. My seven children, two of whom are physicians, returned to celebrate the event with our 12 grandchildren. We had a great time."

Roland W. Richmond, MD '55, and his wife, Janice, continue to travel a great deal. This past year they visited Turkey and Mexico, and they also went to Canada where they attended the Shaw and Shakespeare festivals. They enjoyed several Elderhostels. Rich teaches an adult Sunday school class and volunteers for the local cancer program, Friend of Life. Janice is still preaching and does hospital and prison visits.

John Sullivan, MD '55, and his wife, Helge, divide the year between Vero Beach, FL, and Rome, Italy. John designed their home in Florida, and it is virtually hurricane-proof. **Artemis Pazianos, MD '55,** had occasion to pay a visit last year and was impressed with John's various installations. He is enjoying retirement and spends a great deal of time reading.

Donald Feeny, MD '56: "Trying to stay healthy, being a consultant to health-care corporations and inner-city community clinics serving the underinsured and downtrodden in our society. I remember the quality of my teachers, mentors, and the entire medical center. I would like to hear from my classmates, especially those in my graduation year. I'm looking forward to going to my 52-year reunion in October 2008 and seeing my wonderful classmates."

William H. Plauth Jr., MD '57: "My wife, Bobby, and I are enjoying Santa Fe immensely. Have been here three years now and live only five minutes from our son, Bill, his wife, and their four-year-old son. Our daughter, Nancy, lives in Stanford, CA, and has our three other grandchildren. We had lunch with **Don Goldstein, MD '57,** and his wife, Connie, from Boston. Enjoy gardening with Bobby, tennis, walking, and freedom from responsibility for very sick children—although I loved the challenge at the time."

Peter S. Birk, MD '59: "I'm still in internal medicine at 10829 Georgia Ave., T-2, Silver Spring, MD 20902. Hello to all

my living classmates."

Bruce H. Drukker, MD '59: "Esther and I have enjoyed 11 good-health retirement years at Keowee Key, located on Lake Keowee at the foot of the Blue Ridge escarpment in upstate South Carolina near the small town of Salem, SC. We have become dedicated recreational bicycle riders in the area as well as other U.S. states and Europe. Since we are somewhat off the beaten path, we see WCMC alumni infrequently. On the other hand, we have met many fine friends and physicians from USC, MUSC, Duke, and UNC. After retiring from Michigan State, I have been fortunate to continue teaching and supervising ob/gyn residents and third-year USC students in gynecology and gynecological oncology on a one-day-a-week basis at the Greenville Hospital System in Greenville, SC. It tends to keep the cobwebs away."

1960s **Alvin Poussaint, MD '60,** and his co-author, comedian Bill Cosby, published their controversial book *Come On People: On the Path from Victims to Victors* (Thomas Nelson) last October. The book grew out of a number of "call-out sessions" that Dr. Poussaint and Mr. Cosby had held over the last three years—forums to address how to help the black community achieve full participation in American society. The authors argue that the key to black success lies not in government programs, but at home.

H. C. Alexander, MD '61: "Retired to Southern California in 2000. Keeping active with tennis, competitive bridge, and travel. Hospice volunteer for five years and now teaching reading comprehension at the Oceanside Literacy Center. Never took up surfing, but the water is fine. Children and grandchildren enjoy visiting and classmates are welcome, too."

John D. Bagdade, MD '62: "I have returned to academic medicine after a seven-year sojourn in the vineyards of Oregon making Domaine Meriwether pinot noir-based sparkling wine with the able assistance of a noted French winemaker from Champagne. With the prospect of child number four, son Philip, approaching college and the reality of my having systematically pursued a flawed business plan, I needed a 'day job.' The best available one was in Phoenix, AZ, where I have been the associate chief of staff for research at the Phoenix VA Medical Center since November 2005. My wife, Harriet, and son Philip remain in Eugene, OR, while I commute there from Phoenix on alternate weekends. I enjoyed reconnecting with classmate **Kipp Charlton** at nearby Maricopa County Hospital where Kip has had a distinguished career."

Thomas H. Snider, MD '62: "I enjoy reading *Weill Cornell Medicine*, but I am fully retired from active practice and cannot claim any significant contribution to the practice of medicine. I also enjoy attending meetings of the Bexar County Medical Dinosaurs in San Antonio, TX. We now spend the summer in Snowmass, CO."

Lewis Drusin, MD '64, was selected by the American College of Physicians to receive the James D. Bruce Memorial Award in recognition of contributions to preventive medicine. The award ceremony will take place on May 15, 2008, at the organization's annual meeting in Washington, DC. Dr. Drusin is professor of clinical medicine and professor of clinical public health at Weill

Cornell Medical College, and attending physician at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, where he was formerly director of the Division of Epidemiology. His work centers on the prevention and study of nosocomial infections and sexually transmitted diseases. He directs Weill Cornell's program that places public health and community medicine clerkship students in field locations. He was president of the American Venereal Disease Assn. Since 1995, he has served as the main representative of the International Union Against Sexually Transmitted Infections to the Economic and Social Council of the United Nations.

Robert M. Farrell, MD '66, has been selected as one of the "Best Doctors in New York" for six years in a row and is the proud grandfather of Kevin Russell and his first granddaughter, Margaret Stanford.

Anthony Fauci, MD '66, was highlighted in a *Washington Post* article last September for his work as director of the National Institute of Allergy and Infectious Diseases at NIH and his research on the AIDS virus. In 2007, he received the Kober Medal from the Association of American Physicians, the National Medal of Science, and the Mary Woodson Lasker public service award.

1970s **Cecil Chang, MD '70:** "Since joining the ranks of the retired in January 2006, I find that one of the bad things about retirement is true—there's not enough time to do everything you want to do. Visited **Lou Bartoshesky, MD '70,** and his wife, Pat, in Wilmington, DE, in the fall of '06 and see **Hank Streitfeld, MD '70,** in Berkeley during Cal basketball season. Hope to see more classmates soon."

James S. Reilly, MD '72, was elected president of the Inter-American Assn. of Pediatric Otolaryngology during its recent meeting in Cartagena, Colombia.

Jeffrey P. Gold '74, MD '78, provost, executive vice president for health affairs, and dean of the College of Medicine at the University of Toledo, was elected to the AMA's 12-member Council on Medical Education.

Robert A. Schultz, MD '78, published *Street Smarts for the Practicing Physician and Surgeon* (Data Trace). Dr. James Nunley, chief of Orthopaedic Surgery at Duke University, said, "This book is critical reading for anyone who anticipates entering a practice opportunity. . . . Bob Schultz has been able to condense the business aspects of medicine into an entertaining but very informative book."

Frank Richards, MD '79: "I was interviewed about my work in tropical disease on NPR's 'All Things Considered' in March 2007. I mentioned the importance of Cornell's famous Dr. Ben Kean. Since then I have corresponded with his widow and close friends."

1980s **Neil L. Julie, MD '80:** "I continue to live in Bethesda, MD, and am in private practice in GI. My son Ian is a third-year medical student at Washington University in St. Louis. My son

Alex, having just graduated from Princeton, works at Goldman Sachs in New York City. Laurie and I enjoyed seeing everyone at this past reunion."

Jay Buckey '77, MD '81, former astronaut, withdrew as a Democratic candidate for U.S. Senator from New Hampshire. "I remain committed to the goals of the campaign, but I do not have the financial resources needed to campaign full-time for the next nine months. I'm proud that our campaign has brought the need for an Apollo Program for Energy to the forefront of the Senate debate here in New Hampshire, and I'm going to continue to work for the issues that have been the foundation of our campaign." Dr. Buckey is professor of medicine at Dartmouth Medical School and an adjunct professor of engineering at Dartmouth's Thayer School.

Michael D. Steiner '77, MD '81: "By now most of you have heard of CommunityofDoctors.com. I developed this Internet medical portal for medical news, seminars, consultation, and the diversity of information of importance to MDs throughout the world. We're building our membership first from among the alumni of Weill Cornell."

David Houghton, MD '84: "My exhibition of watercolors and acrylics at the Skoufa Gallery in Athens was well-attended and successful. The exhibit title, 'Fragments of the Sea,' was taken from a poem by the Greek Nobel Prize-winning poet Odysseus Elytis. A photograph of one of my paintings appeared in the English weekly newspaper *Athens News*. The exhibition title was translated differently, accurately, but rather prosaically, 'Sea Bits.' Oh well. Eighteen works had found new homes by the end of June, and some \$5,000 Canadian was raised for Dikeme-College Year in Athens. I continue to be represented by the Skoufa Gallery in Athens, so please drop by if you visit Greece. Most of my time in Greece was spent setting up and then taking down the exhibition and visiting friends, alumni, professors, and family in Athens. I did rent a car and travel down the Peloponnesus in mid-July. I visited my grandfather's village of Isaris near Megalopolis, then spent five days on the island of Kythira in the far south. The heat was fantastic. The temperature reached 47 degrees Centigrade as I crossed the plains below Sparta, with a 60 to 70 kph wind from the west blustering behind me as I drove, nudging the car leftward and kicking up small dust devils. I painted a series of small watercolors of olive trees along the route early in the morning, while the temperature was still reasonable, but most of the time it was too hot for any meaningful cerebral function (www.Houghton-art.ca/new_work/watercolours_from_Greece.htm). Much of this region burned in August, when the same blistering, dry wind and phenomenally hot days triggered uncontrollable fires that raged for days. Millions of olive trees, thousands of hectares of pine forests, and some 80 villages all burned, including Isaris. After leaving Greece in July, before returning home, I had ten days in Switzerland. I lived in Zurich from 1978 to 1980 and taught at the American International School of Zurich in Kilchberg. Zurich, Geneva, and Vancouver rank 1, 2, and 3 (in varying order) as "the world's most livable cities." I prefer Vancouver now, but many of my oldest and most loved friends are in Zurich, Luzern, Bern, Basel, and St. Gallen. Three of the small works I painted last winter in Paris found new homes with them. I exhibited some smaller works (shown for the first time) at Pane e Formaggio in Vancouver's Point Grey neigh-



borhood. The place has fantastic coffee, baked goods, cheeses, and charcuterie. Michael Whynot, partner at this, my favorite spot for morning coffee or lunch near my daughter's school, has generously allowed me to show a few works. In lieu of commission, he has asked that 25 percent of the sale price be donated to the patron's charity of choice. Let me know when you may drop by, and we can have coffee together."

David J. Cole, MD '86, was appointed chairman of the Department of Surgery at the Medical University of South Carolina. Pursuing his interest in cancer immunotherapy, Dr. Cole completed a three-year fellowship in surgical oncology at the National Cancer Institute, then began his first faculty appoint-



Bio basics: Graduate students Eli Berdougo and Kelly Yule in the lab

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ment as an assistant professor at MUSC in 1994. He became a full professor of surgery in 2002 and accepted appointment to the McKoy Rose Endowed Chair of Surgical Oncology in 2003. He has served as director of the Hollings Cancer Center Tissue Bank, head of the MUSC Section of Surgical Oncology, and vice chairman of the Department of Surgery. He led the Hollings Cancer Center Tumor Host Interactions program and currently serves as the medical director of the Cell Therapy Center. Dr. Cole has directed or co-directed studies ranging from molecular-based staging for breast cancer to development of vaccines for cancers of the pancreas, prostate, skin, and lung. He also holds five patents in gene-based detection of cancer.

Karen Scott Collins, MD '86, joined NewYork-Presbyterian Hospital as vice president for quality and patient safety. She will be responsible for leading quality- and performance-improvement initiatives. Most recently she served as the deputy chief medical officer for Health Care Quality Improvement and Innovation at the New York City Health and Hospitals Corp. Dr. Collins is a clinical associate professor at Columbia University Mailman School of Public Health. She has lectured and written about health-care quality improvement, access to care for minority populations, and disease management.

Neil J. Weissman '84, MD '88, was appointed in March 2007 to the position of president of the MedStar Research Institute, where



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he has also served as program director for the GUH-WHC Cardiology Fellowship, chair of the MedStar Institutional Review Board, and vice president for research programs. He is professor of medicine at Georgetown University School of Medicine and is recognized for his expertise in cardiac ultrasound.

1990s **Daniel B. Jones '86, MD '90:** "I am associate professor in surgery at Harvard Medical School and chief, minimally invasive surgery, at Beth Israel Deaconess Medical Center. After the success of *Atlas of Minimally Invasive Surgery* in 2006, this year I am releasing *Atlas of Metabolic and Weight Loss Surgery*, *Lap-Band Companion Handbook*, and *Patient Safety in Obesity Surgery: Defining Best Practices*. I recently participated in the executive panel for Betsy Lehman Center and ACS Bariatric Network."

Robert G. Uzzo, MD '91, was named vice chairman of the Department of Surgical Oncology at Fox Chase Cancer Center. A nationally known leader in the field of urologic oncology, Dr. Uzzo's interests focus on treatment for kidney, prostate, testicular, and bladder cancer and procedures for urinary diversion. He is skilled in minimally invasive procedures, including pure laparoscopic and robotic surgery for kidney, prostate, and bladder cancers. He has consistently ranked among *Philadelphia Magazine's* "Top Docs" in urology. In addition to his extensive clinical experience, Dr. Uzzo also runs a funded basic laboratory studying the molecular mechanisms of genitourinary cancers.

He was promoted from associate member to member with tenure in Fox Chase's division of medical science in 2003. He is a former fellow and clinical staff member of the urology department at the Cleveland Clinic where he was an American Foundation for Urologic Diseases scholar and also held a fellowship in renal transplantation and renovascular surgery. Prior to starting his fellowship in 1997, he served as ship's physician on an expedition to Antarctica. He also served as a primary care physician for the National Public Health Service at the Navajo Reservation in Arizona.

Daniel Laroche, MD '92, is director of Glaucoma Services and president of Advanced Eyecare of New York. He is director of Glaucoma Services at St. Luke's Roosevelt Hospital Ophthalmology Division of New York Eye and Ear Infirmary and assistant professor of ophthalmology at the New York Medical College, Valhalla, NY. He has helped broaden many young surgeons' understanding of the latest in medical, laser, and surgical treatments of glaucoma. Dr. Laroche is also the president of the Empire State Medical Association.

Mary Fusco Adler, MD '94: "**Lou Adler, MD '92,** and I are still practicing in Springfield, MA. I am in a multi-specialty internal medicine group doing primary care and really enjoying my patients. Lou is doing hand surgery at New England Orthopaedic Surgery, a multi-specialty orthopaedics group. We have three children: Sam, 10, Matthew, 7, and Hannah, 3. Life is extremely busy but rich. Parenthood is so much more complicated than residency—makes 'q3' call seem easy!"

Kim Gottlieb Klipstein '91, MD '97, is director of consultation

GRADUATE SCHOOL

psychiatry at Mount Sinai Medical Center in New York City. She also serves as part-time faculty and has a private practice in general adult psychiatry, specializing in the psychiatry of the medically ill patient.

Maithily A. Nandedkar-Thomas, MD '99: "I opened my own practice with full EMR. I am paperless, wireless, and hooked up to the Web. Please check my website: www.professionaldermatologycare.com. I was written about in the April 2007 issue of *Dermatology World*. It is all great."

2000s Catherine Harrison-Restelli, MD '04: "I am finishing up my third year in psychiatry at the University of Maryland–Sheppard Pratt Hospital. We welcomed our third child, Sophie Marie, on November 1, 2007. She joins Edward, 4, and Olivia, 3."

Lisa Staiano-Coico, PhD '81, provost and professor of surgery at Temple University, has been appointed for a three-year term to the board of managers of the Philadelphia Foundation. She is Temple University's top academic officer, responsible for 17 schools and colleges, its undergraduate and graduate programs, and its research enterprise. Before coming to Temple, she served as dean of the College of Human Ecology at Cornell University and vice provost for medical and external affairs and division chief of surgical research at Weill Cornell Medical College. She has held professorships in microbiology in surgery, microbiology in dermatology, public health, nutritional sciences, and fiber science and apparel design. She is an expert in skin cell biology, wound healing, and burns.


 IN MEMORIAM

'35 BA, MD '39—Gaert S. Gudernatch of Salisbury, CT, May 29, 2007; family and school physician; state medical examiner; Connecticut State Police surgeon; active in civic, community, and professional affairs. Seal & Serpent.

'42 MD—Carlton C. Hunt Jr. of Rabun Gap, GA, February 9, 2008; professor emeritus of physiology, University of North Carolina at Chapel Hill; chair of physiology departments at Washington University School of Medicine and Yale University; also taught at the University of Utah, Albert Einstein College of Medicine, and the Rockefeller Institute; researched spinal cord physiology and muscle receptor function; author; member, American Academy of Arts and Sciences.

'42 MD—Thomas E. Mosher of Ithaca, NY, July 26, 2007; retired pediatrician and emergency medicine physician.

'43 MD—Harriet Hull Smith of Long Beach, CA, formerly of Pasadena, CA, February 21, 2007.

'44 MD—Howard K. Linder of Sacramento, CA, March 28, 2007; physician.

'51 MD—Wilbur D. Hagamen of Turners Falls, MA, March 26, 2007; professor emeritus of anatomy, Weill Cornell Medical College; taught gross anatomy and neuroanatomy to more than 75 percent of current living alumni; investigated the use of computers in teaching languages; researched the neurophysiology of the limbic system; veteran; author; active in professional affairs.

'53 MD—Robert D. Gens of Mechanicsburg, PA, October 28, 2007; pediatrician; worked in the communicable disease program, Pennsylvania Department of Health; practiced at Mid-Hudson Medical Group; emeritus member, American Academy of Pediatrics and the American College of Preventive Medicine; sang in the "Sentimentalists" choral group; active in civic, community, professional, and religious affairs.

'55 MD—Kemp B. Doersch of Sacramento, CA, August 24, 2007.

'56 MD—Donald F. Mahnke of Casper, WY, November 22, 2007; practiced at the Casper (WY) Clinic; surgeon; worked in orthopaedics at Good Samaritan Hospital (Portland, OR); veteran; president, Wyoming State Medical Society; volunteer team physician; active in civic, community, professional, and religious affairs.

'57 MD—Aubrey S. Miree III of Florence, AL, March 29, 2007; psychiatrist; clinical associate professor, University of Alabama at Birmingham Medical School; practiced at University Hospital and Carraway Methodist Hospital; veteran; active in community, professional, and religious affairs.

'57 MD—E. Thomas Steadman of New York City, August 1, 2007; retired gynecologist; developed the first nurse-midwifery program in a U.S. private medical facility; began the first teen pregnancy clinic in New York City; clinician and teacher.

'59 MD—Robert G. Sumner of Concord, NC, March 13, 2007; practiced with Copperfield Internal Medicine; began first echocardiography laboratory in Cabarrus County; veteran; musician; active in community affairs. Wife, Alice (Earle), BS Nurs '57.

'61 MD—Arnold F. "Peter" Glendinning of East Williston, NY, December 25, 2007; emergency physician; surgeon; taught emergency medicine at Northshore Hospital; veteran.

Mary Allen Engle, MD, of Easton, MD, January 27, 2008; professor emerita of pediatrics and the former Stavros S. Niarchos Professor of Pediatric Cardiology at Weill Cornell Medical College; instrumental in creating the college's Dept. of Pediatric Cardiology; recipient of the Maurice R. Greenberg Distinguished Service Award; recipient of a Woman of Conscience Award from the U.S. National Council of Women; author; editor; active in community, professional, and alumni affairs.

In the Key of Healing

Getting to Carnegie Hall, via the pediatric ward

fOR FOUR CONSECUTIVE Mondays in January, a quintet of musicians—on flute, piano, violin, trumpet, and trombone—came to Weill Cornell’s Komansky Center for Children’s Health to work with pediatric patients. But their visits weren’t typical sessions in music therapy. Their aim was to create something new—a composition inspired by the experiences of children undergoing medical treatment. “We were surprised and delighted with the response we got from the kids, how enthusiastic they were,” says flutist Elizabeth Janzen. “Our goal was to give them an opportunity to find music in everyday life, where it might be harder to look on the bright side considering their circumstances.”

The musicians are postgraduate fellows at the Academy, a joint program of Juilliard, Carnegie Hall, and the Weill Music Institute that combines advanced training with community service. During their hour-long sessions, they gave each child a xylophone (the instruments had been disinfected and the kids got to keep them) and told them to play simple motifs, which the musicians expanded on the fly. Sometimes they’d ask the patients to come up with a story, such as a movie plot, and the musicians would provide the soundtrack. “It’s taking the children out of the passive role and giving them choices,” says Komansky Center music therapist Claire Ghetti. “That’s what we try to do in music therapy, to empower the patient to feel as in control as possible.” The Academy project, she says, “was sensitive to that need, trying to make it an interactive process. They didn’t just present what classical music was, they got the kids involved.”

Composer Missy Mazzoli, who attended the weekly sessions, took the children’s themes and turned them into a five-and-a-half-minute composition entitled *The Sound of the Light*. “It’s hopeful and exuberant and a little bit flashy,” she says, “because the kids like it when the musicians do virtuosic things.” The quintet will

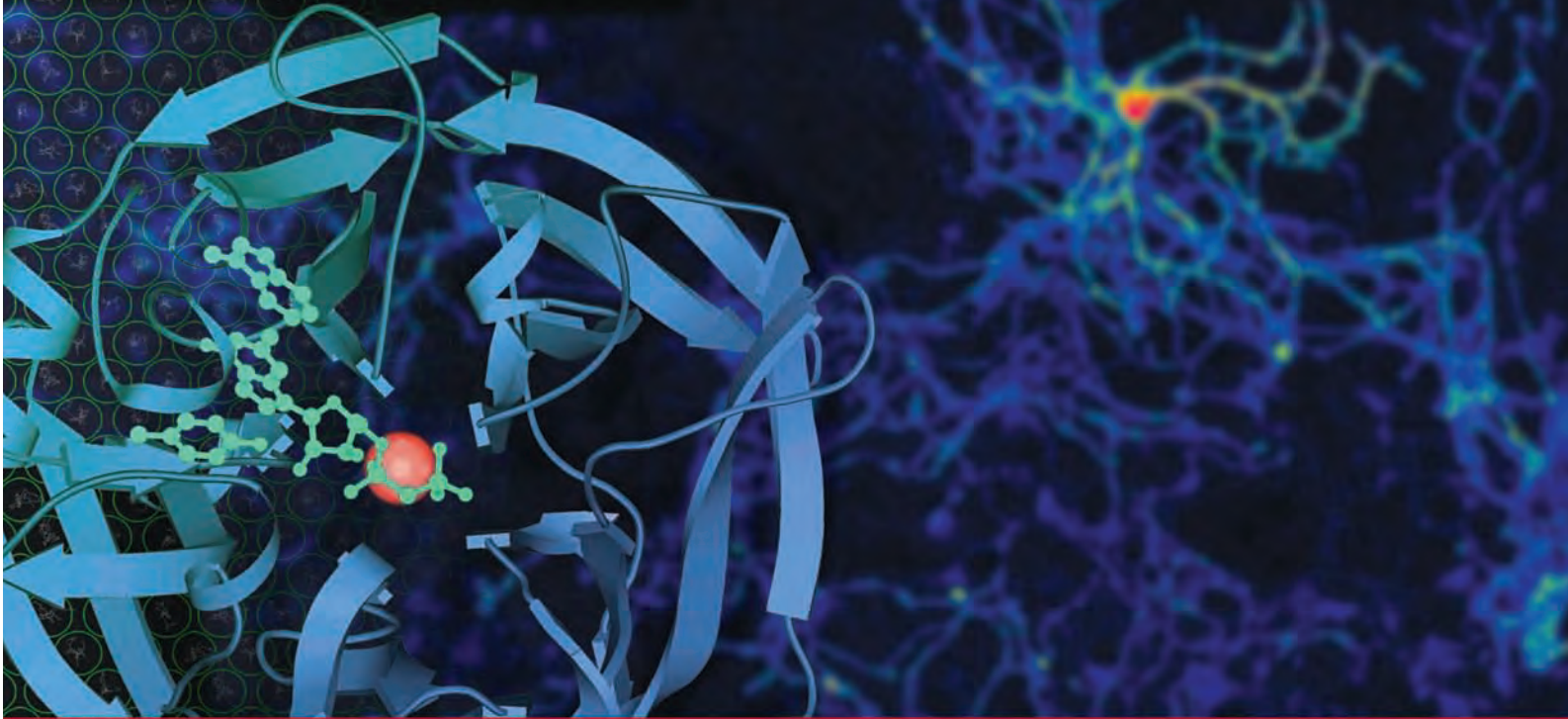


STEPHEN TAYLOR

Beautiful music: A violinist was among the postgraduate fellows from the Academy who worked with pediatric patients, each of whom received the gift of a xylophone.

perform the piece at the Academy’s neighborhood concerts in Brooklyn and Queens, with a Carnegie Hall debut in May. Says Janzen: “Every day we were there, we all left the hospital inspired on completely new levels—inspired at the joy these kids get from making music.”





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First and Foremost

Qatar's inaugural class will soon don cap and gown

On May 8, dozens of dignitaries from Weill Cornell Medical College, Cornell University in Ithaca, and academic institutions throughout the Middle East will join sixteen future doctors and their families on the campus of Weill Cornell Medical College in Qatar for the institution's inaugural commencement exercises. To celebrate this historic event, *Weill Cornell Medicine* will feature extensive coverage of the Qatar graduation in our Summer 2008 issue. In the meantime, the Class of 2008 poses for a photo before donning their Cornell red caps and gowns to receive the very first MD degrees ever granted overseas by an American university. For live reports on the commencement festivities, go to www.news.cornell.edu.

Standing, from left: Vildana Omerovic, Jehan Al Rayahi, Kunali Dalal, Amila Husic, Maryam Shafae, Ayobami Omosola, Sharon King; middle row: Osama Alsaied, Subhi Al Aref, Ibrahim Sultan; bottom row: Dino Terzic, Ali Farooki, Khaled Al Khelafi

Not pictured: Mashael Al Khulaifi, Aisha Yousuf, Rana Biary



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