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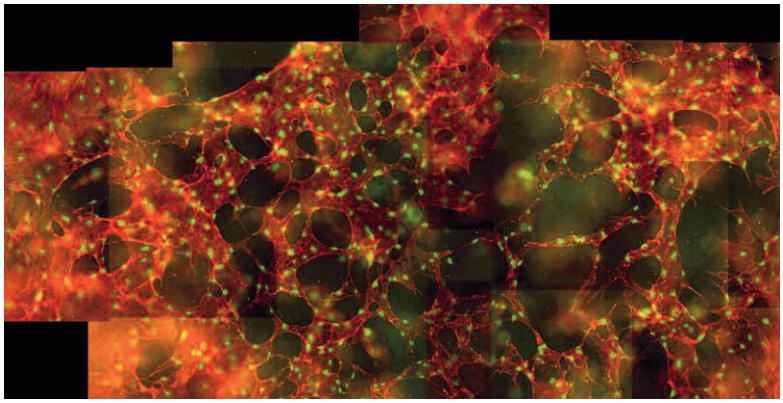

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The new $232 million Weill Greenberg Center is no ordinary clinical care building; it's a state-of-the-art facility designed to bring the patient experience to a whole new level. Dedicated in January, the thirteen-story glass structure features an underground parking garage, original works of art, comfortable waiting rooms, city views—and a user-friendly attitude. It's also setting new standards as a venue for medical education.

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There are more than 540 infectious diseases transmitted from animals to people, and 120 of them can be fatal to humans. In Weill Cornell's Program for Respiratory Virus Infections and Biodefense, Dr. Anne Moscona and colleagues are studying these zoonotic pathogens using cutting-edge technology that obviates the need for high-level biohazard precautions—battling potential bioterror agents without the space suits.

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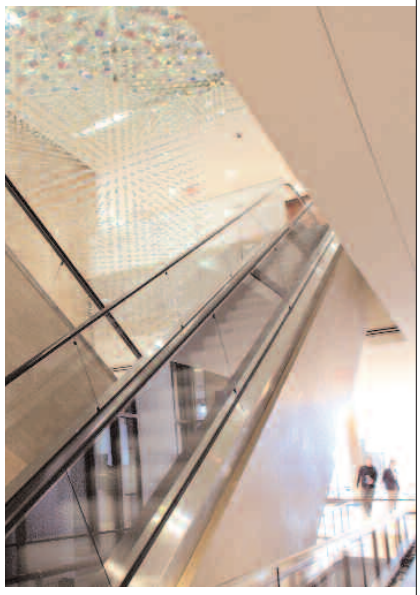

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A Building That Makes a Difference

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

ON JANUARY 26, WEILL CORNELL MEDICAL COLLEGE realized one of the most ambitious and exciting projects in its 109-year history: the opening of the Weill Greenberg Center, the first clinical building the Medical College has constructed.

The Weill Greenberg Center is the centerpiece of the College's recently completed capital campaign, "Advancing the Clinical Mission." Amazingly, the $232 million building was financed entirely by philanthropy and in particular the overwhelming generosity of Sanford Weill, chairman of the Board of Overseers of Weill Cornell, and Maurice Greenberg, also a member of the Board. The momentous event was commemorated by a proclamation from New York City Mayor Michael Bloomberg and attended by many eminent friends of the Medical College, including Mr. Weill, Mr. Greenberg, Cornell University President David Skorton, and Bob Appel, chairman of Weill Cornell's new "Discoveries That Make a Difference" capital campaign.

Although this outstanding event is singularly important in the history of the Medical College, the new Weill Greenberg Center also sets a high standard for medical education and has ushered in a new era of patient care in New York City. The patient experience is at the center of the building's design, and many of the architectural details were overseen by Mr. Weill himself. A spa-like environment—including a waterfall, reflecting pools, and still-water images—promotes the healing process and provides a sense of well-being.

Between appointments, patients may rest in the Myra Mahon Patient Welcome and Resource Center, the focal point of the building, which is located at the top of the escalators from the entrance lobby. The Resource Center features lounges, computer workstations, and the Health Information Library, staffed by a trained librarian.

The building's educational resources are groundbreaking in their own right. Our Clinical Skills Center provides students with a state-of-the-art facility to practice clinical skills with standardized "actor" patients, and the Center's self-study lab features virtual-reality technology and computer-controlled mannequins that allow students to work on a variety of medical procedures. These facilities are allowing the next generation of Weill Cornellians to interact even more effectively and sensitively with their future patients.

Our researchers have new collaborative opportunities as well. One such example, the multidisciplinary Institute for Computational Biomedicine on the thirteenth floor, uses mathematical models, physics, and high-speed computing to analyze large amounts of data quickly and test our scientists' hypotheses about the structure and function of the human body. The Institute not only fosters collaborative research but serves as an educational base for faculty and students to train in the core areas of bioinformatics and computational sciences as they relate to medicine.

JOHN ABBOTT

Collaboration at the Medical College is extending far beyond the walls of the new Weill Greenberg Center, though. Working with Cornell University President David Skorton, a cardiologist with appointments at both the Ithaca campus and Weill Cornell, we are aggressively expanding collaborative research efforts between the two campuses.

In short, it is an exciting time for the Medical College—perhaps the most exciting time since the College opened in 1898. With the help of Sandy Weill, Hank Greenberg, and our other benefactors, Weill Cornell and its physicians and students are in the vanguard of twenty-first-century medicine.

— Dean Antonio Gotto

Opening the Next Chapter on Human Health

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

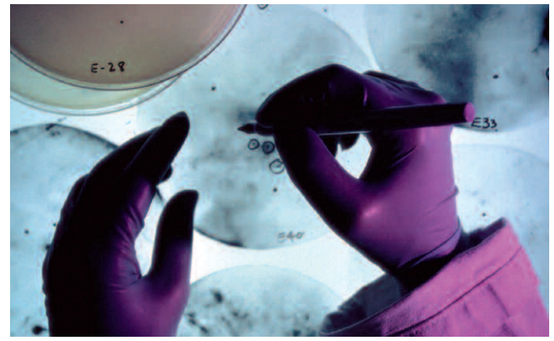
WEILL CORNELL MEDICAL COLLEGE AND THE Weill Cornell Graduate School of Medical Sciences have made incredible progress in the last ten years—much of it very visible. As the executive vice dean for research at Weill Cornell, I am pleased to report that the Medical College has experienced the highest rate of increase in National Institutes of Health (NIH) core funding among leading American medical colleges, and this during a time when such funding has become increasingly competitive. And we have just opened a state-of-the-art ambulatory care and medical education building, the Weill Greenberg Center, about which much can be read in this issue of *Weill Cornell Medicine*.

Perhaps a little less visible to those outside our institution, our student population is also growing, particularly at the Graduate School. In the past ten years, graduate student enrollment has nearly doubled—and it is accelerating. In 1997 our enrollment was less than 200, but today we have 380 students. In a few years, there will be more graduate students than medical students at Weill Cornell.

To further our innovative research goals and plan for this growth, we have unveiled a new capital campaign, "Discoveries That Make a Difference." It will pull together and build on much of what we've accomplished as well as provide the best environment for our growing student body. It is the third part of the Medical College's overall strategic plan and follows logically upon the earlier two phases. Where Phase I focused on basic research and Phase II on patient care and clinical research, this third phase ties the two together and completes the vision by means of translational research. Educational opportunities will be enhanced and other clinical services will be strengthened.

The centerpiece of the campaign will be a $650 million Biomedical Research Building, the first new research facility built by the Medical College in twenty years. The planned 350,000-square-foot structure will double our existing research space, accommodating more laboratories and scientists to accelerate biomedical discoveries in cancer, aging, cardiovascular disease, infectious disease, and metabolic disorders. The facility's proximity to the Weill Greenberg Center will help foster translational research with clinicians, while its design will support collaboration through a disease-based, rather than department-based, approach.

We will also increase our collaboration with our parent university in Ithaca. Between the two campuses, our expertise across disciplines is enormous, and by tapping into our complementary skills we can alter modern medicine in a meaningful way. For example, together we can study metabolic regulation at the molecular, cellular, and whole-animal levels by bringing together biochemists, cell biologists, and physiologists. Through this collaboration, we will better understand insulin-resistance syndromes and other metabolic disorders. Weill Cornell will be investing $150 million in this effort, to be matched by the Ithaca campus, to unlock cross-discipline discoveries in biomedical engineering, nanomedicine, and systems biology; cancer biology; chemical biology and experimental therapeutics; and global health and infectious diseases.



CORBIS/FOTOSEARCH

Even as I write this, New York City and Ithaca scientists are collaborating on a number of projects that exemplify the ideals of translational research. For example, biomedical engineers in Ithaca have worked with physicians at the Medical College to develop a biodegradable "living bandage" that promotes healing of burns and wounds. Pharmacologists at the Weill Cornell Graduate School and molecular biologists and geneticists from Ithaca have made discoveries in gene transcription that could open doors to new therapies for cancer and neurological diseases. Urologists are working with applied engineers and physicists to use multiphoton microscope technology in endoscopes that will provide non-invasive, *in vivo* imaging of the bladder to scan for cancer.

This new campaign is a major step forward in the development of research and training opportunities in the Graduate School of Medical Sciences. We'll be better equipped to collaborate with our clinical colleagues in New York City as well as across the state with scientists and engineers in Ithaca. We'll have more space to recruit more outstanding researchers. And perhaps most important, we'll be better equipped to accommodate the increasing number of students who will make an important contribution to the study of disease.

— Dean David Hajjar

SCOPE
NEWS BRIEFS

Making the rounds: President Skorton speaks with Jenica Upshaw '08 and Assistant Professor of Medicine Dr. Carla Boutin-Foster after his Grand Rounds talk.

RICHARD LOBELL

Skorton 'Comes Back Home' with Grand Rounds

IN HIS FIRST GRAND ROUNDS LECTURE, CORNELL PRESIDENT DR. David Skorton stressed the importance of collaboration between Weill Cornell and the Ithaca campus, as well as between the Medical College and the academic health centers with which it is affiliated. "We need to focus planning with agreement among all the institutions and increase the interdependence of the Medical College with the [NewYork-Presbyterian] Hospital and Cornell-Ithaca," said Skorton, who holds faculty appointments in internal medicine and pediatrics. Skorton's lecture, on January 18, attracted approximately 200 people, the largest Grand Rounds audience in recent memory. In his talk, he stressed the important role of students and faculty in breaking down barriers among institutions, and outlined Weill Cornell's dramatic rise in research spending over the past decade. Being at Grand Rounds, Skorton said, made him feel as if he was "coming back home"; as an administrator, he joked, he was "a doctor who went wrong."

Gift Endows Jaffe MS Unit

THE WEILL GREENBERG CENTER WILL BE HOME TO THE NEW JUDITH Jaffe Multiple Sclerosis Unit. Made possible by a $5.33 million gift from the Feil Family Foundation (with matching funds from the Dean's Challenge), the Unit is named for the daughter of Gertrude and Louis Feil. It will include patient exam rooms, doctors' offices, an infusion room, and a suite for support staff such as nurse practitioners and a social worker. The gift will also endow two clinical scholar awards in MS. "The Feil family's gift secures urgently needed expanded space," says Dr. Brian Apatoff, director of the Multiple Sclerosis Clinical Care and Research Center. "With the opening of the new unit and its additional staff, we expect patient visits to more than double."

Sudanese 'Lost Boy' Visits Weill Cornell

DURING HIS SUMMER VACATIONS BEFORE MEDICAL SCHOOL, FIRST-YEAR student Dan Friedman worked in the psychiatric emergency program at St. Joseph's Hospital in Syracuse, New York. There, he met a security guard named John Bul Dau. Two decades earlier, Dau had fled civil war in his native Sudan, one of 20,000 orphaned "Lost Boys" desperately trying to survive; at age thirteen, he was elected to lead a group of 1,200 boys trekking across Africa toward safety. He eventually came to the U.S. as a refugee, becoming one of the subjects of the award-winning documentary film *God Grew Tired of Us*.

In January, Friedman brought Dau, along with documentarian Christopher Dillon Quinn, to Weill Cornell to share his experiences with students and faculty. Friedman is a co-founder of Cornell Health Advocates for Southern Sudan, which aims to support Dau's dream of founding a clinic in the southern Sudan county of Duk. The campus event included a screening of the film and a question-and-answer session. "He's very modest," Friedman says of Dau, "but he blows me away."

$5 Million Grant Endows Dyson Ophthalmology Floor

THE DEPARTMENT OF OPHTHALMOLOGY IS AMONG THE RECIPIENTS OF $28 million in grants awarded by the Dyson Foundation to celebrate its fiftieth anniversary. The department received $5 million, which will support the Dyson Family Ophthalmology Floor at the new Weill Greenberg Center. The grant continues a relationship that began nearly thirty years ago, when longtime ophthalmology chair Dr. D. Jackson Coleman treated Margaret Dyson for a detached retina, and she became interested in the field. Their friendship led to the establishment of the Dyson Vision Research Center at Weill Cornell in 1989.

Blauer to Oversee Special Projects

JOANNE BLAUER, SECRETARY OF THE MEDICAL COLLEGE, HAS BEEN appointed executive vice dean for special projects. In her new role, she will work with Dean Gotto on strategic planning initiatives. In November, Blauer was among the employees honored for twenty-five years of service to Weill Cornell.

$15 Million Gift Funds Alzheimer's Institute

HELEN AND ROBERT APPEL HAVE GIVEN $15 MILLION TO WEILL CORNELL to fund a center devoted to the study of Alzheimer's disease. The Appel Institute for Alzheimer's Research will bring together scientists in neurology, neurogenetics, biochemistry, and microbiology, in the hope of developing better treatments—and, ultimately, a cure—for the disease. "Helen and I have witnessed the devastating effects of Alzheimer's firsthand," says Robert Appel, a member of the Weill Cornell Board of Overseers. "The impact from the discoveries uncovered within the Institute's walls will forever change the way we diagnose, treat, and eventually cure Alzheimer's." The Appel gift is part of the new $1.3 billion "Discoveries That Make a Difference" campaign, which will fund development of the planned 350,000-square-foot Biomedical Research Building, set to break ground in the near future.

Qatar Students Help in Immunization Effort

PRE-MED STUDENTS IN THE QATAR BRANCH TOOK AN active role in the National Health Authority's Multi-Antigen Mass Immunization Campaign in January. Working with doctors and nurses in Doha, they administered vaccines against polio, measles, mumps, rubella, and pneumococcal disease to children in the local schools. "As pre-medical students we should be exposed to these kinds of activities so, if we get into medical school, we have experience dealing with patients," said student volunteer Mouayyad Zaza.

Prior to the week-long campaign, WCMC-Q students helped conduct health awareness sessions with shoppers at Doha's Landmark Mall. The campaign's goals are to raise community awareness of the importance of immunization and administer vaccines to nearly 60,000 children aged two months to five years.

Holt Named to New Development Post

SUSAN HOLT HAS BEEN APPOINTED TO THE NEWLY created position of chief development officer. Holt has nearly twenty-five years of development experience, including terms at Vanderbilt University Medical Center and Case Western Reserve University School of Medicine. Reporting directly to Dean Gotto and Vice Provost for Development Larry Schafer, she will be responsible for creating a new Office of Institutional Advancement. "Susan Holt has the talent, experience, energy, and drive needed to build and lead a robust and dynamic advancement program that will engage and involve all of our donors and new constituents in an even more ambitious campaign," Schafer says.

Fins and Gotto Lead Ethics Seminar

THE CONTINUING RELEVANCE OF THE HIPPOCRATIC OATH WAS THE focus of a seminar held at the Fifth Avenue Presbyterian Church in February. Led by Dean Gotto and medical ethics expert Dr. Joseph Fins, the event invited audience members to participate in a mock ethics committee meeting on deciding end-of-life issues, as well as a discussion of the ethics of clinical drug trials. Fins, a professor of public health, chaired a Weill Cornell committee that revised the oath to make it more applicable to today's physicians; the new version debuted at Commencement 2005.

Weill Cornell and CU Offer Global Health Program

A JOINT PROGRAM ON GLOBAL HEALTH WILL BRING TOGETHER FACULTY and students from Weill Cornell and the Ithaca campus for academic research, outreach, and internships in such nations as Bangladesh, Ghana, Peru, Tanzania, and Brazil. Funded by the University and the National Institutes of Health, the program will offer a multidisciplinary undergraduate minor, as well as professional and graduate studies through Weill Cornell and the Ithaca-based colleges of Human Ecology, Arts and Sciences, Veterinary Medicine, and Agriculture and Life Sciences. According to Dr. Warren Johnson, the Kean Professor of Tropical Medicine, the program "will be the site of unique and innovative multidisciplinary collaborations, combining expertise in medicine, nutrition, health policy, and more."

COURTESY OF WCMC-Q

All fired up: As the torch for the Asian Games passed through Education City on December 1 during its seven-day journey around Qatar, WCMC-Q students had the chance to act as bearers. Pictured are Class of 2010 members (left to right) Naveed Anwar, Mohsen Hassan, Mohammed Al Hijji, Zuhair Salah, and Shalini Ravishankar. The Games were held in Doha during the first two weeks of December.

from the bench

Pulmonary Disease Effort Gets $14 Million Boost

The National Heart, Lung, and Blood Institute has awarded Weill Cornell a $14.2 million grant to fund genetic research in chronic obstructive pulmonary disease (COPD). While smoking is the primary risk factor for COPD, notes Dr. Ronald Crystal, chief of the Division of Pulmonary and Critical Care Medicine, genetic variation dictates a person's individual risk. "Genetic variability is why a one-pack-a-day smoker develops COPD, while another person with the same habit never does."

Dr. Ronald Crystal

AMELIA PANICO

More than 12 million Americans have been diagnosed with COPD, and an equal number are estimated to be undiagnosed. The disease, which comprises chronic bronchitis and emphysema, is the fourth most common cause of death in the U.S. and a leading cause of disability. The researchers' first step, Crystal says, will be to identify the specific genes responsible for COPD susceptibility and resistance. In the next ten years, he says, "we will be able to predict those individuals who are at increased risk for developing COPD, and offer early detection prior to development of symptoms and individualized therapies for those with the disease."

New Drug Battles Autoimmune Disorder ITP

A new drug shows great promise against the platelet-depleting autoimmune disorder known as immune thrombocytopenic purpura (ITP). The drug, a novel protein called AMG 531, appears to produce healthy amounts of platelets with no major side effects. The two-phase trial, conducted at nine centers around the country, was led by pediatrics professor Dr. James Bussel. The results were published in the *New England Journal of Medicine*. "Further clinical trials are well under way," Bussel says, "and the next step, we hope, will be to license the compound. Then, maybe, we can begin to broaden its use to other illnesses." The Platelet Disorder Support Association estimates that some 200,000 Americans are living with ITP.

A Possible Alzheimer's 'Fingerprint'

A joint effort between scientists at Weill Cornell and on the Ithaca campus has identified a neurochemical "fingerprint" that could someday be used to definitively diagnose Alzheimer's disease in living patients. Presently, doctors assess clinical symptoms to decide if a patient has Alzheimer's as opposed to another form of dementia; it can only be confirmed on autopsy, via the examination of brain tissue.

Dr. Norman Relkin, associate professor of clinical neurology and neuroscience at Weill Cornell, and Kelvin Lee, an Ithaca-based professor of molecular and cell biology, studied 2,000 cerebrospinal fluid proteins from thirty-four patients with autopsy-proven Alzheimer's. They discovered twenty-three protein biomarkers that, together, form a "fingerprint" specific to the disease. "A subsequent 'validation' group of ten patients with suspected Alzheimer's and eighteen healthy and demented control subjects turned up similar results," Relkin says. "Based on their clinical symptoms, we found the new screen to have 93 percent sensitivity to probable cases of Alzheimer's and a 90 percent accuracy in avoiding false diagnoses."

Dr. Norman Relkin

PANICO

The discovery could help physicians assess the effectiveness of Alzheimer's drugs by tracking changes in the biomarkers; such research, Relkin says, is already being conducted on an experimental Alzheimer's treatment called IVIg (intravenous immunoglobulin). The researchers stress that their results in correlating the biomarkers to Alzheimer's, though promising, must be replicated in larger populations.

tip of the cap to...

Dr. **Jack Barchas**, psychiatry chair, awarded the 2006 Sarnat International Award in Mental Health from the Institute of Medicine, for contributions to the study of neurobiology and emotional behavior.

Dr. **Scott Blanchard**, assistant professor of physiology and biophysics, recipient of a $200,000 James D. Watson Investigator grant from the New York State Office of Science, Technology, and Academic Research, to develop imaging instruments that can be used to isolate and probe biomolecule structure and function.

Dr. **John Carucci**, assistant professor of dermatology; Dr. **Lisa Eiland**, assistant professor of pediatrics; Dr. **Ben-Gary Harvey**, associate professor of clinical medicine; Dr. **Erica Jones**, associate professor of medicine; and Dr. **Lisa Kern**, assistant professor of public health in medicine, each the winner of a Clinical Scholar Award, which provides outstanding junior faculty with financial support for research and teaching.

Dr. **Frank Chervenak**, obstetrics and gynecology chair, elected to the World Academy of Art and Science, which focuses on the social consequences of scientific knowledge. Chervenak also won the 2006 Turkish Women Association's Award in Science and Medicine, recognizing his work in obstetrics, gynecology, and maternal-fetal education.

Dr. **Ronald Crystal**, genetic medicine chair, and Dr. **Timothy O'Connor**, assistant research professor of genetic medicine, whose review article was cited by www.ion channels.com as the second most influential publication in gene therapy for 2006. The article, "Genetic Medicines: Treatment Strategies for Hereditary Disorders," was published in the April 2006 issue of *Nature Reviews Genetics*.

Richard Daines, **MD '78**, president and CEO of St. Luke's-Roosevelt Hospital Center, nominated by Governor Eliot Spitzer to be New York State's health commissioner.

Dr. **Owen Davis**, associate professor of reproductive medicine and obstetrics and gynecology, named director of the American Society for Reproductive Medicine.

John Laragh, **MD '48**, professor of medicine in cardiothoracic surgery, awarded the Lewis and Jack Rudin New York Prize for Medicine and Health from the Greater New York Hospital Association and the New York Academy of Medicine, for research on the physiology of hypertension.

Dr. **Kutluk Oktay**, associate professor of reproductive medicine and obstetrics and gynecology, recipient of the Champions of Hope award from Fertile Hope, a nonprofit that offers reproductive information to cancer patients at risk for infertility.

Weill Cornell Medicine is available online.
www.med.cornell.edu/publications

Toward a More Certain Thyroid Cancer Diagnosis

A breakthrough by researchers using microarray technology could revolutionize diagnosis of thyroid cancer. Physicians have long done fine-needle aspiration biopsies to sample thyroid nodules that may be malignant. But the histology performed on those samples is often inconclusive, prompting the removal of the thyroid—and a lifetime dependence on synthetic thyroid hormones—when it may not have been necessary.

In an article in the *Journal of Molecular Diagnostics*, surgeons Dr. Thomas Fahey III and Dr. Carrie Lubitz outline a possible alternative. Using microarray profiles, their team compared the expression of thousands of genes from thyroid tissues and was able to group twenty-five genes that together distinguish the cancerous from the benign. "We next tested the accuracy of these patterns using twenty-two fine-needle aspirate samples from benign or malignant thyroid nodules," Lubitz says. "In all but one case, the microarray test agreed completely with the results of extensive histological analysis in the lab."

Such microarray analysis, the researchers say, could offer more accurate diagnoses in as many as 25 percent of cases. "Advances in gene-based diagnostics are going to make clinical decisions about thyroid and other cancers a lot less uncertain," Lubitz says.

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What a Headache

Patients with pain find relief

DEBORAH LEISTER HAD JUST hit puberty the first time a migraine struck. Both her parents had a history of the condition—but back in the late Sixties, treatment amounted to a handful of aspirin and a day or so in bed, waiting for the debilitating pain to pass. When Leister was thrown through a car windshield in her late twenties, the resulting injuries exacerbated her troubles. In 2001 she suffered a stroke—as may happen with chronic migraine sufferers—and the headaches became a daily reality.

"I'm a complicated patient," admits Leister, a fifty-two-year-old Philadelphia suburbanite and single mother of a teenaged son. "I have a history of migraines, closed-head trauma, and hormone replacement therapy." Even worse, the stroke had left the former banker unable to work and rendered her previous treatment regimen ineffective. Then her doctor suggested Botox, which quiets overactive muscles and inhibits acetylcholine neurons, implicated in the development of tension-related migraines. Once every three months, Leister receives fifty mini-injections spanning the length of her spine and the breadth of her shoulders, as well as sites on her forehead and jaw. "That's the only way I can get around," says Leister, who also takes a nightly dose of an anti-epileptic drug and a narcotic to hold nascent headaches at bay. "With these treatments, I'm able to live a life."

More than 28 million Americans—the vast majority of them women—suffer from chronic, debilitating headaches. In a city with a half-dozen headache centers, Weill Cornell's one-physician practice on East 72nd Street offers personalized care in a comfortable setting. An office manager handles calls and scheduling, but Dr. Dara Jamieson, Leister's physician since 1995, provides all medical care, taking each patient's history, recording headache triggers, and performing physical exams. "Headache medicine is very much a one-on-one interaction," says Jamieson, an associate professor of clinical neurology who took over the Headache Center in September 2005. "Time is probably the most important asset you can offer."

JOHN ABBOTT

Personalized care: Clinical neurologist Dr. Dara Jamieson, director of Weill Cornell's headache center, says that headaches come in "many flavors."

When it comes to migraine, every individual has different triggers—the trick is figuring out what launches the cascade of physiological responses. Often implicated: aged cheeses, caffeine, perfumes, tobacco smoke, bright lights, or hormonal changes.

The Greek physician Aretaeus of Cappadocia first documented what we now recognize as a migraine nearly 2,000 years ago. But it wasn't until the early twentieth century that the field became a specialty, investigated with the scientific rigor that would yield real understanding of the condition and hold out the possibility of effective cures. Much of the credit goes to occasional migraine sufferer Dr. Harold Wolff, who studied briefly with Ivan Pavlov in Leningrad and dedicated his mid-century career to understanding the relationship among cerebral blood vessels, nerve networks, and migraine.

In 1948, Wolff authored *Headache and Other Head Pain*, the definitive text on the subject, now nearly 1,800 pages long and in its seventh edition. He also served as founding director of the Department of Neurology for New York Hospital–Cornell Medical Center when it opened in 1932, went on to head the neurology service at Bellevue, and in the early Fifties was named the first Anne Parrish Titzell Professor of Medicine in Neurology, endowed by a grateful patient at the Cornell-based headache center he founded. Until his death in 1962, Wolff demanded that second-year students master a 101-question diagnostic exam he called the "irreducible minimum of information necessary for an understanding of the nervous system."

Almost a half-century later, a comprehensive history remains the cornerstone of headache treatment. "Most diagnosis is directed through the history," says Jamieson, a board-certified vascular neurologist who is an expert in the prevention and treatment of cerebrovascular disease, "and much of the interaction is education." While the bulk of her patients experience migraines, men often suffer from cluster headaches and some patients experience pain related to changes in the pressure of spinal fluid around the brain. "People who have headaches tend to have multiple types," says Jamieson. "It's like ice cream. Most people think of vanilla or chocolate, but there are many flavors."

When it comes to migraine, every individual has different triggers—the trick is figuring out what launches the cascade of physiological responses. Often implicated: aged cheeses, caffeine, perfumes, tobacco smoke, bright lights, or hormonal changes. (The second and third trimesters of pregnancy frequently offer women a respite due to higher-than-usual estrogen levels.) Ultimately, Jamieson says, the patient bears substantial responsibility for his or her own care—avoiding triggers and following a personalized treatment plan. "If the patient doesn't take the medication, doesn't keep a diary, still eats and sleeps irregularly, I say 'Look, this is what I can do for you, but I can't give you a magic bullet.'"

Jamieson divides the world into "headache people" and everyone else. The vast majority of us can find relief in over-the-counter drugs, although the doctor points out that the labels generally vary more than the pills they describe. "They tend to have the same ingredients," says Jamieson. "It's almost always aspirin, acetaminophen, anti-inflammatories, and caffeine. They're good for mild, infrequent headaches, but if you take them too often, they can cause rebound headaches, kidney and liver problems, and other systemic problems."

Jamieson's patients sometimes experiment with acupuncture, biofeedback, massage, and homeopathy. The doctor doesn't object—especially given the role that stress, mood, and the placebo effect play in headache relief—but she will offer guidance. In the case of acupuncture, for instance, make sure the needles are clean; for migraine sufferers at risk of stroke, avoid chiropractic adjustments to the neck and beware the anticoagulant properties of St. John's wort and vitamin E. For some patients, she suggests a combination of magnesium and vitamin B2 mixed with feverfew, a member of the sunflower family, and butterbur root, a medicinal plant that has been clinically shown to reduce the frequency of migraines. "Once I've diagnosed them with a headache cause that can't kill them," Jamieson says, "they have to decide how much treatment they want. They may just need instruction on avoiding headache triggers, or they may need daily medication to prevent headaches."

Even with comprehensive care, headaches remain an unpleasant fact of life for some patients. Leister, for example, still experiences incapacitating pain a couple of times a month—especially when the barometric pressure fluctuates too quickly. "I could be a better weatherman than a lot of people on TV," she says. "I know if it's going to be really hot, snowy, or rainy." On those occasions, she heads for the local emergency room, where physicians administer a combination of intravenous narcotics in consultation with Jamieson. "There are certainly things that can be done to decrease the triggering of headaches, but migraines happen even without triggers," Jamieson says. "There are millions of people whose brain is wired such that they have a propensity for headaches."

— Sharon Tregaskis

Doc Fracture

Running the ED in Broken Bone, U.S.A.

DR. MICHAEL MACQUARRIE PRESIDES over an emergency department with a pair of unlikely—if informal—distinctions: it's both the Broken Bone Capital of America and the jolliest ED known to medicine.

MacQuarrie, MD '70, is the director of emergency services at Tahoe Forest Hospital in Truckee, California, a resort community within easy driving distance of sixteen ski areas. That adds up to hundreds upon hundreds of fractures each year, treated in an oddly festive atmosphere. Most of MacQuarrie's patients are on vacation, and even in the hospital they're determined to have a good time. "These people have such great attitudes," says MacQuarrie, who's been at Tahoe Forest since 1978. "They're all talking and laughing, so despite the fact that it's an emergency department, it's sort of a happy, crazy place."

A few years ago, one of the nurses devised a Wrist Fracture Hall of Fame, a large piece of posterboard that gives patients an artistic outlet. It's been featured on MTV and in several national newspapers; past entries include "Pain is temporary and chicks dig scars, so deal with it." Says MacQuarrie: "People who've broken their wrist actually say, 'Hey, now do I get to sign the board?' "

Each ski season gets a clean slate, and by mid-December 2006—though Tahoe had seen only two snowstorms—there were already forty-odd inscriptions on the wall. By the end of the season, which runs from about Thanksgiving to Easter, the ED will see about 1,000 such cases, usually caused by what the staff whimsically terms a "FOOSH": a Fall On an Out-Stretched Hand. It's the most common snowboarding injury, incurred when "riders" (whose feet are connected to the board via bindings that, unlike those on skis, don't automatically release) topple forward or backward and instinctively try to catch themselves. "Snowboarding has become a popular family sport, but those most likely to get hurt are those whose joy is doing tricks and taking risks—young males who have more hormones than sense," MacQuarrie says, sounding as if he's only half-joking. "Skiers are rarely hurt anymore because the snowboarders are the ones doing crazy things. Usually skiers get hurt because they're run into by a snowboarder who's out of control, doing a trick that's got some crazy name."

PROVIDED BY DR. MICHAEL MACQUARRIE

MD on skis: Lake Tahoe emergency services director Dr. Michael MacQuarrie

Not that MacQuarrie is against snowboarding; he enjoys the sport himself, though he prefers skiing. He just wishes that more snowboarders would wear wrist guards (there seems to be a stigma against them, he muses) as well as helmets; head trauma is the second most common snowboarding injury, followed by clavicle fractures. Weather conditions also play a major role. "Today I'm looking out at an absolutely cloudless sky," MacQuarrie says, speaking from his home in mid-December. "It's cold, but the sun's out, so it's going to melt a little of the surface; then it'll freeze. It was 3 degrees this morning, and it'll be 35 or 40 during the day. At night all that melting snow turns into boilerplate ice, and that's when we see many injuries."

On a typical day, the ED sees thirty-five to forty patients. But during the peak ski-vacation season between Christmas and New Year's, it can get as many as 100—with 80 percent coming in between noon and 8 p.m. "And they're all injured," MacQuarrie says. "Nobody is here with the sniffles." To try to keep wait times down to an hour, he schedules multiple nurses on staggered shifts and doubles up on radiologists and technicians. Since patients often don't need to be in bed, they can be spread out in chairs or on gurneys in the hallway. "We're so used to this, we just gear up for it," he says. "We keep calling people in so we can keep our throughput time short."

The Tahoe Forest ED also does a brisk business in summer, though the patient population changes; there are fewer young athletic types and more multi-generational families, with the usual geriatric and pediatric health issues. Activities like skydiving, rock-climbing, hang-gliding, and boating keep the injuries coming in—as does the fact that the hospital is roughly 100 yards from Interstate 80. "In emergency medicine, the challenge and the joy is that when you come to work you have no idea what's going to happen," he says. "One day you can be dealing primarily with complicated medical problems, the next day a busload of people rolls off the highway and we have a multiple-injury accident."

MacQuarrie grew up in Palo Alto, California, and did his undergrad work at Dartmouth. His present job is a world away from his training in several inner-city hospitals: he worked at Bellevue as a medical student and did residencies in Harlem and San Francisco's Mission District. (He settled in the area because his wife, who's from Sweden, wanted to live a quieter lifestyle, with access to the slopes.) In urban areas, he notes, people often use the ED for primary care, but his hospital sees a different demographic. "It's a healthier group of people than in the city," he says. "They're here on vacation—and nobody comes to Lake Tahoe to go to the doctor."

— Beth Saulnier

Queen of the Rehab Clinic

Exercise maven marks her centennial

LILLIAN SHARKY CELEBRATED HER 100TH BIRTHDAY WHERE SHE spends most afternoons: at the gym. On November 1, the staff of NewYork-Presbyterian/Weill Cornell's Cardiac Health Center threw her a party, with her niece providing low-fat apple and carrot cakes, plus a kugel. Then Sharky, who goes by "Lakey," worked it off with her usual forty-five minutes of biking, walking, and calisthenics. Although niece and caregiver Linda Resnick says Sharky is tickled to have made it to 100, the honoree herself is nonchalant. "I don't feel any different," she says.

The retired Manhattan hatmaker has worked out at the Cardiac Health Center three times a week since a 1998 surgery to replace a narrow aortic valve. She has exercised throughout her life, from playing basketball in high school to walking in her later years. "When she was eighty," says Resnick, "she would walk eighteen blocks and back several times a week to go to lectures." Sharky attributes her longevity to healthy habits: "I ate right, I lived right."

Those habits inspire others, says senior staff nurse Mary Smith. "I call her the queen of the rehab clinic," Smith says. "When people come in after their heart attack or surgery, they're vulnerable. So when she tells them, 'I'm 100 and I've been coming here seven years,' she's actually therapeutic."

— Susan Kelley

CARY CONOVER

Birthday girl: Lillian "Lakey" Sharky's centennial celebration included cake, a party at the Cardiac Health Center, and forty-five minutes of aerobic exercise.

ANNIE TRITT / NEWSDAY, INC.

Greatest gift: Kidney recipient Tom McManus (front row, left) sits beside his most recent donor, his sister Mary Suzanne. Back row: Sister Siobhan, his second donor, brothers Paul and John (his first donor) and sister Patricia.

All in the Family

Three siblings donate kidneys

MOST PEOPLE ARE LUCKY TO GET ONE kidney should they need a transplant, but Tom McManus has been lucky three times over. That's how many live-donor organs he has received—from his siblings. In November, his five brothers and sisters all gathered for the most recent transplant, performed at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. "We're about as close as we can be at this point," McManus says of his family.

The Long Island native first had kidney problems at the age of eighteen and faced end-stage renal failure six years later. His father, a pediatrician, urged the whole family to get tested for donor compatibility. "He said, 'If it doesn't get done, Tom's going to be in some trouble,'" McManus remembers. "They were pretty much unanimous about doing it." A younger brother, John, donated a kidney, but McManus's body rejected it within a week. Then a younger sister, Siobhan, donated another. That kidney functioned for twenty-nine years, about ten years longer than the average. "I figure that was a pretty good run," McManus says. But it too began to fail after McManus suffered a heart attack in 2001. Another sister, Mary Suzanne, stepped up to the plate for the third transplant.

Scar tissue posed a technical challenge for the surgeon, Sandip Kapur, MD '90, chief of the transplantation division and an associate professor of surgery. But it was a familiar problem: 10 to 15 percent of the division's cases involve re-transplants. "We don't shy away from high-risk operations," Kapur says. "We try to have every possibility available to allow the transplant to go forward."

The procedure has improved significantly since 1977, when McManus got his first kidney. The availability of a wider range of immunosuppressive drugs means advanced centers can individualize therapy, so recipients experience fewer side effects such as compromised bone density. But the real strides have been on the donor side. Surgeons used to make an eight- to ten-inch incision on the donor's back and take out one or two ribs to get to the organ. "It was tough on my sister and brother," McManus says. "They look like they were bit by sharks." Now surgeons remove the kidney through one of three nickel-size incisions. "Patients go home the next day or the day after," Kapur says. "If they have a desk job, they're back to work within three weeks."

That may offer some comfort to the two siblings, Paul and Patricia, who are compatible but have not yet donated a kidney. After the most recent transplant, the family gathered in the recovery room and celebrated the successful operation. "One of the surgeons joked to my brother, 'Hmm, I guess you're up next,'" McManus recalls. "I looked at him and said, 'I hope not.'"

— Susan Kelley

A Dose of Hope

Dr. Gaynor takes an alternative approach to cancer treatment

IT'S A STRUGGLE NOT TO BE CALM around Dr. Mitch Gaynor. Even at the tail end of a gray Friday afternoon, after a crammed pre-holiday week, his smile is easy, his white coat crisp, and his speech soothing. His entire Upper East Side Manhattan office reflects his demeanor: plants, exposed brick walls, the soft sound of ocean waves piped into every room, patients snuggled on soft recliners and sipping green tea.

It hardly seems the kind of place where patients come to face one of their worst nightmares: cancer treatment. But that's the point. Gaynor, an assistant clinical professor of medicine at Weill Cornell, has become a leader in the increasingly accepted movement toward integrative oncology—combining traditional Western medicine (chemotherapy, radiation, bone marrow transplants) with Eastern techniques such as meditation and yoga, along with lifestyle changes, nutrition programs, and dietary supplements. "When a patient comes to an oncologist for the first time, there's a tidal wave of fear, a tidal wave of questions," Gaynor says. But add some guided meditation and music therapy to the talk about chemo and surgery, he says, and "people invariably say they're the most relaxed they've ever been." It's a bold statement and hard to believe—but his patients speak in equally gushing terms about their treatment. "The meditation is the most beautiful experience," says breast cancer survivor Rosemarie. "I feel like I've been to heaven and back. I really never even felt sick."

Another patient, Marisa, had been given just six months to live by a string of reputable doctors, but under Gaynor's care went from being a Type-A corporate vice president of human resources to a holistic therapy convert. She credits meditation, along with a massive diet overhaul and Gaynor's patient support group, with the fact that she's still alive, her pancreatic cancer in check, seven years later. "Everyone else had said there was nothing that could be done," she says. "But he said, 'There's so much you can do to fight this.'"

About fifteen years ago, Gaynor discovered Eastern spiritual practices—and their connection to healing—when he treated a Tibetan monk who introduced him to chanting and to the metal singing bowls that have become a staple of his practice. At the time he started prescribing Eastern approaches, he had already studied the wide-ranging effects of nutrition on cancer treatment and prevention, and had been using guided imagery with patients. But it was then, in the early Nineties, that his mission became as clear as the ringing of that monk's bowls: he would use his extensive credentials in traditional medicine—and the growing number of reputable studies exploring alternative therapies—to take holistic practices to the masses. Four books, a meditation CD, and countless lectures and media profiles later, he has helped the field move toward mainstream acceptance.

One area of research that's currently exploding, Gaynor says, is neurocardiology, the study of nervous system connections

JOHN ABBOTT

Healing hands: As cancer patient (and Weill Cornell assistant professor of medicine) Dr. Desiree Pardi knits, Dr. Mitch Gaynor plays a Tibetan singing bowl.

between the brain and the heart. "Whenever you're stressed, your heart goes into irregular rhythms," he says. "It then releases chemicals throughout your blood stream that affect your immunity, your digestion, everything. We really are what we think." Another hot topic: nutrition's role in diseases from cancer to arthritis and high blood pressure. "It's important that people know they can eat to prevent cancer," he says. "By far the biggest promise for cancer is to not get it in the first place." In fact, that applies on a global scale as well, as he outlines in his book *Nurture Nature/Nurture Health*. Gaynor blames cancer's massive proliferation—not to mention developmental and learning disabilities—on environmental pollution. "It's not just a fear thing," he says. "People need to understand there's something they can do."

Integrative medicine has gained much more widespread acceptance since Gaynor started using it a decade and a half ago; there are now two peer-reviewed journals dedicated to the field. But he feels his work won't be done until it's standard care at hospitals throughout the country—especially since many of his patients still travel long distances to seek his alternative approach. He's seen more and more medical schools starting integrative medicine programs and inviting him to speak to students, whose receptiveness to his ideas gives him hope for the future. He's also seen student interest growing every year in his integrative teaching at Weill Cornell, to the point where many medical students see it as just another part of the program instead of some touchy-feely afterthought. "The third line of the Hippocratic oath is, 'I will keep pure and holy both my life and my art,'" he says. "There's nothing unscientific or hokey about compassion or wholeness. We have a mind and an intellect to guide us, but we also have a heart to feel people's traumas and help them recover."

And that may be the key to all the alternative therapies Gaynor offers: the element of hope, of giving patients a sense of control in a terrifying situation. "Dr. Gaynor said to me, 'Those doctors don't even know when *they're* going to die, so how do they know when *you're* going to die?'" Marisa says. "When he said, 'There's so much you can do,' it was like a little flicker of light came on in me. For the first time, I felt some peace."

— Jennifer Armstrong

One in a Thousand

That's how many Americans are born with fetal alcohol syndrome—but Dr. Daniel Herrera's research could help

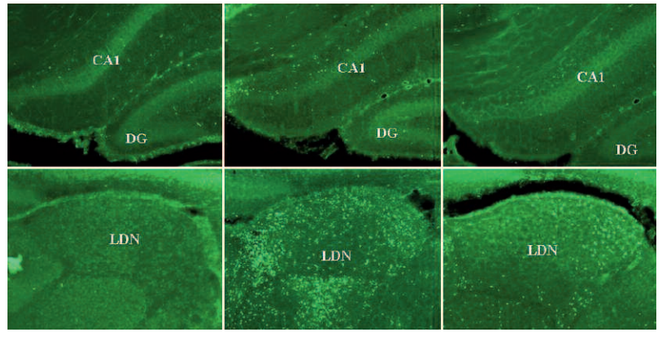
IT'S THE LEADING NON-GENETIC CAUSE OF MENTAL RETARDATION—AND it's 100 percent preventable. In America, one out of every 1,000 babies is born with fetal alcohol syndrome (FAS); one out of 100 is born with fetal alcohol spectrum disorder (FASD), a less debilitating form that nonetheless causes significant behavioral and cognitive problems. Despite decades of public education about the dangers of drinking during pregnancy, many women still haven't gotten the message. "As I understand from the data, fetal alcohol syndrome is actually rising," says obstetrician Dr. Catherine Spong, chief of the pregnancy and perinatology branch of the NIH's National Institute of Child Health and Human Development. "And if you look at the spectrum disorder, it's more far-reaching than people had previously appreciated."

Although the statistics frustrate public health officials, science may offer an effective countermeasure. In mice studies, Weill Cornell assistant professor of psychiatry Dr. Daniel Herrera and colleagues have been exploring the potential of a vitamin B derivative to block alcohol's potentially dire effects on the developing fetus.

Nicotinamide, the amide form of vitamin B3, is a familiar dietary supplement. It's available in health food stores and has long been used to treat the vitamin-deficiency disease pellagra as well as other conditions such as type-I diabetes. But research has shown that the amide is also a neuroprotectant, preventing apoptosis—cell death due to oxygen deprivation—by inhibiting the release of the protein cytochrome-c.

Herrera and Alessandro Ieraci, a former postdoctoral fellow who has since returned to his native Italy, injected seven-day-old mice pups with enough ethanol to simulate a severe drinking binge in a human mother. (Because of differences in brain development, postnatal mice are roughly akin to a third-trimester fetus.) "It was a very high dose," Herrera says, "analogous to getting so drunk you'd end up in the ER—close to a comatose level." Some of the pups received nicotinamide injections a few hours later, while others did not.

PROVIDED BY DR. DANIEL HERRERA



Bad for Baby: Fluoro-Jade B staining (a marker of neuronal degeneration) shows the effects of alcohol on the brains of neonatal rats and the protective effect of nicotinamide. (The top row depicts a region of the hippocampus; the bottom row the latero-dorsal nucleus of the thalamus.) At left is tissue after the administration of saline; in the center is ethanol alone; and at right is ethanol with nicotinamide.

Dissections performed on some of the mice at about two weeks of age found that those who received only the alcohol had significantly fewer neurons in certain structures of the brain than the animals who got either both injections or none. At three to four months of age, there were striking behavioral differences as well. "It was like they couldn't stay in one place," says Herrera, who holds a PhD as well as an MD. "They couldn't pay attention, they couldn't learn as well. But the animals that received alcohol and nicotinamide performed behaviorally as well as those that didn't receive any alcohol."

The problems of the alcohol-damaged mice mirror those of children with FASD, which include hyperactivity, attention deficit disorder, and learning disabilities; those with full-blown FAS can also suffer stunted growth, mental retardation, and dysmorphic facial features. Unsurprisingly, the conditions are particularly prevalent in groups with typically high levels of alcohol consumption, such as Native Americans, Spong says.

One in twelve American women admits to drinking while pregnant—and one in thirty admits to binging, defined as five or more drinks in one sitting. Although some see maternal drinking as a cultural issue—many Frenchwomen enjoy a glass of wine with dinner while they're expecting—the researchers strongly believe that the only safe level of alcohol during pregnancy is zero. "Different people metabolize alcohol differently, so it will have different effects," Spong says. "What one person might be able to tolerate, and their baby might be able to tolerate under certain circumstances, might be very different for another person. So you can't say, 'If you have one binge it's fine' or 'A little drinking every day is fine.'"

Ultimately, Herrera and Ieraci's research could lead to nicotinamide being approved as a treatment for pregnant women who have consumed alcohol. But, given human nature, that raises a concern: some women might plan a night out followed by a quick trip to the doctor for their nicotinamide shot. The fetus could still suffer damage if the timing isn't right—and although nicotinamide appears to be harmless, Spong stresses that it's not worth the risk. "Pregnancy is an incredibly vulnerable time for the baby—everything is developing," Spong says. "Although the nicotinamide may be able to prevent alcohol damage, it may affect other systems. Do you really want to introduce another variable?"

JOHN ABBOTT

Dr. Daniel Herrera

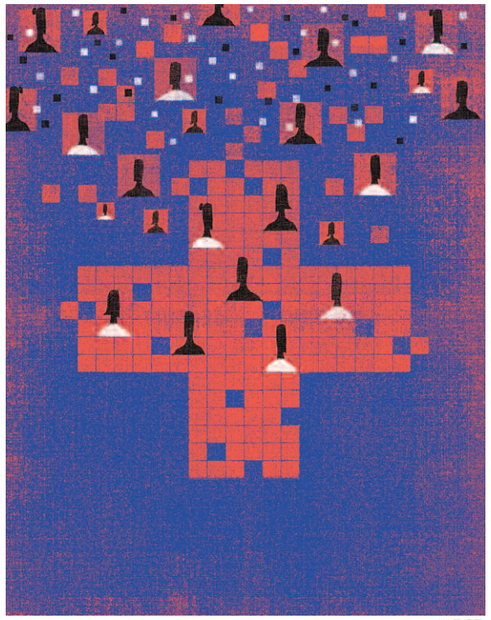
Herrera doesn't plan any clinical trials at this point, concentrating on the bench science. And, with millions of people suffering the after-effects of *in utero* alcohol exposure, he's also looking at the possibility that nicotinamide could ameliorate symptoms even decades after birth. Early work with adult mice, he says, has been promising. And while Herrera—whose youngest child is a toddler—rarely goes out in the evenings, he says that if he ever saw a pregnant woman drinking in public, he'd feel compelled to intervene. "I'd say, 'What you're doing is dangerous. You're damaging your baby.'"

— Beth Saulnier

Educated Guess

Interest groups help students choose a specialty

THE LIFE OF A FIRST-year medical student is filled with choices. Although it may seem like the big decisions have been made—what school to attend and where to live, not to mention the choice to enter medicine in the first place—students are encouraged almost immediately to begin making their next life-altering decision: an area of specialty. To clarify their options, many students join peer-led interest groups. Luring medical students away from their textbooks, labs, or limited free time to discuss the ins and outs of a field is not as difficult as it sounds: in the competitive world of medical studies, advice about the future is welcome.



JIM FRAZIER

The number of specialty interest groups at Weill Cornell changes from year to year; there were seven listed in the student handbook for 2006–07. Funded by the college, these groups solicit members during an activities fair held on campus in September. First-year students are encouraged to consider groups devoted to neurology, orthopaedics, family medicine, sports medicine, pediatrics, and more. To explore their options fully, it's common for first-years to sign up for multiple interest groups. Usually organized and led by a second-year, the events and activities vary in their regularity, but most interest groups meet monthly.

Second-year student Dean Arnaoutakis joined the Stimson Surgery Society last year and is now one of its organizers; two faculty advisers oversee scheduling and events, which usually draw more than two dozen students. Attendings and residents offer insights not only into the career track of a surgeon but also the lifestyle. "I think it provides a realistic picture," Arnaoutakis says. "Attendings speak about their schedules, the number of days in the clinic and days operating. They talk about how they got to their current position and offer opinions on the future of their field." Among the most popular recent events: a suture workshop in which a resident taught participants how to tie surgical knots.

Adrienne Davis is one of the rare third-year students who organizes group meetings. She's now co-chair of the Family Medicine Interest Group, which she learned about through a classmate at the end of her first year. "I had no idea what to specialize in," Davis says. "I only knew I wanted to be someone's doctor, in the traditional sense, with patient-physician relationships that are ongoing." Though time becomes tighter during the third and fourth years and the choices narrow, many students continue to attend meetings to maintain the relationships they've forged.

The groups' relaxed nature was evident at a meeting of the Geriatrics Interest Group (GIG), held in the Olin Hall lounge on an unseasonably warm January evening. About three dozen students and faculty gathered for pizza, cookies, and frank conversation about a summer mentorship program known as MSTAR (Medical Student Training in Aging Research). With their backpacks and books at their feet, the students listened intently as GIG president Eugene Licht and other second-year students talked about their MSTAR experiences, and Dr. Mark Lachs, co-chief of the Division of Geriatrics and Gerontology, along with neurologists Dr. Melissa Nirenberg and Dr. Gunnar Gouras, weighed in on the benefits of the summer program. "GIG students tend to find a home with our division and see our faculty in clinical settings as well as at dinners and summer barbecues," says GIG faculty adviser Dr. Carol Capello, who also attended. "They see us as real people with real lives."

Licht, who joined GIG in his first year, plans on attending meetings until graduation; he enjoys the group's focus on community service and student-run seminars, as well as the opportunities it presents for networking with physicians. "The projects that I have been involved with because of GIG are some of the most rewarding activities that I've participated in at Weill Cornell," he says.

Also at the meeting was GIG vice president Dan Li, a second-year student whose interest in geriatrics came as a surprise: he entered medical school fairly sure he would specialize in otolaryngology, for which there was no interest group. During his first year, Li attended almost every GIG meeting, and it changed his perspective by giving him the opportunity to make close connections with faculty. "Geriatrics is a growing field," Li says, "and now I find myself completely torn." Li plans on attending as many meetings as he can, including those of the otolaryngology interest group. He created it this year.

— Michelle Orange

'Sharper Than a Serpent's Tooth'

Mock competency trial raises real issues

WHAT IF KING LEAR HAD LIVED? AND WHAT if he sued his daughters to get his kingdom back?

That was the scenario played out in September in a mock trial called "Law & Order: Elizabethan Unit," sponsored by Weill Cornell's Humanities and Medicine Program. Lear, played by Dominic Chianese (familiar to "Sopranos" devotees as Uncle Junior), claimed he had been incompetent when he handed over his throne to daughters Goneril and Regan—and he wanted his decision reversed. "The key question was whether or not Lear was demented," says Dr. Robert Michels, a professor of medicine and psychiatry and former dean of the Medical College, who testified as a medical expert for the defense. "Was he confused, or uncertain of what he was doing?"

Like the television show it mimicked, the trial blended fact and fiction, puns and intellectual jousting. Real-life lawyers, medical experts, and a judge played themselves. They included attorneys Kenneth Warner, who at the time was defending the son of 104-year-old socialite Brooke Astor against charges he had neglected her and appropriated funds, and Daniel Kornstein, the author of a book about Shakespeare and the law called *Kill All the Lawyers?* The judge was the Honorable Kristin Booth Glen, who often rules on similar cases in Surrogate's Court in Manhattan. About 200 students, staff, and faculty packed Uris Auditorium to watch the show.

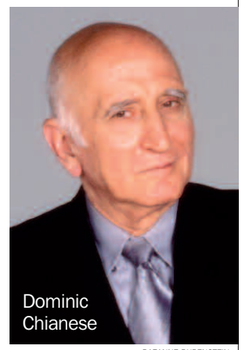
Before the trial began, narrator Stephen Gillers, a law professor at New York University, set the stage. Lear, he said, emerged in 2005 from a forest near Stratford, England, wearing a crown of twigs and making two startling claims. He hadn't died—Shakespeare had offed him in the play for commercial purposes—and he hadn't been competent when he decided to give away his estate.

Then Lear himself appeared in a video clip to read an opening statement. He was dressed as a contemporary retiree but spoke in iambic pentameter, saying that strategizing wars gave him post-traumatic stress disorder and made him "somewhat not myself."

AMELIA PANICO

Mock trial: Lear's competency is debated as attorney Daniel Kornstein (standing) questions Dr. Robert Michels.

And my fair kingdom, with all its holdings
including the best condo in West Palm plus all my loot
down to the model trains—H.O., the kind you can no longer get—
I did bequeath to them, except—dimwit!—the good one.
Please don't ask me my reason's rhyme.
It seemed a good idea at the time.



RAEANNE RUBENSTEIN

He opened and closed with a far-away look and tuneful, if odd, whistling—a detail that seemed to call into question the competence he claimed to have regained.

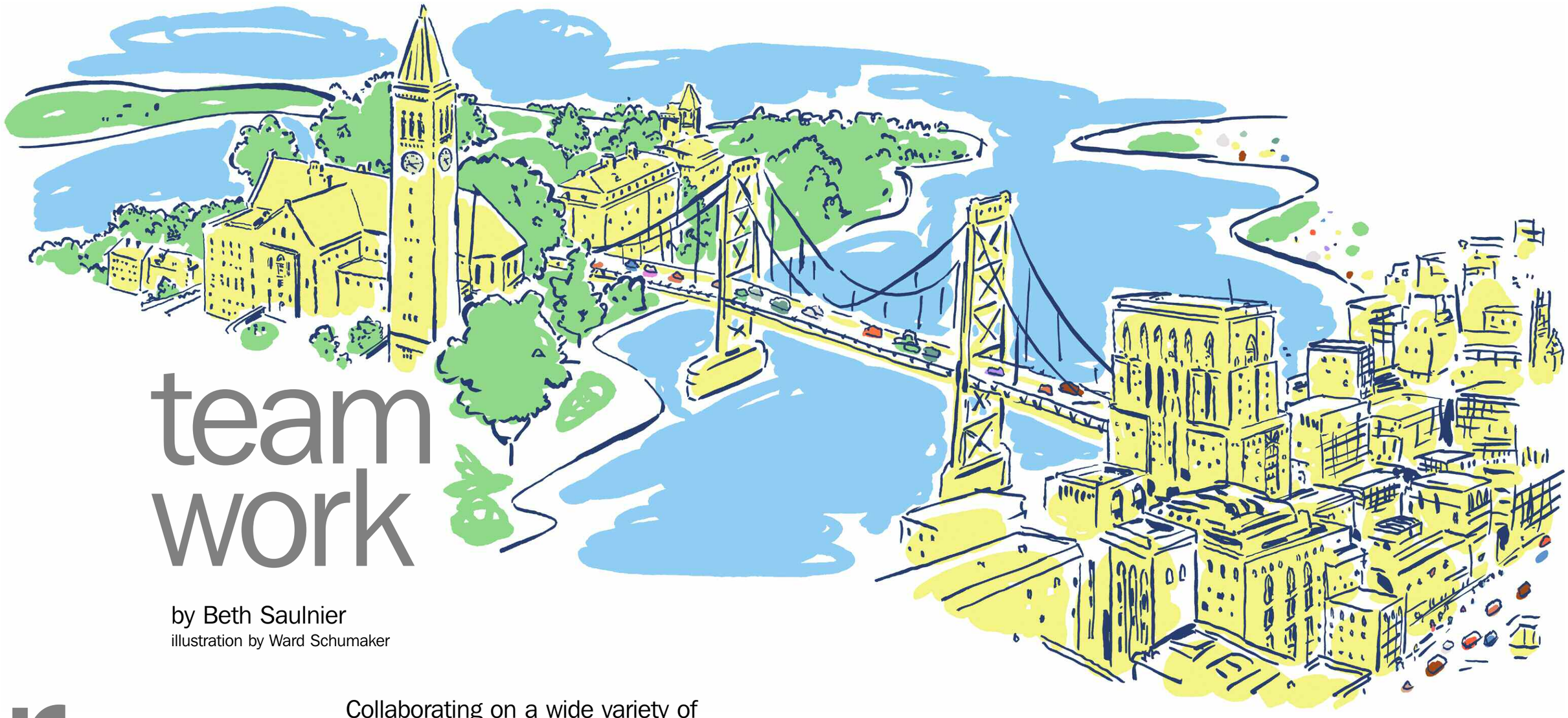
As the trial progressed, the fundamental question of cognizance emerged: did Lear understand what he was giving away and that the gift was irrevocable? Dr. Paul Appelbaum, director of Columbia University's Division of Psychiatry, Law, and Ethics, took the stand as a forensic psychiatrist siding with Lear. Citing Shakespeare's play, Appelbaum said that at the time of the transfer, the king was no longer the kind, effective manager he once had been. Rather, he had become argumentative, irritable, irrational, and occasionally abusive—all symptoms of early onset dementia. But Warner, representing Lear's daughters, pointed out that people often display those traits and are not necessarily demented. Lear was functioning well; he knew, for example, the size and value of his land when he gave it away, and his memory seemed intact.

Besides, Warner said, one reason Lear gave away his kingdom was so he could retire to Florida. "Now that's a rational idea, isn't it?" he asked Appelbaum. "Have you been to Florida?" Appelbaum replied. The institutions of medicine and law got their share of ribbing, too. Warner: "It's also true, isn't it, that in determining incompetence we have to remember no one makes ideal decisions?" Glen: "Counsel, I assume you're excluding judges."

If the trial's tone was often tongue-in-cheek, the issues it raised are serious. Future physicians will witness more family disputes involving questions of competence as the population ages and wealth becomes increasingly concentrated in elderly hands. "This is an important social issue," says Michels. "The trial gave the students another way of thinking about something they're going to see with their demented or older patients."

After the lawyers made their summations, Judge Glen ruled that the king had, in fact, been competent. "Although Lear may have done a terrible, foolish, or unfortunate thing," Michels says, "that doesn't mean you can overturn his decision, because he knew what he was doing."

— Susan Kelley



team work

by Beth Saulnier
illustration by Ward Schumaker

Collaborating on a wide variety of research projects, investigators in Ithaca and at Weill Cornell bridge the gap between the two campuses.

"Research shouldn't be performed in isolation," says NewYork-Presbyterian/Weill Cornell vascular surgeon Dr. K. Craig Kent. "Collaboration—taking people with different backgrounds and having them work together—is really the way that great research is accomplished nowadays."

Kent is one of dozens of physicians, scientists, and engineers who have bridged the distance between Cornell's Ithaca and Manhattan campuses, working together in cross-disciplinary projects. Collaboration between the two is a priority of University President Dr. David Skorton, a cardiology researcher who holds appointments on both campuses. "Researchers at Weill Cornell can take advantage of the cutting-edge basic science in Ithaca to develop clinical applications," says Dr. Antonio M. Gotto Jr., dean of the Medical College. "And by the same token, it's instructive for basic researchers to see what practical uses can be made of their discoveries. I think the more we see of each other, the more opportunities we'll find."

In 2004 the University announced a program of one-year seed grants for intercampus research teams. It awarded a dozen last year and will distribute an additional $400,000 in 2007. In 2006 Cornell formed a steering committee to investigate ways to overcome the 250 miles between the two campuses, including improved fiber-optic communication and such transportation initiatives as the Campus-to-Campus Bus. "The distance is certainly a consideration because some things have to be done on-site," Gotto says. "But with the videoconferencing we've developed using broadband technology, we're able to communicate, in some cases, almost as well as we could if we were down the hall."

Although collaboration is now in the spotlight, some projects have been going on for years. Dr. Mark Lachs, director of Weill Cornell's Center for Aging Research and Clinical Care, and Ithaca-based gerontologist Karl Pillemer are long-standing collaborators on the subject of elder abuse, and Ithaca computer engineer Anthony Reeves has been working with Weill Cornell radiologists on a lung-imaging project for a decade. Ithaca physics and engineering professor Watt Webb has also been conducting research on various topics in multiphoton microscopy with a cadre of Weill Cornell faculty, including biochemist Dr. Frederick Maxfield, urologist Dr. Douglas Scherr, and neurologist Dr. Gunnar Gouras. "With Ithaca and the Weill Cornell campus working together, we should be able to bring new inventions closer to clinical reality than either could alone," says C. C. Chu, a professor of fiber science and biomedical engineering who is collaborating with Kent. "We have to work as partners to achieve that goal, to touch someone's life."

There are challenges, of course. Flying out of Ithaca is expensive; so is spending the night in Manhattan. "The day-to-day contact is difficult," admits Abraham Stroock, an Ithaca engineering professor who is working with Weill Cornell faculty. "There's an obvious challenge due to geography; it's always best to collaborate with the guy in the office next door who has a lab across the hall from yours. But I think the University has lubricated this process—by subsidizing transportation, for example. I have been to New York many times in the last two years and my collaborators have been to Ithaca, and we've been able to write proposals together and start to get experimental results published. My feeling is that, based on these new connections, I've learned a significant amount and initiated projects that would not have been initiated."

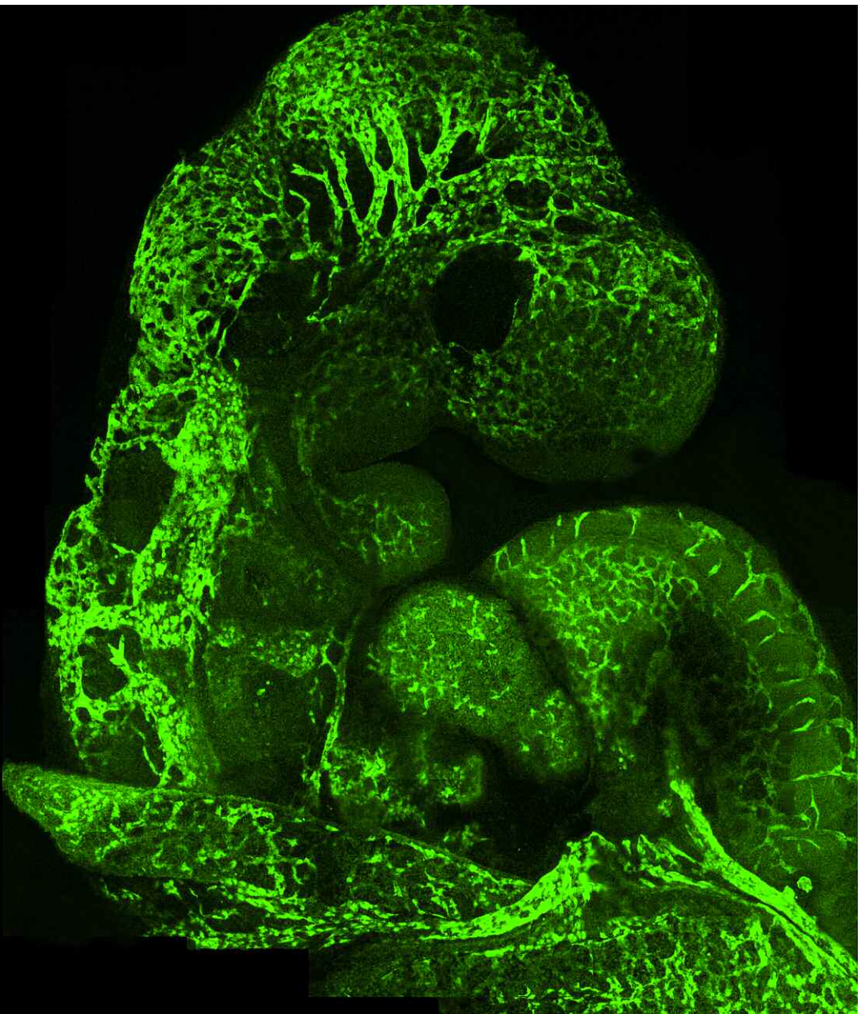
To show the range of collaborative projects now under way, here's a look at five that received 2006 seed grants.

Fluid Progress

Engineering meets wound care and more

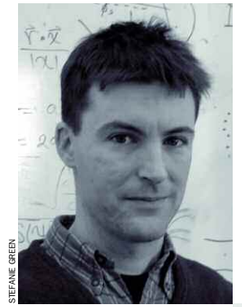
Abraham Stroock is a professor of chemical and biomolecular engineering on the Ithaca campus, but he has a pair of research projects ongoing with collaborators in Manhattan. Stroock specializes in microfluidics, a field that involves the manipulation of fluids on an extremely small scale. With his Weill Cornell colleagues, he's been applying microfluidics to blood-vessel propagation and wound treatment. "Clinicians are great because they're so enthusiastic," Stroock says. "They're optimists; they make things happen."

One project, with Weill Cornell cell and developmental biologist Thomas Sato and Ithaca-based biomedical engineer Lawrence Bonassar, involves the study of how blood flow—a physical rather than a chemical stimulus—affects blood vessels. In *in vitro* work that may soon go to animal models, the researchers are examining the potential for using a patient's adult stem cells to culture a network of new vessels. The research could have applications, Sato says, to "almost all the diseases that affect the cardiovascular system"—for example, to regenerate damaged tissue after a heart attack or stroke. "If we do conventional biological studies, it's hard to separate chemical components from physical components," Sato says. "So Abe and I have been working together to make an artificial blood vessel network in culture, where we can apply only physical forces."



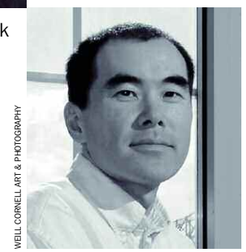
PROVIDED BY PROF. THOMAS SATO

Blood flow: A composite image (opposite) made from multiple fluorescence micrographs shows a capillary network that has formed spontaneously *in vitro*. (The nuclei of the individual capillary endothelial cells are stained green, the cytoskeleton red.) Left: Green fluorescence outlines the developing vascular network in a mouse embryo.



STEFANIE GREEN

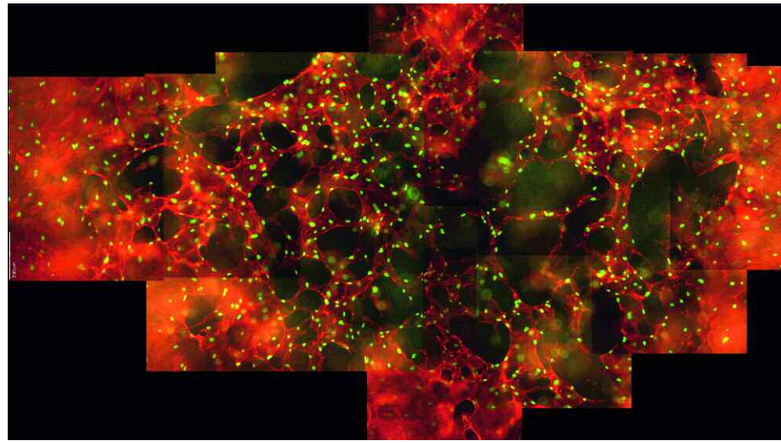
Prof. Abraham Stroock



WEILL CORNELL ART & PHOTOGRAPHY

Prof. Thomas Sato

Sato has been studying the chemical side of blood vessel generation for fifteen years, work that has taught him that physical cues are needed in addition to chemical ones. That focus on blood flow taps into Stroock's expertise in fluidics; Bonassar, who studies cartilage, plans to test their concepts *in vitro* on bone tissue. "Once we figure out what physical forces are necessary to make normal patterns of blood vessels, then we could potentially invent some way to modulate the physical cues, such as changing the blood flow or its viscosity," Sato says. "By combining that with chemicals, we could make healthier, more normal-patterned blood vessels."



VALERIE CROSS

Stroock has also been working with Dr. Suzanne Schwartz, a surgery professor in the William Randolph Hearst Burn Center at Weill Cornell Medical Center, to develop an active dressing that could deliver drugs to chronic wounds while remaining sterile and in place. It could have particular applications to diabetic patients, whose wounds often resist healing under current standards of care. Such a dressing, he says, could also be used as a diagnostic tool. "The idea is that it would have a continuous flow of, in the simplest cases, saline—it's a dressing on a drip," Stroock says. "That fluid comes back out and is analyzed. And part of our longer-term interest would be to develop a system in which you would do protein analysis, for example, on the outstream. Then the analysis of those results would lead to feedback, so the clinician could change the treatment as diagnosis is made."

At the Ready

Preparing for a health crisis

In the event of a major emergency—be it a terrorist attack, a disease outbreak, or a natural disaster—governments, agencies, and health-care providers need to know how to respond to the inevitable medical demands. How many doses of which drugs should be distributed? Which personnel should be deployed, and where? How do you manage the flow of information? Such questions and more are the subject of an intense collaboration between Dr. Nathaniel Hupert, an assistant professor of public health and medicine at Weill Cornell, and Ithaca-based Jack Muckstadt, the Acheson Laibe Professor of Engineering in the School of Operations Research and Information Engineering.

The pair have been in daily contact for nearly two years, working to develop computer models to guide logistics planning for a variety of emergencies in the hope of optimizing patient outcomes. Although some issues translate across disasters, each type of crisis has its own demands. "If you have a hurricane, you have some time to react—but its impact plays out over a long period," Muckstadt says. "Then you have something like 9/11 where a building comes down, or subway bombings—they happen, and they're done. So we're trying to comprehend the differences between them, and how you would set up resources and coordinate public officials, governmental organizations, and private companies."

Hupert cites the example of pandemic flu, which raises myriad questions about patient needs and hospital resources. "I want to know what my predicted surge of arrivals might be," he says. "Who is in my hospital right now? What proportion of them can I discharge safely and with what requirements for outpatient care so they don't wind up coming back? What might individuals with influenza require during their hospital stay? How long will they be in the hospital? How many staff will be required to treat them? What's the health of my staff and what proportion of them might be out with the flu themselves? Where might I send patients if I'm full? What's the optimal allocation of patients given our transportation resources?"

But there's a major challenge to the effort: data collection. Although health officials and government agencies have stepped up information-sharing protocols since 9/11, data systems are often incompatible. "That's the hardest part about this: getting actual data," Hupert says. "It's a huge issue that's being addressed at the national level through a number of different projects funded by the federal government. It's also being addressed by private firms that are working with hospitals across the country to create Web-based information portals." The process, he says, has two steps: "One is creating a model that has the right types of inputs to match the data that are out there, and the next is forming research partnerships with the folks who have that data."

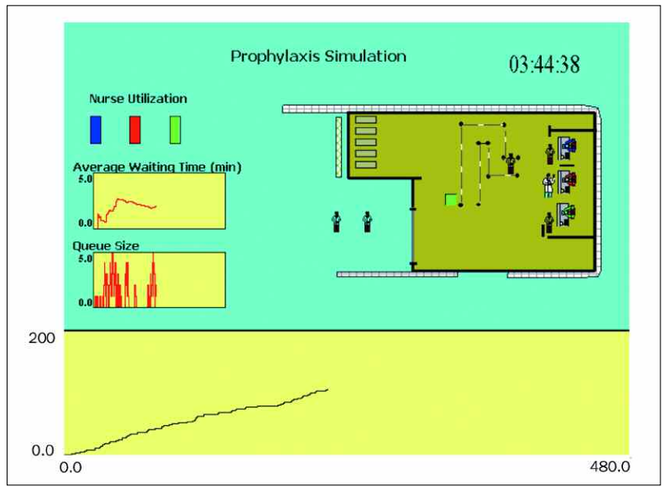
Hupert has long been interested in the field of disaster preparedness; he created simulation models for New York City's first modern large-scale mass prophylaxis exercise in 2002. Operations researchers like Muckstadt study how systems work and try to optimize them, from airline scheduling to factory throughput. "What Jack brings to the table is an incredible breadth of expertise across different modeling and analysis fields," Hupert says. "In supply-chain and logistics modeling, he has brought our ability to create this platform to a much higher level. We could not have done this on our own."

PROVIDED BY DR. HUPERT

Dr. Nathaniel Hupert

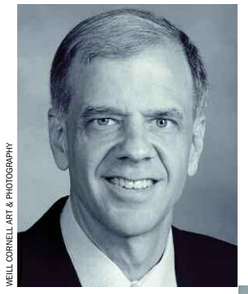
First response: Researchers at Weill Cornell and the Ithaca campus have designed a model (below) for giving antibiotics or vaccines to hospital staff with the least disruption. The work will be published in *Hospital Epidemiology and Infection Control*.

PROVIDED BY DR. NATHANIEL HUPERT



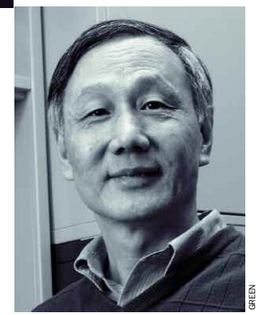
In Circulation

Can plastic mimic a human vein?



WEILL CORNELL ART & PHOTOGRAPHY

Dr. K. Craig Kent



GREEN

Prof. C. C. Chu

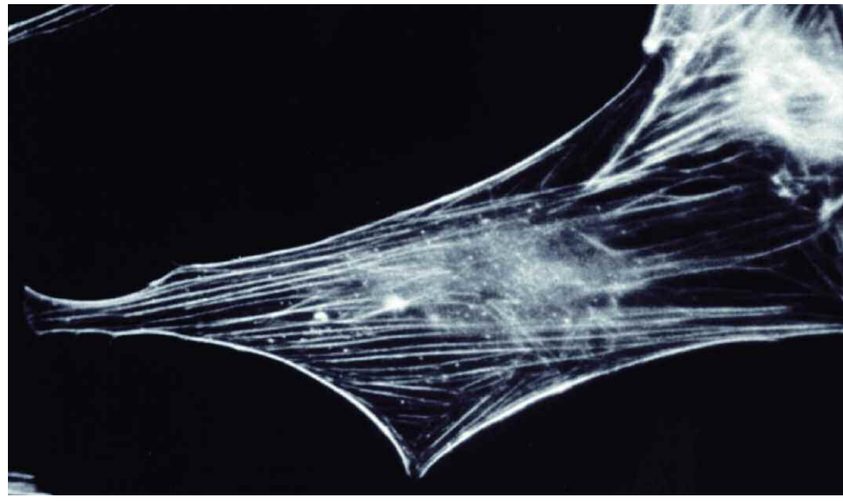
For years, researchers have been trying to develop an artificial alternative to saphenous vein grafts—the procedure in which a vein from the leg is used in heart and other bypass operations. Although the procedure works "reasonably well," says vascular surgeon Dr. K. Craig Kent, oftentimes the vein is simply unusable. "It's already been taken for another bypass, it's clotted, it's small, or it's never been well-developed," Kent says. "In a large number of patients, there isn't a saphenous conduit available."

Bypasses are performed for many reasons, such as to circumvent a kidney artery blockage, improve leg circulation to avoid amputation, or prevent a stroke due to an occlusion in the carotid artery. Unfortunately, progress in developing an artificial bypass method has been slow. Human blood vessels are made of many types of cells and have natural anti-clotting properties, which researchers have so far been unable to mimic. "Plastic grafts clot frequently and they don't last very long," Kent says. "Although they're fairly easy to sew in place, they're not very durable."

With biomedical engineer and fiber scientist C. C. Chu and Weill Cornell cell biologist Bo Liu, Kent has been working to develop an alternative. Their artificial vessel is made from polyesteramides, a new family of biodegradable biomaterials (synthesized mainly from amino acids) invented in Chu's Ithaca lab in 2003. The material is sent to Weill Cornell in the form of a fabric or film, which Kent's lab is studying in cell cultures; testing on animals is the next step. Implants made from these new biomaterials could be particularly useful in patients at risk for intimal hyperplasia, the thickening of the innermost layer of an artery that leads to reocclusion following angioplasty or a bypass. "We have a hypothesis that nitric oxide, which is a biological messenger the body produces upon stimulation, would be able to counter or prevent the formation of intimal hyperplasia if nitric oxide could be locally delivered along with the synthetic vascular grafts," says Chu, who is also working with surgeon Dr. Roger Yurt, director of the William Randolph Hearst Burn Center at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, to develop therapeutic biodegradable artificial skin for burn patients. The fabricated vascular graft is both an implant and a nitric oxide delivery device, Chu says, "so with one stone you kill two birds."

Ultimately, the researchers hope to develop an implant that will spur the body to make its own new blood vessels. They would like to be able to provide a scaffolding for an artery made of collagen produced by the inflammatory process—itself sparked by the dissolving implant. Although such advances may be many years off, Kent says, he hopes that his and Chu's different perspectives will help them succeed in an effort that has stymied researchers for a quarter century. "It's great to put together a bioengineer—who understands the complexities of the structure of an artery in a way that I never will—and a vascular surgeon who understands the disease process and works hands-on with arteries," he says. "He has ideas that I had never thought of. I have different ideas and a different perspective. Blending our knowledge and expertise has the potential of leading to developments that neither of us would be able to achieve on our own."

PROVIDED BY PROF. BO LIU



Poly graft: The researchers are trying to develop an artificial graft that keeps smooth muscle cells (above) from growing and blocking veins.

Brain Power

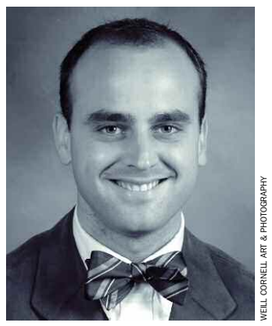
Building a better microcatheter

It's an experiment done over and over in endovascular labs around the world: a small piece of plastic with a sphere on the end is inserted into a blood vessel in a rat's brain to cause a stroke, which can then be studied. The most common method of fabricating the tiny implement is hardly precise: research assistants melt the tip of a plastic suture over a flame to form a glob of molten plastic, then let it harden. "Of course, everybody who does that gets a different device," says William Olbricht, a professor of chemical and biomolecular engineering on the Ithaca campus. "So it's tough to compare results between experiments, and you probably use more animals than you need to because sometimes the device doesn't cause the proper blockage."

PROVIDED BY PROFESSOR WILLIAM OLBRICHT

Stroke studies: The team's innovative microcatheter standardizes protocols.

In collaboration with the lab of Dr. Pierre Gobin—Weill Cornell's Director of Interventional Neuroradiology and inventor of the MERCI Retriever, a corkscrew-like device that can remove blood clots from the brains of stroke patients—Olbricht and Conor Foley, a chemical engineering graduate student, have created a microcatheter intended to standardize the experimental protocol. The device is constructed (in both Cornell's nanofabrication facility and in Olbricht's lab) from plastic tubing bought from a company in Florida and shipped to Ithaca; the experiments are done at Weill Cornell.



WEILL CORNELL ART & PHOTOGRAPHY

Dr. Walter Zink

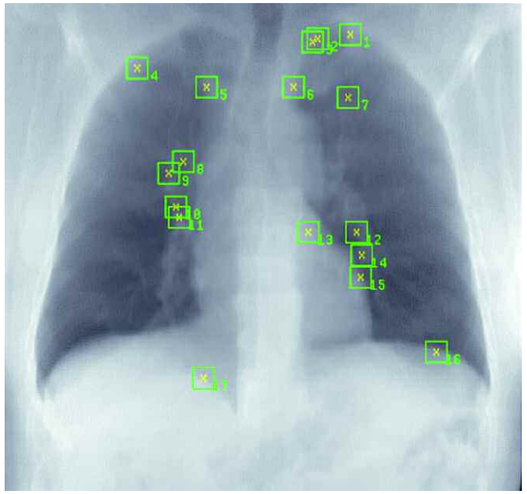
The tubing, several inches long, is just 0.27 millimeters in diameter; the sphere at the end is about half a millimeter wide. "The idea is that we use animals of the same size, 260 to 300 grams, in all the experiments, and the catheters are the same size," says Dr. Walter Zink, an MD-PhD radiology resident working on the project. "There's a narrow range of blood vessel sizes in those animals, so we can pretty much advance the same catheter into the same-sized rat every time and get similar-sized strokes. That's very useful when we test new therapies."

In addition to inducing the strokes, the microcatheter also treats them: the tubing has holes laser-drilled into the side, each about one-twentieth of a millimeter wide, that can be used to deliver neuroprotectants. Gobin's lab was the first in the world to selectively inject specific arteries within the rat brain, allowing researchers to study a drug's effect on one part of the brain versus an untreated region. "The ultimate goal is to use the catheter to simultaneously occlude and then inject the same vessel," Zink says. "And in so doing, we'll have a model for intra-arterial neuroprotection in stroke."

Although the microcatheter is not intended to treat strokes in humans, a similar device could have widespread clinical applications, such as delivery of chemotherapy directly into brain cancers or gene therapy for neurodegenerative diseases. Eventually, Olbricht says, the device could be made in different sizes so researchers could choose the appropriate one for different animals and experiments. "Another thing we want to do is make the tube more flexible, because it has to be threaded through this crowded artery—it has to bend and follow a circuitous route—and you have to be careful, because the artery is rather fragile," says Olbricht, who's seeking an alternative to the plastic material they're currently using. "If the device is too rigid it can puncture the artery, which wrecks the experiment completely."

Image Problem

Computers aid the radiologist

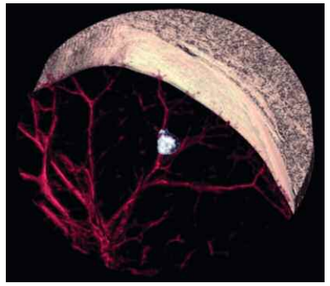


PROVIDED BY DR. DAVID YANKELEVITZ

Breathe deep: A CT image of the chest (above), marked where the computer has identified lung nodules that could be cancerous. Left: Advanced image processing shows the relationship between a nodule (white) and the surrounding blood vessels (red).

For radiologists, the development of more comprehensive imaging technology has been both a blessing and a burden. Ten years ago, notes Ithaca-based electrical and computer engineering professor Anthony Reeves, a whole lung scan might have generated thirty images with a ten millimeter slice thickness; now it can produce twenty times that many, at thicknesses down to half a millimeter. It's a wealth of information—and it all has to be interpreted. "There's a huge constraint on the radiologist because the resolution is so fine now that too many images are produced to fully utilize all of the available information," says Weill Cornell radiologist Dr. David Yankelevitz. "With a CT scan you can get 400 for the chest alone. To look through them all trying to find one five-millimeter nodule is overwhelming."

For a decade, Yankelevitz and Reeves have been working to develop ways for computers to aid in image interpretation. Last fall, some of the results of their International Early Lung Cancer Action Project (led by Weill Cornell professor of radiology Dr. Claudia Henschke) were released, sparking extensive media coverage about their claim that long-term survival rates can be vastly improved—from 5 percent to upwards of 90 percent—via routine CT screening for at-risk patients. But that finding, while striking, was just one element of their long-term project, which has included the development of a highly efficient computerized data-gathering system—one that integrates not only images but pathology data and clinical trial results.



The data contributed by research partners at more than forty institutions around the world will help the team develop algorithms for analyzing images to identify and diagnose early signs of lung cancer. Someday, Reeves says, every scanner will come with sophisticated software that will process images and flag potential problems—not only for lung cancer but heart disease, emphysema, and other conditions. Rudimentary versions already exist for lung screening and mammography; the team's software for measuring pulmonary nodules has been licensed to General Electric.

"Who's the world's best chess player?" Reeves muses. "It's a computer. The computer was trained through all the great games that have ever been recorded, and then it played the world's best and learned more from that. So you get the world's best physicians, and you use them to train the computer, which is distributed as part of the scanner. Once we solve that problem, once we have the algorithm, you'll have an expert diagnostician in the computer."

Reeves and Yankelevitz stress that the algorithms aren't intended to be a substitute for a radiologist's reading; rather, they would give the physician an efficient way of pinpointing areas of concern. With the advent of more complex scanners, Yankelevitz says, some images are already overwhelming to the human eye, and the use of computer aids is reaching a tipping point. "The software is really an assist to the radiologist—everything is looked at again," Yankelevitz says. "People have said that it's going to replace the radiologist, but it's nowhere near that. It's a tool that we need to help sort through the enormous amount of information that is now available and ultimately to make our interpretations more accurate and meaningful." ■

RICHARD LOBELL

Dr. David Yankelevitz

the height of healing

by Beth Saulnier
photographs by John Abbott

As the first dedicated clinical care building in the Medical College's history, the Weill Greenberg Center raises patient services to a new level.

Convenient care: The Weill Greenberg Center's lobby features water pools and a hanging glass sculpture by artist Ray King.

From the moment you walk in the door, it's clear that this is no ordinary trip to the doctor. In fact, that's obvious even before you step into the building, a fifteen-story tower of gauzy, undulating glass at the corner of East 70th Street and York Avenue.

A few days prior to your first visit, you've gotten a phone call to take a comprehensive health history. If you came by car, you've driven into an underground garage complete with valet service and a sixty-foot-long wall of water. The lobby floors and walls are made of travertine marble, but the focal point is a suspended sculpture designed by Ray King, consisting of some 10,000 sparkling glass elements. Beyond a series of pools is an escalator that takes you one flight up to the Myra Mahon Patient Resource Center, where you're directed to your doctor's floor. There, you're greeted by a friendly receptionist and a wall of windows offering a sweeping view of Manhattan.

Weill Cornell's new $232 million ambulatory care and medical education building is designed to revolutionize the patient experience—not only through streamlined services but by creating a serene atmosphere that's conducive to healing. Named the Weill Greenberg Center in honor of longtime Medical College benefactors Joan and Sanford Weill and Corinne and Maurice Greenberg, the building is the centerpiece of the successful $750 million "Advancing the Clinical Mission" campaign—to which the two couples gave a combined $150 million. The Center welcomed its first patients on January 8, with a formal dedication ceremony following on January 26. About 100 physicians and 900 support staff will be housed there, including dermatologists, radiologists, neurologists, otorhinolaryngologists, cardiologists, gastroenterologists, fertility specialists, and pain management specialists. "Our ability to deliver clinical services will be enhanced dramatically by this modern, convenient facility," says Sanford Weill, chairman of the Medical College's Board of Overseers. "It will enable us to come closer to achieving our goal, which is providing the best possible services to our patients."

Of the building's fifteen floors, the top two are devoted to mechanical functions. The second floor features the Selma Ruben Conference Rooms as well as the Myra Mahon Patient Resource Center, offering coffee service, Internet access, help with billing and referrals, a librarian, and a wealth of information about health and disease. The tenth floor houses the innovative Clinical Skills Center, where medical students will be observed and recorded while examining both interactive mannequins and actors portraying patients. "The building will aid dramatically in the education of doctors," Weill says. "Students will be learning from the best and the brightest in one of the most modern facilities in the world for clinical care."

The building was designed by Polshek Partnership, a New York-based architecture firm that has created a number of notable medical and scientific facilities, as well as the Rose Center for Earth and Space at the Museum of Natural History in New York City and the Clinton Presidential Library. In designing the Weill Greenberg Center, the architects sought to integrate a modern facility with the existing campus structures—from the historic character of the original hospital (Polshek partner Todd Schliemann calls it "a white brick pile of Gothic arched windows and a lot of masonry") to the sleeker look of the newer additions. "We wanted to create something that's refined and simple," says Schliemann, a 1979 graduate of Cornell's College of Architecture, Art, and Planning, "as if it's the next step in the evolution of the institution's identity and its approach to giving care."

One key design element is the fritted glass that covers the building's north and east sides. Assembled in Minnesota, the double-paned glass is covered in a white ceramic stencil (or "frit") that minimizes heat from the sun and offers a distinctive

Have a seat: The waiting areas (above) are designed to be stylish as well as comfortable, with plenty of natural light. Left: a close-up of the ceramic "frit" that covers the windows, offering privacy and energy savings as well as a distinctive visual element.

Just the Facts

Groundbreaking: May 25, 2004
Topping out: May 16, 2005
First patients seen: January 8, 2007
Cost: $232 million
Financing: Entirely by philanthropy
Height: 200 feet
Floors: 15 (13 occupied, 2 mechanical)
Square footage: 330,000
Frame: 4,000-ton steel
Estimated annual traffic: 1 million people

The Waiting Game Replace those stale magazines: environment matters

Research has shown that a pleasant atmosphere in doctors' waiting rooms isn't just a matter of taste: it can have a profound effect on patient satisfaction, says Franklin Becker, chairman of design and environmental analysis on the Ithaca campus. In 2005–06, Becker and former graduate student Stephanie Jones Douglass studied six Weill Cornell medical practices—some housed in older buildings, others in newer facilities such as the Jay Monahan Center for Gastrointestinal Health and the Iris Cantor Women's Health Center. After conducting 720 hours of direct observation and surveying 120 patients, Becker says, "we found a strong relationship between the overall attractiveness of the patient areas and perceived quality of care." The link, he says, lies in the fact that the longer people wait to see their doctor, the less satisfied they are with their visit.

That may not sound particularly surprising. The twist is that there was no relationship between the actual amount of time patients waited and their perception of the care they received—but their opinions were heavily influenced by how long they *thought* they waited. And in a nicer atmosphere, the researchers found, people tend to underestimate their wait times. They may have to sit there just as long, but if they have a pleasant setting—rather than, say, uncomfortable chairs, outdated magazines, and harsh fluorescent lighting—they don't mind so much. Providing a more attractive waiting room, in other words, makes patients feel better about their treatment—an important factor in healing.

Although the study's findings were not specifically incorporated into the Weill Greenberg Center's design due to timing issues, says Weill Cornell Physician Organization chief administrative officer Nancy Farrell, they confirmed the value of its essential principles. Becker plans to follow up the research by studying the practices that relocated from older facilities to the new building, to see if patient satisfaction improves.

State-of-the-art space (clockwise, from left): An exam room in the Clinical Skills Center; a monitoring station where med students are observed and recorded; the first-floor reception desk; and the underground parking garage.

aesthetic element. "There's a light gauze across the glass, which puts a kind of distance between you and the street," Schliemann says. "From the outside, the building takes on a lightness and an opacity that doesn't allow people to look in." The glass has a low iron content, which reduces the typical greenish hue; Polshek dedicated an employee to overseeing the technical aspects of the glass curtain wall, comprising approximately 2,500 individual faceted panes, most measuring five feet by seven feet. "The way the glass ripples and facets was meant to break down the scale of the building by making fractured reflections," Schliemann says. "It also gives it a kind of Gothic air, which harkens back to the earlier motif in the institution."

Inside, the building is decorated in soothing tones—light blue, pale green, warm yellow, and soft red—with floors covered in a beige carpet that has textured ripples reminiscent of underwater sand. The upholstered furniture has rich wood accents, and the walls are lined with original, contemporary artwork featuring natural scenery or abstract designs. The exam rooms have cork floors, lightly colored walls (rather than stark white), and state-of-the-art equipment. "We've worked hard to create a feeling of calm and peace in spite of it being very busy," says Nancy Farrell, chief administrative officer for the Weill Cornell Physician Organization, the Medical College's faculty practice. "We wanted to create a spa-like, healing environment."

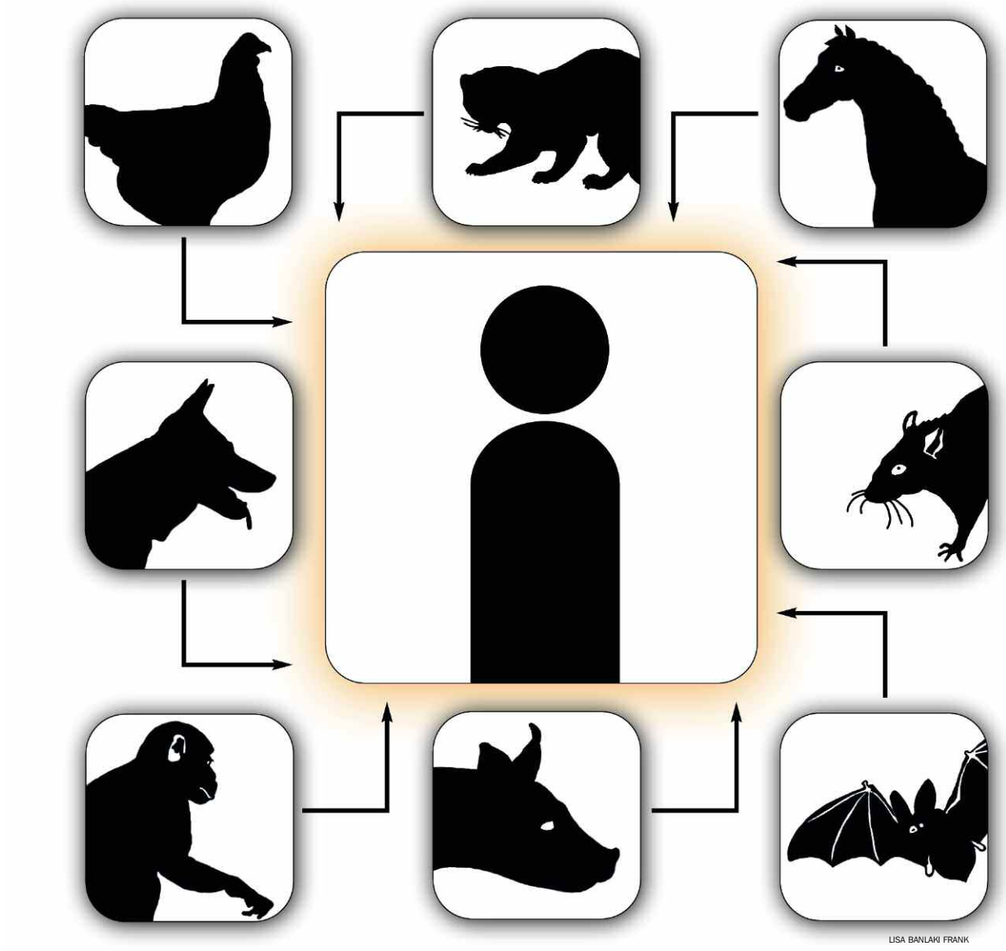
The new building—the first free-standing clinical care facility in the Medical College's 109-year history—is a key component of the "Weill Cornell: We Care" initiative. Begun in 2002, "We Care" is an effort to improve the patient experience on multiple fronts, from increasing the number of appointment schedulers to designing bills that are easier to understand. "For many decades, the doctors here have been well known and admired for their medical care, but services such as answering the phone properly and being able to make appointments easily were antiquated at best," says Richard Thomas, Weill Cornell's senior director for capital planning. "We've put patient services at the top of the list of what doctors do for people instead of at the bottom."

That required an overhaul of how medical practices conduct their day-to-day business. In most doctors' offices, Thomas notes, the staff behind the front desk handle many tasks. "They greet the patient, fill out medical records, call the insurance company, submit bills. The whole operation is confusing and not necessarily devoted to the needs of the patient." In the new facility, each floor has a long reception desk dedicated solely to patient services. There are fewer individual doctors' secretaries and more staff devoted to billing and phone scheduling, functions that happen behind the scenes. If patients see more than one doctor at the Center, their records are shared electronically—obviating the need to reiterate the minutia of their medical histories. "When we took patient surveys, the biggest complaint was that their time was wasted checking in and waiting for the doctor," Thomas says. "We're trying to minimize that by streamlining the processing ahead of time."

The overarching theme in the building's design, Schliemann stresses, is making patients feel at ease. A trip to the doctor can be a source of anxiety, and life in New York City is often stressful and logistically complex. The Weill Greenberg Center is meant to be something of a haven from those pressures, while providing the highest standard of care. "We endeavored to make a building that would give you confidence in these remarkable physicians," Schliemann says. "There's no need to be apprehensive—the environment that you're about to walk into and the medical care that you will receive are some of the best that have ever been. People can feel comfortable, as if they could go shopping, come to this building and have a procedure, and go back out and continue with their daily lives." ■

animal mag netism

by Neeraja Viswanathan



LISA BANLAKI FRANK

Weill Cornell researchers work to stop the spread of zoonotic diseases.

A dead bird in a busy Hong Kong shopping district normally attracts little attention, especially on New Year's Eve. But this tiny scaly-breasted munia—a bird normally found only in rural regions—put Hong Kong on high alert in January 2007 when it tested positive for the H5N1 strain of avian influenza, or bird flu. Officials speculated that the bird was one of hundreds of thousands released yearly in China during Buddhist rituals to improve karma. Once a symbol of freedom, birds now hold a real threat of death, and at least one Buddhist group releases fish into the sea instead.

As of mid-January, the H5N1 virus had killed 161 people worldwide—about 60 percent of those it infected. Though there have been no reported infections in Hong Kong, the local government has slaughtered 1.3 million poultry in an effort to stem its spread. On February 4, avian influenza claimed its first victim in Africa; that same week, health authorities in the U.K. killed more than 150,000 turkeys after an outbreak of H5N1 on an east England poultry farm—the virus's first appearance in the country. The World Bank has approved $28 million in grants to combat the disease in thirteen countries.

Avian influenza is just one of more than 540 known zoonoses—infectious diseases transmitted from vertebrate animals to people—120 of which can be fatal in humans. An estimated 50 million people contracted zoonotic diseases from 2000 to 2005, resulting in approximately 78,000 deaths. At Weill Cornell, researchers in the Program for Respiratory Virus Infections and Biodefense have been studying ways to defeat these deadly pathogens. Dr. Anne Moscona and Matteo Porotto, faculty members in the Departments of Pediatrics and Microbiology and Immunology, have made significant discoveries about Hendra and Nipah, deadly Henipaviruses that the U.S. government lists as potential bioterror agents. Their new approaches involve the use of small peptides that stop the viruses from entering cells. The initial results of this work were published in the October issue of the *Journal of Virology*. "This is our first paper to present these new ways of thwarting infection with Hendra and Nipah viruses, and we have some even more encouraging results coming out soon," says Moscona. "Our next step is to develop more effective antiviral agents based on refinements of the strategies in the October paper. We're now writing up the results of our recent experiments, showing how we have made the peptides even more active against live viruses. "

Moscona and Porotto are the core of the Program, but the laboratory environment is one of lively interactions among scientists at all levels—graduate students, postdoctoral fellows, clinical fellows, high school and college students, medical students, and faculty. For the last twenty years, the Moscona lab has focused on pediatric respiratory viruses, including parainfluenza, a major cause of croup and bronchiolitis in young children. Because of the similarities between parainfluenza and the Henipaviruses, Moscona and Porotto were able to apply their expertise to combating these newly emerging pathogens. Human immunodeficiency virus (HIV) is another zoonotic pathogen, one that crossed over from chimps to humans about seventy years ago. Moscona and Porotto are now interacting with Weill Cornell HIV researchers, including microbiology and immunology professor John Moore, to share advanced techniques and learn from each other's experiences.

The stereotypical image of researchers battling zoonotic diseases brings to mind scientists in HAZMAT suits handling lethal virus strains or studying diseased animals. But the Program's laboratories look little different from many others within the Medical College—no spacesuits are needed here. And the atmosphere, although intense, is far from frightening. Nestled between brightly colored offices on the Department of Pediatrics's research floor—the Friedman Family Pediatric Research Laboratories—the research space contains tissue culture hoods, gel systems, power supplies, flasks, small centrifuges, and microscopes, all lined up neatly on counters, surrounded by journals, notebooks, and calculators. The scientists wear casual clothes under their lab coats and

WEILL CORNELL ART AND PHOTO

Dr. Anne Moscona

don goggles and gloves for safety.

The Department of Pediatrics may seem like a surprising place to study potential bioterror agents, but it is the natural home for this Program. Moscona is a specialist in pediatric infectious diseases who for the past two years has been a professor of pediatrics, microbiology, and immunology and vice chair of pediatrics at Weill Cornell. Throughout her career, her driving motivation has been to find ways to prevent and cure the infections that hurt and kill children.

The experiments leading to Moscona and Porotto's recent discoveries on Hendra and Nipah viruses were the culmination of years of work. Moscona had conducted a great deal of fundamental research on how parainfluenza viruses infect lung cells; she was convinced that understanding how this process occurs was key to preventing or curing the infection. Porotto, a PhD from the University of Genoa and now an assistant professor of microbiology in pediatrics, came to the lab with extensive experience in molecular biology and a dream of applying his abilities to curing childhood infections. Together, the pair first focused on parainfluenza and other viruses in the same family—known as paramyxoviruses—that are responsible for numerous animal and human diseases. When the experiments with parainfluenza revealed a possible strategy for stopping the virus from entering cells, the investigators decided to try the same strategy on Hendra and Nipah, the most deadly viruses under study in their laboratory.

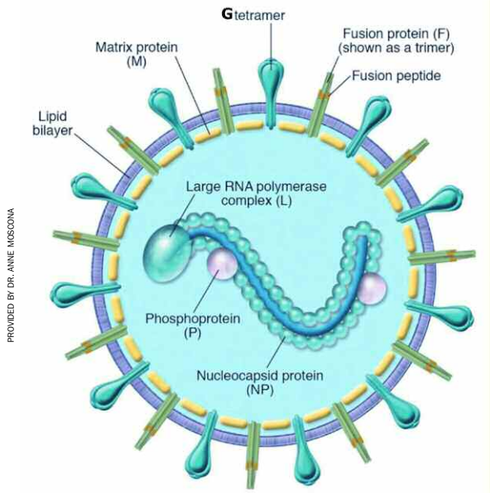
As is often the case in science, teamwork was crucial. "Matteo and I bring complementary skills to the table," Moscona says. "There's a great synergy when someone like me, who has been deeply interested in both the basic mechanisms that viruses use to replicate and the diseases they cause, works with someone like Matteo, whose skills are rooted in fundamental molecular and cell biology techniques. He's intensely creative and dedicated, and has encyclopedic knowledge and tremendous scientific ability. It's ideal when scientists can work together as we do, initially approaching a problem from different angles and bringing our individual strengths to bear on an important medical and scientific problem."

Although she seems very much at home in her Manhattan laboratory, Moscona is equally comfortable in the jungle village clinic in Belize where she recently worked as a volunteer, or when delivering a plenary talk to an audience of thousands at an international conference. Years of obtaining grant funding from the National Institutes of Health have taught her the value of making her research accessible, its impact immediate. As a clinician, she is on the front lines in dealing with infectious threats to children and families and has also been called upon by international agencies for advice on infectious diseases, including avian influenza. "We're letting go of the old idea that we can find 'silver bullets' for each and every disease out there," says Moscona. "The trick is to turn emerging diseases into an enemy we know and understand, finding solutions that apply to groups of pathogens and that are flexible enough to deal with rapidly changing situations." Indeed, because new zoonotic diseases are constantly being discovered, attacking each one with a unique strategy would be a Herculean, if not impossible, task.

Hendra virus emerged only recently, in 1994, when a mare suffering from a frothy nasal discharge infected and killed twelve other horses on a ranch in Queensland, Australia. The trainer and stable hand nursing the mare fell sick within a week, the trainer dying of respiratory and renal failure. The deaths of another horse and owner near Brisbane were linked to the same Hendra strain.

PROVIDED BY DR. ANNE MOSCONA

Matteo Porotto



PROVIDED BY DR. ANNE MOSCONA

Deadly pathogen: There are currently no vaccines or drugs to combat Henipaviruses such as the Hendra virus (above).

Five years later, another, similar Henipavirus called Nipah emerged in Malaysia, killing 105 people. The most likely primary factor behind this emergence was the housing of millions of imported pigs in confined quarters. Local fruit bats took up residence with the pigs, infecting them with Nipah.

Both Hendra and Nipah cause respiratory infections, hemorrhages in the lungs or brain, and central nervous system disease. Most alarmingly, Nipah can cause what is known as relapse encephalitis—the onset of brain hemorrhaging up to four years after an initial infection. "One virus jumped into humans from horses, and the other infected humans via contact with pigs, and they have different symptoms," says Moscona. "But because we now know they infect cells in much the same way, we can try to counter the two viruses using a similar strategy."

There are currently no vaccines or drugs to combat the Henipaviruses; the best chance for preventing deaths in an outbreak would be a drug that could be administered either just before, or soon after, infection. Hence the researchers are targeting an early step in the life cycle of the viruses. Both the Henipaviruses, as well as parainfluenza and other paramyxoviruses, go through similar steps to infect a host. In the binding stage, a viral receptor-binding protein ("G protein" in the case of Hendra and Nipah) attaches to receptors on target cells (in this case, molecules called ephrin B2 that are found on cells that line blood vessels). Once bound to a receptor, the G protein activates the fusion protein (called "F"), allowing the virus to fuse with the cell's membrane and enter the interior, where it can replicate.

The researchers have been concentrating on strategies to prevent this fusion process. "There are three main ways we could do this," says Moscona. "We can block the G protein from binding to cells; we can prevent it from 'triggering' and activating the F protein; or we can stop F from undergoing the shape change, after triggering, that allows it to fuse the virus with the cell." The researchers are focusing on all three strategies, and they expect each to generate useful leads. Their first success has been finding a way to paralyze the function of F protein with a blocking compound, a small peptide that they now hope to turn into an effective drug. While developing ways to prevent disease, the team is also trying to understand the process of pathogenesis: how these viruses and their interaction with the various cells in the body actually cause disease.

Zoonotic diseases have been around since the dawn of civilization. Over the centuries humans have developed immunities to all but the hardiest of them, while some, like influenza, have evolved into epidemic diseases that are transmitted directly from human to human. When humans first encounter a new zoonotic infection to which they have little or no immunity, the effects can be devastating. The Bubonic plague first swept through Europe and Asia in the fourteenth century—spread by rodents and encouraged by societal conditions, including poor sanitation—killing 25 to 30 percent of the population. HIV has caused 25 million people to die of AIDS since its crossover from chimpanzees during the last century. While recent threats of deadly, rare zoonoses such as Ebola and SARS have been in the headlines, others quietly kill thousands—in India 30,000 die every year from rabies. "In my experience," says Dr. Sherif Zaki, pathologist and branch chief with the Centers for Disease Control and Prevention in Atlanta, "90 percent of the more virulent diseases emerging in the last twenty years have been zoonotic in nature." The threat, he says, is "definitely" growing.

The factors known to be involved in the development and spread of zoonotic disease include deforestation, agricultural devel-

> 'We're letting go of the old idea that we can find "silver bullets" for each and every disease out there,' says Moscona. 'The trick is to turn emerging diseases into an enemy we know and understand, finding solutions that apply to groups of pathogens and that are flexible enough to deal with rapidly changing situations.'

Safety First

Cutting-edge techniques allow scientists to study deadly viruses—without the space suits

Handling dangerous pathogens such as Hendra and Nipah viruses requires a Biosafety Level 4 lab, complete with HAZMAT suits, filtered air and water, and specialized safety equipment—as well as facilities to house, feed, and treat the animals used in experimentation. Since the researchers in Weill Cornell's Program for Respiratory Virus Infections and Biodefense have a Biosafety Level 2 lab with none of those facilities, how are they able to study such lethal pathogens? Answer: by using the latest research techniques and some creative thinking.

"We knew that some of the key mechanisms involved in transmission of human parainfluenza viruses were also used by Hendra and Nipah," says assistant professor of microbiology in pediatrics Matteo Porotto. "And these mechanisms were similar in important ways to how another, non-lethal cow virus works." Porotto and Program director Dr. Anne Moscona used this knowledge to engineer a version of the harmless cow virus so that its surface bears spikes from the Hendra virus instead of its own. To do this, they took DNA copies of the genes of the two Hendra virus protein spikes, G (the protein that binds to the ephrin B2 receptor and activates the F protein) and F (the fusion protein that allows the virus to fuse with the human cell), and combined them with the other genes of the cow virus. The new, hybrid virus with the Hendra G and F proteins on its surface acted exactly like its more lethal cousins when fusing with a cell. But the hybrid, known as a "pseudotype" of Hendra, is not capable of sustaining an infection, even in cell cultures—so it is not dangerous to work with and can be studied in a Biosafety Level 2 lab. The scientists further engineered the pseudotype virus so that when it enters a cell it makes a fluorescent protein; the infected cells turn bright red under the microscope. The researchers made a similar pseudotyped virus based on Nipah, allowing them to study the mechanics of both Hendra and Nipah infection without risk to themselves or their colleagues.

Other Weill Cornell researchers are using pseudotyping to study lethal pathogens under normal lab conditions. Microbiology and immunology professor Dr. John Moore has been studying HIV with a similar goal—to prevent it from fusing with, and entering, the host cell. Like Hendra and Nipah, HIV is an enveloped virus, although it is a member of a different family, the retroviruses. The molecular details may be different, but the basic strategy is much the same: making assays that are simpler and safer to use.

Such cutting-edge lab techniques allow Porotto and Moscona to study lethal viruses in a deceptively simple facility. All the cells and viruses used in the Program's research are stored in two freezers. The coldest, filled with liquid nitrogen at –150 degrees Celsius, stores master stocks of viruses and backup supplies of the cells used in the culture systems. The other, at –20 degrees Celsius, contains bacteria used for cloning and engineering DNA as well as ready-to-use stocks of viruses that can be rapidly thawed and used in experiments. Scientists working with living cells and viruses that are growing in culture (in plastic sterile flasks) do so with their gloved hands under a laminar-flow hood, which sterilizes and circulates the air via filters. The process, Porotto says, is much more cost-effective and efficient than experimenting directly on lethal viruses in Biosafety Level 4 labs, which are enormously expensive to build and maintain. (There are only a few in the country; Weill Cornell does have a Biosafety Level 3 lab used for research on tuberculosis and malaria.) "We don't need anything other than the safety conditions built into the lab when it was constructed," says Porotto, "yet our results can be applied to some of the most lethal viruses on the planet."

opment in remote areas, and transplantation of animal populations to foreign environments. But because zoonoses are contracted through both direct and indirect contact with infected hosts—and depend on the constantly evolving relationship between humans and animals—studying them presents special challenges. Each zoonotic disease emerges, spreads, infects, and debilitates in different ways, all subject to numerous variables. Some, like Monkey B virus, can be contracted only through exotic animals—in this case, the macaque. Others, like ringworm, can be found in domestic pets. The various strains of Ebola cause symptoms that progress quickly from fever to bleeding and internal hemorrhaging, while cat scratch disease results in skin sores, swollen lymph glands, and exhaustion. The new coronavirus that emerged to cause SARS came to humans from civets, via co-housing of various animals in markets in southern China, where exotic creatures are eaten as delicacies.

"Zoonoses emerge as a result of wide-ranging societal and global changes," says Moscona. "Until recently, it's been extremely laborious to study how they spread and how epidemics start." She credits advances in molecular biology over the past twenty years with allowing researchers to study many new pathogens safely and efficiently. "A few decades ago, most research on zoonotic infections could be done only by using cells growing in live cultures," she says. "You had to find cells that would support the growth of the new microbes and use microscopy to study them. Remarkable advances in the last few years—for example, genome sequencing and cloning techniques—have made identifying and studying new pathogens much more practical."

Moscona and Porotto pay close attention to relevant veterinary research. In April 2006, they were invited to Ithaca to share their findings at Cornell's annual virology retreat. There they met

PROVIDED BY DR. ANNE MOSCONA

Under the hood: Paolo Carta, a graduate assistant in the Program for Respiratory Infections and Biodefense, tests potential antiviral drugs by using an innocuous virus that has some molecules of the lethal Hendra virus on its surface.

Colin Parrish, who studies parvoviruses that infect mainly dogs and cats but are potential zoonotic threats to humans, and Edward Dubovi, director of the Virology Section in the University's Animal Health Diagnostic Center, who has been investigating suspected outbreaks of canine influenza in dogs. Since Moscona and Porotto contend that common themes in viral entry mechanisms are key to developing new drugs to prevent or treat viral infections, they set up a collaboration with Parrish to study how parvoviruses and paramyxoviruses enter cells. Moscona and Porotto also expect to collaborate with Dubovi and other Ithaca-based researchers to analyze newly emerging zoonotic viruses.

Dubovi's research into canine influenza has disturbing implications for the future transmission of zoonotic diseases. The first significant natural canine influenza virus outbreak was diagnosed in 2004 at greyhound racetracks. Generally the infection results in mild clinical signs that mimic kennel cough, but the mortality rate can be 5 to 8 percent in stressed infected dogs. Canine influenza virus is not currently considered dangerous to humans. However, when sequencing the dog flu genome, the research team realized that all the segments of the genome were from equine influenza—a horse flu that has been studied for fifty years. "The idea that a virus can 'jump' species depends not just on whether it's initially transmitted from one to the other," says Dubovi, "but also whether it adapts to attain the ability to spread within its new host species." This jump from horses to dogs clearly shows the adaptability of influenza virus, as does the infection of Asian dogs and cats with the H5N1 virus.

An interdisciplinary approach to studying zoonotic viruses could be the key to combating infection, Porotto says. "The veterinary community knows a lot about these diseases, but may not realize what that knowledge means to humans," he says. "And we specialists in human viruses often don't learn enough about their research." Moscona stresses that researchers need to continue studying the common themes that these viruses share on a molecular level as well as the ways in which they differ; she sees these basic studies as key to understanding which features are more likely to make certain viruses pathogenic in humans. And since the spread of zoonotic diseases is directly linked to increased human-animal contact, she advises increased surveillance of wildlife and stray animals. Dubovi agrees, but thinks that we might need to do more. "We require vaccinations for domestic animals," he says, "but we may need to seriously start thinking about vaccinations for wildlife as well."

Then there's the issue of pets. A 2001 study in the *Postgraduate Medical Journal* noted that while domestic pets can carry more than 100 zoonotic diseases, only twenty occur regularly in humans and those are rarely fatal. However, the increase in exotic pets concerns Moscona. Exotic birds can harbor microbes that infect people, and snakes can carry salmonellosis—a zoonotic disease transmitted by reptiles.

Moscona and Porotto try to temper their eagerness for new breakthroughs with patience. Although they're intensely focused on studying viral entry, Porotto says, they're well aware that it can take years of experiments to uncover new mechanisms. To forge ahead, they depend on funding; support has come from grants from the National Institutes of Health, the Northeast Biodefense Center (an NIH-funded Regional Center of Excellence in Biodefense), the March of Dimes, and the American Lung Association. Meanwhile, the threat of zoonoses to human health remains pressing—and the pathogens themselves continue to evolve. "Zoonotic diseases occur because of relatively isolated, unconnected, and unplanned events," says Dubovi. "That makes them extremely unpredictable." ■

Wall of wonder: The Komansky Center for Children's Health at NewYork-Presbyterian Hospital/Weill Cornell Medical Center features a series of brightly colored murals depicting classic New York scenes, like these four-season views of Central Park.

JOHN ABBOTT

NOTEBOOK

Dear fellow alumni:
This is the first of several columns I will have the pleasure to offer as president of the Alumni Association. It was an honor to be elected at the biennial Business Meeting in October, held as part of Reunion 2006 (more on that shortly). I hope these next two years are marked by as much growth, progress, and excitement in our association as is evident at the Medical College itself.

MARTIN MARION

Our organization has more than 1,300 members, distributed around the U.S. and several foreign countries; they represent about 25 percent of living alumni of the Medical College. It's a good number, but we can do better. As you read this, I hope you will think of alumni whom you can actively encourage to join. In Spring 2008, we will welcome members from the Qatar branch. As was written here by my predecessor, Ken Swan, MD '60, a devoted and tireless ambassador for our college, the students in Qatar are just as diverse, talented, inquisitive, and successful as our New York students. It will be exciting to welcome them.

The graduates of the Medical College are vibrant and engaged, and those who take the opportunity to reconnect with the College bring that energy to our interactions. I was fortunate to meet quite a few who live and work in the Pacific Northwest at an outreach program in Seattle in October. The range of attendees included Elizabeth Welty, MD '41, whose eyes twinkled with curiosity and who wanted to see more of her classmates at Cornell events, and Drs. Philippa Ribbink and Carolyn Paris from the Class of 1991, who were attending their first such function.

Ken Swan's last column noted Reunion 2006, which was then approaching. I am delighted to report it was a smashing success, with record attendance during the talks and panel discussion as well as at the gala at Chelsea Piers. We entertained more than 600 alumni and guests in true New York style. There were two 50th Anniversary classes, and four other classes celebrated anniversaries of more than fifty years.

I see the mission for the leadership of the Alumni Association to be focused in three main areas. First, we will continue to engage alumni as we attempt to provide an easy, user-friendly, helpful conduit for information and interchange. We will immediately engage new graduates, in the hope of building life-long relationships. Second, we will continue to support student programs and events that augment the students' quality of life and access to career information. Our mentor program is a wonderful example: alumni host students during residency interviews or other regional travel, and provide local knowledge about hospitals, training programs, and lifestyle. And finally, the Association will continue its fund-raising efforts to support student education and scholarship relief. Ideally, we want alumni generosity to reflect gratitude for the education that has given us the professional credentials and training that have formed our lives. Alumni gave more than $3.4 million to the Medical College through the Association in the last fiscal year—an impressive number, but one that I know we can surpass.

You will, in this column, suffer my musing from time to time on matters germane to Medical College alumni. I welcome your ideas, input, questions, and comments, and look forward to serving you and meeting many of you in these next two years.

With my very warmest regards,
Gene Resnick, MD '74
President, CUWMC Alumni Association
gene.resnick@alumni.med.cornell.edu

1940s

Sherwin Kaufman, MD '43: After retiring from a medical career in infertility 15 years ago, Sherwin became an award-winning ASCAP composer and lyricist. His songs—pop, country, inspirational, and children's—have been recorded on several albums in New York and Nashville. He says that piano playing remains a continued source of pleasure. He recently composed "Introducing Children to Classical Music," playing familiar children's songs in the styles of the great composers. Some of his poems and short stories have also been published. Sherwin is a grandson of the author-humorist Sholom Aleichem ("Fiddler on the Roof"). His wife, Claire, a real estate broker, is senior vice president of the Corcoran Group in New York. They have three children, one of whom is a physician.

Morton A. Beer '41, MD '44: "I have now been completely retired for the past eight years. Unfortunately, I have lost all contact with my classmates. I continue to try to play golf two to three times a week. Needless to say, the scores are very high. Norma and I spend the winters in Florida and the rest of the year in Morristown, NJ, where we are surrounded by our children and grandchildren. Not a bad life. My winter address is in Boca Raton and the phone number is in the directory. I am always good for a lunch and maybe, the Lord willing, a round of golf."

Andrew L. Morgan, MD '45: "I practiced urology in Honolulu for 35 years, retiring in 1987. I was clinical professor of urology at the John Burns School of Medicine. I served as chief of surgery at the Queen's Hospital, as president of the Hawaii Medical Library, and as a member of the renal transplantation team at St. Francis Hospital. I joined the ALOHA Medical Missions and worked in the Philippines for three separate years, and I was a surgeon on Majuro Atoll."

Carol Branch Hyman '44, MD '47: "My answer to those who told us in 1944 that they did not like to admit women to the medical school as their education would be wasted by dropping out for family obligations: I was married for more than 50 years (until my husband's death). I have three daughters and two granddaughters. I am continuing to practice pediatric hematology part-time 59 years after graduation. And I'm enjoying a full life of family, friends, and travel."

Ted Thomas, MD '48: "Ruth and **Ed Knights, MD '48**, stopped by in August. We were able to spend the evening together, remembering old times at Cornell and an externship in Pawtucket, RI, where I delivered my first baby. We shared histories of our careers and families. My five children are scattered from Maine to California. I have four grandchildren, two in Maine, 12 and 15, and two in Needham, MA, 9 and 11. Barb has most of her family nearby, and we are able to care for a great-grandchild occasionally, a typical three-year-old boy. We still hike and climb, and belong to the Tramp and Trail Club of Utica, which has had a hike every weekend since 1921. We have climbed the entire Adirondack 46 and the Catskill 35. Barb has beaten me by climbing all the peaks over 4,000 feet in the Northeast. We especially remember Mt. Katahdin and the Knife Edge in Baxter State Park in Maine. We attend classes in the Mohawk Valley Institute for Learning in Retirement at SUNYIT, facilitated by retired teachers and other learned persons. Barb is devoted to exercise more than I am, but we both wonder why time goes by so fast. I attend grand rounds once a week and do some journal reading. I serve on the IRB Review Board in Faxton Hospital, but otherwise am retired from medical practice."

1950s

Anne B. Johnson, MD '51: "I am enjoying being retired with my husband, Jack. I am fortunate in that the group I worked with in our studies on Alexander disease is still active, and I'm included in some of their current work. Alexander disease is most commonly a devastating and fatal, but rare, childhood leukodystrophy. I've been the only one in our group with clinical experience and the main one to have contact with affected families. This disorder is genetic and caused by a dominant mutation in one of the child's genes for GFAP (glial fibrillary acidic protein). But it is not inherited, except in a few rare adult-onset cases, since generally neither parent has the mutation present in their affected child. I had suggested that since it was probably caused by a parental germ cell mutation, we should determine whether or not it was more common from the ovum or the sperm of the parent. I provided a number of parental blood samples for DNA analysis. Thus my colleagues were able to find that the source of the affected child's mutation was six times more common in the allele from the father than the mother. Yet parental age had no influence. The paper on this finding was published in *Human Genetics* (119:137), and I am an author."

Jay B. Skelton, MD '51: "I was introduced to Montclair, NJ, by our classmate **Roger Lochhead**. After finishing my five-year residency at the Cornell New York Hospital Lying-in Hospital in 1959, I started practice in Montclair/Glen Ridge. After 47 years of a very happy practice, I retired on August 15, 2006. They were wonderful years and now great memories."

Russell Hoxsie, MD '52: "Retirement since 1997 has been good to me. Mary Ann and I still live year-round on Menemsha Pond on Martha's Vineyard. We hang on during the blustery weeks from December through March and love to see the seasons change, which is a big thing on the Vineyard. Two of our boys, Chris and Russ Jr., have remained on-island, and Steve and Debby are in Portland, ME, and Wilbraham, MA. We enjoy six grandchildren. Except for attending Friday medical conferences on occasion and reading the summaries in the *New England Journal* and its 'Perspective' section, I am pretty well retired from the medical world, but still keep incredibly busy. **Dick Lennihan, MD '52**, sends me frequent reminders to keep in touch with important issues. I received the 2006 Creative Living Award from the Permanent Endowment Fund of Martha's Vineyard. Together with Jo Chinard, I published a small book of poetry, *Dinner at Dianthe's*. My poem 'Road Sense' was performed by the Island Community Chorus at its Fourth of July concert. I continue to write a bimonthly column, 'Off North Road,' for the *Vineyard Times*."

John Lanman '48, MD '52, and his wife, Nancy, shared a wonderful cruise to the Baja Peninsula of Mexico with **Roy, MD '52**, and **Allyn Hollingshead Lucas '52**. "We missed the rest of the class. We are still well enough to get around. I volunteer at the local free clinic once a week. It's fun, although not as exciting as internal medicine used to be in my private practice."

Ward O. Griffen Jr., MD '53: "**Harlan D. Root '50, MD '53**, and his wife, **Jill (Friedrich) '49, MD '53**, have left San Antonio where they lived for 40 years and gone to live near Brainerd, NY, in Dave's boyhood farmhouse. Dave is still working, although not as much as he used to. Meanwhile, my wife, Pudge, and I live in retirement here in beautiful northern Michigan. The summers are busy with visits from our children, their spouses, friends, and grandchildren (19 at last count)."

Peter Mahrer, MD '53: "Still teaching half-time as professor of radiology at USC."

Bernard Yablin '48, MD '53, has been elected president of the Residents' Council of the Jewish Home of Rochester, where he resides. He has also served as a member of the chaplaincy search committee and helps provide residents with Reform/Liberal Sabbath services. Daughter Adrian (11th grade) plays clarinet in the high school band, and in the summer of 2007 she will visit Australia, New Zealand, and Fiji as part of the People to People Program. Her 13-year-old sister, Dorian, plays the baritone horn and participated in the Holiday Tuba Choir performance at Midtown Plaza.

William H. Plauth Jr., MD '57: "Have spoken or written to classmates **Jim Beattie**, **Don Lathrop**, **Wally Campbell**, **Herb Oestreich**, **Don Taylor**, **Bill Black**, **Jack Madaras**, **Pat Barry**, **John Gerda**, and **Ray Biggs**—a total pleasure. Just a great group. Will be looking forward to seeing them at our 50th."

Bernie Siegel, MD '57: "I have a new book out on healthy parenting for both parents and children, *Love, Magic & Mud Pies* (Rodale Press)."

Beverly Billinger Shaver '54, MD '58: When she opened a copy of the book *Soldiers of Misfortune* in 1992, Beverly learned that her first husband, Navy pilot **James B. Deane Jr. '54**, who was shot down off the coast of China in 1956, may have survived. Katherine Shaver, Beverly's daughter, wrote an article "Truth and Lies," published in the *Washington Post* (May 7, 2006), about her mother's frustrating search for the truth. Former Secretary of Defense Donald Rumsfeld pressed the Chinese government for information about Deane's fate. (Rumsfeld and Deane were fellow Navy pilots stationed in Pensacola, FL, in 1954 and became friends.) Beverly made two trips to China to seek answers, and her daughter made repeated inquiries with the Chinese Embassy, to no avail. Kathleen quotes her mother: "After all you've done and all I've done, there is no question in my mind that we have probably exhausted the possibilities." The article is posted online at: www.washingtonpost.com/wp-dyn/content/article/2006/05/02/AR2006050201384.html?nav=rss_nation/special.

Edward E. Wallach, MD '58: "Since graduation, internship, residency, and two years of service in the USPHS Division of Indian

ABBOTT

Making an entrance: The street-level facade of the new Weill Greenberg Center at East 70th Street and York Avenue.

Health, I've had two jobs. The first was on the faculty of the University of Pennsylvania and the second at Johns Hopkins, where I moved in 1984 to chair the Dept. of Gynecology and Obstetrics. I remain at Hopkins, where I teach and mentor, conduct research, see patients, participate in the Assisted Reproductive Technology program, and do far less administrative work than during my first ten years here. I've initiated a multi-institutional program to determine the influence on couples of having cryopreserved embryos in storage—quite timely in light of our president's regressive stance on stem cell research. Still traveling quite a bit, but more for personal and family trips. Joanne and I have kids and grandchildren in Paris and in Columbus, OH. I was the guest speaker in November at the Japan Society for Fertility and Sterility in Kumamoto, Japan, but traveling to see the kids trumps most other jaunts."

James A. Amlicke, MD '59: "Enjoying the aging process here in South Carolina. Recently shot my age in golf. Appointed to the faculty of MUSC in Charleston, SC, as clinical assistant professor."

Richard Conroy, MD '59: "I retired in 1997 as director of psychiatry at Northern Westchester Hospital in Mt. Kisco, NY. We moved to Florida, but after five years I got a little bored. More important, the market dropped. Around that time, I got a call from a locum tenens organization and discovered there was a huge shortage of psychiatrists willing to do inpatient psychiatry. Since then, I have worked five or six months a year. I have been in upstate New York, Maine twice, New Jersey, and Tallahassee, FL. In 2005 I was back at my old hospital in my old job while a search committee looked for a new chief. Last summer I was in White Plains at NY-Presbyterian Hospital, the same place where **Bud Pray** and I had a psychiatric elective our senior year. The highlight of last year was the marriage of my daughter Sue to Bill Frith of Bermuda in Palm Beach."

Alfred J. Felice '55, MD '59: "I sadly report that our 'first class baby,' Rosemari, passed away July 5, 2003. Our three remaining children and seven grandchildren keep her memory alive. The oldest granddaughter, Alexandra Felice Ballensweig, started at Cornell this fall. She set the bar high for the other six. Two more will be applying this year. Our youngest granddaughter, Sage, 12, Rosemari's daughter, reminds us to remember the good times. It is hard. We all live in Nassau County, Long Island, but spend the winter in St. Thomas, VI. I have been retired since the end of 1995 after a major heart attack in 1989. I believe the warm winter has been a significant factor in my survival. I have six hotel rooms on the beach in St. Thomas, and classmates and families are welcome, but very early arrangements are necessary. Sandy Weill was my undergraduate classmate. He sure has done well. Nice guy too."

Paul E. Romano, MD '59 received an official speed certificate in April 2006 from the Big Bend Open Road Race for attaining the speed of 200 mph in a 1972 White Landry Saab.

1960s

John P. Hayslett, MD '60: "Since I have had reasonably good health, I have been able to continue my practice at both the Yale New Haven Hospital and VA Hospital by attending weekly specialty clinics in nephrology and the inpatient consult services in nephrology. I also have a secondary appointment in obstetrics because of my interest in high-risk obstetrics, which has brought me great pleasure and academic opportunities. Another source of pleasure has been my position as medical director of the Physician Associate Program at Yale. I helped develop a two-year master's program that we think is outstanding. Plans are now being made to establish a PA school in Uganda, which I'm looking forward to. When I graduated Cornell my mother wanted to know when I would 'hang out a shingle' like a real doctor. She eventually gave up asking when she realized that I did not want to leave school."

Rachel Remen '58, MD '62, is one of the pioneers of integrative medicine. She is clinical professor of family and community medicine at the UCSF School of Medicine and director of the UCSF course The Healer's Art, taught in 53 medical schools nationwide and abroad. She is co-founder and medical director of the Commonweal Cancer Help Program featured in the Bill Moyers PBS series "Healing and the Mind." Rachel is founder and director of the Institute for the Study of Health and Illness at Commonweal, an undergraduate and post-graduate CME program for physicians who wish to deepen their compassionate commitment and satisfaction in their work. She has a 52-year history of Crohn's disease, and her work is a unique blend of the viewpoints of physician and patient. She is the author of *Kitchen Table Wisdom: Stories that Heal* and *My Grandfather's Blessings: Stories of Strength, Refuge and Belonging*.

Nicholas L. Tilney, MD '62: "I am now president (2006–08) of the Transplantation Society, a large international organization dedicated to the art and science of organ and tissue transplantation. My recent book, *A Perfectly Striking Departure: Surgeons and Surgery at the Peter Bent Brigham Hospital, 1912–1980*, was published in 2006 by Science History Publications, Sagamore Beach, MA."

King Holmes, MD '63, was named the first chair of the Dept. of Global Health at the University of Washington. The Bill and Melinda Gates Foundation donated $30 million to launch the department. Holmes founded the UW Center for AIDS & STD in 1989 to fight the spread of AIDS and other sexually transmitted diseases. He served as chief of medicine at Harborview Medical Center in Seattle in the 1980s.

James Bernstein, MD '64: "When **Larry Hanlon '35**, **MD '38**, acquiesced to my brazen request to start school six weeks late after a nasty bout of hepatitis, critical lists, and New York Hospital from the inside out, little did I imagine a life journey as colorful and varied as I have enjoyed. From open-heart surgery in the Andes after my freshman year, running a 100-bed surgical ward in a missionary hospital in India between third and fourth year, to Bellevue 2nd division first with **Tom Almy '35**, **MD '39**, and then **Dick Karl**, **MD '44**, to taking the whole resident group to UCSD after 2nd Division died an ignominious death, to running Jonas Salk's lab at the Salk Institute, to running the Georgetown Health Policy center, to heading Jimmy Carter's health policy group during his first presidential campaign—all before I began my current incarnation as a serial entrepreneur. So after developing the first health-risk estimation models and products, launching the first health-care superstore in the US, building from scratch the first private wholesale distribution company for pharmaceuticals in Russia, and launching what became one of the largest bioinformatics companies in the world, I now find myself as CEO of Noxilizer."

James J. Crossley, MD '67: "I was a resident and intern at New York Hospital for two years and completed my otolaryngology residency at Upstate Medical Center in Syracuse. My wife, the former Patricia Wood, also worked at New York Hospital. I was at Fort Sill, OK, from 1973 to 1975, then moved to Greensboro, NC, to practice ear, nose, and throat. I have three children and six grandchildren. I returned to Cornell with memories of the great friends we had at New York Hospital and Cornell Medical."

Bill Rutherford, MD '67: "Retired January 2001 as vice president of Flight Standards and Training at the end of a 32-year career as a United Airlines pilot. Co-founded the Miami Center for Patient Safety at the University of Miami/Jackson Memorial Hospital in 2003 and joined the faculty at the College of Aviation, Western Michigan University, in 2004, where I now serve as associate dean of research and co-director of the Center of Excellence in Simulation Research."

N. Reed Dunnick, MD '69, professor and chair of the Dept. of Radiology at University Hospital in Ann Arbor, MI, received the American Roentgen Ray Society's highest award, the Gold Medal for Distinguished Service to Radiology, at the society's meeting in Vancouver, BC.

Paul A. McGee Sr., MD '69: "Still enjoying my thirty-fourth year in private solo geriatric internal medicine practice. No regrets. Great being a doc."

1970s

Eric Gutnick, MD '71: "I won my age group (60–65) this summer at the 17th annual Vineman Ironman Triathlon in California. It was my eighth Ironman finish, including the one in Hawaii."

James H. Newman, MD '71: "I have lived and worked in Wilmington, DE, for the past 26 years. For the first 24 years I was in the private practice of rheumatology. During this time I became progressively involved in our major health system, Christiana Care. I served as chair of the board of directors of the Physician's Organization for two years and on the board of directors of the Christiana Care Health System for eight years. I led various projects during this time including the development of our freestanding Helen F. Graham Cancer Center on the Christiana Hospital campus. Two years ago I left private practice to become associate chief medical officer at CCHS, patient safety officer and medical director at our Wilmington Hospital campus. I maintained a rheumatology practice with 30 percent of my time. In November I became chief medical officer for our entire organization. Christiana Care has 1,200 beds and 1,400 physician staff members, and it is one of the top four employers in Delaware. It is a community teaching hospital with active residency and fellowship programs and is an affiliate of Thomas Jefferson Medical College. I have been married to Leslie for 27 years and have two sons, Michael (a recent graduate of Columbia Law School) and Craig (a recent graduate of George Washington University). Actually, Leslie works much harder in her career and community activities than I do."

Patricia Duerr DuBose, MD '72: "Day job: ID physician. After hours: babysitting for my new granddaughter. My oldest daughter and her husband are physicians who just moved here for fellowships after residency in Baltimore. Doing recently: great trip to Hawaii last year (our first). Rather be doing: not dealing with the bureaucracy in medicine. Remember the most: being part of our great class as we became immersed in medicine; how much CUMC had to offer. My younger daughter has been living out west. She works for a company that provides Web-based oncology information service; she does every outdoor activity imaginable. Back East for an MBA next year."

Geoffrey Sheridan, MD '72: "Last year was my tenth year survival post-bone-marrow transplant for leukemia. I'm doing well, am retired, and my wife, Pam, and I are gentleman/woman ranchers in a small town in central Utah. Quite a change for an old Long Island boy. The only thing I don't miss about practicing is that late-night ER call."

Jon A. Perlman, MD '73: "I began my private practice as a plastic and reconstructive surgeon in Los Angeles and developed a cosmetic surgical practice while treating industrial hand injuries and major burn injuries at local hospitals. During my first 12 years in practice, I not only operated in Beverly Hills but also provided traumatic and reconstructive hand surgical procedures for many immigrant laborers in the South El Monte area outside of Los Angeles. In early 2003 I received an unexpected phone call from the producer of the ABC TV show 'Extreme Makeover.' Although flattered, I was hesitant to accept an invitation to participate in a 'Cinderella story' TV show in which I would be consulting and performing extensive cosmetic surgeries on national television. After being convinced that both safety and medical ethics were priorities of the show, I decided somewhat nervously to proceed. Little did I know at the time that I would be performing nearly 40 extensive plastic surgical makeovers on 27 different patients over the next two years. I also couldn't fathom how gratifying the experience would prove to be. My greatest sense of accomplishment came from learning how many 'average' people suffered from poor self-esteem due to their physical shortcomings. I received e-mails from grateful viewers around the world who were motivated to diet, exercise, or improve their appearance, thanking me for my small part in helping them turn their lives around. Many had taken steps toward accomplishing their own makeover. I now continue in my regular practice of plastic and cosmetic surgery in Beverly Hills and still perform volunteer teaching as a clinical assistant professor of plastic surgery at UCLA Medical Center. Life has returned to normal, but the power of the media has made the last several years a whirlwind of fun and satisfaction." ("Extreme Makeover" is currently being rerun on the E Style Network.)

Wally Schlech, MD '75, is still professor of medicine in the ID division at Dalhousie University in Halifax, Nova Scotia. He's spending several months a year in Uganda at the Infectious Disease Institute in Kampala teaching and doing clinical work as professor-in-residence. He's also visited Bugando Medical College, a Weill Cornell-affiliated school in Mwanza, Tanzania, and spent three months with Emmanuel Hospital Association doing teaching and HIV work in North India in 2004. He's the governor for Atlantic Provinces of the ACP. Thirty-one years of marital bliss with Mary and five kids, plus assorted cats and dogs, keeps him occupied, as well as golf, fishing, and flying his Cherokee around eastern Canada and New England. Visitors are always welcome. Wally had a nice chat with Peg and **Kevin Kelly, MD '80**, last year on their way to Cape Breton.

Open space: The Weill Greenberg Center's waiting rooms have home-like furnishings and city views.

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Elwin Schwartz, MD '76, received an award last fall at the annual meeting of the American Academy of Ophthalmology in Las Vegas, NV. He has served for the past five years as the representative for the New England states on the academy's Secretariat of State Affairs. Elwin serves on the executive board of the Connecticut Valley Society of Eye Physicians. He is president of Middlesex Eye Physicians, which has expanded to seven ophthalmologists. He and wife Cheryl enjoy sailing and golf in summer and skiing in winter. Their oldest daughter, Ann, is married and pursuing a PhD while teaching computer science and math at Thomas Jefferson High School in Fairfax County, VA. Their daughter Erica pursues her dream and is working as an assistant theater producer in Manhattan; she is involved in the shows "Wicked" and "25th Annual Putnam County Spelling Bee."

Jeffrey P. Gold '74, MD '78: After practicing cardiac surgery since 1985, and more recently serving as the professor and chair of the Department of Cardiothoracic Surgery of the Albert Einstein College of Medicine from 1995 through 2005, Jeff was appointed as the sixth dean of the College of Medicine and senior vice president for medical affairs of the Medical University of Ohio in May of 2005. Jeff currently serves as the executive vice president and provost of health affairs and dean of the College of Medicine of the University of Toledo. In this capacity, he is leading this newly forged entity through a complex merger process, with responsibility for the colleges of medicine, nursing, graduate health science studies, pharmacy, health sciences, and health and human services in addition to the university-owned hospitals, clinics, research centers, and health-care related programs. Jeff and his wife, **Robin (Hayworth)**, **MD '78**, who practices ophthalmology, have two children, Matthew, 22, and Stephanie, 17.

Paul Skudder Jr., MD '79: "I am sad to report the loss of my father, **Paul Skudder, MD '53**, on June 24, 2006. Many of the class knew him as a member of the surgery department at NYH-CUMC during our years at the Medical College. Fortunately, he remained generally well until the last weeks of his life. I and my family are doing well otherwise, and enjoying the fruits of family and career."

Gary Wilton '75, MD '79: "After 22 years in Florida, Lisa and I are moving to the desert in Las Vegas, so we've been preparing for that. Sorry I missed the 25th, but I will try to be more diligent and make the 30th. After my 5-0, I just couldn't read another film, so after practicing radiology in Naples, FL, for 19 years, I decided to retire from active practice in 2004 and join with partners of a different sort. I sold my interest in three imaging centers, and I and three others partnered to form a Naples-based group to develop mixed residential/condo/commercial real estate. We have had success, but this is less than full-time. So, while keeping this Naples interest, Lisa and I have 'retired' to Nevada, where I will again partner and assume a position as sole medical director/principal owner of four start-up imaging centers, two in Las Vegas and two in Phoenix. For my 50th, Lisa threw me a surprise 'casino night/roast' at the Naples Grande Hotel. **Paul Watkins '75**, **MD '79**, sent a video of his monologue to the roast, which was typically brilliant, and kept the guests mesmerized when they weren't laughing out loud. The whole production was kind of a video vignette/SNL/Cornell Christmas show simile. Great fun."

1980s

Steven Kariya, MD '80: "After hours I manage my son's soccer team, create lectures, try to exercise thrice weekly. I have been involved with a number of nonprofit organizations. I videotape my son's soccer games for his coaches and teammates. It helps that his high school team was recently rated ninth in the *Washington Post*. I love teaching and miss the George Washington medical students and house staff who used to rotate through my hospital. I most remember going to Camp Khao-I-Dang as one of the first medical students to rotate through that Cambodian refugee camp. The gunfire sounds at night and the cases of malnutrition and deadly measles will stay with me forever. I would like to hear from **Andy Shadid**, my roommate for two years, who moved to California and has not been heard from in a while."

Kevin Kelly, MD '80: "A few years ago, after a couple of decades of private practice in psychiatry with a smattering of voluntary academic activity on the side, I had an unplanned mid-life career change. In the aftermath of 9/11, I began volunteering psychiatric care to members of the FDNY. Some months later, my volunteer job morphed into a salaried position, and I am now a medical officer with the rank of battalion chief. I have a uniform, badge, and parking placard, but (fortunately for all concerned) they don't let me fight fires. I still have a part-time private practice and do a few academic things. I enjoy the package, and I enjoy knowing that I'm not yet too old to learn some new tricks."

Elizabeth A. Wuerslin, MD '81: "I am well and happy and living in Fort Collins, CO, working as a pediatrician for Children's Hospital Denver, covering peds practices in Colorado and Wyoming, and traveling abroad for international surgery trips. The last trip was to El Salvador last March with Rotaplast of San Francisco. I'm divorced, no children, two cats, great garden, love to ski, volunteer every winter at Copper Mountain. All classmates invited along for a complimentary ski tour."

Douglas F. Buxton, MD '82: "I continue solo private practice and am attending surgeon in ophthalmology at New York Eye & Ear Infirmary. Married redheaded Diana Margaret Butler in March 2005. Hoping for more happy news one day."

Andrew M. Casden '79, MD '83, is an orthopaedic surgeon specializing in spinal surgery. He is the associate director of the Spine Institute at Beth Israel Medical Center in New York. Andrew is also associate professor of orthopaedic surgery at Albert Einstein College of Medicine. He has three boys, 19, 18, and 8. He and his wife, Jeri, celebrated their 25th anniversary last August. They live in Scarsdale, NY.

G. Steven Bova, MD '84: "I was asked to give a talk to my niece's Loyola College medical school class in March 2006, and this spurred me to see what our class had to say about their first 22 years as physicians. The Web survey I created with the help of **MD '84** classmates **Sam Chaplan**, **Susan Cohn**, and **Albert Wu '80** turned out to be a lot more interesting than the talk at Loyola. An amazing 62 of you have responded to the survey so far, and as Chris Gribbin recently e-mailed, 'We had a great class.' There are several of you who I was not able to contact by e-mail. If you'd like to take the survey (and see your fellow classmates' responses—it's just five open-ended questions), please contact me at gsb@telamon1.us."

David A. Haughton, MD '84: "Greetings to all from the Purple House in New Westminster, BC. Lyne and I visited Greece last Spring. I reconnected to family (my sister, Anna, and cousins from my mother's family) and old friends. Lyne sampled Greek island living on the Cycladic isles of Folegandros and Santorini. We hiked most days, starting very early to avoid the heat, and thus saw owls and beautiful sunrises. I did lots of painting in watercolor and acrylic during the rest of the day. Alexis Philactopoulos, the director of College Year in Athens, offered me a chance to exhibit my new works from Greece at the Ismene Gallery on the Platea Stadiou near the Acropolis in central Athens. The show will open in June 2007, and I will return to Greece for the opening. The first set of these works can be seen on my website: www.haughton-art.ca. I attended College Year in Athens right after high school in 1974–75. I studied modern Greek language, ancient Greek history, sculpture and archeology, history of religion, and philosophy from some of the brightest and most articulate teachers I have ever had. On the personal side, I am no less delightedly in love with Lyne. We had a wonderful time together in Greece."

Lawrence W. Robinson, MD '84: "I joined the Endocrine Group in Albany, NY, as the only surgeon for a ten-man endocrinology practice in July 2005. Really a great group. My practice e-mail is: lrobinson@theendocrinegroup.com."

John R. Brierly, MD '86: "Objects in the rearview mirror appear closer than they are. After another four years in New York City and a two-year fellowship at UCSF, I managed to settle into a university job as a cornea specialist at UK for seven years. The prospect of sending three boys to college made me come to my senses, and I am now in private practice in Chattanooga, TN. The practice is booming. We have built a surgery center, and we are getting ready to build a new office building. Twenty thousand cataract surgeries later, I can finally say I am actually pretty good at one thing. If I can just find a glaucoma specialist, I might be able to spend more time on the golf course. As for the male species tendency with age to grow hair on all parts of his body except the top of his head, I am faring reasonably well. No hair transplants or laser treatments yet."

Montgomery B. Douglas, MD '86: "On July 1 I was appointed acting chairman of the Dept. of Family Medicine of New York Medical College. I continue to practice as chairman and program director of the Family Practice Dept. of St. Vincent Catholic Medical Centers."

Walter J. O'Donnell, MD '86, has returned to the Boston area after spending four years as the vice chair of medicine at Allegheny General Hospital in Pittsburgh, PA. He and his wife, Mary, live in Hingham, MA, and consider their children—Kathleen, 20, Tom, 19, Walt, 18, Mary Claire, 16, and Robert, 14—to be their greatest achievements since graduation. After an early career in clinical research, Walter now works in general pulmonary medicine, lung transplantation, and critical care medicine. He teaches medical students, residents, and fellows. He is the clinical director of the Pulmonary and Critical Care Division at Massachusetts General Hospital and assistant professor of medicine, Harvard Medical School.

Walter A. Klein, MD '87: "Jen and I have passed a new milestone: our oldest daughter is now a freshman at Cornell. Ali is having a

great time, but is also impressed by the amount of homework that is already due. I guess we can look forward to many fun trips up Route 17 to visit gorgeous Ithaca."

Stuart Rubin, MD '87: "I am currently a partner at Windsong Radiology, a 13-member outpatient imaging practice with offices in Williamsville, Lancaster, and Amherst, NY. My wife, Lisa, just completed a two-year stint as president of the Transit Middle School PTA. We have two boys, Matthew, 13, and Daniel, 11."

1990s

Carolyn S. Eisen, MD '91, is on staff at NewYork-Presbyterian Hospital/Weill Cornell Medical Center in the Dept. of Radiology, where she specializes in breast imaging and intervention. She lives in Manhattan with her husband, **Mark Schwartz, MD '84**, a plastic surgeon, and her two daughters, Rebecca and Alexa.

Brian A. Aslami, MD '93: "I practice psychiatry and psychoanalysis at my office on the Upper East Side of Manhattan. I enjoy teaching the voluntary faculty of Weill Cornell, especially my work supervising psychiatry residents who are learning to do long-term psychotherapy. I also enjoy teaching a class at the New York Psychoanalytic Institute."

Eric S. Korenman, MD '94, who practiced radiology in Pittsfield, MA, now practices with Advanced Berkshire Imaging P.C., the radiology team that serves Berkshire Medical Center and Fairview Hospital.

Eva M. Aagaard, MD '95, was named associate chairman for education at the University of Colorado.

Kavita Aggarwal, MD '96: "After medical school, I stayed on for residency in internal medicine at New York Hospital and then took a faculty position at Memorial Sloan-Kettering. My husband, fellow alum **Manoj Abraham, MD '97**, and I later moved to Los Angeles for his fellowship in facial plastics and are now back in the New York area. I've joined as partner at a multi-specialty group in Dutchess County and Manoj is busy starting up a solo practice. Our little boy, Kiran, 3-1/2, and his sister Minali, 2, make our family complete. If you're ever in this area or live in the city, we'd love to catch up."

Natalie E. Azar, MD '96: "Following graduation, I completed my residency in internal medicine at NYU Medical Center and went on to do a fellowship in rheumatology at NYU/Hospital for Joint Diseases. I've been in private practice at NYU since 2001, spend a great deal of time teaching both medical students and house staff, and participated in medical and bench research as part of my fellowship training. I married Michael Hubner, a lawyer, in November 2000, and gave birth to my precious little boy, Lucas, in June 2005."

Michael S. Suzman, MD '96 and his wife, Leesa, welcomed the birth of their third daughter, Brooke Josephine, last November. She joins her older sisters, Chloe and Maisie. They live happily in Scarsdale, NY, where Michael is director of plastic and reconstructive surgery at the Westchester Medical Group, a large multi-specialty group practice in Westchester County. He continues his Cornell affiliation on the clinical faculty.

Chery Wongtrakool, MD '97, and her husband, Vin Tangpricha, welcomed Lucas Narong Tangpricha on April 28, 2006. Big sister Natalie is extremely proud of her new brother. Chery says, "We remain on faculty at Emory University School of Medicine and enjoy living in Hotlanta."

Manisha Juthani-Mehta, MD '98, was appointed assistant professor in the Section of Infectious Diseases at Yale School of Medicine in July 2006. She dedicates most of her time to clinical research in the area of infections in older adults, particularly UTI and pneumonia in nursing home residents. In addition, she attends on the HIV inpatient medical and ID consultation services and teaches medical students, PA students, residents, and ID fellows. Manisha lives in Fairfield, CT, with her husband, Raj Mehta, daughter Ishani, 6, and son Shaan, 3. She would love to hear from any classmates at manisha.juthanimehta@gmail.com.

Tim Dutta, MD '99, has finished training and is practicing endocrinology at Weill Cornell.

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Patricia Kozuch, MD '99, joined the Division of Gastroenterology and Hepatology at Thomas Jefferson University Hospital. She is a specialist in inflammatory bowel diseases, including Crohn's disease and ulcerative colitis. Kozuch worked at the University of Chicago Hospitals where she completed an IBD advanced fellowship. She also worked as a research assistant at the National Institutes of Mental Health and Johns Hopkins School of Medicine and held a fellowship in gastroenterology at Montefiore Medical Center.

2000s

Natalie Igel, MD '02: "I am finishing my radiology residency at NYPH/Weill Cornell and staying on here as a fellow in Women's Imaging/Body/MRI for the next year."

Francine Samuels, MD '02: "I am in my second year of fellowship at Morgan Stanley Children's Hospital of NY-Presbyterian/Columbia University Medical Center. My fellowship is in pediatric gastroenterology, hepatology, and nutrition. I graduated from Yale's pediatric residency and have decided to return to New York, as my brother and sister are both physicians in the city. It has been great to be back with family and friends, and I would love to be in touch with anyone else who wants to contact me."

Jonathan Lee-Melk, MD '03: "I am thrilled to have finished my residency training in pediatrics at Phoenix Children's Hospital. I am excited to relocate to southeastern Arizona, where I will work with a nonprofit health organization (as the region's only pediatrician) to provide preventive and curative care along a remote stretch of the US–Mexico border."

Douglas M. Weine '00, MD '04: "Romy Park and I were married last June in New York City. Thanks to my medical school classmate **Lilly Wang, MD '04**, for setting us up. Romy is working toward her master of fine arts in graphic design at Yale, and I am in my final year of internal medicine residency at Cornell, where I will be staying for a gastroenterology fellowship."

Rafael Vazquez, MD '06: "I managed to compete in two amateur bodybuilding competitions during my intern year. I won the men's overall at the INBF Long Island Bodybuilding Competition and recently placed first at the men's middleweight class INBF NYS Bodybuilding Championships."

IN MEMORIAM

'39 MD—Francis G. Casey Jr. of Maplewood, NJ, October 7, 2006; surgeon and anesthesiologist, St. Peter's Hospital, New Brunswick, NJ; veteran; active in professional and religious affairs.

'43 BA, MD '46—Stanley B. Gittelson of Palm Beach Gardens, FL, June 29, 2006; pediatrician; inventor; musician. Tau Epsilon Phi.

'46 MD—Lyman Maass of Palm Desert and Sacramento, CA, September 26, 2006; neurosurgeon; chief of Neurological Surgery Section, Sutter General Hospital; asst. clinical professor, University of California–Davis School of Medicine; veteran; active in professional affairs.

'46 MD—W. Robert Shera of Scarsdale, NY, June 21, 2006; orthopaedic surgeon, White Plains Hospital; veteran; worked for NY Workers' Compensation Board; also worked for Riverfront Associates; active in community, professional, and religious affairs.

'46 MD—Robert W. Tawse of Sun City Center, FL, October 11, 2006; urologist; veteran; pilot; active in community, professional, and religious affairs.

'46 MD—Lynn Poucher Thompson (**Mrs. David D. '43, MD '46**) of Cumberland Foreside, ME, June 24, 2006; physician; cancer researcher; chair, hospital auxiliary, Cornell Medical Center, where she founded the "Art Cart" program; artist; active in community, professional, and alumni affairs.

'49 MD—Melvin B. Goodman of Houston, TX, July 15, 2006; psychiatrist; forensic psychiatrist; worked at Vernon State Hospital and Rusk State Hospital in Texas; director of mental health, Westchester County, NY; director, Day Care Hospital at Philadelphia General Hospital; veteran; author; active in professional affairs.

'49 MD—John G. Rogers of Amelia Island, FL, November 14, 2006; cardiologist; chief of medicine, Zurbrugg Memorial Hospital, Riverside, NJ; veteran; active in community and professional affairs.

'50 MD—S. Frank Redo of New York City, July 4, 2006; chief of pediatric surgery and professor emeritus of surgery, NY Hospital–Cornell Medical Center (1960–95).

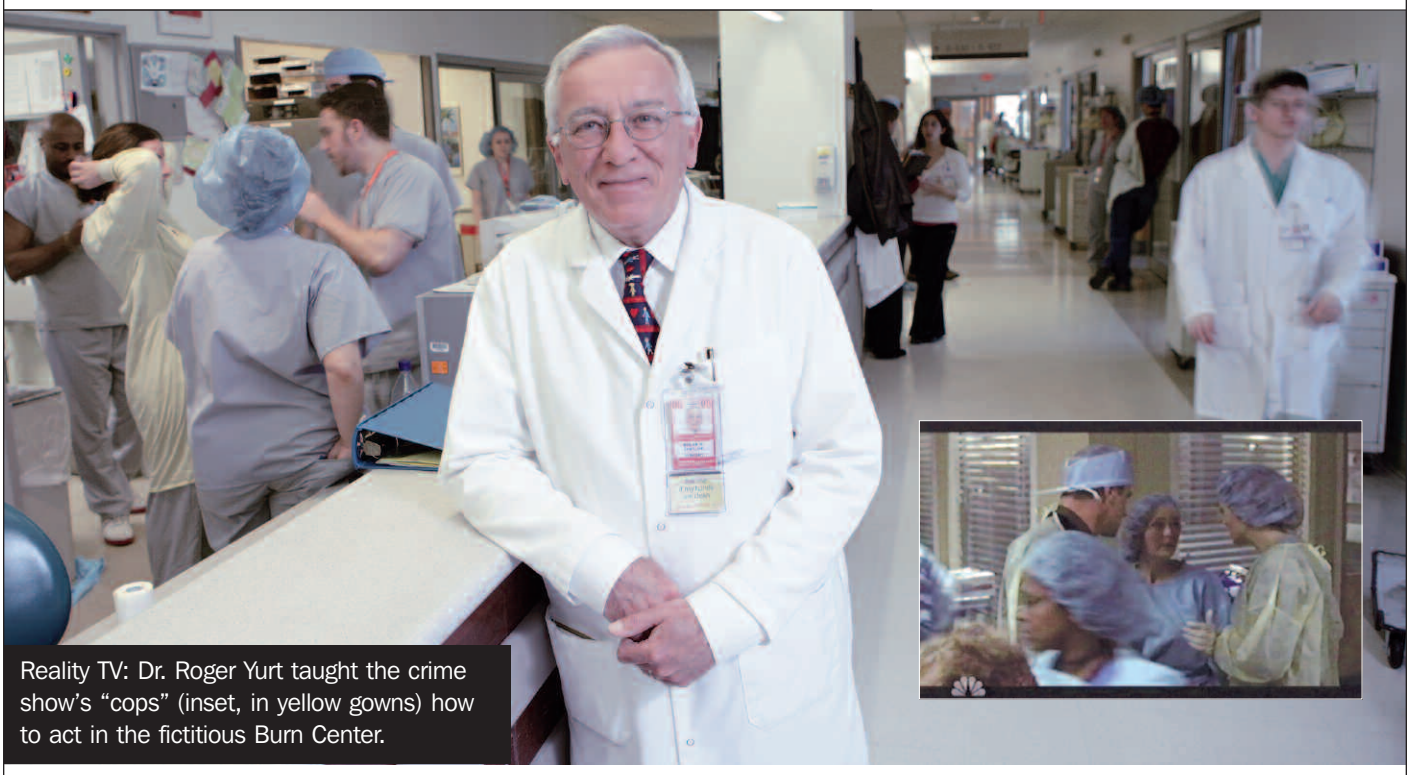
'51 MD—David S. Burgoyne of Phoenix, AZ, July 8, 2006; psychiatrist; chief of staff, Phoenix Camelback Hospital; veteran; former president of the Arizona Psychiatric Society and the Phoenix Psychiatric Council; active in professional affairs.

'53 MD—John B. Branche of Orlando, FL, August 13, 2006; pediatrician; chief of pediatrics, Mercy Hospital; officer with the Tuskeegee Airmen; worked with the NAACP; active in civic, community, professional, and religious affairs.

'54 MD—Richard T. Furr of Ocean Springs, MS, October 19, 2006; family practice and internal medicine physician; operated the Furr Clinic; associate professor of medicine at the University of Mississippi Medical School and Tulane University School of Medicine; president, Howard Memorial medical staff; chief of medicine, Biloxi Regional Medical Center; host of radio program "House Call with Dr. Furr"; veteran; musician; active in community, professional, and religious affairs.

'65 BA, '69 MD—Bernard Paladino of Las Vegas, NV, January 14, 2007; psychiatrist; attorney; locum tenens physician, California Corrections Dept. at prisons in Tehachapi and Corcoran, CA; served in rural Nevada clinics in Yerington, Elko, and Ely.

'73 MD—William P. Homan of White Plains, NY, July 5, 2006; surgeon; director, bariatric surgery program, White Plains Hospital Center.



Reality TV: Dr. Roger Yurt taught the crime show's "cops" (inset, in yellow gowns) how to act in the fictitious Burn Center.

JOHN ABBOTT

Art Imitates Life

Helping 'Law & Order' do no harm

THE PATIENT CAME INTO THE BURN UNIT WITH severe injuries: her estranged husband had set her on fire. A pair of NYPD detectives interviewed her at the bedside, the victim gasping for breath and in extreme pain. Dr. Roger Yurt looked on—not to treat her, but to make sure her fake burns looked realistic.

Yurt, a surgery professor at the Medical College and director of the William Randolph Hearst Burn Center at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, spent a day last fall as a consultant on the New Jersey set of "Law & Order: Special Victims Unit." After reviewing the script in advance, he sat beside the episode's director and offered advice on two scenes: one when the patient is first brought in, and another when she's being treated in the tank room. "It's important for the public to get the right perspective on medical care," he says. "I wanted to assist in any way I could to make sure it was accurate."

Still, medical realities sometimes give way to dramatic license. When Yurt read that the script included the use of maggots for debridement, he noted that they're not standard treatment; the producers opted to leave them in anyway. And during the six-hour gap between the first and second scenes, Yurt pointed out, the patient would become markedly swollen with fluid—but approximating that with make-up was impractical. However, he did successfully lobby to change a cardiac arrest to a respiratory arrest, since the former would have made it all but impossible for the patient to speak to detectives just six hours later. "It can still be dramatic," he says, "but you could reasonably interview her."

Yurt's other responsibilities on the three-to-midnight shoot included deciding when it was appropriate for TV cop Mariska Hargitay to remove her surgical mask and devising realistic ways for the nurses to clean the patient without drowning out the dialogue. He also gave the actress playing the victim some perspective on what her character would be going through. "I told her that every time they touched her it would be excruciating. She'd ask for pain medication, and she'd have trouble breathing because of inhalation injury."

Before shooting the episode, which aired in mid-January, show representatives visited the burn unit to take notes. "The sets were remarkably accurate," Yurt says. "Their tank room was perfect." He was joined on the set by four nurses from the unit, who had background roles.

Yurt had his own dressing room and was "treated like royalty." But he learned that the wheels of drama grind slowly: each scene was shot ten to fifteen times. "I felt like I was at work, but I wasn't," Yurt muses about his brush with Hollywood. "I was doing what I do, but there were no patients."

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