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FALL 2007

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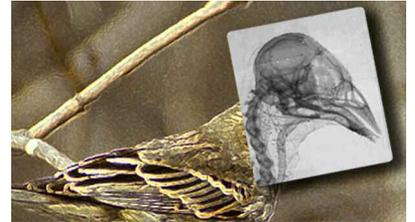
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THE MAGAZINE OF WEILL CORNELL MEDICAL COLLEGE AND WEILL CORNELL GRADUATE SCHOOL OF MEDICAL SCIENCES

18 THE GENTLE TYRANT

BETH SAULNIER

Everyone needs sleep—but more than 10 percent of Americans have chronic insomnia. At Weill Cornell's Center for Sleep Medicine, psychologists and physicians help patients solve their sleep problems, caused by everything from depression to apnea to plain old bad habits. "Insomnia," says the Center's associate director, Arthur Spielman, "is the bane of people's existence."



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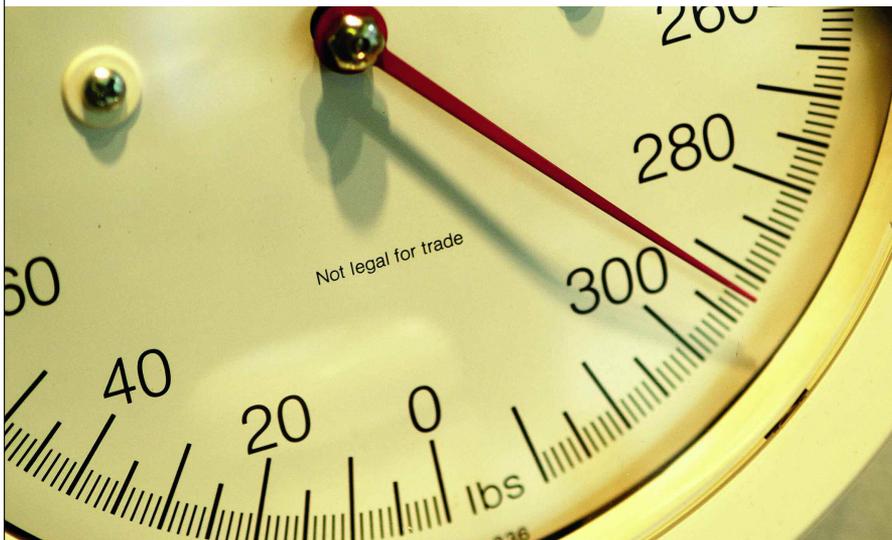
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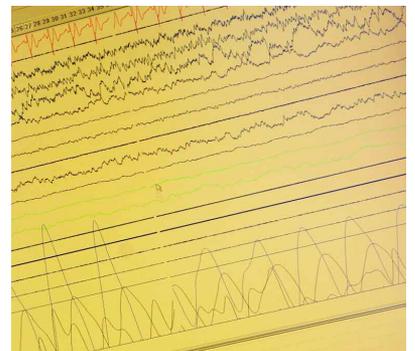
JENNIFER ARMSTRONG

A third of Americans are obese, with another third merely overweight. And while all those added pounds create their own health problems, they're also fueling a separate epidemic: Type 2 diabetes. Once known as the disease's "adult-onset" form, Type 2 diabetes is increasingly common among children—but Weill Cornell researchers and physicians are fighting back.

32 BACK TO BASICS

SHERRY STOLAR

Each spring, Weill Cornell's fourth-year students come together for a two-week seminar before going on to their internships. Called Advanced Biomedical Science, the mini-course prepares students for medical practice by reiterating basic concepts in a more sophisticated context, with prestigious guest speakers and a collegial atmosphere. For the soon-to-be MDs, it's part academic capstone, part class reunion.



Cover illustration by Ward Schumaker

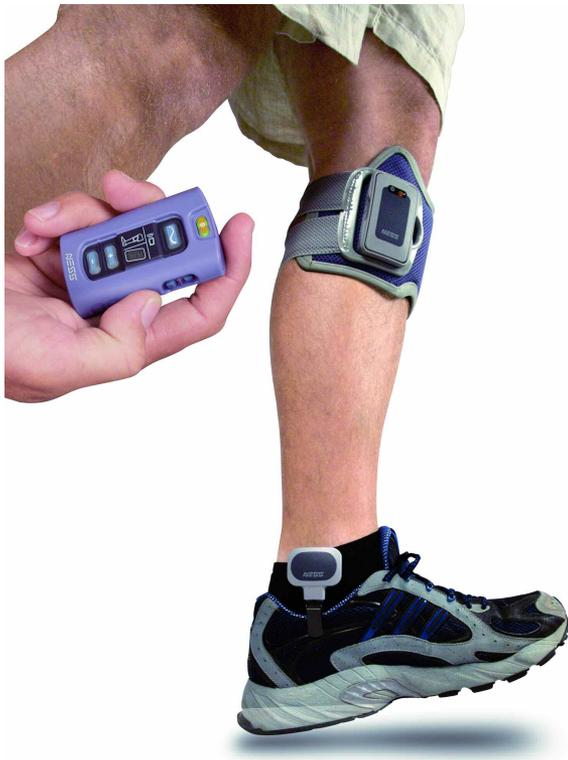
The Age of Possibility

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

THE START OF A NEW ACADEMIC YEAR BRINGS to mind a conversation I had with a colleague several months ago. We were discussing the incredible advances in medicine, particularly in medical technology, and he marveled at the “age of possibility” in which we currently live.

It is something to think about. Technology has advanced to such a degree that we are able to prolong life in ways once unimaginable. Diseases such as multiple myeloma, once considered terminal, can now be man-

Walking tall: The NESS L300 aids stroke patients.



BIONESS

aged as chronic conditions, thanks to medical breakthroughs that keep the progression of the disease at bay.

And yet technology can take us only so far. If this is truly an age of possibility, it is education—classroom and clinical—that will transform lives. Excellence in education will no doubt play a major part in the technological progress of medical care, but we must not forget the important role we play in reminding students of the human element in medicine.

Consider, for example, a recent case at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. Michael Marin, a forty-three-year-old physical education teacher in New York City, suffered a stroke on Christmas Day 2005. He went from running marathons to barely being able to stand. But now, thanks to the NESS L300, an electrical stimulation neuro-rehabilitation unit worn on the leg and foot to improve mobility, he has returned to work and no longer needs the assistance of a cane.

But it was not this breakthrough device alone—amazing as it is—that got Michael back on his feet. It was his team of doctors, nurses, and rehabilitation specialists who taught him how to use the system and how to walk again. While he recognizes the role that the NESS L300 played in his treatment, he credits the success of his recovery to the relationship he had with his medical team. “Without the support I got from these folks,” Michael says, “this device would have been useless.”

Because of the world we live in, the students in our MD program today must be technologically savvy. They understand and appreciate the role that technology plays in their daily lives, and they will no doubt seek out innovative ways to incorporate it into the care of their patients. But at Weill Cornell it is our responsibility, as their teachers and mentors, to temper that enthusiasm with a deep appreciation for the relationship between doctor and patient—which is something that technology, no matter how advanced, can never replace.

— Dean Antonio Gotto

Lonely, Tired, and Pale, No Longer

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

■ IT'S A POPULAR IMAGE OF RESEARCH: IN A LABORATORY tucked away in a sub-basement of a windowless building, exhausted graduate students and doting professors hover over microscopes or titrate some miracle liquid for testing. Only the occasional slamming door or ringing telephone breaks the silence of the dimly lit room.

To my dismay, this dismal scenario is often what comes to mind when people think about biomedical research in an academic institution. And it's simply not the case—although, to be honest, some of the responsibility for such antiquated stereotypes lies with the research community itself. Researchers are a singular breed who can be perceived as solitary, quiet thinkers who disappear for hours at a time as they struggle to understand, for instance, the reasons behind a genetic abnormality. Passion for their work can potentially isolate them from the larger community.

I see the fallacy of these misconceptions daily in the men and women in our program who clearly love their

work and are full and active participants in the life of the Medical College. They enjoy going to the lab and working among team members who share a common vision. And who can blame them? With the promise of easing human suffering, they view research as a calling, not simply a career choice.

I am pleased to report that we will do away with such antiquated views as our institution prepares for the dramatic expansion of research activity enabled by our \$1.6 billion strategic plan, which will be supported by our \$1.3 billion "Discoveries That Make a Difference" capital campaign. The success of this effort will result in doubling our existing research space, thanks to the construction of a new biomedical research facility. In fact, \$650 million will be committed to this project alone. With plenty of room for spacious labs, classrooms, and a conference center—as well as stunning views of the East River, Manhattan, and the rest of the Medical Center—this building is destined to become a vital contributor to the biomedical research that takes place in New York City.

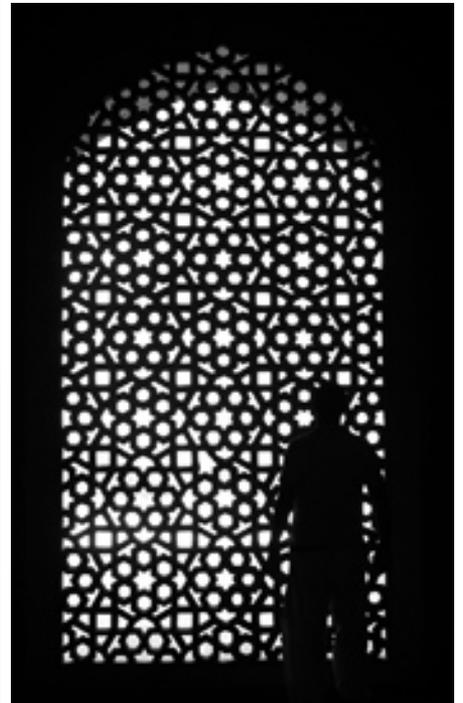
To maximize our potential to become one of the country's leading research facilities, our campaign goal is specifically targeted to recruiting outstanding basic, translational, and clinical research faculty—the best available talent in the world. Simultaneously, we will capitalize on opportunities for collaboration with the Cornell faculty on the Ithaca campus, with the hope of unlocking new cross-discipline discoveries in biomedical engineering, nanomedicine, systems biology, cancer biology, chemical biology, and experimental therapeutics.

Our vision of biomedical research at Weill Cornell is a new one, free of the limiting stereotypes of the past. Our commitment to excellence in education, research, and unsurpassed patient care will become even stronger. And the image of a lonely researcher hunched over a microscope in a darkened lab will fade into the archives of the history of medicine.

— Dean David Hajjar



FOTORESEARCH



Picture time: “Capture Light” was the theme of Weill Cornell Medical College–Qatar’s second annual photography contest. Some 500 entries were received—up from 150 the inaugural year—with contributions from students, faculty, and staff. The grand-prize winner was third-year student Fouad Otaki, whose photo (left) also won awards for technical merit and top honors in the action and motion category. The popular favorite with the Education City community was an image (right) by teaching assistant Saqib Hasan.

Fins Testifies on ‘Silent Epidemic’ of Brain Injury

IN JULY, PUBLIC HEALTH PROFESSOR JOSEPH FINN, MD '86, TESTIFIED before Congress on the importance of improving treatment of traumatic brain injury. Fins, chief of the Division of Medical Ethics, addressed the House of Representatives’ Committee on Veterans’ Affairs, which is particularly concerned with the issue as brain trauma has been called the “signature injury” of the Iraq War.

“The war in Iraq has pointed out many things, and one of them is the pervasive neglect of those with brain injury in American society,” Fins told lawmakers. “Although it is the leading cause of disability among young people, brain injury is often ignored in policymaking at all levels.” Traumatic brain injury, he said, has been described as a “silent epidemic,” with victims often receiving only custodial care—but recent developments in neuroimaging are giving doctors an unprecedented look into the recovering brain. “Recovery from brain injury takes time, often lots of time,” he said, adding that systems must be developed to provide such



Dr. Joseph Fins

WEILL CORNELL ART & PHOTO

chronic care. “This,” he lamented, “is something that our current acute-care system is woefully unable to do.”

Fins made a series of recommendations, including breaking down barriers between the Department of Defense, the Veterans Administration, and civilian centers like Weill Cornell so patients can be properly diagnosed and included in a wider array of clinical studies. He also noted that the epidemic of brain injury among Iraq War veterans presents an opportunity to learn more about a poorly understood condition. “We should use this tragic epidemic to study the epidemiology and natural history of brain injury,” he said, “and establish long-term registries that track patients over months, years, and decades.”

Valentino Show Benefits Ob/Gyn Department

IN MAY, THE HAUTE COUTURE HOUSE OF VALENTINO SHOWCASED ITS fall 2007 ready-to-wear collection at a luncheon to benefit the Department of Obstetrics & Gynecology and the Lying-In Hospital at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. Held at Cipriani in Manhattan, the event was attended by a number of Valentino-clad fashion devotees. Founded in 1799, the Lying-In Hospital was the city’s first hospital devoted to caring for women in childbirth; its residency program remains one of the nation’s most prestigious.

3,000 Kidneys and Counting

THE KIDNEY TRANSPLANT PROGRAM AT NYPH/WCMC AND THE ROGOSIN Institute has marked a milestone: its 3,000th life saved. The program's success is due, in part, to pioneering techniques such as minimally invasive surgery in which organs can be removed via small incisions—which has made many more people willing to donate. Patients have also benefited from advances in immunosuppression and desensitization, allowing transplants across blood groups, and NYPH/WCMC is currently the only center offering an innovative molecular test to predict organ rejection before outward signs develop. In recent years, more organs have been made available through a “kidney swap” system in which people who wish to give an organ to a friend or relative but are incompatible are matched with other patients, with their loved ones receiving kidneys from different donors. Says Rogosin director Albert Rubin, MD '50: “Transplantation has come a long way since the first transplant forty-five years ago.” The first kidney transplant in New York State was performed at NYPH/WCMC in 1963.

Hajjar Named to Executive Posts

DAVID HAJJAR, DEAN OF THE GRADUATE SCHOOL OF MEDICAL Sciences, has been promoted to senior executive vice dean and executive vice provost of the Medical College. The longest serving dean in the history of the Graduate School, Hajjar is also the Rhodes Distinguished Professor of Cardiovascular Biology and Genetics and holds professorships in biochemistry and pathology. “Under his guidance as research dean and executive vice provost at the Medical College, we look forward to continued productive research collaboration between New York and Ithaca,” says Cornell President David Skorton. “His efforts to date to bring the campuses together have been truly noteworthy.”

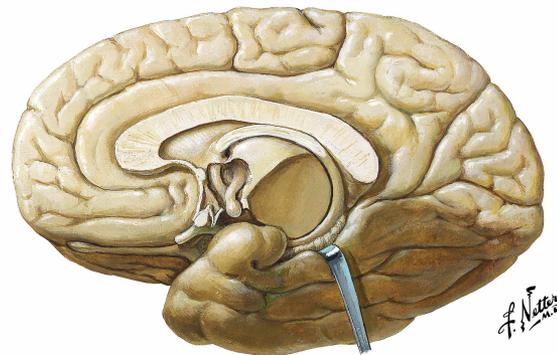
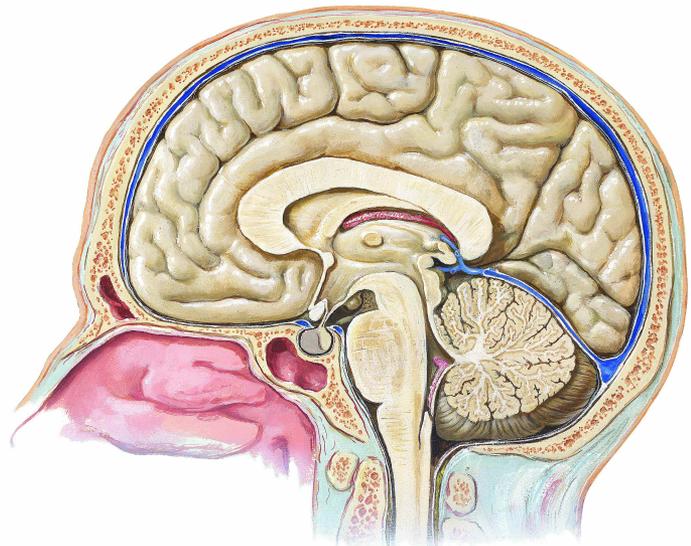
NYPH Ranked Sixth

NEWYORK-PRESBYTERIAN Hospital has been ranked number one in the New York metro area—and sixth-best in the nation—by *U.S. News & World Report*. In an issue published in July, NYPH is one of only four hospitals in the U.S. ranked in all sixteen specialties. Fields in which the hospital was rated in the top five are gynecology, endocrinology, kidney disease, neurology and neurosurgery, and psychiatry. It was ranked in the top ten in heart and heart surgery, orthopaedics, and urology. The complete rankings can be found at www.usnews.com/besthospitals.



\$49 Million Grant Funds Translational Research Center

THE NATIONAL INSTITUTES OF HEALTH HAS TAPPED WEILL CORNELL TO lead a new Clinical and Translational Science Center, with the aim of facilitating research that results in innovative treatments. Funded through a \$49 million grant, the center will comprise a collaboration among Weill Cornell, Memorial Sloan-Kettering Cancer Center, Hospital for Special Surgery, and Hunter College School of Nursing, among others. Says Cornell President David Skorton: “There is a pressing need for broad-based multidisciplinary collaborations that can fulfill the promise of recent advances in areas like genetics and bioinformatics, and efficiently translate them into real-world interventions that benefit the community.”



On the brain: Neurology professors Dr. Michael Rubin and Dr. Joseph Safdieh have coauthored an anatomy text featuring artwork by master medical illustrator Dr. Frank Netter. Published by Elsevier, *Netter's Concise Neuroanatomy* has more than 250 illustrations, including these views of the medial surface of the brain. The upper image is intact; the lower image shows the cerebral hemisphere with the brain stem excised.



Nurses' dining room, 1938

PAUL PARKER

Nursing School History Published

THE ALUMNI ASSOCIATION OF THE FORMER CORNELL UNIVERSITY-NEW YORK Hospital School of Nursing has published a history of the institution, which was open from 1877 to 1979. Written by medical historian Shirley Fondiller, *Go, and Do Thou Likewise* takes its name from the seal of New York Hospital—itsself inspired by the Biblical passage on the Good Samaritan. As Fondiller writes in her introduction: “In its broadest sense, the history of the Cornell University-New York Hospital School of Nursing parallels the development of the nursing profession, while responding to the health concerns of the day in a climate of discovery at a progressive teaching hospital.” Copies of the book are available for a \$20 donation; contact Michelle Vale-Marti at miv9001@nyp.org for more information.

Students Put Heart Medicine on WHO List

WEILL CORNELL STUDENTS HAVE HELPED PLACE A LIFESAVING HEART-disease drug on the World Health Organization's list of essential medicines. The list serves as a guide for developing nations to choose which drugs are a priority for their citizens to receive at a reduced cost. The students, members of Universities Allied for Essential Medicines, lobbied for simvastatin (commercially known as Zocor) to be added to the list in a generic version. Drugs such as simvastatin have been shown to lower “bad” cholesterol by some 25 percent in people at risk for heart disease. “For years, it was thought that heart disease was a concern of affluent countries,” says MD-PhD student Sandeep Kishore, who helped spearhead the effort. “But today, nearly 80 percent of all heart-disease-related deaths occur in the developing world.”

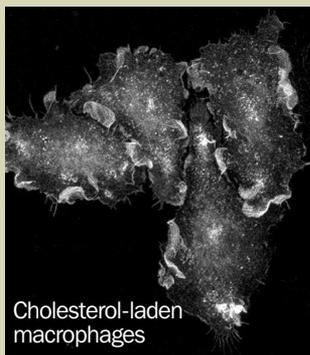
Device Helps Stroke Patients Walk Again

PATIENTS LIVING WITH PARTIAL LEG PARALYSIS CAUSED BY STROKE OR other illnesses may benefit from a novel rehabilitation device now available at NYPH/WCMC. Called the NESS L300 neuro-rehabilitation system, the lightweight device is worn on the lower leg and foot in place of a traditional brace. Sensors detect if the foot is in the air or on the ground and respond by transmitting painless electrical stimulation to the correct nerves, activating the muscles necessary to correct the patient's gait. Says acting chief of rehabilitation medicine Dr. Michael O'Dell: “Our patients have been enthusiastic about this remarkable device.” For more on the NESS L300, see Dean Gotto's message on page 2.

from the bench

Why Good Macrophages Go Bad

Weill Cornell researchers have discovered why macrophages, the scavenger cells of the immune system, sometimes fail to remove cholesterol from blood vessels: the cholesterol itself is the culprit.



Cholesterol-laden macrophages

LAB OF LYNDY PIERINI

Microbiology and immunology professor Lynda Pierini, PhD '96, biochemistry chairman Frederick Maxfield, PhD '77, and their team found that high levels of membrane cholesterol interfere with a key mechanism known as the RhoA/Rho kinase pathway, which signals macrophages to remove their loads of plaque. “They don't move away from the vessel as they

should,” says Pierini. “Instead, they remain along the vessel wall, swollen with cholesterol until they become foam cells. In that way, they become part of the atherosclerotic problem.” The work,

which could offer new targets for anti-cholesterol drugs, appeared in the journal *Arteriosclerosis, Thrombosis, and Vascular Biology* in August.

Brain Stimulation Aids Gravely Injured Patient

There may be new hope for patients in a minimally conscious state, says an article published in *Nature* in August. Neurologist Nicholas Schiff, MD '92, and colleagues have pioneered the use of deep brain stimulation to encourage neural activity in severely brain-injured patients. While the study must be expanded, researchers say, the surgery has already allowed one man—who had been minimally conscious since an assault—to communicate with his family for the first time in six years. “Now my son can eat, express himself, and let us know if he is in pain,” says the patient's mother, who requested anonymity. “He enjoys a quality of life we never thought possible.” The research leading up to the man's treatment was conducted at Weill Cornell, the Cleveland Clinic, and a center for head injuries in Edison, New Jersey. Deep brain stimulation, in which electrodes are placed directly above the brain stem, is an FDA-approved procedure that is routinely performed on Parkinson's patients.

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Syphilis Testing May Prevent Stillbirths

In many developing nations, untreated syphilis in pregnant women is as prevalent as HIV. Although its consequences can be as deadly, congenital syphilis testing is not standard. Recent research from Weill Cornell and the Haitian AIDS-research organization GHESKIO indicates that implementing rapid syphilis testing as part of prenatal HIV testing programs in Haiti could prevent more than 2,000 stillbirths, neonatal deaths, and congenital syphilis cases. The research, published in the May issue of *PLoS Medicine*, suggests that giving treatment only when symptoms appear is not an effective strategy, and eliminating the need for more than one clinic visit means more women will be willing to undergo testing. Senior author Dr. Daniel Fitzgerald, assistant professor of medicine, hopes the study will inspire other developing nations to include a rapid syphilis test in their campaigns against prenatal HIV transmission.

New Mechanism Sheds Light on Working Memory

Weill Cornell researchers have identified a mechanism that plays a vital role in short term—or “working”—memory. In the study, which appeared in *Nature Neuroscience*, assistant professor of computational neuroscience Emre Aksay and his team used common goldfish to learn how cells in both sides of the brain communicate using excitatory and inhibitory neurons. They found that while excitatory neurons are necessary for the two cell groups to exchange information, the inhibitory neurons are responsible only for coordinating the timing of the exchange and preventing mixed signals being sent to the brain. The finding may shed light on psychiatric diseases as well as everyday brain function, and may also offer treatment possibilities for people with schizophrenia. “Many schizophrenic individuals show severe deficits in working memory,” says Aksay. “These findings suggest it is necessary to address not only deficits in excitatory pathways, but also dysfunction in inhibitory pathways that leads to a lack of coordination.”



PROVIDED BY EMRE AKSAY

Eye witness: Neural control of goldfish eyes offers new insights into human memory.

New Fronts for Fighting Cancer

Recently published findings indicate two potentially vulnerable spots on a key cancer-causing protein called the X-linked inhibitor of apoptosis (XIAP). The research, published in the June 8 issue of *Molecular Cell*, was conducted by Weill Cornell professor of biochemistry Hao Wu and her team. They found that XIAP works with a key tumor-causing pathway in two ways: by interacting with another protein, and by structurally interacting with itself. These activities may leave the proteins vulnerable to interference, presenting a new target for cancer drugs. “This is exciting,” says Wu, “because it provides two new points of attack against cancer in a pathway pharmacological researchers are already familiar with.”

Immunity Findings May Combat HIV

Work by Weill Cornell researchers may offer important insight into HIV vaccine research. Large amounts of beneficial bacteria line the human intestines, mouth, nose, and throat; the scientists have shown that the epithelial linings of these surfaces guide the immune system’s regulation of bacteria. “This is a wholly new finding, since most biologists think of epithelial cells as a barrier—not as an active player in immune function,” says senior researcher Dr. Andrea Cerutti. Published in *Immunity*, the study could pave the way for new treatments that harness the body’s defense system to protect against viruses like HIV that enter the body through mucosa.

from the bench

Delis Serve as Model for Hospital Readiness

How you line up to buy luncheon meat may aid hospitals in preparing to fight a bio-terrorism attack or pandemic outbreak, say public health experts. Working with Ithaca-based operations research engineers, Weill Cornell researchers have made a breakthrough in hospital preparedness—using the deli counter as a model. In a study published in the May issue of *Infection Control and Hospital Epidemiology*, researchers tested scenarios for immunizing hospital staff, including two strategies with specific protocols and one in which no guidelines were in place. They concluded that the best method was the “ticket strategy,” inspired by delicatessens that assign numbers to patrons. In this scenario, even if only 25 percent of employees complied, waits for inoculation were still much lower than if no strategy was in place; ideally, medical professionals would have to wait in line for only about two minutes. The findings could help large hospitals develop guidelines to minimize the impact on patient care.

Long-term Ritalin Use Examined

The popular attention-deficit drug Ritalin may alter children’s developing brains, though the effect could be temporary. Ritalin—a stimulant similar to cocaine—is one of the most prescribed drugs for ADHD, but little is known about its long-term effect on children. The study, in the *Journal of Neuroscience*, follows young rats who received regular doses of Ritalin into adulthood. While on the drug, the rats displayed changes similar to what humans experience, such as weight loss and decreased anxiety. Professor of neuroscience Teresa Milner notes that while the rodents showed significant brain chemistry alterations in such areas as the prefrontal cortex, hippocampus, and hypothalamus (areas that control everything from learning to appetite), after three months off the medication the rat-brain chemistry had almost completely returned to normal. “That supports the notion that this drug therapy may be best used over a short period of time,” says Milner. “It is possible that if treatment were to continue for years Ritalin would alter brain chemistry well into adulthood.”

Vessel Stimulus May Limit Effects of Stroke

“Preconditioning” brain tissue with small amounts of stimulus gives it a resilience that may lessen damage to blood vessels during a stroke, say Weill Cornell researchers in the *Journal of Neuroscience*. “This works along the theory of ‘what doesn’t kill you makes you stronger,’” says senior researcher Dr. Costantino Iadecola. Stroke-related injuries activate the production of toxins that, in low levels, are actually beneficial, helping to preserve

vessel function and making the brain impervious to the effects of a stroke. “The real novelty here is that we are looking for a stroke treatment that simply replicates strategies the brain is already using,” says Iadecola. “There’s a large population out there at high risk for a stroke, and we might be able to create a pharmaceutical mimic that could protect them.”

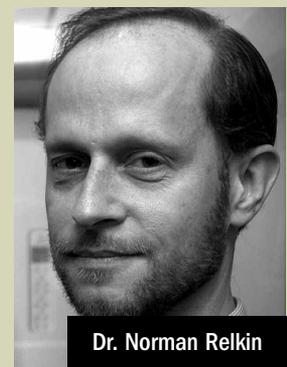
Gene Therapy Offers Hope for Parkinson’s Patients

Researchers at NewYork-Presbyterian Hospital/Weill Cornell Medical Center have completed the first-ever Phase I clinical trial using gene therapy to battle Parkinson’s disease. The study, in which twelve Parkinson’s sufferers had a gene-bearing virus surgically injected into their brain, showed that the procedure was safe and improved motor function in the patients over the course of one year. “Viruses exist in nature to transfer their own genes to the host cell,” says lead researcher Michael Kaplitt, MD ’95, associate professor of neurological surgery. “We modify the virus in a way that the only gene it carries is the one we want it to deliver to the therapeutic site.” The gene being delivered controls the excessive neuron firing that plagues Parkinson’s patients, some 1.5 million people in the U.S. alone. The findings appeared in the June 23 issue of the *Lancet*.

A Natural Defense Against Alzheimer’s?

Newly identified antibodies in human blood may represent a naturally occurring defense against neurodegenerative diseases such as Alzheimer’s, say Weill Cornell researchers. Behavioral neurologist Dr. Norman Relkin and his team have discovered antibodies that target groups of proteins that are toxic to brain cells while ignoring single-molecule forms of the same proteins. Such protein groups can morph into insoluble “fibrils” that cluster around brain cells and have been linked to the brain cell death and memory loss that plague Alzheimer’s patients.

While common in animals, the antibodies had not previously been proven to appear in humans in significant amounts. Additionally, the researchers found that the antibodies recognize the rogue proteins by their unusual shape. “That was a surprise, because most antibodies recognize the chemical structure of their target, not their shape,” says Weill Cornell molecular biologist and co-author Paul Szabo. Further study will be needed to demonstrate potential clinical benefits.



JOHN ABBOTT

tALK OF THE gOWN

INSIGHTS & VIEWPOINTS

Out of Sight

New technique could revolutionize treatment of childhood eye cancer



Dr. David Abramson

eDELEYLE HERNANDEZ'S DAUGHTER GISNEYBY was about seventeen months old when she noticed something odd in the toddler's left eye. "It looked like the eye of a cat, when you see a reflection, like a light," recalls Hernandez. "It was not normal."

Hernandez was describing the classic symptom of retinoblastoma, a tumor of the eye that affects several hundred American children each year, generally striking between birth and age four. The most common childhood eye cancer, the disease is often discovered by parents who notice its characteristic cat's-eye flash, or see a white reflection in a photograph rather than the familiar red-eye effect. Although it can sometimes be treated with chemotherapy, the standard of care for advanced retinoblastoma is enucleation, or removal of the eye. But luckily for Gisneyby, physicians at Weill Cornell and Memorial Sloan-Kettering Cancer Center were gearing up a trial of a revolutionary method for treating the disease while saving the eye; last summer, the little girl became their first patient. "She's doing good—perfect," says Hernandez, a community college student from the Bronx whose husband works for UPS. "At first I thought they'd have to take out the eye, so I was very happy when I found out the treatment worked."

The new technique sprang from a collaboration between Weill

Cornell's Dr. Pierre Gobin—the interventional neuroradiologist who invented the MERCI retriever for clot removal—and Dr. David Abramson, chief of ophthalmic oncology at Memorial Sloan-Kettering and one of the world's leading authorities on retinoblastoma. Their work made headlines last spring, when Utah Jazz basketball star Derek Fisher brought his ten-month-old daughter to New York for treatment after her doctor recommended enucleation. ("We felt like we owed it to her to give her a chance to keep her natural eye," Fisher told the *Salt Lake Tribune* in May. "My lifelong mission from here on out will be to raise awareness of this disease.") The publicity prompted a flurry of interest from parents and physicians, who descended on Abramson and Gobin with requests for treatment and information. "Inundated" is the perfect word," says Abramson, adding that all the attention has been "a blessing, because we can offer them a lot more than anyone could a year ago."

Retinoblastoma has been observed since ancient times; Abramson notes that statues dating from the pre-Christian era depicting children with eye tumors have been found in Peru. It affects between 5,000 and 8,000 children worldwide, though outcomes are highly variable—depending, more than anything else, on geography. "In the developed world, survival is over 95 percent, and some centers have even published 100 percent," says

Abramson. "But in the overall world, more than half the children who get the diagnosis this year will die of it."

Even in developed countries, the disease is often not diagnosed until the tumor has fully invaded the eye, since small children generally can't articulate their vision problems. It's not until someone notices symptoms like the cat's-eye effect or strabismus—when the two eyes don't go in the same direction—that patients see a specialist. But the disease's particular characteristics also offer unique treatment possibilities. "We're fortunate in human eye cancer that only one blood vessel supplies the entire eyeball—and only one supplies the cancer," Abramson says. "When first diagnosed, retinoblastoma is almost always within the eye, so it's kind of an ideal situation for treatment."

Abramson's collaboration with Gobin began when he contacted the neuroradiologist after reading about a treatment being studied in Japan, in which doctors threaded a catheter into the carotid artery, inflated a balloon to stop blood flow to the brain, and injected chemotherapy drugs in the hope that some of it would go into the eye. Abramson thought that he and Gobin could improve upon that concept. In their protocol, which takes two hours from anesthesia to wake-up, Gobin punctures the femoral artery at the groin, then threads a catheter up to the carotid artery and into the ophthalmic artery, where chemotherapy is given directly at the site of the tumor. Patients generally undergo the procedure three times.

The new concept sidesteps one of the major hurdles of treat-

ing retinoblastoma: the fact that the eye constitutes only 1 percent of body mass, and therefore receives only a tiny portion of any drug administered systemically. "Of the drugs we're feeding into the vein, very little is actually reaching the eye—it's diluted," says Gobin. "If you give 100 units of a drug, only one unit gets to the eye, so you get limited by toxicity. The idea is to give a lower dose that will be tolerated by the rest of the body, but give it selectively. This technique is so powerful that we decided to call it 'chemosurgery.'"

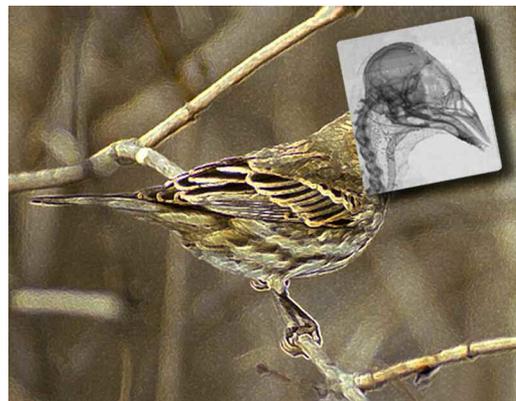
The results, Abramson says, have been "spectacular." Of the eleven patients in the initial trial approved by the Institutional Review Board—children who, as required by the protocol, had tumors advanced enough to warrant enucleation—all are still alive and eight have retained the affected eye. And although the trial's original goal was simply to preserve the eye, the researchers have found that the treatment actually restored vision in some cases. As they prepare their work for publication and review by the scientific community, they continue to treat patients from around the country. "In most cancer studies, if you show a 3 or 4 percent improvement, that's considered a pretty major advance," Abramson says. "This isn't like that. This turned out to be safe, effective, and reproducible. It's going to completely turn our field upside down. I've removed more than 1,000 human eyes, and it would be wonderful if our technique could end that."

— Beth Saulnier

Bird Brains

Twitters and chirps may offer insight into human stuttering

mORE THAN JUST soothing, the chirping of the birds outside your window may hold some answers for the three million Americans who stutter. A collaboration between Weill Cornell and the Methodist Neurological Institute in Houston has found that zebra finches show a distinct right-brained response to the sound of birdsong. These findings, in conjunction with observations that some finches have "stuttering" songs, suggest that the finches could be used as a model for human language acquisition, providing insight into speech impairments. "We've proven a more precise sim-



LISA BANLAKI FRANK

ilarity between how speech and birdsong are processed, which allows us to see more about how the brain works normally and better understand how it can go wrong," says Dr. Santosh Helekar, lead author of the paper and an associate research professor of neuroscience at Methodist and Weill Cornell.

The paper, published in the June 19 issue of *Proceedings of the National Academy of Sciences*, details how the researchers used fMRI on awake zebra finches to study blood oxygenation levels

while listening to other birds' songs, revealing which areas of the brain were most active. Melodies or patterns of sound were much more well-defined on the right side—similar to humans, who process the phonetics of sound on the left side and melodies on the right.

The researchers also note that some zebra finches produce a type of song that resembles human stuttering, although they stutter at the end of phrases rather than the beginning. Further study shows that some birds who stutter will attempt to correct it around non-stutterers, perhaps indicating that they find it distressing. "We know humans view stutterers as different, but we don't know if it is the same for birds," says Dr. David Rosenfield, a Weill Cornell professor of neurology and director of the speech and language center at Methodist. "We don't know, for example, if a female would prefer to mate with a non-stuttering male."

— Liz Sheldon

Dr. Versatility

Medicine is the latest vocation for Louis Cooper, MBA and Navy man

WHEN THE TWIN TOWERS were attacked, Louis Cooper felt helpless. A hedge fund manager living in New York, he was overcome with an urgency to lend a hand—but lacked the training. “I was thinking about where I wanted to spend the next phase of my life and in an instant it all came together,” he says. “This was the time to go to medical school.”

Medicine was not a new interest for Cooper, who had declined admission to medical school at Britain’s Cambridge University two decades earlier in favor of the U.S. Naval Academy. At forty-five, with stints in the Navy and the financial sector under his belt, he enrolled at Weill Cornell. In May, he graduated with honors and is now doing his residency in emergency medicine at Bellevue.

Cooper’s career changes have confounded some of his friends, who’ve been known to call him crazy for paying his dues in various fields without staying long enough to fully reap the rewards. But his broad background appealed to Weill Cornell, says Dr. Sam Selesnick, a professor of otorhinolaryngology with whom Cooper did research. “He’s a very bright man who comes at this with a lot of experiences,” says Selesnick. “He’s got a proven track record.”

Before being accepted, Cooper was interviewed by Dr. Charles Bardes, associate dean (admissions), who impressed him by describing Weill Cornell as “medical school for grownups.” With an emphasis on self-directed learning and the flexibility to schedule his courses in half-days, the college particularly appealed to Cooper, who lives in Brooklyn with his wife, an architect and artist. Much of his studying was done on the subway, forty minutes each way. Because of his significant outside interests—he kept up a sideline as a glassblower during medical school—and



JANET CHARLES

Midlife MD: Born into a family of filmmakers, Louis Cooper jokes that his academic pursuits made him the “black sheep” of his clan. He started medical school at forty-five.

living far from campus, Cooper didn’t get to know his classmates as well as he might have liked. “He already has a life established,” says Jakob McSparron, MD ’07. “It’s been a different journey for him.”

Cooper was drawn to emergency medicine for its broad perspective, craving the intellectual challenge of having to make quick decisions under pressure. Since many people without health insurance use emergency departments as their primary care provider—and the number of emergency rooms is decreasing—he says the field is in the midst of change. “I just love the idea of practicing in an environment where you’re dealing with the people who need you the most, for whom you can make the greatest difference in the shortest period of time.”

An American citizen, Cooper was raised in Europe, mainly in Paris. His family was in the movie business: his father owned a production company, his mother was a film editor and script supervisor, and his brothers have since become television producers, photographers, and actors. (Cooper’s academic pursuits have led him to call himself the “black sheep of the family.”) He graduated with a BS in physics and history from the Naval Academy and did postgraduate work in nuclear engineering and submarine systems. When he was serving as a lieutenant on a “highly classified” submarine, he says, his vessel was nearly destroyed when spies revealed its location during a Cold War intelligence mission in Soviet waters.

Turning down both a Marshall Scholar-

ship to study overseas and an offer to stay in the Navy, Cooper attended Harvard Business School at the height of the 1980s merger mania. "I don't regret leaving because I was going toward something," he says. "And that's repeatedly been my feeling when I've made such career changes." Cooper worked in business for a decade, setting up a London office for Morgan Stanley and starting a mergers and acquisitions division for Deutsche Bank in the U.S. Eventually, he left investment banking to start his own hedge fund, betting against Internet stocks at the height of the "bubble."

His epiphany about medical school was followed by two years as a research assistant in NYU Medical Center's department of hematology while studying for the MCAT, volunteering at St. Vincent's Hospital, and taking a night class in organic chemistry—his only missing pre-med requirement. "You can't predict these things 100 percent, but I think he added a lot to Weill Cornell and he will add a lot to medicine," Bardes says. "I'm impressed with his intelligence and his ability to bring his experience to the table." Cooper

Cooper doubts that clinical medicine will be his 'last career,' pondering a marriage of his medical and business backgrounds in a nonprofit context.

doubts that clinical medicine will be his "last career," pondering a marriage of his medical and business backgrounds in a nonprofit context. For now, though, he's content to continue his training. Says Cooper: "I always wanted to be able to raise my hand when somebody asked, 'Is there a doctor in the house?'"

— Sherry Stolar



Kid stuff: Frank DiCarlo calls son Peter "a rugged little guy."

ABBOTT

Beating the Odds

Heart surgery saves newly adopted toddler

FRANK DICARLO FIRST MET HIS THREE-YEAR-OLD ADOPTIVE SON IN CHINA on January 15. A few weeks later they found themselves on the other side of the world, in the pediatric cardiology offices of NewYork-Presbyterian Hospital/Weill Cornell Medical Center preparing for major heart surgery. Fu Han (or Peter, as he's now known) had been one of China's many "waiting children"—those who have not been adopted because they are older or have serious medical problems. In Peter's case it was a complex atrioventricular canal defect, a problem in which patients lack the normal structures separating the heart's chambers.

After being referred to Weill Cornell by his pediatrician, Peter underwent numerous diagnostic tests—which showed he'd gotten something of a lucky break. "Normally this heart defect causes too much blood flow through the lungs, resulting in congestive heart failure and poor growth," says pediatric cardiologist Dr. Sheila Carroll. "Peter also has subpulmonic stenosis, a narrowing underneath the pulmonary artery that protected his lungs from the extra blood flow." Formerly serendipitous, that narrowing was now severely limiting the blood flow to his lungs, causing a bluish tinge to his lips. "He had just the right combination of problems, and we met him at the perfect time," says Carroll. "Most patients with AV canal require surgery in the first few months of life."

Peter underwent surgery in early March: Dr. Jonathan Chen performed a Fontan procedure, in which blood is diverted directly to the lungs instead of being pumped through the heart. Although the surgery went well, Peter's recovery was slowed by complications, including renal failure and pneumonia. Finally, after almost two months in the hospital, he recovered fully and was able to go home with his new dad. "He was extremely strong and did very well," says Carroll. "Now every time he comes in for a visit, our whole office goes filing in to say hello."

Today Peter is adjusting to life in America—just a normal kid who loves *Curious George*. "He's a rugged little guy," says DiCarlo, who adopted the boy as a single father. "Everyone at Weill Cornell inspired complete confidence. They gave this kid a future."

— Liz Sheldon

Kid Stuff

Medical students get inner-city middle-schoolers psyched about science

WHEN TRUMAN CAZALES '09 WAS CALLED upon to explain the digestive system to some Manhattan sixth-graders, he came up with an analogy he knew any city kid would understand: the subway. "When enzymes or food come out of the small intestine, it's like passengers exiting a train," he told them. "Your mouth is where the passenger named 'food' enters, and another passenger is 'saliva.' When they go through the esophagus, no one gets off—it's like an express stop and you shoot right through."

Cazales's protégés were enrolled in Cornell Kids, a volunteer program that brings students from the East Harlem School to the Medical College for hands-on science lessons. Sponsored by the Weill Cornell branch of the Student National Medical Association, a network of future doctors who are members of racial minorities, Cornell Kids is an important component of the school's year-round college-preparatory program. The goal? To spark interest in medicine at a vital age—before peer pressure and pop culture steer them away from academia. "At the beginning of sixth grade you're still a kid, and by the end you're entering adolescence," says Carolyn Michael, the school's program director and liaison to the

Cornell Kids program. "In sixth grade, you still have every possibility in front of you. If you perform well in the next few years, the world is open to you for high school and beyond."

On monthly Friday afternoons from January to May, the East Harlem School sends about thirty students—its entire sixth grade—to the Weill Cornell campus. They learn basic physiology, participate in histology workshops, explore laboratories, view the Medical College's computer databases, even touch prepared samples in the anatomy lab. "We got to see a real brain," says sixth-grader Jobeir Blake, who nevertheless plans a career in architecture. "I learned about the different lobes and what they're responsible for. It was something that I had never been able to study so in-depth in school."

The East Harlem School is a rigorous independent school committed to providing low-income families with high-quality education; 70 percent of its students qualify for free or reduced lunch, and all come from impoverished inner-city neighborhoods. The half-dozen medical students who volunteer for Cornell Kids each year hope to show them that medicine is a career that's open to them. "You don't tend to see too many minority doctors or

ABBOTT

Medical mentor:
Truman Cazales '09
is one of the Weill
Cornell students
who teaches basic
science to sixth-
graders from the
East Harlem School.



scientists," says A. Garvey René '10, who is co-directing the program for 2007–08 with classmate Brian Rebolledo. "When they see us—I'm Caribbean American, from Haiti and black, and Brian is Hispanic—they think, 'Maybe we can go into medicine and science.' As medical students, good mentorship is the best thing we can do to inspire kids to stay in school, go to college, go to grad school, and succeed in life."

Just being on the Weill Cornell campus goes a long way toward getting the students excited about the subject matter, Michael says. "The program helps them see themselves as people who could be doctors or scientific researchers. They could imagine themselves walking into that building every day. Being in the room where they conduct the seminar, where they have up-to-date computer systems and beautiful graphics of the human body—it makes the students feel respected and part of something that's professional and high-level. They really feel like they're part of the medical school."

Cazales joined Cornell Kids as a first-year, then helped run the

program in 2006–07. Initially, he says, he was worried that the sixth-graders would be an unruly, unmotivated bunch who were only participating because they had been forced to attend. "I was pleasantly surprised," he says. "The kids are well behaved, they're excited, they're asking questions, they're absorbing the information. It's been amazing to see that. Every time I come out of a session, it makes me feel good."

Although the children are not formally tested or given homework, the companion textbook that the volunteers put together includes self-quizzes. And since the sixth-graders want the medical students to see that they are prepared, Michael says, they often review the previous session's material before each visit. "Even the stuff that seems kind of gross, like the digestive system, they really enjoy," Michael says with a laugh. "When they learned the word 'duodenum,' that it's a part of the intestine, they felt like the most brilliant people in the world."

— Beth Saulnier

Heart Strings

A cardiologist with a musician's soul, Michael Chizner is a maestro of the stethoscope

dR. MICHAEL CHIZNER COULD BE AN old-time radio sound-effects man, using his voice to evoke a galloping horse, rushing wind, a key turning in a lock. But he isn't creating atmosphere for the latest installment of "The Shadow" or "The Lone Ranger"; he's performing the sounds he has heard countless times over three decades as a cardiologist, the lub-dubs and whooshes and clicks that he calls "the music of the heart." And he hopes that a new generation of physicians will tune in for the next exciting episode of cardiology's oldest technique.

"The stethoscope shouldn't become a relic," says Chizner, MD '74, who heads the Heart Center of Excellence at the North Broward Hospital District in Fort Lauderdale, Florida. "If young doctors learn the low-tech, high-touch skills that cardiologists have used for generations, they'll make better, more cost-effective choices about high-tech approaches for their patients. And even



more important, they'll establish the rapport that is so essential to providing personal, compassionate care."

You can hear Chizner performing heart sounds on the CD accompanying *Clinical Cardiology Made Ridiculously Simple* (Medmaster), Amazon.com's best-selling cardiology title. Chizner, who is a clinical professor of medicine at several Florida institutions including the University of Miami, wrote the first edition of the textbook ten years ago in response to what he saw as a growing overdependence on diagnostic tools such as echocardiograms and MRIs. He notes that surveys have shown that many young cardiologists are unable to identify as many as 80 percent of the most common conditions that can be recognized via stethoscope. "In the old days, we had traditional bedside teaching in which everyone would examine the patient under the supervision of a master clinician. Today bedside rounds are becoming rounds at a computer. I would like to get back to 'hands before scans,' examining a patient before ordering expensive and possibly unnecessary tests."

In *Clinical Cardiology Made Ridiculously Simple*, Chizner shares many of the lessons that he learned as a Weill Cornell medical student and as a fellow at Georgetown University, where he studied under the eminent cardiologist Dr. W. Proctor Harvey. "I still believe in Dr. Harvey's five-finger approach to diagnosis: patient history as the thumb, then physical exam, EKG, chest X-ray, and finally—and this isn't the smallest finger by coincidence—elaborate invasive and non-invasive tests," says Chizner.

It's an approach that raises important questions about the way that cardiology is taught and practiced, said Dr. Stephen Scheidt, professor of clinical medicine and director of the cardiology training program at Weill Cornell. Scheidt recalled that even as a medical student, Chizner stood out for his belief in direct observation of patients.

"We used to think of ourselves as treating human beings—now too often we treat aortic valves or cardiomyopathy, whatever the tests tell us," Scheidt said. "Technology may offer the most effective way to diagnose many conditions, but Mike Chizner reminds us that we should also look to the



ZUCKER PUBLIC RELATIONS

Dr. Michael Chizner

roots of our discipline."

Chizner's beliefs hark back to his own roots, too. Growing up in New York City, he heard stories about his mother's brother, who worked his way through medical school playing concert piano. Chizner was also musically gifted, learning piano and guitar by ear. At Weill Cornell, he was a star performer in Christmas shows (classmates still recall his song "Blame It on the Carcinoma," performed to a bossa nova beat). When he first heard the rhythms of the heart through a stethoscope, he knew he'd found a connection between his passions for music and medicine. "The sounds of the heart can tell us so much, and just the act of touching a patient—feeling for a pulse, using a stethoscope—is impor-

tant," says Chizner. "The laying on of hands establishes the human connection that makes a patient feel cared for."

Chizner cites the example of a woman in her twenties who complained of chest pain and shortness of breath. Specialists had recommended mitral valve surgery, but she came to Chizner on the eve of the operation for another opinion. After listening to her heart and learning more about her life, Chizner determined that her symptoms stemmed from a combination of a mild mitral valve prolapse, anxiety, and neuromuscular pain—nothing that warranted major surgery. "The echocardiogram had exaggerated what was going on," Chizner says. "So I asked her who had listened to her heart with a stethoscope. Her answer, shockingly, was nobody."

Direct observation can sometimes detect conditions that high-tech tests can't. Early in Chizner's career, he was asked to examine a patient who had been diagnosed with an end-stage cardiomyopathy. "She looked like a concentration camp victim: muscles wasted, massive fluid in her belly and legs, neck veins standing up like ropes," he recalls. But her pulse didn't have the classic strong-weak pattern of cardiomyopathy, and instead of the usual gallop associated with heart failure, Chizner heard a lub-da-dub pattern that made him wonder if she had constrictive pericarditis. An X-ray didn't reveal the calcification that might accompany that condition—but based on what he had heard and felt, Chizner persuaded a surgeon to explore the patient's pericardium. After fourteen hours in the operating room, the surgeon had removed the scar tissue that had encased the woman's heart like a straitjacket—and she walked out of the hospital a few days later.

"I've been telling that story for twenty-five years," says Chizner. "And just last year I heard from her, thanking me for the fact that she had seen her children grow up and had been able to know eight grandchildren. That's why we become doctors—to feel that, with our own hands and eyes and ears and wits, we have been able to give people their lives back."

— C. A. Carlson

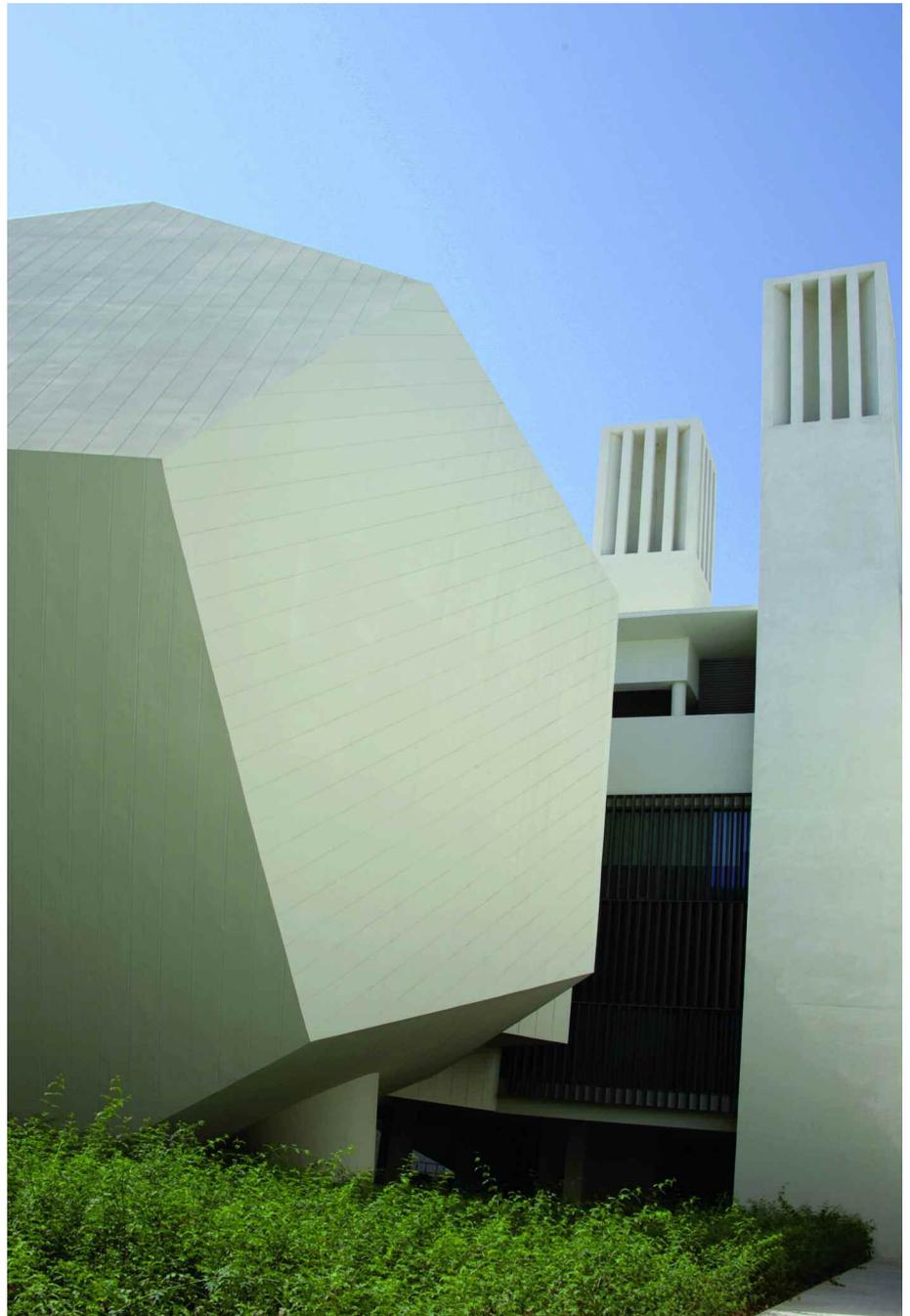
Green Medicine

Weill Cornell works to reduce its environmental impact

WAL-MART CEO LEE SCOTT has pledged to make the company's supply chain greener and double its truck fleet's fuel efficiency within a decade. New York City Mayor Michael Bloomberg plans to spend more than \$32 billion over the next quarter-century to transform the Big Apple into an urban eco-paradise. Health care, too, has gotten into the act, extending the Hippocratic oath to the broader environment in which patients and physicians live. Health Care Without Harm, a global pollution-reduction nonprofit, boasts 443 member hospitals worldwide. Closer to home, nearly 200 American health-care organizations have embarked on or completed construction of facilities in line with the *Green Guide for Health Care*, a sustainable design handbook developed by a group of industry leaders.

By 2015, the health-care industry will represent 20 percent of America's gross national product. Some 1.67 million employees staff the nation's medical schools and teaching hospitals, and their combined economic impact, according to the Association of American Medical Colleges, amounted to \$451 billion in 2005. Over the next decade, those numbers will only grow as the industry embarks on a \$200 billion building campaign to replace and refurbish aging hospitals, medical facilities, and nursing homes in preparation for a tsunami of demand generated by aging baby boomers.

Ten years ago, the health-care industry's 6,200 incinerators held the dubious distinction of being the nation's second-leading source of dioxin and its fourth-highest emitter of mercury. The EPA shut down all but 100, but that has not erased the industry's ecological footprint. Today,



MARTIN MARION

Comfort level: On the Qatar campus, air-conditioning needs are reduced via traditional wind towers, called badgirs, that direct cool air into the buildings.

hospitals, clinics, and nursing homes generate close to 2 million tons of waste each year, spend more than \$6.5 billion on energy, and rank among the top ten consumers of potable water in communities across the country.

At Weill Cornell the nascent green movement emphasizes energy conservation through high-efficiency building design, retrofits of aging buildings, and increased user vigilance. "We are approaching this as both a cost-saving measure and an environmental measure," says Stephen Cohen, executive vice dean for administration and finance, who heads the Medical College's sustainability efforts. "So often in life, one has to make a trade-off between two equally worthy objectives. This is one of the few instances where they are totally in sync."

That approach fits with the University's broader sustainability initiatives—President Skorton placed the effort among Cornell's top priorities in his June State of the University address—and also with the goals of NewYork-Presbyterian Hospital. "One thing we hear over and over is that we need to proactively reduce pollution while improving quality of care, reducing risk, and saving money," says NewYork-Presbyterian Hospital energy programs manager Jennifer Kearney, who also works with the hospital's IT department to recycle old computers and advises the green cleaning program. "That money gets funneled back into quality of care—everything we save goes back to the patient and the patient experience." Already, the hospital has eliminated mercury and CFC refrigerants and installed dry hand-washing stations. On the energy front, a combination of conservation and new, more efficient technology has yielded savings of more than \$1.7 million annually. A 7.5 megawatt, gas-powered co-generation plant—which captures waste heat from the production of electricity—will be the first of its kind in Manhattan, and three times as efficient as the national utility average. Administrators anticipate savings of \$5 million a year when it goes online later this year.

Nationwide, health-care facilities are finding myriad leverage points for reducing their impact—and often simultaneously improving the bottom line. The inner-city, cash-strapped Huron Hospital, a member of the Cleveland Clinic system, has seen a 37 percent decrease in trash and a \$50,000 annual savings by focusing on environmentally preferable purchasing and improved recycling; similar efforts at the much larger Dartmouth-Hitchcock Medical Center have produced savings of close to \$600,000 annually. Kaiser Permanente has made strides toward eliminating such known carcinogens as formaldehyde and polyvinyl chloride—ubiquitous ingredients in plastics, carpeting, even IV bags—from its supply chain. "There are so many opportunities to do better in health care, from purchasing safer materials to building green

buildings," says Laura Brannen, executive director of the non-profit Hospitals for a Healthy Environment. "Health care is so big."

Unlike that of a hospital, with its round-the-clock operations and patient safety considerations, the Medical College's energy demand stems largely from labs running high-tech equipment with intensive cooling and ventilation demands. "In the old days, they had a simple thermostat in a wet lab," says Andrew Ryan, the Medical College's senior director of engineering and maintenance, pointing out that Weill Cornell has spent several million dollars to install computerized control systems and heat-recovery systems, as well as high-efficiency lighting and motors. "Now when we build a lab, we monitor everything from a central location and control the temperatures when spaces are unoccupied, all of which contributes to energy efficiency."

Compared to retrofits of older buildings, new construction affords significant opportunities for both efficiency and environmental stewardship through integrated design that reduces a facility's lifetime

operating costs. The fifteen-floor Weill Greenberg Center, which opened in January 2007, qualified for a \$400,000 rebate from the New York State Energy Research and Development Authority thanks to a host of efficiency features, including controlled ventilation of carbon monoxide from the parking garage and two-stage steam absorption chillers. The NYSERDA-funded features also reduce the building's contributions to nitrogen oxide and sulfur dioxide emissions, and prevent 426 tons of carbon dioxide from entering the atmosphere each year—a net benefit equivalent to taking eighty-five cars off the road.

At Weill Cornell's Qatar campus, architects and engineers faced similar challenges to reduce cooling demand in an arid region that sees summertime highs of more than 100 degrees. A double-layered roof and wall system protects inhabitants from scorching outdoor temperatures, while three eighty-foot wind towers direct cool air into the building. Reflective surfaces, combined with louvered windows and skylights, supply natural daylight to the building's interior while guarding against solar heat gain.

For the 2007–08 academic year, Weill Cornell has set a target reduction of 4 percent in energy demand for the New York City campus. Ryan says that last year the Medical College spent \$8 million on electricity and recent trends have seen yearly increases in demand. This fall, Weill Cornell is launching a new user education program designed to get employees to pitch in. "We want everyone to think about equipment and lights and how much it costs to keep those items running," says Ryan. "It's money for nothing by turning off that switch when you leave a lab or classroom."

— Sharon Tregaskis

Hospitals, clinics, and nursing
homes generate close to
2 million tons of waste each
year, spend more than \$6.5
billion on energy, and rank
among the top ten consumers
of potable water in the country.



the gentle tyrant

A night at the Center for Sleep Medicine, where patients with insomnia and other disorders seek relief.

by Beth Saulnier

illustration by Ward Schumaker

photographs by John Abbott

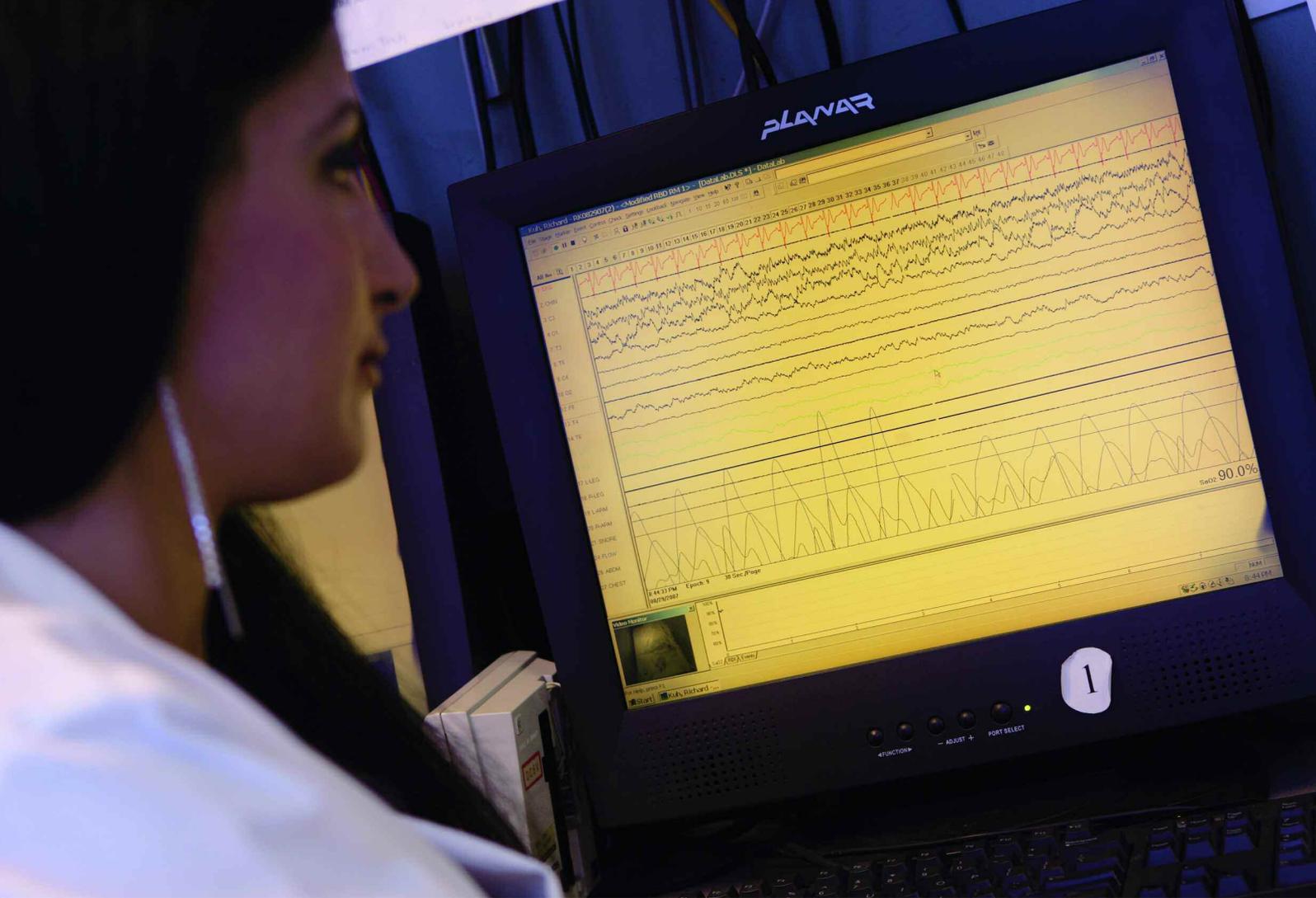
I can't sleep. I'm lying in bed at Weill Cornell's Center for Sleep Medicine, failing at the one thing I'm supposed to do: become unconscious. I'd conked out briefly around eleven-thirty only to wake up again; now it's past two and I'm getting desperate. I try counting sheep—dogs, actually—and hit the thousands while remaining stubbornly awake. A mental review of the plots of my favorite Jane Austen novels is similarly unsuccessful. Earlier that evening, in the hope of tiring myself out, I'd trotted briskly from my previous assignment at 125th and Madison to the sleep lab at the corner of 68th and York. As two-thirty approaches, I'm wrecked. And I still can't sleep.

It doesn't help that I'm hardly what you would call comfort-

able. There are electrodes connected to my head and face, a nasal cannula measures airflow, and a device resembling a tiny wire ski-jump is extended under my nose to monitor snoring. Two bands around my chest measure respiration, sensors on my leg record movement, and (most distracting of all) a pulse-oxymeter is making my right fingertip go numb. I'm being monitored via microphone and recorded on digital video, facts hardly conducive to relaxation. Plus, I know that no matter how little sleep I get, the staff has to rouse me at six. Which only makes me more awake.

I'm one of five patients here on this mid-March night. The others have symptoms that have warranted overnight sleep studies, or polysomnography; I'm on assignment for *Weill Cornell Medicine*. Ironically, as the staff explains, my lack of serious sleep issues may make it harder for me to drop off in this setting. "Every single person who comes here says, 'How do they expect me to sleep with all these things on my head?'" says Mira Nikolova, the Sleep Center's head technician and formerly a physician in her native Bulgaria. "But give or take half an hour, if they're not insomniacs, they're asleep." In other words, patients suffering from apnea or other disorders are often so exhausted they can fall asleep just about anywhere. At the moment, I envy them.

In a 1992 book, researcher Wilse Webb called sleep "the gentle tyrant." Shakespeare had this to say about it, after he sentenced



Night shift: Sleep technician Mazalya Ilkanayeva observes a patient's brain waves and vital signs during his sleep study; live video of the patient lying in bed appears at the lower left-hand corner of the screen.

Macbeth to eternal insomnia as a punishment for regicide:

*Sleep that knits up the ravell'd sleeve of care,
The death of each day's life, sore labour's bath,
Balm of hurt minds, great nature's second course,
Chief nourisher in life's feast*

According to Weill Cornell's sleep experts, more than 10 percent of Americans have chronic insomnia. An additional 4 to 6 percent suffer from apnea, a disorder in which patients stop breathing while asleep, putting them at increased risk for high blood pressure, stroke, heart attack, and death. Each year, some 1,200 people come to Weill Cornell for overnight studies; the wait to be seen as a new clinical patient (after being referred by an internist, cardiologist, or ENT specialist) is three months. "Sleep problems are among the most common health complaints—certainly insomnia is up there with the common cold and headache," says Sleep Center associate director Arthur Spielman, a psychologist. "Insomnia is the bane of people's existence. It takes away quality of life, energy, alertness, and motivation and makes people mildly depressed and irritable. So much can be done about it, it's unfortunate that lots of people just put up with it."

What's the best way to insure a good night's sleep? Choose your parents carefully, jokes Sleep Center director Dr. Charles Pollak, a neurologist. "To be a lifelong good sleeper is a blessing," he says. "There are people who never seem to have problems.

They are relatively few and far between, but they do exist." But at some point in our lives, most of us experience trouble sleeping due to issues like stress, travel, a change in schedule, or simply what Pollak calls the insomnia of everyday life. "People go to bed a little too late and get up at a particular time to get to work," he says. "They're a little sleep deprived in the morning and that's multiplied every night until Friday; their sleep-debt needs are met on the weekend and then they can go back to their usual bad habits. In fact, I think that pattern is the origin of the week itself, which is a purely social convention."

Sleep has five stages. Most laypeople have heard of the rapid eye movement (REM) phase, in which we dream. The other stages include an initial transition between sleep and wakefulness lasting five to ten minutes—characterized by high-amplitude, low-frequency theta waves—and the delta stage, the deepest sleep and the hardest to be roused from. Small children are thought to have more delta sleep, which is one reason why it's so difficult to wake a sleeping toddler.

Why do humans need sleep? While science has hardly settled the question, it's believed to have a number of evolutionary benefits. It allows us to conserve energy by slowing our metabolism—and it limits activity when mammals with poor night vision are most vulnerable. "Another theory is that sleep somehow allows you to restore your body," says Matthew Ebben, a psychologist

who works with Pollak and Spielman. "It's often thought that delta sleep helps restore your physical being and REM sleep helps restore your mental stores."

Increasingly, Americans are relying on drugs such as Ambien and Lunesta to fall asleep and stay there; it's a \$3 billion-a-year business and growing. While pharmacology might work in the short run, like during times of stress or on trips, experts say it's not a long-term answer. "Often we'll get patients who have been taking hypnotics for years and then come to us with horrible insomnia and a drug-dependency problem," Ebben says. "It becomes a tough process for patients because just as they're getting off the medication their insomnia gets worse than ever."

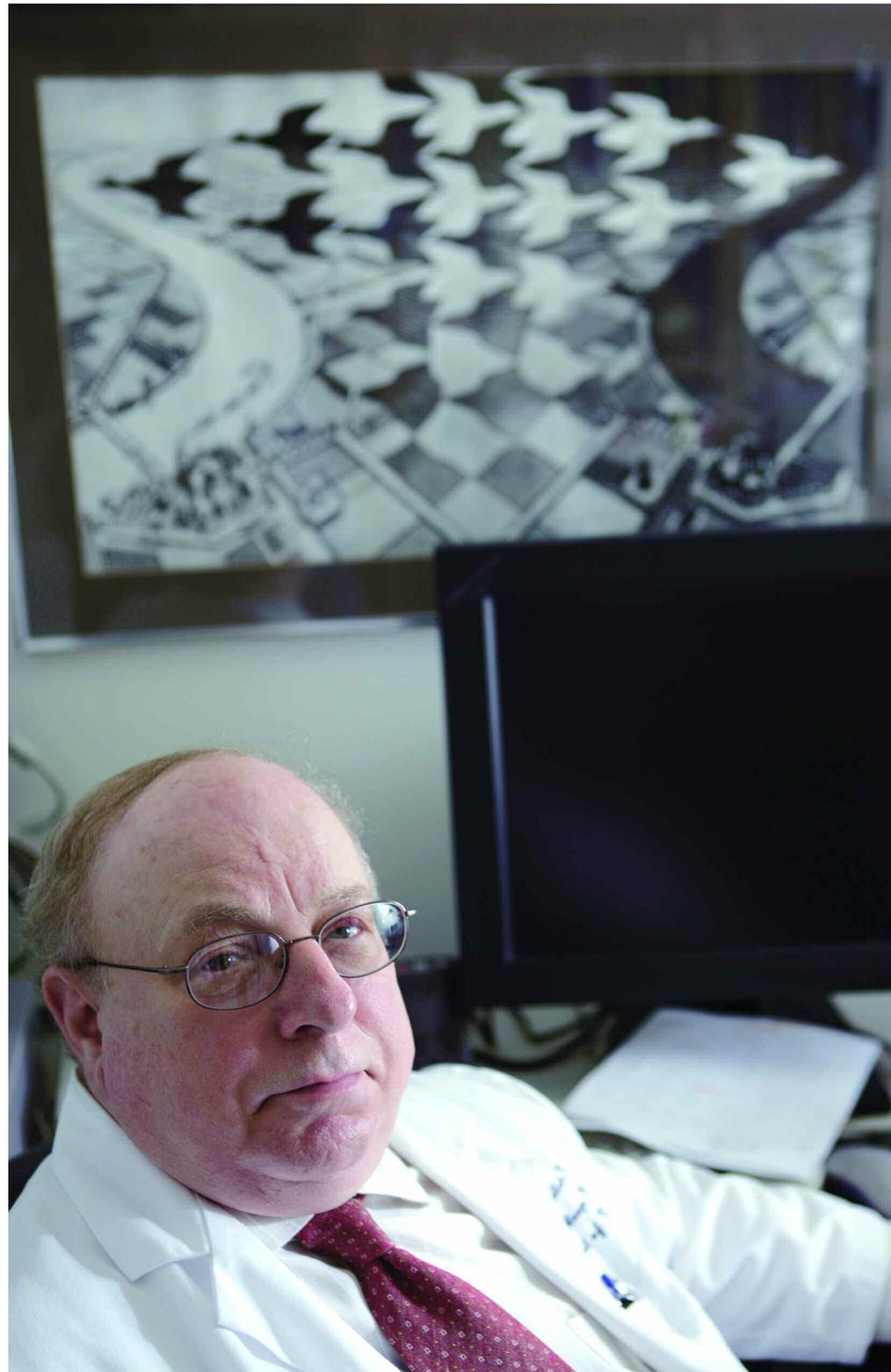
Sleep problems have been vexing humans for centuries. The ancient Greeks and Romans treated sleeplessness with Valerian root; the *Tacuinum Sanitatis*, a wellness text dating from the fourteenth century, contains a section on insomnia. While jet lag seems a distinctly modern malady, Pollak notes that the crews of seafaring vessels suffered a milder version of it. "It would be fashionable to say that sleep problems have been getting worse, but we don't know that," he says. "They're more recognized now—people are more aware of the existence of sleep centers and their power to treat problems."

Still, there's no denying that our society offers more round-the-clock temptations than ever in human history. We can surf the Web at all hours, use digital video recorders to watch prime-time TV at four a.m., shop for groceries at all-night supermarkets. "There is so much available 24/7 that people are enticed to indulge—I'm not saying they shouldn't, but it has consequences for sleep," says Spielman. "And there are plenty of stresses in society, like terrorism and war, that contribute to some people's inability to turn off."

though sleep demands tend to diminish as we age, everyone needs it. As Pollak notes, "It's a natural bodily function that eventually has to get its way—but it can be distorted and postponed for a while." While traditional wisdom values a good night's sleep as a tenet of healthy living, there's a certain prideful machismo in pulling an all-nighter. "There are people who brag about how late they work and how little sleep they get," Spielman says. "They complain, but there's

a glint in their eye of narcissistic gratification." Ebben sees a number of sleep-deprived patients whose work in finance requires them to rise before dawn to follow foreign markets and put in long hours to get ahead. "They almost always tell me, 'Guys I work with sleep four hours a night—why can't I be like that?' It's like asking why you're not six-foot-two. Some people need ten hours to feel fully rested; others can get away with six. It's what you're born with. You can take amphetamines or drink coffee and that will work for a short period of time, but it won't be a long-term solution."

Dr. Charles Pollak





Paul Amelio and his CPAP machine

Spielman and his colleagues stress that sleeplessness isn't just a matter of personal well-being. While drunken driving may be a more high-profile danger, research has shown that getting behind the wheel when you're overtired puts everyone at risk. "There's absolutely no question that single-vehicle fatal crashes are now more commonly attributed to fatigue," Spielman says. "You're more likely to die crashing into a wall or tree from sleeplessness than from alcohol." According to the National Highway Traffic Safety Administration, each year more than 100,000 crashes and 1,500 deaths are due to lack of sleep—at a cost of \$12.5 billion annually. Operator fatigue has been blamed for disasters ranging from a subway collision on New York City's Williamsburg Bridge to the grounding of the *Exxon Valdez*.

A sleep problem isn't necessarily defined by the number of hours of rest a person gets each night; it's how alert, energetic, and functional they feel the next day. The ability to fall asleep is no indication of good habits, as Nikolova notes, since the people with

Patients come in with their wives, and the wives will say, 'My husband has a sleep problem.' And the husband will say, 'I don't have a problem. I get into bed and fall right to sleep—as far as I'm concerned there's no problem.'

the worst sleep problems may be the ones who nod off at their desks. And often it's not the patient himself who recognizes the problem—it's his bed partner, who suffers the effects of snoring, restless movements, or late-night viewings of "The Daily Show." "Commonly patients will come in with their wives, and the wives will say, 'My husband has a sleep problem,'" says Ebben. "And the husband will say, 'I don't have a problem. I get into bed and fall right to sleep—as far as I'm concerned there's no problem.' "

That's what Paul Amelio thought. He fell asleep each night and woke up the next morning—not necessarily refreshed, but reasonably functional. Yes, when he was a kid at summer camp his bunkmates always said he snored, and his college roommates told him he could wake the dead. But he always thought that only overweight people were bad snorers, and he was a slender youth with 3 percent body fat.

It wasn't until he got married—and his wife started sleeping on the couch—that he realized something might be wrong. Then in his thirties, the Manhattan advertising executive learned that he was allergic to dust mites, which were causing his uvula to swell and obstruct his breathing. He had it surgically removed, but the problem didn't go away. He went for his first sleep study at Weill Cornell and was diagnosed with apnea, but the machine he was given to treat it—a continuous positive airway pressure device, or CPAP—was so cumbersome and complicated to clean that he quickly stopped using it. Eight years later, Amelio was still snoring—and his wife was still seeking quieter quarters. Says Amelio: "It was just not working for my relationship."

Last spring he went for a second sleep study, and finally began to accept how bad his apnea really was. Ebben showed him a print-out that Amelio says resembled "the Richter scale of a heavy earthquake." Amelio had gained weight as he'd gotten older, and his apnea had worsened to the point where he stopped breathing on

average 100 times an hour. Luckily, technology had evolved to the point that the CPAP was now the size of a box of tissues, connected to a face mask via a hose. Not only did Amelio stop snoring, he felt far more rested during the day. "After not using the CPAP for so many years, I realized what I was missing," he says. "You feel more revived; you get good sleep versus tossing and turning. I always thought I slept well, but during the day I couldn't stay awake."

Amelio's experience is typical of many apnea sufferers. While they may be reluctant to try the CPAP because of its appearance and unfamiliar sensation—when you first put it on, it feels a little like you're drowning in air—many find it makes an enormous difference. Once patients are diagnosed, they're often asked to return for a second sleep study so the CPAP's pressure level can be fine-tuned. "I love working overnight because in the morning you see people happy," says Nikolova. "You see somebody who's 300 pounds hugging you and crying because he finally slept well after twenty years."

The nation's obesity epidemic is one reason for the rise in apnea diagnoses; for physiological reasons having to do with the placement of fat around the throat, being overweight is a major risk factor. (People with thick necks are also at increased risk; in March the *Chronicle of Higher Education* noted a rise in apnea diagnoses among ever-larger college football players.) Apnea is

Matthew Ebben



All wired up: Ilkanayeva connects patient Richard Kuh's electrodes in preparation for his sleep study.

more common in men than women, and progesterone is believed to play a role in preventing it. "For example, when women are pregnant and gain weight as a result, they seem to be protected from apnea," says Ebben. "My obese male patients almost always have apnea. But obese female patients sometimes have it and sometimes don't."

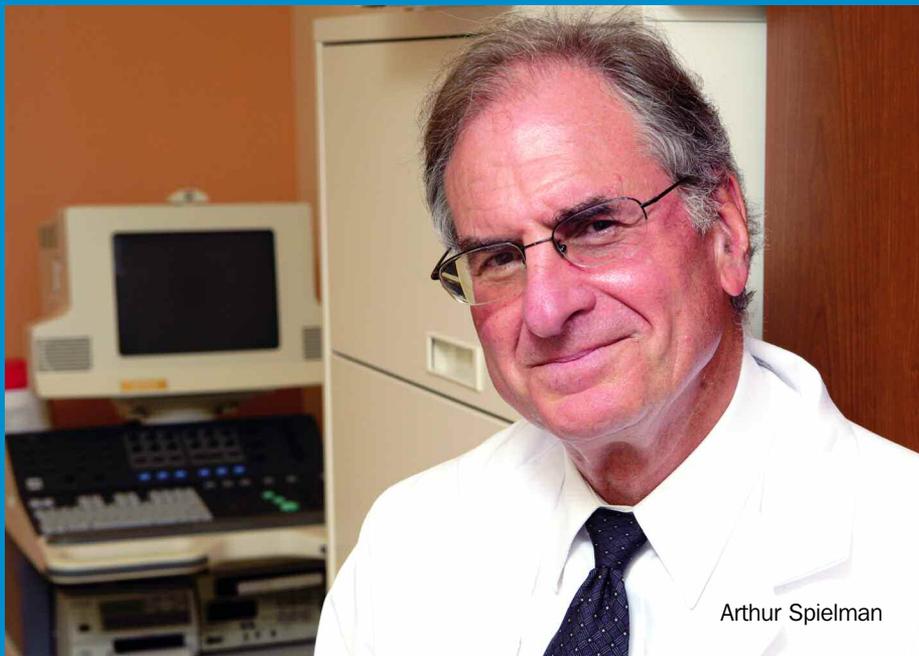


Insomnia, by contrast, is more common in women than men. (Apnea and insomnia make up the majority of conditions among patients at the Sleep Center; while narcolepsy and sleepwalking are popular in fiction for their obvious dramatic value, they're relatively rare.) And while apnea can often be treated successfully with a CPAP, insomnia is more complicated, with roots as much psychological as physiological. "It may be important for the patient to be treated for depression, which is a common cause of severe insomnia—probably the most common cause," says Pollak. "That may include referral to a psychotherapist or the use of medication."

When new patients come to the Sleep Center, they have a thorough medical history taken and are debriefed on lifestyle issues, stressors, prescriptions, and sleep history stretching back to childhood. But some people aren't clinically depressed or lack a clear-cut explanation like drug side-effects—and they still can't sleep. For them, experts offer

Prescription for Slumber

Experts offer alternatives to counting sheep



Arthur Spielman

In *The Insomnia Answer*, Weill Cornell Center for Sleep Medicine associate director Arthur Spielman and co-author Paul Glovinsky, clinical director of the Capital Region Sleep/Wake Disorders Center in Albany, offer advice on getting to sleep—and staying there. Published in 2006, the book helps readers prepare a personalized plan for overcoming insomnia and answers a host of common questions: Why do people get a “second wind”? Why can’t they fall asleep even if they’re exhausted? How can insomnia strike out of the blue after a lifetime of good sleep habits?

The book also offers tips for good sleep hygiene, including:

Avoid going to bed until you are drowsy.

Maintain a consistent rising time, even if you go to bed late, whether during the workweek or on weekends.

Limit napping. If you must take a nap, it should be short—about half an hour—and finished by mid-afternoon.

Avoid all caffeine after noon and limit yourself to one cup in the morning.

Avoid nicotine and alcohol in the evening, or if you awaken at night.

Exercise during the day; vigorous exercise ending four to six hours before bedtime may deepen sleep.

Avoid exercising in the late evening, or if you awaken at night.

Limit fluids as much as possible in the four to six hours before bedtime.

basic advice: stick to a bedtime, limit caffeine to before noon, get regular exercise. Doctors may also recommend cognitive behavioral therapy such as the use of guided imagery, which Spielman describes as “a way to control the spinning and buzzing of your mind.”

For some people, problems can be traced to what’s known as a lack of good sleep hygiene: they hold everything from meals to movie marathons in the boudoir. “The usual advice,” Pollak stresses, “is not to use the bed for anything besides sleep and sex.” New patients fill out sleep logs for several weeks, and doctors often find that although they may sleep only an average of six hours a night, they spend nine or ten hours in bed. “They start

associating their bedroom environment with being awake,” says Ebben, “and the sleep problem becomes even worse.”

One method of getting sleep back on track is stimulus control therapy, in which patients are forbidden to toss and turn. If they’re not tired or sleeping, they can’t be in the bedroom: no reading, no TV. “That also extends to waking up during the night,” Ebben says. “If you wake up and feel like you can’t go back to sleep, you should get up, go to your living room, and do something that’s not that engaging. Once you start feeling sleepy again, go back to bed.”

Another method is sleep restriction therapy, whose name says it all. Though it may sound counterintuitive, patients are trained

Allow sufficient time to wind down before bedtime.

Be sure your bedroom is dark, quiet, well ventilated, and at a comfortable temperature.

Turn your clock so you cannot read the time if you waken at night.

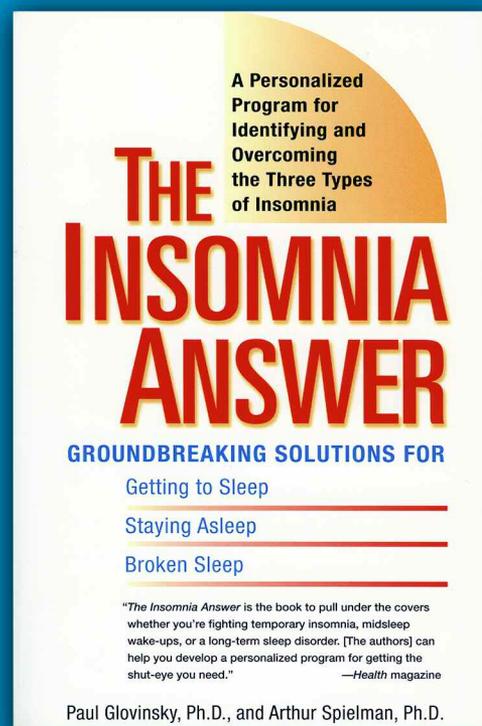
Be sure your bed partner or pet is not disturbing your sleep.

The authors also offer advice on choosing the correct bedtime depending on the nature of your sleep problem. Sleep, they write, is like an ocean wave—and like a surfer, sleepers need to hop on at the right moment. “Fighting the waves will prove hopeless,” they write, “whereas those who literally ‘go with the flow’ will meet with success.”

If your main problem is difficulty falling asleep, they recommend moving your bedtime later. “Cut half the time you usually spend awake out of your schedule. For example, if you typically spend two hours awake in bed, primarily at the start of the night, set your new bedtime one hour later than usual. Keep your rising time constant.”

If your main problem is difficulty staying asleep, they recommend moving your rising time earlier. “For example, if you typically spend two hours awake in bed, primarily at the end of the night, set your new rising time one hour earlier than usual. Keep your bedtime constant.”

If you have trouble both falling asleep and staying asleep, or if you can't discern any pattern in your broken sleep, they recommend moving your bedtime a bit later and your rising time a bit earlier. “For example, if you typically spend two hours awake in bed scattered through the night, set your new bedtime one-half hour later and your new rising time one-half hour earlier than usual.”



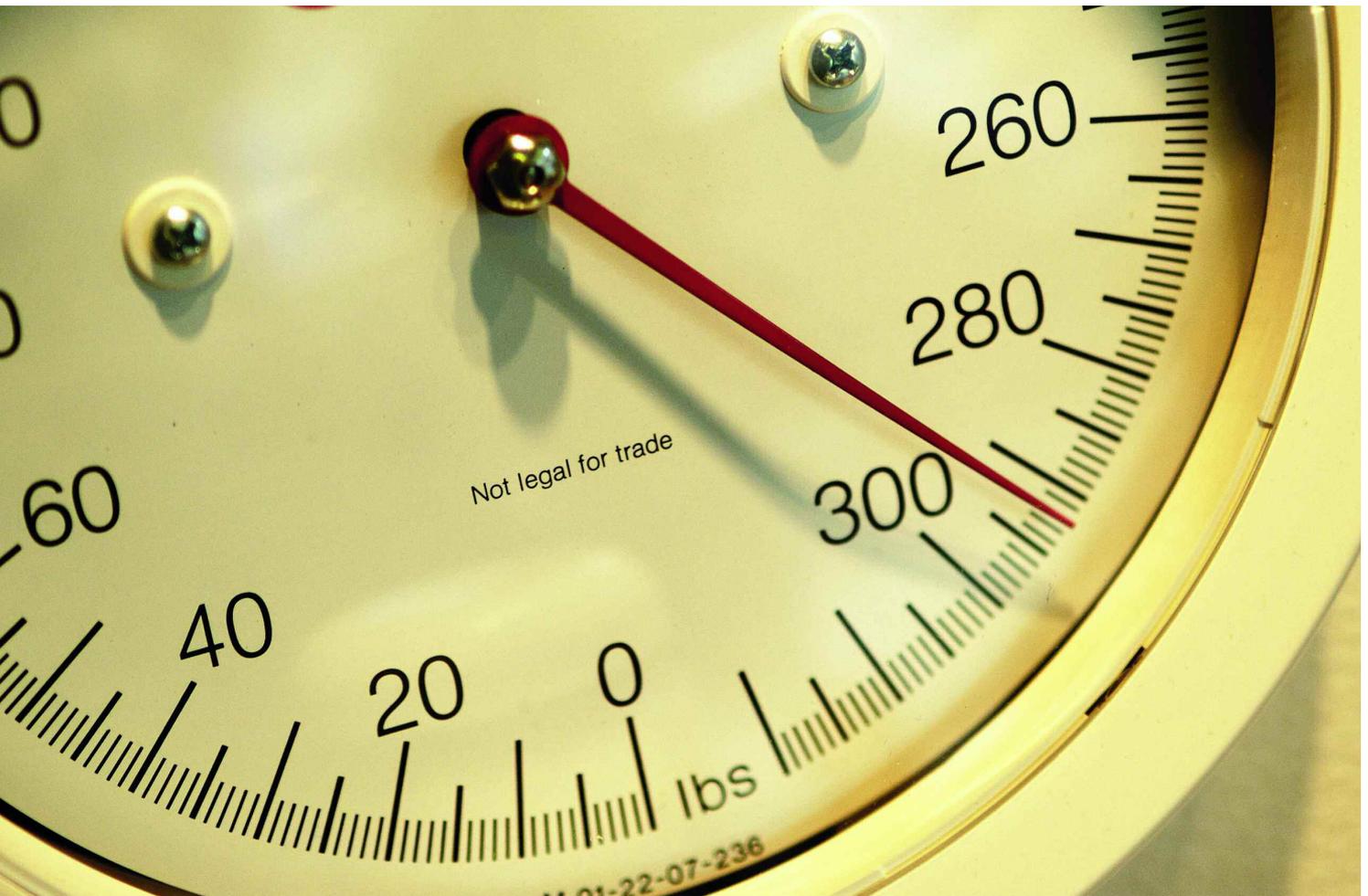
to sleep more by initially sleeping less. For example, they might be limited to sleeping from midnight to six. According to the guidelines, they can't go to bed before midnight no matter how tired they are—and they have to wake up no later than six. “Sleep is one of those things that becomes harder to get the harder you try to get it,” Ebben says. “You can't make yourself sleep, but you can make yourself wake up. So we control the patient's ability to wake up and the sleep will follow, because eventually they will become sleep-deprived and their body will take over.”

Eventually, mine does too; I finally fall asleep around two-thirty only to be roused at six, my scheduled checkout time. At our debriefing a few hours later—I've downed plenty of coffee in

the interim—Ebben gives me a printout reporting my brain activity, breathing, and movement. The good news is, my apnea index is four—well within normal limits. The bad news is, I slept a grand total of 239 minutes. “You slept for a little less than half the time,” Ebben says. “So your sleep efficiency was 41 percent, which is not good.” And as for Amelio: he continues to be a polysomnography success story, though he admits that he wakes each morning to find himself lying atop his CPAP mask. “For some reason, I can't keep it on all night,” he says. “But during the time that I have it on, I get great sleep.” What's more, he says, “my wife sleeps through the night—and we're in the same bed.” ■

big

by Jennifer Armstrong



BARTOMEU AMENGUAL / FOTORESEARCH

problems

America's obesity crisis is fueling its own epidemic: Type 2 diabetes.

Some say it starts at the sub-cellular level, where once-cordial relations among proteins, membranes, and glucose break down. Some say it starts with Big Macs, Ben & Jerry's, and 800 cable channels' worth of reasons to stay on the couch. It might have to do with insulin or endocrine function, the pancreas or the liver, or all of the above. But one thing's for sure: Americans are getting heavier by the day, and it's causing a diabetes epidemic.

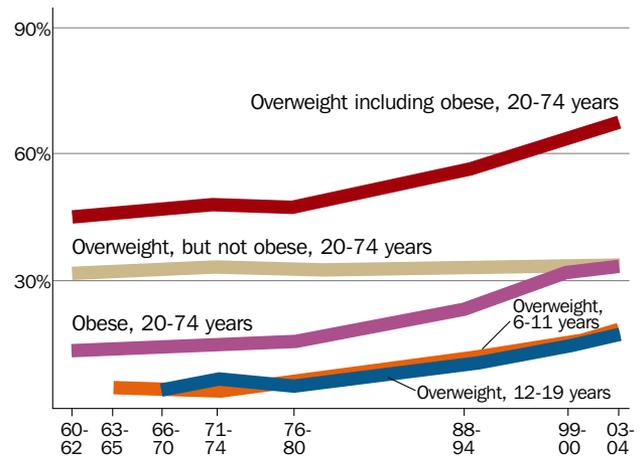
As medical researchers study the microscopic processes that turn our beloved pizza and fries into the energy the body runs on—or ponder how our bodies keep that fuel burning at just the right rate—we have been growing ever larger. In a 1976–80 study, only 15 percent of Americans were obese; by 2003–04, that number had grown to 33 percent. In this survey, a whopping 66 percent, or 133.6 million Americans, were classified as overweight or obese.

Meanwhile, according to a 2005 American Diabetes Association (ADA) survey, 20.8 million Americans have developed Type 2 diabetes—the kind associated with being overweight—costing the country \$132 billion a year in medical bills and lost productivity. Around the world, as more countries become Westernized, adopting our poor dietary and exercise habits along the way, 171 million people have been diagnosed, with some studies projecting that number will double by 2030. As one recently popularized term puts it, there is an official “diabesity” epidemic. “It’s an enormous

problem in all the industrialized world,” says Timothy McGraw, a Weill Cornell biochemist who researches diabetes’s microscopic components. Children’s obesity rates in particular are rising, having quadrupled among six- to eleven-year-olds since 1963, going from 4 percent to 16 percent. And that means things will likely get worse in the coming decades. “Being overweight in childhood plants the seeds for future troubles,” says Dr. Roja Motaghedi, an assistant professor of pediatrics who treats children with the disease. “Overweight children will become overweight adults.”

Overweight and obesity in the US by age, 1960–2004

Source: CDC/National Center for Health Statistics



Expanding waistlines: Data from the National Health and Nutrition Examination Survey have shown a steady increase in obesity rates over the past three decades. The NIH defines someone as obese if they have a body mass index (BMI) of thirty or above, and overweight if their BMI is twenty-five or above.



ABBOTT

Dr. Roja Motaghedi

Those future generations could be among the beneficiaries of the diabetes and obesity initiatives targeted by Weill Cornell's "Discoveries That Make a Difference" capital campaign, which focuses on research that translates directly to patient care. McGraw, Motaghedi, and others at the Medical College are attacking diabetes at every level, from studying cellular functions to designing weight-loss programs. Recent studies have found ways to increase diabetics' physical activity, identified the proteins that regulate glucose uptake, and furthered understanding of the cells that produce insulin. "We spend a lot of time and funding to care for diabetics," says Motaghedi. "It's a lot of resources spent on something that basically shouldn't happen."

Why shouldn't it happen? Type 1, once called "juvenile" diabetes, results from immunological damage to the pancreas, which leads to decreased production of insulin, the essential hormone that regulates blood sugar. But Type 2 most often springs from obesity, which is why it has historically been considered "adult-onset"—though that officially changed in 1997, when increased weight problems in children prompted the ADA to drop the term. And obesity, at least at the levels it has now reached, is a thoroughly modern problem that's entirely preventable.

Put simply, Type 2 diabetes can occur when excess fat interferes with the way the body processes insulin, which prevents patients from efficiently using the glucose in food. That leads to high blood sugar, which harms a variety of body systems. The pancreatic islet cells charged with producing insulin work over-

time—unaware that no matter how much they make, the body will still be resistant to its effects. Meanwhile, other systems are not getting the nourishment they need, yet they are still trying to make up for the body's increasing exhaustion. Even the fat itself can wreak havoc. "It accumulates in the central body organs, including the liver," Motaghedi says. "Then you disturb liver function, which includes the metabolism of glucose. That means the pancreas has to make more insulin and is constantly overworking in an attempt to overcome the insulin resistance and abnormal glucose metabolism." Eventually, the pancreas fails and the worst complications of Type 2 diabetes follow, such as blindness, kidney failure, and limb loss.

Those catastrophic problems often start with simple bad habits like poor diet and lack of exercise—ironically, the same ones that make it that much harder to manage diabetes once it's diagnosed. Better eating and higher activity levels can go a long way toward mitigating diabetes's effects, but often the damage has been done and pulling out of the vicious cycle is no longer a matter of mere willpower. "Metabolic changes in chronic long-standing obesity and insulin resistance," Motaghedi says, "are hard to reverse."

They're even more difficult to fight—and, in fact, are magnified—in groups prone to obesity and diabetes because of socioeconomic factors. In poorer areas, shopping at Whole Foods after hitting the gym isn't a likely option; nor is even having regular doctor visits to monitor your health. Children as young as two living in low-

income New York neighborhoods have a one-in-four chance of being obese, according to a 2006 study conducted by the city. And depressed rural areas fare even worse. In one CDC study, 33 percent of urban whites had unhealthy glucose levels, with that number jumping to 43 percent in rural areas; 45 percent of urban African Americans were affected, and 61 percent in rural regions. Earlier generations of poor people suffered from hunger, notes Weill Cornell obesity expert Dr. Louis Aronne; today they tend to fill up on inexpensive, nutritionally empty foods like potato chips and cookies. Even worse, sugary, carb-laden snacks can cause blood sugar levels to spike, a phenomenon that, if it happens often enough, can lead to insulin resistance and eventually diabetes. Essentially, Aronne says, “that fattening food breaks down the mechanisms that regulate hunger.” Evolution-honed processes, meanwhile, work against anyone who tries to lose weight, slowing down metabolism in an effort to store fat in case food becomes scarce. A handy trait for cavemen—but less so for modern creatures who shop in convenience stores.

ethnicity also plays a part, suggesting a strong genetic component. African Americans, Hispanics, and Native Americans show generally increased rates of both obesity and diabetes. Gender can also factor into the equation. Japanese men can develop diabetes due to their tendency to store fat around the abdomen, while Japanese women don’t tend to have that problem. “Waist circumference is a better predictor of risk than weight,” says Aronne, “especially among ethnic populations.” In fact, people of any race bear a higher risk for the disease if they are apple-shaped, keeping their fat right around the midsection. This kind of portliness even has a medical designation: abdominal obesity.

All types of obesity are targets of Weill Cornell’s Compre-

Timothy McGraw



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Fattening food breaks down the mechanisms that regulate hunger—and evolution-honed processes work against anyone who tries to lose weight, slowing down metabolism in case food becomes scarce.

hensive Weight Control Program, which Aronne has run since 1986 with an eye toward combating diabetes and other diseases at their source. A past president of the North American Association for the Study of Obesity, he sees fat as nothing less than the root of most modern medical evil because of its tendency to wreak havoc with hormones, cause inflammation throughout the body, and raise blood pressure. Hormones, in particular, can throw the body’s systems out of whack—including those that regulate hunger, as abdominal fat cells tend to overproduce messenger substances. (When combined with hypertension and elevated blood fats, the condition is called metabolic syndrome.) Fat cells also attract white blood cells—which means inflammation, believed to be the underlying cause for a host of problems from cancer to heart disease to arthritis. If more patients lose weight, Aronne argues, they will not only decrease their risk of diabetes but avert a variety of other major problems, a key tenet of his book *Weigh Less, Live Longer*.

Aronne’s program focuses on getting the number on the scale down in any way possible, from nutritional counseling to weight-loss drugs and bariatric surgery. He goes through the basics with patients—the principle of more exercise and fewer calories still can’t be beat—and provides supervision and moral support. He also applies the latest research, such as a study proving that more sleep can aid weight loss. A longtime advocate of increasing awareness of weight issues among health-care providers, Aronne edited the *National Institutes of Health’s Practical Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*. Published in 2000, it pulls together the knowledge of dozens of medical experts on assessment of patients with weight problems and offers practical advice about diet, exercise, and lifestyle therapy that includes monitoring progress, managing stress, and seeking social support.

Aronne believes in attacking fat from every angle, including the use of pharmaceuticals. He is studying a promising category of drugs for weight control known as CB1 antagonists, the first of which is called rimonabant (Acomplia/Zimulti). Now approved in forty-two countries around the world, rimonabant was termed

Take a Hike

Student study hails the humble pedometer



ENRIQUE ALGARRA / FOTORESEARCH

Could a decidedly low-tech device—the pedometer—help curb obesity-related diabetes? A Weill Cornell student's study says yes.

Eugene Licht '09 and his research partners at the Naomi Berrie Diabetes Center have found that giving pedometers and a daily walking goal to Type 2 diabetics increased their weekly calorie expenditures by about 45 percent, from 3,183 when the study began to 4,593 six months later. The study focused on older adults, aged fifty-five and older, who make up about 40 percent of Type 2 patients; by targeting African Americans and Hispanics in a low-income area of Harlem, the researchers hoped to cover many of the major risk factors for the disease. "We were trying to increase their physical activity because that's more effective than drugs alone," Licht says. "Doctors tell patients to increase activity, but that's easier said than done because there aren't a lot of parks there, and it may not be safe to walk around at night."

The twenty-eight patients—culled from diabetes-management classes at NewYork-Presbyterian Hospital/Columbia University Medical Center—averaged 7,013 steps per day over the six months measured, short of their goal of 10,000 but well ahead of the control group. They burned 4,593 calories per week (versus 3,931 for the control), engaged in an average of 18.3 physical activities per week (versus 12.5), and were eight times more likely to be involved in moderate to high-intensity activities. The pedometer-toting sample's body mass index was lower, on average, and they could walk farther.

Researchers are continuing the study in the hope of amassing a sample of at least 100, but Licht does not expect the overall message to change: a daily goal may be all it takes to get high-risk patients moving. Most of the extra steps came from a simple lifestyle shift, traveling by foot at times when they normally would have taken the bus. Says Licht: "We think the pedometers got people thinking about how much they're walking."

a potential “miracle weight-loss pill” in one National Public Radio report, though it has yet to win FDA approval. It treats weight gain where it begins—in fat cells, the liver, pancreas, and muscles—and reduces hunger where it begins—in the brain. (It’s technically a cannabinoid receptor antagonist, which means that it works like marijuana in reverse, quelling the munchies instead of stimulating them.)

Motaghedi, too, has been researching pharmaceutical ways to block hunger by studying the endocrine system in patients with Prader Willi syndrome, a rare chromosomal disorder that prevents appetite regulation and causes victims to become morbidly obese as early as age four. The hope is to find drugs that could jump-start weight loss, a particularly difficult task in pediatrics. “Children play video games and do their homework on computers,” she says. “In the past, it used to be the goal to get *enough* calories in school food; now they need fewer. I counsel them for hours and most of the time it’s not successful, because you can’t change their environment just by counseling.”

Others at Weill Cornell are working on research that could lead to new drugs that would treat diabetes directly. McGraw’s team is examining glucose transporters, which facilitate the elaborate process of getting sugars into the fat and muscle cells, where the sugar is used immediately as an energy source or stored for future use, a process that’s interrupted in insulin-resistant (diabetic or pre-diabetic) patients. “It’s a cumbersome mechanism because it involves a lot of steps that could go wrong,” McGraw explains. “We want to understand which of those things are necessary, to identify the components of the system. When individuals develop insulin resistance, it’s not clear where the system is breaking down.” His team recently isolated a protein called Rab10 that helps the process along, a finding that could lead to better, more targeted drugs.

Research aimed at Type 1 diabetics, like Weill Cornell’s islet transplantation program (in which patients get donor infusions of the pancreatic cells that make insulin), could end up helping Type 2s who eventually deplete their insulin-making abilities. Dr. Manikkam Suthanthiran, the Stanton Griffis Distinguished Professor of Medicine, says that drugs like Exendin-4, which stim-



Dr. Louis Aronne

‘It used to be the goal to get *enough* calories in school food,’ says Motaghedi. ‘Now children need fewer. I counsel them and most of the time it’s not successful, because you can’t change their environment.’

ulates insulin release and protects islet cells, “could have great implications for both Type 1 and Type 2 diabetes.” There’s even an increasingly recognized form of diabetes called Type 1.5, essentially a disease with features of both Type 1 and Type 2.

But researchers stress that even the finest drug therapy comes in a distant second to preventing Type 2 diabetes before it strikes—and that time is of the essence. “If you’re going to lose weight, it should be early,” McGraw says. “The longer you wait, the more likely it is that you’re going to have damage.” Motaghedi agrees, and has a simple idea for forestalling the epidemic: appealing to potential victims where they are most likely to be found, on the sofa with the remote. “Sometimes I think I should go on TV and explain why obesity is bad,” she says. “If people don’t become overweight in the first place, we could forget about Type 2 diabetes forever.” ■

back to basics

For graduating MDs, the Advanced Biomedical Science course is part educational capstone, part class reunion.

by Sherry Stolar
photographs by John Abbott

It's nine on a Monday morning in late May, and dozens of sleepy fourth-year medical students stroll into 1300 York Avenue's Weill Auditorium. They're dressed casually, in jeans and T-shirts, and have breakfast in hand as they find their way to their seats. Until the previous week, these students had not been in a classroom together in nearly two years, having spent the third and fourth years of their medical educations in disparate clinical settings. Still, "some things never change," fourth-year Won Kim says, smiling as he settles into what he considers *his* chair. "The other day I walked in and someone had taken my seat. That really bothered me." Classmate David Greenhouse echoes Kim's sentiment.

Two years may have passed since their last lecture, he says, but "everyone sits in the same seats."

Students continue to wander in as Dr. Katherine Amberson Hajjar, the director of the day's module, introduces the topic: Mechanisms of Vascular Health and Disease. Professors fill the front row, taking notes on the speakers; the soon-to-be MDs sit further back, listening attentively. In just over a week, following their May 30 graduation at Carnegie Hall, these men and women will be interns; for now, they're still students expected to show up for class. But this isn't your typical medical school course. An intensive two-week seminar, the Advanced Biomedical Science (ABS) course offers a culmination to their Weill Cornell educations by going back to the basics. "Our aim is to present what students need to know for their future as informed physicians," says Susanna Cunningham-Rundles, vice chair for academic affairs and professor of immunology, one of the course's co-directors. "It gives perspective by relating basic biology to clinical practice."

As early as January, Cunningham-Rundles and her co-

director, professor of psychiatry and neurology Dr. David Silbersweig, start selecting topics and tapping lecturers. (Because the course is intended to combine clinical medicine with basic science, Silbersweig notes, it helps that Cunningham-Rundles is a PhD and he is an MD.) The ABS course is held in half-day modules, each devoted to a different topic, such as advances in obesity and diabetes, the role of clinical research in medicine, and host/pathogen interactions. Cunningham-Rundles and Silbersweig invite physicians and researchers who are doing cutting-edge work in their fields to direct the modules and select individual speakers. For example, this year's course included a lecture on oncogenic mutations in human cancer by Dr. Harold Varmus, president of Memorial Sloan-Kettering Cancer Center and a Nobel laureate. Over the past two years lectures have been added on a number of medical advances, such as optical imaging and the neurobiology of stress. "It's a way of providing examples to the students, as they go out into the world, of what the issues and emerging approaches are," says Silbersweig.

Topics vary from year to year to reflect the latest scientific discoveries. Cunningham-Rundles notes that much of the research presented in the course is work-in-progress,

and "it certainly hasn't made its way into care." Immunologist and HIV expert John Moore's lecture on drug resistance focused not only on the basic science of drug development in HIV/AIDS, but also on what scientists are currently learning about host cell/virus interaction. Exposure to such advanced research can encourage young doctors to think ahead of the curve—so they will be better able, for example, to predict how an individual patient might respond to a certain drug, allowing them to better tailor treatments and optimize care. "The facts are going to change; five years from now what they heard today may be superseded," says Dr. Jorge Kizer, an associate professor of medicine who lectured on hypercoagulable states and cryptogenic stroke. "But they need to know how to continue to learn, how to integrate information and filter it, and how to appreciate the advanced methods that are being developed as all these fields emerge so they can do the best by their patients."

The course is not entirely devoted to research; it has a clinical component as well. Silbersweig says he and Cunningham-Rundles try to make some of the sessions specifically relevant to what the graduates will be doing as interns. Lecturers are encouraged to stimulate discussion so

Coffee and conversation: Course organizer Susanna Cunningham-Rundles chats with Lou Cooper '07 during a break in the Advanced Biomedical Science class. Lily Changchien '07 is at lower right.





Susanna Cunningham-Rundles

the students can make their own connections between basic science and practice, as in a talk on respiratory distress syndrome by Dr. David Berlin, an assistant professor of medicine. “This year we addressed what you do when a patient stops breathing right in front of you,” says Silbersweig. “It’s tangible because a few weeks from now, they could be the person called into the room.”

The course is mandatory for graduation but attendance is not strictly enforced. There are no tests, no papers—simply a sign-in sheet when the students enter. “We’re treating them as colleagues,” says Kizer. “The notion is to welcome them into the fold and excite them, to send them off thinking critically about these issues.” The students appreciate such mutual respect, he says, and most attend every day. ABS is designed to be intellectually rigorous yet relaxed. “If there were a paper or an exam,” says class president Anuj Mehta, “I think the whole dynamic would change.”

The class comes at a vital time in the students’ careers, says Kizer. Though they may have seen much of the information earlier, the way it is presented in the ABS course is different—and so are the students themselves. Having had some clinical experience, they have a more advanced and integrated perspective. Explaining the basics of cryptogenic stroke to students who have never encountered a patient is a greater challenge than lecturing to fourth-years who have witnessed stroke’s damage firsthand. “I can present the same information in a first-year course and they won’t see the same thing,” notes Kizer. “Before they’ve had their clerkships, students receive and perceive very differently.”

For the students, though, wrapping their minds around the facts can be difficult at a time when they are both excited and nervous about beginning their careers. “I think everyone has clinical medicine on their minds, so it’s hard to focus on basic science right before we’re going to start practicing,” says Greenhouse, bound for an internship in general surgery at the University of Vermont. “Still, it is easier to understand the basics now that we’ve had the clinical context from the last few years.”

the course is structured around the students’ busy lives as they transition from school to practice. They will soon begin their careers as physicians, and a fair amount of logistical preparation comes along with it—moving and settling into new communities and, for many, saying goodbye to friends in New York. “We know that students have a lot on their plates right now, so we’ve designed the course as morning sessions, leaving the afternoons free to make personal arrangements,” says Cunningham-Rundles.

Still, not all the students feel the course is held at the right time. Kathleen Forcier, bound for a pediatrics residency at Stanford, says that the class might be better if condensed into two or three full days, leaving more time free to relocate—or take a vacation. Forcier had to leave an internship in Botswana early to attend the ABS course, and planned to begin her residency about a week after graduation. “I’m sure the speakers have amazing

things to say, but we've got so much on our minds right now," she says. "We might not be giving them the attention they deserve." Mehta agrees, suggesting that the class could come between the third and fourth years, when students would be better able to focus. "We had a Nobel laureate speak last week, and some people had to leave halfway through," he says. "It's not an efficient use of the last few weeks." While it's true that some students feel that way, says Cunningham-Rundles, 70 percent of those responding to last year's course evaluation recommended keeping the course at the end of the fourth year.

As Dr. William Muller lectures about the pathology of atherosclerosis, the students do seem a bit distracted. A few even close their eyes, either deep in thought or fighting off sleep. Yet when Muller finishes, the auditorium bursts into an uproar of applause. Students who moments ago seemed not to be paying close attention now raise their hands with questions, eager for more information. "How much do you need to lower cholesterol to reduce lesions?" asks one student. "What about people who have chronic inflammatory conditions?" asks another. Once the rapid-fire questions die down, Silbersweig thanks Muller and the students head out to the Archbold Commons for coffee.

The Advanced Biomedical Science course was created in 2000–01 during the Medical College's shift to a problem-based curriculum. As more clinical medicine was brought into the first two years, ABS was added to fulfill curricular requirements. The goal of the seminar was "to bring science back to our fourth-years in a way that would be meaningful, so they clearly understand how its role fits into the broader scheme of medicine," says Dr. Marcus Reidenberg, who co-chaired the committee with Dr. Joel Pardee that first developed the course—then called Advanced Basic Science—in 1999–2000. In 2001, when Reidenberg and Cunningham-Rundles approached Dr. Carol Storey-Johnson, the

'The facts are going to change; five years from now what they heard today may be superseded,' says Dr. Jorge Kizer. 'But they need to know how to continue to learn, so they can do the best by their patients.'

senior associate dean for education, with the idea of refocusing the course on the application of basic science to clinical practice by using case-based modules, Storey-Johnson liked their suggestion. "The course is a nice bridge," she says. "It brings back the rigor of thinking scientifically and addresses the impact that current research has on practice."

The course also has a function beyond the pedagogical: it's a bonding experience for the class. It represents the first time many students have seen each other in two years—and one of the last times they will be together. "That was the idea from the begin-



Dr. Jorge Kizer

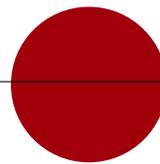
ning," Reidenberg says, "to have a strong intellectual part with a social component, to make the total experience worthwhile." The students recognize that this may be the last time they will all be in the same room. "We've been trying to spend as much time together as we can during these last two weeks," says Greenhouse. "We've been more social than we ever were in all four years." To encourage togetherness, Mehta organized social activities including a karaoke night, a quiz night, and a formal at the Water Club on the East River. ABS, Greenhouse says, serve as "a sort of last hurrah."

At the end of each year's course, students submit feedback and suggestions, which the organizers take "exceedingly seriously," says Silbersweig. Since its implementation, the course has evolved substantially. Among other things, it has been shortened from four to two weeks and, since 2001, has included a daily coffee break with free bagels, fruit, and pastries. And other schools have followed suit: seminars that relate the practice of medicine back to basic science—known as "capstone" courses—are becoming more common among peer institutions. "I rather like the flavor of our course, though," says Storey-Johnson. "It involves thinking about the future of medicine and disease, and getting a broader picture. It's unique because it's oriented toward the scientific method and applied research."

Sometimes, students are invited to present their own research. Elan Bomsztyk entered Weill Cornell with the Class of 2007 but took a year off to do translational research—"taking something esoteric and translating it into patient care." While his classmates were busy applying to residency programs, Bomsztyk spent what would have been his fourth year studying the formation of cancer in blood stem cells, research that he was invited to speak about in the ABS course this May. "It was an opportunity to tell them a little bit about where I've been," says Bomsztyk, who will graduate in 2008. "They're like my family—it's going to be lonely next year when they're spread across the country and I'm still here." ■



Welcome to medicine: At the traditional White Coat Ceremony for new medical students, Dean Antonio Gotto dresses first-year Yifan Xu, while Dr. Peter Marzuk aids Xu's classmate Ray Wu.



NOTEBOOK



WEILL CORNELL ART & PHOTO

Dear fellow alumni:

I hope you have had some time to relax and recharge over the summer as we head into the typically busy fall. Summer is always bracketed by two Medical College events that trigger wonderful memories and reminders about the mission of the Alumni Association. I am referring, of course, to Commencement and the White Coat ceremony for first-year students.

It was an honor and pleasure to be part of the Commencement processional held in late May at Carnegie Hall and to represent our alumni at the ceremony. At a dinner celebration and formally at Commencement, I presented Jay Cohn, MD '56, with the Alumni Award of Distinction, our highest honor given to a Weill Cornell graduate. Jay was thrilled to receive the award and urged the new graduates to pursue their dreams—outside the boundaries of traditional thinking, if necessary.



MARTIN MARION

The pride and sense of accomplishment were palpable as I mingled with the graduates and their families. Hugs, family photos with ear-to-ear smiles, and joy-filled conversations were the order of the day. It is an event that is always moving as our new alumni move on to their next career step after successfully navigating medical school. We wish them well as they launch professional lives backed by the credential of the Weill Cornell MD degree, and encourage them to maintain connections to the Medical College through our association. Keep a lookout for first-year postgraduates from Weill Cornell in your own institutions.

The White Coat ceremony, which introduces first-year students to the noble medical profession, is equally stirring. The curious, eager, and excited faces one sees at this ceremony are echoed in the proud, beaming faces seen at Commencement. In my view, these two happy events are the perfect beginning and end to summer.

The Alumni Association's mission to improve student life has been well served in recent months. New student initiatives that we have supported include startup costs for a student website, which will foster class spirit and provide a repository for information, notices, and class and lecture notes; an urban experience orientation for incoming students, to demystify the city and introduce them to cultural and recreational opportunities in Manhattan; the Weill Cornell Youth Scholar Program to groom participants for professional success; and travel expenses for three students to attend the Student National Medical Association Conference in San Francisco. Weill Cornell students are bright and active; they continually seek and initiate novel activities, community interactions, and research opportunities. Supporting their initiatives serves our mission—and, frankly, the interactions are an awful lot of fun.

In conjunction with Dean Gotto's office, the Alumni Association will host alumni and friends receptions around the country over the next few months. Please plan to attend, and encourage other Weill Cornell graduates and guests to come too. The events will be held in Washington, D.C., on November 5; in Palm Beach, Florida, on February 28; in Los Angeles on April 22; and in San Francisco on April 24.

It will be a busy year. I hope to see you here in New York or at one of our receptions. Please don't hesitate to get in touch with any suggestions or comments about Weill Cornell or your Alumni Association.

With my very warmest regards,

Gene Resnick, MD '74

President CUWMC Alumni Association

gene.resnick@alumni.med.cornell.edu

1930s **Robert J. Hoagland, MD '33:** "After 32 years as an Army medical officer, I retired and practiced medicine in Atlanta, GA, and Warrenton, VA. In 1987 I moved to Charlotte, NC, where I now live at Southminster Retirement Home."

1940s **Earl J. Netzow, MD '43:** "My wife, Cindy, and I celebrated our 65th wedding anniversary in August."

Edwin D. Kilbourne '42, MD '44: "This has been a busy year for an 86-year-old. After retiring in 2002 from a lifetime in medical research on influenza, I collected a number of light verses I had published through the years in the late *Saturday Review* and elsewhere and issued them as a book entitled *Strategies of Sex*; samples can be viewed on the Amazon website. I have just completed a chapter on 'Plagues and Pandemics' for a book called *Global Catastrophes*, to be published by Oxford University Press. A novel is next. In July of last year I spent over a week in Amman, Jordan, meeting with Iraqi scientists under a redirection program organized by the US State Department. The meeting was organized by my eldest son, **Edwin M. '74, MD '78.**"

Herbert I. McCoy, MD '45: "Just back from Bali. Served as doctor to a scuba diving group. Looks like I have the doubtful honor, at 86, of being the oldest active scuba diver in the South Pacific. My buddy and wife, Lani, is a dive master. Fantastic sea life and lovely warm waters."

William C. Robbins, MD '45: "I am still doing some volunteer work at the Newell Museum of the Trout Lake Nature Center in Eustis, FL. We have added a Florida panther to our exhibit of mounted birds and animals, and I have a bluebird, a red-bellied woodpecker, and a kestrel being mounted. I would be delighted to see any classmates who may visit central Florida."

Elizabeth M. Adams, MD '47: "My dog and I share an apartment in a reasonably pleasant retirement facility in Sacramento. We walk a lot and exercise to keep in shape. My son lives elsewhere in Sacramento and my daughter in New Hampshire. I had colon cancer in 1996, treated surgically, apparently successfully—as did my brother, who was two years behind me at CUMC."

Joan K. Barber, MD '49: "The journey from '49 is ongoing: pediatrics and psychiatry in New York, a permanent move to Washington, DC, the George Washington University Department of Psychiatry until emeritus retirement in 1999, private practice, and currently an unplanned career as university psychiatrist in student health. My husband, Milt Semer, and I are reveling in second marriages."

Robert B. Cubberley, MD '49: "Continuing my travel experiences as I remain alive and well—no recent problems. On May 18 I returned from 17 days in Afghanistan. Abject poverty outside the cities—a step backward in time. Little schooling for girls; 80 percent illiteracy. Most unusual."

1950s **Robert P. Vomacka, MD '50:** "Bonnie and I are still hanging in there, but the ravages of time are catching up. Our family doctors are taking good care of us. Heard from CUMC roommate **Al Rubin, MD '50**, and learned about the death of his

wife, Carolyn. Our four kids and two grandkids are doing as well as expected. Best regards to all."

Robert Boyer, MD '52: "I retired in August 2001. Keeping active as a member of the board of trustees at our local hospital and as a volunteer in senior activities in Old Tappan, NJ. Enjoying painting, gardening, and golf. Attended the funeral of **Wally Greenspan, MD '52**, this past spring and saw **Walt Peretz, MD '52**. Visited **Dave Niceberg '48, MD '52**, at his home in Syosset, NY. Looking forward to our 55th Reunion this fall."

Roy Lucas, MD '52: "I retired from an active radiology practice in Winter Haven, FL, seven years ago. My wife, Allyn, and I enjoy good health, love to travel, and started playing golf. We spend as much time as possible with our nine grandchildren and enjoy summers on Cape Cod. This retirement thing is OK. We send our very best to all in that great class of 1952."

Alan Van Poznak '48, MD '52: "Busier in retirement than I was at work. Much music activity: making CDs from my 20 years of tape recording at St. Thomas Church in New York City. Also record concerts at Tenafly High School and Middle School—great teachers and student talent. Family mostly well. Daughter **Catherine, MD '95**, is an oncologist at the University of Michigan in Ann Arbor. Granddaughter Marisa Van Poznak is a med-peds resident at Brown University. I never would have guessed that terminal senility would be so much fun."

Kenneth C. Archibald, MD '53, was featured in an article in *Beyond Medicine* about the groundbreaking for the Archibald-Ehrenberg Rehabilitation Terrain Park at California Pacific Medical Center. The park, named for Dr. Archibald and his medical partner, Dr. Bob Ehrenberg, will help patients recovering from serious orthopaedic injuries, stroke, or other neurological problems.

Richard T. Silver '50, MD '53: "I am still working. Last man standing wins!" Dr. Silver is professor of medicine and director of the Leukemia and Myeloproliferative Center at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. He is an attending physician of NewYork-Presbyterian Hospital, medical director of the Cancer Research and Treatment Fund Inc., and a life member of the Cornell University Council. Dr. Silver is the immediate past president of the New York State Society of Medical Oncologists and Hematologists. He is currently involved in evaluating novel small molecular agents such as imatinib mesylate and dasatinib. Recently he won honorable mention in an international photography competition sponsored by Charles Pfizer Inc. His pioneering work among the Indians of the Upper Xingu Basin in the Brazilian Amazon in 1965 earned him membership in the Explorers' Club. He is also an avid tennis player and clarinetist.

Clifford H. Urban, MD '53, is interested in making contact with the surviving members of the Class of '53.

Bernard Yablin '48, MD '53: "My oldest daughter, Vanessa Ochs, is head of the Division of Jewish Studies at the University of Virginia. Her recent books are *Sarah Laughed* (Norton) and *Inventing Jewish Ritual* (Jewish Publication Society). I share my alumni news with hopeful premedical students and my podiatrist, for his weekly radio health talk show."

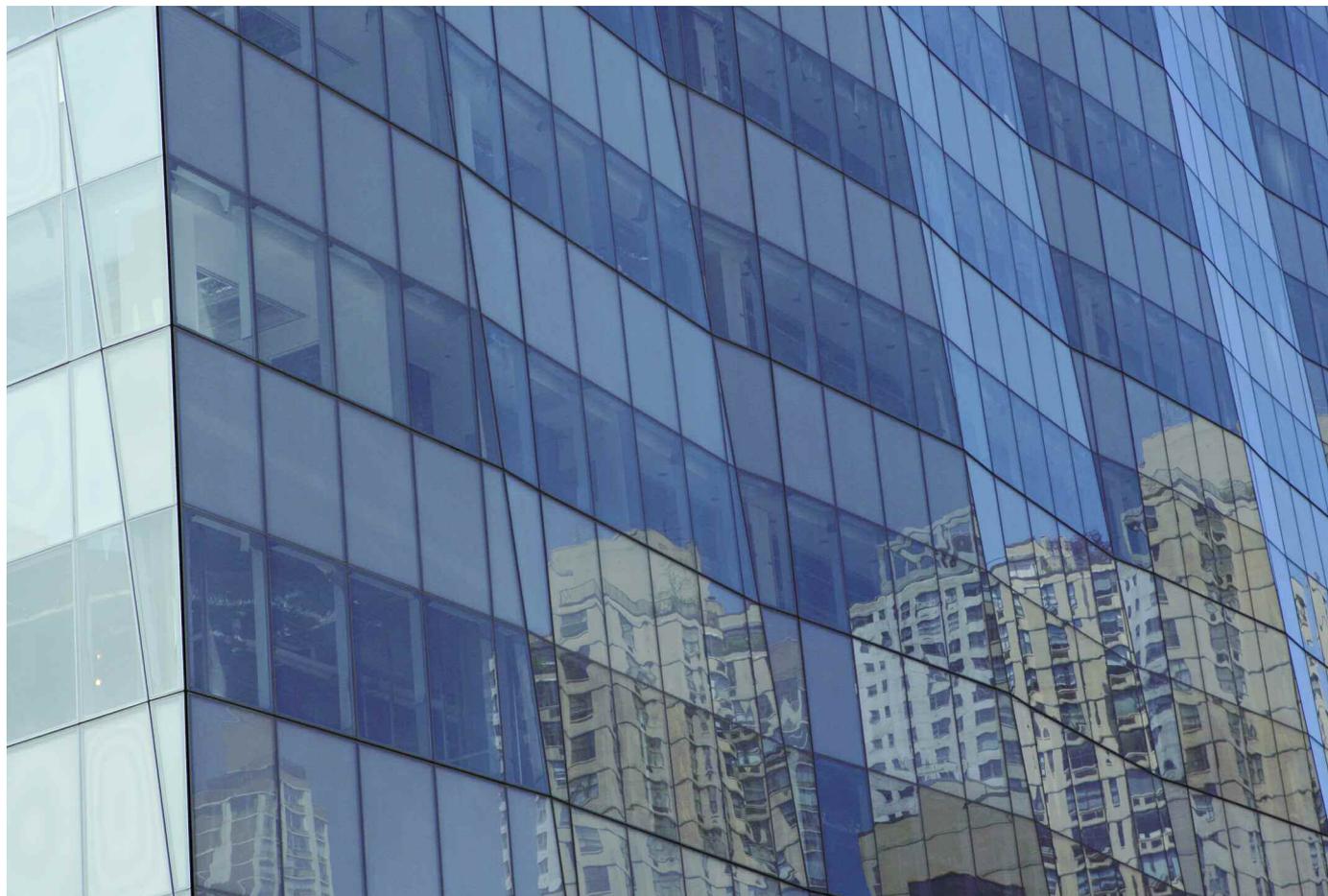
Frederick R. Abrams '50, MD '54: The American Medical Association Foundation presented Dr. Abrams with the 2006 Isaac Hays, MD, and John Bell, MD, Award for Leadership in Medical Ethics and Professionalism at the AMA's semi-annual policymaking

meeting in November 2006. Dr. Abrams, an outspoken advocate for patient safety through sound medical ethics, led the nation's community hospital-based bioethics movement as founding director of the first center for the study of ethical issues in a community hospital setting in the United States, the Center for Applied Biomedical Ethics at Rose Medical Center in Denver. The Center sponsored many of the earliest national conferences on bioethics and was the earliest source of training for Colorado hospital ethics committees in the 1980s. With the Denver Dept. of Social Services, he founded one of the earliest community-wide ethics committees in the country. In 2003, the faculty and advisory board of the Center for Bioethics and Humanities at the University of Colorado Health Sciences Center presented him with the Lifetime Achievement Award for "helping to create such a fertile ground for bioethics in Colorado." This award recognized Abrams's leadership roles in medical ethics, including: first executive director and commissioner of the Colorado Governor's Commission on Life and the Law (1991) and project director of the Robert Wood Johnson Foundation-supported "Colorado Speaks Out on Health," which educated 30,000 Coloradans about ethical issues in health (1986). Dr. Abrams also was instrumental in passing Colorado's first advance directive laws as well as one of the nation's first genetic privacy laws. On the national scene, he served on the advisory board for institutional ethics committees, American Society of Law and Medicine; and the national advisory board on ethics in reproduction and the national ethics committee, American College of

Obstetricians and Gynecologists, 1984–90, and as chairman, 1987–90. Dr. Abrams's most recent publication is a book of true stories about ethical dilemmas he encountered in 42 years of practice (and one humorous story about encounters at Cornell University Medical College) entitled *Doctors on the Edge: Will Your Doctor Break the Rules for You?*

J. Robert Buchanan, MD '54: "In the three years since our 50th Reunion, Sue and I have sold the larger house on our Connecticut property, which we had occupied since 1991. We are now making our home from May 15 to October 15 in our former horse barn, which was renovated in 2000 and to which we added a wing in 2006. That move necessitated major vetting of more than 40 years of accumulated papers, books, photos, awards, furniture, and miscellany. As those who have done likewise will agree, it is both physically and emotionally draining. The remainder of the year we live in Punta Gorda, FL, our official domicile. My principal avocation at this time is working as a trustee of the Aga Khan University and a volunteer in the Aga Khan Development Network, where my experiences as a medical educator and hospital executive are devoted to improving such facilities in the developing world, especially in Pakistan, Afghanistan, and East Africa. Just last week I returned from a whirlwind 12 days in East Africa where I visited Nairobi, Mombassa, and Amboseli in Kenya and Dar es Salaam and Arusha in Tanzania. In October I will attend a one-day meeting in London, and in November I will spend a week in Karachi, Pakistan. As I approach 80, I find long-distance travel more of a challenge than I

JOHN ABBOTT





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did just a few years ago. However, I find the associated intellectual activity stimulating and, I hope, protection against senility."

George Dermksian, MD '54: "I have served on the board of directors of the Armenian Medical Fund for the past 25 years. Initially the Fund provided financial and professional support for the Armenian Tuberculosis Sanatorium in Lebanon. Since the 1988 earthquake in Armenia and establishment of the independent nation of Armenia in 1991, the Fund has expanded the scope of its activities to support tuberculosis institutions in Armenia and children's hospitals."

David H. Law '49, MD '54: "Doing some mentoring for a health-care executive development program. Still enjoying life on the water in Florida: pool, beach, etc. Lots of travel with children scattered coast to coast: Napa, the D.C. area, New Orleans, and Albuquerque, where I attend the yearly International Balloon Fiesta (38th year) and visit **Ralph "Cooley" Williams '50, MD '54**, and his wife, Mary '50, in Santa Fe. Starting to plan our 55th medical school reunion."

William S. Augerson, MD '55: "Still working a little, plus board of health work, and a little help for VA."

Reginald H. Isele, MD '55: "Enjoying retirement more and more."

W. Walter Menninger, MD '57: "On May 5, 2007, I received a Doctor of Humane Letters Honoris Causa from Dominican University, River Forest, IL. This is my fifth honorary degree."

Bernard S. Siegel, MD '57: "My ninth book, *Love, Magic & Mudpies*, was published, on how to raise children to feel loved, be kind, and make a difference. Parenting and the health of children are inseparable events."

Frederic G. Dalldorf, MD '58: "My wife, Joanna Stein Dalldorf, died of lung cancer in 2005. On June 11, 2007, I married Jane H. Bultman in Duxbury, MA. The wedding party consisted of the

entire new family of four children, four spouses, and 12 grandchildren. It was a wonderful party."

Robert A. Levine '54, MD '58: "I received the Mentors Research Scholar Award on May 20 from the American Gastroenterological Assn. in Washington, DC. It has been a privilege to have been able to counsel individuals eager to learn, help them obtain funding sources, and guide them into medical research. I owe much to my mentors, who planted the seed for clinical research at Cornell and Yale. I enjoy working full-time at SUNY Upstate Medical University in Syracuse."

Robert L. McKee, MD '58: "I am happy to report that Grace and I are well and active with extensive family life, the usual diversions, plus the clarinet (me) and quilting (Grace). We just drove across the country to accompany our son, Dan, and grandson, Bryan, on a cross-country bike trip. See the website 'Crazy Guy on a Bike' for a look into that world. Professionally I am retired from an internal medicine-oncology practice that was a consuming but worthwhile life. Now I do only a monthly consultation with the nurses who care for a population of mentally retarded persons in a local nonprofit agency, Rehab Programs Inc."

Robert G. Merin, MD '58: "Blair Leroy and I play golf weekly. Visited **George Coale, MD '58**, and his wife in Galveston over Memorial Day weekend."

George E. Shambaugh, MD '58: "I continue to volunteer as a preceptor to the fellows and residents at Emory University in their Division of Endocrinology and Metabolism. After nine years of retirement, I have slowly worked my way into other activities. My father's tenor banjo and his 1924 course book are a continuing challenge, along with polishing Spanish for communication with my patients. I have purchased 22 acres of land on the Old Mission Peninsula in lower Michigan, which is being rehabilitated and will be planted in cherries next year. The trees need five years to become cherry bearing, and that may well signal my complete retirement from medicine. Meanwhile, Roberta and I have a large home here in Atlanta and cordially invite you and your partners to be our guests."

Michael H. Stone '54, MD '58, has been the host of Discovery Channel's documentary program "Most Evil," based on his interviews with serial killers, members of the Manson family, and others—an outgrowth of his work in forensic psychiatry over the past 20 years. The program focuses on Dr Stone's exploration of the factors predisposing individuals to the commission of criminal acts in peacetime that the public labels as evil. He recently lectured on the subject in Regensburg, Germany, and also on his 40-year follow-up of patients with borderline personality disorder.

Peter S. Birk, MD '59: "I'm still practicing internal medicine in Silver Spring, MD. Hello to all my classmates."

James E. Shepard, MD '59: "After 40 years of an on-call schedule that would now be illegal for 25-year-old house staff, I decided to retire from active practice. Accordingly, we closed down our primary care internal medicine practice, and my partners now do just consultant nephrology. We contacted med schools in California to

give the internal medicine practice to a qualified doctor or doctors completing residency for free. There were no takers. No one wants to work that hard anymore, I guess."

1960s **Stebbins B. Chandor, MD '60**: "Just began a year as president of the Retired Faculty Assn. of USC. Fun getting to know faculty from all the schools of the university."

Thomas H. Milhorat '57, MD '61, was appointed the first director of the newly formed Harvey Cushing Institutes of Neuroscience, North Shore Long Island Jewish Health System, in May 2006. The Cushing Institutes consist of 12 disease-focused, multidisciplinary programs embracing the neuroscience specialties. Dr. Milhorat is chairman of neurosurgery at North Shore University Hospital and Long Island Jewish Medical Center, professor of neurosurgery (clinical) at New York University School of Medicine, and founder and director of the Chiari Institute.

Bill Newmeyer, MD '61: "It seems like a long time ago now, but the reunion held on October 13–14, 2006, was a very nice occasion. The medical school put on an interesting and varied program, with a dinner dance at the Chelsea Piers on Saturday night. At the risk of omitting someone, I won't try to list all the names, but at one point or another during the two days about 20 classmates put in an appearance, and everyone had a good time. Surprising to me was the fact that many came long distances while quite a few of the local people did not come. It would be nice if we had a really big turnout for the 50th in a few years. **Bob Fear, MD '61**, and I are going to try to get that event organized so we can have a class dinner on Friday night. It would be helpful if everyone would provide an up-to-date phone number and e-mail address to Cornell (alumni@med.cornell.edu) or to me (willynew@pacbell.net; phone: 415-386-3791)."

Donald Catino, MD '64: "Retired from private solo internal medicine, geriatrics, acupuncture practice to nursing home medicine. I'm medical director of three Genesis nursing homes and care for residents there as well. Looking forward to my next retirement, doing third-world medicine in Africa."

Thomas J. Engelsing, MD '64: "Retired, I have been pursuing interests in evolution, genetics, and behavior; music, art, and history; wildflower photography; and the psychology of investing. Peggy and I live abroad three or four months each year, most often in Paris. I hope to cruise all the old canals in France before I die."

Samuel H. Greenblatt '61, MD '66: "At the annual meeting of the International Society for the History of the Neurosciences, I received the society's Lifetime Contribution Award. They seem to think I'm out to pasture!"

John C. Urbaitis, MD '66, has been elected trustee of the American Psychiatric Association, representing the Mid-Atlantic states. He continues as medical director for ambulatory psychiatry at Sinai Hospital of Baltimore and is on the medical faculty at Johns Hopkins and the University of Maryland. He and his wife, Barbara, live in Baltimore.

Richard J. Castiello, MD '67: "I'm still practicing dermatology full-time. Still enjoying my professional life. For 30 years I have been a consultant to the Dept. of Defense, teaching residents at Walter Reed and the National Naval Hospital. Kathy and I celebrated our

41st anniversary. We have four children and six grandchildren. Greetings to all."

Robert S. Ennis, MD '67: "This past year has seen some changes for Lorelei and me. We will be celebrating our 43rd wedding anniversary in December. I am no longer doing orthopaedic surgery or seeing patients, but I continue to be active in teaching and medical administration. Lorelei is working as a volunteer librarian. I also finished updating my chapter on DVT prophylaxis for the online EMedicine textbook. The extra free time has given us the ability to sit on the boards of several philanthropic organizations. We also have time to travel, pursue hobbies, and enjoy our children and grandchildren, who live close by in Weston, FL. If this is retirement, then we are all for it."

Charles H. Hennekens, MD '67, was named the first Sir Richard Doll Research Professor, College of Biomedical Science, Department of Clinical Science and Medical Education, Center of Excellence, Florida Atlantic University, Boca Raton, FL. Dr. Hennekens was formerly the first John Snow Professor of Medicine and the first Eugene Braunwald Professor of Medicine at Harvard Medical School. From 1995 to 2005 he was the third most widely cited medical researcher in the world and five of the top 20 were his former trainees and/or fellows.

John H. Shenasky '63, MD '67: "Enjoying retirement: summers in southeastern Connecticut, winters in Maryland. Up to six grandchildren. Hope to see a good turnout of the Class of '67 at our 40th Reunion this fall."

Francis V. Chisari, MD '68, received the Distinguished Scientist Award from the Hepatitis B Foundation at its annual Crystal Ball Gala in April. He is renowned for his pioneering work in the host-virus interactions that determine the outcome of viral infections, using the hepatitis B and the hepatitis C viruses as models. He developed the first transgenic mouse models of a human viral pathogen in collaboration with other researchers and used these models to define the immunological basis of viral hepatitis, whereby he discovered that chronic immune-mediated hepatocellular injury initiates primary liver cancer, or hepatocellular carcinoma. Dr. Chisari is professor and head of the Division of Experimental Pathology in the Dept. of Molecular and Experimental Medicine at the Scripps Research Institute.

Joan Page Gerring '64, MD '68: "I hooded my daughter, Judy Gerring Street, at her graduation on May 17 from the Johns Hopkins School of Medicine. She begins a psychiatry residency at UCSF in June where her husband, Timothy Street, also a Hopkins graduate, begins a postdoctoral fellowship in biophysics."

Grant V. S. Parr, MD '69: "I have stepped down as chair of the Dept. of Cardiovascular Medicine at Morristown Memorial Hospital. I have been named the physician in chief of the Gagnon Heart Hospital. Part of the Heart Hospital is a new 235,000-square-foot, 148-bed (all private) wing at Morristown Memorial. The north tower is complete and the west tower is under construction and due for completion in late 2008. Programmatic parts of the Heart Hospital will be at Overlook Hospital as well. I remain on the board of trustees at Atlantic Health. My wife, Helen, and I just celebrated our 40th anniversary. Helen received her master's degree in theology from Drew University two years ago. Our older daughter, Gage, is a cardiac anesthesiologist at Union Memorial Hospital in Baltimore. Our younger daughter, Helen J., is a product

line editor for McGraw-Hill and does online medical products such as 'Access Surgery' and 'Access Pharmacology.' Thus some of my interests have been passed along to the next generation."

1970s **William W. Goodhue, MD '70**, continues to enjoy life in paradise, spending time at his Kauai Anini beach home when he is not working as Honolulu First Deputy Medical Examiner.

Fred Chu, MD '71: "Here's a link to us doing the Argentine tango in April: www.youtube.com/watch?v=6KK8XOF10YQ."

Richard A. Lynn, MD '71: "I am still in Palm Beach after 31 years, practicing general and vascular surgery. I am completing my second year as president of the Florida chapter of the American College of Surgeons. My three sons are all orthodox rabbis. Two live in Jerusalem; the oldest moved back from Israel and teaches at the University of Pennsylvania. I have 10 grandchildren, with one on the way."

Dianne Aronian, MD '72: "I guess my honorary degree is something to write about—the institution is Westminster College in western Pennsylvania, where I completed a BS in 1962. Subsequently, I served on their board for eight years. I was awarded a Doctor of Public Service degree based on the voluntary work I have done in Belize over the last 13 years and the teaching and clinical work I did while I was still in practice in New York. The graduation exercises were on May 19, 2007, and I was the keynote speaker. My short address was entitled 'A Philosophy for Life.' "

Lawrence W. Koblenz, MD '73: "Our son is entering his second year of law school. Of course, both his parents are physicians."

Jane Grant-Kels, MD '74, and **Barry Kels, MD '74**, have been living in the Hartford, CT, area since January 1980. Barry has a private practice in ophthalmology in Hartford and is a glaucoma specialist. He received his JD with honors from the University of Connecticut Law School in 2002 and is also the director of risk management and associate professor of surgery at the University of Connecticut Health Center. Jane is professor and chair of the Dept. of Dermatology at UConn, assistant dean of clinical affairs, director of the dermatopathology lab, and director of the Signature Melanoma Program. Her program has just initiated a new dermatology residency that she directs. Jane and Barry have two children, both of whom are married. Their son, Charles, attended Harvard and the University of Pennsylvania School of Law. He is an Air Force captain in the JAG corps, husband of Lori Kels (a first-year medical student), and the proud father of George Grant Kels. Their daughter, Joanna, and her husband, Luke Albright, work in finance and live in San Francisco.

Robert A. Reichert, MD '74: "A four-month sabbatical at the Royal Marsden Hospital in London in 2001 on the way to a new job in Seattle has now turned into six years and counting. London was a wonderful experience for our son, Ian, and an extraordinary place for him to spend his teen years. For my wife, **Gail Genvert, MD '80**, London—besides being a city one never tires of—has the advantage over Seattle and Florida, where we both had practiced for the previous 20 years, of being less than three hours by train from Paris. I now work as a consultant surgeon at one of the large teaching hospitals in London and as an honorary senior lecturer at Imperial College School of Medicine. No malpractice insurance

working only for the NHS (National Health Service) and very reasonable hours, allowing us the opportunity to visit the small village house we bought in the south of France."

Thomas M. Anger, MD '75: "We are downsizing this year. We will be moving to a downtown Chicago high-rise condo. Travel time to Burnham Harbor, where I have my sailboat, goes from 45 minutes to five minutes. Still practicing general pediatrics in northwest Indiana. Still writing, singing, and performing folk music and playing in a klezmer band called the Klezmedics."

Roger W. Geiss, MD '75, professor and chair of pathology at the University of Illinois College of Medicine at Peoria, received the 2007 Outstanding Teaching Award from the UICOMP faculty, as well as Best Instructor awards from the UICOMP second-year class for the general pathology course and for skeletal/skin, gastroenterology, cardiovascular, and endocrine/reproductive integrated organ segment courses.

James H. Newman, MD '75, became chief medical officer of Christiana Care Health System last October. Dr. Newman has been on the medical staff at Christiana Care for 26 years and is the chief of the Rheumatology Service. He has served an eight-year term on Christiana Care's board of directors. Dr. Newman received his residency training in internal medicine at the University of Pennsylvania, 1975–78, and completed a postdoctoral fellowship in rheumatology at Yale University Medical Center in 1980. His faculty appointments include lecturer in internal medicine at Yale University Medical Center in 1979–80 and clinical associate in medicine from 1984 to 1989 at the University of Pennsylvania School of Medicine. Since 1982, he has been a clinical associate professor of medicine at Jefferson Medical College. He received the Leonard P. Lang, MD, Outstanding Internist Award in 1997 and the Laureate Award from the Delaware ACP. Dr. Newman has published 25 articles in professional journals.

William J. Powers, MD '75: "After 37 years in the Dept. of Neurology at Washington University, I left St. Louis on April 30 to move to Chapel Hill, NC, and assume the chair of the Dept. of Neurology at the University of North Carolina School of Medicine."

Melissa S. Pashcow, MD '76: "I was recently re-appointed one of the surgeon directors in the Dept. of Otolaryngology at the New York Eye and Ear Infirmary. My husband, Dr. Andrew Seidenfeld, an ophthalmologist, is also on staff at the Infirmary. Our daughter, Laura, is the administrator of the tribal arts department at Sotheby's, and our son, Justin, is a junior at Princeton."

Vincent P. de Luise, MD '77: "I continue to practice ophthalmology, specializing in cataract, corneal surgery, and LASIK, and teach at Yale, where I am on the faculty as clinical assistant professor. I was also named to 'Best Doctors in America' for 2007–08. I'm active in the American Academy of Ophthalmology as the course instructor on herpes zoster and committee member for position papers on laser refractive surgery. My wife, Debra Hinck '74, and I have recently enjoyed trips to Prague, Sydney, and Naples. Clarinet, tennis, and volleyball round out the week. Our daughters surprise and delight us with their myriad activities."

Matthew A. Mauro '73, MD '77: "In January I was appointed the Ernest H. Wood Distinguished Professor of Radiology and Surgery and chairman of the Dept. of Radiology at the University of North Carolina School of Medicine."

Barry Weintraub, MD '77, national spokesperson for ASPS, has recently relocated back to New York City from Los Angeles to serve the community in the active practice of plastic surgery.

Luciano V. Barone, MD '78: "I was listed in the *Hudson Valley Magazine's* 'Top 90 Doctors of the Hudson Valley.' "

Richard F. Daines, MD '78: "In February 2007, I was appointed by Governor Eliot Spitzer as the 14th New York State Commissioner of Health. I divide my time among the department's principal offices in Albany, travel around the state, and New York City. My wife, Linda, is a managing director at Goldman Sachs and divides her time between the city and our Dutchess County farm (nonworking). William will graduate from Weill Cornell in the Class of 2008 and is getting ready to apply to internal medicine programs. Katie has finished three years at Goldman and will return to graduate school. Andrew spent two years at the Naval Academy and is currently on leave to serve as a Mormon missionary in Malaysia (speaking Malay and Iban); he plans on a career as a Marine officer."

Hillel Hammerman, MD '78, has opened a new, completely renovated office at 210 East 73rd Street for the practice of gastroenterology, office endoscopy, and internal medicine. He reports that all is well with his wife, Caren, and their not-so-little children: Daniel, 27, Rachel, 25, Emily, 21, and Leah, 17.

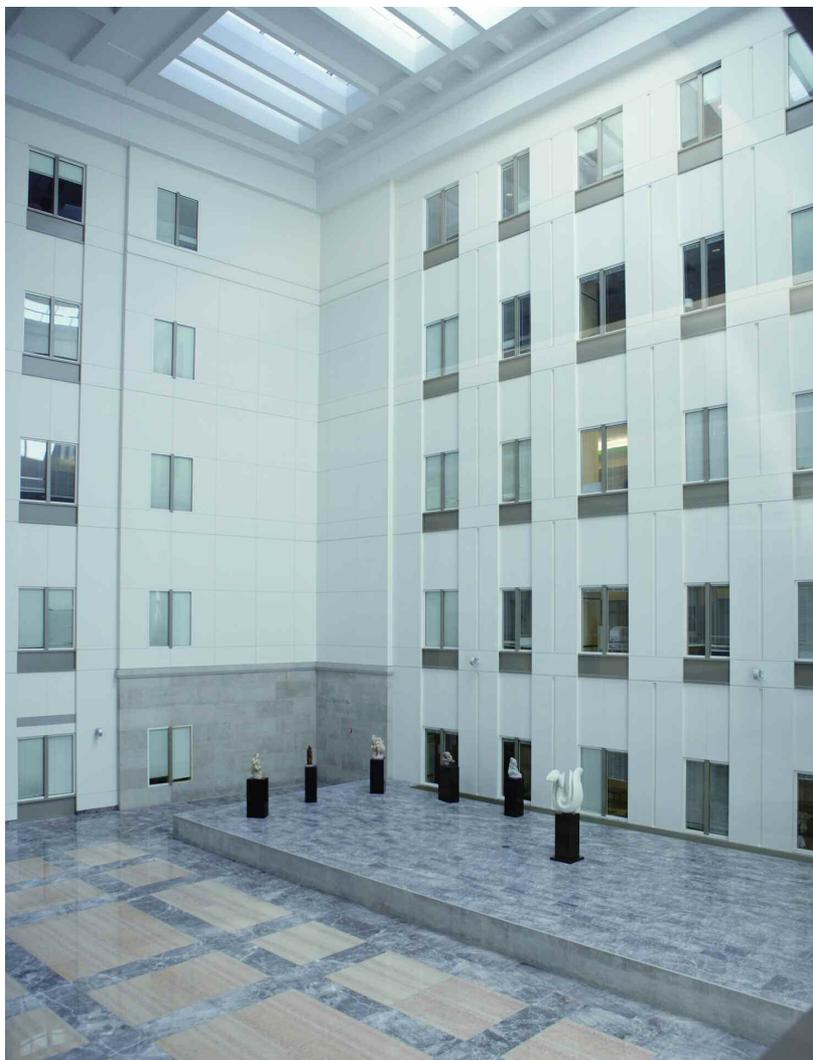
Ken Adams, MD '79: "I am happy to say that the cardiology division in my multi-specialty medical group in northeastern Massachusetts has grown to seven members. We provide the cardiac care for

patients of the 45 doctors in our group and for other physicians in our communities. My group is a member of the Partners Network, which includes doctors at MGH and Brigham and Women's Hospital. My work as medical director (a new role for me) brings me into contact with two classmates, **Tom Lee, MD '79**, and **Dale Adler, MD '79**. We all had a recent mini-reunion that included **Gary Berman, MD '79**, who was visiting from New Jersey. Everyone is doing well. My wife, Anita, and I celebrated our 32nd wedding anniversary. We play mixed-doubles tennis on a USTA team. Opponents can always tell we are married because of the way we 'discuss' things on the court."

Stuart Fischer, MD '79: "Our daughter, Kim, finished her first year at Weill Cornell Medical College in June. Our son, Eric, is currently in South Korea teaching English. He will return in September. Stephanie and I send regards to all."

Diana R. Horne, MD '79, is still practicing psychiatry. Her husband, Jim, retired from plastic and reconstructive surgery a few years ago. He is now starting a new career teaching chemistry in a Bronx high school. Their three adult sons and two grandchildren are healthy and flourishing.

Patricia M. Romano, MD '79: "I have retired from active clinical practice. I am enjoying teaching anatomy, physiology, and biology to high school students. I also teach physical diagnosis to medical students. My e-mail is pmr18@aol.com."



ABBOTT

1980s James C. Blankenship '76, MD '80: "Every May, the Medical College holds a reception for fourth-year students returning from overseas rotations. They prepare posters describing their experiences and are present to discuss them. You can fund a scholarship for one of them for just a couple thousand dollars a year. Attending the annual reception to talk with the student you sponsor is a good excuse to visit the College and find out what students are thinking—and to catch up with Lew Drusin. For details, call the Alumni Office or contact me at jblankenship@geisinger.edu. It is a good way to donate to the College, and you can see how it makes a difference."

Patricia Boiko, MD '80, produced a new short film, "Reconciling Rwanda." It can be purchased at: www.indieflix.com/FilmDetail.aspx?tid=10554.

Gail Genvert, MD '80: "I had been practicing ophthalmology on the west coast of Florida for 16 years when we decided to take a four-month sabbatical in London before a move to the Seattle area, where my husband, **Robert Reichert, MD '74**, had been recruited to join a clinic as a general/thoracic surgeon. We ended up staying in London for the past six years. Bob is now a consultant surgeon in the NHS, and I am enjoying all London has to offer. Our son, Ian, starts at Amherst College this fall. Not a conventional retirement, but I highly recommend it."

Karl Weyrauch, MD '80, formed a coffee-based philanthropy to bring doctors to Rwanda to teach skills to residents in all fields: www.coffeerwanda.com. All proceeds directly support development work in Rwanda. If you would like to find out how to volunteer for a one-month rotation teaching your specialty to residents in Kigali, please write to him: karl@coffeerwanda.com.

Jay Buckey '77, MD '81, launched his candidacy for the U.S. Senate with a ten-county tour throughout New Hampshire, beginning July 20 (the 38th anniversary of the first moon landing). "We have an opportunity to be inspired by a new Apollo program for energy," he writes, "and I believe my background in science, technology, and the space program has prepared me to be a leader in this effort." He flew as payload specialist on the Space Shuttle *Columbia* in April 1998 and served as an Air Force Reserve flight surgeon for eight years. Dr. Buckey is a professor of medicine at Dartmouth Medical School and an adjunct professor of engineering at Dartmouth's Thayer School. He and his wife, Sarah, have three children and live in Hanover, NH.

Scott H. Greenstein, MD '81: After 20 years in Connecticut and,



Banquet, she encouraged women to pursue excellence in science, technology, engineering, and math and to become leaders in society.

Loretta Sullivan Zweig, MD '81: "I have been living in Santa Rosa, CA, for the past 25 years with my husband, Richard Zweig, MD. We have three sons. Charlie is a middle school art teacher, Max is working toward becoming a physical therapist, and Louie is entering his second year of high school. Both Rich and I work at Kaiser Permanente in the Family Medicine Department. I also volunteer at a nature preserve and am in a singing group called the Quercus Quire, which performs at elementary schools and teaches ecological concepts through song. I enjoy thinking back to our 'Funny Thing Happened' days. Hope you are all well and still singing."

Kenneth Kelleher, MD '82: "I have been in the Afghanistan and Iraq theaters for the US Army Institute of Surgical Research. While at the CENTCOM Surgeon's conference in Doha, I stopped at the Qatar campus and met with Dean Alonso." Captain Kelleher is director of the Joint Theater Trauma System.

Daniel Sulmasy '78, MD '82, was elected to the Johns Hopkins University Society of Scholars. He is a professor of medicine, the director of the Bioethics Institute of New York Medical College, and a Franciscan friar. In addition, Dr. Sulmasy holds the Sisters of Charity chair in ethics and is the chairman of the John J. Conley Dept. of Ethics at St. Vincent's Hospital in Manhattan, a member of the New York State Task Force on Life and the Law, and editor-in-chief of the journal *Theoretical Medicine and Bioethics*. He served as a resident and assistant chief of the Osler Medical Service of the Dept. of Medicine at Johns Hopkins.

William F. Young, MD '82: "After 10 years in academic neurosurgery at Temple University, I embarked on a career in private practice. Since 2001 I have been a member of the Fort Wayne Neurological Center, a large multi-specialty neuroscience group in Ft. Wayne, IN. I'm still married to Doris, a former M-8 nurse I met while a student. My daughter, Lauren, just completed her freshman year at Williams College. I remain active in teaching medical students through Indiana University Medical School, which has a branch in Ft. Wayne."

Tyr Wilbanks, MD '83: "After 15 years in private practice in Stamford, CT, I left to become associate chief of surgery at Lincoln Medical and Mental Health Center a little less than two years ago. I'm doing trauma and general surgery in the Bronx as well as trying to keep Lincoln one step ahead of the ever-proliferating regulations. I've come full circle as I'm now teaching the Weill Cornell medical students rotating through Lincoln for

general surgery. I've also been joined in the Bronx by my eldest daughter, Rebecca Wilbanks (Cornell '07), who is teaching freshman biology and science literacy at Bronx School for Science."

David Haughton, MD '84: "I would like to extend my heartfelt thanks to everyone who attended my exhibits in May. The whole process of setting up the galleries and hosting everyone was a terrific event and a memory I will always treasure. And thank you to all who could not come but wished me well in this adventure. Thank you to the hundred or so people who responded to my interview with Sheryl MacKay on 'North by Northwest' (www.cbc.ca/nxmw/art.html) and

most recently, as chief of ophthalmology at both Waterbury Hospital and Griffin Hospital, Scott has moved to Boston, where he is now on the full-time staff of the Massachusetts Eye & Ear Infirmary and instructor in ophthalmology at Harvard Medical School. Scott and Barbara's twin sons, Jesse and Max, are freshmen at Tulane and the University of Wisconsin at Madison, respectively.

Mae Jemison, MD '81, received the 2007 American Association of University Women Award on July 2. Jemison, an entrepreneur, teacher, chemical engineer, and physician, was the first African American woman in space. In her address at the AAUW Foundation

came from as far away as Victoria, BC, to climb the stairs and experience the sadness and beauty of the Kindertotentanz works. (Link to installation: www.haughton-art.ca/KINDER/installation.htm). Ms. MacKay is a wonderful interviewer, and I was surprised just how many people are awake and listening to CBC at 7:20 on a rainy Sunday morning. Thank you, most emphatically and deeply, to Lyne, who did so much work and who, through her calm support and resolve, allowed the exhibit to happen when catastrophe struck and panic could have ensued. This spring, I left for Greece for the third of my exhibits, "Fragments of the Sea: Watercolors and Acrylics of the Greek Landscape" at the Skoufa Gallery in Athens. Please take a moment to view the work online at www.haughton-art.ca/new_work/greece.htm. The show is a benefit for a wonderful program in Athens that gave me my single most exciting year of education. I hope you will be interested in acquiring a piece while at the same time supporting the school."

Peter I. Yi, MD '84: "Our older son, Justin, will be continuing the Cornell tradition by attending Cornell University this fall. Hope to see you in Ithaca, NY."

Roger S. Blumenthal, MD '85: "It was great to see fellow classmates at our reunion. My son Ross is an active lacrosse player and an avid fan of most sports. I was promoted to professor of medicine at Johns Hopkins this spring, and Hopkins won the NCAA lacrosse title."

David Cole, MD '86: After a national search process, David Cole was chosen to succeed Dr. Fred Crawford as chairman of the Dept. of Surgery at the Medical University of South Carolina, starting September 4, 2007.

Elizabeth A. Drabant '83, MD '87, works for the United States Agency for International Development (USAID). Her present posting is in Israel as director of Health and Humanitarian Services, West Bank/Gaza.

Nancy Tham, MD '87: "I have my MBA now and serve as the chief medical officer at Newark Community Health Centers Inc."

Paul R. Kirchgraber, MD '88: "I have moved on to a new position as senior director of laboratory operations and medical affairs at Covance Central Laboratory Services in Indianapolis, IN."

Scott Rodeo, MD '89: "I am co-chief of the Sports Medicine and Shoulder Service at Hospital for Special Surgery. I am associate professor, orthopaedic surgery. Current roles: associate team physician, NY Giants Football, and chairman, USA Swimming Sports Medicine Committee. Just received NIH RO1 grant for basic studies in tendon healing. More important, we have four great kids—two sets of twins, ages 3 and 11. My wife, **Christine Frissora '85, MD '90,** is on staff in the Dept. of Gastroenterology at Weill Cornell."

1990s **Carolyn S. Eisen, MD '91:** "I am an attending radiologist at NewYork-Presbyterian Hospital/Weill Cornell Medical Center in the women's imaging division, where I perform all aspects of breast imaging, including mammography, breast ultrasound, breast MRI, and breast interventional procedures. I live in Manhattan with my husband, **Mark Schwartz, MD '84,** a plastic surgeon who is in private practice and on staff at NewYork-Presbyterian. We have two daughters, Rebecca, 3, and Alexa, 2."

Lisa A. Piazza, MD '91: "I recently completed psychoanalytic training at Columbia."

Evan R. Goldfischer, MD '92: "After graduation, I did my internship in general surgery and my residency in urology at the University of Chicago. I then completed a fellowship in endourology at Long Island Jewish Medical Center under the direction of Dr. Arthur Smith. I entered private practice in July 1998 with Hudson Valley Urology, where I have been ever since. I serve as director of research there, as our group is active in many clinical trials, and I also serve as director of the Center for Advanced Surgery at Vassar Brothers Medical Center. I am married to Julie Goldfischer, a psychotherapist, and have two children, Sabrinna, 6, and Gigi, 4."

Michael B. Rubin, MD '92: "I am president of New Rochelle Radiology Associates and director of the Dept. of Radiology at Sound Shore Medical Center in New Rochelle, NY."

Louise Greenspan, MD '95: "I am enjoying working at Kaiser Permanente in San Francisco as a clinician and clinical researcher in pediatric endocrinology. My husband, Ben, and I welcomed our second child, Jacob, this spring. Older sister Ella is 2 and loves to play doctor."

Lisa Ipp '92, MD '96: "So much news to report. **Kurt Voellmicke '92, MD '96,** and I recently moved to Ridgefield, CT. Kurt started a new job at the Mount Kisco Medical Group, a multi-specialty group in Mount Kisco, NY, where he is practicing primarily foot and ankle orthopaedic surgery. I'm still at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, where I'm the associate director of adolescent medicine. My other hat is as the chief of pediatric medicine at Hospital for Special Surgery. (I guess all those years of hanging out with an orthopedist rubbed off.) We are thrilled to announce the birth of our third child, Benjamin, who joins his brother, Jacob, 2, and his big sister, Isabel, 4. We are really trying to enjoy every minute of our hectic lives. All the best to our wonderful Class of '96."

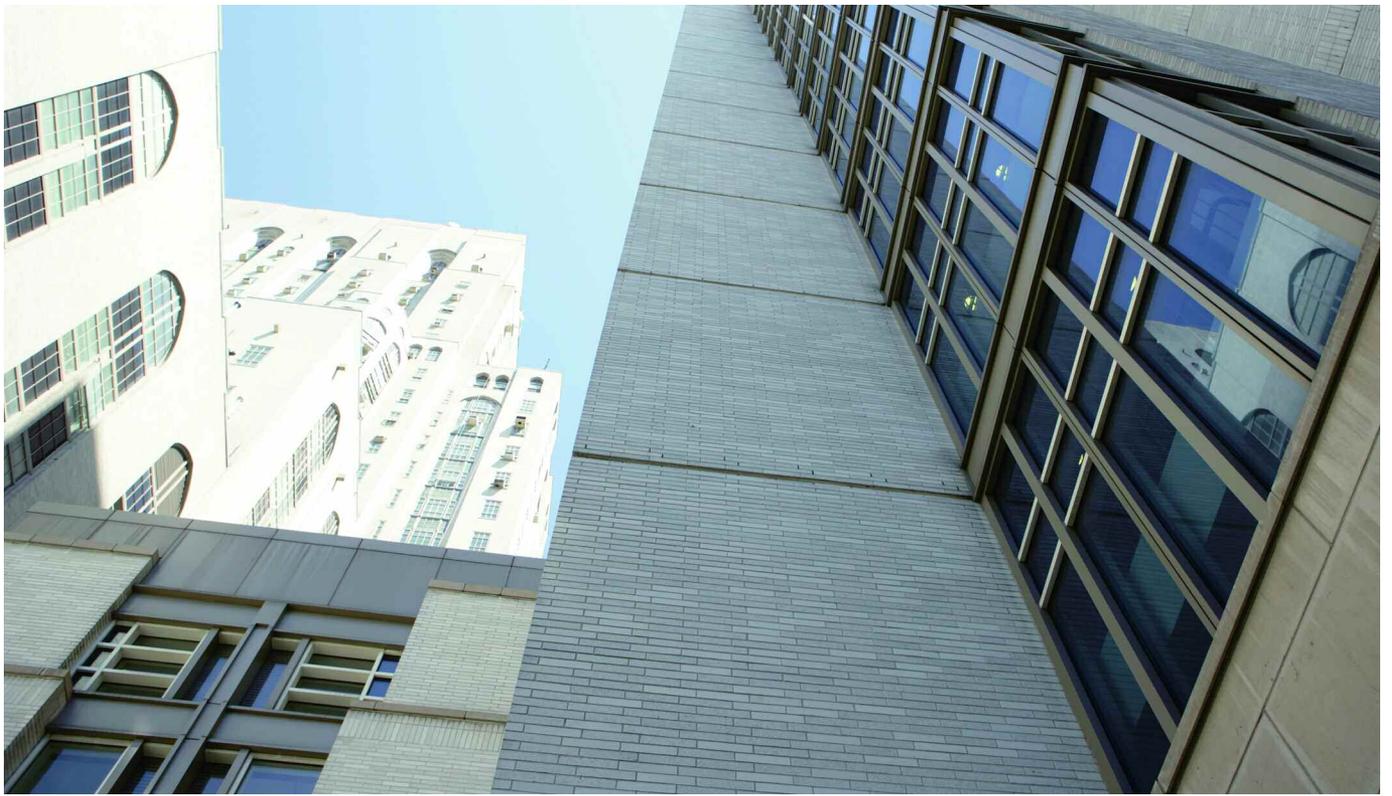
Nathaniel Zonerach, MD '96: "This is my second year of practice. I founded Advanced Fertility Care for infertility and reproductive endocrinology in Scottsdale, AZ. My wife, Beth, and I have a daughter, Rachel, 6, and a son, Alex, 4."

Peter K. Kim, MD '97: "I am now attending surgeon at Jacobi Medical Center and North Central Bronx Hospital."

Eric C. Burdge, MD '98: "I am serving in the US Air Force as a general surgeon, with the rank of major. My family (spouse Tally, daughters Elena, 3, and Juliana, 1) and I are stationed in Japan on the Yokota Air Base."

Avram H. Mack, MD '98: In the summer of 2006, Dr. Mack and a team of psychiatrists and other experts at Georgetown University produced an assessment and recommendations for the District of Columbia's Criminal Justice Coordinating Council on the District justice system's approach to the mentally ill (see the Gap Analysis at cjcc.dc.gov).

2000s **Amy E. Abbot, MD '00:** "After graduation, I began a six-year research fellowship at NewYork-Presbyterian Hospital/Columbia University Medical Center in orthopaedic surgery. I spent a year doing research in biomechanics with particular focus on disorders of the hand. I then expanded to study technological advances in total joint replacement, such as computer navigation. Both of these paths led to several publications and presentations at national meetings."



ABBOTT

Recently, I completed a fellowship in orthopaedic sports medicine and arthroscopy at the University of Massachusetts. Here I again applied my background in research and completed a study on the clinical outcome of specific treatments of shoulder injuries in middle-aged patients. This research was recognized with the Warner-Arciero NESES (New England Shoulder and Elbow Society) Fellow's Research Award and with acceptance for presentation to the specialty meeting of the American Orthopaedic Society of Sports Medicine. This was also a busy year clinically, taking care of patients who came from everywhere from the local schools to the minor league affiliates of the Boston Red Sox. I will be relocating to Fall River, MA, where I will be working to found the Dept. of Orthopaedics at St. Anne's Hospital. Outside of work, most of my life has revolved around rowing, with five Head of the Charles regattas since entering medical school and one club national championship."

Michael S. Irwig, MD '00, has joined George Washington University as an assistant professor of medicine. He practices and teaches general endocrinology with a particular interest in andrology. In his spare time, he sought out an anaconda snake in the plains of Venezuela.

Kathleen D. Keeffe, MD '00: "I married John Christopher Hough in February 2005, and we now have a beautiful girl, Samantha, born November 28, 2006. We live in Severn, MD, and I work as a full-time attending physician at Good Samaritan Hospital's Emergency Dept."

Kenneth G. Swan Jr. '93, MD '00: "Just moved to Basking Ridge, NJ, where I will live with my wife, Karen (Cornell Law '99), and two sons, Kyle, 3, and Ryan, 6 months. Both future Cornellians for sure. Professionally, I'm one year into a new position at Robert Wood Johnson University Hospital in New Brunswick after a year-long sports and shoulder surgery fellowship at the University of

Colorado. Now I'm taking care of high school and college athletes with orthopaedic sports injuries (and lots of trauma call, too) here in central Jersey. In terms of community service, I take care of many uninsured and underinsured citizens with acute and subacute orthopaedic maladies, both as emergencies and through our orthopaedic clinic—part of the privilege of being a caregiver, as I see it. But I am deeply worried about our broken health-care system, the overall impact it will continue to have on the health of our nation, and what, if anything, I can do about it. To that effect, I am studying the financial impact of gun violence on our health-care system, as this is a potential avenue of enormous cost savings should we ever have the courage to tackle this endemic problem."

Tara Bishop, MD '02: "I thought you might be interested in an essay I wrote recently: www.babble.com/content/articles/features/personalessays/bishop/mommytrack/. It may be close to home for a lot of alumnae, faculty, and students." Dr. Bishop's writing has appeared in *Annals of Internal Medicine* and *Clinical Geriatrics*. She and her husband and two sons live in New York City, where she is working on a novel.

Francine Samuels, MD '02: "Just wanted everyone to know that I am currently completing my final year of a postdoc fellowship in pediatric gastroenterology/hepatology/nutrition at the Morgan Stanley Children's Hospital of New York-Presbyterian Hospital/Columbia University Medical Center. My research interests include pediatric obesity, particularly laparoscopic banding in morbidly obese adolescent patients, as well as GI motility disorders. I would love to hear from my former friends/classmates and can be reached at frs2008@hotmail.com or fs2191@columbia.edu."

Monique Sellas '98, MD '02, decided to stay in Boston after her four-year residency and is now board certified in emergency medicine. She is a full-time faculty member at the Massachusetts General

Hospital Dept. of Emergency Medicine and Harvard Medical School. Recently, she started an intensive study program in clinical forensic medicine, the underdeveloped discipline that deals with cases involving both medical and legal aspects of patient care, with an emphasis on the detection, collection, and preservation of evidence; pattern injury recognition and interpretation of injuries; documentation of testimonials and injuries; and fluency with reporting requirements and regulations. This is the first of its kind at MGH, and her department is planning to start a Division of Clinical Forensic Medicine within the next few years. Monique would love to hear from her classmates and can be reached at mis4@cornell.edu.

Johanna Freedman, MD '03, joined the Arvada Internal Medicine office of New West Physicians, a group practice of 48 primary care physicians serving the Denver metropolitan area. Dr. Freedman completed her residency in internal medicine at Mount Sinai Medical Center, where she also taught as a clinical associate in internal medicine. During her time at Mount Sinai, she deliv-

ered presentations on a variety of topics including nutrition and screening procedures for colorectal cancer.

Christine L. Zink, MD '06: "I am enjoying emergency medicine at Cornell-Columbia."

Marnie B. Nussbaum '03, MD '07: "I'm enjoying my transitional year in medicine at Memorial Sloan-Kettering and looking forward to beginning my residency in dermatology at Weill Cornell. Regards to all my classmates. I hope you are all enjoying this exciting first year and managing to find time to fit some sleep into your schedule."

FACULTY

Paul A. Marks, professor of medicine at Weill Cornell Medical College and president emeritus at Memorial Sloan-Kettering Cancer Center, was elected to the American Philosophical Society, the oldest learned society in the United States.



IN MEMORIAM

'39 MD—Hamilton M. McCroskery of Delray Beach, FL, June 20, 2007; retired physician.

'38 BA, '42 MD—Raymond Pearson of Springfield, IL, December 14, 2006; retired physician; veteran; active in community, religious, and alumni affairs.

'43 MD—Frank H. McNutt Jr. of Kittanning, PA, May 12, 2007; physician; innovator in use of hypnosis and acupuncture; helped to start program in family medicine; practiced in medical programs in Honduras and India; veteran; active in community and professional affairs.

'47 MD—Robert C. Partenheimer of Fort Pierce, FL, formerly of Summit, NJ, February 10, 2007; internal medicine specialist; emergency medicine physician in New Jersey and Florida; also worked at Merritt Island Weight Clinic; lieutenant commander, US Public Health Service; served at the National Institutes of Health.

'49 MD—Samuel M. Schlyen of Boynton Beach, FL, formerly of Rutherford, NJ, April 18, 2007; specialist in oncology and internal medicine; adjunct professor, Memorial Sloan-Kettering Cancer Center; helped start the cardiac care unit at Passaic Beth Israel Hospital; president of medical staff, Passaic General Hospital; veteran; recipient of Golden Merit Award, Medical Society of New Jersey; active in professional affairs.

'52 MD—Waldo Greenspan of River Edge, NJ, February 21, 2007; professor, Hackensack University Medical Center; private practitioner; veteran; active in community affairs.

'52 MD—George Johnson Jr. of Chapel Hill, NC, May 15, 2007; Roscoe B. G. Cowper Distinguished Professor, University of North Carolina School of Medicine; chief of vascular surgery; vice chair, Dept. of Surgery; director, Ambulatory Care Surgery Center; coordinator of general surgery; leader in establishing ambulance standards; veteran; author; active in community and professional affairs.

'57 MD—Robert F. Barreras of Madison, WI, January 30, 2007; retired professor, University of Wisconsin Medical School; clinical researcher in gastric acid physiology; research physician, Atomic Bomb Casualty Commission; veteran; author; active in professional affairs.

'67 MD—Robert G. Schwager of New York City, June 26, 2007; plastic and reconstructive surgeon and researcher; clinical assistant professor of surgery, Weill Cornell Medical College; assistant attending surgeon, New York-Presbyterian Hospital/Weill Cornell Medical Center; naval surgeon, Vietnam War; active in professional and alumni affairs.

Eleanor Elliott of New York City, December 3, 2006; life overseer, Weill Cornell Medical College; life trustee, New York-Presbyterian Hospital; founder, Barnard Center for Research on Women; staff writer and editor, *Vogue* magazine; first woman board member of Celanese Corp.; member, National Advisory Council on Women's Education Programs; social secretary to Secretary of State John Foster Dulles.



Picture perfect: President David Skorton and Dean Antonio Gotto with Gotto's portrait

WEILL CORNELL ART & PHOTO

Heart Felt A cardiovascular center in Istanbul is named in Dean Gotto's honor

IT HAS BEEN MORE THAN THREE DECADES SINCE CARDIOVASCULAR disease expert Dr. Antonio M. Gotto Jr. first saw Rahmi Koç as a patient at the Methodist Hospital in Houston. Koç is now honorary chairman of Koç Holding, a Turkish firm and one of the global Fortune 300; Gotto is dean of Weill Cornell. Their friendship has continued over the years, and Gotto has become intimately involved with health-care issues in Koç's nation. He has traveled to Turkey some three dozen times, served as consulting and attending physician to two ex-presidents and a former prime minister, and collaborated on a long-term research study on cholesterol and the Turkish population.

In late June, Gotto's contributions were recognized with the dedication of a heart disease center named in his honor at the Vehbi Koç Vakfi Foundation American Hospital in Istanbul. Equipped with the latest technology and staffed by board-certified physicians and leading scientists, the new Antonio M. Gotto Jr. Center for Cardiology and Cardiovascular Diseases triples the hospital's space for heart disease research and treatment. (The hospital is affiliated with Weill Cornell Medical College, Columbia University College of Physicians and Surgeons, and NewYork-

Presbyterian Hospital; the Vehbi Koç Foundation is named for Rahmi Koç's father, a Turkish entrepreneur and philanthropist who passed away in 1996.)

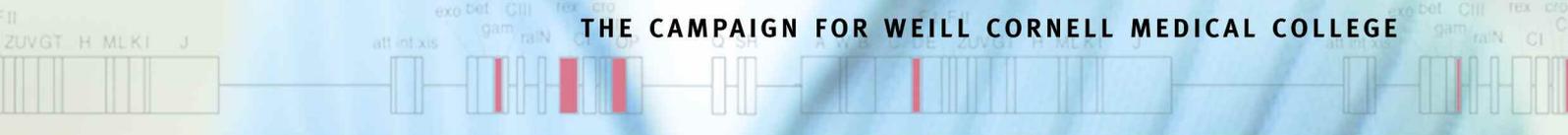
Among the dignitaries at the ceremony were Rahmi Koç, chairman of the American Hospital's board of directors; Cornell University President David Skorton, himself a cardiologist; Peter Meinig, chairman of Cornell's Board of Trustees; Sanford Weill, chairman of Weill Cornell's Board of Overseers; and Dr. Isadore Rosenfeld, the Rossi Distinguished Professor of Clinical Medicine. The ceremony included the unveiling of a portrait of Gotto, which will be on display at the center, flanked by commemorative plaques in Turkish and English; a video tribute celebrated his contributions to medicine and the health of the Turkish people.

"Establishing a center such as this will enable the American Hospital to continue to provide the highest quality cardiac care to the region, as well as engage in the kind of significant research that will contribute to the health and well-being of the Turkish people and beyond," Gotto said at the ceremony. "Today, no one could be happier than I with our enduring relationship, which has made a real difference in medicine, education, and research worldwide."



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Thumbs up: Sanford and Joan Weill and Dean Antonio Gotto celebrate \$400 million in gifts to Weill Cornell Medical College with (from left) first-year WCMC student Joshua Ehrlich, Tanzanian student Stella Mongella, WCMC-Qatar student Jehan Al Ravahi, WCMC overseer Anik Patel, and WCMC-Qatar student Ibrahim Sultan.

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