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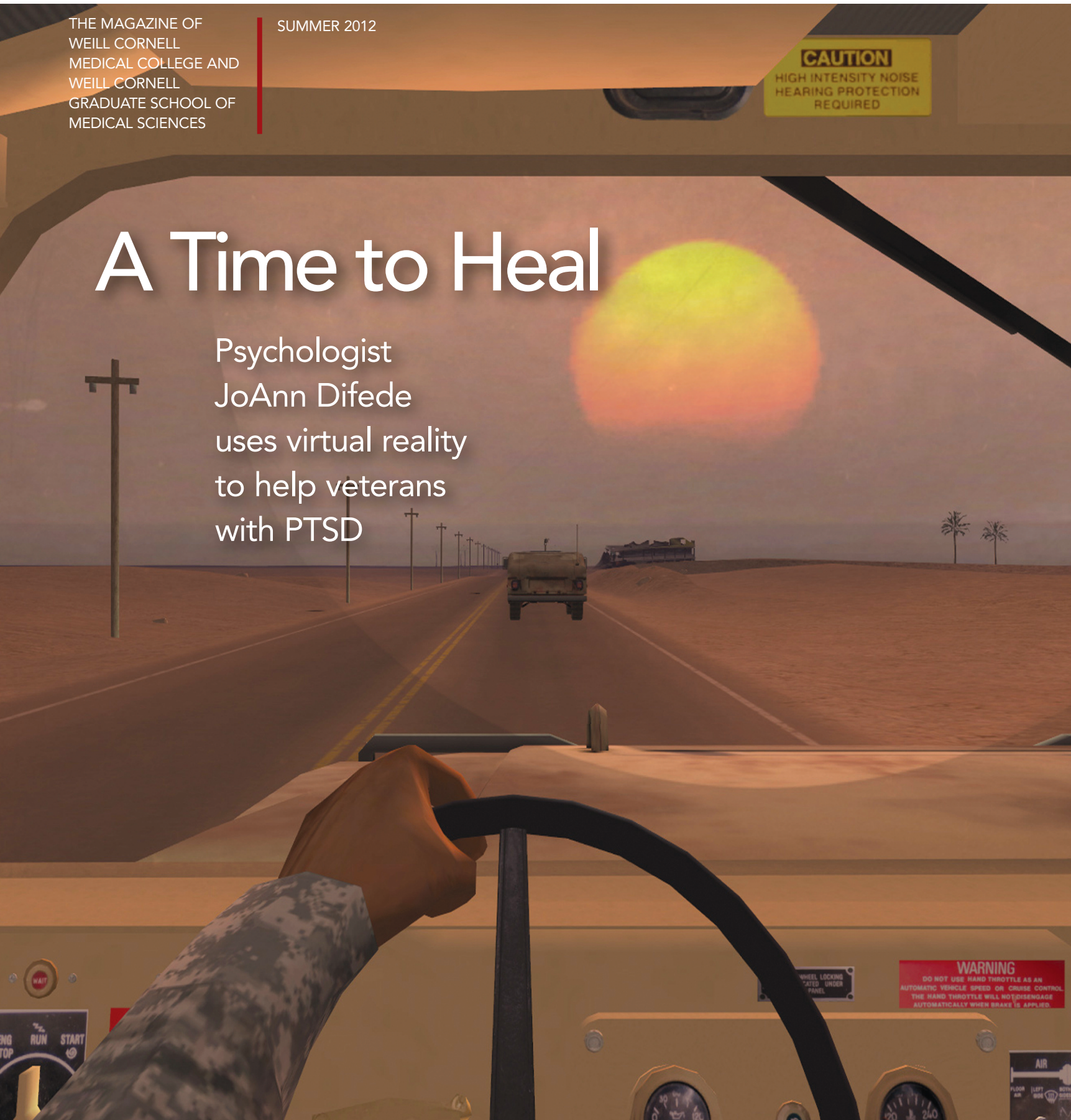
THE MAGAZINE OF
WEILL CORNELL
MEDICAL COLLEGE AND
WEILL CORNELL
GRADUATE SCHOOL OF
MEDICAL SCIENCES

SUMMER 2012



A Time to Heal

Psychologist JoAnn Difede uses virtual reality to help veterans with PTSD

HEALTHY LIVING THROUGH WEILL CORNELL

LOSING WEIGHT

Dr. Louis J. Aronne and Frederick J. Iseman

It was Frederick J. Iseman's very first appointment with Louis J. Aronne, MD, and he knew he had found the right doctor.

"I had already begun a program of exercise and weight loss, but I wanted to make sure it was sustainable. Lou had been recommended to me as the most medically astute scientist and physician working in the area of nutrition," Mr. Iseman recalls.

Weight Loss Treatment: A Whole New Game

Dr. Aronne is Clinical Professor of Medicine at Weill Cornell Medical College and Director of the Comprehensive Weight Control Program at New York Presbyterian/Weill Cornell Medical Center.

Research by Dr. Aronne and other physician-scientists in the last five years has helped lead to more complex, realistic, and successful approaches to weight loss. Gone are the days when the best your doctor could do was tell you to eat less, exercise more, and shore up your will power.

The Feed Forward Mechanism

When we start to eat fattening foods, it triggers a "feed forward mechanism" that begins to "disinhibit other systems in the body, which then drive more eating," says Dr. Aronne.

"At Weill Cornell, we've done 50 trials of new medical treatments, and less invasive surgical options – and we are applying what we've learned to our patients," says Dr. Aronne.

Researchers in the field of obesity and diabetes are learning how to crack those codes. "But there is so much we still don't yet know, and I feel fortunate to be at Weill Cornell, which is the perfect place for this kind of research," says Dr. Aronne.

"No Wildebeests to Hunt"

Mr. Iseman, Founder, Chairman, and CEO of CI Capital Partners, lost 24% of his body weight and is now happily "in the normal range" of weight.

But he also found that working with Dr. Aronne turned into an education far beyond his own personal weight loss journey.

"Lou taught me that the human body has evolved in a condition of constant food shortages. It has only been in the last century or two that a substantial portion of the planet has moved from food deficit to food surplus. As a result, our body chemistry is based on functioning and preserving weight and conserving fat in a near-starvation environment," says Mr. Iseman.

"So when you drop a chunk of weight, your leptin (a key hormone in weight regulation) tells your brain it no longer has a safe level of fat cells – it's saying, in effect, you might starve because 'the water hole is dry, the wildebeests aren't out there yet to hunt, so you'd better store fat until you can find something to kill and eat, or until the rains come and something grows,'" he says.

For Mr. Iseman and Dr. Aronne, weight loss is a partnership. "As with many of my patients, I can get the ball rolling," Dr. Aronne explains. "From there, each patient has to draw on motivation and persistence. Fred has done a great job of that."

3 Weight Loss Rules Mr. Iseman Lives By

#1. Always carry with you something healthy to eat.

#2. When you stay in a hotel, make sure that they empty the mini-bar before you arrive. Avoid "mini-bar suicide."

#3. Know the economics of carbohydrates. "Carbs like pizza, pasta, and bread are cheap to produce and high-margin to sell – very profitable. Protein is expensive. That is why the world is thrusting cheap high-margin food in your face all the time."

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FEATURES

22 WAR AND REMEMBRANCE
BETH SAULNIER

With an $11 million grant from the Department of Defense, psychologist JoAnn Difede, PhD, is testing virtual reality as a treatment for PTSD in veterans of the wars in Iraq and Afghanistan. Using the sights, sounds, vibrations, and even smells of combat, the technology is designed to allow survivors of such traumas as sniper attacks and roadside bombings to process their memories and begin to heal. "Humans," says Difede, "don't work by cognition alone."

28 LIFE OF THE MIND
SHARON TREGASKIS

Each year, 1.7 million Americans suffer traumatic brain injury. For most, the effect is fleeting—but thousands wind up in nursing homes, their grip on consciousness tenuous at best. For twenty-five years, professor of neurology and neuroscience Nicholas Schiff, MD '92, has investigated the structural biology and electrical circuitry of human consciousness. Working closely with medical ethicist Joseph Fins, MD '86, he seeks clues to predict which patients might awaken—and explores novel therapies to promote recovery.

34 HEARTS AND MINDS
ANDREA CRAWFORD

The Ronald O. Perelman Heart Institute at NYP/Weill Cornell is dedicated to patient care, education, and—above all—prevention. Housed in a soothing, light-filled, seven-story space, it features such patient-friendly amenities as a café, a medical concierge, and an information center on heart health. The Heart Institute, funded by a $25 million gift from its namesake, aims to be a "medical town square," uniting Weill Cornell's cardiovascular services—and allowing physicians, surgeons, and researchers to work more closely together.

Cover image courtesy of JoAnne Difede, PhD

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Light Box

Artistic side: Photos from the second issue of *Between Seminar Rooms*, the Qatar branch's student-run literary journal, include *Al Shaqab* (right) by Tasnim Khalife, MD '11, and *Supermoon* (below) by Abdelaziz Farhat '14. For more on the journal, see page 21.

Capital Campaign Update

The Inside Story — Taking Science Where It's

Who are the people leading the revolution in patient care and improving the quality of life and health for us all?

Meet two of the many Weill Cornell scientists whose pioneering research in brain health is leading to breakthrough medical discoveries never before thought possible.

Here, they describe their most exciting findings, their goals, and **the ever closer link between the bench and the bedside.**

Nicholas D. Schiff, MD | Focus: Recovery from Traumatic Brain Injuries

Jerold B. Katz Professor of Neurology and Neuroscience
Director of the Laboratory of Cognitive Neuromodulation

"Now, we have sophisticated imaging tools that, for the first time, allow us to look directly into the brain and show us how it is actually functioning."

What the Brain Tells Us

"Our goal is to systematically bring medical knowledge and science to the recovery of consciousness and cognitive function after serious brain injuries such as **stroke**, **traumatic brain injury**, and **cardiac arrest**.

"This was not possible five years ago, when we had to rely on the patient's external behavior to assess recovery. Now, we have sophisticated imaging tools that, for the first time, allow us to look directly into the brain and show us how it is actually functioning inside the head while certain behaviors are being carried out. These tools can generate three-dimensional brain images, track brain energy use at the neuron level, and even measure how connections in the brain might change slowly over time."

One Patient's Recovery

"We recently followed a patient for three years who had a significant brain injury and almost no evidence of consciousness. She came to us with a diagnosis that traditionally meant her condition wouldn't ever improve.

"When her doctors brought this patient to our attention for clinical studies, we made initial brain measurements, suggested standard treatments, and then followed her over three years. Through brain imaging, we were able to track the changes as she improved from almost no evidence of conscious awareness and behavioral responsiveness to **the first glimmers of speaking** and interacting — in just a little more than two years after this injury.

"More recently, she 'emerged,' or **spontaneously recovered**. She does not speak fluently, is not yet fully cognizant of the nature of her injury, but she is so recovered that her family has taken her home, her friends have invited her on a weekend getaway, and she clearly conveys an enormous sense of humor. She is fully re-engaged as a human being."

Weill Cornell: The Best Place for This Research

"Weill Cornell — a top-tier academic medical center surrounded by the world's highest concentration of neuroscience collaborators — is **the best place in the country to do this kind of research.**

"Through intelligent modeling and systematic collaborative effort with other major research institutions and Cornell University in Ithaca, we are learning when we can accelerate recovery of brain function, and how. We will be better able to **give hope when it's appropriate** and not give hope when it's not."

Never Been Before

"The possibility of slowing the progression of, and **potentially even preventing, Alzheimer's disease is now within reach."**

Steven M. Paul, MD | Focus: Slowing the Progression of Alzheimer's Disease

Director of the Helen and Robert Appel Alzheimer's Disease Research Institute
Burton P. and Judith B. Resnick Distinguished Professor in Neurodegenerative Diseases
Professor of Neuroscience, Psychiatry and Pharmacology

The True Cost of Alzheimer's Disease

"Alzheimer's disease is one of the most important public health problems of our generation. As the proportion of older people in populations around the world increases, the number of people afflicted with this terribly disabling and ultimately fatal disease is increasing dramatically.

"Today, about six million Americans have a diagnosis of Alzheimer's disease. It is a tremendous burden on patients, their families and caregivers, and on society at large.

"If no successful treatments emerge, the number of Alzheimer's disease patients in the U.S. will double by 2050 and the cost of caring for these people will reach $1 trillion."

Unraveling the Mystery — One Discovery at a Time

"We now have a much better understanding of the genetic factors that alter and in some cases determine who will develop Alzheimer's disease — as well as the neuropathological abnormalities that occur in the brains of patients with the disease. With new powerful diagnostic tests, **we can now detect the telltale signs** of the disease 10 to 15 years before a patient even exhibits symptoms.

"The possibility of slowing the progression of Alzheimer's disease is now within reach. My expectation is that in the next five to ten years **we will find an effective disease-modifying treatment** that, when used early, will either prevent this disease from occurring in the first place or, if already present, will dramatically slow it down over time. Conceivably, such treatments may well prevent the disease in those who are at a high risk."

Collaborative Pioneers in Research Breakthroughs

"The Weill Cornell community is a terrific place to do research on Alzheimer's disease because of the **critical mass of scientists and clinical investigators** that we have here. Also, because of the spirit of collegiality and collaboration — with Cornell University in Ithaca and the tri-institutional partnership among Weill Cornell, Rockefeller University, and Memorial Sloan-Kettering.

"We have an incredible group of people here — scientists and clinicians — **working together to combat this devastating disease**. I believe it is going to be possible for us to pull together and make very significant advances in this area."

A Critical Need for Support

"**Support for this research is absolutely essential**. Because of the federal budget deficit, we have seen a noticeable decrease in public funding for research. Private philanthropy — the kind of support shown by Helen and Robert Appel in establishing the Appel Institute — is an absolute necessity if we are going to find a cure for this disease."

To see the full videos of these interviews and to hear more inside stories from our scientists and doctors, please visit ***weill.cornell.edu/campaign/research***

Weill Cornell Medical College

For more information and a detailed list of gift opportunities, please contact Lucille Ferraro, Campaign Director, at 646-317-7387 or luf2003@med.cornell.edu

Of Crystal Balls and Agents of Hope

Laurie H. Glimcher, MD,
Dean of the Medical College

As a physician-scientist, I don't believe you can see the future in a crystal ball. Yet as I prepared to address the Class of 2012 at the recent Commencement ceremonies in New York and Qatar, I found myself searching for a reliable lens through which these talented doctors and scientists might glimpse the complex world that awaits them as they embark on their careers.

It was not an easy task. With advances in medicine happening so quickly, discovery cycles compressing so tightly, and the increasingly influential role of technology in everything we do, I can only imagine what the world will look like ten, twenty, even fifty years from now. As the Nobel Prize–winning physicist Niels Bohr said: "Prediction is very difficult, especially about the future."

With that in mind, I focused my remarks on these things I know to be certain: As graduates of Weill Cornell, members of the Class of 2012 are among the best prepared in the world to take on whatever the future holds. They are smart and skilled and capable, and they have global opportunities and a world view that many others don't.

Most important, embedded in all the work they have done at Weill Cornell is this essential thread: The patient is at the center of everything we do. This commitment to patient-centricity will be their beacon as medicine evolves and becomes more complex, more technology-driven, and more demanding. Since there is no roadmap to the future, a beacon is a very good thing to have.

This is relevant no matter what discipline they pursue, including a research path. In fact, it is even more important for those who go into research because they may find themselves feeling disconnected from the bedside, unable to see for themselves the impact of their work.

Medicine is a journey of discovery. Almost every great advance in medicine began with an observation by a curious, committed, and aware physician who let the patient and the patient's condition speak to him or her, and who knew how to listen. With the implementation of the Patient Protection and Affordable Care Act, the legality of which was recently affirmed by the United States Supreme Court, new models of patient care will be tested that place greater emphasis on patient-physician and physician-physician communication. As the next generation of discoverers, the Class of 2012 must observe and listen to their patients, and seek new ways of doing things, new cures, new processes, and new paradigms of care.

Theirs is a journey that is, by nature, full of risks. Discovery doesn't come from complacency. As the nineteenth-century Scottish author Samuel Smiles said: "We learn wisdom from failure much more than from success. We often discover what will do, by finding out what will not do; and probably he who never made a mistake never made a discovery."

AMELIA PANICO

Complicating the future for the Class of 2012 is the role of technology. Some experts suggest that technology is moving so fast that we will experience 20,000 years of progress in the twenty-first century. These young medical professionals must be aware of technology's challenges as well as its advantages. Technology is a great tool; they must use it, leverage it, and make it work for them. But they must never let it come between them and their patients.

I left our graduates with this Arabic proverb: "He who has health, has hope. And he who has hope, has everything." While it is not a prediction of the future, it is an eloquent and inspiring guideline. It is a reminder that ultimately they are treating people, not disease—and that as agents of good health, they are also agents of hope.

Researchers Without Borders

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

At the Graduate School of Medical Sciences, we have always sought to recruit the best students in the world. Thus, outstanding international students have long made their way to York Avenue, historically comprising at least one-third of our doctoral student body. For decades, these scholars from abroad have populated labs, enhanced research efforts, and developed close partnerships with faculty—playing an essential role, as all our students do, in the advancement of biomedical research. When our students graduate and return to their home countries, many—about 60 percent—go into academic research, educating the next generation of scientists while helping to build a global network of WCMC-trained researchers.

In recent years, however, we have seen an increase in the proportion of our students coming from abroad—even as the economic downturn has prompted many more U.S. students, who in earlier years might have chosen other careers, to pursue biomedical doctorates. Applications are up across the board—greater than 700 a year for sixty-five available positions in the class. Over the last five years, the number of international students applying to the Graduate School has doubled. The composition of our student body is now split evenly between U.S. citizens and international students.

This increase results from concerted efforts to enhance global recruitment. For example, we have long had students from the Pasteur Institute in Paris, France; from Tianjin and Beijing medical universities in China; and from other institutions of higher learning. Most recently, the Indian Institutes of Technology (IIT)—the world-renowned collection of universities that count some of our faculty members among their alumni—has also been an academically rich source of students for us. A few years ago Randi Silver, PhD, associate dean of the Graduate School, began visiting the IIT campuses to strengthen our institutional ties. Likewise, through the help of Brazil native Thomas Maack, MD, professor emeritus of physiology biophysics and medicine at Weill Cornell, the Graduate School is now developing new partnerships in South America. Last fall, Dr. Silver and Assistant Dean Francoise Freyre visited top universities in Brazil through its "Science Without Borders" program, a large, government-funded initiative to enhance science and research.

In the past couple of years, the Graduate School has also had success with our master of science program in clinical epidemiology and health services research, under the direction of chair Mary Charlson, MD, and with assistance from Daniel Fitzgerald, MD, associate professor of medicine, and Warren Johnson Jr., MD, director of the Center for Global Health. The program recruits top medical professionals from abroad to train under the supervision of WCMC faculty. They return home as clinical researchers able to teach investigative methods and conduct studies in a variety of

JOHN ABBOTT

Study abroad: Alessia Deglincerti, an Italian grad student in pharmacology, works in the lab of Professor Samie Jaffrey, MD, PhD.

populations. In the last two years, we have graduated nine professionals from South Africa, India, Tanzania, Haiti, and Brazil; seven trainees are currently enrolled in the program and three more arrive this summer.

In a sign of the important role international students play in the advancement of biomedical research, last year the Howard Hughes Medical Institute launched a pilot program, the International Early Career Scientists Award, to identify foreign-born scientists with the potential to become leaders in their fields. While federal training grants for biomedical research still require U.S. citizenship, HHMI has led the way in showing that scientific advances know no international borders.

At the Graduate School, we are very proud of our long tradition of educating international students. We look forward to further strengthening our relationships with our "global" alumni—and reaching out to more potential students from all around the world who are the very best.

Two Campuses Celebrate Commencement

WCMC-Q

Academic regalia: The dignitaries at the WCMC-Q Commencement included (from left) Cornell University President David Skorton, MD, Weill Cornell Dean Laurie Glimcher, MD, and Bakr Nour, MD, the Qatar branch's associate dean for clinical affairs, who held the WCMC-Q mace.

Dean Laurie Glimcher, MD, presided over her first Commencement season in May, when Weill Cornell conferred 144 MDs—thirty-two of them earned on the Qatar campus—as well as thirty-seven PhDs, twenty-seven physician-assistant degrees, and eleven master's of science. "As graduates of Weill Cornell, you are among the best prepared in the world to take on whatever the future holds," Glimcher said in Carnegie Hall. "You are smart and skilled and capable. You are curious and open-minded. You are good communicators and colleagues. And you have global opportunities and a world view that many others don't. Most important is that embedded in all the work you have done while studying here is this essential thread: the patient is at the center of everything you do." The Qatar campus celebrated its own Commencement in early May, when seven women and twenty-five men received their MDs. Said WCMC-Q Dean Javaid Sheik, MD: "Nothing gives us greater pleasure than witnessing our talented students fulfill their dream of being called 'Doctor' for the first time."

WCMC Hosts Brain Tumor Biotech Conference

According to the American Cancer Society, more than 22,000 people in the United States are diagnosed with brain or spinal tumors each year, and more than 13,000 die from malignant growths. Reductions in federal grants have made private research funding all the more vital—prompting the Medical College to host the inaugural Brain Tumor Biotech Summit in June. The daylong conference, co-sponsored by the Weill Cornell Brain and Spine Center and the Weill Cornell Cancer Center, was conceived and chaired by associate professor of neurological surgery John Boockvar, MD, director of the Brain Tumor Research Group. It brought together leading brain tumor and biotech industry experts with the aim of accelerating more effective treatments and promoting funding for emerging therapies. Leaders from biotech, venture capital firms, finance, foundations, and pharmaceutical companies discussed ways to get research noticed and funded, while scientists and clinicians presented findings on such topics as novel agents, gene therapies, and nanotechnology.

The event's luncheon keynote speaker was Representative Patrick Kennedy, son of the late Senator Edward Kennedy, who discussed his "One Mind for Research" initiative, a national coalition he co-founded to seek new treatments and cures for diseases of the brain. He also shared his personal reflections about his father's battle with a brain tumor, noting that when the senator was diagnosed with glioblastoma, he was given less than two months to live—but that thanks to the intervention of a bold surgeon, his life was extended by two years. "My father knew that his days were coming to an end," he said, "but he had the ability to say his goodbyes, to leave life the way he wanted to."

Stewart Named WCMC's First Vice Dean

WCMC ART & PHOTOGRAPHY

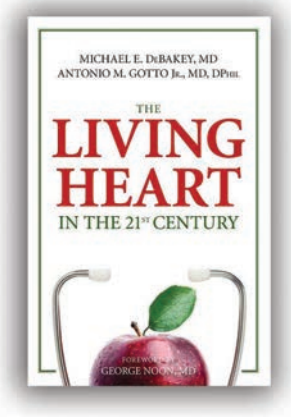
Michael Stewart, MD

Michael Stewart, MD, the E. Darracott Vaughan Jr., MD, Senior Associate Dean for Clinical Affairs and chairman of the Department of Otolaryngology–Head and Neck Surgery, has been named to the newly created position of vice dean of the Medical College. Announcing the position, Dean Glimcher said: "Dr. Stewart will work closely with me, administration, department chairs, and directors of our centers and institutes to enhance the academic and clinical missions of the Medical College." Stewart's duties will include assisting with academic and clinical program development, leading strategic planning initiatives, and serving as liaison to academic partners and affiliates, including WCMC-Q. Glimcher calls Stewart—a general otolaryngologist with expertise in nose and sinus disease, sleep breathing disorders, and head and neck trauma—"a dedicated teacher, an innovative researcher, and a renowned expert in outcomes research and evidence-based medicine in otolaryngology."

'Dean's Challenge' Seeks Innovative Ideas

Dean Glimcher has launched the "Dean's Challenge," an initiative to gather and assess ideas for improving Weill Cornell through innovative policies and programs. Through the end of August, students, faculty, and staff can use their Weill Cornell credentials to log onto a website (ideas.med.cornell.edu) to make suggestions, or to comment and vote on those made by others. In a college-wide announcement, Glimcher said that she aims to "establish a mechanism that will enable the institution to develop innovative yet practical and community-tested ideas to ensure that the Medical College continues to provide excellence in education, research, and clinical care."

Gotto Releases New 'Living Heart' Book



Dean Emeritus Antonio Gotto, MD, has published another volume in his best-selling "Living Heart" series of cardiovascular health books. Co-authored with the late Michael DeBakey, MD, *The Living Heart in the 21st Century* is geared toward a general audience—both people who are undergoing cardiac treatment and those aiming to stay healthy. "Cardiovascular medicine has seen major advances since the first 'Living Heart' book was published in 1977," says Gotto, co-chairman of the Board of Overseers, the Lewis Thomas University Professor at Weill Cornell, and vice president and provost for medical affairs emeritus at Cornell University. "This new volume contains the latest information on how to prevent, diagnose, and treat heart disease in the twenty-first century." Previous books in the series include *The Living Heart*, *The New Living Heart*, *The Living Heart Diet*, and *The Living Heart Cookbook*.

TIP OF THE CAP TO...

Donald D'Amico, MD, the Betty Neuwirth Lee and Chilly Professor in Stem Cell Research and chairman of the Department of Ophthalmology, who was invited to a Vatican congress on blindness and met Pope Benedict XVI.

Professor of clinical neurology and NYP/Weill Cornell neurologist-in-chief **Matthew Fink, MD**, elected a fellow of the American Academy of Neurology.

Oncology researcher **Paraskevi Giannakakou, PhD**, associate professor of pharmacology in medicine and director of laboratory research in the Division of Hematology and Medical Oncology, given the Mary Kalopathakes Award from the Hellenic Medical Society of New York.

Dean Emeritus **Antonio Gotto, MD**, co-chairman of the Board of Overseers, winner of the Pasarow Foundation Award in Cardiovascular Research for his contributions to the field.

Helen Hobbs, MD, a professor of internal medicine and molecular genetics at the University of Texas Southwestern Medical Center, recipient of the first Antonio M. Gotto Jr. Prize in Atherosclerosis Research.

David Lyden, MD, PhD, the Stavros S. Niarchos Associate Professor in Pediatric Cardiology, winner of the I. J. "Josh" Fidler Innovation Award from the Metastasis Research Society.

Pediatrics professor **Jeffrey Perlman, MD**, named NYP/Weill Cornell's Physician of the Year.

Mukesh Prasad, MD, associate professor of clinical otolaryngology, winner of the Patients' Choice Award from the physician-assessment website vitals.com.

Andrew Schafer, MD, the E. Hugh Luckey Distinguished Professor of Medicine and chair of the Department of Medicine, winner of the Robert H. Williams, MD, Distinguished Professor Award from the Association of Professors of Medicine, considered the most prestigious prize in the field of academic internal medicine.

Peter Schlegel, MD, the James J. Colt Professor of Urology and chair of the Department of Urology, who received the Barringer Medal from the American Association of Genitourinary Surgeons.

Cornell University President **David Skorton, MD**, winner of the Exemplary President in Governmental Relations Award from the Association of Public and Land-Grant Universities' Council on Governmental Affairs.

Ashutosh Tewari, MD, the Ronald P. Lynch Professor of Urologic Oncology and director of the Lefrak Center for Robotic Surgery, winner of the Gold Cytoscope Award from the American Urological Association.

Skorton Attends Faculty Mentoring Program

In April, President Skorton was the featured guest at the monthly session of the Department of Medicine's Faculty Development Mentoring Program. Established in 2010, the novel program aims to offer peer mentorship to faculty in the early stage of their careers. At the meeting, Skorton—also a professor of medicine and of medicine in pediatrics at Weill Cornell—told the ten assistant professors in attendance at the Cornell Club in Midtown that their success as faculty members is fundamental to the Medical College's mission. To facilitate career development, he said, faculty must reflect on their choices and rely on their values to lead them in the right direction. "Academic medicine can be dehumanizing," Skorton said. "You think about your career instead of your life and personal values."

David Skorton, MD

AMELIA PANICO

The ten-month mentoring program comprises monthly eight-hour group sessions where participants learn how to align their career and life goals with their values and receive practical guidance on oral presentation, writing skills, team building, leadership, negotiation, and more. "I think it's been fantastic," says participant Tara Bishop, MD '02, the Nanette Laitman Clinical Scholar in Public Health–Clinical Evaluation. "I've never had an opportunity to have time set out to think about my career and where I want to be in the next decade and what it'll take to get there."

Michelassi Champions Cancer Surgery Certificate

Thanks in part to the efforts of Department of Surgery Chairman Fabrizio Michelassi, MD, the American Board of Surgery will soon offer a subspecialty certificate in complex general surgical oncology. Michelassi, the Lewis Atterbury Stimson Professor of Surgery and current chair of the Surgical Oncology Board, led the Surgical Oncology Advisory Council's 2009 examination of the feasibility of the certificate—which, he says, "opens a new chapter in the history of the American Board of Surgery." The certificate, to be offered as early as 2013 to graduates of accredited two-year training programs following completion of general surgery residencies, comes after a quarter-century of advocacy by surgical oncologists. It's the first new certificate the Board has offered since 1984.

Starr Gives $50 Million for Stem Cell Research

Continuing its support for stem cell research, the Starr Foundation has made a $50 million gift in support of the Tri-Institutional Stem Cell Initiative (Tri-SCI), a collaborative effort of Weill Cornell, Sloan-Kettering, and the Rockefeller University. Established in 2005 through a grant from the Foundation, Tri-SCI funds interdisciplinary research, technology development, seminars, symposia, and fellowships. "Stem cell research has undergone a remarkable expansion and transformation in the seven years since this initiative was launched," says Maurice Greenberg, chairman of the Starr Foundation and a member of the Weill Cornell Board of Overseers. "There are many exciting developments on the horizon, and I am delighted that the Starr Foundation can renew its support of this important collaborative effort at such a promising time."

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Welcoming space: A rendering of an activity room at the Center for Autism and the Developing Brain

Autism Center Under Way in Westchester

The Westchester campus has begun construction on its new Center for Autism and the Developing Brain. To be located in a former gymnasium on the historic psychiatric campus in White Plains, the research and treatment center will feature design elements friendly to people with autism—including open, light-filled spaces, rooms identified by color, and ample carpeting and soundproofing to reduce noise. Its treatment protocols will take an integrated approach, with a combination of applied behavior analysis and other therapies to improve social communication and motor and adaptive skills. "Our focus on the lifespan and interdisciplinary combination of evidence-based approaches to both assessment and treatment is unusual, even among the most highly respected programs in the country," notes autism authority Catherine Lord, PhD, the Center's director. "We're also proud of our innovative approach to diagnosis and treatment, and our core identity is as a hub from which we can connect patients and families to the wealth of programs and services in the community." Slated to open in early 2013, the 11,000-square-foot Center is a joint initiative of NewYork-Presbyterian Hospital, Weill Cornell, and Columbia University College of Physicians and Surgeons, in collaboration with the New York Center for Autism.

ABC Documentary Highlights Hospital

Weill Cornell faculty are featured in a medical documentary series that began airing on ABC in July. "NY Med," which chronicles stories of patients and staff at NYP/Weill Cornell and NYP/Columbia, debuted on July 10. The eight-part program marks the first time that a New York hospital or academic medical center has been profiled in a documentary series.

Correction

Due to a production error, Aasim Padela, MD '05, was given an incorrect first name in "Making Accommodations" (Talk of the Gown, Special Issue 2011). Our apologies to Aasim.

Healthcare Informatics Center Founded

With a keynote address by New York State health commissioner Nirav Shah, MD, Weill Cornell marked the establishment of the Center for Healthcare Informatics and Policy in March. The Center, which is designed to foster interdepartmental collaboration to address issues at the intersection of health-care informatics and policy, will be led by Rainu Kaushal, MD, the Frances and John L. Loeb Professor of Medical Informatics and chief of the Division of Quality and Medical Informatics at Weill Cornell. "Through collaborative efforts, the Center for Healthcare Informatics and Policy conducts research and offers services and programs that drive innovation, educate, and provide critical insights into how technology applications, solutions, and devices can improve the quality, safety, and efficiency of health care," says Kaushal, who is also executive director of New York State's Health Information Technology Evaluation Collaborative. The Center's members—drawn from such departments as pediatrics, public health, medicine, radiology, pathology, and urology—have expertise in informatics, clinical medicine, biostatistics, public health, computer science, economics, and more.

Weill and Fins Elected to American Academy

Foremost benefactor and Board of Overseers Chairman Sanford Weill and ethicist Joseph Fins, MD '86, have been elected to the American Academy of Arts and Sciences. Weill and Fins, a professor of public health and the E. William Davis Jr., MD, Professor of Medical Ethics, are among the 220 new fellows set to be inducted into the Academy in October. Cornell University President David Skorton, MD, was elected to the Academy last year.

FROM THE BENCH

New Technique Improves Melanoma Diagnosis

A new staining technique is more than 90 percent accurate in identifying melanoma. The test, described in the *Archives of Dermatology*, uses a soluble adenylyl cyclase (sAC) expression pattern to determine if a specimen is benign or cancerous. "The sAC stain is either positive or negative in the cell's nucleus," says the study's senior author, Jonathan Zippin, PhD '05, MD '06, assistant professor of dermatology. "Other stains require an interpretation of the staining intensity, which means that a diagnosis of melanoma can rest on a pathologist's opinion." A benefit of the new test, which can be used in conjunction with current methods, is that it offers a clear indication of where a cancerous lesion ends and healthy tissue begins. "What I hope," Zippin says, "is that five years down the line, this and other stains will help pathologists remove any uncertainty as to whether a biopsy is worrisome."

Preventing Cervical Cancer in HIV-Positive Women

Aspirin may keep HIV-positive women from developing cervical cancer. In a study of Haitian women infected with HIV, researchers led by Daniel Fitzgerald, MD, associate professor of medicine, discovered that HIV induces expression of the COX-2/PGE2 inflammatory pathway in cervical tissue. "These young patients—many of whom were mothers and the sole support for their families—had worked hard to have their HIV controlled with antiretroviral therapy, only to develop and die from cervical cancer," Fitzgerald notes. Aspirin is one of the cheapest and most effective COX inhibitors—making the discovery especially vital for patients in developing countries.

Compound Offers Targeted Cancer Treatment

A collaboration among Weill Cornell, Sloan-Kettering, and the National Cancer Institute has yielded a compound, PU-H71, that binds to abnormal protein complexes in cancer cells—pointing the way to more targeted treatments with fewer side effects. Associate professor of medicine Ari Melnick, MD, director of the Sackler Center for Biomedical and Physical Sciences, and colleagues are exploring the compound's potential for treating diseases such as breast cancer and lymphoma. The work was published in *Nature Chemical Biology*. "The holy grail in the field was to develop some way to figure out what factors keep cancer cells alive, regardless of whether they have mutations," Melnick says. "In this paper, we presented a method to do just that."

Head Size Gene Related to Parkinson's and Dementia

Dennis Mook-Kanamori, MD, a geneticist on the Qatar campus, has found that a gene previously known to be associated with dementia and Parkinson's disease is also related to head size. Mook-Kanamori and colleagues identified the head-size gene by measuring the head circumference of 10,000 children and scanning their genomes. In a separate MRI study of 8,000 people, Mook-Kanamori found that the same gene is linked to intracranial volume. Both studies were published in *Nature Genetics*. "Although it's only responsible for a small variation in head size, it may still give you an idea of why people get dementia and Parkinson's," he says of the gene. "It's the beginning; it's the first step to understanding biological pathways."

Pay-for-Performance Incentives May Not Pay Off

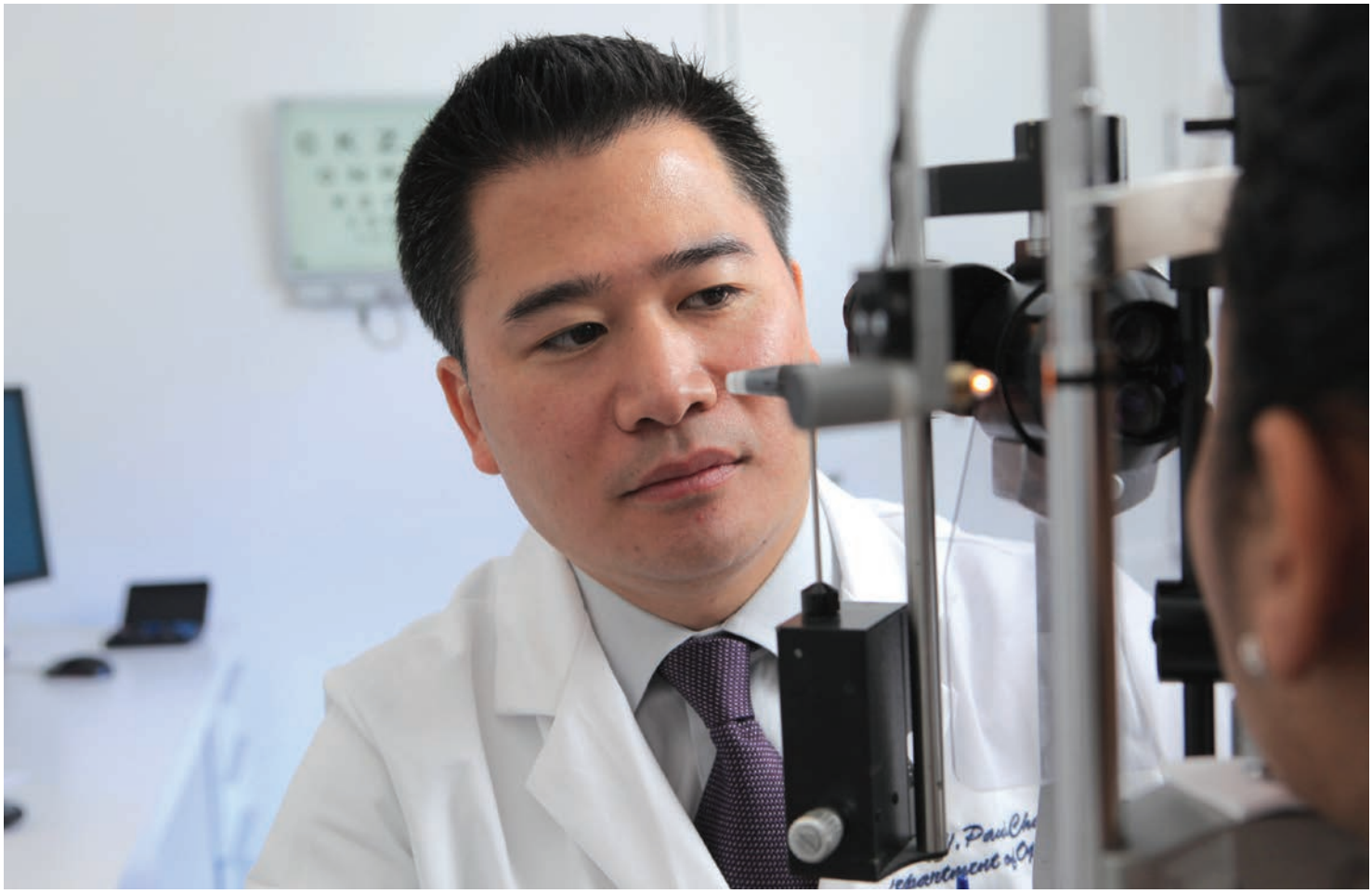
The financial incentives to improve health care known as "pay-for-performance" may not have significant effects, reports a Weill Cornell assistant professor of public health. In *Health Affairs*, Andrew Ryan, PhD, the Walsh McDermott Scholar in Public Health, and colleagues looked at the first two phases of the Medicare and Medicaid hospital pay-for-performance pilot program. The first phase, which began in 2003, rewarded only high performers and showed promising results; the second, launched in 2006, increased incentive payments by 50 percent and included three tiers of reward. Based on quality measures related to heart attack, heart failure, and pneumonia, the researchers found that improvement rates flat-lined—and even, in some cases, decreased—in the second pilot program compared to the first. "I'm frankly not very optimistic that, as it is currently structured, hospital pay-for-performance is going to make much of an impact," Ryan says.

Meta-Analysis Compares Prostate Surgery Methods

Robot-assisted prostate cancer surgery compares favorably to other techniques, reports a study in *European Urology*. Ashutosh Tewari, MD, the Ronald P. Lynch Professor of Urologic Oncology and director of the Lefrak Center for Robotic Surgery, and colleagues performed the first large meta-analysis of three types of prostatectomies: open radical, conventional laparoscopic, and robot-assisted. The analysis included a review of 400 original articles and treatment information on nearly 290,000 patients. It found that compared to the two other approaches, robot-assisted surgery offered lower complication rates, less blood loss, and fewer transfusions.

Global Vision

Ophthalmologist R. V. Paul Chan, MD, combats an eye disease that strikes premature infants



JOHN ABBOTT

R. V. Paul Chan, MD

In an outpatient medical clinic in Ulaanbaatar, Mongolia, last summer, mothers were lined up with their babies outside an exam room. Inside was R. V. Paul Chan, MD, associate professor of ophthalmology, who was screening the children for retinopathy of prematurity (ROP), a retinal vascular eye disease that can cause blindness. Chan was on one of the seven trips he'd make in 2010–11 to developing countries where improvements in neonatal care have paradoxically led to a veritable epidemic of ROP. The scene before Chan was sobering, with a third of the children suffering the most severe forms of ROP—the ones that are difficult or impossible to reverse. One mother, refusing to accept her child's prognosis, stood outside the door to the exam room all day, crying. "Is my baby going blind?" she asked Chan over and over.

Her grief reinforced what for Chan is an urgent mission. In the United States, guidelines stipulate which babies should be screened for ROP based on their birth weight and gestational age; today, ROP-related blindness is mostly limited to the tiniest. In Mongolia and many other middle-income countries, no such parameters exist, and ROP may account for 60 percent of cases of blindness, according to a 2007 study in the journal *Eye*. "Had a system been in place, that child would not have been blind," says Chan, the St. Giles Associate Professor of Pediatric Retina. "You go into a country that never managed ROP before and see babies who need treatment right now, and your heart drops."

The retinal blood vessels are not mature at birth, and exposure to too much oxygen before they have fully formed can compromise their development. In the U.S., newborns are screened for ROP if they weigh less than 1,500 grams at birth and are delivered at less than or equal to thirty weeks gestation; titrating oxygen while a preemie is in the NICU is a crucial form of risk reduction. But premature infants in developing countries often are not screened for ROP and may be given constant 100 percent oxygen, elevating their chance of developing the disease. While many children who develop ROP can have their condition regress, if treatment is required and it's caught in time laser surgery can halt its progression. However, very little can be done to completely preserve the sight of those whose retinas have completely detached. "Children who are blind don't live as long, are ridiculed, and live a life of dependence—and you take a person [who cares for them] out of the workforce," Chan says. "If you catch it, you can prevent them from living a life of blindness. If you don't treat it in time, it's game over: this child will go blind."

In two short years, Chan has become a key resource for the nonprofit group ORBIS International, which trains health-care workers in developing countries to prevent and treat blindness. "Whenever our projects need expertise in ROP, that's when we give Paul a call," says Danielle Bogert, the organization's director of faculty relations. "He's spearheading dialogue at national and regional levels in terms of screening protocols, human resources, and infrastructure for countries to create a robust ROP program." As one of 400 volunteer faculty members, Chan flies to Asia and Latin America for seven- to ten-day trips every few months. There, emerging economies have provided the resources to buy lifesaving—and sight-saving—equipment, but not always the expertise to use it.

Chan's drive and intensity impress David "Hunter" Cherwek, MD, who sits on ORBIS's medical advisory board and has worked with him in Peru, Mongolia, Guatemala, and Vietnam. "I've seen him get off a flight after thirty hours and go straight from the airport to start seeing children," Cherwek says. "He's been able to give children and families hope when no one else in that country would be able to diagnose or treat them."

LESLIE MACKEEN

See how it's done: Chan in Mongolia, guiding a pediatric ophthalmologist as she performs an eye exam on a young boy

The potential to seed a skilled, international health-care force appeals to Chan, who was raised by ophthalmologist parents who dedicated their careers to training doctors in the U.S. and Asia. Last year, he traveled to Peru, Vietnam, Mongolia, Armenia, Mexico, and Thailand to screen and care for children and work with local providers to recognize and treat ROP. He expects to return this year to all of those countries, and will go to China as well. "Education leads to sustainability," he says. "If you teach someone to manage ROP, they're better equipped than if you went there and did it for them."

Chan, a Philadelphia native who did his residency at Weill Cornell followed by a fellowship at Harvard, knew that he wanted to make global health part of his practice, but he initially wasn't sure how. After he returned to Weill Cornell in 2006, he began studying ROP, and the following year traveled to Mwanza, Tanzania, on a fact-finding mission to help the Medical College prioritize its ophthalmology work with partner school Weill Bugando. The trip underscored his belief that to be effective, global health requires a long-term, full-time commitment. "It galvanized this concept of, 'education is one of the most important things we can focus on,'" he says. "And we're not going to change the world unless you have someone in-country leading the charge."

Chan remains New York-based. But through his work with ORBIS, the Armenian Eye Care Project, the Insight Foundation, and other nonprofit organizations, he's promoting the need for permanent expertise overseas. "It's a team effort," he says, "and we have a committed group of collaborators from the U.S., Mexico, Thailand, and a number of other countries."

Chan often travels with colleagues who specialize in neonatology and telemedicine with the idea of disseminating their knowledge to local providers who can pass it on to others. From the U.S., Chan and his colleagues then keep up with the doctors they've trained, mentoring them via Web-based platforms on the images they send of their patients' retinas. "They take the picture; I get it on my phone and reply to tell them what I think," he says. "After a certain period of time, they're recognizing and treating kids on their own. Our in-country partners have learned how to manage ROP, and by capitalizing on the technology we have at our disposal, we all stay connected. Through digital imaging and education, we have the potential of keeping a generation of children around the world from going blind."

— Jordan Lite

A Seat at the Table

Internist Alice Chen, MD '05, leads Doctors for America, which works to get physicians' voices heard in the health-care debate

NORRIS KAMO

Marching for medicine: Doctors for America members demonstrate in Washington, D.C., in spring 2010. Top left: Alice Chen, MD '05, the group's executive director.

Alice Chen, MD '05, was in her first year on the faculty as an internal medicine hospitalist at UCLA when she joined a new group of physicians and medical students calling themselves Doctors for America (DFA). Today she's executive director of the nonprofit, founded in 2008 and self-described as a "national movement of 15,000 physicians and medical students working together to improve the health of the nation and to ensure that everyone has access to affordable, high-quality health care."

DFA is not a lobbying body but a "vast community resource" with members in all fifty states, says Chen, who splits her time between the group's home base in Washington, D.C., and her clinical practice at UCLA. "We rally in our white lab coats, hold educational community forums, and do just about everything from honk-and-waves to speaking with members of Congress," she says. DFA members regularly appear in the media in an effort to make the point that the Affordable Care Act is a critical step that is already helping millions of people, including the young adults who now have health insurance through their parents, the seniors who are getting assistance with prescription drug coverage, and the communities that are receiving grants for programs that promote healthy school lunches and other initiatives. Chen stresses, however, that the group is not affiliated with any partisan group or the Obama Administration. "Membership is drawn from across the political spectrum, and we encourage our members to speak out individually about their own beliefs and experiences in the health-care system," she says.

While focused on organizing and training physicians to be advocates, DFA also works with organizations that represent nurses, physician assistants, pharmacists, patients, and others who deliver or receive health care. In January, the group filed a joint amicus brief with the Supreme Court in anticipation of hearings on the constitutionality of the Affordable Care Act. It argues for the constitutionality of the minimum coverage provision, commonly referred to as the "individual mandate," which requires citizens to carry health insurance or face financial penalties. Chen and other DFA members rallied outside the high court during its March hearings on the case—one group among many arguing for or against the health-care law. "Doctors are not used to having to play the role of activist," she says. "But they are learning that they have to step up if they want a say in the future of America's health care."

When Chen volunteered for DFA, it was a loose affiliation of physicians and medical students from across the U.S. who simply wanted a voice in the roiling national debate on health-care reform. "None of us knew how to run a grass-roots organization," Chen recalls. "We learned a lot from other health-care groups and medical societies, and we were lucky because there was momentum in that direction." The groundswell started in 2008, when President Barack Obama chose health-care reform as his top priority. The Affordable Care Act, signed into law in 2010 and dubbed "Obamacare" by its opponents, incited an ideological war. In the political backlash that followed, doctors and medical students found themselves largely left out of the conversation

—frontline personnel relegated to the sidelines. Their collective frustration proved to be fertile territory for Chen's organization, whose main goal is to make sure that physicians' voices are heard in the debate. "Health care should not be about politics," says Chen. "Doctors who have had to turn away patients who cannot afford proper medical services know firsthand the tragic results of our broken health-care system."

According to a group survey, the majority of DFA members are physicians—more than half have been in practice for more than ten years—and most others are medical students. There is a roughly fifty-fifty split between doctors in private practice and those who work or study in academic hospitals, community health centers, Veterans Affairs, and the Indian Health Service. DFA's membership also includes medical school deans and health policy experts.

The group's varied efforts have garnered widespread media and governmental attention. Members are regular contributors to op-ed pages in major newspapers (the Associated Press covered their rally at the high court) and have appeared on CNN, MSNBC, Fox News, and other outlets. In January 2011, President Obama appointed DFA president Vivek Murthy, MD, to a panel that advises the National Prevention, Health Promotion, and Public Health Council, which is mandated by the Affordable Care Act to devise national health and wellness strategies. This year, DFA aims to educate one million Americans about health-care reform, an initiative that includes training 1,000 physicians and medical students on the nuts and bolts of leading community education events.

As much as DFA's goal is to inform policymakers and the public on the facts about affordable care, Chen says that it also serves as a support network for physicians and students who feel powerless to change a deeply flawed health-care system. "Our common cause is a desire to improve that system," says Chen, who concedes that she sometimes feels a twinge of guilt for not treating patients full time. She has a prescription for those moments—a mantra of sorts. It's the same one she used to get through the grueling days and nights of internship: the closing lines of the Weill Cornell Hippocratic Oath. "That I will be an advocate for patients in need," Chen recites, "and strive for justice in the care of the sick."

— Franklin Crawford

PROVIDED

Debugged: Margaret McGlynn '14 distributes malaria nets to schoolchildren in Uganda.

Net Worth

Margaret McGlynn '14 and her sisters help Ugandan kids avoid malaria

Many nonprofits strive to help children in Africa. Some provide them with an education, while others work to prevent diseases such as malaria. In 2007, Margaret McGlynn '14 and her four sisters founded an organization that aims to do both.

After meeting a Ugandan man visiting their Illinois hometown to spread the word about the challenges facing his country, the sisters were alarmed to learn that one of the chief barriers to school attendance is malarial infection. So they founded NETwork Against Malaria, a nonprofit that provides bed nets to protect children from infected mosquitoes. The group delivers nets directly to rural schools, where local volunteers educate students on their proper use. "The children and adults of Uganda are the ones who will change their nation," says McGlynn, who majored in biology at Nebraska's Creighton University. "We're just empowering them to develop the talent they already possess." To date, more than 11,000 of the $10 nets have been delivered; another large distribution is planned for August.

Having started small—fundraising through T-shirt sales and individual donations—the nonprofit has expanded over time, now boasting seventeen chapters across thirteen states. It has partnered with a foundation that employs Ugandan women to make beads from recycled paper; volunteers—some of them Weill Cornell students—use the beads to make jewelry, which is sold in shops throughout the U.S., including the WCMC bookstore.

In the summer of 2011, McGlynn traveled to Kampala to study Kaposi sarcoma on a research trip sponsored by the Weill Cornell Global Health Program. In her spare time, she traveled to the town of Hoima, one of NETwork's primary sites, to distribute nets and visit with children. "Hearing about the devastating effects of malaria is much different from seeing them," McGlynn says. "Knowing the names of these children who are at risk of dying from malaria made what we are doing very personal."

— Erin Keene

Sweet Science

The Sackler Institute follows up the "marshmallow test"

ABBOTT

BJ Casey, PhD

It was a classic psychological study. In the Sixties and Seventies, hundreds of four-year-olds from a Stanford University preschool were given a choice. They could have one cookie or marshmallow now—but if they waited fifteen minutes, they could have *two* of them.

For some, it was a no brainer. "There was a group of children who had the cookie in their mouth even before the researcher left the room; that's sort of what we'd expect with four-year-olds," says BJ Casey, PhD, the Sackler Professor and director of Weill Cornell's Sackler Institute for Developmental Psychobiology. "But there was also a group of individuals who could wait—and the way in which they waited was really interesting." Some sat on their hands; others turned the chair away to avoid looking at the treat. "One little girl came up with an imaginary friend," Casey says, "and she talked about anything but the cookie."

What came to be known as the "marshmallow test" turned out to have surprising predictive abilities. As researchers followed the children into adulthood, they found that those able to delay gratification tended to do better on certain measures of success. On average, for example, they had higher SAT scores and lower rates of substance abuse; they were more likely to have lasting marriages and were less likely to be overweight.

Now, Casey has taken the research a step further. She and her co-investigators retested fifty-nine of the original subjects—those at the far ends of the delayed-gratification spectrum—to see if their tendencies persisted into their forties. (Since not all adults are tempted by marshmallows or cookies, they used a common testing tool in which subjects are drawn to images of smiling faces.) The result: Casey and her team were "blown away" by the similarities between the childhood and adult behaviors.

What's more, they found a biological basis for the tendencies. As expected, fMRI showed that the prefrontal cortex—the higher-reasoning region that Casey jokingly calls the "Vulcan" area of the brain, in honor of Mr. Spock of "Star Trek" fame—was involved. But even more important was a deep region known as the ventral striatum, which has been implicated in addiction. "The low delayers were activating that region more, but the area was suppressed in the high delayers," Casey says. "Much as the four-year-olds did with their hands, the forty-year-olds were doing in their minds."

The research is ongoing; Casey is especially interested in studying those subjects whose inclination *did* switch from childhood to adulthood—noting that the work has promise for interventions into behaviors related to impulsivity, such as drug addiction and over-eating. "If they're seeing a change in how they can stop themselves," she says, "we want to know how they can do that."

But Casey stresses that being a low delayer isn't a recipe for doom; as a group, she says, the original test subjects are doing quite well. "Do I want there to be no low delayers in life?" she muses. "Absolutely not. In science, for example, it's wonderful to do logical, methodical studies. But usually when we take a step forward, it's because someone does a high-risk experiment outside the box. And that's what low delayers may be doing—making connections quickly and acting on them."

— Beth Saulnier

Making the Grade

New pass/fail system gets high marks

For years, medical students, faculty, and administrators debated with passion the potential merits and pitfalls of a pass/fail system. Would it lower student stress or allow them to grow complacent? Was the current system fair in granting honors on a curve, so that in every year and every class a different standard determined who gets an "H" and who merely passes—even if, as often happened, the difference amounted to only a tenth of a percentage point?

In fall 2010, after those and other issues were duly considered, WCMC instituted a pass/fail system for the first two years of medical school. According to Peter Marzuk, MD, associate dean for curricular affairs, the College made the change to "correct inherent unfairness, improve student collegiality and collaboration, foster greater exploration of different learning formats and materials, and be more in line with our peer institutions." The new system drops the designation of honors for the first and second years, thereby removing what Marzuk calls artificial cutoffs between students. "We have such an outstanding class of high-achieving students that it becomes very difficult to try to distinguish 'honors' from 'pass,' particularly a 'high pass,' in the first two years," he says. The third- and fourth-year clerkships remain on the system of honors, high pass, pass, and fail—as is the case in the majority of medical schools throughout the country.

Most students supported the move, according to Bem Atim '13, whose class spent its first year in the old system and its second in the new. Previously, "there was no way to know how you compared with your classmates until the final grade came out, so people felt it was an arbitrary benchmark that changed every year," he says. "It's like playing a basketball game but not knowing the score until the end, so it's impossible to keep track of your progress."

With honors granted on a curve, competition was inherent. "Now, you don't have to 'wish someone else did poorly,'" Marzuk says. Already, Atim says, students have sensed a change. "People seem a little bit more cooperative, more willing to e-mail study guides or form study groups," he says. Carol Capello, associate director of the Office of Curriculum and Educational Development, says that preliminary results from an IRB-approved study showed that 80 percent of students felt their class environment had become less competitive, and 92 percent said the changes had a positive effect on stress levels. Capello is surveying students and faculty to assess a wide range of attitudes and outcomes; complete results will be released in the fall.

ALLEGRA STUDIO

Improved collegiality and lower student stress levels had been cited as reasons to alter the grading system, but faculty had feared it would reduce motivation. Marzuk notes that the medical education literature shows that has not been the case in other pass/fail systems. Carol Storey-Johnson, MD '77, senior associate dean for education, says that WCMC has seen no evidence of students slacking off, noting that "the quiz scores have been as strong as ever." Elan Guterman '13, who was a student representative on the basic sciences faculty committee while the issue was under consideration, agrees. "We're all medical students and perfectionists at heart," she says, "so we wanted to do well whether or not there was the hope of getting honors at the end."

The new system is not "pure" pass/fail, since scores for each component—quizzes, small groups, and clinical work—are still recorded in an internal document known as a performance profile. These scores are based on established criteria rather than being determined relative to other students' performance; they are not weighted or converted into an overall numerical grade. Students must get above a 65 in each component to pass a course (though the official transcript shows only a P or an F). But the performance profile allows students to see how they're doing and where they might need to improve, and it informs the writing of the dean's letter and granting of Alpha Omega Alpha awards—allowing the dean to see all individual component scores and not a final grade.

Problem-based learning, meanwhile, has gone to a pure pass/fail system, with narrative assessments not converted into scores. "Our goal is to accurately capture performance," says Marzuk. "The dean can see exactly how they're doing across all the courses. It gives a more rounded picture of students' talents." Guterman says that students appreciate the more nuanced scrutiny, calling it "a good opportunity for the faculty to understand our aptitude on many different levels."

In the old system, which placed greater weight on quiz and exam scores, "the quizzes were like the battleground where that honors grade was decided," Atim says. With quiz scores no longer weighted more heavily than other components, some students have observed healthier attitudes toward learning and greater self-direction. "It allows some of our basic science activities to become more of an academic playground," says Guterman, "where we're safe to experiment and question."

Not only has the new system changed the way students study, it has also altered the way that at least one faculty member gives exams. Now, Marzuk notes, he writes questions so they mirror learning objectives and no longer worries about crafting some of them to create a point spread among students. "I'd like to think our students are here because they want to be the best physician and learn as much as possible," says Marzuk. "It's not just a matter of needing some external motivation called a grade."

— Andrea Crawford

Safe Haven

Student group helps refugees seek asylum

After suffering years of persecution and violence in his native country because of his sexual orientation, the young Gambian man sought asylum in the U.S. But during his interview, a government official found inconsistencies in his story—for example, whether his plane ticket to America had been one-way or round-trip. "One of the main reasons that people have difficulty getting asylum is if there is any discrepancy, even with minor details," observes Ellie Emery '14. "It can be a reason to think the client isn't credible."

Emery is executive director of the Weill Cornell Center for Human Rights, a two-year-old student organization that offers physical and psychological exams to support immigrants' asylum claims. With the help of volunteer professionals—most of them WCMC faculty—the group evaluates asylum seekers and creates medical-legal affidavits in advance of their hearings. As of this spring, it's batting 1.000: of the two dozen clients whose cases have been adjudicated, all have had their petitions granted. In total, the group has evaluated more than fifty people from some two dozen countries.

"The feeling you get when you hear that a client you worked with has gotten asylum is hard to describe," says co-founder Shelli Farhadian, who completed her MD-PhD in May and matched in internal medicine at Yale. "You get chills. You feel like you've affected a life in a profound and powerful way. We had at least one client who was given asylum and was also able to bring his family here; that really sticks with you, knowing that an entire family has the opportunity to start over in the U.S. My parents are immigrants—they fled revolutionary Iran in 1979—so I have a personal connection to people coming to America with very little."

In the case of the man from Gambia, the students and their physician mentor found a medical reason for his conflicting tale: the inconsistencies in his story could be traced to head trauma from the many anti-gay beatings he'd suffered. "When we did a mental status exam on him, he had huge cognitive disabilities. He couldn't even remember his own phone number," says Emery, who earned an undergrad degree from the Ithaca campus in 2010. "So we were able to explain to the judge why, medically, there were discrepancies in the case."

The program finds its clients through referrals from the asylum arm of the nonprofit Physicians for Human Rights (PHR). Examinations are done in the Clinical Skills Center, conducted by a physician or psychologist and several students. (The cause has proven popular among medical students; in 2011–12, more than a quarter of first-years underwent training.) "It's one of the best things I've come across in thirty years of medical education," says Thomas Kalman, MD, clinical associate professor of psychiatry, one of the faculty volunteers. "The students' idealism, their enthusiasm, their desire to help—it's inspiring." Kalman—whose cases have included a Central American family claiming that their children had been threatened with kidnapping by gangs—also praises the students' organizational skills. "They make it more inviting for physicians like myself, whose time is at a premium," he says.

> 'Most of our requests are for psych evaluations, because people torture smarter than they used to and don't leave as many physical scars—which is a weird way to think about it.'

The Center for Human Rights has seen clients from around the world—political refugees from Syria and China, numerous LGBT cases from central Africa, victims of female genital mutilation (also mostly from Africa) desperate to spare their

ABBOTT

In their corner: Center for Human Rights leaders Shelli Farhadian, MD '12, PhD '12 (left), and Ellie Emery '14, whose group offers medical and psychological exams for asylum seekers.

daughters the same fate. "Most of our requests are for psych evaluations, because people torture smarter than they used to and don't leave as many physical scars—which is a weird way to think about it," Emery says. "As you'd imagine, we see mostly major depression and PTSD, but there are also a lot of cognitive injuries."

After the exam, the students draft the medical affidavit; the licensed professional signs off on it and testifies in court. So far, Emery says, the group has doubted a claimant's credibility only once. "We immediately contacted the attorney and said we couldn't write the affidavit, and then contacted PHR and told them that they needed to look into it," she says. "The judges know our physicians, because they've testified repeatedly—and if we testify for a client who turns out not to be credible, they would never believe testimony from our clinic again. Fortunately, it rarely happens—but when it does, we take it very seriously, because it could totally undermine the work we're trying to do."

The group has drawn the attention of students at other medical schools, who aim to set up similar programs. Joanne Ahola, MD, an adjunct clinical assistant professor of psychiatry and one of the volunteer medical directors, notes: "PHR is saying that this is the model for the future—and it's a wonderful model. For a physician like me who has been doing asylum work for years, it provides an opportunity to teach the next generation."

In addition to offering a vital service to asylum seekers—of whom there are more in the New York metro area than anywhere else in the U.S.—the program has myriad pedagogical benefits. Ahola says that it gives students a global health perspective, a chance to do satisfying *pro bono* work, some hands-on clinical experience early in their medical education, and a broad view of human experience. "Asylum applicants always come to us with compelling and fascinating stories," she says. "It's a privilege to hear them, and it's eye-opening. For many years I've sat with individuals and thought, If only there could be a wider audience to learn from what this person has to teach us—about what they endured, the conditions where they came from, the consequences of persecution and torture, and the power and resiliency of the human spirit."

— Beth Saulnier

‘Believe the Patient’

After toxic mold made her sick, Lisa Nagy, MD ’86, has devoted her career to validating and treating environmental illness

A decade after earning her medical degree, Lisa Lavine Nagy, MD ’86, had it all. After stints in the New York City Department of Public Health and as an attending ER physician at Torrance Memorial Medical Center in Los Angeles, she had landed a full-time post at a Kaiser hospital in Southern California. Her husband, a pianist and composer, was writing music for such shows as “The West Wing,” “Felicity,” and “Spin City.” To celebrate, the couple bought a gorgeous home, complete with a large indoor aquarium stocked with koi and small sharks.

Shortly after moving in, both husband and wife—and even their dogs—developed a dizzying array of debilitating symptoms. They were plagued by muscle weakness, low energy, pounding headaches, and deep sadness. The smell of diesel exhaust, cheese, even Nagy’s perfume, induced staggering nausea. “I felt like I was dying,” she recalls. “My arms were so weak I couldn’t fold a towel, wash my hair. My hands would turn blue from the dysautonomia.” Each time she sorted the mail, Nagy (whose name is pronounced *nahj*) experienced maddening bouts of itching and reddened hands. Unopened bills piled up. Nagy left her job and the couple sold their home. Meanwhile, her physicians were flummoxed, speculating that perhaps she had early Lou Gehrig’s disease. They diagnosed her with Addison’s disease; she had a positive tilt-table test for postural orthostatic tachycardia syndrome and a biopsy that showed severely anoxic mitochondria. What was going on?

Then one day in 2003, Nagy stumbled across an online account of symptoms shockingly similar to her own, down to the mail-induced itching she still thinks of as “bizarre.” Reading further, she learned of an upcoming meeting on chemical sensitivity in Virginia. She dragged herself across the country and discovered environmental medicine, a field that examines the influence of various toxins—including mold, the volatile organic compounds we know as the “new car” smell, and even perfume—on mental and physical health. Practitioners diagnose and treat such symptoms as endocrine imbalances precipitated by certain molds and toxins, and use a combination of exposure reduction, intravenous vitamin therapy, oxygen, and sauna detoxification to heal the damage. At the Environmental Health Center of Dallas, Nagy underwent intensive therapy that included intravenous vitamins and provocation-neutralization allergy testing. She became stronger every day.

PROVIDED

Lisa Nagy, MD ’86

Nagy blames mold and trichothecane mycotoxins, associated with that home aquarium, for launching a cascade of adrenal and mitochondrial damage responsible for the mysterious array of syndromes she experienced. “The toxins in the air had overloaded my system and made me intolerant of all chemicals, especially pesticides,” she says. “A muscle biopsy showed that I had severe damage to my mitochondria.” In 2004, she and her husband decamped to Martha’s Vineyard, where they had wed and still owned a weekend cottage. “I needed clean air,” she says. “I couldn’t tolerate the high ozone and exhaust levels in Los Angeles.”

Now fifty-one, Nagy still can’t practice emergency medicine; the combination of omnipresent chemicals, as well as patient perfume and scented laundry detergent residue on clothes, can wreak havoc with her energy level, ability to stand without tachycardia, and attention span. Instead, she oversees an intensive, fifty-patient private environmental medicine practice on Martha’s Vineyard. She also travels around the country giving lectures on environ-

mental illness as a member of the American Academy of Environmental Medicine and serves as an appointed member of the National Institutes of Health's Roundtable on Health and Buildings and as a delegate of the Massachusetts Medical Society. "When they hear hoof beats, some medical students are taught to hear horses; others are taught to hear zebras," says Nagy, who thinks of herself as an ambassador for environmental medicine. "The rare disease, the bizarre situation I went through and that my patients have, with all of these multiple symptoms—they all fit in this basket of environmental illness, which is becoming very common today. What was once a zebra is now a horse!"

Nagy has been approached about doing a movie based on her story and is drafting a practical guidebook called *How to Be a Better Doctor and Patient*. In the process, she has been meditating on the diagnostic mindset promoted by Weill Cornell neurologists Fred Plum and Jerome Posner, co-authors of *Diagnosis of Stupor and Coma*. "They always said, 'Believe the patient,'" says Nagy, recalling the case they presented during her medical training of a woman who inexplicably waved her arms when walking through doorways. It might have been easy to dismiss the patient's symptoms as psychiatric, she says, yet a scan revealed a thalamic tumor that was altering the woman's spatial awareness. "When I became sick with a condition that is never taught, nobody believed me," she says. "You don't even believe yourself, because you're a doctor and you didn't learn about it in school."

Nagy acknowledges that many of the symptoms common in environmental medicine present as behavioral—and that it would be easy to slap a psychiatric diagnosis on the people who come to her as a last resort. To honor Plum and Posner's dictate, she starts out with a comprehensive medical history and a complete battery of tests analyzing metabolic and endocrine function. "Why give them a psychiatric label and walk away," she wonders, "if there are fifteen things you can check to see if they have physiological abnormalities causing the psychiatric symptoms—and fix them both?"

— Sharon Tregaskis

For more information, go to www.lisanagy.com and the website of the American Academy of Environmental Medicine at www.aaemonline.org.

Rooms with a View

Literary magazine showcases WCMC-Q's creative side

From the opening pages of the premiere issue of WCMC-Q's literary magazine, it's clear this is no hidebound academic publication. As the introduction declares, "*Between Seminar Rooms* accepts creative submissions of any kind in any form: poetry, prose, fiction, non-fiction, creative non-fiction, creative non-poetry, poetic homework, found objects, photographs, status updates, fine art, bad art, really bad art, animals, vegetables, minerals, recipes, sarcasm, your shoe, a picture of your shoe, a picture of your shoe writing a poem."

Launched in 2010 and with its third issue currently in the works, the journal offers a creative outlet for the Qatar branch's premedical and medical students. In addition to the wide range of genres listed above, *Between Seminar Rooms* includes such features as an "ask the expert" column, a "two lies and one truth" segment, Facebook status contests, and even the occasional recipe. (In the first edition, Noor Al Khori, MD '10, describes her apple pie cheesecake as "quick, easy, and nutritious, and ideal for Ramadan.") The publication has grown from a debut issue of seventy-six pages to a second volume of 130, with the third planned for about the same length.

The project is the brainchild of Autumn Watts, director of the WCMC-Q Writing Center, who serves as the managing editor. A student editorial board vets the submissions, but it aims to be inclusive. "We didn't want to leave anybody out, but we wanted to make sure that the quality would be high," Watts says. "So if we get a submission that's a bit rough, we work with the writer and give them feedback so they can improve the piece." The magazine's title, she notes, is meant to capture "the way that students' creativity spills out between classes." It was chosen by a campus-wide vote—beating out *Corn Aliens*, a play on "Cornellians."

Fathima Zahra Kamil '14 was active in art, creative writing, and the yearbook committee in high school; now, the Sri Lankan native is on the *Between Seminar Rooms* editorial board, has contributed numerous art works (oil paintings, watercolors, and pencil sketches), and is helping design the cover of the third issue. "In medical school, it's easy to get swamped with course work and neglect your hobbies," Kamil observes. "Medicine tends to be a very left-brained field, so dabbling in the arts and humanities sparks the creativity and imagination within all of us."

Fellow board member Sally Elgazar, who completed her second premed year this spring, says that seeing other students' creative work inspires her to produce her own—and that it broadens her horizons. "It's very important, even essential, that a doctor—or any other person, for that matter—understands the huge diversity in people and is able to accept these diversities," says Elgazar, an Egyptian who has contributed a fiction story and two interview pieces. "It definitely makes for a much better doctor-patient relationship."

Between Seminar Rooms is available in both hard copy and electronically via the Writing Center's page on the WCMC-Q website. Each issue is celebrated with a launch party at which contributors have exactly two minutes each to present their work; the long-winded risk being "chickened off" the stage by the squeaky rubber poultry that Watts keeps in her office. "The students are complex people who have lives and abilities outside of medicine," Watts says. "I think many faculty are surprised by the quality and range of the work. One of the most common reactions is, 'Wow, who did that? I had no idea.'"

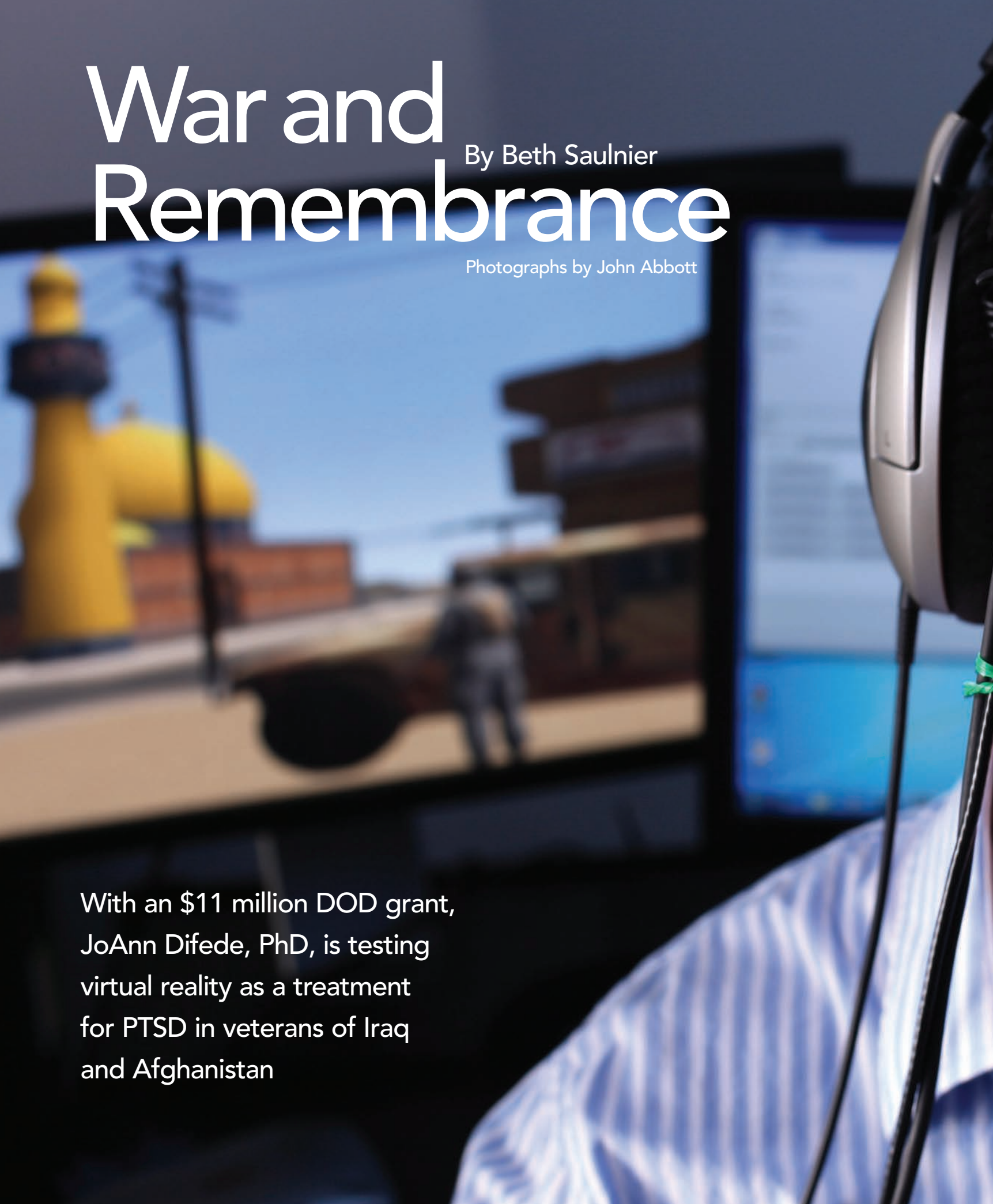
— Beth Saulnier

For more images from *Between Seminar Rooms*, see page 2.

War and Remembrance

By Beth Saulnier

Photographs by John Abbott



With an $11 million DOD grant, JoAnn Difede, PhD, is testing virtual reality as a treatment for PTSD in veterans of Iraq and Afghanistan

A military convoy in Afghanistan is struck by a roadside bomb. Soldiers on patrol in Fallujah are attacked by a sniper. Marines are killed in a Humvee rollover. Solders walking the streets of Baghdad are gravely injured by an improvised explosive device.

American service members have faced those and other dangers over the past decade of conflict in Iraq and Afghanistan. And in recent years, some of them have come to the corner of 70th and York to relive those traumas—their sights, sounds, even smells—in an effort to heal.

In a treatment room on the fourth floor of Payson House, current and former soldiers, Marines, and National Guardsmen don virtual reality (VR) goggles and earphones and are transported back to a war zone. A subwoofer installed under a platform mimics the vibrations of explosions; a scent machine can approximate such aromas as cordite, Middle Eastern spices, and burning flesh. For some veterans, the illusion is incomplete unless they carry a faux M16 rifle—made of plastic, but believably weighty.

In addition to having served in Iraq and Afghanistan—or, in many cases, both—these treatment participants have one thing in common: all suffer from post-traumatic stress disorder (PTSD), a chronic, often debilitating condition whose personal and societal tolls are becoming increasingly known as this generation of veterans returns home. In December, with the aim of evaluating a novel form of therapy, the Department of

Inner life: In the VR treatment, subjects wear goggles and earphones that immerse them in the circumstances of their trauma, such as a Baghdad patrol.

JoAnn Difede, PhD

Defense awarded a four-year, $11 million grant to a Weill Cornell team led by JoAnn Difede, PhD, professor of psychology in psychiatry and director of the Program for Anxiety and Traumatic Stress Studies at NYP/Weill Cornell. Collaborating institutions include the University of Southern California and Emory University.

For more than a decade, Difede—who led a seminal study published in the *Journal of Clinical Psychiatry* using virtual reality to enhance treatment for World Trade Center survivors—has been studying the use of virtual reality to treat people with trauma and anxiety disorders. The treatment is a high-tech take on imaginal exposure therapy, the current standard of care for treating PTSD. (SSRIs such as Zoloft and Paxil are used palliatively, for symptoms like anxiety and sleeplessness; a committee of the Institute of Medicine has found that exposure therapy is the only treatment for PTSD with a strong evidence base.) In exposure therapy, patients are guided in reliving their trauma in a safe environment, with the goal of facilitating "extinction learning"—consolidating the experiences as memories rather than as volatile, emotionally fraught episodes that can re-emerge as flashbacks.

Difede cites that classic Psych 101 example of operant conditioning, Pavlov's dog—but instead of hearing a pre-dinner bell, the animal receives an electric shock each time a light goes on. "Over time, the dog will get frightened and have the same reaction he would have to the shock itself when he sees only the light," she says. "Extinction learning would be teaching that lights aren't scary in general—just in this particular context. What you do is repeatedly show the

dog the light without a shock, and he learns that lights aren't scary after all; it was the shock. The same thing happens with people. Let's say you worked in the World Trade Center and escaped with your life on 9/11; stairwells are suddenly frightening places. You've developed a conditioned response that stairwells can be scary because you escaped down the stairs that day wondering whether or not you were going to make it out, hearing mayhem outside, maybe even one of the buildings collapsing. Stairwells are no longer neutral for you."

By recalling the traumatic memory in the therapist's office, Difede says, the patient can eventually uncouple stairwells—or, say, the sight of a plane flying over the city on a cloudless day—from the horrors of 9/11. "Over and over again, we're extinguishing the cues to fear in a safe environment," she says. "In theory, that would allow the person's autonomic nervous system—which went into fight-or-flight mode when it perceived danger—to go back to homeostasis and say, 'Okay, every time I see a plane in a blue sky, I don't need to think there's going to be a terrorist attack. It's just another plane.'"

But imaginal exposure therapy is by no means easy. It requires PTSD patients to do what they dread most: relive the traumatic memory. One of the advantages of the virtual reality treatment is that it provides the mnemonic cues rather than requiring participants to summon them up. "Part of PTSD is being avoidant of things that remind you of your trauma—people, places, things, memories, emotions," Difede says. "So when you tell someone that part of the treatment is going over what happened to them—that they have to will the memory into their mind and go over it—they're reluctant to do that. But this way, we're putting them back in Iraq or Afghanistan in a Humvee or on patrol in town, or at the World Trade Center, and the cues are being delivered to them. You have reminders in the context that your trauma occurred—you can see, hear, smell, feel. They're powerful sensory cues, and we think that will help emotional engagement and make it easier for people to process their memories. Humans don't work by cognition alone. We don't just think about what happened to us or remember it, we apprehend it in multi-sensory dimensions."

In the DOD-sponsored study, which will include 300 participants, veterans will receive either standard imaginal exposure therapy or the virtual reality version. The work will be conducted at Weill Cornell, at a VA medical center in Long Beach, California, and at Bethesda National Naval Medical Center outside Washington, D.C. The protocol calls for nine treatment sessions per participant; for the VR group, seven of the sessions will include thirty to forty-five minutes of immersion in virtual Iraq or Afghanistan.

"A common experience we hear of is being part of a convoy, maybe the second vehicle, and seeing one of the other vehicles get hit by an IED, and running to try to save the people in it," says Judith Cukor, PhD, assistant professor of psychology in psychiatry, who is a co-investigator and the Weill Cornell site's primary clinician. "So we have them describe in great detail what they saw and did and thought and felt during those moments, because that's what's in their brains—that's what's replaying itself through nightmares or constant thoughts, is triggered easily, and isn't able to be consolidated as a memory. And as they're describing it, we'll use the virtual reality to help bring them back there. They'll be sitting there with a helmet on, in a virtual Humvee, and talking in the present tense, as if it's actually happening—knowing that it's not happening, but trying to put themselves there. They'll say, 'I'm traveling, it's eight o'clock in the morning, it's just a regular day. We're joking about something. I look up and I see smoke.' At the appropriate time in the treatment—when they're ready for it—we'll play an IED or have smoke in the distance. We do it in a gradual way, and they're able to engage in their memory and habituate to the emotions around it."

The virtual-reality versions of Iraq and Afghanistan were designed and refined with input from veterans who served there. The scenarios have the feel of a modern video game—but are even more immersive, because when the user turns his head, the perspective shifts accordingly. The virtual worlds are highly detailed, with atmospheric elements like calls to prayer, groups of chatting civilians, and piles of refuse (which are often used to conceal IEDs). By manipulating a joystick, the user can walk around and explore, climbing stairs and entering rooms. "In this world, you can play out a variety of scenarios at any time of day," Difede says. "We can add helicopters or airplanes that might come for backup support. We can add cues that are relevant to a wide variety of experiences that happen on patrol—going back to this idea of PTSD as a disorder of emotional learning."

The VR technology has other benefits in treating veterans, the researchers say. For one thing, notes Cukor, "it gives them a sense that we understand where they've been. Even though we're civilians, we have this environment that is very similar to what they went through, and they feel like, 'Oh, they get the military,' which is helpful." Then there's the fact that the current crop of veterans grew up on video gaming, and many are avid fans of combat-oriented titles like Call of Duty. "Video games have a lot of validity with the generation of young men and women who went to Iraq and

'Over and over again, we're extinguishing the cues to fear in a safe environment. In theory, that would allow the person's autonomic nervous system—which went into fight-or-flight mode when it perceived danger—to go back to homeostasis.'

Treatment team: The mental health professionals working with Difede on the project include (from left) Megan Olden, PhD, Francis Lee, MD, PhD, and Judith Cukor, PhD, seen with the treatment equipment, including a faux rifle.

Afghanistan," Difede says. "They know how to use the technology. They're comfortable with it. This isn't the psychotherapy of Freud that they might have learned about in college or in popular culture; it doesn't even look like psychological treatment. And there's evidence that if a person thinks the treatment is going to work, they're more likely to stay with it. They'll give it a chance." Cukor adds that for many participants, the technological learning curve is appealingly flat. "The patient is able to move around with a joystick—and let me tell you, they're able to do it a lot better than I am," she says with a laugh. "I have trouble getting through some doorways, and I try to explain it to them, but they don't even need to hear it. They've got it in a second."

Unlike a video game, though, the VR scenarios avoid the unexpected. The therapist programs the computer to reflect the details of the veteran's trauma—employing them gradually as treatment progresses. For example, someone who was in a vehicular accident or attack might start out by spending time just driving down a desert road. Megan Olden, PhD, an instructor of psychology in psychiatry, recalls working with one such patient (outside the DOD-funded study), who'd been in a Humvee rollover. "I told him in advance that nothing surprising was going to happen," says Olden, who is serving as the assessor at the Weill Cornell site for the DOD study and is therefore not treating its participants, in order to preserve double-blind status. "I said, 'There wasn't an explosion in your original trauma, so there won't be one now.' But he was really vigilant as he was moving the Humvee down the road—concerned about mines and IEDs. He was transported back as though he were driving in Afghanistan, with all the dangers."

In 2008, the RAND Corporation published a 500-page report on PTSD and major depression among Iraq and Afghanistan war veterans. It calculated the rate of prevalence of one or both conditions at nearly 20 percent—and noted that in the two years following deployment, PTSD and depression among returning service members cost the nation as much as $6.2 billion in medical bills, lost productivity, and other factors. The condition raises the risk of a variety of social ills—including suicide, substance abuse, and domestic strife. "There are lots of interpersonal costs, including compromised social functioning," Olden says. "Emotional constriction is one of the common features of PTSD—so people are not able to feel loving or happy feelings, which makes it very difficult to function in a marriage or as a parent. Often people feel anger and irritation, and that also causes interpersonal difficulties. Avoidance is a strong feature of PTSD, so people work hard to not approach anything that's going to trigger their anxiety, which can narrow your life in an extraordinary way—avoiding driving, crowded places like malls, going out with groups of friends."

While PTSD has always been part of war's lingering cost—whether known by its modern label or more antiquated terms like "soldier's heart," "shell shock," or "battle fatigue"—it seems to be striking veterans of the current conflicts especially hard, researchers say. "One factor is that people have been repeatedly deployed, so they're encountering dangerous and traumatic situations again and again," Olden says. "Also, the nature of the wars is different than some previous conflicts. There is more of a chronic threat level. It's not just when you're in battle; at any time there could be IEDs or a suicide bomber, so it's more difficult to know when you're safe. Some of the soldiers I've worked with report not feeling safe even on base. They'd be mortared all the time, or were interacting with local soldiers who they thought were tipping off the enemy. So they felt like they could never relax."

Given the financial and human costs, finding an efficient and effective treatment for PTSD is a pressing national health issue. With the aim of maximizing treatment benefits, the DOD-funded study is also looking at the efficacy of a

'Avoidance is a strong feature of PTSD, so people work hard to not approach anything that's going to trigger their anxiety, which can narrow your life in an extraordinary way—avoiding driving, crowded places like malls, going out with groups of friends.'

drug called D-cycloserine (DCS), which preclinical studies have shown to enhance extinction learning, the presumed mechanism underlying exposure therapy. An antibiotic approved by the FDA a half-century ago to treat tuberculosis, DCS is thought to facilitate learning by binding to an important glutamate receptor in key brain regions and enhancing its function. In the current trial, half the participants will receive DCS in addition to either imaginal exposure therapy or VR—making for a total of four experimental groups. Either a placebo or the drug, which is short acting, will be given only prior to each treatment session. "The hypothesis is that those who get D-cycloserine will get better faster and may have a lower relapse rate—and the implications of getting better faster are significant when you think about the associated costs of posttraumatic stress disorder," Difede says. "If people start to get better faster, it may also lower dropout rates."

DCS may prove especially useful in patients with a particular variant of a growth factor, BDNF (brain-derived neurotrophic factor), a form that impedes extinction learning. Psychiatry professor Francis Lee, MD, PhD, co-investigator and the primary psychiatrist at the Weill Cornell site on the DOD project, has been studying BDNF in a mouse model as part of his work on the genetics of anxiety disorders. In the DOD study, participants will give a saliva sample from which their DNA will be analyzed for the BDNF variant. "If this therapy were 100 percent perfect, everyone would be cured of PTSD," says Lee, who has published two papers in *Science* on related topics, including the genetic basis for lack of response to SSRIs in PTSD patients. "But some people respond and some don't. As is the hope of many in modern psychiatry, we're trying to predict who will respond to standard treatment and who will not. In the future, we would want to be able to take a DNA sample, say, 'This person's got this variant, they're not going to respond to this drug, therefore we're going to make a treatment decision based on this biomarker,' and put them on D-cycloserine and give them exposure therapy. Even though it's more time-consuming for the patient, there's enough data out there that this is going to give you a better outcome."

To approximate traumatization and extinction learning in humans, Lee's rodent studies have included a version of the Pavlovian scenario. Mice hear a tone and receive a minor shock; soon, they become anxious simply at the sound of the tone. Then the tone is repeatedly played without the shock. When the experiment is concluded, the mice are examined and Lee does histochemical and electrophysiological studies of their brains' synaptic activity. "This pharmacogenetic approach has tremendous applications for multiple psychiatric conditions," Lee says. "Treatments for almost all types of anxiety disorders that involve phobias—fear of heights, for instance—are all built on the same principle of exposure therapy. Treatment for obsessive-compulsive disorder involves learning that having dirty hands, for example, is not dangerous. All these have a common theme of retraining the brain that things that were anxiety provoking are no longer dangerous." For Lee, customizing treatment according to a patient's genetic makeup represents the future of psychiatry. "You won't just give them a drug or therapy," he says. "You give them both, and you do it in a way that isn't just flooding the system."

In his clinical practice, Lee has seen an increasing number of PTSD patients over the past few years, mostly as part of Difede's studies. Their cases have spurred his research efforts. "The fact that I'm still seeing patients who have suffered traumas from 9/11, and they're still a prominent part of my clinical work, suggests that this is an extremely chronic disorder and it can have debilitating effects," he says. "And even though 50 percent or more recover to some degree, I was struck by how severe the disorder can be. The therapies that are currently available can help some patients, but not all, and we need to find better ones."

In recent years, both the military and the medical establishment have made concerted efforts to destigmatize PTSD and encourage sufferers to seek help. But while strides have been made, Cukor says, there's still much work to be done. "We can say, 'It's a real thing, get treatment for it,' but there's still a perception that needing help might signify weakness," she says. "That's part of the psychoeducation that we need to do—that it's not the weak people who have PTSD. In fact, very often it's people who've been through so much, who have an exceptionally large load on their shoulders because they're so capable." But because of the lingering stigma, Cukor laments, patients often don't come for help until they're suffering acutely. "It's very sad, because we have many people come into our offices five to ten years after their trauma, and their lives are falling apart. They're hesitant to seek treatment, and often when they come in it's because their spouse has filed for divorce or they haven't gotten out of bed for months. Their lives are crumbling. It's a shame to see it take such a toll, because treatment can really help. And of course it's extremely gratifying to sit with somebody who's in so much pain and ten weeks later see them so much better. People often ask, 'How do you listen to all these terrible things?'—but we're part of the healing. We don't see the terrible things. We see people getting better." ●

Life of the Mind

By Sharon Tregaskis

Physician-scientists seek clues to consciousness

Terry Wallis was nineteen years old in 1984 when the pickup truck he was riding in careened off a backwoods road, crashing through a guardrail before it plunged more than thirty feet to the bottom of a dry riverbed in the Ozark Mountains. One of his companions died; the other was unscathed. Wallis, a gifted mechanic whose wife had given birth to their daughter just six weeks earlier, would spend nearly two decades in a nursing home, paralyzed and unable to talk or care for himself—or to recognize the child he once adored.

Doctors told Wallis's family that he was in a persistent vegetative state from which he would never recover. Nursing home staff monitored his feeding tube, guarded against bedsores, and tended to his other basic physical needs, but therapy was virtually nonexistent. Over the years, his parents saw glimmers of the old Terry and pled for neurological assessments, but their requests were rejected. Then one day in mid-June 2003, when his mother arrived in his room for a visit, Wallis said "Mom." "Milk" and "Pepsi" followed—and in subsequent weeks, the words returned in a torrent. Headlines declared the thirty-nine-year-old a modern-day Lazarus and reporters from around the world flocked to Arkansas to herald his miraculous recovery.

MAN WANTS PEPSI AFTER 19-YEAR COMA trumpeted the *USA Today* headline above a front-page story on July 9, 2003. That morning, Weill Cornell professor of neurology and neuroscience Nicholas Schiff, MD '92, was at a conference in Lake Tahoe, slated to present his latest insights on consciousness. As he stood at the podium, the colleague introducing Schiff waved a copy of the complimentary newspaper that had been slipped under the door of each attendee's hotel room—and promised that Schiff would explain the science behind Wallis's extraordinary recovery. "I said, 'It's probably fake,'" recalls Schiff, now director of Weill Cornell's Laboratory of Cognitive Neuromodulation. "'Nobody is in a coma for that long, then regains language.'"

Schiff—a co-author, with the late Fred Plum, MD '47, and Jerome Posner, MD, of the fourth edition of the classic textbook *The Diagnosis of Stupor and Coma*—now knows he was half right. "The case was real and fascinating, and of course he wasn't in a coma or a persistent vegetative state," says the physician-scientist, who has since examined Wallis several times and authored studies on his continued recovery. Unlike

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JOHN ABBOTT

Nicholas Schiff, MD

'We use neuroimaging so the brain can talk to us whenever it happens to activate and give us some response,' Schiff says. 'But interpretation of the results is a tricky process.'

that other famous, severely brain-injured Terry—Schiavo, whose family's decade-long battle over her end-of-life care ultimately involved the U.S. Congress and President George W. Bush—Wallis had been misdiagnosed. "He was in a minimally conscious state for twenty years," says Schiff, whose latest work on Wallis's ongoing recovery is slated for presentation in November at the Society for Neuroscience meeting. "He has recovered not only full consciousness, but fluent language and a level of cognitive function that has made him testable on standard neuro-psychometric measures, which is amazing. We're still learning things about his brain."

Each year, 1.7 million Americans suffer traumatic brain injury. For 75 percent, the effect is fleeting—a concussion that causes a bad headache or brief blackout. But for the remainder, disability persists. They experience cognitive or emotional problems or have difficulty communicating, moving, or processing sensory stimuli like touch, smell, or sound. Statistics are tough to verify, but perhaps as many as 300,000 Americans—including more than 6,000 veterans injured in Iraq and Afghanistan—wind up in nursing homes, their grip on consciousness tenuous at best. Occasionally, like Wallis, their brains heal enough to allow for communication, even self-care. For families, the uncertainty can be agonizing. What are their loved one's prospects for a meaningful recovery? On what time scale? Would the person want to be kept alive or should care be withdrawn? Would therapy help? The answers rely on credible guidance from physicians—but until recently, they've had little insight to offer.

For twenty-five years, Schiff has investigated the structural biology and electrical circuitry of consciousness, seeking clues to predict which patients might regain consciousness and exploring how some combination of therapy, pharmaceuticals, and surgical interventions might promote recovery. With a team of Weill Cornell scientists that includes medical ethicist Joseph Fins, MD '86, he has conducted a series of studies using magnetic resonance imaging and electroencephalography to reveal brain activity and explore ways in which people unable to speak or write might be able to reveal their capacity for thought.

Recently, Schiff and Fins have worked with physicians at the Cleveland Clinic and Harvard, testing the potential of a pacemaker-like device to stimulate function of the thalamus, a region of the brain that integrates sensory signals and regulates consciousness. Their goal: to promote recovery of functional communication, allowing patients to express their needs and enhance their caregivers' ability to respond. "I focus on the central thalamus not because it will explain consciousness," says Schiff, "but because it's an economical focal point for manipulating states of consciousness and understanding some aspects of it."

Expanding on the issues raised by their collaborations, Fins—chief of the Division of Medical Ethics at NYP/Weill Cornell and a professor of medicine, of public health, and of medicine in psychiatry—has interviewed the family members of forty patients from around the country, including Wallis's mother, for a book tentatively titled *Rights Come to Mind: Brain Injury, Ethics, and the Struggle for Consciousness*. "The fundamental issue is the residual cognitive capacity of these patients to actually mount a recovery and communicate," says Fins, the E. William Davis Jr., MD, Professor of Medical Ethics. "That specter haunts me—of people being conscious and taken as if they're not, left alone and sequestered in chronic care, labeled as vegetative when they're not. What's the potentiality to intervene?"

Consciousness exists on a spectrum. We sleep and wake; anesthesiologists put us under for surgery, then bring us back. Between

those end points, our alertness ebbs and flows—evident in how far we open our eyes, how quickly and appropriately we respond to our environment. After a brain injury, neurologists rely on behavioral assessments at the bedside—yes/no responses (or nonverbal signals) from the patient to a series of questions—to guide diagnosis and offer families a prognosis. "Consciousness is a black box," says Schiff, the Jerold B. Katz Professor of Neurology and Neuroscience. "If we don't have gesture or verbal communication, then we have the problem of making an assessment. What is the level of cognition within that box?"

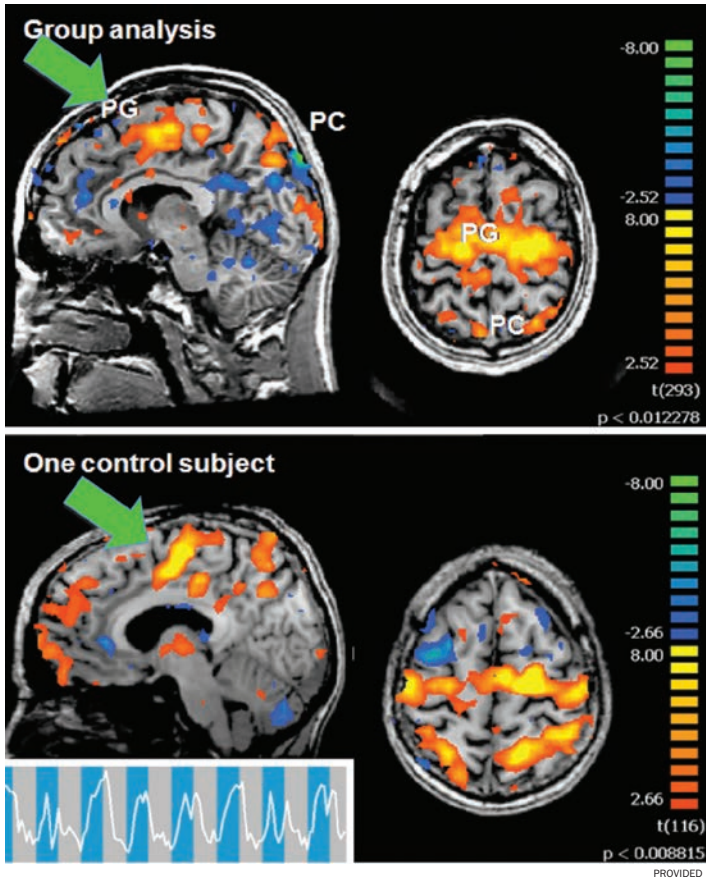
Schiff was an infant in 1966 when Plum, the Anne Parrish Titzell Professor and chairman of the Department of Neurology at the Medical College from 1963 to 1998, coined the term "locked-in syndrome" to describe individuals who retained full cognitive capacity but due to profound paralysis were limited—to the flutter of an eyelid or a shift of their gaze—in their ability to demonstrate consciousness. Schiff was in elementary school when, in 1972, Plum and Scottish neurologist Bryan Jennett, MD, published their first article on "persistent vegetative state," a dour diagnosis they described as "wakeful unresponsiveness," reflecting the absence of activity above the brain stem but clinically distinct from coma. Karen Ann Quinlan was in a vegetative state, and Plum was the court-appointed neurologist in Quinlan's case, a landmark court battle that helped to establish the right to die.

Throughout the Nineties, as Schiff completed his medical training and Fins delved into the issues attending ethics and end-of-life care, physicians remained fundamentally dismissive of the prospect for meaningful recovery from profound brain injuries. Bedside observation was the only tool available to a doctor seeking clues to a patient's condition—and ultimately to the prospect of recovery. "Some of the clinical truths that I learned about the vegetative state when I graduated from Cornell twenty-five years ago are no longer true," says Fins. "This is a moving target. I was more certain about neurologic outcome and what ethically followed from that certainty ten years ago than I am now. Everything is in flux."

Today, such tools as electroencephalography, magnetoencephalography, magnetic resonance imaging, functional MRI, and diffusion tensor MRI allow scientists to examine the real-time electrical, metabolic, and blood-flow changes in a living brain. Comparison of the patterns of activity after a brain injury with those of intact subjects has the potential to reveal not only such subtle conditions as locked-in syndrome, but also more evidence of consciousness than some patients are able to demonstrate in a bedside examination.

Schiff's studies have analyzed responses to auditory recordings of a voice familiar to a patient, the ability to recognize matched playing cards, and the capacity to follow a command—such as "Imagine yourself swimming"—that stimulate the neurons involved in physical activities, even if the limbs required for the activity itself have been stilled. "We use neuroimaging so the brain can talk to us whenever it happens to activate and give us some response," says Schiff, who has published multiple papers on the possibilities and challenges inherent in assessing consciousness using such techniques. "But interpretation of the results is a tricky process."

Schiff and his team are investigating novel methods to fine-tune analyses of consciousness that can be done in the nursing homes and community hospitals where most brain-injured patients receive



PROVIDED

Black box: When normal subjects were instructed to imagine themselves swimming, scans showed the areas of activation within their brains. They were predominantly in the supplementary motor area, partially extending laterally into the premotor areas and parts of the posterior parietal cortex.

care. In 2011, *Clinical Neurophysiology* published the laboratory's latest work on EEG by Andrew Goldfine, MD, assistant professor of neurology; he had started working with Schiff as a third-year resident, helping to analyze EEG data from the newly loquacious Terry Wallis. Unlike MRI, which can't be done on patients whose bodies contain metal—not uncommon among people whose bones were damaged in the incident that caused their traumatic brain injuries—EEG doesn't require that a patient remain still and generates useful data even during sleep.

Much of Schiff's work has centered on a state known as minimal consciousness, first codified by his collaborator Joseph Giacino, PhD, now at Harvard, in 2002. By the time Giacino's paper on the subject was published, Fins notes, the diagnosis had probably fit Terry Wallis's condition for more than eighteen years. People in a minimally conscious state have some awareness of the outside world and some capacity to interact, verbally or nonverbally. Diagnosis requires multiple assessments over a period of time—because just as an office worker's attention level ebbs and flows over the course of the day, the alertness of someone in a minimally conscious state varies and can be influenced by such factors as medication, tiredness, pain, and even recovery. Scientists estimate that perhaps 40 percent of the people diagnosed as being in persistent vegetative

'If we can improve their functional status just a little bit because they're moving around and don't get bedsores, or can eat by mouth and forego a feeding tube, that reduces the cost of care,' says Fins, 'and maybe some of those resources could be redirected to therapy or to devices that might maximize their cognitive potential.'

states are in fact minimally conscious. "The minimally conscious state is important for lots of reasons, but probably the most important is the ambiguity of outcome," says Schiff. "You can have people who can achieve good outcomes, but they might remain minimally conscious long beyond the current time points for which their health insurance will provide therapy or treatment."

Buffalo, New York, firefighter Don Herbert spent a decade in a minimally conscious state after the roof of a burning building collapsed and nearly suffocated him in December 1995. As in Wallis's case, Herbert's doctors told his family there was no hope of a meaningful recovery—yet ten years after he was pulled from the rubble he suddenly regained the ability to recognize and converse with his wife and four sons, as well as former colleagues. The disparity between what doctors initially told the Herbert family and his eventual improvement, says Schiff, are a "calibration of our ignorance" regarding the latent potential for people with brain injuries to recover. "When Don Herbert emerged, he was not only conscious, fluent in language, and able to ambulate," he says, "he had insight into the fact that he had been out for ten years—he had remorse, frustration, and anger about it."

As an undergraduate at Stanford, Schiff wrote his senior thesis on the work of Canadian neurosurgeon Wilder Penfield, MD, founder of the Montreal Neurological Institute and author of the landmark 1951 book *Epilepsy and the Functional Anatomy of the Human Brain*. Schiff was most interested in Penfield's late-career musings interpreting this work, which focused on using electrical stimulation to diagnose and treat epilepsy and on the role of the thalamus in consciousness. Schiff spent a summer in Montreal on a research grant, sifting through Penfield's papers, including an early draft of his 1975 book, *The Mystery of the Mind: A Critical Study of Consciousness*. Schiff was captivated by the question of why scientists sometimes abandoned—or their colleagues failed to award grant funding to—potentially promising lines of inquiry.

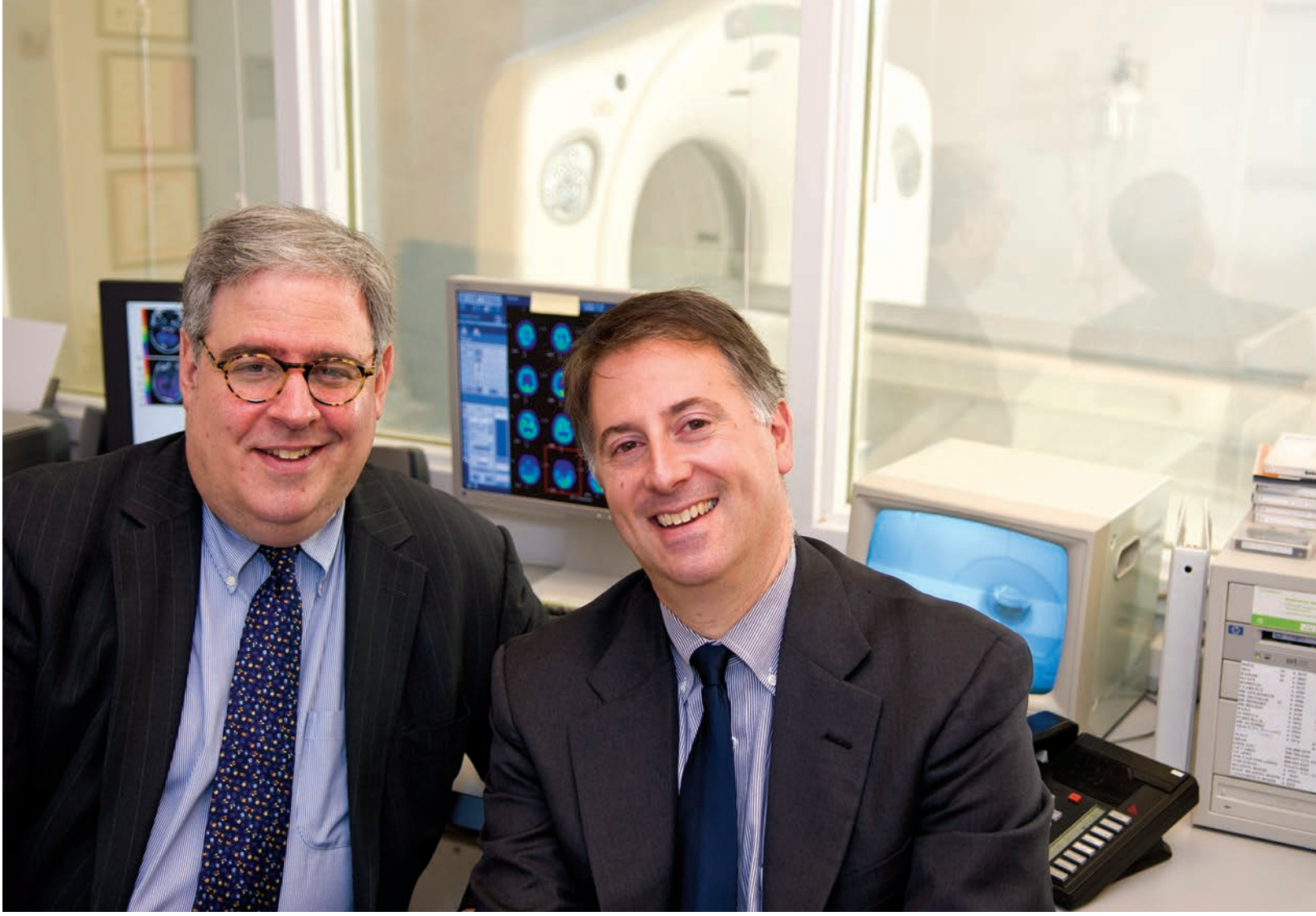
That summer Schiff also spent hours interviewing neurosurgeons William Feindel, MD, then the Neurological Institute's director, and Theodore Rasmussen, MD, a Penfield protégé who held the post after his mentor's retirement. "Dr. Rasmussen explained to me the importance of the role of the central thalamus and how studies of its contributions to organizing consciousness in the brain had been stymied by a confluence of scientific and political factors," says Schiff. Feindel told him there was only one neurologist who was seriously investigating the neurophysiology of consciousness: Fred Plum.

Feindel's urging lingered in the back of Schiff's mind when he enrolled at Cornell, and he met Plum during his white coat ceremony. As a medical student, he worked in the lab of Jonathan Victor, MD '80, now the Fred Plum Professor of Neurology, who combines mathematical and computational analyses of brain wave patterns to investigate sensory processing. In 1990, Schiff began testing some of the questions Penfield had raised about the role of the thalamus, using electroencephalography to measure brain activity during a type of epileptic seizure known as absence, in which a person briefly loses consciousness. "I knew that anything I could learn about that seizure could feed right back into this general problem of consciousness," says Schiff, whose paper on the topic with Victor was published in *Biological Cybernetics* in 1995. "The absence seizure is like a momentary vegetative state."

As a third-year neurology resident, Schiff served on Memorial Sloan-Kettering's neuro-oncology service, headed by Jerome Posner, MD, Plum's longtime collaborator. In a setting where few patients could be cured and most had only weeks or months to live, Posner trained Schiff to look for what he could do for patients, rather than what he couldn't. "You can make their lives a lot better, forestall loss of function, and make a tremendous difference for patients and families," says Schiff, "and you can do it systematically, building on science." After Schiff finished his residency, Plum invited him to collaborate on a project with NYU colleagues using magnetoencephalography (MEG) to quantitatively measure electromagnetic activity in the brains of people in persistent vegetative states and to correlate those observations with bedside assessments.

In 1999, the *Journal of Cognitive Neuroscience* published "Words Without Minds," a case study by Plum, Schiff, and NYU collaborators Urs Ribary and Rodolfo Llinas, of a woman whose brain had been extensively damaged by blood clots and who, despite being in a persistent vegetative state, blurted out intermittent expletives. Using structural imaging, PET scans, and MEG, the team demonstrated that isolated regions of the brain might retain function—and thus fragments of behavior might linger—even after the capacity for thought has been erased. The case begged the question of whether locked-in wasn't the only diagnosis in which thought might remain, even after the capacity for engagement with the outside world—whether verbal or non-verbal—has been lost.

A few years earlier, Schiff and Fins had crossed paths in a NewYork-Presbyterian coffee shop. Fins needed a neurologist to provide commentary for a case in which there was a debate about whether pain medication should be given to a patient who was in a coma. "We started getting into the questions of brain mechanisms, how the diagnostic categories were organized, what the correlative measurements were," recalls Schiff, who told Fins about his work



WCMC ART & PHOTOGRAPHY

Working relationship: Longtime collaborators Joseph Fins, MD ’86 (left), and Schiff communicate daily.

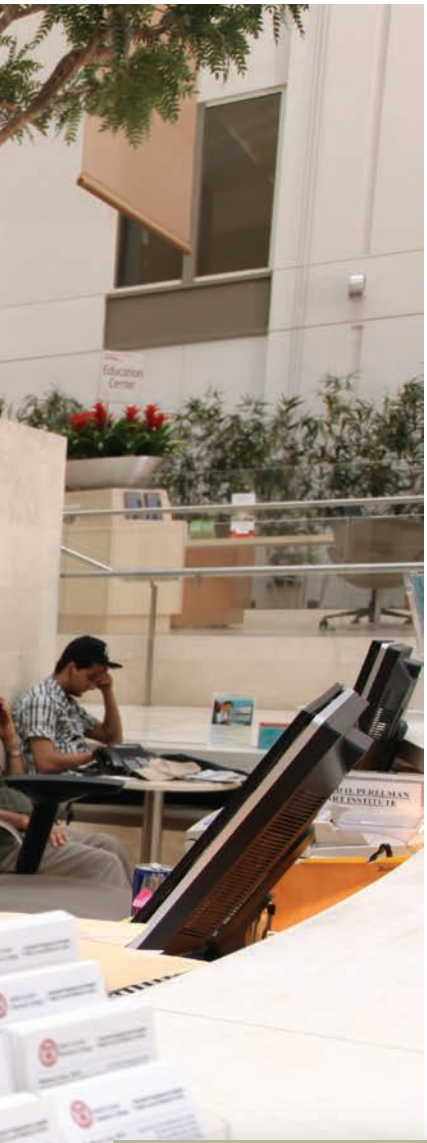
with Plum. “Joe immediately saw how this could have implications for the ongoing conversations in his field about vegetative state and end-of-life care and self-determination, and many of the issues that were present in the right-to-die movement.” Both humanities majors as undergraduates, the two men shared a common vocabulary and soon they were talking daily—first in person and more recently, since Fins’s office moved a few blocks away, by telephone at the end of every day. The partnership, says Schiff, is a better-together, “Reese’s peanut butter cup kind of thing.”

Their closest partnership to innovate together in science and ethics has arisen from efforts to pilot the first test of deep brain stimulation of the central thalamus in minimally conscious state patients. Using a combination of funds from the NIH, private foundations, and medical device makers, they designed the framework for judging the entry point of patients for study, based on principles of risk and benefit and considering both scientific knowledge and ethical principles. Fins further innovated an approach to the problem of surrogate consent for an invasive procedure in this patient population, who could not provide their own consent. Of three patients studied, only one responded—but that patient regained an ability to speak and feed himself. Says Fins: “If we can improve their functional status just a little bit because they’re moving around and don’t get bedsores, or can eat by mouth and forego a feeding tube, that reduces the cost of care—and maybe some of those resources could be redirected to therapy or to devices that might maximize their cognitive potential.”

The research is still in its earliest, academic phases—tweaking algorithms for analyzing the vast reams of imaging data, refining staged consent forms that allow for the possibility that a formerly incapacitated patient might regain the ability to guide treatment. “The generalizability of this work is completely unknown,” says Schiff. “We have to figure out the logic, rules, and selection criteria for when we do fMRI communication experiments, for how we sequentially investigate pharmacological therapies, for how we identify patients who might benefit from deep brain stimulation and select them into these trials.”

Further, says Schiff, the team has to understand the risks to which experimental treatments might expose individual patients—and whether the goals of such interventions are proportionate to those risks. Fins notes that for patients and their loved ones, the stakes couldn’t be higher. “The burden that these families live under—the inability to get a credible diagnosis and secure adequate, basic medical care for their loved ones—is an unspeakable tragedy of American medicine,” says Fins. “If we really believe in informed consent, we have to share the nuance and complexity of these diagnoses with families in a transparent way.” ●

Warm welcome: Patients at the Perelman Heart Institute are greeted by a medical concierge.



Hearts and Minds

By Andrea Crawford

Photographs by John Abbott

With the aim of improving cardiac health in the city and beyond, the Ronald O. Perelman Heart Institute is dedicated to patient care, education, and—above all—prevention

In a physiological reaction probably honed a few million years ago, the human body responds to stress as if in imminent danger: adrenalin surges to release reserves of energy, cortisol increases to heighten visual and auditory responses, digestion decreases to redirect energy toward the large muscles needed for running and fighting, and arteries in the arms and legs constrict while blood clots more quickly—all in anticipation of serious bodily harm.

Such impressive biochemical responses remain useful in certain situations; people do still get chased by wild animals once in a while. But unfortunately for cardiovascular health, the stress caused by reading an angry e-mail in an office cubicle or getting stuck in traffic triggers the same reactions. This helps explains why, as Weill Cornell clinical assistant professor of psychology in medicine Robert Allan, PhD, told a rapt audience at NewYork-Presbyterian Hospital/Weill Cornell in early April, a recent PubMed search of the terms "stress and cardiovascular disease" yielded more than 58,000 citations.

Allan's audience had gathered in the large, wood-paneled boardroom of the Whitney Pavilion for his lecture on the role stress, anger, and depression play in cardiovascular health. He was one of two guest speakers in that week's three-hour seminar, whose participants were learning how to teach others about heart disease prevention. These were not medical students, but eighteen pastors and health-ministry leaders from underserved congregations in Manhattan, Queens, Brooklyn, and Staten Island—the inaugural class of the HeartSmarts faith-based community outreach program, an initiative of the Ronald O. Perelman Heart Institute at NewYork-Presbyterian/Weill Cornell.

When the Perelman Heart Institute opened in 2009—funded by a $25 million gift to the hospital from Perelman, chairman of MacAndrews & Forbes Holdings Inc.—it united NewYork-Presbyterian/Weill Cornell's cardiovascular services under the leadership of Karl Krieger, MD, the Philip Geier Professor of Cardiothoracic Surgery, and Bruce Lerman, MD, the H. Altschul Professor of Medicine and chief of the Division of Cardiology. It was conceived as a "medical town square," notes O. Wayne Isom, MD, the Terry Allen Kramer Professor of Cardiothoracic Surgery and chairman of the Department of Cardiothoracic Surgery at NYP/Weill Cornell. Patients check in with a medical concierge in a soothing, light-filled, seven-story space, and the windows of their rooms look down onto the atrium's cream-colored travertine floor and its gardens of soaring

Holly S. Andersen, MD

bamboo trees. Families and friends await patients in a café area or the many intimately arranged sitting areas, in an atmosphere that bears no resemblance to a typical hospital waiting room and instead feels like the lobby of an elegant art museum. After one patient's procedure is complete, interventional cardiologist Geoffrey Bergman, MD, still in scrubs, greets three people having coffee at a sleek white table, and tells them that everything went well. Moments after he leaves, a nurse arrives to escort the family to the recovery room, like a gracious friend showing them around an unfamiliar guest house.

Cardiovascular disease is the leading cause of death in the United States and around the world—not only in urbanized, wealthy countries, but also in developing countries outside of sub-Saharan Africa. According to Arash Salemi, MD '97, assistant professor of cardiothoracic surgery, the creation of the Perelman Heart Institute was "a great way to bring together all the services we're providing in cardiovascular care. It's the central point from which we can organize and provide care to patients, and patients really appreciate that." The integration also helps in ways that laypeople may not realize, by allowing physicians, surgeons, and researchers to work more closely together. "We can take the science to the bedside," says cardiologist Holly S. Andersen, MD, clinical associate professor of medicine.

In addition to these benefits, a key mission of the Perelman Heart Institute is its focus on education and preventive care. In the atrium, while family members wait, they have access to an information center staffed by a nurse educator, with computer kiosks for research and an exhibit (modeled after one at the National Institutes of Health and written by Weill Cornell physicians) covering the history of and latest developments on heart disease. Andersen, who was named the Perelman Heart Institute's first director of education and outreach, emphasizes that early education is vital in the battle against heart disease. "We're really good at treating it, and we're pretty good at getting people to practice prevention and get them on medicines and doing the right things once they are diagnosed with heart disease," she says. As a result, overall death rates from the disease have decreased. "But when you look at our younger population—that's where we're losing the battle."

At the Ronald O. Perelman Heart Institute, educating the public involves a multi-pronged strategy that includes lectures, outreach to New York City elected officials and corporate leaders, and education campaigns for hospital employees. The Institute has mapped two "Perelman Miles," one indoors and one out, to help employees and guests get more exercise. Aiming to reach people in their teens and twenties, Andersen is now working with Julianne Imperato-McGinley, MD, the Abby Rockefeller Mauze Distinguished Professor of Endocrinology in Medicine and chief of the Division of Endocrinology, Diabetes, and Metabolism, to include cardiovascular disease prevention in a satellite outreach program that Imperato-McGinley runs for members of the National Guard, African American churches in underserved areas, and senior citizen centers. And this year, the Institute launched the Heart Smarts program, with the pilot group receiving external funding from the Fridolin Charitable Trust and IRB approval to investigate this "train-the-trainer" peer-educator model. "Pastors hold more authority in terms of behavior change than a doctor would," explains Naa-Solo Tettey, EdD, the Perelman Heart Institute's cardiovascular health education and community outreach coordinator. "Research has shown that having a pastor tell a congregation to eat better and exercise has more value."

After Tettey—one of the principal investigators of the study

The Perelman atrium features an education center (below left) and comfortable seating (above). Right: Naa-Solo Tettey, EdD, the Heart Institute's cardiovascular health education and community outreach coordinator.

"Perelman HeartSmarts: Utilizing a Faith-Based Approach to Improve Cardiovascular Health"—reached out to potential participants through the city's Office of Minority Health, a group representing some 200 churches attended the information session. For the pilot program, the Institute enrolled eighteen community leaders, some of whom represented congregations with as many as 1,000 members. For twelve Tuesdays this spring, they attended a three-hour seminar in the hospital's boardroom, taught by Tettey and featuring guest speakers. Using a curriculum adapted from the National Heart, Lung, and Blood Institute—plus passages from the Bible and faith-based discussion points—they covered nutrition, physical activity, diabetes management, and methods to mitigate stress and depression. "They are learning to eat healthy on the run or on a budget, learning to cook healthy foods when they're faced with different barriers," Tettey says.

Over the summer, the participants are using that curriculum to lead their own ten-week programs for members of their congregations, with Tettey on hand each week to guide them. The classes are being taped for quality assurance and data-gathering purposes. "Working with faith-based organizations is increasing in popularity," Tettey adds. "So observing how this information is received—when it's taught by a peer versus by someone they may see as more of an expert in the field—is good feedback for us." At the outset, participants had their blood pressure, waist circumference, and BMI recorded. They filled out questionnaires about depression, sleep, and overall knowledge about heart disease and prevention, and each was issued a pedometer or other exercise equipment, such as fitness training videos. Their outcomes will be measured at the end of the summer.

Paradigm Shift

With minimally invasive surgery for aortic stenosis, the Perelman Heart Institute offers hope for previously inoperable patients

For fifty years, cardiothoracic surgeons have been managing diseases of the aortic valve the same way: replacing the valve during open-heart surgery while the patient is on the heart-lung machine. "It's a well-refined procedure, and patients have fared very well through the years with that approach," says Arash Salemi, MD '97, assistant professor of cardiothoracic surgery. But the procedure can't help everyone, as many people are too sick to undergo open-heart surgery. "There's no medication, no exercise regimen, and no diet to treat aortic stenosis," he says, "so the intervention has to be surgical."

Arash Salemi, MD '97

In the last few years, a minimally invasive technique has arrived on the scene, offering what Salemi calls "an exceptionally good and viable alternative to patients who otherwise are left just counting their days." Called the Transcatheter Aortic-Valve Implantation (TAVI), the procedure either uses access points in the femoral vessels in the groin or takes a transapical approach that includes an eight-centimeter incision in the chest wall. The procedure obviates the need for a sternal incision and the cardiopulmonary bypass machine. Cardiothoracic surgeons and interventional cardiologists work together to thread a new valve, using catheters and wires, which is crimped around a balloon; once across the aortic annulus, they expand the balloon to put the valve in place.

To do so, some two dozen professionals work together in the hybrid operating rooms of the William Acquavella Heart Valve Center at NYP/Weill Cornell. Cardiology chief Bruce Lerman, MD, says that such a cooperative, cross-disciplinary approach is vital. "It's the only way you can do this effectively and well," says Lerman, the H. Altschul Professor of Medicine. Lerman explains that some patients' vessels are too small to allow the experimental device (known as the Edwards SAPIEN Transcatheter Heart Valve) to be inserted through the femoral artery, as is traditional in interventional cardiology; instead, a transapical approach is required, via an incision under the left nipple.

For Salemi, the procedure represents a paradigm shift in the treatment of aortic stenosis, and he is thrilled to be able to help a much wider range of patients. "It is rare in medicine," he says, "that you can be part of a transformational treatment strategy."

Nonsurgical treatments of the aortic valve began in the Eighties in France, but the idea didn't take off until the initiation of the transcatheter approach. As interventional cardiology technology—the catheters, wires, and stents—improved about a decade ago, the idea germinated to replace a valve within a stent similar to one used on the aorta or a coronary vessel. Salemi admits there was initial reluctance. "At this institution, we've had a 1 percent mortality for twenty years using the traditional method," he says, "so we were very skeptical about getting into this new technique, thinking 'how can you do better?' "

Three years ago, the hospital joined a multicenter trial, known as PARTNER, which randomly assigned high-risk patients to receive the TAVI procedure. Salemi and Shing-Chiu Wong, MD, professor of medicine and director of cardiac catheterization laboratories at NYP/Weill Cornell, have now done more than 150 cases, with a mortality rate of just 0.6 to 0.7 percent. "That's proof of concept—that this procedure is safe and it can stand to help a very sick group of patients," Salemi says. As the initial PARTNER study concluded with good outcomes, the FDA approved the procedure last fall. Salemi and Wong now have a new study under way to look at patients of intermediate risk.

Salemi notes that the procedure has shown a slightly higher risk of stroke. Unlike in standard surgery, when the heart is stopped and the calcified valve is cut away, in TAVI physicians expand the new valve with force against the annulus, which can result in embolism. Nationally in the trial, the rate for stroke has been about 3.5 to 4 percent at thirty days. "We're fortunate that, in our hands, the stroke risk is much lower, in line with the [less than 1 percent] stroke risk associated with standard open-heart surgery," Salemi says. "I believe that with further iterations of the device and technological developments such as cerebral vessel filters and smaller devices, outcomes will continue to improve and the stroke rate will decrease even further." As technology improves, he adds, the Perelman Heart Institute will be able to provide this type of care to more patients—not only for the aortic valve but for other heart valves as well.

Lerman notes that the SAPIEN valve made important progress this summer, when an FDA advisory board voted eleven to zero (with one abstention) that its use be expanded. The vote took the procedure, now an experimental protocol, one step closer to becoming a routine part of patient care. "It's not an automatic [FDA] approval," Lerman says, "but it is often a very strong indication."

For educated health-care consumers, the way to prevent heart disease—not smoking, eating well, exercising—is fairly well known. But the information isn't being widely disseminated, Andersen says. "There's little opportunity to broadcast to the community, in an informed way, what we know and translate it into good preventive medicine. So we're training these leaders to be our messengers." When Tettey speaks at outreach events, she's often struck by how much people appreciate the knowledge she shares. "It is actually new information for them," she says. "Some people are genuinely surprised to learn that you shouldn't deep-fry your vegetables."

But knowing what to do and actually implementing change are two different things. So Tettey teaches participants motivational interviewing techniques—for example, responding to someone who says there's no fresh fruit available near their home by asking, "Are you sure there is absolutely no place at all to buy a single banana or apple anywhere in your entire neighborhood?"

Coffee break: Visitors and staff alike enjoy the atrium's café.

"It has to be done in small steps," Tettey says, by setting realistic goals and adjusting them weekly based on people's current habits; someone who eats no vegetables at all might set a goal of adding just one serving a day. The next phase of the Institute's prevention program will take these educational practices to another group of city institutions with strong communal ties: beauty salons.

The importance of such outreach cannot be overstated. While the impression of heart disease as a man's problem—an incorrect notion partially caused by misinterpretation of initial results from the Framingham Heart Study—has begun to change over the last fifteen or so years, many people are still surprised to learn that heart disease kills more American women than all cancers combined. Death due to heart disease, an ailment that actually begins in the teens and twenties, is now rising in the youngest adults and increasing fastest in women—yet Andersen notes that two-thirds of women never hear about prevention. While men develop heart disease about a decade earlier than women, women catch up after menopause—though researchers still don't know why. Cardiologists see more female patients than males; women under fifty are twice as likely as men to die following a heart attack; and African American women are at higher risk than white women. "Women are more likely to die of heart disease once diagnosed, and they get treated less aggressively every point along the way," says Andersen. That's why education—not only for patients, their families, and the general public, but also for physicians—is so important. "Even women cardiologists don't treat women as aggressively as they treat men," she says.

One challenge is that the symptoms of heart disease in women are different than in men. Between 40 and 45 percent of women who have a heart attack experience no chest pains, yet the medical profession still considers chest pain the tell-tale sign of an attack; cardiac care clinics are even officially accredited as "chest pain centers." And for reasons not fully known—although anyone familiar with a busy working mother might venture a guess—many women don't take the symptoms as seriously as they should. A survey of the American Heart Association found that just 53 percent of women who think they're having a heart attack will call 911. "Which means," Andersen notes, "that 47 percent of women *who think they're having a heart attack* won't call." She's heard patients say they don't have time to have a heart attack. "Physicians are well meaning, but they'll treat black men more aggressively than white women and white women more aggressively than black women. There's a pecking order, and it translates into mortality rates."

Hence the need for another facet of the Perelman Heart Institute's educational mission: training future practitioners in a variety of specialties. For example, it teaches ob/gyn residents and fellows to include heart disease prevention in their patient conversations, since relatively common pregnancy complications like gestational diabetes and pre-eclampsia significantly increase the risk of future cardiovascular events. And with children developing diabetes at ever-greater rates, the Institute's physicians are educating pediatricians-in-training as well. Since one of every two Latinas born in the U.S. today will develop diabetes, Andersen says, it's a conversation that can't start early enough. "What we're starting to do, in a small way, is make it a responsibility of physicians and medical communities to take on the role of not just putting out fires and treating heart attacks, but to be responsible about working on prevention," she says. "As a medical community, we have all this information, but we're not getting it out there as well as we could." ●

Notebook

News of Medical College and Graduate School Alumni

PROVIDED

Michael Alexiades, MD '83

Dear fellow alumni:

Recently, I met with Dean Laurie Glimcher, MD, and found that her acclimation to Weill Cornell is commendable. She is eager to expand the research done here and to support the students and engage alumni in every possible way.

I am also pleased to report that she is most appreciative of the support expressed by alumni—both financially and by way of personal engagement with the institution and our medical students. She is well aware that, with such busy schedules, time is in short supply and is often our most precious resource.

In April, yet another group of alumni demonstrated their commitment to Weill Cornell by participating in the latest ASK (Alumni-to-Student Knowledge) session. This event, hosted by the Alumni Association, allows students to meet alumni in an informal setting and ask candid questions about life in their specialty. (See story, page 48.) We look forward to hosting more ASK sessions in the coming academic year. Should you have an interest in participating, please contact the alumni office.

Weill Cornell Medical College in Qatar's commencement celebration took place in early May, and thirty-two bright graduates joined the ranks of our Alumni Association. The board and I welcome them with open arms. Dean Glimcher and Cornell University President David Skorton, MD, were in attendance; Spencer Kubo, MD '80, who represented the Alumni Association, was impressed by the students' intelligence and enthusiasm. Most have matched in great residency programs here in the United States and eagerly look forward to this new challenge.

Your Alumni Association supported the International Fellows Reception, which was held in mid-May to recognize the 2012 fellows and the donors who make these opportunities possible. Later in the month, we honored Michael Gershon '58, MD '63, at the annual Alumni Awards Dinner. The Award of Distinction was formally presented at Commencement—when we saw the Class of 2012 receive their MDs in Carnegie Hall and become the newest members of the Alumni Association. In the Class of 2012, there were 100 matches to "top fifty" hospitals around the country. We are so proud of our students! This fall, the Medical College will welcome the Class of 2016 and the cycle will begin anew.

In June, the Alumni Association hosted an alumni and friends dinner in Chicago in conjunction with the annual meeting of the American Society of Clinical Oncology. We will be planning more of these regional events during the 2012–13 academic year, so be on the lookout for events in your region. Also in June, we hosted the annual Dean's Circle Dinner with Dr. Glimcher. This special event recognizes the Medical College's most generous alumni. It is never too late to join the Dean's Circle and help our students in need. Please contact the alumni office for further details.

Please make plans to attend Reunion, which is scheduled for October 19 and 20. Meet old friends and colleagues—and make new ones as you tour WCMC's facilities and hear from a fascinating group of Reunion speakers. You will receive further information in the weeks ahead.

Again, thank you for your continued support of the Alumni Association, the Medical College, and our students. Without you, Weill Cornell would not be the special place it is.

Best and warmest wishes,
Michael Alexiades, MD '83
President, WCMC Alumni Association
alexiadesm@hss.edu

1940s

Francis S. Greenspan '40, MD '43: "I retired as clinical professor of medicine, University of California, San Francisco, in July 2010, and my wife and I are now residing in a retirement center in Alameda, CA. I was chief of the thyroid clinic and active in practice and teaching for 60 years. My training at the Medical Center gave me an excellent basis for my life's work."

Charlotte, MD '45, and **David Brown, MD '45**: "We're retired and relatively robust at 92 and are enjoying the continuing rewards of our 60 years of active physician participation both in our community's affairs and in the lives of many of its people. We recognize that our education was basic to that success, but we would like our classmate marriage also to be seen as a great plus."

Edwin M. Knights, MD '48: "Ruth and I moved into Hunt Community's retirement facility in Nashua, NH, about nine months ago. We're satisfied with the Hunt and have made many friends here. We still have three condos in Boston and Nashua, but fortunately they are all leased. Our grandson, Dan, just received his PhD in computer sciences from the University of Colorado and will be moving back East next fall (with two kids and a dog) to Cambridge, where he has a postdoctoral position at Harvard. After he com-

pletes that, they will move to Minnesota, where he has a faculty appointment."

1950s

David Barr '47, MD '50: "I'm still retired, raising orchids, walking the dog, and going strong at 85."

Ames L. Filippone '50, MD '53: "Some recent activities that have helped keep me out of my wife's hair: I've been making architectural models from basswood and clay."

Bertram S. Brown, MD '56: "Joy and I are celebrating our 60th wedding anniversary this year. We have four daughters, four granddaughters, and one grandson—they're our prime accomplishment. For the past five years, we have spent six months in Key West and six months in Philadelphia. I am still a failure at retirement. After my career in the Public Health Service as director of NIMH, I went to the Rand Corp. and started my second career in anti-terrorism. Five years of training as the president of Hahnemann University equipped me to found the National Security Health Policy Center at the Potomac Institute. From 1990 to 2005, I worked for the Pentagon in quality assurance for military health care. I'd be happy to hear from any of my classmates."

Albert Z. Kapikian, MD '56, was one of 80 microbiologists elected to fellowship in the American Academy of Microbiology. Dr. Kapikian researches epidemiologic infectious diseases with special emphasis on viral gastroenteritis and vaccine development.

Donald P. Goldstein, MD '57: "I am still gainfully employed as a gynecologic oncologist at Brigham and Women's Hospital, where I was recently honored for 53 years of continuous service, first as a resident in ob/gyn and now as an attending. During that time I've devoted most of my clinical and research activities to the New England Trophoblastic Disease Center, which treats patients with molar pregnancy and gestational trophoblastic disease. I founded the center in 1965 after returning from a clinical fellowship at the National Cancer Institute. Although I no longer perform surgery, I see consults at the Dana Farber Cancer Institute and at Brigham and Women's, and I am active in the Pre-Invasive Tumor Service. Connie and I are active with the Boston Early Music Festival, which produces Baroque operas here and in Europe and sponsors performances of early music groups in the Boston area. We enjoy visiting and sharing the lives of our three children and six grandchildren, three of whom are now in college. We are looking forward to attending my 55th Reunion in October. After reading a list of all the WCMC Class of 2011 graduates who matched in New England, I thought it would be fun to get the Boston contingent together for a mini-reunion. Four of the ten were able to join Connie and me for drinks and dinner at the Harvard Club on March 16. Those who attended were **Will Gordon '05, MD '11**, **Bracken Babula, MD '11**, **Jonathan Robbins, MD '11**, and **Aaron Goldberg, MD '11**. If you continue to notify me of each year's graduates who are training in Boston, I will plan to sponsor a mini-reunion annually."

WCMC FLICKR.COM

A good start: The New York Commencement ceremony included grads from the Qatar campus.

Bernie Siegel, MD '57: "I find it disturbing that no medical student is ever told that Carl Jung interpreted a dream and correctly diagnosed a brain tumor. It had to do with the flow of milky fluid from a pond being obstructed, and he diagnosed a tumor in the area of mammary bodies obstructing the flow of cerebrospinal fluid. He was also fascinated by the somatic aspects of patients' drawings."

Howard R. Francis, MD '58: "After graduating from and taking residency at LDS Hospital in Salt Lake City, I was in a private ob/gyn practice in Provo, UT, for 30 years. After retiring from private practice, I served as the medical director for the missionary training center for our church. I served in the Army and retired as a major. My wife, Deanne, and I have been married for 52 years and have six children, 29 grandchildren, and two great-grandchildren. We have owned three ranches in the past, and I am currently involved in the day-to-day operation of a ranch in Ely, NV, where we raise 800 cows with calves, and 6,000 sheep with lambs. Instead of delivering babies, I am now delivering calves and lambs. There is definitely less liability involved, but no less night call."

Ann Huston Kazarian, MD '58: "I've moved again. I'm (happily) back in Connecticut, this time in Southington, about 20 miles from where we lived and worked for decades before a brief sojourn in Texas following family. I retired from my practice of psychiatry in the Greater Hartford community at the end of 2004 before the move south. My mobility is a bit sketchy, thanks to MRSA discitis as a complication of surgery in Texas in 2007, but otherwise I am doing well and happy to be back here."

George Shambaugh III, MD '58: "My life is currently occupied with three different endeavors. The first is continuing with teaching fellows and residents in the general endocrine clinic at Emory University's teaching charity hospital. I relive my medical school experiences weekly, and it's as if I never really left. I try to keep up with some of the literature, but no longer do research. The second is learning to play bluegrass three-finger style on a five-string banjo. It takes coordination between right and left hands, one's eyes to read the music, and one's ears to hear. This takes time and constant practice. I like to think it helps new areas of synaptic development, but after a particularly trying week I really don't know. The third is owning a farm of 14 acres of tart cherry trees in Northern Michigan. The worn-out soil has been rehabilitated and my trees are into their fifth year. In a couple of years, they will be ready for their first harvest. Here in Atlanta we live in a large house and would welcome any of you to stay with us. I look forward to our 55th in 2014. Fond regards to everyone."

1960s

William Winn, MD '61: "I'm still in active private medical practice here in Visalia, CA. I'm phasing out of the active practice of pulmonary medicine over the next year, but will still be doing some sleep disorder medicine after that. I've noticed that years of experience are definitely worth something at this stage of the game.

AMELIA PANICO

Red and ready: Graduates in Carnegie Hall during the ceremony

I have many good memories of helping a people manage their chronic illnesses and even get better sometimes. It's to the Medical College's credit that we were always told that we would need to learn new medical things as time went by.

I first heard of sleep apnea in 1969, well through my residency and fellowship training. Now it's considered a significant clinical problem for about 4 percent of our middle-aged and elder population, and I spend a good deal of my time caring for patients with sleep disorders. I'm a CPAP user myself, as are a number of other physicians in this medical community.

Tulare County, where I live, is famous for having more cows than people (about 350,000 to 320,000 currently). We are the number two county in the US for dollar value of agricultural production. Our hospital in Visalia is an inner-city hospital in a rural setting, as 25 percent of our population has no medical insurance. Our first residency programs (under the auspices of UC Irvine) will begin next year. San Joaquin Valley Fever is still with us, but as far as I know the first case of human tularemia remains to be diagnosed here in the county where that disease was first described in the early twentieth century.

It has mostly been a lot of fun to work here and see what a community that cares about its health care is able to accomplish. We have seen a lot of changes in medicine since 1961—most of them good. But we do seem to be pricing ourselves and our patients out of the marketplace. Access to diagnosis and treatment is not all that it should be. Also, the breakdown of "continuity of care" (which we learned about from Dr. Reader in our fourth year Comprehensive Care rotation) seems to have become the rule rather than the exception.

Our class has been out in the real world for more than 50 years now, and we have pretty much passed the baton to our younger colleagues. They deal with the problems of their patients (who are increasingly likely to be us) and the health-care system itself just as we once did. The medical systems issues seem to be more numerous and harder to deal with than they once were. We can only hope that most patients will be at least as well cared for in the future as they are now. Will our recent Weill Cornell graduates be able to enjoy the practice of medicine as much as most of us once did? We can certainly hope and pray that this will be the case. Medicine was never supposed to be easy, and as always, those who follow us are not only younger and stronger, but they may be better at balancing their priorities. Wouldn't it be fascinating to hear what they will have to say about all of this in 2061?"

William Chaffee, MD '62: "I've been retired for 12 years, but I can't say I miss practice with what is happening to medical care in our country. Grace and I are looking forward to my 50th, and we hope to see many friends in October."

Barry D. Smith, MD '62: "I retired from being the long-term chair of the ob/gyn department at Dartmouth Medical School at the end of 2004, but I returned to work six months later after my wife died. I worked half time doing patient safety, quality improvement, and risk management for a project that extended from a planned two years into six years. Since my second retirement in June 2011, I've remained medically busy on several regional and national committees while also doing some teaching at Dartmouth Medical School. I'm fortunate to be able to still ski, play tennis, golf, and travel. Recently I spoke at an ACOG meeting in San Diego and then attended my son's wedding just up the road in Del Mar. It was wonderful that my daughter and her children were able to travel from Germany to join us in the celebration."

Donald Catino, MD '64: "I'm continuing my globetrotting locum tenens medical adventures again in New Zealand. I've been working in Southland at the Invercargill district hospital. Nationalized health care is alive and pretty well here, though I'm sure it would not do as well in America. What makes it work here is that there are only 3 million Kiwis, they do not feel entitled, nor are they litigious, and they are patient and willing to wait for their non-urgent care. So, the medical experience has been very positive, and the travel throughout the South Island amazing—by foot ('tramping'), horseback, kayak, and whitewater raft."

Gus Kappler '61, MD '65: "I'm in my 13th year of retirement from a general and vascular surgery practice in Amsterdam, NY. The first few years allowed me to commit

We want to hear from you!

Keep in touch with your classmates.

Send your news to Chris Furst:
cf33@cornell.edu
or by mail:
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my full efforts to helping my wife, Robin, and daughter, Kim, deal with life-altering events. God works in mysterious ways. Robin and I spend our winters on East 65th Street in the City. She suggested I become involved at Weill Cornell. I responded, 'Not a chance, I'm not an academician.' Well, Dr. Alonso, who was dean of academic affairs, invited me to become a facilitator in Problem Based Learning: Human Structure and Function. I've volunteered in that capacity for 13 years as a way of giving back to the Medical College. I believe it an honor being involved in the development of new physicians of Weill Cornell's caliber. I've even received the Excellence in Teaching Award. Lecturing in the third-year surgery rotation on the acute abdomen is also a thrill, for I visit with the students that I facilitated in their first year. The annual lecture on my trauma surgical experience at the 85th Evacuation Hospital in Phu Bai, Vietnam, follows our study of hemorrhagic shock.

Life in Amsterdam is somewhat redneck-ish, with lots of shooting sports, hunting, four-wheeling, kayaking, planting food plots to attract deer, hiking, and scouting the game around my farm in Montgomery County and at Ohmer Mtn. Club's 15,000-acre hunting camp in the Adirondacks. So far the turkeys are winning.

Daughter Kim Kappler Fine's son, Declan,14, shot his first buck at Ohmer last fall and my son's three daughters enjoy equitation lessons in the area. They all enjoy our land and the pool, and it's quiet. Last September Robin and I visited the Normandy Coast, a really moving experience, having served in Vietnam. See Saving Private Ryan to experience the bloody reality of a beach invasion. Bayeux is a beautiful jumping off point to Omaha Beach, Utah Beach, Colleville, as well as Honfleur and Deauville. After a few days in Paris, we cruised the Soane and Rhone from Beaune to Avignon with a bus trip to Nimes and along the Cote d'Azur to Monaco. This September is the 42nd-year reunion of the 85th Evacuation Hospital in Las Vegas. We all share loving but brutal memories."

Jackie Parthemore, MD '66: "My husband, **Alan Blank '59** (CUMC ob/gyn resident 1967–72), and I enjoyed visiting the ruins of many ancient cities while traveling through western Turkey last fall. We now have four grandkids, from 1 to 6 years of age, and are very fortunate that their parents decided to settle in the San Diego area. At this year's American College of Physicians meeting, I was inducted as a Master of the College. I am planning to attend my 45th Reunion in October."

Charles H. Hennekens, MD '67, the first Sir Richard Doll Research Professor in the Charles E. Schmidt College of Medicine at Florida Atlantic University, has been ranked number 81 by ScienceHeroes.com for saving more than 1 million lives. He was ranked behind Edward Jenner (5), who developed the smallpox vaccine, but ahead of Jonas Salk (83), who developed the polio vaccine. Dr. Hennekens played seminal roles in the discovery of the net benefits of aspirin in the primary prevention of a first myocardial infarction, first stroke, premature death in the treatment of acute MI, as well as in secondary prevention in a wide range of over 170,000 male and female survivors of occlusive cardiovascular disease events. He has done research on statins, angiotensin converting enzyme inhibitors, and receptor blockers, as well as beta-blockers. Dr. Hennekens says his chief motivation was the premature and sudden cardiac death of his father.

Ronald Rankin, MD '68: "I'm working for my old group in a satellite hospital in Idaho and also for St. Peter's Hospital in Helena, MT. I recently visited **Paul Wasserman, MD '69**, former roommate and now oncologist, at his gorgeous home in Scottsdale, AZ. What would I rather be doing? Literally selling the ranch and moving to our lake house in Coeur d'Alene, ID. The things I remember most are how engaged the supremely talented faculty was; also, learning sterile technique from a scrub nurse on surgical rotation. (I think of her nearly each time I glove up for a procedure.) I'd like to hear from **Robert Koehler, MD '68**, retired chairman of radiology at the University of Southern Alabama, and best man at my wedding."

Reed Dunnick, MD '69, received the Gold Medal from the Association of University Radiologists this past April.

John Hirshfeld '65, MD '69: "I'm working at Penn Med at an 80 percent workload, a terrific balance that has enabled me to continue to do all the things I like to do, including diagnostic and coronary interventional procedures, attending in the CCU, teaching the cardiovascular course, and serving on the FDA Circulatory Systems Advisory Panel (where I see **Jeff Borer, MD '69**, from time to time). The reduction to 80 percent has given Barbara and me more time to do things together. We recently saw **Jim Foster, MD '69**, and his wife, Elaine, during a stopover at their home in Chapel Hill, and I've had the pleasure of dropping in on **Bill Davidson, MD '69**, and his wife, Carolyn, when in San Diego for a meeting. I have no current plans to retire or slow down further."

1970s

Ronald K. Harris, MD '71: "I've been in general surgical practice for almost 34 years. My wife, Helen, and I have been married 44 years. Daughter Kimberly Harris Greiner '00 is a University of Pennsylvania veterinarian; daughter Skye Harris Hawk is an ICU coordinator; son Jonathan is an event coordinator."

Richard Lynn, MD '71: "First I want to thank **Frank Bia, MD '71**, for helping me with the plans for the 40th Reunion. I'm overjoyed by the response. As of June 1, here is the list of those who have responded: Frank and **Peggy Bia, MD '72**, **Lou Rambler, MD '71**, **Charlie Rance, MD '71**, **Eric Gutnick, MD '71**, **Arnie Cohen, MD '71**, **Ken Schwartz, MD '71**, **Henry Pitt '67, MD '71**, **Steve Rosenblatt, MD '71**, **Theo Manshreck, MD '71**, **Fred Chu, MD '71**, **Peter Robinson '68, MD '72**, **John Perlmutter, MD '71**, **Ron Harris, MD '71**, and **Bob Laureno, MD '71**. **Peter Monoson, MD '71**, may be coming. **Ivan Login, MD '71**, sends his regrets, as does **Nancy Ronsheim '64, MD '71**. Unfortunately our classmate **Angel Olazabal, MD '71**, in Puerto Rico, will be unable to come. His wife called me to tell me that last year he was diagnosed with a glioblastoma and has had radiation and now chemo and has had to close his practice. I told her our prayers are with them. If ever there was a reason to smell the roses, now—after this sad news—is the time for those who have not made plans to please do so and get in touch with me. A private class dinner is being planned for Friday evening. On a personal note, my youngest son, Peter, 34, who is an Orthodox rabbi and dean of students at a yeshiva in Jerusalem, just received a master's degree from the University of Pennsylvania in applied positive psychology. He flew in once a month (ten times) from Israel to Philly to accomplish this. Needless to say, I am very proud. I hope to see you in October."

Neil MacIntyre, MD '72: "I'm entering my 32nd year on the Duke faculty, currently a full professor in pulmonary/critical medicine. It has been a wonderful career and I've had the opportunity to visit many parts of the world. Susie and I have raised six children, with three of them going into

medicine, two in finance, and one who flies planes for NOAA. We also have three grandkids and look forward to more. Hope to see as many classmates as possible at the reunion."

Mike Anger, MD '75: "My big news is I have decided to retire from active practice as of August 15. I have lots of ideas about how to fill the time: more songwriting; playing music with my brother, Jim; sailing; and I might see if I can still manage some downhill skiing. I hear lift tickets are sometimes free for us old guys. I may also have a volunteer teaching gig at Children's Memorial Hospital, which is moving soon to a new building close by in downtown Chicago. Best to all my classmates."

Milagros Gonzalez, MD '75: "I'm doing well at Providence Pediatrics in Phoenix, Arizona. My husband, Keith Bracht, and I are awaiting with great anticipation our upcoming cruise to the Panama Canal in October of this year. Hello to everyone."

Carlyle H. Miller, MD '75: "I'm the associate dean for student affairs and equal opportunity programs at Weill Cornell, and I've been promoted to associate professor of medicine as of July 1, 2012."

Greg Everson, MD '76, just completed a new book for patients and families, *Curing Hepatitis C*, and is professor of medicine and director of hepatology at the University of Colorado, Denver (visit HepQuant.com). His wife, Linda, has a fine arts career producing abstractions of nature and images from the Southwest and other places (visit lindaeverson.com). Son Brad is working in Denver, started CNOME.LLC, and is a long-distance runner. Son Todd is getting his PhD in epidemiology at the University of South Carolina and is a shark fisherman.

Richard S. Nenoff '72, MD '76, was inducted as a fellow in the American College of Radiology (ACR) at the annual meeting in Washington, DC, in April. Dr. Nenoff is the medical director of the Breast Imaging Center at X-ray Associates of New Mexico. He is a member of the ACR, the Radiological Society of North America, the American Roentgen Ray Society, and the Greater Albuquerque Medical Association.

Leon Fay, MD '77: "I retired from family medicine practice in June 2011, with the last 15 years being the best, at a community health center in Lawrence, MA. I have done a lot of global health in Latin America and Eastern Europe. I try to keep up with medicine and am teaching in first-year courses at the Tufts University School of Medicine in Boston. My wife, Francesca, who I met when she was on the faculty of the Cornell-New York Hospital School of Nursing, and I have been married for 34 years, live in New Hampshire, and have two sons who are doing well in their chosen fields. Retirement is definitely a work in progress."

Steve Koenig, MD '77: "Just a note to let you know that I recently got together with classmates **Kurt Oesterling, MD '77**, and **Mark Kris, MD '77**, while Mark was lecturing in Milwaukee. Both look great and have changed little since medical school. In fact, Mark was about to compete in a triathlon in NYC. On the home front, the honeybees are active and the buds have broken at River Road Vineyards, my latest horticultural project. Academic cornea continues to be fun."

Thomas Kosten, MD '77: "I'm living in Houston, TX, after spending 28 years at Yale in psychiatry, including chief of psychiatry for four years. Now I'm at MD Anderson Cancer Prevention Center and Baylor College of Medicine, where I have had various positions over the past six years including vice president for clinical research. In my laboratory, I've been developing vaccines for addictions and studying the pharmacogenetics of addiction treatments. I also established a new Institute for Translational Research at Texas Medical Center and direct the adult components with a co-director for pediatrics. Publications seem to help with keeping funding, and last year I passed the 500 mark of papers with the help of my laboratory in Beijing, China, at Peking University, where I maintain my Distinguished Professorship in Psychiatry and Addictions. Great opportunities in China just seem to keep accelerating, and I may need to move there before I retire. I'm doing a few other things at the Institute of Medicine of NAS with what seems monthly trips to Washington, DC. I rarely make it back to NYC, but hope everything is going well there. My wife of almost 40 years continues to happily conduct her research at Baylor, my daughter is getting married, and my son is considering where he wants to go to college here in Texas."

1980s

Carolyn Heywood Grosvenor, MD '80: "My husband, Wayne, took early retirement last year and is currently pursuing his music interests (acoustic bass/jazz). I work part-time for the VA in Albany, NY (primary care), teach at UAlbany School of Public Health, and serve on the faculty of the NYS Preventive Medicine Residency program. I also work in public health outreach and education at a local rescue mission. But the most exciting update is that in May I went to Honduras on my first medical missions trip. I recently received the University at Albany Alumni Association's 2012 Excellence in Community Service Award. (I received my MPH from UAlbany when I completed a residency in preventive medicine in 2006.) Here is a link to my profile: http://www.albany.edu/alumni/excellenceawards.php#Grosvenor."

Mark Landon, MD '80, is professor and chairman of obstetrics and gynecology at Ohio State University College of Medicine. He works closely with **Steven Gabbe, MD '69**, who is senior vice president of Health Sciences for Ohio State and CEO of its Wexner Medical Center. Mark writes: "I have been in Columbus for 25 years and, despite my New York roots, I consider myself a Buckeye, especially on Saturday afternoons in the fall. I recently met **Peri Petras, MD '80**, and **Jeff Kocher '76, MD '84**, for dinner in New York. We continue to share so many wonderful medical school memories."

Robert Naparstek, MD '80: "I have moved to Providence, RI, with my wife, Lisa. Our kids, ages 21 and 23, are doing well. All in all, we are pretty fortunate and blessed."

Douglas F. Buxton, MD '82: "I'm preparing for my third annual two-week surgical mission to Zimba, Zambia, at the eye clinic, where we perform more than 200 surgical procedures and see more than 700 patients in an underserved area of southern Africa. We see patients from as far afield as Tanzania and Angola. This has been the most rewarding work I have ever done, though physically and often emotionally exhausting. I urge all my classmates from Cornell to become involved and give back in any and all ways they deem appropriate. We can change the world's health and consciousness one patient at a time. *Un abrazo*."

Jonathan Javitt, MD '82: "I'm the CEO and founder of Telcare Inc. We're building the world's first commercial enterprise to focus on connecting patients to their caregivers via wireless medical devices. Our first product is a cellular-enabled glucose meter that has already shown a 10 percent improvement in glucose control among kids with type 1 diabetes. All of this started when I got commissioned by President Bush to lead the President's Information Technology Advisory Committee. The policy we wrote

was the basis for creating ONC and the High Tech Act. The problem is that we got nowhere when we talked about connecting patients to the system. Telcare is the first demonstration of what's possible when you do that. The testimonials on our website from patients and their parents say it all. Starting Telcare has been the most all-consuming fun I've ever had."

Evelyn Placek, MD '82: "I'm an alumna of the Weill Cornell dermatology program (1988), and I've been in a group dermatology practice in Scarsdale, NY, for the past 24 years. I am very happily remarried for the past ten years to Gary Horowitz. Daughter Kerri is currently applying to school (hoping to go to Cornell), and son Ryan is just back from an incredible semester abroad in Valencia, Spain. Friends have drifted away over the years, but I'm still in touch with **Shelley Lanzkowksy Bienstock, MD '82**, who is a pediatrician in Morristown, NJ."

Bruce Reidenberg '81, MD '85: "I'm now doing house calls at the homes of adults with developmental disabilities and consulting with the NYC Dept of Education on various issues with special needs children. My wife, **Joy Gaylinn Reidenberg '83**, still loves gross anatomy and continues to teach anatomy at Mt Sinai. We have two wonderful graduations this year, one from Muhlenberg College and one from Rye High School. In the fall, we start empty nesting."

Stephen P. England, MD '86: "I'm living in Minneapolis, MN, and married to Suzanne Paki with one daughter, Olivia, 10. I'm a pediatric orthopaedic surgeon at Park Nicollet Health System and Tria Orthopaedic Medical Center in the Twin Cities."

B. Sonny Bal, MD '87: "Since graduating from Weill Cornell, I've earned my law degree and have a law firm in North Carolina. I also have my MBA from Kellogg. I work full time at the University of Missouri, with service on several corporate boards, and am a law partner in an orthopaedic niche law firm."

Carol McIntosh '83, MD '87: "I, as the gynecologist, along with several other physicians (a breast surgeon, family practitioner, and anesthesiologist) traveled to Mercy Hospital in Bo, Sierra Leone, with the intent of providing breast cancer screening and treatment, cervical cancer screening and treatment, prenatal care, and training of the medical staff. Our goal is to pilot a cervical and breast cancer screening and typing methods appropriate for a low-resource setting. All women with identified lesions would receive treatment. Our objectives are to establish a collaborative telemedicine consultation program between Mercy Hospital and US-based clinicians after initial cancer screening is performed together; to describe a sampling of cervical and breast disease seen in the selected population; and to identify potential areas of future cervical and breast cancer research for further discussion with Sierra Leonean researchers." Thanks to a grant from Helping Children Worldwide, Mercy Hospital opened its doors in 2007; today it cares for 10,000 patients a year, regardless of their ability to pay.

PANICO

Pomp and Circumstance: Dignitaries on the Carnegie Hall stage

Alexander Babich, MD '88: "I am about to become an empty nester (a poorer empty nester, as two private-college tuitions await next fall). My older son will be a senior at Oberlin College majoring in history and creative writing, while the younger will enroll at Stanford to study (we think) political science. I enjoyed a recent Brooklyn Technical High School reunion and hope that our 25th Reunion next year will be as much fun. My pathology practice group has added two bright new faces whose youth and enthusiasm is very refreshing. Is this how others saw us 25 years ago?"

Linda Sanderson LaTrenta, MD '89: "I am happily working as a radiologist at Greenwich Hospital. My two kids, Lucas, 12, and Alexandra, 10, are thriving in the 'burbs. I am getting married in Hawaii in August. I couldn't be happier."

1990s

Daniel B. Jones '86, MD '90: "I was promoted to professor of surgery at Harvard Medical School and vice chairman, Beth Israel Deaconess Medical Center. I'm the co-chair of the ACS-ASE Skills-Based National Simulation Curriculum for Medical Schools Years 1–3. I chaired the Quality, Outcomes, and Safety Committee, Fundamental Use of Surgical Energy (FUSE) Task Force, Educational Resources Committee. I edited several new books released this year including *SAGES Manual for FUSE*; *SAGES Manual for Quality, Outcomes, and Safety*; *Mastery of Surgery*; *Hernia Surgery*; and *The Textbook of Simulation: Skills and Team Training*. My Boston neighbor raves about his Hospital for Special Surgery orthopaedic surgeon, classmate **Rob Rozbruck, MD '90**."

Evan Goldfischer, MD '92, is co-CEO and founder of Premier Medical Group of the Hudson Valley, a 22-physician group of urologists and gastroenterologists that serves the mid-Hudson Valley region. He is also the founder of Premier Cares Foundation, a 501(c)(3) charity that provides funding for underserved patients with urologic and digestive diseases.

Roderick K. King, MD '92, was recently appointed deputy director of the Florida Public Health Institute (FPHI). Dr. King's training includes a BS in biomedical engineering from Johns Hopkins, an MD from

Weill Cornell Medical College, where he earned the Honors in Research Award as an NIH Young Investigator, and an MPH from Harvard School of Public Health. He is currently the president of Next Generation Consulting Group, an organization that uses strategic planning, leadership, organizational development, and evaluation to build healthy communities. In addition, Dr. King serves on the faculty of the Department of Global Health and Social Medicine at Harvard Medical School and senior faculty at the Massachusetts General Hospital Disparities Solutions Center, and is a former director of the Program on Cultural Competence in Research in Harvard Clinical Translational Science Center (Harvard Catalyst). He most recently served as the director for the Health Resources and Services Administration (HRSA), New England Regional Division, and as a Commander in the US Public Health Service. In 2011, Dr. King was selected as one of 20 scholars in the Western Hemisphere for the new Fulbright Regional Network for Applied Research (NEXUS) Program to engage in collaborative thinking, analysis, and problem-solving with a focus on improving the quality of life for communities in the region. His Fulbright project focused on "Leadership Innovation for Collective Impact to Address the Chronic Disease Epidemic in the Caribbean." He currently serves on the US Department of Health and Human Services Advisory Committee on Minority Health.

Thomas Ullman, MD '92: "I live in Chappaqua, NY, with my wife, Nona (Cornell ILR class of 1988), and my three daughters. I've stayed at Mount Sinai since completing my GI training and am currently the director of the IBD Center and medical director for the faculty practice for the Department of Medicine. Sadly, I don't get to see my classmates nearly enough, but I have nothing but the best memories of our four years together."

Jeff Kauffman, MD '93: "I'm an orthopaedic surgeon. After having a busy sports medicine practice in Sacramento for ten years, last year I moved back to New York with my wife and daughter (Uschi and Heidi). I joined Orthopedic Associates of Dutchess County and live in Cold Spring, NY."

Seth Leopold, MD '93, was named editor-in-chief of *Clinical Orthopaedics and Related Research*, a leading international peer-reviewed orthopaedic journal published continuously since 1953. Dr. Leopold is a professor of orthopaedic surgery at the University of Washington School of Medicine. He served as chief of the Orthopaedic Surgery Service at the University of Washington Medical Center and vice chair of the department.

> 'I was awarded my aviation wings and flight surgeon rating this past month. This lateral move will permit me to serve the nation while taking care of its citizens.'
>
> **Eric C. Burdge, MD '98**

Eric C. Burdge, MD '98: "Here is what I have been up to this past year: 'In-theater medical treatment keeps warriors in the fight.' You can read about my recent deployment at the following link: http://www.af.mil/news/story.asp?id=123212620. That work earned me the USAF Achievement Medal. It has been an honor and my pleasure to serve not only this great nation but also the wounded warriors giving their all to defend freedoms enjoyed by the citizens of our country. I also wanted to give you an update on my professional life and share some wonderful news. The match results for the Surgical Oncology Breast Fellowship have been posted, and I have been matched with V. Suzanne Klimberg, MD, Program Director, Winthrop P. Rockefeller Cancer Institute, University of Arkansas. I am blessed to have been matched in such a prestigious program. I will be training with Dr. Klimberg, who is one of the top three breast surgeons in the world. She writes the textbooks for breast surgery. The fellowship is in Little Rock, AR (University of Arkansas for the Medical Sciences), so that will certainly be a big change. With these results in hand, I will now separate from active-duty Air Force at the end of June and transition to the 189th Airlift Wing of the Arkansas Air National Guard and function as their flight surgeon. I was awarded my aviation wings and flight surgeon rating just this past month. This lateral move will permit me to serve the nation while taking care of its citizens, especially those afflicted with breast cancer. My family is growing and maturing by leaps and bounds. I have been blessed with three daughters (ages 2, 5, and 7) who are in gifted educational programs. I also enjoy the companionship and partnership of my lovely wife, Tally. Without her selfless efforts, I could not serve my country in the deployed environment. She truly is the proverbial 'unsung hero' (or heroine in her case). I have never heard her complain once about having to do my job and hers while I have been deployed for six months or more. Lastly, thank you, Weill Cornell, for giving me the proper tools to serve not only this nation, and my patients, but also wounded warriors and third-world nationals."

2000s

Tina Marie Meyer Mayer '99, MD '03: "I am living in New Jersey and working as an academic medical oncologist at Cancer Institute of New Jersey, with a focus on GU malignancies and primary brain tumors. I enjoy my career path and the challenges of practicing oncology. I have a 3-year-old son and a 2-year-old daughter who definitely keep me on my toes!"

Cara Grimes, MD '05: "This year has been a big one for me. I will finish my fellowship in female pelvic medicine and reconstructive surgery at UC San Diego in June. In August I will join the Gynecological Surgical Services Division of Ob/Gyn at Columbia Medical Center. I'm excited to be returning to New York City with my husband, Justin Marquis, and son, Wyatt George Grimes Marquis."

Kate Lampen-Sachar, MD '07: "I'm finishing my radiology residency at NYP/Weill Cornell and starting a fellowship at Memorial Sloan-Kettering in breast and body imaging. I have fraternal twin daughters, Sophia and Isabelle, who are 20 months old. Hope that everyone is doing well. My e-mail is Kate.Lampensachar @ gmail.com."

Jennifer Inra, MD '08: "I married Dr. Paul Gordon on September 24, 2011, at Blue Hill at Stone Barns in New York. We met during residency at Massachusetts General Hospital in Boston. We were so lucky to celebrate our wedding with so many WCMC friends. Currently, I'm finishing my first year of gastroenterology fellowship at Brigham and Women's Hospital in Boston."

In Memoriam

'40, '43 MD—Harold C. Miles of Naples, FL, February 29, 2012; staff psychiatrist, Community Mental Health Center; clinical associate professor of psychiatry, University of Rochester; director of Community Health Services of Monroe County; commissioner of health, Cattaraugus County; fellow in psychiatry, Milbank Memorial Fund; medical officer, US Army. Sigma Pi.

'40, '43 MD—James N. Trousdell of Oyster Bay, NY, January 9, 2012; physician. Beta Theta Pi.

'45 MD—George E. Eddins of Albemarle, NC, April 4, 2012; physician; helped establish coronary care unit at Stanly County Hospital; veteran; active in community, professional, religious, and alumni affairs.

'42, '45 MD—Jay F. Harris of Albuquerque, NM, October 8, 2011; physician; medical consultant.

'46 MD—John J. Bowe of Ridgewood, NJ, March 23, 2012; plastic and reconstructive surgeon; director of plastic surgery, Valley Hospital and St. Joseph's Hospital; lepidopterist; research associate, Florida State Collection of Arthropods; veteran; artist; active in community and professional affairs.

'47, '51 MD—James D. Allan of West Springfield, MA, April 11, 2012; general surgeon, Providence Hospital; also practiced at Noble Hospital, Springfield Hospital, and Baystate Medical Center; veteran; director, Chamber of Commerce; active in community affairs. Tau Kappa Epsilon.

'43, '51 MD—Henry L. Hood of River Woods, NH, February 18, 2012; neurosurgeon; director of neurosurgery and president of Geisinger Medical Center; CEO, Geisinger Health System Foundation; veteran; active in professional affairs. Acacia.

'49, '53 MD—Peter D. Guggenheim of Warwick, NY, March 5, 2012; psychiatrist; associate clinical professor of psychiatry and co-founder of the Forensic Fellowship program, New York University; veteran; collector of Renaissance bronzes and clocks; equestrian. Sigma Alpha Mu.

'56 MD—John H. Prunier of Riverside, CT, February 7, 2012; specialist in internal medicine; genetics researcher, Rockefeller University; veteran; active in alumni affairs. Psi Upsilon.

'59 PhD—June Lee Biedler of Greenwich, CT, April 16, 2012; Distinguished Cell Biology Cancer Research Scientist, Memorial Sloan-Kettering Cancer Center; professor of medical sciences, Weill Cornell Graduate School of Medical Sciences; associate editor, *Cancer Research*; recipient, G. H. A. Clewes Memorial Award for research in combination therapies; lifetime member, In Vitro Biology; author.

'55, '59 MD—Alfred J. Felice of Sands Point, NY, May 25, 2012; obstetrician/gynecologist. Beta Sigma Rho.

'60 MD—George V. Burkholder of San Antonio, TX, April 15, 2012; urologist; founding partner, Urology Clinic of San Antonio; assistant chief of urology, Brooke Army Medical Center; chief of staff, Southwest Texas Methodist Hospital; teaching staff member, Cleveland Clinic; also worked in pediatric urology at Great Ormond Street Hospital; veteran; sculptor in bronze; painter; active in community, professional, and religious affairs.

'60 MD—John P. Hayslett of Hamden, CT, April 15, 2012; professor of medicine and chief of nephrology, Yale School of Medicine; medical director, Physician Associate Program at Yale; practiced at Yale-New Haven Hospital and Veterans Administration Medical Center; clinical and laboratory researcher; veteran; sailor; active in community and professional affairs.

'56, '60 MD—Robert K. Heineman Jr. of Delmar, NY, April 15, 2012; orthopaedic surgeon; specialist in total hip and knee replacement; team physician, Albany Metro Mallers; adjunct instructor, Dept. of Physical Therapy, Russell Sage College; expert witness; veteran; photographer; active in community and professional affairs. Delta Chi.

'63 MD—Terrence J. Barry of Miami, FL, formerly of Lindon, UT, May 1, 2012; orthopaedic surgeon; specialist in arthroscopic knee surgery; airline pilot, TWA; Air Force fighter pilot; LDS bishop, stake president, mission president, and patriarch.

'68 MD—George Cooper IV of Charleston, SC, April 28, 2012; director, Gazes Cardiac Research Institute, Medical University of South Carolina; chief of cardiology, Veterans Administration Medical Center in Charleston; expert in heart physiology and the causes of heart failure; director of basic cardiovascular research, Temple University; also taught at University of Iowa; author; recipient, Louis N. Katz Basic Science Research Prize and the Carl Wiggers Award; active in professional affairs.

'67, '71 MD—David R. Gutknecht of Danville, PA, March 31, 2012; associate and director, Dept. of General Internal Medicine, Geisinger Medical Center; clinical professor of medicine, Milton S. Hershey Medical Center, Jefferson Medical College, and Temple University School of Medicine; editor, Geisinger Bulletin; veteran; chorister; Civil War battlefield guide; active in community, professional, religious, and alumni affairs. Pi Kappa Phi.

'73 MD—William M. Riedesel II of St. Louis, MO, April 25, 2012; forensic, geriatric, and addiction psychiatrist; clinical professor emeritus, Washington University Medical School; musician, University City Summer Band and Florissant Valley Orchestra; member, Rat and Mouse Club.

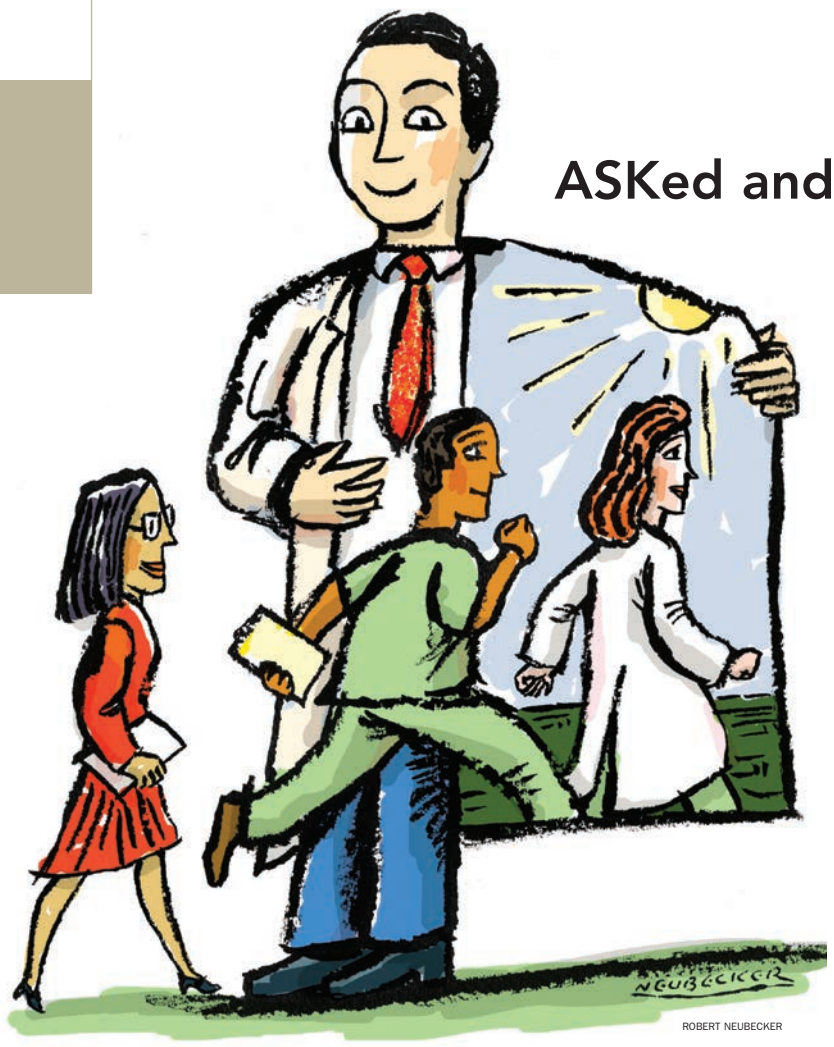
'84 MD—Harold Wenger of Wellesley, MA, April 25, 2012; founder, Baystate Medical and Surgical, an independent physician staffing company.

Faculty

Andrew C. Leon of New York City, February 18, 2012; professor and biostatistician in psychiatry at Weill Cornell Medical College; expert in testing and evaluating methods of treatment; environmentalist.

ASKed and Answered

Alumni give students the straight scoop on their specialties



ROBERT NEUBECKER

What workload should be expected in residency? What is private practice like? Is fellowship training recommended? Are there research opportunities? How fast can one pay off student loans?

One evening last spring, a diverse group of working anesthesiologists sat around a conference table over dinner with a dozen Weill Cornell students, sharing their stories and advice as part of the Alumni-to-Student Knowledge (ASK) Program. Since its creation in 2009, the program has provided a forum for students to talk to practitioners about their fields; recent panels have covered psychiatry, radiology, and dermatology/plastic surgery. "The students really only have access to doctors in academia, but a lot of them will go into private practice," says Clara Cullen, director of alumni relations and giving. Plus, she says, "they don't necessarily feel comfortable asking the same people who are evaluating them questions about their debt when they graduated or the decision to have a child while a resident." As a result, the discussions at ASK events generally involve quality of life rather than nitty-gritty questions like how to secure a specific residency. "It's more about getting a general feel for the specialty," she says.

At the April event, moderated by Paul Miskovitz, MD '75, clinical professor of medicine, the speakers' careers represented a mix of professional opportunities: a community hospital, academia, private practice, and administrative leadership. The anesthesiologists were Weill Cornell professors Miles Dinner, MD '78, and Jill Fong '79, MD '84; Gregory Liguori, MD '89, anesthesiologist-in-chief at Hospital for Special Surgery; and Lissette Lugo, MD '00, attending anesthesiologist at Lawrence Hospital in Bronxville. They began by discussing what brought them to the specialty, noting that none of them had envisioned being anesthesiologists when they matriculated. "I came into medical school undecided," said Fong. "I may still be undecided," she added, eliciting laughter.

Students heard what the alumni like best about their field: the new and varied directions anesthesiology is taking, particularly in terms of pain management; the ability to have a life outside of medicine; and the stimulation that comes from working with many different people in the OR. Liguori noted that the specialty offers the flexibility to work as few or as many hours as one needs or wants. "In anesthesiology, time is money," he said. "If you're working a ton of time in the OR, then you're making more money." The speakers offered details such as how many hours they've put in at various career stages, how many weekends they are on call, and what workloads are common. "It was critical for me to have my kids in all the school sports, and I coached their teams for seven or eight years," said Dinner, who is also a classical pianist. "I can't imagine too many specialties that give you that opportunity."

— Andrea Crawford

For more information or to participate in the ASK Program, contact Clara Cullen at clc2016@med.cornell.edu.

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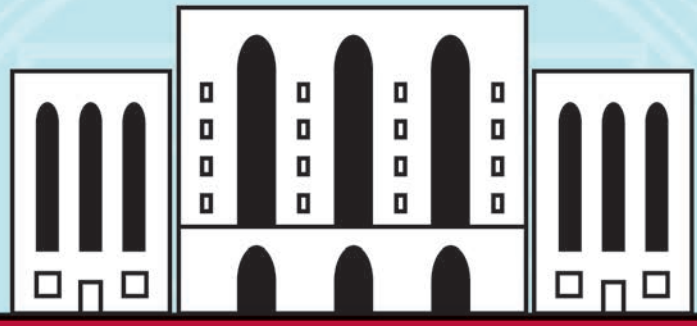

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