

**weillcornell**medicine

The magazine of Weill Cornell Medicine

VOLUME 14, NUMBER 3

Care.

Discover.

Teach.



# Alumni

## Welcome New Students to Campus

Frank Bia, MD '72 with first-year students Olivia Sutton, David Hess-Homeier, Linjia Jia, and Eliza Gentzler

On August 20th, the Weill Cornell Medical College Alumni Association hosted its second annual Alumni and Students Reception during new student orientation week. The Alumni Association was pleased to have an excellent turnout from the Class of 2019, as well as nearly twenty alumni who welcomed this newest group of Weill



Carol Capello, PhD and Michaela Thompson

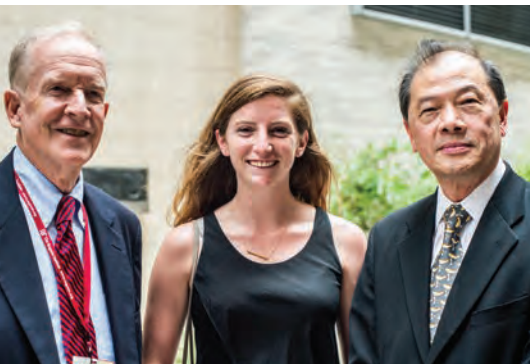
Cornell Medicine students to campus.

Joseph Habboushe, MD '07, gave a warm welcome to the first-year medical students on behalf of the Alumni Association. He shared a bit about the



Dr. Habboushe speaks to attendees

Association's history, highlighting the many ways in which the Alumni Association engages and supports students at the medical college. For the rest of the evening, the new students had the opportunity to meet with alumni and faculty, some of whom would be teaching them in their new courses.



Barry Smith, MD '72, PhD, Lynne Rosenberg, and John C.L. Wang, MD '79



Anthony Rosen, MD '10 with his daughter Juliet

### Join us for our next event!

To become more involved with the Alumni Association, please visit [weill.cornell.edu/alumni](http://weill.cornell.edu/alumni) or contact:

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THE MAGAZINE OF  
WEILL CORNELL MEDICINE

VOL. 14, NO. 3



## FEATURES

### 26 FULL CIRCLE JENNIFER MOON

From four temporary classrooms to a soaring campus on the Upper East Side, Weill Cornell has evolved over more than a century to meet dizzying changes in medical education, research, and healthcare. In October, the adoption of a new name—Weill Cornell Medicine—was the culmination of a strategic expansion that has positioned the Medical College, Graduate School of Medical Sciences, and Physician Organization to not only thrive in today's evolving healthcare landscape, but to lead the way in shaping medicine for the future. A look at the history of an institution that, from its earliest days, has pledged to “keep the patient at the center of everything we do.”

### 36 OUR BODIES, OURSELVES BETH SAULNIER

Jaclyn Bonder, MD, is one of just a dozen physiatrists nationwide who specialize in women's health rehabilitation with a focus on ob/gyn-related issues. An assistant professor at Weill Cornell Medicine, Bonder treats numerous pregnant and postpartum patients with musculoskeletal problems, as well as those with other conditions related to pelvic floor muscle dysfunction and weakness. “When patients come to me, they've often lost hope,” Bonder says. “I find it really gratifying to keep digging, to think outside the box to try to figure it out.”

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## What's in a Name?

### Introducing 'Weill Cornell Medicine'



LISA BERG

In the provenance of academic medicine, excellence in clinical care is inextricably tied to cutting-edge research and top-notch medical education. At Weill Cornell, we want those interdependent relationships, so intrinsic to our work as educators, investigators, and clinicians, to be as evident to the public as they are to us—and for our patients to understand how central they are to the academic medicine we practice.

To that end, we have adopted a new name: Weill Cornell Medicine. This brand, which telegraphs to patients that they are at the center of everything we do, is joined by a simple and elegant description of our work: “Care. Discover. Teach.”

Why now? We are at an important milestone in our history, with the rapid addition of dozens of Physician Organization practices across the five boroughs and the recent recruitment of more than fifty top-tier scientists; at the same time, more than 150 Weill Cornell Medicine physicians have helped to grow NewYork-Presbyterian/Lower Manhattan Hospital and the outer borough NewYork-Presbyterian campuses.

Our partnership with NewYork-Presbyterian is just one of many that make our connection to our patients and peers so powerful. By building relationships with complementary institutions in New York City, nationally and around the world, we are influencing the shape and reach of academic medicine. Patients reap the rewards of this uniquely collaborative environment, through team-based care and access to innovative therapies, and our students and faculty hone their expertise in what has become a true scientific powerhouse on the Upper East Side.

All of these qualities have grown us into a dynamic, global leader in academic medicine, and it was imperative that we find a way to

more clearly communicate that. A rebranding effort involving extensive research and interviews with overseers, faculty, senior administrators, students, alumni, and patients demonstrated the value of an identity that leverages the prestigious Weill Cornell name and recognition as a top-ranked medical college—a history we are proud of—and our increasing reputation for excellence in patient care. The Weill Cornell Medicine name captures the totality of who we are, what we do, and the values that have driven us for more than a century.

This issue of the magazine showcases those values from our earliest days through today. From the beginning, our mission has been shaped and inspired by patients, as you will read in our cover story, “Full Circle.” A desire to help patients motivated our students and faculty to provide affordable and accessible care from the time of our founding, in neighborhoods and delivery systems that broke from traditional models. Today, patients anchor a new curriculum that offers innovations in medical education: it enables students to engage patients from their first day of school through graduation, providing them a deep and complex understanding of the healthcare system. Patients also motivate scientists like Dr. Conor Liston, who is uncovering surprising connections between developmental disorders and psychiatric conditions in children. Patients drive clinicians like Dr. Jaclyn Bonder, who is providing rare and much-needed care to women suffering from poorly understood forms of pain and dysfunction, and Dr. Susan Ball, who has cared for AIDS patients at Weill Cornell Medicine from the beginning of the epidemic and has chronicled their stories in a new book.

Ultimately, patients inspire the work of everyone throughout the Weill Cornell Medicine family. And now they are at the heart of our name.



# The Campaign for Education



**Weill Cornell  
Medicine**



Weill Cornell Medicine's \$50 million Campaign for Education was launched in the fall of 2014. In just a short period of time, **more than \$25 million** has been raised to support its key elements: a new educational curriculum with an even stronger emphasis on the doctor-patient interaction; integration of the latest digital and technological advances into the Weill Cornell Medicine infrastructure; enhancement of student resources on campus; and an increase in the scholarship and faculty endowment.

The new curriculum began rollout in September 2014 with the Class of 2018. In addition to enhancements to all facets of the Weill Cornell Medicine education, students now begin their clinical studies in the first year – interacting with patients from the very start.



"A Weill Cornell Medicine education emphasizes leadership skills," says Student Overseer Raul Martinez-McFaline, an MD-PhD candidate in his fourth year. "Whether a medical college student becomes a physician, principal investigator, researcher, or pursues any other field – **donating to this campaign means investing in future leaders.**"

**To learn how to give to the Weill Cornell Medicine Campaign for Education, please contact:**

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**lil2033@med.cornell.edu**

## Thoughts from Leadership:

"It's exciting to be a part of these transformative efforts. **Our goal is to empower our newest doctors to lead** the charge in patient care, biomedical research and medical education."

**Richard Cohen, MD '75**  
Co-Chair of the Education Campaign



"At Weill Cornell Medicine, we aim to provide medical students with an excellent education, and all that entails: **opportunities to learn firsthand from some of the top physician-scientists in the world, using top-notch facilities and technology, all while interacting with patients from the very beginning of their training.** The Campaign for Education outlines goals that will enrich every aspect of the learning process, and we're thrilled that our donors are sharing our enthusiasm."

**Dean Laurie Glimcher**

"Weill Cornell Medicine has long been a driver of excellence in medical education.

**The Campaign for Education will ensure that we remain at the vanguard.** I can think of no better investment than supporting our faculty and students."

**Overseer Sandy Ehrenkranz**  
Co-Chair of the Education Campaign

## Scope

### News Briefs

## 'Weill Cornell Medicine' Name Announced



Dramatic entrance: The new name graces Weill Cornell Medicine's main building on York Avenue.

**W**ith the aim of more comprehensively capturing the full scope of its mission, Weill Cornell Medical College has announced a new name: Weill Cornell Medicine. The new name unites the institution's three essential principles—to care, discover, and teach—and underscores its focus on patient well-being as its essential motivator. "Weill Cornell Medicine's long-standing tradition of providing world-class clinical care is now elevated by an unprecedented collaboration with patient-centered research and education," says Jessica Bibliowicz, chair of the Board of Overseers. "Our new brand is the realization of our transformation into a global healthcare powerhouse and perfectly expresses our enduring commitment to improving our patients' health."

The Weill Cornell Medicine brand is the culmination of a strategic expansion that has touched every program area, from the Medical College and Graduate School of Medical Sciences to the Physician Organization. In July, the Association of American Medical Colleges named it the fastest growing medical school in the country based on its increase in operating revenue over the past five years. "Weill Cornell Medicine has a distinguished legacy of putting patients first, providing them with the finest care, and offering the best possible outcomes to ensure that they live healthier lives," says Dean Laurie



Glimcher, MD. “Our name now fully encapsulates the strength and totality of our mission—keeping the patient at the center of everything we do.”

Much of WCM’s long-term strategic growth has centered on connecting New Yorkers to its physician network. In 2007 it opened the Weill Greenberg Center, its flagship ambulatory care center. And since 2013, it has added more than 40 medical practices in Manhattan, Brooklyn, and Queens and more than 150 physicians to its ranks at NYP/Lower Manhattan Hospital.

In the past three years, WCM has recruited more than fifty scientists to its faculty, including a Nobel laureate and members of many prestigious international societies, who are leading precision medicine and other translational fields with promising applications to patient care. The Belfer Research Building, opened in 2014, is the hub for these translational efforts, headquartering more than a half-dozen newly established interdisciplinary centers and institutes. The new medical school curriculum, unveiled in fall 2014, further exemplifies WCM’s commitment to patients by providing students with a hands-on education that will shape them into successful doctors.

The Weill Cornell Medicine name also exemplifies the belief that collaboration is the most effective way to improve patient outcomes. Its partnership with NewYork-Presbyterian, as well as The Rockefeller University and Memorial Sloan Kettering Cancer Center, has established a powerful scientific corridor on the Upper East Side. Faculty work closely with their colleagues at Cornell University, both in Ithaca and at the new Cornell Tech campus in New York City. “For 150 years, Cornell University has fostered a culture of discovery, ambition, and creativity—three essential values that underscore the bold and visionary Weill Cornell Medicine name,” says President Elizabeth Garrett. “The esteemed physicians and scientists at Weill Cornell Medicine will continue to be trailblazers, their work giving rise to new innovations that will truly make a difference across the globe.”



Leonard Girardi, MD '89

## Girardi Named Cardiothoracic Chairman

Leonard Girardi, MD '89, a heart surgeon who has been on the WCM faculty for nearly three decades, is the new chair of the Department of Cardiothoracic Surgery and cardiothoracic surgeon-in-chief at NYP/Weill Cornell. “We have a proud legacy of providing high-quality, exemplary patient care,” says Girardi, also the O. Wayne Isom Professor of Cardiothoracic Surgery. “To confidently take on the most difficult cardiothoracic cases, you need the support of the entire institution, and this is where Weill Cornell Medicine and NewYork-Presbyterian really shine.” In his new role, Girardi will maintain and enhance the department’s distinguished clinical care and biomedical research programs and champion minimally invasive techniques. The winner of numerous awards including an early-career NIH Research Fellowship, Girardi did his residencies in general and cardiothoracic surgery at NYP/Weill Cornell as well as a fellowship in cardiothoracic surgery at Baylor College of Medicine under the renowned Michael DeBakey, MD.

## TIP OF THE CAP TO...

**Augustine Choi, MD**, the Weill Chairman of the Weill Department of Medicine and the E. Hugh Luckey Distinguished Professor of Medicine, who gave the American Thoracic Society’s J. Burns Amberson Lecture, its most prestigious honor.

**Dean Laurie Glimcher, MD**, winner of the Steven C. Beering Award from the Indiana University School of Medicine for her ground-breaking work in immunology. The honor, which carries a \$25,000 prize, recognizes a renowned researcher who has contributed to advancing biomedical or clinical science.

**Barbara Hempstead, MD, PhD**, senior associate dean for education, associate dean for faculty development and diversity, the O. Wayne Isom Professor of Medicine, and a professor of medicine and of neuroscience in the Feil Family Brain and Mind Research Institute, elected to the American Clinical and Climatological Association.

**Costantino Iadecola, MD**, director of the Feil Family Brain and Mind Research Institute and the Anne Parrish Titzell Professor of Neurology, winner of the Excellence Award for Hypertension Research from the American Heart Association.

**Mark Lachs, MD**, co-chief of the Division of Geriatrics and Gerontology and the Irene F. and I. Roy Psaty Distinguished Professor of Medicine, recipient of the American Medical Association’s Debasish Mridha Spirit of Medicine Award.

**Barbara Milrod, MD**, professor of psychiatry, given the American Psychiatric Association’s Distinguished Psychiatrist Award.

**Alvin Mushlin, MD**, the Nanette Laitman Distinguished Professor of Public Health in the Department of Healthcare Policy & Research, honored with the Career Achievement Award from the Society for Medical Decision Making.

**Thomas Walsh, MD**, professor of medicine and of medicine in microbiology and immunology, winner of the American Society of Microbiology’s David C. White Research and Mentoring Award.



Weill welcome: President Elizabeth Garrett in the Belfer Research Building with Dan Huttenlocher, PhD, dean of Cornell Tech

## WCM Celebrates President Garrett

Three days after she was inaugurated president of Cornell University, Elizabeth Garrett visited the Medical College for a reception in which she heralded a future of greater collaboration between the campuses in Ithaca and New York City. “Cornell is not only established in an amazing college town that facilitates reflection and discussion, but we have a substantial and growing footprint in this great international urban center, full of energy and global connections,” Garrett said to a crowd of 350 in the Belfer Research Building. “This is a combination that no other American research university enjoys.” In introducing Garrett, Dean Glimcher noted that positions of president, medical dean, and Board of Overseers chair are now held by women. “Some people say we’re witnessing history,” Glimcher said. “I say it’s about time.”

## Former Cabinet Member Speaks on Campus

Louis Sullivan, MD, a pioneering African-American physician who served as Secretary of Health and Human Services under President George H. W. Bush, came to campus in September to discuss his life and career as the featured speaker for the David Rogers Health Policy Colloquium. Born in the Jim Crow South, Sullivan in 1958 became the first black intern at what was then New York Hospital-Cornell Medical Center. “I’m still pushing very hard to increase diversity in the health profession,” said Sullivan, a former WCM Overseer, who noted during his talk that fewer than 5 percent of American physicians are African-American.



Louis Sullivan, MD

## Informatics Head Comes from Mayo Clinic

Jyotishman Pathak, PhD, has been named chief of the Division of Health Informatics in the Department of Healthcare Policy and Research. Pathak—whose work focuses on developing new methods and tools for mining complex electronic health record data—plans to increase the size and scope of the division, which is dedicated to understanding how the explosion of biomedical big data affects healthcare delivery. He will lead efforts to expand research and develop a curriculum for a doctoral program in health informatics, aimed to launch in the next few years. A native of India, Pathak comes to WCM from the Mayo Clinic.

## Alumna Tapped as Internal Medicine Chief

Effective in January, Monika Safford, MD ’86, will serve as chief of the Division of General Internal Medicine, which unifies NYP/Weill Cornell’s outpatient and inpatient programs. A clinician-investigator known for patient-centered research on diabetes, cardiovascular disease, and health disparities, Safford was recruited as the John J. Kuiper Professor of Medicine. A New York native, she comes from the University of Alabama, Birmingham, School of Medicine. Among Safford’s more than 300 published studies are investigations on an underserved and largely African-American region called the Alabama Black Belt, where two-thirds of adults are obese and many have diabetes, hypertension, or other chronic conditions. She was recently awarded a \$10 million grant by the NIH’s National Heart, Lung and Blood Institute to test ways of improving the blood pressure of 2,000 people in the area.



Monika Safford, MD ’86

## \$10 Million Grant to Study Adolescent Brain

Weill Cornell Medicine has received more than \$10 million from the NIH, one of thirteen grants for a study on the effects of drugs and alcohol on the developing brain. The effort will follow some 10,000 children beginning at ages nine to ten through the period of highest risk for substance use and other mental health disorders. Scientists will track exposure to such substances as nicotine, alcohol, and marijuana and measure intellectual, emotional, social, and physical development, including using neuroimaging scans. WCM’s portion of the project, known as the Adolescent Brain Cognitive Development (ABCD) Study, will follow 1,100 teens and focus on predictors of early-onset substance use and how it alters brain development. “I’m really excited about this study because adolescence is a time when the brain is capable of remarkable adaptability in light of the many social, physical, sexual, and intellectual challenges that this developmental phase brings, yet a peak time for the clinical onset of most mental illnesses,” says BJ Casey, PhD, director of the Sackler Institute for Developmental Psychobiology and a professor of psychology in psychiatry and in neuroscience, who is leading the grant at WCM.



Risk factors: An image of the adolescent brain showing changes in circuitry that may be most susceptible to substance abuse.



## FROM THE BENCH

### Contraceptive Implant Has Health Risks

A common nonsurgical form of birth control carries heightened risks for patients, finds a team led by Art Sedrakyan, MD, PhD, professor of healthcare policy and research. Their study was the first to compare laparoscopic sterilization—a procedure that obstructs the fallopian tubes—with a nonsurgical method that blocks the tubes with the Essure contraceptive implant, a spring made from a nickel-titanium alloy. Patients have recently filed lawsuits against Essure's manufacturer, Bayer, claiming the implant has led to allergic reactions to nickel, severe pelvic pain, and post-procedure operations including hysterectomies; the FDA is investigating. "We found tenfold higher risk of repeat surgery after Essure when compared to laparoscopic surgery," says Sedrakyan. "This means that nationally more than 10,000 women likely underwent additional surgery in the past five years." The work, which was widely covered in the mainstream press, was published in the *British Medical Journal*.



Art Sedrakyan, MD, PhD

CARLOS REINE PEREZ

### Gene Offers Key Lymphoma Insight

A genetic mutation implicated in an incurable form of non-Hodgkin lymphoma drives the disease by disrupting the mechanism that manages normal immune cell growth, reports a study in *Nature Medicine*. The finding, about the gene KMT2D—a member of a small family of proteins that can modify a specific amino acid on proteins around which DNA is wrapped—may explain why this lymphoma becomes treatment resistant. "KMT2D turns out to be one of the top twenty most mutated genes across all cancer types," says co-senior author Ari Melnick, MD, chair of the hematologic malignancies program in the Sandra and Edward Meyer Cancer Center and the Gebroe Family Professor of Hematology/Oncology. "It is really one of the superstars of cancer because it is one of the genes that is most strongly linked to tumors."

### Immune Gene May Spur Blood Cancers

Scientists have long understood the crucial role of a gene known as AID in the adaptive immune system, which manages the body's response against pathogens: AID ensures that the cells responsible for antibody production can mutate their genome, enabling a more effective defense. Now, researchers led by Olivier Elemento, PhD, have discovered another role for the gene, one which potentially reveals a cause of some cancers. In *Cell Reports*, they say that the enzyme encoded by AID is also involved in removing chemical tags from DNA, a process called hypomethylation. "We found that it is a player in removing methyl

groups—the first time anyone has found molecules that perform this powerful form of gene regulation," explains Elemento, an associate professor of computational genomics who heads the Laboratory of Cancer Systems Biology in the Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Institute for Computational Biomedicine and co-chairs the Meyer Cancer Center Program in Genetics, Epigenetics, and Systems Biology. "What is interesting is that many tumor types tend to be linked to global—genome-wide—hypomethylation, compared to normal cells."

### Elders at Risk of Financial Exploitation

In a commentary in *Annals of Internal Medicine*, geriatrician Mark Lachs, MD, advocates defining a pattern of imprudent decision-making among elders as a possible clinical syndrome that warrants research, protective policies, and heightened awareness among physicians. Called age-associated financial vulnerability (AAFV), it's facilitated by factors such as changes in the brain and the onslaught of marketing schemes targeting elders that put older adults at risk for losses that could harm quality of life. "AAFV is a public health crisis for patients and families," says Lachs, the Irene F. and I. Roy Psaty Distinguished Professor of Medicine, who co-authored the commentary with S. Duke Han, PhD, of Rush University Medical Center. "Everyone I speak to has an elderly patient or friend who's had money taken from them."



Mark Lachs, MD

A. MELNICK

### New Drug Combo for Lymphoma

A combination therapy lacking the debilitating effects of traditional cancer treatment effectively manages mantle cell lymphoma (MCL), shrinking this rare, aggressive, and incurable malignancy and halting its growth in the vast majority of patients. The *New England Journal of Medicine* reports that a combination of Lenalidomide and Rituximab provides an effective alternative to chemotherapy. More than 90 percent of patients saw their cancer shrink by more than half, and two-thirds of that group showed no detectable tumor growth. When the investigators examined longer-term outcomes, they found that the results held steady for 85 percent of patients after two years. "For patients, their quality of life was preserved or improved, and that's a huge step up from regular chemotherapy," says lead author Jia Ruan, PhD '98, MD '99, associate professor of clinical medicine.

### Advocating for a New Brain Injury Term

Terminology used to describe certain unresponsive patients with severe brain injury is overly broad and overlooks those whose consciousness is

imperceptible at the bedside, argues Nicholas Schiff, MD '92. In *JAMA Neurology*, he advocates for the term cognitive motor dissociation (CMD) as a better way to describe these patients, who cannot purposefully move but demonstrate brain activity associated with thinking and remembering. "Having this new terminology helps doctors to identify and actively look for these patients," says Schiff, the Jerold B. Katz Professor of



Nicholas Schiff, MD '92

WCH

Neurology and Neuroscience and a professor of neurology, neuroscience, and medical ethics in medicine in the Feil Family Brain and Mind Research Institute.

### Hep C More Common than Believed

Upwards of a million more people are infected with the hepatitis C virus (HCV) than current estimates indicate, Brian Edlin, MD, associate professor of medicine, and colleagues report in *Hepatology*. Their study examined the National Health and Nutrition Examination Survey, which assesses the health of a representative sample of the U.S. population. In 2014, it estimated that 3.6 million people have HCV antibodies, of whom 2.7 million are currently infected. But a closer analysis revealed that the report excludes six populations: people who are homeless or hospitalized; prisoners; military personnel; nursing home residents; and residents of Native American reservations. Including these groups, the researchers estimate that 4.6 million people have antibodies for HCV and that 3.5 million are infected—and that is likely an underestimate.

### Patients Accept Electronic Records

Patients whose doctors use electronic records are increasingly confident that their information will remain secure, finds a study in the *American Journal of Managed Care*.

"Electronic health records, which were adopted really quickly and are now used in more than 96 percent of doctor's offices, have made a huge difference in the way that medical care is delivered," says lead investigator Jessica Ancker, PhD, associate professor of healthcare policy and research. The researchers collected data through a national phone survey of about 1,000 people for three years. In 2013, some 41 percent worried that electronic records would lessen the privacy and security of health data, compared to 47.5 percent in 2011.



Jessica Ancker, PhD

WCH

## The Power of Two

Identical twin astronauts offer a rare chance to study how space affects the human genome

Some 220 miles above our collective heads, astronaut Scott Kelly is orbiting the planet on the International Space Station. Awaiting his return here on Earth is his twin brother, Mark—six minutes his elder, and himself a retired astronaut.

During the run-up to Scott Kelly's launch last March, NASA officials realized they had a potential scientific bonanza on their hands: a natural experiment involving two people with all-but-identical genes, one of whom would spend a full year in space. So they put out a call for proposals, offering a total of \$1.5 million in grants to scientists eager to investigate the effects of long-term space travel on the human body. Among the ten winners of the three-year awards: Christopher Mason, PhD, associate professor of physiology and biophysics at the HRH Prince Alwaleed Bin Talal Bin Abdulaziz Al-Saud Institute for Computational Biomedicine and assistant professor of neuroscience at the Feil Family Brain and Mind Research Institute.

Mason is principal investigator of a study entitled "The Landscape of DNA and RNA Methylation Before, During, and After Human Space Travel." Essentially, it's an exploration of how an astronaut's environment affects how his or her genes are expressed—an area known as epigenetics—and whether any such changes are temporary or permanent. The other nine funded projects address such wide-ranging topics as cognition, immune response, and the composition of gut, skin, and oral bacteria. "This is probably the most integrated biological portrait of a human ever made—on Earth and then again in space," Mason



'This is the first step on a long stairway toward understanding human physiology in space and helping NASA prepare for long-duration missions.'

says of the overall effort, known as the NASA Twins Study. At the same time, he acknowledges the project's inherent limitations: it does, after all, have only two research subjects. "Statistically, it's the lowest power you could ever have," he notes. "So no one in the study, myself included, believes it's the be-all and end-all. This is the

first step on a long stairway toward understanding human physiology in space and helping NASA and humanity prepare for long-duration missions."

It's a step that Mason was thrilled to take; he's a lifelong astronaut fan who, as a kid, dreamed of applying to NASA and attended space camp twice. Similarly,





Double duty: Astronauts Mark (left) and Scott Kelly

colleague Francine Garrett-Bakelman, MD, PhD, who'd once contemplated a career in aerospace medicine, leapt at the chance when Mason and his co-investigators—George Grills, PhD, assistant dean of research resources, and Ari Melnick, MD, the Gebroe Professor of Hematology-Oncology and director of the Raymond and Beverly Sackler Center for Biomedical and Physical Sciences—asked her to take on the project's bench work. "This is a way to participate in space science that I never imagined I'd be able to do," says Garrett-Bakelman, an instructor in medicine and a mentee of both Mason and Melnick. "Very few people are astronauts; only 500-plus

have actually been in space, but there are hundreds of thousands who support that work. And being part of that group is pretty special."

Ultimately, the team's investigations could have implications both on Earth and beyond. Studying how the epigenome responds to the stresses of space travel—with its microgravity, increased radiation exposure, and lack of conventional days and nights—could offer insights into such topics as aging, cancer, and circadian rhythm function. On a logistical level, the Twin Study is spurring the



Christopher Mason, PhD

creation of a computational infrastructure to integrate findings from all ten projects, which Mason says could serve as a model for researchers in other data-heavy fields. And as NASA contemplates long-range space travel, including a mission to Mars, the study could influence how future generations of astronauts live and work. "This could help us understand how to design a space station so it can be a healthy environment," Mason says. "As for the long-term goals, the sky's the limit. NASA is planning to send humans to Mars and beyond."

Before Scott Kelly launched, he and his twin underwent a battery of physical tests; some are ongoing during his stay, and both brothers will have follow-up exams after Scott returns. During the yearlong mission, the Kellys are giving regular blood samples for analysis—though, obviously, Scott's are harder to obtain. Some of his specimens are frozen for transport back to Earth during scheduled astronaut return trips, while others are delivered via space capsule: a fresh sample splashes down in the ocean, gets picked up by helicopter, and is transported to the Johnson Space Center in Houston. There, Mason, Melnick, Garrett-Bakelman, and fellow Twins Study researchers collect and process it, and some of the samples are brought back to WCM. Garrett-Bakelman confesses that the first time she did so—handling blood that just a matter of hours earlier had flowed through the veins of an orbiting astronaut—was rather mind-blowing. "It was a very high-quality sample," she recalls. "It was as though the cells didn't even care that they'd traveled down from the International Space Station, landed in Kazakhstan, and flown through Ireland to Houston to the lab. It was a little surreal, to be honest. But it was really cool, because it was from space."

— Beth Saulnier





## Fungus Fighter

Medicine professor Thomas Walsh, MD, has helped upend the odds of saving kids with cancer from deadly fungal infections



SCIENCE PHOTO LIBRARY

Invasion force: The *Aspergillus* mold

A year into treatment for acute lymphocytic leukemia, young Anna Nikolich was doing well, and her doctors were optimistic. It had been a devastating diagnosis for the Milwaukee girl and her family, but aside from the usual side effects of chemotherapy and radiation, there had been no complications.

That changed abruptly one evening, when her father noticed something disturbing. “The whole left side of her body wasn’t working,” says Aleks Nikolich. “It looked like a stroke—but this was a six-year-old kid.”

Anna was rushed to Children’s Hospital of Wisconsin, where her doctors struggled to figure out what had triggered the stroke. Had one of her chemo drugs caused a blood clot? It seemed a likely explanation, but then Anna developed a 103-degree fever, which lasted for more than two weeks. Finally a CT scan revealed the culprit. Her brain was riddled with pus-filled abscesses, the largest the size of an

egg. A biopsy revealed that they were caused by *Aspergillus*, a common mold that, while usually harmless, can be deadly in a cancer patient whose immune system is compromised.

Anna’s oncologist recommended removing the infected half of her brain; despite the risks, he believed a hemispherectomy could keep her alive. But before scheduling the surgery, he decided to consult with Thomas Walsh, MD, who is currently professor of medicine, pediatrics, and microbiology and immunology at WCM (he was then at the National Institutes of Health). The director of the Transplantation-Oncology Infectious Diseases Program in the Division of Infectious Diseases in the Department of Medicine, Walsh is well known among doctors on the front lines of pediatric cancer and infectious diseases for his pioneering work on fungal infections in immunocompromised children. “When I was in medical school, I saw patients who

had bone marrow transplants for leukemia, who were being put into remission and then dying horrible deaths from invasive mycosis [fungal diseases],” remembers Walsh, sitting at his desk in his office at WCM, where he leads a team of lab and clinical researchers in the hunt for new ways to diagnose, treat, and prevent fungal infections in immunocompromised patients. “We were seeing sepsis caused by *Candida*—a yeast—and pulmonary aspergillosis. Imagine developing pneumonia and nothing stops it. Normally our host defense can easily handle these organisms, but once you have cancer, no.”

After earning his MD at Johns Hopkins in 1978, Walsh spent a decade doing postdoctoral work there, at the National Cancer Institute in Bethesda, and the University of Maryland, Baltimore. At the time, medical mycology—the study of fungal infection—was considered a minor field. Infectious disease researchers were



making breakthroughs in the fight against bacterial infections, with new drugs and combination therapies. “But we had basically one, maybe two antifungal agents,” Walsh says. “And those were not that effective—and very toxic.” Meanwhile, prognoses for pediatric cancer were improving. Cancers that were once nearly always fatal could now be cured with new drugs and better therapies. But as more young patients survived cancer, more were dying from opportunistic infections. Walsh was one of the few doctors to focus specifically on the growing importance of medical mycology for these vulnerable patients. “Mycoses emerged with a vengeance,” he says. “In high-risk patients, particularly those with hematological malignancies, easily about 15 or 20 percent would have fungal infections.”

For nearly twenty-five years, Walsh led a lab in the Pediatric Oncology Branch of the National Cancer Institute outside Washington, D.C. He helped form a consortium of industry, government, and academia to investigate the range of available antifungal drugs, discover and test new ones, and figure out how to use them in children—who metabolize medicines faster and are thus not always given an

## ‘Normally our host defense can easily handle these organisms.’

appropriate dose. Eventually, Walsh and his team helped to develop three new classes of drugs and write guidelines for using them. “It was part of a wonderful series of collaborations that spanned a quarter-century in development,” Walsh says. “Eventually, the outcomes dramatically improved.” Invasive *Candida* infections once had a 50 percent survival rate, Walsh says. Today, almost all patients survive it. At least four out of five people diagnosed with pulmonary aspergillosis used to die. Now, four out of five may be cured.

In Anna Nikolich’s case, Walsh says, conventional therapy would have offered her only a 10 percent chance of survival. But among children with central nervous system aspergillosis treated with new drugs under the protocols he helped develop, nearly every one has survived. “In the first paper I wrote on that topic, literally everybody had died,” Walsh recalls. “Now it’s almost reversed—we’re able to save most patients.” Anna’s family was heartened by

those statistics, and when Walsh advised the team of clinicians caring for her, they began to hope that she could avoid drastic surgery. Operations were still required to selectively remove the abscesses, but Walsh recommended a course of powerful drugs that eventually killed the fungus, leaving Anna’s brain intact while monitoring her response with new molecular tests.

Anna, whom her father describes as “feisty,” has made almost a full recovery, and over the years, her family stayed in touch with Walsh. Recently, more than five years after he helped save her life, Anna and her family traveled to New York; over pizza, she met Walsh for the first time. “When these doctors consult, they rarely see the patient,” Aleks Nikolich says. “So he got very emotional. I think he was very touched by what he had been able to do.” Nikolich is just one of many grateful parents whose children have been helped by Dr. Walsh’s dedication. “Our clinical and laboratory research team continues its life-saving mission,” Walsh says, “to develop new approaches for the diagnosis, treatment, and prevention of fungal and bacterial pathogens in pediatric and adult patients with cancer.”

— Amy Crawford

## The Welcome Wagon

From giving tours to lunching with interviewees, current students are key to the admissions process

**N**early 6,200 people applied to join WCM’s Class of 2019. Just 14 percent of those aspiring physicians were invited to come to campus for an interview—part of a winnowing process that ultimately selected the talented group of 106 first-years that matriculated this fall. But for the hopeful future doctors navigating the medical school application system, it can be a challenge to get a comprehensive picture of the institutions where they aim to study, notes assistant dean of admissions Lori Nicolaysen. “With undergrad you get the chance to see the school before you apply, but with medical school you don’t,” Nicolaysen says. “One of the questions that premed students always have is, ‘How can I choose where to go, when I don’t get the kind of interaction and exposure I had applying to college?’”

Luckily for applicants—and for the admissions staff—the Medical College has a not-so-secret weapon: its current students. Throughout the academic year, med students volunteer their time to help the next crop of Weill Cornellians get to know the school. They give tours to applicants during their interview visits,



Tour guide: Ryan Walsh '19 (in blue shirt) shows prospective medical students around campus.

JOHN ABBOTT

have lunch with them, host them during the formal “revisit” weekend for admitted students, and more. “They’re a critical part of it, to the point where we’ve been changing our interview scheduling because we want students to be involved,” says Nicolaysen. “For applicants, student enthusiasm is a big piece. They fill out surveys after they come here, and they’re happiest when they get to talk to a range of students—like if they get to talk to both a first year and a fourth year, that’s wonderful.”

During revisit weekend last spring, Natalie Wong ’18 hosted an admitted student; the two hit it off, and she was pleased to learn that the young woman decided to enroll. “I was able to make her feel at home here, and that goes a long way,” says Wong, who has also given tours and attended lunches for interviewees.

“It’s hard for undergraduates to get an idea of what medical school is like. Even at the end of my own admissions cycle, I had no idea of what I was getting myself into, so it felt good to offer real expertise and insight. It was an opportunity to give back a little of the experience I’ve gained.”

Like more than a third of her class, Wong also served as an Admissions Ambassador, a semi-formal system that asks first-years to indicate areas of expertise they’re willing to share with prospective students via phone or e-mail. Among her topics: hailing from the Mid-Atlantic region and matriculating with no fixed idea of a future specialty. Others have fielded queries on such issues as taking a gap year, earning an MD-PhD, being a married student, and having a passion for music. “You get a lot of different questions,”

says Shahdabul Faraz ’18, who weighed in on being an international student and having an interest in global health, “and I think that reflects how diverse the incoming class is each year.”

In addition to participating in tours and lunches, Faraz helped organize last year’s revisit weekend, which included outings to a Broadway show, a comedy club, and the Metropolitan Museum. One of his classmates, Simone Elder ’17, fielded Ambassador questions about being an underrepresented minority—she’s African American—as well as coming to New York from the South.

“The medical school application process can be daunting, because there are so many options, so many decisions you can make,” Elder says. “I want prospective students to know that this is a great institution, and they can do whatever they want

coming out of here. I think it’s important to spread that enthusiasm, but also to be realistic—to have peer-to-peer contact, instead of just a glossy brochure.”

Like Wong, Elder was gratified to facilitate a student’s choice of WCM: a young man from a similar background to her own, with whom she communicated almost weekly during the application process, is now in the Class of ’19. “The admissions staff don’t live our medical school experience, and neither do our professors,” she says. “We have the best understanding of what these students could experience and achieve here. At the end of the day, we’re their richest resource—and we’re really motivated, because we’re interacting with our future peers.”

— Beth Saulnier

**‘The medical school application process can be daunting, because there are so many options.’**



Inside scoop: Owen Drinkwater ’19 (in black T-shirt) lunches with prospective Weill Cornellians.



# Women's Studies

## An intercampus project explores midlife health in Qatar

In Arabic, “menopause” translates to “the hopeless age.” But even in the face of such linguistic negativity, women in Qatar often see menopause as a period of maturity and wisdom that has positive aspects.

That’s one of many things that Linda Gerber, PhD, professor of healthcare policy and research and of epidemiology in medicine, learned from an extensive study, one of the first focused exclusively on Arab women. The New York-based Gerber was the principal investigator of a project exploring the health of middle-aged women in Qatar, a country that has seen its life expectancy increase five years in the last decade due to improved healthcare quality and access.

Gerber, an epidemiologist and human biologist with training in medical anthropology, modeled the work—sponsored by the Qatar National Research Fund—after the Study of Women’s Health Across the Nation (SWAN), which began in the United States in 1994 and is ongoing. Supported by several funders including the NIH, the multi-site, longitudinal, epidemiological SWAN study has looked at five racial or ethnic groups and the various changes women go through in midlife.

As the SWAN investigators had done, Gerber and her WCMC-Q faculty partners—Ravinder Mamtani, MD, a public health physician and associate dean for global and public health, and Mohamud Verjee, MD, associate professor of family medicine—divided the work into two stages, beginning with a qualitative phase that consisted of six focus groups of women ages forty to sixty. The team interviewed three groups of Qatari women and three of non-Qatari nationals (those, for example, from Egypt, Jordan, Palestine, Sudan, Lebanon, and Syria), all living in Doha. The second phase of the study consisted of face-to-face interviews with more than 800 women drawn from nine primary care centers. Researchers queried the women on a wide range of health practices and personal assumptions, including their attitudes toward meno-



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pause, use of complementary and alternative medical therapies, menopausal status and symptom experiences, levels of physical activity, the support they receive from family and friends, their sources of health information or advice, and more. “The women were very receptive to the study and we had an excellent participation rate,” Gerber says. As the researchers have compiled the results, they’ve published findings on a range of topics.

**While many of the women did not like the term ‘menopause,’ they did enjoy the positive effects it had on their lives.**

In exploring the women’s knowledge of menopause and the physical, emotional, and social experiences related to it, Gerber and her colleagues learned that while many of them did not like the term “menopause,” they did enjoy the positive effects it had on their lives, as the researchers noted in a 2013 paper published in *Climacteric*. These included greater participation in religious activities and the enhanced support of their families. In an Islamic culture where menstruating women are not allowed to pray, read the Koran, or go on pilgrimages, menopause allows for greater freedom, explains Darine Dimassi, the clinical research coordinator at WCMC-Q who moderated the focus

group discussions among the women. “They said it’s good to reach this stage,” Dimassi says. “They receive the support of their husbands and they think more about praying, about being close to God.”

The researchers also learned that a lack of physical activity was a common concern for the women. Well aware of its importance for their health, participants noted the challenges they faced in getting exercise: they’re not socialized to be active and the region’s weather makes it difficult to be outdoors. Even gardening—which women in other climates often do for exercise, the investigators noted—is impossible in Qatar’s extreme heat.

In a look at alternative medicine practices, the researchers determined that they’re used by almost 40 percent of women in Qatar, mostly in the form of herbs. (As Mamtani notes, it’s a rate similar to that of women in the U.S.) The work, published last year in the *Eastern Mediterranean Health Journal*, was the first comprehensive study of the topic conducted in Qatar.

As expected in a part of the world where people tend to stay indoors and where many women cover their bodies in public for religious reasons, researchers found that some 53 percent of study participants had vitamin D insufficiency—but that number was much less than the 85 percent who believed they had a deficit. Gerber was surprised to learn that among the half with insufficient levels, their bone mineral density was not low—and in fact, the Qatari women had relatively little osteoporosis and its precursor, osteopenia. That lack of a strong relationship between vitamin D and

bone density demands further study, Gerber says, with potential implications for women worldwide. “There are new data coming out that the vitamin D that we’re measuring—the circulating vitamin D levels—may not be the ones that are most closely related to bone mineral density,” she notes.

The study, one of numerous collaborative efforts between investigators on the New York and Qatar campuses, continues to produce results. The researchers have published five papers so far, with more expected as the data are analyzed. “We know a lot about women going through

midlife in the United States because of the SWAN study going on for the last twenty years,” Gerber says. “Now this is a chance to see how different cultures, lifestyles, and behaviors may influence health outcomes around the world.”

— Andrea Crawford

## Paws for Contemplation

For anesthesiology residents, the CU vet school offers a new (and furrier) perspective on their field

“She’s like a typical pediatric patient,” says Dorian Batt, MD. “She’s small, and it’s difficult to get IV access.”

The patient in question is lying on an exam table, swathed in a towel. To sedate her for surgery, her doctors try to insert an intravenous line in one tiny leg; when that fails, they try another leg. Finally, they succeed—with the *third* leg. The locus of concern for the half-dozen, highly trained medical professionals gathered around the table? A pet bunny, scheduled to be spayed.

It’s a normal day at the Cornell University Hospital for Animals—but an extraordinary one for Batt. A fourth-year anesthesiology resident at NYP/Weill Cornell, Batt is doing a weeklong elective in the College of Veterinary Medicine, learning how the specialty is practiced on four-footed creatures. “One of the best parts is the afternoon rounds where they come up with anesthetic plans for the next day,” says Batt. “They go through every decision about the drugs they’re going to use, and I get to chime in and ask why they’re doing certain things and tell them why we’d do something different in a human. It’s kind of an intellectual high.” Batt visited the Ithaca campus—her undergrad alma mater—in late summer, observing anesthesia being administered to cats, dogs, pigs, sheep, and other animals. The trip’s many highlights included watching a rabbit being intubated—no easy feat, since their jaws open only 30 degrees—and viewing an emergency surgery on a horse with colic.

At the vet school, there’s a cheeky T-shirt declaring that “real doctors treat more than one species.” And indeed, the chance to see how anesthesia is administered to creatures great and small is a major draw for Batt and her colleagues. “Our residents go there and engage with the same things they’ve been doing on humans for four years—putting somebody to sleep, maintaining their blood pressure, replacing blood volume,” says residency director Eric Brumberger, MD, assistant professor of anesthesiology and an undergraduate alumnus of the Ithaca campus. “But when they need to think about it for ten or twenty different species, they have to go back to the basic principles, to really understand how the drugs work in a way that, I hope, elevates their overall understanding of anesthesia as a field.”

For Batt, one major takeaway from her week in Ithaca was how adaptable and flexible veterinarians are, not only at treating multiple species but in using equipment that is often repurposed from human

medicine. Having such a comprehensive command of the specialty that you can cope with challenging situations that arise even in seemingly routine cases is vital in treating two-legged patients as well, Brumberger says. “I don’t want anyone to think that what we do as anesthesiologists could be described as rote or mundane; each patient brings to the table certain anatomic, age-related, or physiologic factors that could make an anesthetic or a surgery go a million different ways,” he says. “But after a while, things can become a little routine. When you’re at the end of your training—when you feel like you’re at the top of your game and you’ve mastered your craft—it’s challenging to be thrown into an environment where all of a sudden instead of the heart having four chambers it has two; instead of a normal adult heartbeat of sixty to 100 per minute, it’s twenty. That kind of out-of-the-box thinking on your feet is essential to any anesthesiologist.”

Launched last spring, the elective complements a long-standing program in which the vet school sends its anesthesiology residents to NYP/Weill Cornell for a weeklong stay, enriching their understanding of their specialty and its underlying science by seeing how it’s practiced in humans. They send one resident a year, while the New York program will be sending four—underscoring the fact that vet anesthesiology is a much smaller field. As Brumberger notes, NYP/Weill Cornell’s department alone has seventy-eight residents. By

comparison, only between five and twelve residency slots in veterinary anesthesiology come open nationwide in any given year, says his counterpart at the vet school, Manuel Martin-Flores, DVM, assistant professor of anesthesiology and residency

program director, who coordinates the school’s elective with Luis Campoy, DVM, clinical associate professor of anesthesiology and analgesia. “As competitive as human anesthesiology is,” Brumberger says, “to be a vet is even more insanely competitive.”

Brumberger and colleague Kane Pryor, MD, associate professor of clinical anesthesiology and the department’s director of education, conceived the program after noting that whenever a visiting veterinary anesthesiology resident gave a talk at NYP/Weill Cornell, it would draw standing-room crowds—and would routinely be rated among the year’s finest lectures. “We saw how skilled and passionate they are about what they do,” Pryor recalls, “and we said, ‘We have to send our residents up there.’ ” Now, there are many more hopeful fourth-years than available slots, so they have to apply with a personal statement. “Anesthesiology for most people, even other physicians, is a bit of a black box,” Brumberger says. “We love what we do—we think it’s really cool, exciting, important, and interesting—but not many other people in the world can understand it. So when you find somebody else who can relate to it, but has this unique bent, it’s a match made in heaven.”

— Beth Saulnier

‘Thinking on your feet is essential to any anesthesiologist.’





Dogged effort: Anesthesiologist Dorian Batt, MD, with colleagues and a canine patient in the OR at the Cornell University Hospital for Animals

ROBERT BARKER / UP



ABBOTT

A brighter future: Susan Ball, MD, with patient Lyndell Johnson. In her time working with the disease, prognoses for patients with HIV have gone from “nearly hopeless” to “very hopeful.”

## Standards of Care

In an era when HIV is largely a manageable infection, Susan Ball, MD, looks back at the dark days of the AIDS crisis

In the first line of her medical memoir, Susan Ball, MD, gets straight to the point: “I am an AIDS doctor.” *Voices in the Band* chronicles Ball’s experiences on the front lines of the HIV epidemic, recalling a time three decades ago when she and her colleagues struggled to help their desperately ill, often socially marginalized patients—people whose disease not only had no effective treatment, but sparked fear and rejection from the world around them. For the reviewer who lauded the book in the *New York Times*, herself a physician, Ball’s memoir “brought the bad old days back to me in Technicolor: the waiting rooms full of walking skeletons, splotched and coughing, vanishing forever at regular intervals. Those were the days when you returned to work after a week’s vacation and asked, ‘Who died?’”

Published last spring by Cornell University Press, Ball’s book is subtitled *A Doctor, Her Patients, and How the Outlook on AIDS Care Changed from Doomed to Hopeful*. In it, she describes life at the Center for Special Studies (CSS), the HIV/AIDS clinic at NYP/Weill Cornell—a still-thriving practice that, at its founding, opted for a generic-sounding name to spare patients the stigma associated with the disease. “So many people were dying; it was such an intense experience that we all shared, and that sharing helped us get through it,” says Ball, an associate professor of clinical medicine. Sitting in her CSS office on the hospital’s twenty-fourth floor, she recalls how the grim prognoses of the Eighties gave way to life-saving therapies in the mid-Nineties. “It was such an important time in the HIV epidemic, but also in medicine. Going from



having no medications to having good, effective treatment—it was a transformative period.”

Unlike many medical memoirs, Ball’s book contemplates the patient’s perspective as much as that of the staff. She introduces the reader to such people as Bella, a former heroin user with advanced AIDS. Bella’s still-addicted husband was also infected, as was one of their two sons—though the couple couldn’t bear to tell their children the truth, even making excuses for why one son took so many pills. And Etta, a troubled woman who “persistently treated her HIV as an annoyance more than a concern”; unwilling or unable to comply with her drug regimen, she was in and out of the hospital, her condition growing increasingly grave. And Stewart, who not only coped with real complications like blood clots and pneumocystis pneumonia but became obsessed with minor symptoms and had an “almost hysterical fear” of potential drug side effects. While CSS’s current patients have much brighter medical prognoses, Ball notes, they often still cope with challenges of poverty, addiction, and family dysfunction. “Many of our patients come from disadvantaged parts of society, and it can be hard to reach them or make a significant impact in their lives, because HIV is just one little factor in a life that’s got so many other issues,” she says. “But sometimes if we can get them to give up their drug use or take their medicine so their HIV is under better control, or even just help them with their childcare needs, having that little impact can make a big difference. That intimate environment with patients is something that I really wanted to get across in the book.”

Ball’s memoir is a work of narrative nonfiction, with the names and identifying details of patients and colleagues changed to protect confidentiality. Some of the anecdotes were drawn from her personal journal, and she honed her writing skills with a master’s program in narrative medicine at Columbia. “I hope that readers will take away an appreciation for what medicine can do—how a good, well-run, cohesive interdisciplinary team can support patients in a way that is so strong and effective,” Ball says. “Even in the bad old days when we couldn’t treat the HIV—when we couldn’t make patients better, per se—we could still support them and care for them.”

— Beth Saulnier

## ‘THOSE KINDS OF PEOPLE’ An excerpt from *Voices in the Band*



Crisis point: A 1983 AIDS vigil in New York’s Central Park

The stigma that surrounded AIDS patients from the very beginning of the epidemic in the early Eighties continued to be harsh and isolating: mention AIDS and people imagined promiscuous homosexuals and heroin addicts, all of them skinny and covered with purple spots. They remembered those early photos of diaper-clad, emaciated men with scraggly beards looking fearfully into the face of the priest or nun leaning over their hospital bed. People looked askance at me: What was it like to work in that kind of environment with those kinds of people?

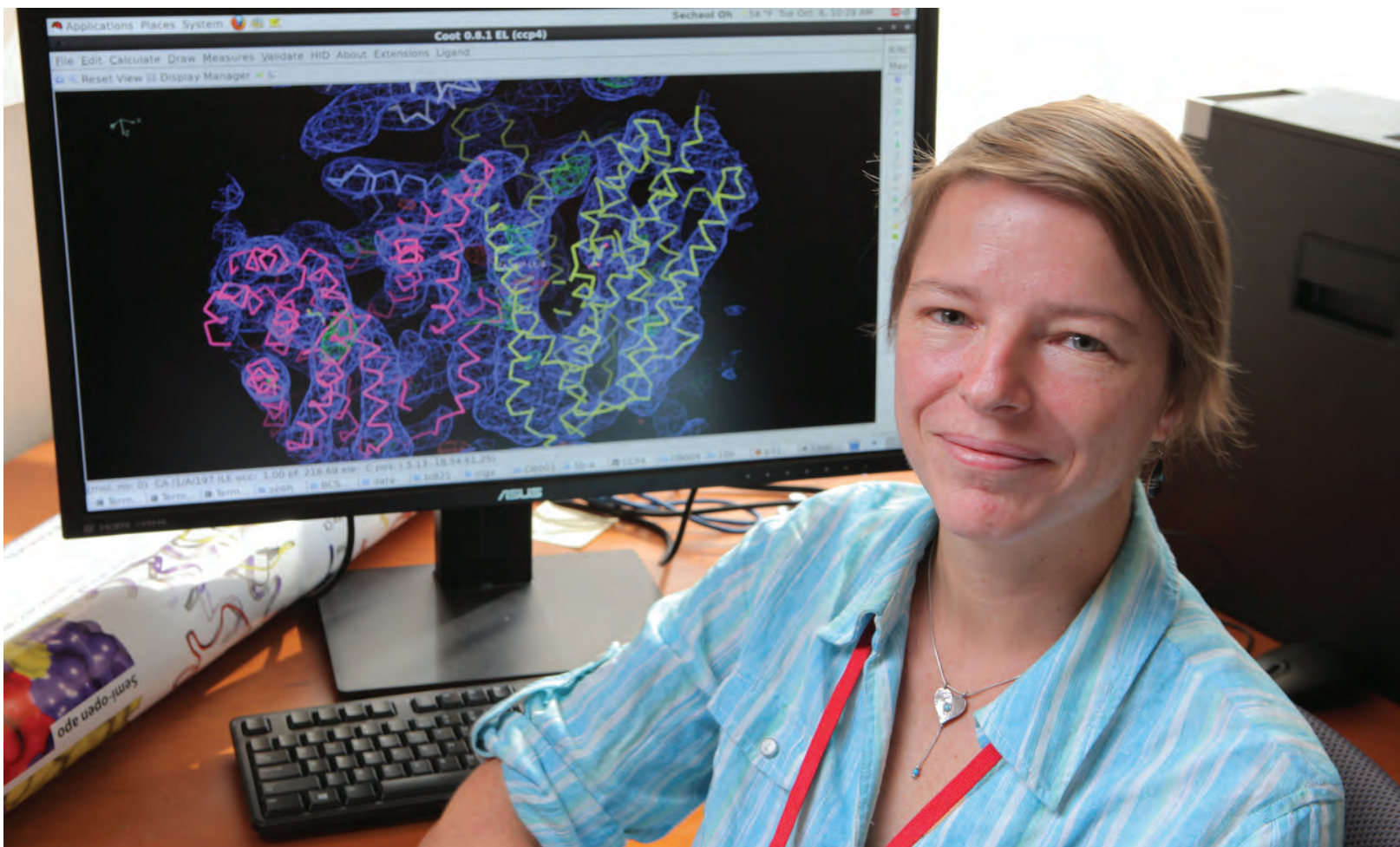
My patients are “those kinds of people.” They are an array and a combination of brave, deprived, strong, entitled, admirable, self-centered, amazing, strange, funny, daring, gifted, exasperating, wonderful, and sad. And more. At my clinic most of the patients are indigent and few have had an education beyond high school, if that. Many are gay men and many of the patients use or have used drugs. They all have HIV, and in the early days far too many of them died. Every day they brought us the stories of their lives. We listened to them and we took care of them as best we could. My patients have the kinds of voices that are rarely heard, coming as they do from a hip-wiggling drag queen or a drug-using Hispanic man who lives in a shelter, or from a welfare-dependent single mother of four who lives in her subsidized two-bedroom sixth-

floor walk-up out in a remote part of the city that I will likely never see. My colleagues and I heard the stories; and in caring for our patients we created more stories, with all the small victories, the horrible deaths, the humor, and the sadness. We worked hard to be good doctors and our patients helped us become better ones as we took our tumultuous journey together.

I wanted to write a book about my patients and my colleagues and how we made it through the roller-coaster last decade of the twentieth century, how we moved from helplessly watching our patients die to being able to offer them a treatment course and a fairly normal life expectancy. In that time we saw some patients literally return from death’s door. This kind of dramatic success has not been seen in any other field of medicine, except perhaps following the introduction of penicillin many years ago. I wanted to try to answer the question, “What was it like?” What was it like to care for patients with AIDS, a disease that didn’t even exist when I was in college? How did we deal with dying patients for whom we had a diagnosis but no treatment? How did we care for patients that many in society rejected, patients that many even within the field of medicine rejected? What happened in those years, when the prognosis for a patient with HIV went from nearly hopeless to very hopeful?

From VOICES IN THE BAND, published by Cornell University Press.

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Olga Boudker, PhD

## Molecular 'Mechanic'

Olga Boudker's work with glutamate pumps earns her membership in an elite cadre of investigators

**W**hen a scientist is named a Howard Hughes Medical Institute investigator, he or she joins the ranks of the most renowned biomedical researchers in the United States. These 330 or so explorers and innovators—among them 182 National Academy of Science members and twenty-four Nobel laureates—work to answer essential questions about such topics as how stem cells renew, how genes affect behavior, and how bacteria communicate with each other. It's an honor that carries five years of unrestricted research support; in 2014 alone, HHMI investigators received \$706 million.

In May, Olga Boudker, PhD, associate professor of physiology and biophysics, joined this elite group. One of just twenty-six new investigators chosen from a pool of about 900 applicants, she began her term in September.

The focus of Boudker's work is a molecular machine called a glutamate pump, which she calls her "love and

professional life." Although it's 100 million times smaller than a human being, it's incredibly important, responsible for enabling healthy communication in the brain. Located on each cell's surface, or membrane, glutamate pumps use an elevator-like process to scoop up and move the brain's most common neurotransmitter—glutamate—from the outside to the inside of each cell. This process allows neurons to talk to each other and enables cognition and memory. But if it goes awry, glutamate languishes in the synapses between brain cells and quickly becomes toxic, resulting in seizures or neuropathic pain (a sensation somewhere in the body unrelated to any specific injury). If someone experiences a brain injury or stroke, it's the leftover glutamate spilling throughout the region that continues to kill neural cells and spread trauma.

The Russian-born, third-generation scientist has spent the last fourteen years working to understand how these machines function. Boudker and her team were the first to use X-ray crystallography to capture atomic resolution snapshots of glutamate pumps as they work; thanks to collaborations with Scott Blanchard, PhD, associate director of the Tri-Institutional Chemical Biology Program, she was also the first to use fluorescent techniques to see how the elevator mechanism operates in real time.

As Boudker describes it, this depth of knowledge makes her a mechanic of sorts. While a car mechanic must possess a deep understanding of how each part of a vehicle works—how the pistons are moving and wheels are spinning—Boudker is developing a similar



level of understanding about how a molecular machine functions. And just as a mechanic needs that intimate knowledge to fix a car, Boudker's findings may one day help researchers craft new strategies to treat stroke, traumatic brain injury, and neurodegenerative diseases, and to develop drugs that can improve or fix broken pumps. "With this award, I've been given an opportunity that every scientist wants to have, but not very many get," says Boudker, one of three current HHMI investigators affiliated with Cornell University. "I have carte blanche to pursue any type of research that I'd like, and I'll have HHMI's support no matter what I choose. The question is how to take the best advantage of this opportunity."

That means spurring understanding of how to make molecular machines work faster and more efficiently, or to fix them when they're broken. Boudker describes herself as exploring "uncharted territory." Among the outstanding questions in the field are how to apply her findings on how glutamate pumps work to another molecular machine that resides on the cell membrane; how to better understand how the pumps function so they might be pharmacologically activated down the road; and how they work in tandem with other molecular machines within cell membranes, focusing on the system as a whole.

**'I've been given an opportunity that every scientist wants to have, but not very many get.'**

While the importance of taking full advantage of the HHMI award weighs heavily on Boudker's mind, the scientist who recruited her to WCM is nothing but confident in her abilities. "Dr. Boudker is a deep thinker and also a risk taker—a rare combination in science that can lead to spectacular results," says Harel Weinstein, DSc, the Maxwell M. Upson Professor of Physiology and Biophysics and chair of the department. "Others might shy away from the type of multidisciplinary experiments that she favors because they might not work. But her approach, which combines crystallography and dynamic biology, gives her an enormous advantage."

For her part, Boudker describes her approach as less about taking risks than breaking each experiment down into small, manageable parts. She compares it to writing a book: if authors considered the enormity of the task, they might never set pen to paper. But if they don't worry about the end result, they can take pleasure in the journey. "You hope that if you put in good work, something good will eventually come out," Boudker says. "It might not go as you originally thought, but hopefully you will reach some other goal."

— Anne Machalinski

## Best and the Brightest

For Qatari high schoolers in New York, an 'experience of a lifetime'



Life lessons: Qatari students Wadha Al Nabti (left) and Alyiaa Haji (right) in the lab with instructor Anurag Sharma, PhD (second from left), and professor Stefan Worgall, MD, PhD

**"T**hese four ladies are really an impressive bunch, and you ought to be very proud of them," says Randi Silver, PhD. "They really worked very hard."

Silver, associate dean of the Graduate School of Medical Sciences and professor of physiology and biophysics, is standing at the front of a conference room in the Department of Pharmacology. Around the table are a few other WCM faculty and lab staff, plus some visitors who've traveled 6,700 miles to be here: the family members of the four Qatari high school students who have spent the past week on campus getting an up-close look at life in academic medicine.

It's the midpoint of their two-week stay, and the four soft-spoken young women are presenting the results of the small research projects they've just completed: one (in Silver's lab) on chronic lung disease in premature infants, the other (in the lab of Stefan Worgall, MD, PhD, distinguished professor of pediatric pulmonology) on asthma. They also field questions on how the trip is going so far—and what inspired them to take it in the first place. "I'm currently fifteen, and my school is asking me what I want to do for the rest of my life, so I came here to see if I want to go into the medical field," responds Wadha Al Nabti, a rising junior at Qatar Academy. "This is going to be my deciding point."

The four have come to New York on Doctor of the Future summer scholarships, the prizes given to the winners of WCMC-Q's Healing Hands essay competition. Founded in 2008 as a way to attract talented Qatari students to medicine in general—and to the Doha campus in particular—the contest requires applicants to write 800 words on a medically related theme; this year's topic was "Coping with disability." WCMC-Q faculty choose the four winners who will visit the New York campus in mid-July for (as the 2015 announcement put it) "a fully funded, two-week experience of a lifetime." The contest, which also awards twenty honorable mentions, routinely garners high-quality essays, notes Rachid Bendriss, EdD, assistant dean for student recruitment, outreach, and foundation programs on the Qatar campus. "The panel of judges looks for evidence of research and

**'We want the very best candidates who will get the most out of the experience.'**

a deep understanding of the subject," says Bendriss. "The two weeks spent in the research laboratories in New York are intellectually demanding, so we want the very best candidates who will get the most out of the experience."

So far, about 80 percent of winners have been offered admission to WCMC-Q. They include Faten Aqeel, now a member of the Doha campus's Class of 2018, who attended in summer 2011. "I can describe the experience simply as the door that allowed me to see the field of medicine in a different way," says Aqeel, who's contemplating a career in pediatrics. "In two weeks, I learned a lot about the advanced techniques used

in Weill Cornell research laboratories and I got to shadow physicians in the clinic. I also attended meetings where physicians discussed patient cases, which helped immensely in providing the basics of the medical knowledge I wanted to have at a young age."

During their first round of presentations, the 2015 winners earned kudos for the command of research tools and basic science they'd gained in a single week. Speaking in teams of two, they demonstrated their newfound knowledge of topics ranging from the step-by-step preparation of cell cultures to the varied causes of asthma to the oxygen needs of babies in the neonatal intensive care unit. As Silver said in closing, before the students and guests gathered for a halal lunch: "It was a privilege working with these talented and special young women, who have very successful futures ahead of them."

— Beth Saulnier



Hands on: Shahad Al Sulaiti (right) in the lab with physiology and biophysics staff associate Barbara Summers



## Common Cause

Neuroscientist Conor Liston, MD '08, PhD, is making connections between the roots of autism and depression

Imagine that a psychiatrist sees two new patients. The first says she's having trouble sleeping, isn't interested in eating, and can't find joy in activities she once loved. The second also reports that he doesn't enjoy the things he once did, but his other symptoms are the opposite of the first patient's: he's having a hard time getting out of bed, can't stop eating, and has gained weight. Eventually, both are diagnosed with depression and started on similar courses of treatment.

Like patients with depression, people who have autism spectrum disorder can also experience varying symptoms that fall under the same diagnosis. While one person with autism might be nonverbal and have an IQ of 30, another might have an IQ 100 points higher and speak cogently—but repeat a lot of what he or she says, obsess about specialized topics like trains or the weather, and have trouble connecting with peers. What unites them are deficits in their social interactions, sensory processing, learning and memory, and verbal and non-verbal communication.

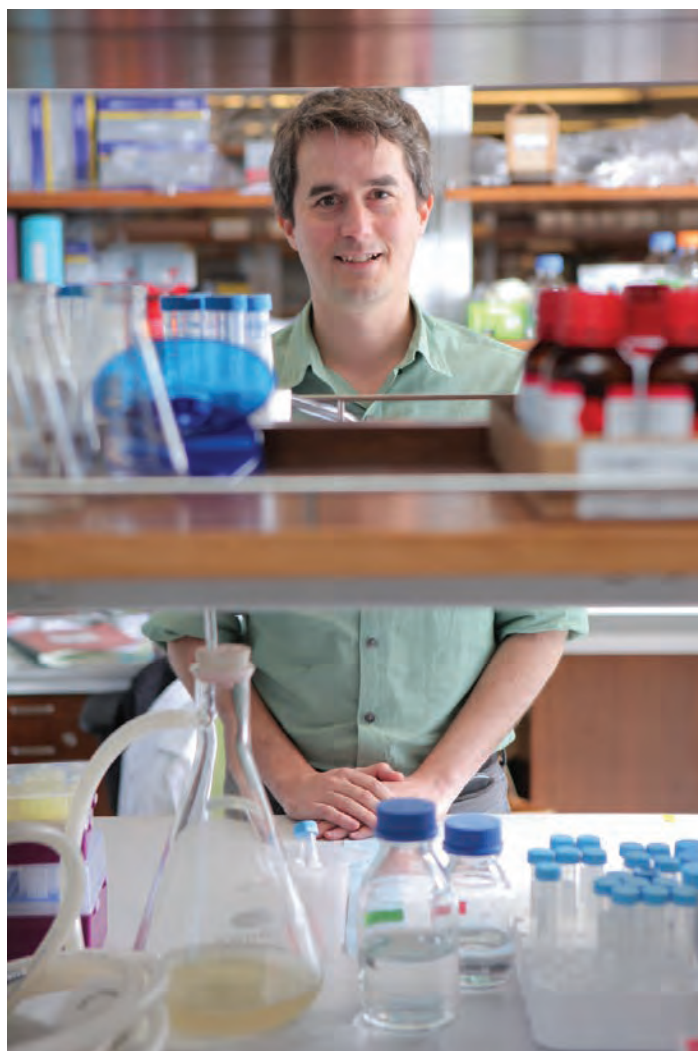
This variability in clinical presentation isn't the only similarity between autism and depression. Some of the root causes of both may be similar, says Conor Liston, MD '08, PhD, assistant professor of neuroscience in the Feil Family Brain and Mind Research Institute—and understanding what drives each condition is key to developing targeted therapies. “For both depression and autism, our long-term goal is to customize treatments rather than taking a one-size-fits-all approach,” says Liston. “We're at the basic science level today, but in the not so distant future, the work we're doing might lead to personalized medicine for neuropsychiatric conditions.”

For years, Liston has focused his studies on how nerve cells within the prefrontal cortex—an area that supports cognition, socialization, and emotion recognition—communicate with each

**'Our long-term goal is to customize treatments rather than taking a one-size-fits-all approach.'**

other and ultimately drive behavior. He theorizes that when there are misfires within these pathways and neural circuits subsequently fail to reconnect—especially during the transition from adolescence to adulthood—depression and other psychiatric conditions may result. Although autism is often diagnosed in childhood rather than adolescence, it too may link back to problems with connections within communication circuits in the brain, Liston says.

To test this hypothesis, Liston will revisit an approach he earlier used to identify subtypes of depression. For that work, which is currently in journal review, he studied more than 700 fMRI brain scans of depressed patients gathered from labs at Cornell, Stanford, and Emory universities, and discovered distinct



Conor Liston, MD '08, PhD

patterns. “We found that patients with depression have abnormal connectivity in circuits throughout different regions of the brain,” he says. “Basically, in the depressed brain, the wiring is off.” He grouped the scans that looked alike, and noted that they corresponded to patients with similar clinical symptoms. The result is what's called a biomarker: a measurable variable—in this case abnormal brain circuitry—that's tied to the same disease process. Ultimately, doctors might be able to discern from a brain scan whether a patient suffers from depression, what sub-type it is, how it might present clinically—and the optimal way to treat it. “Right now, some antidepressants only work in one-third of the people who take them,” Liston notes. “We can do better.”

Liston points out that this work is so challenging—and so important—in part because science still knows relatively little about how the brain works. But new technologies are giving researchers unprecedented insights into its processes, potentially offering great leaps in understanding about neuropsychiatric diseases and how to treat them. To describe the current state of knowledge, Liston offers an analogy to a computer. The brain's physical structure is the hardware, and when something goes wrong—like the development of a tumor—it's easily detectable on an MRI. But “software” problems are a different matter. “In a person with depression, you can't look at their brain and see anything structurally abnormal about it,” Liston says. “There's

something about the software—or the computations being performed by the brain—that is causing a problem.”

For his new work on autism, Liston will use funding from his recent Hartwell Foundation Individual Biomedical Research Award, a grant of \$300,000 over three years. His data set: brain scans and clinical information from 1,000 kids with autism, which affects an estimated one in sixty-eight children in the United States. Because he typically studies adolescence and young adulthood, he'll focus on scans from patients aged ten to sixteen, scrutinizing them for atypical patterns in neural connectivity within the prefrontal cortex. From there, as in the depression

study, he'll try to link the atypical connectivity patterns to specific symptoms. Given the diversity of how autism presents, it's no small task; Liston predicts the project will require the entire three-year Hartwell Award term. “Once we've identified subtypes of these disorders, we can try to figure out what's going wrong in patients' brain circuits, what molecules are causing these wiring mistakes, and what drugs might be used to rewire them in a more functional way,” Liston says. “With better tools, drugs, and interventions, we'll hopefully reach the end goal: to improve each patient's quality of life.”

— Anne Machalinski

## The Anxiety Gene?

Researchers Francis Lee, MD, PhD, and BJ Casey, PhD, close in on why some psychiatric patients respond so well to treatment—while others don't

Psychiatrist Francis Lee, MD, PhD, has had many patients over the years, but there's one who still puzzles him. It's not because the man, who was afraid of heights, didn't get better. Rather, Lee's continued interest is because he got over his fear so swiftly. After Lee recommended a therapist specializing in anxiety disorders, the man did so well with cognitive behavioral therapy (CBT)—without the aid of medication—that he was soon able to go skiing. “As clinicians, we're always amazed that there are some people who respond remarkably well to treatment, whether it be drug or behavioral therapy,” says Lee, the Mortimer D. Sackler, MD, Professor of Molecular Biology in Psychiatry. “I've always wondered: Why is that?”

New research led by Lee and BJ Casey, PhD, director of the Sackler Institute of Developmental Psychobiology at WCM, may help answer that question. Their study, published in March in *Nature Communications*, is the first to establish that people with a certain genetic mutation are less anxious. Those who have this variation can get over their fears more easily, which enables them to bounce back from stressful situations faster than others. The hope is that this discovery will lead to more precise ways of treating the 40 million Americans who have been diagnosed with phobias, panic disorder, post-traumatic stress disorder (PTSD), and



Francis Lee, MD, PhD

other anxiety-related mental illnesses. Says Lee: “We could identify people who have this alteration and essentially guide our treatment of them, based on their genetic signature.”

Earlier work by other researchers suggested a link between human anxiety and anandamide, a compound thought to play a key role in regulating mood. Anandamide has a calming effect on the body and—though it is produced naturally in the brain—is chemically similar to the active ingredient in marijuana. About 20 percent of Americans of European descent possess a mutation that reduces levels of fatty acid amide hydrolase (FAAH), an enzyme that breaks down anandamide; this,

in turn, leads to an increased amount of the so-called “bliss” chemical. Lee and Casey sought to test whether this mutation decreases anxiety-like behavior in both mice and humans, working across multiple WCM labs. (Their colleagues on the project included Charles Glatt, MD, PhD, associate professor of psychiatry; postdoc Iva Dincheva, PhD; Catherine Hartley, PhD, assistant professor of psychology in psychiatry; MD-PhD candidate Andrew Drysdale; and doctoral student David Johnson.)

To begin testing their hypothesis, Lee and his team inserted the variant FAAH gene into mice. Subsequent biochemical and neuroanatomical tests confirmed that this genetic change led to higher levels of anandamide in the mice's brains, as well as a stronger connection between the prefrontal cortex (a region that helps control emotions) and the amygdala (involved with processing fear)—a circuit that is associated with lower anxiety. “It's rare for a genetic mutation to cause what we call a ‘gain of function,’” says Lee. “Usually when you make a genetic mutation, you think of things being lost. So this was very startling and interesting to us.”

Lee's group next conducted behavioral experiments by teaching the mice to associate a loud noise with an electric shock. They then introduced the noise without the shock, showing the mice that they were now safe. At first, the animals





ISTOCK

would freeze whenever they heard the noise, afraid they'd be shocked again. Over several days, however, the researchers noticed that mice with the mutation would freeze less often than the others; in other words, they learned to shed their fear more quickly. Plus, Lee notes, mice with the variant gene spent much more time in the open parts of a maze, rather than staying close to the walls. "This suggested they were more daring and willing to take more risks," he says.

Meanwhile, Casey posed a similar fear-extinction test in humans, who provided saliva samples so the scientists could test their DNA for the FAAH mutation. She and her colleagues had the subjects look at pictures of two colored squares, one of which was paired with a loud noise on the first day. The squares were presented without the noise the

**'It's rare for a genetic mutation to cause what we call a "gain of function." So this was very startling and interesting to us.'**

following day, and fear responses were measured by slight changes in sweat. The result was the same as in the mice: humans with the gene alteration got over their fear more quickly.

Casey says these findings are significant because CBT—much of which relies on exposing patients to a feared situation and gradually desensitizing them—is the standard treatment for most anxiety disorders. Yet this approach only works

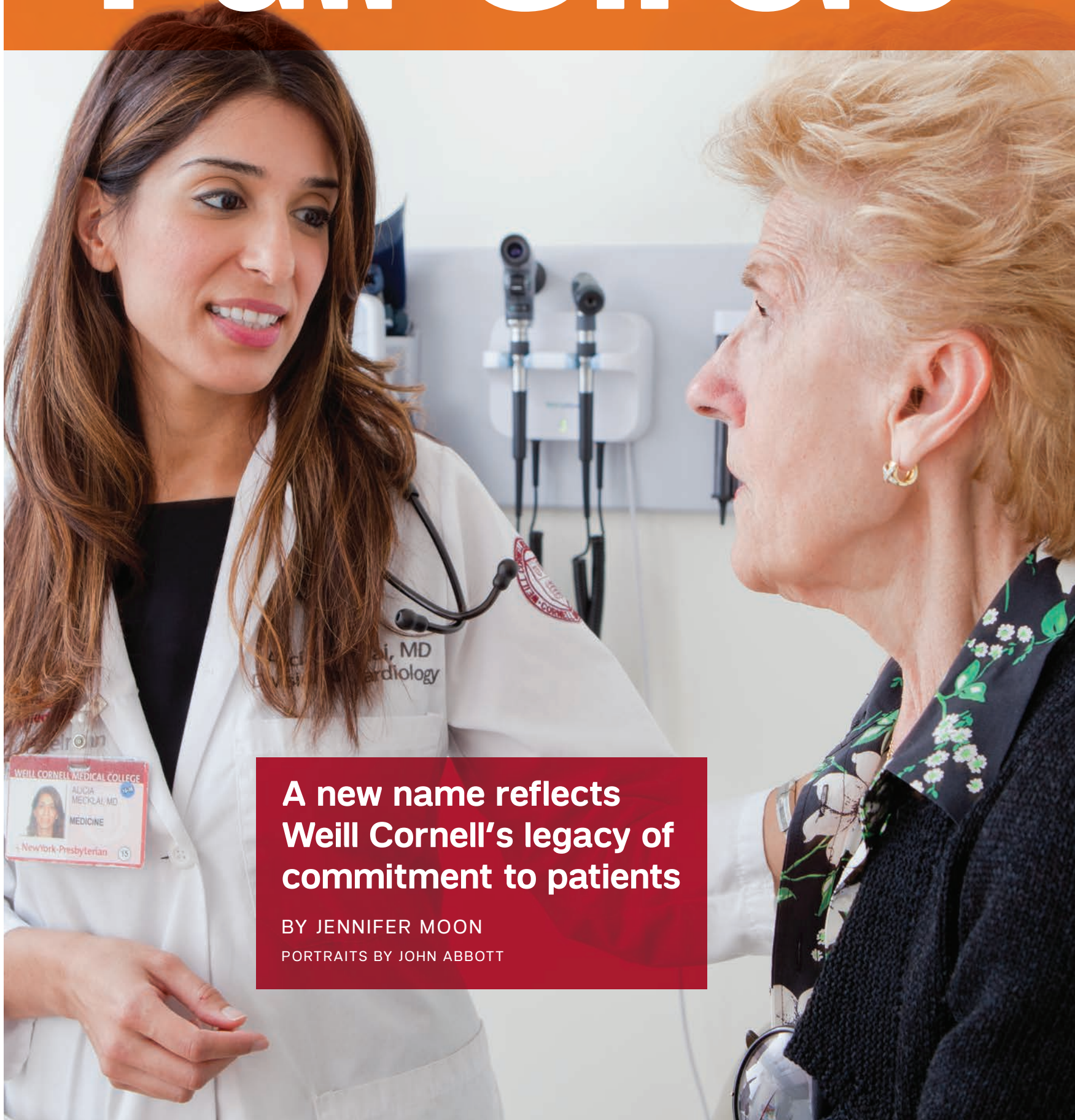
about half of the time. "This variant," she says, "might explain some of that discrepancy in the treatment response." Going forward, Casey adds, this information could aid in developing new anti-anxiety medications that target anandamide—and by knowing a patient's genetic background, doctors could develop a more effective, individualized treatment strategy.

For example, Lee says, a course of exposure-based CBT would be the first option for a patient with this mutation. But a soldier suffering from PTSD, who does not have the variant, could require more therapy sessions than what is typically recommended. "It gives you a little more information about whether they'll respond, not respond, or partially respond," he says. "It helps tailor your treatments in a more precise manner."

—Heather Salerno



# Full Circle



**A new name reflects  
Weill Cornell's legacy of  
commitment to patients**

BY JENNIFER MOON

PORTRAITS BY JOHN ABBOTT



**It has been a dramatic transformation:** from four temporary classrooms to a soaring campus on the Upper East Side, Weill Cornell has evolved over more than a century to meet dizzying changes in medical education, research, and healthcare. Yet the sizable growth it has seen since its founding in 1898—of expanded real estate, rapid advances in technology, and visionary philanthropy—has always been motivated by a desire to serve patients. Today, a new, unified identity as Weill Cornell Medicine reinforces the connection to those patients, who have been the constant, driving force behind the institution's mission.

Succinctly uniting Weill Cornell Medicine's three essential principles—to care, discover, and teach—the new name, launched at the beginning of October, is the culmination of a strategic expansion that has positioned Weill Cornell Medical College, Weill Cornell Graduate School of Medical Sciences, and Weill Cornell Physician Organization to not only thrive in today's evolving healthcare landscape, but to lead the way in shaping medicine for the future. With history as precedent, Weill Cornell Medicine will surely succeed.

**T**he first students to enroll in what was then Cornell University Medical College were taught in four temporary classrooms on the grounds of Bellevue Hospital. It was 1898, and many of their professors had recently seceded from nearby New York University to form their own medical school just a few blocks away. Anticipation was high for a new building being constructed on First Avenue between Twenty-Seventh and Twenty-Eighth streets, which would offer the latest in medical education and patient care. Among the planned amenities were recently invented X-ray machines and an early air-conditioning system that would afford students the opportunity for year-round investigations in gross anatomy.

Weill Cornell Medicine has changed dramatically since those early days. In the first century since its founding, Cornell University Medical College moved from its initial location downtown into a newly built academic medical center on the Upper East Side. It formed overseas military hospital units during both world wars, weathered economic booms and downturns, and entered the new millennium as the newly renamed Weill Cornell Medical College. Already the twenty-first century has seen the creation of a branch campus in Qatar, a reinvigorated commitment to global health, two new buildings that truly embody the cutting edge in clinical care and biomedical research, and now, a Weill Cornell Medicine brand that fully captures the breadth of its endeavors.

Yet its foundation has stayed constant. Long before the medical school formalized a mission statement, the desire to improve the care available to patients drove all its efforts. In 1941, for example, Dean William Ladd wrote: "In the long run all of the teaching and investigative work of the school is directed toward the improvement of the healing art. To teach the art of healing and to restore the sick human being to as near a state of good health and able citizenship as possible is our basic reason for existence."

That commitment to patient care runs through the history of Weill Cornell Medicine to the present day. Back at the turn of the twentieth century, many medical schools were for-profit institutions that focused little attention on science or clinical training. All too few students had actual contact with patients, and many sat in lecture halls for six or seven hours a day.

From the start, Weill Cornell Medicine was different. Its students, which included a large proportion of women at a time when most medical schools were single-sex, met some of the toughest admissions requirements in New York. They were taught the scientific basis of medicine in labs, dissecting rooms, and small-group study sessions, and they learned how to care for patients while shadowing their professors on the hospital wards and participating in weekly medical clinics. Generous support from the school's founding benefactor, Col. Oliver Payne, guaranteed that Weill Cornell Medicine could maintain its high academic standards without any sacrifices in quality.

**Founding principle:  
Weill Cornell Medicine  
has always made  
excellence in  
clinical care its  
central mission.**



Students and faculty learned and taught medicine, while firmly engaged with the needs of the surrounding community. Bellevue, the medical school's first site for clinical teaching and a bustling public hospital, provided a temporary haven for many indigent patients during a period of rapid industrialization and severe overcrowding in the city. The distinguished physicians on Weill Cornell Medicine's early faculty, such as the pioneering surgeon Lewis Stimson and the cardiologist Lewis Conner, served the elite of New York by making house calls; they also provided charity care at Weill Cornell Medicine's free dispensary for the impoverished.

In addition, Weill Cornell Medicine was one of the first medical schools in the country to address the needs of the emerging middle class. An innovative experiment called the Cornell Pay Clinic opened in 1921, charging moderate fees and offering comprehensive healthcare to middle-income patients who could not afford private physicians but were not entitled to free care. Initially, it charged an admission fee of \$1 per visit, plus additional fees for special tests

or services, ranging from 25 cents for prescription medications to \$25 for an X-ray of the gastrointestinal tract. On the day it opened, the clinic was overwhelmed by visits and had to turn patients away in order to maintain the quality of care. Compared to similar facilities scattered around the country that were targeted at middle-class patients, the Cornell Pay Clinic offered both diagnosis and treatment by specialists in a private office environment. This model allowed for a personal relationship between doctor and patient—an amenity that was otherwise available only to the wealthy.

### **The Academic Medical Center: A New Focal Point For Education And Research**

A pivotal moment for Weill Cornell Medicine came in 1932 with the opening of a new medical center on York Avenue, built in partnership with New York Hospital. The decision to build a medical school and a teaching hospital adjacent to each other, made a decade before, was somewhat of a novelty. Academic medical centers had taken root in Europe, but were

only gradually starting to emerge in the United States after the publication of Abraham Flexner's highly influential 1910 report on medical education. Weill Cornell Medicine's goal in tying itself even more tightly to New York Hospital, its clinical affiliate starting in 1912–1913, was to create a medical institution of the future. Its vision, which continues to this day, was to advance the field of medicine by acting on multiple fronts simultaneously: patient care, education, and research.

With a new medical center came major innovations. Dean Canby Robinson reorganized the faculty to create a full-time system of professors who received a salary and were expected to devote themselves primarily to teaching and research. George Heuer, chair of surgery, also introduced the first surgical residency program in New York City. Residents began receiving training for five or six years, as opposed to two, and were housed in the medical center, sometimes so successfully that they neglected to go outside for months at a time. They learned by performing most of the department's procedures themselves, while older surgeons were





The Medical College's original building (left) in the early 1900s. Below: Students on York Avenue circa the Eighties. Opposite: The future home of NYP/Weill Cornell under construction in 1930.

asked to serve primarily as advisors and assistants. These revolutionary changes soon spread to other departments, improving the standards of patient care and, in conjunction with sparkling new research laboratories and teaching facilities, transforming Weill Cornell Medicine into a genuinely modern medical institution.

### A Growing Presence

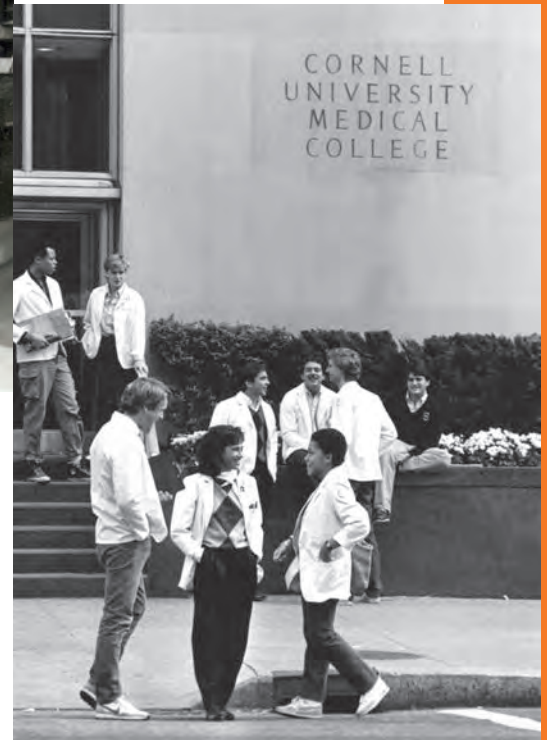
Today Weill Cornell Medicine is leading the way in the development of precision medicine, an approach that aims to provide each patient with the right treatment at exactly the right time. By analyzing the complex interplay between genetics, lifestyle, and environment that makes each person unique, physicians and scientists are moving away from a one-size-fits-all mentality and entering into a new era of personalized, tailored treatments for individuals.

The tools that are making this transformation possible—from sophisticated imaging technologies to genomics—were unimaginable to bedside physicians practicing a hundred years earlier. The size and scope of today's medical schools would also prove astonishing to the faculty and students who moved into their state-of-the-art medical center in 1932, constructed at a cost of about \$30 million, including land, buildings, and equipment.

Fueling Weill Cornell Medicine's considerable growth since that time was a constel-

lation of forces that were shaping medicine, science, and healthcare nationally. One of the most significant was an exponential increase in federal funding for medical research in the years following World War II. Between 1932 and 1957, the dollars spent on research at then-New York Hospital-Cornell Medical Center increased by 3,000 percent, largely due to an influx of funds from the federal government that continued through the 1960s. Weill Cornell Medicine was able to build a robust research infrastructure, recruit new investigators, and direct more resources toward finding better treatments for disease. At the same time, biomedical research became increasingly focused on the subcellular level, with scientists scrutinizing proteins and genes to understand how diseases develop. The basic sciences blossomed in this fertile environment, and in 1952 the Cornell University Graduate School of Medical Sciences was established in New York City. Its students benefited from Weill Cornell Medicine's close partnership with the cancer-focused Sloan Kettering Institute—one that continues today in concert with neighbor The Rockefeller University—and received advanced training in fields including microbiology, biophysics, and biochemistry.

The passage of Medicare and Medicaid in 1965, which provided federal health insurance to new populations of elderly and low-income patients, had a huge impact on







# Care

Commitment to patient care runs through the history of Weill Cornell Medicine to the present day.





Weill Cornell Medicine. Patient care became even more central to its mission, and a precursor to today's Physician Organization was quickly formed to ensure that all patients received the same high quality of care regardless of their ability to pay. Like other medical schools nationwide, Weill Cornell Medicine saw a dramatic increase in clinical revenues that mirrored the explosive growth in federal research funding of previous decades. Its York Avenue campus expanded, with the addition of the Wood Library and Research Building, Griffis Faculty Club, and William Hale Harkness Building. In keeping with the spirit of the 1960s, students began playing a much more active role in their education and initiated community health projects in the Bedford-Stuyvesant neighborhood of Brooklyn and on the island of Jamaica to address the needs of underserved populations.

The makeup of Weill Cornell Medicine's student body itself became much more diverse with the launch of a robust affirmative action program. Roscoe Conkling Giles, the medical school's first African American graduate, received his medical degree in 1915, but between then and the 1970s, less than a dozen people of African descent had graduated as physicians. Through a summer research pipeline program, which continues today, as well as targeted academic and counseling services, Weill Cornell Medicine increased the number of students from groups underrepresented in medicine to at

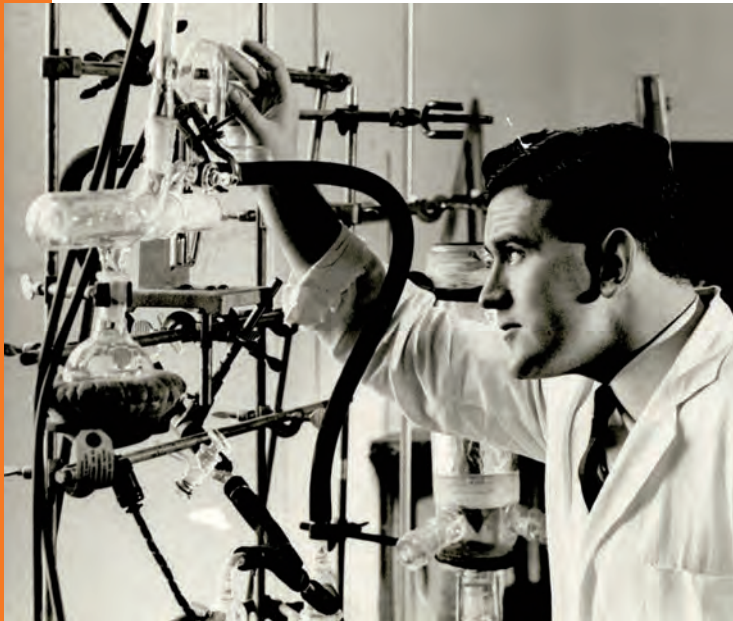


**Opposite: Alicia Mecklai, MD,** assistant professor of medicine, with patient Ruth Kuhlmann. **Clockwise from top left: A demonstration of a scanner in 1974; a surgeon and patient; Connie Guion, MD,** founder of the Cornell Pay Clinic and the country's first female professor of clinical medicine, with a patient in an undated photo.

least 13 percent of each entering class during the 1970s. Weill Cornell Medicine's decision to keep admissions standards for minority and non-minority students the same contributed to a high level of academic success among its entire student body and led to a substantial increase in the number of African American graduates.

Despite these positive developments, Weill Cornell Medicine faced major challenges starting in the 1970s that continued for several decades. Federal funding for research stagnated, the nation's healthcare spending spiraled out of control, and the government and private insurers began looking for ways to cut healthcare costs. Like other medical schools and hospitals, Weill Cornell Medicine responded to these





**Opposite: Dilek Colak, PhD, assistant professor of neuroscience, in the lab with research associate Monica Ferrer Socorro in the new Belfer Research Building. Clockwise from top left: A researcher at work; a lab class in the Fifties; members of the Class of '42 learning biochemistry in 1938.**

financial constraints creatively, by becoming more cost-effective and resourceful in the teaching and practice of medicine. It forged mutually beneficial partnerships with its neighboring institutions and established programs that capitalized on each of their various strengths, such as the Tri-Institutional MD-PhD program with The Rockefeller University and the Gerstner Sloan Kettering Graduate School of Biomedical Sciences. The merger that resulted in the formation of NewYork-Presbyterian Hospital in 1996 represented a different approach, aimed at streamlining operations and consolidating departments across previously separate institutions.

Private philanthropy was crucial in propelling Weill Cornell Medicine, renamed in 1998 in honor of Joan and Sanford I. Weill, toward the new millennium. Extraordinarily generous and timely gifts from Ruth Uris, the Weills, Maurice and Corinne Greenberg, the Atlantic Philanthropies, Robert and Renée Belfer, and many others enabled the medical school to reach beyond the status quo and work toward actively shaping its own future. And that future became much brighter as a series of three strategic plans were implemented in succession.

Vigorous growth occurred in the basic sciences and medical education in the late 1990s. Today, under a new, patient-focused curriculum, medical students are exposed to healthcare delivery from their first day of school. As they follow a panel of patients with chronic illnesses for all four years of their medical education, students come to understand healthcare delivery as well as the physical, social, and psychological effects of disease. They develop a powerful foundation for their medical practice, learning the value of treating patients holistically.

Clinical care continues to be the economic engine by which the institution is able to deliver that education. Construction of the Weill Greenberg Center in 2007 provided a headquarters for ambulatory care—expansion that has continued beyond campus. Since 2013, Weill Cornell Medicine has added more than 40 medical practices in Manhattan, Brooklyn, and Queens and





# Discover

The Belfer Research Building, which opened early last year, serves as the hub for Weill Cornell Medicine's translational efforts.





# Teach

Today, under a new, patient-focused curriculum, medical students are exposed to healthcare delivery from their first day of school.





Opposite: Under the direction of Marc Dinkin, MD '02, assistant professor of ophthalmology, John Paddock '17 uses a special lens to look at the retina of ophthalmology fellow Ajay Jurangal, MD, in the Weill Greenberg Center. Clockwise from left: Students observe a turn-of-the-century surgery at Bellevue; Walter Modell, MD '32, teaching pharmacology circa the Sixties; members of the Class of '75 in a lecture hall in 1972.



extended the services offered by Weill Cornell Imaging at NewYork-Presbyterian. More than 150 physicians at NewYork-Presbyterian/Lower Manhattan Hospital and a growing number from NewYork-Presbyterian/Queens also supplement the ranks of Weill Cornell Medicine faculty.

Healthcare, too, supports Weill Cornell Medicine's deep portfolio of biomedical research. The Belfer Research Building, which opened early last year, serves as the hub for Weill Cornell Medicine's translational efforts, housing some of the more than 50 physicians and scientists recruited since 2012. These investigators are spurring new biomedical research discoveries and applying them to patient care.

Today, Weill Cornell Medicine initiatives touch patients as far afield as Qatar, Tanzania, Haiti, and Houston. Their goals—to bring new medicines and therapies to patients as quickly and efficiently as possible, to understand how and why disease strikes, and to train the next generation of health-care leaders—have become global in scale.

Yet those core aspirations—to care, discover, and teach—have remained unchanged since the very beginning. •



JENNIFER MOON IS THE CO-AUTHOR, WITH ANTONIO GOTTO, MD, OF *WEILL CORNELL MEDICINE: A HISTORY OF CORNELL'S MEDICAL SCHOOL*, TO BE PUBLISHED IN SPRING 2016 BY CORNELL UNIVERSITY PRESS.

FOR MORE VINTAGE PHOTOS, SEE NOTEBOOK ON PAGE 40.









# Our Bodies, Ourselves


Physiatrist Jaclyn Bonder, MD, specializes in the rare field of rehab for women with pelvic floor disorders and other ob/gyn-related issues

BY BETH SAULNIER

PORTRAITS BY JOHN ABBOTT

'So relieved': Jaclyn Bonder, MD, with patient Julia Buldo-Licciardi





'Seeing her, that one visit, my life turned around.'

**C**arter Bisso was about twenty weeks pregnant when the pain started—an ache on the right side of her lower back, between her hip and spine. It got worse and worse, to the point where she couldn't sleep at all. "I would lay down and the pain was absolutely agonizing," recalls Bisso, a marketing professional who lives in the West Village. "When you're in that much pain, the nights are endless. Sitting also hurt, so I would stand and kind of sway at the kitchen counter and try to stay awake. I was almost delirious."

**Happy ending:** Carter Bisso (above) with her son, Cal. **Right:** Bonder and Buldo-Licciardi, herself an aspiring physician.

Bisso's ob/gyn said she could try an over-the-counter sleep aid, but it didn't help; neither did a visit to a pain-management specialist. When she went for an ultrasound at thirty-one weeks, she recalls, "the tech was trying to be supportive, and he said, 'Only nine weeks to go,' and I burst into tears. When you're in that kind of pain, any amount of time is too long." Finally, she called her ob/gyn's practice again to ask for a referral to a physical therapist. But one of the nurses had a different suggestion, someone she'd seen during her own pregnancy: Jaclyn Bonder, MD, medical director of women's health rehabilitation in the Department of Physical Medicine and Rehabilitation at NYP/Weill Cornell.

An assistant professor, Bonder is one of just a dozen physicians nationwide who specialize in women's health rehabilitation with a pelvic floor and ob/gyn focus. She treats numerous pregnant and postpartum patients with musculoskeletal problems, as well as those with other conditions related to pelvic floor muscle dysfunction and weakness including chronic pelvic pain, urinary and bowel issues, pain following gynecologic surgery, pain during intercourse, and pain in the lower back, groin, abdomen, and hips. Zeroing in on diseases and conditions using specialized exam techniques as well as conventional diagnostic methods, she treats patients using a wide range of modalities including physical therapy, oral medications, injections of pain drugs, hormone therapy, and topical medications.

"When I went to her, it was remarkable," Bisso recalls. "I told her roughly where the pain was, and she pointed to a spot on my back and asked, 'Is it right here?'"—and it was the dead-on spot that was hurting." Bonder had Bisso lie down and raise each leg; the right one was harder to lift. "Then she leaned over and squeezed in on my hips and told me to lift my right



leg again,” Bisso says. “And it was almost as if it was air, it lifted so easily.”

It turned out that Bisso’s problem was primarily related to the sacroiliac joint, a pelvic joint in her buttock. Bonder explained the importance of wearing a pregnancy support garment commonly known as a “belly band”—which, despite its name, is more about reinforcing the joints of the pelvis as they loosen and the muscles stretch in preparation for birth. She also cautioned her against exercises that stretch and open the hips, which Bisso had been doing avidly in the mistaken belief that they might help, and offered advice for modifying her prenatal yoga routine. “Seeing her, that one visit, my life turned around,” Bisso says. “I was so scared about my pregnancy, not being able to sleep. I didn’t know how I was going to make it through to my delivery date, living in that kind of pain. One visit made such a difference, and now I’ve told all my pregnant friends about her. She was so patient and attentive and professional. It really was a wonderful experience.”

Bisso—who gave birth to a healthy baby boy, Cal, in June—is just one of many patients who credit Bonder with helping them overcome pain and restore their physical function. For Bonder, who contemplated a career in physical therapy before applying to medical school, such outcomes are immensely satisfying. “When patients come to me, they’ve often lost hope,” she says. “I find it really gratifying to keep digging, to think outside the box to try to figure it out. I put myself in their shoes and think how upset and miserable I’d be if I couldn’t sit on the floor to play with my son or lift him out of the bath. Like any doctor, it feels great to make a patient feel better—to help give them back parts of their lives.”

Bonder’s path to her unusual specialty began with a postcard. During her residency in rehab medicine (also known as physiatry) at NYU, she got notice of a continuing medical education course at the Rehabilitation Institute of Chicago on rehab for women with pain and other musculoskeletal issues related to pregnancy and birth. Since she’d loved her ob/gyn clerkship during medical school and had a strong interest in women’s health, it felt perfect for her—and her residency director agreed. In Chicago, she learned to perform a specialized procedure known as a musculoskeletal pelvic floor exam, an internal and external exam in which the physician assesses the status of the pelvic floor—the muscular base of the

abdomen, attached to the pelvis—and related joints, muscles, and nerves. Although it takes just ten minutes or so, the exam is not routinely taught in medical school or postgraduate training.

After doing additional training in Chicago during her residency, Bonder became one of the only physiatrists in New York who address conditions related to pelvic floor pain and dysfunction. She now gets referrals to treat patients, including men, with a wide range of symptoms and conditions. “She’s a very caring physician and a wonderful colleague to work with,” says Bilal Chughtai, MD, an assistant professor of urology who specializes in treating women. “These are difficult cases in general, because these patients are often silent sufferers who’ve had their conditions for a long time. You’ve got to be very good at speaking to them and bringing it to the surface, because a lot of times they won’t really talk to you about it. So it’s important that you make patients comfortable.”



One patient who struggled for years was Julia Buldo-Licciardi, a twenty-six-year-old instructor who teaches undergrads at NYU. Years ago, when she was a ballet dancer, she tore a muscle in her hip—and that injury may or may not have contributed to a constellation of symptoms that started plaguing her three years ago including constipation, abdominal numbness, and vaginal pain.

Since all of Buldo-Licciardi’s test results were unremarkable, she says, “everybody kept telling me I was fine,” and she eventually sought mental health treatment on the assumption that the symptoms must be related to stress following the death of a close relative. “When I got Dr. Bonder’s name, I was so relieved,” says Buldo-Licciardi, who was referred by Orli Etingin, MD, the Lisa and Sanford B. Ehrenkrantz Professor in Women’s Health and medical director of the Iris Cantor Women’s Health

Center. “When I got to her office, I felt like I was finally being taken care of. She actually knew what I was talking about, and she was completely in tune with all my symptoms. It wasn’t like it was foreign dialogue to her.”

Bonder prescribed a course of physical therapy—a combination of at-home exercises and sessions with a specialist in pelvic floor rehab—and the results have been excellent. Buldo-Licciardi’s pain and numbness have abated and her gastrointestinal function is now normal. “I’m gaining more sensation in my abdomen and we’re releasing the vaginal muscles in the pelvic floor, and that’s alleviating a lot of the pain, so it’s been incredible,” she says. “I feel very lucky.”

In the future, more patients may not need to count on luck to feel better. Bonder and a colleague at Columbia are surveying ob/gyn residents throughout the New York metro area on their knowledge of lower back and pelvic pain during pregnancy and after delivery, including their thoughts on when and how they’d offer treatment. The ultimate goal is to devise educational tools to make clinicians more aware of such conditions and their possible remedies. “Most obstetricians are not trained in what to do with these patients, because the symptoms are muscle and joint related, not necessarily gynecologic,” Bonder says. “The natural inclination is to tell them, ‘You’ve just delivered a baby, you’ve got some pain, it’s normal, it’s going to get better, just give it some time.’ But that’s not always the case. If you take ten patients, it’s probably true that most of them are going to get better—but if you don’t do anything, the others may not, and may get worse. And the earlier you treat them, the likelier they are to get better.”

Bisso improved so much from following Bonder’s advice that she canceled a follow-up appointment. But she went back to see her about three months after giving birth, when she started to feel pain in the same area of her back. “I wanted to be preemptive,” says Bisso, “and not wait until I couldn’t sleep at night.” It turned out to be just muscle strain, and the pain abated after Bonder suggested Advil and some stretching exercises. “I wish more women didn’t just accept that we’re supposed to suffer—and that there were more doctors like Dr. Bonder,” Bisso says. “Especially in the third trimester, everyone says you’re not going to sleep, you’re counting down the days, you’re almost expecting it to be rough. But in the end, that’s not what it had to be for me.” •

## Notebook

News of Alumni

Dear Alumni,

With Commencement and Orientation, the life cycle of a medical school continues. Last May, we had the great pleasure of welcoming ninety-six graduates from our New York campus and forty-two from our campus in Doha, Qatar, to our esteemed Alumni Association. These new alumni will help carry the banner and will represent the best of Weill Cornell Medicine in many different avenues.

And in late August, we were equally excited to welcome our new recruits: the 106 members of the Class of 2019. These bright, energetic, and ambitious students are starting their medical journey at our illustrious school. The Alumni Association is proud to play a prominent role in providing a warm welcome to our new students and getting their medical careers off to a great start.

During the sometimes overwhelming activities of Orientation, The Buster Foundation sponsors the White Coat Ceremony, a joyous yet impactful ritual in which incoming students don the physician's uniform and reflect on the momentous responsibility and obligation they will soon assume. Later on in the week, the Alumni Association sponsors a cocktail reception that facilitates conversation, connection, and bonding. I would like to give a special mention to the alumni who attended the events and demonstrated the commitment of our alumni to current students. They include Carl Anderson, MD '83, Frank Bia, MD '71, Curtis Cole, MD '94, Lew Drusin, MD '64, George Ellis, MD '74, Joe Habboushe, MD '07, Paul Miskovitz, MD '75, Connie Newman, MD '78, Anthony Rosen, MD '10, Barry Smith, MD '72, PhD, and John Wang, MD '79.

Another visible sign of our dedication to students is the Paul F. Miskovitz, MD '75, Stethoscope Fund. The stethoscope endures as a tool and symbol of our profession. I vividly remember when Cornell President Dale Corson playfully displayed the "tubes" in his coat pocket to an audience in Uris to emphasize his close bonds to the physicians of the Medical College. The Alumni Association made a special appeal to its membership to provide a stethoscope to each new student, and we are delighted to report overwhelming support with nearly \$40,000 received from more than 200 alumni!

Finally, at our most recent meeting of the Board of Directors, the Alumni Association reviewed a number of excellent proposals submitted by our students requesting sponsorship for their outreach activities to the community and the patients they want to serve. I like to think of the Association supporting our students and alumni "from cradle to grave"; look for pictures of these fabulous events that represent our support of the students in the "cradle" elsewhere in this issue.

If you are looking for a way to express your support of students and your medical school, I hope you will consider the Campaign for Education, which is an ambitious \$50 million effort whose objective is to transform our curriculum and ensure that we shape the best doctors who are dedicated to improving the lives of patients. We are very proud that this campaign is co-chaired by Richard Cohen, MD '75, clinical professor of medicine, who notes, "It's exciting to be a part of these transformative efforts and empower our newest doctors to lead the charge in patient care, biomedical research, and medical education." This campaign is making excellent progress and is now at 50 percent of its target.

Thanks to all who have generously contributed to the Association with your time, support, and commitment, all of which greatly strengthen our community!

*Warm regards,*

*Spencer Kubo, MD '80  
President, WCM Alumni Association  
spencer.h.kubo@gmail.com*



PROVIDED

Spencer Kubo, MD '80



Anatomy lesson: Do you recognize these Weill Cornellians, or any of the others who appear on the following pages? Let the Office of External Affairs know at [pr@med.cornell.edu](mailto:pr@med.cornell.edu).



## 1930s

**Arthur D. Hengerer, MD '39**, celebrated his 102nd birthday in May 2015 with his children. His wife, Janet, passed away in May 2014. They were married almost 73 years.

## 1940s

**Herbert I. McCoy, MD '45**: "I'm just back from a Danube river trip with my wife, Lani, and some of our family. Thoroughly retired here in lovely La Jolla, CA."

**Arthur B. DuBois, MD '46**: "After graduation from CUMC, I interned in medicine at New York Hospital, then entered the Naval Reserve in the medical corps, stationed first at St. Albans Naval Hospital, then at Sick Quarters in Bancroft Hall, USNA, Annapolis, MD. After two years, I was awarded a medical research fellowship under Fenn, Rahn, and Otis, in Rochester, NY, followed by a year as senior assistant resident at the Peter Bent Brigham Hospital, then academic appointments at the University of Pennsylvania Medical School in physiology and medicine. In 1974, my wife, Robin, and I moved to New Haven, where I became director of the John B. Pierce Laboratory, following James D. Hardy, a physicist who had worked in thermal physiology at CUMC and the University of Pennsylvania. At Yale, I was professor of

public health and physiology. I am an emeritus, but also work at the Koerner Center for retired Yale professors, and continue looking after my wife at home. We have three children, Anne, Brooks, and James, who have careers of their own. We live in New Haven, CT, and have a summer house in Woods Hole, MA."

**Margaret Swann Norris, MD '49**: "I'm living in a retirement apartment not far from Vanderbilt University and remain fairly active. I was the only one from the Class of '49 at our 2014 reunion and would like to hear from some classmates."

## 1950s

**Sarah Burton Nelson, MD '50**, lives in an assisted living community in Scottsdale, AZ, with her husband, Bernie. Last year they had a "triple 0" celebration in honor of Sarah's 90th, Bernie's 80th, and 20 years of marriage. A retired psychiatrist, Sarah enjoys reading, playing piano, seeing friends, and her lifelong passion: swimming. Lately she's been studying Total Immersion, a method of freestyle that emphasizes streamlining and propelling the body with core muscles, as dolphins do.

**Robert Boyer, MD '52**: "I'm enjoying retirement. I'm active in our town as a

member of the board of health and the senior citizens committee. I see **Allan M. Levy, MD '51**, and **Ron Allen, MD '54**. I'm also in touch with **Charlie Malone, MD '53**."

**Roy H. Lucas, MD '52**: "I'm enjoying retirement and keeping up with our nine grandchildren. All is well."

**Allen W. Mead, MD '53**, married Mary Evelyn Dean on April 24, 2010.

**Harry Daniell '50, MD '54**: "I retired from my office practice on July 31, 2015, but continue active teaching as a clinical professor in the local UC Davis Medical School in their residency programs in Redding, CA, while enjoying my more frequent naps."

**George Dermksian, MD '54**: "Tammy and I were delighted to be guests of **Henry Erle, MD '54** (at his apartment in the sky) at an elegant dinner during our 60th Reunion. Great to spend some pleasant time with him, **Seneca Erman, MD '54**, and **Bruce Levy, MD '54**. And a very special surprise to meet **Robert Runyon, MD '54**'s son, who is a student at the medical school. He certainly is his father's son in looks and charm. Henry is a wonderful host. Also surprised to receive a phone call from **Walt Freedman, MD '54**. Both he and Seneca are in the Tucson area, but apparently are not in contact."

**William H. Gordon Jr., MD '54**: "I'm retired from Kaiser Permanente. I live in Upland, CA, with family nearby, and am

**'Retirement is fine: travel, golf, bridge, theatre, opera, and museums. I'm enjoying my five children and nine grandchildren. I'm in good health. What could be bad?'**

**— Stanley Landau  
53, MD '56**

active in the Claremont University Club and Episcopal Church. One son lives in Raleigh, NC."

**J. Kenneth Herd, MD '54:** "I'm still struggling to publish a theory predicting fundamental causes of signs and symptoms of cystic fibrosis. I am professor emeritus of pediatrics at East Tennessee State University."

**Ralph C. Williams Jr. '50, MD '54:** "I'm retired now from practice and concentrate on doing my art—watercolors, oils, and pastels—along with taking art lessons from an excellent teacher here in Santa Fe once a week. Every now and then I get lucky and sell one. I keep in touch with classmates **Jack Rose '50, MD '54**, and **Ken Hubel, MD '54**. Summer here in Santa Fe is when the opera brings so many people into town."

**William Hillis, MD '55:** "I've now moved to a final retirement spot at Ashlar Village. Life is great; health is good."

**Joe Johnston, MD '55:** "My son got the 'Family Practice Physician of the Year' award for the State of Mississippi (as did I in 1980). The newspaper article shows a picture of three generations of physicians. Life is good!"

**Artemis G. Pazianos-Willis, MD '55:** "I continue to travel extensively with some of my college friends. Last November I had a fabulous trip to Iran, and in April of this year I went on a pilgrimage to Israel with my church. At home I continue to garden and swim—in summer, of course."

**Donald P. Feeney, MD '56:** "I turned 85 recently and am enjoying my retirement after a wonderful career in urology, followed by administrative medicine with WellPoint/Anthem in their Chicago office at the Sears Tower. My wife, Fran, whom I met when she was a student nurse at the Cornell College of Nursing, is also alive and well. We have four living children, including a son who is a practicing urologist in Cincinnati, and five grandchildren. One of my granddaughters will be entering medical school (hopefully Cornell) in the fall of 2016. Best wishes to all. Fran and I hope to attend my 60th Reunion next year."

**Stanley Landau '53, MD '56:** "Retirement is fine: travel, golf, bridge, theatre, opera, and museums. I'm enjoying my five children and nine grandchildren. I'm in good health. What could be bad?"

**William G. Loomis, MD '56:** "My wife, Jeannie MacRae Loomis, died of natural causes on May 13. When we met she was assistant head nurse in the postpartum unit at Cornell–New York Hospital. We met at CUMC and married on June 9, 1956, three days after my graduation. Ours was a Cornell med school romance. She is survived and much loved by me, five children, and nine grandchildren."

**Bill Plauth Jr., MD '57:** "Bobby, my wife of 54 years, and I are 'sailing along' under somewhat 'shortened sail' these days. Memory and stamina

are noticeably down a bit, but otherwise we're doing well. I enjoy the WCMC magazine very much. I'm impressed with all your progress. I hate to hear of deaths, but so be it. I saw **Don Lathrop '53, MD '57**, and his wife, Jackie, in April in California—a happy reunion. Best wishes to all."

**Bernard Siegel, MD '57:** "I'm still active helping people with cancer to heal their lives and love their bodies and induce self-healing. Read Solzhenitsyn's novel *Cancer Ward* and you will get the connection."

**Robert L. McKee, MD '58:** "Grace (an RN) and I participate in the Dutchess County Medical Reserve Corps that promotes preparedness for calamitous events and supports the Red Cross when it runs shelters in times of floods and fire."

**John T. Queenan, MD '58,** is professor and chair emeritus at Georgetown University School of Medicine. He also served as professor and chair at the University of Louisville. While a faculty member at Cornell University Medical Center, he began pioneering work in Rhesus disease management and prevention. He has conducted research in ultrasound, fetal physiology, and ultrasonographic detection of the timing of ovulation. Dr. Queenan was the founder and editor-in-chief of *Contemporary OB/GYN* and deputy editor of *Obstetrics & Gynecology*. He focused on global health at the US Agency for International Development, trained healthcare providers at Holy Family Hospital in Bethlehem, and developed a resource-based course for physicians in India. The Pregnancy Foundation recently named the Queenan Fellowships for Global Health in his honor.

**George E. Shambaugh III, MD '58:** "I continue to teach as a volunteer, and this year was given the award 'Distinction in Endocrinology' by the American College of Endocrinology at their national meeting. I also work on my banjo lessons, trying to rehabilitate my wrist functions after surgery following a fall and consequent fractures. The tart cherry orchard produced a pretty good crop after a numbing frost toward the end of the blossom season. Hopefully there will be a small profit so I can report to the Feds that I am not in the hobby business but am at work feeding the world. Come on down to see us in Atlanta. We have plenty of room in our current home."

**Henriette Abel, MD '59:** "I am still practicing dermatology four days a week. My husband, **Bob Stackpole, MD '56**, finally retired as of June 30 after practicing urology in eastern Union County, New Jersey, for 51 years. We spend a great deal of time in the summer at our farm in Amagansett, NY, where our children and five grandchildren love to visit. We still do not work on Wednesdays—in the winter we see a number of Broadway shows and also attend lectures at the Metropolitan Museum of Art. We are both doing well, but slowing down."



However, we did spend two weeks in France this past spring."

**Harry G. Preuss, MD '59:** "The American College of Nutrition honored me with the Presidential Recognition Award at their annual meeting held in San Antonio. I remain on their board of directors. I continue my research in the Biochemistry Department at Georgetown University Medical Center. At this time, I'm working on interesting data showing that fasting blood sugar levels (FBS) are more important biomarkers of health than total cholesterol. Most interesting, the higher the level of glucose in the non-diabetic range, the worse become the various components that make up the metabolic syndrome. Recently, I was awarded a patent on finding that the carotenoid astaxanthin is an important preventative of heat stress. Georgetown University then sponsored me, and I received membership in the National Academy of Inventors. My wife, Bonnie, who worked as a nurse in labor and delivery at New York Hospital when we met, continues with her love of nursing, working 12-hour shifts in the Emergency Department of Inova Health Systems. Our son, Jeffrey, an emergency room physician in Roanoke, VA, was recently awarded the Best Bedside Manner Award in Emergency Medicine in Southwest Virginia. The award is presented for 'kindness, empathy, attentiveness, and care for patients requiring prompt medical attention and delivery of urgent medical evaluation and treatment.'"

**James K. Van Buren '55, MD '59:** "Mary and I still enjoy my retirement. Occasionally I shoot my age at golf. I enjoy being part of Emory University's Emeritus College, which gives exposure to a lot of fun and interesting non-medical information and programs. Good health!"

## 1960s

**Elizabeth Barrett-Connor, MD '60:** "I had a fabulous residency at Parkland SW University Dallas under the leadership of Don Seldin and many others. I was married in London in 1965 to James Connor, MD, who was chief of pediatrics while I was learning about diabetes, CVD, and sex differences. I became Distinguished Professor of Family and Preventive Medicine and Internal Medicine. I'm still working full time. Jim and I look forward to Reunion in New York City."

**David Robbins, MD '60:** "I'm enjoying retirement in Highland Beach, FL. Would enjoy working with other alumni in building

an active Cornell presence in Palm Beach and Broward counties. Please e-mail: davidbrucerobbins@gmail.com."

**H. Spencer Bloch, MD '63:** "I certainly enjoyed chatting with classmates at our 51st Reunion. I'm practicing two days a week in anticipation of completing this phasing out sometime. An eight-year effort to have a second book published on the psychological development and treatment of adolescents came to fruition in March. By contrast, my earlier book (1995) on the same subject was accepted within a couple of months, and had a good run. I'm not sure how to interpret this last hurrah."

**Richard M. Ehrlich '59, MD '63:** "Steidl Publishers will publish *Face the Music* in September 2015. It's a photography project of 41 well-known musicians, including Quincy Jones, Ringo Starr, Herbie Hancock, Dave Brubeck, Wayne Shorter, Iggy Pop, Esperanza Spalding, Herb Alpert, Sir Graham Nash, Philip Glass, Jean-Yves Thibaudet, and Emmylou Harris, listening to music of their own choice, capturing in portraiture their inner feelings and emotions. As music is central to autism treatment, this project will be the centerpiece for fundraising efforts for autism research through gallery exhibits."

**William Tyler '59, MD '63:** "I really enjoyed the 50th Reunion. Thanks to all."

**Robert D. Schrock Jr., MD '64:** "Thank you for your support when I had to miss our 50th Reunion. I am happily on the other side of an autologous stem cell transplant at Duke for mantle cell lymphoma. They say that I have sailed through it, but weighing in at 137 pounds I am not sure that I'm eager to go sailing again anytime soon. On the other hand, I feel very fortunate that I can look forward with enthusiasm to a continued active lifestyle."

**Jonathan Adler, MD '65,** announced his retirement in 2014 after more than 40 years of providing exemplary patient care at Winchester Hospital in Winchester, MA. As a tribute to him, the hospital renamed one of its recently renovated units the Dr. Jonathan and Sunny Adler Medical/Surgical and Oncology Unit. For months, hundreds of gifts poured in from a loyal fan club of patients, colleagues, friends, and neighbors. Dr. Adler writes, "I retired from active practice in January, although I still do consultations in my specialty of infection."

**Deborah Pavan Langston, MD '65:** "I finally retired on June 30, but was appointed to the board of trustees of MEEI/MGH Hospitals, so no rest for the weary. I'm currently in that well-known early retirement state of feeling a bit down as I am not



Journal club: Keeping up on the scientific literature, in the age before digital media. For more institutional history, see "Full Circle" beginning on page 26.



Flashback: Olin Hall in 1984

**'An ob/gyn's nightmare—I injured my hand. I contacted Scott Wolfe, MD '84, on Sunday and he had me in the office the next afternoon and on the OR table at 5:30.'**

**— Libby Sauter, MD '84**

working but haven't gotten all those activities I had planned (teach at Harvard part time, more time with grandkids, photography, my house on Martha's Vineyard) fully up and running yet. I hear it takes about six months."

**Robert A. Pezzulich '61, MD '65:** "I am alive and well. My dear wife of almost 50 years passed away two years ago. On February 28, 2015, I remarried. The former Alice Goodman is a nurse practitioner and two of her three sons are physicians, the oldest being the chief of thoracic surgery at the Wilkes-Barre division of the Geisinger Medical Center. It was a totally unexpected occurrence in my life—and a totally happy one. Wishing all health and happiness."

**Robert S. Ennis, MD '67:** "I'm living with my lovely wife of 50 years, Lorelei, in Weston, FL, with kids and grandkids nearby. A few hobbies, travel, and the boards of several philanthropic organizations make a full life. Best regards to my friends and classmates at WCM."

**Anthony Turel Jr. '63, MD '67:** "I'm semi-retired. For the past seven years, I've worked at the Hershey Medical Center in the Department of Neurology, helping in clinical trials for MS and in the MS clinic. I'm assisting in translational research with basic scientists Ian Zagon and Patricia McLaughlin in the biological effects of low-dose Naltrexone."

**Elaine Sarkin Jaffe '65, MD '69:** "I was named the recipient of the 2010 Rous-Whipple Award from the American Society of Investigative Pathology. From the award letter: 'The ASIP Rous-Whipple Award is given to a senior scientist with a distinguished career in research that has advanced the understanding of disease and with continued productivity at the time of this award. You are the first individual from the National Institutes of Health to receive the award in its 40-year history.'"

## 1970s

**Peter W. Blumencranz, MD '70:** "We recently had our fourth grandson. I was a contributor to the newly released book *Operative Standards for Cancer Surgery* from the American College of Surgeons Clinical Research Program."

**John Kirk, MD '70:** "I'm still practicing internal medicine full time—mostly geriatrics and palliative care—at New London Hospital in New Hampshire, teaching Dartmouth-Hitchcock students and residents, and participating in primary care research with the Dartmouth Coop Project. I was privileged last month to be one of three internists invited to join the leaders of all the family medicine organizations in the Keystone IV Conference in trying to define the essential characteristics and qualities of good primary care in the changing and challenging healthcare environment. I'm also enjoying three capable children and four grandchildren."

**Richard A. Lynn, MD '71:** "I am director of the Society for Vascular Surgery. As of August of this year, I'm the chief quality officer for the Visiting Nurse Association of Florida. And I now have 20 grandchildren from my three Orthodox rabbi sons!"

**Charles Jarowski, MD '72:** "My wife, Joan, and I closed my private practice in medical oncology and hematology on the East Side of Manhattan associated with NewYork-Presbyterian Hospital. I saw my last patients in April 2015. We decided to retire in France and are now living in Provence at Domus Alba for most of the year. We will return to the New York area for several months each winter. We are enjoying ourselves. One of my sons and his two grandchildren also live in Europe. Any classmate travelers in southern France should e-mail us at stretchjnyc@gmail.com to arrange a meet-up."

**Jeff Urman, MD '72:** "I retired from Kaiser after practicing rheumatology there and serving as physician-in-charge. I continue teaching at Stanford University as a voluntary clinical professor of medicine. I now work for the Medical Board of California and interview physicians regarding quality/practice issues. Marian and I have two sons and four grandchildren who live in Massachusetts and Sherman Oaks, CA. We've lived in Palo Alto for 38 years and love it. In March of this year Marian and I got together with two of my former gross anatomy partners, **Glen Wiggans, MD '72**, and his wife, Marlo, and **Mark Vrana '68, MD '72**, and his wife, Jody, for a five-day bike trip in Death Valley. We had a wonderful time, and it was fun talking about the great times we spent together at WCM."

**Allan Gibofsky, MD '73,** was recently named associate editor of the *European Journal of Rheumatology*. He is currently co-director of the



Clinic for Inflammatory Arthritis at Hospital for Special Surgery.

**John P. Mitchell '69, MD '73:** "My play *The Chosen Few*, featuring a Cornelian circa 1942, had a staged reading on July 13. The theater (MIST Harlem, 165 seats) was filled to standing room only. Many Cornellians were present. The feedback has been tremendous. We are waiting for financial support. I look forward to nine performances this fall. The main character, Aloysius Sam, was a member of the Big Red Marching Band before being drafted into the Marine Corps (when they opened up to African Americans). He becomes the bandleader of the first Marine Corps Negro Marching Band. Later he is shipped out to Iwo Jima, to that iconic battle."

**Stephen L. Hoffman, MD '75:** "This has been a wonderful and gratifying year. Seth and Benjamin, our youngest sons, have finished their second year of MD and MD/PhD programs, respectively, working hard but loving it. Alexander, our oldest, is the in-house counsel for our two companies and keeping us on track. My wife, Dr. B. Kim Lee Sim, was recently featured in an article in Malaysia, and became a visiting professor at the University of Malaya. In October 2014, I gave Medicine Grand Rounds at Weill Cornell Medicine (2014 B.H. Kean-Boxer Family Foundation Lecture in Global Health). Kim Lee and I were honored to be in a photo by Annie Leibovitz, which was released in January 2015. In 2014, the malaria vaccine we developed, PfSPZ, won the Vaccine Industry Excellence (VIE) Award for best prophylactic vaccine, and this year I won the VIE Award for best biotech CEO. We have achieved 100 percent protective efficacy against malaria in two clinical trials and are now conducting trials at multiple sites in Africa, Europe, and the US. Thus, we are constantly on the move and marching toward a licensed, highly protective malaria vaccine ([www.sanaria.com](http://www.sanaria.com)). If you are in the D.C. metro area, please visit."

**Elwin Schwartz, MD '76:** "Since retirement from active practice four years ago, the charity eye clinic that I established in Riobamba, Ecuador, has grown and flourished. We have hired a full-time ophthalmologist from Nicaragua and also have surgical teams visiting from the US on a regular basis. We have purchased land and will soon build our new dedicated clinic with a surgical suite. Cheryl and I continue to ski, sail, and golf and enjoy our four grandchildren."

**Vincent deLuise, MD '77:** "Regards to all '77 classmates. I'm still teaching ophthalmology

at Yale, but have retired from clinical practice. I'm also active on the WCMC Music and Medicine Committee. I've been engaged in giving a series of lectures on 'Music and the Brain' and playing clarinet with an area chamber ensemble."

## 1980s

**Francis X. Brickfield, MD '81:** "I graduated from George Mason University School of Law, *magna cum laude*, and took the Virginia Bar exam in July. Returning to school was a fabulous experience."

**Walter E. Donnelly, MD '82:** "Well, the rugby game has its men of fame, but to see my old hooker now president of our Alumni Association! **Spencer Kubo, MD '80**, always was quick on his feet. The Donnelly children are doing well: Kevin is set to graduate from Ohio State Medical School this spring and Ryan and Erin are both doing biomedical research at OSU. The bicycling is beautiful in Ohio."

**Peter Judson, MD '82, and Grace Makari-Judson, MD '82,** enjoyed celebrating the graduation of their son, **Timothy Jack Judson, MD '15**, from Weill Cornell Medicine in May. They write, "It is amazing that two generations of Judsons were mentioned by **Lew Drusin, MD '64**, and **Ralph Nachman**."

**Robert Kalb, MD '82:** "Last month I was in Los Angeles for a meeting and had an opportunity to see my old friend, **Mark Tramo, MD '82**. Mark is thriving in Southern California, combining both his scientific interest in the perception and processing of sound as well as a practice in clinical neurology. Since obtaining his PhD with David Hubel (a Harvard Nobel laureate), Mark has done pioneering work on music perception. He is organizing a multi-disciplinary institute at UCLA focusing on research on auditory perception, music, and the mind. This grows out of his lifelong love of music. Mark has created studio space in his home where he continues to generate new and exciting music. It was a blast to see him and I'm gratified by his continued successes."

**Barnaby Starr, MD '82:** "I miss all my classmates/friends very much, but continue to enjoy my private practice in general pediatrics in Baltimore."

**Michael M. Ziegelbaum, MD '82:** "I just completed my term as president of the Nassau County Medical Society and

am now president-elect of the medical staff at Long Island Jewish Hospital. I go to Haiti yearly as a medical volunteer and started the Haitian American Joint Conference on Urology."

**Libby Sauter, MD '84:** "An ob/gyn's nightmare—I injured my hand. I contacted **Scott Wolfe, MD '84**, on Sunday and he had me in the office the next afternoon and on the OR table at 5:30. I was repaired and ready to heal and get back to work as soon as possible. It was then a dream come true and of course he did a fantastic job."

**Montgomery Douglas, MD '86:** "What's new? I now chair the Maintenance of Certification Committee of the board of directors of the American Board of Family Medicine."

**Matthew Kates, MD '86:** "My son, Brandon, started as an undergraduate at Cornell University this fall. He is a science and math guy, and a career in medicine has not been ruled out."

**George J. Makari, MD '87:** "I have a new historical work, *Soul Machine: The Invention of the Modern Mind*, which came out from W.W. Norton this fall. The *New York Times* Opinion section discussed the book in the July 18, 2015 issue ('The Anxious Americans'). I am the director of the DeWitt Wallace Institute for the History of Psychiatry and a professor of psychiatry at Weill Cornell Medicine."

**Paul Kirchgraber, MD '88:** "Work is always a challenge, but I'm enjoying a new role with Covance. Our eldest son was recently married so we welcomed Mary Catherine to our family."

**Theresa Rohr-Kirchgraber, MD '88:** "My AMWA presidency year is going well with

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**'Procedures, teaching, research, and writing have been great professional joys to me.'**

**— Douglas Adler, MD '95**

two new task forces. We are working on maternity leave policies nationally as well as the recognition of emotional distress and suicide prevention among women physicians. I'm happy to be among such talented people. Work and home are fun as well. Summer vacation in France with family was fabulous."

**Paul Rubery, MD '88:** "I was named the Marjorie Wehle Strong Professor and chairman of the Department of Orthopaedics at the University of Rochester in May 2015. I also maintain my clinical responsibilities in spine and scoliosis surgery."

**Michael J. Bernardo '78, MD '89:** "In May, I traveled to Vietnam with a group of vets (and non-vets, together with my son, Nate, who is applying to PA school in 2016) and provided medical care to more than 1,800 people, including a severely burned patient, a group of disabled and Down syndrome children, and many more with diseases such as CVA and HTN. As medical director for the group Vets with a Mission ([www.vetswithamission.org](http://www.vetswithamission.org)), I am leading the group to do more teaching of national health providers. We are going to train village health workers and rural clinic staff in 2016 in basic first aid and emergency triage."

**Bill Bernstein, MD '89:** "I have been named



Short coats: Medical students in the mid-Eighties

associate chair for academic affairs and quality at the Children's Hospital at St. Peter's University Hospital in New Brunswick, NJ. I also serve as associate professor of pediatrics at Rutgers Robert Wood Johnson Medical School."

## 1990s

**Robert Uzzo, MD '91,** of Fox Chase Cancer Center, was recently elected to the American Association of Genitourinary Surgeons.

**Adam Cifu, MD '93:** "I hope you are all well. I have a book being published in October by Johns Hopkins University Press. *Ending Medical Reversal* is medically oriented but of general interest as well."

**Douglas Adler, MD '95:** "I am professor of medicine, director of therapeutic endoscopy, and GI Fellowship director at the University of Utah School of Medicine. After moving all over the country for training, and a few years on faculty at the University of Texas, Houston, I came to the University of Utah in Salt Lake City to run their therapeutic endoscopy group. Nothing beats living in the mountains. Procedures, teaching, research, and writing have been great professional joys to me. I have an active clinical practice and head a large research team. I've published more than 250 papers and book chapters and just completed my fifth textbook of gastroenterology. Most of the best times at Cornell were spent hanging out with my roommate **Ari Gershon, MD '99**, and our good friends and classmates **Margaret Holmes, Theresa Chan, and Dan Goldsmith** (all MD '95).

## 2000s

**Jian Shen, PhD '99, MD '02:** "Greetings from Upstate New York. I joined Mohawk Valley Orthopedics in the New York Capital Region in 2011 and have since developed a successful minimally invasive spine surgery practice—more than 2,500 spine surgeries done without any nerve injury or infection. My wife, Wencui, 9-year-old daughter Ivyann, and I live in Albany. We enjoy the beautiful four seasons and lots of outdoor activities."

**Thomas B. Nguyen, PhD '03, MD '04:** "I just moved to the Bay Area, but would like to stay in touch with classmates."

## 2010s

**Sandeep Kishore, PhD '13, MD '14:** "I and a team helped add two new life-saving medicines to the WHO Essential Medicines List for cancer. One is imatinib (Gleevec) for chronic myeloid leukemia, and the other is trastuzumab, for her2+ breast cancer. The operating idea is that cancer treatment ain't just for rich people!"



## In Memoriam

'37, MD '41—**Clifford A. Bachrach** of Gaithersburg, MD, June 1, 2015; editor of *Index Medicus*; chief of the Bibliographic Services Division, National Library of Medicine; researched risk factors in ischemic heart disease at the National Heart Institute; director of the Research Statistics Division of the Veterans Administration Dept. of Medicine and Surgery; director of medical records and statistics, Johns Hopkins Hospital; faculty member in the Dept. of Biostatistics, Johns Hopkins School of Hygiene and Public Health; epidemiologist at the New York State Dept. of Health, where he worked on control of the last smallpox outbreak in the United States; veteran of the US Army Medical Corps during World War II; also studied tropical medicine and parasitology at the University of Havana.

'46, MD '48—**Morton D. Bogdonoff** of New York City, March 1, 2015; professor of medicine at Weill Cornell; fellow, the Center for Advanced Study in the Behavioral Sciences, Stanford University; chairman of the Dept. of Medicine, Abraham Lincoln School of Medicine in Chicago; professor of medicine in the division of endocrinology, and director of the division of behavioral medicine at Duke University Medical School; editor, *Archives of Internal Medicine*; director of the Living at Home Program, Commonwealth Fund, and the Pew Memorial Trust; co-chief of the geriatric division, WCMC; tutored third-year students at WCMC; attending physician, New York Hospital; active in professional affairs. Pi Lambda Phi.

'49 MD—**Edmund T. Welch** of West Hartford, CT, May 28, 2015; anesthesiologist; director of the Dept. of Anesthesiology, Hartford Hospital; associate examiner, American Board of Anesthesiology; president, Connecticut State Society of Anesthesiologists; US Navy lieutenant; fly fisherman; amateur astronomer; volunteer, Manchester public library; Head Start and pre-school breakfast volunteer; avid reader.

'53 MD—**Carl H. Brennan** of Savannah, GA, and Lamoine, ME, August 10, 2015; founding partner of Pediatric Associates; chief of staff and clinical ethicist at St. Joseph's Hospital; Rotarian; recipient of Medical Association of Georgia's Wyeth-Ayerst Physician Award for Community Service; member, American Academy of Pediatrics; member, American Society of Law, Medicine, and Ethics; fellow of the Royal Society of Medicine; B-24 navigator in the US Army Air Corps during World War II; in later life he studied every summer at Oxford University; active in community, professional, and religious affairs.

'52, '56 MD—**Mary Alice Newhall Mathews** of Ithaca, NY, and Newton, MA, June 29, 2015; psychiatrist in private practice; played second chair violin in the Cambridge Symphony, and went on to play with the Newton Symphony; sang in church choirs for several congregations; antiques collector; avid gardener; enthusiastic traveler; scuba diver; underwater photographer; whitewater rafter.

'56 MD—**Richard D. Wagoner** of Rochester, MN, April 26, 2015; internist; nephrologist at Mayo Clinic from 1963–96; professor of internal medicine at Mayo Medical School; traveler; had a lifelong passion for learning.

'58, '62 MD—**Donald A. Vichick** of Sandia Park, NM, June 9, 2015; chief of orthopaedics, William Beaumont Army Medical Center; hospital commander, Irwin Army Hospital, Fort Reilly, KS; retired Colonel, US Army; practiced hand surgery at the University of New Mexico in Albuquerque, NM; skier; Porsche racer.

'65 MD—**Joseph C. Fratantoni** of Rockville, MD, May 6, 2015; retired physician with the US Public Health Services; director of the hematology division at the Food and Drug Administration's Center for Biologics Evaluation and Research; also worked in private practice; volunteer at Mercy Health Clinic; former president of the Montgomery County Swim League.

'69 MD—**William H. Davidson** of San Diego, CA, May 24, 2015; orthopaedic hand surgeon; practiced with the San Diego Orthopaedic Associates Medical Group; taught hand surgery to residents at Children's Hospital; chief of staff and chief of the orthopaedic residency program, Mercy Hospital; medical missionary with the Mercy Outreach Surgical Team; member of the Equestrian Order of the Holy Sepulchre of Jerusalem; fellow of the American Academy of Orthopaedic Surgeons; researched the natural chemistry of the redwood and the giant sequoia and identified alpha limene and other essential oils that act as a defense against insects; active in professional and religious affairs.

'74 PhD, '84 MD—**Jacqueline Schuker Winterkorn** of Roxbury, CT, July 11, 2015; taught neuroanatomy at Weill Cornell Medicine and practiced and taught neuro-ophthalmology there for 25 years.

'83 MD—**Nicholas Gonzalez** of New York City, July 21, 2015; immunologist; pioneer in intensive nutritional therapy in the treatment and prevention of advanced cancer and other diseases; active in professional affairs.

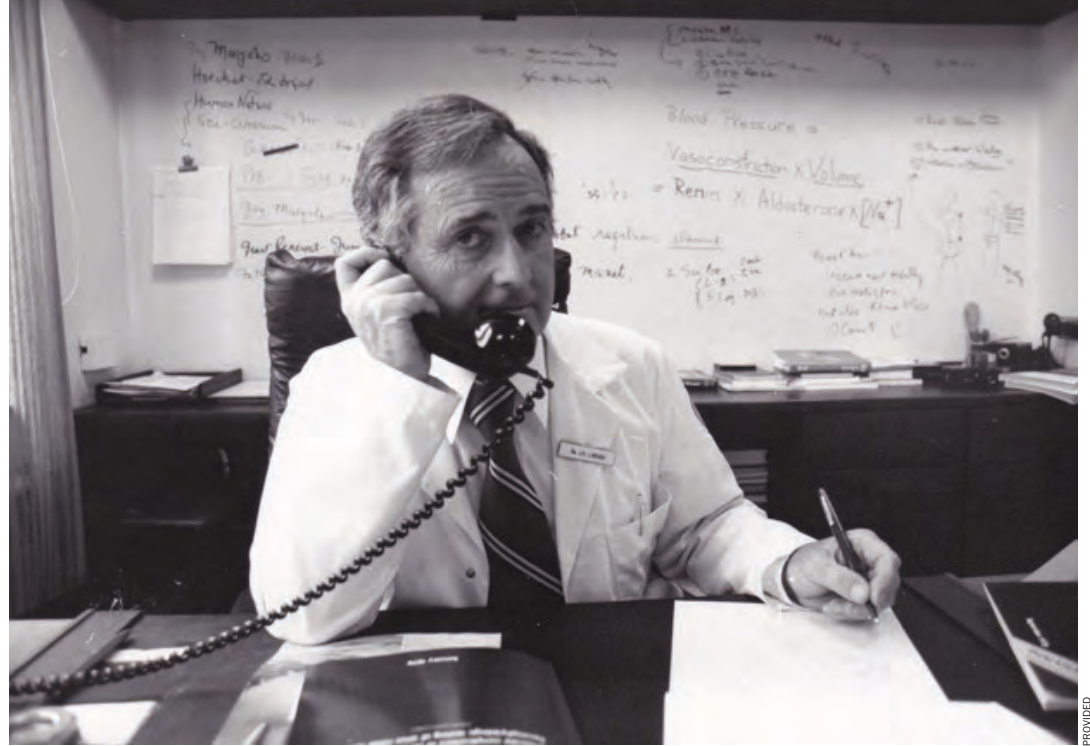
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## Post Doc

### A 'Pioneer' Passes

Remembering hypertension expert John Laragh, MD '48



John Laragh, MD '48

**P**atients with high blood pressure have significantly longer life expectancies than they did decades ago—and in no small part, they have John Laragh, MD '48, to thank for it. The internationally renowned clinician-scientist and longtime Weill Cornell Medicine faculty member, who died March 20 at age ninety, did groundbreaking research into the causes and consequences of hypertension. His work led to the development of two new classes of drugs—ACEs (angiotensin converting enzyme inhibitors) and ARBs (angiotensin receptor blockers)—that have become therapeutic mainstays and helped revolutionize the treatment of heart disease, kidney ailments, and diabetes.

Laragh founded the hypertension center at NYP/Weill Cornell in the Seventies, established the hospital's cardiovascular center, and served as chief of cardiology for nearly twenty years. Dedicated to investigating the underpinnings of hypertension, Laragh emphasized the significance of a precise, data-driven approach to managing patients with the condition. "He was a fascinating, brilliant, charming individual who contributed so much—maybe as much as any one person—to our knowledge of the treatment of high blood pressure," says Phyllis August, MD, MPH, the Ralph A. Baer Professor of Medical Research and director of the hypertension center at Weill Cornell. "He was a pioneer, a maverick. He was creative; he was funny; he was a magnet for young people who wanted to learn about high blood pressure."

Born and raised in Yonkers, where his grandfather served as mayor, Laragh lost both parents as a teenager. During World War II

he volunteered for the Army, which sent him to medical school. He did his residency in internal medicine at Columbia, where he met his mentor, department chairman Robert Loeb, MD, who inspired him to question dogma—a mindset that Laragh would pass on to his own students. "He trained so many people to think for themselves," says his widow, Jean Sealey-Laragh, DSc, a research professor emerita of physiology and biophysics in medicine at WCM, who was married to Laragh for forty years. "They, in turn, quote him to their students, so it's an ever-widening circle."

Laragh was founding president of the American Society of Hypertension and founding editor-in-chief of the *American Journal of Hypertension*. Before joining WCM's faculty in 1975, he was chief of nephrology at Columbia. In January of that year, *Time* magazine featured his research in a cover story—and those discoveries, along with his many other contributions to the field, remain relevant today. Collaborating with his wife, Laragh demonstrated a strong interaction among the kidneys, salt, and the hormones of the renin-angiotensin system, which regulates blood pressure and fluid balance. He concluded that there are two main causes of high blood pressure: excess salt in body fluids and excess plasma renin (a kidney-produced hormone) in the blood. A plasma renin-based treatment algorithm, known as the Laragh Method, enables clinicians to determine which of these two causes predominates and to select medications accordingly. "The product of his work is used every day by millions of physicians taking care of patients," says Jon Blumenfeld, MD, the Maxwell Professor of Clinical Medicine and director of hypertension at the Rogosin Institute, a Weill Cornell-affiliated research and clinical center specializing in kidney disease.

In addition to Laragh's wife, survivors include two sons and two granddaughters. In 1996, the couple moved from New York City to Palm Beach County, Florida, where he pursued his longtime passion for golf. He continued to be a physician-scientist, publishing journal articles until about two years ago. "A physician should come to the bedside with compassion, but with scientific knowledge," he once said. "When he has both he will have the joy of a very special career."

— Susan Kreimer



# Planned Giving to Support Future Physicians

**S**upporting the next generation of physician-scientists at Weill Cornell Medicine through mentoring and philanthropy is a lifelong calling for Richard T. Silver, MD '53, Professor of Medicine and Emeritus Director of the Richard T. Silver, M.D. Myeloproliferative Neoplasm (MPN) Center. Therefore, in his most recent gift, Dr. Silver has made a bequest through his estate plan, to honor the memory of his parents – a gift that will endow scholarships for Weill Cornell Medicine students who are pursuing research in basic sciences and clinical medicine.

Dr. Silver is affectionately known as a “quadruple red” – he received his undergraduate degree from Cornell University, and completed medical school, his internship and his residency at Weill Cornell Medicine. Now a world-renowned medical oncologist whose work has led to pioneering treatments for cancer patients, Dr. Silver has long recognized the importance of giving back. In 1968 he established the Cancer Research

and Treatment Fund, which has given more than \$14 million to Weill Cornell Medicine to support cutting-edge cancer research and clinical trials.

For Dr. Silver, this planned gift is an opportunity to strengthen his legacy of mentorship and collaboration, and to benefit Weill Cornell Medicine’s patient-centered research for years to come. “As a medical college, we’re interested in what is relevant to the patient, so we can train good scientists who are also good clinicians,” he explains. “Scholarships are a way of supporting that.”

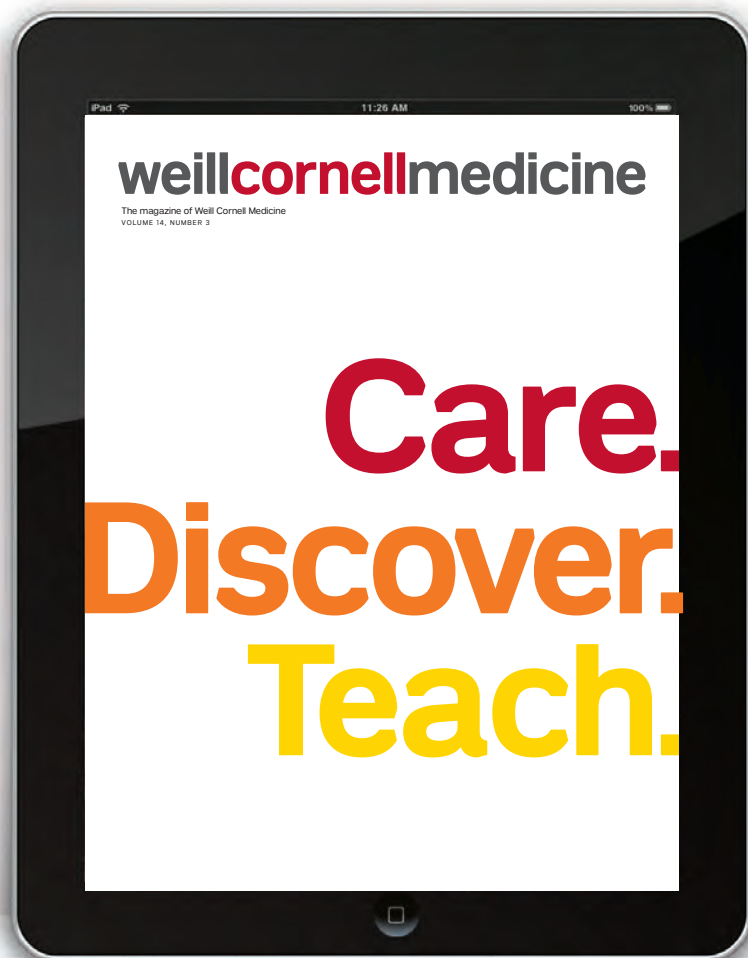
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