

weillcornellmedicine

VOLUME 17, NUMBER 2



Beyond Borders

At WCM, immigrants make untold contributions to research, teaching, and patient care



**Weill Cornell
Medicine**



Alumni Reunion



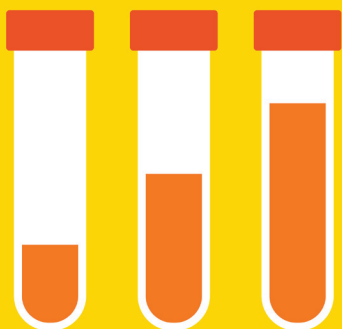
**Oct 5-6
2018**

The Weill Cornell Medicine Alumni Reunion will take place from Friday, October 5 – Saturday, October 6, offering engaging guest speakers, institutional updates and tours, class get-togethers, a gala dinner dance, and opportunities to mingle and network with old friends.

Class years ending in '2, '3, '7, and '8 are celebrating milestone reunions, and as always, all alumni are invited back to campus to commemorate another year since graduation.

We hope to see you there!

Visit alumni.weill.cornell.edu/reunion for updates.



Save the Date



THE MAGAZINE OF
WEILL CORNELL MEDICINE
VOLUME 17, NUMBER 2



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FEATURES

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BETH SAULNIER

America's foreign-born scientists and physicians have long played a vital role in research and patient care in the U.S.—but current political support of policies to restrict immigration has raised concerns about the ability of these foreign-born MDs and PhDs to continue living and working here legally. At Weill Cornell Medicine, and at many of its peer institutions, immigrants make untold contributions to the clinical and scientific enterprise. In a special feature, we offer portraits and stories of six members of our community—four faculty, a medical student, and a resident at NYP/Weill Cornell—whose personal histories inform their perspectives on healthcare and science.

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AMY CRAWFORD

In recent years, many researchers at WCM and across the medical and scientific worlds have felt a new urgency to communicate their work to the public. Their motivators include a desire to combat the recent rise in denial of scientific facts, as well as the advent of social media—which has allowed both bona fide research and misinformation to be delivered directly to the masses. Says Carl Nathan, MD, dean of the Weill Cornell Graduate School of Medical Sciences and the R.A. Rees Pritchett Professor and chairman of the Department of Microbiology and Immunology: “We have a civic obligation to be prepared to articulate what we do and why we do it, why it matters, and how it works, in all kinds of settings.”

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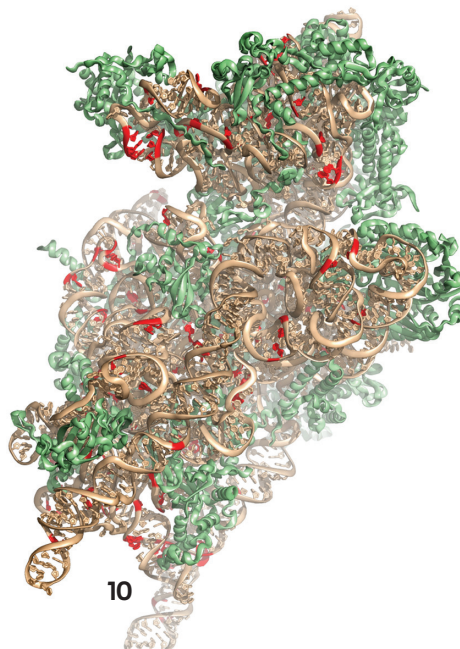
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Augustine M.K. Choi, MD
Dean of Weill Cornell Medicine

Cultivating Diversity: An Essential Mission



One of my priorities is to strengthen Weill Cornell Medicine's already robust culture of diversity and inclusion. As the immigrant son of an immigrant physician, I have a personal investment in this endeavor. In the late 1960s, political instability in the aftermath of the Korean War led my father to leave a successful career as a cardiothoracic surgeon in South Korea to become a general practitioner in the jungles of Malaysia. When we reached the United States five years later, he hoped—as so many immigrants do—to provide greater educational opportunities for his children.

When we arrived, my father had to retrain in geriatrics even though he had performed the first heart bypass surgery in Korea. I learned incredible lessons from him about self-sacrifice and determination. At least as importantly, he taught me to value openness to new people, communities, and ways of practicing medicine. I see those same traits, too, in the many talented trainees, faculty, and staff who come to Weill Cornell Medicine from all over the world. Yet fostering diversity is about more than supporting newcomers who want to achieve the American dream.

Our society faces numerous healthcare challenges: an aging and increasingly multicultural population, a rapidly changing system of delivery, and a projected shortfall of tens of thousands

of doctors by 2030. We need individuals with different perspectives, abilities, and life experiences, like those featured in our cover story: a thriving group of medical students, physicians, and scientists whose global perspectives enable us to better care for our diverse city and nation, train future doctors with the empathy that comes from varied life experiences, and come up with innovative approaches to scientific investigation. Their contributions not only improve the

health of our country and the sophistication of our nation's research enterprise, but also lift the wellbeing of people around the world and enrich humanity's understanding of science.

To ensure that our community reaches its full potential, Weill Cornell Medicine has many initiatives aimed at improving equity and inclusiveness, including the Tri-Institutional Minority Society, which offers professional development and networking opportunities for students from our institution, The Rockefeller University, and Memorial Sloan Kettering Cancer Center who are underrepresented in medicine. The Travelers Summer Research Fellowship, celebrating its fiftieth anniversary this year, gives twenty-five pre-med students from backgrounds that are disadvantaged or underrepresented in medicine the chance to pursue laboratory or clinical research, while studying topics of particular concern in minority communities, such as cardiovascular disease. We've also established a second childcare facility—an essential support particularly for our female faculty, staff, and students, who often still shoulder the primary burden of childcare responsibilities—and launched the "Safe Zone" training course to raise awareness of LGBT issues among staff and clinicians.

Among our more recent efforts is the opening of an Office of Student Diversity, which aims to increase recruitment of minority graduate and medical students as well as offer enhanced support to those already on campus. In April, we held our first-ever Diversity Week, with a series of events focused on such topics as women in science and racial disparities in healthcare. During that week, I was proud to formally announce the Dean's Diversity Scholarships, a full-tuition award now given annually to two accepted medical students with financial need, in order to support the diversity of our student body.

Here at Weill Cornell Medicine, we have a diverse community to be proud of, but we can always do more. Our shared goal is to become a national leader in diversity, a place where many distinct voices are embraced and amplified to our city, our country, and the world. It is an ambitious endeavor—one that, with our collective commitment, we will achieve. ■

Our society faces numerous healthcare challenges: an aging and increasingly multicultural population, a rapidly changing system of delivery, and a projected shortfall of tens of thousands of doctors by 2030. We need individuals with different perspectives, abilities, and life experiences.

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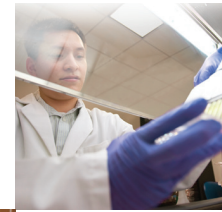
Celebrating Twenty Years

Twenty years ago, Weill Cornell Medicine took on the name of Joan and Sanford I. Weill and launched a bright, new era of dynamic expansion, successfully propelling the institution to its position as a formidable leader in global healthcare.

With extraordinary donor support and strong leadership from the Board of Overseers, a series of well-executed strategic plans and groundbreaking initiatives – powered by a transformational gift and the renaming of the institution in 1998 – have placed Weill Cornell Medicine at the forefront of biomedical science, medical education, and patient care.



of Progress



To support development initiatives at Weill Cornell Medicine, please contact:
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luf2003@med.cornell.edu.

20th
1998-2018
ANNIVERSARY

Weill Cornell Celebrates 20th Anniversary of Medical College Renaming



EXEMPLARY ACHIEVEMENT: The twentieth anniversary of WCM's renaming brought out leaders including (from left) Chairman Emeritus Sanford I. Weill, Jean Pape, MD '75 (winner of a new award established in the Weills' honor), Joan Weill, and Dean Augustine M.K. Choi, MD.

This year, Weill Cornell Medicine marks the twentieth anniversary of its renaming in honor of champions Joan and Sanford I. Weill, who made a landmark \$100 million gift to the institution in 1998. At a celebratory dinner in early March, WCM celebrated the milestone and presented the inaugural Joan and Sanford I. Weill Exemplary Achievement Award, established in the couple's honor to recognize physicians and scientists whose work enhances health and healthcare worldwide.

The award, which carries a \$50,000 cash prize, went to Jean William "Bill" Pape, MD '75, the Howard and Carol Holtzmann Professor in Clinical Medicine and the founder and director of Haiti's GHESKIO clinic. As he told the Weills in his remarks: "Because of your enormous generosity, because of your amazing vision, because of your strong leadership, you have contributed to making my alma mater, Weill Cornell, become a premier world

leader in medicine and among the greatest healers of humanity."

Affiliated with WCM, GHESKIO (whose name is the French acronym for Haitian Study Group on Opportunistic Infection and Kaposi's Sarcoma) is believed to be the world's oldest clinic dedicated to treating, studying, and preventing HIV/AIDS—helping to reduce the virus's prevalence in Haiti from 6 percent to 2 percent since its founding in 1982. The clinic also provides primary and prenatal care as well as treatment for tuberculosis and cholera; conducts research; and trains future healthcare leaders. "What a remarkable and inspirational career," Dean Augustine M.K. Choi, MD, said at the gala. "Dr. Pape has really been a true role model and inspiration for all of us. Through the work he does every day, he exemplifies our collective commitment to combat disease and to contribute positively to society. He reminds us of why we're all here and inspires us to do more."

PHOTO: STUDIO BROOKE



MATCHED UP: Jaime Bernstein '18 reacts to the news that she'll do her plastic surgery residency at NYP/Weill Cornell, with time training at NYP/Columbia and other area hospitals. For more Match Day images, see Notebook starting on page 39.

Match Day 2018 Sets Records

In mid-March, the members of WCM's Class of 2018 learned where they'll be spending the next three to seven years of their medical careers, as the annual Match Day celebration revealed their internship and residency postings. This year's match was the largest on record: according to the National Resident Matching Program, 18,818 allopathic medical students from across the country and 16,759 international and osteopathic medical students, as well as Americans studying abroad, competed for some 33,000 residency positions. After the envelopes were ripped open, it was revealed that forty-four members of the class will remain in metro New York—thirty-one of them at NewYork-Presbyterian, including twenty-one at NYP/Weill Cornell. One hundred percent of students seeking residencies in highly competitive specialties, such as dermatology, neurosurgery, ophthalmology, urology, and orthopaedic, plastic, and general surgery, earned positions. As Dean Choi told the celebrants: "Go make us proud."

TIP OF THE CAP...

Antonio Bernardo, MD, professor of research in neurological surgery, who received Italy's highest honor, the Order of Merit of the Italian Republic, for achievements in neurosurgery and neuroscience.

John Leonard, MD, associate dean of clinical research, the Richard T. Silver Distinguished Professor of Hematology and Medical Oncology and a professor of medicine, winner of the Miriam G. Wallach Award for Excellence in Humanistic Medical Care from NewYork-Presbyterian.

Endocrinologist **Connie Baum Newman, MD '78**, an adjunct professor of medicine at NYU, named president of the American Medical Women's Association.

Scott Rodeo, MD '89, professor of orthopaedic surgery, winner of the Arthur C. Rettig Award for Academic Excellence from the NFL Physicians Society for his research on the clinical use of biologics in soft tissue healing. Rodeo is head team physician for the New York Giants.

Harel Weinstein, PhD, the Maxwell M. Upson Professor of Physiology and Biophysics and chair of the department, named a fellow of the Biophysical Society.

Jonathan Zippin, PhD '05, MD '06, assistant professor of dermatology, named to a three-year term on the American Contact Dermatitis Society's board of directors.

Veich Named Vice Provost for External Affairs



MARK VEICH

Mark Veich, a leader in the field of institutional advancement, has been appointed WCM's vice provost for external affairs; he succeeds Larry Schafer, who retired after more than a quarter-century of service. Veich comes to WCM from Michigan Medicine, where he served as managing director for development. Leveraging his talents in fundraising, communications, marketing, and government relations and community affairs, Veich will develop strategies to raise philanthropic gifts and increase awareness and visibility of WCM as a premier global academic medical institution. He will report to Dean Choi and serve on his leadership team; he will also be a principal adviser to the Board of Overseers and work with Cornell University on alignment of strategic priorities.



PREVENTIVE EFFORTS: In the wake of the deadly shootings at Florida's Marjory Stoneman Douglas High School that inspired the March For Our Lives and prompted calls for stricter firearms laws, a group of WCM medical students gathered for a photo to express their solidarity in opposing gun violence. André Belarmino '19 (holding the banner at left) is a Douglas alumnus and the cousin of a current student who survived the attack.



HANDS-ON SCIENCE: This winter, WCM hosted a pair of outreach efforts to get kids excited about research. Big Red STEM Day (above left) brought ninety teens from New York City public high schools to campus for workshops, labs, and more, led by volunteers from WCM, Cornell Tech, the Ithaca campus, and Cornell Cooperative Extension (which offered a hands-on look at drones). And on Family Science Day (above right), elementary-aged children spent a morning doing experiments and other activities with WCM grad students.

New Center Combats Disparities in Health Outcomes



MONIKA SAFFORD, MD '86

Researchers at WCM and Cornell's Ithaca campus have teamed up to establish the Cornell Center for Health Equity. Launched with a symposium at WCM in March, the center is dedicated to understanding why health outcomes vary among demographic groups. Working with local organizations and providers in New York City and Upstate New York, it will study the causes of such disparities—particularly in outcomes for heart disease, stroke, and cancer—among minority communities. Investigators will analyze the role of such factors as policy, societal biases, and socioeconomic status, with the goal of developing interventions to eliminate the disparity in outcomes. Among the center's first projects are hypertension and cancer screenings in Brooklyn. "Despite extraordinary medical advances in recent decades, what medicine has not done is close the gap in giving care to underrepresented communities, so the disparities continue," says Monika Safford, MD '86, chief of general internal medicine and the John J. Kuiper Professor of Medicine at WCM and the center's co-director. "We want to drill down on this issue, so we are partnering with communities to understand their priorities and perspectives, collaboratively developing interventions based on science as well as community realities, and partnering with community organizations to sustain those interventions."

Living Donor Liver Transplant Program Launched

To expand access to life-saving liver transplants, Weill Cornell Medicine and NYP/Weill Cornell have launched a new living donor program. The program, along with the existing Center for Liver Disease Transplantation—a collaborative effort by WCM, NYP, and Columbia University Irving Medical Center—offers donors fully laparoscopic surgery, which cuts their recovery time in half. Living donor transplantation leverages the liver's unique ability to regenerate: the partial organs of both donor and recipient regrow, regaining size and function within eight weeks. Recipients have better survival rates compared to those whose organs come from deceased donors, and the wait for transplant is much shorter. "So many people are desperately in need of a liver transplant. We're excited to broaden our transplant program to save more lives," says Benjamin Samstein, MD, chief of liver transplantation and hepatobiliary surgery at NYP and an associate professor of surgery at WCM. "Having a newly certified living donor transplant center in New York City, which has a particularly high number of recipients on the waiting list, is hugely important for patients."

Home for Entrepreneurship

WCM's BioVenture eLab now not only has a new name, but a dedicated space as well. In January, the facility—formerly known as the Dean's Entrepreneurship Lab—celebrated the opening of its permanent home at 1157 York Ave. It features three offices, a bullpen, a shared conference room and kitchen, and a makerspace with a 3D printer. Launched in March 2016 and overseen by the Office of BioPharma Alliances and Research Collaborations, the eLab offers several programs including a twelve-week intensive entrepreneurship crash course, the Bench-to-Bedside Initiative, that helps students and faculty translate promising ideas for biomedical devices, diagnostics, therapeutics, and software to the commercial world. It also hosts workshops in electronics and computational biology, 3D printer training, regular networking events, and a business plan competition. Says director Sarah Kishinevsky, PhD '16: "All of our programs are meant to educate or provide resources, with the hope that some of these early-stage companies become real businesses."

Drukier Prize Awarded to Pediatric Hematologist



VIJAY SANKARAN, MD, PHD

A physician-scientist who investigates the molecular underpinnings of pediatric genetic blood disorders has been awarded the third annual Gale and Ira Drukier Prize in Children's Health Research from WCM; it honors important contributions by an early career pediatrician. The winner, Vijay Sankaran, MD, PhD, is a pediatric hematologist and oncologist at Dana-Farber/Boston Children's Cancer and Blood Disorders Center and an assistant professor of pediatrics at Harvard Medical School. He conducts innovative research on red blood cell disorders such as sickle cell disease and thalassemia, using genetic studies to understand how blood cell production occurs normally and how it goes awry in disease. His findings have led to promising new therapeutic approaches.

PHOTOS: STEM DAY, STUDIO BROOKE; FAMILY SCIENCE DAY, ALEXANDER EMMANUELLI; SAFFORD, NISHA FRIEDMAN/WCMC; SANKARAN, SANKARAN LABORATORY

FROM THE BENCH

Study Explores Surgical Residency Attrition



HEATHER YEO, MD

A nine-year, longitudinal study of 1,048 surgical residents has found that Hispanics and women are at greatest risk for dropping out of their training programs. In the U.S., attrition from surgical residencies, which typically last five to seven years, is higher than in any other specialty, with about a quarter of residents leaving. "Attrition leads to problems for the programs that invest in training these residents, the residents who spend time in their training programs, and the field of surgery as a whole," says lead author Heather Yeo, MD, the Nanette Laitman Clinical Scholar in Healthcare Policy and Research/Clinical Evaluation, an assistant professor of surgery and of healthcare policy and research, and a surgeon at NYP/Weill Cornell. In *JAMA Surgery*, Yeo and colleagues report that Hispanics are more likely overall to drop out, starting in the first year of training, while women leave near the end—findings that underscore the need for interventions.

Stricter Gun Laws Could Reduce Deaths

More stringent state regulation of firearms could help reduce rates of suicide and homicide, finds a study led by Elinore Kaufman, MD, a surgical resident at NYP/Weill Cornell and Weill Cornell Medicine. The investigators analyzed county-level data to determine whether state firearm laws have interstate spillover effects on firearm-related homicides and suicides. They found that counties located in states with restrictive laws had lower rates of homicide and suicide by firearm, regardless of neighboring states' laws. Counties located in states with lenient policies had higher firearm death rates, with rates declining if those counties were located in close proximity to states with tougher laws. "We know that most firearm policies in the United States are made at the state level," Kaufman says, "but states do not exist in a vacuum." The paper was published in *JAMA Internal Medicine*.

A Nervous-Immune Connection



DAVID ARTIS, PHD

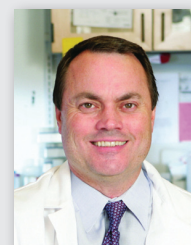
An article in *Science*, based on work in a mouse model, reports that cells in the nervous system can "put the brakes" on the immune response to infections in the gut and lungs to prevent excessive inflammation—insight that may one day lead to new ways to treat diseases caused by unchecked inflammation, such as asthma and inflammatory bowel disease. "There is a crosstalk between the nervous system and the immune system, and that plays an important role in regulating acute and chronic inflammation," says David Artis, PhD, director of the Jill Roberts Institute for Research in Inflammatory Bowel Disease and the Michael Kors Professor of Immunology. "Those two organ systems are closely interacting and play an important role in human health and disease."

Efforts to Reduce Transfusions Successful

Blood transfusions are one of the most common—and overused—hospital procedures in the U.S., but a recent study reveals that they're declining. The paper, in *JAMA*, is the first to examine transfusion patterns among hospitalized patients at the national level. It shows that transfusions for red blood cells and plasma declined from 2011 to 2014, while platelet transfusions remained stable. The authors say that this trend has important implications for healthcare costs and patient care. "It reflects the collective successful efforts of various patient blood management initiatives across the nation," says first author Ruchika Goel,

MD, an assistant professor of pathology and laboratory medicine and of pediatrics at WCM and assistant medical director of transfusion medicine and cellular therapies at NYP/Weill Cornell. "Patient blood management has truly been a revolution in the world of transfusion medicine."

Insight Into Cancer's Spread



DAVID LYDEN, MD, PHD

A cellular messenger discovered by WCM scientists may help reveal how cancer cells co-opt the body's intercellular delivery service to spread. In *Nature Cell Biology*, the researchers report that they were able to use a new technique to efficiently sort nano-sized particles, called exosomes, that are secreted by cancer cells. The technology allowed investigators to separate two exosome subtypes and discover a new nanoparticle, which they named exomeres. "We found that exomeres are the most predominant particle secreted by cancer cells," says senior author David Lyden, MD, PhD, the Stavros S. Niarchos Professor in Pediatric Cardiology and a scientist in the Sandra and Edward Meyer Cancer Center and the Gale and Ira Drukier Institute for Children's Health at WCM. "They are smaller and structurally and functionally distinct from exosomes." Exomeres, he explains, largely fuse with cells in the bone marrow and liver, where they can alter immune function and metabolism of drugs—possibly explaining why many cancer patients are unable to tolerate even small doses of chemotherapy due to toxicity.

Implant Study Findings 'Surprising'



BILAL CHUGHTAI, MD

According to a study in *JAMA Surgery*, an implanted device called a sacral neuromodulator, which regulates bladder and bowel control, often requires additional operations to repair or replace it. First author Bilal Chughtai, MD, working with Art Sedrakyan, MD, ScD, PhD, and colleagues, found that one in three patients required additional surgeries within three to five years, largely because of device failure or malfunction. "Our study results were somewhat surprising," says Chughtai, an associate professor of urology at WCM and a urologist at NYP/Weill Cornell. "The rates of reintervention were much higher than I thought they would be, especially when considering the low rates acknowledged by manufacturers." Use of the device has more than tripled in the last five years, he says—so a formal registry of data showing which patients respond well to it and which are prone to higher failure rates is needed.

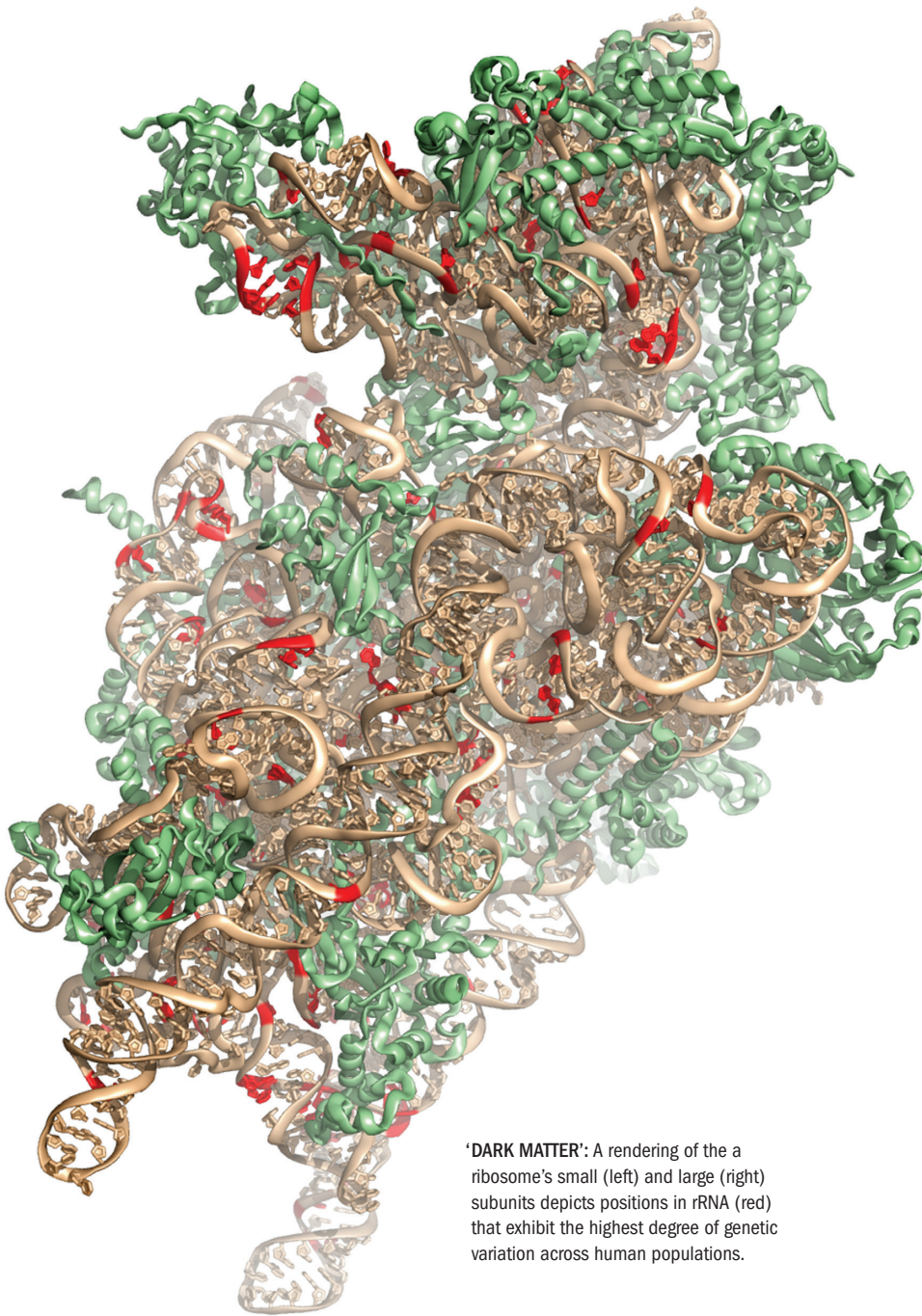
High-Salt Diet Tied to Dementia



COSTANTINO IADECOLA, MD

A high-salt diet reduces resting blood flow to the brain and causes dementia in mice, according to WCM scientists. The work, in *Nature Neuroscience*, is the first to unveil a gut-brain connection linking dietary salt intake to neurovascular and cognitive impairment. The findings illuminate a potential target for countering harmful effects to the brain caused by excess salt consumption. "We discovered that mice fed a high-salt diet developed dementia even when blood pressure did not rise," says senior author Costantino Iadecola, MD, director of the Feil Family Brain and Mind Research Institute and the Anne Parrish Titzell Professor of Neurology. "This was surprising since, in humans, the deleterious effects of salt on cognition were attributed to hypertension."

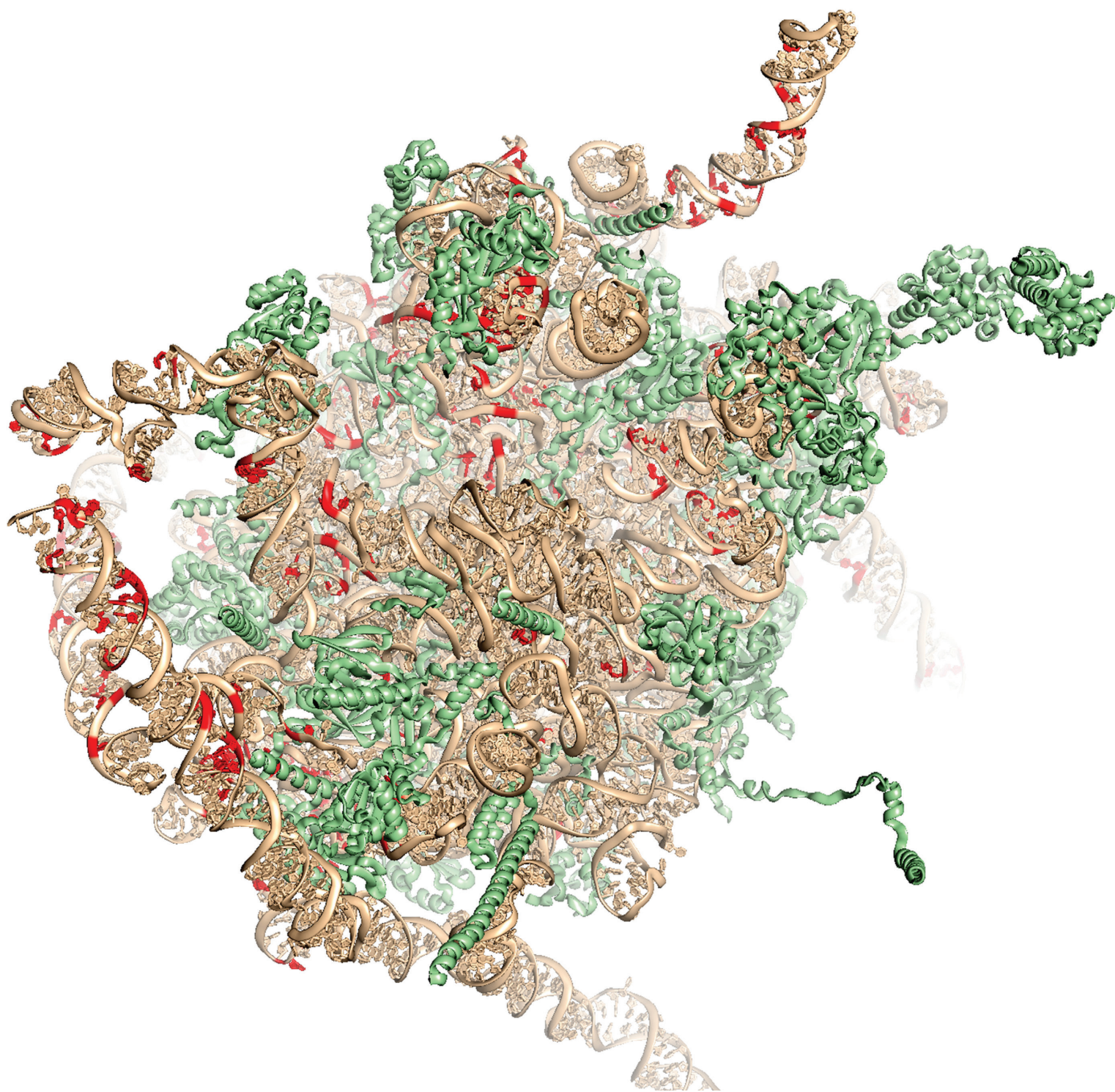
A Distinction With a Difference



'DARK MATTER': A rendering of the a ribosome's small (left) and large (right) subunits depicts positions in rRNA (red) that exhibit the highest degree of genetic variation across human populations.

It was long thought that ribosomes—the millions of cellular machines that translate the genetic code carried by DNA into proteins—were all identical. But work by Scott Blanchard, PhD, professor of physiology and biophysics, and colleagues is challenging that belief. As the team reported in *Science Advances* in February, an analysis of ribosomal DNA from thousands of individuals showed that each person may actually possess a variety of ribosomes. Their discovery of genetic variation in the ribosome's most essential component, ribosomal RNA (rRNA), may help illuminate the causes of certain developmental disorders. "The potential physiological impacts of physical distinctions in the rRNA sequence of the ribosome have not been investigated before. It's an overlooked aspect of modern genomics and medical diagnostics," says Blanchard, adding that ribosomal DNA "is currently dark matter in the genome."

IMAGES: WCM SCIENTIFIC COMPUTING UNIT



Service Call

The Glickman Fellowship aims to attract future doctors to gynecological oncology by giving them an intensive, up-close look at the specialty



NEXT GENERATION: Thomas Caputo, MD (center), with medical students Simone Elder '18 (left) and Sasha Hernandez '18, both alumni of the Glickman Fellowship program. Opposite page: The three visiting Caputo's patient Tracy Dickinson in her hospital room.

Thomas Caputo, MD, professor of clinical ob/gyn, came to Weill Cornell Medicine in 1982 to serve as its first director of gynecological oncology. Over the years, he has seen his patients' survival rates gradually climb as new treatments became available and minimally invasive laparoscopic surgery has become the norm. But as Caputo looks forward to retirement, his greatest worry is that there aren't enough young physicians to follow in his footsteps—not only in the U.S. but around the world. "Except for breast cancer, women's cancers are neglected and under-researched," says Caputo, also vice chairman for ob/gyn at WCM and an attending physician at NYP/Weill Cornell. "And that translates to a potential shortage of doctors who want to specialize in

female cancer." Studies comparing research dollars with years of life lost, for example, have shown that work on prostate cancer—which only affects men—is funded at six times the rate for uterine cancer and nearly 2.5 times the rate for ovarian cancer.

But hope that patients with these diseases will receive the attention and resources they deserve may lie with young physicians like Candelaria O'Farrell. In spring 2017, O'Farrell—then a medical student at the Instituto Universitario CEMIC in Buenos Aires, Argentina—traveled to NYP/Weill Cornell for an intensive, month-long exploration of the field through the Glickman Fellowship in Gynecologic Oncology. Almost as soon as she arrived, O'Farrell was scrubbing into a surgery, assisting and observing as doctors removed

PHOTOS: JOHN ABBOTT



a benign uterine tumor from a woman in her thirties. Over the next few days, O'Farrell presented the case in rounds, which meant checking in on the patient each morning as she recovered in the hospital. When the woman returned for follow-up care a few weeks later, she was happy to see the student who had helped tend to her—and the feeling was mutual. “She was really scared going into surgery,” recalls O'Farrell, who completed her medical degree in December 2017, “but when I saw her again afterward she was so revitalized.”

Forming relationships with patients was new for O'Farrell, who had little opportunity to follow ongoing cases during her education in Argentina. But it is typical of the experience of Glickman Fellows, whose time at WCM offers them an up-close, in-depth look at what it means to specialize in gynecologic oncology. “The students are totally immersed in the service,” Caputo says. “They take care of the patients on the floor, they go to the operating room every day, they go to the clinics, they go to our private offices and see our patients. They're totally involved from beginning to end, so they get a complete exposure to everything that encompasses gynecologic oncology.”

Founded in 2009, the fellowship is named for Elenore Glickman, a patient of Caputo's who passed away from ovarian cancer in the late Eighties. Grateful for her care, her family donated a total of \$200,000 to support gynecological oncology training at WCM. But Caputo was concerned that students at other institutions were getting little exposure to the field, so he started the fellowship program to bring young people from around the country and the world to WCM for an intensive few weeks. “I hoped that by interesting them in our specialty we would have more bright young people go into gynecologic oncology,” Caputo says.

The need for young doctors to choose oncology—especially gynecological oncology—is increasingly vital. According to a 2017 report by the American Society of Clinical Oncology, an aging

population will require more oncological care, just as more doctors themselves near retirement. There are nearly 40 percent more oncologists aged sixty-four and older than there are younger than forty, and the median age for gynecologic oncologists—fifty-eight—is the highest of any oncological subspecialty. “To have these eager young students come here, to see them mature and then go back and share their experiences with other students all over the world—that is one of the most rewarding things I do,” Caputo says.

Over the past nine years, the fellowship has brought more than three dozen students to WCM from around the United States and as far away as Germany, India, and Australia, including a handful who have gone on to do residencies at NYP/Weill Cornell. Several have traveled to New York from WCM's Qatar location, including Ahmed Saleh '18, who arrived in February 2017. “I didn't get to see a lot of gynecologic oncology patients during my core ob/

gyn rotation,” he says. “But the fellowship covered the entire spectrum. You get to scrub in and help out with surgery, go on rounds, go to the chemotherapy clinic. It introduces you to the world of gynecologic oncology.”

A native of Egypt who also recently completed a rotation in Tanzania, Saleh believes that getting to see a variety of cases first-hand during his time in New York was especially valuable for him as a future ob/gyn who plans to pursue a career in global health. In Africa and the Middle East, he notes, there's still a stigma around women's cancers, which can translate to delayed diagnoses and more advanced disease when patients do consult a doctor. But while he appreciated seeing how women's cancers are treated at a top-flight center for gynecologic oncology like NYP/Weill Cornell, the physicians' human touch may have made an even deeper impression. “The fellowship teaches you a lot, not just about oncology but also things you'll need to know no matter what your specialty,” he says.

‘To have these eager young students come here, to see them mature and then go back and share their experiences with other students all over the world—that is one of the most rewarding things I do,’ says Thomas Caputo, MD.

“The doctors at NYP/Weill Cornell are amazing in the way they talk to patients, the way they explain things to them.”

Witnessing those doctor-patient relationships stayed with O'Farrell as well. That's why she credits the fellowship with cementing her decision to specialize in oncology, possibly with a focus on women's health. “You follow your patients from the first biopsy, when you make the diagnosis, and you are in the clinic or the OR with them,” she says. “You see them through it all.” ■

— Amy Crawford

Red Alert

According to physician-scientist Alan Lockwood '65, MD '69, global warming isn't just an environmental calamity—it's a public health crisis

Today's headlines can seem a grim litany of disasters, from hurricanes in the Atlantic and epidemics in South America to conflicts in Africa and droughts in the Midwest. For Alan Lockwood '65, MD '69, though, these calamities all have two things in common: they're rooted in climate change, and they're signs of public health crises that the medical profession—as well as other scientists, policymakers, and citizens around the world—must address.

In his book *Heat Advisory: Protecting Health on a Warming Planet*, the physician-scientist offers a rigorous examination of the evidence for climate change and an overview of global warming's many consequences for human health. Published by MIT Press, the book begins with a primer on the science of greenhouse gases and their impact on weather worldwide. Then, chapter by chapter, Lockwood offers data on infectious diseases like malaria and dengue, carried by mosquitoes that flourish as temperatures rise; respiratory and cardiovascular issues caused by pollution from fossil fuels and drought-driven wildfires; and violence sparked by the scarcity of resources like food and water. Lockwood draws upon sources ranging from *The Lancet* and other medical and scientific journals to reports



change is that every aspect of it impinges on health in some way," says Lockwood, emeritus professor of neurology and nuclear medicine at the University of Buffalo's Jacobs School of Medicine and Biomedical Sciences. "As physicians, we have a responsibility that goes beyond just taking care of the patients in our offices. Sometimes we must bring our expertise to bear on issues that may be political, too."

It's a perspective, Lockwood says, that grew out of his early studies in ethics and philosophy as a "double Red," an alumnus of both Cornell's undergraduate College of Arts and Sciences and its medical college. After a residency in Weill Cornell Medicine's neurology department,

Lockwood took his first faculty post at the University of Miami, where he met a number of students involved with Physicians for Social Responsibility (PSR). He soon joined the organization and became actively involved as a speaker and researcher on its core concerns—nuclear weaponry and energy, environmental toxins, and climate change—and served a term as its president in the mid-Nineties.

In 2009, Lockwood helped PSR produce a white paper on the adverse health effects of energy production from coal, which led to his 2012 book, *The Silent Epidemic:*

Coal and the Hidden Threat to Human Health, also published by MIT Press. That volume documents pollution-related deaths from lung cancer, asthma, chronic obstructive pulmonary disease, and other conditions. He says that his experiences touring and talking with audiences about it revealed a need for a

'The untold story of climate change is that every aspect of it impinges on health in some way,' says Lockwood. 'As physicians, we have a responsibility that goes beyond just taking care of the patients in our offices. Sometimes we must bring our expertise to bear on issues that may be political, too.'

from the United Nations, the World Health Organization, and the Centers for Disease Control and Prevention to make the case that climate change is already affecting human health worldwide.

Packed with charts and tables, *Heat Advisory* is clearly the work of a research scientist—but its passionate and sometimes personal call for action embodies the voice of a physician who sees addressing global warming as a mandate of his Hippocratic oath, especially in an era of science and climate change denialism. "The untold story of climate

larger conversation about how environmental factors affect public health. In *Heat Advisory*, Lockwood outlines a model for addressing global warming and its health impacts that's analogous to disease prevention in medicine. "To prevent heart disease, for example, you look first to diet and exercise; then you might prescribe a drug to control cholesterol," he explains. "The primary prevention of the health effects of climate change would be to reduce greenhouse gases, while the next steps in minimizing its impact could include a vaccine against dengue."



GREAT OUTDOORS: Alan Lockwood '65, MD '69, seen near his home in Oberlin, Ohio, believes doctors have a duty to advocate for solutions to climate change.

While diseases like dengue and malaria may seem like distant threats in the U.S., Lockwood cautions against thinking that the developed world isn't already experiencing public health issues driven by climate change. He points out that heat is the leading weather-related cause of death in this country, with an average of more than 100 people dying from heat stroke and related conditions each year. The severe storms that struck parts of the U.S. in 2017—whose intensity, he notes, reflects the predictions of climate change scientists—had effects beyond their immediate physical and psychological impact; for instance, IV bags had to be rationed after Hurricane Maria shut down a major manufacturer in Puerto Rico. And the consequences of global warming will continue to affect Americans in ways that may not be immediately obvious, Lockwood says. For example: "By the end of the century, without any changes in greenhouse gas emissions patterns, the yield of corn—the most valuable commodity in the United States—is likely to fall by as much as 80 percent. That will affect

world food prices, but it will also create poverty and food insecurity here at home, both of which impact health."

The political challenges of addressing climate change have only grown since Lockwood completed the book in 2016, before the election of a presidential administration committed to rolling back many environmental agreements and policies. Because he believes strongly that the medical community—both collectively and individually—can shift how lawmakers, the media, and citizens view global warming, he urges physicians to advocate for climate change solutions, be it through philanthropic funding, letters to elected officials, or even running for public office. "Make the most of the expertise and authority you have as a physician," he says. "The national conversation may be daunting and difficult at the moment, but we can't throw up our hands and say there's nothing to be done. It's more important now than ever for those of us who have devoted our professional lives to human health to speak up and take action." ■

— C. A. Carlson

Second Act

Elwin Schwartz, MD '76, founds a robust eye clinic in the mountains of Ecuador



IN SIGHT (clockwise from top): Schwartz doing an exam at the main clinic in Riobamba, the capital of Ecuador's Chimborazo Province; seeing a patient at an off-site clinic in a rural area; a view of the volcano that dominates Riobamba; women spinning wool yarn while awaiting an exam at an off-site clinic (an employee is at left in scrubs).

Two years ago, in a remote region of Ecuador, ophthalmologist Elwin Schwartz, MD '76, helped give a six-year-old girl the gift of sight. The child had been blind since birth because of a clouding in the lens of her eyes, known as congenital cataracts; Schwartz and a colleague performed a fifteen-minute surgery that reversed the condition. "Within a couple of days," he says, "she could see with almost perfect vision."

Since retiring from his Middletown, Connecticut, practice six years ago, Schwartz has been offering hope to the thousands of people he and his colleagues have treated at a clinic in a town called Riobamba, perched 9,700 feet up in the Andes Mountains. "No one in this area had ever seen an eye doctor before," says Schwartz, noting that there are only a few hundred practicing ophthalmologists in Ecuador, a country of 15 million. Its poor and often unemployed indigenous people—like many residents of Chimborazo Province, where the clinic is located—typically lack any healthcare beyond the tribal medicine that local shamans practice. "But now, people know they have a resource," he says of the clinic, "which is so critical, especially for families with kids."

PHOTOS: PROVIDED

Schwartz never planned on working in global health after retirement. But when a friend who had founded a pediatric medical and dental clinic in Ecuador offered him the chance to open an eye clinic there, Schwartz agreed immediately—in part because establishing a permanent presence in an in-need community seemed like a good, sustainable way to help people. “This feels so much better to me than going to Africa this year and India the next,” says Schwartz, who went on one-off medical mission trips to Mexico earlier in his career, and now visits the Ecuador clinic regularly. But even though he’d been given an open invitation to establish an eye clinic in his friend’s facility, known by the Spanish acronym FIBUSPAM, Schwartz found that launching it wasn’t as straightforward as he’d hoped. For instance, having secured a full suite of eye instruments donated by friends, colleagues, and business associates, Schwartz arrived in Guayaquil—the closest major city to Riobamba—to find the equipment tied up in customs. So he and a colleague who’d traveled with him improvised, providing more than 1,000 vision screenings on that first trip with the handheld instruments they’d packed in their suitcases.

Since then, the clinic—which is open seven days a week, year-round (except for holidays), and staffed by a full-time ophthalmologist from Nicaragua and an optometrist from Quito—has screened and treated thousands more locals. It also operates regular off-site clinics, which often require treacherous drives along landslide-prone cliffs to reach nearby tribal regions. Many times, he says, just fitting people with free eyeglasses vastly enriches their quality of life; Schwartz cites the cases of women who make their living by weaving or making beads, whose work suffers when their eyesight weakens as they age. “If we can identify these women and give them a simple pair of reading glasses,”

Schwartz says, “they’re able to function, make money to support their family, and be part of society again.” Similarly, providing glasses to children who need them often allows them to do better in school and to help their families around the house.

Schwartz says the bulk of the clinic’s other work consists of operating on people with cataracts, a curable form of blindness that is thought to affect more than 120,000 Ecuadorans. On his last trip alone, Schwartz identified 260 people from Riobamba and the surrounding region who needed the surgery—including elders who require almost around-the-clock care from relatives once they lose their sight. “These people are walking everywhere and cooking over hot stoves,” Schwartz says. “Dangerous



‘No one in this area had ever seen an eye doctor before,’ says Elwin Schwartz, MD ‘76. ‘But now, people know they have a resource—which is so critical, especially for families with kids.’

things to do if you can’t see.” Cataract surgery—which is often performed at the clinic by volunteer teams from organizations such as Vision Health International and SEE International—not only gives them back their independence, he says, but frees up family members to return to work. In addition, other types of eye operations are performed on adults and children in the clinic’s operating rooms.

The entire FIBUSPAM clinic now operates on a budget of about \$300,000 a year, funded through private donations and grants; many of the medical staff who volunteer there also donate equipment and medications. Schwartz spends a week or more each year at the clinic, often accompanied by his wife, Cheryl, an optician. That leaves him plenty of time to travel, babysit the couple’s five granddaughters, and pursue other passions such as skiing, sailing, and playing the odd game of golf. He also does logistical work for the clinic remotely, such as obtaining new equipment or helping to recruit staff. “In the last five-and-a-half years, what started as just an idea has grown into a self-sustaining clinic that has exceeded my expectations,” he says. “It still blows my mind how much we’ve accomplished.” ■

— Anne Machalinski



'An Incredibly Exhilarating Time'

Improved drugs and diagnostics offer new hope for leukemia patients



IN REMISSION:
Gail Roboz, MD
(right), with one
of her patients,
retired chef
Michel Lemoine

PHOTO: ABBOTT

For Ralph Hills, getting ready for minor back surgery in December 2014 was no big deal. At seventy-one, the computer consultant was physically fit—regularly playing golf and tennis—and his heart and lungs were in good shape. So when he went for a routine pre-operative blood test, he never expected to get a call referring him to an oncologist near where he lives in suburban Connecticut. It turned out Hills had acute myeloid leukemia (AML), a fast-moving cancer of the blood and bone marrow. “I was told I should go home and get my affairs in order,” he says.

But Hills sought a second opinion from Gail Roboz, MD, a professor of medicine and director of the Clinical and Translational Leukemia Program at Weill Cornell Medicine and a hematologist/oncologist at NYP/Weill Cornell. At first, she recommended aggressive chemotherapy. However, the night before he was to start treatment, Roboz asked Hills if he’d instead be willing to participate in a clinical trial on an experimental drug called enasidenib. Hills was soon taking four pills each day—and three years later, he’s in complete remission. “I’ve never had chemo. I’ve never been in the hospital,” he says. “I’m the luckiest person I know.”

Early data from that trial showed such a positive overall response to the drug—including putting 18 percent of relapsed patients into complete remission—that enasidenib was fast-tracked for FDA approval, which was granted in August 2017. It’s not the only one: since April 2017, the agency has signed off on the use of four other leukemia drugs that improve survival—an unprecedented number in so short a time frame—and others are in the pipeline. That means there are now more options than ever for patients with leukemia, a disease that has seen few clinical advances in the past forty years. Says Roboz: “It’s an incredibly exhilarating time.”

AML is the most common form of leukemia in adults, with more than 21,000 new cases diagnosed and over 10,000 people dying from it each year. The prognosis for older patients is particularly dire; those over sixty-five have an overall five-year survival rate of less than 10 percent. But in Hills’s case, Roboz ordered a genetic profile and discovered he had a mutation of a gene known as IDH2. In 8 to 19 percent of AML patients, an altered IDH2 gene blocks typical white blood cell development; enasidenib inhibits that mutated gene and promotes normal cell growth. The medicine made Hills feel sick at first; he was fatigued, had trouble eating, and lost forty-five pounds. “There was very little hope, but I never gave up,” he says. “And after three months, the leukemia cells started to disappear.” By May 2015, his cancer was in remission.

Some other newly approved drugs take different approaches. Inotuzumab ozogamicin—also approved by the FDA in August—is for adults with acute lymphoblastic leukemia (ALL). This therapy attaches a chemotherapy drug to monoclonal antibodies—molecules designed to target certain proteins such as those found on cancer cells—with the goal to deliver the chemo directly to tumors. Another new AML medication, CPX-351,

packages two commonly used chemotherapies into one formula with improved delivery. And yet another drug now in clinical trial at WCM—AG221—works in a similar manner to the one that Hills is taking, but focuses on a different gene mutation. Michel Lemoine, a seventy-five-year-old retired chef who lives in Manhattan, entered that trial shortly after Roboz diagnosed him with AML in July 2015. Three months later, with no side effects, he also went into remission and continues to be in good health. “It’s a miracle, honestly,” he says.

In addition to new leukemia medicines, scientists are developing techniques to pick up minimal residual disease (MRD), or tiny cancer cells that remain in the body even after treatment. The number and character of these cells are indications of how well a therapy has worked—particularly with AML, which has a high relapse rate. Physicians traditionally assess MRD by viewing cancer cells under a microscope, but there’s an urgent need for more sensitive tests. In May, Duane Hassane, PhD, assistant professor of computational biomedicine and director of leukemia genomics at Weill Cornell Medicine’s Englander Institute for Precision Medicine, and colleagues published an article in the *Journal of Molecular Diagnostics* describing a method that can identify residual leukemia cells in patients by looking for a mutation in a gene called NPM1—a sign of remaining cancer, since normal cells don’t have NPM1 mutations. The approach was found to detect both common and rare forms of NPM1 mutations, making this kind of testing applicable to more patients. Hassane isn’t stopping there: his lab is involved in a multi-center study that plans to monitor MRD in hundreds of AML patients over the next several years as they undergo care, using advanced

‘It’s a miracle, honestly,’ says patient Michel Lemoine, who’s been healthy since participating in a trial for a new leukemia drug, which caused no side effects.

DNA analysis that includes the NPM1 test. The theory is that better outcomes may result if doctors have information that allows them to adjust an individual’s therapy throughout the treatment process. “If we know how the disease persists and evolves before any clinical signs of relapse, it may present new opportunities for highly personalized treatments,” says Hassane.

Roboz cautions that these innovations don’t mean that everyone with leukemia will soon be cured; rather, she says, “these are incremental advances that will allow us to improve individualized care.” For instance, while enasidenib can’t eradicate Hills’s disease, he says he’s thankful that the drug has extended his life and given hope to other patients like him. “I’m seventy-four, but I recently celebrated my third birthday,” he says, reflecting on the additional time that the new treatment has given him. “That’s because three years ago, I started my life over.” ■

—Heather Salerno

Cardiac Care

A physician-scientist explores Africa's alarming rates of heart failure—particularly its connection to HIV



GLOBAL REACH: Justin Kingery, MD, PhD, in New York (above) and working with a trainee at Weill Bugando (opposite page)

Justin Kingery, MD, PhD, grew up in West Virginia coal country, a world away from Tanzania—but he felt at home in the East African nation from the beginning. That may seem surprising, but Kingery has come to realize that the two places have much in common. Residents of both often struggle with poverty, he notes, but they have a deep sense of community and a willingness to help each other. “Growing up in a coalmining camp in West Virginia is actually very similar to growing up in Tanzania—it’s a very communal upbringing,” says Kingery, an instructor in medicine in the Division of General Internal Medicine at WCM and a hospitalist at NYP/Weill Cornell. “I think that’s part of why I took to the Tanzanians, because they understand me even though we don’t speak the same language all the time. In Tanzania, everyone takes care of everyone, and that’s exactly how southern West Virginia is. Sometimes it can be a little closed to the outside world, but they’re fiercely protective of people; they want everyone to be OK.”

For nearly three years, Kingery has been splitting his time between

New York and Mwanza, Tanzania, home to the WCM-affiliated Weill Bugando School of Medicine. As a research fellow at the Weill Cornell Center for Global Health, Kingery is partnering with colleagues from Weill Bugando to study the high rates of heart disease in Tanzania. “When I first started going to Africa, I noticed that they have an even higher burden of cardiovascular disease than we do in the West—it’s pretty dramatic,” he says. “In fact, all the literature suggests now that the cardiovascular disease burden in low- and middle-income countries is much, much higher than even in the developed world, and that is going to be a big problem once those countries start to develop more.”

One study that Kingery conducted found that 20 percent of the patients who come to Weill Bugando Medical Centre are seeking treatment for heart disease—and alarmingly, 60 percent of them die within a year. Rob Peck, MD, the Tanzania-based director of the WCM-Weill Bugando partnership, points out that the drivers of this cardiovascular epidemic reflect the urbanization and

PHOTO: ABBOTT

westernization that have altered lifestyles throughout the developing world. “Whereas the people of Tanzania used to live and work on the land, farming, many more are moving into the cities, working at desk jobs, getting very little exercise, and eating a diet very high in fat and salt,” says Peck, an assistant professor of medicine and of pediatrics in the Division of Infectious Diseases who is one of Kingery’s research mentors. “Because of these changes in diet and exercise, obesity is rising at an alarming rate.” But Tanzania’s high incidence of HIV infection—with 5 percent of adults carrying the virus—has made matters even worse. In a study of 250 HIV-infected patients, Kingery’s research revealed that 41 percent suffered from a particular kind of heart disease known as diastolic dysfunction, more than double the rate of an uninfected control group.

In diastolic dysfunction—which can progress to heart failure and death—the heart’s lower left chamber doesn’t relax properly and therefore has difficulty filling with blood. In Mwanza, where Kingery spends about eight months of the year, he has been diagnosing the condition at the bedside through echocardiography, an imaging technology rare in Tanzania due to a lack of equipment and expertise; he has also been teaching Weill Bugando’s students and residents how to use it. And with his background in the role of immunology in heart disease—the subject of his doctoral work at the University of Louisville, where he also earned his MD—Kingery is studying the relationship between HIV and diastolic disease in the laboratory during his time in New York. “The research that Justin is doing is really groundbreaking,” says Peck. “He is a very bright, dedicated doctor who goes above and beyond to get his patients better. And he’s not only doing research and treating patients—he’s training the next generation of doctors here in Tanzania.”

While the connection between diastolic dysfunction and HIV has previously been observed in the West, it’s more of a threat in Africa, where patients are generally diagnosed with HIV much later, allowing the heart disease to develop as the virus goes unchecked. Fortunately, Peck says, HIV treatment is free and widely available in Tanzania, so once patients are diagnosed they do well in terms of disease management—and as the antiretroviral drugs strengthen their immune systems, Kingery can study how and why that impacts cardiac function. “We’ve come up with what we think is one of the central pathways involved,” he says. “I’ve done echocardiography on about 500 patients over the past couple of years, and we have samples from them of blood and serum, both before and after receiving treatment for HIV. This is a unique opportunity, because it would be rare even in the U.S. to have all of that data and samples in a freezer waiting to be investigated.”

And as Kingery notes, understanding the immunology of this type of heart disease has potential benefits beyond patients in Tanzania, and even beyond the HIV infected population worldwide. While diastolic disease is uncommon in younger people, he says, “if you’re in the U.S. and you’re over sixty, there’s about a 40 to 50 percent chance you have it. So we could be helping hundreds of thousands of people.” Furthermore, he says, his studies in Tanzania



may offer insights into other aspects of heart disease. “There are interesting differences in cardiovascular disease between there and the U.S.,” he observes. “For example, only 5 percent of people with heart failure in Tanzania have ischemic heart disease [in which the coronary arteries become narrowed or blocked]. If you compare that to the U.S., about 50 percent of people with heart failure have ischemic disease. If the Tanzanian diet is as bad as ours, and they’re as sedentary, why are so few having heart attacks? We don’t know.”

For Kingery, the desire to battle the scourge of cardiovascular disease runs deep; growing up, he saw many members of his West Virginia community succumb to heart attack and stroke, due to such factors as obesity and environmental pollution from coal mining. The first adult male in his family not to work in the mines, Kingery attended Marshall University on a scholarship funded by famed test pilot Chuck Yeager, an area native. While at the University of Louisville, which he attended on a full scholarship, Kingery became

‘The research that Justin is doing is really groundbreaking,’ says Rob Peck, MD, adding that Kingery is also ‘training the next generation of doctors here in Tanzania.’

friends with an elite marathon runner from Kenya who planned to open a medical clinic in his hometown and invited Kingery to help with a community health assessment, providing his first glimpse of Africa’s cardiovascular disease burden. When he learned about WCM’s global health research fellowship after completing his internal medicine residency in Louisville, it seemed the perfect fit—allowing him to contribute to improving health both in the developing world and back home. “The research goes back and forth, and this project is a great example of that,” he says of his work with diastolic disease and HIV. “I’m taking research methods that were developed for the richest people in the world, and I’m using them to help people in a low-income country—but also to help us. It’s a never-ending cycle, going back and forth to help each other. I really love that.” ■

— Beth Saulnier

The Golden Door

At Weill Cornell Medicine—and at many of its peer institutions across the U.S.—immigrants make rich contributions to research, education, and clinical care

BY BETH SAULNIER
PHOTOS BY STEPHANIE DIANI

America's foreign-born scientists and physicians have long played a vital role in research and patient care in the United States. As the Union of Concerned Scientists noted in a 2017 blog post, immigrants represent more than a quarter of the nation's entire science and engineering workforce—and foreign-born researchers tend to be extraordinary achievers, including winning a striking number of the Nobel Prizes awarded to scientists affiliated with American institutions. But current political support of policies to restrict immigration has raised concerns about the ability of these foreign-born MDs and PhDs to continue living and working legally in the U.S.

At Weill Cornell Medicine, an institution that not only has a global reach but a truly global character, immigrants make

untold contributions to the clinical and scientific enterprise. In the following pages, we offer portraits and stories of six members of our community—four faculty, a medical student, and a resident at NYP/Weill Cornell—who came to the U.S. seeking opportunities unavailable to them in their home countries. Their diverse backgrounds and life experiences have informed their work and enriched the institution—adding to the body of scientific knowledge, and ultimately benefitting patients here and around the world. And their stories embody the ideals of Emma Lazarus's famous poem *The New Colossus*; emblazoned inside the pedestal of the Statue of Liberty, it welcomes newcomers with a lamp, lifted "beside the golden door." >



Second-year
medical student
Francesca Voza, a
native of Martinique
(story on page 25)



TRAINING ON TWO CONTINENTS

Ayman Al Jurdi, MD '15

THIRD-YEAR RESIDENT, INTERNAL MEDICINE

Al Jurdi earned his medical degree from WCM's Qatar location, but training in the U.S. was always on his radar. Time on the New York campus is part of the educational experience for WCM-Q students, and Al Jurdi spent several months doing electives here; he also worked in a WCM stem cell lab and did research on liver cancer at the College of Veterinary Medicine in Ithaca. That solidified his desire to do his residency in the U.S., as do most WCM-Q alumni. "What drew me is seeing that doctors here are not only really good with their scientific knowledge, they're connected with patients," says Al Jurdi, whose older brother preceded him at WCM-Q. "I saw how many resources there were, and I wanted to train in a place where the cutting-edge stuff was available—and also for a cultural experience. Weill Cornell is very diverse: even in my residency class, we have people from nine or ten countries and from all over the U.S. People are understanding of everyone and interested in each other's background. You feel accepted."

A Doha native who holds Lebanese citizenship, Al Jurdi attended WCM-Q's premedical program before matriculating at the medical school. During his first year in New York, he was named his program's top intern—and next year, he'll serve as chief resident. He aims to follow his residency with training in nephrology and transplant nephrology, then gain experience in practice in the U.S. before returning to Qatar. One lesson he has learned in residency, he says, is the importance of engaging patients in making decisions about their own care, a cultural difference he has observed between the two nations. "Here in New York when we're trying to decide on a diagnostic or treatment workup and there's more than one option, we'll have a discussion with the patient about the pros and cons, taking into account the patient's values," he says. "In Qatar, many patients leave decisions about their healthcare up to their physicians out of trust, and follow their recommendations without being as involved in the decision-making. It's not going to be easy, but the concept of shared decision-making is something I hope to bring back with me."

STARTING OVER

Francesca Voza

SECOND-YEAR MEDICAL STUDENT

The French educational system has many virtues, but flexibility isn't among them. That's the roadblock that Voza faced when her dreams of becoming a physician came up against the reality of stringent national exams, whose results put her on a track toward a PhD rather than an MD. So Voza—who was born on the French Caribbean island of Martinique and earned her bachelor's degree (in biology and biochemistry) and master's (in pharmacology) in Paris—decided to move to the U.S. to pursue medical school. With dual French-American citizenship through her mother, she got a job as a research technician (first at Mount Sinai, then at Memorial Sloan Kettering Cancer Center) and re-applied for undergrad. "It was a battle because it was hard for the schools to evaluate me with my French transcript," she explains, "but I finally managed to get in." She spent several years taking pre-med classes at Hunter College as a second-degree student while working full time and contributing to several peer-reviewed publications, accruing enough of an academic track record to gain admission to Weill Cornell. "I have no regrets in terms of where I am right now," says Voza, now in her late thirties. "I just wish it had taken a bit less time."

As a volunteer evaluator and board member at WCM's Center for Human Rights, Voza says, her language skills come in handy when interviewing asylum seekers from Francophone countries. While she hasn't yet decided on a specialty, she hopes to contribute to care on her native Martinique in some form. "Medical school is challenging. We're evaluated on many levels," says Voza, who has a strong interest in global health and healthcare disparities. "I'm definitely enjoying it. It's fascinating to apply the material we're studying to best treat our patients. This is where I wanted to be. Every day I'm so happy to see how much I've learned, and how I can make a difference."

CONNECTING WITH PATIENTS

Ruben Niesvizky, MD

PROFESSOR OF MEDICINE

Niesvizky came to the United States three decades ago, a poignant postscript to a tale that began when his family first tried to immigrate here two generations earlier. As Jews fleeing pogroms in Eastern Europe, he explains, his grandparents on both sides were turned away due to quotas on immigrants from Poland—the same sort of restrictions that denied many twentieth-century victims of anti-Semitism a safe haven in the U.S. The family ultimately settled in Mexico, where Niesvizky was born and completed his education and medical residency. He came to New York for a fellowship in hematology and stem cell transplant at Mount Sinai, later shifting to Memorial Sloan Kettering and then to Weill Cornell. “The opportunities to grow academically were much better in the U.S.,” he says. “I wanted to make a contribution to science and to hematology itself.”

An expert in myeloma, a blood cancer that develops in the bone marrow, Niesvizky is now director of the Multiple Myeloma Center at NYP/Weill Cornell. He notes that his Spanish fluency has enabled him to connect with patients and families coping with a challenging disease, eliminating the added burden of a language barrier without the need for a translator. “Diseases of the blood are so complicated that explanations in Spanish are always welcome,” says Niesvizky, who’s also fluent in Hebrew and Yiddish. “When patients see my face, they would never think that I speak Spanish, and all of a sudden I speak to them and their eyes change. They can communicate much better, and that increases their confidence and trust. Patients feel a bit closer to their doctor if they can understand each other.” His unique status as a Mexican-born myeloma expert has also allowed him to establish bridges of research, training, and education between the U.S. and Latin America, where, he notes, physicians who treat blood cancers tend to be generalists. “There is a lot of talent and expertise, but few individuals focus on myeloma itself, and it’s the same for each disease, so it’s enriching for them to see somebody whose focus is disease-specific,” he says. “I often serve as an adviser or teacher in Mexico, and several residents have come here to rotate—and now they are leaders in myeloma there.”





PAYING IT FORWARD

Gunisha Kaur '06, MD '10

ASSISTANT PROFESSOR OF ANESTHESIOLOGY

"We didn't come on a refugee program," says Kaur, "but essentially, we came as refugees." In the mid-Eighties, when Kaur was a toddler, she and her family—part of India's Sikh minority—moved to the U.S. to escape increasing religious, ethnic, and political strife in their native Punjab region. She, her parents, and an older brother settled into a two-bedroom apartment near the University of Iowa, where her father got a postdoc in a genetics lab—and while many refugees face far worse circumstances, it was still a step down. "Had he stayed in India, his career trajectory would have been very different," Kaur notes. "He would have had his own lab and several floors of research capacity." Money was so tight that Kaur recalls scrounging in the couch cushions for change to buy gas to get her dad to work until his next paycheck. "It's so vivid to me, those memories of being an immigrant," she says. "Especially when you come as refugees, you have very limited means—but it doesn't matter. You're escaping something, and no matter how stressful life might be, it's better than where you were."

As Sikhs, the men in Kaur's family wear turbans and beards. As a result, they have sometimes been the targets of threats or violence—in India, her father was beaten by a mob and left for dead—or everyday bias such as regularly getting pulled out of line for extra screening at the airport. Kaur's background and experiences drive her dedication to an unorthodox specialty: studying the ongoing pain endured by survivors of torture. She also volunteers at WCM's Center for Human Rights, which prepares medical affidavits for asylum seekers. "When my family came here, not many people were able to escape that unstable environment," she says. "Because of that, I've always felt a strong responsibility to be a voice for those who aren't able to escape."

A BOLD LEAP

Wen Shen, PhD

ASSOCIATE PROFESSOR OF CELL BIOLOGY
IN RADIATION ONCOLOGY

Shen admits that coming to the U.S. from China to earn a PhD was a tough decision. When the chance presented itself, she was in her early thirties, had a good job, was married with a six-year-old daughter, and had limited English skills. “I was happy with my work and life in China, reluctant to leave home and start a career from the beginning again in a foreign country,” recalls Shen, who grew up in the ancient city of Xi’an and went to university in Nanjing. “I hesitated when I had the opportunity to do PhD studies, but my family gave me very strong support to convince me I should go.” At the University of Illinois, Urbana-Champaign, Shen struggled to understand the lectures and had to put in hours of study afterward just to catch up—but she managed a straight-A average. Her family eventually joined her, with her husband enrolling as an MBA student and her daughter starting second grade.

After earning her doctorate, Shen spent five years as a postdoc at Columbia before starting her own lab at WCM, where she studies how cancer evolves. “I feel very fortunate that I decided to come to the United States,” she says. “Living in a country that is the leader in the biomedical field expanded my ability to do good research.” She’s equally grateful that her daughter—who’s now in dental school at Stony Brook University—was able to attend American schools and have a more diverse educational experience. “A main reason why the U.S. is the leading country in biomedical research is the diversity—the different cultures, the combined efforts of people with different backgrounds,” she says. “People like myself, who come here and benefit from the diverse scientific community, are thankful and willing to return what they learned to the country and to the whole world.”





HOOP DREAM

Said Ibrahim, MD

CHIEF, DIVISION OF HEALTHCARE
DELIVERY SCIENCE AND INNOVATION

For Ibrahim—growing up in Somalia as one of the ten children of a small-town policeman and a homemaker—an MD degree seemed an unattainable dream. Medical school was reserved for wealthy elites, he explains, and his family lived on his dad’s salary of about \$50 a month. So when the famed Cleveland State basketball team recruited him in the mid-Eighties—he’s 6-foot-8—he jumped at the chance to attend college in the U.S. But his tryout was a bust: after two solid days of travel, he was taken straight to the gym, where he failed to impress and was told to return to Africa the next day.

Determined to pursue his education, the twenty-two-year-old ventured onto the streets of Cleveland with just \$30 in his pocket. Luckily, he met a sympathetic legal aid attorney who helped him enroll at Oberlin College, where he played basketball and got his BA. He went on to earn an MD from Case Western Reserve, an MPH from Harvard, and an MBA from MIT. With a passion for “taking care of those who need the most help,” Ibrahim has devoted his career to studying and combatting healthcare disparities. Before coming to WCM last year as chief of the newly established Division of Healthcare Delivery Science and Innovation as well as vice chair for strategy and development in the Department of Healthcare Policy and Research, he spent two decades practicing in the Veteran’s Administration system, which he calls “one of the most important safety nets in the U.S.” The nation’s recent shift toward policies that curtail immigration, Ibrahim says, is disheartening. “I believe that what makes the U.S. so special and unique is its diversity,” he says. “But I’m an optimist. I believe this is a phase, and we’ll be back to the usual spirit of America, which is a place that’s welcoming to immigrants.” ■

Getting the Message

In an era where misinformation is rampant, more and more scientists—at WCM and nationwide—see an urgent need to communicate their work to the public

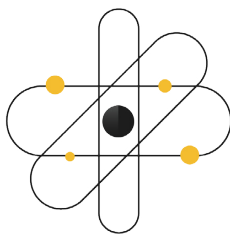
By Amy Crawford Illustration by Aldo Crusher

For many sports fans, reading recaps of the previous day's games is a morning ritual; the box scores, play-by-plays, and nicknames for star athletes bring the action to life. But the sports pages can feel a bit inaccessible to the casual observer—and they're utterly baffling to someone who's never spent an hour at the stadium. "How can you explain what happened at the game without using jargon, without being condescending, and while trying to convey the stakes?" says J. David Warren, PhD, associate professor of research in biochemistry, who recently encountered that conundrum in the form of an exercise at a science communication workshop hosted by Dean Augustine M.K. Choi, MD, and organized by WCM's Office of External Affairs. "It's much harder than it sounds."

The analogy isn't directly related to science, of course. But asking scientists to make the jargon-laden sports section meaningful to peers who never scan the box scores highlights a struggle that many researchers, steeped in the language of their own field, face when they try to explain their work to the public. And in recent years, Warren—like many of his colleagues at WCM and across the medical

and scientific communities—has felt a new urgency to communicate about his research. Much of that is due to a rise in denial of science, coupled with a public distrust of experts that has contributed to such problems as parents refusing, against medical evidence, to vaccinate their children. Meanwhile, the advent of social media has opened new channels of communication that allow both scientists and charlatans to speak directly to the public. In an era of so many competing voices, it can be hard to get your message out, let alone make yourself understood. "I think scientists have gotten really good at communicating with themselves, but in speaking with the lay public, even the most seasoned scientists can struggle to get their point across," Warren says. That idea was driven home by the sports exercise, which he admits was a tough assignment for the physicians and scientists sitting at his table. "It just shows," he says, "how difficult it can be to explain something that you know very well."

In 2015, the Pew Research Center surveyed more than 3,700 scientists connected with the American Association for the Advancement of Science (AAAS). Nearly 90 percent agreed with the statement, "Scientists should take an active role in public policy debates" >







WALKING THE WALK: More than a million people participated in worldwide marches in support of science, including this one in Washington, D.C.

Journalist Christie Nicholson, who led a recent WCM workshop on communicating science, says that for researchers, seeing their work from a bird's-eye view is 'necessary to engage almost any audience, even the audience down the hall from them.'

about issues related to science and technology." Many were working to fulfill that obligation, including more than 50 percent who had talked to journalists about their work, and just under half who used social media to talk about science or learn about the latest developments.

Online, Twitter seems to be scientists' preferred platform: in 2017, researchers at the Indiana University School of Informatics, Computing, and Engineering were able to identify more than 45,000 scientists tweeting across nearly every discipline. One is WCM's Neera Gupta, MD, associate professor of pediatrics and director of research at the Pediatric Inflammatory Bowel Disease Center, who joined Twitter in 2014, after friends and colleagues at national meetings mentioned they'd found it useful. She uses the microblogging platform to share research findings, raise awareness about inflammatory bowel disease, and even recruit study

participants. Her nearly 900 followers include national and international colleagues, journalists who cover medicine, and patients who live with the conditions she researches. "Twitter is a wonderful way to share scientific information," says Gupta, who has since broadened her use of social media by participating in videos on NewYork-Presbyterian's YouTube channel and in a Facebook Live video chat for the Crohn's and Colitis Foundation. "I enjoy posting and I enjoy reading what everyone else posts. I think everyone benefits by participating in a thoughtful and constructive conversation, which may lead not only to all of us learning, but also to new ideas, collaborations, and research, and ultimately to improved patient care."

But while scientists are embracing new opportunities to communicate, many also worry that an expanding media landscape is helping to propagate disinformation. According to the Pew survey, nearly 80 percent of scientists were troubled by the way in which the media covers science, especially when "news reports don't distinguish between well-founded and not well-founded scientific findings." In part because of that concern, interest in improving communication skills has been on the rise among scientists nationwide. AAAS has seen increasing interest in its communication workshops for scientists and engineers; last year it offered forty-four sessions, up from twenty-six in 2015. Attendees at the AAAS Annual Meeting, the world's largest gathering of scientists, have increasingly requested communication-related training. In response, the organization provided three mini-workshops at the most recent event this past February, covering the fundamentals of science communication, social media, and engaging policy-makers. Three hundred people attended.

Like WCM, other academic institutions are responding to the perceived need for better science communication. Last May, the

University of California, San Diego, launched a research communications program funded by a two-year, \$225,000 grant from the Gordon and Betty Moore Foundation, the family foundation established by the Intel cofounder and his wife. The new initiative will train UC San Diego faculty, post-docs, and other researchers to better communicate with the public about their work. Meanwhile, the Alan Alda Center for Communicating Science at Stony Brook University—founded in 2009 and renamed for the actor and science advocate in 2013—organizes workshops around the country to help science graduate students and established researchers learn how to talk about their work. (It was the Alda Center that initially conceptualized the sports exercise.) Science journalist Christie Nicholson—who has trained more than 3,000 scientists as a lecturer with such institutions as the National Science Foundation and the New York Academies of Science, as well as the Alda Center—facilitated the February workshop at WCM. She has found that demand for services like hers is only increasing. “It could be because there’s more availability, or because there’s more need,” she says. “But the bigger thing is that, because science has become ever more abstract—and that’s not going to slow down—even those within the same discipline are having trouble speaking to each other.”

Many scientists are aware of the problem, Nicholson says, and she has been impressed by how much they want to be able to talk to others—including friends and family—about their work. But it can be hard to transcend the so-called “curse of knowledge,” wherein a person can’t remember what it was like not to have their current level of expertise. Another challenge is being able to rise above the day-to-day minutia of lab work to see things from a bird’s-eye view. “That’s necessary to engage almost any audience, even the audience down the hall from them,” says Nicholson, who works to help scientists imagine things from the listener’s perspective by practicing a technique called “empathy mapping.” “Your goal is to get your audience to feel or think or do something. The empathy map exercise gives you a sense of, ‘This is what they’re interested in, this is what they care about.’ That will help you with your messaging.”

It was in the interest of forging connections across disciplines that Carl Nathan, MD, dean of the Weill Cornell Graduate School of Medical Sciences and the R.A. Rees Pritchett Professor and chairman of the Department of Microbiology and Immunology, established a new lecture series called “Science and Society” this past fall. The ongoing program brings in outside experts to help students understand subjects like medical journalism, medicine and social justice, and even theoretical physics. “I thought we could bring in scientists who talk about science that has nothing direct to do with what our graduate students study, and see how they communicate their science to us,” Nathan explains. “And then we can imagine communicating our science to an audience that doesn’t have the same technical background or frame of reference.”

While biomedical research funding has enjoyed strong bipartisan support in Congress in recent years, including recent increases in funding for the National Institutes of Health, scientists believe they must remain engaged. A “Science and Society” lecture scheduled for this fall will tackle advocating science to the government—an issue that has become more and more pressing, Nathan says, as

anti-scientific ideas have become public policy under the current administration. While institutions like WCM remain nonpartisan, it has become clear to many faculty, including Nathan and Dean Choi, that physicians and researchers must now work harder to make their case for government funding. In a letter to faculty in April 2017, just before more than 1 million people participated in a worldwide “March for Science,” Choi urged his colleagues to take every opportunity to engage with the public, writing, “By communicating more effectively about what we do and why it matters, we may acquire a broader base of support within our society.”

Part of that effort has included meeting with members of Congress directly—and WCM’s participation in a “Rally for Medical Research” last September was the best-attended such event ever, with fourteen faculty traveling to Washington, D.C., to meet with lawmakers. “The idea that climate science should play no role in government decisions that affect climate change, that the term ‘evidence-based’ must not appear in the budget of the CDC—these are disastrous points of view,” Nathan says. “So I think we have a civic obligation to be prepared to articulate what we do and why we do it, why it matters, and how it works, in all kinds of settings—with neighbors and family members, at school board meetings and town halls, and in writing letters to elected representatives. If we don’t speak up, we’re under attack.” ■



SPEAKING CLEARLY: A workshop on science communication, held at WCM in February, drew faculty members (including David Christini, PhD, vice dean of the Graduate School of Medical Sciences, holding microphone at left) seeking guidance on how best to communicate their work to the public.



NEWS OF MEDICAL COLLEGE AND GRADUATE SCHOOL ALUMNI



"If I have seen further, it is because I have stood on the shoulders of giants."

– Isaac Newton

I can say without exaggeration that being exposed to a few giants when I was at Weill Cornell Medicine had a tremendous impact on my career. The contributions I have made to my patients and trainees were incubated on York Avenue, and are why I feel so strongly about giving back to my alma mater, specifically our students and young alumni.

When I was a third-year student, Martin Gardy, MD '60, was running the medicine clerkship. He was a man of a different time in medicine. He was scholarly and compassionate, and he took the time to empathetically interact with patients and was very intense about doing the best for them. With his students, he was not one to give everyone a gold star just for being present. However, underneath his demanding exterior was a physician utterly committed to an intellectual foundation of what we were trying to achieve for our patients. Ultimately, he was trying to model for students how to be an internist with a capital "I."

I remember being very anxious about presenting a case to him. The patient had a bleeding ulcer and, on a few urgent occasions, had been prepped for gastric surgery. I had reviewed his course, his latest day's situation, and a bit of the medical literature. Dr. Gardy listened intently; then we went to the bedside and he examined the patient. He asked about the patient's family, his thoughts about his current situation, and the care he was receiving. We then went, en masse, to a conference room, where Dr. Gardy cited verbatim a paragraph from a paper I had reviewed. I was amazed by his recall; the paper was six years old! He then proceeded to focus on the underpinnings of the therapy being proposed. I realized that here was someone I might try to emulate, and possibly never succeed.

The next interaction that I can recall (my memory being a lot weaker than his) was when he conducted my exit interview for the clerkship. He was kind, firm, and specific in his critique of my performance. No gold star was affixed to my forehead when I left his office, but he did offer me something I incorporated into my career. He said, "If there is anything about a career in internal medicine you would like to discuss as you consider your future, I will happily make time for you."

There are other examples of WCM faculty who by their grace, intelligence, and professionalism had a large impact on my maturation. Charles Christian, MD, was an attending when I was a sub-intern, and I later worked in the lab of one of his young faculty, Michael Lockshin, MD. Dr. Christian led his faculty meetings with patience, kindness, and an interest in leveraging the ideas that were brought up to realize their fullest potential. A number of students worked in his labs, and he was patient and kind to us all. I remember conversing with him about a paper I'd read, about which he was skeptical. He told me to see if the findings were sustained as true a year later—superb advice that I've shared with many of my students.

I encourage all of you to think about ways in which you can make a difference in the lives of our students. Will you sponsor the first stethoscope they receive in their first week of training? Will you host a fourth-year traveling for residency interviews so they can save on expenses? Will you let a student shadow you in your clinical practice or research lab so they get firsthand exposure to your field? Will you connect with or mentor a student or recent graduate so they can learn from those who came before them?

How will you leave your mark on the future of medicine, like Dr. Gardy left on me?

Stuart Mushlin, MD '73

President, Weill Cornell Medical College Alumni Association

stuartmushlin@icloud.com



Medical College

1950s

Robert Greenwood, MD '50: "After years of futile searching, last week I finally found **Al "Moose" Berkenfield '46, MD '50.** We had a long phone conversation during the course of which we both wondered how many of us 1950 graduates were still up and about. I gather that only those of us that write in and confirm our viability get a notice in the periodic bulletin, suggesting there may be a number lurking out there hoping not to be noticed. Both Al and I would like to know. As for the present, I continue to enjoy the privacy and solitude of a log cabin in the forest. I retired from my orthopaedic practice at the earliest possible age without a financial penalty and have had a very long and enjoyable retirement here in the woods indulging

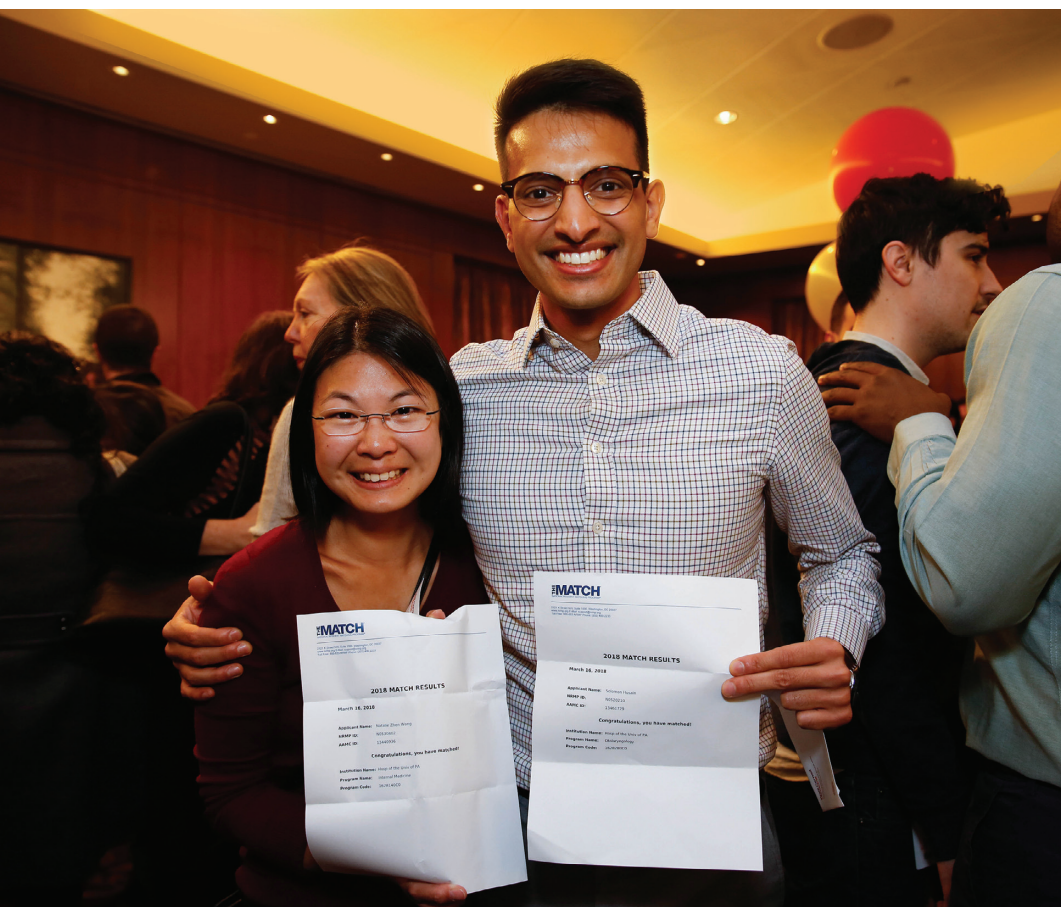
the endless crafts I have cultivated all my life and living in this antediluvian culture, so basic, so genuine. I have very fond memories of the years in medical school. All good wishes to any of you other survivors."

Francis Wood, MD '50, practiced neurosurgery in Newark and Montclair, NJ, where he now lives. He often visits his daughter in Brooklyn and attends the opera in New York City with various friends. His four children are: Tom, Newton, MA, financial software consultant; Rick, Salisbury, MD, high school science teacher; Penelope, Brooklyn, NY, retired American Express executive; and John, St. Paul, MN, Delta Airlines pilot. His wife, Mary, was an anesthesiologist who passed away several years ago. In early December, Frank

EMOTIONAL MOMENT: On Match Day 2018, Sasha Hernandez '18 (center) absorbs the news that she'll do her ob/gyn residency at NYU Lagone Medical Center.

visited **Chan Thompson, MD '50,** a close friend from Wildwood days. Chan lives in Charlotte, NC, where he practiced general surgery. Chan had a stroke a few years ago and is living in the inpatient medical facility associated with the retirement community where he and his wife, Dede, lived. She continues to occupy their home. Chan and Frank had a great time reviewing the Class of '50 *Samaritan*, plus a framed picture of all the class, which Frank had brought with him. He'd be happy to hear from any classmate.

Roy W. Menninger, MD '51, is retired and living in Topeka, KS. He writes, "I'm necessarily adapting to a passive lifestyle." He would rather be traveling. The one thing he remembers most from medical school: "The



PENN BOUND: Friends Natalie Wong '18 (left) and Solomon Husain '18 both matched at the University of Pennsylvania—she in internal medicine, he in ENT.

incessant pressure to be perfect and remember everything—and my regular failure to meet that standard.” He would like to hear from **Carl Wierum, MD '51**, his old roommate.

Ed Margulies, MD '56: “Paulette and I are doing very well. We winter in Naples, FL, where we have full lives and are very busy. Last year I was in severe right heart failure; some old pacemaker wires had pinned a leaflet of my tricuspid valve against the septum, putting me into roaring TI. Laser extraction of the wires and re-routing new wires brought me back from the brink. Now I’m enjoying golf again and chasing master points at the bridge table. Still piling up grandchildren. Our oldest is now 12.”

Mildred D. Rust, MD '56: “I’m almost 90; my daughters are making a big thing of it: a big party in February here at Riderwood Village, my retirement home. Ninety is nothing around here—residents are all very well cared for, active in many ways (as am I), and long-lived. (A ninety-year-old club was inactivated, members too numerous and busy; now a 100-year-old club is developing.) However, among family and younger, outside friends,

it’s still apparently a big deal, so here we go. I have Parkinson’s disease, at a moderate degree. Balance is nil, I require a continuous walker, but that is my buddy, and allows me almost normal life, with a full schedule of activities: social, volunteering, friends, games, concerts, etc., but slow, awkward, bad hand coordination, unable to get in much extra beyond caring for body, and above. A great deal of walking and special exercising. I’m trying to keep the disease at bay, with some success. I have two wonderful daughters, both PhDs: Paula, a professional sociologist, owns a business, does great teaching and outreach work, and has a good marriage and four children. Lynn, a microbiologist, runs a grant reviewing program at the NIH, is an organizer, is married, and cares for her disabled husband.”

Bernie Siegel, MD '57: “My wife of 63 years, who attended my Colgate graduation ceremony, died peacefully in her sleep on January 19. We had an incredible life and love, which made us feel complete and lacking nothing. We had each other and that was all we needed to enjoy life. Her death is another commencement for me. I also know her spirit and consciousness are with me since I have had messages from her to let me know all is okay and she is with family again.”

John N. Baldwin, MD '59: “I’m guiding big game fishing groups to Sitka, AK, though I would rather be operating on aortas and hearts. When I was in medical school there was one office—Dean Larry Hanlon. Now there are 24 or more. No wonder it only cost \$800 a year and a kid could work it off in the blood bank, typing records, or Millbury Snack Bar. I remember sailing with greenhorns in 1958 to the Bahamas with only a radio and total parental support, as well as walking naked on Paradise Island, then uninhabited, now a crowded resort with gigantic hotels and casinos. It was the best of times and guys.”

Mary Anne Dewitt Smith, MD '59: “My husband, **Fred Smith, MD '56**, died a year ago. We were fortunate to have 57 years together, and I am fortunate that two of my three children live in Portland, OR. They, friends, and good neighbors have helped so much this past year.”

1960s

Clay Alexander, MD '61: "My fifth novel, *The Awakening of Thomas Hunter*, is now on Amazon in both Kindle and paperback forms. The book goes beyond an exciting read—questions about mortality, credence, and the divine are raised and will give readers something to contemplate long after the action has faded from memory."

James E. Bernstein, MD '64: "As I begin my 80th year on this earth, I am pleased to be fully engaged in solving one of the major problems that prevents essential surgery around the world. The Eniware portable, power-free sterilizer [see *Weill Cornell Medicine*, Volume 15, Number 2] will finally be available for use early in 2018. This has been my full-time job for the past five years. I paused for two weeks last year to welcome a bovine valve into my aorta, which works very well."

Gus Kappler '61, MD '65: "I just delivered the opening keynote address at the Navy/Marine 21st Century Battlefield Medical Care Symposium in Quantico. I reviewed my experience as a trauma surgeon in Vietnam, trauma care in Iraq/Afghanistan, and my proposed preventive measures to mollify active duty military and veteran PTS, substance abuse, and suicide. I referenced my book, *Welcome Home From Vietnam, Finally: A Vietnam Trauma Surgeon's Memoir*. It was stressed that inductees possess an adolescent brain, are changed by basic training, worry about stigmatization, and must conform to the military culture. These factors, not combat, are most responsible for the development of PTS and its downstream consequences."

Paul L. Gunderson, MD '67: "I finally retired last December after 40 years of practicing ophthalmology in the Boston area, as well as part-time teaching at Mass Eye and Ear Infirmary (HMS Department of Ophthalmology—now emeritus staff). I'm living in Wolfesboro, NH, with Lee Ann, my wife of 48 years. I have three sons, all good-looking like their mother."

H. James Wedner '63, MD '67: "I am still at Washington University School of Medicine in St. Louis, currently the Korenblat Professor and Chief of Allergy & Immunology.

No thoughts of retirement as yet. My wife, Pat, and I have seven grandsons, ages 7 to 16."

Ruth Dowling Bruun, MD '68: "After 45 years of practicing psychiatry, mainly psychopharmacology, I retired at the end of December. I specialized in the treatment of, and did research on, Tourette's syndrome, authoring two books and numerous book chapters and journal articles on this disorder. I particularly enjoyed working with these patients to make their lives more bearable. I have six children and 14 grandchildren and live in Remsenburg, NY, a very quiet and beautiful area. My husband, Bertel Bruun, died in 2011."

1970s

Richard A. Lynn, MD '71: "The annual Palm Beach alumni breakfast took place here on Saturday, February 3. Dean Choi and his wife, Mary Choi, MD, honored us with their presence. **Rick Bailyn '67, MD '71, Bob Cucin '67, MD '71,** and yours truly represented our class. We were briefed on the exciting new developments and strategic plans for our alma mater."

Marc E. Kaminsky, MD '74: "I have been retired from my radiology practice in Fort Wayne, IN, for two years. Dana and I shall have been married for 41 years in April. Our only child, Clay, is a federal defender in Manhattan, and his wife works for the Mellon Foundation. We have two granddaughters, ages 3 and almost 1."

Thomas M. Anger, MD '75: "I am working three days a week, cycling, taking classes at Old Town School of Folk Music, and enjoying trips to Columbus, OH, to see kids and grandkids. I remember hearing a lecture in medical school about a rare type of lymphoma known as Waldenström's macroglobulinemia and thinking, well, that's one I probably won't see as a pediatrician. Little did I know; starting soon I will be getting Retuximab for it. Funny how things work out. Was so sorry to hear about the death of **Cleland Landolt, MD '75**—he was a great friend."

Gregory T. Everson, MD '76: "I retired from the University of Colorado, Denver, and GI/hep division in June 2017, then joined

'After 45 years of practicing psychiatry, mainly psychopharmacology, I retired at the end of December. I specialized in the treatment of, and did research on, Tourette's syndrome, authoring two books and numerous book chapters and journal articles on this disorder. I particularly enjoyed working with these patients to make their lives more bearable.'

— Ruth Dowling Bruun, MD '68

'I am approaching my tenth anniversary as chairman of dermatology at Mass General Hospital. I'm running a research lab with about 20 trainees. Our department has multiple outstanding WCM graduates. Recently, I had the opportunity to visit Weill Cornell Dermatology—a fabulous department.'

— David E. Fisher, MD '85

HepQuant LLC as CEO in July 2017. My youngest son, Todd, married this summer; he and Jessica now live in Atlanta where he works at Emory University and she teaches art in high school. Oldest son, Brad, is CBDO of HepQuant and works with me. Linda and I are still biking and skiing—as long as knees hold out. Best wishes to all."

Nina C. Ramirez, MD '78: "I am looking forward to our 40th anniversary and Reunion. What a milestone. **Theresa Jackson, MD '78,** and I are class Reunion leaders and hope to inspire our colleagues to come and celebrate. I remain busy in practice as an allergist, immunologist, and pulmonologist for children and adults. The past several years have been especially exciting given the advent of targeted biologics for patients with severe refractory asthma. We are now capable of impacting so many lives, and more discoveries are on the way. This is a great time to be a physician. My participation on different speaker's bureaus has afforded me an opportunity to spread the word about these discoveries to a wide audience. I am an active member of our state allergy society and am president-elect of the Florida Allergy, Asthma, and Immunology Society. Later this year, I will become the society's 69th president and fourth female to hold the position. It is truly an honor. My life's work would never have evolved were it not for my beginnings at WCM. For this and so much more, I am eternally grateful. I hope to see my classmates in the fall. I will bring samples."

Harvey Guttman, MD '79: "In November, as president of the medical staff at Abington-Jefferson Hospital, I invited **Tom Lee, MD '79,** currently the CMO of Press Ganey, as our Alfred E. Frobese Visiting Professor for an exhilarating and informative social and educational event. It brought us both fondly back in memory to our Weill Cornell days, and we had a wonderful visit together. I feel so fortunate to have studied among such inspiring students, who have evolved into some of our most esteemed thought leaders in American medicine."

Thomas J. O'Dowd, MD '79: "We see **Steve Luminais, MD '79, Bill Schickler,**

MD '79, and Steve Werns '75, MD '79, and family on a regular basis. Boy, do *they* look old."

Steven Schutzer, MD '79, a professor and physician-scientist at Rutgers University-New Jersey Medical School, co-chaired a meeting at the Cold Spring Harbor Laboratory's Banbury Center in 2016 that discussed improvements in the early diagnosis of Lyme disease. The findings were published in the December 7, 2017, issue of *Clinical Infectious Disease* with Dr. Schutzer as senior author.

1980s

Nina F. Schor, MD '81: "After 11-plus years as chair of the Department of Pediatrics of the University of Rochester and pediatrician-in-chief of its Golisano Children's Hospital, I have become deputy director of the National Institute of Neurological Disorders and Stroke at NIH."

Robert M. Friedman '80, MD '84: "After nearly 30 years of delivering babies, I called it a day as of March 1, 2018. I can honestly say I can look back on a wonderful career. It's now time to get on with the next half of my life. Regards to all who know me."

David Haughton, MD '84, reports that his latest art exhibit, *40+ Views of Mount Baker: Homage to Hokusai*, was held at Gallery 110 in Seattle in March. He writes, "Hokusai extended his *36 Views of Mt. Fuji* series by ten works; I am taking similar license with my arithmetic, but am adding 19 new works to my series."

David E. Fisher, MD '85: "I am approaching my tenth anniversary as chairman of dermatology at Mass General Hospital. I'm running a research lab with about 20 trainees. Our department has multiple outstanding WCM graduates. Recently, I had the opportunity to visit Weill Cornell Dermatology—a fabulous department. Personal: we suffered a terrible tragedy when one of our four sons, Samuel, died suddenly at the finish line of a charity triathlon. Our oldest son is in Harvard Medical School, and our third son is completing college and planning grad school in organic chemistry.

Our youngest is still in high school. My wife of 30 years, Claire Fung, is a radiation oncologist at Beth Israel Harvard."

Edward Chaum, PhD '86, MD '87:

"In addition to being a retina specialist, I have been actively engaged in research into the biology and treatment of blinding diseases throughout my career. I recently accepted the position as the inaugural J. Donald M. Gass Professor of Ophthalmology and Visual Sciences at the Vanderbilt University Eye Institute. Dr. Gass was one of the most influential retinal disease specialists of the 20th century and I am honored to have a professorship in his name. You can reach me at Edward.Chaum@vanderbilt.edu."

Sonja Gray, MD '88, announces the summer opening of the Inner Vault Wellness Center in downtown Caldwell, NJ. A psychiatrist, Dr. Gray will be integrating Eastern and Western healthcare modalities in a newly renovated, environmentally friendly building. Her current practice is in Montclair, NJ.

Theresa Rohr-Kirchgraber, MD '88, received the Bertha Van Hoosen Award from the American Medical Women's Association (AMWA) on March 24, 2018. The award honors women physicians who have demonstrated exceptional leadership and service to women physicians and students through AMWA. Dr. Rohr-Kirchgraber served as its president in 2015–16.

Charles Flowers, MD '89: "After the economic crash of 2008 decimated my LASIK Center in San Diego, I sold what was left and eventually got recruited to join the full-time faculty at the USC Roski Eye Institute at the Keck School of Medicine of the University of Southern California. I'm really enjoying my time in academia, and I'm in the process of developing a sports vision-training center of excellence at USC. As a result of my efforts in the world of athletics, I have been working alongside the USC Department of Orthopedics, and I was pleasantly surprised to find out that one of the orthopaedic surgeons I am working closely with worked in the lab of one my WCM classmates, **Scott Rodeo, MD '89.** Scotty-Dog, you da man! In any event, I am



PROUD PARENTS: Cecilia Nicole '18 (right) and her mother and father celebrate her residency match at NYP/Weill Cornell for primary care.

chillin' in Cali, and if any of you '89ers are ever in LA-Land, holler at a brother."

1990s

Christine Frissora '86, MD '90, reports that she is publishing a book of poetry, *Beyond Onomatopoeia*, and that she is available for readings and other events. "Please look for it on Amazon soon," she writes. "Your children will enjoy it too—there are plenty of spaces for them to practice their own writing and to color."

Arlene Sussman '84, MD '90, medical director of vRad (Virtual Radiologic), received the fourth annual "Top People to Watch in Radiology" award from *Diagnostic Imaging*. A proponent of breast cancer education and awareness, Dr. Sussman was noted in the award nomination for promoting live video diagnostic technology to give patients access to face-to-face conversations after their mammograms. She is an expert in digital mammography, breast sonography, breast MRI, and stereotactic- and ultrasound-guided biopsy. Before joining vRad, Dr. Sussman served as director of radiology, outpatient division, at Memorial Sloan Kettering Cancer

Center and director of women's imaging at Winthrop University Hospital.

Carolyn Eisen Schwartz, MD '91: "I am an attending radiologist on staff at NYP/Weill Cornell. I work in the Division of Breast Imaging. I am married to **Mark Schwartz, MD '84,** a plastic surgeon in private practice and on staff at NYP. We live in Manhattan with our two daughters, Rebecca, 14, and Alexa, 12."

Roderick K. King, MD '92, is assistant dean of public health education, MD-MPH program director, and an associate professor of public health sciences at the University of Miami Miller School of Medicine.

Philip L. De Jager, MD '99, PhD '99: "I have just returned to New York after accepting the position as the Weil-Granat Professor of Neurology, chief of the Division of Neuroimmunology, and director of the new Center for Translational & Computational Neuroimmunology in the Department of Neurology at Columbia University Medical Center. I look forward to reconnecting with classmates who are in the neighborhood."

Michael S. Irwig, MD '99, was appointed an adjunct professor of medicine at Georgetown University, in addition to his regular appointment at George Washington University.



BRAIN POWER: Samuel Jones '18 (left, with his roommate, Hyun Sung Park '19) is all smiles after learning he'd matched in neurosurgery at the University of Minnesota.

2000s

Miriam Hoffman, MD '00, and **Steven Kleiner, MD '02,** relocated their family of five back to New York after 14 years in Boston. The move was spurred by Miriam being recruited to be the founding associate dean of medical education at a new medical school being built in northern New Jersey, the Seton Hall-Hackensack Meridian School of Medicine. Steven has opened a private psychiatry practice in Manhattan.

Jian Shen, PhD '99, MD '02, has performed more than 1,700 endoscopic spine surgeries during the last six years and has become a leader in such surgeries. This year, he opened the Center for Regeneration Spine Surgery in New York City.

Kavita Parikh, MD '04: "I am an associate professor of pediatrics at Children's National Health System and George Washington Medical School. I am a leader in pediatric hospital medicine serving on national committees through the AAP and Section of Hospital

Medicine and have federal grants through AHRQ for asthma care improvement in children. My husband, **Shantanu K. Agrawal, MD '04,** is the current CEO of the National Quality Forum in Washington, DC."

2010s

Sara Sani, MD '12: "I finished my residency in internal medicine at UCSF in 2015 and stayed on as an assistant clinical professor in the Department of Medicine. I will be starting a fellowship in rheumatology at UCSF this summer and ultimately hope to rejoin the faculty as a clinician educator. I am thankful for the medical foundation I received at WCM and am always excited to run into fellow grads here in San Francisco."

Daniel Agarwal, MD '13: "I am finishing my medical retina fellowship at Cleveland Clinic and will start my surgical retina fellowship at Yale New Haven Hospital in July."

Graduate School of Medical Sciences

Arthur Cooper, PhD '74, is a professor of biochemistry and molecular biology at New York Medical College and an adjunct professor of biochemistry in neuroscience in WCM's Feil Family Brain & Mind Research Institute. His research interests include pyridoxal 5-phosphate enzymes, enzyme mechanisms, bioactivation mechanisms, neurochemistry, neurodegenerative diseases, chemoprevention, and 1-C, nitrogen, sulfur, and selenium biochemistry. In June 2017, he became editor-in-chief of *Analytical Biochemistry*.

John Biggins, PhD '04, is a scientist at LifeMine Therapeutics, a biotech company focused on discovering and delivering the next generation of therapeutics from natural resources. He lives on Long Island with his wife and son.

Jennifer Giordano-Coltart, PhD '05, is a partner with the international law firm of Kilpatrick Townsend & Stockton LLP, where her practice focuses on intellectual property strategy in the life sciences, biotechnology, and medical device fields. She completed her thesis work in the lab of Jerard Hurwitz, PhD, in the molecular and cell biology department at Sloan Kettering Institute. She earned her law degree from Duke University where she wrote and edited for the *Duke Law & Technology Review* and was president of the Intellectual Property & Cyberlaw Society. She joined Kilpatrick Townsend & Stockton in 2008 and has built a practice assisting research institutions and companies ranging from start-ups to industry leaders across the country and abroad in protecting and commercializing their innovations. She regularly publishes and speaks on legal issues in her field and sits on the editorial board of *Current Stem Cell Reports*.

Alice Berger, PhD '11: "In 2016, I joined Fred Hutchinson Cancer Research Center as an assistant professor. I am a recipient of an NIH Pathway to Independence Award, the Fred Hutch President's Young Investigator Award, the Stephen H. Petersdorf Lung Cancer

Research Award, and the LCFA-IASLC Lori Monroe Translational Research Award."

Jon Bardin, PhD '13, is based in New York, where he is a senior director at the Discovery Channel and Science Channel. His responsibilities include bringing new documentaries and specials to the networks while helping manage development and production. Previously, he co-founded a nonprofit production company, the Public Good Projects. There, he served as producer on *Sleepless in America*, a co-production with the NIH that explored the crucial need for sleep and the life-threatening consequences of its absence; it premiered on the National Geographic Channel in 2014.

Xiaozhou "Sheldon" Fan, PhD '13: "I recently took a new position as biotechnology equity research associate at Leerink Partners LLC."

Karen Tkach Tuzman, PhD '14: "After graduating from the immunology and microbial pathogenesis program at Weill Cornell and doing a post-doc at Stanford, I began writing for BioCentury Inc.'s translational publication *BioCentury Innovations*, which covers preclinical science for the biotech, pharma, and life sciences investor communities. I am now its associate editor and head of preclinical content, and would love to hear about the exciting translational work being advanced by my fellow alums."

Judith Dattaro, MS '15, earned a certificate in plant-based nutrition from eCornell in August 2017. In October 2017, she became a Diplomate of the American Board of Lifestyle Medicine, serving as a member of the inaugural class to be board certified.

Joon Seok Park, PhD '16: "I majored in immunology (IMP program) and am currently a postdoctoral research fellow at Harvard Medical School."

Anya Grozhik, PhD '18, is completing a postdoctoral fellowship at EMBL Heidelberg in Germany. She welcomes visitors.

'After graduating from the immunology and microbial pathogenesis program at Weill Cornell and doing a post-doc at Stanford, I began writing for BioCentury Inc.'s translational publication *BioCentury Innovations*, which covers preclinical science for the biotech, pharma, and life sciences investor communities. I am now its associate editor and head of preclinical content, and would love to hear about the exciting translational work being advanced by my fellow alums.'

— Karen Tkach Tuzman, PhD '14

ALUMNI

'43 MD—Seymour E. Rosenthal of Woodcliff Lake, NJ, January 28, 2016; practiced internal medicine and oncology; affiliated with Mount Sinai Hospital.

'43 BA, '45 MD—Arthur C. Smith Jr. of Elmira, NY, October 26, 2016; ophthalmologist; veteran; US Army field surgeon in Korea; outdoorsman; land steward of the Nature Conservancy's Frenchman's Bluff Preserve; past president, Tanglewood Nature Center and Museum; birder; advocate for the protection of endangered species; hunter; fisherman; Rotarian; active in community and professional affairs. Kappa Alpha.

'44 BA, '46 MD—Frank J. Palumbo of Lewiston, NY, August 17, 2016; former chief of medicine and director of the coronary care unit at Mount Saint Mary's Hospital; established the first coronary care unit in Niagara County; instructor at the SUNY Buffalo medical school; president of the staff, attending physician, and consultant in medicine at Niagara Falls Memorial Medical Center; established a rheumatic fever program with the Niagara County chapter of the American Heart Association; fellow, American College of Chest Physicians; member, International Myeloma Foundation and Multiple Myeloma Research Foundation; veteran; author; tennis player; active in community and professional affairs. Phi Sigma Kappa.

'46 BA, '49 MD—Robert J. Haggerty of Canandaigua, NY, January 23, 2018; pediatrician; executive director, International Pediatric Association; president, American Academy of Pediatrics; president, William T. Grant Foundation; professor and chair of the Department of Health Services, Harvard School of Public Health; chair of pediatrics,

University of Rochester School of Medicine; chief of pediatrics, Strong Memorial Hospital; helped develop the Jordan Health Center and medical services for migrant workers and school health programs; associate editor, *New England Journal of Medicine*; founder and editor-in-chief, *Pediatrics in Review*; author; veteran; gardener; reader; art and classical music lover; traveler; birdwatcher; active in community and professional affairs.

'50 MD—Joseph L. O'Brien of Tenafly, NJ, September 14, 2017; attending neurologist and clinical professor of neurology at the Neurological Institute of Columbia Presbyterian Medical Center; veteran; US Navy medical officer.

'48 BA, '51 MD—Dewey A. Nelson of Lititz, PA, November 19, 2017; neurologist; founder of Wilmington Neurology Associates; professor of neurology at Jefferson Medical College; veteran; battalion surgeon in the Korean War; author; deep-sea fisherman; beekeeper; classic car restorer; choir singer; active in community, professional, and religious affairs.

'57 MD—Alan B. Echikson of Livingston, NJ, January 27, 2018; former president, St. Barnabas Medical Center staff.

'62 MD—William G. Chaffee Jr. of Scottsdale, AZ, November 23, 2017; internal medicine specialist; soccer coach; skier; photographer; traveler.

'62 MD—John H. Gundy of Corinth, VT, May 26, 2015; pediatrician; professor of pediatrics, Yale University School of Medicine and Dartmouth Medical School; taught at Hahnemann Hospital; planned a new pediatric floor at Danbury Hospital; school doctor, Danbury Schools; coordinated care at a federal health clinic as part of the War on Poverty;

established several clinics; advocate for the health needs of disabled children; medical volunteer after the Haiti earthquake in 2010; veteran; poet; author; jazz pianist and clarinetist; hiker; skier; active in community and professional affairs.

'62 MD—Paul D. Stolley of Columbia, MD, August 4, 2017; epidemiologist; chairman, Department of Epidemiology and Public Health, University of Maryland School of Medicine; senior consultant, Food and Drug Administration; helped found the University of Pennsylvania Medical School's Center for Clinical Epidemiology and Biostatistics; associate professor, Johns Hopkins School of Public Health; also worked at the Centers for Disease Control; researched patterns of violence in Baltimore; author; president, American Epidemiological Society and Society for Epidemiological Research; ardent civil rights supporter; fisherman; classical music lover; traveler; avid reader; active in civic, community, and professional affairs.

'61 BA, '65 MD—Harold G. Kunz Jr. of Diamond Point, NY, January 5, 2018; radiologist; practiced at Medical Imaging Group of Lehigh Valley, New Scotland Radiological Group, and Scott Radiological Group; US Air Force veteran; avid sailor; skier; active in community and professional affairs. Sigma Alpha Epsilon.

'68 MD—Stephen Zendel of Sarasota FL, November 1, 2017; nephrologist; worked at the Centers for Disease Control.

'75 MD—Robert E. Burke of Tenafly, NJ, January 1, 2018; Alfred & Minnie Bressler Professor of Neurology and Pathology & Cell Biology, Columbia University; director, Laboratories for Research in Parkinson's Disease and Related Disorders, Columbia University

Irving Medical Center; led the NIH-supported Morris Udall Research Center; received awards from the Dystonia Medical Research Foundation and the Michael J. Fox Foundation; mentor; gardener; woodworker; photographer; sailor; hiker; cyclist; scuba diver; avid reader; active in professional affairs.

'78 MD—Craig W. S. Howe of Minneapolis, MN, January 5, 2018; assistant professor, University of Iowa Medical School; associate professor and director of the bone marrow transplant program, Medical College of Virginia; president and CEO, National Bone Marrow Donor Program; private oncologist in St. Paul; golfer; traveler; reader.

FACULTY

Isadore Rosenfeld, MD, of Greenwich, CT, January 30, 2018; cardiologist and the Ida and Theo Rossi Distinguished Professor of Clinical Medicine; founding member of WCM's Board of Overseers; winner of the 2006 Maurice R. Greenberg Distinguished Service Award; health editor, *Parade* magazine; host of "Sunday Housecall with Dr. Rosenfeld" on Fox News; author of 14 books and numerous articles; co-author of a cardiology textbook.

Victor Sidel, MD, of Greenwood Village, CO, formerly of New York City, January 30, 2018; leader in community and social medicine

at Weill Cornell Medicine, Albert Einstein College of Medicine, and Montefiore Medical Center; founding member, Physicians for Social Responsibility; campaigned against the medical consequences of nuclear war and poverty; president, American Public Health Association; 1957 graduate of Harvard Medical School; author; editor.

Carl Fritz Walter Wolf, MD, of New York City, January 17, 2018; professor emeritus of clinical pathology and laboratory medicine; leader in blood banking and transfusion medicine; director of the blood bank and transfusion services at NYP/Weill Cornell, 1976–2005; associate investigator, Lindsey Kimball Research Institute of the New York Blood Center, 1969–87; served in the US Army Medical Service Corps; worked for DuPont; 1968 graduate of Hahnemann Medical College; pathology fellow at Weill Cornell Medicine; joined the WCM faculty in 1972; directed the Department of Pathology and Laboratory Medicine Training Program in Clinical Pathology from 1974–94; fellow, American Society of Clinical Pathologists and New York Academy of Medicine; member, Alpha Omega Alpha Honor Medical Society, Tau Beta Pi Engineering Honor Society, Phi Lambda Upsilon Chemical Honor Society, American Medical Association, and American Association of Blood Banks.

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Beautiful Minds

Nicholas Schiff, MD '92, the Jerold B. Katz Professor of Neurology and Neuroscience, does groundbreaking research on consciousness after brain injury



"Neurology tends to be a tough specialty. I remember our first day of residency at NYP/Weill Cornell, Dr. [Jerome] Posner and Dr. [Fred] Plum [MD '47] said, 'For neurological patients, you are their last line of defense. Most people don't understand neurological disease. They are afraid of it. It's hard to deal with, and this is your job.'

"As an undergraduate at Stanford studying the history and philosophy of science, I got interested in research on modeling areas of the brain that are important to maintaining consciousness. I later became interested in problems of epilepsy that impair consciousness, and I saw it had an intersection to fundamental questions about what we are, how we come to be, and how we're aware of the world around us. As a medical student I worked on mathematical analysis of electrical activity in the brain, and as a resident, I was putting all those ideas together with observations about brain stimulation in certain patients; for example, you could pour cold water in one ear and restore motor function or speech in some stroke patients. I thought that was fascinating. It suggested that there might be a circuit-level repair mechanism in the injured brain.

"I've seen things in my work that most people would never

believe. I've seen the look of stunned recognition in a family member who has gotten someone partially back—or in some cases nearly fully back—who they were told would never regain any semblance of consciousness. That happens often enough to keep me going. But the frustration is how little this knowledge has been generalized to common, everyday medical practice. Given how fast the science is, it's going too slowly. There's still very little infrastructure allocated to helping people with these disorders of consciousness, and things that were considered common knowledge twenty-five years ago continue to color how this problem is approached.

"When I started clinical practice, there was no 'minimally conscious state'; it wasn't a category. Now population studies say that 20 percent of people who remain minimally conscious for months after coma will go back to work within five years. That's what the science of this is going to do—to allow us to support good outcomes when they're possible. It could be recovery in someone who isn't able to live an independent life but can interact with their family—and we've seen that. Or it could be a patient who looked like they'd never recover consciousness, getting on an airplane and traveling to a foreign country. And we've seen that too." ■

PHOTO: AMELIA PANICO



Supporting teaching and scholarship with a gift that gives back: **Jack Richard, MD '53**

A love of teaching has inspired Dr. Richard's support of Weill Cornell Medicine. A dedicated WCM and Cornell alumnus and longtime clinical professor of medicine, he has made gifts to endow a scholarship, a clinical fellowship, and a visiting professorship. He recently established his third charitable gift annuity, one of his favorite types of planned gifts.

"Charitable gift annuities allow you to help Weill Cornell Medicine while providing annual payments for life, plus tax savings," says Dr. Richard. "With proper charitable planning, one's values can continue to live on."

Weill Cornell Medicine payment rates range from 3.7% to 9%, depending on the age and number of annuitants. Request a no-obligation sample of the payment and tax benefits for your age and your donation amount (our minimum is \$10,000).

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