

weillcornellmedicine

VOLUME 15, NUMBER 3

Happy Birthdays

Patients laud Weill Cornell
Medicine's natural approach
to labor and delivery





Weill Cornell Medicine

Alumni Association Award of Distinction 2017



Dr. Stephen L. Hoffman
2016 Award of Distinction Recipient

Call for Nominations

Do you know an alumna or alumnus who demonstrates exceptional achievement as a physician, scientist, and/or educator, and who has brought honor and acclaim to the Medical College? Would you like to honor a former classmate who has made a difference in science and medicine?

You can help the Weill Cornell Medicine Alumni Association recognize alumni by nominating worthy candidates for the 2017 Award of Distinction.

To learn more about the Award of Distinction, past award winners, and the nomination process, visit the Alumni Association's website. All nomination packets must be received by Tuesday, November 1, and include the following:

- Letters of recommendation
- CV for the nominee

Alumni Association Award of Distinction Recipients

1949 – William S. McCann, MD '15
1950 – David P. Barr, MD '14
1951 – Connie M. Guion, MD '17
1952 – Niles P. Larsen, MD '16
1953 – William C. Menninger, MD '24
1954 – Samuel Z. Levine, MD '20
1955 – Irving S. Wright, MD '26
1956 – Preston A. Wade, MD '25
1957 – Henry H. Kessler, MD '19
1958 – Paul F. Russell, MD '21
1959 – Ida S. Scudder, MD 1899
1960 – Dean F. Smiley, MD '19
1961 – Irvine H. Page, MD '26
1962 – Paul Reznikoff, MD '20
1963 – May G. Wilson, MD '11
1964 – Milton Helpert, MD '26
1965 – S. Bernard Wortis, MD '27
1966 – Armand J. Quick, MD '28
1967 – Thomas P. Almy, MD '39
1968 – Philip Levine, MD '23
1969 – Alexander D. Langmuir, MD '35
1970 – William D. Holden, MD '37
1971 – Harry Gold, MD '22

1972 – Harriet L. Hardy, MD '32
1973 – Thomas H. Ham, MD '31
1974 – Charles G. Child II, MD '34
1975 – Gustave J. Dammin, MD '38
1976 – David E. Rogers, MD '48
1977 – Alfred E. Maumenee, Jr., MD '38
1978 – Charles A. LeMaistre, MD '47
1979 – Edwin D. Kilbourne, MD '44
1980 – W. Clarke Wescoe, MD '44
1981 – Walter F. Riker, Jr., MD '43
1982 – William A. Barnes, MD '37
1983 – Fred Plum, MD '47
1984 – Harry M. Rose, MD '32
1985 – Robert C. Hickey, MD '42
1986 – J. Robert Buchanan, MD '54
1987 – Robert J. Haggerty, MD '49
1988 – C. Everett Koop, MD '41
1989 – Joseph F. Artusio, MD '43
1990 – George A. Wolf, Jr., MD '41
1991 – Forrest C. Eggleston, MD '45
1992 – Anthony S. Fauci, MD '66
1993 – John H. Laragh, MD '48
1994 – Mary Ann Payne, MD '45

1995 – Roy C. Swan, MD '47
1996 – Carlton C. Hunt, Jr., MD '42
1997 – Gerald David Fischbach, MD '65
1998 – Heinz F. Eichenwald, MD '50
1999 – Merlin K. DuVal, Jr., MD '46
2000 – Thomas Killip III, MD '52
2001 – Albert Z. Kapikian, MD '56
2002 – Gerald L. Mandell, MD '62
2003 – Elizabeth Barrett-Connor, MD '60
2004 – Francis V. Chisari, MD '68
2005 – John Allen Clements, MD '47
2006 – George H. McCracken, Jr., MD '62
2007 – Jay N. Cohn, MD '56
2008 – Elizabeth G. Nabel, MD '81
2009 – John Ross, Jr., MD '55
2010 – William Schaffner, MD '62
2011 – Anne A. Gershon, MD '64
2012 – Michael D. Gershon, MD '63
2013 – R. Gordon Douglas, Jr., MD '59
2014 – Kathleen M. Foley, MD '69
2015 – Steven G. Gabbe, MD '69
2016 – Stephen L. Hoffman, MD '75



The honoree will be celebrated during Commencement and at the annual Award of Distinction Dinner in May.

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alumni@med.cornell.edu
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THE MAGAZINE OF
WEILL CORNELL MEDICINE
VOLUME 15, NUMBER 3



FEATURES

26 THE COMFORTS OF HOME

ANNE MACHALINSKI

Some women with low-risk pregnancies choose to give birth without medical intervention—but the increasing trend of delivering at home has many doctors worried. “Unexpected complications can come up at any moment,” says Frank Chervenak, MD, chairman of obstetrics and gynecology and the Given Foundation Professor of Obstetrics and Gynecology, “and if you’re delivering at home, you don’t have access to the medical equipment that can save you or your baby’s life.” To attract women who want a more natural experience, Chervenak and others decided to bring a home-like atmosphere to the hospital. A state-of-the-art birth center is now open at NewYork-Presbyterian/Lower Manhattan Hospital, and plans are in the works to further facilitate a natural, family-centered approach to labor and delivery.

32 PEOPLE POWER

PORTRAITS BY JOHN ABBOTT

Our faculty and staff—the physicians, scientists, and administrators who work so hard every day to fulfill our mission to care, discover, and teach—are the heart and soul of our institution. In a photo essay launching our new social media campaign #WeAreWCM, we showcase six of those amazing individuals: clinicians, researchers, and one veteran administrator. Each of their stories is distinct and memorable—but what they all have in common is an intense dedication to Weill Cornell Medicine and everything it stands for. “Every day, I wake up in the morning, and I’m so excited to go to work with my students and colleagues,” says one of those subjects, Estomih Mtui, MD, who has taught anatomy at WCM since 1988. “I’m very thankful.”

38 NORTH & SOUTH

HEATHER SALERNO

It’s known as the “Stroke Belt”—the communities of the rural Southeast, mostly underserved and predominantly African American, that have the greatest prevalence of diabetes and the highest mortality rate from heart disease and stroke. Improving outcomes in the region, also known as the Black Belt, has long been the focus of diabetes expert Monika Safford, MD ’86. The newly appointed chief of the Division of General Internal Medicine at WCM and NYP/Weill Cornell, Safford is continuing her work at her alma mater—aiming to empower patients to take charge of their own health. “The common thread in all our Black Belt studies is that community members are the agents of change,” says Safford, assistant professor of medicine. “It’s an empowerment model.”

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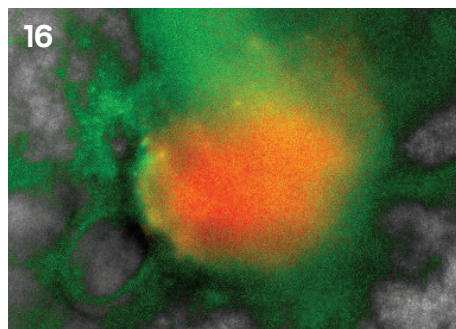
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3 DEAN'S MESSAGE

Comments from Interim Dean Augustine M. K. Choi

4 MAKING STRIDES IN CANCER RESEARCH

6 SCOPE

Sampling microbes worldwide. *Plus:* Dean search under way; two elected to American Academy; honoring the Class of '16; more "Inside Medicine" episodes; autism study launched; partnership with mobile med app; top stroke certification for NYPH; gynecological cancer expert hired; and gastro/hepatology gets a new chief.

10 LIGHT BOX

Art & medicine at WCM-Q

12 TALK OF THE GOWN

Migraine relief. *Plus:* Working with LGBT patients; cerebral "organoids"; virtual reality vs. cancer; mentoring med students; the Sean Parker Institute for the Voice; undergrads study global health; and empowering cancer patients in Qatar.

42 NOTEBOOK

News of alumni

47 IN MEMORIAM

Alumni remembered

48 POST DOC

Remembering urologist E. Darracott Vaughan Jr., MD

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Care, Discover, Teach: WCM's Time Is Now



Through their innovative research, our faculty strive to be change agents, transforming medicine for current and future generations.

Weill Cornell Medicine is more than a world-class academic medical center—it's a closely knit community of more than 6,000 physicians, scientists, teachers, and staff who have dedicated their careers to providing superior patient care, undertaking visionary research, and offering comprehensive medical education. The personal histories that motivate the work of these extraordinary individuals can forever alter the life trajectories of our patients, casting them on the path to health and enabling experiences that might not otherwise have been possible.

In these pages, you will gain insight into who these exceptional physicians and scientists are: a husband-wife neurosurgery team committed to prolonging the lives of their pediatric patients as they support each other; a physician-scientist driven to understand the development of Alzheimer's disease after watching the condition strip his grandmother of her independence; and a third-generation educator from Guyana who has dedicated her four-decade-long career to preparing students from underrepresented backgrounds to succeed in medicine.

Our exceptional faculty are compelled by the stories they hear from patients to improve healthcare for both individuals and society at large. A pair of ob/gyns who documented the sometimes tragic outcomes of home births across the country recognized that many women desire natural environments in which to deliver their babies. Their findings inspired a birth center at NewYork-Presbyterian/Lower Manhattan, where women can labor in the safety of a hospital, without traditional interventions and under the supervision of certified nurse midwives.

Through their innovative research, our faculty strive to be change agents, transforming medicine for current and future generations. They work to eliminate healthcare disparities among different racial, ethnic, and socioeconomic groups and battle tumors by studying tiny "brains"

grown in a petri dish. And they focus on teaching tomorrow's healthcare leaders as much as they can about the all-important doctor-patient relationship. With our new medical education curriculum, students are exposed to clinical interactions—both real and simulated—earlier and more often, while targeted programs offer guidance to clinicians and trainees on how to better meet the needs of LGBT patients.

At Weill Cornell Medicine, our outstanding faculty inspire us every day with their passion and their creativity. They are the face of our community, as well as the motivating force behind our unprecedented growth.

In the last few years, our footprint has expanded and many changes have taken place, thanks to the unstinting efforts of our physicians, scientists, educators, and administrators. As our partner NewYork-Presbyterian has extended its network, we have seen increasing numbers of patients both at our York Avenue campus and in our community-based practices in Manhattan, Queens, and Brooklyn. We've opened the state-of-the-art, \$650 million Belfer Research Building, and launched a number of cross-disciplinary research institutes, like the Jill Roberts Institute for Research in Inflammatory Bowel Disease and the Drukier Institute for Children's Health. We've seen 20 percent growth in sponsored research, and have landed prestigious grants from organizations like Stand Up to Cancer and the Tri-Institutional Stem Cell Initiative. And we've started proactively preparing future PhDs in the Weill Cornell Graduate School of Medical Sciences for nontraditional jobs in industry, consulting, and technology. We are advancing continually in our core mission to care, discover, and teach.

There is truly no better time to be a part of the Weill Cornell Medicine community. We are trailblazers. We are visionaries. We are doctors and scientists, teachers and students. We are families and friends. We are Weill Cornell Medicine.



**Weill Cornell
Medicine**

Making Strides in Cancer Research



Recent gifts to support cancer research at Weill Cornell have brought the institution to the forefront of innovation in the fight against this insidious disease.

Thanks in great part to the 2014 gift of \$75 million from Sandra and Edward Meyer to fund cancer research, the Meyer Cancer Center, headquartered within the Belfer Research Building, has grown exponentially in the last two years. Dr. Lewis Cantley, Meyer Director of the center, is thrilled about its precedented growth, and credits much of this progress to philanthropy.

“Philanthropy at Weill Cornell Medicine helps us build new infrastructures so that we’re doing experiments that no one else in the world is doing,” says Dr. Cantley. “It is expediting the time that it takes to get new therapies to patients.”

The Meyer Cancer Center works in tandem with the Englander Institute for Precision Medicine, named in

2015 thanks to a significant investment from Caryl and Overseer Israel Englander and led by Dr. Mark Rubin, the Homer T. Hirst III Professor of Oncology in Pathology.

“When we began in precision medicine, our clinical decisions were based on evaluation of a relatively small number of genes,” says Dr. Cantley. “We are now leaders in this field – we can evaluate all 23,000 genes – and by doing this broader analysis, we are catching things that we otherwise might have missed.”

In honor of past research that has provided scientists with a greater understanding of the disease, funds provided for cancer research are more impactful than ever before, says Dr. Cantley.

“We now know in so much more detail the science of why cancers emerge and why they evolve and become resistant,” he says. “We have made remarkable progress just in the last year, particularly in the advancement of novel research and in the area of recruitment. But we’re not finished.”

**To support critical research initiatives at
Weill Cornell Medicine, please contact:**

**Lucille Ferraro, Campaign Director,
646-962-9491 or luf2003@med.cornell.edu**



Some of the Notable Additions to the Meyer Cancer Center Faculty

Dr. Harold Varmus

The Nobel Prize-winning cancer researcher left his position at the National Cancer Institute to join Weill Cornell as the Lewis Thomas University Professor and senior advisor to the dean.

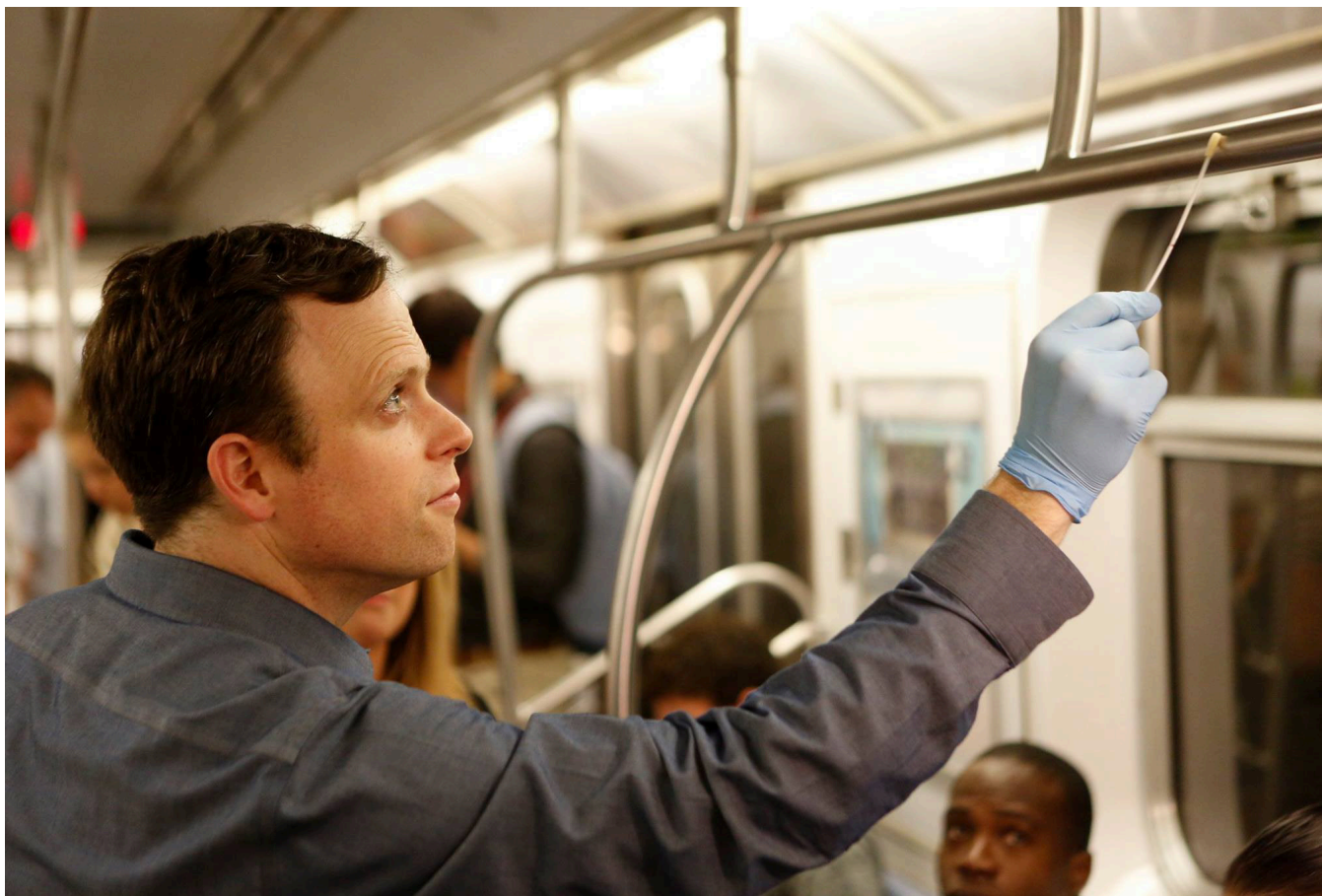
Dr. Howard Fine

The founding director of the Brain Tumor Center has dramatically enhanced Weill Cornell's ability to do clinical trials by creating "mini-brains," allowing him to grow brain tumors outside of the body and see how they respond to various courses of treatment.

Dr. Silvia Formenti

The Sandra and Edward Meyer Professor of Cancer Research has conducted groundbreaking work in immunotherapy, which uses the body's own immune system to fight cancer. She has been successful in converging radiobiology and her clinical research interests into the care of many cancer patients.

'Sampling Day' Kicks Off Worldwide Microbe Survey



The Bill & Melinda Gates Foundation has awarded a Grand Challenges Explorations Grant to a WCM project that will help researchers study antimicrobial resistance in fifty-four cities worldwide. The grant, which provides \$100,000 in its first phase, will enable scientists to develop maps of the cities' genetic differences as well as their epigenetic states (which detail how genes are turned on or off). To do so, investigators will sequence DNA, RNA, and microbes collected from subways, buses, parks, beaches, sewer systems, and other locations in cities including New York, Boston, Stockholm, Shanghai, Hong Kong, and Moscow. The project was kicked off in June with an event called Global City Sampling Day, when more than 400 people on six continents collected thousands of samples. "This work is so exciting because there is this entire invisible world around us that we can now start to bring into focus," says Christopher Mason, PhD, an associate professor of physiology and biophysics and of computational genomics in the HRH Prince Alwaleed Bin Talal Bin Abdulaziz Al-Saud Institute for Computational Biomedicine and the WorldQuant Foundation Research Scholar, who oversaw a similar study in New York City's subway system in 2015. "The genetic and epigenetic maps that we'll develop will be invaluable for public health, disease surveillance, and the planning of smarter cities in the future."



SWAB THE DECKS: Chris Mason, PhD (top), samples a New York subway car for DNA, RNA, and microbes on Global City Sampling Day. Above: Mason (right) and a colleague swab a turnstile.

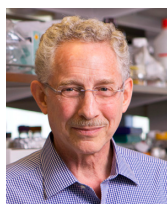
THOS ROBINSON/GETTY IMAGES FOR WCM

WCM Dean Search Under Way

Cornell University has formed a committee to search for WCM's next dean and provost for medical affairs. The nineteen-member committee, co-chaired by Interim President Hunter Rawlings III, PhD, and Board of Overseers chair Jessica Bibliowicz, comprises Cornell trustees and WCM overseers, senior administrators, faculty, an alumnus, and a student, as well as NewYork-Presbyterian leadership. They have a deep and comprehensive understanding of WCM's commitment to enhancing human health by providing exemplary and individualized patient care, making groundbreaking biomedical discoveries, and educating generations of exceptional doctors and scientists. Previous dean Laurie Glimcher, MD, recently left to head the Dana-Farber Cancer Institute; Augustine Choi, MD, the Weill Chairman of the Weill Department of Medicine, is serving as interim dean.

Nathan, Hajjar Elected to Academy

Two members of the WCM faculty have been elected to the prestigious American Academy of Arts and Sciences. Carl Nathan, MD, and David Hajjar, PhD, are among the 213 scholars, scientists, and world leaders—including two others from Cornell University—who received the honor. Nathan, a prominent authority on tuberculosis, is the R.A. Rees Pritchett Professor of Microbiology and chairman of the Department of Microbiology and Immunology. Hajjar—dean emeritus of the Graduate School of Medical Sciences, former executive vice provost of WCM, and a professor of pathology and biochemistry—is an expert on cardiovascular disease. They'll be inducted into the academy at a ceremony in October.



Carl Nathan, MD



David Hajjar, PhD

Class of '16 Honored at Commencement



POMP AND CIRCUMSTANCE: The scene in Carnegie Hall. Below right: Newly minted physicians take the Hippocratic Oath.

At Commencement 2016, 258 students received their degrees in Carnegie Hall: 139 MDs, sixty-two PhDs, thirty-four physician assistants, and twenty-three masters of science. The graduates included MDs from the Qatar campus, which had celebrated its own Commencement a few weeks earlier. "We have no choice but to tirelessly apply the knowledge that we accumulated toward the advancement of biomedical research and healthcare for those who follow, so that human health does not evolve in place but progresses incrementally forward," said medical student commencement speaker Jeffrey Russ, PhD '14, MD '16. "Right now it is our turn to channel the lessons of our very educators as we embrace the responsibility of our new profession."



TIP OF THE CAP...

John Barnhill, MD, professor of clinical psychiatry and of medical ethics in clinical medicine, winner of the Edith Sabshin Teaching Award from the American Psychoanalytic Association.

Antonio Bernardo, MD, associate professor of research in neurological surgery, who received the Grand Award of Merit from the American Society of the Italian Legions of Merit.

Olga Boudker, PhD, professor of physiology and biophysics, winner of the Biophysical Society's Michael and Kate Bárány Award for Young Investigators.

Third-year MD-PhD student **Du Cheng**, awarded a \$90,000 Paul & Daisy Soros Fellowship for New Americans.

Donald D'Amico, MD, the John Milton McLean Professor of Ophthalmology and chair of the department, winner of the Retina Research Foundation's Pyron Award.

Dylan Gee, PhD, assistant professor of psychology in psychiatry, named one of the World Economic Forum's fifty "Young Scientists" for 2016.

Marcin Imielinski, MD, PhD, an assistant professor of computational genomics and of pathology and laboratory medicine, winner of the Young Physician-Scientist Award from the American Society for Clinical Investigation.

James Killinger, MD, assistant professor of pediatrics, elected a fellow of the American College of Critical Care Medicine.

Richard Kogan, MD, clinical professor of psychiatry, winner of the Joan and Stanford Alexander Award in Psychiatry from Baylor College of Medicine.

Dan Landau, MD, PhD, assistant professor of medicine and of physiology and biophysics, who won a Sidney Kimmel Foundation Scholar Award.

Michael Perelman, PhD, clinical professor emeritus of psychology in psychiatry, winner of the James W. Maddock Faculty Award from the American Psychological Association.

Gregory Sonnenberg, PhD, assistant professor of microbiology and immunology in medicine and a member of the Jill Roberts Institute for Research in Inflammatory Bowel Disease, named a Searle Scholar.



COMPASSIONATE CARE: Cardiologist Erica Jones, MD, with a patient

More 'Inside Medicine' Episodes Online

The second season of the "Inside Medicine" video series is available online. The program, which showcases WCM faculty, students, and patients, can be found at cornell.edu/video. The three episodes feature cardiologist Erica Jones, MD, an associate professor of clinical medicine and medicine in clinical radiology and director of the HeartHealth program at the Dalio Institute of Cardiovascular Imaging; a grandmother whose bladder cancer is being treated at the Caryl and Israel Englander Institute for Precision Medicine; and a boy whose Crohn's disease is being well managed by two WCM physicians.



Catherine Lord, PhD

Major National Autism Study Launched

WCM is participating in an online research initiative that's aimed to be the largest autism study ever undertaken in the U.S. In collaboration with NewYork-Presbyterian and Columbia University College of Physicians and Surgeons,

WCM has helped launch the Simons Foundation Powering Autism Research for Knowledge (SPARK), which will collect information and DNA for genetic analysis from 50,000 people with autism and their families to advance scientific understanding of the causes of the condition and to spur treatments. The effort is being led locally by Catherine Lord, PhD, a professor of psychology in psychiatry and in pediatrics.

WCM Teams with Mobile Med App

WCM has announced a partnership with Pager, an on-demand healthcare service that uses a location-based mobile app to connect doctors with patients in Manhattan and Brooklyn needing urgent care. Through the app, Pager's healthcare professionals evaluate prospective patients through online chats and telemedicine, providing in-person visits at their homes or offices. When patients require more complex or specialty care, Pager will engage the WCM Physician Organization's referral center to schedule appointments with primary care physicians and specialists. Patients needing hospitalization or complex procedures are then connected with NewYork-Presbyterian.

NYP/WC Gets Top Stroke Certification

NewYork-Presbyterian Hospital has been certified by the Joint Commission as a Comprehensive Stroke Center (CSC), the highest level of certification a hospital can receive for treating stroke. The criteria include participating in stroke research; maintaining 24/7 availability of neurosurgeons, neurologists, neurointerventionalists, and neuroradiologists; and having dedicated neuro-intensive care unit beds for complex stroke patients.



David Fishman, MD

Gynecological Cancer Expert Hired

A leader in gynecological oncology has joined the WCM faculty. David Fishman, MD, was recruited as a professor of clinical obstetrics and gynecology as well as cancer center director, vice chair of obstetrics and gynecology, and director of gynecologic oncology at NewYork-Presbyterian/Queens. Fishman, who comes to WCM from Mount Sinai, is known for his research on the regulation of ovarian metastasis. He has developed new methods for risk assessment and detection of early-stage ovarian cancer, including an innovative way to use ultrasound technologies to diagnose it. At NYP/Queens, he has established the Cancer Center Risk Assessment and Cancer Prevention Program, which provides comprehensive care to patients whose personal or family history or genetic makeup increases their risk of cancer. "The future of oncology is prevention," he says. "Our goal is to identify and optimize care for patients who are at increased risk for developing cancer, and to intervene before the disease occurs."



David Cohen, MD, PhD

New Gastroenterology and Hepatology Chief

Physician-scientist David Cohen, MD, PhD, has assumed the role of chief of the Division of Gastroenterology and Hepatology at WCM and NewYork-Presbyterian/Weill Cornell. A hepatologist whose research focuses on obesity-related liver disease, Cohen was recruited from Brigham and Women's Hospital, where he was director of hepatology. He's overseeing a division that has more than doubled in size over the past five years, resulting in a marked increase in clinical volume and expansion in many areas of expertise—including hepatitis C, gastrointestinal cancer treatment and prevention, irritable bowel syndrome, and inflammatory bowel disease. "David is an esteemed physician, scientist, and leader whose contributions to understanding and treating obesity-related fatty liver disease exemplifies his commitment to providing the very best in patient care," says Interim Dean Augustine Choi, MD, the Weill Chairman of the Weill Department of Medicine.

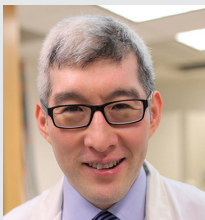
FROM THE BENCH



ADRIENNE PHILLIPS, MD

Immune Drug for Rare Lymphoma

A drug that recruits immune cells to fight a rare, aggressive form of lymphoma that disproportionately affects minorities in the U.S. appears to be more effective than chemotherapy. The findings of a small clinical trial show that the antibody drug mogamulizumab induces tumor responses in nearly 28 percent of patients with a fast-growing and difficult to treat blood cancer known as ATLL, for which there are currently no specific drugs approved in the U.S. The work, led by Adrienne Phillips, MD, an assistant professor of medicine and a member of the Meyer Cancer Center, was highlighted at the American Society for Clinical Oncology meeting in June.



FRANCIS LEE, MD, PHD

Treating Anxiety in Adolescents

The discovery that unique connections in the adolescent brain make it possible to easily diminish fear memories could have important implications for the treatment of trauma and anxiety disorders. In a study of mice reported in *Nature Communications*, researchers found that the prefrontal cortex, which controls fear and anxiety, goes through a rearrangement during adolescence where it forms a significant number of new connections with the hippocampus, the region that controls spatial memory. "There is such a stigma around seeing a psychologist or psychiatrist for treatment. We hope that these findings will destigmatize therapy," says author Francis Lee, MD, PhD, the Mortimer D. Sackler, MD, Professor of Molecular Biology in Psychiatry. "Dealing with fear is just learning and memory, and we have shown that adolescent brains are very good at that—better than those of adults."



MEGAN JOHNSON SHEN, PHD

Increasing Latinos' Use of DNRs

Studies have shown that Latinos are less likely than whites to sign a do not resuscitate (DNR) order, a form of advance-care planning that helps ensure better quality of life for terminally ill patients. But a new investigation, published in *Cancer*, indicates that communication about end-of-life care can improve the odds that Latino patients with terminal cancer sign a DNR. Lead author Megan Johnson Shen, PhD, assistant professor of psychology in medicine, found that Latinos were about ten times more likely to sign a DNR if they discussed end-of-life care with a healthcare provider.

'Hookahs' May Be More Dangerous than Cigarettes

A study in the *American Journal of Respiratory and Critical Care Medicine* warns against water pipes, also known as hookahs. Ronald Crystal, MD, chairman of genetic medicine and the Bruce Webster Professor of Internal Medicine, reports that using the

pipes significantly affects lung function and biology in young adults. Water pipes have recently become popular in the U.S., with at least 20 percent of young adults reporting having used them. Many believe them to be a safe alternative to cigarettes. But Crystal and colleagues found that hookahs, in many ways, are more dangerous—exposing users to significantly higher levels of nicotine, carbon monoxide, tar, and formaldehyde than conventional smoking does.



YUHUA BAO, PHD

Monitoring Key to OD Prevention

State prescription drug-monitoring programs—databases that gather information from pharmacies on dispensed prescriptions for controlled substances—may play an important role in stemming the epidemic of opioid overdoses, researchers report in *Health Affairs*. Investigators led by Yuhua Bao, PhD, associate professor of healthcare policy and research, analyzed ten years of data from the National Ambulatory Medical Care Survey. They found a more than 30 percent drop in the rate of prescribing the most addictive painkillers in two dozen states with such programs.

Checklist for Anthrax Meningitis

Using the largest-ever review of historical anthrax cases, researchers have created a checklist to identify patients who develop a potentially fatal secondary meningitis infection. The tool, described in *Clinical Infectious Diseases*, could aid the response to an outbreak such as a bioterror attack. "Our paper provides public health officials both in the United States and around the world with a very straightforward rule that could be implemented to both improve patient care and also improve the management of what assuredly would be very scarce resources," says senior author Nathaniel Hupert, MD, associate professor of healthcare policy and research.



OLIVIER ELEMENTO, PHD

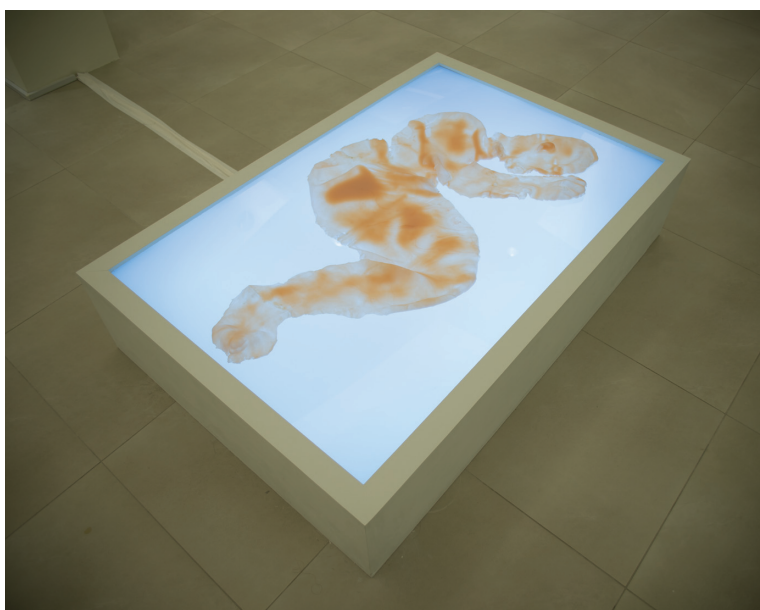
Steroid for Prostate Cancer?

Researchers have published an article in *Cell Reports* describing how the steroid dexamethasone could deter the growth of a prostate cancer subtype. "Prostate cancer is very often linked to a mutation and over-expression in a gene called ERG that many people thought was undruggable, meaning there's no way to target the mutation with medications to disrupt the disease," explains senior author Olivier Elemento, PhD, associate professor of physiology and biophysics and associate director of the HRH Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Institute for Computational Biomedicine. He and his colleagues developed a method to screen for drugs that may disrupt the mutation's function; dexamethasone emerged as a promising possibility. By analyzing medical records, they found that patients who received the steroid (for reasons other than cancer) were less likely to develop the malignancy.



Body of Work

As part of an interdisciplinary collaboration between WCM–Qatar and the Doha campus of Virginia Commonwealth University, students created an exhibit entitled “Art and Medicine.” On display from mid-April to late June, the show featured works, employing a variety of media, meant to explore the intersection between the two disciplines. The semester-long project involved six WCM–Q medical students and six art students from VCU–Q, who created the pieces under the mentorship of faculty from both campuses. “Clearly, art and medicine are very different disciplines involving very different modes of learning, so the students have to move outside of their comfort zones and think creatively to develop ways to communicate and work productively with one another,” says Alan Weber, PhD, associate professor of English at WCM–Q. “Through this process the students gained an entirely different perspective on learning, problem-solving, teamwork, and creativity, which we feel has been enormously enlightening, both for the students themselves and for us as researchers interested in pedagogical innovation.”





PHOTOS: THOMAS RHY'S HIMSWORTH

COLLABORATIVE CREATIVITY: Each piece was made by a two-student team—one from WCM-Q, one from VCU-Q. Clockwise from top left: *Inside Out* (Eman Mosleh '18 and Abdul Rahman); the works on display; *Proprioceptive Allodynia* (Farah Al-Sayyed '18 and Noor Al-Thani); *Underneath Within* (Faryal Malick '18 and Amelie Beicken); *Crafting the Virtual Into Reality* (Mu Ji Hwang '18 and Mohammad Jawad); and *An Essence of Presence* (Yanal Shaheen '18 and Emelina Soares).



Brain Storms

At WCM's Headache Center, migraine sufferers get specialized treatment

A few years ago, Debra Jaliman, MD, shattered her knee in a skiing accident. When an MRI revealed the damage, her doctors were astonished by their patient's stoicism: despite the injury's severity, Jaliman had declined all proffered medication. "I explained that I get migraines," she recalls with a rueful laugh. "Broken bones are a joke when you get migraines. Childbirth is a day in the park. Migraines feel like someone's taking a vice and trying to crush your skull."

Jaliman, a sixty-year-old Manhattan dermatologist, has suffered from migraines for a quarter-century. At first it was a few times a month, but around her fiftieth birthday they became a daily torment. Over the years she saw twenty different doctors and tried a pharmacopeia of drugs. Then, one of Jaliman's own patients, a fellow migraine-sufferer, recommended Joseph Safdieh, MD. Figuring it was worth a shot, Jaliman made an appointment—a decision that would lead to the first relief she had experienced in years. "Dr. Safdieh really is an expert in what he does," Jaliman observes. "He knows what new treatments are coming, and he knows about every new drug."

Safdieh is a neurologist with WCM's Headache Center, an outpatient center focusing on migraine and other such conditions. Offering not only individualized patient care but the opportunity to participate in clinical trials of the latest therapies, he works at the front lines of a quiet war against one of the most common chronic neurological diseases—and one of the most misunderstood. Migraine afflicts some 36 million Americans, and historically this debilitating condition has been little-studied. But in recent years sufferers have become more vocal about the need for research funding, and doctors have begun to express cautious enthusiasm about new treatments that could soon translate into better patient care.

PHOTO: ISTOCK.COM/MICHAELWJC

Migraine is commonly described as a bad headache, but in reality the level of pain is far higher than this quotidian explanation suggests. “I think its impact on society is often underappreciated,” says Safdieh, an associate professor of neurology. “There are people who are told, ‘Oh, it’s just a headache; I get headaches, too.’ But it is actually a very common cause of disability.”

Sufferers are often misdiagnosed with sinus or tension headaches, less severe conditions with remedies—nasal sprays or over-the-counter painkillers—that are ineffective for migraine. The confusion may arise because the stereotypical symptom of migraine, a visual aura, only affects 30 percent of patients. A true migraine is a headache of worse than moderate intensity, which is aggravated by routine activity and accompanied by either nausea or sensitivity to light and sound, or both. Proper diagnosis often hinges on finding a neurologist who specializes in the condition, Safdieh says, noting that stand-alone headache centers like WCM’s are still a fairly new concept. “We’ve had a center since 2007,” he notes, “so we’ve been somewhat ahead of the game on this.”

The focus on headache allows Safdieh and his colleagues—including Dara Jamieson, MD, associate professor of clinical neurology, and Louise Klebanoff, MD, assistant professor of neurology—to diagnose most sufferers based on patient history and physical examination. These experts, who see as many as 500 new patients a year, may also use functional brain imaging to reveal the changes in blood flow that occur during a migraine, or MRI and CT scanning to exclude other possible causes of headache, such as tumors or aneurysms.

In recent years, researchers have begun to gain insight into the genetic basis for migraine and the neurochemical processes underlying the painful symptoms. For now, Safdieh relies on a variety of drugs, most of which were originally developed for other conditions but proved to help migraine patients as well. The Headache Center also recently started using newly approved electrical and magnetic stimulation devices, which have been shown to reduce migraine frequency. And for many patients, the most effective preventive measure is Botox, the injected bacterial toxin more commonly used to smooth facial wrinkles; the FDA approved it for chronic migraine in 2010 after clinical trials in which the Headache Center participated. “That is a procedure that primary care doctors aren’t doing,” Safdieh says. “I started seeing a lot more people come in because they wanted to ask about Botox injections as an option.”

Jaliman is one of Safdieh’s Botox patients. Her regular injections are part of a cocktail of treatments that includes the drug nortriptyline—which was developed to treat depression but also works for migraine—and topiramate, a drug originally used for epilepsy. She also uses a headband-like device called Cefaly, an electric nerve-stimulator that was approved by the FDA in 2014. Over time, Jaliman says, her migraines have become rarer, now occurring only about five times a month—an outcome that she credits to Safdieh, whom she calls “so smart and responsive to his patients.” As one of the 10 percent of Americans who suffer from migraines, Jaliman has found herself part of a large, reluctant, and misunderstood community. “People don’t get it,” she says. “They say, ‘It’s a headache.’ But it destroys your quality of life.” Today, however, she has something to offer her fellow sufferers besides commiseration. “I refer everyone to Dr. Safdieh,” she says. “He’s a wonderful doctor.” ■

—Amy Crawford

‘I think [migraine’s] impact on society is often underappreciated,’ says Safdieh. ‘There are people who are told, “Oh, it’s just a headache; I get headaches, too.” But it is actually a very common cause of disability.’



Joseph Safdieh, MD

LGBT Health

Training programs help WCM students and faculty better treat patients



ALL IN THE FAMILY: Internal medicine resident Carrie Down, MD (above left), at a tennis tournament with her sister, Christa Down, who transitioned from male to female. Opposite page: Nelson Sanchez, MD (in purple tie), and nurse practitioner Anthony Pho (center) during a conference on LGBT healthcare in the Belfer Research Building.

'While we know that not every doctor is going to be an expert on LGBT healthcare, we can train every one to be sensitive to a patient's needs.'

Internal medical resident Carrie Down, MD, has had many mentors during her training—but she never imagined that they would include her own sister, whose personal journey has guided and informed Down's practice in unexpected ways, helping her take even better care of her patients.

After graduating from SUNY Oneonta, Christa Down started seriously considering whether the gender that she was assigned at birth—male—reflected her true identity. While the answer wasn't a firm "no," it wasn't a solid "yes," either. So as she continued dressing androgynously, she explored her feelings by scouring online forums and watching YouTube videos featuring transwomen. When her hair started thinning, Christa made the first of many medical decisions intended to make her appear more feminine: without a prescription, she started taking the hair-loss drug Propecia. Then she formally began the transition process, ordering cheap testosterone blockers from a black market website and starting a self-directed hormone replacement therapy regimen. "Looking back, this probably wasn't the safest thing to do," says Christa, now twenty-seven, "but I was still too afraid to tell people."

Around this time, Christa started seeing a counselor, who told her she shouldn't take the drugs without medical oversight. Even so, she never considered consulting her primary care physician. "I just didn't feel like my doctor would know what to do or would understand," Christa says. But she eventually came out to her family, moved to New York City, and found a medical practice in Chelsea popular with lesbian, gay, bisexual, and transgender patients; in 2014, she underwent gender confirmation surgery.

Throughout this four-year transition, Carrie Down, a third-year NYP resident at Weill Cornell Internal Medicine Associates (WCIMA), watched and learned. "I've seen the difficulties that she's had navigating the healthcare system, even with a college education and emotional and financial support from our family," Carrie says. "I can only imagine what people without a strong support network go through." Aiming to delve deeper, she designed a survey to assess how much her fellow residents knew about transgender healthcare. She found that respondents largely felt unsure of their ability to provide comprehensive care to transgender patients—but that nearly all of them wanted to learn more. To address this need, she is putting together a Web-based resource for NYP residents and WCM physicians.

Carrie Down is part of a growing group of WCM students, NYP residents, and faculty who are working to train providers in how to talk to, treat, and refer out LGBT patients to specialists when they need them, with the ultimate aim of reducing the health disparities these groups face. Those challenges include stubbornly high rates of HIV infection among gay men, severe side effects in transgender patients using black-market hormones, and an increased risk of cervical cancer in lesbian women, who often skip Pap smears and HPV screenings because

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they assume they don't need them. "While we know that not every doctor is going to be an expert on LGBT healthcare, we can train every one to be sensitive to a patient's needs, and to be aware that there are outside resources available," says Nelson Sanchez, MD, an assistant professor of clinical medicine who chairs WCM's LGBT Steering Committee. "If a doctor doesn't know what hormone a transgender patient should take or whether or not a gay patient is a good candidate for pre-exposure prophylaxis to help prevent them from contracting HIV, they should at least know where to send them, and how to use language that makes them feel comfortable."

Among these educational efforts is a new series of mandatory lectures for medical students—who, as an oft-cited *JAMA* study from 2011 showed, receive a nationwide average of just five hours of instruction on LGBT issues. These lectures cover disparities in HPV screening and vaccination for lesbian and bisexual women; gender orientation and identity in transgender patients; and how to best determine, based on sexual activity, which gay men should be offered pre-exposure prophylaxis. "It's important for students to understand how to talk to people about their sexuality, and to know what their answers mean when it comes to their medical care," says one of the lecturers, Timothy Wilkin, MD, an associate professor of medicine who primarily treats and researches gay men. "Addressing these topics in a proactive way is a step in the right direction."

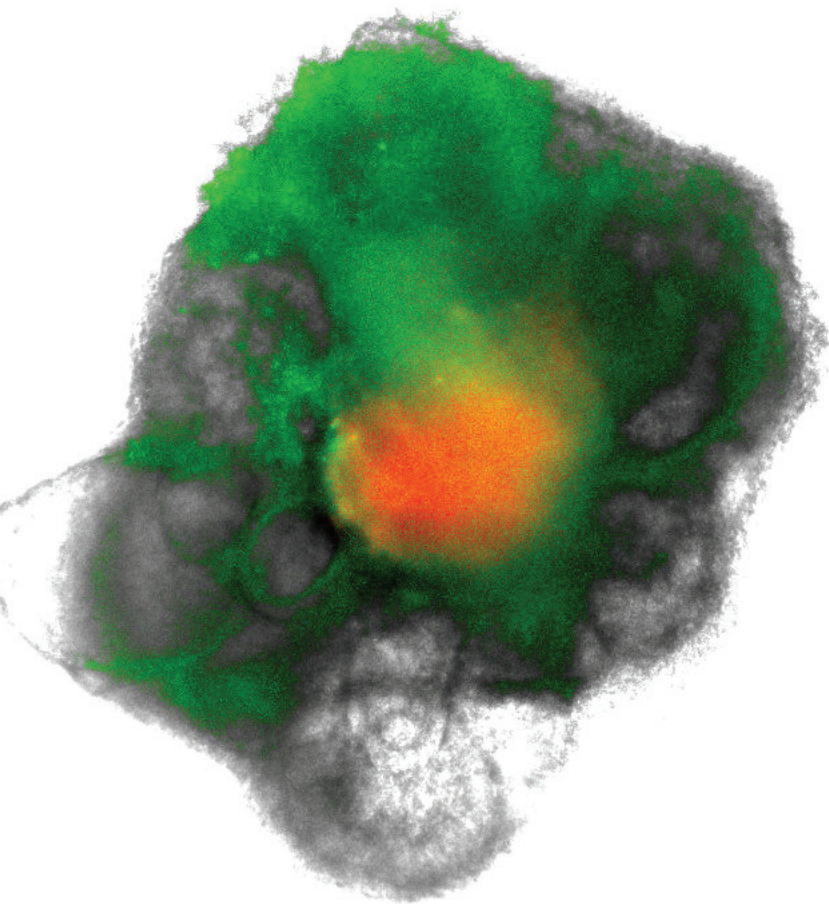
A second program focused on LGBT health, delivered to first-year residents, is led by Anthony Pho, a nurse practitioner at WCIMA. This frank and detailed two-part course, which relies heavily on role playing and discussion, first defines LGBT terminology for clinicians, then provides a brief health policy update and reviews health disparities this community faces, and finally allows participants to practice their clinical communication using case studies featuring LGBT patients. In the process, residents learn how well pre-exposure prophylaxis works and best practices for prescribing it; how to ask patients

open-ended questions about sexual orientation, identity, and practices, without making assumptions based on age or marital status; and what gender confirmation surgery entails, including details on post-surgery sexual function. "Anthony addresses material that many people have not had in their medical training, with a depth and a breadth that is powerful and important for residents to hear," says Fred Pelzman, MD, WCIMA's medical director, who's in charge of directing the residents' educational curriculum. "They come out of there enlightened and a little bit exhausted, but any new material that challenges you and helps you take better care of your patients is a good thing."

Sanchez also holds regular training sessions covering how WCM students and faculty can make the climate in the hospital, clinic, and workspace more inclusive for LGBT patients and colleagues by using the right language and being more sensitive to others' differences so that everyone feels comfortable. This spring, he's rolling out an online version. "A lot of New Yorkers take for granted that everyone is friendly, welcoming, and inclusive to LGBT individuals," he says. "But we need to remember that not all Weill Cornell Medicine students, trainees, and staff have interacted with LGBT people—in or out of the healthcare setting—before arriving in New York. Everyone has unique experiences and biases. This is why it's so important to keep training students and faculty in these areas."

Such efforts are especially important to Sanchez and Pho, in part, because of who they are: gay men of color. Sanchez notes that before he received his MD, he had some negative experiences with his own physicians. While some failed to take a thorough sexual history when it would have been relevant, others ordered HIV testing even if it had nothing to do with the purpose of his visit. "Now that I'm a provider, I feel that it's my responsibility to improve clinician knowledge and sensitivity so that experiences like the ones I had are minimized," Sanchez says. "For me, it's very personal." ■

— Anne Machalinski



'Cells, particularly tumor cells, are very different when you grow them alone, compared to when you grow them in the midst of other normal cells.'

Small Wonders

Cerebral organoids—tiny 'brains' grown in a petri dish—offer a potent weapon in the battle against brain tumors

As a neuro-oncologist specializing in brain cancer, Howard Fine, MD, has spent nearly three decades fighting one of the most devastating and intractable types of tumors. Over the years, he has treated more than 20,000 people with cancers that originated in the brain—and, he notes grimly, for far too many of those patients, the disease took their lives.

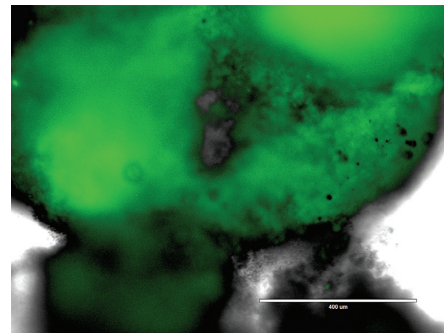
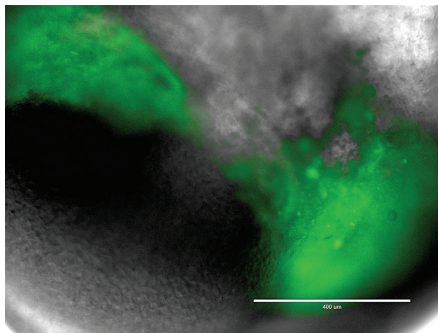
During all that time, the median survival for glioma, the most common type of brain cancer, has edged up only slightly, from one year to fifteen months from the time of diagnosis. But Fine has reason to believe that hope is finally on the horizon. "We now understand the biology and genetics of the tumor much better than we ever did," says Fine, who moved from Harvard last year to found WCM's Brain Tumor Center and was recruited as the Louis and Gertrude Feil Professor of Medicine. "Our basic knowledge has dramatically expanded. Now we're taking a brand new look at this disease, and we're doing something different—something that we're really excited about."

That novel approach involves tiny human brains grown in the lab from stem cells. First described in 2013 by Austrian and British scientists, these cerebral organoids offer scientists the best model yet for conditions like Alzheimer's and Parkinson's diseases. Fine's team at WCM is the first to deploy them in the fight against brain tumors.

A collection of tiny gray smudges floating in a petri dish, organoids hardly resemble the science fiction trope of a sentient brain trapped in a jar. They also carry none of the ethical baggage: while the neurons signal to one another, the organoids are primitive enough that there is no possibility of thought or feeling. Still, Fine says, these are miniature versions of a twenty-week-old fetal brain, complete with all of the different cell types neurologists would expect to see. That means that when researchers introduce tumor cells, they grow in the organoids much as they would in a real human brain. "Cells, particularly tumor cells, are very different when you grow them alone, compared to when you grow them in the midst of other normal cells," explains Fine, chief of the Division of Neuro-Oncology

BRAIN STORMS: Glioma stem cells (near right, seen in green) form invasive tumor masses inside a cerebral organoid; after ten days in culture (far right), the stem cells have invaded most of the organoid tissue.

Above: In a separate experiment, genetic mutations frequently found in human gliomas were introduced to an organoid to model how human cancers develop. The green areas are tumor tissues in which only one mutation was expressed; the orange and yellow areas have multiple mutations. Understanding the mutations expressed in a tumor is important, because it can help guide treatment decisions.





Howard Fine, MD

and associate director of translational research at the Sandra and Edward Meyer Cancer Center at Weill Cornell Medicine. Because location and the type of tissue surrounding a tumor can affect its ability to resist chemotherapy or radiation, new treatments that look promising in the lab don't always work in patients. To get around this problem, researchers often grow tumors in the brains of mice, but that has its own obstacles—primarily the mouse's skull. "All we can do is treat the animal and see if it lives longer or not," Fine says. "You can't actually do real biology. So we've been searching for a way of growing glioma cells in a more natural environment. With cerebral organoids, we'll be able to do it in a petri dish where we can genetically and chemically modify these tumors, observing each of them in real time under the microscope."

Fine's research team has been at work for a year, and so far the new method is working better than they could have predicted. "What we found out is that glioma stem cells not only can grow in these organoids, but they love these organoids," Fine says. "They form big masses and infiltrate and destroy the organoids, and pathologically it looks just like what you would see in the human brain."

The next step is to use these cancer-ridden organoids to screen drugs and other treatments in a way that is not only more realistic than previous methods, but also much faster. Where mouse

studies can look at a handful of drugs every six to twelve months, organoids—which can easily be grown by the hundreds—can allow for screenings of many potential new drugs at once. Organoids may also allow doctors to take a precision medicine approach, better tailoring treatments to individual patients. Fine envisions a time when a patient's own genetically distinct tumor cells can be implanted into multiple organoids in order to test drugs. "We can then go back to the patient and say, 'Here's a treatment that's much more likely to be effective than just picking something off the shelf,'" Fine says, noting that today's oncologists must often rely on informed hunches in selecting from a vast array of chemotherapy drugs.

Glioma remains a devastating diagnosis, and Fine continues to see patients knowing that most of them will not survive their cancers. His clinical practice can be emotionally draining, he says, but he takes solace in the knowledge that the work he and his team are doing in the lab might one day allow him to give his patients better news. "I think that's where being a physician-scientist helps," he says. "If I were solely a clinician taking care of these patients, after 25,000 I think I would have burned out. But the fact that I can go back into the laboratory and possibly make a difference so that the next patient has a better outcome—that's my motivator." ■

— Amy Crawford

Virtual Vision

3D technology could offer a potent weapon in cancer care

In the 1966 film *Fantastic Voyage*, physicians were shrunk down to microscopic size to travel inside the human body and save a dying patient. Now, researchers at Weill Cornell Medicine are using virtual reality goggles to bring that fantasy to life—with the aim of improving cancer care.

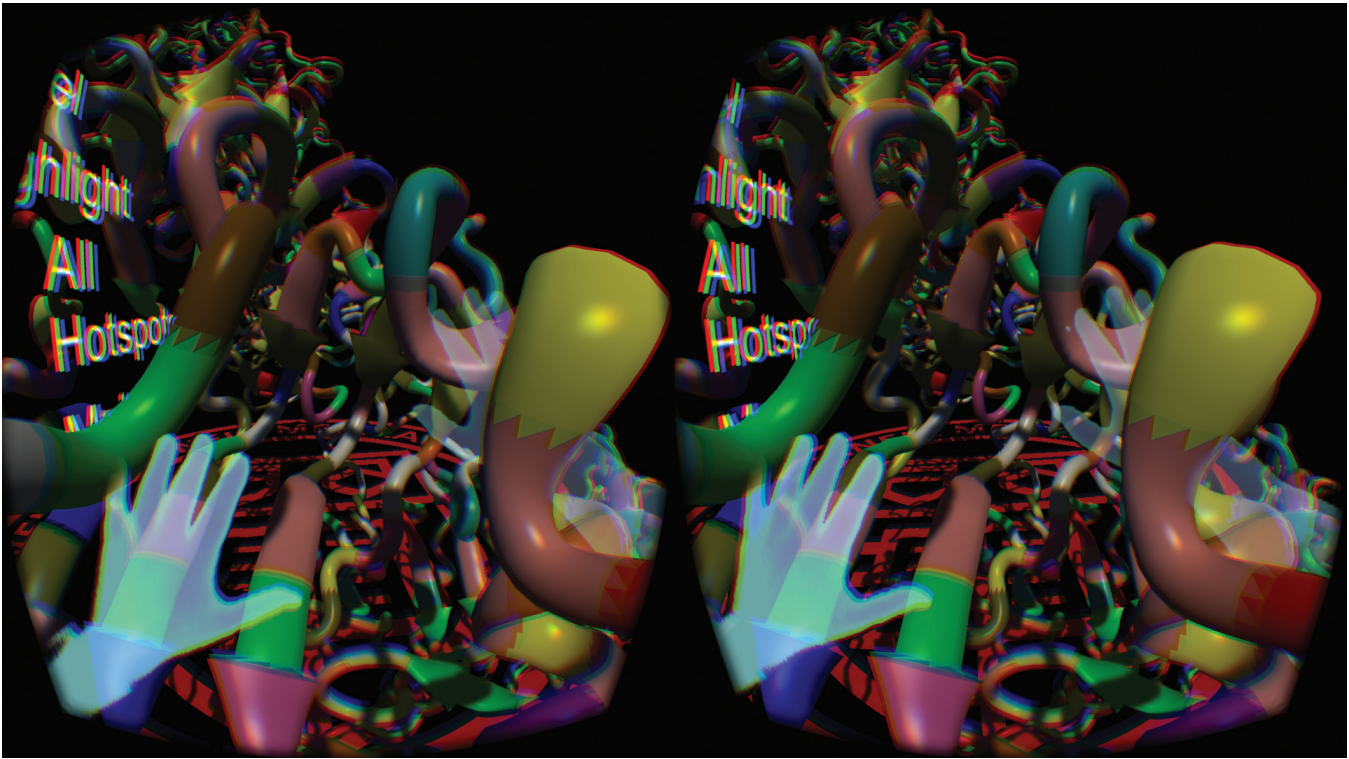
The virtual world that Alex Sigaras, a research associate in computational biomedicine at WCM's Englander Institute for Precision Medicine, has developed consists entirely of protein molecules. His technology allows doctors to swim through and around a patient's proteins—almost literally. When users don a virtual reality headset, they see colorfully labeled 3D renderings

of protein folds overhead and underfoot; using hand gestures and other movements, they can enlarge the protein, shrink it, or change its orientation. Touch-activated drop-down menus allow users to highlight certain parts of the protein model or read additional background information.

Sigaras's technology—which he developed under the mentorship of Olivier Elemento, PhD, associate professor of physiology and biophysics and of computational genomics in computational biomedicine and associate director of the HRH Prince Alwaleed Bin Talal Bin Abdulaziz Alsaud Institute for Computational Biomedicine—is designed to help physicians better treat cancer



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IN LIVING COLOR: The view through the virtual reality goggles. Opposite page: Researcher Alex Sigaras sporting the headset.

patients by more fully understanding the genetic mutations underpinning their individual disease. As Elemento explains, in some cases those mutations are well known, and the best course of treatment is clear. In others, though, the effects of the mutations aren't obvious from looking at the genome itself—but they can be better understood by examining a cancerous tumor's proteins in 3D.

Typically, mutations that are located near one another in the protein are closely related, and the cancers they cause require a similar course of treatment. However, figuring out which mutations are close together can be tricky. Proteins are folded in three dimensions, so mutations that are far away when the protein is ordered in a linear strand might actually be nearby when the protein is folded in its natural state.

That's where virtual reality comes in. Instead of providing a two-dimensional print-out, Sigaras's system allows doctors to see the protein in three dimensions. With the knowledge that cancers with mutations located near one another may respond well to similar treatment regimens, physicians can compare where a patient's cancerous mutations are in relation to known mutations to help formulate a treatment plan. "We're enabling clinicians to fully immerse themselves into medical data," says Sigaras, who holds a master's degree in computer science from Columbia. So far, he and others on Elemento's team have made virtual reality renderings of proteins for a few dozen patients with various types of cancer, but they hope to make the technology more widely available.

The goggles themselves are relatively inexpensive—around

**'We're enabling
clinicians to fully
immerse themselves
into medical data.'**

\$600—and Elemento hopes to make the software available for free to anyone who requests it. The DNA sequencing will need to be done at a state-of-the-art lab, because both the equipment and the supercomputers required to analyze the raw data are prohibitively expensive. Someday, he says, clinicians could

send in DNA samples—one from a cancerous cell and one from an unaffected cell—for sequencing and analysis; within a week or two they'd receive a virtual rendering of all mutated proteins, with the mutations highlighted for easier viewing. Then, using their own knowledge of common mutations, they'd examine the 3D rendering, combine this information with resources such as the Precision

Medicine Knowledge Base (also developed in Elemento's group), and devise the best course of treatment. That's already possible, but right now the technology is not in widespread use; only about twenty patients have benefitted from it to date, though Elemento hopes that number will soon grow.

And cancer treatment is just one potential medical use for the virtual reality set-up. In theory, the technology could be employed for any data that's best represented in three dimensions, including MRIs and other types of medical images. "It's almost limitless what you can do with these virtual reality devices. In theory, you could have one in every physician's office, so clinicians could navigate and visualize the entirety of a patient's health and genomic data," Elemento says. "They could sift through enormous amounts of complex data." ■

— Keri Blakinger

'Master' Class

New program helps first-years form their identities as physicians

Knock, knock, knock.

"Come on in," says Gina, an anxious-looking patient waiting in the exam room. It's a cold, rainy afternoon and—as she soon explains—she's in a rush to pick up her sons from daycare after her appointment at the Weill Greenberg Center.

Medical student Linjia Jia '19 warmly introduces herself as she washes her hands. Then, for the next twenty minutes, Jia asks questions—not shying away from personal topics like drug use, sex life, and family illnesses. She learns that Gina, a forty-one-year-old married mother of two, has been experiencing stomach pain and headaches. The reasons for her symptoms are unclear, Jia tells Gina, "but I'll discuss this with your doctor and we'll do our best to get to the bottom of this." Gina smiles, looking a little less anxious.

There's more going on here than meets the eye. First off, "Gina" is a specially trained actor. The exam room, too, is a look-alike—outfitted with standard equipment like cotton swabs and an exam table, but also cameras and microphones. It's one of twelve such rooms in the Margaret and Ian Smith Clinical Skills Center; today, each contains one first-year and one actor. The

exercise is designed to let students practice taking a medical history—to remember the sixty-plus items they need to review in a typical patient visit to a general practitioner, and go over them in a way that makes patients comfortable—under the watchful eye of faculty, who observe through one-way glass. Later, both the actors and the professors give the students feedback.

The exercise is part of the Clinical Masters Program, a recent addition to the WCM medical school curriculum that fosters strong clinical skills and effective doctor-patient communication. Founded last fall, the program is aimed at helping students form their identities as physicians under the mentorship of distinguished faculty—the "clinical masters" of the name—chosen for their experience as educators and exemplary physicians. "There's a certain process as the students start as civilians and become physicians," says one of those mentors, Catherine Hart, MD, clinical associate professor of medicine and a voluntary faculty member. "It's an incredibly important part of preparing them for what they're going to be doing in the real world."

Besides their sessions in the Smith Clinical Skills Center, the first-years—who are divided into groups of about ten students guided by two masters—role-play with classmates and faculty



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'There's a certain process as the students start as civilians and become physicians,' says Catherine Hart, MD. 'It's an incredibly important part of preparing them for what they're going to be doing in the real world.'

PRACTICE MAKES PERFECT: Matali Kini '19 (right) takes a history from an actor trained to play a patient. Opposite page: Clinical Skills Coordinator Kevaughn Harvey (in red jacket) briefs the students.

on such topics as which kinds of medication to prescribe a sick patient and the proper way to measure blood pressure. Faculty members give them personal feedback on their role-play performances and offer advice gleaned from their own experience, making the program distinct from other required courses that are more focused on medicine as a science than on the art of being a doctor. The students also participate in ethics discussions and read and write short narratives, outlining the way they would navigate hypothetical conversations with patients—for example, how to broach potentially difficult topics like substance use and sexual health. "Medicine is not merely performing tests on patients; to perform those tests, you need outstanding clinical skills," says Charles Bardes, MD, associate dean (admissions) and professor of clinical medicine, who created the program in collaboration with B. Robert Meyer, MD, professor of clinical medicine, and Keith LaScalea, MD, associate professor of clinical medicine. "Our program puts students with experienced faculty to teach them those skills, but also show them the joys of medicine."

The Clinical Masters Program is part of the Essential Principles of Medicine course, which was created under WCM's new medical curriculum. Launched in 2014, the curriculum incorporates physicianship and patient care throughout all four years of study. "Sure, to be a good doctor you need to know the science, but there's this whole other aspect you need—of being human and interacting with people," says first-year MD-PhD student Maria Passarelli, who took the course in fall 2015. "This program drives

that home in the beginning, which is really important." The emphasis on ethics—including sessions with WCM faculty who are specialists in the field—is also invaluable, says Iryna Ivask '19. For her, the most memorable topics include how to relate to patients from different backgrounds, overcoming language barriers, and understanding varied family and socioeconomic situations. "It's important to hear others' perspectives on what's right and wrong," she says. "Some students grew up in other countries; some are married with kids. They all offer different points of view you may not have considered."

The masters comprise twelve full-time and eight voluntary faculty members, who take time out from their busy clinical and academic schedules to devote three hours a week to the program. "The voluntary faculty are particularly valuable to the program because of their outstanding track records in patient care and teaching, and their spectrum of experience outside the institutional walls," Bardes says. "While all the Clinical Masters have extensive academic experience, the voluntary faculty also bring an additional sense of 'real life' medicine as practiced in the community." The masters represent many medical fields, giving students an up-close look at what it's like to practice in a variety of specialties. "I couldn't pass up the opportunity to be a clinical master," says Juliet Aizer, MD '01, a rheumatologist at Hospital for Special Surgery and an assistant professor of clinical medicine at WCM. "These students have great potential, and the program challenges them in ways that boost their growth as physicians." ■

— Erica Cirino

Talk Therapy

The Sean Parker Institute for the Voice treats a wide variety of patients, from Broadway singers to schoolteachers



Lucian Sulica, MD, and patient Daniel Rosenfield

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In 2014, Daniel Rosenfield saw a doctor for a sore throat that had lingered for two months. He was told it was due to allergies—but, he says, the idea that allergies could cause discomfort persisting for so long struck him as “a little far-fetched.” So he went to an ear, nose, and throat specialist, who said the problem was acid reflux and prescribed medication. When that didn’t help, Rosenfield went for a CT scan and endoscopy. The ENT doctor told him he had a paralyzed vocal cord and sent him to a laryngologist, who suggested a virus might be to blame.

Then, suddenly, he could barely talk. “My voice sounded like I was 120 years old,” recalls Rosenfield, a real estate executive in his mid-sixties who lives in Westchester County. “I could get three words out before I’d run out of air.”

By early 2015, doctors were recommending an operation to correct the problem—but Rosenfield was hesitant to undergo such major surgery, so he sought another opinion. That’s when he met otolaryngologist Lucian Sulica, MD, director of Weill Cornell Medicine’s recently established Sean Parker Institute for the Voice. Sulica knew that deterioration of the voice after many months of vocal cord paralysis was highly unusual, and suspected the situation was more serious. So he sent Rosenfield back for another CT scan and quickly identified the problem: a two-centimeter thyroid tumor compressing the nerve to the vocal cord which, if left untreated, could have invaded his trachea or esophagus. Rosenfield subsequently underwent surgical removal of the tumor, followed by another procedure to rehabilitate the paralyzed vocal fold—and today, he credits Sulica with saving his life. “The previous doctor would have done the surgery and restored my voice,” he says, “but he would have never seen the thyroid cancer and it would have kept growing.”

While patients generally come to Sulica’s office with the same handful of symptoms—hoarseness; a voice that is overly rough or soft; loss of projection and volume—their underlying causes can vary widely, from nerve damage to cancer to injuries related to heavy voice use. Most of these problems are correctable through interventions including surgery, injections, and voice therapy, but Sulica says that, unfortunately, they often go untreated. “Most people—even most physicians—aren’t fully aware of the impact of a voice disorder,” says Sulica, the Sean Parker Professor of Otolaryngology. “Even if they are, they may not be aware that treatment exists. It’s the great overlooked handicap.”

Founded in fall 2013 with a \$6 million gift from the Internet entrepreneur and named in

his honor, the Parker Institute currently comprises Sulica and otolaryngologist-head and neck surgeon Babak Sadoughi, MD, assistant professor of otolaryngology, as well as two voice therapists. The Parker Foundation recently donated \$2 million to establish the Sean Parker Fellowship in Laryngology, which will train clinical research fellows in the field. Though many people assume that the Institute primarily treats performers, Sulica notes, many of his patients are in other vocally demanding professions including teaching, exercise instruction, sales, and the clergy. “In a place like New York City, pretty much every job involves information transfer,” he says. “And in an information-based economy, communication is currency, so having a voice disorder can be truly disabling.”

For Rachel Rincione, her voice is indeed her bread and butter. The thirty-five-year-old Manhattanite is a Broadway singer and actress, currently understudying various roles in *Les Misérables*. Rincione had already been struggling

‘Most people—even most physicians—aren’t fully aware of the impact of a voice disorder. It’s the great overlooked handicap.’

with allergies and throat issues when one day, she went onstage for an ensemble number and “nothing came out.” The culprit ended up being a recurring vocal cord hemorrhage, caused by a “varix”—a varicose vein in the vocal cord. The vein ruptured, filling the cord with blood and preventing it from vibrating properly. As a result, Rincione could barely speak—let alone sing—for a few weeks after each new hemorrhage.

Thanks to data collection and analysis that had been done at WCM, Sulica was able to recommend surgery as the best solution. Previously, whether to operate to remove a varix was a matter of anecdote and opinion—but by collecting data from instances of hemorrhage in forty-five patients over a six-year period, Sulica now knows that if someone with a hemorrhage has a varix in their vocal fold, their chance of bleeding again is essentially one in two, “so we know at that point that it’s worth a surgical intervention.”

Rincione underwent the procedure in July 2015, was back onstage three months later, and is now performing in as many as eight shows a week. Says Rincione: “Dr. Sulica saved my career.” ■

— Keri Blakinger

World Travelers

WCM faculty give Cornell undergrads first-person perspectives on global health



MEDICAL MENTORS: WCM faculty Eric Brumberger, MD (above center), and Gunisha Kaur, MD '10, chat with students in the Ithaca global health class. Left: Kaur lectures on the unintended consequences of social action.

In a lecture hall on the Ithaca campus, an audience of seventy-five undergrads listens with rapt attention as anesthesiologist Eric Brumberger, MD, offers a painful lesson in good intentions gone awry. Seven years ago, he tells them, he was part of a medical mission to Ghana—organized by an outside group that he met through a colleague—that performed successful surgeries on dozens of children. When the doctors and nurses encountered a man who was suffering from a long-untreated hernia that severely compromised his quality of life, they felt a duty to help. The patient was eager for relief, the operation seemed straightforward, and the procedure went reasonably well—but afterward, he began bleeding internally. “He didn’t survive the night,” says Brumberger, an assistant professor of anesthesiology at Weill Cornell Medicine and director of the department’s residency program. “We didn’t have the resources, equipment, drugs, or blood products needed to keep him alive. We watched—horried, shamed, guilt-ridden—as this otherwise healthy person, who in the U.S. would have gone home that same day, died in front of us. That experience has informed the way I’ve approached global health work ever since.”

Brumberger spoke in April as part of Global Health Case Studies, a new course he co-founded that brings WCM faculty to Ithaca to discuss the topic from a comprehensive perspective—marrying medical disciplines like public health and epidemiology with such fields as anthropology, history, and economics. Launched in an abbreviated pilot version in spring 2016, the class has proved highly popular; while Brumberger and co-founder Gunisha Kaur, MD '10, expected two dozen or so students to enroll, they got three times that many. “The most rewarding experience has been interacting with the doctors,” says student Olivia Lee, an aspiring physician majoring in human development who took the class her senior spring and also served as a teaching assistant. “Being able to talk with them about how they approach global health and how their experiences as doctors have shaped their thinking has been really

‘We know that some of these students are going to do work in global health, and we hope that what they gain from this approach is the ability to do it more responsibly and sustainably.’

inspiring, because I’d like to do the sort of work they’re doing.”

Offered through the College of Human Ecology’s Division of Nutritional Sciences, the course was developed with the aid of grants from the Ithaca campus’s Mario Enaudi Center for International Studies and the office of its vice provost for international affairs. Lecturers have included Madelon Finkel, PhD, professor of clinical healthcare policy and research (who spoke about cervical cancer screening in impoverished rural areas), and James Gallagher, MD, associate professor of clinical surgery (who discussed his experiences in Tanzania, including setting up a burn center there). From a show of hands during one class—the one in which Brumberger and Kaur spoke about the unintended consequences of social action, as exemplified by the death of the Ghanaian hernia patient—roughly two-thirds of its students aim to be MDs. “We know that some of these students are going to do work in global health,” says Kaur, an instructor in anesthesiology,

“and we hope that what they gain from this approach is the ability to do it more responsibly and sustainably by understanding the social, political, economic, and environmental context of the places in which they work.”

This fall, the class is being offered in a full-semester form, with enrollment capped at 125. Brumberger and Kaur—both undergraduate alumni of Cornell—have retooled it a bit, incorporating lessons they learned from the pilot version; for instance, they’ve halved the amount of required reading, having realized that what they assigned was more appropriate for the med students and residents whom they’re accustomed to teaching. “As an undergraduate, I would have loved access to the medical college and its faculty,” says Kaur, noting that several students from the course’s first iteration came to WCM to conduct research over the summer. “When I was at Cornell, there was very little connection between the two campuses. Having something like this course bridges that gap really well.” ■

—Beth Saulnier

PHOTOS: ROBERT BARKER / CORNELL MARKETING GROUP

Survivors' Stories

Ground-breaking booklet aids cancer patients in Qatar

One woman didn't tell her children that she had breast cancer until the night before her mastectomy, not wanting to upset them while they were studying for exams. One young man, unwilling to reveal the news of a potentially malignant tumor in a phone call, asked his parents to visit from abroad for a fictitious work event—waiting until they arrived to say he was actually having brain surgery. Another breast cancer patient, a Philippina struggling with the side effects of chemotherapy and radiation while living alone in Qatar, dreaded informing her parents back home about her diagnosis; when she finally did, she was thrilled that her mother moved in to help her recover.

The three are among the cancer survivors in Doha, Qatar, who are featured in *Story of Hope*, a new booklet intended to comfort and inspire patients undergoing treatment. Created by students at WCM-Q in collaboration with the Qatar Cancer Society, the bilingual (English and Arabic) booklet is a first for the region—so much so that its publication made national headlines. “Cancer is often a taboo subject in the Middle East,” explains Alan Weber, PhD, an associate professor of English who spearheaded the project. “Many of the patients told us that once you say the word ‘cancer’ it really means ‘death,’ because

‘There’s very little information here in the Middle East about what to do if you’re diagnosed with cancer.’

in this part of the world there has only recently been a high-enough standard of care to successfully treat it.”

Volunteering their time, a dozen of Weber's students interviewed eight patients identified by the Cancer Society, working with them to craft essays describing their experiences with diagnosis, treatment, and recovery. An initial print run of 1,000 copies is being distributed in support groups, schools, and other locations. “There's very little information here in the Middle East about what to do if you're diagnosed with cancer,” says Sara El Husseini, a second-year medical student from Lebanon who interviewed a survivor of Hodgkin's lymphoma. “It's a scary disease and we don't talk about it, but it doesn't have to lead to death or to negative outcomes. It's something so common, it's sad to have to hide it.”

In each of the eight essays, the survivors share insights about coping with disease, often citing the comforting role of their Islamic faith as they faced the pain and uncertainty of treatment. Many note what a relief it was to share their diagnosis with others—and encourage readers to do the same. “I now believe that telling the truth up front can strengthen your support from your family,” said one of the interviewees, who asked to remain anonymous. “Disclosing your concerns and fears will strengthen you and help you pass the hard experiences ahead. You shouldn't face cancer alone.” ■

— Beth Saulnier



STORY OF HOPE: The booklet, a collaborative effort by WCM-Q and the Qatar Cancer Society, was published in both English and Arabic.

The Comforts of Home

Weill Cornell Medicine is embracing natural childbirth methods and progressive postpartum care, while putting safety first

BY ANNE MACHALINSKI

PORTRAITS BY JOHN ABBOTT



It was about a week after the due date for her second child when Jessica Holloway, a thirty-seven-year-old lawyer from Brooklyn Heights, started feeling the first pangs of early labor. Knowing that the process could take hours and she should conserve her energy, she headed to an afternoon showing of *Captain America: Civil War* with her husband, Cas, and waited for things to ramp up.

It wasn't until about 10 p.m. that the pain intensified and her contractions became more regular. The next hours flew by. Holloway made some last-minute preparations, dozed for a bit, and then labored at home until it was time to head to the hospital around 4 a.m. Her husband ordered an Uber, and Holloway spent what she calls "the least comfortable seven-minute ride" of her life, kneeling backwards in a Toyota Camry as it bumped along cobblestone streets and over the Brooklyn Bridge. But once she arrived at NewYork-Presbyterian/Lower Manhattan Hospital's sixth-floor birth center, where certified nurse midwife Rita Wagner was waiting for her, things became decidedly more calm.

Holloway was ushered into one of the center's two birthing rooms. It was nice and quiet, she says, allowing her to focus on breathing through her contractions. About ninety minutes after she arrived, she gave birth to her second daughter—nine-pound, seven-ounce Catherine—while lying on a queen size bed. Catherine was placed right on Holloway's chest and started nursing within moments. "I was extremely happy to deliver there," says Holloway, who like other women who give birth at the center never got an IV or any pain medication, and was not even required to change into a hospital gown. "I was able to just walk right into this room, get comfortable, and establish a sense of place." The lighting was dim, the medical equipment was unobtrusive, the noise level was low, and the mood was soothing. "All of those little things," she says, "added up and made a big difference."

Holloway's experience isn't typical of most women who give birth in the United States—but that's precisely the point. More than 32 percent of babies nationally are delivered by cesarean section, a figure that has held steady since 2009 but had shot up by 60 percent in the previous thirteen years. Although the procedure

has saved countless lives, some patients and physicians believe it's over-performed. Of women who deliver vaginally, about three-quarters get epidural anesthesia for pain relief in New York City, according to CDC statistics from 2008. Most women also have some other type of intervention during the birth process, such as the administration of a hormone called Pitocin to induce or speed up labor and an episiotomy, a vagina-enlarging surgical snip performed before delivery.

Some women with low-risk pregnancies want the chance to give birth without these interventions—and of this population, a small but growing contingent decides to forgo the hospital entirely and deliver at home. Most of these couples enlist the services of a midwife, but not always those with the most advanced

BABY MAKES THREE: Jessica Holloway (opposite) in the birthing center with husband Cas and newborn daughter Catherine (also seen napping below)





Certified nurse midwife Rita Wagner (left) and Jacques Moritz, MD

'I had a baby in an environment that feels a lot like my home, but if there had been an emergency, all of the tools and reassurances of modern medicine were just down the hall—not an ambulance ride away,' patient Jessica Holloway says.

levels of education and certification. The NYP/Lower Manhattan birth center only employs experienced, certified nurse midwives—who have a master's degree, are registered nurses, and take a national certification exam—who provide the gold-standard of midwife-led care.

But even when home births are attended by a certified nurse midwife, there's another pressing issue: if an unexpected complication occurs, the medical equipment, facilities, and team necessary to handle such an emergency aren't close at hand, says Frank Chervenak, MD, chairman of obstetrics and gynecology. "Women are led to believe that because childbirth is a natural experience, delivering at home is a safe option—but it's not," says Chervenak, the Given Foundation Professor of Obstetrics and Gynecology and obstetrician-in-chief at NYP/Weill Cornell. "It's an unnecessary risk."

To appeal to women who want a more natural experience, Chervenak, other senior faculty in WCM's Department of Obstetrics and Gynecology, and medical center leadership decided to bring a

home-like atmosphere to the hospital, and opened a state-of-the-art birth center at NYP/Lower Manhattan in December 2015. This in-hospital center—only the second of its kind in Manhattan and one of just a handful across the country—is one way to offer a safer option (that's still covered by insurance) for women who want an intervention-free birth. "I had a baby in an environment that feels a lot like my home, but if there had been an emergency, all of the tools and reassurances of modern medicine were just down the hall—not an ambulance ride away," Holloway says. "That seemed like a no-brainer."

A Shifting Landscape

For most of human history, many women and babies died because of prematurity or other complications, says Amos Grünebaum, MD, professor of clinical obstetrics and gynecology. It was only when women started delivering in hospitals in the early 1900s that maternal and neonatal mortality went down by more than 90 percent, he says. Since then, modern obstetrics has focused on making childbirth safer by addressing the top three causes of maternal mortality: bleeding, blood clots, and hypertension. NYP/Weill Cornell and NYP/Lower Manhattan have established protocols to address maternal hypertension and potentially deadly obstetrical hemorrhage; blood products are widely available; and physicians routinely administer a clot-preventing medication to moms who've had a cesarean or who have other risks. NYP sees more than 7,700 annual births between its Upper East Side and Downtown campuses, and these guidelines have led to the lowest neonatal mortality rate of all hospitals in New York City and no maternal deaths associated with delivery in the last ten years. "It's a very safe time for mothers and for babies when the delivery occurs in the hospital," Grünebaum says, "and hopefully we can make it even safer."

While 98.5 percent of the almost four million annual U.S. births still occur in hospitals, the remaining 1.5 percent happen in freestanding birth centers or at home. This population, while small, is growing; it represents an 80 percent increase between 2009 and 2014, when there were 38,000 home births—the highest number that has been recorded since

1989, when the CDC started tracking this statistic, and the highest in the developed world. In New York State, home births represent 1 percent of the total: 2,350 in 2014.

Earlier this year, Chervenak and Grünebaum published an article in the *Journal of Perinatal Medicine* reporting the results of their investigation into the rise of home births. Given that delivering at home is associated with an increased risk of neonatal death and adverse outcomes like newborn seizures and low Apgar scores—a quick way to check newborn health based on factors like appearance, pulse, activity, and respiration—they find this trend deeply unsettling. In the article's conclusion, they note that the U.S. has more out-of-hospital births than any other developed country, and that the medical community should identify and address the root cause of this increase. For women who opt for a more typical birth experience than the type that characterizes the NYP/Lower Manhattan center—with or without interventions—the labor and delivery rooms and recovery rooms at both campuses are intentionally quiet, with what Chervenak calls “traffic lights” in the hallways to manage noise. Both hospitals’ postpartum units promote a family-centered concept called rooming-in, where newborns remain with their mother throughout their stay, and offer daily breastfeeding classes and appointments with certified lactation consultants. Says Chervenak: “All of our doctors and staff are dedicated to making childbirth a beautiful experience.”

Because some protocols, like continuous fetal heart rate monitoring, aren't standard in NYP's birth center rooms, only women with low-risk pregnancies are admitted; those with hypertension, a multiple-fetus pregnancy, and previous cesarean birth or stillbirth are disqualified. In fact, physicians ultimately deem about half of the women who hope to deliver at the center ineligible. Among the criteria they must meet are showing clear amniotic fluid if their water has broken, a fetus in the head-down position, and a pregnancy not past forty-one weeks and six days of gestation. “We want to keep it as low risk as possible,” says Jon Snyder, MD, an associate professor of clinical obstetrics and gynecology and the head of safety in NYP/Lower Manhattan's labor and delivery unit.

Additionally, all women set to deliver at the birth center must undergo formal preparation for an intervention-free, vaginal delivery. For Julie Olival, a thirty-four-year-old children's dance teacher in Brooklyn, this meant two courses in natural childbirth plus the center's required two-hour workshop. In case Olival's labor didn't go according to plan, she was also counseled about cesarean births and about the various types of pain relief that are available, including epidurals. This meant having an advance meeting with an anesthesiologist—as all NYP birth center patients are required to—and filling out consent forms in advance, when she was calm and could ask questions. “After all of that, I felt really confident and prepared,” says Olival, who gave birth in late March.

During labor itself, a midwife tracks the mother's progress and monitors the fetal heart rate by listening to it. If the baby's heart rate appears worrisome or if there's a concern such as infection or feces in the amniotic fluid, the patient is moved through a sliding glass door into a regular delivery room for closer monitoring. If an emergency cesarean is required, the operating room is just down the hall.

Once they've delivered, mothers and their families can stay in the same space for the entirety of their twenty-four-hour stay. “The room that you are triaged in, admitted to, labor in, and give birth in, you then recover in,” says Jacques Moritz, MD, an affiliate assistant professor of clinical obstetrics and gynecology and the head obstetrician at the Lower Manhattan practice. That worked out well for Briann Baker, a thirty-two-year-old film producer from Astoria, Queens, who gave birth to

‘It's a very safe time for mothers and for babies when the delivery occurs in the hospital,’ says ob/gyn Amos Grünebaum, MD, ‘and hopefully we can make it even safer.’



Frank Chervenak, MD (left), and Amos Grünebaum, MD

'It was so nice to be in an environment that was less clinical and more comfortable,' says patient Briann Baker, who gave birth in May



her second child, a son named Ty, in the birth center in mid-May. For Baker and her family—her husband, nearly two-year-old daughter, and fifteen-year-old stepson—the quiet time they spent together in the room was instrumental in helping everyone bond with the new arrival. “It was so nice to be in an environment that was less clinical and more comfortable,” she says.

The Birth Center Way

The goal of each birth at the center is simple, says Moritz: a healthy mom and baby, delivered without medical intervention. To achieve that, he says, the philosophy of the five staff midwives is “low tech and high touch.” To ease the pain associated with natural childbirth, the center’s two rooms are equipped with a large Jacuzzi tub, wedges and balls for positioning and massage, and a looped sling hanging from the ceiling, which Baker used to hold herself up during contractions, rather than relying solely on her husband. The aesthetic of the rooms is also more like a modern loft space than a hospital suite, with dark wood paneling, a queen size bed, and amenities like a microwave, mini fridge, and coffee machine. “This birth center was designed with total midwife input,” says Moritz, adding that he and Wagner, the midwife, attended dozens of construction meetings as the space was developed. “It turned out beautifully.”

In addition to being aesthetically pleasing and functional, this low-intervention approach means that women are free to move and deliver in any position or location that feels comfortable. “We want to allow the woman’s body to guide the process,” Wagner says, “and as midwives, we follow along.”

A number of the center’s approaches are common practice in Europe, though relatively rare in the U.S. For pain relief, for example, midwives offer nitrous oxide—often administered during labor abroad, but just now making a comeback in the U.S., where it had fallen into disuse in favor of epidurals. “We’re the first birthing center to use it in New York City,” says Moritz, adding that the drug can “help take the edge off” the pain during the particularly intense period called transition, when the body readies itself for delivery. Meeting with an anesthesiologist during



HAPPY FAMILIES: Briann Baker (above) in the hospital with newborn son Ty. Opposite: Julie Olival at home with husband Kevin and daughter Zoe.

PHOTO: ERIK BAKER

pregnancy rather than delivery is also typical in Europe, as is a proactive effort to educate postpartum women on how childbirth can affect the pelvic floor (the group of interconnected muscles and ligaments that support the vagina and hold the bladder, uterus, and other pelvic organs in place). “Pregnancy, and specifically vaginal delivery, significantly increases a woman’s risk for pelvic floor disorders such as urinary incontinence and pelvic organ prolapse—when the internal organs bulge out of the vagina,” says urogynecologist Tirsit Asfaw, MD, assistant professor of obstetrics and gynecology. While the American model of healthcare

typically doesn’t discuss these issues unless a problem occurs, NYP/Weill Cornell now routinely teaches postpartum women about the pelvic floor, recommends exercises they can do to strengthen these muscles, and lets them know where they can obtain help if they’re having problems. “If these things aren’t addressed, they can affect a woman’s sexual and personal lives, her ability to go back to work, and her physical activity,” Asfaw says. “We want new moms to get back to healthy living and healthy habits.”

Olival, a first-time mother, is currently addressing some lingering pelvic pain with an outside physical therapist after

first discussing the issue with Wagner. She says she feels thankful to have had such open and honest conversations with the midwives throughout her pregnancy, birth, and postpartum period. As she settles into motherhood, Olival says that she often thinks back to the quiet time she spent alone with her family after giving birth. Once the room had cleared out, she took a shower, had something to eat, and then looked on as her husband dozed on the bed next to their newborn daughter. “As they were sleeping, I watched the sun rise over the Brooklyn Bridge,” Olival says. “I’ll always remember that moment.” ■

People Power

Celebrating the individuals who make Weill Cornell Medicine great

PORTRAITS BY JOHN ABBOTT

At Weill Cornell Medicine, people are the heart and soul of our institution. Our faculty and staff—the physicians, scientists, and administrators who work so hard every day to fulfill our mission to care, discover, and teach—make us who we are.

On the following pages, in words and pictures, you'll meet six of those amazing individuals: clinicians, researchers, and one veteran administrator. They include an investigator who was inspired to study Alzheimer's after his beloved grandmother was diagnosed with the disease; a dedicated physician who has enabled countless women with high-risk pregnancies to become mothers; and a married couple both practicing the intense, demanding specialty of pediatric neurosurgery.

Each of their stories is distinct and memorable—but what they all have in common is an intense dedication to Weill Cornell Medicine and everything it stands for. "Every day, I wake up in the morning, and I'm so excited to go to work with my students

and colleagues," says one of those subjects, Estomih Mtui, MD, who has taught anatomy at WCM since 1988. "I'm very thankful. What I do is so rewarding, and it gives me great pleasure."

Mtui and the other faculty featured in this photo series are among those celebrated in "We Are Weill Cornell Medicine," a social media campaign highlighting the people working in our institution's strikingly collaborative environment. Its videos, images, and stories—to be showcased in future issues of this magazine, on the WCM website, and on various online platforms—are aimed to capture the unique specialties and experiences that make Weill Cornell Medicine a world-class academic medical institution. As pediatric neurosurgeons Mark Souweidane, MD, and Caitlin Hoffman, MD '07, so aptly put it: "We all work with the same principles of professionalism, empathy, and concern for the patient and their families. Those sentiments permeate every individual at Weill Cornell Medicine, where everyone shares the same esteemed values."



"A lot of the work I do has to do with blood clotting problems in patients who are pregnant or recently postpartum, so there have been a lot of very gratifying moments when women who have had recurrent miscarriages were finally able to give birth successfully, or patients who had multiple complications were finally able to get through a pregnancy in a healthy way. I remember being in the delivery room ten or twelve years ago with a patient who'd had multiple pregnancy losses, some of them in the much later phases, and watching her baby being born and being overwhelmed by that moment. We think about the

science and the decision-making, but when we see that, it's life changing. I had another patient who'd had about six miscarriages, and when I and her ob/gyn helped her get through a pregnancy safely, she had a son. Yesterday he came to me as a new patient; he's nineteen years old and I remember when he was born and being at their family celebration, the bris—that was pretty incredible. I took care of his grandparents and parents; he's the third generation of this family I've had the privilege of taking care of. And that was just my life on a regular day. It's pretty awe inspiring. It's pretty good work."



"I grew up in America, so I didn't see my grandmother as much as I would have liked. But when I was an MD-PhD student, I took two years off to live and work in Japan, and I got to know her a lot better. A few years after that she was diagnosed with Alzheimer's; she was always a strong-willed and independent woman, but she now requires twenty-four-hour-a-day care. I was training to be a neurologist when she was diagnosed, and it really shaped the direction of my career. One of the key components was that I saw she lost a lot of weight right before she developed Alzheimer's. That got me interested in how weight loss might play a role. As I delved

deeper, I realized it has been described for decades, but nobody understood why it occurs. That drove me to try to identify the molecular mechanisms underlying it. Is it a cause or an effect? We think it's both. We think it's a metabolic change that occurs as part of the disease, and we hypothesize that it's detrimental to brain function. Unfortunately, science doesn't move fast, so you know the work you're doing isn't going to help someone today. You hope it will help in the future—but whether that's six months or ten years down the road, you don't know. Hopefully, we can help someone else's parents or grandparents. That's what I keep my eye on."



"My family is very committed to education. My grandfather had a school back home in Guyana, and after he passed away my dad took it over. So teaching is the family business. I came to this country in 1971, and it took me eighteen years to finish my undergraduate degree; now I'm getting a doctorate in executive leadership. I'm writing my dissertation on the effectiveness of the Travelers summer research fellowship—the program at Weill Cornell Medicine I've been working with for forty years—in preparing students from underrepresented backgrounds for careers in medicine. I meet students where they are and help them get where they

want to go. They may be the first in their family to go to college, coming from communities where they don't see physicians who look like them. I give them advice and let them know, 'You can do it, and this is how.' There have been over a thousand Travelers students. Looking at their accomplishments makes me feel that this program is making a difference. It's having an impact on people's lives. The fact that I play a small part gives me a very good feeling. I have stacks of cards and notes from them, thanking me. It makes me think, OK, you're living your life's purpose. This is what you were put on this earth to do."



“My dad was a medical assistant at the missionary hospital in Kilimanjaro, Tanzania. I would go there as a kid, and I was so intrigued by medicine; I wanted to be a doctor from the time I was three. In high school, I was really interested in biology. I went to the dean of the nearby medical school and asked if I could see a cadaver, because I wanted to correlate what I was seeing in frogs and rats with the human body. They thought I was crazy, but they took me to the dissection room, and it was so impressive. I still vividly remember my gross anatomy professor from when I was a medical student in Tanzania. He had so much energy, and he made the subject matter so

interesting by emphasizing the correlations between anatomy and clinical care. Anatomy is the foundation for all the disciplines of medicine—and it can be intimidating. For me, the most gratifying part is helping students find and understand the anatomical structures; you look at their faces and see how thankful they are. I bumped into one student fifteen years after I taught him, and he said, ‘All my success—being an attending in urology—I built on the anatomy you taught me.’ It was so rewarding. I want to make anatomy exciting for my students, so they’ll remember the material for the rest of their lives.”

Mark Souweidane, MD

Professor of Neurological Surgery and of Neurological Surgery in Pediatrics

Caitlin Hoffman, MD '07

Assistant Professor of Neurological Surgery



“Our love for children is what attracted us to the field of pediatric neurosurgery; with every procedure, we hope that we’re investing in the next several decades of their lives. Many people ask, ‘How do you guys work together?’ A lot of them view it as too insular. ‘What do you guys talk about at the dinner table? How do you have a life outside?’ But if anything, it’s balanced in favor of a sense of understanding. It’s hard for a spouse who’s not in pediatric neurosurgery to truly understand the level of commitment—that you’re going to interrupt dinner, leave in the

middle of your child’s recital, or get up three times in the middle of the night to go back to the hospital. We know what our calling demands. We have shared values and goals. We know what the expectations are and we fully support each other. When things aren’t perfect at work, when outcomes aren’t ideal, there’s that sense of understanding and empathy. Your own experience allows you to dig down deep and support each other. It makes it easier to be a parent, to be a spouse. You don’t have to come home and explain yourself. You just know.”

North & South

Monika Safford, MD '86, known for her studies of health inequalities in Alabama, is continuing that work at her alma mater

BY HEATHER SALERNO
PORTRAIT BY JOHN ABBOTT



Monika Safford, MD '86

A decade after graduating from Weill Cornell Medicine, Monika Safford, MD '86, was working as the director of an inner-city clinic in Newark, New Jersey, where most patients were African American and many had limited means. One woman Safford treated made an especially strong impression on her: she was a single mother working three part-time jobs to care for her children while desperately trying to manage her own diabetes, high blood pressure, and thyroid condition. Like many others who can't afford their medications, the woman rotated the drugs prescribed for her various illnesses each month and hoped for the best.

Safford tried to help, but the two eventually lost touch. A year and a half later, she saw the woman again—except this time, she was on dialysis because her kidneys had shut down. “That was one of the most heartbreaking and frustrating experiences,” says Safford, who is the newly appointed chief of the Division of General Internal Medicine at WCM and NYP/Weill Cornell. “It made me angry. If we could have given her access to all the medication she needed, we might have staved off dialysis for a lot longer.”

The experience solidified Safford's commitment to addressing inequalities in the provision of medical care among different racial, ethnic, and socioeconomic groups. She went on to become the first endowed professor in diabetes prevention and control at the University of Alabama, Birmingham (UAB) School of Medicine, where she conducted more than 300 notable studies on health disparities. Many of these focused on underserved and predominantly African American communities in the rural Southeast, which has the greatest prevalence of diabetes and the highest mortality rate from heart disease and stroke in the U.S. It's so high, in fact, that the region has earned an unfortunate nickname: “the Stroke Belt.” Though now based in New York, Safford plans to continue her health disparities research.

The community-focused part of her research program is concentrated primarily on the Alabama Black Belt, an impoverished region largely populated by descendants of former slaves. While the community has many strengths—including deep ties among family and friends, a strong sense of faith, and an abiding resilience—it faces significant challenges. There, one-third of residents live below the federal poverty line, compared to 15 percent nationally. Obesity is at epidemic levels, with two-thirds of adults considered overweight or obese, increasing their risk of cardiovascular diseases, diabetes, musculoskeletal disorders, and some cancers. As a native of the Northeast—raised in New York's Hudson Valley; educated at Dartmouth, Cornell, and Penn; and having worked as an instructor of medicine at Brown University

Medical School—Safford was shocked to see the severity of these inequalities. “I had never even heard of the Black Belt before I came to Alabama,” says Safford, who spent twelve years at UAB, where she also served as a professor of medicine and assistant dean for continuing medical education. While driving through some of the country's poorest counties when she first arrived, she was horrified to see that many people lived in shacks without running water or electricity—conditions that looked more like a developing country than the U.S. As a result of the very high burden of chronic disease, some Black Belt counties have a shorter life expectancy than residents of Ecuador, Malaysia, or the Gaza Strip. “It's a national embarrassment that we have not paid more attention to the health-related needs of residents of the Black Belt, especially given the historical context,” Safford says. “This is a direct legacy of slavery that I think is underappreciated nationally.”

The Power of Peers

To help rectify these inequalities, Safford is testing ways to make lasting, real-world changes by utilizing community leaders, neighbors, and other influential voices outside of traditional healthcare settings. Education is a key component to preventive care, she says, since many in the region are unaware that healthy eating and exercise can often forestall chronic conditions like cardiovascular disease and diabetes. “Many don't understand how you get diabetes,” she says. “It's so ubiquitous in these communities that there's an attitude that it's inevitable. There isn't wide recognition that so many chronic diseases have a large lifestyle component and could be prevented or delayed. That's a level of knowledge that most people in these communities don't have.”

But imparting that information can be hard given the widespread mistrust of the healthcare system in the region—which includes Tuskegee, Alabama, site of the infamous study, launched in 1932, in which black men were left with untreated syphilis while researchers tracked the disease's progress for years after treatments became available. Even if a patient is willing to see a doctor, Safford notes, primary care physicians are scarce, and the need to travel long distances makes regular visits difficult. So in one trial published last



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'This is a more durable solution than just going in and doing a research project and leaving. It's very gratifying.'



year in the *Annals of Family Medicine*, she and her team looked at whether peer coaches might be effective in improving diabetes outcomes among minorities in rural Alabama. The coaches were laypeople recruited from the same neighborhoods as the 424 participants; all had diabetes themselves or had cared for a family member with the disease. This type of intervention is attractive for hard-to-reach, under-resourced areas, Safford says, since it's relatively low-cost and requires limited instruction. "It's not someone outside coming in to provide a service; these are people they shop with and go to church with," says Debra Clark, founder of the

Health and Wellness Education Center in Livingston, Alabama, a nonprofit that links individuals to health-related resources, and who assisted with the study. "They are speaking to someone they can relate to. They feel like, 'This person is just like I am.'"

For the study, coaches received twelve hours of training, and participants went to a one-hour group diabetes education class and counseling session. Then, over the next ten months, peer coaches followed up regularly by telephone to help patients work toward their health goals and lend social and emotional support. In many cases, coaches and clients ran into each other at school events or elsewhere in the community, offering guidance outside the regularly scheduled calls. Participants showed significant improvements in blood pressure, body mass index, and quality of life, Safford says.

Those success stories include Lillian Banks, a sixty-one-year-old mother of eight from the tiny town of Minter, Alabama, who lost ten pounds during the study, mostly by cutting back on desserts like her favorite peach cobbler; a person living with type 2 diabetes, she also says her blood sugar dropped. Though Banks says her doctor had explained the importance of managing her diet and keeping track of glucose levels, the information didn't really sink in until she began to have weekly one-on-one conversations with a coach. "I figured I'd eat right otherwise, and then sweets would be no problem," she says. "I didn't take my diabetes seriously and I was destroying myself. The study opened my eyes to a lot of things."

Now Banks checks food labels at the grocery store

and pushes herself to take more walks even when she's suffering from joint pain. If she continues to lose weight, Banks says that her physician will consider taking her off her blood pressure and diabetes medications. "It's amazing what you can learn to help yourself," she says. "Even though these are things you think you know, sometimes it takes someone else to give you that little boost." The program was so successful that it is still ongoing—facilitated by Clark's center and another local nonprofit—and Banks is currently working toward becoming a peer coach herself. Says Safford: "This is a more durable solution than just going in and doing a research project and leaving. It's very gratifying."

From Research to Action

Indeed, Safford's concern doesn't stop when the research does. She's helped organize health fairs at local community centers and personally offered motivational training to peer coaches. When one former study subject reached out about needing health insurance, Clark says, Safford's team provided information on how to sign up for an affordable plan. "She really puts herself into the work that she does," Clark says. "She makes these programs personal."

Ethel Johnson, a health educator at the nonprofit West Central Alabama Health Improvement League in Camden, Alabama, who has also worked closely with Safford through the years, says that her studies have had an unexpected ripple effect: residents who haven't taken part in Safford's studies or related activities learn from neighbors who have. "I was talking to one young lady just last night who stopped snacking on sweets and starchy foods, and is taking nuts and apples to work," she says. "I was so amazed and proud. Word is really getting around. It's like a spark: once the idea gets out there, it flies."

Safford is determined to help even more by overseeing a five-year trial aimed at improving blood pressure in 2,000 rural and low-income African Americans in the Black Belt regions of Alabama and North Carolina. The project recently received a \$9.5 million NIH grant to assess the effectiveness of two strategies: practice facilitation—where a trained practice coach works with local primary care physicians and their staff to deliver services more efficiently—and a peer-coaching program designed to help individuals take charge of their chronic diseases. "The common thread in all our Black Belt studies is that community members are the agents of change," Safford says. "It's an empowerment model."

Carla Boutin-Foster, MD, MS '99, who until recently directed the Comprehensive Center of Excellence in Disparities Research and Community Engagement—a consortium comprising Weill Cornell Medicine and four other metro-area institutions—agrees, pointing out that Safford's

community-based initiatives in rural locations complement similar urban initiatives in New York. The consortium conducts research and outreach programs that target medically underserved racial and ethnic minority populations; WCM faculty frequently collaborate with local partners—such as barbershop owners, religious organizations, and neighborhood physicians—who are trusted by residents of minority communities.

Boutin-Foster was aware of the power of Safford's research long before they became colleagues, and has quoted her studies in grant applications, noting, "Her work definitely preceded her." She was particularly impressed with Safford's research that utilizes data from a national study that is following more than 30,000 African American and white individuals in an attempt to understand why stroke outcomes continue to be worse for black people. Safford led an influential ancillary study, published in 2012 in the *Journal of the American Medical Association*, which found that African Americans continue to have twice the risk that whites have of sudden death at the first indication of heart disease. These findings were particularly disappointing since they showed that although treatments have dramatically improved in the last two decades, they have not reached all Americans equally. The study went on to suggest that better control of risk factors could eliminate the disparity, highlighting it as an ongoing, massive public health problem.

Augustine Choi, MD—interim dean, chairman of the Weill Department of Medicine, and physician-in-chief at NYP/Weill Cornell—agrees that Safford's innovative approaches to treatment can have wider applications. "Diversity is one major domain she's interested in," he says, "but her work is relevant to all populations."

Empowering Patients

According to Choi, the ability to look at unique methods of improving overall patient care was a vital factor in Safford's selection as division chief, since WCM wanted that person to oversee the merger of its inpatient and outpatient programs. One immediate way Safford hopes to build on this combination of services is with the introduction of a software platform called the Patient Activated Learning System (PALS) that answers questions about medical conditions in an engaging, easy-to-use format. The idea is to give patients basic facts before they sit down with a doctor, allowing for a more informed conversation. The system also provides information about what a medical test will be like and how to properly take medications. "If you pitch it at people who have relatively low literacy, but you make sure you're not talking down to them, it has broad appeal," she says. "That's what we want to do with the PALS: to create an educational system for people from all walks of life."



Healthier living: Safford (top) works with community groups that hold events (above and opposite page) to encourage exercise and good nutrition.

For Safford, one of the most attractive aspects of her new position is the chance to expand the division's clinical research program. She says she's thrilled to be tasked with recruiting top investigators and mentoring faculty and students—to foster the next generation of physicians who'll work to find better ways to deliver comprehensive care for everyone. She also hopes to create a solid partnership between scholars and front-line doctors; after all, she says, both often address specific, practical issues, such as why some diabetes patients don't take their medications as prescribed. "I look forward to the opportunity to house clinician-teachers near clinician-researchers, so each can strengthen the other's work to advance the care of our patients—practicing clinicians informing research, and researchers helping clinicians implement their findings, hot off the press," she says. "What could be more exciting?" ■

'Diversity is one major domain she's interested in,' Augustine Choi, MD, says of Safford, 'but her work is relevant to all populations.'

NEWS OF MEDICAL COLLEGE AND GRADUATE SCHOOL ALUMNI



Dear Alumni,

The end of an academic year is always an exciting time at Weill Cornell Medicine. On May 9, thirty-three students graduated from WCM-Qatar, and on May 25, 103 medical students graduated from the New York campus. I was delighted to be able to attend both ceremonies, where I expressed my congratulations to the new doctors and welcomed them as the newest members of our Alumni Association.

This year's graduating class truly embodied Weill Cornell's rich tradition of excellence. More than half of the New York campus's medical students who matched will pursue primary care residencies in internal medicine, pediatrics, family medicine, and obstetrics and gynecology. And twenty of our newly minted physicians—seventeen from New York and three from Qatar—are now training at NewYork-Presbyterian/Weill Cornell.

Looking out at all the graduates was a special moment. It was simply marvelous to see their energy, passion, and dedication—and of course, their families' beaming pride and joy. These graduates have such bright futures ahead of them and it was thrilling to contemplate how they are going to make their mark on the world.

I also had the privilege of hosting the 2016 Alumni Award of Distinction Dinner. On May 24, alumni and guests gathered in Griffis Faculty Club to celebrate this year's honorees: Stephen Hoffman, MD '75, winner of WCM's Award of Distinction, and Lisa Staiano-Coico, PhD '81, winner of the Distinguished Alumna Award from the Graduate School of Medical Sciences.

Reunion 2016 will be the perfect occasion to reconnect with fellow alumni. We have had a tremendous response, and I hope that Friday and Saturday, September 23 and 24, are marked on your calendars. With opportunities to catch up with classmates and friends, campus tours, speaker panels, a live interview with keynote speaker Anthony Fauci, MD '66, and a gala dinner dance at the Plaza, Reunion 2016 is not to be missed!

Finally, I would like to thank Laurie Glimcher, MD, for her service. Dr. Glimcher joined Weill Cornell Medicine as dean in 2012, and we are grateful for all she helped the college to achieve. We thank her for her leadership and know that we are in a position of strength with Interim Dean Augustine Choi, MD. As our new graduates look ahead with vigor and excitement, so too does the entire Weill Cornell Medicine community.

Looking forward to seeing you at Reunion!

Warm regards,

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

1950s

Ira Kaufman '48, MD '53: "I have taken root in a seniors' living accommodation in the Galleria area of Houston, where my needs are handily met. The winters here are a delight, but the summers—phew—too hot. Dawn is in a memory care center quite nearby. We are both physically fit. I have gotten involved in planning activities for us oldsters: spelling bee, short story reading, crossword solving, playing piano for happy hour and other events, establishing karaoke sessions, serving on the residents' council, swimming, yoga classes, and attending continuing education at Rice University, also nearby. I am impressed with humans' stamina and craving more life despite infirmities and loss. There are not a few over 100 here, and some retain allure. Warmest wishes to colleagues and friends of Cornell."

Bernie Siegel, MD '57: "My latest book is *Love, Animals & Miracles*. Good stuff for everyone to read. All physicians should read the poem 'Rags' by Edmond Vincent Cooke, available on the Internet. It relates to medical training, too, though its main theme is about a dog named Rags—my latest dog's name, too, after I read the poem. The late **C. Everett Koop, MD '41**, was a WCM graduate too. He interviewed me in Philadelphia when I was seeking a pediatric surgical residency. His seemingly austere Dutch behavior scared me a bit. When I entered his office he looked at my papers and said, 'I see you are born the same day as a famous American.' 'Yes, Dwight Eisenhower,' I answered. 'There's another one.' 'Who is it? I didn't know that.' He responded, 'Me.' We were friends for life after that joyful moment."

Michael H. Stone, MD '58: "Within the past year I have given lectures on forensic psychiatry (focusing on violent crimes) in Quito, Ecuador, and on the treatment of borderline personality disorder and on serial sexual homicide, in two locales in Stockholm, Sweden. I have published articles on narcissistic personality, antisocial personality, and borderline personality, and on persons who have murdered a policeman (all such cases in the US in 2013/2014). My wife and I are patrons of the Metropolitan Opera, and last September we attended our 31st successive Opening Night gala."

J. William McRoberts, MD '59, was honored with the American Urological Association (AUA) Presidential Citation on May 10 in San Diego for "many years of exemplary leadership as chair of urology at the University of Kentucky and for service as the AUA Southeastern Section secretary and president."



DOCTOR CALLING: Aynsley Duncan, MD '16, at Commencement in Carnegie Hall

Harry G. Preuss '56, MD '59: "My 12th book came out at the end of last year: *Nutraceuticals and Functional Foods in Human Health and Disease Prevention*. (Eds. D. Bagchi, HG Preuss, CRC Press, Boca Raton, FL. 2015.) My co-editor and I are contemplating a new textbook concerned with problems of high sugar in the diet. I have been researching this for over thirty years and a number of years back brought this problem before the National Cholesterol Education Program leading to a greater focus on the metabolic syndrome. I presented a lecture at Harvard Medical School last September entitled, 'Lowering circulating glucose levels that are in the non-diabetic range is important for long-term optimal health.' (Proceedings of the 18th International Conference. Chronic Diseases: Bioactive Compounds and Biomarkers.) One month later, I presented an invited lecture at Supply Side West in Las Vegas entitled, 'Analyzing Clinical Studies on Weight Loss.'"

James E. Shepard, MD '59: "In May, I testified as an expert witness in New Mexico. In June, I attended the UCSF annual renal transplant meeting at Silverado. Usually, I get there several hours early in order to play a round of golf first. In July, Sally-Jean and I will take a small boat trip visiting the coast and river sites of Alaska."

1960s

Clay Alexander, MD '61: "I have completed my fourth novel, *When Seashells Sleep*, the sequel to *The Wisdom of Seashells*. It's available on Amazon for all those with e-readers. When families from Warsaw, New York, and San Diego mix, imagine the comedies, tragedies, and triumphs that result. My choice of a college English major, after a life of medicine, has finally come full circle. I'm apparently not the only one relishing life with art: **Don Fischman, MD '61**, who paints vibrantly with oils, will be coming by for a visit at the end of the summer."

William Chaffee, MD '62: "Sad news to report for our class. We have lost three 1962 classmates from the Phoenix area in the past few months: **Kip Charlton**, **Darwin Zahn**, and **Ron Stroth**. See the 'In Memoriam' section of the previous issue for details."

Edward M. Copeland, MD '63, is the emeritus chairman of the Department of Surgery, University of Florida College of Medicine, and is now a Distinguished Professor of Surgery at the University of Florida.

John Graybill, MD '66: "Since 2007 I have been an emeritus professor, which means doing some things for my school, the University of Texas, San Antonio, on a gratis basis. My initial thoughts were to supervise med students coming to Guatemala, where Sue and I have a second home, and working with a



NEW MDS: Class of '16 members (left to right) Evan Bander, Jennifer Bender, Rebekah Blutstein, and Amare Assefa

'I am a busy rheumatologist at the University of Vermont Medical Center. My husband, Turner, and I are happily ensconced on Lake Champlain's waterfront with two golden retrievers.'

—CHI CHI LAU, MD '82

close friend, Eduardo Arathoon, graduate of the Stanford Infectious Disease program. This worked for a few years then fizzled as interests of our international folks turned elsewhere. So what I do in medicine now is what I have done for 40 years: organize and participate in short term volunteer dentistry and MD programs. No sophisticated meds and only blood glucose and urine test strips for a lab. But I did see a child with acute rheumatic fever, a condition

which I had not seen since medical school, and last year another with acute nephrotic syndrome, likely post-streptococcal, also not seen by me for many years in the past. We have had burns and wounds and lots of very unremarkable things. Gave out albendazole, usually for about 300 people, and our dentists pulled about 150 unsalvageable teeth. Likely to do this next year as well. Doing the logistics for a team of even just 16 people—getting drugs, setting up clinics, etc.—takes a surprising amount of time. This annual trip for volunteer work is now the only reason I maintain my medical license. I have not seen any US patients in a while. Along with this I am vacating my position as an associate editor of *Clinical Infectious Diseases*. It has been a great 15-year experience, but it's time for a new board and younger people to take over. What does one do when leaving formal medicine? For me it has been collecting and growing orchid species and trying to grow them from seed. I have also resumed my high school hobby of model railroading. Our two-car garage is now sort of a slightly less than one-car garage full of *papier-mâché* mountains, etc. Susan and I both do some grandparenting, but she is a little better at this than I am."

Glenn A. Meltzer, MD '66: "Keeping busy painting."

David N. Tucker, MD '66: "Since my retirement in 2004 from the practice of ophthalmology after 35 years in Cincinnati, OH, I taught at NYU/Bellevue Hospital Center in NYC for five years, and then completely retired from medicine in 2013. I reside in Westport, CT, with Lynda, my wife of 53 years. Lynda has been devoted to hospice care for over 30 years, and is now involved in the establishment and construction of a hospice home in Stamford, CT, serving the Fairfield

County community. I, along with my co-author, Burton Spivak, have completed a memoir concerning a complex father-son relationship and how it eventually influenced me to become a physician. My dad was the iconic operatic tenor at the Metropolitan, Richard Tucker, who was dismissive of my ambitions to enter the music world, but wholeheartedly focused on his son to enter the noble world of medicine. This story hopefully will transcend to other individuals who do their imperfect best to find and give love to their families. Our literary agent is now seeking a publisher for our manuscript. Also, I have commissioned a playwright to develop a dramatic comedy for Broadway based on our book. All very promising and a work of pride and love."

Terry W. Hensle, MD '68: "I received the Urology Medal from the American Academy of Pediatrics in Prague in October 2015."

Michael Schwartz, MD '69: "Our group at Texas A&M plus colleagues at the University of Texas, Austin, put together an awesome meeting on the topic of 'Sleep, Consciousness, and Lucid Dreaming' on May 14. For more information, go to www.humanitiesinmedicine.org."

1970s

Richard Tax, MD '70: "I have recently retired from active ophthalmology practice in Southampton, PA. I was the senior partner in a large multi-subspecialty practice in lower Bucks County just north of Philadelphia. I returned to New York City at the end of April. My wife, Anne, and I met at WCM in NYC and have been married almost 48 years. We moved into an apartment on East 54th Street in Manhattan."

Richard A. Lynn, MD '71: "On February 27, on a beautiful morning in Palm Beach, Dean Glimcher greeted 30 alumni from the South Florida area at a breakfast session at Club Colette, here in Palm Beach. **Lew Drusin, MD '64**, whom most of us remember, still at WCM, came down as well. In attendance from our class were **Carl Sadowsky, Rich Bailyn, Bob Cucin**, and yours truly. **Lloyd Dropkin, MD '70**, came as well. My wife, Margrit, and I had the privilege of being on the host committee for the Palm Beach weekend, culminating on Monday with a symposium on healthy living at the Breakers, where close to 500 people attended, moderated superbly by the dean, with three faculty. Our 45th Reunion is coming up. So far, perhaps thanks to my 'pestiness,' the following are coming: **Frank Bia, Bob Laureno, Ron Harris, John Perlmutter, Ken Schwartz, Fred Chu, Arnie Cohen, Rich Bailyn, Tom Moore, Henry Pitt**, and **Steve Rosenblatt**. **Dave Console** is a hopeful. **Nancy Ronsheim** gives her best, but is having additional back surgery and won't be able to attend. **Jeff Eckardt, Bob Cucin, Roger Simon**, and **Bill**

PHOTOS: AMELIA PANICO

Schnall are unable to come, but also give their best. If any of you have not received correspondence from me, please contact me, as I may not have your information. You may reach me at rich549bux@gmail.com. I hope we can have a great turnout. Our class dinner will be Friday at 7 p.m., September 23 at the Cornell Club."

Roger W. Geiss, MD '75: "On June 1, 2015, I finally bit the bullet and retired from my position as chair of pathology at the University of Illinois College of Medicine, Peoria, although I do continue to teach part time. The final class to whom I presented their second-year pathology course honored me with the Golden Apple Best Instructor Award for 2014–15. Then in January 2016, I received the Distinguished Service Award for Exceptional Lifetime Contribution from the Group for Research in Pathology Education at their national meeting in San Diego. Since my retirement, Dianne's and my travels have been to the East Coast (twice), most recently for my 50th high school reunion (ouch!). We've also been able to spend more time with our respective families, mainly the kids and grandkids in Omaha. More trips are planned for the next year or so, as well as moving out of snow country, at least for the winters, most likely to the Southwest. So life is great, and I hope to see as many of you as possible over the next several years."

Anthony Provenzano '72, MD '76, is the chairman of the Cancer Committee and director of oncology at NewYork-Presbyterian/Lawrence Hospital in Bronxville, NY. His daughter is the medical director of outpatient services at Manhattanville College in Purchase, NY, and his son has recently received his PhD in biomedical engineering and neuroscience from the Taub Neurological Institute at Columbia University, where he is a post-doctoral student.

Thomas Kosten, MD '77: "I have decided that in spite of turning 65 this February, I will start a new venture into the commercial side of medicine by forming a company called Kadvax Technologies to make anti-addiction vaccines. I have been working on these vaccines for the last 25 years, first at Yale and now in Houston for the last ten years, where I am the JH Waggoner Chair and Professor of Psychiatry, Neuroscience, Pharmacology, Immunology & Pathology. And to keep my hand in moving laboratory and clinical research into the marketplace, I will also continue to be the co-director of the Dan L. Duncan Institute for Clinical and Translational Research at Baylor College of Medicine and the Michael E. DeBakey Veterans Affairs Medical Center in

Houston. I have slowed down my international work, but continue my trips to China as a Distinguished Professor at Peking University Medical School. My trips across the street in Houston also continue to the MD Anderson Cancer Prevention Center, where I work as professor of epidemiology and of behavioral health. Needless to say, aging has not slowed me down much, and I still enjoy writing and being an editor-in-chief for a couple of addiction journals including the *American Journal on Addictions*. My writing continues with over 750 papers, books, and reviews about the use of pharmacotherapy for treating cocaine, opioid, alcohol, methamphetamine, nicotine, and other addictive disorders with a particular emphasis in vaccine development for cocaine and methamphetamine addictions both here in the US and in China for methamphetamine particularly. Older age also has its rewards in getting a few awards lately and being declared a 'Distinguished Life Fellow' in a few organizations such as the American Psychiatric Association. If any of you are interested in biologics as treatments, please send me an email at kosten@bcm.edu."

1980s

Brian Changlai, MD '80, PhD, has been a proud member of the Dean's Circle since April 2016. He recently pledged \$100,000 for the Brian Y. Changlai, MD '80, PhD, Mary C. Daye, MD, and Brian A. Changlai, BS '04, MD, Scholarship, to assist outstanding medical students in financial need. A cardiologist in Syracuse, Dr. Changlai holds a PhD in chemical engineering from Clarkson University. His wife, Mary Daye, MD (internal medicine, nephrology, and geriatrics), also a Clarkson graduate, is affiliated with St. Joseph's Hospital Health Center. She received her MD from SUNY Upstate Medical University in Syracuse. Their son, Brian Changlai, MD, is a graduate of Cornell University as well as St. George's University School of Medicine, Grenada; he is an assistant professor of internal medicine and hospital medicine at SUNY Upstate.

Pamela Cantor, MD '81: "After nearly two decades practicing psychiatry, specializing in childhood trauma, I founded Turnaround for Children, the organization that I have led as president and CEO since 2002. Based in New York

City, Turnaround translates neuroscientific research into tools and strategies for schools with high concentrations of students impacted by adversity, in order to accelerate healthy development and academic achievement. Earlier this year, Turnaround released 'Building Blocks for Learning,' a white paper that articulates the skills and mindsets that all students need to be successful in school and beyond. The framework draws from research in multiple fields to suggest movement from lower-order to higher-order skills, and demonstrates a developmental pathway to help children overcome the impact of adversity and become effortful, engaged, and curious learners. 'Building Blocks for Learning' has received widespread attention from researchers, practitioners, and policymakers alike, and we are excited to see the impact that it will have on the broader education reform landscape. Learn more about Turnaround's work, and the 'Building Blocks' in particular, at turnaroundusa.org."

Chi Chi Lau, MD '82: "I am a busy rheumatologist at the University of Vermont Medical Center. My husband, Turner, and I are happily ensconced on Lake Champlain's waterfront with two golden retrievers. Our son, Alexis, is finishing up his junior year at Cornell. My apologies to all my former classmates for not communicating sooner, but please visit if you are in the neighborhood. We need more rheumatologists here if anyone is looking."

David Haughton, MD '84: "During our sojourns to Tofino, British Columbia, Lyne and I always stay in a cabin on Mackenzie Beach. This year, in January, I had intended to work further on a new series of paintings, but I got sidetracked. We had the best of winter weather: tremendous storms all times of the day and night, calm early mornings with subtle tints, and sunsets dramatic and blustery. Instead of following my plan, I was compelled to paint the waves, rocks, islands, and mists—eventually making such huge progress within the continuation of the series *Fear, Hope and Longing* that I have rearranged my exhibition plans for the next three years. I aim to have *Fear, Hope and Longing III* ready for a fall 2016/spring 2017 exhibition. I have yet to confirm the venue. But I'm excited by the first five finished works that I have just posted on my website, haughton-art.ca."

Bruce Reidenberg '81, MD '85: "My career has taken an unusual turn: I'm working part time for the NYS Office for People with Developmental Disabilities doing house calls at

'I am a clinical professor of psychiatry at Columbia . . . I have five grandchildren. I am very blessed, and most of my happiness began with my experience at Weill Cornell.'

— MARGARET SPINELLI, MD '88

We want to hear from you!

Keep in touch with your classmates.

Send your news to Chris Furst: cf33@cornell.edu

or by mail:
Weill Cornell Medicine
401 East State Street
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adult group homes and part time consulting with pharma/biotech developing new medicines for a variety of conditions. On the personal side, Joy and I are celebrating our 35th wedding anniversary this summer, and our daughter, Ariella, graduated from Cornell (Arts and Sciences) in December. We are looking forward to Reunion this fall."

Stephen J. Rosenfeld, MD '86: "I am currently a full-time IRB chair at an independent IRB, Quorum Review. I split my time working from my home in Maine and my office in Seattle. I'm also privileged to be a member of the HHS Secretary's Advisory Committee on Human Research Protections."

Randy Jacobs, MD '87: "I have been an attending for over 20 years at Saint Joseph Hospital Emergency Department in Denver. We teach residents from the Denver Health ER residency. I feel honored to be involved with such a fine, intelligent group of doctors. I am part of the Colorado Permanente Medical Group, which has over 1,000 physicians. My wife, Jill, and I have three boys, and our family loves all that Colorado has to offer: mountain and road biking, back country skiing, hiking, and rafting. I was looking through my old yearbook recently and have fond memories of New York and WCM. Last summer **Stuart Rubin, MD '87**, was in Denver and we had a really nice visit. I hope all my classmates are doing well. If you are ever in Colorado, let me know."

Peter Stein, MD '87, is president of the New York Society for Surgery of the Hand for 2015-16. He is in private practice with a large orthopaedic group on Long Island, where he lives with his wife and three children. He travels whenever possible and spends much of his free time coaching his kids' soccer teams and skeet shooting.

Paul Kirchgraber, MD '88, is currently vice president and global general manager for Covance Central Labs and enjoys trips around the world to assist in the development of new medications. Even being an empty nester, he is busy with work and play. Both he and his wife, Theresa, enjoy seeing their family in other cities and get to Philadelphia during hockey season to watch their youngest play for Villanova.

Theresa Rohr-Kirchgraber, MD '88, recently completed her year as president of the American Medical Women's Association and now hopes to be an excellent past president. She was recently awarded a PEAR award, which recognizes faculty members of Indiana University-Purdue University Indianapolis for their academic achievements. She continues to promote women's health and the support and empowerment of women physicians both in Indiana and nationally.

Margaret Spinelli, MD '88: "I am a clinical professor of psychiatry at Columbia University. I was also selected as a Distinguished Lifetime Fellow of the American Psychiatric Association. I have five grandchildren. I am very blessed, and



FUTURE PHDS?: Kyuho Kang crosses the stage with kids Chloe (left) and Derek to receive his doctorate in immunology and microbial pathogenesis.

most of my happiness began with my experience at Weill Cornell."

Judith Hertz Tanenbaum, MD '88, has proudly been a member of the Dean's Circle since May 2015. The future Betts-Tanenbaum Chair in Clinical Psychiatry, endowed through a bequest, will be established to help fund clinical psychiatry programs at WCM.

Marlene Wust Smith '85, MD '89, has been practicing general pediatrics in rural north central Pennsylvania for the past ten years, and is also medical director for the Division of Primary Care at her organization. Quite different from the hustle and bustle of practice on the Upper East Side of Manhattan and in the Hamptons. She and her husband, Jim, enjoy the country life and raising their almost 16-year-old daughter, Madison (future Cornellian?), who is expressing an interest in sports medicine/orthopaedics. She had the honor of being featured by *Parents Magazine* in 2014.

1990s

Hilary P. Blumberg, MD '90, was appointed the inaugural John and Hope Furth Professor of Psychiatric Neuroscience at the Yale School of Medicine, where she is professor of psychiatry, radiology, and biomedical imaging, professor in the Child Study Center, and director of the Mood Disorders Research Program.

Daniel Jones, MD '90: "I was recently elected president of the Society of American Gastrointestinal and Endoscopic Surgeons."

S. Robert Rozbruch, MD '90: "Limb lengthening and deformity correction continues to be an exciting and evolving subspecialty of orthopaedic surgery. A major advance in our field has

PHOTOS: AMELIA PANICO

been the successful clinical implementation of a fully motorized internal lengthening intramedullary nail that allows us to completely avoid the use of external fixation. The entire process is now easier, safer, quicker, and less painful for patients. I recently lectured on this as an invited guest speaker in Kanazawa, Japan. Also, we published (I was the editor) with Springer the three-volume *Limb Lengthening and Reconstruction Surgery Case Atlas*."

Alicia Salzer, MD '93: "I recently moved to Brooklyn, bought a brownstone, and am rehabbing it to its former glory. I got married in June to Allyson Hayden, a social worker for the NYS Office of Mental Health. My private practice in adult psychiatry is thriving in the Wall Street area. I recently attended a bat mitzvah for the daughter of classmate **Sam Glazer, MD '93**, along with fellow WCM grads **Byron Demopoulos, MD '91**, and his wife **Jackie Ehrlich '89, MD '93**. I'm also delighted to keep in touch with **John Carew, MD '91**, an amazing ENT who I send all my people to for their hearing and ear issues. Hope all Weill Cornell folks are thriving."

Li-Ming Su, MD '94, was appointed chair of the Department of Urology at the University of Florida. Dr. Su is an expert in minimally invasive urologic surgery. He currently serves as the David A. Cofrin professor of urology, associate chair of clinical affairs, and chief of the division of robotic and minimally invasive urologic surgery.

Robert E. Merritt, MD '98: "I was named the director of the Division of Thoracic Surgery at the Ohio State University Wexner Medical Center and the James Comprehensive Cancer Center on March 1, 2016."

Tamara Rozental, MD '99, was recently named chief of hand and upper extremity surgery at Beth Israel Deaconess Medical Center. She is the program co-chair for the 2016 American Society for Surgery of the Hand's annual meeting.

2000s

Jennifer Rodriguez Corwin, MD '09: "My husband, Deric, and I welcomed our second child, Bennett James, in February. I am learning a new normal now as a working mom of two."

2010s

David C. Saunders, MD '14, and **Jennifer Small, MD '14:** "We had a baby boy, Charles Robert Saunders, on February 18, 2016. Nothing else to report!"

'49 MD—Thomas L. Doyle Jr. of Forest Hills, NY, February 10, 2016; psychiatrist.

'52 MD—George S. Shields of Cincinnati, OH, March 31, 2016; medical researcher and professor at the University of Cincinnati Medical School; physician in private practice; opened clinics for underserved communities; founding member, Society for Computer Medicine; charter member, Society for Advanced Medical Systems; helped develop hospice care in Ohio; medical director of nursing homes; US Navy veteran; active in religious affairs.

'58 MD—Robert G. Brayton of New York City, March 8, 2016; retired faculty member at WCM, known for his passion for internal medicine and infectious disease; medical director of Irving Trust Bank and the Bank of New York. He had long-standing interests in American art and antiques, and in wildlife and land conservation; painter, carver, furniture restorer, and taxidermist; active in the Physicians Scientific Society, New York County Medical Society, the Medical Strollers, and the Grenfell Foundation.

'54, MD '58—S. Frederick Slafsky of Providence, RI, January 8, 2016; surgeon emeritus and clinical associate professor of surgery at Brown University Medical School; first director of the surgical intensive care unit at Miriam Hospital; recipient of the Spiedel Award from Cardinal Cushing for research on portacaval shunts; chief surgical resident, research fellow, and instructor of surgery at Peter Bent Bingham Hospital; worked in the animal laboratories of transplant surgeon and Nobel Prize winner Dr. Joseph E. Murray; helped in the development of Lifespan; president of the board of Moshassuck Medical Center; also held clinical appointments at Roger Williams Medical Center and Women and Infants Hospital.

'48, MD '61—Anne Johnson Minkoff of Great Neck, NY, February 16, 2016; pathologist.

'57, MD '61—John C. Schiebler of Knoxville, TN, November 16, 2015; practiced with Urological Surgeons and the West Side Clinic in Green Bay, WI; chief of staff at St. Mary's Hospital; provided free prostate cancer screening clinics throughout northeastern Wisconsin; US Army veteran; world traveler.

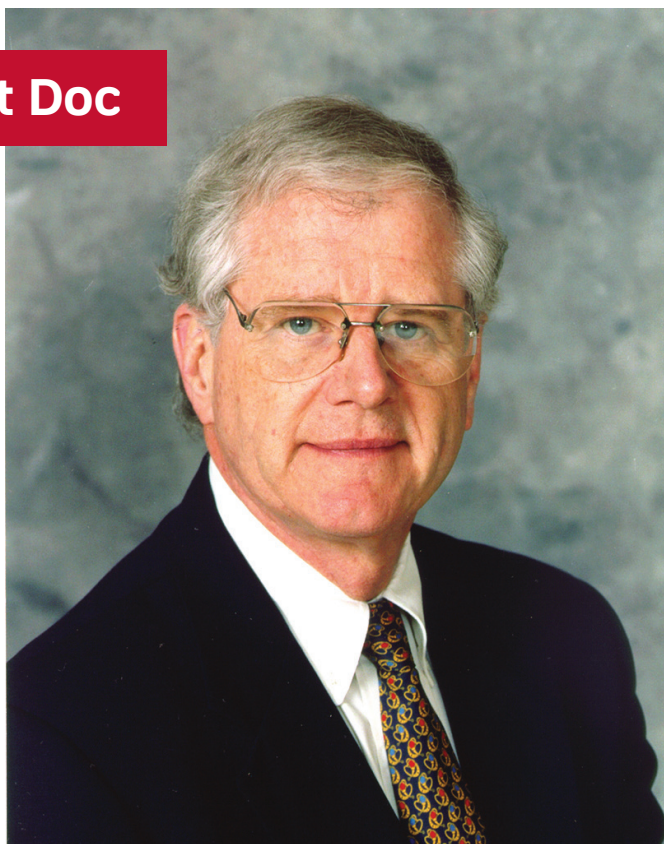
'66 MD—John C. Urbaitis of Baltimore, MD, August 15, 2014; former president, Maryland Psychiatric Society; former director of psychiatry at Sinai Hospital; served on the medical faculty at Johns Hopkins University and the University of Maryland; advocate for community mental health; founding director and president, Maryland Council of Community Mental Health Centers; recipient of the Lifetime Service Award, Maryland Psychiatric Association; Distinguished Life Fellow, American Psychiatric Association.

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Remembering urology chief
E. Darracott Vaughan Jr., MD

'As a physician, he was very beloved; his patients stayed with him for life.'

It was a small gesture, but to Peter Schlegel, MD, it spoke volumes. In 1989, Schlegel had come to New York to interview for a joint fellowship in urology at Weill Cornell Medicine and The Rockefeller University. Meeting with E. Darracott Vaughan Jr., MD, then chairman of urology at WCM, Schlegel learned that the position wouldn't offer everything he'd been seeking. But when the interview was over, Vaughan did something unexpected that helped convince Schlegel to take the job. "Even though he was one of the leaders in urology in the country, he walked me out the door of his office and down the hall—then walked me to the elevator, got in, and went out of the building and down the block to where I was interviewing at Rockefeller," recalls Schlegel, who now holds Vaughan's former position as urology chairman. "That tells you a lot about who a person is. By demonstrating that sort of interest, even though technically he wasn't able to offer everything I wanted, it was clear that he was going to support me."

More than a quarter-century later, that moment sticks out in Schlegel's mind as he reminisces about his friend and mentor, who passed away on April 22 at age seventy-six. A widely respected clinician and researcher, Vaughan served on the WCM faculty for more than thirty years; he and his wife, Anne, retired to Wyoming in 2010. "Dr. Vaughan was someone who got along just as well with the person cleaning the floor as with the CEO of a Fortune 50 company," says Schlegel, who also holds Vaughan's former position as the James J. Colt Professor of Urology. "He was an incredibly busy and important person, but he never made anyone feel that his time was short. Whether it was the most junior medical student or a patient going through a challenging time, he always had the right words to support or console people, and demonstrate empathy while having an unbelievable knowledge of medical facts."

A Virginia native, Vaughan earned his MD from UVA; he did his urology residency there and, after a fellowship at Columbia, joined

the UVA faculty. He came to WCM in 1978 as the Colt Professor, founding chairman of urology, and urologist-in-chief at what is now NewYork-Presbyterian/Weill Cornell. During his tenure as chair, which lasted until 2001, Vaughan built on the department's distinguished clinical reputation and made it a national leader in research; his own groundbreaking work included key studies on how blockages of the ureter affect kidney function and how changes in the kidney influence blood pressure and flow. He later helped establish the Weill Cornell Physician Organization, serving as its chief medical officer. "He was a Southerner, very polite and kind," says another longtime friend and colleague, Michael Stewart, MD, chairman of otolaryngology. "He was a people person—he was very social—and had a great sense of humor and was always positive and upbeat. As a physician, he was very beloved; his patients stayed with him for life. He couldn't go anywhere on the Upper East Side without running into somebody who came over to say hello to him."

Vaughan was a past president of the American Urological Association, winning three of its most coveted honors, including the Gold Cystoscope. At WCM, he also served as senior associate dean for clinical affairs—a position that a grateful patient eventually endowed in his honor, and which Stewart now holds. "He was a great listener and communicator, and he believed in letting group dynamics work," Stewart says. "He was happy to have other people lead an effort even if it had been his idea, as long as good work got done." While Vaughan had stopped performing surgery by the time Stewart came to WCM, he says, the eminent urologist's calming presence in the OR remained legendary. "I heard from many people that whenever there was a difficult situation, they'd call Dr. Vaughan," Stewart says, "and as soon as he went into the room, everyone's blood pressure went down." ■

— Beth Saulnier

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