Columbia Medicine

Columbia University Vagelos College of Physicians & Surgeons

WINTER 2024/25

Changing the Face of Aging

Geroscience seeks to reveal the causes of age-related decline and find new ways to prolong health and vigor.

Embracing Community

New CUIMC hub strengthens relationships with our neighbors

Investing in Research

Centralized biobank houses up to 12 million patient samples

Dear Readers,

If there's one word that sums up the last six months at Columbia—and throughout the country—it's *Transition*. From faculty members navigating a shift in leadership, to providers stepping into new responsibilities, we all know the challenges that come with times of change.

CHRIS TAGGART

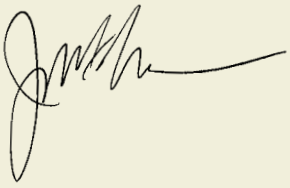
We also know that transitions can help illuminate fresh perspectives, prompting us to consider novel insights and envision new paths.

And the North Star of any transition is the set of values that do not change. For VP&S, that core value is our commitment to patients: the care that protects them, the science that gives them hope, the education that trains their providers, and the community that supports them. When an institution's foundation is strong, even these types of transitions cannot shake it.

The Winter issue of *Columbia Medicine* demonstrates our unwavering commitment to excellence during a time of transition. "Forever Young" spotlights the many Columbia investigations in geroscience, which will translate into new avenues of care. "Becoming a Better Neighbor" explores the relationships being started and strengthened with our local community. "Paying Dividends" looks inside our newly centralized biobank, which is capable of housing up to 12 million patient samples. But even the entirety of achievements highlighted throughout these pages can't come close to representing the full breadth of work happening across the VP&S campus every day. All these efforts are enriched by significant investments from our community—including the historic generosity of Roy and Diana Vagelos in support of biomedical science research and education.

In our chosen role as protectors and restorers of human health, we start 2025 confident in our ability to meet the coming year together, and to turn any unforeseen challenges into unparalleled opportunities.

With Best Wishes,



James McKiernan'93
Interim Dean, Vagelos College of Physicians & Surgeons
CEO, ColumbiaDoctors

departments

ON THE COVER: Illustration by Charlotte De Greling. Article, page 10.

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Columbia**Medicine**

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Alumni should update their addresses by writing the Alumni Association at the address above or calling the alumni office at 212-305-1472

Faculty and staff should contact their departmental administrators to update their addresses, which are obtained through the Columbia University personnel system.

All others with address changes should contact VP&S Communications at columbiamedicine@columbia.edu.

Letters

Rachmaninoff Piano

The article "Rachmaninoff Piano Restored to Former Glory" in the Fall (2024) edition of *Columbia Medicine* left out a significant detail. As I recall, the piano in question had been manufactured not far away in Queens. In other words, it was a Steinway. I remember it being in Bard Hall where we used it for musicals and Bard Hall Philharmonic concerts. I turned pages for a professional accompanist when Allen Steere'69 gave a violin recital. It's good to know that the grand piano is back in use and in good condition.

Edward Walworth'70
(Nephew of Henry Z. Steinway)

What's in a Name?

It occurred to me reading the Alumni News (Spring/Summer 2024 *Columbia Medicine*) that "Alumni" might be out of date. Perhaps Alumni/ae would be better, or even Alumni/ae/a to include graduates identifying as "they," though I don't know enough Latin to know if that's acceptable.

Daniel Bryant'65

Editors' Note: *Dr. Bryant's thoughtful inquiry has prompted an important editorial discussion about the precision and evolving sensitivities of language. While the* Associated Press Stylebook *says "alumni" is plural for male graduates and "alums" is an acceptable gender-neutral term,* Merriam-Webster's *usage guide says both "alums" and "alumni" are acceptable plurals for gender-neutral graduates and further states, "these terms are often used loosely and their strict definitions are in flux." Beyond grammatical considerations, as one of four schools within our institution, VP&S wouldn't change its terminology without a larger consultation about Columbia's approach to addressing all graduates. Therefore,* Columbia Medicine *will continue its current naming convention of formally referring to multiple male and female graduates as "alumni" while reserving "alums" for less formal references. As an academic journal, we reaffirm our editorial commitment to the ethos of inclusivity embraced by our school, and we welcome continued discussion about the accuracy and awareness of labeling language.*

↘ *send letters to:*

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NOTE: The magazine's email address was unable to accept emails for several weeks during the summer and early fall of 2024. If you tried to write us but received a rejection message, please try again.

News from around the Vagelos College of Physicians & Surgeons

VP&S news

Historic Gift to Support Biomedical Research and Education

The single largest gift ever made to Columbia's medical school was bestowed last summer when Roy'54 and Diana Vagelos made a $400 million gift in August of 2024. This gift, along with their previous giving, establishes Dr. and Mrs. Vagelos as the most generous donors in the history of Columbia University.

The gift will expand the mission of the Vagelos Institute for Biomedical Research Education, which was created in 2023 through a $175 million gift from Dr. and Mrs. Vagelos. The institute will now be named the Roy and Diana Vagelos Institute for Basic Biomedical Science. The institute will provide the infrastructure to unite cutting-edge research taking place in Columbia's basic science departments, medical and graduate education programs, and research initiatives in clinical departments.

"By assembling this mix of mutually reinforcing activities, we seek to build the world's foremost ecosystem for biomedical research and to attract the next generation of exceptionally creative and collaborative scientists able to realize this vision," said Columbia interim President Katrina Armstrong, MD, and VP&S interim Dean James McKiernan'93 in an announcement about the gift.

The gift will also support construction of the new biomedical research building at 167th Street and Audubon Avenue. The building, expected to be open in Fall 2026, will be known as the Vagelos Innovation Laboratories and will provide more than 55,000 square feet of new laboratory space. It also will be New York City's first fully electrified, university-owned laboratory building.

The new gift will also support the medical school's programs in cell engineering and gene therapy and help expand collaborations that harness breakthroughs and new technologies. Research to advance these next-generation therapies will revolutionize treatment for a wide variety of diseases ranging from disorders of the blood and immune system to cancers, metabolic disorders, and inflammatory, neurological, and cardiovascular conditions.

"The legacy of Roy and Diana Vagelos at Columbia University and in the world of philanthropic support for biomedical research and education was already well established before the announcement of this historic gift," said Drs. Armstrong and McKiernan. "They are unique benefactors guided by laudable values that became guiding principles for our school. Their sustained commitment to education, scientific research, and human health, in general—and to Columbia, in particular—is simply unmatched. The impact of their philanthropy will extend far beyond Columbia and be felt for generations to come."

Before their recent gifts, Dr. and Mrs. Vagelos supported construction of the Vagelos Education Center and in 2017 created a scholarship initiative that sparked a nationwide revolution to address affordability in medical education.

"It is difficult to conceive of our medical campus without their contributions," said Drs. Armstrong and McKiernan. "This latest gift comes at a critical inflection point for the Vagelos College of Physicians and Surgeons. The confluence of fresh thinking about the future of basic and translational biomedical research from our brilliant faculty, a structured strategic planning effort aimed at strengthening VP&S, a thriving clinical practice embracing growth and innovation, and a bedrock institutional commitment to building a more equitable health care system, all make this an auspicious moment in the life of our institution."

COURTESY KOHN PEDERSEN FOX

Celebrating the Scientific Vision of Roy Vagelos

Hundreds of physicians, scientists, employees, and community members came together at the United Palace theater in October 2024 to celebrate the scientific accomplishments of Roy Vagelos'54 and the decades of support that he and his wife Diana have committed to Columbia University and VP&S.

The special evening, marking Dr. Vagelos' birthday, celebrated his achievements with a video titled "The Vagelos Effect," which praised the couple's vision and dedication to biomedical science and education. The event also featured a live performance from the new Broadway musical "Buena Vista Social Club."

Diana and Roy Vagelos surrounded by family, colleagues, and community members

"Roy's eminence and stature in science and industry is unmatched. In his professional career, Roy used biochemistry to revolutionize drug discovery and demonstrated that corporations could be compassionate while being productive," said Katrina Armstrong, MD, interim president of Columbia University, at the event. "I know I speak on behalf of everyone gathered here when I say how proud we are that our medical school bears your name and how honored we are to be a part of the extended Vagelos family."

TO VIEW "THE VAGELOS EFFECT" TRIBUTE VIDEO, VISIT **vagelos.columbia.edu/magazine.**

Leadership Transitions at CUIMC

When Minouche Shafik left the office of Columbia University president in August of 2024, several leaders at VP&S assumed interim and expanded roles.

Katrina Armstrong, MD, who had been appointed dean of VP&S and CEO of Columbia University Irving Medical Center in 2022, agreed to serve as interim president of Columbia University. She has retained her roles as CEO of CUIMC, executive vice president for health and biomedical sciences for Columbia University, and Harold and Margaret Hatch Professor of the University.

During Dr. Armstrong's time as interim president, James McKiernan'93, senior vice dean for clinical affairs at VP&S and CEO of ColumbiaDoctors, is serving as interim dean of VP&S. Prior to his appointment as interim dean, Dr. McKiernan had planned to step down as chair of the Department of Urology; an interim chair has been named while a search is conducted for a new chair. Dr. McKiernan is also the John K. Lattimer Professor of Urology, and a 1993 graduate of VP&S.

Wil McKoy, chief financial officer at CUIMC, and Jennifer Williamson, associate vice dean for research policy and scientific strategy at VP&S, have also assumed larger roles in the management of CUIMC. Mr. McKoy has been appointed interim chief operating officer of CUIMC, overseeing facilities, information technology, campus services, human resources, communications, and community and government affairs. Ms. Williamson has taken on a newly created position as chief of staff for Dr. Armstrong, supporting initiatives across VP&S and CUIMC. Ms. Williamson will also continue to serve as associate vice dean for research policy and scientific strategy.

SIRIN SAMMAN

Katrina Armstrong

CHRIS TAGGART

James McKiernan

Frederick Ehlert: New Associate Dean for Admissions

Frederick Ehlert'86 was appointed associate dean for admissions of VP&S in July of 2024. As a member of the admissions committee since 2007, Dr. Ehlert, associate professor of medicine, has interviewed hundreds of prospective students and worked closely with previous admissions deans on the selection process.

Dr. Ehlert's long history at VP&S began as a medical student and continued through residency. After completing fellowships in cardiology and cardiac electrophysiology at Northwestern Memorial Hospital in Chicago, he returned to Columbia as a faculty member in 1993.

Dr. Ehlert continues an active clinical practice in cardiac electrophysiology at VP&S and as director of physician development for Columbia HeartSource, a management services organization that works with hospitals to establish cardiovascular centers of excellence. His area of expertise is pacemaker and defibrillator lead management, and he is one of the most experienced lead extractors in the country. He also maintains a commitment to undergraduate and graduate medical education and has served as clinical teacher, lecturer, formal preceptor, research mentor, and currently as the electrophysiology fellowship program director. He has been active in the VP&S alumni community, serving as Class of 1986 chair and as a member of the board of the Alumni Association.

RUDY DIAZ

Frederick Ehlert

RUDY DIAZ

Jay Vyas

Jay Vyas: New Associate Dean for Academic Innovation

Jay Vyas, MD, PhD, was appointed associate dean for academic innovation and director of physician-scientist programs at the Roy and Diana Vagelos Institute for Basic Biomedical Science in October of 2024. Dr. Vyas holds a faculty appointment in the Division of Infectious Diseases in the Department of Medicine.

In his associate dean role, Dr. Vyas works alongside VP&S leadership to advance innovative academic programs and transdisciplinary educational and research initiatives. He also supports new models of integrating discovery science and clinical care. As inaugural director of physician-scientist programs within the Vagelos Institute, Dr. Vyas oversees the physician-scientist portfolio, including the MD-PhD program, formal research activities in the MD curriculum, and other physician-scientist awards and programs administered by the dean's office.

Dr. Vyas has deep expertise in developing and advancing innovative training models in physician-scientist education. He joins Columbia from Harvard Medical School, where he served as a professor of medicine and the residency program director for the largest graduate medical education program in Massachusetts. Dr. Vyas also co-created the Stanbury Physician Scientist Program and co-developed the Pathways program to encourage intellectual curiosity during residency. He is the principal investigator of three NIH grants to support research during residency.

Dr. Vyas earned his PhD and MD from the Baylor College of Medicine. He completed his internship and medical residency at the Massachusetts General Hospital and his fellowship in infectious disease at the joint Massachusetts General Hospital/Brigham and Women's Hospital program.

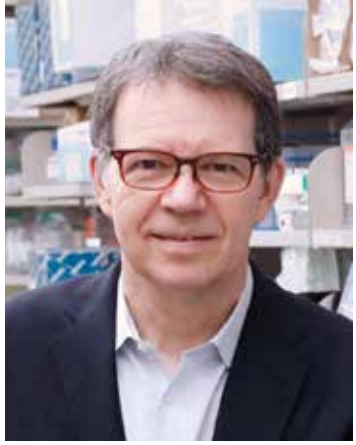
Uma M. Reddy, Elected to National Academy of Medicine

Uma M. Reddy, MD, professor and vice chair of research in the Department of Obstetrics & Gynecology at VP&S and professor in the Heilbrunn Department of Population & Family Health in the Mailman School of Public Health, is among the leaders in medicine and health elected this year to the National Academy of Medicine. Elected among a class of 100 individuals, Dr. Reddy was chosen for her leadership of paradigm-shifting research that has advanced the understanding of stillbirth, neonatal morbidity and mortality, and labor management and its impact on maternal morbidity. Her work is driving higher standards in national obstetric practice and improved outcomes for pregnant people and their children.

JOHN ABBOTT

Uma M. Reddy

Cancer Immunotherapy Pioneer Michel Sadelain Joins Columbia University



MICHAEL DIVITO

Michel Sadelain

Michel Sadelain, MD, PhD, was appointed inaugural director of the Columbia Initiative in Cell Engineering and Therapy (CICET) in September of 2024. Building on existing research into cell and gene therapies, this new University-wide initiative will drive progress in fundamental and translational science at Columbia. Dr. Sadelain will also serve as director of Columbia University Irving Medical Center's Cancer Cell Therapy Initiative in the Herbert Irving Comprehensive Cancer Center.

Dr. Sadelain is known globally for pioneering chimeric antigen receptor T cell (CAR-T) immunotherapy. This revolutionary approach uses genetic engineering to transform a sample of a patient's T cells into "living drugs." Dr. Sadelain comes to Columbia from Memorial Sloan Kettering Cancer Center, where he led the development of CAR-T cells targeting CD19, a marker found in certain blood cancer cells. After conceiving CAR molecules and identifying this target, Dr. Sadelain and his team established genetic engineering and cell manufacturing capabilities to translate their science into clinical applications, starting with refractory leukemias in 2007. The first CAR-T therapies became FDA approved in 2017, which opened the door to a new class of drugs based on T-cell engineering.

"Dr. Sadelain's work foreshadows a range of therapeutic innovations in biomedical science and is already providing therapeutic options for patients with certain lymphomas, leukemias, and multiple myeloma," Katrina Armstrong, MD, interim president of Columbia University, said in an email announcement. "At Columbia, Dr. Sadelain and his team will further explore cell engineering for the treatment of additional cancers and other illnesses, including monogenic blood disorders, neurological diseases, and autoimmune and transplant-related conditions. CICET will strive to devise sustainable cell and gene therapies for patients with unmet medical needs and to ensure equitable access to these treatments."

Dr. Sadelain was previously the Stephen and Barbara Friedman Chair in the Immunology Program of the Sloan Kettering Institute, where he founded the Center for Cell Engineering at MSK. He recently received Harvard's Warren Alpert Foundation Prize, the Canada Gairdner International Award, and the Breakthrough Prize for Life Sciences. He is a member of the American Academy of Arts and Sciences and the National Academy of Medicine of France. Dr. Sadelain received his MD from the University of Paris, conducted his PhD research at the University of Alberta, and completed his postdoctoral work at the Whitehead Institute for Biomedical Research at MIT.

The launch of CICET is expected to create productive synergies with several promising research initiatives at Columbia, as well as attract a new cadre of leading scientists, enhance research infrastructure, and integrate innovative work in disease modeling, bioengineering, genome editing, systems biology, synthetic biology, machine-learning/AI, and other areas.

"I would like to thank the many people across VP&S who were part of the journey to bring Michel and his lab to our institution," James McKiernan'93, interim dean of VP&S and CEO of ColumbiaDoctors, said in an email announcement. He extended his gratitude to the cell therapy advisory committee led by Markus Mapara, MD; scientists at the HICCC, Columbia Center for Translational Immunology, the Vagelos Institute, and across VP&S who met with Dr. Sadelain and his team; and experts who are working to create a new and enhanced research infrastructure that will enable CICET's work. "This moment is a testament to our team's extraordinary dedication and exemplary science and education."

New HHMI Investigators

Two VP&S scientists were among 26 leading researchers named as new investigators of the Howard Hughes Medical Institute. These highly sought-after appointments provide each new investigator with steady and generous support for several years. Dmitriy Aronov studies how a brief event, experienced only once, can become a memory that lasts a lifetime. To study such "episodic" memories, Dr. Aronov's lab uses a unique memory specialist, the black-capped chickadee. Samuel Sternberg is an expert on the CRISPR-Cas systems of RNA-guided nucleic acid targeting and on the development of these systems for genome engineering applications. His lab searches the genomes of bacteria, archaea, and viruses for additional hidden non-coding RNA molecules that can be converted into novel tools to precisely manipulate the human genome.

Dmitriy Aronov

Samuel Sternberg

JÖRG MEYER

From left: Mansi Shah, Joshua Dawson, Dave Crenshaw, Jude Okonkwo, Harry Liang, Rubyen Nelson, Shawn Simmons, and Insa Mannstadt

Students Mentor Kids Through Sports

Friday afternoons at P.S. 128 have become a site of mentorship in motion. A VP&S student-led initiative called Pick Up Sports and Health (PUSH) is combining sports and science lessons as a way of motivating community youth to pursue health-oriented careers and promote health equity.

The student volunteers running PUSH—who represent VP&S, Mailman School of Public Health, and College of Dental Medicine—hold semimonthly sessions at P.S. 128 on West 169th Street, as well as community events at the Harlem Polo Grounds and at P.S. 128. Each session engages children and teens in sports drills, games, and exercises before transitioning to interactive health and wellness lessons designed to expand health literacy and improve health outcomes. Lesson topics include asthma, sugar consumption, heart health, mental health, bone health, and more. The curriculum is developed by Columbia students based on models provided by the NYC Department of Health and Mental Hygiene.

Joshua Dawson'25, a PUSH co-founder and board member, says the program isn't just about encouraging kids to pursue careers in health science; it's also about encouraging them to explore their own potential.

"With my background in health equity research, it made sense to formalize a program where we use sports as a vector to motivate these kids to pursue careers in health," Mr. Dawson says. "Over the past few years, the program transformed more to just giving kids the option to pursue careers in health fields, as well as helping the kids learn more about their bodies, one more way to tap into their own brilliance and natural curiosity."

PUSH has so far engaged more than 200 children and teens in Washington Heights through partnerships with local community organizations and activists. Student leaders have published research on the program, with abstracts accepted at the 2024 Social Mission Alliance Conference and the 2024 Wilbert C. Jordan Research Forum. They also have secured grant funding from the VP&S Department of Pediatrics and the American Academy of Pediatrics and presented on the impact of the program at an AAP conference in October of 2024. Julie S. Glickstein, MD, professor of pediatrics, serves as the club's faculty adviser.

The student volunteers in the program have the opportunity to take their learning from the classroom and adapt it for kids, a valuable experience for future health services providers in making medicine accessible for all.

"Oftentimes we're hesitant to create lessons that are too complicated for the kids, and they always blow us out of the water with their ability to retain what they learned two weeks ago," Mr. Dawson says. "It challenges us to think about how we can make these lessons engaging and stimulating. These kids are sponges, and we just have to give them the opportunities and resources to channel their innate greatness."

Part of the appeal of the program is mentorship, giving both students and local youth the chance to foster long-term relationships and trust.

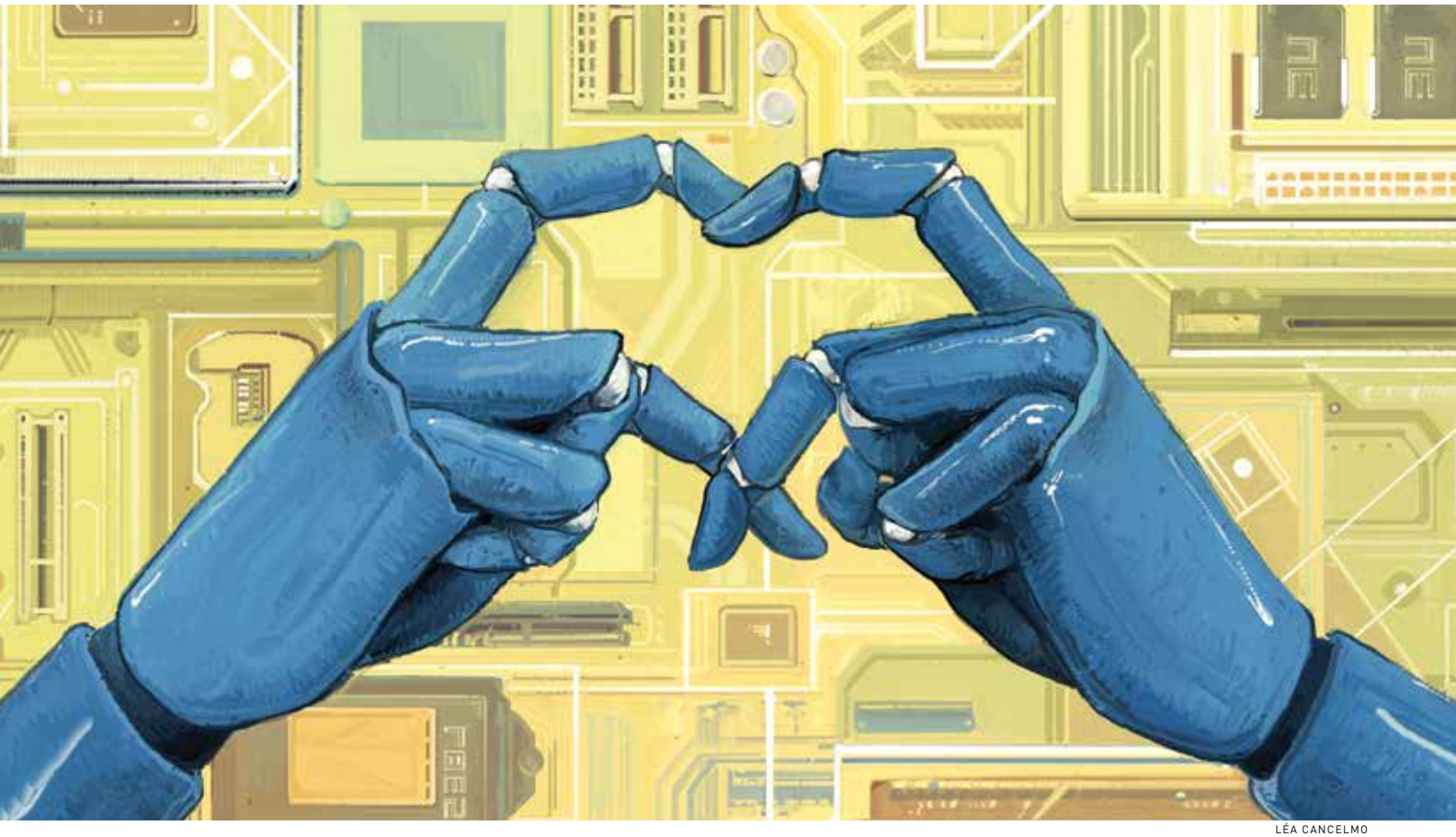
"We asked the kids how many of them had ever considered a health career before and none of them had, and none of them knew someone who worked in medicine," says Jude Okonkwo'25, PUSH co-founder, board member, and coach. "Then a few weeks later, I ran to PUSH after a late day in clinic and the kids were fascinated with my white coat. I remember one of the second graders running up to me to give me a high five, telling me that he would have a white coat just like mine in the years to come."

— Felicite Fallon

New devices, procedures, guidelines for clinicians

Clinical advances

By Brenda Lange



LÉA CANCELMO

Robotic Heart Surgery Program Flourishes at Columbia

The new Robotic Cardiac Surgery Program at Columbia has performed more than 100 procedures in its first year, including repairs of atrial septal defects in children as young as six.

Robotic surgery pioneer Arnar Geirsson, MD, arrived in 2023 from Yale to create the program and further develop Columbia's expertise in robotic cardiac surgery and minimally invasive cardiac surgery. At Yale, Dr. Geirsson was central to the development of robotic techniques for mitral valve repair, a focus of Columbia's program, and other minimally invasive and robotic cardiac surgical procedures.

Though some of the world's first robotic surgeries were performed on the heart, first-generation robotic systems were difficult to use for heart surgery, and adoption of robotic techniques for heart surgery stalled. Since the arrival five to 10 years ago of a newer generation of surgical robots with greater capabilities, surgeons are increasingly developing procedures for heart surgery, and the number of cardiac robotic surgeries has rapidly increased.

"The acceptance of robotic surgery by the public has grown over the past few years," says Dr. Geirsson, who is director of the Cardiovascular Institute and Surgical Heart Valve Program at NewYork-Presbyterian/Columbia University Irving Medical Center and professor of surgery at VP&S. "Patients come specifically to us to learn more about robotic options, and we have a high level of

overall satisfaction with the robotics program, which is helping us to grow."

In robotic heart surgery, a cardiac surgeon makes small incisions in the patient's chest wall allowing the robotic arms to gain access to the heart while the surgeon controls the machine's movements from a computer console. Conditions that may be treated with this approach include cardiac tumors, atrial fibrillation, coronary artery disease, and heart valve disease.

"Robotic cardiac surgery is more precise and less invasive, lowers the risk of infection, and speeds recovery time with less pain," Dr. Geirsson says, adding that studies confirm that minimally invasive techniques such as robotic surgery are as successful and as safe as traditional, open-heart techniques done through sternotomy.

Congenital heart disease is another area where Dr. Geirsson's team is making a mark. Earlier this year, a team led by Emile Bacha, MD, director of congenital and pediatric cardiac surgery, performed the first robotic surgery to correct a rare heart defect, scimitar syndrome, in an adult patient. In patients with scimitar syndrome, blood enters the right side of the heart when leaving the lungs, rather than entering the left side, causing shortness of breath and fatigue.

The Columbia approach showed that robotic techniques for the repair of scimitar syndrome are safe and effective in select adult patients. In 2024, the surgeons presented their techniques at the World Summit for Pediatric and Congenital Heart Surgery in June and at the Congenital Heart Surgeons' Society annual meeting in October.

"Our goal is to continue to offer all options to our patients—from large, open operations to robotic procedures—safely and effectively," Dr. Geirsson says. "At Columbia, people can get the best therapy, however it is performed."

For more information, contact https://columbiasurgery.org/heart/robotic-cardiac-surgery-columbia or 212-305-8312.

Polycystic Kidney Disease Center Named PKD Center of Excellence

The PKD Foundation recently recognized Columbia's Polycystic Kidney Disease Center as one of the foundation's 43 Centers of Excellence in the United States. PKD Foundation Centers of Excellence offer patient-focused, comprehensive care delivered by a team of kidney disease experts, clinical trials, and new therapies.

Columbia has, for years, provided the highest standard of care for patients with PKD, a common genetic disorder that causes fluid-filled cysts to grow in the kidneys. The disorder affects about 500,000 people in the United States and often leads to kidney failure.

Nearly two years ago, a concerted effort was made to streamline treatment and formalize resources for Columbia's PKD patients.

"We had all the resources and nephrologists, but this dedicated effort to put all the pieces together has made the center much more efficient," says Heedeok Han, MD, assistant professor of medicine and clinical director of the center.

With a dedicated clinic, new patients are seen much faster. They are generally contacted within 48 hours of their initial outreach and are scheduled for an appointment within two to four weeks. The PKD Foundation also funds the center's dedicated patient navigator who coordinates each patient's care and acts as an information resource. The patient navigator is proficient in Spanish to ensure all patients in the community have the same access to care.

Although all patients are born with PKD, the disorder may go undiagnosed until adulthood when cysts enlarge and interrupt normal kidney function. Initial symptoms in these adults may be nonspecific, including high blood pressure, kidney pain, blood in the urine, kidney stones, and urinary tract infections, which often delays diagnosis.

Because PKD is a genetic condition that frequently goes unrecognized for years, all PKD patients at Columbia are offered genetic testing and counseling to give the team the opportunity to diagnose other members in the same family who need care.

With the advent in 2018 of tolvaptan, the first drug approved in the United States for the treatment of PKD, identifying patients early has more impact. When taken for several years, the drug slows the growth of kidney cysts in adults with a high risk of rapidly progressing PKD and may delay the need for a kidney transplant or dialysis.

For other patients, "lifestyle modifications including a low-salt diet and drinking a lot of water are the primary treatments at this time," Dr. Han says.

Most patients with PKD will eventually require a kidney transplant, partly to prevent kidney damage impacting other organs such as the liver, pancreas, spleen, and heart.

"Patients with autosomal dominant PKD tend to get preemptive kidney transplants at a higher rate than the rest of the population with comparable or better outcomes," Dr. Han says.

"When the time comes for transplantation, the members of our center are here to facilitate the process with the Columbia transplant program, one of the largest, leading programs in the country."

The Polycystic Kidney Disease Center at Columbia (https://columbianephrology.org/pkd/) has clinics in Upper Manhattan, Westchester, and northern New Jersey. Contact nephrologyappts@cumc.columbia.edu or 212-305-3273.

Forever Young

AT COLUMBIA, a growing number of researchers are on a quest to reveal the causes of age-related decline and find ways to prolong health and vigor in our later years. By Alan Dove

Anyone over the age of 40 has likely noticed that the human body wasn't optimized for the long haul. Our vision gets worse, our joints start to ache, and things get harder to remember. And if that's not enough, our risk for cancer, heart disease, osteoporosis, and many other chronic conditions skyrockets, too.

There's a simple, but not very reassuring explanation for this: evolution expects us to be dead. "We live much longer than we did 5,000, 50,000, or 500,000 years ago, and in outsmarting nature in that way, we have created another definition of aging, which is what happens when we live longer than we were supposed to live," says Gerard Karsenty, MD, PhD, the Paul A. Marks, MD, Professor and chair of the Department of Genetics and Development at Columbia.

Addressing this very human problem is the focus of geroscience, which seeks to reveal the causes of our age-related decline and find ways to prolong our healthy lifespans. Columbia has become a major center

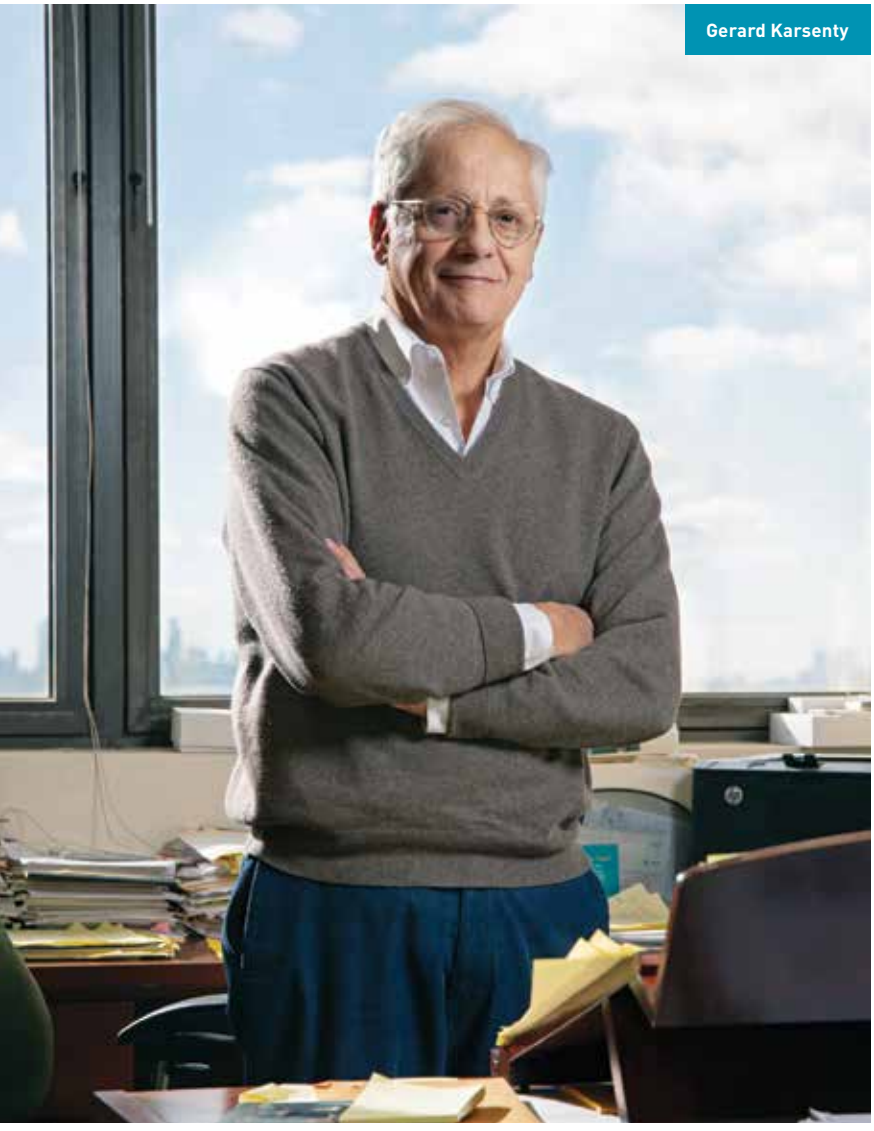
Photographs by Jörg Meyer

Illustration by Charlotte De Greling

for this work, with a growing number of VP&S faculty approaching the aging puzzle from diverse angles.

Feeling It in the Bones

Dr. Karsenty has had a longstanding interest in skeletal biology, starting with the observation that changes in bone mass affect such seemingly unrelated body systems as cognition, energy metabolism, and fertility. "A hypothesis that has been a driving engine of the lab is that bone mass, energy metabolism, and reproduction should all be co-regulated, or should have coordinated regulation," he says. An evolutionary perspective promises clues. "The overarching goal of the work is to define to what extent the appearance of bone changed the physiology of mammalian organisms, and to what extent we can harness this knowledge to propose new treatments for degenerative or age-related diseases," says Dr. Karsenty, who is also professor of medicine and biomedical engineering.



Gerard Karsenty

Indeed, his work has revealed that in addition to its other functions, the skeleton is an endocrine organ with a central role in aging, pumping out hormones that affect other organs. Much of Dr. Karsenty's recent work has focused on one hormone in particular that co-evolved with bones: osteocalcin, named for its ability to bind calcium ions.

Circulating levels of osteocalcin fall dramatically with age, in lockstep with declines in glucose regulation, muscle function, and male fertility. "Once we made these observations, it was clear that osteocalcin has brought us to aging biology," says Dr. Karsenty.

He and his colleagues are now looking at other physiological processes that decline with age, along with the clinical manifestations that follow, and asking whether osteocalcin regulates those processes as well. By tracing the signaling pathways to and from osteocalcin, the researchers hope to identify targets for future treatments that can postpone the negative effects of aging, prolonging healthy lifespans.

In addition to his lab work, Dr. Karsenty has been deeply involved in the formation of the Columbia Healthy Aging Initiative, which brings together researchers from across the campus to exchange ideas and build collaborations around aging studies. "There are many, many people working on aging biology at Columbia," says Dr. Karsenty. "The only problem is that sometimes they don't know it and/or don't know each other." For example, he asserts that scientists studying hematological or neurological diseases are necessarily doing work that intersects with aging. "We need to be unified with a common team and a common goal," he says.

Linda P. Fried, MD, MPH, dean of Columbia's Mailman School of Public Health, chairs the Aging Initiative's steering committee. She and Dr. Karsenty have now been joined by over a dozen other investigators at VP&S, the Robert N. Butler Columbia Aging Center, and the College of Dental Medicine. "We are building on it to forge the community and apply for federal funding as a group so that we are recognized as a medical school deeply involved in the study of aging biology," says Dr. Karsenty. Besides bringing in new funding streams, the initiative has also organized a graduate course and a seminar series on aging biology, and helped build networks of potential collaborators across the university.

Old School

It's not the first time Columbia has made a big commitment to aging research, and one of the earlier efforts illustrates how such projects can provide a powerful draw for new talent. Jennifer Manly, PhD, is now a professor of neuropsychology in neurology at the Gertrude H. Sergievsky Center and the Taub Institute for Research on Alzheimer's Disease and the Aging Brain, and a leading figure in Alzheimer's research. Thirty years ago, though, she was a graduate student looking for someplace to study what she realized was a fundamental blind spot in geroscience.

"Researchers had traditionally recruited people for studies of cognition from memory clinics," says Dr. Manly. While easier to access, those samples are starkly skewed: overwhelmingly white, and from secure socioeconomic backgrounds that provide them with access to advanced specialty care. "This convenience sampling was getting the opposite of what I wanted to study, which was people in communities of color," she says. A literature search drew her attention to Columbia's Washington Heights-Hamilton Heights-Inwood Columbia Aging Project (WHICAP), which has tracked aging in a large cohort of Latinx and African American individuals since the 1980s.

When she came to Columbia as a postdoctoral fellow in 1996, WHICAP had already discovered distinct patterns of aging in these populations. Compared with the memory clinic recruits, Dr. Manly explains, "WHICAP found that African American and Latinx older adults declined more quickly and had a higher risk of dementia over time." She wanted to know why.

As a neuropsychologist, Dr. Manly investigates how experiences across the life course may affect cognitive aging, Alzheimer's disease, and other dementias.

"Factors such as schooling and literacy strongly predict the risk of cognitive impairment as people age," she explains. In the U.S., systemic racism, segregation, and income inequality negatively impacted educational opportunity. Participants in the WHICAP cohort, however, attended schools across the country and around the world. "We had data on early educational opportunity that was very different across race and ethnicity," she says, "and also really different among people of the same race and ethnicity." Her work revealed that lower-quality early education was a primary predictor of worse cognitive aging, even within groups. "It's not genetic," says Dr. Manly. "It's not biological."

Jennifer Manly

"Factors such as schooling and literacy strongly predict the risk of cognitive impairment as people age."

In subsequent work, her team has tracked down participants in Project Talent, which administered a battery of achievement and cognitive tests to hundreds of thousands of American high school students in 1960. By retesting these individuals in their old age, Dr. Manly was able to identify specific educational correlates that protect against cognitive decline. "Teacher qualifications and teacher training are a big driver of school quality, and they also predict better cognitive function 58 years later," says Dr. Manly. "We're trying to understand the school-age interventions that are the drivers of this relationship." Her current hypothesis is that better early education leaves people with more cognitive reserve, able to tolerate later neuropathology with more resilience.

Under-Studied Ova Age

Yousin Suh, PhD, director of the Reproductive Aging Program, investigates aging in another chronically under-studied population: women. Besides making up a little more than half of humanity, women also carry a unique model organ for studying aging: the ovary.

"When you talk about aging, you're usually talking about changes that occur in your sixties and seventies," says Dr. Suh, who is also the Charles and Marie Robertson Professor of Reproductive Sciences (in obstetrics & gynecology) and professor of genetics & development. The ovaries, however, get a much earlier start on aging than other human organs. "You're talking about something that happens in your thirties and forties."

Yousin Suh

Because ovaries age decades before other organs, Dr. Suh initially wondered whether unique molecular mechanisms drive ovarian aging. "When I first arrived at Columbia to help build the field of reproductive aging, I started with what I do best, namely human genetic and functional genomic studies," Dr. Suh explains. She and her team obtained autopsy samples from women who had died suddenly and analyzed gene transcription patterns at single-cell resolution in young and older ovaries.

"What's remarkable is that there's really nothing special" in ovarian aging, Dr. Suh says. "What's happening in your liver, in your heart, and in your kidneys during your seventies occurs in the ovary, but much earlier; at the molecular level, it's a clear example of accelerated aging."

That dovetailed with an earlier discovery Dr. Suh and others had made, that ovarian aging correlates with overall aging. Women who undergo menopause later are more likely to live longer, healthier lives than those with earlier menopause, and brothers of women with later menopause have a longevity advantage. "In other words, there's a genetic component of ovarian aging that can be applied not just to women, but to human beings, so we are trying to understand these mechanisms," says Dr. Suh, who has also studied the genetics of centenarians.

Her body of research points to a regulatory protein called mTOR, which other groups have also identified as a critical controller of aging. Rapamycin, a widely used immunosuppressant drug, targets mTOR activity and has been touted as a potential antiaging treatment. However, it would take decades to verify whether the drug extends healthy lifespans in humans. Dr. Suh and her colleagues realized that ovarian aging could provide a much faster answer.

The Validating Benefits of Rapamycin for Reproductive Aging Treatment (VIBRANT) study, which is now seeking to recruit up to 1,000 women, will look at whether low doses of rapamycin can delay ovarian aging and prolong fertility. It's the start of what Dr. Suh hopes will be a new approach in geroscience. "Because the ovary undergoes aging so much more rapidly, using the same mechanisms that we see in other organs, we should really use the ovary as a first test system for antiaging drugs."

Not So Fast

Though well-controlled clinical trials such as VIBRANT are just getting started, tantalizing preclinical results have already spawned a rush to promote

and commercialize various interventions. Indeed, the hype has grown so thick around antiaging treatments that it's become hard to publish data that complicates the story. Emmanuelle Passegué, PhD, Alumni Professor of Genetics and Development and director of the Columbia Stem Cell Initiative, was undeterred.

Dr. Passegué and her colleagues had tested the effects of a battery of different treatments on hematopoetic stem cells in aged mice. These cells give rise to all other blood cells and produce crucial regulators of aging. They found that none of the recently popularized interventions, including calorie restriction, exercise, and transfusion of plasma from younger animals, managed to rejuvenate the blood stem cells. "There is no universal strategy for rejuvenation, and what works in certain cells and organs doesn't necessarily work in different systems," says Dr. Passegué, whose findings were eventually published in the Journal of Experimental Medicine in 2021. The paper, she notes, "was a hard sale."

Nonetheless, the work pointed toward a more nuanced and interesting understanding of how blood ages. "It's not just the seed, it's the soil—including changes in the bone marrow microenvironment, which are affecting stem cell activity and circulating factors," says Dr. Passegué. In recent work, she has found that the marrow niche in aging mice degrades and becomes more pro-inflammatory, which inhibits the blood stem cells' ability to regenerate. After finding that this inflammatory transition is closely linked to glucose metabolism, Dr. Passegué's team tried another intervention to rejuvenate aged blood stem cells: 24 hours of fasting followed by 24 hours of refeeding. "We found that fasting by itself doesn't help," she says. "What really helps is refeeding, because it resets the metabolism of the stem cells."

Those results are now converging with another line of work in her lab, looking at emergency myelopoiesis, the process by which bone marrow myeloid cells are produced. While hematopoietic stem cells normally give rise to a balanced assortment of blood cell types, the system can also adapt to boost regeneration of specific cells over others. That adaptation commonly happens during infections and in response to various drugs, but dysregulation of the process can also contribute to the pro-inflammatory bone marrow environment seen in aging. In the summer of 2024, Dr. Passegué received a $7.7 million grant from the National Heart, Lung, and Blood Institute to explore those connections.

Aging affects all tissues in the body and "it is essential that we start understanding all these connections between the stem cells, their differentiated progenies, and their environment in the different organs of the body," says Dr. Passegué. It is one of the key areas of research for the laboratories of the Columbia Stem Cell Initiative that Dr. Passegué directs that aims at improving the resilience and regeneration of many aging tissues and developing new rejuvenation interventions for healthy aging.

Across the spectrum of aging research, scientists in the field agree that understanding the process is crucial for modern medicine. "Aging is the driver of almost all chronic diseases," says Dr. Suh. "If we understand the basic biology of aging, we'll be able to target all chronic diseases simultaneously." ❖

Emmanuelle Passegué

"It is essential that we start understanding all these connections between the stem cells, their differentiated progenies, and their environment in the different organs of the body,"


AT THE ARM
IN COLLABORATION
COLUMBIA

BECOMING A **BETTER NEIGHBOR**

CUIMC establishes a hub to advance the medical center's community service mission.

By Brittany King and Sharon Tregaskis

On a cloudy, cool July morning in Washington Heights, a PIX 11 camera crew is filming at The Armory's Nike Track & Field Center, the 65,000-square-foot indoor arena across the street from the Hammer Health Sciences Building. Rita Finkel, co-president of The Armory Foundation, a non-profit organization dedicated to strengthening community, preps a group of Washington Heights seniors on what to expect and hypes them up to go live. Music begins playing, and a dozen older adults in yellow and pink t-shirts surround anchor Ben Aaron, dancing.

The footage will accompany an evening news segment about training programs offered at The Armory, including Seniors AIM High, a collaboration of The Armory Foundation with Columbia University Irving Medical Center. Launched in 2022, the program was designed to engage local residents over 60 in weekly exercise and create informal opportunities to promote preventive care.

"When I looked at the community members The Armory Foundation was serving, the seniors were a group that we knew we were missing and needed to reach," says Ms. Finkel, who also serves as director of Armory College Prep. "We turned to other organizations in the neighborhood to find support, and CUIMC was happy to join us. The institution provides the medical support, and we provide the space and equipment for our seniors to work out."

During its first year, Seniors AIM High had 100 regulars. Participants got their blood pumping with boxing, yoga, and Zumba sessions. News-you-can-use talks by internal medicine clinicians covered topics like screening for diabetes and how to make heart-healthy meals at home. Since organizers added a second day each week, participation has swelled to 600 community members.

Photographs by Rudy Diaz

From left: Olajide Williams, Rafael Lantigua, Katrina Armstrong, Sandra Harris

"The focus isn't about trying to prescribe them anything, or get them to come in for a checkup," says Ms. Finkel, who sees the project as a model for gyms nationwide. "Historically, seniors have walked around malls to get in their movement; this program gives them other opportunities and allows them to engage with health professionals and their community in an intentional way."

The Armory Foundation's collaborations with CUIMC run deep. Seniors AIM High extends the Foundation's long-running campaign to promote physical health and wellness access in Washington Heights, Inwood, Harlem, and South Bronx neighborhoods. CUIMC activities at Armory facilities have included commencement events, white coat ceremonies, and receptions for transplant recipients and their donors. During the early years of COVID-19, the track served as a mass vaccination center.

The relationship exemplifies what's possible when CUIMC and neighborhood organizations work together toward a common cause, says Sandra Harris, CUIMC vice president of Academic and Community Partnerships. "We're doing so much good work at the medical center," she explains, "but it needs to be exciting, relatable, and translatable to the people who can use this info to improve their lives."

NEIGHBOR TO NEIGHBOR

Ms. Harris is no stranger to the efforts of Northern Manhattan's residents to support their community members. A Washington Heights native herself, she served in the 1990s as a constituent services liaison for New York State Senator Franz Leichter, a staunch human rights champion. She later worked for Washington Heights-based Alianza Dominicana, the largest Dominican community development organization in the U.S., and served as executive director of the Northern Manhattan Community Voices Collaborative, promoting local partnerships to enhance access to quality health care services.

At CUIMC for 25 years—most recently as vice president of government and community relations—Ms. Harris credits Columbia University interim President Katrina Armstrong, MD, with setting a bold course for the medical center's role in Northern Manhattan and beyond when she launched the Office of Academic and Community Partnerships (OACP) in February 2024. "This office was created as a rallying point to look at all the community-oriented initiatives taking place at the medical school and figure out how to partner with community members while also strengthening our relationships with community partners," says Ms. Harris.

Rafael Lantigua and Sandra Harris

"We want our neighbors to see a news story about research being conducted, or a new vaccine and be proud to say, 'my neighborhood institution did that.'"

She is joined in the work by longtime community health champions neurologist Olajide Williams, MD, vice dean for community health, and primary care physician Rafael Lantigua, MD, director of the Office of Community Service Programs since 2019 and associate dean for community programs.

Dr. Williams, a leader in stroke disparities and community-based behavioral intervention research, currently leads a five-year, $6 million NIH-funded interventional trial to mitigate social determinants of health in stroke outcomes and build community capacity. He is also founder and chair of Hip Hop Public Health, which develops multimedia public health campaigns to engage young people and their families on the topics of health and wellness. "VP&S is probably the premier medical school in New York City," he says. "Our

goal is to heal, reduce suffering, and help people improve their well-being and their health outcomes." Yet health outcomes in the neighborhoods surrounding the medical center remain some of the poorest in the city. "Clearly," says Dr. Williams, "we can do better."

BRIDGE BUILDERS

With 3,500 students, just over 3,000 full-time faculty, more than 6,700 full-time employees, and extensive research and clinical operations, CUIMC boasts a massive economic and physical footprint in Washington Heights. The predominantly Hispanic neighborhood's residents include people of Dominican, Puerto Rican, and Cuban heritage; the majority speak a language other than English, and about half are immigrants to the U.S.

Ms. Harris, Dr. Williams, and Dr. Lantigua aim to bridge the divide by forging new connections with community groups, getting the word out about research findings, and strengthening partnerships among community members, neighborhood organizations, and the institution.

The first step is cataloging the array of existing initiatives and collaborations—official and unofficial. Throughout the spring and summer of 2024, OACP staff met one on one with community partners. As part of its overall strategic planning process, VP&S convened 16 committees comprising faculty, staff, students, and community leaders. Three of those groups focused on community engagement, exploring such topics as student involvement in the community; research efforts that engage Washington Heights' diverse population; and neighborhood events that students, faculty, and staff could attend. The three committees identified existing programs that needed more support, like Seniors AIM High, and offered a host of suggestions on improving neighborhood relations. Among all three committees, a central theme emerged: the need for residents and the CUIMC community to interact intentionally and frequently throughout the year.

Over the last six months, OACP staff have delved into the details of how community partners have historically interacted with the medical center, compiled a roster of health care resources sought by community leaders, and identified opportunities to broaden ongoing collaborations. Ms. Harris and her team are also reaching out to organizations without existing ties to the medical center, intent on opening lines of communication.

"We have been aware of the tensions between our neighbors and the institution for some time," says Ms. Harris. Beyond serving as a central point for once-disparate offices that each had a hand in serving the community, Ms. Harris envisions a more integrated role for CUIMC in the community, with her office furnishing a contact point for local businesses, future students, and other community members looking to connect with the institution. A top priority will be supporting improved community health outcomes throughout Northern Manhattan.

"In some of our initial conversations we've learned how important it is to present health information in a way that is accessible to the community," says Ms. Harris. "Eventually we want our neighbors to see a news story about research being conducted, or a new vaccine and be proud to say, 'my neighborhood institution did that.'"

A DEEP FOUNDATION

Dr. Lantigua, now a professor of medicine, joined the faculty in 1980. Back then, he says, CUIMC had a more isolationist stance. Undaunted, he was the driving force behind the Columbia Center for the Active Life of Minority Elders (CALME), which supported research to reduce health disparities affecting minority elders and connected medical school researchers with community members. As an early proponent of the Columbia Center for the Health of Urban Minorities, Dr. Lantigua—himself an immigrant from the Dominican Republic, where he earned his medical degree—championed a paradigm shift in community-based research to embrace the leadership and insights of community members as equal partners in the work.

Seniors AIM High was designed to engage local residents in weekly exercise and to promote preventive care

CUIMC's responsibilities extend beyond its neighbors' health outcomes, says Dr. Lantigua. "We're the biggest employer in this neighborhood and we need to ensure we're serving our staff and clients, but we also need to make sure we're understanding what the community needs," he says.

Ana Cepin'99 was born and raised in the neighborhood. Now an associate professor of obstetrics & gynecology and director of the Community Women's Health Program in the Department of Obstetrics & Gynecology at Columbia, Dr. Cepin catalogs the assets she experienced growing up. "There are great things about our community: the commitment to family and social networks, the resilience," she says. "The creation of OACP is a recognition

of how important it is to be in the community and provides ongoing support for the work already happening."

As medical director of NewYork-Presbyterian's Family Planning Practice, which provides sexual and reproductive health care to people who are underinsured or uninsured, Dr. Cepin sees first-hand the hazards of maternal morbidity and mortality that plague her patients throughout the first 12 months following childbirth. To combat those trends, she launched a community women's health office, a collaboration between the obstetrics & gynecology department and NYP's Division of Community and Population Health. Services include postpartum doulas, maternal mental health, and parenting programs.

To get the word out among people who are most at risk, Dr. Cepin and colleagues worked with Finn Partners, a local marketing agency, on Keep the Beat, an initiative to boost awareness of the increased risk of cardiovascular disease for people who have had preeclampsia or gestational diabetes. The bilingual campaign utilized social media, bus ads, and posters around Washington Heights to encourage residents to safeguard their own health after delivering their baby.

"Many of us have worked with this community for decades," says Dr. Cepin. "We see firsthand that due to our nation's systems and systemic injustices, people are at higher risk for adverse outcomes."

The nonprofit Northern Manhattan Improvement Corporation (NMIC) tackles the systemic injustices that plague the most vulnerable residents of Washington Heights. Founded in 1979 as a grassroots effort to provide access to legal housing support for immigrants, NMIC has expanded to serve residents of Upper Manhattan and the Bronx experiencing barriers across the array of social drivers of health: housing, education and employment, financial and legal aid, food access, and more. In 2003, CUIMC joined with NMIC and other community partners to launch an initiative aimed at helping parents recognize early signs of asthma in young children and introduce effective management strategies.

Since then, the working relationship has gained depth and breadth. Ms. Harris sits on NMIC's board, and NMIC staff members serve as community ambassadors with the Irving Institute for Clinical and Translational Research's community engagement core. CUIMC provides material support and volunteers for NMIC's annual gala, and social work interns serve NMIC constituents.

Maria Lizardo, executive director of NMIC for the last decade, says she's pleased with how CUIMC has shown up for the organization. She expects even more as OACP hits its stride and engages in the frank and honest conversations necessary to build trust. "Not all the folks who work at Columbia are integrated in the community," she says. "You can't just come in to take—you need to be an anchor in the community."

Participants in Seniors AIM High, a collaboration of The Armory Foundation and CUIMC

Already, CUIMC has begun identifying trusted community leaders who are willing and able to share upcoming research participation opportunities with their neighbors. The medical center has also established a clinical translation ambassador program that brings together researchers with NMIC staff, who offer guidance and recommendations on everything from study design to the dissemination of findings. "We are a world-class research institution," says Ms. Harris, "and we should be sharing our findings and resources with our neighbors."

COURTESY DÍGAME BIENVENIDOS

Food pantry run by language and cultural immersion program "Dígame Bienvenidos"

THE LONG VIEW

VP&S students have a rich history of disseminating resources from their own training throughout the community. "Students come to VP&S with a sincere commitment to serving our Washington Heights neighbors," says primary care physician Rosa Lee, MD, senior associate dean for curricular affairs. "In my conversations with both prospective and current students, they frequently ask about the relationship between CUIMC and the community. Students are seeking opportunities to contribute meaningfully and make a lasting impact, and they understand that this only happens when our relationship with the community is rooted in respect and collaboration."

For many, those early experiences have sparked careers dedicated to community service. Elizabeth Bishop Davis'49 was a first-year medical student in 1946 when she served as a clerk at the first mental health clinic in Harlem, the brainchild of local civil rights activists. The sliding-scale Lafargue Clinic, housed in a church basement, was open two nights each week. Sixteen years later, Dr. Davis was named founding director of Harlem Hospital's Department of Psychiatry.

"We are all interdependent and connected—a healthier Washington Heights means a better New York City and better New York state."

Seventy-five years later, Katherine Nash'15, now assistant professor of pediatrics at VP&S, a hospitalist at Morgan Stanley Children's Hospital, and a health services researcher in the Department of Pediatrics, credits her current focus on equity in health care delivery to a project she pursued with two classmates in her first year at VP&S. Together, the trio created a language and cultural immersion program—now known as "Dígame Bienvenidos"— to introduce new VP&S and College of Dental Medicine students to Washington Heights. Says Dr. Nash, "We wanted to connect with our patients, not abroad, but in the communities in which we served."

Today, an array of longstanding student-run clinics provide services to distinct populations within the community, including people who are unhoused, those without insurance, LGBTQ+ people, individuals seeking support for substance use disorders, and immigrants seeking asylum in the U.S. Additional student-run organizations focus on advocacy, community service, and public awareness on topics including youth pregnancy, nutrition, and mentorship for youth.

Dígame Más—an interprofessional group comprising dental, nursing, public health, and medical students—bolsters connections among Columbia students and their neighbors in Washington Heights by providing language, service, cultural, and health education. The VP&S chapter of White Coats For Black Lives has tackled the systemic challenges that affect health care delivery, leading campaigns to promote better health care for people affected by the carceral system, revamp the allocation of state funds for safety-net hospitals, and eliminate the de facto segregation of health care delivery based on patients' insurance status. Columbia's chapters of Students for a National Health Program and WC4BL continue the campaign for universal health care.

"We are all interdependent and connected—a healthier Washington Heights means a better New York City and better New York state," says Dr. Williams. "Not only are there moral implications of turning a blind eye to the suffering in our backyard, but there is also an economic benefit to the city and our neighborhood when we consider the entire community. We're not just training doctors and health care workers; we're preparing people for a global village and a more connected world." ❖

With the opening of the BRIDGE facility, Columbia's newly centralized biobank can house up to 12 million patient samples to accelerate medical discovery.

PAYING DIVIDENDS

By Susan Conova

At the beginning of 2020, Columbia University Irving Medical Center was getting ready to open its first centralized biobank.

Biobanks—collections of blood and tissue from patients—have proven essential for understanding human disease and developing new treatments. Over the past few decades, Columbia researchers have built several large biobanks, usually focused on specific diseases, that together hold 1.3 million samples from more than 100,000 individuals.

"These resources have been incredibly valuable, but only accessible to a limited group of researchers," says Muredach Reilly, MD, vice dean for clinical and translational research at VP&S and director of the Irving Institute for Clinical and Translational Research. With a centralized biobank, however, samples would be available to a wider range of researchers, accelerating discovery today and safeguarding these resources for decades of biomedical research.

Then the pandemic hit.

The biobank's launch team, including researchers and staff in the Irving Institute, the Department of Pathology & Cell Biology, and the Office for Research, joined forces to fast-track the opening with a changed focus: COVID-19.

The efforts paid off. Just a few months after the biobank's accelerated launch, researchers were using samples collected from thousands of patients at Columbia and NewYork-Presbyterian, who were eager to help scientists understand the mysterious illness.

"The experience with COVID was a vivid reminder of the power of centralized biobanks," says Michael Shelanski, MD, PhD, senior vice dean for research at VP&S, "and it gave us extra incentive to start bringing in more samples from all kinds of patients at CUIMC to spark new medical discoveries."

Later in 2020, the medical center received an $8 million grant from the NIH to construct a new state-of-the-art facility designed to house up to 12 million patient samples. In the coming years, facilities and operational efforts steamed ahead to turn plans for this expanded resource into reality. The medical center marked the launch of the new Biobank Resource for Investigating Disease, Genes, and Environment—BRIDGE—during a ribbon-cutting ceremony in November 2024.

"This is a transformative moment for biomedical research at Columbia," says Dr. Reilly. "From rare diseases to cancer, Alzheimer's, and heart disease: the new biobank will shape the future of medicine."

INVESTIGATING DISEASE, GENES, AND ENVIRONMENT

Following its late 2024 launch, the new BRIDGE facility's automated BioStore Storage System (built by Azenta) was ready for its first deposits in early 2025.

The core of the facility is one of the field's most advanced freezer systems. About the size of a shipping container, the BioStore preserves liquid biospecimens at -80 C (equivalent to -112 F, colder

The core of the facility is an advanced freezer system that is about the size of a shipping container and preserves liquid biospecimens at -80 C

PHOTOS BY JÖRG MEYER

than average winter temperatures at the South Pole). The glacial setting ensures that biological material like DNA and proteins—critical for modern biomedical research—will not degrade for years.

Each new sample is prepared by BRIDGE's own team, ensuring it is handled according to the same, optimal protocols. BRIDGE also includes bioinformatics and IT components to link data from patients' electronic health records with their stored samples, which gives researchers the ability to query the biobank's holdings.

"The ability to match and integrate patient phenotypic data with readily accessible and retrievable patient samples provides a robust platform for discovery," says Kevin Gardner, MD, PhD, chair of the Department of Pathology & Cell Biology, which oversees the administration of BRIDGE, providing scientific oversight of the facility, including its handling, storage, and distribution of patient samples.

Inside the freezer, a robot runs up and down the central aisle removing requested samples from storage and making new deposits. The robot can run 24 hours a day, increasing the speed with which samples are processed and made available to investigators.

Jointly supported by VP&S and NewYork-Presbyterian, BRIDGE leverages Columbia's expertise in bioinformatics in the Department of Biomedical Informatics and the bioinformatics core within the Herbert Irving Comprehensive Cancer Center.

INCREASING DIVIDENDS

More than 50 studies at Columbia now tap the university's existing biobanks, and the new, centralized facility should only increase that number. Just like savings accounts, the biobank's deposits will become more valuable over time as samples and data accumulate.

Early-career investigators, in particular, will get an important boost. "Junior faculty will have ready access to patient samples and data that previously would have taken them years to gather, accelerating the pace of their research and giving them greater momentum," says Aaron Viny, MD, assistant professor of medicine, who was involved in BRIDGE planning efforts. The central biobank also frees up funds that departments currently spend on their own expensive biobanking operations for exciting pilot projects, often conducted by younger investigators.

More benefits will come from BRIDGE's capacity to collect serial samples from the same patient. Though single "snapshot" samples provide valuable information for many studies, "with a large collection of serial samples from the same patient, it will be easier to understand the progression of a disease, and one day, intervene," says Dr. Viny.

With such serial samples, "you can investigate those taken before and after diagnosis of a disease, for example, to find the factors that may have led to the disease developing in the first place."

RECRUITING PATIENTS

Four years ago, when the biobank's first patients enrolled, the focus was on COVID-19. Thanks to the biobank's consent protocols, all those samples can also be used for future research that spans all disease areas.

"Our patient consent protocol is a unique strength," says Danielle Pendrick, DrPH, director of interdisciplinary research initiatives at VP&S, "and allows us to utilize patient samples and data for multiple studies any time in the future."

BRIDGE's strong enrollment and engagement team continues to help recruit patients, which have grown in number to include more than 10,000 new participants since the 2020 launch. Those patients, like those of the entire medical center, are among the most diverse—racially and socioeconomically—in the nation.

"We are centered in the communities of Northern Manhattan, Washington Heights, Harlem, and the South Bronx, where our patients live, and our biobank needs to continue to reflect the values and priorities of our community," Dr. Reilly says. Since the biobank's beginnings, a community advisory board has helped set its priorities, which include research that should help reduce racial disparities in patient care and increase health equity.

"With dynamic long-term engagement with our patients, this facility can have a great impact on our communities and for people across the city and the world." ❖

Alumni News & notes

Julia Hickey González, Alumni Writer

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Roy Vagelos was honored with an inaugural "Elimination Champion" Legacy Award in July 2024 by the Coalition for Global Hepatitis Elimination for his immense contribution toward the elimination of hepatitis B in China. Dr. Vagelos received the award alongside Professor Zhao Kai of China, with whom Dr. Vagelos collaborated in the early 1990s to facilitate a transfer of necessary technology from the United States to China for producing high-quality vaccines to protect newborns and children from hepatitis B virus infection. By 1994, two factories were completed in China to make the vaccines. They are now capable of producing more than 20 million doses per year. It is estimated that the groundbreaking collaboration prevented more than five million deaths from hepatitis B in China, according to the Coalition. Dr. Vagelos, renowned for his visionary leadership in the pharmaceutical industry, has played a pivotal role in developing and distributing hepatitis B vaccines as CEO and chair of Merck. The Coalition for Global Hepatitis Elimination, a program of The Task Force for Global Health, is a nonprofit bringing together global partners to achieve worldwide elimination of viral hepatitis. "With the exciting discoveries coming from academia and industry that can lead to improved drugs and vaccines, as well as improvements in distribution in developing nations, I am certain that diseases and deaths from hepatitis infections will ultimately be eliminated," Dr. Vagelos told the Coalition.

1981

Two classmates—Alice Levine and Ellen Seely—were among 14 endocrinologists chosen for the Endocrine Society's 2025 Laureate Awards, the top honors in the field. Established in 1944, the Society's Laureate Awards recognize the highest achievements in the endocrinology field, including groundbreaking research and innovations in clinical care. The awards will be presented at the society's annual meeting in July 2025. Dr. Levine will receive the Outstanding Educator Award, which recognizes achievement as an educator in endocrinology and metabolism. She is professor of medicine and oncological sciences at the Icahn School of Medicine at Mount Sinai in New York and director of the school's Adrenal Center and Pituitary Center. She is also the systemwide director of the endocrinology, metabolism, and diabetes fellowship at the Mount Sinai Health System, the largest endocrine fellowship program in the country. Dr. Levine was the course director for the Icahn School of Medicine at Mount Sinai endocrine pathophysiology course for 25 years, inspiring generations of medical students to pursue careers in the field. She received the Icahn School of Medicine at Mount Sinai's Teaching Award in 2011 and the Jacobi Medallion in 2017, the highest award conferred by its Alumni Association. Dr. Seely will receive the Outstanding Mentor Award, which recognizes a career commitment to mentoring and a significant positive impact on mentees' education and career. Dr. Seely is director of the Clinical Research, Endocrinology, Diabetes, and Hypertension Division in the Department of Medicine at Brigham and Women's Hospital and a professor of medicine at Harvard Medical School. She is known for her studies of hypertensive disorders of pregnancy but also has dedicated a substantial part of her academic career to nurturing the intellectual and professional growth of peers and juniors alike. She has received the A. Clifford Barger Excellence in Mentoring Award at Harvard Medical School, the Distinguished Member of the Society of Teaching Scholars at Brigham and Women's Hospital, the William Silen Lifetime Achievement in Mentoring Award, and the Mentoring Award from Women in Endocrinology.

Alice Levine'81

Ellen Seely'81

1986

Frederick Ehlert, associate professor of medicine, has been appointed associate dean for admissions for the Vagelos College of Physicians & Surgeons. He has been a member of the admissions committee since 2007, and in that time, he has interviewed hundreds of prospective students and worked with previous admissions deans on the selection process. He is active in the VP&S alumni community, serving as Class of 1986 chair and as a member of the board of the Alumni Association. Dr. Ehlert has served on the Columbia faculty since 1993. He continues an active clinical practice in cardiac electrophysiology at VP&S. His area of expertise is pacemaker and defibrillator lead management, and he is one of the most experienced lead extractors in the country. He also maintains a commitment to undergraduate and graduate medical education and has

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RUDY DIAZ

Frederick Ehlert'86

served as clinical teacher, lecturer, formal preceptor, research mentor, and currently as the electrophysiology fellowship program director.

1988

Andrew Feigin has been appointed chief medical officer at Rho, a global contract research organization in North Carolina. Before joining Rho, Dr. Feigin, a neurologist, led a team that founded a contract research organization for a rare disease study group. After completing a fellowship in experimental therapeutics, he joined North Shore University Hospital and established a clinical trial program for patients with Parkinson's disease, Huntington's disease, Tourette syndrome, and other movement disorders. Before joining Rho, he had been professor of neurology at the NYU Grossman School of Medicine since 2017. He served

Andrew Feigin'88

as the site principal investigator on more than 30 clinical trials, notably spearheading the first phase 1 clinical trial using gene therapy for Parkinson's disease. He is a member of the American Academy of Neurology, the American Neurological Association, the Movement Disorder Society, the Parkinson Study Group, and the Huntington Study Group. He has published over 150 peer-reviewed articles.

2001

William J. Mack became chair of the Department of Neurological Surgery at the University of Southern California's Keck School of Medicine in September. Dr. Mack joined USC in 2010 as assistant professor of neurological surgery and was

William J. Mack'01

promoted in 2022 to professor of neurological surgery and physiology and neuroscience (clinical scholar). He has held numerous leadership roles at the medical school, including vice chair of academic affairs in the Department of Neurosurgery, director of the neurointerventional program, program director of the neuroendovascular surgery fellowship, and chair-elect of the Faculty Council. He has chaired the annual leadership conference for the Keck School's Center for Gender Equity in Medicine and Science for the past two years. Dr. Mack is an elected member of the Society of Neurological Surgeons and the American Academy of Neurological Surgery. He has served as president of the Society of NeuroInterventional Surgery and chair of the cerebrovascular section of the Congress of Neurological Surgeons/American Association of Neurological Surgeons. He has authored over 220 peer-reviewed publications based on NIH-funded translational research in cerebrovascular disease. He completed his neurosurgery residency at Columbia and a neurointerventional fellowship at UCLA. Dr. Mack earned a master's degree in clinical and biomedical investigation and an MBA from USC.

2003

Andrew Bomback, a nephrologist and associate professor of medicine, is co-director of the newly named David Koch Jr. Glomerular Kidney Center at Columbia, alongside longtime inaugural director Gerald Appel, MD. The center, which was originally created in 2000, was the first of its kind in the United States to provide dedicated care for people with rare diseases of the kidney filters. A $20 million gift by the David Koch Jr. Foundation, announced in August 2024, will provide permanent support to build on Columbia's groundbreaking work to develop innovative diagnostics and

Andrew Bomback'03

treatments for these rare kidney diseases and expand physician education and training. Dr. Bomback has published more than 200 peer-reviewed articles and book chapters on chronic kidney disease, glomerular diseases, and hypertension. He is co-author of the textbook "Chronic Kidney Disease and Hypertension Essentials" and an editor of the National Kidney Foundation's Primer on Kidney Diseases. He currently serves as principal or co-investigator on clinical trials of new treatments for IgA nephropathy, membranous nephropathy, lupus glomerulonephritis, hereditary nephritis, C3 glomerulopathy, and focal segmental glomerulosclerosis. He serves on the American Society of Nephrology's Glomerular Diseases-Collaborative Steering Committee, which aims to promote high-quality care for people with glomerular diseases and stimulate opportunities to address gaps in knowledge, training, continuing education, and awareness across the spectrum of glomerular diseases.

2005

Yo-El Ju, a neurologist, was installed as the inaugural Barbara Burton and Reuben M. Morriss III Professor at Washington University School of Medicine in St. Louis. Dr. Ju is a physician-scientist whose discoveries have illuminated the complex relationship between sleep and neurodegenerative disease. The professorship was created to advance Alzheimer's disease research. Alzheimer's disease was Dr. Ju's entry point into the world of sleep and neurodegeneration. In 2013, she and colleagues published the first study in people that showed an association between poor sleep quality and presymptomatic Alzheimer's disease. In 2017, she published a paper that showed

that disruption of the deep, restful phase of sleep is associated with higher levels of amyloid beta. Her work launched development of experimental sleep-based interventions to prevent or treat Alzheimer's. Dr. Ju recently expanded her work to include other neurodegenerative diseases characterized by toxic accumulation of brain proteins. She leads an international consortium studying REM behavior disorder; about 80% of people diagnosed with the disorder go on to develop a neurodegenerative disease such as Parkinson's disease or Lewy body dementia. The consortium is developing clinical, neuroimaging, and biofluid biomarkers of synuclein-associated diseases to prepare for a clinical trial to treat REM behavior disorder and prevent the development of serious neurodegenerative disease. Dr. Ju, who also is professor of anesthesiology, is a co-director of the Washington University Center on Biological Rhythms and Sleep and cares for patients with sleep disorders at the Washington University Sleep Medicine Center, which includes a specialty clinic for REM behavior disorder and other neurology patients at Barnes-Jewish Hospital. She completed a neurology residency and clinical and research fellowships at Washington University and joined the faculty in 2011. Among her many honors are the Wayne Hening Sleep Medicine Investigator Award from the American Academy of Neurology and the Young Investigator Award from the World Association of Sleep Medicine.

2009

John Pepen joined the Commonwealth Health Physician Network's surgical team in Scranton, Pennsylvania. He specializes in minimally invasive techniques and robotic technology. Dr. Pepen completed fellowship training in surgical critical care at Brigham and Women's Hospital. He is board-certified in general surgery and surgical critical care and experienced in minimally invasive and robotic-assisted surgery for a range of health issues, including appendicitis, hernia repair, gastrointestinal surgery, colorectal disease, and gallbladder disease.

2013

Simon Sung has joined Fox Chase Cancer Center in Philadelphia as associate professor of pathology. He joined Fox after serving on the VP&S faculty since 2018. Dr. Sung completed an anatomic pathology residency

Simon Sung'13

at Columbia, a fellowship in cytopathology at Weill Cornell, and a fellowship in general surgical pathology at Columbia. He has authored over 20 peer-reviewed articles. He received the Sigmund L. Wilens Prize for Excellence in Pathology in 2013 and the Intersociety Council for Pathology Information Trainee Travel Award in 2016.

2018

Natalia Fontecilla Biles has joined Dockside Dermatology, a practice in Millersville, Maryland. After medical school, Dr. Biles completed a residency at Johns Hopkins University. She practices general dermatology. She says a research position at the NIH that focused on MRSA helped her decide on a specialty in dermatology. "I had no idea how complex the skin is, and I was obsessed," she says. Dr. Biles is a Bethesda, Maryland, native.

Natalia Fontecilla Biles'18

PHOTOS COURTESY ELAINE WAN

Elaine Wan'05

Electrician of the Heart: A physician-scientist reflects on the challenges and rewards of her career path

By Julia Hickey González

A mouse's heart is the size of a pinky nail and beats at least 600 times per minute. That has not stopped Elaine Wan'05, director of electrophysiology research at VP&S, from the daunting task of developing algorithms to precisely map its electrical activity in an NIH-funded study that has expanded the possibilities of testing where and why irregular heartbeats, or arrhythmias, emerge.

"Before, everything was in two dimensions. In my lab, we are offering 3-D visualization. The old saying is that a picture is worth a thousand words," she says.

Dr. Wan's extensive basic science and translational research inform her clinical practice as the Esther Aboodi Associate Professor of Medicine in Cardiology and Cardiac Electrophysiology at VP&S, where her use of novel imaging techniques is already improving precision treatments for human heart surgery patients.

Dr. Elaine Wan'05 and Clyde Wu'56, who was a special guest at VP&S graduation in 2005

Being a physician-scientist is really two jobs at the same time, she says. "Those of us interested in academia are also teaching students, residents, and fellows. That becomes a third job. Everyone asks me how I split my time, and I say I am 100%, 100%, 100%."

On any day, you might find Dr. Wan leading lab meetings, consulting expectant mothers with heart arrhythmias, performing invasive electrophysiology procedures such as pacemaker implantation or cardiac ablation, or presenting a lecture to medical students on electrical malfunctions of the heart. She was one of the principal investigators in a clinical trial utilizing improved pacemakers as small as bullets. She also holds three patents on surgical tools and imaging techniques.

In addition to her duties at Columbia, Dr. Wan holds national advisory roles, including as a trustee on the board of the Heart Rhythm Society and as chair elect of the American Heart Association Committee on Arrhythmias and Electrocardiography. These groups are tasked with determining how best to incorporate the immense heart rate data from smartphones and smartwatches into health care and to develop the latest scientific statement to guide the treatment of heart arrhythmias.

Dr. Wan's professional commitments are immense, but she delights in seeing her findings directly improve patient outcomes. "For example, a patient comes in having heart palpitations. We find out they have an arrhythmia. We do an electrocardiogram, and usually in the past we'd use the EKG and say, 'I think the arrhythmia is coming from here, but I won't know for sure until we actually do the procedure and put the catheters into your heart.'"

By collaborating with biomedical scientists for specialized ultrasound imaging, Dr. Wan hopes to noninvasively identify the likely location of an arrhythmia and its mechanism and to shorten the procedure time for ablation in her patients. In Fall 2024, she received a 5-year NIH grant alongside principal investigators Dr. Angelo Biviano and Dr. Elisa Konofagou to deepen their investigations into a novel ultrasound imaging technique called electromechanical wave imaging and its ability to visualize the activation and mechanism of cardiac arrhythmias.

"I think what is unique about a physician-scientist is bringing what they call the 'bench to the bedside'—translating what you see in patients and then trying to find applications of what you see underneath the microscope or at the bench and how that can be transformed to meaningful treatment therapeutics for your patients," she explains.

Dr. Wan was elected as a fellow of the American College of Cardiology in 2016

An Early Commitment

Dr. Wan knew at a young age that she wanted to be a surgeon.

"I was always very adept at using my hands," she recalls.

As a child, she practiced embroidery and took pleasure in perfectly filleting a fish. She was drawn to science, even though her parents ran an art gallery.

Dr. Wan grew up in Fresh Meadows, Queens, but spent countless hours on the subway heading into Manhattan. During high school, she worked after school and summers in a lab at Rockefeller University. She researched drug-resistant bacteria and learned from her colleagues the meticulous methods and devotion that would inspire her research career.

She graduated from MIT, entered Columbia for medical school, and has never left—completing training in internal medicine, clinical cardiology, and invasive cardiac electrophysiology. As the late Anke Nolting, associate dean and executive director of development and alumni relations at VP&S, used to tell her: "Elaine, you are a product of Columbia."

"I definitely am," Dr. Wan says, "because I graduated there from the medical school, stayed there for residency, fellowship, super fellowship, and I have been on faculty for over 10 years. So I love Columbia. I am proud of Columbia and thankful for my experiences there."

A self-described "nerd," she respected her medical school classmates' diverse extracurricular and athletic interests. "I totally appreciate the reason why we needed to celebrate the diversity. Some of us ended up being orthopedic surgeons. Some of us ended up being pediatricians. Some of us ended up being radiologists or internists."

But her time at VP&S has not been without challenges. During medical school, a classmate died in a tragic accident. David Huang, her anatomy partner, had traveled to Utah with a group of medical students to celebrate finishing his STEP 1 board examinations. Several students jumped into a lake, and David drowned. Dr. Wan first believed it to be a cruel joke when another anatomy partner broke the news because it seemed so improbable. David was an athlete with no known medical conditions.

"It made us appreciate life more, the fragility of it. It just reminds us to strive to be the best we can be, like David always did, because we don't know how much time is granted to us," she said, adding, "I don't think that's the reason why I have three jobs, but it adds to an appreciation for life and trying to do our best."

Indeed, Dr. Wan does not shrink in the face of challenge, be it scientific, professional, or personal. The day before this interview, she was faced with a rare surgical case in which the patient's heart was located on the right side of the chest instead of the left, a mirror image of the norm.

"Fortunately, this was not my first rodeo," she says. Throughout her training at Columbia, Dr. Wan encountered some of the country's most complex cardiac cases.

She is also committed to creating inroads for women in medicine and female physicians in science, especially in electrophysiology. Despite increasing numbers of female physicians in the United States, only 5% of electrophysiologists are women, and 20% of states do not have a single female EP operator. Arrhythmias during pregnancy are common, and Dr. Wan believes it's important for patients to have access to female electrophysiologists.

As the mother of two young children, she brings that understanding to her pregnant patients and knows firsthand the balancing act of motherhood. Indeed, Dr. Wan made sacrifices during her own two pregnancies and postpartum to keep up with her professional demands. Never entirely on "leave," she contin-

Dr. Wan with one of her former electrophysiology fellows Dr. Salma Baksh

Electrophysiology laboratory nurses, fellows, and attendings in December 2018

ued to mentor students, hold lab meetings, and write grants after giving birth to each of her children.

"Being a woman physician-scientist is quite rare. I think that we have to acknowledge that women will continue to have success in our careers, but that there will be time points, pregnancy and postpartum, that it will likely be a little more difficult to be as successful as some others would like us to be."

Dr. Wan wants to acknowledge the challenges faced by female physician-scientists while highlighting that they are temporary in the long arc of one's career and life.

"Sometimes you just want to focus on all your accomplishments but not on the difficult times. We want younger women to stay in research, to understand that there are some difficult times, but they can be overcome."

She adds that continued institutional support for physician-scientists throughout the middle of their careers—not just for fresh graduates or tenured investigators—is critical to retention in such a demanding environment.

Atrial Fibrillation: The Golden Fleece

Ultimately, Dr. Wan stays motivated by her vision of a future in which doctors can identify who is at higher risk of developing arrhythmias and visualize where in the heart an arrhythmia is predisposed to happen, offering personalized preventive treatments.

The most common form of irregular heartbeat, atrial fibrillation, affects more than 5 million Americans per year and increases their chances of heart failure or stroke. Dr. Wan describes AFib as a "tornado in the heart. The eye of the tornado is moving around the heart. We don't know why the eye of the tornado is only moving in certain places of the heart."

Therapies for treating AFib, such as ablation with a catheter, destroy tissue in the process. Scientists have tried for decades to determine the causes of AFib, to no avail.

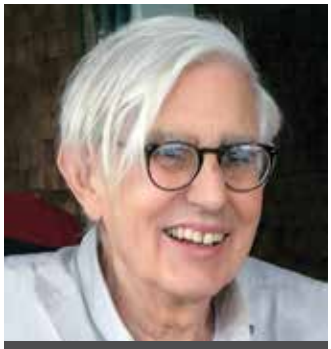
To clarify the challenge, Dr. Wan cites oncology: "Cancer is just one cell, one cell type, multiplying many times. If you can treat the cell, you can solve the problem. In AFib, we know it is not one cell or one problem—there are probably many more mechanisms that need to be targeted."

For Dr. Wan, mapping the mouse heart was just one early step in the increasingly complex investigation to determine the primary mechanisms of this prevalent heart arrhythmia.

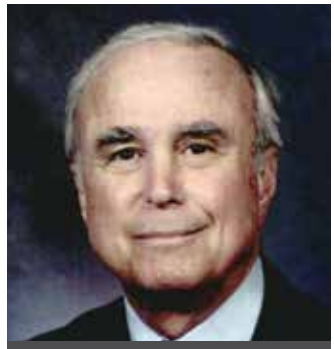
For electrophysiologists, finding the cause of AFib is the "Golden Fleece," she says—that faraway treasure of Greek myth, guarded by fire-breathing bulls and a dragon, that Jason and the Argonauts were tasked with retrieving through a long and arduous journey.

"A lot of medicine is really about the clinical trials because basic science is difficult," she says. But difficult things are worth doing. "Understanding the mechanisms of disease is important."

in memoriam



Thomas Reese'62



Spencer E. Sherman'62

FACULTY

Saundra Curry, MD, professor of anesthesiology, died Oct. 6, 2024.

Richard Deckelbaum, MD, Robert R. Williams Professor of Nutrition, Pediatrics, and Epidemiology, died Oct. 2, 2024.

Jose de Jesus Contreras, MD, clinical professor of urology, died Aug.15, 2024.

Joel Delfiner, MD, formerly associated with the Department of Neurology, died Aug. 29, 2024.

Dale Hesdorffer, PhD, professor of epidemiology in the Sergievsky Center, died Jan. 22, 2024.

Arthur Karlin, PhD, Higgins Professor Emeritus of Biochemistry and Molecular Biophysics, died Sept. 20, 2024.

Philip Lister, MD, lecturer in psychiatry, died June 22, 2024.

Carl Olsson, MD, former chair of the Department of Urology, died Oct. 3, 2024.

Susan Spear, MD, former assistant clinical professor of pediatrics, died July 30, 2024. Read more in Alumni In Memoriam (Class of 1972).

Marvin Wasserman, MD, associate clinical professor of psychiatry, died March 19, 2024.

ALUMNI

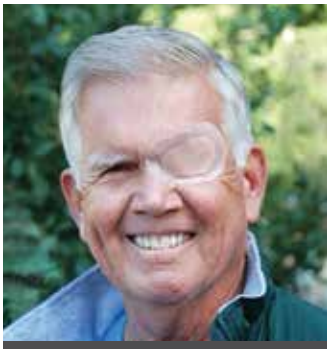
1956

Louis "Lou" Scian, an internist who practiced for many years at Suncoast Medical Clinic in St. Petersburg, Florida, died March 8, 2024. He was 92. Born in Italy, he emigrated to America as a boy, settling with his parents in Trenton, New Jersey. He attended Princeton. He completed a medical residency in Tokyo, Japan, while serving three years in the U.S. Air Force. He and his family returned to New Jersey and St. Petersburg, settling after retirement in South Carolina. Dr. Scian was an avid bridge player and football fan. He is survived by four children and six grandchildren.

1962

Thomas Reese, a world leader in structural neuroscience, died Oct. 11, 2024, at the age of 89. He spent six decades at the NIH, ultimately as a senior investigator and chief of the Section on Structural Cell Biology in the National Institute of Neurological Disorders and Stroke (NINDS) Intramural Program. He developed cutting-edge applications that fundamentally changed scientists' understanding of synapses and cells in the brain, as well as the barrier separating the brain from the bloodstream. Late in his career, Dr. Reese focused on the evolution of the nervous system. While maintaining his appointment at the NIH, Dr. Reese also set up a laboratory at the Marine Biological Laboratory (MBL) in Woods Hole, MA, to study giant axons in squid. He held a bachelor's degree from Harvard College and completed a medical internship at Boston City Hospital before joining the NIH as a research associate. He left briefly for a postdoctoral fellowship in the Department of Anatomy at Harvard Medical School in 1965. Dr Reese was elected to the National Academy of Sciences in 1987.

Spencer E. Sherman, an ophthalmologist and surgeon in New York, died July 27, 2024. He was 88. He served as a U.S. Army Medical Corps captain from 1963 to 1965. In 1970, Dr. Sherman was named chief of the Eye Department of the Hospital for Joint Diseases of New York and a consulting ophthalmologist for the United Nations. He practiced in New York for more than 53 years, serving as a clinical professor and attending surgeon in the Department of Ophthalmology at Mount Sinai School of Medicine and attending surgeon at the Manhattan Eye, Ear & Throat Hospital and Lenox Hill Hospital. He founded Manhattan Ophthalmology Associates. As one of the founders and early chairs of the Museum of Vision of the Foundation of the American Academy of Ophthalmology, Dr. Sherman donated his antique ophthalmology book collection to the museum. He also collected antique ophthalmological instruments and memorabilia, donating that collection to Alcon Laboratories in Fort Worth, Texas. Dr. Sherman enjoyed



Brent W. Lambert'65

Gordon Page Guthrie Jr.'70

Susan Spear'72

tennis and golf and was an amateur artist and enthusiastic singer. He is survived by his wife, Sue, two daughters, five grandchildren, and a sister.

1965

Brent W. Lambert, an ophthalmologist and devoted leader within his church, died July 24, 2024, shy of his 85th birthday. Born in San Francisco, he attended Harvard College and later completed his residency at Massachusetts Eye and Ear Infirmary. He also served two years in the Air Force in Biloxi, Mississippi. He lost an eye to cancer. Dr. Lambert was a devout member of the Church of Jesus Christ of Latter-day Saints, serving as bishop, stake president, and mission leader. After retiring in Naples, Florida, he decided in 1997 to start an entrepreneurial project, the Ambulatory Surgical Centers of America, and developed over 70 surgical centers throughout his career. He ultimately settled in Salt Lake City. Dr. Lambert is survived by his second wife, Christie, four children, four stepchildren, 34 grandchildren, and 12 great-grandchildren.

1966

John McDowell Wolff, an internist specializing in endocrinology and metabolism, died June 11, 2024, at age 83. He had Alzheimer's disease for nine years. He was born in Atlanta, Georgia, and attended Vanderbilt University. He remained in New York City for his internship and residency at Bellevue Hospital before taking a role with the Communicable Disease Center's Epidemic Intelligence Service in 1968. He returned to New York City in 1970 for his second year of residency at Harlem Hospital Center and later completed a fellowship in endocrinology at Vanderbilt University. He was on the medical staff of Piedmont Atlanta Hospital from 1974 until his retirement in 2013. He served as a designated medical practitioner for Canadian and Australian immigration, a role he appreciated for its interaction with intellectuals and scientists. Dr. Wolff was a member of the American College of Physicians, the Endocrine Society, the Medical Association of Atlanta, and the Medical Association of Georgia. He enjoyed nature, running, reading American history, and classical music. Dr. Wolff is survived by his wife, Ellen, two children, three step-children, and three step-grandchildren.

1970

Gordon Page Guthrie Jr., known for his research in diabetes, hypertension, and cardiovascular disease, died May 28, 2024. He was 79. Born in New York City, he attended Yale University and completed his residency at Mount Sinai Hospital in New York City. He completed a fellowship at the McGill University School of Medicine in Montreal. Afterward, Dr. Guthrie joined the faculty of the University of Kentucky College of Medicine, where he became chief of endocrinology. He later practiced at Baptist Health in Lexington. He authored the medical textbook "Hypertension and the Brain." Possessing a quiet demeanor, Dr. Guthrie was an excellent golfer, accomplished pilot, and skier and enjoyed spending his time tending to his farm and garden. He is survived by two children, two grandchildren, and his beloved border terrier, Ozzie.

1972

Susan Spear, a pediatrician, hospital administrator, and affordable housing advocate, died in Wellfleet, Massachusetts, on July 30, 2024, after fighting metastatic breast cancer for ten years. She was 78. Dr. Spear earned a degree in political science from Wellesley College in 1968. She completed her residency in pediatrics at Columbia, followed by a fellowship in adolescent medicine, and worked at Mount Sinai Hospital before opening a private practice in Tenafly and later Teaneck, New Jersey. In 1992, she became an executive at Columbia's Presbyterian Hospital and helped facilitate the merger with Cornell to become NewYork-Presbyterian Hospital. She later worked as an executive for EHE Health, a preventive health care company. She and her husband split their time between New York City and Wellfleet, Massachusetts, where Dr. Spear was deeply invested in the town's community, cultural, and civic life. She served on the board and executive committee of Wellfleet Preservation Hall, helped establish the annual "Taste of the Town" fundraiser, supported Habitat for Humanity, and served on the Wellfleet Local Housing Partnership.

in memoriam

Sharon Grundfest-Broniatowski'73

Sean Elliott'93

Since 2020, she enjoyed joining her husband on flights with their Cessna 172. She is survived by her husband, Ron, two children, and four grandchildren.

1973

Sharon Grundfest-Broniatowski, an esteemed surgeon at the Cleveland Clinic, died June 17, 2024. She was 76. She graduated from the Massachusetts Institute of Technology, where she studied electrical engineering, and later completed her internship in general surgery at Roosevelt Hospital. She then pursued training in colon and rectal surgery at Cleveland Clinic, where she became an attending physician in 1982. Dr. Grundfest-Broniatowski broke barriers in fields dominated by men to make significant contributions to colorectal surgery, general surgery, and pancreas transplantation. She started the pancreas transplant program at Cleveland Clinic and developed extensive experience in breast disease, hernia repair, and minimally invasive surgery. She served as associate professor of surgery at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. Her board certifications included the American Board of Surgery and the American Board of Colon and Rectal Surgery. She was an accomplished concert pianist. She was interested in genealogy and spoke several languages. Her hobbies also included birdwatching and astrophotography. She is survived by two children and five grandchildren.

1983

R. Alexander Blackwood, a faculty member in the University of Michigan's Division of Infectious Diseases in the Department of Pediatrics for 33 years, died April 1, 2024. He was 68. Born in New York City, he earned his bachelor's, master's, and MD/PhD at Columbia. He completed a pediatric residency at Columbia and a fellowship at the University of California San Francisco. At Michigan, he was the faculty lead for the Office for Health Equity and Inclusion's Leaders and Learners Pathways Program and the IRB vice chair for human subjects. Dr. Blackwood was instrumental in exposing high school and premedical students to medical careers, particularly those from underserved and disadvantaged backgrounds, and helping them gain qualifications to apply for and succeed in medical school. He was a cherished mentor to many faculty members at Michigan. Dr. Blackwood and his wife attended Oakwood church for 30 years. One of his favorite sayings was "GGYB" or "God's got your back." He is survived by his wife, Nicole, four children, and eight grandchildren.

1988

Kenneth Joseph Powers, a urogynecologist who served the Bronx for 26 years at Montefiore Medical Center, died June 9, 2024, at his home in San Rafael, California. He was 66. Born in Louisville, Kentucky, he attended the University of Chicago. He trained in family medicine before specializing in urogynecology. Besides spending time with family, nothing gave him more pleasure than sailing on the Long Island Sound or San Francisco Bay. It was Dr. Powers' wish that his body be donated to UCSF. He is survived by his wife, Chris, three children, four grandchildren, and six siblings.

1993

Sean Elliott, a pediatrician, infectious disease specialist, and professor emeritus at the University of Arizona College of Medicine–Tucson, died May 19, 2024. He was 56. Dr. Elliott attended the University of Chicago and completed his residency at Northwestern University School of Medicine before completing a fellowship in pediatric infectious diseases at St. Louis Children's Hospital at Washington University. He was recognized three times for excellence in teaching in the clinical sciences and received multiple accolades for humanism in medicine, reflecting his commitment to the holistic well-being of the patients and families he served. He joined the University of Arizona in 1999 and served in multiple leadership roles, most recently as assistant vice president for curricular affairs. He was an avid musician, runner, and artist through carpentry. He taught himself the guitar and formed a band named Jammin' with Jelly. He is survived by his wife, Kim, and a daughter.

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White Coat Ceremony Welcomes New Medical Students

The 139 members of the VP&S Class of 2028 gathered in August for the White Coat Ceremony, where they were welcomed into the profession and cloaked in white coats by faculty members.

"Keep your minds and hearts open, because you never know what's going to happen," said James J. O'Connell, MD, president of Boston Health Care for the Homeless and assistant professor of medicine at Harvard Medical School, who delivered the Fern Feldman Anolick-Gold Foundation Lecture. "You'll be invited into the most intimate times in your patients' lives, when they are most distressed and most need someone to listen to them. It's a great privilege and a great honor."

Photos by Michael DiVito