

Columbia Medicine

Columbia University Vagelos College of Physicians and Surgeons

SPRING/SUMMER 2026

Paging 'Dr. ChatGPT'

Navigating the nuanced realities of patient-chatbot interactions

Somatic Mosaicism

Exploring the role of acquired genetic changes in a wider range of diseases



A New BLUEPRINT for Alzheimer's

Columbia scientists are approaching this complex disease from every angle

Dear Readers,

As dean of VP&S, I feel very lucky to have a front-row seat to the remarkable work unfolding across our community.

Each day, our physicians, scientists, and staff come together to advance education for students and to further medicine in ways that seemed unimaginable even a decade ago. Health care is a field defined by constant change, and today the pace of innovation feels especially rapid, propelled by new technologies and a deeper understanding of human biology that allow for more personalized and effective care. A critical component of the VP&S Strategic Plan is to harness the potential of these changes to drive discovery and to create tomorrow's clinical model.

In this issue, you will learn about VP&S faculty who are attacking Alzheimer's disease from every angle—identifying distinct subtypes, uncovering molecular pathways, and developing targeted therapies that move beyond a one-size-fits-all approach. You will read about somatic mosaicism: surprising genetic variations that open the door to more precise diagnoses through expanded genetic screening. And you will become more familiar with the rapidly evolving role of artificial intelligence in health care. As more patients use AI tools to seek medical guidance—sometimes out of necessity in the face of limited access—providers are navigating both the promise and the complexity of these interactions. Alongside these forward-looking stories, you will have the chance to reflect on VP&S's history through a photo essay of medical student notebooks from the 1800s—a reminder of how far we have come, and how curiosity and dedication have long guided us.

As our VP&S community continues to make exceptional strides on campus, I hope these stories inspire you to share in this work as ambassadors—helping to advance our trailblazing medical school and the broader progress of science and medicine.

All my best,



Katrina Armstrong, MD

Dean



Columbia **Medicine**

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Katrina Armstrong, MD

Dean of the Faculties of Health Sciences and the Vagelos College of Physicians and Surgeons

Vanita Gowda

Chief Communications Officer

Address correspondence to:

Editor

Columbia Medicine

Vagelos College of Physicians and Surgeons

630 W. 168th St.

New York, NY 10032

Email: columbiamedicine@columbia.edu

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.

↘ *send letters to:*

Editor

Columbia Medicine

Vagelos College of Physicians and Surgeons

630 W. 168th St.

New York, NY 10032

Email: columbiamedicine@columbia.edu

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YANG XIAO

VP&S Enacts New Vision for PhD Student Education

Spurred by a \$175 million gift in 2023 from Roy’54 and Diana Vagelos, the Vagelos Institute’s Biomedical Research Education (VIBRE) PhD Programs are creating a new academic model to give PhD students greater freedom and to support the intellectual risk-taking needed to make historic advances in health science research.

The VIBRE PhD Programs will launch in the fall of 2026, unifying previous doctoral programs at VP&S. VIBRE spans three programs—Biomedical Life Sciences, Biomedical Informatics, and Neurobiology and Behavior. The new Biomedical Life Sciences program includes the following tracks: Biochemistry,

Biophysics, and Structural Biology; Cancer Biology; Cell and Molecular Biology; Computational Biology; Disease and Therapeutics; Genetics; Immunobiology and Microbial Sciences; Metabolism and Nutrient Biology; Stem Cell Biology; and Systems Biology.

“Graduate programs in the life sciences have evolved over time by layering new initiatives on top of an existing structure. It is rare to have the opportunity to step back, view the system in its entirety, and thoughtfully reconsider how graduate education should be designed and structured for today,” says Hashim Al-Hashimi, PhD, associate dean for biomedical graduate education at VP&S, who spearheaded

the implementation of changes envisioned by the graduate school task forces.

VIBRE brings together doctoral programs that were previously separate under a shared umbrella, creating a large, connected community of students and faculty. Each program and disciplinary track is guided by an interdepartmental training committee composed of faculty from across departments who oversee admissions, curriculum, and mentoring. The goal is to create a more personalized, student-driven experience that gives students both deep disciplinary expertise and broad cross-disciplinary exposure, empowering them to follow their curiosity and pursue transformative discoveries.

4 New Department Chairs at VP&S

Since October 2025, four new chairs have been appointed at VP&S across the basic science and clinical departments. Bringing deep experience and dedication to their new roles, Gwyneth Card in neuroscience, Ojas Shah in urology, Emile Bacha in surgery, and Harris Wang in systems biology have been warmly welcomed to the leadership team.

“Each of these individuals brings remarkable talent and vision as clinicians, researchers, and educators. I am confident that their leadership will not only advance our departments of neuroscience, urology, surgery, and systems biology, but also enrich our entire academic community and the next generation of physicians and scientists we are privileged to train,” said Katrina Armstrong, MD, dean of VP&S.



Harris Wang, Chair of Systems Biology

Harris Wang, PhD, was appointed chair of the Department of Systems Biology in February. Dr. Wang is professor of systems biology, pathology and cell biology, and biomedical engineering, and had served as interim chair of systems biology since September 2023. Having joined Columbia in 2013 as a founding faculty member

of the department, he is widely recognized for his pioneering work in synthetic biology, focusing on advancing next-generation microbiome and cellular therapeutics through systems and synthetic biology approaches. A Biohub investigator and a fellow of the American Institute for Medical and Biological Engineering, Dr. Wang is the recipient of the Vilcek Prize for Creative Promise in Biomedical Science and the National Science Foundation Faculty Early Career Development Program (CAREER) award.

Andrea Califano, Dr, who served as founding chair of the Department of Systems Biology from 2013 to 2023, is continuing as the Clyde’56 and Helen Wu Professor of Chemical Biology (in Systems Biology).



Emile Bacha, Chair of Surgery

Emile Bacha, MD, became chair of the Department of Surgery at VP&S and surgeon-in-chief of NewYork-Presbyterian on Jan. 1. Dr. Bacha is the Roth Salzhauer Family Professor of Surgery, and since 2010 has served as chief of the Division of Cardiac, Thoracic, & Vascular Surgery at NewYork-Presbyterian/CUIMC and director of congenital and pediatric cardiac surgery at the NewYork-Presbyterian Congenital Heart Center. A leader in both pediatric and adult con-

genital and pediatric cardiac surgery at the NewYork-Presbyterian Congenital Heart Center. A leader in both pediatric and adult con-

genital cardiac surgery, Dr. Bacha has dedicated his distinguished career to expanding therapies and improving outcomes for some of the most complex cardiac conditions.

Craig Smith, MD, who served as chair since 2010, is continuing as the Johnson and Johnson Distinguished Professor in the Department of Surgery and the Valentine Mott Professor of Surgery.



Gwyneth Card, Chair of Neuroscience

Gwyneth Card, PhD, assumed the role of chair of the Department of Neuroscience in October 2025.

Dr. Card joined Columbia in 2022 as associate professor of neuroscience and principal investigator in the Mortimer B. Zuckerman Mind Brain Behavior Institute, and as an investigator at the Howard Hughes

Medical Institute. Her work focuses on the sensory, motor, and brain cells that underlie movement in animals—specifically, fruit flies—to uncover universal principles about movement and how animals decide on a course of action. She previously served as a group leader at the Howard Hughes Medical Institute’s Janelia Research Campus.

Steven Siegelbaum, PhD, who served as chair since 2009, will continue in his role as professor of neuroscience and pharmacology.



Ojas Shah, Chair of Urology

Ojas Shah, MD, was appointed chair of the Department of Urology at VP&S and urologist-in-chief at NewYork-Presbyterian/CUIMC in October 2025. Dr. Shah had served as interim chair since September 2024. An internationally recognized expert in the medical and surgical management of patients with urinary

stone disease, Dr. Shah’s clinical and research interests include surgical and metabolic treatments of kidney stone disease, minimally invasive urologic surgery, upper urinary tract urothelial carcinoma, ureteral strictures, ureteropelvic junction obstruction, and ureteral/renal reconstructive surgery. After joining Columbia in 2015, Dr. Shah was appointed vice chair of the Department of Urology in 2023. He was previously an associate professor of urology and the director of the Endourology and Stone Disease Program at New York University Langone Medical Center and served as chief of urology at Bellevue Hospital.

Dr. Shah succeeds James McKiernan’93, who is CEO of ColumbiaDoctors and senior vice dean for clinical affairs at VP&S.



VP&S Students Travel to Albany

On Feb. 10, a contingent of 23 students from CUIMC schools, including VP&S, traveled to Albany to deepen their understanding of the New York state legislative process and advocate for health policies they personally value. During “Albany Day,” students met with more than half a dozen assembly members and state senators and several other officials, including Chloe Coffman, senior policy adviser for health to Gov. Kathy Hochul, and James V. McDonald, New York state commissioner of health.

Before the trip, all students attended mandatory training on advocacy and developed a series of policy advocacy documents. In Albany, the students presented their positions to elected officials, representing themselves and not the institution, on topics ranging from the New York Health Act to mental health response to reproductive health. Some students arranged their own meetings with elected officials, and many attended the Legislature’s annual budget hearing on health spending and policy.

“When students step into the halls of the Capitol not as spectators, but as advocates, democracy grows stronger,” said New York

state Sen. Robert Jackson, who hosted the Columbia group. “I was proud to welcome these future physicians, nurses, public health leaders, and dental professionals as they engaged directly in the legislative process. Their preparation, their clarity, and their courage to speak remind us that policy is not abstract—it shapes lives.”

A third-year medical student at VP&S, Frances Morris, said Albany Day was “an invaluable opportunity,” and added: “It was inspiring to see how accessible elected officials and the legislative process can be. The experience left me feeling empowered to advocate for patients and motivated to integrate advocacy into my future career.”



EILEEN BARROSO

Class of 2026 Celebrates Match Day

On March 20 in the Hudson View Room at 50 Haven Ave., 135 fourth-year VP&S medical students opened the envelopes containing their match letters and learned where they will continue their medical training after graduation.

The most popular residency matches were internal medicine (25%), neurology (8%), psychiatry (8%), and anesthesiology (7%). About a third of the class elected to stay at Columbia, said Salila Kurra, MD, associate dean for student career development at VP&S. “I think that says a lot about the quality of their experiences here as medical students.”

Dr. Kurra, who helps guide every VP&S student through the match process, said this year was particularly gratifying. “We had a 100% match year, so everyone has firm plans for their next step.” And, Dr. Kurra added, “I know this group. Wherever their residencies take them, they will be wonderful ambassadors for Columbia.”

Andrew Lassman Takes on New Role as Vice Dean of Clinical Trials



Andrew B. Lassman, MD, has taken on a newly formed role as vice dean of clinical trials at VP&S. Dr. Lassman, professor of neurology, will continue in his current roles as vice chair for clinical research in the Department of Neurology, chief of the Division of Neuro-Oncology, and associate director for clinical trials at the National Cancer Institute-designated Herbert Irving Comprehensive Cancer Center (HICCC).

In his new role, Dr. Lassman will further develop and support VP&S’ infrastructure for clinical trials, both at HICCC and across new areas. With Dr. Lassman’s leadership, VP&S aims to expand and optimize its clinical trial footprint to position Columbia as a premier site globally for scientifically impactful and medically meaningful clinical trials.

CUIMC Brings Science to Life for Curious Kids

Over a thousand elementary schoolkids learned about stem cells, brains, bacteria, and more at CUIMC's second annual Curious Minds Science Zone, an outdoor science extravaganza for local third-through sixth-graders.

Under the guidance of more than 50 faculty, staff, and student volunteers, students looked at their own cells under a microscope, measured their muscles' electrical activity, practiced surgical suturing, and learned how to use stethoscopes to listen to their hearts beat, among other activities.

The event was hosted in fall 2025 by the VP&S Office of Student Diversity, Inclusion, and Belonging in collaboration with the Office of Academic and Community Partnerships, as well as the Stem Cell Initiative.

"At CUIMC, we believe that science and medicine should feel accessible to every child in our community," said Monica Lypson, MD, vice dean for education at VP&S. "Bringing local students onto our campus for hands-on experiences not only shows them that they can see themselves as future scientists, health



professionals, and innovators, it shows our community—and our learners—VP&S and CUIMC at its best."

The event was one of many community youth engagement initiatives offered at VP&S. This summer, students will gain hands-on experience through the Summer Youth Employment Program at CUIMC, exposing them to the possibilities of a health science career.

Department of Psychiatry Receives \$10M to Launch the Dr. Herbert Pardes Scholars Initiative

The **Essel Foundation Inc.** made a transformational gift of \$10 million to the Department of Psychiatry to establish the Dr. Herbert Pardes Scholars Initiative—an ambitious new program designed to support the careers of outstanding junior faculty members as they develop into leaders in the field of psychiatry.

The initiative will provide flexible supplementary support for 25-30 exceptional assistant professors in the department. Scholars will receive critical resources that enable them to pursue bold lines of research, launch pilot studies, and develop the foundation for future federal funding and academic advancement.

The initiative is a meaningful tribute to the legacy of Herbert Pardes, MD, and his lifelong contributions to mental health and academic medicine. Dr. Pardes (1934-2024) served as chair of the Department of Psychiatry (concurrently serving as director of the New York State Psychiatric Institute) and as vice president for health sciences at Columbia and dean of the Faculty of Medicine at VP&S, before joining NewYork-Presbyterian as president and CEO. The Essel Foundation is the family foundation created by Steve and Connie Lieber, long-standing friends of Dr. Pardes and benefactors of the Department of Psychiatry.

News in Brief

Michel Sadelain, MD, PhD, was elected to the National Academy of Medicine for pioneering studies spanning more than 25 years that laid the groundwork for CAR-T cell immunotherapy for cancer and for advancing its clinical application. Dr. Sadelain is the director of the Columbia Initiative in Cell Engineering and Therapy and the Herbert and Florence Irving Professor of Medicine. He was also awarded a BBVA Foundation Frontiers of Knowledge Prize in Biology and Biomedicine and a Lifetime Achievement Award from the Stanford Cardiovascular Institute for his pioneering research in cell therapy.

Mustafa Aydogan, PhD, and **Vikram Gadagkar, PhD**, have been selected as 2025 Freeman Hrabowski Scholars by the Howard Hughes Medical Institute. Freeman Hrabowski Scholars are outstanding early-career faculty who have the potential to become leaders in their research fields and to create lab environments in which everyone can thrive. Dr. Aydogan, assistant professor of genetics and development, investigates the fundamental principles of biological time control in animal development, metabolism, and disease. Dr. Gadagkar, assistant professor of neuroscience, investigates how brains evaluate behaviors, both self-generated and the behaviors of others, by studying the courtship songs of birds with state-of-the-art computational, theoretical, and experimental approaches.

Yiping Han, PhD, was elected a fellow of the American Association for the Advancement of Science. Dr. Han is professor of microbial sciences in the College of Dental Medicine and professor in the departments of Microbiology & Immunology, Obstetrics & Gynecology, and Medicine at VP&S. Dr. Han's pioneering discoveries have revealed that oral bacteria are not confined to the mouth and can have impacts on other parts of the body, potentially causing gastrointestinal cancer and preterm birth.

Clinical *advances*

The Inspire device consists of a stimulating cuff that is implanted in the neck and a battery that is placed in the chest

COURTESY OF COLUMBIA SURGERY

Hypoglossal Nerve Stimulator Implantation for Sleep Apnea Gains Popularity By Adam Peterson

The Columbia sleep surgery program is helping more patients achieve quality sleep, thanks to an implantable technology that keeps the tongue from getting in the way of a good night's rest. Inspire therapy is the first Food and Drug Administration (FDA)-approved device to treat moderate to severe obstructive sleep apnea (OSA) using hypoglossal nerve stimulation.

"It's essentially a pacemaker for the tongue," says Yi Cai, MD, assistant professor and director of sleep surgery. "Because it's an implanted therapy, it can be much easier to manage than other common treatment options."

First approved in 2014, Inspire has been gaining popularity as a viable alternative to continuous positive airway pressure (CPAP). The latest model is significantly smaller and more streamlined, making it easier to implant and tolerate.

A Vital Need

For people with OSA, the tongue falls back during sleep, blocking the airway. In addition to causing snoring, the blockage restricts oxygen flow to the brain, periodically triggering the body to wake up and breathe.

Because this cycle happens repeatedly throughout the night, people with OSA have difficulty getting quality sleep. They often experience

daytime fatigue, irritability, forgetfulness, or inability to concentrate. Over time, OSA increases the risk of high blood pressure, congestive heart failure, stroke, heart attack, metabolic disease, and dementia.

OSA affects millions of Americans; studies suggest that as many as 84 million adults in the United States live with this condition, with most cases going undiagnosed.

The Status Quo

Ironically, the most common treatment for sleep apnea may contribute to poor sleep quality in some patients. CPAP requires a patient to wear a mask over their nose and/or mouth. The mask is connected by a hose to a machine that creates a pressurized column of air that keeps the airway open during sleep.

Unsurprisingly, many people find this arrangement awkward and difficult to use.

"CPAP can work for some people, but it can be very uncomfortable for others," says Dr. Cai. "Half of the people trying CPAP ultimately can't use it as a long-term solution. In fact, patients must have tried and failed CPAP to be a candidate for Inspire."

A Different Approach

The Inspire device consists of a stimulating cuff that is implanted in the neck and a battery that is placed in the chest. The device is

controlled by an external remote and delivers gentle pulses to the tongue and airway muscles to keep the airway open. Data sent to an app allow the care team to monitor device performance and refine the treatment over time.

“It’s a same-day procedure that takes about two hours, including anesthesia time, and people usually report some soreness at the incision sites afterwards for a week or two,” says Dr. Cai. “It’s a simple and relatively low-pain recovery compared to other procedures in the field.”

In addition to having tried and failed CPAP, patients must have a body mass index of less than 40 and undergo a sleep endoscopy, a sedated exam that allows the surgical team to see how the airway collapses.

“If it collapses in a circular pattern, then they’re not a candidate for Inspire,” says Dr. Cai. “They also need a sleep study showing that they have moderate to severe sleep apnea. This isn’t for mild cases.”

Expanding Options

The therapy class for hypoglossal nerve stimulation is growing. A second device that delivers bilateral therapy and does not require an implanted battery, the Genio, was approved by the FDA in August 2025. Meanwhile, a third device, the aura6000, received premarket approval in March. Patients will soon have more treatment options than ever.

“So many of my patients report that they can function much better in life because of this device,” says Dr. Cai. “When I first meet them, they’re falling asleep in the waiting area or even falling asleep when we’re about to perform a sleep endoscopy; they’re falling asleep before we’re putting them to sleep! So I’d love to spread awareness that there are other options beyond CPAP. For so many people, we’re able to fix this issue for them.”

For more information, contact the Columbia sleep surgery program at sleepsurgery@cumc.columbia.edu or 646-317-3176.

First US Program for Robotic Liver Surgery in Children By Lindsay Gandolfo

Pediatric liver surgery is among the most complex and delicate procedures in modern medicine—and a new chapter is unfolding that combines thoughtful surgical expertise with groundbreaking robotic technology. As the first program in the United States performing robotic liver surgery in children, Columbia’s Robotic Liver Surgery Program is redefining the pediatric surgical landscape.

Robotic surgery is an advanced version of laparoscopy, providing 10x magnification and 3D depth perception, which is critical for delicate dissection and suturing. “We still use small laparoscopic incisions, but the robotic arms and enhanced camera allow us to perform complex operations with a minimally invasive approach that’s as safe and precise as open surgery,” says Jason Hawksworth, MD, chief of hepatobiliary surgery and director of the Robotic Liver Surgery Program.

Columbia started using robotic techniques for pediatric patients in the summer of 2023, beginning with small tumors localized on both sides of the liver, as well as bile duct surgery. The team is now

moving to major liver resections for larger tumors, even malignant tumors.

“Also, patient selection expanded,” says pediatric transplant hepatologist Mercedes Martinez, MD. “We began with children over 15 kilos, and then 10 kilos, and now babies less than five kilos.” The youngest patient so far has been a 2-month-old, she adds.

Whether a tumor is benign or malignant is a decision branch point for choosing a minimally invasive approach. Malignant tumors involving vasculature still require open surgery. “If there’s a blood vessel that needs to be reconstructed, that’s very difficult to do minimally invasively,” says Dr. Hawksworth. But those cases are the exception. “For the vast majority, we can offer the robotic approach.”

Benefits for Patients and Families

When a family is referred to Columbia, they often first see Dr. Martinez and her team, who explain the diagnosis and introduce the idea of surgery, which is always overwhelming. “We begin laying the foundation: This will be minimally invasive, the scar will be small, the recovery will be shorter,” says Dr.

Martinez. Tumors are extracted through a small incision below the waistline. “Our outcomes are excellent—even better than when we did open surgery in some cases. That helps families feel informed and empowered to move forward.”

Looking Ahead

In data presented at a recent international meeting in Korea, the team reported no difference in complications or cancer outcomes compared with open surgery. “But we did see shorter hospital stays, significantly lower narcotic use, and less postoperative pain,” says Dr. Hawksworth.

While broader adoption of the robotic approach seems likely, it will take time due to the rare combination of expertise—pediatric, transplant, and robotic surgery—it requires. “Very few teams have this combination of skills and resources,” says Dr. Hawksworth. “Like everything we do, we’ll move slowly and safely, methodically.”

For more information, contact 212-305-0914 or visit columbiasurgery.org/liver/robotic-liver-surgery-program-columbia.

The moments
and milestones
that shaped
a class

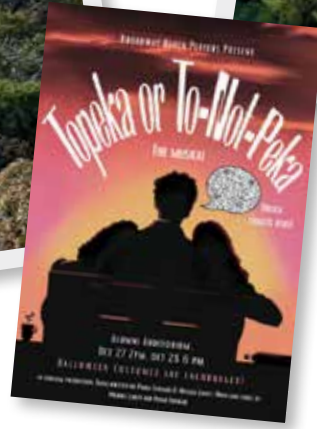
the Yearbook



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CLASS OF 2026

As the newest crop of VP&S doctors moves from Match Day and graduation onto their next chapter, *Columbia Medicine* commemorates their four years on campus by spotlighting milestones, celebrating student life, and sharing the personal reflections that will stay with them.

1. A hike held by the Physicians and Surgeons Outdoor Orientation Program
2. "Topeka or To-Not-Peka," a student-written musical performed in 2023
3. White Coat Ceremony at The Armory in 2022
4. Running the NYC Marathon
5. BALSQ Jazz Mixer, a fundraiser hosted by the Black and Latino Student Organization
6. Match Day celebration in March
7. Steven Z. Miller Student Clinician's Ceremony
8. Kayaking around Manhattan
9. Students playing in a Coffeehouse performance



5



6



7



Juan Baltazar



Simran Chand



Caroline Chen



Kensington Cochran



Nadia Goldberg



Ryan Leone



Elisha "Eli" Pinker

WHAT CLASS ACHIEVEMENT MAKES YOU MOST PROUD?

What makes VP&S unique is the well-rounded people who cheer each other on at marathons or dance performances, who never miss a birthday, who are always down to giggle and laugh, who are willing to be a shoulder to cry on, and who are the most genuine people. I am so proud to be a graduate with the Class of 2026.

— *Simran Chand, matched to Obstetrics & Gynecology, New York-Presbyterian/Columbia University Irving Medical Center*

I'm most proud of how my class continued to show up as advocates and activists during an especially challenging political moment. Throughout medical school, many of us stayed engaged in the issues that shape patients' lives, even while navigating the intensity of medical training. It isn't the easiest time to enter medicine, but being surrounded by such smart and passionate classmates has been motivating.

— *Nadia Goldberg, matched to Pediatrics, Rush University Medical Center*

HOW DO YOU HOPE YOUR CLASS WILL IMPACT THE WORLD?

As health care disparities continue to widen, social medicine is more important than ever. I hope we can all incorporate socially conscious care into our practices, from family medicine to orthopedic surgery.

— *Juan Baltazar, matched to Orthopedic Surgery, NYP/CUIMC*

I'm hopeful that our class can balance the demands of clinical medicine—caring for patients and families directly—with the ever-growing responsibility of physicians to be leaders and advocates for public health, policy change, systemic improvements, and trust in science.

— *Ryan Leone, matched to Emergency Medicine, Brooke Army Medical Center*

WHAT'S ONE LESSON YOU'RE TAKING WITH YOU?

One thing that VP&S gave me that no curriculum could is the experience of learning alongside people whose backgrounds and perspectives were nothing like my own.

— *Elisha "Eli" Pinker, matched to Internal Medicine, NYU Grossman School of Medicine*

I began to appreciate what a gift it is to be in a room full of smarter people—whether amongst peers, working with a more senior clinical team, or sitting with a patient with a wealth of lived experience.

— *Kensington Cochran, matched to Neurology, NYP/CUIMC*

To be the best physician, best human, and best ____ you can be—whether that's being a runner, singer, dancer, painter, writer, thinker, team player, or just a positive force. Being well rounded is what makes us better physicians and better people.

— *Simran Chand*

One of the biggest lessons I'll carry forward is the importance of compassionate care—making sure each patient feels truly heard, seen, and valued.

— *Caroline Chen, matched to transitional year, Memorial Sloan Kettering Cancer Center; Dermatology, NYP/CUIMC*

WHAT WOULD GO IN A CLASS OF 2026 TIME CAPSULE?

Hilltop iced coffee.

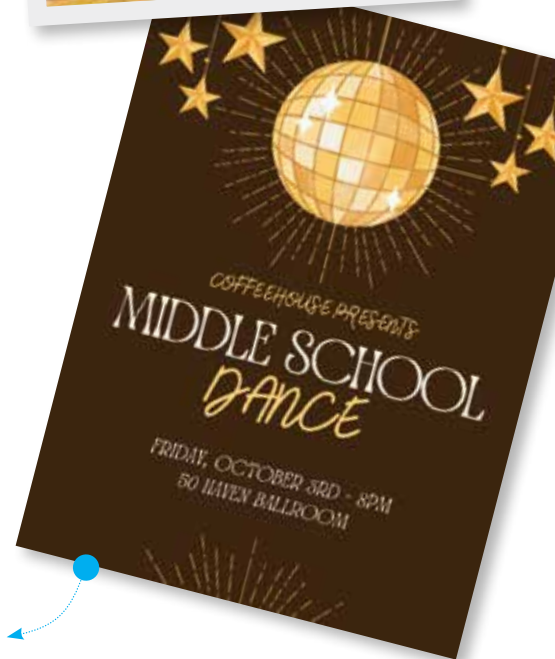
— *Elisha "Eli" Pinker*

Six 5-gallon water jugs duct-taped together from Dr. Barasch's nephrology lectures.

— *Kensington Cochran*

A Coffeehouse flyer.

— *Simran Chand*



Approaching Alzheimer's from every angle, Columbia scientists are finding unexpected inroads to this complex disease and seeking the paths to new treatment possibilities.

By Sarah C.P. Williams

When Connie Walterscheidt sent her family a “Happy Mother’s Day” text on Valentine’s Day in 2017, her sister Debbie Gritz couldn’t just shrug it off. Debbie and Connie, then 53, had worked side by side as phlebotomists at the Oklahoma Blood Institute for two decades. Lately, Debbie had noticed Connie making careless mistakes and forgetting how to use lab equipment.

“Connie had spent all these years being top-tier at work, and then suddenly she was really struggling,” says Debbie. “It was hard to watch.”

Shortly after the Mother’s Day text, Debbie encouraged Connie to talk to a neurologist. Later that year came the diagnosis: early-onset Alzheimer’s.

For Debbie and sister Vickie Elmer, Connie’s disease was just the beginning. Despite no known family history of Alzheimer’s, their easygoing father, Leon, received the same diagnosis a few months later.

“We all knew there was something wrong with Dad, but we had put it off to old age,” recalls Vickie. “Once Connie was diagnosed and we learned more about what Alzheimer’s looked like, we realized we should get him tested.”

Then, their mother, Ruby, started showing the same symptoms and, ultimately, received the same diagnosis.

“It hit us like dominoes,” Debbie says. “Full force.”

For the two healthy sisters, the experience was overwhelming.

“Connie was the hardest. She wasn’t herself anymore,” Debbie says. “She became belligerent, angry, and very vocal and hurtful toward us.”

Until their sister’s death in 2024 and their parents’ deaths in 2021 and 2023, Debbie and Vickie—along with one of Connie’s daughters—became full-time caretakers. At the same time, they began to worry about their own futures, their children, and the 34 great-grandchildren that Ruby and Leon left behind.

“We were walking in there blind when Connie and our parents were diagnosed,” Vickie says. “If it shows up in us, I want to know early and I want the rest of our family to at least have an inkling of what to do.”

So they turned to VP&S researchers, joining a family study that tracks people at high risk for Alzheimer’s. When their father passed away in

A New BLUEPRINT for Alzheimer’s

Illustration by Keith Negley // Photographs by Jörg Meyer

A New BLUEPRINT for Alzheimer's

2023, they donated his brain to the study. But so far, they have few answers; their family has none of the genetic variants currently known to be associated with Alzheimer's.

"The known risk genes only explain around half the genetic contribution to Alzheimer's," says Christiane Reitz, MD, PhD, a neurologist and genetic epidemiologist who works with families like Debbie and Vickie's. "There's much more to be discovered."

That lack of answers for so many individuals and families is driving a fundamental shift in Alzheimer's research. At Columbia, scientists are no longer betting everything on a single, simple explanation for the disease. Instead, they're attacking it from many angles: probing the genetics of the disease, asking questions about the immune system's role, analyzing millions of brain cells to understand when and how damage begins, and studying why some people's brains resist disease.

The work is pointing toward a complex picture. Alzheimer's likely has many causes that differ from person to person, which means it will require many different treatments. Basic research must uncover each of those triggers and reveal how they work.

"You're not going to fix something unless you know what's fundamentally broken," says Scott Small, MD, director of Columbia's Alzheimer's Disease Research Center (ADRC). "I think now we're getting closer to that. The field is becoming more optimistic."

MOVING PAST AMYLOID

For a short time in the 1980s, Alzheimer's researchers thought they had the disease figured out. Pathologists had observed that most people who died of Alzheimer's had clumps (called plaques) of a sticky protein called amyloid beta clogging up their brains. At the same time, neurologist Peter St George-Hyslop, MD, discovered that some patients had mutations in the amyloid precursor protein (APP) gene—the very gene that produces amyloid protein. It all seemed to be pointing to one common thread: Amyloid plaques in the brain were causing Alzheimer's.

"We immediately oversimplified things," admits Dr. St George-Hyslop, now the Belle and Murray Nathan Professor of Neurology at Columbia. "We thought that was it."

But Dr. St George-Hyslop and others soon found that the APP mutation was relatively rare, and that amyloid plaques in the brain didn't always correspond directly with dementia symptoms. More recently, drugs that clear amyloid plaques from the brain have shown only modest benefits for Alzheimer's patients.

"There's no question that amyloid plaques are bad. But we're coming around to the idea that amyloid is the smoke, and the fire is what's going on inside neurons," says Dr. Small. "If you want to intervene, you can't just clear the smoke; you have to put out the fire."

To find out what else contributes to Alzheimer's, researchers at VP&S continue to probe the genetics of the disease. Gene variations that make a person more likely to develop Alzheimer's not only point toward ways to gauge people's risks, but also help to explain what can go wrong to trigger the disease.

"Genetics is one of the most direct ways of finding out what the underlying problem is," says Dr. Reitz.

THE GENETIC FOUNDATION

Richard Mayeux, MD, chair of the Department of Neurology and one of the field's most prominent genetic epidemiologists, has spent more than 35 years building the infrastructure to ask increasingly complex questions about what causes Alzheimer's. In 1992, he established the Washington Heights-Inwood Columbia



RICHARD MAYEUX AND CHRISTIANE REITZ

Aging Project, which continues to track aging and dementia in thousands of families in Northern Manhattan.

He also leads the National Institute on Aging Alzheimer's Disease Family Based Study, which follows 2,500 families around the country—including Debbie and Vickie's—that are affected by the disease. The approach: Find genes that appear only in affected family members, never in healthy relatives.

"We've taken a very restrictive approach in finding these gene variants," Dr. Mayeux explains. "To meet our criteria, a variant had to be present in every affected individual in a family, and in nobody in the family who doesn't have the disease."

The Columbia team has been at the forefront of the field for a long time, says Dr. St George-Hyslop, who joined the University in 2022. "We have made many of the critical discoveries on the genetics and biology of Alzheimer's and related diseases, including the discovery of and characterization of genes that have been game changers for the field because they shed light on the basic processes of the disease." These include the genes for APP, which is cleaved to create the sticky peptides that form the amyloid plaques; PSEN1 and PSEN2, enzymes that cleave APP; and SORL1, which helps control the trafficking of APP to sites where it is cleaved.

“There’s no question that amyloid plaques are bad. But we’re coming around to the idea that amyloid is the smoke, and the fire is what’s going on inside neurons.”

Turning to more diverse populations than ever before is helping to reveal new genes associated with Alzheimer's. Dr. Reitz has carried out studies around the world to find genes that might be more prevalent in underrepresented populations. In 2013, she revealed that ABCA7—a gene that has a minor influence on Alzheimer's risk in European whites—is the second-strongest risk factor in African Americans. In 2024, she identified MPDZ, another gene that increases risk specifically in people of African ancestry. She's now co-leading a large National Institutes of Health-funded initiative recruiting participants from Africa, South America, and underrepresented U.S. populations.

"You can't just take a variant in a gene that's found in one ethnic group and assume it will work the same way in another ethnic group," says Dr. Reitz. "You need to actually do the work in different populations."

Down the road, what's found in one population could have ripple effects for everyone with Alzheimer's, even those who don't share the same genetic backgrounds.

By following people over decades, tracking families at risk of Alzheimer's, and turning to new populations, Drs. Mayeux and

Reitz and colleagues have uncovered a list of rare variants in genes, and many have already pointed toward a few key systems that go wrong in the brain in Alzheimer's disease: inflammation, the movement of proteins between cells, cholesterol metabolism, and how molecules are broken down and recycled.

With Dr. Small at the helm, the Columbia ADRC focuses on two of those areas: the immune system's role in Alzheimer's, and how the molecular recycling program in brain cells goes awry with the disease.

IMMUNE BETRAYAL

As the gene list grew, a pattern emerged. Genes like CD33 and TREM2 weren't involved in making or processing amyloid. Instead, they were unique to microglia, the brain's immune cells. Dr. St George-Hyslop's group played a key role in discovering such genes and dissecting how they contribute to the disease.

"The Alzheimer's field was for a long time solely focused on neurons, which are the primary cells that die during the disease," says Philip De Jager, MD, PhD, chief of neuroimmunology. "But neurons are in an environment that is defined and supported by other cells including immune cells."

Microglia, together with astrocytes, are supposed to be the brain's support and cleanup crew. When bacteria or viruses invade, microglia attack. After a stroke or trauma, they sweep away dead cells and help reestablish connections. When Alzheimer's screens started turning up genetic variation in microglia genes, Dr. De Jager wanted to know how the cells were involved in the disease.

In a project spanning the last five years, Dr. De Jager analyzed 1.6 million brain cells from more than 400 donors at different stages of Alzheimer's disease. His team identified different types of cells that appear at different points in the progression of disease: One type of microglia accumulates early with amyloid plaques, another shows up alongside clumps of a protein called tau, and a subtype of astrocyte emerges only before cognitive decline.

"If different types of microglia and astrocytes are doing different things at different times, we can't just take any Alzheimer's patient and stimulate all these cells at once to treat the disease," Dr. De Jager explains. "There might be points in the sequence of disease-related events where we want to turn down their activity instead, or only stimulate one very particular subtype of microglia or astrocyte."

Dr. De Jager is now following up on the nuances between astrocyte and microglia types that appeared in his study. Since each brain represents only one single snapshot in time, his team is modeling how groups of immune cells change over time to create a more dynamic picture by considering the 400 brains simultaneously. Then he wants to know whether blocking just one type of cell might stop the progression of cognitive decline.

Andrew Teich, MD, PhD, a neuropathologist at Columbia, has taken a complementary approach to studying how immune signals in the brain change throughout the progression of Alzheimer's. Working with Guy McKhann, MD, a neurosurgeon at Columbia, they recognized a unique opportunity to study brain tissue from

A New BLUEPRINT for Alzheimer's

Alzheimer's patients early in their disease. Dr. McKhann is an expert in the treatment of a particular type of cerebrospinal fluid buildup in the brain—normal pressure hydrocephalus (NPH)—that affects aging patients. NPH is treated by placing a brain “shunt,” a tube that drains the spinal fluid to another part of the body. Columbia is one of the first centers to routinely biopsy the brain at the time of shunt replacement to examine pathology in NPH patients, who sometimes have early-stage Alzheimer's changes, independently from their hydrocephalus.

“It was a perfect opportunity to look at the early inflammatory responses in Alzheimer's disease,” Dr. Teich says. “We usually only have the chance to see brains postmortem at the very end stage of disease.”

The biopsies not only had expected signs of disease, like amyloid plaques and tau tangles, but also changes to immune mol-

ecules. High levels of YKL-40—a molecule produced by astrocytes and microglia during inflammation—were predictive of disease-associated changes in these cell types, suggesting YKL-40 could serve as an early biomarker of how these processes play out in at-risk individuals. Drs. Teich and McKhann are following up on the role of the molecule in the progression of Alzheimer's.

Together, the findings show that Alzheimer's involves a cascade of changes in the brain: Immune cells switch their behavior, produce inflammation, and trigger the brain's destruction. But the immune system isn't the only culprit. Other genes pointed toward a fundamental problem inside neurons themselves.

WHEN THE BRAIN'S RECYCLING SYSTEM BREAKS

Among the genes Dr. Mayeux's team discovered through family studies was SORL1, which is involved in how cells recycle proteins. In parallel, by asking why Alzheimer's starts where it does in the brain, SORL1 and the recycling system it regulates emerged as an answer. Since then, Drs. Small and St George-Hyslop and other researchers have been investigating how SORL1 dysfunction leads to disease.

Dr. Small's work focuses on a structure inside cells called the endosome—a sorting center where cells decide what molecules to recycle, what to break down, and what to send back to the cell surface. Dr. Small worked out the details of how SORL1 is needed to help proteins exit the endosome. When the gene for SORL1 is faulty, proteins get stuck inside.

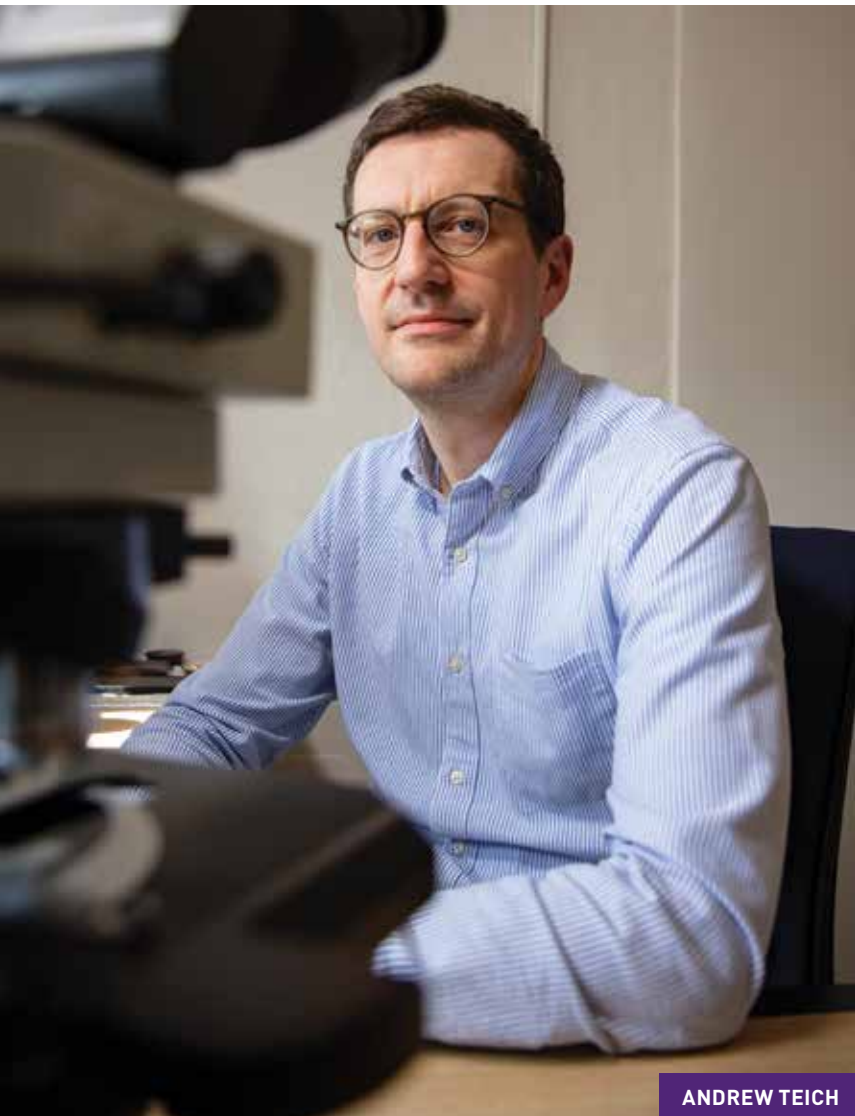
That traffic jam happens first in cells in the entorhinal cortex, one of the earliest brain regions affected by Alzheimer's. Dr. Small's lab discovered why: This region has high levels of cellular trafficking because it's one of the most hyperconnected areas in the brain.

“This part of the brain is effectively Grand Central Station,” Dr. Small says. “Imagine if you block all the exiting trains. You get chaos.”

When the recycling system breaks down, neurons themselves stop working. At the same time, microglia—which also need SORL1 to function properly—can't respond normally to the neuronal damage, accelerating disease progression. Dr. Small calls it “a double whammy.”

Dr. Small co-founded a company developing compounds to restore the endosome's function. But he's also still solving a fundamental genetics puzzle: SORL1 has around 500 variants, and scientists still don't know which ones truly cause dysfunction.

“Ultimately, we want clinicians to be able to test which gene for SORL1 someone has and use that to assess their risk of Alzheimer's or guide what treatment



ANDREW TEICH

might work,” Dr. Small says. “First, we have to figure out which variants are important.”

MULTIPLE DISEASES, MULTIPLE SOLUTIONS

The dozens of genes linked to Alzheimer’s tell a story of complexity. Each person likely has a different combination of genetic vulnerabilities—some with immune problems, some with cellular recycling failures, and others with both, or another problem entirely. Ultimately, each molecular error converges on the same outcome: neurons that degenerate, causing dementia.

“Until a few years ago, we were focused on Alzheimer’s as a unitary disease. It turns out it’s not,” says Dr. Mayeux. “My suspicion is that the heterogeneity explains why we have so many different genes and none of them are clear right now.”

The realization echoes what happened in cancer research. Doctors no longer end their diagnosis at “lung cancer”—they identify molecular subtypes and treat each differently.

“If someone says, ‘I have lung cancer’ or ‘I have heart disease,’ there are lots of different types,” Dr. Mayeux says. “Those fields have moved forward by focusing on signatures that tell you, ‘This is the type of lung cancer you have,’ and then develop specific treatments for each subtype. We’re not there yet with Alzheimer’s, but that’s where we’re headed.”

The idea that there are many converging causes for Alzheimer’s means that different research approaches aren’t competing—they’re complementary.

“There are a lot of good ideas that are not mutually exclusive,” says Dr. Teich. “I don’t think we’re in a situation where somebody’s going to win and everyone else is wrong. I think there are a lot of people playing different musical instruments, now realizing we’re part of the same orchestra.”

The goal of each researcher is to make Alzheimer’s a disease that can be screened for, caught early, and treated so it doesn’t progress.

“Sooner or later, when we go see our annual primary care provider, we’ll not only be testing for cholesterol and diabetes, but also for Alzheimer’s,” Dr. Small predicts.

HOPE FOR PATIENTS

The timeline of basic research—unraveling how individual molecules within brain cells work together to protect against damage or to trigger dementia—is slow. But the pieces are coming together.

“We’ve gone from not knowing anything about the disease to having simplistic ideas to now beginning to understand how these things come together,” Dr. St George-Hyslop says. “As you see more pieces of the puzzle, it’s easier to solve the rest of it.”



SCOTT SMALL AND PHILIP DE JAGER

“Until a few years ago, we were focused on Alzheimer’s as a unitary disease. It turns out it’s not.”

For families like Debbie and Vickie’s, the research represents more than scientific progress. Participating in Columbia’s family studies connects them to educational resources and caregiver support groups.

“My team establishes direct connections to the communities we work with,” explains Dr. Reitz. “For a lot of these families—especially those with many people affected—they really don’t know where else to get help.”

Debbie and Vickie say they’ve gotten some relief from the support and knowledge gained through their Columbia study. But, without answers about why their sister and parents developed Alzheimer’s, they remain on edge.

“We worry for our kids—not only that they’ll have to take care of us, but what if they develop it even before us? The not knowing is hard,” says Debbie.

For them, and other families affected by Alzheimer’s disease, the answers, tests, and new treatments can’t come quickly enough. ❖

As personal use of AI for health care grows—and new tools such as ChatGPT Health continue to emerge—providers are navigating the realities of patient-chatbot interactions.

Paging 'Dr. ChatGPT'

In November 2022, our world began to experience a transformative technological advancement. It was marked by the launch of a generative artificial intelligence (AI) chatbot called ChatGPT that rapidly spread around the planet, reaching over 100 million people in just two months. Two and a half years later, ChatGPT had over 700 million users each week, representing around 10% of the global adult population.

This number, and other use metrics, continues to grow. Generative AI tools like ChatGPT have quickly become embedded in all aspects of our lives, changing our relationships to information, each other, and even ourselves. According to a January 2026 report from OpenAI, the developers of ChatGPT, over 40 million people worldwide use ChatGPT for health-related queries alone every day.

Timothy Crimmins, MD, associate professor of medicine, chief medical information officer at Columbia-

Doctors, and lead of the AI at VP&S Clinical Workgroup, isn't surprised at its booming popularity in the health care space. "My assumption is that my patients are using publicly available AI tools." But, he says, "I do wish it worked differently."

The rapid pace of technological advancement and deployment leaves users to navigate these new, unregulated spaces as they're created, and patients and providers alike are still just beginning to understand the many benefits—and consequences—of this transformation.

A Band-Aid for a Broken System?

Dr. Crimmins, a cardiovascular disease physician, is one of countless providers in the U.S. whose patients have used online resources to educate themselves about their health since the widespread adoption of the internet in the 1990s and early 2000s.

Some do so out of curiosity, while others do so out of necessity.

**By Amanda
Rossillo, PhD**



Health care deserts have become increasingly common as local, physician-led practices are absorbed by regional and national health systems, especially in rural areas. Even for those who are geographically near providers, some specialties have yearslong waitlists. And that's to say nothing of the financial and emotional burdens of seeking and receiving treatment; health insurance is its own inscrutable black box.

This Kafkaesque system often leaves patients feeling overwhelmed, frustrated, and invisible. According to Gallup, 70% of Americans believe the health care system has "major problems" or is "in a state of crisis."

Heedeok Han, MD, a nephrologist and assistant professor of medicine at VP&S, believes using alternative solutions that are free, fast, and available 24/7 is a natural response. "There's a reason why patients turn to the internet, and it's because providers are inaccessible. If the health care system could allow for better access to medical teams, patients might turn to online resources less often."

For decades, search engines have been the tools of choice. As of April 2025, 71% of Americans used search engines like Google or Bing to answer their health questions, according to data from the University of Pennsylvania.

These tools are limited in scope by design, relying on preset algorithms to return lists of webpages based on user-specified keywords. Finding, interpreting, contextualizing, and appropriately acting on the

“With the tools that are now available, we should expect that our patients are getting second opinions through AI. They’re fact-checking notes that we create, reports that we generate, test results that we release.”

information requires levels of digital and medical literacy that users don't always have.

"About five years ago, I got a colleague and myself matching mugs that say, 'Please do not confuse your Google search with my medical degree,'" says Andrew Eisenberger, MD, a hematologist and associate professor of medicine at VP&S. "It's not enough to just have the knowledge. We've trained for many, many years and know how to differentiate high- and low-quality evidence, how to synthesize it, and how to integrate it into clinical practice."

But what would happen if a platform could possess some of these skills? This once-hypothetical technology, which became a reality essentially overnight in November 2022, is now being used to manage physical and mental health in ways that Google can't.

Dr. ChatGPT

Many generative AI tools are powered by large language models (LLMs). These models are trained on massive amounts of text, image, audio, and video data to understand, summarize, generate, and predict human language. Many chatbot-style platforms can search the internet, analyze document attachments, follow instructions, reason, provide recommendations, and ask follow-up questions.

ChatGPT even has "memory": Users can specify preferred output styles and personal information to be stored and accessed in future chats.

Though some more advanced features require a paid subscription, the free versions are incredibly powerful on their own and continue to improve. Several studies have shown that ChatGPT-3.5 and ChatGPT-4 can pass U.S. and U.K. medical licensing exams, with ChatGPT-4 performing better than medical students over 75% of the time.

Dr. Crimmins believes the timing is critical. As LLMs become more advanced and accessible, so too has access to an important source of input: health information that was once restricted to care providers.

A decade ago, he says, doctors weren't required to release visit notes to their patients. A few years later, they were legally obligated to do so within two weeks. Today, patients must receive access to the notes as soon as they're available.

"We've reached a new inflection point in this continuing trend of empowering patients with their own information," he says. "And with the tools that are now available, we should expect that our patients are getting second opinions through AI. They're fact-checking notes that we create, reports that we generate, test results that we release—even uploading diagnostic images."

The data bear this out. According to OpenAI's report, three out of five Americans have used AI tools for health or health care purposes in the last three months. The most common uses include checking or exploring symptoms, understanding medical terms and instructions, and learning about treatment options. Notably, users send 1.5 million to 2 million messages per week concerning health insurance alone to understand their coverage, handle claims, and more.



Timothy Crimmins

LLMs also have the potential to help patients manage chronic conditions that require a strict diet, such as Type 1 diabetes, says Nina Suda, MD, an endocrinologist at Columbia's Naomi Berrie Diabetes Center and assistant professor of medicine at VP&S.

"These patients need to know exactly how many carbs they're eating so they can match their insulin to their carb intake, but some of them struggle with counting carbs," she says. "It's very complicated to interpret nutrition labels, determine serving sizes, and calculate how much insulin you need." To ease this burden, in certain circumstances, she's recommended that some of her patients take photos of what they're eating to let AI help count the carbs and provide added decision support for their insulin dosing, which can be especially useful if they're eating out and can access AI platforms from their mobile devices.

Michael Carollo, PsyD, a clinical psychologist and assistant professor of medical psychology at VP&S, believes that AI chatbots could be useful for patients seeking mental health support for problems that affect planning and executive functioning, such as ADHD and major depression.

"ChatGPT can theoretically help people overcome task paralysis by providing a tangible starting point," he says. Whether it's for writing a cover letter or creating a meal plan, "it presents a place for people to build upon, though it shouldn't be taken at face value." He's also seen clients use it to help navigate interpersonal challenges by uploading text message conversations and asking for feedback.

Dr. Carollo believes that much of the appeal in using LLM-based chatbots for psychological support lies in the conversation-style format. "There's something about the back-and-forth dynamic that mimics an office

visit,” he says. “It serves as another party in the interaction. However, it lacks the dynamic nature of a trained provider and shouldn’t replace in-office therapy.”

It can be dangerous when patients leave their providers out of the loop altogether. Dr. Han, a polycystic kidney disease expert, recalls one patient who used ChatGPT when she started experiencing symptoms of low sodium. The patient provided the chatbot with a list of her current medications, and it alarmingly recommended stopping one that could have this side effect. The patient followed the recommendation, and her sodium levels had stabilized by her next visit.

Dr. Han’s patient stopped her medication without checking with him, only informing him after the fact. If ChatGPT had been wrong in that case, he says, it could have been bad.

“A lot of patients don’t want to bother us, but I encourage them to message me with questions as they come up,” he says. “Even if it adds a little more to my plate, it doesn’t take long to look at a message and tell them to stop that medication.”

The Role of Trust in Care

There’s something inherently vulnerable about revealing physical and mental health struggles to AI chatbots. Patients may feel empowered by being actively involved in their health and well-being, but the chatbots themselves can consequently hold immense sway over patients urgently seeking answers, relief, or support.

“I call this the ‘moth-comes-to-the-flame effect,’” says Dr. Eisenberger. Patients feel a sense of control when their experiences are validated, even when a suggested diagnosis may not be accurate or a course of treatment may go against a clinician’s advice.

Dr. Crimmins shares his concerns: “We don’t know what AI sources or tools patients are using, and, therefore, we don’t have a way to score the validity of the information they’re getting.”

This phenomenon is similar to using Google, but generative AI platforms are much more powerful: Their personalized, human-like responses can reinforce beliefs more strongly than search engines can, especially with enough prompting.



“With AI tools, the context of the questions is so important,” says Dr. Suda. “Patients might not know how to ask questions correctly, may intentionally feed the model false information, or even repeatedly rephrase questions to get a certain answer.” ChatGPT in particular is known for responding with what users want to hear.

Jason Liebowitz, MD, a rheumatologist and assistant professor at VP&S, notes that the tone of the responses also matters. “Responses from ChatGPT tend to sound very authoritative and objective, especially compared to Google results.”

Together, these features can have serious consequences for patients with thought disorders such as bipolar disorder or schizophrenia, says Dr. Carollo.

Since November 2022, there have been dozens of reports of AI-induced psychosis in which various platforms have validated and reinforced delusional thinking. Some of these interactions have led to homicides and suicides.

These tragic cases are part of a broader documented pattern whereby LLMs excel at understanding factual medical information but fail at both recognizing when users are in crisis and providing appropriate actionable interventions, underscoring the continued need for human oversight.

Dr. Eisenberger believes that relationships grounded in trust are a critical counterweight. “My job is to help my patients understand that I have their best interests in mind and the knowledge and experience to guide them,” he says.

This is especially important for people who distrust or are not familiar with the medical system, he says. “People come to me feeling scared, especially when there’s a language barrier involved. By speaking to my patients in Spanish, I can meet them where they are, walk them through it, and build rapport that chatbots can’t establish.”

The Future of AI in Health Care

Patient use of generative AI chatbots is raising urgent ethical and legal questions at the intersection of health care, liability, accountability, and technological innovation.

How are these models using patients’ personal health information? At what point should platforms encourage users to consult a health care provider or seek emergency treatment? Who is responsible when patients use these tools and make harmful decisions based on the output?

“I cannot imagine a future in which patients and doctors are not using AI technologies more and

more,” says Dr. Liebowitz. “It’s not a matter of if we should do it, it’s how. How can we all use these tools in a responsible and helpful way?”

To build a sustainable path forward in which AI serves as a supplement to health care, rather than an imperfect replacement, implementing regulations and guardrails is critical. But the legal system moves slowly, leaving the health care technology industry to address these issues from a technological standpoint as they arise.

In January 2026, OpenAI announced a new initiative called ChatGPT Health: a secure online space where users can upload their medical records and third-party fitness data to discuss their health and wellness.

Created with input from physicians, ChatGPT Health aims to help users “navigate everyday questions and understand patterns over time” to “feel more informed and prepared for important medical conversations.”

“I cannot imagine a future in which patients and doctors are not using AI technologies more and more. ... How can we all use these tools in a responsible and helpful way?”

However, while the waitlist is currently open to users in the United States, ChatGPT Health already appears to exhibit the very shortcomings that prompted its creation. Researchers conducting a “stress test” of the platform found that it undertriaged more than half of the cases presented to it, including “missed high-risk emergencies and inconsistent activation of crisis safeguards,” as reported in *Nature Medicine*.

Dr. Crimmins anticipates that AI will continue to become more integrated into health care delivery, so providers and patients need to use due diligence in using it safely—especially while the technology is still being improved.

“We need AI tools that are well vetted with high levels of oversight, and we should aim patients toward those as they develop. And just like when using any other resource, patients should still validate everything with their care team,” he says.

Innovation and cumulative progress are fundamental for improved health care. While this shift toward generative AI tools represents a major advancement in the field, it won’t be the last. “There can be a lot of anxiety when something’s unknown,” says Dr. Han, “but if we can accept, learn, and adjust, we can all grow from it.” ❖


The Dusan Bogunovic lab closely analyzes cells from patients with genetic conditions to understand how disease severity is influenced by cells' decisions about which copy of a gene to express.



We Contain

By Alan Dove

Multitudo



On a spectrum of strange
to stranger, the surprising
genetic revelations of
somatic mosaicism are
reshaping the way we
think about diseases—
and opening doors to
new levels of accuracy in
diagnosis and treatment.

Multitudes
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A

patient walks into a doctor's office with symptoms of an inherited disease, but the diagnosis doesn't add up. According to a quick genetic test, they lack the mutation that's supposed to cause the condition, which also developed later in life than it should have. What's going on?

Traditionally, these cases would be lumped under labels such as "idiotypic" or "unknown etiology." However, as genome sequencing and gene expression profiling have gotten cheaper and faster, researchers have found a surprising new explanation: somatic mosaicism.

Genetics textbooks describe the genome as a single blueprint, and many of us grew up learning that every

cell in our body (sperm and eggs excepting) contains the same genome. But that's turning out to be more of a starting point. Somatic mutations accumulate as cells divide, even during embryogenesis, and are well-known triggers for cancer development. But recent discoveries show that acquired genetic changes are more common than previously believed and may also drive many more diseases never thought to have genetic underpinnings.

"If you are considering a variant that occurred at a certain point in a person's development, that variant could be isolated to cells in the brain, or it could be isolated to a person's germline, in sperm or egg, in which case it might not impact that person at all—but it might impact their future children," says Jennifer Posey, MD, PhD, chief genomics officer at CUIMC and associate professor of pediatrics and medicine.

No One Is Immune

For doctors unaccustomed to thinking about genetic disease, recent findings on somatic mosaicism may come as a shock.

Jason Liebowitz, MD, a rheumatologist and assistant professor of medicine at VP&S, had that experience in 2020, when a team at the National Institutes of Health (NIH) published their discovery of VEXAS, a new inflammatory condition caused by mutations that appear in some blood stem cells. "VEXAS was a landmark paradigm shift in the way we think about a disease that arises due to somatic mutations and has features that look like our classical autoimmune diseases," says Dr. Liebowitz.

Patients with VEXAS often present with odd constellations of autoinflammatory symptoms. Without sequencing the affected blood cells (not all possess the mutation), physicians struggle to diagnose them. Dr. Liebowitz points to a patient his team saw recently: Though her initial symptoms resembled lupus, she went on to develop features of spondyloarthritis and vasculitis. "Now this was starting to be weird. Why would this person have features of many different distinct autoimmune conditions that don't typically swim in the same pool?" says Dr. Liebowitz.

Sequencing her blood cells' DNA, however, suggested a VEXAS diagnosis. "Ten years ago, we would've tried to fit her into one of our clinical boxes, but now we have a molecular diagnosis for her, and it is going to inform her treatment and what we can offer her," says Dr. Liebowitz, who now advocates for widespread genetic testing in medicine. "I'm definitely incorporating genetic sequencing more and more into my daily practice. Sometimes it's leading



Jennifer Posey

to a specific diagnosis, sometimes not, but it's still worthwhile," he says.

Deeper genetic testing, including performing genome sequencing and testing multiple cell types, could also help researchers find better explanations for the heterogeneity of some autoimmune diseases. While many, such as rheumatoid arthritis, have clear disease courses, others remain frustratingly variable. Lupus, for example, can cause anything from a mild rash and joint pain to multiple organ failure. "Lupus feels strongly like a disease where we've grouped a large heterogeneous group of patients in one bucket, but maybe genetics will help us tease apart the many subtypes," says Dr. Liebowitz.

Clear diagnoses can also be deeply meaningful to patients, he adds. "The number one question patients have for rheumatologists is 'Why did I develop this disease to begin with, and why now?'" Somatic mosaicism may provide answers.

Better diagnoses, in turn, should lead to more targeted therapies. Dr. Liebowitz points to oncology as an example, where treatments tailored to the genetics of a patient's tumor are proving far more effective than older, more general chemotherapies. "In rheumatology, we have these very broad-based immunosuppressive regimens that very non-specifically suppress the immune system," says Dr. Liebowitz. "If there's a genetic disease that really affects one pathway, you can either develop new drugs or use existing drugs and target that specific pathway."

An Ever-Expanding Mosaic

Mosaicism itself isn't a new discovery; geneticists have long known of examples such as calico cats, whose patchwork coats come from the random inactivation of X chromosomes. Recently, however, new DNA and RNA sequencing tools are showing that the phenomenon is much more widespread than previously thought.

"We are not universally good at detecting somatic mosaicism, especially when we don't know to suspect it," says Dr. Posey, who is also chief of the Division of Clinical Genetics in the Department of Pediatrics. "I think it explains far more than we realize."

The NIH and other research agencies have started ramping up efforts to plumb the depths of somatic mosaicism, with large consortia now enrolling participants for extensive genetic testing. "They're doing sequencing in multiple different tissue types so they can really understand: OK, if we compare blood to skin to another tissue, what are the variants that we're observing, and which variants are specific to a particular tissue?" says Dr. Posey.



Jason Liebowitz

“Lupus feels strongly like a disease where we've grouped a large heterogeneous group of patients in one bucket, but maybe genetics will help us tease apart the many subtypes.”

Those projects should help to reveal the scope of somatic mosaicism, but scientists are also probing the diversity of its effects. "You could have a very damaging variant that's present in 1% of cells and that has no impact on health; you could have another, less damaging variant that's present in 5% of cells, and that could be enough to push against the threshold of disease," says Dr. Posey. Specific mutations will likely have different critical thresholds for causing disease, which may also vary in different tissues; a mutation that's harmless in skin might be deadly in cardiac muscle.

Understanding the impacts of somatic mutations will also require more basic genetics research. Most

human protein-coding genes still have unclear or unknown roles in health and disease, and even well-characterized genes can fail in multiple ways. Dr. Posey adds that because gene products work in concert, some mutations may only matter in the context of variations in other genes: “Most likely, the mosaic variants across the genome interact with one another, collectively shaping the clinical features observed in that individual.”

Though much of that research will take years to bear fruit, Dr. Posey is already working to bring a more nuanced understanding of genetics to patients. As one of the leaders of the NIH-funded GREGoR Consortium (Genomics Research to Elucidate the Genetics of

Rare diseases), she hopes to find better ways to diagnose and treat genetic conditions. “What we’re really looking at is how do we go beyond the current standard of care and think about how to get families a better genetic or molecular diagnosis?” she says.

Products of the Past

Somatic mutations also present a major challenge for one of the hottest technologies in regenerative medicine: induced pluripotent stem cells (iPSCs). Over the past two decades, researchers have discovered and refined techniques for “reprogramming” fully differentiated cells, such as fibroblasts, to turn back their developmental clocks. The reprogrammed cells resemble embryonic stem cells and can then be induced to differentiate into other tissues.

In principle, iPSCs derived from a patient’s own cells could be used to generate replacement tissues, or even organs, that could then be transplanted back into the patient without triggering immune rejection. “My group has been interested in whether or not that process would carry along any mutations that those individual cells accumulated on their way to becoming your skin or your blood or even your brain,” says Kristin Baldwin, PhD, professor of genetics and development.

The answer turns out to be “yes,” and Dr. Baldwin’s team has been characterizing the extent and potential impact of those mutations. “There is no avoiding this; they will be there,” she says. “So, present efforts are screening through the mutations that we know are very bad, and I think in the future, people will basically look at the whole genome and have a book of variations that are harmful and things that are neutral.”

Besides screening for dangerous mutations, iPSC developers may also be able to avoid them in the first place, by picking the right somatic cells to reprogram. “If you knew which cells in your body had the fewest mutations, I think that would be a great place to start,” says Dr. Baldwin. She adds that “some people are using umbilical cord blood, which should have a lower number of mutations.” Others have proposed using cells that differentiate early in development and don’t divide, such as neurons. But both cell types are hard to obtain.

Fortunately, Dr. Baldwin’s lab has discovered a surprising source of low-mutation cells that’s more widespread: old blood stem cells. The finding arose when the group was studying the blood of healthy centenarians. “As you might guess, you get more and more mutations as you age, but then we saw at about 80, the number went down again, and we didn’t know why,” says Dr. Baldwin. Her lab then



Kristin Baldwin

realized that as people age, their blood comes from smaller populations of stem cells, reducing the number of potential mutation sources.

That finding hints at one of the other challenges of diagnosing conditions driven by somatic mosaicism: finding the right cells to sequence. “If you’ve got someone with strong symptoms and the blood doesn’t tell you that the gene is there, you might want to do a follow-up of a broader set of their tissues,” says Dr. Baldwin.

Transcriptional Mosaicism

As strange as the new data on somatic mosaicism may seem, the field is poised to get even stranger. Besides accumulating random mutations, cells may also make independent decisions about which copy of a gene to express. The phenomenon, called autosomal random monoallelic expression, is turning some long-standing assumptions about genetics on their heads.

Every biology student learns that each cell in our body (except sperm and eggs) contains two copies of each gene, one from each parent, and each copy plays an equal part in the cell. That’s why Dusan Bogunovic, PhD, professor of pediatric immunology in the Department of Pediatrics, was so surprised when he analyzed gene expression in cells from a patient with one mutant copy and one wild-type copy of a critical gene.

“We expected to see about 50% of the RNAs from the mutant gene and 50% from the wild-type gene, but all the RNA we found came from the mutant gene,” he says.

To determine whether that was a general phenomenon, he and a team of collaborators profiled gene expression in a set of immune cells from 10 healthy New Yorkers. They found that those cells had inactivated either the maternal copy or the paternal copy of about 5% of their genes. “That means that some cells in your body can be more Mom and less Dad, or vice versa, depending on which copies are inactivated,” says Dr. Bogunovic. “To make things even more complicated, the inactivated copies differ from cell to cell and can perhaps change with time.”

The researchers did a similar analysis in several families with different genetic disorders affecting their immune systems and found that the disease-causing allele was more likely to be active in sick patients and suppressed in healthy relatives with the same gene.

“We don’t see a preference for immune genes or any other class of genes, so we think this phenomenon can explain the wide variability in disease severity we see with many other genetic conditions,” says Dr. Bogunovic. “This could be just the tip of



Dusan Bogunovic

“Some cells in your body can be more Mom and less Dad, or vice versa, depending on which copies are inactivated.”

the iceberg.” His lab is now studying the mechanisms behind selective gene inactivation, with an eye toward finding ways to redirect it to suppress expression of the undesirable copy of a gene.

In addition to testing for somatic DNA mutations, physicians may soon be ordering tests for RNA expression patterns to characterize the full extent of a patient’s illness—paving the way for whole new approaches to naming and treating disease.

“I think that more and more, we’re going to move from clinical diagnoses to molecular diagnoses,” Dr. Liebowitz says. “And then I think there will be a huge shift to developing new medications or applying existing medications in a much more targeted way.” ❖

A NOTEWORTHY GALLERY

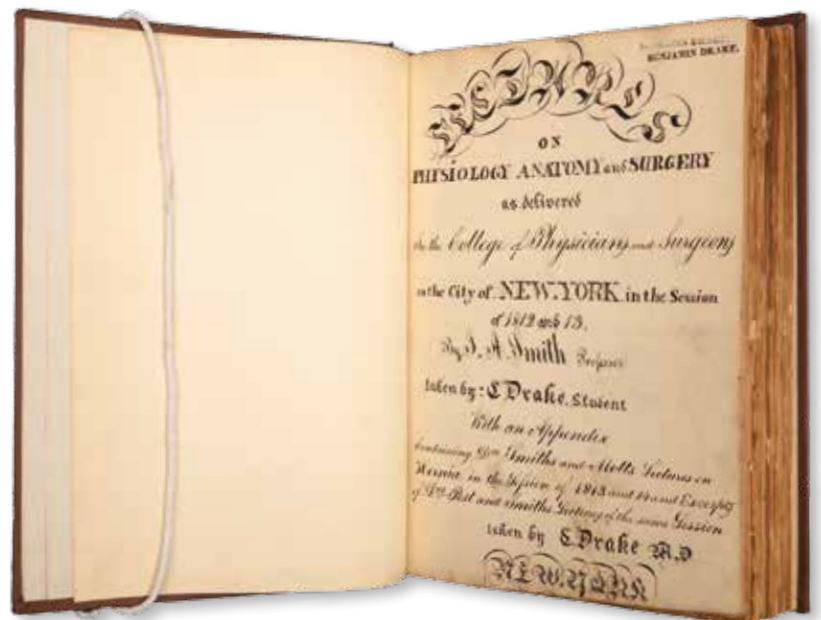
HIGHLIGHTS FROM 200 YEARS OF COLLEGE OF PHYSICIANS AND SURGEONS STUDENT NOTEBOOKS

By The Editors and Archives & Special Collections staff

From detailed accounts of infectious disease lectures to irreverent doodles of faculty members, student notebooks provide a candid glimpse into centuries of classroom life, as well as a unique record of the evolving field of medicine.

Dating from 1774 to 1964, some 175 notebooks recorded by Columbia's medical, dental, nursing, and pharmacy students are preserved by Archives & Special Collections at the Augustus C. Long Health Sciences Library. The collection includes treasures such as notes on emerging medical theories, illustrations of case studies, and the renowned names of medical trailblazers.

The Archives team opened its notebook collection to *Columbia Medicine*, revealing some of the most cherished pages recorded by past College of Physicians and Surgeons students.



Lectures From Founding Faculty

This elaborate title page is the work of student Charles Drake (P&S' 1812), who would later serve the College as a trustee from 1820 to 1832. He was recording the lectures of Dr. John Augustine Smith, who was one of the original faculty members at the opening of the College of Physicians and Surgeons in 1807 and would serve as president of P&S from 1831 to 1843.



Cirrhotic Liver shown at Clinic representing
1. Perihepatitis 2. Characteristic Granules.
3. Disproportionate size of Left Lobe.

...of antiseptic ... as already said ...
... for the condition of the stomach ...
... the patient in the early stage of the ...
... disease. The main point in treatment should be to neutralize ...
... stimulating food particularly to strictly forbid the use of ...
... alcoholic liquor. The forms of carbonic acid water containing ...
... sodium bicarbonate are beneficial to the ...
... stomach and alkaline carbonates are beneficial to the ...
... stomach especially if there is a tendency to haemorrhoids ...
... to the same class of diseases it is hardly to take anything ...
... from the medicinal diet (food or drink) of the patient which ...
... the joints will appear some of benefit for there is now no ...
... longer hope to check the disease for the neoplasmic connection ...
... of the liver has already so characteristically ...
... the possibility of its ever expanding again so as to reduce ...
... to the treatment of symptoms only for the patient and not to ...
... check the alkaline carbonates with potassium carbonate ...
... to check the treatment for has already been taken of ...
... food only add that when tapping ought not to be made ...
... it is so although it is safe and the abdomen is relaxed after ...
... this but however that it is not merely water but an albuminous ...
... fluid that is removed and that the elements are supplied to the ...
... surface of the liver consequently making a cover for the ...
... patient through this it is the fact that the excretion is ...
... rapidly followed by the fresh infiltration make tapping inadvisable ...
... especially temporary benefit of any, has shown by this patient ...
... who was tapped, however to coming here, three times at ...
... intervals ...
... it is sometimes well to give a little Carb. tricarbon. of calcium ...
... in the morning, and a little, chloride, during the day, the patient ...
... need should be as nutritious as may be ...
... The main diet was composed of eggs, milk, - Sydenham's bread ...
... There has been a diminution of the nodes in this man's abdomen ...
... but circumference same, this coming on ...
... It is evident has been kind enough to place her in a box and explain ...
... the former showing very beautifully, the perihepatitis already referred ...
... to the latter illustrating the congestion and enlargement of that organ ...

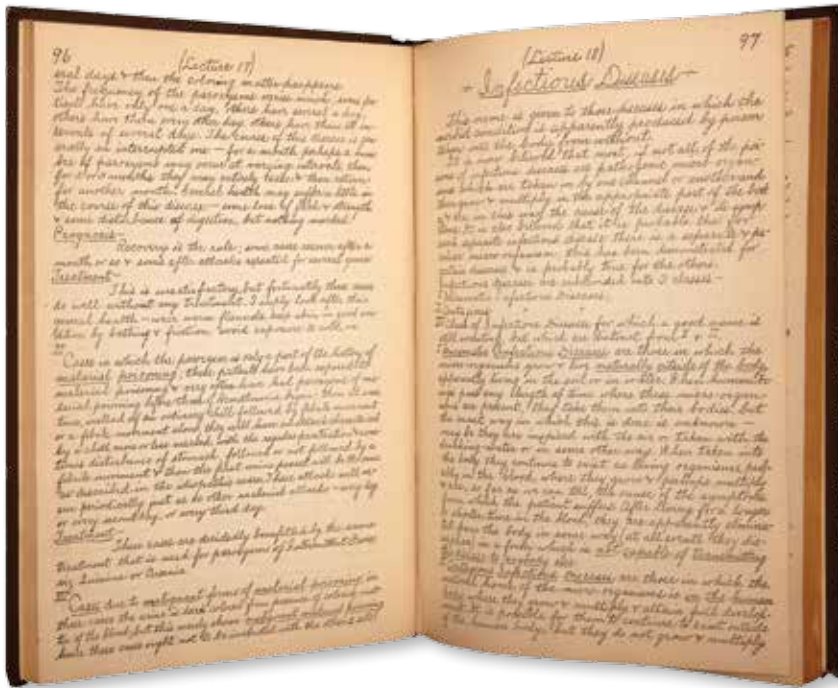
Detailed Depictions

This colored illustration of a cirrhotic liver and black-and-white depiction of an antiseptic "spray apparatus" (in which "wire gauze surrounds the flame making it safe when in contact with ether") were recorded during clinical lectures delivered and operations performed by the "Medical & Surgical Staff of the New York Hospital" from 1878 to 1879. Staff members mentioned in the notebook include Charles M. Allin, Thomas M. Markoe, James W. McLane, Henry B. Sands, and Robert F. Weir.



Fig. 1. Spray apparatus made by Coleman
Dewelle (London) wire gauze around
the flame making it safe when in
contact with ether

Fig. 2. Spray apparatus devised by Weir



Germ Theory of Disease

In this 1887 lecture on infectious diseases, Dr. Francis Delafield notes: "It is now believed that most, if not all, of the poisons of infectious diseases are pathogenic micro-organisms. ... It is also believed that it is probable that for each separate infectious disease there is a separate & peculiar micro-organism." This is one of the earliest statements in the notebook collection asserting the germ theory of disease as a fact. Ervin Alden Tucker, P&S'1889, who took these notes in shorthand, later transcribed them for the benefit of "students who do not take any notes at all or only incomplete notes."

Gift of Edwin B. Cragin (P&S'1886), 1917

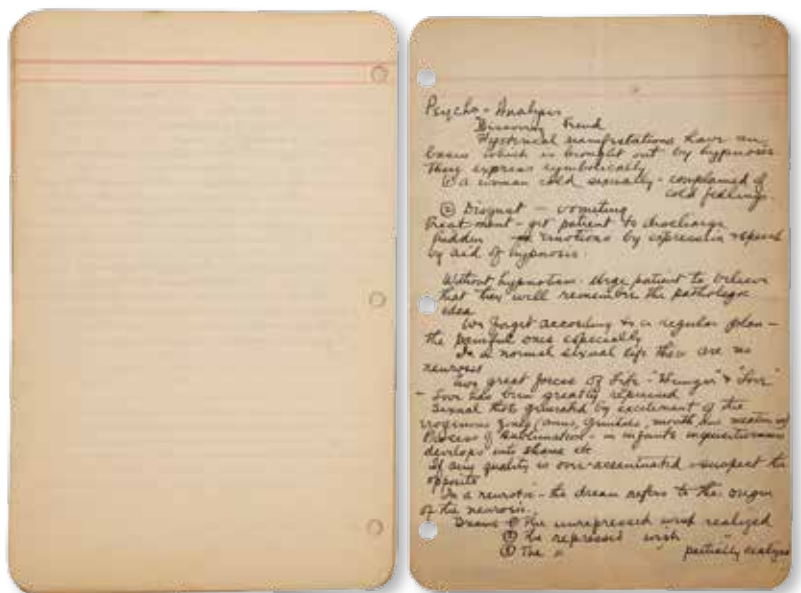


Comparative Anatomy

John G. Curtis (P&S'1870) drew these exquisite anatomical illustrations, probably while a student here. He spent his entire academic life at P&S, where he had a distinguished career as a physiologist. Curtis was a noted book collector, and his library on the history of medicine now forms part of the rare book collection in Archives & Special Collections.

A New Psychiatric Viewpoint

Arthur Purdy Stout's medical school psychiatry notes mention the new theories of a Viennese doctor named Freud, including "Hysterical manifestations have an [sic] basis which is brought out by hypnosis. They express symbolically." Although undated, these notes must have been taken during Stout's time as a student at P&S from 1908 to 1912.



Gift of the family of Dr. Raffaele Lattes, 1999

Candid Caricatures

Although George Huntington, the 1871 P&S graduate for whom Huntington's disease or chorea is named, kept meticulous notes of his medical school classes, he was also a confirmed doodler who adorned his notebooks with caricatures of students and professors, rebuses, and comic sketches. This 1869-70 volume of surgical notes from lectures by professors Willard Parker and Thomas Markoe shows figures including "The Student" and what appears to be a faculty member.



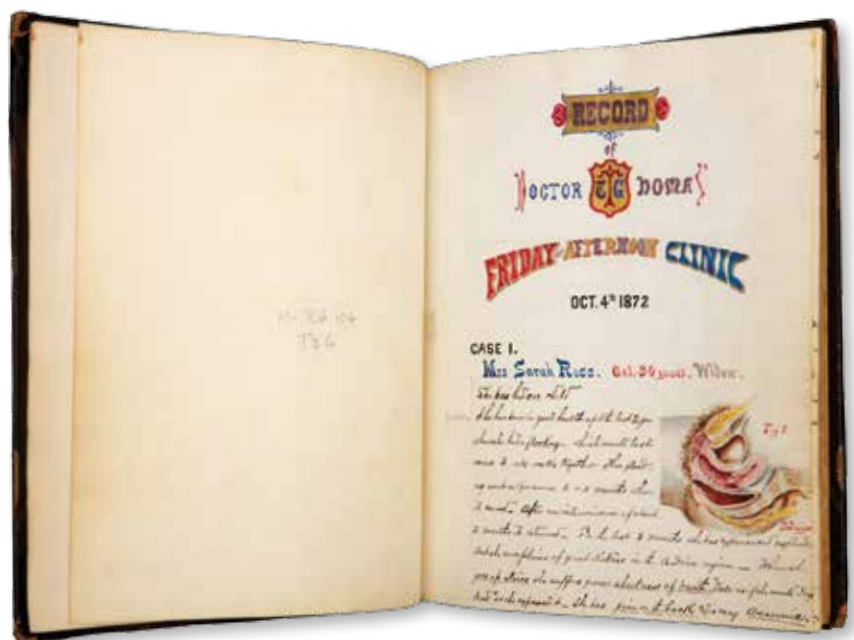
Contribute to the Collection

Archives & Special Collections is eager to expand their volumes of student notebooks. Any student or alum who would like to donate their student notebook may reach out to hslarchives@columbia.edu.

Friday Afternoon Clinics

This richly colored notebook belonged to student Thomas Rutherford Savage (P&S'1874), son of an early American medical missionary to Africa. He would go on to spend 18 years as physician at the Michigan Hospital for the Insane at Kalamazoo before setting up practice in New York City.

His notes were taken in the "Friday Afternoon Clinics" conducted by Dr. T. Gaillard Thomas, one of the most renowned gynecologists of his time, in the P&S building on 23rd Street. Dr. Thomas had joined the P&S faculty in 1863 and became professor of obstetrics and the diseases of women. He was an innovative surgeon whose "Practical Treatise on the Diseases of Women" went through numerous editions and was translated into 12 languages. ❖



Alumni News & Notes

By Julia Hickey González, Alumni Editor

1966

Robert J. Lefkowitz, a Nobel Prize winner in chemistry, is the 2026 commencement speaker for Northwestern University Feinberg School of Medicine. Dr. Lefkowitz, the Chancellor's Distinguished Professor of Medicine and professor of biochemistry and chemistry at Duke University School of Medicine, is widely recognized for discoveries that transformed understanding of G protein-coupled receptors, molecular gatekeepers involved in many physiological processes. Today, more than half of all prescription drugs target this kind of receptor. In 2012, he and former trainee Brian Kobilka shared the Nobel Prize in chemistry for revealing how these receptors function at the molecular level. Dr. Lefkowitz completed internship and residency training at Columbia-Presbyterian Medical Center, worked at the National Institutes of Health as a commissioned officer in the U.S. Public Health Service, and later trained in cardiology at Massachusetts General Hospital before joining the Duke faculty in 1973. He is a member of the National Academy of Sciences, National Academy of Medicine, and American Academy of Arts and Sciences. Among many



Robert Lefkowitz '66

awards, he has received the National Medal of Science. He continues to be actively involved in his research on G protein-coupled receptors, the most common target of therapeutic drugs.

1969

Thomas Sculco, surgeon-in-chief emeritus of the Hospital for Special Surgery in New York City, and his wife, Cynthia, have opened an art museum to showcase 150 works from their personal collection. The Westerly Museum of American Impressionism in Westerly, Rhode Island, is considered to be the only museum in the U.S. dedicated exclusively to American impressionist paintings from the 1880s to the 1920s. Both natives of Westerly, the Sculcos were captivated by the colors and expressive brushwork of the movement and its depictions of the natural beauty of New England. The site of a former nursing facility that closed during COVID-19 has been transformed into a modern, 20,000-square-foot museum overlooking Babcock Cove and the Pawcatuck River, and has received an average of 1,200 visitors per month since its opening in October 2025. Dr. Sculco, an orthopedic surgeon known for his leadership in joint replacement surgery, built the collection with his wife over more than 40 years. He spent much of his career at the Hospital for Special Surgery, where he helped advance modern approaches to hip and knee reconstruction. Their son, Peter Sculco, is a 2009 graduate of VP&S.

1975

Kevin Bell, an internist, is the namesake of the Kevin E. Bell, MD, Critical Care Unit at Overlook Medical Center in Summit,



Kevin Bell '75

New Jersey. The 31-bed unit opened in mid-2025. Dr. Bell joined the hospital in 1979 after completing an internship and a tenure as chief resident at the University of Wisconsin. Because Overlook Medical Center was previously affiliated with Columbia's medical school, Dr. Bell taught P&S medical residents for 14 years and was faculty for the Introduction to the Patient class for first-year medical students from 1980 to 1992. He also established a private practice in Somerset County, New Jersey, while receiving multiple awards for clinical excellence.

1977

Vivian Lewis published an article in the *Journal of Medical Biography* about her maternal grandfather, Edward S. Miller, who was born into slavery and became a physician and civic leader at the turn of the 20th century. In "Edward S. Miller: Physician, Entrepreneur, and Community Leader (1858–1942)," Dr. Lewis and co-authors Paul Miller and Constance D. Baldwin draw on archival research, newspapers, government documents, and family interviews to trace Dr. Miller's path from post-Civil War Kentucky to medical training and practice in Chicago,



Vivian Lewis '77

where he built a career serving the city's Black community. The authors cite that, nationally in 1890, only 0.9% of all physicians were Black, most practicing in the South. The article follows Dr. Miller's contributions to Provident Hospital, his service as a field surgeon with a unique Black volunteer regiment during the Spanish-American War, and his later role in founding institutions that supported Black civic and economic life, including a cemetery and a federally chartered bank. Dr. Miller's story illustrates the challenges of the medical system in the North and the resourcefulness needed by a Black leader to succeed and build community in a segregated society. Dr. Lewis is president of the VP&S Alumni Association as well as co-chair for the alumni network of the VP&S Black and Latino Student Organization, also known as BALS0. She is a professor emerita in the Department of Obstetrics and



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Gynecology at the University of Rochester School of Medicine and Dentistry, where she also served as vice provost for faculty development and diversity.

1988

Jeffrey Ascherman, the Thomas S. Zimmer Professor of Reconstructive Surgery at CUMC, was elected chair of the board of trustees of the American Society of Plastic Surgeons for 2026. He trained in general and plastic surgery at NewYork-Presbyterian/CUIMC and completed a craniofacial fellowship in Paris. As site chief of the Division of Plastic Surgery, he specializes in a full spectrum of aesthetic and reconstructive surgeries. Beyond his clinical practice, Dr. Ascher-



Jeffrey Ascherman '88

man has performed life-changing surgeries abroad in underserved communities across Asia and South America. His son, Benjamin Marc Ascherman, graduated from VP&S and Columbia Business School.

1989

Abraham Thomas is now chief medical officer of Caring Health Center in Springfield, Massachusetts, a federally qualified health center that provides primary care and preventive services to underserved communities. Dr. Thomas brings more than two decades of clinical and executive leadership experience in academic health



Abraham Thomas '89

systems and community-based care. He previously served as system chair of medicine at Baystate Health, chief quality officer at Central Maine Healthcare, and chief of medicine at the former NYU Lutheran Medical Center. Dr. Thomas has also served as chair of the Food and Drug Administration's Endocrinologic and Metabolic Drugs Advisory Committee. A graduate of both Columbia College and VP&S, Dr. Thomas also holds an MPH from the Harvard T.H. Chan School of Public Health and an MBA from the University of North Carolina Kenan-Flagler Business School.

1991

Deb Schrag has been elected president of the American Society of Clinical Oncology for the 2027-28 term and will assume the role of president-elect following the society's annual business meeting in June. Dr. Schrag is chair of the Department of Medicine at Memorial Sloan Kettering Cancer Center and professor of medicine at Weill Cornell Medical College. A gastrointestinal medical oncologist and population scientist, Dr. Schrag focuses her research on improving the quality, effectiveness, and experience of cancer care. She is an elected member of the National Academy of Medicine and partners with city, state, and federal stakeholders to advance population-level cancer control and the accessibility of

clinical cancer research. Before joining Memorial Sloan Kettering, she led the Division of Population Sciences at the Dana-Farber Cancer Institute and served as a professor of medicine at Harvard Medical School.

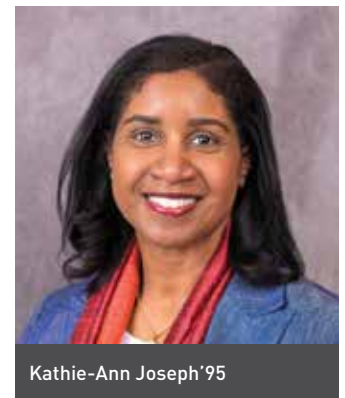
1995

Stephen Fealy, an orthopedic sports medicine surgeon at the Hospital for Special Surgery, has integrated his lifelong love of baseball with consulting work for the Major League Baseball Players Association. He helped co-create MLB's Pitch Smart initiative, which since 2012 has promoted safer pitching practices and worked to reduce overuse injuries in youth baseball. He considers medical school, where he played on a competitive rugby team, the best part of his education. Dr. Fealy completed his orthopedic surgery residency and sports medicine fellowship at the Hospital for Special Surgery, during which time he served as an assistant team physician to the New York Giants football team. Dr. Fealy is an active member of many professional organizations, including the American Orthopaedic Society for Sports Medicine, the Arthroscopy Association of North America, the American College of Sports Medicine, the American Shoulder and Elbow Surgeons, and the American Academy of Orthopaedic Surgeons.



Stephen Fealy '95

Kathie-Ann Joseph, former president of the VP&S Alumni Association, has been appointed chief of breast surgery and co-director of the multidisciplinary breast program at the Rutgers Cancer Institute and the Jack & Sheryl Morris Cancer Center at RWJBarnabas Health. In addition to her new roles, Dr. Joseph is a professor in the Department of Surgery at Rutgers Robert Wood Johnson Medical School and will serve as associate chief surgical officer for system integration and quality for RWJBarnabas Health, as well as director of breast surgical services for the RWJBarnabas Health Southern Region. A nationally recognized leader in advanced breast surgery and health equity, Dr. Joseph has



Kathie-Ann Joseph '95

focused her career on improving access to breast cancer screening and care for underserved populations, helping thousands of women receive critical screenings and support services. She previously co-directed the Beatrice W. Welters Breast Health Outreach and Navigation Program at NYU Langone's Perlmutter Cancer Center and served on the faculty of the NYU Grossman School of Medicine.

Raelene Walker has joined MCHC Health Centers in Ukiah, California, where she provides pediatric care at Hillside Health Center for patients from infancy

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Raelene Walker '95

through young adulthood. Dr. Walker brings more than two decades of experience in community-based pediatrics, most recently practicing in Santa Cruz. A former National Health Service Corps scholar, she began her career at a community health center in New Haven, Connecticut, serving largely Spanish-speaking families. This placement also gave Dr. Walker the opportunity to become fluent in Spanish, building on communication skills she'd developed working in orchards alongside migrant workers in the rural part of Oregon where she grew up, and during a year working in Mexico for a binational nonprofit after college. Outside of her day-to-day role, she provides palliative and hospice care for children with complex needs, some of whom are facing the end of life. Dr. Walker describes herself as very outdoorsy and enjoys spending time in nature, having recently completed a three-week trek in Nepal. She is also learning to crochet small animal toys, which she hopes to share with her patients.

1997

Andrew Lassman has been appointed vice dean of clinical trials at VP&S, a newly created role designed to accelerate and coordinate the school's growing clinical trials enterprise. A professor of neurology, Dr. Lassman has internationally renowned expertise as a translational clinical

trialist for brain tumors, focused on experimental therapeutics. Dr. Lassman will continue in his current roles as vice chair for clinical research in the Department of Neurology, chief of the Division of Neuro-Oncology, and associate director for clinical trials at the National Cancer Institute (NCI)-designated Herbert Irving Comprehensive Cancer Center. After earning his medical degree from VP&S, Dr. Lassman completed postgraduate training at Mount Sinai, New York-Presbyterian/CUIMC, and Memorial Sloan Kettering Cancer Center. He has served as principal investigator for more than 50 brain cancer studies including multicenter prospective trials conducted through the NCI-sponsored National Clinical Trials Network, with partnerships across both the NCI and industry. He has authored more than 150 peer-reviewed publications, including 14 widely adopted clinical guidelines.

2000

J Mocco became chair of the Department of Neurological Surgery at Weill Cornell Medicine and neurosurgeon-in-chief at New York-Presbyterian/Weill Cornell Medical Center in December 2025. A cerebrovascular and endovascular neurosurgeon, Dr. Mocco is a physician-scientist who studies stroke, intracerebral hemorrhage, aneurysms, and other



J Mocco '00

vascular disorders of the brain, and has helped to develop widely adopted approaches to acute stroke therapy. He has explored pioneering therapeutic technologies, such as brain-computer interfaces that create a direct communication pathway between the brain's electrical activity and a home computer, and is leading or co-leading clinical trials with more than \$60 million in National Institutes of Health funding. He joins Weill Cornell from the Icahn School of Medicine at Mount Sinai, where he served as the Kalmon D. Post Professor and senior vice chair of neurological surgery, as well as directed the health system's Cerebrovascular Center. Dr. Mocco trained in neurological surgery at the Neurological Institute of New York and completed fellowship training in endovascular neurosurgery at the University at Buffalo. In addition to his MD from VP&S, he earned an MS in biostatistics from Columbia University's Mailman School of Public Health in 2007.

2012

Frances Onyimba, director of the board of the Columbia University Club of Washington, D.C., recently led a Columbia Alumni Association event discussing innovation in health care alongside entrepreneur and investor Halle Tecco, author of "Massively Better Healthcare." Dr. Onyimba is a gastroenterologist and entrepreneur who leads the esophageal motility program at WellSpan Health, where she works to translate advances in digestive disease care into scalable clinical models. She trained in internal medicine and neurogastroenterology at Johns Hopkins Hospital before completing a gastroenterology fellowship at the University of California, San Diego, where she served as chief fellow. Beyond medicine, she remains an avid

supporter of the performing arts and co-founded the Columbia University Arts Initiative-backed P&S Dance Club at Columbia, now known as Dance Haven.

2013

Virginia (Workman) Singla, a cardiac electrophysiologist, has joined Independence Health System at Butler Memorial Hospital in Pennsylvania. Dr. Singla completed an internal medicine residency at the University of Virginia Health System before completing fellowships in cardiovascular medicine and clinical cardiac electrophysiology at Yale New Haven Hospital. Board certified in internal medicine, cardiovascular medicine, adult echocardiography, and clinical cardiac electrophysiology, she specializes in diagnosing and treating complex heart rhythm disorders, including atrial fibrillation and other arrhythmias.

2016

Elizabeth Hutchins has joined Cottage Cardiology Clinic in Santa Barbara, California, as a cardiologist specializing in cardiology. Dr. Hutchins focuses on the cardiovascular care of patients undergoing cancer treatment, with clinical interests that include cardiac imaging and the use of informatics and artificial intelligence to improve cardiovascular risk assessment. Board certified in adult comprehensive echocardiography and internal medicine, she also holds an MS in clinical and molecular nutrition from Columbia University's Institute of Human Nutrition. She completed her internal medicine residency at Harbor-UCLA Medical Center and a cardiovascular medicine fellowship at the University of California, Los Angeles, where she served as chief fellow. Dr. Hutchins has authored peer-reviewed research and presented nationally on cardiovascular complications of cancer therapy.



Michael Vitti

FACULTY

Michael Vitti, MD, assistant professor of surgery and director of the Eastern Vascular vein center, died Jan. 22, 2026.

Jason Greenberg, MD, assistant professor of neurology, died Jan. 3, 2026.

Robert Lifton, MD, lecturer in psychiatry, died Sept. 4, 2025.

ALUMNI 1946

John Keith Spitznagel, an internist and immunologist who founded the Good Samaritan Health and Wellness Center in Jasper, Georgia, died Jan. 14, 2026. He was 102. After earning undergraduate and medical



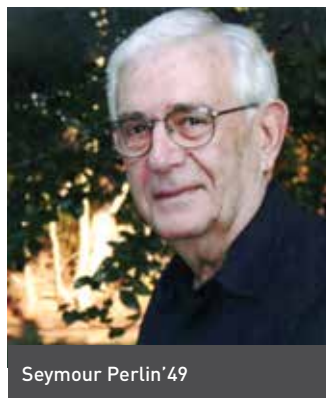
John Keith Spitznagel '46

degrees from Columbia University, he later trained at the Johns Hopkins Hospital and Barnes Hospital of Washington Univer-

sity, and spent a year as a visiting investigator at the Rockefeller Institute for Medical Research. He served in several positions in the U.S. Army Medical Corps, including as an instructor in basic sciences at Walter Reed Hospital, as an assistant chief of medicine with the 114th Field Hospital in Kyushu, Japan, and as chief of medicine at Fort Bragg, rising to the rank of lieutenant colonel. In 1957, Dr. Spitznagel joined the University of North Carolina School of Medicine, where he advanced to professor of internal medicine and bacteriology and became internationally recognized for his National Institutes of Health-funded research on the mechanisms by which white blood cells combat bacterial infections. In 1979, he was appointed chair of microbiology and immunology at Emory University, where he served until retiring as professor emeritus. He is honored annually with the Spitznagel Annual Seminar on Host Defense. During retirement, in 2002, he founded the volunteer-run Good Samaritan clinic, which is a federally qualified health center that continues to foreground compassionate, accessible health care. Dr. Spitznagel enjoyed reading, fly-fishing, and playing the flute. He was predeceased by his wife, Anne, and is survived by five children, 14 grandchildren, and five great-grandchildren.

1949

Seymour Perlin, an academic psychiatrist and pioneer in suicidology, died Nov. 20, 2025. He was 100. Born in Passaic, New Jersey, he graduated from Princeton University, where he enjoyed an assignment to escort Albert Einstein to university seminars. Dr. Perlin completed training at the University of Michigan Hospital, the New York State Psychiatric Institute, and the Washington Psychoanalytic Institute before



Seymour Perlin '49

serving as chief of psychiatry at the National Institute of Mental Health. He founded the Division of Psychiatry at Montefiore Hospital and later held senior academic roles at the Johns Hopkins University School of Medicine and the Henry Phipps Psychiatric Clinic, where he established the first postgraduate fellowship program in the U.S. for the study of suicide. In 1967, he received Columbia University's Silver Bicentennial Medallion for Achievement in Psychiatry. In 1974, he joined the faculty of the George Washington University School of Medicine and Health Sciences, where he directed psychiatry residency training for more than 15 years. A founder of the American Association of Suicidology, he made significant contributions to the scientific literature in the areas of suicidology, aging, community mental health, and medical ethics. Dr. Perlin was the author of more than 50 scholarly publications as well as two definitive anthology textbooks, "A Handbook for the Study of Suicide" and "Ethical Issues in Death and Dying" (co-editor). Outside of medicine, he was an avid gardener, traveler, and devoted patron of the arts. He is survived by his wife, Ruth, three sons, and seven grandchildren.

1952

Bayard D. Clarkson, an oncologist, hematologist, and leader

in leukemia research, died Dec. 30, 2025. He was 99. Born in Bayville, New York, Dr. Clarkson attended St. Paul's School and later Yale University. His education was interrupted by World War II, during which he served with the American Field Service as an ambulance driver in Italy and Germany and participated in the evacuation of the concentration camp at Bergen-Belsen. After the war, he resumed his studies and completed a Lasker Fellowship in clinical chemotherapy at Memorial Hospital, which later merged with the Sloan-Kettering Institute to form Memorial Sloan Kettering Cancer Center. Dr. Clarkson would remain at Memorial Sloan Kettering for more than five decades, serving in roles including chief of the Hematology/Lymphoma Service, director of fellowship training in hematology and medical oncology, and associate chairman for research in the Department of Medicine. During his tenure, he contributed to the expansion of the hospital's leukemia research program and helped develop curative therapies for acute lymphoblastic leukemia. He was recognized for his work on intracellular signaling pathways altered by BCR-ABL fusion genes, key drivers in certain types of leukemia. Additionally, he served as president of the American Society of Clinical Oncology and held leadership roles within the American Association for Cancer Research. He served on the board of trustees of Clarkson University, where he held an ancestral connection. He enjoyed sailing, rowing, and traveling with family. Predeceased by his wife, Virginia, Dr. Clarkson is survived by four children, six grandchildren, and eight great-grandchildren.

1954

Donald Dallas, a cardiologist and former chief of medicine at St. Luke's Hospital in New York

City, died Nov. 18, 2025. He was 96. Born to immigrant parents from Scotland and Germany, Dr. Dallas was the first in his family to attend college. He graduated from Columbia College in 1950 and, during medical school, married his sixth grade sweetheart, the artist Dorothy Benz Dallas. He went on to serve in the U.S. Public Health Service and Coast Guard following medical school. He is survived



Donald Dallas '54

by four children, six grandsons who called him "Babbo," and four beloved dogs.

1955

Alfonse "Al" Thomas Masi, a rheumatologist, epidemiologist, and prolific physician-scientist, died March 6, 2025. He was 94. A first-generation Italian American and native of New York City, Dr. Masi completed his undergraduate studies at the City College of New York. He pursued advanced training in internal medicine, epidemiology, and rheumatology at the Johns Hopkins Hospital, the Centers for Disease Control and Prevention's Epidemic Intelligence Service in Puerto Rico, UCLA Medical Center, and the National Institutes of Health. He also earned a Doctor of Public Health degree from Johns Hopkins University. Dr. Masi began his academic career as chief of rheumatology at the University

of Tennessee College of Medicine before joining the University of Illinois College of Medicine Peoria, where he served as the founding head of the Department of Medicine and later as professor emeritus. He authored more than 220 publications and was widely recognized for his pioneering work on neuroendocrine-immune mechanisms in rheumatoid arthritis. He had his last rheumatology paper



Alfonse "Al" Thomas Masi '55

accepted for publication at the age of 92. Outside of medicine, he loved traveling, sipping rum, watching classic movies, playing his bongo drum, bodysurfing, and dancing. He is survived by his wife, Nancy, four children, and nine grandchildren.

1956

Walton K.T. Shim, who was born in Hawaii and returned to the island to shape pediatric surgical care across the Pacific region, died Nov. 4, 2025. He was 94. Dr. Shim graduated from 'Iolani School and Dartmouth College before serving as a captain and surgical consultant in the U.S. Army from 1962 to 1964. After his training in Chicago, he shifted his professional focus back to Hawai'i in 1967, eventually becoming a founding member of the Pacific Association of Pediatric Surgeons. He became a professor of surgery and pediatrics at the John A.



Walton K.T. Shim '56

Burns School of Medicine and held several leadership roles at Kapi'olani Medical Center for Women & Children, including division chief of pediatric surgery and multiple terms as chief of staff and chief of surgery. He found great joy in the outdoors. At the time of his passing, he was living on his property in the rugged landscape of Montana. He also loved tennis and tending to his vegetable garden, and was a devoted supporter of the symphony. He is survived by his wife, Vicki, four children, and six grandchildren.

1957

Michael Lazor, former chair of nephrology at Hartford Hospital, died Nov. 11, 2025. He was 94. Born in Tarrytown, New York, to Czechoslovakian immigrants, Dr. Lazor earned his undergraduate degree from Williams College. He completed his residency training in Madison, Wisconsin, followed by a rotation at the National Institutes of Health. Dr. Lazor spent his clinical career at Hartford Hospital. In 1996, he played a central role in founding Connecticut Multi-Specialty Group, helping to unite physicians across practices to strengthen patient care; the group later grew into one of the largest multispecialty organizations in New England. He was an avid traveler, gardener, and enthusiastic home cook. He faithfully cheered



Michael Lazor '57

for the New York Giants, the Knicks, the Yankees, and UConn basketball. His porch was always stacked with daily newspapers, which he read cover to cover. He is survived by three children, eight grandchildren, and four great-grandchildren.

1958

William "Bill" Hopewell, who practiced medicine for decades in Ridgewood, New Jersey, died Nov. 18, 2025. He was 93. Raised in Mariemont, Ohio, Dr. Hopewell earned his undergraduate degree from Yale University, where he was a varsity football player. He completed his medical training and went on to



William "Bill" Hopewell '58

establish a long and respected clinical career in northern New Jersey. He built a trusted private practice and served on multiple medical boards at Valley Hospital. He was an avid runner who completed five marathons,

a devoted traveler, and a gifted artist who painted more than 300 dog portraits. He loved reading, opera, crossword puzzles, Cape Cod, and rescuing animals. He was deeply engaged in church life at Mount Auburn Presbyterian Church in Cincinnati. He is survived by his wife of 72 years, Jane, three children, seven grandchildren, and six great-grandchildren.

1959

James Rose Carter Jr., internist and educator, died Sept. 17, 2025. He was 92. He graduated from Princeton University, then completed his internal medicine residency at Massachusetts General Hospital, where he served as chief resident, and conducted research at the National Institutes of Health on transport mechanisms affected by diabetes. Dr. Carter held academic appointments at Harvard and the University of Pennsylvania

before joining the faculty at Case Western Reserve University, where he remained for 26 years and attained the position of professor of medicine, emeritus. He was a fellow of the Academy of Medicine and became chair of the Department of Medicine at MetroHealth Medical Center, a teaching hospital for the university. Dr. Carter helped to develop the primary care track for medical students and won numerous accolades and teaching awards.



James Rose Carter Jr. '59

He loved the outdoors, especially climbing the Presidential Range in the White Mountains of New Hampshire. He collected art, was an avid reader of classic literature, and cheered on Boston sports teams from wherever he resided. He is survived by his wife, Susan, two children, and four grandchildren.

Theodore "Ted" Johnson, an obstetrician-gynecologist who practiced for 31 years alongside his brother at Grove Hill Clinic in New Britain, Connecticut, died Dec. 21, 2025. He was 93. A native of New Britain, Dr. Johnson earned his undergraduate degree from Harvard University. He spent a year conducting research at the University of Birmingham in England during medical school and went on to complete his internship at the University of Chicago and his residency at the University of California, San Francisco. He served

as a captain in the U.S. Air Force at James Connally Air Force Base, Waco, Texas, before returning to Connecticut. He was a passionate advocate for women's health and a longtime supporter of Planned Parenthood. Beyond medicine, he embraced Unitarian Universalism and actively participated in the UU Fellowship of New Britain and the Unitarian Society of Hartford. A passionate musician, he sang, played brass instruments, performed with local chorales, helped found the CONCORA professional choir, and was a constant whistler of everything from Beatles tunes to classical melodies. He is survived by his wife, former U.S. Rep. Nancy L. Johnson; three daughters; 10 grandchildren; six great-granddaughters; and four great-grandsons.

1964

John Mulliken, a pioneering pediatric plastic and reconstructive

Alan Neil Schechter '63, an Esteemed *Columbia Medicine* Board Member

Alan Neil Schechter, a pioneering physician-scientist who devoted six decades to the National Institutes of Health (NIH) and served as a longtime editorial board member of *Columbia Medicine*, died Oct. 15, 2025. He was 86. Dr. Schechter graduated from Cornell University and completed clinical training at the Albert Einstein College of Medicine before joining the NIH Laboratory of Chemical Biology, where he worked on the fundamental processes of protein folding with Nobel laureate Christian B. Anfinsen. In 1981, he succeeded Dr. Anfinsen as chief of what is now the Molecular Medicine Branch of the National Institute of Diabetes and Digestive and Kidney Diseases. His investigations into hemoglobin S polymerization helped pave the way for hydroxyurea as a Food and Drug Administration-approved therapy for sickle cell disease. In later years, his research on nitric oxide biology advanced understanding of vascular regulation and ischemic disease, generating multiple patents and opening new therapeutic avenues. A devoted mentor, he exemplified the physician-investigator ideal, training generations of physicians to think like researchers and researchers to understand clinical medicine. He served as acting NIH historian and a leader within

the Foundation for Advanced Education in the Sciences. An avid art collector, he recently loaned part of his extensive collection of 19th century Japanese woodblock prints to the Vassar College Frances Lehman Loeb Art Center. He was always eager to learn from others and had an extraordinary capacity to connect people across disciplines.

As a *Columbia Medicine* editorial board member, Dr. Schechter contributed intellectual rigor, deep institutional memory, and generous collaboration to help shape issues that reflected the best of VP&S clinical advances and research. He is survived by his wife of 60 years and medical school classmate, Geraldine Poppa Schechter '63, the former chief of hematology at the Washington Veterans Administration Hospital; two children; four grandchildren; and a sister.



Geraldine Poppa Schechter '63 and Alan Neil Schechter '63

surgeon who devoted himself to the art and science of caring for children with facial differences, died Jan. 20, 2026. He was 87. Dr. Mulliken earned his undergraduate degree magna cum laude from Princeton University. He completed general surgery training at Massachusetts General Hospital before joining the U.S. Army Medical Corps. He served as a commanding officer of the 43rd Mobile Army Surgical Hospital in Uijeongbu, Korea, and later the chief of surgery at Cushing Hospital at Fort Devens in Massachusetts. He completed a plastic surgery fellowship at the Johns Hopkins Hospital



John Mulliken '64

and, in 1974, joined Boston Children's Hospital, where he spent his career as a pioneering surgeon, researcher, and teacher. He served as director of the Craniofacial Center, director of the Cleft Lip and Palate Program, and co-director of the Vascular Anomalies Center, building internationally recognized programs. A professor of surgery at Harvard Medical School, he transformed the care of children with vascular anomalies and craniofacial differences, co-developing the widely adopted Mulliken classification system and advancing genetic and surgical understanding of complex congenital conditions. He was awarded the VP&S Alumni Association's Gold Medal for Excellence in Clinical Medicine

in 2008. Outside of medicine, he had a deep love of history and the arts. He is survived by his wife, Portia, and one daughter.

1965

John Geary Gregory, a long-practicing urologist and committed mentor, died Oct. 26, 2025. He was 87. Dr. Gregory was born in Philadelphia and graduated from Princeton University. He completed a residency at the University of Pennsylvania and began his academic career in Missouri, where he served as professor and chair of urology at Saint Louis University before transitioning to private practice. In 2000, Dr. Gregory moved to Maine and joined Waldo County Hospital, continuing to practice urology for nearly two additional decades. He remained deeply committed to patient care and medical education, mentoring generations of trainees and colleagues, and practicing well



John Geary Gregory '65

into his 80s. Outside of medicine, Dr. Gregory was a passionate woodworker who spent countless hours in his workshop or building in his yard. He was an avid reader and a devoted member of the Episcopal Church, serving in lay leadership and teaching roles in both Missouri and Maine. He is survived by his wife, Sandy, three children, eight grandchildren, and two great-granddaughters.



Charles "Chuck" Peterson '69

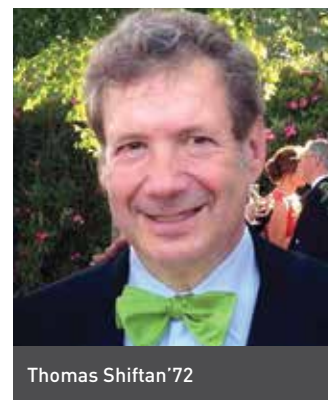
1969

Charles "Chuck" Peterson, a physician-scientist whose work made foundational contributions to diabetes care, hemoglobin A1c measurement, and blood diseases, died June 10, 2025. He was 82. Born in New York City, Dr. Peterson earned his undergraduate degree from Carleton College and was awarded an international fellowship from the School of International and Public Affairs during medical school for research in Bolivia. He later trained in internal medicine, serving as chief medical resident at Harlem Hospital and Rockefeller University Hospital, where he spent 11 years on faculty. Dr. Peterson went on to serve as CEO of the Sansum Medical Research Institute in Santa Barbara and later as director of the Division of Blood Diseases and Resources at the National Heart, Lung, and Blood Institute in Maryland. His career also included senior leadership roles with the U.S. Army Medical Research and Materiel Command, industry, and telemedicine initiatives, as well as clinical service during the COVID-19 pandemic as medical director of an opioid use disorder treatment center. With more than 15 patents, his research advanced therapies for sickle cell disease and thalassemia; established hemoglobin A1c as the standard measure of long-term glycemic

control; linked glucose control to improved pregnancy outcomes; developed widely used clinical assays; and pioneered early applications of atomic force microscopy to cellular biology. Remembered for his humor and loyalty to friends and family, Dr. Peterson is survived by his wife, Karen, two children, one stepson, and one grandchild.

1972

Thomas Shiftan, a physician-scientist and a founding oncologist of what became the Sidney Kimmel Cancer Center in San Diego, died Dec. 1, 2025, in La Jolla, California. He was 79. Dr.



Thomas Shiftan '72

Shiftan was born in New York City to refugees of Hitler's Germany and attended the University of Virginia. During medical school, he completed a three-month tropical medicine rotation in Phebe, Liberia. He trained at the University of California, San Diego, followed by a hematology fellowship and a research year at the University of Innsbruck in Austria. He cherished that year for the connections he made with young residents, who sought out his guidance when they felt hesitant to approach their traditionally didactic superiors. He returned to practice in San Diego and served Sharp Memorial Hospital as chief of medicine, chair of the Oncology Advisory Committee, and medical direc-

tor of oncology for nearly two decades. He was instrumental in the formation of the Sidney Kimmel Cancer Center, helping to integrate laboratory discovery and clinical trials and to expand patient access to experimental cancer therapies in the region. He was an enthusiastic athlete and a lifelong devotee of opera and the performing arts, serving on the boards of San Diego Opera and La Jolla Playhouse. He is survived by his wife, Maureen, two sons, and three grandchildren, who called him “Papageno,” the endearing bird catcher from Mozart’s “The Magic Flute.”

2012

Amanda Posner, a pediatrician, died Aug. 28, 2025. She was 43. Dr. Posner grew up in Scarsdale, New York, and earned a bachelor’s degree from Dartmouth College in 2004. She completed her residency in pediatric gastroenterology at UCSF Benioff Children’s Hospital. She served on the boards of Bay Area Young

Survivors and the Norfield Children’s Center, extending her advocacy beyond the clinic. A talented performer, she acted and sang in college productions and with the Bard Hall Players at VP&S after appearing off-Broadway as a teenager and acting in the films “Welcome to the Dollhouse” and “The Door in the Floor.” Her humor, generosity, and authenticity left a lasting impression on those who knew her. She defied metastatic breast cancer by living life fully in the face of her illness for a decade. She is survived by her husband, Ben, one son, her parents, and her brother.

2014

Omoye “Oye” Enisegho Imoisili, an internist and public health physician who rose to the rank of commander in the U.S. Public Health Service Corps by the age of 35, died Nov. 17, 2025. She was 38. Dr. Imoisili was born in Richmond, Virginia. She enrolled in Princeton University at age 16

and earned a bachelor’s degree in psychology, followed by a research year at the National Institutes of Health. During medical school, she developed a keen interest in population-level health, pausing her MD studies to complete an MPH at the Johns Hopkins Bloomberg School of Public Health. Upon returning to VP&S, she was inducted into the Gold Humanism Honor Society for compassionate, patient-centered care. She completed residency training in internal medicine at Yale-New Haven Medical Center on the primary care track and was named Intern of the Year. Dr. Imoisili then served as an Epidemic Intelligence Service officer at the Centers for Disease Control and Prevention (CDC), followed by roles at the U.S. Food and Drug Administration and the CDC’s Division for Heart Disease and Stroke Prevention. In 2017, she was commissioned in the U.S. Public Health Service Corps and rose to the rank of commander in 2023,

contributing to multiple national deployments, including the earliest phase of the COVID-19 response. A devoted Christian, she was also a lover of music and learned to play the piano and the violin. She



Omoye “Oye” Enisegho Imoisili ’14

visited 67 countries, all 50 U.S. states, and multiple territories. Having learned French and Spanish, she was studying Yoruba toward the end of her life. She died after a yearlong battle with cancer. She is survived by her father, Menfo, her mother, Bim, and her three siblings.

Gerald E. Thomson ’96, Executive Vice President, Senior Associate Dean, and Champion for Underrepresented Students in Medicine

Gerald E. Thomson, a pioneering nephrologist who served as the double-endowed Samuel Lambert and Robert Sonneborn Professor Emeritus of Medicine at VP&S, died in February 2026. An honorary VP&S alumnus of the Class of 1996, Dr. Thomson received his undergraduate degree from Queens College following military service and earned his medical degree from Howard University College of Medicine. He trained at SUNY Downstate/Kings County Hospital, where he helped establish one of the nation’s earliest large-scale maintenance dialysis programs. His dedication to addressing disparities in health, health care access, and medical education arose from a deep commitment to justice and human rights that informed all his work, including the establishment of a dialysis program at Harlem Hospital Center, where he was director of medicine from 1971 to 1985. He served as executive vice president and chief medical officer of Columbia-Presbyterian Medical Center from 1985 to 1990. As a senior associate dean at VP&S from 1991 to 2002, he was a staunch supporter of stu-

dents underrepresented in medicine, including Black and Latino Student Organization (BALSO) students, and founded the Gerald E. Thomson Undergraduate Pre-Medical Program to expand pathways into medical careers. His influence was felt beyond VP&S as a member of the National Academy of Medicine; president of the American College of Physicians; chair of the American Board of Internal Medicine; co-founder and president of the Society of Urban Physicians; and board member of Physicians for Human Rights. He is survived by his wife, Carolyn, two children, and two grandchildren.

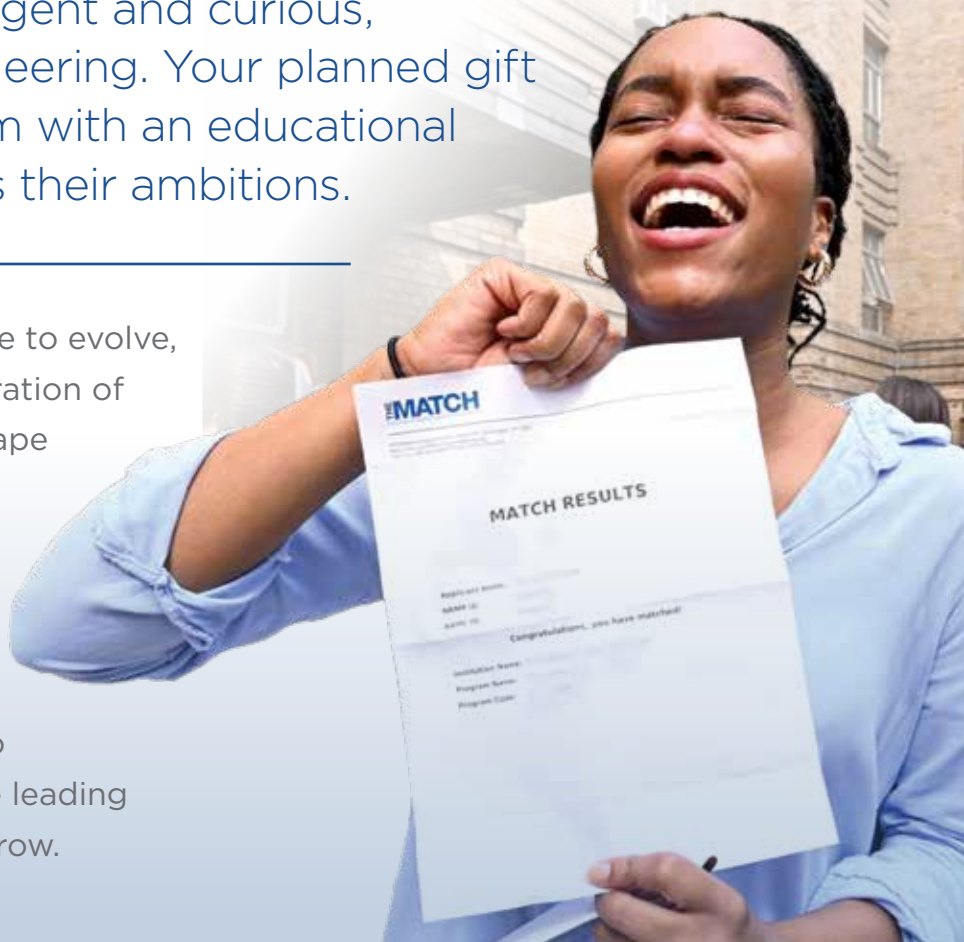


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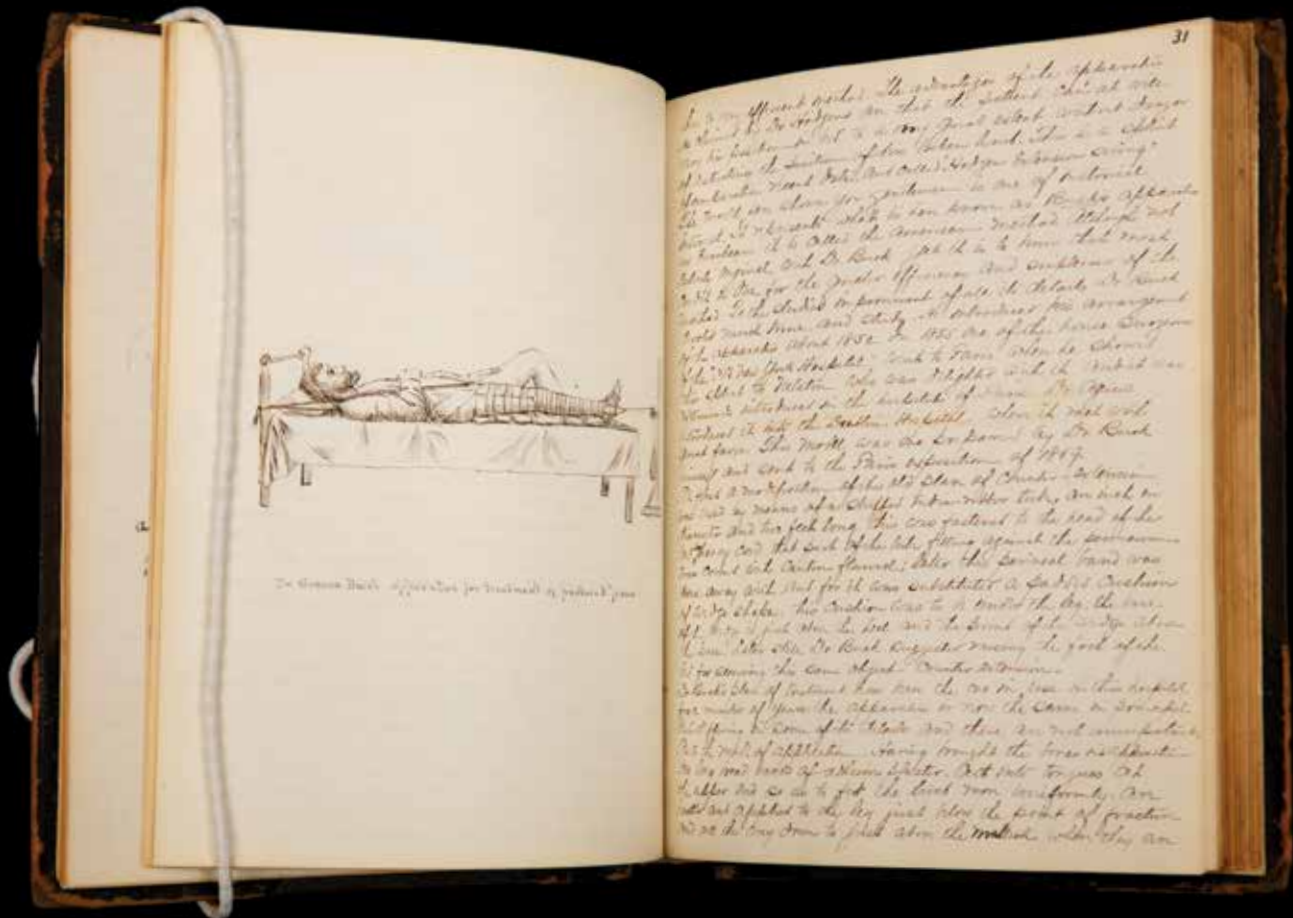
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Archival Treasures

STUDENT NOTEBOOKS can serve as utilitarian learning aids, historic records, and even small works of art. Archives & Special Collections preserves some 175 notebooks recorded by Columbia's medical, dental, nursing, and pharmacy students. The above pages documented clinical lectures delivered and operations performed by the "Medical & Surgical Staff of the New York Hospital" between 1878 and 1879. Archives' collection also includes notes on emerging medical theories, illustrations of case studies, and the renowned names of medical trailblazers.

See "A Noteworthy Gallery" on page 28.