Columbia Public Health

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SAVE THE DATE
April 26, 2023

Centennial Gala
Launching Our Second Century of Public Health Leadership

Honoring
Wafaa El-Sadr, MD, MPH '91, MPA
Roy Vagelos, MD '54

With Special Guest
Anthony S. Fauci, MD
Recipient of the Frank A. Calderone Prize in Public Health

Capitale
130 Bowery, New York City

For tickets and sponsorship information, visit publichealth.columbia.edu/gala
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Future Focus

Columbia Mailman School of Public Health began to educate public health leaders in 1922, in the aftermath of the influenza pandemic, and today we find ourselves starting our second century during another pandemic. It is a reminder of how far public health has come and how far we still need to go.

Over the past 100 years, public health achievements have extended life spans by more than three decades. Workplaces, motor vehicles, and our food supply are safer. Mothers and babies are healthier. Campaigns in favor of immunization and against tobacco use have succeeded. Our air and water are cleaner. Our work is far from done, however. We need to extend our “health spans” to match our longer life spans. We face increasingly complex challenges, such as the climate crisis, emerging infectious diseases, a growing chronic disease burden, humanitarian emergencies, and widening health disparities—all while we are confronting disinformation, distrust, and disinvestment in public health and science.

As public health professionals, we have a responsibility to bring public health back to the center of “the commons.” It is a public good that is fundamental to a flourishing society. Since our founding, our School has been dedicated to fostering this flourishing, and to excellence. As we begin our second century, we are launching a vision of our leadership; establishing the capabilities that are essential to this leadership; and galvanizing dynamic and foundational innovation and investment for maximal societal benefit.

With today’s knowledge, tools, and technologies, we have an unprecedented opportunity to transform public health. Building on our strengths, we will expand interdisciplinary research teams, increase investment in innovation to give faculty the resources to tackle the challenges of the future, provide increased scholarship support to work toward debt-free education, and expand our doctoral training programs. These investments will position us to provide the public health leadership needed in New York City and around the globe.

We will launch our second century at our Centennial Gala on April 26, 2023. I look forward to celebrating the groundbreaking accomplishments of our faculty, students, staff, and alumni with you. I am honored to be a member of this wonderful community as we begin our second century with renewed dedication to building a healthy and just world.

Wishing you good health,

Dean Linda P. Fried, MD, MPH

Read about our history and Centennial celebrations at publichealth.columbia.edu/centennial.
The Year of the Refugee

Natural disasters and conflicts, including the war in Ukraine, have pushed the number of people who are refugees, internally displaced, or otherwise forcibly displaced to more than 100 million for the first time on record, the United Nations reported early in 2022. The situation is so intense that Germany relocated Afghan refugees in order to welcome Ukrainians.

Monette Zard, director of the School’s Program on Forced Migration and Health, is an expert on public health, forced migration, and human rights. She collaborated with other public health researchers to publish an article earlier this year in Nature Medicine calling attention to the U.S. federal government’s use of public health grounds to deny entry to asylum-seekers at the border. Zard also joined with dozens of epidemiologists, public health experts, and physicians who called upon both the Trump and Biden administrations to reverse the rule, known as Title 42, and pointed out the dangerous example the U.S. was setting. “Applying a public health policy to justify the expulsion of vulnerable people into harm’s way runs counter to public health tenets,” Zard said. (The Biden administration tried to terminate Title 42 but was blocked in federal court.)

Zard has called attention to inequitable treatment by the U.S. of refugees from Ukraine versus asylum-seekers from Central America, Haiti, and elsewhere. And she has offered guidance on how governments can minimize the spread of COVID-19 among those awaiting entry. “Trust in public health institutions—key to effective pandemic response—is undermined when their guidance is subject to political interference. As asylum-seekers and refugees navigate an increasingly perilous world, the U.S. should uphold its obligations to offer protection and serve as a beacon for both science-based public health policy and the rule of law,” she says.
VinFuture Prize to Karims
Salim Abdool Karim, MS ’88, MD, PhD, and Quarraisha Abdool Karim, MS ’88, PhD, have been awarded the VinFuture Special Prize for Innovators from Developing Countries for their groundbreaking research on HIV prevention in South Africa. The prize, given by the VinFuture Foundation in Vietnam, celebrates the power of science and technology to solve global problems. Richard Friend, VinFuture Prize Council chair, said the winners “have brought new solutions for some of the most significant challenges that humanity is facing.”

Two “Papers of the Year”
The National Institute of Environmental Health Sciences has singled out two studies led by Columbia Mailman School Department of Environmental Health Sciences scientists as its 2021 “Papers of the Year.” The papers—among only 35 so honored—were selected from 3,942 published. One group of researchers reported in Environmental Research that mice exposed to e-cigarette aerosol had a buildup of toxic metals in the brain. Another observed an increase in hospitalizations from respiratory diseases, infectious and parasitic diseases, and injuries during the week after a tropical cyclone. (Read more on page 7.) Those findings appear in the journal Nature Communications.

Samari Is William T. Grant Scholar
Goleen Samari, PhD, assistant professor in the Heilbrunn Department of Population and Family Health, has been named one of five William T. Grant Scholars in the class of 2026. The $350,000 award will allow Samari to explore how xenophobic immigration policies in the U.S. influence immigrant adolescent and young adult reproductive behaviors, access to reproductive healthcare, and, ultimately, birth outcomes.

Hershman Elected to the AAP
Professor of Epidemiology Dawn Hershman, MD, MS, has been elected to the Association of American Physicians. As co-leader of the Cancer Population Science Program at the Herbert Irving Comprehensive Cancer Center, Hershman focuses on improving cancer care delivery, reducing disparities, and designing studies to improve the quality

Career MODE Paves the Way for Early Career Growth
A NEW PROGRAM IN DATA SCIENCE AND OMICS—a rapidly advancing science dedicated to studying the genome, epigenome, metabolome, microbiome, and other markers of health—will provide intensive training and mentoring from a network of more than 70 mentors. The 11-month Career MODE (Mentoring and training in Omics and Data for Early-stage investigators) program includes instruction in machine learning, relational database management, and other techniques, as well as leadership and team management, and grant writing. All participants pursue a research project and can seek grant funding. “Oomics and data science are the future of biomedical research, yet there is a scarcity of early-career researchers trained in these techniques,” says Andrea Baccarelli, MD, PhD, program leader, Leon Hess Professor, and chair of Environmental Health Sciences. “Our goal is to accelerate the progress of early-career scientists, especially women and individuals from marginalized groups.”

Clearing the Air in the Bronx
AN AVERAGE OF 300 DIESEL TRUCKS USE THE CROSS BRONX EXPRESSWAY PER HOUR, and the pollution is linked to high asthma rates in the 220,000 people—most of them Black and brown—who live nearby. For years, community advocates, elected officials, and Columbia Mailman School professor of Health Policy and Management Peter Muennig, MD, MPH ’98, have been working to do something about this. Now, Sen. Chuck Schumer and Rep. Ritchie Torres, both of New York, have promised that a massive project to mitigate the expressway’s harms is a top priority as part of a new $1.2 trillion infrastructure bill.

The project would cap portions of the expressway and add vents to cleanse the exhaust; green space and noise barriers would be added to other areas. Muennig’s research shows that the changes could cut in half asthma rates in adjacent neighborhoods and that long-term health and economic benefits would far exceed the work’s estimated $750 million cost. “We now have a once-in-a-generation opportunity to suture the wound of a highway that cuts through the heart of Bronx communities,” he says. “This project is going to mean a better future for everyone who lives here.”
What Students Are Talking About Right Now

At the end of their first semester, as a culmination of the Core Curriculum, MPH students integrate the concepts and skills they’ve learned by writing an op-ed. From the more than 300 essays, some common themes emerge.

Two Awards for Fried

Dean Linda P. Fried, MD, MPH, has been named to PoliticsNY’s “Power Players in Healthcare” list and awarded the Association of American Physicians’ 2022 George M. Kober Medal, one of the highest honors in academic medicine. Fried, the DeLamar Professor of Public Health and director of the Robert N. Butler Columbia Aging Center, was recognized for her groundbreaking contributions to the science of healthy aging, particularly in defining the clinical syndrome of frailty and for prevention of frailty, disability, and cardiovascular disease.

Susser Receives Lieber Prize

Ezra Susser, MD ’82, DrPH ’92, is the Brain & Behavior Research Foundation’s Lieber Prizewinner for Outstanding Achievement in Schizophrenia Research. He was honored for groundbreaking work on prenatal exposure to starvation and maternal blood biomarkers, as well as other work on the determinants of the onset and the course of schizophrenia. At a molecular level, he has worked on genomic and epigenomic causes, but his research extends beyond disease onset to strategies for prevention and improving quality of life.

Prestigious NIH Award to Nigra

Anne Nigra, PhD ’20, assistant professor in Environmental Health Sciences, is one of only ten scientists awarded an NIH Director’s Early Independence Award in 2021. Her research will explore racial, ethnic, and socioeconomic inequalities in public drinking water contamination and how they contribute to adverse birth outcomes across the U.S.

Hispanic Network Honors Martins

Silvia Martins, MD, PhD, professor of Epidemiology, has received the 2021 National Award of Excellence in Mentorship from the National Hispanic Science Network. Martins was honored for outstanding mentorship to graduate students and early-career investigators working in the area of Hispanic substance abuse.
SUPPORTING OUR WORK

Coronavirus: Funding the Future
The Columbia Center for Infection and Immunity Coronavirus (C/three.sup) Fund, led by Board of Advisors member Cyrus Massoumi, MBA ‘03, raised $5,595,636 from 122 donors in less than three months. The funds support the work of Center director W. Ian Lipkin, MD, and his team as they develop and scale the cutting-edge diagnostic, serology, and therapeutic tools the world urgently needs to respond to coronaviruses.

Examining Affordable Housing
The JPB Foundation donated $2,040,000 for a three-year study of the impact of comprehensive social, environmental, and health-promotion services on residents’ well-being and quality of life in affordable housing. “We aim to create ‘Communities of Opportunity,’ and this research will identify best practices to guide housing providers and public health,” says Population and Family Health professor Virginia Rauh, ScD, study co-leader.

Gates Foundation Continues Support
A $24 million philanthropic gift from the Bill & Melinda Gates Foundation will fund the ICAP-led CQUIN Learning Network: Phase Two. The HIV Coverage, Quality, and Impact Network works in sub-Saharan Africa with ministries of health and in-country program partners to accelerate implementation of person-focused delivery of HIV services, leading to enhanced health outcomes and programmatic efficiencies.

NIH Grant for Gun Research
A new multimillion-dollar grant from the National Institute of Child Health and Development will allow Charles Branas, PhD, and colleagues to assess more than two dozen firearm violence prevention safety tactics used in 600-plus schools across the U.S., including metal detectors, active shooter drills, and policies that permit school personnel to carry arms. It was one of ten grants awarded by the NIH as part of a historic $12.5 million effort to study gun violence.

In Memoriam: Two Icons
THE SCHOOL HAS LOST TWO EMERITUS FACULTY MEMBERS WHO WERE COMMITTED TO ADDRESSING THE DEEP FISSURES OF INEQUALITY IN SOCIETY.

ZENA STEIN, MB, BCh, BELOVED PROFESSOR OF EPIDEMIOLOGY, died at age 99. Stein and her late husband, Mervyn Susser, MB, BCh, FRCP, helped establish the discipline of epidemiology. With creative and rigorous research, they brought new insights to mental health, reproductive health, and the social determinants of health. Their research led to the recommendation that women who could become pregnant should consume folic acid daily.

EUGENE LITWAK, Ph D (’58), REVERED FORMER HEAD OF THE DEPARTMENT OF SOCIO-MEDICAL SCIENCES, broadened the focus of the field to embrace health promotion and disease prevention, supported interdisciplinary collaborations and helped position the School at the forefront. Litwak applied social theory to explain how social structures are matched to tasks undertaken in activities of social life, including in schooling, housing, and care for older adults.

Speaking Up on Abortion
TERRY MCGOVERN, JD, WAS PREPARED FOR THE SUPREME COURT’S OVERTURNING OF ROE V. WADE. The Harriet and Robert H. Heilbrunn Professor and chair of the Department of Population and Family Health has been outspoken before and after that watershed moment. “The court has gone against its own precedent, against public opinion, and against more than a century of science promoting women’s, girls’, and communities’ health and well-being,” says McGovern who, along with fellow faculty and students, has been protesting and educating the public in the wake of the decision.

Writing in BMJ after a draft of the ruling leaked, McGovern enumerated in chilling detail the potential public health ramifications, including global evidence that making abortion illegal increases maternal mortality. (Banning safe, legal abortion in the U.S. could lead to a 21% increase in pregnancy-related deaths, and a 33% increase for Black women.) She pointed out that increased racial discrimination could follow the court’s decision, noting that in Florida, Black women are 15% of the population, but comprise 75% of arrests related to pregnancy. McGovern has also noted many states are ill-equipped to handle additional children in foster care.

McGovern and her department remain dedicated to restoring the rights of women, girls, and pregnant people under Roe. She is already fundraising for a project that will examine new criminalization provisions. “There are many battles to fight,” she writes in BMJ, “and fight we will.”
Recent tropical cyclone seasons have yielded stronger, more active, and longer-lasting storms. Now, research shows that these incidents are linked with higher death rates from major causes in subsequent months. After collecting 33.6 million U.S. records from 1988 to 2018, Columbia Mailman School researchers used a statistical model to calculate how death rates changed after tropical cyclones and hurricanes when compared to equivalent periods in other years. The largest overall increase in deaths occurred during the month of a storm, but there were also increased death rates in the month following tropical cyclones due to injuries, infectious and parasitic diseases, respiratory diseases, cardiovascular diseases, and neuropsychiatric conditions.

Half of the U.S. population experienced at least one tropical cyclone during the study period, and “our results speak to the ‘hidden burden’ of climate-related exposures and climate change,” says Robbie Parks, PhD, a postdoctoral research scientist. Women and those over age 65 were especially at risk, and an outsized proportion of low-income and historically disadvantaged communities in the United States reside in tropical cyclone-affected areas, placing those populations at special risk. “Understanding how cyclones may affect deaths provides an essential foundation for improving resilience to climate-related disasters across the days, weeks, months, and years after they wreak destruction,” notes Marianthi-Anna Kioumourtzoglou, ScD, assistant professor of Environmental Health Sciences.
Bed Nets Save Lives Long Term

Researchers have long known that bed nets protect against malaria, but a 22-year study of more than 6,700 children in Tanzania, published in the New England Journal of Medicine, shows that children who sleep under the nets at an early age have a 40 percent greater chance of surviving into adulthood than those who use nets less often. There had been speculation that preventing malaria early in life made people more vulnerable to it later on, but this study strongly counters that theory. Study co-author Patrick Kachur, MD, MPH, a professor of Population and Family Health, says: “Billions of mosquito nets have been delivered. We were delighted to confirm the survival of so many children—among the first in a generation protected from malaria in a way that wasn’t imaginable before.”

Pharmacists May Expand Role

Research released by Columbia Mailman School and Express Scripts Pharmacy, an Evernorth company, reveals that amid growing provider shortages, pharmacists are projected to play an increasingly integral role in care management. America’s pharmacists already provide wellness screenings, do telepharmacy counseling, diagnose acute conditions, and prescribe medications. “Most people trust pharmacists to play a greater role in providing their care. As the shortage of doctors and nurses persists, and as complex new therapies and digital healthcare technology solutions are developed, the role will continue to evolve,” says John McHugh, MBA, PhD, an assistant professor in the Department of Health Policy and Management.

The report surveyed more than 3,000 patients, 1,000 pharmacists, and 500 physicians and other providers. Key findings: Providers reported a high level of trust, often over 90 percent, in pharmacists’ current activities. A majority of pharmacists see a transition to more direct patient care by 2030. More than half of pharmacists felt their training was sufficient to manage patients, with opportunities for learning in chronic disease education, diagnosing, and prescribing.

1,800
Latest total number of new microbes discovered by the Center for Infection and Immunity

1
Latest rank of Environmental Health Sciences Department for NIH funding in environmental health sciences, up from #7 in 2016

3,000+
Number of journal articles on all topics published by faculty in the past three years
Important Autism News

Two new studies shed light on autism spectrum disorder (ASD).

1. **Researchers have identified molecular signatures of inflammation in pregnancy that are linked to ASD**, which could lead to a test to screen for the condition at birth. Earlier studies had linked ASD risk to prenatal exposure to maternal fever and to certain infections. The new study examined 60 molecular markers and linked ASD risk to specific groupings of inflammation-related molecules, with different groupings seen in boys versus girls. “Our research suggests a period of vulnerability during gestation when inflammation can interfere with central nervous system development,” says Xiaoyu (Jason) Che, PhD, assistant professor of Biostatistics in the Center for Infection and Immunity, who is the study’s co-first author along with Mady Hornig, MD, associate professor of Epidemiology.

2. **Another team has found that the odds of self-harm are over three times greater in people with ASD than among those without ASD.** Up to 42 percent of the autism population engage in behaviors such as hand-hitting, self-cutting, and hair pulling. “In light of the increase in the reported prevalence of autism and heightened rates of depression, anxiety, and suicide associated with the COVID-19 pandemic, further research should develop injury surveillance systems for the autism population, and implement effective prevention strategies,” says senior author Guohua Li, DrPH, MD, professor of Epidemiology.

Pregnancy: Good News, Bad News

Affordable Care Act Medicaid expansion increased preconception and postpartum Medicaid coverage and led to significant declines in uninsurance and insurance churn, finds a new study. These improvements were likely especially beneficial to low-income people and members of racial and ethnic minority groups. While researchers found only limited evidence that improved coverage led to better maternal and child health outcomes, “our findings indicate that Medicaid expansion to low-income adults is a very effective approach to increase preconception and postpartum health insurance coverage,” says senior author Jamie Daw, PhD, assistant professor of Health Policy and Management.

Elsewhere at the School, researchers have shown that exposure to phthalates, chemicals found in plastics and other household products, is associated with elevated blood pressure during late pregnancy, as well as an increased likelihood of having unfavorable blood pressure postpartum. The study is the first to examine long-term blood pressure trajectories in relation to phthalate exposure during pregnancy. The researchers analyzed urine samples collected from 892 pregnant women in Mexico City. “Exposure to phthalates during pregnancy may have lifelong consequences, potentially elevating the risk for hypertension later in life,” says first author Haotian Wu, PhD, an associate research scientist in Environmental Health Sciences.
New Fever Screen

Hospitals, schools, and other high-traffic locations could use a new low-cost thermal imaging system to take temperature readings that would alert them to outbreaks of COVID-19 and other diseases that cause fever. Fred Jiang, PhD, associate professor of Electrical Engineering at Columbia Engineering, teamed up with Andrew Rundle, MPH, professor of Epidemiology, to develop the SIFTER system. The team tested it for months at ColumbiaDoctors’ midtown clinic in New York City. It screened more than people, with a measurement error within °F at meters, a significant improvement on other infrared thermal scanners. In the coming months, they will deploy the system in a public space to test whether day-to-day variation in fever prevalence tracks with the variation in COVID-19 cases.

Why Young Ugandans Use Healers

Young people in the Rakai region of Uganda are turning to healers for sexual and reproductive healthcare, according to a new study published in Social Science and Medicine. Young people reported that high costs, inconsistency of supply, and experience or fear of stigma in clinics and pharmacies influenced their preferences to visit healers.

Young people also said healers provide a sex-positive approach and counsel focused on pleasurable and economically motivated sex. These therapies diverge from HIV prevention messaging that frames nonmarital and transactional sex in terms of danger and disease. “Our findings indicate that healers should be engaged as allies in HIV prevention and other sexual and reproductive healthcare efforts,” says Erin V. Moore, PhD, lead author, who conducted the study while she was a postdoctoral scientist in the Heilbrunn Department of Population and Family Health. “Global public health practitioners stand to benefit from taking healers’ conceptualization of sexual health seriously as it takes into account physical, emotional, social, and especially economic well-being.”

Children at Risk

About 1 in 3 children and adolescents with disabilities experience emotional and physical violence, finds a new review of research involving more than 16 million young people from 25 countries. In addition, 1 in 5 experience neglect, and 1 in 10 have experienced sexual violence. More than 94 percent of children with disabilities live in low-middle-income countries where many risks converge. Inadequate protection and support systems, as well as stigma and discrimination, contribute to the higher levels of violence. Some children with disabilities are unable to verbalize or defend themselves. An estimated 11 percent of the world’s child and adolescent population has epilepsy, an intellectual disability, or vision or hearing impairment; many more have other disabilities.

The findings highlight an urgent need: “Protecting children with disabilities from violence is a fundamental aspect of social justice and equity,” says Ilan Cerna-Turoff, MPH ’14, PhD, a postdoctoral research fellow in Environmental Health Sciences who was a co-leader of the study, which was published in The Lancet Child & Adolescent Health.

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Ride-Share Rewards

More ride-share trips mean fewer alcohol-involved crashes, shows a study in the *Journal of Studies on Alcohol and Drugs*. Christopher Morrison, PhD, assistant professor of Epidemiology, and fellow researchers studied Chicago statistics, matching nine alcohol-involved crashes with nine that did not involve alcohol. For each additional ride-share trip per square mile, there was a zero percent decrease in the odds that a crash was alcohol-involved. Although the benefits for each trip were small, the volume of trips and of alcohol-involved crashes mean the overall impact could be substantial. Morrison concedes that some research suggests links between ride-sharing and pedestrian crashes but says, “Drunk driving is devastating for drivers and passengers. We can use this information to help reduce these enormous health costs.”

Looking to the Positive

Policymakers should design programs based on the behaviors of individuals who succeed in spite of challenging circumstances (so called “positive deviants”), argues Kai Ruggeri, PhD, assistant professor of Health Policy and Management, in *Perspectives on Psychological Science*. For example, he says, “look at parents who raise healthy children in low-income households and make their practices the focus of an intervention because it takes into account resource limitations.” In an ongoing study, Ruggeri and colleagues are applying the positive deviants approach to examine how people spent stimulus checks. They will extract lessons from the 5 percent of people who saved or invested this money that could be tested in future interventions.

**SURPRISE VIRAL THREAT**

VirCapSeq-VERT, a test developed by the Center for Infection and Immunity, detected the normally harmless human polyomavirus 9 in three transplant patients who died, identifying a new risk to immunocompromised people.
Aging redefined

Columbia Mailman School is guiding a global quest to enhance health as the world’s population ages—and transforming how we think about aging in the process.

By Paula Derrow
People don’t generally think of getting older as a sunny topic. But when Dean Linda P. Fried, MD, MPH, talks about the subject of aging in her book-lined office, just a few days after the release of the National Academy of Medicine’s Global Roadmap for Healthy Longevity, she brims over with enthusiasm. “It’s quite extraordinary what public health has done,” says Fried, who co-chaired the commission that created the report and played a key role in shaping its vision. “Public health is already responsible for 70% of the opportunity for health,” says Fried. “And our investments in prevention have created longer life spans—people around the globe have almost double the life expectancy they had in 1900.”

Longevity, however, isn’t enough. Fried is even more passionate about the possibility of healthy longevity—not just extending the life span but also extending the health span. “For the first time in human history, it’s not only possible to live longer, but to live longer with health,” she says. “The challenge now is to make the next-stage investments to fully realize the opportunity this creates, to democratize healthy longevity so that it is available not just to those with the most resources, but to everyone.”

The National Academy of Medicine’s road map looks ahead to 2050, laying out the means and conditions for older people to stay healthy, engaged, and productive, and to lead meaningful lives. This healthy longevity, the National Academy of Medicine’s International Commission points out, won’t just benefit older people, but will also help societies as a whole to thrive.

Fried has already begun to harness the formidable resources of Columbia Mailman School and the Robert N. Butler Columbia Aging Center to take the lead on accomplishing the report’s recommendations. “Health doesn’t just come from medical care,” she says. “It’s not enough to change one sector of society; we’ll need to change every sector in service of promoting longer, healthier lives.” It’s a tall order, but it doesn’t deter Fried: “The evidence is strong that by 2050, we can create healthy longer lives around the world.”
To realize that vision, Fried is working intently on launching and expanding programs at Columbia Mailman School and at the Butler Center, which was founded as part of the legacy of Robert N. Butler, MD ’53, pioneering gerontologist and former president and CEO of the International Longevity Center-USA. Fried is hiring faculty and pulling together a dream team of experts that stretches across the university, the medical center, and the globe. Along with the School’s current work—on the biology of aging, on the impact of inequities on health span, on infrastructure and policy, on attitudes about aging, and on what we can learn from cultures around the world—Fried and the School are laser-focused on ushering in a new paradigm. “Medicine and public health have always studied the negative—disease and disability,” says Fried, who trained as a geriatrician and is known for her seminal work on frailty. “But what we don’t have is a definition of health.”

Now, she says, the science is ready, and it’s largely coming out of the School and the Butler Center. “Nearly a year ago, we launched an interdisciplinary program with faculty in Columbia Mailman School, the medical school, and beyond, to study not just the downsides of aging but also the upsides of health. It’s going gangbusters,” says Fried. “To my knowledge, we have the first formal program in the science of healthy longevity in the world,” she says. “If we can add health to longer lives, older people can stay engaged, contribute, work, volunteer, and be creative in unimagined ways.”

Science suggests that if older people can stay healthy, they will put the immense talents and assets they accrue over life to good use. “As we age, we gain knowledge and expertise, along with the intellectual and cognitive abilities to decide if something matters. We can bring these powers to bear to come up with critical solutions to problems of import,” says Fried. She says that the largely untapped human capital of older people—which only grows as more older people remain healthy—will create a third demographic dividend, one that flies in the face of the Reagan-era economic perspective that tends to see seniors or anyone in need as a potential societal burden.

Of course, not everyone views a rapidly aging population as a shining opportunity. Some scientists and economists fear the graying of the globe the way experts once feared the scourge of overpopulation in the 1970s. And there is reason to worry, if society and government aren’t propelled by good public health science to do their part to help people live long lives with good health. “People are waking up and smelling the demographics,” says John W. Rowe, MD, Julius B. Richmond Professor of Health Policy and Aging in the Department of Health Policy and Management and Butler Center faculty member. By 2030, 1 in 6 people in the world will be 60 years or older, according to the World Health Organization. By 2050, the number of people aged 80 years or older is expected to reach 426 million, triple the number of octogenarians in 2020. Some who don’t share Fried’s optimism worry that besides overtaxing our healthcare system, this “gray tsunami” will sweep away resources for younger generations. They point to a popular theory of economics known as the “lump of labor,” which maintains that there are only a certain number of jobs out there, and that older people holding on to these jobs will deprive younger workers of opportunities.

But what if this negative narrative is just plain wrong? In fact, the lump of labor theory has been disproven; when older people are working and are active consumers, that creates more jobs for young people. “We have to get rid of the assumption that aging is only about illness and dependency. That’s not based on evidence. Science has debunked that old narrative, but our society is still living by it, and missing unprecedented opportunities that can come if only we redesign society for longer, healthier lives,” says Fried.
Rowe is one of those doing the debunking. He co-leads, with Fried, the interdisciplinary program examining how society can age positively and thrive, identifying opportunities for older people to, say, volunteer or participate in the workforce past retirement age if they desire. “Seventy is the new fifty!” says Rowe. “These days, people in the sixty to seventy age range are not frail; they’re fit, they’ve learned a lot, and there’s clear evidence that they have a lot to contribute.”

Fried points out that if older people want to work but can’t get jobs, which is all too common, “that’s a lose-lose proposition. We have to retrain older workers so they can keep up with changes in the workplace. We also need to create a broad range of roles for older adults that align with their goals, to create a better future.”

Rowe agrees, and points to problems in many European countries, where there are fewer and fewer workers and a growing population of retirees. “That can make it difficult to produce all the necessary goods and services,” he says. “But if you increase the workforce by creating more jobs for older adults, the entire workforce benefits—the tide lifts all ships.” Case in point: Research has shown that intergenerational teams are more productive and innovative than single-generation teams. “And evidence from factories in Europe suggests that mixed-age teams perform better than young teams—they may not be as quick, but the quality is higher and there are fewer errors,” says Rowe. “A study in a European factory that builds small trucks found that there were fewer accidents when the line included older, more experienced workers.” Perhaps even more surprising, a World Economic Forum, AARP, and Organisation for Economic Co-operation and Development study finds that investing in a multigenerational workforce will raise gross domestic product per capita by almost 19% within three decades.

The benefits go far beyond the bottom line. “Studies have shown that older people are more prosocial,” says Fried. “They care deeply about future generations, helping others, and leaving a legacy of a better world. We’ve never had that before at this scale. It’s pretty exciting and offers immense opportunities for society.” Those opportunities will only come to fruition if we adopt strategies that ensure the core institutions in our society—work, volunteering, retirement, healthcare, public health, education—are redesigned to support the population we will have in the future. Says Rowe, “It’s not just about turning society into a huge old-age home.”

In his role as chair of the MacArthur Foundation-supported Research Network on an Aging Society, which is based at the Butler Center, Rowe and a group of 14 scholars from the U.S. and Europe (including Fried) are developing an index that measures which cities, states, and countries are doing the best for their aging populations. (If you’re curious, Norway and Sweden rank first; the U.S. second.) “The index measures well-being in five domains,” says Rowe. These are productivity (participation in the workforce and volunteering); well-being (health status and life expectancy without disability); cohesion between generations; security (support for retirement and physical safety); and equity (which measures gaps between the haves and have-nots). One advantage of this index is that it’s possible to follow up over time and see how countries are doing as they implement new policies. “We’ve shared our results with the World Bank, the European Commission, and other global organizations. That’s just one example of the impact that the Butler Center is having,” says Rowe.
Like Rowe’s research, the work of Kavita Sivaramakrishnan, PhD, associate professor of Social Medical Sciences, stretches beyond U.S. borders. The Butler Center program she leads on global aging and health encompasses attitudes about aging and how older people are faring around the world, particularly in the global South (South Asia, Southeast Asia, the Arab countries, and sub-Saharan Africa).

“I’m interested in the value and meaning of aging across cultures,” says Sivaramakrishnan, whose latest book is As the World Ages: Rethinking a Demographic Crisis. “I want to know if it’s possible to think beyond binaries—that youth equals productivity and old equals panic. As a historian who is doing work in South Africa and Asia, my goal is to look at how families and communities come up with solutions and begin to cope.”

Sivaramakrishnan’s work isn’t just about numbers. “Numbers can make me cranky,” she says. “They don’t tell the whole story. Human behavior is not so predictable. There can be misery in old age and there can also be resilience. But you can’t just expect people to stand up on their own feet with no support.” Sadly, that’s too often the case. The reluctance to increase support to elders tends to be justified financially, says Sivaramakrishnan. But the numbers ignore the often-invisible contributions older adults make in terms of sharing their pensions with the younger generation (something she has studied in South Africa) or providing care for grandchildren when parents are at work.

Some elders take on longer-term responsibilities when family members migrate to other countries for work opportunities and leave their children behind. That’s something Sivaramakrishnan herself experienced when, as a young widow, she moved from India to Boston for a job at Harvard and, for a time, left her daughter with her parents. “We pretend that kind of thing doesn’t happen in America, but throughout COVID-19, we’ve seen families migrate to be with grandparents to get more help with their children. Too often, those contributions are ignored,” she says.

Sivaramakrishnan is bringing them to light, working with nongovernmental organizations such as HelpAge International to study how well local, community-based solutions are working in aging societies. “I’ve interviewed older people in Chennai,
Researchers at Columbia Mailman School are also spearheading a new, similarly plastic way of looking at biological aging, not as something that happens only in the third phase of life but as a process that starts from adolescence (or earlier). “A major focus of our research is biopsychosocial factors related to healthy aging—exposure to poverty, discrimination, educational barriers, and other adversities—that increase stress and produce health inequities,” says Allison Aiello, PhD, professor of Epidemiology, who started at the School on May 1 and who is developing a program on biosocial aging at the Butler Center. She is deputy director of Add Health (the National Longitudinal Study of Adolescent to Adult Health), a longitudinal study of more than two million seventh to twelfth graders launched in 1994. “Gathering information about exposures that occur early in the life course is key to understanding what contributes to healthy aging,” she says.

A 2021 report by the Alzheimer’s Association found that 6.2 million Americans aged 65 years or older are living with dementia, a number that, without intervention, could grow to 13.8 million by 2060. In the Add Health study, Aiello is focusing on measuring risk factors for decline in cognitive function that begin as far back as middle school. Children who grow up in poverty end up developing more diseases and die younger than people with more socioeconomic advantages. “This study will allow us to understand better which factors delay early changes in cognitive function and provide insights on ways to intervene,” she says.

For instance, in a 2017 study co-authored by Aiello, researchers found that low socioeconomic status across the life course was associated with immunological aging. “When you trace impacts from early to later life, including factors such as access to housing or education, you can better see how changing some of these levers through policy and intervention may reduce the risk of Alzheimer’s Disease in later life.” Aiello was drawn to the School and the Butler Center because she is an interdisciplinary thinker. “There is a lot of interaction across disciplinary areas; everyone shares a strong drive to understand healthy aging and all the complex processes that go into it. It is an exciting time to be at Columbia, given the many initiatives supporting aging research and health equity,” she says.
Just as exciting is the research of Daniel Belsky, PhD, on developing biomarkers to track how well (or poorly) someone is aging. These measurements of aging will make it possible to evaluate the impacts of various interventions over time. “We’re using clinical laboratory data, genomic data, and machine-learning tools to develop algorithms that summarize individual differences in aging—and we hope to deploy these algorithms in other studies and randomized controlled trials,” Belsky explains.

Like Aiello, Belsky, an assistant professor of Epidemiology who came to the School in 2019, was drawn to its unique approach to the science of aging. “We study biological aging across the full life-course, including young, midlife, and older adults—and we’ve even begun to explore whether it’s occurring in children,” says Belsky. Obviously, we all begin getting older from birth onward. What’s different about this research, says Belsky, is that “we can measure how the processes of aging progress more rapidly in some individuals. Early differences in the pace of aging may connect the environment we grow up in with our health across the lifespan.”

Exactly how these factors speed up or slow down aging is still a mystery. “But by following people over time and taking repeated physiological measurements including immune markers and blood chemistry, we can begin to see how people are aging differently,” says Belsky, who is also keen to discover whether it’s possible to modify a person’s aging trajectory for the better. “We’re analyzing epigenetic data from trials to see if it’s possible to slow the pace of aging. One trial focuses on restricting calories in non-obese adults. Calorie restriction has long been known to slow aging,” says Belsky. Another set of trials that Belsky is working on with Peter Muennig, MD, MPH, a professor of Health Policy and Management, is focusing on poverty, including measuring the effects on aging of benefits like an earned income tax credit, helping people find and maintain employment, and social mobility. Their colleague at the Butler Center, Adina Zeki Al Hazzouri, PhD, assistant professor of Epidemiology, focuses on how social and cardiovascular exposures across the life course influence Alzheimer’s disease and other dementias, and related health outcomes in old age.

The good news: “It’s now possible to say that if we do this thing, we can change the aging trajectory in this way, which will save Medicare X billions of dollars,” says Belsky. “We’ll be able to show how an intervention that may look costly will end up generating savings, opening up a new range of possibilities for public health interventions with at-risk populations.”
Interventions that occur later in life can also change the aging trajectory, dramatically and for the better. One intervention that yields a wealth of positive results for older people is volunteering. “It’s good for the brain and the body,” says Rowe. A 2018 study he co-authored found that retired people who began volunteering at a low level had a 34% decrease in disability over time. “And we published one paper that showed that volunteering after age 65 was as beneficial to health as smoking cessation.”

Fried is a pioneer in studying the health benefits of volunteering and developing novel models that make it easier for older adults to give back in high-impact ways. In the early ’90s, she created and launched Experience Corps, which brought older volunteers to public elementary schools for 10 to 15 hours a week to support the success of all children. Not only did the kids benefit, but brain scans of the older volunteers also showed improvements in neural activity. “That got the attention of a lot of people,” says Rowe, and, indeed, the program has now expanded nationally. Fried is, characteristically, optimistic that this kind of work will also get the world’s attention. “We will have the science to guide public health and clinical care and social services so that people flourish at all ages, including into the oldest ages. Every generation has a role to play,” she says.

But first, it’s essential to get the truth about what older people can do out there. “Honestly, right now, the biggest barrier is that we’ve got the wrong story about aging,” says Fried. “If we stay with that story, all the disaster scenarios that people predict could come true. But if we build a society for longer lives with health, there will be a huge return on our investment.”

Paula Derrow has worked and written for national magazines, nonprofits, and academic institutions. She specializes in health and psychology.
In March of 2020, when then-Mayor Bill de Blasio announced that the New York City Police Department would be responsible for enforcing mandates related to the raging COVID-19 pandemic, Seth J. Prins, MPH ’10, PhD ’16, had a bad feeling. “We saw anecdotal reports in the media that most of the people being arrested or given summonses were Black,” says Prins, assistant professor of Epidemiology and Sociomedical Sciences.

Sure enough, once data became available, Prins and his research team found that ZIP codes with a higher percentage of Black residents had significantly higher rates of COVID-19-specific court summonses and arrests, even after researchers took into account what percentage of people in each area were following social distancing rules. The team’s findings suggested that tasking police with enforcing mandates may have contributed to overpolicing of Black communities and the harms that result. Living in a neighborhood with a high rate of police stops has been associated with elevated rates of anxiety, post-traumatic stress, and even asthma. Prins and his colleagues found that pandemic policing mirrored the discretionary nature of the city’s stop-and-frisk program, which was deemed unconstitutional in 2013 due to racially discriminatory practices.

“It was a sick irony,” he says. “Not only did the policy increase close contact with police, who had incredibly low vaccination rates and often weren’t wearing masks, but also the people arrested were taken to crowded jails, where transmission rates were extremely high, and then sent back to their communities, which were already experiencing disproportionately high rates of coronavirus.”

His team’s report is one of several highlighting the ways in which the COVID-19
pandemic brought to the fore the longstanding effects of racism on public health, with findings of far higher death rates in this country among people of color. The Centers for Disease Control and Prevention declared racism a serious public health threat in 2021, following decades of research supporting the idea that structural racism is a significant driver of the social determinants of health, impacting everything from where people live and where their children go to school to the quality of the air they breathe, the food they eat, and the healthcare they receive. In recent years, Columbia Mailman School researchers have published numerous studies that underscore the persistent and devastating effects of racism on public health and illustrate the ways in which historically marginalized groups experience deep-seated health inequities that lead to higher rates of diabetes, hypertension, obesity, asthma, and heart disease, as well as a shorter life expectancy.

In her course titled The Untold Stories in U.S. Health Policy History, Heather Butts, JD, MPH, assistant professor of Health Policy and Management, guides students through an examination of policies that have embedded structural racism in healthcare over several decades. Among them is redlining, a racially biased mortgage-appraisal policy dating to the 1930s that led to food deserts (and the adverse health impacts that result) and other environmental adversities. More recently, research has shown that pulse oximeters are less effective on people with darker pigmentation. Throughout the COVID-19 pandemic, “You had Black and brown people going to their doctors and saying, ‘I’m having trouble breathing,’” she notes. “The doctor says, ‘The oximeter says your oxygen level is 96, you’re good to go.’ Meanwhile, that’s not an accurate reading.”

By continuing to probe the less obvious ways in which these historic mindsets continue to affect society, the researchers hope to contribute to a conversation whose ultimate goal is true health equity. Ami Zota, ScD, MS, who recently joined the School, has published research linking elevated levels of endocrine-disrupting chemicals in the bodies of Black, Asian, and Latinx women to products, such as skin lighteners, hair straighteners, and fragranced feminine care products, that reinforce Eurocentric beauty norms. Discrimination based on hair style and texture has been directly traced to a lack of access to economic opportunity.

When discussing her work, Zota, like Prins, points to the structural racism behind the findings. While we might not typically think about the social context that drives definitions of beauty, Zota says, “environmental exposures are determined by upstream factors like racism.” In 2017, she wrote about the disproportionate use of feminine care products among Black women and noted a link between douching and the legacy of slavery in this country. “White slave owners created a social construction of race and highlighted phenotypic differences to basically say that those of African descent were sub-human,” she says. While skin color and hair texture were obvious components of that, she says, odor also figured in. “Smells related to sexual and reproductive organs were further used to hypersexualize Black women who were enslaved”—and used as a rationale for sexual exploitation. “The idea that the body and home should smell ‘clean’ became a value that was passed down and a pathway to social and economic mobility,” says Zota.

She also noted a subtle racism in some of the responses she got from the media covering the work. Some reporters asked her why, if the OB-GYN community had discouraged douching, Black women were still engaging in the practice. “They took the approach of vilifying the user,” she says.

So pervasive is structural racism that it affects the temperature of the air circulating within our homes. Diana Hernández, PhD, associate professor of Sociomedical Sciences, has documented how racism has resulted in both segregation and a lack of investment in housing among certain populations, with enduring implications for physical and mental health. Hernández is a sociologist who conducts much of her research in the South Bronx, where she grew up in Section 8 housing. She has found
that people living in poverty and people of color are more likely to live in energy-inefficient homes (such as those with poor insulation), despite consuming less energy overall. Energy insecurity—the inability to meet basic household energy needs—is associated with poor sleep, mental strain, and respiratory illness. Affected households might cope with the lack of heat by using ovens, stoves, or space heaters to warm their homes (exacerbating the risk of fire and contributing to respiratory problems), and by wearing coats and extra layers of clothing indoors. They might spend their days in bed, tucked under blankets and quilts, and forgo food, medicines, and other necessities. Hernández tells the story of one woman who sent her kids to school with holes in their shoes so that she could afford to keep the lights on at home.

Though the energy crisis of the 1970s and ’80s led to the implementation of some programs that address home-energy insecurity, only about 1 in 5 eligible Americans actually obtain benefits. In addition to a lack of awareness about where and how to access help, people with limited incomes face administrative burdens, from having to take time off work and pay for transit to submitting documents verifying identity and need. Energy insecurity also tends to be internalized in a way that other issues aren’t, says Hernández, and is often interpreted as a personal failure. “There are ways people navigate the food landscape—by visiting food pantries or accessing Supplemental Nutrition Assistance Program benefits, for example—that are not available when it comes to energy,” she says, a situation that can affect social relations. In managing the shame and stigma associated with a lack of heat or power, many will keep friends and relatives at a distance.

Prins, whose early-career work in the policy realm spurred him to ask bigger-picture questions about racism and our country’s drug policy, has written extensively about the school-to-prison pipeline, a set of practices that make it more likely for some adolescents to be criminalized and ensnared in the legal system than to receive a quality education. The phenomenon gathered steam in the 1990s, part of a trend that saw the government cut spending in welfare, education, and housing while investing in systems of surveillance, punishment, and incarceration. “There are over 10 million students in the United States who go to a school that has a police officer but no nurse, counselor, social worker, or guidance counselor,’’ Prins says. Out-of-school suspensions have more than doubled over the past 40 years, and these policies have been borne disproportionately by adolescents of color, which is directly related to the preponderance of Black people in the nation’s criminal legal system.

Many Columbia Mailman School researchers have had the satisfaction of watching their work translate into real-world change. Zota testified before policymakers in California, Washington, and elsewhere as they considered regulations on beauty and personal care products, for instance, and saw the Toxic-Free Cosmetics Act, which bans the use of 24 hazardous ingredients from personal care products, passed in 2020. (Eighteen states, including California and New York, have also passed laws banning discrimination based on hair style and texture in the workplace and in schools.) A write-up in The Washington Post about Zota’s research into the presence of harmful chemicals in fast food led Sen. Dianne Feinstein of California to take the issue on and spurred Rep. Raja Krishnamoorthi of Illinois to petition the Food and Drug Administration (FDA) about it.

The wins can be gratifying, but Zota and the others acknowledge that, like racism, entrenched interests including Big Pharma, Big Food, and other industries can obstruct the work getting done. For example, thanks in part to the trailblazing research of the Columbia Center for Children’s Environmental Health, Congress instituted a federal ban on seven phthalates in levels exceeding 0.1 percent in toys and children’s products. But the dangerous chemicals can still be found in clothing, shower curtains, detergents, shampoos, and other products. Zota points to a lack of enforcement mechanisms for various consumer protection laws and to a dearth of funding for implementation. Last year,
A Commitment to Anti-racism in Public Health

During the 2021-2022 academic year, as part of its mission to become an anti-oppressive and inclusive institution, Columbia Mailman School launched a comprehensive curriculum analysis to address issues of power, race, and privilege in our content. It also hosted a FACE Forward Speaker Series, panel discussions about topics such as intersectionality in racism and public health that provided opportunities for students, faculty, and guests to consider how we can repair inequities as public health professionals.

One panel, Global Perspectives on Racism in Public Health, featured Epidemiology Professor Salim Abdool Karim, MS ’88, MD, PhD; New York State Department of Health Commissioner Mary T. Bassett, MD ’79, MPH; and New York University School of Medicine Professor Stella S. Yi, MPH, PhD. It was moderated by Associate Dean for Community and Minority Affairs and Professor of Sociomedical Sciences Robert Fullilove, EdD. The three talked about racism’s roots in white supremacy and colonialism and agreed that it is a system designed for the extraction of wealth. Living in Africa, Abdool Karim says, he is keenly aware of how not only white supremacy but also a myth of Black inferiority has been perpetuated over the centuries. So deeply embedded are these belief systems, Yi noted, you see evidence of them even in dietary guidelines, which are blatantly Eurocentric. “If you start digging,” she says, “you find white supremacy in places you’d never expect it.”

Each panelist shared a personal account of an experience with racism. Abdool Karim, a third-generation South African of Indian descent, described how, after 9/11, rampant Islamophobia meant that he was pulled aside for questioning every time he landed at JFK. Bassett, whose father was Black and her mother white, pointed out that at the time of her birth in Virginia, her very existence was against the law. And Yi, who is Asian American, reminded the audience of widespread incidence of anti-Asian violence in the U.S.

The panelists engaged in a lively back-and-forth about the place of race and ethnicity categories in our nation’s data systems. While changing demographics might point to the need for a more intersectional approach, Bassett noted that such a system would omit important questions about why health outcomes vary so widely among races. They ended on a note of optimism, with Abdool Karim marveling that he’d watched an entire country change its views on race; Yi pointing to a surge in cross-racial relationships and coalition building; and Bassett noting that while the year 2020 had been undeniably grim, it had also witnessed a level of engagement, and a willingness to tackle structural issues, unlike anything she’s seen for half a century.

She published a paper looking at the effects of phthalates on learning and attention among children and recommending their elimination from food contact substances, only to see the FDA rule soon after that the petrochemical industry could continue using the most common phthalates—and leaving out any mention of health concerns in its decision. Facing challenges related to climate change, she noted, the industry appears to be digging in when it comes to the production of plastic.

Some progress is being made where the school-to-prison pipeline is concerned. Prins points to pilot programs in New York City that use restorative justice practices in schools to deal more holistically with disciplinary issues and that train teachers to be less discriminatory when applying discipline. But such measures can only go so far. Truly addressing the structural issues behind the school-to-prison pipeline, Prins says, will require a fundamental shift, one where social services are redirected from punishment to prevention. Similarly, he says, addressing mental health and substance use issues related to exploitation in the workplace shouldn’t be about offering underpaid and overworked people seminars on work-life balance. Policymakers should be looking at things like enforcing overtime laws and making it easier for people to unionize.

Systemic change will likely come about only when different questions start getting asked—and different people ask them. In 2019, Zota, whose parents hail from rural India, created Agents of Change in Environmental Justice, a fellowship aimed at amplifying the voices of environmental health scientists from marginalized backgrounds. The program’s move to Columbia with Zota’s arrival complements the work of RISE (Resilience, Inclusion, Solidarity, and Empowerment), a peer mentor program launched at the School in 2018. These days, Zota says, most of the people shaping public perspectives in the environmental health field are older, male, and white, but the members of her program—which works with the non-profit Environmental Health News to amplify research and engage with the public—offer different lived experiences. “Whether you’re
talking about climate justice or environmental justice, if you’ve grown up in one of the communities that is hardest hit, that is going to shape how you view the problem and how you view solutions.” Participants in Agents of Change write essays and produce podcasts and videos. Graduates, including at least four Columbia Mailman School alumni, already have been invited to give talks at the National Institutes of Health and the National Academies of Sciences, Engineering, and Medicine.

A new initiative capitalizing on the expertise of Epidemiology professor Mary Beth Terry, PhD ’99, will tackle systemic health problems among historically marginalized groups in a revolutionarily holistic way. In January, Terry was named director of the Center to Improve Chronic Disease Outcomes through Multi-level and Multi-generational Approaches Unifying Novel Interventions and Training for Health Equity (known as COMMUNITY). While the citywide center has roots in public health, it incorporates representatives from cardiology, oncology, neurology, nursing, and general medicine and draws expertise from across Columbia University. The goal is for the Columbia researchers, working with colleagues from Cornell, NewYork-Presbyterian, Hunter College, and the City University of New York, to engage with the communities Columbia Mailman School serves, particularly the Black and Latinx communities, across several diseases at once. Whereas most research programs get their funding through a connection to individual diseases, the aim here is to break down silos and focus on more comprehensive interventions.

Terry calls this new initiative the realization of a 20-year dream shared by the entire team, whose members have wanted to work together, given the common antecedents to many chronic diseases. “This new funding focuses on developing and validating interventions as we have so much descriptive epidemiology already,” she says. “These data have existed for decades. We need scalable, successful interventions.”

Terry notes that community health workers, who tend to have large networks and inspire trust, will be central to achieving health equity. They are already part of a program focused on improving outcomes for people juggling multiple chronic diseases, including a sleep program recently launched in the Latinx community in Washington Heights. A Harlem project will rely on community health workers engaging with churches to identify candidates for colorectal cancer screening, as the guidelines recently changed in response to a surge in diagnoses among young Black men. Terry expects the combined initiatives, which are led by her Columbia colleagues, to improve health and help build the evidence for the cost-effectiveness of community health workers, and ultimately to fund them better.

Hernández, too, sees leveraging community networks—in her case, within reimagined multiple-unit housing—as a way to bridge gaps in public health. Practitioners have long worked in gathering places such as churches, particularly in Black communities, to get public health messages across. “In some ways,” she says, “sharing an address can be more of a connection point than sharing faith. There are so many things that can be done to think about meeting people where they are, reducing barriers, and reaching populations that are quote-unquote hard to reach.”

Researchers affiliated with the COMMUNITY Center will continue the work that Columbia Mailman School has long undertaken with community organizations such as the Harlem-based WE ACT for Environmental Justice—work that centers the concerns of people of color. Like Zota’s fellowship, COMMUNITY involves an educational element, including training the next generation of new investigators who are interested in combating the health inequities of chronic diseases. This deliberate passing on of knowledge is critical. “To me, structural racism is not having the mentors you need to move up the ranks,” says Butts. As an African American with degrees from three Ivy League universities, Butts stands as a living example of the change she and her colleagues all believe is possible.

THE POWER
OF MENTORSHIP

By Tim Paul

Behind many a celebrated career or collaboration is a strong mentor-mentee relationship. The School’s mentors help mentees identify goals and achieve them; offer advice on how to excel as a teacher and researcher; open opportunities for collaboration and provide entrée to a network of their peers; and guide them on the byways of academia. Most of all, they give emotional support and serve as a sounding board.

Scientific advancement and instructional excellence is sustained through generations of mentor-mentee relationships. I. Bernard Weinstein, MD, who led the Environmental Health Sciences Department from 1978 to 1990, was a valued mentor to Frederica Perera, MPH ’76, PhD ’82; Regina Santella, PhD; and Paul Brandt-Rauf, ScD ’74, MD ’79, MPH ’90, DrPH ’87. Brandt-Rauf went on to also chair the department, and Perera, Santella, and Weinstein were instrumental in developing the field of molecular epidemiology.

In turn, Perera, who founded the Columbia Center for Children’s Environmental Health (CCCEH), has mentored several faculty, including Julie Herbstman, MSc, PhD, and Andrew Rundle, MPH ’94, DrPH ’00, both of whom have furthered her work on the impact of early-life environmental exposures on children. “I learned so much from being around Ricky [Perera] and observing her decision-making process and gradually taking on new responsibilities,” says Herbstman, the director of CCCEH, who is shown at left with Perera (below). The learning goes both ways. Marianthi-Anna Kiourmourtzoglou, MSPH, ScD, recipient of the 2022 Dean’s Excellence in Mentoring Award, is continually amazed by her postdoctoral mentees. “I’m here because I get the opportunity to work with students and learn with them every day,” she says.

Harold W. Brown, MD, DrPH, the School’s dean from 1950 to 1955, organized study trips to Suriname for students in the 1950s. One of the students, John H. Bryant, MD ’53, went on to become a leading authority on international health systems and parasitology. In 1971, he stepped into the position once held by his mentor, becoming the School’s fifth dean.

In 2013, Jasmine McDonald, PhD, then a postdoc researcher, approached Mary Beth Terry, PhD, ’99, a cancer researcher, with a bold idea to explore the link between early-life infections and pubertal timing in girls. Though the idea was outside Terry’s expertise, McDonald recalls, “Her answer was, ‘Tell me more.’ She guided me on how to answer my research question and how to get my first grant, which eventually led me to a faculty position.” Says Terry: “I love to work with people who have different scientific disciplines. As the slogan goes, ‘Great minds think differently.’”
Merlin Chowkwanyun, MPH, PhD, first learned about public health as an undergraduate history major at Columbia through a class taught by Samuel Roberts, PhD, professor of History and Sociomedical Sciences, in 2003. Less than a decade later, Chowkwanyun joined his mentor as a member of the history faculty in Sociomedical Sciences. Roberts, who is Black, helped Chowkwanyun, who is Asian American, feel less alone in a historically monochrome field. Roberts adds, “One of the fruits of being a mentor is developing future colleagues. It’s not a one-way street.”

Even though Roberts was already a seasoned professor when, in 2014, he was named policy director of the Institute for Research in African-American Studies, he reached out to retired Columbia Mailman School professor Andrew Davidson, PhD, MBA, for advice. “I haven’t had a single conversation with him where I didn’t walk away having learned something. … Very few of us are no longer in need of mentorship.”

Tim Paul is editorial director in the Columbia Mailman School Office of Communications.
On a sunny Tuesday last May—some 26 months since the COVID-19 pandemic drastically changed life in the five boroughs and beyond—more than 300 people converged on The Forum at Columbia University to celebrate the launch of the New York City Pandemic Response Institute (PRI), a $20 million initiative led by Columbia University, under the auspices of ICAP at Columbia Mailman School of Public Health, with key partner the City University of New York Graduate School of Public Health and Health Policy. Guests included Columbia President Lee C. Bollinger; City University of New York Chancellor Félix V. Matos Rodríguez; three New York City deputy mayors and other officials; dozens of community leaders; and Professor of Epidemiology and Medicine Wafaa El-Sadr, MD, MPH ’91, MPA, director of ICAP at Columbia University, who has been tapped to reimagine the way the city responds to health emergencies and now leads PRI at Columbia.

The mood that day was festive. “Everybody had been through this common experience for two years. There was broad recognition of the need for PRI, why it’s absolutely important that the city learn from the experience of COVID-19,” says El-Sadr, who is executive vice president for Columbia Global and also directs Columbia World Projects. Indeed, less than three weeks after PRI’s launch, New York City confirmed its first case of monkeypox.

COVID-19: Continuing the Fight

From the earliest days of the pandemic, faculty members at Columbia Mailman School produced projections on the infection’s spread, sounded the alarm on health disparities, and advised local, state, and national governments on pandemic protocols. Now, armed with lessons learned during the initial emergency response, they are working to prepare communities from Manhattan to Mali to handle the next public health disaster.

By Christina Hernandez Sherwood
Learning Lessons, Preparing for the Future

PRI’s first major initiative, already in the works, is conducting a review of the city’s COVID-19 response. “It will be quite broad,” El-Sadr says. “The goal is to learn from the city’s many sectors and stakeholders.” The resulting report will be reviewed by a diverse group of community partners convened by PRI, including non-governmental organizations, neighborhood groups, and public health advocates, who will provide their own perspectives before it is released to the public. Harvesting the lessons learned from these groups will be critically important to informing future emergency preparedness, response, and recovery, whether the emergency is due to another infectious disease or to climate change.

To achieve its ambitious goal, PRI is organized around seven expert-led teams. For example, the innovation group is exploring technology and establishing relationships with businesses for the development of new diagnostic tests. The data group is considering different ways to collect, connect, and use public health data, including working with communities to be part of the data collection process at a hyperlocal level, developing novel ways to visualize and explain data, and sharing data back to gain the trust of the community. At the same time, the modeling group is pursuing methods to create projections of the potential disease transmission in nursing homes and prisons.

In a deliberate manner that is fundamental to PRI and its goals, each group includes diverse experts and voices, such as participants in local resident associations, members of professional groups, and environmental justice activists—to ensure diversity is embedded within PRI, El-Sadr says. “COVID-19 did shine a light on how health disparities can lead to catastrophic outcomes for some of our most vulnerable populations,” she says. “We’ve centered equity at the core of everything we do at PRI.”

The institute will establish hubs in each of the city’s five boroughs, co-located at community organizations. These will serve as clearinghouses for curated information, as training centers, and as supply distribution centers. PRI also plans to engage with other municipalities across the United States and around the world to share information and best position New York City for the future. “We’re hoping that this work, and all of our ongoing work, will be instructive beyond New York City,” says El-Sadr.
Preventing the Next Pandemic

Another Columbia Mailman School initiative with public health implications far beyond the city began in earnest a decade before the COVID-19 pandemic. In 2009, a woman living in Lusaka, Zambia, became sick with an unexplained high fever. She was airlifted to a hospital in Johannesburg, South Africa, where she died. The paramedics and nurses who cared for her also succumbed to the illness.

Scientists sent blood samples from the victims to the laboratory of epidemiologist W. Ian Lipkin, MD, who directs the Center for Infection and Immunity (CII) at Columbia Mailman School. Lipkin and his colleague Thomas Briese, PhD, associate professor of Clinical Epidemiology, used novel genetic sequencing methods to identify a new virus—a distant relative of Lassa fever that was given the name Lujo—which suggested a course of treatment that was credited with saving the life of the last five people exposed to the virus.

But Lipkin wondered if more lives would have been saved if there was a way to replicate this process in a faster, easier, and more localized way. His team developed an enhanced pathogen identification technique (dubbed VirCapSeq-VERT, as in “virome capture sequencing”) that inexpensively detects known and unknown viruses with unprecedented speed and sensitivity.

Today, the Global Alliance for Preventing Pandemics (GAPP), housed within CII, links public health leaders worldwide to detect viral threats, respond to local outbreaks, and curb the global spread of infectious diseases. GAPP is developing trusted relationships with scientists in low- and middle-income countries around the world, working to advance microbial surveillance and discovery and the development of diagnostic methods, drugs, and vaccines, all while valuing local cultures and beliefs. Establishing these long-term partnerships involves providing infrastructure and training in how to use VirCapSeq-VERT and BacCapSeq (a method for detecting bacteria and antimicrobial resistance), along with other methods and technologies, and networking and sharing ideas on pandemic risk reduction. “We’ll have these interregional networks that can help with the mission of identifying and containing pathogen outbreaks,” says GAPP Administrative Director J. Kenneth Wickiser, PhD, who recently joined CII from the U.S. Military Academy at West Point, where he was associate dean for research. “The vision is about the democratization of science and health equity.”

Last year, GAPP partnered with the National Institutes of Health and Liberia’s Ministry of Health to use VirCapSeq-VERT to determine whether Liberia’s spike in COVID-19 cases was related to an emerging variant. (The Delta variant was the culprit.) Since then, GAPP’s efforts in Liberia have expanded to unexplained febrile illnesses and other diseases that local public health scientists deem important to study. “It’s our job to teach and mentor best practices so our partners can be more effective in their identification and containment of pathogen outbreaks,” says Wickiser.

In June, public health scientists from Mali traveled to CII’s labs—with their patient specimens shipped via international couriers—to partner with GAPP to learn how to apply VirCapSeq-VERT to identifying the source of an unexplained febrile illness that is sickening Malians. Public health scientists from Indonesia, Zambia, and Mexico, where migrant camps exacerbate the spread of disease, are slated to participate in future cohorts. Once their scientists spend time working with CII experts, these countries become part of the GAPP network, Wickiser says, which provides them with access to supplies and support to continue this work at home. “GAPP stands on the shoulders of decades of experience and achievement by the Center for Infection and Immunity,” he says.

GAPP wasn’t CII’s only contribution to the COVID-19 battle. Lipkin also advised the Chinese government and its scientists on the country’s COVID-19 response from the earliest days of the outbreak, developed health protocols for the Democratic National Convention and the entertainment industry, served on the city’s Testing Innovation Council, and collaborated with Columbia’s Irving Medical Center on a clinical trial of convalescent plasma for patients with severe COVID-19. Elsewhere in CII, Nischay Mishra, PhD, assistant professor of Epidemiology, developed a polymerase chain reaction for SARS-CoV-2 that was licensed to SummerBio for automated testing and used for 20 million tests in California alone.
Diving Into the Data

Researchers throughout Columbia Mailman School have published studies this year on the many ways the COVID-19 pandemic exacerbates an array of existing public health problems. Professors in the Department of Sociomedical Sciences found that the initial COVID-19 lockdown led to an increase in nicotine and tobacco use and that the pandemic was harmful to adolescent mental health. In the Heilbrunn Department of Population and Family Health, researchers found early evidence suggesting that gender-based violence increased during the pandemic, as well as many ways COVID-19 changed adolescent sexual and reproductive health. The Department of Epidemiology published papers highlighting the pandemic’s negative impact on firearm violence, adult mental health, domestic violence, school-based meal programs, and risk for childhood obesity.

The papers on the last two topics were drafted by Andrew Rundle, MPH ’94, DrPH ’00, professor of Epidemiology, who focused on obesity and how neighborhoods affect health. At the start of the pandemic, Rundle quickly sidelined his “day job” to work on pressing questions related to COVID-19. He began translating the COVID-19 projections from the laboratory of Jeffrey Shaman, PhD, professor of Environmental Health Sciences, who directs the Columbia Mailman School’s Climate and Health Program, into maps and models to help governments, companies, and citizens prepare for future caseloads. “It was an emergency,” Rundle says. “My team did what we knew how to do that would be useful, which is spatial mapping, creating data tools.”

In one project, the team works with a large American financial services company to create a dashboard mapping COVID-19 data in its locations across the U.S. The data visualizations help the company, which has returned employees to the office, decide, based on local risk levels, when to shrink or expand its on-site workforce.

Perhaps most notable is Rundle’s ongoing data analytics and visualization work for the city of Stamford. Connecticut’s second-largest city sits about 30 miles northeast of the School. In the early days of the pandemic, Rundle says, its government had access to some COVID-19 data, but it wasn’t detailed enough to steer pandemic strategy. Rundle’s team became certified to use Connecticut’s reportable infectious disease database, which shows cases reported to the state. The team built a computer program to mine the data it downloaded each day, eventually giving the city’s health department some 150 ways to visualize the impact of COVID-19. These include virus infection data by age, sex, race, census tract, ZIP code, and more. “We provided a tool to see what is exactly going on throughout the pandemic in Stamford, with projection data on what they can expect in the next six weeks,” says Rundle. Stamford used the detailed data to guide its pandemic response, such as how to focus public education efforts, and when and where to plan vaccination and testing campaigns; it now has one of the highest vaccination rates in the state.

Rundle, along with then-Stamford Director of Health Jennifer Calder, MPH, PhD, and others co-authored a paper in the Journal of the American Medical Informatics Association to show other municipalities how to replicate their process. “Public health is about data sciences. Public health schools and departments of epidemiology need relationships with computer science or data science departments so that we can tap into that expertise in these scenarios,” says Rundle. “This is a pure public health service.”

As New York City’s third summer in the shadow of COVID-19 turned out to be less of a reprieve and more of the same—thanks to virulent new variants and the monkeypox virus—the efforts by Columbia Mailman School experts to identify, track, and respond to pandemics were already proving bigger and more critical than ever. El-Sadr’s comment at the debut of PRI applies to the larger work of Columbia Mailman School as well: “This initiative is all about putting forth the best thinking, the most relevant data, the sharpest innovations, and, importantly, the most effective partnerships, so that everyone in our city is well prepared for the next major health threat—fully informed, engaged, safe, and healthy.”

Philadelphia-area health and science writer Christina Hernandez Sherwood has a master’s degree from Columbia Journalism School.
As Columbia Mailman School launches its second century of public health leadership, we asked faculty, students, graduates, and staff members to share the areas they believe most demand our attention and predict the field’s next successes.

Interviews by Caroline Hopkins
“We urgently need to incorporate climate and health into the training of all health professionals, so that they have the knowledge and skills to prevent and respond to climate and planetary crises. Through this, we will see gains in health for the current generation and see a world that can support health in generations to come.”

Cecilia Sorensen, MD, associate professor of Environmental Health Sciences and director of the Global Consortium on Climate and Health Education

“An underrecognized area of public health that needs attention is the mental health impact COVID-19 has had on marginalized communities, in particular.”

Nia Augustine, MHA ’23 candidate in Health Policy and Management

“Sexually transmitted infections. There has been a nearly 30 percent increase over the past six years, and, notably, cases of congenital syphilis have almost quadrupled. The clinical impact is significant and the economic cost—estimated at over $16 billion—is staggering.”

Alwyn Cohall, MD, professor of Sociomedical Sciences and Population and Family Health, professor of Pediatrics at Columbia University Irving Medical Center, director of the Harlem Health Promotion Center, and director of Project STAY (Services To Assist Youth)

“Black maternal mortality. Black women are three times more likely to die during childbirth than non-Hispanic white women. This is part of the legacy of American slavery, which permeates all American institutions. Racism is in the air we breathe and the water we swim in. Solutions cannot be solely rooted in awareness or downshifting the blame. They need to be as robust and multifaceted as the problem.”

Yveneed Francois, MPH ’22, Sociomedical Sciences

“Columbia Mailman School is uniquely suited to be a leader in reversing threats to reproductive rights in the United States, both by investing in Mailman initiatives and by collaborating across the medical center and Columbia University as a whole.”

Leslie Davidson, MD ’78, special lecturer in Epidemiology and former professor of Epidemiology and Pediatrics at Columbia University Irving Medical Center

“I think it is unquestionably labor rights and occupational health. If you look at who got hit hardest by COVID, especially in the scary early days of the pandemic, it was people working hazardous jobs in enclosed spaces. Occupational health was once a big part of public health, and I hope it returns to the center.”

Merlin Chowkwanyun, MPH, PhD, Donald H. Gemson Assistant Professor of Sociomedical Sciences

“Intergenerational trauma-informed care and practice needs more attention. A trauma-informed approach recognizes the traumas inflicted upon historically marginalized communities and how adverse childhood experiences affect health outcomes across the life span.”

Monét Bryant, MPH ’22, Population and Family Health
What public health success could we see by 2040?

“I think we could see an end to the HIV epidemic. The mRNA technology used to develop COVID-19 vaccines has increased optimism about the development of an approved HIV vaccine in the near future. But while researchers continue to make progress on that, we must remind ourselves of an important pandemic lesson: that vaccinations, and not vaccines, prevent serious disease. So let’s strategize now on how to address the access and hesitancy barriers that marginalized communities face.”

Michael A. Joseph, PhD, MPH, vice dean of education and associate professor of Epidemiology

“We may see wider access to over-the-counter, inexpensive, and accurate self-test kits—like pregnancy test kits—not only for COVID-19, but also for influenza and other respiratory pathogens. Right now, test kits are often expensive, and most of the results do not get reported. Future test kits could be set up so that the results are easily sent to a public health agency through cellphones.”

Jessica Justman, MD, senior technical director of ICAP, and associate professor of Medicine in Epidemiology at Columbia University Irving Medical Center

“Virtually eliminating cervical carcinoma is within reach by 2040. Human papillomavirus is responsible for almost all cervical carcinoma, a major cause of death in women in a number of low-middle income countries. The vaccine is safe, and providing it to all adolescents would reduce these cancers by up to 90 percent.”

Stephen Morse, PhD, professor of Epidemiology and director of the Infectious Disease Epidemiology Certificate Program

“By 2040, we hope to see significant strides made in universal healthcare and access disparities. A few years ago, this seemed out of reach, but in light of other public health challenges, this goal now seems attainable. States must continue creating options and developing ways to fund universal healthcare. If we truly commit to affordable coverage, we can see reductions in chronic diseases.”

Sandra Bernal Garcia, associate dean for student affairs and dean of students

“By 2040, I hope we see the end of the criminalization of addiction. The United States has the worst opioid overdose crisis in the world, and decades of criminalizing substance use have only exacerbated it. Substance use should be seen through the lens of harm reduction so we can provide folks with treatment, not a prison cell.”

Kyle MacDonald, MD, MPH ’19, Alumni Board president and senior associate, advisory, at KPMG U.S.

“The pandemic has transformed the workplace. A huge public health success I believe we will see is a world where people—particularly older workers and caregivers of any age—can remain challenged and fulfilled in their jobs but on their terms. This includes continuing to work in newly flexible ways as we age past what we now think of as retirement. We know this new way of working will benefit their healthy longevity, and we now know it is attainable.”

Caitlin M. Hawke, associate director of programming, and senior science and strategy officer at the Robert N. Butler Columbia Aging Center
How do you imagine the School’s second century will be different from its first?

“Collaboration will flourish. Tackling the big challenges of the next century, such as climate change, will require the School to work more than ever before across disciplines such as the natural sciences, engineering, data science, and political science.”

Jamie Daw, PhD, assistant professor of Health Policy and Management

“Due to the pandemic, public health is now recognized as a branch of science that solves the world’s biggest problems. I think we will scale up our impact in the decades to come.”

Ying Kuen (Ken) Cheung, PhD, professor of Biostatistics and vice dean of Faculty Affairs

“In the next decade, the School will increasingly have to confront a perennial tension between technological paths to improving population health and sociopolitical ones. While we tend to (rightly) focus on the dystopian aspects of these innovations, I believe they can be harnessed for public health improvement. I am excited about the rate of innovation in information technology and about how many more tools people will have to work with.”

Merlin Chowkwanyun

“The School will continue to be a place that attracts a diverse and intelligent group of people who are destined to be leaders of change in society. The institution will continue to figure out ways to support these students while prioritizing equity.”

Yveneed Francois

“The second century of public health will be unique in that, rather than lacking data about key drivers of health, we will be inundated with data. We need to invest in our data systems and infrastructure. This includes advanced computing, data storage systems, and the training of public health professionals to be able to translate massive data sets into useful and actionable information.”

Gary W. Miller, PhD, professor of Environmental Health Sciences and vice dean of Research Strategy and Innovation

“I believe there will be improved emphasis on service learning and the provision of even more opportunities to get involved in the community by participating in an array of service and research projects. There will also be increased opportunities for community-academic partnerships.”

Alwyn Cohall

“Our second century will see rapid growth and a deeper synergy between academia, industry, and public policy. Columbia Mailman School will inform and guide public discourse using cutting-edge research and evidence-based solutions rooted in equity as it plays a key role as a global center for public health.”

Kyle MacDonald

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New York City science and health reporter Caroline Hopkins is a 2019 graduate of Columbia Journalism School.
From the Ground Up

G. Robert “Bobby” Watts, MPH ’88, MS ’94

Bobby Watts always knew he wanted a career as a public health administrator. But he was also passionate about helping those in poverty, and upon his acceptance to Columbia Mailman School, Watts deferred for a year to work as a live-in counselor at a rescue mission in Lower Manhattan. He prepared residents for a doctor’s visit for “basic things like treating an open wound,” Watts says. “I saw what a big difference it made.” Watts stayed at the mission during his first year at Columbia. He wrote every optional paper about healthcare for the homeless and completed his practicum with the New York City Health Care for the Homeless Program.

When Watts arrived, the School’s research into homelessness was just beginning. He learned from the team’s statistical analysis and informatics practices; they learned from his experience living among the population. He started Homelessness Concern—a campus volunteer organization. (“Activism was encouraged and students had a chance to spread their wings,” he says.) He was student government vice president; the School later recognized him with the Gorman Humanitarian Award.

As CEO of the National Health Care for the Homeless Council (NHCHC) since 2007, Watts supports 300 federally funded Health Care for the Homeless programs and 100 medical respite providers. NHCHC offers technical assistance, research, and policy advocacy and shares best practices. Watts credits much of his efficacy to his training at Columbia Mailman School. Lessons from teachers like Drs. Samuel Wolfe, Lowell Bellin, and Stephen Ng stick with him. Bernard Challenor, MD, MPH, and his Comparative Health Systems class had a global perspective that “really helped me understand the U.S. health system better from a negative way—some of the things that we’re not doing that we could,” Watts says.

His MS in Epidemiology also pays dividends, informing decisions on how to use data. (Watts was appointed to President Biden’s COVID-19 Health Equity Task Force.) More than any one course, what shines through Watts’ leadership are key School philosophies: to listen to and support experts on the ground, and to take a multi-contextual and interdisciplinary approach. “We help the programs learn best practices from each other so we can shorten the learning curve,” says Watts. “We value those with lived expertise of homelessness to help guide us. That powers all of our work.”

We Are What We Eat

Zoe Feldman, MPH ’08

Zoe Feldman is fired up. Her passion for healthy and equitable food systems is contagious—and she backs it up with hard skills, professional experience, and a pain-taking work ethic. Feldman is bold in her vision and outspoken in articulating it. “I am the person who says things like, ‘The food industry is very whitewashed, very classist,’ which it is,” she says. She wants to make food healthier (which she worked toward in her early career at PepsiCo); she wants to shift the industry’s funds to benefit diverse founders and good farming (which she did while working in venture capital); and she wants to support food businesses that prioritize nutrition and philanthropy (which she achieved on the leadership team at Chobani). Her dream began at Columbia Mailman School, where she designed her own concentration in nutritional epidemiology. Feldman took advantage of the full university, learning from Joan Gussow, EdD, the mother of the organic food movement, at Teachers College. Columbia Mailman School “showed me who I wanted to be,” Feldman says.

Her work at Chobani showed her what she wanted to do. As director of the incubator program, Feldman found food businesses worth funding. That birthed Chobani Gives, a social responsibility effort, which she led. “It’s the thing I’m most proud of,” says Feldman. “I want whatever comes next to be like the Chobani Gives products, but I need to have operating experience in order to run it.” Feldman became general manager of consumer at Momo-fuku in October 2021 to gain experience in “macro, micro, pricing, inflation, consumer behavior and desire” to back up her vision of rebuilding the food industry as an altruistic one. “There’s that saying: When the s--- hits the fan, go find the helpers,” says Feldman. “I’m one of those helpers.”
Funding the Future

Wadzanayi Muchenje, MPH ’11

Look at Wadzanayi Muchenje’s bookshelf and you’ll find worn copies of her biostatistics and health econ textbooks. “The number of times I pull out my books to go through my notes is pretty incredible,” Muchenje says. Reliable resources are just one way her time at the School serves Muchenje now as director of the Africa Regional Office and Regional Health initiatives at the Rockefeller Foundation.

Muchenje grew up in several African cities as the HIV epidemic intensified and always anticipated a career in public health in order to give back. But she didn’t foresee the breadth of the field. “To me, it was very narrow—there was prevention and there was treatment,” she says. But her Public Health Law class uncovered the public health underpinnings of myriad statutes, which sparked her realization: “Public health is everywhere.”

Her courses and professors also supplied practical tools for her day-to-day success. Having begun her career at the global AIDS organization AVAC before working at the Clinton Health Access Initiative in Zimbabwe, Muchenje now spends her time advancing The Rockefeller Foundation’s regional priorities in Food, Health, Energy, and Climate. “Right now we’re developing follow-up support for the Africa CDC, an entity that turned five years old this year,” Muchenje says of her most rewarding work to date. Her job is to align the foundation’s funds with the continent’s needs. As is the trademark of a Columbia Mailman School student, she takes her cues from experts on the ground. “I love the continent and I want to do whatever I can to help it advance and progress,” she says. “I see what it can become. That potential is there. It just needs people to help realize that potential.”
Reinvention Is a Necessity

Charles Knirsch, MD, MPH ‘95

One of Charles Knirsch’s mentors, Glenda Garvey, MD, once told him he was a “patchwork quilt” of clinical activities and research. Indeed, over his impressive career Knirsch has become a master of many things. A physician, tropical disease specialist, professor, textbook co-author, nonprofit co-founder, and clinical trial leader, Knirsch found his multi-hyphenate footing at Columbia Mailman School. “The mission is so clear, the community has so much need, and the hospital is state-of-the-art. It was pretty easy to find people to collaborate with and to stay fresh by reinvention,” he says.

Knirsch has spent two and a half years at Pfizer, so it might seem he has settled down, but look closer: He has been therapeutic head of anti-infectives, New York site head of clinical research and development, and global head of specialty clinical development. He is now program lead of clinical research and development in therapeutic vaccines and has a secondment as clinical/medical head of global health partnerships.

One class in Sociomedical Sciences especially transformed his perspective. “The readings and discussions about health equity and access to these programs greatly impacted my desire to spend time and invest in a perspective that was not something I would have normally listened to,” he says. The MPH also gave him “a lot of rigor and a sense of how to build teams,” he says.

In two thousand, one, seven, he co-founded Parasites Without Borders. The organization evolved from the textbook Parasitic Diseases. (Knirsch co-wrote the fourth through seventh editions.) The book, plus lectures, video courses, and certification exams provided by the nonprofit—at no cost—fill a gap in American medical education, training students and physicians to deal with infectious entities they might encounter while on medical missions or in their own research. For Knirsch, every project scratches a different itch. “I never expected to be at one place for this long,” he says. “But being told, ‘You need to do something different, this is what we’d like you to do,’ was kind of perfect for me.” As in a quilt, each patch creates a more diverse, expansive, and effective whole.

Ruthie Fierberg, a Barnard College alumna, is the creator and host of the podcast Why We Theater, which explores theater and social justice.
Books from Our Faculty

A Girl's Guide to Puberty & Periods
By Marni Sommer, DrPH '08, MSN, RN, Margaret Schmitt, MPH '13, Christine Hagstrom, MPH '21, Caitlin Gruer, MPH '14
This graphic-novel–style book, born out of research led by Sommer, a professor of Sociomedical Sciences, incorporates real-life stories collected through participatory research with the help of many of Columbia Mailman School's MPH students. Artwork and stories depict a broad range of bodies, backgrounds, and lived experiences.

All Health Politics Is Local: Community Battles for Medical Care and Environmental Health
By Merlin Chowkwanyun, MPH, PhD
Grassroots community structures have a tremendous influence on public health. All Health Politics Is Local by the School's Donald H. Gemson Assistant Professor of Sociomedical Sciences looks at six different health controversies in four unique locales—Los Angeles, New York City, Cleveland, and Central Appalachia—and explores the huge role the local political machine, economy, racial politics, neighborhood configurations, and grassroots traditions play.

101+ Careers in Public Health, 3rd Edition
By Beth Seltzer, MD, MPH '08 and Heather Krasna, MS, EdM, PhD
This comprehensive guide to health careers is co-authored by Krasna, associate dean of Career Services at Columbia Mailman School, and Seltzer. It features interviews with 54 public health professionals and a unique, evidence-based career assessment tool for public health careers, as well as descriptions of 120 different jobs and concrete job-search tips.

Case Study Teams Have a Banner Year

Three Columbia Mailman School master’s students won the 2022 UCLA Center for Healthcare Management Case Competition, one of several case study teams to triumph this year. Helena Chan, MHA ’23, Alexis Bryan, MPH ’22, and Liat Schreiber, MHA ’23 (above) took first place in a field of 36 teams with a proposal that the UCLA Health System partner with mobile care and remote service providers to better reach far-flung communities with limited mobility—largely low-income communities of color.

The team members were enrolled in the Case Competition course taught by professors John McHugh, MBA, PhD, and David Rosenthal, PhD. They weren’t the only winning team this year. Lauren Barry, MPH ’22, Michelle Nader, MPH ’22, Poorvi Satya, MHA ’23, and Jessica Yuen, MPH ’23 took first place in a competition sponsored by the Cleveland Clinic. Ashley Sealy, MHA ’22, Hongye Lyu, MHA ’23, and Tianyi Zhang, MHA ’23 took second place in a contest organized by Centura Health in Denver. In addition to analytical ability and creative thinking, competitions require design skills, organizational acumen, and a strong presentation, all skills honed in the classroom at Columbia Mailman School.

Leading on Migrant Food Security

Manuela Orjuela-Grimm, MD, associate professor of Epidemiology, and a group of fellow researchers are calling for more monitoring of food insecurity among migrants in transit. In the Journal of Immigrant and Minority Health, they recommend establishing uniform assessment measures, then documenting food insecurity during migrants’ journeys, a key step toward ensuring the universal right to food for migrants.
A gap year from medical school allowed Nealie Ngo to come to Columbia Mailman School, where she expanded her interest in health communications and the use of graphic novels as a public health tool. “For my thesis I created a curriculum around Healing the Whole Family, a graphic novel I illustrated shortly before coming here,” she says. “It’s designed to increase medical students’ empathy and cultural competency around Asian American and Pacific Islander mental health.” Her time at the School “was the perfect year to figure out what I wanted my future to look like,” Ngo says. “I love the diverse faculty and how everyone is passionate about helping patients but also about making systemic changes. It makes me feel hopeful.”

Above, excerpts from Healing the Whole Family. See all of the project at nealiengo.wixsite.com/htwfgraphicnovel.
Invest in Future Leaders

Our practicum translates classroom learning to hands-on experiences. Founded by the School’s Alumni Board, the Alumni Centennial Practicum Fund provides stipends that allow students the freedom to pursue practicum experiences that match their aspirations while serving our local, Northern Manhattan neighborhoods.

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