Weill Cornell Medicine

Care

Discover

Weill Department of Medicine
Annual Report 2022

Teach

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In FY21, the Weill Department of Medicine's sponsored research portfolio **increased 5% to $98.6 million** from $94.0 million in FY20.

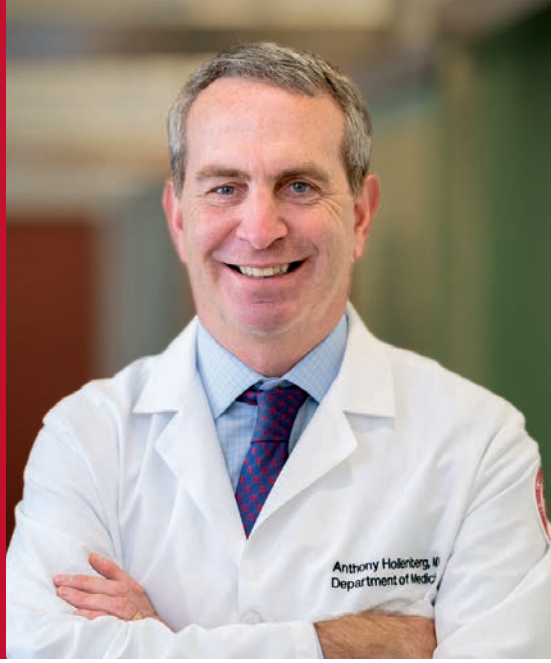
Grant revenue increased 7.4% from $78.2 million to $84.0 million, while clinical trial revenue decreased from $15.8 million to $14.6 million.

Outpatient visits in FY2021 totaled 283,948 as compared to patient visits in FY2020 at 229,428.*

*(These numbers have been affected by the COVID-19 pandemic.)

Front Cover (top to bottom): Dr. Robert S. Brown, Jr. (L), Dr. Charlie Buffie (R), Division of Gastroenterology and Hepatology; Dr. Lishomwa Ndhlovu in his lab; Residents in training

Dear Colleagues and Friends:



It is a pleasure to welcome you to our Annual Report that highlights the accomplishments of the Joan and Sanford I. Weill Department of Medicine. The Department remains dedicated to its missions, which are centered around clinical care, health equity, biomedical research, and education. In this report you will find a detailed overview of activities that span 2021 for all of our department's divisions. The report also includes faculty honors and awards, leadership biographies, information on our residency training program in internal medicine, as well as featured news stories.

The COVID-19 pandemic again influenced our entire year as we saw the persistence and adaptability of the SARS-CoV-2 despite our enhanced ability to prevent infection via the development of vaccines and other therapeutics. Still, the Department was able to grow significantly in all areas, while, at the same time, caring for significant numbers of patients affected by COVID-19. Our clinical volumes rebounded and grew nicely across all areas and the continued presence of significant video visit volume allowed us to continue to provide flexible access to our communities. Our research growth was again substantial and also included a new T32 training program in cardiovascular disease as well as a host of new awards to faculty across all of our divisions. Finally, our training programs continued their tradition of excellence, recruiting candidates from throughout the United States and globally to train and learn in a highly innovative educational environment.

While we undoubtedly will face many additional challenges going forward, the strength of the faculty and staff in the Weill Department of Medicine has provided a force that has allowed us to continue to move forward and to succeed.

Please enjoy our annual report and the remarkable accomplishments of the Weill Department of Medicine.

Sincerely,

Anthony Hollenberg, M.D.
Sanford I. Weill Chair of Medicine
Joan and Sanford I. Weill Department of Medicine
Weill Cornell Medical College

Physician-in-Chief
NewYork-Presbyterian Hospital/Weill Cornell Medicine Center

The Sonnenberg Lab: ILC3s Yield a Cascade of Discoveries

Dr. Gregory F. Sonnenberg is a scientist in the Jill Roberts Institute for Research in Inflammatory Bowel Disease at Weill Cornell Medicine, an Associate Professor of Microbiology and Immunology in Medicine, and Head of Basic Research within the Division of Gastroenterology and Hepatology, WDOM.

What regulates gastrointestinal health and chronic inflammation in the gut? To answer this question, Dr. Gregory F. Sonnenberg has been exploring how we develop a beneficial, or tolerogenic, relationship with the trillions of microbes that line the gut, known as the microbiota. These trillions of microbes hold the answers as to why someone may develop a particular condition or disease, such as Inflammatory Bowel Disease (IBD), or the fourth most common cancer in the U.S., colorectal cancer. With a focus on a subset of immune cells – ILC3s (group 3 innate lymphoid cells) – the Sonnenberg Lab has been rapidly unraveling a cascade of discoveries related not only to IBD and colorectal cancer, but, more recently, to airway inflammation and multiple sclerosis (MS).

Located in the Belfer Research Building, the Sonnenberg Lab is a hub for state-of-the-art research, productive collaborations, and the training of a new generation of diverse and high-tech investigators. 2021 represented the best in all three of these areas, beginning with the seminal discovery that ILC3s not only maintain healthy gut bacteria but provide protection against colorectal cancer. It was found that this protection is due, in part, to the role that ILC3s play in maintaining a healthy dialogue between the immune system and gut microbes. To prove their findings, the researchers used a mouse model in which they disrupted functionality of ILC3s. The result was aggressive colon cancer with effectiveness of cancer immunotherapies greatly diminished.

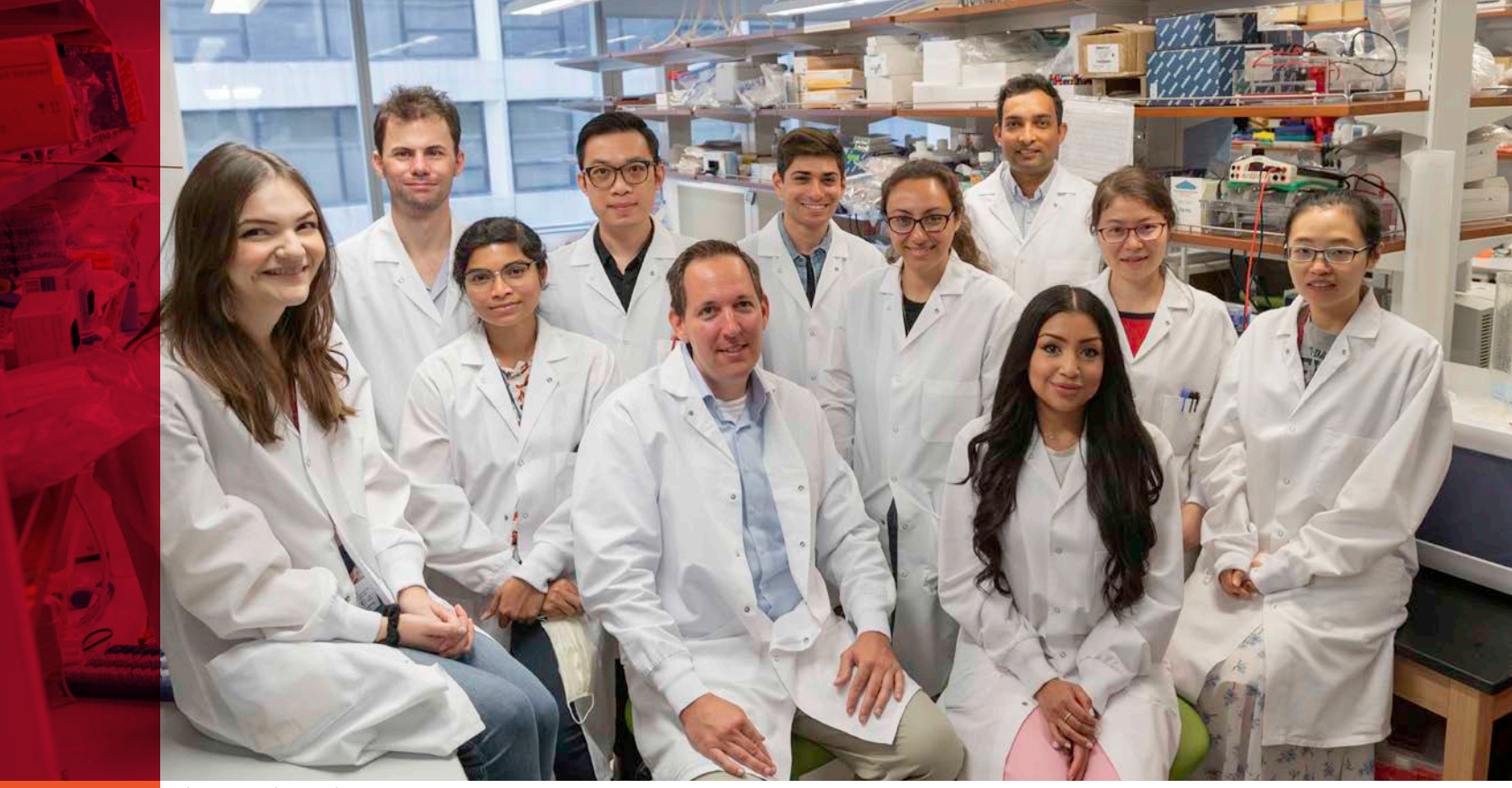
"As colorectal cancer is associated with chronic gut inflammation and a major disruption of the normal microbiome, the finding that ILC3s protect against colorectal cancer holds potential for improved patient therapies," explains Dr. Sonnenberg.

On the heels of these findings, the Sonnenberg Lab posed a new question: Why do cancers in some patients respond well to immunotherapies, while others do not? Collaborating with Dr. Manish Shah, Director, Gastrointestinal Oncology Program, Division of Hematology and Medical Oncology, and lead-author Dr. Jeremy Goc, a research associate in the Sonnenberg Lab, Dr. Sonnenberg and colleagues began to analyze ILC3s in colorectal tumors and pre-cancerous polyps in both humans and mice. While Dr. Sonnenberg and Dr. Goc worked at the bench, Dr. Shah, who serves as co-Director of the Center for Advanced Digestive Care at NewYork-Presbyterian/Weill Cornell Medical Center, provided the tumor samples from patients.

It was found that ILC3s in cancerous tissues were relatively depleted, as compared with healthy tissues, and, fundamentally, their functions were altered. In addition, the investigators observed that the ability of ILC3s to regulate a specific immune cell subset, called T cells, was significantly disrupted. Disruptions in this dialogue between ILC3s and T cells led, in turn, to a rise in inflammation in the gut that modified the gut microbiome. This was a seminal finding, as these modifications resulted in a decrease in the levels of T cells, which are necessary to fight tumors. Through the use of mouse models, it was also revealed that by blocking ILC3 signaling, tumors were relatively unresponsive to a cancer immunotherapy called anti-PD-1 checkpoint blockade.

Research in the Sonnenberg Lab had now confirmed that normal functionality of ILC3s plays a pivotal role in keeping gut microbiome healthy, preventing colorectal cancer, and in aiding the success of a cancer immunotherapy. To advance these findings, the lab has begun to ask key questions for the future. For example, could gut microbiota be sampled to predict tumor progression, or to predict responsiveness to immunotherapies? Could healthy microbiota be used to improve treatment responsiveness to more patients?

By the end of 2021, more discoveries were on the way, including an entirely new pathway related to ILC3s; the

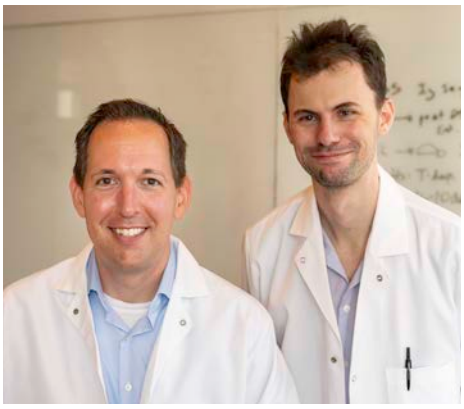


The Sonnenberg Lab

finding that ILC3s control airway inflammation by limiting T cell responses to allergens and microbes; and a connection between ILC3s and brain-related disorders.

Whereas the investigators had previously established that ILC3s could trigger beneficial responses in the gut for IBD and colorectal cancer, their latest discovery showed that ILC3s could have an opposite effect. They had uncovered a subset of ILC3s that circulate in the bloodstream with the ability to infiltrate the brain. And, in a mouse model, this distinct subset was found to trigger T cells to attack myelinated nerve fibers which led to MS-like symptoms. Reinforcing this unexpected finding, the investigators observed a similar inflammatory ILC3 response in the peripheral blood and cerebrospinal fluid of MS patients.

More breakthroughs followed, including that MS-like disease in mice could be prevented by removing a key molecule, called MHCII, from the ILC3s. This approach essentially blocked the cells' ability to activate myelin-attacking T cells. It was further shown in mice that ILC3s reside in other tissues in the body and could be programmed to counter the activity of brain-infiltrating T cells and to prevent the MS-like condition.



L to R: Dr. Sonnenberg and Dr. Jeremy Goc

"This work has the potential to inform our understanding of, and potential treatments for, a broad variety of conditions involving T-cell infiltration of the brain," says Dr. Sonnenberg, who collaborated on the project with lead-author John Benji Grigg, a Weill Cornell Graduate School of Medical Sciences doctoral candidate in the Sonnenberg Lab, and Dr. Timothy Vartanian, Professor of Neuroscience, Feil Family Brain and Mind Institute, Weill Cornell Medicine, Professor of Neurology and Chief, Division of Multiple Sclerosis and Neuro-immunology, Department of Neurology, Weill Cornell Medicine and NewYork-Presbyterian/Weill Cornell Medical Center.

By the start of 2022, the Sonnenberg Lab had published another key advance. Using an advanced technique called single-cell RNA sequencing and quantitative tissue imaging, they had delineated a new pathway in ILC3 that involved a growth factor (HB-EGF) that protects against the effects of IBD. Their findings demonstrated that ILC3s are the dominant driver of HB-EGF and that HB-EGF can powerfully counter the harmful effects of TNF. This was a welcome breakthrough, as TNF is an inflammatory immune protein and major driver of intestinal inflammation. The team's next steps will be focused on the cellular and molecular mechanisms of this novel pathway and its implications in intestinal health, inflammation, and cancer.

"We have identified the cascade of signaling factors that occurs downstream of TNF and causes ILC3 to switch on HB-EGF production. We have also observed this same cascade in human ILC3s. Identifying the significance of this pathway is a good first step, and we're now thinking about how we might manipulate this pathway to benefit IBD patients," says Dr. Sonnenberg, who collaborated on the study with Dr. Lei Zhou, lead-author and postdoctoral associate in the Sonnenberg Lab.

As the cascade of discoveries continues, the Sonnenberg Lab remains dedicated to employing all means of state-of-the-art strategies towards improved patient care.

Dr. Erica Phillips: A Champion for Change in Healthcare Delivery and Healthcare Equity

After earning her M.D. from Columbia University College of Physicians and Surgeons and completing residency training at the University of Pennsylvania, Dr. Phillips joined the faculty of the WDOM's Division of General Internal Medicine. She completed a Fellowship in Health Services Research at Weill Cornell Medicine (WCM) and an M.S. in Epidemiology from the Weill Cornell Graduate School of Medical Sciences.

Dr. Erica Phillips, the WDOM's Jack Fishman Associate Professor of Clinical Cancer Prevention, has been a champion in the field of healthcare equity for more than 20 years. Throughout her career, she has remained focused on equity for minority and underserved populations while employing creative strategies and solutions for a wide array of health conditions from obesity and weight management, to heart disease, and cancers.

A leader in evidence-based research, Dr. Phillips has forged a close and productive relationship with communities in New York City while establishing trust and strong ties with community residents, organizations, and providers. Her research has been targeted to three areas: behavioral interventions to promote healthier lifestyles in high-risk populations; understanding the social determinants that drive differences in morbidity and mortality between certain racial/ethnic groups; and strategies and tools, grounded in the principles of community-based participatory research (CBPR), to create larger scientific programs to address health disparities.

Dr. Phillips serves as Associate Director of Community Outreach and Engagement for the Meyer Cancer Center at Weill Cornell Medicine and as co-Associate Director of Community Engagement for the Cornell Center for Health Equity. "Dr. Phillips has done an exceptional job of leading the Meyer Cancer Center's community outreach and engagement efforts and has been instrumental in building our partnerships with community stakeholders. The programs she and her team are implementing will have a direct impact on reducing the burden of cancer in our communities," says Dr. Lew Cantley, former director of the Sandra and Edward Meyer Cancer Center. "A tireless advocate for community engaged research over her entire career, Dr. Phillips has been a superb leader of the Community Engagement Core of the Cornell Center for Health Equity," says Dr. Monika Safford, Chief, Division of Internal Medicine, WDOM.

Dr. Phillips is the former Associate Medical Director of the now Community Health Network's Long Island City Health Center where she practiced between 2003 through 2011 before transitioning to Weill Cornell Internal Medical Associates (WCIMA). She is one of the founding physicians of WCIMA's Weight Management Practice, where along with NYP's Ambulatory Care Network dietician, the team supports behavioral lifestyle counseling combined with pharmacological support to aid patients seeking weight loss in order to improve their quality of life. Since its inception in 2009, the practice has provided this important clinical service to a diverse patient population regardless of insurance type.

In support of the department's tripartite mission, Dr. Phillips has played an instrumental role in mentoring numerous trainees including medical students, residents, fellows and junior faculty members within and outside of the WDOM. For the past three years, Dr. Phillips has served as the Director of the Scholars in Health Equity which is an initiative of the Weill Cornell Diversity Center of Excellence.

In addition to her clinical and educational service to the department, Dr. Phillips is also the co-Chair of the WDOM's Racial Justice Equity Task Force (RJETF). Alongside Dr. Susana Morales, and a multitude of trainees, faculty, staff and

community based organizers, the task force has made the desegregation of care in the ambulatory setting one of their top priorities. For historical reasons there has been fragmented patient care based on payor. Hence, based on insurance, ambulatory patients at WCM may be seen in separate physical spaces and by different providers in the same facility. The RJETF is calling for a halt to this practice.

As a health services researcher, Dr. Phillips was one of the only non-basic science-oriented WDOM faculty to receive a grant from Weill Cornell Medicine in support of her research on COVID-19 which is investigating the role of social determinants of health on long COVID symptomatology in comparison to actual disease severity. One of Dr. Phillips' first major research projects was a rapid venue-intensive-vaccination program of hard-to-reach populations (e.g., substance abusers, sex workers, undomiciled) conducted in East Harlem and the South Bronx. The project, funded by the National Institute of Drug Abuse and housed at the CDC Urban Center at the New York Academy of Medicine, is where Dr. Phillips was introduced and mentored by experts in the field of CBPR (Drs. David Vlahov and Sandro Galea). Dr. Phillips later became an integral member and co-Investigator for "SCALE: Small Changes Lasting Effects," a $6.5 million U01 grant from the National Institutes of Health (NIH). The project tested the efficacy of a lifestyle intervention in at risk adults in Harlem and the South Bronx. She also served as the former co-Director of the community engagement core of Weill Cornell's NIH-funded Comprehensive Center of Excellence in Disparities Research and Community Engagement, a center focused on improving health outcomes among Black and Latinx adults. Dr. Phillips designed one of the first studies to combine a lifestyle intervention with acceptance-based therapy to investigate emotional eating as a potential barrier to optimal energy balance in Afro-Caribbean breast cancer survivors. Most recently, she designed a lifestyle intervention that aims to leverage the social network of individuals seeking weight loss who often succumb to the social undermining of health behaviors within their families and communities.

Dr. Phillips collaborates with a cadre of investigators locally and nationally. She is one of the Principal Investigators of a new multi-institutional NYC center that aims to reduce health disparities among individuals living with multi-chronic diseases. Funded by the National Institute of Minority Health Disparities, the center's work focuses on a multifaceted approach that intervenes on structural, community, family and individual level determinants of health and well-being. Over the past five years the infrastructure that her team has built in establishing the office of community outreach and engagement for the MCC has been instrumental in the receipt of several awards tied to reducing cancer disparities in marginalized populations across the cancer centers catchment area. These include two grants totaling $1.3 million (over five years) to establish the Blood Cancer Research Initiative Developing Greater Engagement with Community Patients (BRIDGE) program and a recent Department of Defense award that will pilot a highly portable and rapid prostate cancer point-of-care test.

Dr. Phillips is a recent recipient of a Healthy Equity Award from NYP Brooklyn Methodist Hospital, the inaugural recipient of The Marie Metoyer, M.D. Award for Excellence in Community Service, and she was recently inducted as a fellow of the American College of Physicians.

Dr. Phillips with members of the Meyer Cancer Center's research programs, office of community outreach and engagement and community advisory board.

In Pursuit of a Cure for HIV: Dr. Brad Jones Appointed as Principal Investigator of $28.5 Million NIH-funded Grant (REACH)

Dr. R. Bradley "Brad" Jones is an Associate Professor of Immunology in Medicine, Division of Infectious Diseases, WDOM. He received his Ph.D. from the University of Toronto and continued his work as a postdoctoral fellow at the Ragon Institute of MGH, MIT, and Harvard.

A nationally and internationally recognized investigator in the field of HIV, Dr. Brad Jones was recruited from George Washington University to the Division of Infectious Diseases, WDOM, in 2018. Coinciding with his arrival to Weill Cornell Medicine, Dr. Jones had been invited to give the plenary basic science lecture at the 22nd International AIDS Conference held in Amsterdam, the Netherlands. He had been tasked with conveying scientific findings on HIV-AIDS to a lay audience. The event hosted 18,000 delegates from 160 countries, dignitaries from around the world, and key leaders in the field of HIV-AIDS.

"The challenge, which seemed rather daunting at first, was to reasonably represent two broad fields of study – cure and vaccine – at a level that was both accessible to a lay audience and perceived as up-to-date and balanced by experts," says Dr. Jones. His lecture received many positive responses on Twitter with comments such as "the clearest talk on the subject of HIV cure and HIV vaccines I have ever heard."

As Dr. Jones explained in 2018, and which remains essentially true today, although antiretroviral drugs (ART) can contain HIV and suppress the virus in the blood to practically undetectable levels, the drugs cannot completely eradicate HIV from a person's body. This is due to the persistence of viral reservoirs. Known as HIV latency, this reservoir consists of HIV-infected cells that stay dormant and can remain undetectable for years, even decades, while ART is being administered. However, if antiretroviral drugs are discontinued, the virus will rebound from the reservoir.

Using the story of the little Dutch boy (representing ART), who plugs the overflowing dam with his finger until help arrives, Dr. Jones provided details on two lines of strategy: either drain the reservoir or reinforce the dam. These strategies opened two possible options: sterilizing the reservoir with a technique known as "kick-and-kill" (meaning draining and eliminating all infected cells in a person) or, alternatively, strengthening the immune response so that the HIV-infected cells do not do damage. Dr. Jones also brought to light the critical knowledge that genetic material of the HIV virus can be defective – and at a rate of up to 98%. This illuminating fact about the genetics of HIV had provided Dr. Jones and colleagues a portal in the dam to closely assess defective vs. effective genetic material.

At the time of his lecture in the Netherlands, there was only one patient, Timothy Ray Brown, who had been considered "cured" of HIV. More recently, a patient, who had both cancer and HIV, was treated at Weill Cornell Medicine with a blood stem cell transplant (involving a unique cord blood that contained an HIV resistant variant). As part of an NIH-funded clinical trial led by physician-scientists in the WDOM (Drs. Koen Van Besien, Jingmei

Hsu, and Marshall Glesby), the patient has been free of cancer for more than four years and there has been no sign of reemergence of HIV to date. However, the procedure is considered too risky for HIV-positive patients who otherwise would not need such a transplant.

Although both of these examples represent good news, there are still many individuals who have not achieved a cure for HIV or have limited, if any, access to ART. In addition, life-long reliance on ART involves a host of challenging side effects.

Dr. Jones believes a cure for HIV is within reach…

Throughout his career, Dr. Jones has been focused on the relationship between HIV and the human immune system, primarily studying cytotoxic T-cells and natural killer cells. Located in the Belfer Research Building, the Jones laboratory is known for its novel and creative strategies that employ state-of-the-art techniques, from *in vitro* experiments using a bank of clinical HIV samples, to humanized mice as pre-clinical models of HIV infection, and through to clinical trials.

Since 2016, Dr. Jones has been co-leading, along with Dr. Douglas Nixon, Professor of Immunology in Medicine, Division of Infectious Diseases, the NIH-funded Martin Delaney "BELIEVE" collaboratory. His studies with BELIEVE have focused on maximally harnessing the "cytotoxic T-cell" arm of the immune system to contribute to the elimination of the HIV reservoirs that persist in individuals on long-term ART therapy.

"The REACH award represents a remarkable vote of confidence and recognition of Weill Cornell Medicine as an international hub of HIV cure research," said Dr. Jones. "With this funding we will leverage novel technological and analytical methods to redefine how the immune system interacts with the HIV reservoir in people on therapy. We want to understand the role that this immune failure plays in HIV persistence and develop ways to overcome it. This is a major aim of the grant and will be built upon mechanistic investigations using multi-omics platforms. Ultimately, we seek to find a cure that will eradicate the HIV virus from the body and/or suppress the virus by boosting the immune system. Either outcome would eliminate the need for lifelong medication."

One of the benefits resulting from studies on HIV has been a number of breakthrough findings involving other diseases, including cancer and neurological conditions. Recently, Dr. Jones, who has been working for many years on T-cell therapy approaches to HIV, published a paper in *Blood* that showed T-cells from recovered COVID-19 patients can be successfully multiplied in the lab and maintain the ability to effectively target (fight) proteins that are key to the function of COVID-19. Furthermore, it was found that people who recover from COVID-19 have T-cells that recognize and target viral proteins of SARS-CoV-2, giving them immunity from the virus because those T-cells are primed to fight it. It is hoped that findings from this study could lead to adoptive immunotherapy in an effort to protect people who are vulnerable to COVID-19. (This study was in collaboration with Children's National Hospital.)

"Just as HIV research has benefited other fields like cancer, the **seeds of discoveries we are sowing now will drift into the future** to form the basis of cures in the future…"
Dr. Jones

Dr. Jones and colleague at work in the lab

As of 2021, Dr. Jones is serving as Principal Investigator of REACH (Research Enterprise to Advance a Cure for HIV), a part of The Martin Delaney Collaboratories. Formed in late 2020, and dedicated to finding a cure for HIV, REACH builds upon investigative elements of BELIEVE. REACH involves 18 different institutions and is co-led by Dr. Marina Caskey of The Rockefeller University. The reach of REACH is extensive with studies focused on HIV subtypes A and D in Uganda, as well as subtype B in Mexico.

"Just as HIV research has benefited other fields like cancer, the seeds of discoveries we are sowing now will drift into the future to form the basis of cures in the future," said Dr. Jones in 2018.

Fast forward to 2022, "We have learned so much about how HIV persists over the past decade. The next five years will be so critical to addressing the remaining gaps in knowledge, and then using this deeper understanding to design next generation therapeutic approaches. With the ongoing support of the NIH and the communities of people living with HIV, I do believe that a cure for HIV is within reach."

Four years after giving his plenary talk at the 22nd International AIDS Conference, Dr. Jones is leading the Basic/Translational Science Track for the 2022 AIDS Conference to be held in Montreal, Canada. He also serves on the Steering Committee for the International AIDS Society Global Scientific Strategy; his work with this society, involving a consensus document on research priorities for an HIV cure, was published in *Nature Medicine*. Dr. Jones is currently in the recruitment phase for a new clinical trial that is using yet another promising approach to achieving HIV cure or remission.

For further information: bradjoneslab.org and REACH twitter @reachforthecure

Dr. Lishomwa "Lish" Ndhlovu Leads a Bench-to-Bedside Research Program

Dr. Lishomwa "Lish" Ndhlovu leads a bench-to-bedside research program that spans multiple disciplines to understand the complex process of how HIV leads to immune damage and age-related complications in older people living with HIV. His team seeks to develop and design effective strategies to prevent, slow, or eliminate these complications, while, in parallel, pioneering discoveries for achieving a cure for HIV.

Dr. Ndhlovu was recruited to the Division of Infectious Disease, WDOM, in 2019. Upon his arrival, he swiftly established the Laboratory of HIV Immunopathogenesis in the Belfer Research Building. Employing state-of-the-art immunology and virology techniques, a major focus of his research, which covers many disciplines, is identifying neuro-immune pathways that are associated with brain injury in people living with HIV to illuminate the complex pathogenesis of HIV and aging. This work has opened the door to developing new improved approaches to treat these co-morbidities.

To study mechanisms that underly such complicated processes, Dr. Ndhlovu has employed a number of novel innovations including epigenetics combined with machine-learning analyses in his research that spans more than 20 years. Epigenetics, as Dr. Ndhlovu explains, is the study of how behaviors and environment can cause changes in how genes are expressed and work in cells but do not change an individual's DNA. This is essentially how an organism grows and develops through carefully orchestrated chemical reactions that activate and deactivate parts of the genes at strategic areas. They have been shown to be critical in normal brain function, and Dr. Ndhlovu and his team have revealed that epigenetic mechanisms may be key events in HIV brain injury. His team is also developing next generation organoids 'mini-brains' to model human brain development in an effort to pioneer new discoveries that will aim to improve brain health in those aging with HIV.

Dr. Ndhlovu's journey in medicine began in Zambia at time when the HIV epidemic was raging and this spurred his interest in immunology. His early research identified how several retroviruses (HIV, SIV and HTLV-1) drive T cell and NK cell immune exhaustion through negative checkpoint pathways, and he has developed and investigated immunotherapeutics to rescue these defective immune responses. Dr. Ndhlovu has completed several landmark publications, including how the microbiome influences immunotherapy in HIV. In more recent work, he has identified immunoepigenetic signatures in blood of acute HIV infection, HIV associated cognitive decline, HIV reservoirs, including expansion to severe COVID-19 disease, and HIV/COVID-19 co-infection. These discoveries are providing some of the most comprehensive host epigenome analyses in these disease states to the field in a quest for advancing effective interventions.

Dr. Lishomwa Ndhlovu, Professor of Immunology in Medicine, Division of Infectious Diseases, WDOM, received his medical training in Zambia at the onset of the HIV epidemic which spurred him to pursue a Ph.D. in Immunology at the Tohoku University Graduate School of Medicine in Japan. He completed postdoctoral training at the Gladstone Institutes and University of California San Francisco on an Irvington Institute Cancer Research Institute Fellowship. He also has a shared secondary appointment at the Brain and Mind Research Institute at Weill Cornell Medicine.

After completing medical training in Zambia, Dr. Ndhlovu "wanted to learn more about the underpinnings of how HIV can drive such destruction to the immune landscape and drive such high morbidity." This motivated him to embark on a career in scientific discovery, obtaining a Ph.D. at Tohoku University in Japan, and in the U.S. where he completed postdoctoral fellowships in HIV Immunology.

"I have been working to learn how to manipulate the immune system to limit disease and transition my knowledge towards deadly viral infections like HIV," says Dr. Ndhlovu.

Today, as part of a $26.5-million NIH-funded HIV cure grant, Dr. Ndhlovu serves as one of the Principal Investigators of the HOPE Collaboratory. HOPE involves a collaborative partnership with Weill Cornell Medicine, Gladstone Institutes, and Scripps Research (now University of Florida), and is one of 10 groups awarded a 5-year grant from the NIH's Martin Delaney Collaboratories HIV Cure Program.

Dr. Ndhlovu and lab team

Over the past 40 years, **advances in treating HIV have moved it from a deadly disease to one that can be controlled with daily drugs that extend life expectancy**, however, complications persist and a definitive cure has remained elusive.

The HOPE Collaboratory represents a completely new strategy for curing HIV. Considered an alternative tactic, block-lock-excise, is a new strategy that targets latent HIV in new ways. This approach does so without reactivating the virus. Instead, utilizing previous knowledge regarding how other viruses have become naturally inactivated over time, the HOPE approach aims to silence and permanently remove HIV from the body.

"We have not yet been able to achieve a cure for HIV because the virus finds a way to hide out in reservoirs of cells across the body that cannot be cleared by conventional anti-HIV drugs," explains Dr. Ndhlovu. "The HOPE grant is allowing us to test whether a novel block-lock-and-excise approach can achieve long-term silencing of HIV in all relevant tissue sanctuaries, so it cannot be released from cells. Coupled with permanent removal of any remnants of the silenced virus, we hope this will prevent the rebound of HIV when antiviral drugs are stopped, and lead to a cure."

On the heels of his appointment as Principal Investigator for HOPE, Dr. Ndhlovu and colleagues published several breakthrough advances on HIV pathogenesis and persistence in *PLOS Pathogens* and the journal *AIDS*. Dr. Ndhlovu, working with colleagues and lead author Dr. Michael Corley, Assistant Professor of Immunology in Medicine, Division of Infectious Diseases, WDOM, utilized cell-type specific DNA methylation profiling (epigenetic markers) to investigate epigenetic changes that occur at the earliest stage of HIV infection and following immediate anti-HIV treatment. It was found that HIV rapidly embeds an epigenetic memory in immune cells, which was not mitigated by anti-HIV drugs, and even when the drugs were administered soon after diagnosis of HIV. Furthermore, their work has shown that by integrating a suite of epigenetic markers they can predict clinical outcomes including HIV reservoir dynamics. These could be key findings to improve future early interventions to reduce disease complications and to also guide HIV clinical trials for an HIV cure.

"The results from this study have been compelling in terms of generating new information on the earliest host pathogen interaction in key immune cell types during the earliest stage of acute HIV infection," says Dr. Ndhlovu. "We've identified specific epigenetic hotspots associated with acute HIV infection during the very early acute HIV period and also with HIV persistence. These hotspots warrant consideration as candidates for epigenome editing approaches in HIV prevention, treatment, and cure."

As advances continue to unfold in Dr. Ndhlovu's laboratory, his overarching goal remains: a cure for HIV.

Dr. Ndhlovu's honors include the NIH's Emerging International Leaders in Global HIV/AIDS Research Award, and he is a member of the International Neuro-HIV Cure Consortium which provides cutting-edge investigation and expertise globally. He is also an elected Fellow of the American Academy of Microbiology. His research has consistently earned funding from premier sources, such as the National Institutes of Health and the Department of Defense.

WDOM's 6th Annual Research Retreat Day Hosts Leader in RNA and Vaccine Research

The WDOM's 6th Annual Research Retreat Day attracted a record number of young investigators, trainees, and residents. Lectures were provided by WDOM faculty and keynote speaker, Dr. Drew Weissman, who played a major role in critical discoveries that allowed for the mRNA platform to be used in developing vaccines against SARS-CoV-2.

Held on October 29, 2021, the day's proceedings began at the Belfer Research Building, where opening remarks were given by Dr. Tony Hollenberg, Chair, WDOM; Dr. John P. Leonard, Executive Vice Chair, WDOM; and Dr. Steven Lipkin, Vice Chair for Research, WDOM. The event, which hosted 40 participants in person and 100 via zoom, included 10 lectures given by WDOM faculty and 80 poster presentations contributed by junior faulty, postdoctoral students, graduate students, and research technicians. Featured lecturers spanned topics in the areas of pulmonary and critical care medicine, hematology and oncology, gastroenterology, endocrinology, global health, infectious diseases, community-based medicine, and more.

Following presentations from WDOM faculty, keynote speaker, Dr. Weissman, delivered an illuminating lecture on nucleoside-modified mRNA-LNP therapeutics in the Weill Auditorium. The Roberts Family Professor in Vaccine Research at the University of Pennsylvania School of Medicine, Dr. Weissman leads a laboratory that is focused on the study of RNA and innate immune system biology and the application of these findings to vaccine research and gene therapy. With recent publications, such as "mRNA Vaccines for Infectious Diseases: Principles, Delivery and Clinical Translation," *National Reviews Drug Discovery*, his keynote lecture on mRNA-LNP therapeutics was ideally timed in light of the COVID-19 pandemic.

"We were thrilled to host Dr. Weissman, who, together with Dr. Katalin Kariko, has furthered critical discoveries on the mRNA platform utilized to develop vaccines against SARS-CoV-2," said Dr. Hollenberg.

"It was an exciting day for all of us as we celebrated the outstanding variety of research that defines the WDOM. Since 2017, our research grant portfolio has more than doubled and, just as importantly, our department features 32 faculty members who are on career development awards from the NIH. Many others have similar awards from foundations or internal programs, such as Fund for the Future or Jumpstart. This growth will allow the department to continue to make outstanding contributions to meet unmet medical needs in everything we do."

Research Retreat Day, which was launched by Dr. Augustine M.K. Choi, former Chair of the WDOM and now the Stephen and Suzanne Weiss Dean of Weill Cornell Medicine, exemplifies the wide variety of research that defines the WDOM. Attracting more and more attendees each year, the day serves as a valuable forum where senior and junior faculty can exchange ideas as they look to the future. Another key component of the day involves the WDOM's focus on developing its next generation of researchers. To that end, the day concluded with a discussion led by Dr. Hollenberg and Dr. Weissman devoted to career development objectives.

The WDOM expresses its thanks to all leadership, participants, and attendees at the 6th Annual Research Retreat, as well as to Kristen Brady, Associate Director of Research Administration, WDOM, who organized the event.

Leadership
(2021)

Anthony Hollenberg, M.D.
Sanford I. Weill Chair of Medicine

Dr. Anthony Hollenberg is the Sanford I. Weill Chair of Medicine in the Joan and Sanford I. Weill Department of Medicine at Weill Cornell Medicine and the Physician-in-Chief at NewYork-Presbyterian Hospital. Dr. Hollenberg received his M.D. from the University of Calgary in Canada in 1986. He completed his Internal Medicine residency in 1989 and was Chief Resident in Medicine from 1990 to 1991 at the Beth Israel Hospital. Dr. Hollenberg then completed a fellowship in Endocrinology, Diabetes, and Metabolism at Massachusetts General Hospital in 1993 and was recruited back to Beth Israel to start his laboratory. From 2011 until his recruitment to Weill Cornell Medicine and NewYork-Presbyterian Hospital, Dr. Hollenberg was Chief of the Division of Endocrinology, Diabetes and Metabolism at Beth Israel Deaconess Medical Center and Director of the Clinical and Translational Research Training Programs at Harvard Catalyst and Harvard Medical School where he was also a Professor of Medicine. Dr. Hollenberg's research focuses on the hormonal regulation of metabolism, with a particular emphasis on the role of thyroid hormone. His work has important ramifications for the regulation of body weight and metabolism. Additionally, The Hollenberg Lab focuses on understanding thyroid gland development and the possibilities for regenerative medicine.

Joseph T. Cooke, M.D.
Chief of Medicine at NYP/Queens
Vice Chair, Weill Department of Medicine

Dr. Joseph T. Cooke is the Chief of the Department of Medicine at NewYork-Presbyterian/Queens and is Vice Chair of the Weill Department of Medicine. Beginning with internship and residency, Dr. Cooke has served in numerous roles through what is now his 35th year at NewYork-Presbyterian/Weill Cornell Medical Center. Before joining NewYork-Presbyterian/Queens, Dr. Cooke, an Associate Professor of Clinical Medicine and Public Health, was the department's Chief of the Division of Pulmonary and Critical Care Medicine, Chairman of the General Faculty Council, and Chief Quality and Patient Safety Officer for NewYork-Presbyterian/Weill Cornell Medical Center. Board certified in internal medicine, pulmonary disease, and critical care medicine, Dr. Cooke is a fellow of the American College of Chest Physicians and the American College of Physicians. He earned an undergraduate degree in Biology with honors from New York University and obtained his M.D. from SUNY Downstate. He and Dr. Vlad Kvetan founded and co-chaired the Critical Care Leadership Network of GNYHA (2006-2009). Dr. Cooke is the Treasurer for the Queens County Medical Society and continues to serve on the Medical Advisory Board for the New York Organ Donation Network. He had previously served on the Institute of Medicine's subcommittee on organ donation after cardiac death. In addition to earning numerous teaching awards at Weill Cornell, Dr. Cooke has been honored with the NYPH Physician of the Year Award, the New York Weill Cornell Center Alumni Council Award for Outstanding Service, and the Lorraine Tredge Award from HHC for leadership in quality and patient safety. At the 2008 HRSA National Learning Congress, he was named one of 11 national champions for his work in organ donation for NewYork-Presbyterian Hospital/Weill Cornell Medical Center.

Orli R. Etingin, M.D.
Vice Chair for Faculty

Dr. Orli R. Etingin is the founder and Medical Director of the Iris Cantor Health Center at NewYork-Presbyterian/Weill Cornell Medical Center, a multidisciplinary group practice sponsored by the Departments of Dermatology, Medicine, Obstetrics and Gynecology, Radiology, Surgery and Urology. She is the Lisa and Sanford B. Ehrenkranz Professor of Clinical Medicine at Weill Cornell Medicine and serves as Vice Chair for Faculty in the Weill Department of Medicine. Dr. Etingin's clinical expertise is in internal medicine and coagulation disorders, such as blood clotting in pregnancy. Dr. Etingin received her undergraduate degree from Johns Hopkins University. After receiving her M.D. from Albert Einstein College of Medicine in New York, she completed residency training in internal medicine, subspecialty training in hematology-oncology and a Chief Residency at NewYork-Presbyterian/Weill Cornell Medical Center. As the recipient of an NIH Clinical Investigator Award from 1987 to 1992, she conducted basic scientific research on thrombosis in vascular cells, leading to numerous publications in the journals Cell, Biochemistry, and Journal of Clinical Investigation. Dr. Etingin is listed in Who's Who, Castle Connolly's Best Doctors Guides, and US News Top Doctors. She was the associate editor of the *Textbook of Women's Health*, a comprehensive manual for physicians in the field. A frequently invited speaker at women's health symposia, she has served as Moderator of the annual Women's Health Symposium at NewYork-Presbyterian Hospital since 1998 and as Moderator of the annual Women and the Brain Conference since 2006. Dr. Etingin is a member of the American Medical Women's Association and the American Medical Association. She is the editor of two nationally distributed newsletters, *Women's Health Advisor* and *Women's Nutrition Connection*, and is a contributor to *Everyday Health*.

Kirana Gudi, M.D.
Vice Chair of Education

Dr. Gudi serves as Vice Chair of Education in the Weill Department of Medicine. As Vice Chair, she oversees a broad range of training programs and works closely with the Weill Department of Medicine to advance its educational mission in furthering faculty development. Dr. Gudi is an Assistant Professor of Medicine in the Division of Pulmonary and Critical Care Medicine and is the Program Director of the department's residency training program in internal medicine. She received her medical training on the Weill Cornell campus, beginning with an M.D. from Weill Cornell Medicine. She served as a Chief Resident and completed her residency training, as well as a fellowship in Pulmonary and Critical Care Medicine, at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. She maintains an active outpatient pulmonary practice, attends on the Inpatient Pulmonary Consult and the ICU Consult services, and is a passionate advocate of medicine and medical education.

Renuka Gupta, M.D.
Vice Chair and Chief of Medicine at NewYork-Presbyterian/Lower Manhattan Hospital

Dr. Renuka Gupta is the Chief of Medicine at NewYork-Presbyterian/Lower Manhattan Hospital (NYP/LMH). In this role she oversees and coordinates the outpatient and inpatient activities of WDOM faculty at LMH, serving an important role as liaison for the faculty, Division Chiefs, Chair of Medicine, and Hospital Leadership. Dr. Gupta joined the WDOM in the Division of General Internal Medicine (Hospital Medicine) at NewYork-Presbyterian/Weill Cornell Medicine in 2010. In addition to her roles as a clinician and educator, Dr. Gupta is an expert on hospital operational efficiency, hospital systems, health care policy, and quality improvement. She has played key roles in improving both efficiency and functionality in the hospital as well as reducing average length of stay and two years ago was appointed as the Physician Liaison for Operational Efficiency in Medicine at NYP. She is also a leader in the academic domain of discrimination against physicians. Dr. Gupta completed medical school at Pandit Bhagwat Dayal Sharma, India, followed by internal medicine residency training and a Clinical Nutrition Fellowship at NewYork-Presbyterian/Columbia University Medical Center.

Jennifer I. Lee, M.D.

Vice Chair for Quality and Patient Safety

Dr. Jennifer I. Lee is an Associate Professor of Clinical Medicine and a hospitalist in the Division of General Internal Medicine. Board certified in internal medicine, Dr. Lee earned her M.D. from the State University of New York Buffalo School of Medicine and Biomedical Sciences and completed her combined internal medicine and pediatrics residency at Mount Sinai Medical Center in New York City. In her role as Vice Chair for Quality and Safety, she collaborates with the NewYork-Presbyterian Hospital's Division of Quality and Patient Safety, Weill Cornell Medicine Physician Organization QPS, and Weill Department of Medicine aiming to align improvement efforts across the institution. She designed and co-chairs the department's Quality Improvement/ Patient Safety (QIPS) committee and spearheaded the launch of the Quality Improvement Academy, an advanced QI faculty development program designed to provide a pathway for promotion for junior faculty in all clinical departments through academic achievement in quality improvement. She was awarded the AAMC Learning Health Systems Champion Research Award and was featured as the Research on Care Community's Member spotlight. Her focus is the education of students, residents and faculty in quality improvement and safety science to ensure high-quality, high-value care delivery for patients in both the inpatient and outpatient settings.

John P. Leonard, M.D.

Executive Vice Chair, Weill Department of Medicine

Dr. John P. Leonard is the Executive Vice Chair of the Weill Department of Medicine, a role in which he is advancing key academic and educational activities as well as other critical initiatives for the department. A nationally and internationally recognized authority on hematological malignancies, Dr. Leonard serves as the Senior Associate Dean for Innovation and Initiatives at Weill Cornell Medicine. The Richard T. Silver Distinguished Professor of Hematology and Medical Oncology, Dr. Leonard has pioneered the development of novel therapeutics in lymphoma, and he serves as one of the leaders of the national lymphoma clinical trials effort as leader of the Lymphoma Committee for the Alliance for Clinical Trials in Oncology (a part of the National Clinical Trials Network of the National Cancer Institute). Dr. Leonard has been an elected member of the American Board of Internal Medicine subspecialty board for Hematology and has also been elected to membership in the American Society of Clinical Investigation. He has served as Chair of the Scientific Advisory Board and Board Member of the Lymphoma Research Foundation and Board Member of the Leukemia and Lymphoma Society/New York City Chapter. In 2017, he received the Miriam G. Wallach Award for Excellence in Humanistic Medical Care from NewYork-Presbyterian Hospital. Dr. Leonard has spearheaded many innovative initiatives in the Weill Department of Medicine to facilitate cutting-edge patient-oriented research.

Steven M. Lipkin, M.D., Ph.D.
Vice Chair for Research

Dr. Steven M. Lipkin, Professor of Medicine, Division of Gastroenterology and Hepatology, is the Vice Chair for Research. Dr. Lipkin works with departmental and divisional leadership to enhance and foster the research activities of our faculty and trainees. A nationally and internationally regarded leader in the field of adult genetics, he was recently elected as a Member of the American Society of Clinical Investigation. His research focuses on genetic testing for hereditary cancer disorders, including the Lynch Syndrome, Familial Adenomatous Polyposis, and Hereditary Pancreatic Cancer, among others. He is an authority on cancer genetic syndromes, with a particular emphasis on hereditary gastrointestinal cancer syndromes, and authored MAPP-MMR, a bioinformatic program that is used to interpret whether Lynch syndrome missense variants are deleterious mutations or benign polymorphisms. Dr. Lipkin has more than 80 published papers in the top peer-reviewed journals and is the author of *The Genome Generation: Tales From the Front Lines of Genetic Medicine*, published in 2016 by Beacon Press. Dr. Lipkin has practiced at NewYork-Presbyterian Hospital/Weill Cornell Medicine since 2009. He trained in internal medicine at Duke University and in medical genetics at the National Human Genome Research Institute, where he performed postdoctoral work in the laboratory of Francis Collins, now Director of the NIH.

Susana R. Morales, M.D.
Vice Chair for Diversity

Dr. Susana R. Morales serves as the Vice Chair for Diversity in the Weill Department of Medicine. An Associate Professor of Clinical Medicine, Dr. Morales joined the Weill Cornell Medicine faculty in 1998. She serves as the Associate Director of the House Staff Training Program in Internal Medicine and is the Director of the Education Core for the Cornell Center for Health Equity. In 2018, she became the Principal Investigator and Director of the Weill Cornell Medicine Diversity Center of Excellence. At Columbia Presbyterian Medical Center, Dr. Morales had previously served as Assistant Director for Education and Training in the Division of General Medicine. She has served as a member of the governing Council of the Society of General Internal Medicine (SGIM) and on the Advisory Boards of the Commonwealth Fund's "Bettering the Health of Minority Americans" program and the National Hispanic Medical Association. She is also a board member of both the United Hospital Fund and the Latino Commission on AIDS and has served on the NYS Council on Graduate Medical Education. In 2017, Dr. Morales served on the NewYork-Presbyterian Hospital Disaster Medical Response Team in Puerto Rico. Dr. Morales obtained her M.D. from the Columbia University College of Physicians and Surgeons and completed residency training in internal medicine at the Presbyterian Hospital of the City of New York. Her honors include: J. James Smith Memorial Award; National Medical Fellowships Community Service Award; "Senior List" (selected by four graduating classes at Weill Cornell Medicine); Pioneers in Diversity/Bruce Laine Ballard M.D. Award for Excellence in Mentoring (Office of Faculty Diversity in Medicine and Science, Weill Cornell Medicine); Elnora M. Rhodes SGIM Service Award; and Hispanic Health Leadership Award from the National Hispanic Medical Association.

Stephen J. Peterson, M.D.

Chief of Medicine at NewYork-Presbyterian/Brooklyn Methodist Hospital
Vice Chair, Weill Department of Medicine

Dr. Stephen J. Peterson has been Chief of the Department of Medicine at NewYork-Presbyterian/Brooklyn Methodist Hospital (NYP/BMH) and Professor of Clinical Medicine at Weill Cornell Medicine since August 2013 and Vice Chair of the Weill Department of Medicine since April 2018. He is also the Assistant Dean of Weill Cornell Medicine for the NYP/BMH Campus. Dr. Peterson is certified by the American Board of Internal Medicine and has a wealth of experience in the field of medicine. He is particularly renowned for his basic science research in the field of obesity. He has over 120 publications in peer-reviewed journals and has been awarded the coveted titles of Master of the American College of Physicians, Fellow of the American Heart Association, and Fellow of the New York Academy of Medicine. He is a former President of the New York Chapter of the American College of Physicians. Dr. Peterson is dedicated to teaching and has numerous teaching awards from four institutions over 35 years. He was named in the 2017 and 2018 Top Doctor lists for Brooklyn, New York.

Tsiporah B. Shore, M.D.

Vice Chair for Compliance

Dr. Tsiporah B. Shore serves as the Vice Chair of Compliance in the Weill Department of Medicine (WDOM) and as Clinical Director for Inpatient Oncology Operations in the WDOM's Division of Hematology & Oncology. She is the Associate Director of the Bone Marrow and Stem Cell Transplantation Program in the Division of Hematology and Medical Oncology at Weill Cornell Medicine and NewYork-Presbyterian Hospital, as well as the Chief of the Inpatient Bone Marrow Transplantation Service. A Professor of Clinical Medicine, Dr. Shore graduated from medical school and served her residency training at the University of Manitoba in Canada and the University of Toronto (internship). She then went on to complete a hematology/oncology fellowship at Tufts New England Medical Center in Boston. She completed an additional two-year subspecialty fellowship in Bone Marrow Transplantation in Seattle and Vancouver and subsequently developed and directed the Manitoba BMT Program in Winnipeg, Canada. Dr. Shore has extensive experience in the diagnosis and management of all hematological malignancies, including leukemias, lymphomas, myeloma, and myelodysplastic/myeloproliferative disorders. In 2001, Dr. Shore joined the staff of Weill Cornell Medicine with her practice located at NewYork-Presbyterian Hospital. While Dr. Shore has experience in all facets of hematology and oncology, she is especially interested in continuing to advance the field of bone marrow/stem cell transplantation and malignant hematologic disorders utilizing novel therapies and clinical trials in addition to standard therapies. She teaches and mentors students, residents, and fellows. Dr. Shore did FACT inspections for many years and has done clinical trials for stem cell transplantation with CALGB, BMT-CTN, NMDP, and the MPD Research Consortium. She is a member of ASH, ASCO, CALGB, and ASBMT and was elected to the Special Populations Subcommittee of the BMT CTN. She volunteers for the Bone Marrow Foundation's Ask the Expert program. She reviews articles for multiple medical journals related to stem cell transplantation.

Dana Zappetti, M.D.
Vice Chair for Clinical Operations

Dr. Dana Zappetti is the Vice Chair for Clinical Operations in the Weill Department of Medicine. In this role Dr. Zappetti is focused on advancing ambulatory programs across the department. She works to grow and enhance the capabilities of divisional ambulatory programs in this new era ensuring the best use of space and resources to meet the growing needs of patients at WCM and NYP. She is also focused on both patient and faculty and staff satisfaction in a new environment where both virtual and in-person visits are occurring. Dr. Zappetti is an expert in all areas of pulmonary and critical care medicine with a special interest in pulmonary infections in immunocompromised patients and the pulmonary complications of stem cell transplantation. She received her M.D. from Brown University School of Medicine and completed her residency training in internal medicine and a fellowship in pulmonary and critical care medicine at NewYork-Presbyterian/Weill Cornell Medicine. Since joining the faculty of the WDOM's Division of Pulmonary and Critical Care Medicine in 2005, Dr. Zappetti has excelled in many leadership roles, including as Program Director for the Pulmonary and Critical Care Medicine Fellowship and as Key Clinical Faculty for the Internal Medicine Residency at NewYork-Presbyterian/Weill Cornell Medicine. Dr. Zappetti has served as Weill Cornell Medicine's Associate Dean for Student Affairs and has earned numerous awards over the years, such as the J.J. Smith Memorial Award, Senior List, Excellence in Teaching Award, and Department of Medicine Consultant of the Year.

Tammy Snyder, M.P.H.

Tammy Snyder, M.P.H., serves as Chief Administrative Officer in the Weill Department of Medicine. In this key leadership role, Tammy directs administrative and business activities within the department, including finance, accounting, research administration, clinical operations, capital planning, academic appointments, and education. With a focus on developing operational and fiscal solutions, she works collaboratively with the department chair, division chiefs and faculty, as well as with NewYork-Presbyterian leadership. She also works with the network hospitals to expand programs, increase quality and access, and develop opportunities for academic and other partnerships. Prior to joining Weill Cornell Medicine, Tammy served as the Chief Administrative Officer for the Department of Anesthesiology and Critical Care Medicine at Johns Hopkins Medicine, where she had held other administrative roles in the Department of Radiation Oncology, Division of Cardiology, and Chief Operating Office and Vice President of Medical Affairs. She holds a Bachelor's degree (with honors) in Health Policy and Administration from the University of North Carolina-Chapel Hill, a Master's degree in Health Policy and Administration from Yale University's School of Public Health, and completed a two-year Administrative Fellowship Program at Johns Hopkins Medicine. She is Green Belt certified from the Lean Six Sigma Program.

Honors and Awards

Weill Department of Medicine

Honors & Awards

Research Awards

The Department of Medicine Young Investigators Award

This award is presented annually to members of the Department of Medicine below the rank of professor who perform on outstanding levels in the areas of clinical and/or basic biomedical research. Supported by the Michael Wolk Foundation.

Winners

John Richard Lee, M.D., M.S., F.A.S.N.
Topic: Microbiome Profiles Diagnostic and Predictive of Urinary Tract Infection
Division: Nephrology & Hypertension

Robert Schwartz, M.D., Ph.D.
Topic: Hedgehog Signaling Demarcates a Niche of Fibrogenic Peribiliary Mesenchymal Cells
Division: Gastroenterology & Hepatology

Runners-Up

Tibor Krisko, M.D.
Topic: Gut Microbe and Glucose Metabolism
Division: Gastroenterology & Hepatology

Megan Ritter, M.D.
Topic: The Role of Nuclear Corepressor 1 in Thyroid Hormone Signaling and Sensitivity
Division: Endocrinology, Diabetes & Metabolism

The David E. Rogers Memorial Research Award

This award was established in 1995 to encourage medical residents to continue their investigative research in internal medicine. Four finalists are chosen to present their research at Medical Grand Rounds. The award was founded and is chaired by Holly S. Andersen, M.D., Director of Education and Outreach at The Ronald O. Perelman Heart Institute (and Associate Attending Physician at NewYork-Presbyterian Hospital and Associate Professor of Clinical Medicine at Weill Cornell Medical College) and is funded by the Holly Andersen Heart Foundation.

Winner

Montreh Tavakkoli, M.D.
Topic: Epichaperome Abundance Predicts Response to the Epicharperome Inhibitor PUH-71 in Acute Myeloid Leukemia

First Runner Up

Daniel Helbig, M.D.
Topic: Outcomes in CLL Patients with NOTCH1 Regulatory Pathway Mutations

Finalists

Dario Villamar, M.D.
Topic: Serial Circulating Tumor DNA (ctDNA) Measurement Predicts Clinical Response in Advanced Urothelial Carcinoma Patients

Brian Yum, M.D.
Topic: Left Atrial Strain Impairment is a Novel Early Marker of Diastolic Dysfunction – A Multimodality Validation Study

The Department of Medicine Annual Fellow in Research Award

Initiated in 2002, the Fellow Award in Research is presented annually to fellows within the Weill Department of Medicine who have presented outstanding research.

Winner

David R. Price, M.D., M.S.
Topic: Effect of Neutropenic Critical Illness on Development and Prognosis of Acute Respiratory Distress Syndrome

Runners-Up

Divya Shankaranarayanan, M.B.B.S.
Topic: Calcium Release Activated Calcium (CRAC) Channel is a Novel Target to Promote Tolerance

Michael Shusterman, M.D.
Topic: A Phase II Randomized Controlled Trial of Medical Intensive Nutrition Therapy to Improve Chemotherapy Tolerability in Malnourished Patients with Solid Tumor Malignancies

Visiting Professors

Richard Silver, M.D. Visiting Professor
January 13, 2021
Laura Michaelis, M.D.
Medical College of Wisconsin

Rogosin Visiting Professor
March 24, 2021
George Bakris, M.D.
University of Chicago - Medicine

Ralph Nachman, M.D. Visiting Professor
April 7, 2021
David Weinstock, M.D.
Dana Farber Cancer Institute

B.H. Kean-Boxer Family Foundation Lecture in Global Health
October 27, 2021
Luciana Borio, M.D.
Johns Hopkins University

Arthur Ashe Endowment-Christopher L. Barley, MD Lecturer
December 8, 2021
Monica Ghandi, M.D.
University of California San Franciso

Endowed Professorships

Ronald D. Adelman, M.D.
Emilie Roy Corey Professor in Geriatrics and Gerontology

Laura Alonso, M.D.
Herbert J. and Ann L. Siegel Distinguished Professor of Medicine

David Artis, Ph.D.
Michael Kors Professor in Immunology

Louis J. Aronne, M.D.
Sanford I. Weill Professor of Metabolic Research

Phyllis August, M.D.
Ralph A. Baer Professor of Medical Research

Ann Bordwine Beeder, M.D.
Jeanette and Jeffrey Lasdon Associate Professor of Clinical Public Health and Psychiatry

Julie Magarian Blander, Ph.D.
Gladys and Roland Harriman Professor of Immunology in Medicine

Carl P. Blobel, M.D., Ph.D. (HSS)
Virginia F. and William R. Salomon Chair in Musculoskeletal Research

Jon David Blumenfeld, M.D. (Rogosin Institute)
Maxwell Professor of Clinical Medicine

S. Louis Bridges, Jr., M.D., Ph.D. (HSS)
Joseph P. Routh Professor of Rheumatic Diseases in Medicine
Franchellie M. Cadwell Chair

Robert S. Brown, Jr., M.D.
Vincent Astor Distinguished Professor in Medicine
(as of 12/1/2021)

Mary E. Charlson, M.D.
William T. Foley Distinguished Professor in Medicine

Augustine M.K. Choi, M.D.
Stephen and Suzanne Weiss Dean, Weill Cornell Medicine

Curtis L. Cole, M.D.
Frances and John L. Loeb Associate Professor of Libraries and Information Technology

Mary K. Crow, M.D. (HSS)
Benjamin M. Rosen Chair in Immunology and Inflammation Research

Ronald G. Crystal, M.D.
The Bruce Webster Professor of Internal Medicine

Orli R. Etingin, M.D.
Lisa and Sanford B. Ehrenkranz Professor in Women's Health

Douglas T. Fearon, M.D.
Walter B. Wriston Professor of Pancreatic Cancer Research

Joseph J. Fins, M.D.
E. William Davis, Jr., MD, Professorship of Medical Ethics

Richard R. Furman, M.D.
Morton Coleman, MD, Distinguished Professor of Medicine

Roy M. Gulick, M.D.
Rochelle Belfer Professorship in Medicine

Barbara Hempstead, M.D., Ph.D.
O. Wayne Isom Professor of Medicine

Manuel Medina Hidalgo, M.D., Ph.D
E. Hugh Luckey Distinguished Professor of Medicine
(ended 9/30/2021)

Walter B. Wriston Professor of Pancreatic Cancer Research (as of 7/1/2021)

Anthony N. Hollenberg, M.D.
Sanford I. Weill Chair of the Department of Medicine

Julianne L. Imperato-McGinley, M.D.
The Abby Rockefeller Mauzé Distinguished Professorship in Endocrinology in Medicine

Lionel B. Ivashkiv, M.D. (HSS)
David H. Koch Chair for Arthritis and Tissue Degeneration Research
Richard L. Menschel Chair

Elizabeth Leef Jacobson, M.D.
Ehrenkranz Family/Orli R. Etingin, MD Associate Professor in Women's Health

Warren D. Johnson, Jr., M.D.
B. H. Kean Professor of Tropical Medicine

Yoon Kang, M.D.
Richard P. Cohen, MD Associate Professor of Medical Education

Gary Koretzky, M.D., Ph.D.
Frank H.T. Rhodes Distinguished Professor in Cardiovascular Biology and Genetics

Mark S. Lachs, M.D.
The Irene F. & I. Roy Psaty Distinguished Professor of Clinical Medicine

John P. Leonard, M.D.
Richard T. Silver Distinguished Professor of Hematology and Medical Oncology

Bruce B. Lerman, M.D.
Hilda Altschul Master Professor of Medicine

Steven M. Lipkin, M.D., Ph.D.
Gladys and Roland Harriman Professor of Medicine

C. Ronald MacKenzie, M.D. (HSS)
C. Ronald MacKenzie, MD, Chair in Ethics and Medicine

Peter Martin, M.D.
Richard A. Stratton Associate Professor in Hematology and Oncology

Fernando J. Martinez, M.D.
Bruce Webster Professor of Internal Medicine II

Bassem M. Masri, M.D.
Daisy and Paul Soros/Recanati-Kaplan Family Assistant Professor in Preventive Cardiology

Ari M. Melnick, M.D.
Gebroe Family Professor of Hematology-Oncology

Henry W. Murray, M.D.
Arthur R. Ashe, Jr. Professor of Medicine

David M. Nanus, M.D.
Mark W. Pasmantier Professor of Hematology and Oncology in Medicine

Stephen A. Paget, M.D. (HSS)
Stephen A. Paget, MD, Chair in Rheumatology

Jean William Pape, M.D.
Howard and Carol Holtzmann Professor in Clinical Medicine

Alessandra B. Pernis, M.D. (HSS)
The Peter Jay Sharp Chair in Lupus Research

Erica Phillips, M.D.
Jack Fishman Associate Professorship of Cancer Prevention

Geoffrey Pitt, M.D., Ph.D.
Ida and Theo Rossi Distinguished Professor of Medicine

Holly G. Prigerson, Ph.D.
Irving Sherwood Wright Professor in Geriatrics II

Shahin Rafii, M.D.
Arthur B. Belfer Professor in Genetic Medicine

M. Carrington Reid, M.D., Ph.D.
Irving Sherwood Wright Professor in Geriatrics and Gerontology I

Linda Russell, M.D. (HSS)
The Anne and Joel Ehrenkranz Chair in Perioperative Medicine

Monika Safford, M.D.
John J. Kuiper Professor of Medicine

Jane E. Salmon, M.D. (HSS)
Collette Kean Research Chair

Ellen J. Scherl, M.D.
Jill Roberts Professor of Inflammatory Bowel Disease

Manish A. Shah, M.D.
Bartlett Family Associate Professor of Gastrointestinal Oncology

Sergio Schwartzman, M.D. (HSS)
Franchellie M. Cadwell Chair (Emeritus)

Eugenia L. Siegler, M.D.
Mason Adams Professor of Geriatric Medicine

Harsimran Singh, M.D.
David S. Blumenthal Assistant Professor of Medicine

Manikkam Suthanthiran. M.D.
Stanton Griffis Distinguished Professor of Medicine

Harold E. Varmus, M.D.
Lewis Thomas University Professor of Medicine

Jonathan W. Weinsaft, M.D.
Antonio M. Gotto Jr., M.D. Professor in Atherosclerosis and Lipid Research

Clinical, Education, and Research Scholars

The Clinical, Education and Research Scholar Endowment is designed to provide outstanding lower-level faculty members, versus junior faculty, in the Weill Department of Medicine with financial support early in their careers. Support is provided specifically to help young academic faculty balance patient care with research and teaching. The awards allow lower-level faculty to make a commitment to academic medicine and, as a result, support promising new talent.

Eleni Andreopoulou, Ph.D.
Madeline and Stephen Anbinder Clinical Scholar in Hematology/Oncology

Eftychia Apostolou, Ph.D.
Raymond and Beverly Sackler Research Scholar

Erica Chu, M.D.
Joachim Silbermann Family Clinical Scholar in Geriatric Palliative Care

Tessa Del Carmen, M.D.
Roland Balay Clinical Scholar

Pinkal Desai, M.D.
Charles, Lillian, and Betty Neuwirth Clinical Scholar in Oncology

Lukas E. Dow, Ph.D.
Burt Gwirtzman Research Scholar in Lung Cancer

Jennifer Downs, M.D., Ph.D.
Friedman Family Research Scholar in Pediatric Infectious Diseases

Kathryn M. Dupnik, M.D.
Nan and Stephen Swid Research Scholar in Medicine

Ernie Esquivel, M.D.
Gary M. Sumers Education Scholar

Bishoy Faltas, M.D.
Gellert Family-John P. Leonard, M.D. Research Scholar

Marcus D. Goncalves, M.D., Ph.D.
Ralph L. Nachman Research Scholar

Goyal Parag, M.D.
Etingin Family Clinical Scholar in Medicine

Maria G. Karas, M.D.
Michael Wolk Heart Foundation Clinical Scholar in Cardiology

Dhruv Khullar, M.D.
Nanette Laitman Clinical Scholar in Healthcare Policy Research/ Quality (as of 2/1/2021)

Jiwon Kim, M.D.
Bruce B. Lerman Clinical Scholar

Sonal Kumar, M.D.
Anne and Ken Estabrook Clinical Scholar in Gastroenterology

Lindsay Lief, M.D.
Abby Joseph Cohen Clinical Scholar

Cynthia Lien, M.D.
Joachim Silbermann Family Clinical Scholar in Geriatrics

Jyoti S. Mathad, M.D.
Bonnie Johnson Sacerdote Clinical Scholar in Women's Health (as of 8/1/2021)

Margaret L. McNairy, M.D.
Bonnie Johnson Sacerdote Clinical Scholar

Ana Molina, M.D.
Anne Moore M.D. Clinical Scholar in Hematology-Oncology

Hasina Outtz Reed, M.D., Ph.D.
James Hilton Manning and Emma Austin Manning Foundation Research Scholar

Sarah C. Rutherford, M.D.
John P. Leonard, M.D./Gwirtzman Family Research Scholar in Lymphoma

Michael J. Satlin, M.D.
William Randolph Hearst Foundation Clinical Scholar in Microbiology & Infectious Diseases

Ashish Saxena, M.D., Ph.D.
Madeline and Stephen Anbinder Clinical Scholar in Hematology and Oncology (as of 10/1/2021)

Edward J. Schenk, M.D.
James P. Smith M.D. Clinical Scholar

Amy Shaw, M.D.
Joachim Silbermann Family Clinical Scholar I

Allison Liao Yang, M.D.
Linda Horowitz Cancer Research Foundation Clinical Scholar in Gastroenterology

Teaching Awards

The WDOM congratulates its faculty who received teaching awards at the Weill Cornell Medicine Class of 2022 commencement ceremony held on May 19, 2022.

The Senior List

Dr. Juliet Aizer
Dr. Justin Choi
Dr. Laura Greisman
Dr. Laura Kolbe
Dr. Gregory Mints
Dr. Anthony Ogedegbe
Dr. Tracy Paul
Dr. David Scales

Second Year Teaching Award
Dr. Juliet Aizer

The Leonard P. Tow Humanism Awards
Dr. Juliet Aizer

The Elliot Hochstein Teaching Award
Dr. Juliet Aizer

Volunteer Clinical Faculty Award of Alpha Omega Alpha
Dr. Jason Kendler

Jeanne and Herbert Siegel Faculty Development Award
Dr. Susana Morales

Jeanne and Herbert Siegel Award for Outstanding Medical Research
Dr. David Artis

The National Academy of Medicine (NAM)

Dr. Jeremiah A. Barondess (Emeritus - Columbia)
Dr. Lewis C. Cantley
Dr. Augustine M.K. Choi
Dr. R. Gordon Douglas, Jr. (Emeritus)
Dr. Joseph J. Fins
Dr. Antonio M. Gotto, Jr. (Dean Emeritus)
Dr. Rainu Kaushal
Dr. Gary A. Koretzky
Dr. Ralph L. Nachman (Emeritus)
Dr. Carl F. Nathan
Dr. Jean W. Pape
Dr. Jane E. Salmon (HSS)
Dr. Andrew I. Schafer
Dr. Harold E. Varmus

Association of American Physicians

Dr. Omar Abdel-Wahab (MSKCC Affiliate)
Dr. Peter B. Bach (MSKCC Affiliate)
Dr. Jeremiah A. Barondess (NY Academy of Medicine - Emeritus)
Dr. Carl P. Blobel (HSS Affiliate)
Dr. Mary E. Charlson
Dr. Augustine M.K. Choi
Dr. Bayard D. Clarkson (MSKCC Affiliate - Emeritus)
Dr. Ronald G. Crystal (Emeritus)
Dr. Luis A. Diaz, Jr. (MSKCC Affiliate)
Dr. R. Gordon Douglas, Jr. (Emeritus)
Dr. James A. Fagin (MSKCC Affiliate)
Dr. Joseph J. Fins
Dr. Daniel Fitzgerald
Dr. Silvia C. Formenti (secondary appt)
Dr. Michael Glickman (MSKCC Affiliate)
Dr. Antonio M. Gotto, Jr. (Dean Emeritus)
Dr. Roy M. Gulick
Dr. Katherine A. Hajjar (secondary appt)
Dr. Barbara L. Hempstead

Dr. Anthony Hollenberg
Dr. Katherine C. Hsu (MSKCC Affiliate)
Dr. Julianne L. Imperato-McGinley
Dr. Lionel B. Ivashkiv (HSS Affiliate)
Dr. Warren D. Johnson, Jr.
Dr. Rainu Kaushal (secondary appt)
Dr. Gary A. Koretzky (Cornell University, Ithaca)
Dr. James Krueger (Rockefeller Affiliate)
Dr. Ross L. Levine (MSKCC Affiliate)
Dr. Fernando Martinez
Dr. Ari M. Melnick
Dr. Henry W. Murray (Emeritus)
Dr. Ralph L. Nachman (Emeritus)
Dr. David M. Nanus
Dr. Carl Nathan (secondary appt)
Dr. Kenneth Offit (MSKCC Affiliate)
Dr. Geoffrey Pitt
Dr. Shahin Rafii
Dr. Neal Rosen (MSKCC Affiliate)
Dr. Charles M. Rudin (MSKCC Affiliate)
Dr. Jane E. Salmon (HSS Affiliate)
Dr. Charles L. Sawyers (MSKCC Affiliate)
Dr. Andrew I. Schafer
Dr. David A. Scheinberg (MSKCC Affiliate)
Dr. Howard I. Scher (MSKCC Affiliate)
Dr. Deborah Schrag (MSKCC Affiliate)
Dr. David B. Solit (MSKCC Affiliate)
Dr. Wadi N. Suki (Baylor - Emeritus)
Dr. Manikkam Suthanthiran
Dr. Marcel R.M. van den Brink (MSKCC Affiliate)
Dr. Babette B. Weksler (Emeritus)
Dr. Marc E. Weksler (Emeritus)
Dr. Jedd Wolchok (MSKCC Affiliate)

The American Society for Clinical Investigation

Dr. Omar Abdel-Wahab (MSKCC Affiliate)
Dr. Abdul B. Abou-Samra (Hamad Medical Corporation Affiliate)
Dr. Laura C. Alonso
Dr. Peter B. Bach (MSKCC Affiliate)
Dr. Marina Fernandes de Barros Caskey (Rockefeller Affiliate)
Dr. John Blass (secondary appt – Emeritus)
Dr. Richard S. Bockman (HSS Affiliate)
Dr. Renier J. Brentjens (MSKCC Affiliate)
Dr. Sarat Chandarlapaty (MSKCC Affiliate)
Dr. Yu Chen (MSKCC Affiliate)
Dr. Ping Chi (MSKCC Affiliate)
Dr. Augustine M.K. Choi
Dr. Bayard D. Clarkson (MSKCC Affiliate)
Dr. David E. Cohen
Dr. Ronald G. Crystal
Dr. Luis A. Diaz, Jr. (MSKCC Affiliate)
Dr. R. Gordon Douglas, Jr. (Emeritus)
Dr. James A. Fagin (MSKCC Affiliate)
Dr. Daniel W. Fitzgerald
Dr. Michael S. Glickman (MSKCC Affiliate)
Dr. Antonio M. Gotto, Jr. (Dean Emeritus)
Dr. Roy M. Gulick
Dr. Katharine A. Hajjar
Dr. Alan M. Hanash (MSKCC Affiliate)
Dr. Barbara L. Hempstead
Dr. Tobias M. Hohl (MSKCC Affiliate)
Dr. Peter R. Holt (Rockefeller Affiliate)
Dr. Katherine C. Hsu (MSKCC Affiliate)
Dr. Lionel B. Ivashkiv
Dr. Richard N. Kolesnick (MSKCC Affiliate)
Dr. Gary Koretzky
Dr. James G. Krueger (Rockefeller Affiliate)
Dr. Dan A. Landau
Dr. C. Ola Landgren (MSKCC Affiliate)
Dr. Jeffrey C. Laurence
Dr. John P. Leonard
Dr. Ross L. Levine (MSKCC Affiliate)
Dr. Steven M. Lipkin
Dr. Piro Lito (MSKCC Affiliate)
Dr. Randy S. Longman
Dr. Ari M. Melnick
Dr. James K. Min (secondary appt)
Dr. Henry W. Murray
Dr. Thangamani Muthukumar
Dr. Ralph L. Nachman (Emeritus)
Dr. David M. Nanus
Dr. Carl F. Nathan
Dr. Douglas F. Nixon
Dr. Kenneth Offit (MSKCC Affiliate)
Dr. Alessandra B. Pernis (HSS Affiliate)
Dr. Geoffrey S. Pitt
Dr. David N. Posnett (Emeritus)
Dr. Shahin Rafii
Dr. Kyu Y. Rhee
Dr. Charles M. Rudin (MSKCC Affiliate)
Dr. Michel Sadelain (MSKCC Affiliate)
Dr. Charles L. Sawyers (MSKCC Affiliate)
Dr. Andrew I. Schafer
Dr. David A. Scheinberg (MSKCC Affiliate)
Dr. Robert E. Schwartz
Dr. Kendall A. Smith
Dr. David Solit (MSKCC Affiliate)
Dr. Wadi N. Suki (Baylor – Emeritus)
Dr. Manikkam Suthanthiran
Dr. William D. Tap (MSKCC Affiliate)
Dr. Marcel R.M. van den Brink (MSKCC Affiliate)
Dr. Alan M. Weinstein
Dr. Babette B. Weksler (Emeritus)
Dr. Marc E. Weksler (Emeritus)
Dr. Jedd Wolchok (MSKCC Affiliate)
Dr. Stefan Worgall (secondary appt)

Castle Connolly Top Doctors

(This list is based on an online search of Castle Connolly Top Doctors conducted as of February 2022.)

Allergy & Immunology

Dr. Frederick Ast
Dr. Michael J. Chandler
Dr. Elena S. Resnick

Cardiac Electrophysiology

Dr. Jim Cheung
Dr. Seth H. Goldbarg (NYP/Queens)
Dr. James Ip
Dr. Bruce Lerman
Dr. Steven M. Markowitz
Dr. David J. Slotwiner (NYP/Queens)
Dr. Gioia Turitto (NYP/Brooklyn Methodist)
Dr. Miguel Valderrabano (Houston Methodist)

Cardiovascular Disease

Dr. Olakunle Akinboboye (NYP/Queens)
Dr. Holly Andersen
Dr. James A. Blake
Dr. David S. Blumenthal
Dr. Jeffrey S. Borer
Dr. Robert D. Campagna
Dr. Adam Deutsch
Dr. Richard B. Devereux
Dr. Hajir E. Dilmanian (NYP/Brooklyn Methodist)
Dr. Timothy C. Dutta
Dr. Jeffrey D. Fisher
Dr. Kenneth W. Franklin
Dr. Richard M. Fuchs
Dr. Harvey L. Goldberg
Dr. Kirsten O. Healy
Dr. John F. Heitner (NYP/Brooklyn Methodist)
Dr. Evelyn M. Horn
Dr. Lawrence A. Inra
Dr. Mazen O. Kamen
Dr. Robert J. Kim
Dr. Karla M. Kurrelmeyer (Houston Methodist)
Dr. John J. Mahmarian (Houston Methodist)
Dr. David T. Majure
Dr. Bassem M. Masri
Dr. Ellen Mellow
Dr. David H. Miller
Dr. Richard L. Mueller
Dr. Sherif F. Nagueh (Houston Methodist)
Dr. Lynne V. Perry-Pottinger (NYP/Queens)
Dr. Martin R. Post
Dr. Miguel A. Quinones (Houston Methodist)
Dr. Mary J. Roman
Dr. Howard S. Rubin (Houston Methodist)
Dr. Allison Spatz
Dr. Theodore Tyberg
Dr. Nir Uriel (NYP/Columbia)
Dr. Michael J. Wolk
Dr. Daniel Yadegar
Dr. Hooman Yaghoobzadeh
Dr. William A. Zoghbi (Houston Methodist)

Endocrinology, Diabetes, and Metabolism

Dr. Laura C. Alonso
Dr. Richard S. Bockman
Dr. Georgiana A. Dobri
Dr. Edmund W. Giegerich (NYP/Brooklyn Methodist)
Dr. Barry J. Klyde
Dr. Andrew J. Martorella
Dr. Steven M. Petak (Houston Methodist)
Dr. Richard J. Robbins (Houston Methodist)

Family Medicine

Dr. George J. Kessler
Dr. Thomas G. Molnar (NYP/Queens)
Dr. Moitri Chowdhury Savard

Gastroenterology

Dr. Paul M. Basuk
Dr. Robert S. Brown, Jr.
Dr. Michael C. Cantor
Dr. Bradley A. Connor
Dr. Robert B. Cooper
Dr. Gulchin A. Ergun (Houston Methodist)
Dr. Sonal Kumar
Dr. Arnon Lambroza
Dr. Susan L. Lucak
Dr. Franklin Marsh, Jr.
Dr. Paul F. Miskovitz
Dr. Jerry Nagler
Dr. Michel E. Nussbaum (NYP/Queens)
Dr. James A. Rand (NYP/Queens)
Dr. Moshe Rubin
Dr. Ellen Scherl
Dr. Michael J. Schmerin
Dr. Felice Schnoll-Sussman
Dr. Won Sohn (NYP/Brooklyn Methodist)
Dr. Meyer N. Solny
Dr. Donald N. Tsynman (NYP/Lower Manhattan)
Dr. Wallace J. Wang
Dr. Arnold L. Weg
Dr. Gil Weitzman

Geriatric Medicine

Dr. Ronald D. Adelman
Dr. Mark S. Lachs
Dr. Sonal S. Mehta
Dr. Barrie Lynn Raik
Dr. Eugenia L. Siegler
Dr. George E. Taffet (Houston Methodist)

Hematology

Dr. Perry C. Cook (NYP/Brooklyn Methodist)
Dr. Maria De Sancho
Dr. John P. Leonard
Dr. Ruben Niesvizky
Dr. Raymond David Pastore
Dr. Gail J. Roboz
Dr. Andrew Schafer
Dr. Koen W. Van Besien
Dr. David J. Wolf

Hospice & Palliative Medicine

Dr. Cynthia X. Pan (NYP/Queens)

Infectious Disease

Dr. Barry Brause
Dr. Marshall J. Glesby
Dr. David C. Helfgott
Dr. Harold W. Horowitz (NYP/Brooklyn Methodist)
Dr. Henry W. Murray
Dr. Sorana Segal-Maurer (NYP/Queens)
Dr. Paul T. Smith
Dr. Rosemary Soave
Dr. Ole Vielemeyer

Internal Medicine

Dr. Monica Altman
Dr. Louis J. Aronne
Dr. Christopher L. Barley
Dr. Baquar M. Bashey (NYP/Brooklyn Methodist)
Dr. Ryan Bell
Dr. Allan E. Beyda (NYP/Queens)
Dr. Roger M. Chung (NYP/Lower Manhattan)
Dr. Richard P. Cohen
Dr. Symra A. Cohn
Dr. Trenton R. Collier
Dr. Arturo Constantiner (NYP/Lower Manhattan)

Castle Connolly Top Doctors (continued)

Dr. Ward Cunningham-Rundles
Dr. Howard Eison
Dr. Orli Etingin
Dr. Laura Lani Fisher
Dr. Marina Gafanovich
Dr. Flavia A. Golden
Dr. Daniel Goldin
Dr. Catherine C. Hart
Dr. Len H. Horovitz
Dr. Matteethra Chandry Jacob (Houston Methodist)
Dr. Lisa J. Kalik
Dr. Jason S. Kendler
Dr. Helang Cho Kravitz (NYP/Lower Manhattan)
Dr. Keith LaScalea
Dr. Meredith Lash-Dardia
Dr. Michael R. Leonard
Dr. Amy Lichtenfeld
Dr. George Liu
Dr. Bruce D. Logan
Dr. Samuel J. Mann
Dr. Jacqueline M. Mayo
Dr. Parag H. Mehta (NYP/Brooklyn Methodist)
Dr. Jennifer Meller
Dr. Mark L. Meyer
Dr. Shari R. Midoneck
Dr. Serena A. Mulhern
Dr. Thomas Nash
Dr. Deena J. Nelson
Dr. Y-Uyen L. Nguyen (NYP/Lower Manhattan)
Dr. Sonal Parr
Dr. Mark S. Pecker
Dr. Perry Pong (NYP/Lower Manhattan)
Dr. Arthur I. Radin
Dr. Jill M. Rieger
Dr. Tsun Y. Shen (NYP/Lower Manhattan)
Dr. Todd L. Simon (NYP/Brooklyn Methodist)
Dr. Rachel M. Smerd
Dr. Adam R. Stracher
Dr. Judy Tung
Dr. Jessica Weiser-McCarthy
Dr. Wendy S. Ziecheck

Interventional Cardiology

Dr. Douglas Ray Bree (Houston Methodist)
Dr. Sorin Brener (NYP/Brooklyn Methodist)
Dr. Neal S. Kleiman (Houston Methodist)
Dr. Shing-Chiu Wong

Medical Oncology

Dr. Alan B. Astrow (NYP/Brooklyn Methodist)
Dr. Jenny C. Chang (Houston Methodist)
Dr. Morton Coleman
Dr. Julian A. Decter
Dr. David C. Dosik (NYP/Brooklyn Methodist)
Dr. Lauren Elreda (NYP/Queens)
Dr. Howard A. Fine
Dr. Robert M. Gelfand
Dr. Manuel Hidalgo
Dr. Nancy E. Kemeny (MSKCC)
Dr. Bernard M. Kruger
Dr. Ana Molina
Dr. David M. Nanus
Dr. Allyson J. Ocean
Dr. Mark W. Pasmantier
Dr. Anna C. Pavlick
Dr. Bonnie S. Reichman
Dr. Joseph T. Ruggiero
Dr. Scott T. Tagawa
Dr. Gina M. Villani (NYP/Queens)
Dr. Andrew D. Zelenetz (MSKCC)

Nephrology

Dr. Phyllis August
Dr. Jon D. Blumenfeld
Dr. Stuart Saal
Dr. David Serur
Dr. Bruce S. Spinowitz (NYP/Queens)
Dr. John C. Wang
Dr. Ruth L. Wintz (Houston Methodist)

Pulmonary Disease

Dr. David Berlin
Dr. Lester W. Blair (NYP/Lower Manhattan)
Dr. Clinton H. Doerr (Houston Methodist)
Dr. Andrea B. Feng (NYP/Lower Manhattan)
Dr. Brian D. Gelbman
Dr. Liziamma George (NYP/Brooklyn Methodist)
Dr. Daniel M. Libby
Dr. Rameen M. Miarrostami (NYP/Brooklyn Methodist)
Dr. Michael S. Niederman
Dr. Anthony Saleh (NYP/Brooklyn Methodist)
Dr. Abraham Sanders
Dr. Eugene Shostak
Dr. Sidney K. Stein
Dr. Jeremy A. Weingarten (NYP/Brooklyn Methodist)
Dr. Dana Zappetti

Rheumatology (Hospital for Special Surgery)

Dr. Juliet B. Aizer
Dr. Dalit Ashany
Dr. Anne R. Bass
Dr. Doruk Erkan
Dr. Theodore R. Fields
Dr. Allan Gibofsky
Dr. Susan M. Goodman
Dr. Jessica K. Gordon
Dr. Alana B. Levine
Dr. C. Ronald MacKenzie
Dr. Joseph A. Markenson
Dr. Stephen Paget
Dr. Edward Parrish
Dr. Linda Russell
Dr. Lisa R. Sammaritano
Dr. Sergio Schwartzman
Dr. Robert Spiera
Dr. Richard Stern
Dr. Arthur M. F. Yee

Sleep Medicine

Dr. Dianne M. Augelli
Dr. Ana C. Krieger
Dr. Gerard T. Lombardo (NYP/Brooklyn Methodist)

Sports Medicine

Dr. Lisa R. Callahan (HSS)
Dr. Scott E. Rand (Houston Methodist)
Dr. Christian M. Schupp (Houston Methodist)

Division Profiles

Weill Department of Medicine

Cardiology

Bruce B. Lerman, M.D.
Chief, Maurice R. and Corinne P. Greenberg Division of Cardiology

Hilda Altschul Master Professor of Medicine

Professor of Medicine
Weill Cornell Medical College

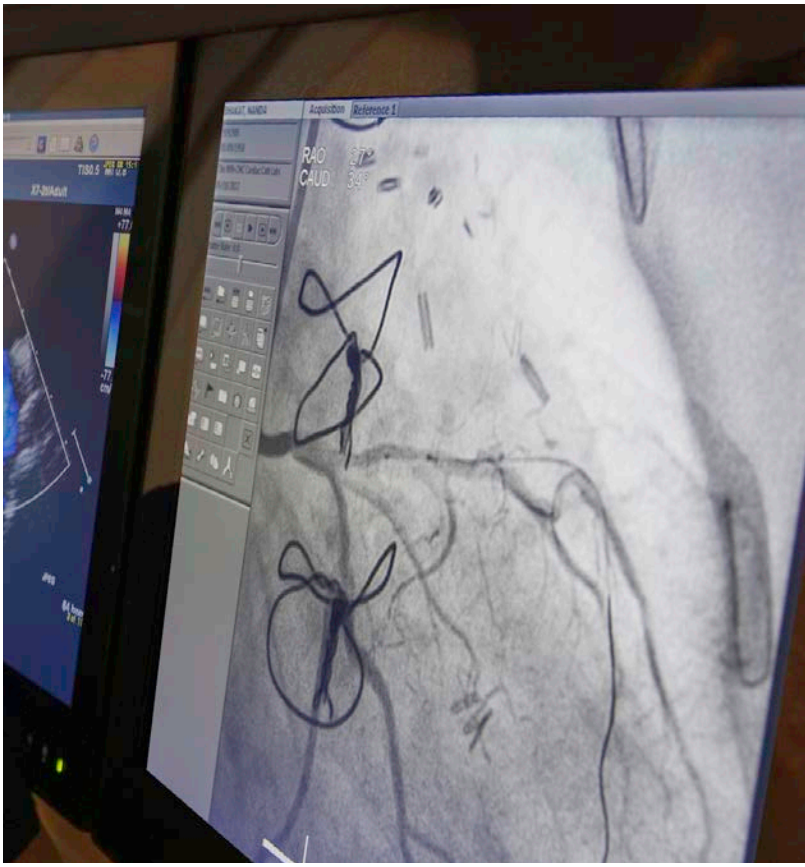
Attending Physician
NewYork-Presbyterian Hospital

The Maurice R. and Corrine P. Greenberg Division of Cardiology is a leader in cardiovascular research, education, and clinical care. The division's mission is to remain at the forefront of scientific and technological developments that are revolutionizing cardiology and to translate these findings to the clinical bedside. Our internationally renowned programs investigate the basic mechanisms of cardiovascular disease, including the genetics of heart disease, the cellular signals and transcription factors responsible for cardiac development, the transformation and homing of stem cells for myocardial regeneration, and the delineation of the molecular bases for cardiac arrhythmias.

Strategies are continually implemented to enhance physical space, expand comprehensive clinical programs, and continue our history of cutting-edge research. The division continues to develop and deliver cutting-edge therapies for heart disease and to advance clinical investigation. Expert faculty provide mentoring, training, and supervision to medical students, internal medicine residents, and fellows in cardiology, preparing them as tomorrow's leaders. The faculty also provide a host of weekly conferences for internal and external colleagues.

From basic science, investigating the mechanisms of arrhythmias and large population-based studies of new diagnostic and therapeutic approaches, to a vast array of cardiovascular conditions and diseases, the focus is on improving patient care. This involves our faculty and all cardiology fellows-in-training, as well as postdoctoral trainees and graduate and medical students, thus creating a rich intellectual milieu in which trainees develop into experienced investigators.

Clinical services achieve superior outcomes in all areas, from interventional and imaging laboratories, to outpatient consultative and ongoing care. Patient care covers the full spectrum of heart and vascular diseases, including, but not limited to, arrhythmias, coronary and peripheral arterial disease, valve disease, inherited heart diseases, as well as heart failure and transplantation cardiology. To facilitate immediate treatment of patients



presenting in the early stages of a heart attack, there exists 24-hour, in-hospital coverage of the Cardiac Intensive Care Unit, Telemetry and Step-Down Unit, and the interventional laboratory. The division is particularly proud of its Cardiac Catheterization Laboratory and performance under the leadership of Dr. Shing-Chiu Wong.

In the latest data published by the New York State Department of Health (2016), the Cornell Catheterization Laboratory had the lowest risk-adjusted mortality for percutaneous angioplasty for any laboratory in the state. The NewYork-Presbyterian/Weill Cornell Medical Center is the only hospital in the State of New York that has a significantly lower all case mortality rate in the latest 2017 report and also over the most recent three-year period (2015-2017).

The faculty continued to publish papers in the top-tier journals, including findings on the mechanisms of ventricular tachycardia. Dr. Bruce Lerman, Chief, Division of Cardiology, recently published a manuscript in *Circulation AE* that described the body of work that resulted in identifying a novel somatic mutation in GNAS associated with right ventricular outflow tract tachycardia. The mutation results in constitutive activation of $G_s\alpha$, impairs GTP hydrolysis, and elevates basal cAMP levels, leading to enhanced L-type calcium current and triggered activity. These findings amplify Dr. Lerman's previous work in this area and further support the novel observation that RVOT tachycardia can be caused by somatic mutations in signal transduction proteins that regulate intracellular cAMP and its downstream effectors.

Dr. Jiwon Kim, The Bruce B. Lerman, M.D. Clinical Scholar and Associate Professor of Medicine, received the 2021 ASCI Council Young Physician-Scientist Award.

Cardiology Fellowships

- Cardiology: three-year program that prepares highly qualified candidates for careers in investigative and clinical cardiology. Harsimran Singh, M.D., Program Director
- Clinical Cardiac Electrophysiology (CCEP): two-year training fellowship for intensive clinical training in mapping and ablation of complex arrhythmias. Jim W. Cheung, M.D., Program Director
- Interventional Cardiology: one-year advanced training fellowship in all areas of interventional cardiology, including drug eluting stents, rotational atherectomy, thrombectomy devices, distal protection devices and intravascular ultrasound. Luke Kim, M.D., Program Director
- Advanced Heart Failure and Transplant Cardiology: one-year training program in the management of the advanced congestive heart failure patient population. Irina Sobol, M.D., Program Director

Clinical Epidemiology and Evaluative Sciences Research

Mary E. Charlson, M.D.
Chief, Division of Clinical Epidemiology and Evaluative Sciences Research

William T. Foley Distinguished Professor of Medicine

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Division of Clinical Epidemiology and Evaluative Sciences Research draws upon the talents and experience of a multidisciplinary faculty based at Weill Cornell Medicine, Cornell University-Ithaca, Cornell Tech, and other institutions. Faculty members are experts in qualitative and quantitative research methodology, health services research, clinical epidemiology, medical informatics, decision sciences, health disparities research, community-based participatory research, clinimetrics, outcomes research, and behavioral science. They work together in a series of activities designed to encourage, and systematically support, the development of new research initiatives within, and outside, the division.

Research efforts in the division include a strong track record with the NIH and PCORI and an ongoing commitment to fostering a new generation of investigators via training grants and other opportunities. As leaders in population health research, the division plays a unique role at Weill Cornell Medicine through its contributions to behavioral science, health disparities, and population health, and it has enrolled more than 3,000 patients in clinical research studies. The division provides

Clinical Epidemiology and Evaluative Sciences Research

national leadership in bending the cost curve by implementing innovative and evaluative strategies for population management focused on interventions in high comorbidity patients. Related areas of investigation include studies to improve clinical outcomes, behavioral science research, research on complex patients with a significant burden of comorbidity, and comparative effectiveness. The division seeks to stimulate and support new clinical, health services, and outcomes research within and outside of Weill Department of Medicine.

Divisional faculty lead graduate training programs in clinical epidemiology and research methodology. Graduates of the Master's Program in Clinical Epidemiology and Health Services Research have received more than $200 million in peer-reviewed funding. Faculty in the division continue to publish top-tier research papers focused on improving outcomes of patients with chronic illness.

The PCORI cRTC, *Preventing Tipping Points In High Comorbidity Patients: A Lifeline From Health Coaches* (Dr. Charlson, Principal Investigator), compares the outcomes of patients randomized in clusters by FQHC within PBRNs. In this study, the research team is adding health coaches to patients' healthcare teams to help patients set life and health goals and manage their chronic conditions. They want to know how well medical teams, with a health coach, help patients manage their conditions and avoid unplanned hospital visits as compared with medical teams that do not have a health coach.

The CARE T37 program, co-directed by Said Ibrahim, M.D., M.P.H., M.B.A., Mary Charlson, M.D., and Linnie Golightly, M.D., aims to identify talented URM pre-and post-doctoral trainees across the health sciences who are considering careers in health equity and global health research. Selected trainees of the program will engage in a mentored research experience tailored to their individual career and research goals.

Hunter-Cornell NHLBI Health Disparities Fellowship

Carla Boutin Foster M.D.
M.S. Rodrigo Valles, Ph.D.
Mary E. Charlson, M.D.

A two-year training program (T32 NHLBI Fellowship Program) that trains pre- and post-doctoral students and residency physicians to conduct methodologically rigorous research focused on cardiovascular health disparities in a multidisciplinary environment.

Endocrinology, Diabetes and Metabolism

Dr. Laura Alonso
Chief, Division of Endocrinology, Diabetes and Metabolism

Director, Weill Center for Metabolic Health

Herbert J. and Ann L. Siegel Distinguished Professor of Medicine

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

As part of a world-class academic medical center, the Division of Endocrinology, Diabetes and Metabolism is dedicated to excellence in providing highest quality care to patients with endocrine and metabolic disorders, conducting ground-breaking research to advance the frontiers of endocrinology and diabetes, and training highly motivated and dedicated physicians to become successful clinicians and physician-scientist leaders in academic medicine.

The division offers exceptional patient care across the spectrum of endocrine disorders. With respect to diabetes, we provide state-of-the-art care for patients with type 1, type 2, and gestational diabetes mellitus, offering a multidisciplinary team approach with comprehensive case management and individualized treatment for every patient. Our expert diabetes team includes physicians, nurse practitioners, certified diabetes care and education specialists, and registered nutritionists who are experienced in intensive diabetes management, including insulin pump therapy, continuous glucose monitoring systems, and state-of-the-art hybrid closed-loop systems. The division receives federal funding to support ongoing clinical and bench research in diabetes.

The Comprehensive Weight Control Center (CWCC), home of obesity expertise, is directed by Dr. Louis J. Aronne, Professor of Clinical Medicine and the Sanford I. Weill Professor of Metabolic Research. Dr. Aronne and a staff of endocrinologists, nutrition, and obesity medicine specialists have developed and provide a uniquely effective form of "weight-centric" patient care to achieve weight loss in complex cases, which forms the clinical foundation for the field of Obesity Medicine. Led by Dr. Alpana Shukla, Director of Clinical Research at the CWCC, the research staff runs clinical trials on the management of obesity and metabolic disease with diet, medication, and novel devices, and has fostered collaborations with multiple divisions and departments at Weill Cornell Medicine (WCM) to develop

cross-discipline treatment and research programs. The CWCC fellowship program is one of the largest in the country. The center trains students at all levels and mentors master's students from the Institute for Human Nutrition, Columbia University, and Weill Cornell Medical College.

The division has deep expertise in classical endocrine disorders, including all forms of thyroid disease (thyroid nodules and cancer; disorders of calcium metabolism, osteoporosis, and metabolic bone disease; reproductive endocrinology such as the treatment of menstrual irregularities, hirsutism, menopause, and androgen deficiency; and disorders of the pituitary and adrenal glands. Should surgery be necessary for the treatment of an endocrine disorder, we routinely collaborate with a team of experienced endocrine surgeons.

In 2021, the division opened a new Clinic for Gender Affirming Care. Guided by Dr. Ann Danoff, the former director of the Division of Endocrinology at NYU, the new clinic offers gender affirming care for gender diverse adults. The team welcomes all patient referrals from physicians across all areas of medicine, providing individualized gender affirming hormone treatment. We are developing a collaborative network of relevant specialty expertise across Weill Cornell Medicine to support the whole health of our gender diverse patients.

Groundbreaking research is ongoing in the division with the ultimate goal of generating new knowledge for the prevention, detection, and treatment of patients with endocrine diseases. Dr. Alonso's laboratory is focused on identifying approaches to increase the insulin-producing capacity of the pancreatic beta cells to prevent or treat diabetes. Her work is funded by the NIH and the American Diabetes Association. Drs. Anthony Hollenberg, Marcus Goncalves, Shannon Reilly, Megan Ritter, and Rohit Sharma also direct endocrine research in the Belfer Research Building. Dr. Hollenberg, a physician-scientist and endocrinologist, serves as Chair of the Weill Department of Medicine and is the recipient of the Sidney H. Ingbar Distinguished Lectureship Award and multiple NIDDK R01s. His work has refined our basic understanding of how thyroid hormones act to keep the body healthy. Dr. Goncalves, a physician-scientist with a tremendous career trajectory started the year with a career development award from the NCI (K08) and has achieved two R01 awards over the past year. He studies the interface between endocrinology and cancer. Dr. Ritter is a physician-scientist working to solve complex problems in thyroid hormone biology, and the recipient of not only a Fund for the Future Award but also a recent grant from the American Thyroid Association. Dr. Shannon Reilly is our newest faculty member, a stellar scientist studying how fat tissue works, recruited from University of California San Diego in the fall of 2021. Her work is also supported by an R01 from the NIH.

The division has a growing footprint in patient-centered clinical research. Remarkably, division faculty member and prior chief Dr. Julianne Imperato-McGinley serves as the Principal Investigator and Program Director of Weill Cornell Medical College's $46 million NIH-funded Clinical and Translational Science Award (CTSA). The CTSC supports a wide range of clinical research training and advances that extend far beyond endocrinology. The division is a site for the Epidemiology of Diabetes Intervention and Complications (EDIC) Trial, a continuation of the multicenter Diabetes Control and Complications Trial (DCCT), the seminal trial demonstrating the beneficial effects of intensive glucose control on long-term complications of diabetes. Ongoing quality Improvement projects include: standardizing and streamlining the Diabetic Ketoacidosis (DKA) Guidelines in the Weill Cornell Medical ICU and in the Lower Manhattan Hospital's ICU, including a nurse-directed DKA protocol

L to R: Mingming Hao, Ph.D., Associate Director, and Dr. Laura Alonso, Director, of the newly opened Joan and Sanford I. Weill Center for Metabolic Health

Endocrinology, Diabetes and Metabolism

and an effective subcutaneous-delivery DKA protocol that was widely adopted during the COVID-19 pandemic; a new, simpler inpatient diabetes regimen using the oral medication sitagliptin; integrating each patient's blood glucose data into their outpatient visit for all of the latest diabetes technologies; and a new program helping young adults with type 1 diabetes to transition seamlessly from pediatric to adult endocrine care.

The division is closely associated with the Joan and Sanford I. Weill Center for Metabolic Health, of which Dr. Alonso also serves as Director. The center celebrated its official launch on September 22, 2021, complete with an address by Dean Choi, an illustrious keynote speaker, and a delightful outdoor reception. The center is a collaborative hub catalyzing research advances in pursuit of solving important problems in human metabolic health such as diabetes, obesity, and other problems in metabolism. The center has more than 40 active faculty members, with biomedical expertise ranging from biochemistry, pharmacology, physiology and biophysics, pathology, and genetics to fundamental cell and molecular biology. The center is home to the Metabolic Phenotyping Center, a state-of-the-art core facility run by Division faculty member Hayley Nicholls Krisko, PhD, that allows researchers to comprehensively quantify metabolic parameters in mouse models, a key step in interpreting how experimental interventions impact metabolism. Mingming Hao, Ph.D. serves as the Center's Associate Director. Dr. Hao, recruited from a faculty position in the Department of Biochemistry at WCM, has many years of experience in diabetes research focusing on pancreatic beta-cell dysfunction. Center members currently enjoy >$20M in support from the NIH, as well as numerous foundation awards.

The division thanks former Chief, Dr. Imperato-McGinley, Director, CTSC, for her participation over the past year in making covid vaccination available in people's own communities, particularly at "trusted spaces" like places of worship or a neighborhood organization.

Endocrinology, Diabetes and Metabolism Fellowship

Aaron Schulman, M.D.
Program Director

Associate Program Directors
Felicia Mendelsohn Curanaj, M.D.
Stephanie Fish, M.D.
Richard S. Bockman, M.D., Ph.D.

The Endocrinology, Diabetes and Metabolism fellowship is a joint program with NewYork-Presbyterian/Weill Cornell Medicine, Memorial Sloan Kettering Cancer Center, and the Hospital for Special Surgery. It is a two-year training program accredited by the Accreditation Council for Graduate Medical Education. This subspecialty fellowship training program is designed to provide the education and experience necessary to acquire not only the clinical competencies critical to becoming an expert in this field, but also mentoring towards a basic or clinical endocrine research career in academia.

Obesity Medicine Fellowship

Beverly Tchang, M.D.
Program Director

Associate Program Directors
Sarah Barenbaum, M.D.
Rekha B. Kumar, M.D., M.S.
Katherine H. Saunders, M.D.
Louis J. Aronne, M.D.

Alpana Shukla, M.D.
Research Director

Gastroenterology and Hepatology

Robert S. Brown, Jr., M.D., M.P.H.
Chief, Division of Gastroenterology and Hepatology

Vincent Astor Distinguished Professor of Medicine

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

Robert S. Brown, Jr., M.D., M.P.H. was appointed as the new Chief of the Division of Gastroenterology and Hepatology effective August 1, 2021. Dr. Brown is the co-founder and Director of the bi-campus Center for Liver Disease and Transplantation at NewYork-Presbyterian Hospital. He has been an integral part of the liver transplant effort at Weill Cornell since 1999 and joined the faculty full-time in 2015. The liver transplant program has the best outcomes and among the largest volume in the region and is a pioneer in laparoscopic living liver donation. Dr. Brown had worked with Dr. David E. Cohen, the division's previous Chief, to double the size of the clinical and research faculty of the division. He also led the expansion into the new David H. Koch Center building. Dr Brown has served as Vice Chair for Mentorship and Academic Development and is currently Chair of the Promotions and Appointment Review Committee in the WDOM.

The Division of Gastroenterology and Hepatology provides outstanding patient care in a wide range of subspecialty areas, including hepatology, inflammatory bowel disease (IBD), gastrointestinal reflux disease, advanced endoscopic diagnostic and therapeutic procedures, functional bowel disorders, gastrointestinal infections and gastrointestinal cancer prevention and treatment. The division houses The Jill Roberts Center for Inflammatory Bowel Disease, the Jay Monahan Center for Gastrointestinal Health, and the Center for Liver Disease and Transplantation, as well as a multidisciplinary pancreas program. Patient care addresses the prevention and treatment of viral and alcohol-related hepatitis, fatty liver, obesity, gastrointestinal cancers, Barrett's esophagus, IBD, IBS, disorders of gastrointestinal motility, nutritional disorders, benign and malignant diseases of the liver, pancreas and biliary tree, c. difficile infection and the entire spectrum of gastrointestinal and liver diseases.

Numerous research projects and clinical trials are underway. Dr. Brown continues to direct a robust liver transplant program and is leading a multicenter NIH U01 consortium to study liver cirrhosis. The Center for Liver Disease and Transplantation combines the Liver Transplantation program and the general hepatology program within the division, as well as the Liver Transplant Surgery Division of the Department of Surgery. This interdepartmental program has laid the foundation for a comprehensive hepatology program at Weill Cornell Medicine with clinical trials in hepatitis B and C, fatty liver disease, primary biliary cholangitis, primary sclerosing cholangitis, and alcohol-induced hepatitis. Dr. Brown (in collaboration with Dr. Benjamin Samstein, Chief of liver transplantation and hepatobiliary surgery in the Department of Surgery at NYP/WCMC) received United Network for Organ Sharing approval of a program to promote living donor exchanges in liver transplant program, thus expanding access to life-saving liver transplants for those in need.

Dr. Felice Schnoll-Sussman serves as Director of Endoscopy, including the 11 new high-tech endoscopy suites at the David H. Koch Center on York Avenue. She is also Director of the Jay Monahan Center for Gastrointestinal Health, which offers a wide breadth of expertise including endoscopic ultrasound, capsule endoscopy, colorectal cancer genetics, colon cancer prevention, endoscopic treatment of Barrett's esophagus, and esophageal motility. Dr. Reem Sharaiha, Director of Interventional Endoscopy, also oversees the Endoscopic Bariatric Program, which provides the full spectrum of novel technologies related to endoscopic treatment of obesity. This advanced endoscopy group offers endoscopic suturing, confocal endomicroscopy for early detection of GI cancers, photodynamic therapy and radiofrequency ablation for pancreatico-biliary cancers, endoscopic drainage of pseudocysts, endoscopic necrosectomy and EUS-guided ERCP, and POEM (treatment of esophageal achalasia). Dr. Sonal Kumar is Director of a multidisciplinary fatty liver disease and weight management clinic of the Innovative Center for Health and Nutrition in Gastroenterology (ICHANGE). Dr. Tibor Krisko succeeded Robert Burakoff, who recently retired after a long, illustrious career, as the Site Chief for the Division of Gastroenterology and Hepatology at NYP/Lower Manhattan Hospital and Weill Cornell Medicine.

Dr. Randy Longman is the new Director of the Jill Roberts Center for Inflammatory Bowel Disease, which provides state-of-the-art patient care for IBD patients at the David H. Koch

Gastroenterology and Hepatology

Center. This center has enabled the division to recruit multiple new faculty members who are providing expert care in all facets of IBD and collaborates closely with the Jill Roberts Institute for Research in Inflammatory Bowel Disease (IBD). The Jill Roberts Institute for Research in Inflammatory Bowel Disease employs a multidisciplinary approach in translating scientific discoveries into new preventative and treatment strategies for IBD. The close collaboration between researchers at the Roberts Institute (Director, Dr. David Artis) and clinicians at the Jill Roberts Center at Weill Cornell Medicine and NewYork-Presbyterian Hospital is enabling a trend towards more personalized treatment for IBD. The Jill Roberts Center is active in research studies focused on moderate to severely active Crohn's Disease and ulcerative colitis, eating patterns and disease activity, as well as health care maintenance, in patients with IBD.

2021 was a banner year for honors, awards, and advances. The division received seven new R01 awards from the National Institutes of Health. Three members of the division – Dr. Gregory Sonnenberg, senior author, Dr. Jeremy Goc, lead author, and the study's co-author, Dr. Manish Shah – discovered that ILC3s (which reside in the intestines) protect against colorectal cancer, in part, by helping to maintain

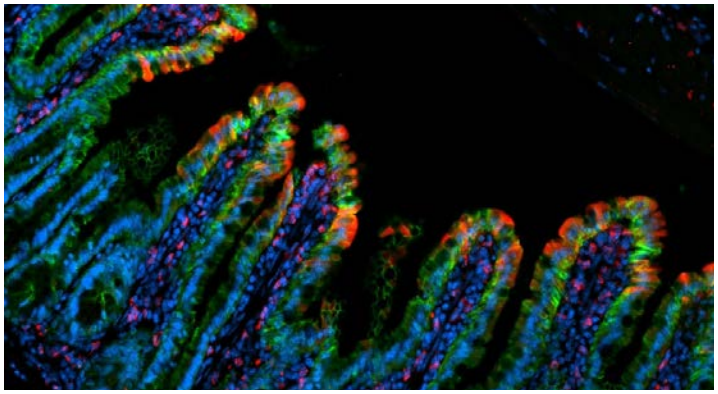


Image courtesy of the Sonnenberg Lab

a healthy dialogue between the immune system and gut microbes. Published in *Cell*, this critical finding is expected to open the door to new strategies for treating colorectal cancer. Dr. David Artis received two new grants (R01s) from the National Institutes of Health (NIDDK). The grants are focused on neuro-immune regulation of intestinal inflammation and neuropeptide-mediated regulation of antihelminth immunity. Dr. Rachel Niec, a fourth-year fellow who is now a clinical instructor at WCM, received the prestigious 2021 Career Award for Medical Scientists from the Burroughs Wellcome Fund; her work uses 3D imaging and genomic assays to study how stem cells in the intestine interact with their niche in health and how this is altered in diseases (e.g., IBD). She was also selected for an emerging leader (EGEN) award from the American Society of Clinical Investigation.

The division congratulates two of its faculty who were recently inducted into ASCI (American Society for Clinical Investigation): Dr. Randy S. Longman and Dr. Robert E. Schwartz. Focused on interactions between gut microbes and the immune system in IBD, Dr. Longman's work has identified specific strains of bacteria that are involved and how they relay signals to the immune system to activate inflammation in patients with Crohn's disease and ulcerative colitis. In 2021, he and colleagues, including Dr. Ellen Scherl and Dr. Chun-Jun Guo, discovered the critical finding that patients with Crohn's disease have an overabundance of an inflammation-producing gut bacteria, Escherichia coli (AIEC). Their study has uncovered a therapeutically targetable weak point in the bacteria. Dr. Schwartz is developing and building models of human liver disease *in vitro*. He uses stem cell biology, hepatocyte biology, and incorporates engineering techniques to better understand human liver disease with the goal to improve clinical therapy.

Gastroenterology and Hepatology Fellowship

Carl Crawford, M.D.
Program Director

A three-year program that focuses on specialized rotations and research, including opportunities to participate in clinical research (e.g., hepatology, inflammatory bowel disease, cancer screening, endoscopic ultrasound, the microbiota of the GI tract, endoscopic imaging techniques). An NIH T32 training grant provides support for two postdoctoral fellows to pursue basic or clinical research for two years. This has provided support for Master's degree training for clinical researchers and salary support and protected time for bench researchers. The fellowship program has been expanded to four fellows per year to allow more protected time for research and increase the breadth of their clinical experience with more elective time. We continue to recruit top candidates nationally and our fellows are pursuing academic careers in hepatology, advanced endoscopy, IBD, motility, and other disciplines within gastroenterology upon graduation. Fourth-year advanced fellowships have been added in transplant hepatology, obesity, and IBD to the existing advanced endoscopy fellowship.

General Internal Medicine

Monika Safford, M.D.
Chief, Division of Internal Medicine

John J. Kuiper Professor of Medicine

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Division of General Internal Medicine is home to the sections of Adult Internal Medicine, Hospital Medicine, and Research, and also houses the Integrative Health program. The Division includes more than 300 employed and voluntary faculty and 70 staff. The division's tripartite mission is focused on providing compassionate, comprehensive, coordinated, and state-of-the-art patient-centered care for every patient through evidence-based practice; educating the next generation of Internal Medicine physicians; and generating new evidence on how to optimize the overall health and well-being of patients and communities via collaborative research.

Dr. Monika Safford, Division Chief, is an expert in cardiometabolic epidemiology and prevention, health disparities, and real-world trials of pragmatic interventions. She is the author of more than 550 peer-reviewed publications, receives ongoing funding from the NIH and other sources, and has a passion for mentoring junior faculty. She leads the Section of Research and the Division's T32 Cornell-Hunter Health Equity Research Fellowship Program. Dr. Safford is the Founding Co-Director of the university-wide Cornell Center for Health Equity. Dr. Safford is also the creator of the Patient Activated Learning System (palsforhealth.com), a novel patient education platform being developed in collaboration with division and other college faculty members specifically designed to overcome low health literacy.

Dr. Judy Tung is the Division's Section Chief of Adult Internal Medicine (AIM) and Associate Dean for Faculty Development. The AIM program includes over 40 academic full-time members who provide high-quality and comprehensive primary care for diverse patients representing a cross section of the ethnic, cultural, and economic diversity that is New York City. The program integrates faculty and trainee practices at locations on the Upper East Side (Weill Cornell Internal Medicine Associates [WCIMA]), lower Manhattan, and Long Island City. Services include preventive health care, treatment of acute and chronic illness, and coordination of care for those with medical complexity. Patients are seen in all AIM practices regardless of insurance type. This Section is the primary hub for general medicine ambulatory education for the Internal Medicine Residency Training Program.

Dr. Judy Tung

Dr. Arthur Evans is the Division's Section Chief of Hospital Medicine (HM). The Hospital Medicine program includes 83 faculty members from around the country. All faculty are board certified in Internal Medicine and many have additional training and subspecialty expertise (e.g., infectious disease, emergency medicine, nephrology, critical care, medical informatics, pain management, quality improvement, and clinical research). On any given day, the faculty provides care for over 200 inpatients at both the Upper East Side (UES) and NewYork-Presbyterian/Lower Manhattan Hospital (NYP-LMH) campuses. HM faculty teach the Internal Medicine house staff and run the medicine consult service, staff the medicine-orthopedics trauma service, and oversee the medical Physician Assistants service.

Dr. Art Evans

The Research Group, led by Dr. Safford assisted by Associate Director for Research Dr. Lisa Kern, generates new evidence to optimize the health and functioning of people living with chronic diseases focused on health equity. Funded programs include cardiovascular and cancer clinical epidemiology and population health, implementation science, behavioral intervention trials, and whole person care for patients with advanced chronic illness. Faculty are funded by the NIH, Patient Centered Outcomes Research Institute, Commonwealth Fund, Robert Wood Johnson Foundation, American Heart Association, and private sponsors. Projects include: disparities in access to treatment for hepatitis C (Dr. Martin Shapiro); disparities

General Internal Medicine

in cardiometabolic disease outcomes and interventions to overcome them (Dr. Safford); fragmented ambulatory care (Dr. Lisa Kern); cardiovascular epidemiology in Haiti (Dr. Margaret McNairy); community-engaged research to eliminate health disparities in Brooklyn (Dr. Erica Phillips); peer support to improve health outcomes in arthritis (Dr. Iris Navarro-Millan); deprescribing in adults with heart failure with preserved ejection fraction (Parag Goyal); improving heart failure care by home health aides (Dr. Madeline Sterling); cancer disparities (Dr. Laura Pinheiro); clinical decision-making (Dr. Justin Choi); disparities in health related to natural disasters (Dr. Arnab Ghosh); online interventions to combat vaccine hesitancy and misinformation (Dr. David Scales); health outcomes in Syrian women displaced in Lebanon (Dr. Sasha Fahme); social influences on obesogenic behaviors in Latino men (Dr. Christopher Gonzalez).

The Cornell-Hunter Health Equity Research Fellowship is a HRSA-funded T32 program that trains clinicians and PhDs for careers in health equity research. The two- to three-year fellowship (co-directors, Drs. Safford and McNairy) provides trainees the skills to design and conduct patient-centered and health systems research as well as global health research and prepares them for NIH K-award submissions by the end of the program. Training includes one-on-one faculty mentorship and multidisciplinary collaborations with faculty at Weill Cornell Medicine, Hunter College, and other affiliated programs.

The HM Clinical Point of Care Ultrasound (POCUS) Fellowship, led by Drs. Tanping Wong and Gregory Mints, provides overall proficiency in basic and advanced POCUS, instruction leading to national certification and participation in POCUS research with the goal to present results at national meetings. Faculty span two hospitals and have taught POCUS at the American College of Physicians and the Society of Hospital Medicine. They are involved in developing policy around HM-POCUS sponsored by the Society of Hospital Medicine.

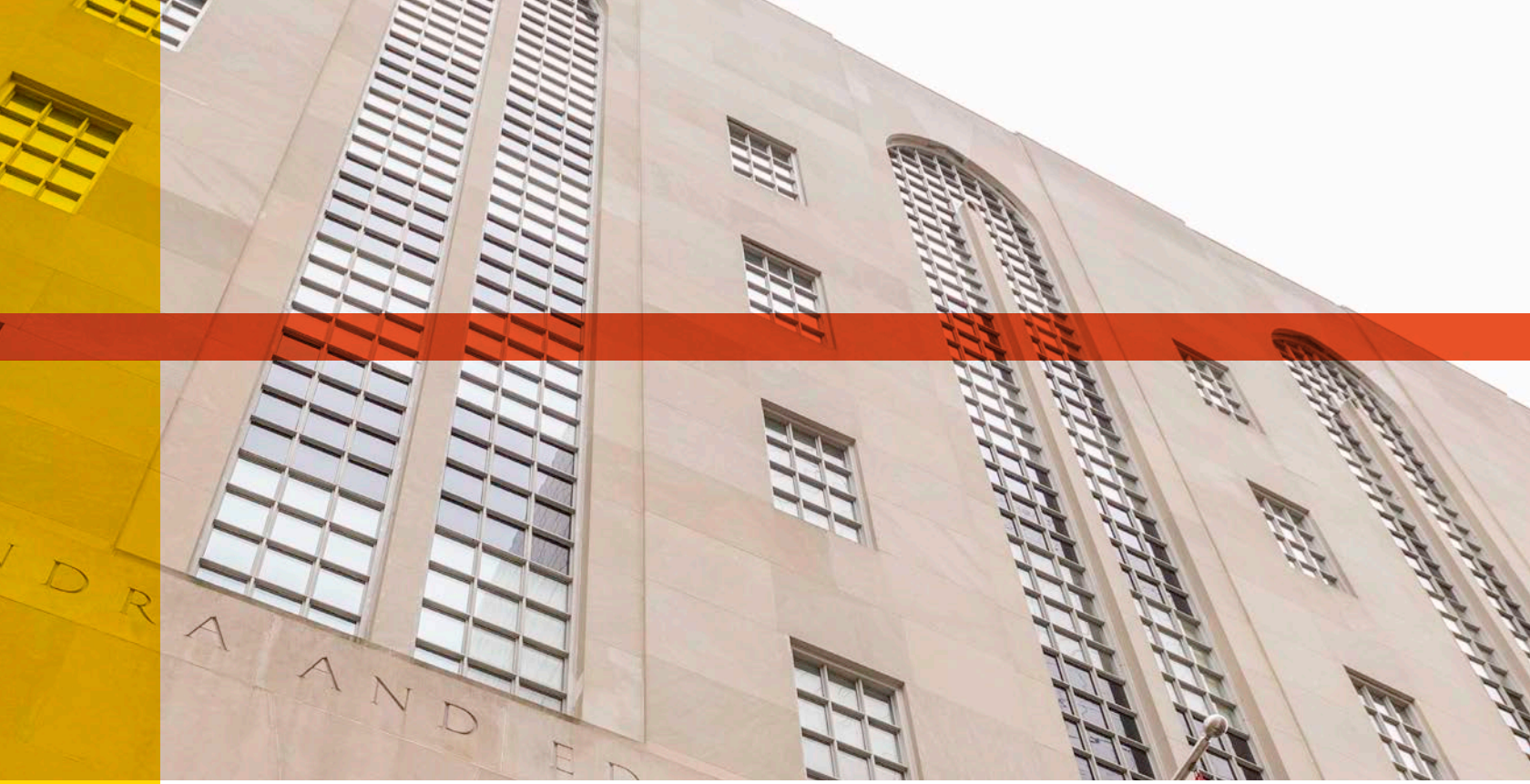
The division includes the college-wide year-long faculty development, Leadership in Academic Medicine Program (LAMP), directed by Dr. Judy Tung. It also includes leadership of the college-wide Quality Improvement Academy, led by Dr. Jennifer Inhae Lee; competitively selected fellows learn principles of quality improvement and rigorous evaluation over a year-long program. The Academy holds an annual Symposium, which took place virtually on September 21, 2021. The program is co-sponsored by the Physician Organization Division of Quality and Patient Safety and NYP Department of Nursing and showcases quality and safety projects from all departments across WCM-UES, LMH, Queens, and Brooklyn Methodist.

Dr. Fred Pelzman continues to serve as Medical Director of WCIMA, and directs the Primary Care Innovations Program, a college-wide philanthropic initiative to increase innovation in primary care. This program holds annual Symposia and awards competitive pilot grants to spur innovation in primary care at WCM. This year's Symposium took place contiguous with Proud to be GIM week in February 2022, showcasing the College's many innovations in primary care.

In 2021, the PCI program hosted the 4th Annual Primary Care & Hospital Medicine Innovations Symposium (virtual, 200 guests). This year the PCI program provided $175,000 to fund 11 innovative interdisciplinary projects across campus, consisting of 8 faculty, 1 resident, and 2 student awardees in various topics related to primary care. The half-day symposium began with opening remarks from Dr. Pelzman, Dean Augustine Choi, and Dr. Tung. The program featured a new format with two prominent keynote speakers: Andrea Cherrington, M.D., Professor, Division of Preventive Medicine, University of Alabama Birmingham, and Robert Wachter, M.D., Professor and Chair, Department of Medicine, University of California, San Francisco. A panel discussion with keynote speakers (moderated by Dr. Safford) focused on *Reflections on Primary Care & Hospital Medicine in the Current State*. Past competitive seed grant presentations, abstract presentations, and compelling poster sessions were included. This year's event showcased posters from medical students, residents, fellows, and faculty from WCM, NYP, Global Health, Pediatrics, Internal Medicine, and ITS. With closing remarks and a raffle giveaway from Dr. Safford, the symposium was a forum to get to know others with similar interests and to become familiar with the ongoing innovative work on-campus and off-campus in the Primary Care arena.

The Integrative Health and Wellbeing program, led by Executive Director Dr. Chiti Parikh, provides clinical services at the David H. Koch Center on the UES. Patients receive a whole person approach to medical care, offering comprehensive evaluation and services such as acupuncture, massage therapy, nutrition counseling, yoga instruction, mindfulness coaching, and meditation instruction. The program sponsors a two-year Integrative Medicine Clinical Fellowship that offers comprehensive education and hands-on experience in the field of Integrative Medicine.

Many faculty members continued to lead the Cornell Center for Health Equity (CCHEq), a university-wide center



that advances health equity by generating and sharing new knowledge; training outstanding investigators, with an emphasis on people from underrepresented groups; educating students, trainees, faculty, and communities; engaging with diverse communities in this work; and applying knowledge to maximize its impact on practice and policy. Co-Directors are Drs. Safford (WCM), Jeff Niederdeppe, and Jamila Michener (the latter two from Cornell University [CU]). The Community Engagement Core is led by Dr. Erica Phillips (WCM) and Mr. Adam Hughes of the Cornell Cooperative Extension (CU). The Investigator Development Core of the CCHEq is led by Drs. Martin Shapiro and Joseph Osborne (both of WCM) and has awarded competitive pilot grants for the past four years.

The CCHEq's Education Core is co-led by Drs. Susana Morales (WCM) and Gen Meredith (CU). WCM's activities were funded by a HRSA Diversity Center of Excellence (DCOE) grant led by Drs. Morales and Safford. The DCOE focuses on increasing the number of underrepresented minority (URM) physicians in academic medicine. Its activities expanded pipeline programs from middle school through undergraduates; enhanced support for URM medical students and trainees; expanded faculty development for hiring and retention of URM faculty; and generated new knowledge on how to achieve health equity. A supplement from HRSA supported the COVID-19 Community Education and Empowerment Internship for undergraduate STEM students that focused on the dissemination of information about COVID-19 vaccination for diverse communities, vaccine science, and approaches to community education. The supplement also supported community engagement activities and mini-grants, providing numerous faculty-led programs to combat vaccine hesitancy.

Drs. Parag Goyal and Jyoti S. Mathad both received an Association of Clinical Investigators Council Young Physician-Scientist Award which recognizes physician-scientists who are early in their first faculty appointment and have made notable achievements in their research. Assistant Professor of Clinical Medicine Dr. Laura Greisman was appointed as co-Director of the Office of International Medical Student Education. She is a recipient of the "Senior List" teaching award and the Excellence in Medical Education Award at WCM. Dr. Erica Phillips, Associate Professor of Clinical Medicine, was named the Jack Fishman Associate Professor of Cancer Prevention in the WDOM for her research on community-based programs to achieve health equity in support of the Meyer Cancer Center. Dr. Phillips' integrates her research focus on behavioral intervention with her WCIMA weight management program. Dr. Madeline R. Sterling was selected by the NIH's National Heart Lung and Blood Institute (NHLBI) as one of the clinician scientists to be featured for Women's History Month in March. Part of NHLBI Celebrates Women Scientists (2021), Dr. Sterling's work on home health aides and healthcare delivery for adults with chronic conditions was featured.

The Ambulatory Care Clerkship is a general internist-run "New York Primary Care" experience that all Weill Cornell Medicine students experience as a core clerkship during their second or third year of medical school. Students see patients with a diverse group of academic and voluntary faculty community-based internists, geriatricians, pediatricians, gynecologists, urgent care physicians, dermatologists, and surgical subspecialists. Students grow their clinical skills in

General Internal Medicine

patient interviewing and motivational counseling, physical examination, patient presentations, and differential diagnosis and management. General internists in our division lead an innovative didactic curriculum and run small tutor group sessions where students present cases to each other that fit primary care themes. This clerkship, under the direction of Dr. Brian Eiss, offers two clinical tracks: the main Weill Cornell Medicine campus and the NYP/Brooklyn Methodist campus.

Under the direction of Dr. Tung, several faculty, staff, and students aided on a quality improvement assessment and intervention project to increase the COVID vaccination rates of Black and Hispanic WCIMA patients. The project aimed to assess interest in and barriers to receiving the COVID-19 vaccine, address concerns or questions regarding the vaccine, and facilitate scheduling of vaccination for those interested.

The Diversity Center of Excellence worked with several campus partners to address vaccine hesitancy and increase vaccine confidence. In 2021, Dr. Susana Morales joined faculty to host a Virtual Vaccine Education Ambassador Training. This event was aimed at helping community members make an informed decision about vaccinations. In addition, the Diversity Mentoring Cascade program hosted a special session on vaccine ambassador training for physicians and trainees on March 9, 2021. The goal of the session was to provide information and resources on how to talk to patients and community members about COVID vaccinations. For a recording and access to resources, visit centerforhealthequity.cornell.edu.

2021 highlights… Dr. Susana Morales, Vice Chair for Diversity and Associate Professor of Clinical Medicine, was interviewed on PBS's MetroFocus regarding her numerous COVID-19 education efforts in the community. Dr. Morales and Dr. Christopher Gonzalez were honored at Women's Housing and Economic Development Corporation (WHEDco) 2021 Benefit and Ballgame Heroes event in recognition of their tireless efforts to encourage residents of the city's poorest zip codes to become vaccinated against COVID-19. WHEDco provides a wide array of social and educational services to residents in one of the city's poorest areas in the South Bronx. Dr. Morales was also honored as Physician of the Year by the National Hispanic Medical Association.

Geriatrics and Palliative Medicine

Ronald D. Adelman, M.D.
Co-Chief, Division of Geriatrics and Palliative Care

Medical Director, Irving Sherwood Wright Center on Aging

The Emilie Roy Corey Professor in Geriatrics and Gerontology

Professor of Clinical Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Division of Geriatrics and Palliative Medicine is guided by a patient-centered culture of care. By integrating high-quality clinical care, the teaching of geriatric and palliative medicine, and scientific research, the division seeks to improve the quality of life for older adults and for patients of all ages facing chronic illness and end-of-life. The division also supports the networks of patient families and caregivers.

The division is home to the Center on Aging, located at Payson 2 on the NewYork-Presbyterian/Weill Cornell Medical Center campus. Division co-Chief, Dr. Ronald D. Adelman, Emilie Roy Corey Professor of Geriatrics and Gerontology, serves as Executive Director of the Center on Aging. Dr. Tessa Del Carmen, Assistant Professor of Medicine and Roland Balay Clinical Scholar, serves as its Medical Director. This practice is designed to provide superb care for geriatric patients in a state-of-the-art setting and to meet the complex needs of older adults, together with the needs of their families and other caregivers. Mental health professionals, geriatrics nurses, nurse practitioners, social workers, and nutrition specialists complement the work of the geriatricians. The practice excels in patient satisfaction scores within the Ambulatory Care Network of NewYork-Presbyterian Hospital. For homebound patients, comprehensive services are provided in the home through the EGL House Call Program.

Board-certified physicians in palliative medicine, along with an interdisciplinary team of nurse practitioners, social workers, and chaplains see adults of all ages in the inpatient and outpatient settings. Dr. Milagros Silva, Assistant Professor of Medicine, is Medical Director of the outpatient palliative care team, which works closely with Weill Cornell oncologists and other divisions to address pain and other symptom management and wellness needs for a wide range of patients. Outpatient reach includes a focus on patients who require the use of interpreters to make medical decisions. The Palliative Care/Hospice Unit is located on Greenberg 14 South. Under

Mark S. Lachs, M.D., M.P.H.
Co-Chief, Division of Geriatrics and Palliative Care

Director, Geriatrics for the NewYork-Presbyterian Health System

The Irene F. and I. Roy Psaty Distinguished Professor of Clinical Medicine

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

the leadership of Dr. Larry Asprec, Assistant Professor of Clinical Medicine, and Liz Capano, NP, the Unit receives patients from throughout the hospital who are receiving palliative/end-of-life care.

Dr. Sara J. Czaja, Professor of Gerontology in Medicine, leads the Weill Cornell Center on Aging and Behavioral Research. Internationally renowned for her research on behavioral interventions for older adults, aging and technology, older adults in the workplace, and family caregiving, Dr. Czaja has received ongoing funding from the National Institutes of Health (NIH) since 1995.

The Cornell Center for Research on End-of-Life Care, co-directed by Dr. Holly Prigerson, Irving Sherwood Wright Professor in Geriatrics, is home to numerous NIH-funded research projects focused on factors that promote informed decision-making and the receipt of value-consistent, more humane care of patients confronting death. Evidence derived from these studies informs the development of interventions to reduce suffering in seriously ill patients.

The NIA-funded Roybal Center, directed by Dr. M. Cary Reid, Irving Sherwood Wright Professor in Geriatrics, investigates pain in later life and the role of palliative care in pain and symptom relief. Drs. Prigerson and Reid also recently renewed their funding from the NIH/NIA in support of a five-year T32 grant; this postdoctoral training grant prepares highly qualified MDs and PhDs for successful careers in aging and palliative medicine research.

The research of Dr. Veerawat Phongtankuel, Assistant Professor of Medicine, focuses on improving the quality of life for older adults and their caregivers at the end-of-life. He is in his second year of a 5-year NIA career development award (K76) to implement a technology-based intervention to improve care delivered to hospice patients and their caregivers.

The division's NYC Elder Abuse Center (NYCEAC) is a leader in developing innovative and effective responses to elder abuse, neglect and exploitation through an unprecedented level of collaboration and coordination between government, non-profit agencies, and financial institutions. Division co-Chief, Dr. Mark Lachs, Irene F. and I. Roy Psaty Distinguished Professor of Medicine, is NYCEAC's Chief Medical Officer. Lisa Rachmuth, LMSW, is leading the next chapter of NYCEAC's impressive growth by expanding services in collaboration with nonprofits and governmental partners on local, state, and national levels. With a total of over $3.2M in annual funding from city and state government and the Department of Justice, NYCEAC has successfully launched EMDT case consultation services and training for professionals in all five boroughs and has partnered with Lifespan of Greater Rochester to bring EMDTs to every New York State county. NYCEAC also spearheads training and technical assistance for EMDTs nationwide. The Elder Abuse Helpline provides confidential and immediate help to those assisting NYC-residing elder abuse victims, and the Interview of Decisional Abilities (IDA) tool assists Adult Protective Services (APS) caseworkers in gathering information to assess their clients' decision-making abilities related to elder abuse risks.

The division's faculty trains all levels of learners in geriatrics and palliative medicine. The division hosts the Geriatrics and Palliative Scholarship (GPS) summer program through which

(left) Liz Capano, B.S.N., M.S.N., and (far right) Dr. Larry Asprec, with colleague in social work, Sawudat Decoteau

Geriatrics and Palliative Medicine

selected medical students are immersed in clinical and didactic activities to deepen their understanding of the aging population. The student scholars also conduct research with a universal focus on aging, culminating their research with presentations to the Weill Cornell community and at the American Geriatrics Society Annual Scientific Meeting.

Dr. Cynthia Lien, Assistant Professor of Clinical Medicine, serves as Director of LEAP (Longitudinal Experience Advancing Patient Partnerships). LEAP is an educational program grounded in medical humanities, socio-cultural aspect of healthcare, and the Art of medicine. A part of the core curriculum at Weill Cornell Medical School and Weill Cornell Graduate School Master of Science in Health Sciences for Physician Assistants (MSHS PA) Program, LEAP creates a space for medical and PA students to engage with patients early in their training (e.g., healthcare access, navigation from the patient lens, psychosocial aspects of medicine). LEAP partners with clinical practices and departments at NewYork-Presbyterian to recruit a diverse group of patients and faculty members in providing a well-rounded learning experience.

In 2021, co-Chief, Dr. Mark S. Lachs, authored a timely article published in *Nature Aging*, "COVID-19 and Aging, A Tale of Two Pandemics." The insightful commentary reflects Dr. Lachs' experiences during the COVID-19 pandemic and his observations on resource availability at hospitals and nursing homes, as well as scientific opportunities and challenges for aging research.

Dr. Holly Prigerson was recently featured in two separate articles published in *The New York Times*. She provided perspective on her longstanding research on prolonged grief disorder (PDF) and its addition as a classified, diagnosable psychiatric disorder in the latest edition of *Diagnostic and Statistical Manual of Mental Disorders*. Dr. Prigerson had been working to include PDF in the manual for some time.

Catherine Ana Riffin, Ph.D., Assistant Professor of Psychology in Medicine, hosted the 2021 Conference on Engaging Family Caregivers of Persons with Alzheimer's Disease and Related Dementias (ADRD) in Healthcare Delivery. This illuminating conference convened interdisciplinary thought leaders from across the nation to generate key research priorities. It focused on many areas, including best practices and training programs, with the overarching goal of establishing a policy- and practice-aligned research agenda for enhancing ADRD caregiver identification and support in healthcare settings. Findings are being used to inform federal agencies and foundations. Funded by the National Institute on Aging, the conference was held in collaboration with the Mayo Clinic, United Health Group, and UsAgainstAlzheimers.

Fellowships

The division houses a Geriatrics Fellowship and, jointly with Columbia University Medical College, a Hospice and Palliative Medicine Fellowship. In addition, the division received approval of a new 2-year combined "GeriPal" fellowship and will be training its first GeriPal fellow beginning July 2022. The fellowship programs include numerous rotations, teaching opportunities, and a variety of quality improvement and clinical research initiatives.

Geriatrics Fellowship
Karin Ouchida, M.D.
Program Director

Sonal Mehta, M.D.
Associate Program Director

Hospice and Palliative Medicine Fellowship
Navendra Singh, M.D., M.P.H.
Weill Cornell Site Director

Hematology and Medical Oncology

Manuel Hidalgo, M.D.
Chief, Division of Hematology and Medical Oncology

The E. Hugh Luckey Distinguished Professor of Medicine (2020)

Walter B. Wriston Professor of Pancreatic Cancer Research

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Division of Hematology and Medical Oncology has 96 full-time faculty members who are dedicated to world-class patient care, scientific research, and teaching. Within the division, the clinical services are comprised of Solid Tumor Oncology, Leukemia, Lymphoma, Myeloma, Stem Cell Transplant & Cellular Therapies, and Non-Malignant Hematology. The primary sites of operation are locations within NewYork-Presbyterian Hospital (NYP) Main Campus, Weill Greenberg Ambulatory Care Building, David H. Koch Center, 425 East 61st Street, and NewYork-Presbyterian/ Lower Manhattan Hospital. Faculty practices continue to expand and grow at two additional network sites: NewYork-Presbyterian Brooklyn Methodist Hospital (NYP-BMH) and NewYork-Presbyterian Queens (NYP-Q). The division works closely with these sites in Brooklyn and Queens to advance the integration of cancer programs; including breast, prostate, lymphoma, and other blood cancers. The Cancer Program at NYP/Weill Cornell Medical Center and NYP/ Columbia Medical Center ranked number 15 in the country for cancer care in *U.S. News and World Report (2021-2022).*

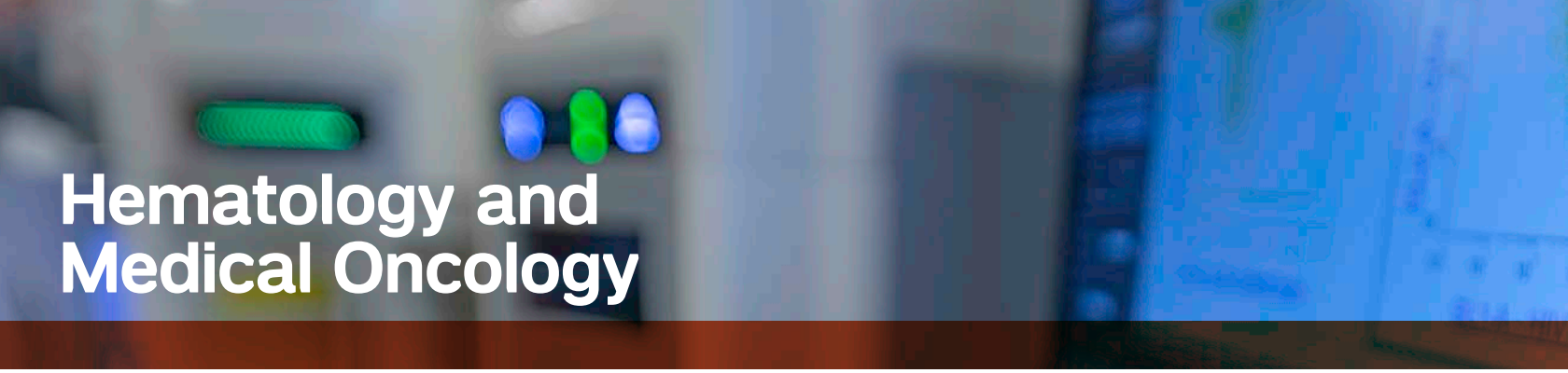
Clinical research programs enrolled 360 people in approximately 120 interventional clinical trials, including continuing to expand the division's footprint in NYP-BMH and NYP-Q. More than $22.7 million in new funding for cancer and blood disease research was received in 2021. *This* resulted in *6*6 new research projects for a total of 138 active projects.

Under Dr. Evi Giannakakou's leadership, the division has a major emphasis on translational research. The National Cancer Institute (NCI)-funded T32 Postdoctoral Training Program on Molecular and Translational Oncology Research (MTOR), co-led by Dr. Giannakakou, offers a unique training opportunity for early career scientists interested in translational cancer research. Laboratory-based faculty are involved in the translational components of numerous clinical trials, working hand-in-hand with clinical researchers and using cutting-edge technology to address oncologic questions that impact patient care and outcomes. The division maintains a central role in the growth of the Meyer Cancer Center to recruit basic science and translational researchers.

The division had a banner year in 2021. The Weill Cornell Solid Tumor Program continues to thrive under the leadership of Dr. Manish Shah. Dr. Massimo Cristofanilli was recruited and appointed as Director of Breast Medical Oncology. A world-renowned leader in the field of breast cancer, Dr. Cristofanilli is a pioneer in precision medicine in cancer, combining oncology with genomic sequencing. In this role, Dr. Cristofanilli with be responsible for the further development of breast cancer programs and patient enrollment in clinical trials. The

Dr. Massimo Cristofanilli, Director of Breast Medical Oncology

Weill Cornell Breast Center's breast oncology program delivers advanced treatment and comprehensive care for patients with all stages of breast cancer and those at increased risk for developing breast cancer. Additionally, the Breast Center's survivorship programs continue to grow, along with the triple negative breast cancer registry and biobank. The Gastrointestinal (GI) Oncology Program, led by Dr. Shah, continues to offer innovative clinical trials and multidisciplinary therapeutic options that advance



Hematology and Medical Oncology

care across the spectrum of gastric, esophageal, pancreatic, colorectal, liver, and other rare gastrointestinal cancers. The Genitourinary (GU) Oncology Program, led by Dr. Scott Tagawa, continues to expand its clinical research portfolio and build on niche expertise in prostate specific membrane antigen (PSMA) targeted therapies. The Thoracic Oncology Program employs immunotherapies, targeted therapies, and other biological agents to treat lung cancer and bring better outcomes to patients. The Head, Neck and Endocrine Oncology Program unites diverse specialty cancer care and research expertise in partnership with the Department of Otolaryngology (ENT), Head and Neck Surgery and Oral and Maxillofacial Surgery and Dentistry. Dr. Anna Pavlick serves as Director of the Melanoma and Cutaneous Oncology Program and continues to expand our clinical and research expertise across a wide array of skin cancers (e.g., melanoma, basal cell cancer, squamous cell cancer and Merkel cell carcinoma, ocular melanoma, eyelid tumors, other rare solid tumor malignancies).

The Richard T. Silver, M.D. Center for Myeloproliferative Neoplasms (MPN), led by Scientific Director, Dr. Joseph Scandura, has novel research underway on neoplastic myeloid biology. The center has a clinical informatics platform, biorepository and web presence, and provides coordinated care for patients with MPNs and related non-hematologic complications. The Weill Cornell Clinical and Translational Leukemia Program, led by Dr. Gail Roboz, offers a variety of novel investigator-initiated, cooperative group, and industry-sponsored clinical trials on acute leukemia and myelodysplastic syndrome (MDS). The clinical care team runs one of the largest inpatient leukemia services in the country. The Myeloma Center leads in drug development, clinical trials, biology scholarship, and translational research under the leadership of Dr. Ruben Niesvizky.

In 2021, the Bone Marrow and Stem Cell Transplant (BMT) and Cellular Therapy Program, led by Dr. Koen van Besien, performed 137 autologous and allogeneic transplants, and 55 additional infusions, including immunotherapies such as CAR-T cells. The National Marrow Donor Program (NMDP), which oversees the largest public dataset related to bone marrow and stem cell transplantation, determined that out of the 50 largest centers in the U.S., the WCM/NYP BMT Program continues to take on the most complex and challenging patients in the country with outcomes improving each year for the past five years in a row. The program is particularly proud of recent bench to bedside research efforts resulting in enrolling the first patients on a unique CAR T treatment – based on Weill Cornell science – for patients with advanced thyroid cancer.

Dr. Koen van Besien and Dr. JingMei Hsu were recently highlighted in *The New York Times* for participating in the successful care of a cancer patient with HIV. As described in the Times, "A woman of mixed race appears to be the third person ever to be cured of HIV, using a new transplant method involving umbilical cord blood that opens up the possibility of curing more people of diverse racial backgrounds than was previously possible…"

Dr. Peter Martin leads the Lymphoma Program, which continues to grow strategically; researchers are advancing high-impact clinical trials that provide therapy for various disease subtypes. The Non-Malignant Hematology Service and Center for Blood Disorders, led by Drs. Maria De Sancho and Raymond Pastore, delivers state-of-the-art treatments for people with all types of blood disorders.

Dr. Gail Roboz and team published a seminal paper in *The New England Journal of Medicine* that revealed a key finding on using oral azacytidine for patients with acute myeloid leukemia (AML). It was found that patients with AML strongly benefit from taking a pill form of azacytidine as a maintenance treatment for AML based on results from an international Phase 3 clinical trial at WCM and NYP. This means there is now an effective treatment that can be given in the post-remission setting to help keep AML patients in remission and improve their survival.

Dr. Ari Melnick and team published a breakthrough finding in *Nature Immunology* that identified Smc3 as a critical gene in the development of the body's immune response (B cells). Dr. Dan Landau and team published key findings in *Cancer Discovery* on a mapping technique involving a new algorithm, MethSig, that analyzes the thousands of DNA methylation changes detected in tumor cells and infers which ones are likely driving tumor growth. Dr. Leandro Cerchietti and colleagues published critical findings in *Cancer Discovery* that revealed a connection between lymphoma tumors and their microenvironments, which consist of different ecosystems of cells and treatment responsiveness.

On the heels of receiving the 2021 Emerging Leader Award from The Mark Foundation for Cancer Research, Dr. Eftychia Apostolou published a paper in *Molecular Cell* that provided potential new routes for stem cell therapy and cancer treatment based on new findings examining the "cell identity crisis."

Dr. David Nanus, Professor of Medicine and a member of the Meyer Cancer Center, is participating in a collaborative new research project in partnership with Cornell University that brings a portable prostate cancer test to underserved men. This exciting study addresses the need for increasing access

Infectious Diseases

to PSA (Prostate-Specific Antigen) screening among African American men (who are not able to get tested periodically).

Dr. Christine Garcia and Dr. Alexandra Gomez Arteaga were accepted into the 2021 Leadership in Academic Medicine Program (LAMP) at Weill Cornell Medicine.

Dr. Bishoy Faltas received grant funding from the Starr Cancer Consortium. These awards fund WCM-led multi-institutional teams for the advancement of groundbreaking cancer research projects. Dr. Faltas, the Gellert Family-John P. Leonard, M.D. Research Scholar, Director of Bladder Cancer Research at the Englander Institute for Precision Medicine, and a member of the Meyer Cancer Center, is working on "Defining the Functional Impact of Composite Mutations in Oncogene-driven Urothelial Cancer Using Circulating-tumor DNA and Single-cell Sequencing."

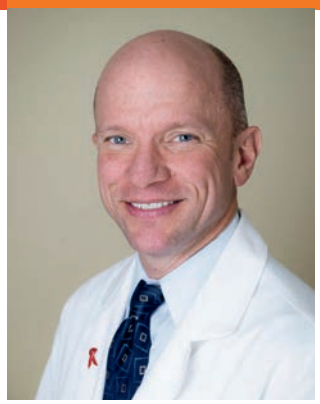
Dr. Pashtoon Kasi is an oncologist and researcher focused on treating patients with gastrointestinal (GI) cancers and the treatment of patients with novel drugs/early-phase clinical trials. Dr. Kasi serves as the division's Director for Colorectal Cancer Research, as well as Precision Medicine Director for Liquid Biopsy Research at the Englander Institute of Precision Medicine at WCM.

It was also a great year for the recruitment of new physicians and scientists, with clinicians (Drs. Massimo Cristofanilli, Nausheen Hakim, Pashtoon Kasi, Hana Lim, Barbara Ma, Erin Mulvey, Jones Nauseef, Despina Siolas) and researchers (Drs. Mark Bustoros and Inna Serganova).

Hematology and Medical Oncology Fellowship

Ronald Scheff, M.D., Program Director
Adrienne Phillips, M.D., Associate Program Director

A three-year comprised of rotations through the inpatient and outpatient clinical subspecialty services at NYP/Weill Cornell Medical Center, as well as supervised basic, translational, and clinical research. The fellowship program matches and enrolls five to six new ACGME fellows annually.



Roy M. Gulick, M.D., M.P.H.
Chief, Division of Infectious Diseases

Rochelle Belfer Professorship

Professor of Medicine
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Division of Infectious Diseases provides expertise in research, clinical care, and education and training. Internationally recognized physician-scientists conduct cutting-edge basic laboratory, translational, clinical, and epidemiologic research in infectious diseases in New York City and abroad. Research in the division investigates bacterial infections, including multidrug-resistant organisms, fungal infections, hepatitis B and C, HIV/AIDS, hospital-acquired infections, human papillomavirus (HPV), parasitic infections (Babesia, malaria, schistosomiasis), transplant/oncology infectious diseases, tuberculosis, other viral infections (adenovirus, endogenous retroviruses, influenza, parainfluenza, rhinovirus), and, most recently, SARS-CoV-2 and COVID-19. Additionally, the division provides both inpatient and outpatient infectious diseases clinical consultations. Dr. Ole Vielemeyer (Clinical Director), along with a roster of highly experienced infectious diseases physicians, provide care and advice for a broad range of infectious diseases and international travel issues.

The division's programs in laboratory, translational, and clinical research, remain robust. The Golightly Lab (Director: Dr. Linnie Golightly) is working on the pathogenesis of cerebral malaria, as well as a novel noninvasive, cell phone-based device to diagnose and determine the severity of malaria. The Jones Lab (Director: Dr. Brad Jones; investigators Drs. Ali Danesh, Andrea Grammatica, Guinevere Lee) and the Nixon Lab (PI: Dr. Douglas Nixon; investigators Drs. Matthew Bendall, Robert Furler) work side-by-side conducting breakthrough laboratory research on HIV/AIDS. Drs. Jones and Nixon serve as co-PIs of an NIH-funded $28 million grant in support of the "BELIEVE in a Cure" Martin Delaney Collaboratory along with more than a dozen other scientists from Brazil, Canada, and Mexico to translate breakthrough lab findings into life-saving therapies for HIV/AIDS – and ultimately a cure. The Ndhlovu Lab

Infectious Diseases

The Transplant/Oncology Infectious Diseases Clinical Research Unit

(PI: Dr. Lishomwa Ndhlovu; investigators Drs. Michael Corley and Teresa Evering) continues to investigate neurologic complications of HIV infection.

The Kirkman Lab (Director: Dr. Laura Kirkman) studies drug-resistance mechanisms in malaria and, Babesia, a parasite transmitted by ticks in the northeast U.S. The Rhee Lab (Director: Dr. Kyu Rhee; investigators Drs. Chris Brown and Travis Hartman) continues its highly innovative work on Mycobacterium tuberculosis (MTb) using novel mass spectrometry-based metabolomic approaches.

The HIV Clinical Trials Unit (Director: Dr. Marshall Glesby, with co-investigators Drs. Grant Ellsworth, Teresa Evering, Carrie Johnston, Roy Gulick, Kristen Marks, Mary Vogler, and Timothy Wilkin) conducts clinical research in the treatment and prevention of HIV infection, the treatment and prevention of viral hepatitis, and the assessment and treatment of human papillomavirus (HPV) infection. The Transplant/Oncology Infectious Diseases Clinical Research Unit (Director: Dr. Catherine Small, along with co-investigators Drs. Alex Drelick, David Helfgott, Priya Kodiyanplakkal, Markus Plate, Michael Satlin, and Rosemary Soave) conduct cutting-edge clinical research in patients who have undergone organ transplantation, or have cancer, and develop infections. Both clinical research units also studied new agents for COVID-19 treatment and prevention.

Dr. Gulick and colleagues recently received a renewal from the NIH/NIAID in support of their HIV Clinical Trials Unit (CTU) grant in the amount of $18.9 million through 2027. This is funding studies of the national AIDS Clinical Trials Group and HIV Prevention Trials Network. Dr. Wilkin is the Principal Investigator on a $8.3 million grant from the National Cancer Institute for HPV Clinical Trials that is funding critical studies on HPV-related cancers in people living with HIV and will include clinical trials focused on two forms of cancer – oropharyngeal and cervical.

An NIH-sponsored T32 training grant, “Research Training in Infectious Diseases” (PI: Dr. Gulick), continues to support training of developing infectious diseases physician-scientists and academic clinicians. This grant supports infectious diseases fellows to conduct basic, translational, clinical, and epidemiologic research projects. Fellows study a wide variety of areas in infectious diseases,including adherence with HIV pre-exposure prophylaxis (PrEP), COVID-19 in healthcare workers, the intestinal microbiome, racial/ethnic disparities, and the parasitic disease, schistosomiasis, among others.

2021 was a banner year for new advances in infectious diseases research. Weill Cornell Medicine was awarded a new five-year $28.5 million Martin Delaney Collaboratory grant from the NIH, a multi-institutional effort to find a cure for HIV, and under its auspices, Dr. Brad Jones is leading a WCM-based program known as REACH: Research Enterprise to Advance a Cure for HIV. Dr. Jones works closely with Dr. Marina Caskey, The Rockefeller University, who co-leads The REACH Collaboratory.

Dr. Lishomwa “Lish” Ndhlovu, Professor of Immunology in Medicine, was appointed as one of the Principal Investigators to lead the HOPE (HIV Obstruction by Programmed Epigenetics) Delaney Collaboratory. As part of this $26.5-million grant from the NIH, Dr. Ndhlovu is playing a key role with the HOPE Collaboratory as it pursues a completely new strategy for curing HIV. Known as block-lock-excise, the strategy targets latent HIV in new ways and without reactivating it while aiming to silence and permanently remove HIV from the body.

Dr. Ayana Morales, Assistant Professor of Medicine, received a 2022 Pilot Grant Award of the Mastercard Diversity-Mentorship Collaborative at Weill Cornell Medicine. It will support her project focused on understanding the role of an oncoprotein, Wilms’ Tumor 1, in HIV-Associated Kaposi

Center for Global Health

Sarcoma. She will use patient samples, as well as 2D and 3D disease models, working towards identifying a biomarker and a potential target of immunotherapy.

In an exciting advance that was covered by many news outlets in 2021, Dr. Marshall Glesby, along with colleagues from the WDOM's Division of Hematology and Medical Oncology (Drs. Koen Van Besien, Jingmei Hsu), led a clinical trial involving a woman living with HIV who developed leukemia whom they treated with a special stem cell transplant who has since been free of HIV for more than a year. The trial involved a unique cord blood cell transplant that contained a genetic mutation that can resist HIV infection.

Dr. Gulick continues to serve as co-Chair of the National Institutes of Health (NIH) COVID-19 Treatment Guidelines Panel. Dr. Marks continued her research as Principal Investigator on NIH Phase 3 randomized studies to evaluate the longer-term safety and efficacy of two different COVID-19 vaccines from Moderna and Novavax**.** Drs. David Calfee and Matthew Simon serve as the Hospital Epidemiologists for NYPH/WCM; both are noted for their strong efforts in response to the COVID-19 pandemic, as well as day-to-day strategies to decrease hospital-acquired infections at NYPH/WCM. The Center for Special Studies (CSS; Directors Drs. Jon Jacobs and Samuel Merrick), the HIV primary care service, continues to provide care for over 2,500 HIV-infected patients and recommends HIV prevention strategies for at-risk HIV-negative individuals. At NYP/Lower Manhattan Hospital, the inpatient and outpatient infectious diseases service and hospital epidemiology-infection control are led by Dr. Harjot Singh. At NYP/Brooklyn Methodist Hospital, the Division of Infectious Diseases is led by Dr. Harold Horowitz and at NYP/Queens by Dr. Sorana Segal-Maurer.

In 2021, new faculty recruits included Drs. Yesha Malik and Joshua Rosenblatt, who joined the clinical team of a new "attending-only" infectious diseases inpatient consult service, Dr. Vijay Soni, who joined the Rhee lab as a co-Investigator, and Dr. Heidi Torres, who joined the NYPH/WCM Infection Control program as an Assistant Hospital Epidemiologist.

Infectious Diseases Fellowship

Matthew Simon, M.D., Program Director

A two- to three-year training program that includes individualized training through clinical rotations, didactic course work, mentored research, and faculty guidance to develop the next generation of infectious diseases physician-scientists and academic clinicians.

The Center for Global Health's mission is to decrease health care inequalities and improve the health of people in lower-income countries through clinical care, research, and training. The center has 18 core faculty members, five postdoctoral fellows, and more than 50 collaborating faculty members from multiple WDOM divisions, including Cardiology, Clinical Epidemiology, General Internal Medicine, Infectious Diseases, and Pulmonary and Critical Care Medicine. The center has long-standing programs in Brazil, Haiti, India, Tanzania, and Uganda. Research and training programs in cardiovascular disease, women's health, and infectious diseases are supported by the United States' National Institutes of Health (NIH), foundations, and individual donors.

Cardiovascular disease (CVD) is now the leading cause of death in lower-income countries worldwide and Weill Cornell Medicine's (WCM) CVD research and training in Haiti and Tanzania expanded significantly in 2021 to address this challenge. Dr. Molly McNairy, Associate Professor, WDOM, leads a 3,000-person community-based cohort study of CVD and risk factors in Haiti supported by the NIH. This is one of the first and largest community-based cohort studies on CVD in a low-income country and will define risk factors for CVD with the goal of defining targets for prevention interventions. This research is being done in collaboration with WCM's partner, the GHESKIO Centers in Port-au-Prince, Haiti, which is led by WCM faculty member, Dr. Jean Pape. In 2021, Drs. McNairy and Pape also received an NIH training grant from the Fogarty International Center to train young Haitian investigators in CVD prevention, care, and research methodology. In Tanzania, WDOM faculty members Drs. Robert Peck and Jennifer Downs received an NIH R01

Center for Global Health

to conduct a cluster randomized trial to improve blood pressure control in rural villages. This research is being conducted in collaboration with Weill Bugando School of Medicine in Mwanza Tanzania and will examine the impact of engaging religious leaders in community-based blood pressure control programs.

The Center's women's health research and training expanded in 2021. Dr. Jyoti Mathad conducts clinical research on maternal health in Pune India. In 2021, she reported in the journal *Clinical Infectious Diseases* the results of an NIH-supported clinical trial on a new regimen to treat latent tuberculosis (TB) in pregnant women. Pregnant women have historically been excluded from clinical trials of new drugs, and Dr. Mathad's research provides critical information to clinicians caring for pregnant women at risk for TB in lower income countries. Dr. Puja Chebrolu, who is mentored by Dr. Mathad, received a Department of Medicine Fund for the Future Award for her studies on gestational diabetes in pregnant women in India.

The Center's Women in Global Health Research Initiative promotes women's leadership in global health and is supported by the WCM Board of Fellows Chair, Jessica Bibliowicz. In 2021, the women's initiative held their annual symposium in Tanzania in collaboration with the Weill Bugando School of Medicine. Ninety-five women health professionals attended the symposium from six countries and multiple other international institutions, including the Tanzanian Ministry of Health, Muhimbili University of Dar es Salaam, the Nelson Mandela African Institute of Science and Technology, Nairobi University, and the Women in Law, and Development Africa (a pan-African women's rights group). The symposium included keynote presentations on gender and leadership, leveraging digital media to promote women's health, and working groups to develop practical next steps to advance women in global health leadership in Africa.

Infectious Diseases continue to be a focus of the Center's research, especially TB which causes over 1 million deaths worldwide each year. In 2021, Dr. Daniel Fitzgerald, Professor of Medicine and Director of the Center for Global Health, received a 6.1 million dollar ten-year research grant for participation in the Tuberculosis Trials Consortium of the Centers for Disease Control and Prevention. These trials will focus on developing shorter and more effective treatments for TB with studies conducted at the GHESKIO Centers in Port-au-Prince, Haiti. Other faculty members who are participating in this program include Drs. Jean William Pape, Vanessa Rouzier, and Oksana Ocheretina.

Medical Ethics

Joseph J. Fins, M.D., FACP
Chief, Division of Medical Ethics

E. William Davis, Jr., M.D.
Professor of Medical Ethics

Professor of Medicine
Professor of Public Health
Professor of Medicine in Psychiatry
Weill Cornell Medical College

Director of Medical Ethics
and Chair, Ethics Committee

Attending Physician
NewYork-Presbyterian Hospital

The Division of Medical Ethics pursues a tripartite mission of medical education, ethics consultation, scholarship and research. In response to the ethical challenges posed by the COVID-19 pandemic, the division has been active providing ethics consultations to patients, families, and clinical staff at NewYork-Presbyterian/Weill Cornell Medical Center (NYP/WCMC) and NewYork-Presbyterian/Lower Manhattan Hospital (NYP/LMH), as well as additional counsel to our colleagues at NewYork-Presbyterian Brooklyn Methodist Hospital and NewYork-Presbyterian Queens Hospital.

The division's case consult volume makes it one of the most active ethics consultation services in the U.S. The Ethics Committee of NYP/WCMC is chaired by Dr. Joseph J. Fins, Division Chief, provides oversight to the consultative process and guidance to the hospital on policies and procedures related to medical ethics and patient rights. Barrie Huberman, Ph.D., a clinical psychologist, serves as Director of Clinical Ethics and provides consultative services, along with Dr. Fins, Joan Walker, R.N., and Dr. Ezra Gabbay, who also serves as Chair of NYP/LMH's Ethics Committee, as well as Associate Professor of Clinical Medicine in Medical Ethics, Debjani Mukherjee, Ph.D., a clinical psychologist and clinical ethicist with deep expertise in disability ethics. The consult service is also enriched by the presence of Dr. Nekee Pandya and Dr. Laura Kolbe as well as current Clinical Ethics Fellows, Benjamin Sundholm, J.D., Ryan Dougherty, Ph.D., M.S.W., and Dr. Colleen Farrell.

The division plays a key role in advancing the educational mission of Weill Cornell Medical College. Dr. Inmaculada de Melo-Martin led the ethics curriculum on professionalism. Dr. Huberman led Advanced Clinical Ethics, and Dr. Mukherjee directed Health, Illness and Disease. Ethics content has recently been added to the transition for the residency course given to medical students. The division also considers ethical and regulatory issues in clinical research, so that students appreciate their responsibilities as clinicians and investigators.

A key collaboration of the division is through the New York Houston Ethics Consortium, which sponsors a medical ethics fellowship. The fellowship is supported by the WDOM, Dean's Office (WCMC), and NewYork-Presbyterian Hospital, as well as The Houston Methodist Hospital and Baylor Medical College in Houston. This outstanding program is a unique offering in American bioethics, spanning two great medical centers and distinct regions of our country, while providing a singular experience for trainees.

Dr. Inmaculada de Melo-Martin, Professor of Medical Ethics, has continued her fruitful collaboration with the Center for Reproductive Medicine at Weill Cornell Medicine (led by Dr. Zev Rosenwaks) publishing their work in *Fertility and Sterility.* She continues to pursue questions regarding genetic identity and assisted reproduction themes addressed in her highly regarded volume, *Rethinking Reprogenetics: Enhancing Ethical Analyses of Reprogenetic Technologies* (Oxford University Press).

On the international front, the division has continued a synergistic collaboration with colleagues and students in Doha, via Dr. Pablo Rodriguez del Pozo, Associate Professor of Medical Ethics in Medicine, who leads the ethics curriculum at that campus. Dr. del Pozo explores cross-cultural issues and medical education. He has completed a project funded by the Qatar National Research Foundation exploring the rights of persons with disabilities aimed to inform the Qatari legal system. This multinational project involves the Weill Cornell Medical College in Qatar, Qatar University, Institute of Human Rights at Carlos III University in Madrid, and the Division of Medical Ethics, WDOM, with Dr. Fins collaborating. The project will culminate with an important monograph that will have practical and theoretical impact on disability studies.

Dr. Fins (far right) at the AAP induction. L to R: Drs. Shahin Rafii, Dr. Anthony Hollenberg, and Dr. Roy M. Gulick

Dr. Fins continues his collaboration with Dr. Nicholas D. Schiff, Jerold B. Katz Professor of Neurology and Neuroscience, as they co-direct the Consortium for the Advanced Study of Brain Injury (C.A.S.B.I.) at Weill Cornell Medicine and Rockefeller University. CASBI's goal is to elucidate mechanisms of recovery, develop novel therapeutics, and advance public policy to meet the needs of these patients and families. Dr. Schiff is Principal Investigator on an NIH Brain Initiative grant on the use of Deep Brain Stimulation (DBS) in severe brain injury. Dr. Fins is a co-investigator on the project. Following upon his book, *Rights Come to Mind: Brain Injury, Ethics and the Struggle for Consciousness* (Cambridge University Press), Dr. Fins has pioneered ethical and legal scholarship advancing the civil and disability rights of patients with severe brain injury. Dr. Fins has an RO1 from the NIH BRAIN Initiative, "Cognitive Restoration: Neuroethics and Disability Rights," to further elucidate these issues in the context of the aforementioned first in human DBS trial in moderate to severe brain injury.

Dr. Fins has expanded the reach of CASBI at Yale Law School, where he was appointed as a Visiting Professor of Law in addition to his position as the Solomon Center Distinguished Scholar in Medicine, Bioethics and the Law. His work at the interface of neuroscience, neuroethics and disability law has resulted in collaborative scholarship with Yale Law School students and faculty and numerous publications in leading law reviews. Dr. Fins is assisted in these efforts by Zachary Shapiro, M.A., J.D., who serves as an Adjunct Assistant Professor of Medical Ethics Research in Medicine.

With the support of the Weill Cornell Clinical Translational Center, Drs. Fins, Mukherjee and colleagues are leading a study examining "Assistive Technology in Pediatric Brain Injury following In-patient Rehabilitation: Access, Barriers and Burdens on Patients and Families" in conjunction with the Blythedale Children's Hospital.

In 2021, Dr. Inmaculada de Melo Martin was elected to the Fellows Council at the Hastings Center and as President of the Society of Philosophy and Technology. Dr. Fins was elected President of the International Neuroethics Society and served as a research tutor for undergraduates at Yale and Wesleyan. He continues to serve on the Board of Directors of the Hastings Center and joined the Scientific Advisory Committee of the Curing Coma Campaign associated with the Neurocritical Care Society. Dr. Fins was recently inducted into the Association of American Physicians (AAP); election to the AAP is an honor extended to physicians with outstanding credentials in basic or translational biomedical research and is limited to 70 persons per year.

Nephrology and Hypertension

Manikkam Suthanthiran, M.D.
Chief, Division of Nephrology and Hypertension

Chief, Department of Transplantation Medicine and Extracorporeal Therapy

Stanton Griffis Distinguished Professor of Medicine

Professor of Medicine
Professor of Biochemistry
Professor of Medicine in Surgery
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Division of Nephrology and Hypertension is committed to a tripartite mission of patient care, research, and education. A combination of resources has ensured the division's success, including NIH funding over three decades, a clinical immunogenetics laboratory, a self-supported hypertension clinical practice, and support from Weill Cornell Medicine, NewYork-Presbyterian Hospital, and philanthropy. The division's clinical excellence is the product of making patient care the highest priority, while effectively translating bench discoveries to the bedside and applying evidence from clinical trials into compassionate clinical practice.

We provide compassionate, comprehensive, state-of-the-art care to each patient afflicted with kidney disease and/or high blood pressure. We have self-organizing teams for each critical area of nephrology: transplantation medicine, dialysis, apheresis, hypertension, clinical nephrology (e.g., diabetes and metabolic renal disease), onconephrology (kidney disease in patients with malignancy), critical care nephrology, acute kidney injury and cardio-renal syndromes, nephropathology and obstetrics nephrology. Services include kidney consultations, inpatient kidney medicine, dialysis therapy, and kidney and pancreas transplantation and kidney care for liver-kidney recipients and kidney dysfunction in stem cell transplant recipients.

Our self-organizing teams of kidney specialty rose to the challenge of the COVID-19 pandemic, and our fellows and faculty ensured that every COVID-19 patient received state-of-the-art kidney care. The team contributed new knowledge in areas ranging from acute kidney injury and innovative dialysis therapy to safe kidney transplantation and personalized care of kidney transplant recipients diagnosed with COPVID-19 resulting in excellent outcomes.

Our nephrologists work collaboratively with nephrologists with primary employment at The Rogosin Institute, nephrologists with primary employment at Memorial Sloan Kettering Cancer Center, and with the Weill Cornell Medicine kidney transplant surgeons in the Division of Transplantation Surgery to manage our transplant recipients with highly personalized therapies to protect the transplanted organ while helping to reduce the toxic side effects of anti-rejection drugs. Our transplant physician-scientists have made pioneering discoveries on mechanisms of action of anti-rejection drugs and have invented noninvasive molecular tests to personalize immunosuppressive drug therapy of transplant patients.

The kidney disease program has been consistently rated in the top 10 by *US News & World Report* (Ranked 2nd in the country and 1st in New York in 2020-2021). It is one of the highest-ranked programs among the medical subspecialties at NewYork-Presbyterian Hospital. The kidney transplantation program at Weill Cornell Medicine is a significant contributor to NYP's transplantation program (ranked #1 in the U.S. for the last 10 years), and its translational research has been transforming care for transplant recipients. More than 200 kidney transplants are performed annually at our center with excellent patient and graft survival rates. The most recent adult (18+) one-year patient and graft survival rates, following living donor kidney transplantation, were 98.84% and 97.85%, respectively. The one-year patient and graft survival rates following deceased donor kidney transplantation were 95.57% and 93.14%, respectively. These exemplary outcomes are all the more impressive in light of the center transplanting high-risk patients. (Data Source: *Scientific Registry of Transplant Recipients, Health Resources and Service Administration*).

The first kidney transplant in the New York tri-state region was performed at our center in October 1963; more than 6,000 kidney transplants have been performed since the center's inception. Several innovations in transplantation have been introduced by our transplant physicians, including: blood type (ABO) incompatible kidney transplants; kidney transplantation across a positive cross-match; minimizing the amount of drugs patients need for successful transplantation; treatment protocols to reduce serious post-transplant complications (e.g., infection and malignancy); and noninvasive molecular assays for assessing transplant status and reducing the need for an invasive biopsy procedure.

The division's Hypertension Center is one-of-a-kind in the U.S. and has discovered and implemented clinical therapies that are personalized for the individual patient. The hypertension faculty pursue innovative research (e.g., studies of pregnancy-induced hypertension, mind-body link in hypertension, personalized drug therapy for hypertension control). Internationally acclaimed, the Hypertension Consultative practice continues to thrive under the direction

of Dr. Phyllis August, Ralph A. Baer Professor of Medical Research, and with complementary expertise provided by Dr. Mark S. Pecker, Professor of Clinical Medicine, Dr. Samuel J. Mann, Professor of Clinical Medicine, Dr. Line Malha, Assistant Professor of Medicine, and Rosemerie Marion, ANP, Nurse Practitioner.

The division continues to drive breakthrough research. Division Chief, Dr. Suthanthiran, directs a highly productive, NIH-funded world-renowned research Laboratory of Immunogenetics and Transplantation. The division has pioneered the development of gene expression profiling for the noninvasive diagnosis and prognostication of acute rejection in renal allografts and has contributed to several landmark studies in organ transplantation on elucidation of the genetic signature of rejection and tolerance. Dr. Suthanthiran's translational research has been NIH-funded continuously for 30-plus years, and he is a recipient of the prestigious NIH MERIT award.

Dr. Phyllis August serves as the Site Principal Investigator (PI) on a cooperative grant from the NHLBI/NIH/DHHS to evaluate the benefits and harms of pharmacologic treatment of mild chronic hypertension in pregnancy. Dr. Mary Choi is the recipient of multiple awards from NIH to study novel mechanisms of organ fibrosis and autophagy. Dr. Thangamani Muthukumar, in a productive collaboration with Dr. Franco Mueller, has deciphered innate immune mechanisms responsible for kidney allograft rejection. Dr. Darshana M. Dadhania is a PI on an NIDDK cooperative grant to study the impact of the APOL1 gene on long-term outcomes in renal transplant recipients of a kidney from an African American donor and the impact on kidney function in African-Americans donating a kidney, and an R01 award to establish the utility of urinary cell-free DNA to detect a wide range of pathogens as well as gain insights into antibiotic resistance and host-pathogen interactions. Dr. John Lee is a recipient of an NIAID grant to invent and apply shotgun sequencing of urinary cell-free DNA to define the microbial, bacterial growth dynamics, tissue injury in the transplanted kidney, and the host's response to urinary tract infection (UTI). In another NIAID-funded grant, he is investigating many avenues related to the impact of gut microbiome on human health and disease. Dr. Thalia Salinas is the recipient of the prestigious CTSC KL2 Career Development Award. Dr. Suthanthiran recently executed a research collaboration agreement with CareDx, a leader in transplantation molecular diagnosis, to further develop biomolecular markers of kidney allograft status.

Dr. Mary Choi, Professor of Medicine and a world-renowned physician-scientist, is conducting research addressing the mechanisms of kidney injury and failure. Dr. Choi's fundamental studies should not only yield key insights into mechanisms underpinning kidney injury but will also help to identify novel therapeutic targets for the prevention of progression of kidney injury manifested by fibrosis. The multifunctional cytokine transforming growth factor beta (TGF-B) is considered a major player in kidney disease and health, and Dr. Choi's seminal studies have led to the cloning and characterization of the cell surface receptors for TGF-B1; delineation of key intracellular mediators of TGF-B signals; and resolution of glomerular endothelial cell

Nephrology and Hypertension

proliferation and differentiation. Her original contributions have resulted in an improved understanding of the molecular mechanism of tissue injury, inflammation, and fibrosis as they pertain to the pathogenesis of chronic kidney disease. Her laboratory has successfully resolved mechanisms by which TGF-B1 elicits key cytoprotectants, such as heme oxygenase-1, and carbon monoxide and protection from oxidative stress and kidney injury via activation of autophagy. Dr. Choi and colleagues recently identified a new therapeutic target by their discovery that a receptor-interacting protein kinase-3 independently promotes kidney fibrosis. Dr. Choi's research has been supported continuously by highly competitive NIH awards and she is a PI Investigator, co-PI, and co-Investigator on multiple NIH grants.

Dr. Darshana M. Dadhania, Medical Director, Kidney and Pancreas Transplant Program, NewYork-Presbyterian/ Weill Cornell Medical Center, ensures the operation and compliance of the transplant program in accordance with the United Network for Organ Sharing (UNOS) Bylaws in collaboration with the Kidney and Pancreas Transplantation Division within the Department of Surgery at Weill Cornell Medicine. As part of an intercampus team of researchers working on a $3.65 million NIH grant, Dr. Dadhania and Dr. John R. Lee, along with colleagues, are developing a method for diagnosing urinary tract infection by innovative profiling cell-free DNA. A cohort of 300 kidney transplant patients will be profiled using state-of-the-art technologies the investigators had previously developed.

Dr. Deirdre Sawinski joined the division in 2021 from University of Pennsylvania as an Associate Professor of Medicine. Dr. Sawinski is a clinical researcher and epidemiologist focused principally on virally mediated disease following kidney transplantation. She has contributed impactful studies on donor selection, transplant complications and immunosuppression management relevant to the clinical transplant community. She is focused on the evaluation and management of kidney transplant candidates and recipients, participates in the education of fellows, residents and medical students and conducts research on improving transplant outcomes.

2021 was a banner year for honors, speakerships, and publications. Dr. Dadhania moderated and spoke at the Society of Transplantation and International Society of Heart and Lung Transplantation joint symposium on "Challenges in Heart/Kidney Transplantation." Her presentation was on sensitization and the role of HLA and non-HLA antibodies in simultaneous Heart-Kidney Transplantation. Dr. John R. Lee received the 2021 ASCI Council's Young Physician-Scientist Award, which recognizes physician-scientists who are early in their first faculty appointment and have made notable achievements in their research. Dr. August co-authored a landmark paper in the *New England Journal of Medicine* detailing treatment for mild chronic hypertension during pregnancy (Tito et. Al., 2022). Dr. Sawinski was awarded the Ritu Banga Diversity and Healthcare Disparities Research Award.

Nephrology faculty teach the *Health, Illness, and Disease (HID) Course* for Weill Cornell medical students at both the New York and Qatar campuses. The highly challenging HID course in Nephrology, under the inspired leadership of Dr. Muthukumar, has become one of the top-rated HID courses at Weill Cornell Medicine. The division is committed to scholarship; a daily educational conference ensures faculty and fellows practice evidence-based medicine, as well as receive CME credits. There has been a 100% pass rate for the ABIM Nephrology subspecialty, and the scholarship of our trainees and faculty is demonstrated by their presentations of original research at every national and international meeting related to nephrology and transplantation. Our full-time faculty lecture nationally and internationally and published 39 peer-reviewed articles in 2021.

Nephrology Fellowship Program

Phyllis August, M.D., M.P.H.
Program Director

Thangamani Muthukumar, M.D., M.S.
Associate Program Director

Our highly competitive two-year nephrology fellowship program is designed to provide comprehensive training in all aspects of kidney disease including acute and chronic kidney failure; end stage kidney disease; hemodialysis including home hemodialysis; peritoneal dialysis; apheresis; kidney and kidney and pancreas transplantation; hypertension; glomerulopathy; onconephrology, obstetric nephrology, kidney stones, polycystic kidney disease, and metabolic disorders including acid base and fluid and electrolyte disorders. A third and fourth year are available for additional research training. Despite almost 50% of nephrology fellowship slots not being filled across U.S. nephrology fellowship programs, our program has been highly successful in fulfilling 100% of the fellowship slots through the Nephrology Fellowship Matching Program. Dr. Muthukumar, in addition to his current role as Associate Director (Research), has been promoted to the vital role of Associate Program Director in recognition of his pivotal contributions to the education and training of Nephrology Fellows.

Public Health Programs

Ann B. Beeder, M.D.
Chief, Division of Public Health Programs

Jeanette and Jeffrey Lasdon Associate Professor of Clinical Public Health and Psychiatry

Associate Professor of Clinical Medicine

Associate Professor of Clinical Psychiatry, Weill Cornell Medical College

Associate Attending Physician, NewYork-Presbyterian Hospital

The Division of Public Health Programs delivers integrated multidisciplinary patient care for patients with trauma and addiction through a variety of outpatient programs. The programs provide medical, psychiatric, and substance abuse treatment to patients with substance use problems, including alcohol, marijuana, nicotine, cocaine, heroin, and prescription medication. On-site and virtual medical, psychiatric, trauma treatment, and social services promote and accelerate patients' progress toward recovery. Consultation services are available for expert evaluation, diagnosis, treatment, and referral for patients with substance use disorders being treated at the NewYork-Presbyterian Hospital.

Outpatient treatment locations include The Midtown Center for Treatment and Research, The Center for Trauma and Addiction, and the Vincent P. Dole Institute for Treatment and Research. The Midtown Center for Treatment and Research is located at 56 West 45 Street, Floor 9, NYC, NY 10031. It is an outpatient drug treatment program providing multidisciplinary alcohol and drug treatment with integrated psychiatric and social services both onsite and through telehealth. Services include outpatient suboxone detoxification and maintenance for opiate dependency (prescription pain medication and heroin), trauma treatment (EMDR and CBT), psychiatric care, DUI program, anger management, and other services. Patients are carefully evaluated involving an individualized treatment plan, including groups, individual treatment, urine and other toxicology, as well as psychiatric evaluation and care when needed. Patients needing primary and specialty medical care have access to CIMA at Weill Cornell Public Health Programs Medicine and comprehensive subspecialty care (e.g., HCV, HIV, cardiology, pulmonary, nutritional, and other services).

Dr. Beeder (far right back row) with the public health programs team

The Center for Trauma and Addiction is located at 641 Lexington Avenue, Floor 25, NYC, NY 10022. It is an outpatient psychological trauma treatment program with integrated psychiatric and social work treatment offering on-site and virtual targeted trauma psychotherapy. Services include evidence-based trauma treatment including EMDR (Eye Movement Desensitization and Reprocessing) and other trauma modalities, and psychiatric evaluation and care when needed. Populations served include combat veterans, and survivors of physical and sexual abuse, as well as domestic violence. A special track exists for survivors of trauma from the LGBTQIA+ community.

The Vincent P. Dole Institute for Treatment and Research is located at 503 East 70th Street, NYC, NY 10021. It is part of the NewYork-Presbyterian Hospital's Ambulatory Care Network. Both the Midtown Center and the Vincent P. Dole Institute serve as sites for the study of the prevention and treatment of dependency diseases, as well as outreach, evaluation, and treatment of patients with hepatitis C. Research studies are underway on the integrated care model, epidemiology and treatment of hepatitis C infection in drug users, and understanding immunity in opioid users.

The Employee Assistance Program Consortium (EAPC) is located at 641 Lexington Avenue, Floor 25, NYC, NY 10022. It serves the approximately 12,000 employees of Weill Cornell Medical College, Rogosin Institute, and Hospital for Special Surgery. The program provides free and confidential evaluation, crisis intervention, and referrals for a wide range of problems affecting employees. Services are available on-site as well as virtually through telehealth.

In addition to providing a host of valuable services for a wide variety of patients, the division's faculty is distinguished for education and research on topics related to substance use and trauma. These topics include the use of telehealth in providing trauma treatment, the integrated care model, epidemiology and treatment of hepatitis C infection in drug users, understanding immunity in opioid users, and more. A study is underway with Division Chief, Dr. Beeder, serving as a co-Principal Investigator, and Dr. Ronald Crystal, Chair, Genetic Medicine, Weill Cornell Medicine, on a Phase I clinical trial that is exploring a vaccine model in patients with cocaine dependency disorder. Dr. Mirella Salvatore, an Assistant Professor of Medicine in the division, is also working on the project and has been publishing related research papers in the peer-reviewed journals.

Pulmonary and Critical Care Medicine

Fernando J. Martinez, M.D.
Chief, Division of Pulmonary and Critical Care Medicine

Bruce Webster Professor of Internal Medicine

Professor of Clinical Medicine Weill Cornell Medical College

Attending Physician NewYork-Presbyterian Hospital

The Division of Pulmonary and Critical Care Medicine employs advanced expertise in the diagnosis and treatment of all types of respiratory disorders, including those related to sleep. Physicians of Weill Cornell Pulmonary Associates provide diagnostic and therapeutic services in a state-of-the-art medical facility.

The division provides 24-hour, in-hospital coverage of the Medical Intensive Care Unit (MICU) at Weill Cornell Medicine (WCM) and at NewYork-Presbyterian/Lower Manhattan Hospital (NYP/LMH). MICU clinical care offers daytime and expanded overnight services. The Bronchoscopy Suite offers state-of-the-art patient care, including Endobronchial Ultrasound (EBUS), Navigational Bronchoscopy, and chest tube and Pleurx catheter placement.

The Pulmonary Inpatient Consult Service provides rapid, expert clinical care seven days a week, including an Outreach Service for patients who are critically ill outside of the ICU. It upgrades continuity of care for patients who are transitioning from inpatient to outpatient management and has led to successful interdisciplinary collaborations with specialists throughout the institution.

Recognized by the COPD Foundation as a COPD 360 Net Accredited Center, the COPD Center at WCM is led by Dr. Jamuna Krishnan and Dr. Michael Niederman. Its clinical program provides high-quality patient-centered care and offers advanced therapeutic options. Located at 425 East 61st Street, the staff works closely with the COPD Foundation to optimize clinical care and develop new diagnostic and treatment options for patients with airway disease. Dr. Krishnan has used this program to address inequities in care delivery to patients suffering from COPD. The division remains active with collaborators at Columbia and NYU in an ALA-ACRC series of joint projects.

The Interstitial Lung Disease (ILD) Program, led by Dr. Robert Kaner, is one of the premier programs in the country focusing on a complex series of disorders characterized by lung inflammation and fibrosis. It is a designated Pulmonary Fibrosis Foundation (PFF) Center of Excellence. In close collaboration with the Departments of Radiology, Pathology, and Thoracic Surgery at WCM, the rheumatology division at the Hospital for Special Surgery, and the pathology department at Memorial Sloan Kettering Cancer Center, the program holds weekly multidisciplinary conferences to optimize patient care. Divisional investigators lead and participate in multicenter clinical trials of new therapies bringing state-of-the-art diagnostic and treatment options for patients with ILD.

The Pulmonary Procedure Service, directed by Dr. BenGary Harvey, provides innovative diagnostic and therapeutic services for the diagnosis and management of lung cancer, pulmonary fibrosis, and lung infection. Dr. Harvey, who has received advanced training in the bronchoscopic management of advanced emphysema, also directs Endoscopic Valve Lung Volume Reduction. The procedure utilizes the insertion of small valves through a bronchoscope. Once the valves reach the most diseased areas of the lung, Dr. Harvey occludes (or closes) the non-functional portions of the lung creating room for the healthier parts of the lung to improve breathing function and quality of life. Dr. Margaret Goldberg has recently joined the division to expand procedural expertise to the complex patient care environment of the ICU.

The Pulmonary Function Laboratory, led by Dr. Abraham Sanders, remains a vital component of the division's continuum of care via expert and timely diagnostic services. Led by Medical Director, Dr. Ana Krieger, and collaborators, the Weill Cornell Center for Sleep Medicine (run jointly by the Weill Department of Medicine's Division of Pulmonary and Critical Care Medicine and the Department of Neurology) is accredited by the American Academy of Sleep Medicine and the largest academic research program in the Tri-State area. It provides evaluation and treatment for the full range of pulmonary and non-pulmonary sleep problems, employing multidisciplinary specialists in partnership with NewYork-Presbyterian Hospital, and carrying out cutting-edge federally-funded research projects, including a recently funded R01 for a collaborative research study of sleep in people with HIV in Tanzania (PI, Robert Peck).

For NYP/LMH, Dr. David Weir serves as Director of Pulmonary and Critical Care Medicine. His expertise includes treatment and symptom management for advanced lung disease and compassionate care for the critically ill. Dr. Seth Manoach serves as Director of the MICU. An expert in the pathophysiology of critical illness, including cardiopulmonary interface and advanced airway management, he is dedicated to improving patient care in the MICU.

Dr. Kelly Griffin has led numerous initiatives to enhance nocturnal ICU care across our campus, while spearheading a close interaction with maternal fetal medicine and the Department of Obstetrics and Gynecology to standardize the care of critically ill obstetrics patients. She participates in regional and national programs focusing on optimizing health systems under stress, especially important in light of the COVID-19 pandemic.

Led by Dr. Lindsey Lief, Director, Medical Intensive Care Unit, the division has expanded an outpatient program focr post-ICU recovery (housed within Weill Cornell Medicine Pulmonary Associates at 425 East 61 Street). Experts in intensive care see patients in follow-up after an ICU admission, either from NYP/Weill Cornell or other institutions. ICU survivors are at risk for post-intensive care syndrome (PICS) that can have effects on mental and physical health, cognitive function, and the ability to care for oneself and go back to work. This practice provides ICU survivors with everything they need to maximize recovery. This program has served as a key nidus for expanded post-COVID-19 care and its associated long-term manifestations. The post-COVID team draws on expertise in rehabilitation, cardiology, nutrition, psychiatry, radiology, and integrative medicine.

Dr. Joseph Mailman is Pulmonary Director for Veno-Venous ECMO at the Cornell campus and affiliated regional sites (24/7 coverage schedule of care for VV-ECMO patients). In collaboration with CT-Surgery and Critical Care Anesthesiology, Dr. Mailman has built a team of pulmonary and critical care physicians who are available for 24/7 VV-ECMO consultation and management of the most severely ill patients in the hospitals. An interdisciplinary consult service is available to sister sites (LMH, NYP-Q, NYP-BM) and other local hospitals. In combination with the Shock program, Weill Cornell was recently awarded ELSO GOLD status for Excellence in Extracorporeal Life Support. Dr. Mailman also led the division's transition to EPIC systems, training nearly 150 critical care physicians to use the new EMR system (virtual). Dr. Mailman also serves as Director of the Pulmonary Embolism Response Team.

Dr. Clark Owyang utilizes his multidisciplinary critical care training to pursue interests in critical care delivery, resuscitative TEE, critical care echocardiography and provision of ECMO. He has collaborated with intensivists of different backgrounds across the Extracorporeal Life Support Organization (ELSO) network.

Dr. Xavier Jimenez, trained in infectious disease, critical care, and medical education and is focused on the critical care management of immunocompromised hosts, patients with hospital-acquired infections, sepsis, antimicrobial stewardship, and critical care delivery.

Dr. Dana Zappetti, the WDOM's Vice Chair for Clinical Operations, continues to advance ambulatory programs across the WDOM ensuring the best use of space and resources.

Investigative programs

The division's research portfolio ranges from interstitial and obstructive lung diseases, pneumonia, and lung cancer, to sleep medicine and genetic medicine. Physician-scientists participate in clinical and basic mechanistic investigations, both independently and with collaborators.

A key participant in numerous NHLBI-sponsored COPD studies, Dr. Martinez, Division Chief, defined the role of lung volume reduction surgery, chronic macrolide therapy, statin

Pulmonary and Critical Care Medicine

therapy, and long-term oxygen therapy in COPD. He has also been involved in defining the immunological basis of acute exacerbations, the role of innovative small airways imaging methods, and the role of COPD endotypes. He is Principal Investigator (PI) on a nearly $11 million R01 grant (The Capture Study) from the National Heart, Lung, and Blood Institute (NHLBI) that seeks to identify COPD patients who are under-recognized and undertreated in 100 primary care centers across seven practice-based research networks across the U.S. Dr. Martinez has also been awarded an $11 million five-year grant from the NHLBI, "Understanding the Origins of Early COPD." A new cohort of younger at-risk individuals will be recruited to link chest imaging and pathologic abnormality with longitudinal disease progression; findings will be used to target the development of disease-modifying therapies. Similarly, with NHLBI support, Dr. Martinez has defined optimal approaches to diagnosing idiopathic interstitial pneumonias, imaging and biochemical approaches to prognostication, and he has investigated the role of various therapeutic approaches for Idiopathic Pulmonary Fibrosis (IPF). He has also studied the interaction between dysbiosis in the lung microbial community and disease progression, which led to an ongoing NHLBI-funded study of an innovative therapeutic approach targeting IPF progression. Dr. Martinez remains an overall PI of PRECISIONS, which aims to transform the diagnosis and treatment of IPF by moving into a new era of precision medicine ($22 million grant from the NIH and Three Lakes Partners).

Dr. Augustine M.K. Choi, Dean, WCM, directs an extremely active laboratory that, in part, leads the global investigative carbon monoxide (CO) community in understanding this complex biological pathway. His laboratory has successfully translated these findings as they lead the design and successful completion of Phase I and Phase II trials targeting the use of inhaled CO in human disease. Dr. Choi is the leading investigator in a multicenter, investigational program delineating the biological pathways intersecting between COPD and IPF. Dr. Choi is the principal mentor to numerous faculty members that are actively engaged in translational studies of human diseases. Dr. Lisa Torres is defining the biological processes underlying immunoparalysis in patients suffering from sepsis. Dr. Maria Plataki has established a robust investigative infrastructure to examine the impact of diet induced obesity on the pathogenesis of acute lung injury and the acute respiratory distress syndrome. Dr. John Harrington continues to examine the role of mitochondrial DNA's role as a biomarker of sepsis outcomes. Dr. Alexandra Racanelli is defining the role of the pulmonary vascular endothelium in the development of COPD and associated disorders. Translational clinical research in the ICU is led by Dr. Edward Schenck, an NHLBI K23 awardee, who is expanding a clinical database that links detailed clinical data with biological patient samples to study inflammation and lung injury in critically ill patients with sepsis.

Many other investigators in the division are at the cutting-edge of research. Dr. Renat Shaykhiev leads a robust program examining the role of airway epithelial stem cells, epithelial-mesenchymal interactions, epithelial-immune interactions and innate immunity in the lung, underlying the pathogenesis of airway remodeling in human lung disease. Dr. William Zhang is defining the role of iron metabolism in alveolar macrophages in patients with COPD. Dr. Heather Stout-Delgado explores the aging immune system and its impact on infections and respiratory inflammatory disorders. Dr. Soo Jung Cho's laboratory characterizes the role of impaired glucose metabolism and progressive lung fibroproliferation. Dr. Hasina Outtz Reed is expanding an investigative program that is delineating the role of the lung lymphatic system in the genesis of chronic lung diseases. Dr. Michael Podolsky is focused on defining the mechanisms underlying extracellular matrix turnover and remodeling in fibrotic lung diseases. Dr. Laurel Monticelli leads a multi-investigative collaborative program with the Gale and Ira Drucker Institute for Children's Health to develop a comprehensive approach to characterizing the role of innate lymphoid cells in ILD. Dr. Chris Parkhurst is defining the link between changes in the microbial structure of the gut with central nervous system function, which is highly relevant to various disease states.

Dr. Robert Kaner is focused on basic and clinical research programs in ILD and COPD. He is the PI of numerous industry- and federally-funded therapeutic trials exploring innovative therapeutic approaches to patients with ILD. He was recently awarded an NHLBI UG3/UH3 phase II trial of doxycycline to slow emphysema

progression in people living with HIV, based on his prior translational investigations into the mechanisms of early emphysema in People Living with HIV.

Dr. Kerri Aronson, a member of the ILD Program, has developed new insights into optimizing patient-centered management of patients suffering from interstitial lung diseases.

Dr. Anna Podolanczuk is an authority on the earliest manifestations of interstitial lung disease, advancing our ability to diagnose and manage patients with these disorders.

Dr. Michael Niederman, an internationally-recognized expert in pneumonia and other lung infections, continues clinical investigation protocols related to pneumonia in the ICU and in the community.

Dr. Lindsay Lief has partnered with Dr. Holly Prigerson on the study of patient and provider attitudes at the end-of-life in the ICU.

Dr. Bradley Hayward is developing a collaboration with Geriatrics and other divisions on the clinical aspects of palliative care.

Dr. Deborah Haisch remains focused on addressing the optimal format to enhance critical care delivery in low- and middle-income countries, with a focus on Ethiopia.

Educational programs

The division's educational mission involves a multifaceted program for the training of students and residents and a Pulmonary and Critical Care Fellowship. Simulation programs for providing Advanced Cardiovascular Life Support and the insertion of Central Venous Catheters continue. The division's Briscoe King Lung Club hosts fellows from training programs throughout the area so that they may present their scientific work. Monthly multidisciplinary conferences on diagnosis and management of ILD continue. Dr. Kapil Rajwani has developed educational programs as the Director of Medical Simulation to enhance instructions in complex intensive care procedures to trainees throughout the institution.

The division has an NHLBI T32 training grant (Multidisciplinary Approach to Training in Respiratory Research) led by Drs. Martinez, Kaner, Augustine M.K. Choi, and Heather Stout-Delgado. The program includes faculty across the tri-institutional consortium who are training respiratory-focused physician-scientists. Training provides an intensive research experience that fosters the skills needed to pursue a successful career in investigative pulmonary sciences. Trainees have received career development awards as well as private foundation funding.

Dr. Kirana Gudi, the WDOM's Vice Chair of Education, continues to oversee a broad range of training programs, including the Residency Training Program in Internal Medicine, and works closely with the WDOM to advance its educational mission in furthering faculty development.

2021 highlights include: Dr. David Price, Instructor in Medicine was named the division's Thomas C. King, M.D Fellow. Dr. Price had known Dr. King and trained with him. Dr. Price's research is focused on neutrophil independent mechanisms of critical illness. Dr. Martinez and colleagues Drs. Kaner, Podolanczuk, Outtz Reed, Aronson were highlighted in NYP Advances for their outstanding work on the multipronged management of ILD. Their new paradigm to confront IPF and other progressive fibrotic includes state-of-the-art diagnosis, clinical trials (e.g., PRECISIONS), and research studies.

Pulmonary and Critical Care Fellowship

Meredith Turetz, M.D., Program Director

Robert Kaner, M.D., Associate Program Director

Brad Hayward, M.D., Associate Program Director

The PCCM Fellowship Training Program is an ACGME-accredited three-year comprehensive program that provides clinical and research training aimed at developing physician-scientists, physician-investigators, and academic clinicians. 15 trainees receive robust clinical training in different venues, including: the inpatient pulmonary consult service, advanced procedure service, critical care triage, MICU, and other specialty ICUs (cardiothoracic and neurologic), weekly outpatient clinic experiences (encompassing general pulmonary diseases and specialty clinics including ILD and Post ICU Recovery Clinic), and clinical elective rotations. They also develop expertise in simulation and ultrasound. All fellows conduct at least 18 months of research spanning a broad range of expertise (e.g., bench laboratory research, health service and/or patient centered investigation). Additional training is available through master's degree programs and additional research time is available through our T-32 Training Grant. Key investigative areas include cellular biology and molecular immunology, lung and vascular injury, human pathophysiology, and epidemiology and bioinformatics. Faculty mentoring across the tri-institutional setting provides an ideal training environment and promotes scientific collaboration. Fellows typically go on to academic faculty appointments.

Regenerative Medicine

Shahin Rafii, M.D.
Chief, Division of Regenerative

Arthur B. Belfer Professor in Genetic Medicine

Director, Ansary Stem Cell Institute

Professor of Medicine
Professor of Genetics
Professor of Reproductive Medicine

The Division of Regenerative Medicine is dedicated to furthering discoveries and knowledge on organ regeneration and repair, and to translating their potential into life-saving therapeutics. It is led by renowned physician-scientist Dr. Shahin Rafii, who was recently elected to the esteemed Association of American Physicians (AAP). Dr. Rafii has been at the forefront of vascular biology and stem cell research for nearly two decades, the division is an interactive community of researchers and clinicians who work at Weill Cornell Medicine in stem cell research and regenerative medicine. Research in this division is not only of great value in terms of patient care, it is serving to educate the next generation of scientists and clinicians, as well as the general public, about the realities and potential benefit of stem cell research. A role model in creating synergistic partnerships with other institutions and foundations, the division also advocates for public policy that promotes stem cell based research and therapies.

Known for its state-of-the-art approach to investigation, the division's laboratory has been carrying out cutting-edge studies on stem cells and organ regeneration since 2003. Dr. Rafii, who also serves as the Director of the Ansary Stem Cell Institute at Weill Cornell Medicine, provides a core laboratory that is utilized by junior faculty members, principle investigators, postdoctoral fellows, graduate resident students, and support staff. The laboratory also trains visiting scientists from around the world. Additionally, the division deploys staff to the Starr Foundation Tri-Institutional Stem Cell Derivation Laboratory at Weill Cornell Medicine to offer on-site human embryonic stem cells and a GLP facility that serves researchers working with pluripotent stem cells.

The Ansary Stem Cell Institute is home to landmark advances in regenerative medicine. Dr. Rafii, its Director, is nationally and internationally recognized for having pioneered the transformative paradigm demonstrating that tissue-specific adult endothelial cells (ECs) are unique instructive vascular niche cells that produce paracrine "angiocrine factors" to directly induce organ regeneration. This concept has revealed the remarkable heterogeneity of the adult vasculature that is underscored by production of tissue-specific angiocrine factors necessary for orchestrating organ regeneration. Dr. Rafii's laboratory has ushered in a new era in state-of-the-art models for the study of tissue-specific induction of angiocrine factors in ECs. His laboratory's many advances include the identification of physiologically relevant tissue-specific stimulatory and anti-fibrotic angiocrine factors. The team utilizes *in vivo* genetic models to determine the role of angiocrine factors in organ regeneration and has played a major role in illuminating the intrinsic and microenvironmental determinants of vascular heterogeneity.

The division also focuses on stem cell biology and their niches using mouse and human genetic models, tissue culture approaches, and molecular biology to model the complex interactions between stem cells and their micro-environment. Multiomics, molecular and cell biological techniques are combined to achieve a systems-level understanding of these complex processes.

Recently, Dr. Rafii was named as Director of The Hartman Institute for Therapeutic Organ Regeneration, which will expand the frontiers of stem cell-based research and organoid development, creating a hub within Weill Cornell Medicine's Division of Regenerative Medicine that will facilitate collaboration among researchers, clinicians, surgeons and entrepreneurs. Scientists in the division have already devised game-changing technologies to fully realize the promise of tissue-specific organoids for repairing injured and malfunctioning organs. The Institute is focused on a multidisciplinary approach in advancing organ regeneration and repair with the goal of translating discoveries to patient care at Weill Cornell Medicine. This institute was made possible through a gift made by Board of Fellows member Alan Hartman and his wife, Kim.

Currently, Dr. Rafii is focused on identifying the molecular and cellular pathways involved in organ regeneration and tumor growth. He has established the concept that vascular endothelial cells are not just inert plumbing to deliver oxygen and nutrients, but also by production of tissue-specific growth factors, defined as angiocrine factors, support organ regeneration and tumor proliferation. He has shown that bone marrow endothelial cells by elaboration of angiocrine factors, such as Notch ligands, support stem cell self-renewal and differentiation into lymphoid and myeloid progenitors. He has recently shown that liver and lung endothelial cells are endowed with unique phenotypic and functional

attributes, and by production of unique instructive growth factors, contribute to the hepatic and alveolar regeneration. Dr. Rafii has also induced differentiation of the murine and human pluripotent embryonic stem cells into functional and engraftable vascular and hematopoietic derivatives. He developed screening approaches to exploit endothelial cells, as a vascular niche platform, to identify, as yet, unrecognized novel angiocrine factors that instruct organ morphogenesis and also orchestrate stem cell self-renewal and differentiation.

The laboratory of Dr. Joe Qiao Zhou has made seminal contributions to regenerative biology. His laboratory pioneered a new approach of regenerating pancreatic insulin-secreting beta cells in mature pancreas by directly reprogramming pancreatic acinar cells with defined genetic factors. This study is the first proof-of-concept that cells in adult organs can be reprogrammed *in vivo*, which led to numerous subsequent studies of adult tissue plasticity. His laboratory discovered that gastric antral cells are also highly amenable for conversion into insulin-secreting cells. The Zhou lab continues to make significant progress in advancing mechanistic studies, as well as in developing technologies to produce insulin^{+} cells from human gastric stem cells as a potential cell therapy for type 1 diabetes. Also in process is the study of stem cells in large intestine mucosal regeneration. The Zhou lab has identified critical factors, without which, colon mucosa is transformed into small intestine mucosa with implications in diseases such as short-bowel disease, inflammatory bowel diseases, and colorectal cancer. The Zhou lab uses state-of-the- art tools and approaches, including human embryonic stem cells, human organoids, CRISPR screening, single-cell sequencing, functional genomics, and many more for mechanistic understanding and therapeutic development.

In 2021, Dr. Zhou and colleagues published key findings in *Cell Stem Cell* on the role the gene SATB2 plays in the colon lining, which has opened a window on illuminating the development of inflammatory bowel disease (IBD) as well as insights into a rare syndrome in which the SATB2 gene is disrupted. It was discovered that SATB2 contributes to changes in stem cells that typically develop into the inner lining of the colon, or large intestine, and furthermore, that these changes in stem cells transform them into a type of cell that normally would line a portion of the small intestine called the ileum. The researchers also found that the presence of the SATB2 gene enables other intestinal cell types to develop and retain colon cell-like properties.

Dr. Raphael Lis aims to advance the study of the brain blood barrier (BBB) by developing *in vitro* models attempting to mimic the physiological complexity of the BBB *in vivo*. It has been demonstrated that BBB traits are not intrinsic to brain specific endothelial cells (ECs), but rather the result of a dynamic interplay with their microenvironment, including multiple cell types such as astrocytes and pericytes. The Lis laboratory aims to resolve this issue by developing various *in vitro* BBB models using neural cell co-cultures consisting of ECs, pericytes, and astrocytes. These models also include pluripotent stem cell differentiation methods, as well as brain organoids and organ-on-a-chip approaches to generate an *in vitro* model of the BBB for clinical research and drug development.

Dr. David Redmond is a computational biologist specializing in high-throughput sequencing platforms, including bulk and single-cell transcriptomics, epigenetics, and spatial technologies. With the recent development of these single-cell and spatial sequencing technologies that have allowed for a deeper understanding of the cell as a functional unit, Dr. Redmond has been developing methods for deconvoluting important functional data including one of the first algorithms for recapitulating full TCR identity in single cell data.

Rheumatology

S. Louis Bridges, Jr., M.D., Ph.D.
Chief, Division of Rheumatology, Weill Department of Medicine

Joseph P. Routh Professor of Rheumatic Diseases in Medicine

Attending Physician
NewYork-Presbyterian Hospital

Physician-in-Chief
Chair, Department of Medicine
Chief, Division of Rheumatology
Hospital for Special Surgery

Franchellie M. Cadwell Chair

Based at Hospital for Special Surgery (HSS), the Division of Rheumatology is a national and international leader in clinical care of patients with autoimmune, inflammatory and musculoskeletal conditions; in research that has contributed to identification of novel therapeutic targets and new understanding of disease mechanisms; and in innovative approaches to medical education and education research. In addition to close to 20,000 in-person or telehealth outpatient rheumatology visits per year, the division has responsibility for the pre- and post-surgical medical care of more than 10,000 patients per year who undergo orthopaedic procedures at HSS. The large volume of patients treated at HSS has enabled HSS clinicians and researchers to develop patient registries with detailed clinical information that provide important resources for clinical and translational research studies. Longitudinal data collection, patient reported outcomes and availability of biologic samples are features of some of the registries shared with collaborators nationally and internationally. Achieving optimal outcomes for patients is the goal of our 41 active rheumatologists, who treat disorders ranging from osteoarthritis to the most complex patients with rheumatoid arthritis (RA), lupus, vasculitis, systemic sclerosis or diagnostic dilemmas. In addition to outpatient clinics in the Main HSS Hospital and HSS Brooklyn, rheumatology patients are seen at satellites in Paramus, NJ, and White Plains, NY, with a site in Uniondale on Long Island opening in the summer of 2022.

The HSS Department of Medicine (DOM) Clinical Operations Work Group, co-chaired by Drs. Linda Russell and Jessica Gordon, is implementing the transformation of the division's clinical practice operations with the goal of establishing more efficient and value-focused care across all practices. Dr. Steven Magid serves as Chief Medical Information Officer for HSS, overseeing implementation of the medical information technology system in the hospital and office practices. Optimal preparation and postoperative management of patients undergoing orthopedic surgery at HSS is under the leadership of Dr. Russell, Director, Division of Perioperative Medicine. Dr. Karen Onel leads the Division of Pediatric Rheumatology, with many clinical and academic programs shared with the adult rheumatologists. The Division of Endocrinology, which focuses on bone health, is led by Dr. Richard Bockman. Dr. Andy Miller is the Chief of the Division of Infectious Diseases, which collaborates with orthopaedic surgeons to care for patients with musculoskeletal infections in the hospital setting and rheumatologists to care for immunocompromised patients. Rheumatology clinics at HSS represent an essential training component of our rheumatology fellowship programs, as does a busy inpatient consult service that covers HSS, NYP Hospital, and Memorial Sloan Kettering Cancer Center.

HSS rheumatology fellowship programs in adult and pediatric rheumatology combine a broad-based, in depth clinical and research experience to deliver the highest quality academic training to rheumatology professionals. The adult rheumatology training program is directed by Drs. Juliet Aizer and Karmela (Kimi) Chan, and the pediatric rheumatology training program is directed by Dr. Alexa Adams. Fifteen adult and pediatric rheumatology fellows provide continuity of care for the patients seen in the clinics with involvement of all rheumatology faculty members as supervisors and teachers. A weekly clinic for evaluation of new patients, and specialty clinics focused on inflammatory arthritis, lupus and antiphospholipid syndrome, vasculitis and systemic sclerosis, provide rheumatology fellows and rotating internal medicine residents with a superb experience in evaluation and management of a full spectrum of rheumatic diseases. A rich learning environment is also provided in the multidisciplinary clinic conferences, following Monday Inflammatory Arthritis Clinic and Friday Lupus Clinic, which involves discussion of patient management guided by recent literature and enriched by attendance of representatives from other Weill Cornell specialties. Training of fellows in musculoskeletal ultrasound is provided through a specialized curriculum as well as hands-on experience. Each rheumatology trainee completes a basic, clinical, or education research project under the supervision of one or more faculty members and with oversight by a mentoring committee.

Trainees pursuing a research career are encouraged to apply for peer-reviewed research grant support, and those headed for careers in academic medicine often gain additional training through several available master's programs. This strong academic environment attracts the future leaders in academic rheumatology to its fellowship program. Dr. Anne Bass and pediatric rheumatologist Dr. Sarah Taber lead the HSS DOM Education Work Group, which coordinates educational activities focused on referring physicians, rheumatologists, and patients.

The division has a long history of leading basic and translational research studies that have elucidated important mechanisms of autoimmune and inflammatory disease and have identified important therapeutic targets. It is also recognized for its productive collaborations among bench scientists and clinicians. Clinical rheumatologists, clinical and laboratory investigators, nurses, social workers, and students advance disease-focused research, patient education, and professional education through the division's centers of excellence in lupus, scleroderma/vasculitis/myositis, inflammatory arthritis, and integrative rheumatology and orthopedics, as well as its Barbara Volcker Center for Women and Rheumatic Diseases.

Timothy B. Niewold, M.D. was recently appointed as Vice Chair for Research in the Department of Medicine at HSS. A pioneering physician-scientist in lupus, Dr. Niewold is working with Dr. Bridges in leading the next generation of impactful translational and clinical research and will chair the Research Work Group.

Dr. Lionel B. Ivashkiv, Chief Scientific Officer, is supported by NIH research grants addressing epigenetic mechanisms relevant to regulation of inflammation and bone resorption in rheumatoid arthritis. His lab is making seminal observations on the epigenetic control of cytokine gene expression and osteoclast maturation, and his studies of chromatin modifications are leading to new understanding of how the immune system becomes primed to react efficiently to future microbial or inflammatory stimuli. Dr. Jane Salmon, Associate Dean for Faculty Affairs, Weill Cornell Medicine, has identified biomarkers that predict adverse pregnancy outcomes in patients with lupus or antiphospholipid syndrome. She is leading an interventional trial of a tumor necrosis factor inhibitor to prevent adverse pregnancy outcomes in patients with antiphospholipid syndrome. Dr. Mary Crow's lab, in collaboration with Dr. Kyriakos A. Kirou, has demonstrated that type I interferon is a central mediator of immune dysregulation and autoimmunity in SLE and has provided insight into the role of additional molecular pathways involved in lupus nephritis.

In addition to established investigators, the Division of Rheumatology has a deep pool of outstanding early-stage investigators, including Drs. Bella Mehta, Medha Barbhaiya, Kim Lakin, David Fernandez, Sarah Lieber, Theresa Wampler Muskardin, Ashira Blazer, and Ruth Fernandez Ruiz. Collectively, this group has funding from the NIH (K23, K08), Rheumatology Research Foundation, Arthritis National Research Foundation, and Lupus Research Alliance. Their research interests are broad and include rheumatoid arthritis, osteoarthritis, scleroderma, undifferentiated connective tissue disease, antiphospholipid syndrome, myositis, frailty in rheumatic diseases, the impact of COVID-19 on patients with rheumatic diseases, and health care disparities.

Drs. Laura Donlin, Vivian Bykerk, Lou Bridges, and Susan Goodman of HSS, along with Dr. Dana Orange at Rockefeller University and investigators at Rochester University and the University of Colorado, lead a national NIH-funded Accelerating Medicines Partnership Program Autoimmune and Immune-Mediated Diseases (AMP AIM) team focused on rheumatoid arthritis. The AMP AIM Program will utilize a suite of next-generation tools and technologies to map how cell types, cell states, and cell-to-cell interactions network to cause inflammation, abnormal function, and tissue injury, not only in RA, but in psoriatic spectrum diseases, Sjögren's disease, and systemic lupus erythematosus. HSS was integral to the success of the previous AMP RA/SLE program, which pioneered a transformational approach to dissect how these diseases occur at the individual cell level.

Dr. Anne Bass, Dr. Nilasha Ghosh, and Dr. Donlin are leading translational studies of the rheumatologic complications of checkpoint inhibitor therapy for cancer in collaboration with oncologists at Memorial Sloan Kettering Cancer Center. Dr. Melanie H. Smith, who is focused on understanding the different roles of tissue-resident synovial fibroblasts in arthritis using patient samples, recently received ASCI's prestigious Emerging-Generation Award, as well as a Scientist Development Award from the Rheumatology Research Foundation. Dr. Smith will join the Division of Rheumatology in July 2022. Dr. Jane Salmon leads the Faculty Development Work Group, which will focus on faculty promotions, wellness, and issues around Diversity, Equity, and Inclusiveness.

Iris Cantor Women's Health Center (ICWHC)

Orli R. Etingin, M.D.
Medical Director, ICWHC

Vice Chair for Faculty

Lisa and Sanford B. Ehrenkranz Professor in Women's Health

Professor of Clinical Medicine

Professor of Clinical Obstetrics and Gynecology
Weill Cornell Medical College

Attending Physician
NewYork-Presbyterian Hospital

The Iris Cantor Women's Health Center (ICWHC) at 425 East 61st Street in Manhattan offers the most comprehensive array of healthcare services, designed specifically for women, in a single location in New York City. With more than 40,000 square feet of clinical space occupying four floors under one roof, women can access the finest prevention, screening, and treatment services in one convenient location. All of the Center's physicians are full-time faculty members of Weill Cornell Medicine and attending physicians at NewYork-Presbyterian/Weill Cornell Medical Center. A team of internists, gynecologists, radiologists, among many others, facilitate superb coordination. Iris Cantor Women's Health Center (ICWHC) The Iris Cantor Men's Health Center, for which Dr. Etingin had provided expertise and assistance during the development phase, has grown to encompass both men's health and executive health testing.

The contiguity of the Women's Health Center, Men's Health Center, and the new Executive Physical Center, has enabled streamlined care for every type of patient. Located at 425 East 61st Street, the men's health practice enhances the primary care network of Weill Cornell Medicine delivering patient care that covers internal medicine, cardiology, endocrinology, hematology, and urology. It also houses the Department of Urology's Institute for Bladder and Prostate Health. Clinical research collaborations between men's and women's Health continue.

The 2021 Women's Health Symposium was presented virtually in October of 2021. The symposium featured balancing mindfulness and medications for anxiety mood disorders, as well as metabolism at various stages of a women's life. The invited speakers were Dr. Susan Evans and Dr. Rekha Kumar. A Professor of Psychology in Clinical Psychiatry at Weill Cornell Medicine, Dr. Evans serves as Director of Education in Psychology and Director of the Cornell Cognitive Therapy Clinic. Her expertise focuses on the cognitive behavioral treatment (CBT) of anxiety and mood disorders and utilizes a CBT approach to promote healthy lifestyles including weight reduction and management, exercise, and stress reduction. Dr. Rekha B. Kumar serves as an Associate Professor of Clinical Medicine and Attending Endocrinologist at Weill Cornell Medicine and specializes in the diagnosis and treatment of various endocrine disorders. She is currently the Medical Director of the American Board of Obesity Medicine and an Associate Editor of the journal, *Obesity*.

Dr. Orli Etingin at the ICWHC

Residents & Fellows

Weill Department of Medicine

Residents & Fellows

Dr. Kirana Gudi

Dr. Kirana Gudi serves as Director of the Internal Medicine Residency Program and also as the Vice Chair for Education in the Weill Department of Medicine. The Internal Medicine Residency Program is distinguished by a unique combination of activities and opportunities. One of the program's core principles is that house staff learn best through authentic responsibility. House staff serve as the primary provider across all aspects of patient care. Intellectual curiosity is fostered throughout the curriculum, whether exploring basic science, translational medicine, clinical expertise, or the healthcare delivery system.

Chief Residents of 2021

Youmna Abdelghany, M.D.

Lauren Balkan, M.D.

Benjamin Langan Gordon, M.D.

Quality Improvement Chief Resident

Ramsey Kalil, M.D.

Ambulatory Chief Resident

Cecilia E.W. Nichol, M.D.

Senior Residents (PGY3)

Aiya Aboubakr, Icahn School of Medicine at Mount Sinai

Andrew Adelsheimer, New York University Grossman School of Medicine

Prashasti Agrawal, Stanford University School of Medicine

Michael Alvarez, Rutgers New Jersey Medical School

Clarissa Andre, The Warren Alpert Medical School of Brown University

Emmanuel Attah, University of Texas Medical Branch School of Medicine

Mara Bensson, The Warren Alpert Medical School of Brown University

Tanya Bhardwaj, Northwestern University Feinberg School of Medicine

Benjamin Biederman, New York Medical College

Carly Borinsky, Rutgers Robert Wood Johnson Medical School

Lindsay Clarke, George Washington University School of Medicine and Health Sciences

Erica Corredera, University of Pittsburgh School of Medicine

Kelly Crane, University of Colorado School of Medicine

Thomas Di Vitantonio, Rutgers New Jersey Medical School

Jesse Frye, Stony Brook University School of Medicine

Lee Gottesdiener, Weill Cornell Medicine

Adam Greenfest, George Washington University School of Medicine and Health Sciences

Nigel Gwini, Georgetown University School of Medicine

William Jackson, Weill Cornell Medicine

Chanel Jonas, SUNY Downstate Health Science University College of Medicine

Eric Jurgens, Weill Cornell Medicine

Manjinder Kandola, Harvard Medical School

Melanie Koren, Albert Einstein College of Medicine of Yeshiva University

Arielle Kushman, Harvard Medical School

Nikita Malakhov, SUNY Downstate Health Science University College of Medicine

Sonal Mallya, Tulane University School of Medicine

Sapir Nachum, Weill Cornell Medicine

Chukwuma Onyebeke, Perelman School of Medicine, University of Pennsylvania

Benedict Osorio, Jr., Rutgers Robert Wood Johnson Medical School

Maryam Own, Weill Cornell Medicine – Qatar

Christine Park, Boston University School of Medicine

Madelyn Renzetti, Lewis Katz School of Medicine at Temple University

Wesley Rogers, Weill Cornell Medicine

Elizabeth Sanchez, Universidad Nacional de Colombia Facultad de Medicina

Sandeep Sikerwar, SUNY Upstate Medical University, Norton College of Medicine

Emily Smith, SUNY Downstate Health Science University College of Medicine

Kerry Meltzer, George Washington University School of Medicine and Health Sciences

Fabian Vargas, The Warren Alpert Medical School of Brown University

Xin Wang, University of California, Los Angeles David Geffen School of Medicine

Patrick Weill, University of Texas School of Medicine at San Antonio

Rochelle Wong, Vanderbilt University School of Medicine

Alyssa Zaidi, Lewis Katz School of Medicine at Temple University

Junior Residents (PGY2)

Ugochukwu Akpara, CUNY School of Medicine

Brinda Alagesan, Stony Brook University School of Medicine

Ariel Bar-Mashiah, Icahn School of Medicine at Mount Sinai

Kevin Chan, Weill Cornell Medicine

Alexander Choi, University of Michigan Medical School

Megan Creasman, University of California, San Francisco School of Medicine

Mikiyas Teshome Desta, University of Kentucky College of Medicine

Bianca Di Cocco, Geisel School of Medicine at Dartmouth

Ashley Dixon, Rutgers New Jersey Medical School

Nechama Dreyfus, Albert Einstein College of Medicine of Yeshiva University

Olivia Fankuchen, Tulane University School of Medicine

Emily Frey, The University of Chicago Pritzker School of Medicine

Theodore Getz, Case Western Reserve University School of Medicine

Nicolas Gomez Banoy, Universidad Nacional de Colombia Facultad de Medicina

Justin Grenet, Perelman School of Medicine, University of Pennsylvania

Jeanie Gribben, Icahn School of Medicine at Mount Sinai

Namrata Gumaste, Rutgers Robert Wood Johnson Medical School

Zachary Hostetler, Perelman School of Medicine, University of Pennsylvania

Devora Isseroff, Icahn School of Medicine at Mount Sinai

Ruth Kagan, Harvard Medical School

Ashwin Kelkar, Case Western Reserve University School of Medicine

Madelyn Klugman, Albert Einstein College of Medicine of Yeshiva University

Rebecca Krakora, Rutgers Robert Wood Johnson Medical School

Dennis Lee, Weill Cornell Medicine

Michelle Lee, Baylor College of Medicine

Kimberly Loo, Lewis Katz School of Medicine at Temple University

Lawrence Lucas, University of South Carolina School of Medicine Greenville

Malika Madhava, Sidney Kimmel Medical College at Thomas Jefferson University

Melina Manolas, Tulane University School of Medicine

Lauren Mitchell, Harvard Medical School

Paul Paik, Weill Cornell Medicine

Jin Park, University of California, Los Angeles David Geffen School of Medicine

Tamasha Persaud, SUNY Downstate Health Science University College of Medicine

Kara Ryan, Tufts University School of Medicine

Choumika Simonis, Loyola University Chicago Stritch School of Medicine

Hank Swerdloff, Tulane University School of Medicine

Jacqueline Tao, Stanford University School of Medicine

David Thomas, Columbia University Vagelos College of Physicians and Surgeons

Brittany Toffey, Rutgers New Jersey Medical School

Christopher Tricarico, Washington University School of Medicine and Health Sciences

Charlton Tsai, Duke University School of Medicine

Manik Uppal, Weill Cornell Medicine

Krista Vadaketh, Drexel University College of Medicine

Sharan Yadav, Weill Cornell Medicine in Qatar

David Zhang, Weill Cornell Medicine

Raymond Zou, CUNY School of Medicine

Intern Residents (PGY1)

Kevin Bachrach, Boston University School of Medicine

Jeetayu Biswas, Albert Einstein College of Medicine of Yeshiva University

Benjamin Blake, Virginia Commonwealth University School of Medicine

Joshua Bliss, Weill Cornell Medicine

Catherine Cai, Saint Louis University School of Medicine

Joyce Chen, University of California, San Diego School of Medicine

Nicole Cornet, Rush Medical College of Rush University

Camila Delgado, New York University Grossman School of Medicine

Neela Easwar, University of California, San Diego School of Medicine

Rahmi Elahjji, Weill Cornell Medicine

Raihan El-Naas, Weill Cornell Medicine - Qatar

Scott Fabricant, Rutgers New Jersey Medical School

Elise Fraser, Columbia University Vagelos College of Physicians and Surgeons

Karen Gambina, Columbia University Vagelos College of Physicians and Surgeons

Stephanie Gergoudis, Icahn School of Medicine at Mount Sinai

Nancy Holbrook, Emory University School of Medicine

Michael Hovan, Rutgers Robert Wood Johnson Medical School

Raina Jain, Geisel School of Medicine at Dartmouth

Joshua Kassner, Georgetown University School of Medicine

Rebecca Klahr, Icahn School of Medicine, at Mount Sinai

Isha Lamba, Weill Cornell Medicine - Qatar

Han Li, Weill Cornell Medicine

Chanel Ligon, Columbia University Vagelos College of Physicians and Surgeons

Bethina Liu, Weill Cornell Medicine

Paulina Luna Martinez, Yale School of Medicine

John Mancini, CUNY School of Medicine

Ari Mandler, George Washington University School of Medicine and Health Sciences

Francis May, Case Western Reserve University School of Medicine

Jessica Palmer, New York Medical College

Colton Pence, The University of Texas Southwestern Medical School

Christina Pugliese, George Washington University School of Medicine and Health Sciences

Emma Schatoff, Weill Cornell Medicine

Zohaib Shaikh, Duke University School of Medicine

Jared Silberlust, University of Miami Miller School of Medicine

Rebecca Spicehandler, Duke University School of Medicine

Yuqing Sun, Johns Hopkins University School of Medicine

Rachel Tenney, University of California, San Francisco School of Medicine

Graham Wehmeyer, Weill Cornell Medicine

Dustin Wessells, University of Virginia School of Medicine

Andrew Yin, Weill Cornell Medicine

Linda Yu, University of California, San Francisco School of Medicine

Daniel Zetter, University of Louisville School of Medicine

Jingxian Zhang, Yale School of Medicine

Ruina Zhang, New York University Grossman School of Medicine

Professional Pursuits 2021

Subspecialty Fellowship Appointments

Cardiology

Andrew Adelsheimer, *New York University*

Lauren Balkan, *Beth Israel Deaconess*

Jesse Frye, *Stony Brook University*

Chanel Jonas, *University of Pennsylvania*

Ramsey Kalil, *Baylor College of Medicine – Texas Heart Institute*

Arielle Kushman, *NewYork-Presbyterian/Weill Cornell*

Pedram Navid, *University of Southern California*

Chukwuma Onyebeke, *NewYork-Presbyterian/Weill Cornell*

Rayhan Saiani, *Baylor College of Medicine – Texas Heart Institute*

Hector Sepulveda Alemany, *University of Puerto Rico*

Ozan Unlu, *Massachusetts General Hospital-Brigham and Women's Hospital*

Fabian Vargas, *NewYork-Presbyterian/Columbia*

Brian Yum, *Baylor College of Medicine-Texas Heart Institute*

Alyssa Zaidi, *NewYork-Presbyterian/Weill Cornell*

Endocrinology

Kharisa Rachmasari, *Mayo Clinic*

Nicolas Gomez Banoy, *NewYork-Presbyterian/Weill Cornell*

Sapir Nachum, *University of Pennsylvania*

Jin Park, *NewYork-Presbyterian/Weill Cornell*

Gastroenterology

Aiya Aboubakr, *NewYork-Presbyterian/Weill Cornell*

Emmanuel Attah, *Memorial Sloan Kettering Cancer Center*

Preston Atteberry, *NewYork-Presbyterian/Weill Cornell*

Benjamin Biederman, *New York University*

Lindsay Clarke, *Massachusetts General Hospital-Brigham and Women's Hospital*

Enad Dawod, *NewYork-Presbyterian/Weill Cornell*

Benjamin Gordon, *NewYork-Presbyterian/Weill Cornell*

Nabeel Wahid, *Northwestern University*

Geriatric/Palliative

Emily Coskun, *NewYork-Presbyterian/Weill Cornell*

Kristina Fernandez, *NewYork-Presbyterian/Weill Cornell*

Stephanie Pagliuca, *Boston University*

Melanie Koren, *Mount Sinai Hospital*

Hematology and Medical Oncology

Prashasti Agrawal, *Memorial Sloan Kettering Cancer Center*

Brinda Alagesan, *Memorial Sloan Kettering Cancer Center*

Brian Chernak, *NewYork-Presbyterian/Columbia*

Jonathan Goldstein, *Stanford University*

Caitlin Gribbin, *NewYork-Presbyterian/Weill Cornell*

Nigel Gwini, *Memorial Sloan-Kettering Cancer Center*

Eric Jurgens, *Memorial Sloan-Kettering Cancer Center*

Matthew Kudelka, *Memorial Sloan-Kettering Cancer Center*

Kristine Lacuna, *NewYork-Presbyterian/Columbia*

Justin Lebenthal, *University of Texas-MD Anderson Cancer Center*

Nikita Malakhov, *NewYork-Presbyterian/Weill Cornell*

Xiaoli Mi, *Memorial Sloan-Kettering Cancer Center*

Claire Sathe, *NewYork-Presbyterian/Columbia*

Ariel Schaap, *New York University*

Michael Sun, *NewYork-Presbyterian/Weill Cornell*

Gaurav Varma, *New York University*

Julian Waksal, *Mount Sinai Hospital*

Julia Wu, *NewYork-Presbyterian/Weill Cornell*

Infectious Disease

Lee Gottesdiener, *NewYork-Presbyterian/Weill Cornell*

Anna Mertelsmann, *NewYork-Presbyterian/Weill Cornell*

Wesley Rogers, *NewYork-Presbyterian/Weill Cornell*

Catherine Stoeckle, *NewYork-Presbyterian/Weill Cornell*

Pulmonary and Critical Care Medicine

Youmna Abdelghany, *University of Maryland*

Alexander Bain, *New York University*

Matthew Brandorff, *NewYork-Presbyterian/Weill Cornell*

Chou, *NewYork-Presbyterian/Weill Cornell*

Kelly Crane, *NewYork-Presbyterian/Weill Cornell*

Marvah Hill Pierre-Louis, *Massachusetts General Hospital-Beth Israel Deaconess*

William Jackson, *Yale University*

Sonal Mallya, *Johns Hopkins*

Madelyn Renzetti, *Yale University*

Elizabeth Sanchez, *New York University*

Mark Sonnick, *NewYork-Presbyterian/Columbia*

David Thomas, *NewYork-Presbyterian/Weill Cornell*

Antonio Velez, *New York University*

Maya Viavant, *Stanford University*

Patrick Weill, *University of Texas Southwestern Medical Center*

Other Professional Pursuits

Rachel Engelberg, Population Health Science Fellow, *New York University, Bellevue Hospital*

Asia Gobourne, *General Internal Medicine Research on Health Equity Track and Diversity Leadership Faculty Scholar, NewYork-Presbyterian/Weill Cornell*

Kerry Meltzer, *Fellow National Clinicians Scholars Program, University of Pennsylvania*

Leland Soiefer, *Clinical Leadership Fellow, NYC Health & Hospitals*

Rheumatology

Maryam Own, *Mayo Clinic*

Xin Wang, *NewYork-Presbyterian/Columbia*

Chief Residencies

Thomas Di Vitantonio, Chief Medical Resident, *NewYork-Presbyterian/Weill Cornell*

Manjinder Kandola, Chief Medical Resident, *NewYork-Presbyterian/Weill Cornell*

Benedict Osorio, Chief Medical Resident, *NewYork-Presbyterian/Weill Cornell*

Emily Smith, Chief Medical Resident, *NewYork-Presbyterian/Weill Cornell*

Rochelle Wong, Ambulatory Chief Medical Resident, *NewYork-Presbyterian/Weill Cornell*

Adam Greenfest, *Chief Medical Resident, Memorial Sloan-Kettering Cancer Center*

Hospitalists/Instructor In Medicine

Ankita Agarwal, *New York University, Bellevue Hospital*

Alexander Bain, *University Pennsylvania Medical Center*

Tanya Bhardwaj, *NewYork-Presbyterian/Weill Cornell*

Dan Benenson, *NewYork-Presbyterian/Columbia*

Carly Borinsky, *NewYork-Presbyterian/Weill Cornell*

Erica Corredera, *Memorial Sloan-Kettering Cancer Center*

Angela Hu, *University Pennsylvania Medical Center*

Christine Park, *Memorial Sloan-Kettering Cancer Center*

Rayhan Saiani, *NewYork-Presbyterian Hospital/ Columbia University*

Sandeep Sikerwar, *NewYork-Presbyterian/Weill Cornell*

Academic Appointments

Clarissa Andre, Clinical Assistant Professor, *New York University*

Mara Bensson, *Primary Care* Physician *Bulfinch Medical Group, Massachusetts General Hospital, and Instructor in Medicine, Harvard Medical School*

Kyle Koster, Clinical Leadership Fellow, *NYC Health & Hospitals*

Neil Lim, *Weill Cornell Medicine Primary Care*

Akash Patel, Instructor in Medicine, *Weill Cornell Medicine-Tribeca*

Shyam Sundaresh, Instructor in Medicine, *Mount Sinai Hospital*

Kenneth Vera, Clinical Assistant Professor in Medicine, *New York University*

Xiaohui Wang, Instructor in Medicine, *NewYork-Presbyterian/ Lower Manhattan*

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ThuTrang Du, Interim Administrator
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Ronald D. Adelman, M.D., Co-Chief
Mark S. Lachs, M.D., M.P.H., Co-Chief
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Manuel Hidalgo, M.D., Chief
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For further information about the Weill Department of Medicine, please visit our website at **https://medicine.weill.cornell.edu**

In Memoriam

The WDOM expresses its sincerest condolences on the passing of Dr. Martin Nydick. One of our most beloved physicians on the voluntary staff, Dr. Nydick had a thriving private practice specializing in general endocrinology, diabetes, and lipid metabolism. Dr. Nydick received his M.D. from the Columbia University College of Physicians & Surgeons and served in the WDOM as a Clinical Associate Professor of Medicine and as an Attending Physician at NewYork-Presbyterian Hospital for many years. He was also affiliated with the Hospital for Special Surgery.

Weill
Cornell
Medicine

Weill Department of Medicine
Annual Report 2022

Weill Cornell Medicine

NewYork-Presbyterian

NewYork-Presbyterian/Weill Cornell Medical Center
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