

Weill Cornell Medical College  
NewYork-Presbyterian Hospital

# Department of Medicine

TRANSLATING DISCOVERIES

AR  
2012

Department of Medicine Annual Report 2012

Weill Cornell Medical College NewYork-Presbyterian Hospital



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NewYork-Presbyterian Hospital  
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NewYork-Presbyterian Hospital/  
Weill Cornell Medical College  
Department of Medicine  
525 East 68th Street, Box 130  
New York, NY 10065  
[www.cornellmedicine.com](http://www.cornellmedicine.com)



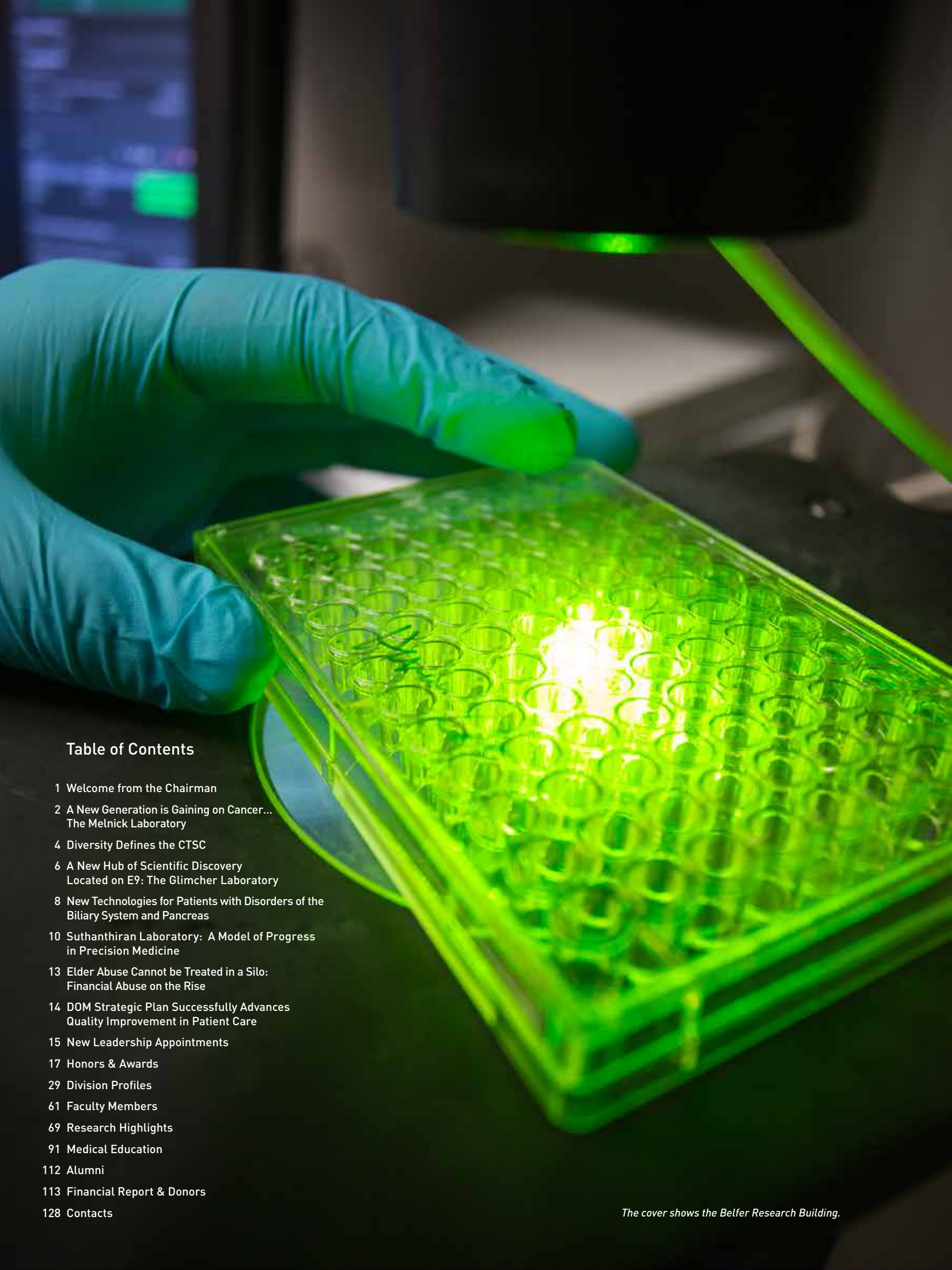


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The cover shows the Belfer Research Building.

Dear Colleagues and Friends:

Our Annual Report of the Department of Medicine of Weill Cornell Medical College and New York-Presbyterian Hospital/Weill Cornell Medical Center highlights the department’s accomplishments during the Calendar Year 2012. It provides but a glimpse of the extraordinary breadth and depth of contributions generated by our gifted, tireless and dedicated group of faculty, trainees and staff.

By remaining adaptable in the way we do things, while at the same time asserting an uncompromising commitment to our core values, we have sustained an indomitable spirit in the face of adversities that are the inevitable consequence of a rapidly changing, often unpredictable environment in academic medicine today. We have maintained a steadfast, unwavering focus on the patients we serve: they are at the very center of and reason for everything we do, including leadership in medical research and producing a next generation of physicians who we want to be, like our own children, even better than we are.

As I write this in my seventh year as Chairman of this great Department of Medicine, I feel more confident than ever that this department is well-prepared to meet the formidable challenges ahead and will, under Dr. Augustine Choi’s vigorous new leadership, rise to new heights of excellence for many years to come.

Andrew Schafer

**Andrew I. Schafer, M.D.**  
The E. Hugh Luckey Distinguished Professor of Medicine  
Chair, Department of Medicine  
Weill Cornell Medical College  
  
Physician-in-Chief  
NewYork-Presbyterian Hospital/Weill Cornell Medical Center





# A New Generation is Gaining on Cancer...

## The Melnick Laboratory



Dr. Melnick (center) with some of his postdocs (l-r): Drs. Lorena Fontan Gabas; Francine Garrett-Bakelman; Karen Bunting; Yanwen Jiang

Since Dr. Ari Melnick joined the Department of Medicine in 2008, his group has produced a steady stream of research breakthroughs. Dr. Melnick has been instrumental in moving the nascent field of epigenomics into the translational arena for hematologic malignancies. His laboratory has created a virtual arsenal of sophisticated methodologies, including computer mapping, transcriptional analysis, and therapeutic targeting. At the same time, Dr. Melnick has also been effectively mentoring a remarkable number of young scientists who are drawn to his laboratory from around the world. To date, he has trained more than 60 residents, fellows, and medical students, many of whom have published in the leading peer-reviewed journals, presented their work at national meetings, and have earned research funding of their own. They are a newly trained generation of scientists, and they are gaining on cancer. They are also ready for the duration in a challenging field, where, as Dr. Melnick explains, “the diversity among the various strains of cancer is mind boggling.”

Dr. Melnick believes that there are two main avenues of attack on hematological malignancies: one, finding specific *biomarkers* to determine how tumors work in individual patients as well as identifying those with highest risk for resistant forms of the disease; and two, discovering what *basic mechanisms* encode instructions that program the specific biological features of these disease processes. The

latter enables cancer clinical investigators to target a particular tumor more precisely with effectively tailored drugs.

As researchers seek to better understand the chemical layers of epigenetic programming that can regulate our DNA, they will be able to produce more effective drugs to treat a tumor, understanding exactly how one tumor can be very different from another. Dr. Andrew Schafer, Chairman, Department of Medicine, notes, “When we recruited Dr. Melnick five years ago, we knew he was the ideal candidate to lead NYP/WC’s Epigenomics Program in Cancer. The breakthroughs he and his team have achieved have included some predicted advancements, as well as some welcome surprises. These breakthroughs have created a path towards personalized medicine that will effectively target a particular tumor.”

Dr. Schafer continues, “Just as importantly, beyond his own scientific accomplishments, we knew that Ari would bring with him a remarkable ‘halo effect’ in stimulating better science around him.”

**Decoding Cancer Leads to Destroying Cancer**

When conditions are right, master regulatory factors in the body can reprogram normal cells into cancerous cells. Just as bacteria can divide quickly, every 20 minutes, so can cancerous cells multiply at a staggering pace – combinations into the billions, says Dr. Melnick. The master regulatory

systems that he investigates control production of proteins that produce cancer. These systems are governed by epigenetic mechanisms. Using sophisticated gene mapping, Dr. Melnick and his team have been unearthing various cancer-causing mechanisms [at the molecular level] that they are able to locate throughout the human genome.

Leukemias have surprisingly few mutations compared to other cancers, but they are some of the most intractable cancers to treat. Children who have ALL (acute lymphoblastic leukemia) are usually cured, but unfortunately, adults have experienced the worst outcomes. During 2012, Dr. Melnick led a team that included national and international scientists in a first of its kind study using integrative epigenomics to investigate B-ALL in adults. Their results, entitled, “Integrative Epigenomic Analysis Identifies Biomarkers and Therapeutic Targets in Adult B-Acute Lymphoblastic Leukemia,” were published in *Cancer Discovery*.

In sum, the group decoded the key “software” instructions that drive three of the most virulent forms of ALL. Specifically, they uncovered that ALL’s “software” is encoded with certain epigenetic marks, or chemical modifications of DNA and surrounding proteins, and identified a novel biomarker in B-ALL called IL2RA[CD25]. The new biomarker, IL2RA[CD25],

is a master regulatory protein that causes aberrant growth and the survival of lymphoma cells by assembling a multiprotein gene repressor complex. After reporting this initial finding, he went on to publish a paper in *Nature Medicine* (2004) showing that the actions of BCL6 in gene regulation could be blocked, thereby inducing growth arrest and death of lymphoma cells. These two advances proved that transcription factors (such as the BCL6 oncogene) are indeed feasible drug targets for the treatment of cancer – an idea, previously held by many, to be unlikely at best.

From Dr. Melnick’s perspective, the year 2010 brought one of those watershed moments for the team. He and his colleagues published a paper in *Cancer Cell*, entitled, “Leukemic IDH1 and IDH2 mutations result in a hypermethylation phenotype, disrupt TET2 function, and impair hematopoietic differentiation.” Translation: a new class of leukemia was discovered that is caused by mutations in metabolic enzymes that generate a kind of chemical poison which disrupts production of a newly discovered class of epigenetic marker called 5-hmC. When these mutations occur in bone marrow cells the consequence is altered growth properties and development of leukemia.

“This was a monumental advance for us,” explains Dr. Melnick, “as it showed for the first time an entirely new and unsuspected disease mechanism could lead to development



“Our study is the first to integrate the decoding of many layers simultaneously, which has enabled us to unlock some of the mysteries explaining the malignant and aggressive behavior of three leukemias.”

was determined to hold actionable potential for clinical use, an advance that could translate into better therapeutic targets and improved treatments for adults with B-cell ALL. Currently, therapeutic antibodies to the CD25 protein exist, and the Melnick laboratory seized the opportunity to use these CD25 antibodies, proving that they could successfully kill one of the three forms of leukemia investigated in their study.

“Our study is the first to integrate the decoding of many layers simultaneously, which has enabled us to unlock some of the mysteries explaining the malignant and aggressive behavior of three leukemias,” says Dr. Melnick. “One could potentially conceive of a human clinical trial where those antibodies are used to attack these cancerous cells.”

This type of advancement is one of many following Dr. Melnick’s first major discovery in which he described the mechanism of action of BCL6, a crucial lymphoma oncogene in the field of cancer research. Dr. Melnick found that BCL6

of cancer. This discovery opened a window for development of specific targeted therapies to reverse this metabolic abnormality, which are expected to be in clinical trials in the near future. Hence the cycle of discovery of new disease mechanism to specific therapy was greatly accelerated.”

A month after the Department of Medicine prepared its report on year 2012, yet another major breakthrough occurred in the Melnick Lab. The team has shown, published in *Nature Immunology*, that it is possible to shut down BCL6 in the cancer known as diffuse large B-cell lymphoma (DLBCL) and without negatively affecting its vital function in T cells and macrophages which is needed to support a healthy immune system.

“This means that drugs we have developed against BCL6 are more likely to be significantly less toxic and safer for patients with this cancer than we realized. The finding comes as a very welcome surprise,” says Dr. Melnick, and one which is sure to generate many more.



# Diversity Defines the CTSC

News headlines regarding Dr. Julianne Imperato-McGinley's work have frequently read, "Five More Years," meaning five more years of NIH funding. Appointed to Chief of the Division of Endocrinology, Diabetes, and Metabolism in 1994, she was already an established international expert in her field leading NIH-funded grants in the multimillions. As Program Director of the NIH-funded GCRC (General Clinical Research Center) at NYP/WC, she designed and implemented novel programs that ensured the GCRC would serve as both a vital hub for clinical research and a protected training environment for young investigators. Senior investigators were encouraged to include residents, fellows, and medical students in the writing and submission of research protocols.

In 2007, Dr. Imperato-McGinley had yet again received NIH funding for 5 more years. Granted from the NCRR (National Cancer for Research Resources), this time the amount of the award was \$49.6 million, making it the largest federal grant to be awarded at Weill Cornell Medical College. It funded the CTSC (Clinical and Translational Science Center) at NYP/WC, for which Dr. Imperato-McGinley serves as Program Director, overseeing a remarkably diverse roster of programs that span virtually all fields of medical research and patient care. The grant proposal she wrote and submitted to the NIH had emphasized the idea of "silo-busting."

As "silo-busters," the CTSC strives to reduce barriers; barriers between fields of medicine, between medical institutions, and between academic medicine and industry. The CTSC collaborates with major institutions, including Memorial Sloan-Kettering Cancer Center, Hospital for Special Surgery, Cornell University (Ithaca), Lincoln Hospital and Hunter College School of Nursing. To date, it has funded 158 multi-institutional, multi-disciplinary awards, with 29 more expected in its sixth year. "In today's world, we realize that disease is a complex entity," says Dr. Imperato-McGinley. "There may be many factors involved, such as genetics, nutrition, and economics. So it's clear that you need teams of researchers working on all aspects of the disease in its entirety."

From Facebook, health fairs, and "speed dating" events for clinicians and research scientists, to town hall presentations from medical experts and videoconferencing on critical health care topics of the day, the CTSC promotes high-quality patient outreach. "At the CTSC, we forge collaborative research projects with a focus on effective patient treatments and preventive interventions," explains Dr. Imperato-McGinley. "We are committed to taking our discoveries to the community, to the ethnically diverse and underserved areas. The Heart-to-Heart Community Outreach Campaign empowers participants to lead healthier lives while connecting those most in need with healthcare professionals and solutions. This year Heart-to-Heart plans to increase the frequency of its cardiovascular disease community screenings and measure their impact on the health of participants." With funding from AstraZeneca HealthCare Foundation, the Heart-to-Heart program will continue to bring comprehensive screenings for heart disease and diabetes to underserved New Yorkers through community centers and faith-based organizations.

Novel training opportunities abound for physicians and scientists at the CTSC – established faculty, physician-scientists in training, medical students, and nurses. Opportunities include front-rank research projects, in addition to practical training courses. A CTSC Grant Writing Seminar offers hands-on training towards writing a grant that gets results – and wins the funding. Last year it received a total of 303 participants from WCMC and partnering institutions. Practical step-by-step guidance includes



As "**silo-busters**," the CTSC  
strives to reduce barriers...

strategies for composing a manuscript, choosing the appropriate journal or publication, and producing data necessary to publish.

A 3D Workshop (Drug Development and Discovery), devised by Pfizer, has inspired enthusiasm from young physician-scientists who are eligible to win a prize for creating the best drug product. The second 3D workshop, offered in 2012, was devoted to oncology. All partnering institutions were involved. Team participants are assigned a role corresponding to a role in the actual drug development process – discovery scientist, project manager, regulatory affairs representative, toxicologist, and more. Each phase of drug development is addressed from identifying promising chemical compounds and using computer-based simulation, to the final stages of obtaining FDA approval and marketing the drug.

"The 3D Workshop participants came from WCMC, MSKCC, HSS, Lincoln Hospital, and Hunter College for the 2012 competition," reports Dr. Imperato-McGinley. "You could see the excitement in the hallways as the various teams came out of the room where they had presented their work for the Pfizer evaluators. The evaluators were so impressed that they could not decide on one winner. All three teams won a prize. This type of experience equips the next generation with the knowledge and experience needed to improve medications available for patients."

There is also a highly sought after Master's in Research degree offered by the CTSC. A two-year program, it attracts many members of the Department of Medicine to its ranks, and several surgical residents each year. Dr. Imperato-McGinley began to develop the program while directing the GCRC; once the necessary funding arrived, it was folded into her work at the CTSC.

Department of Medicine faculty members have participated in numerous research endeavors via the CTSC. For example, a seed grant enabled Dr. David Nanus, Chief of the Division of Hematology and Medical Oncology, to collaborate with an Associate Professor of Mechanical Engineering (Cornell University), Dr. Brian Kirby. They captured and tested prostate cancer cells and tested them in the lab to gauge sensitivity to chemotherapeutics. Dr. David Brillon of the Division of Endocrinology, Diabetes, and Metabolism, was part of a research team that produced a 6-variable algorithm to identify patients at high risk for diabetes. The six variables are age, gender, a family history of diabetes, a personal history of high blood pressure, obesity, and physical activity. In 2012, the American Diabetes Association recognized this new formula and replaced its previous guideline. A KL2 Scholar who received her Master's in Research via the CTSC, Dr. Darshana Dadhania (an Assistant Professor of Medicine in the Division of Nephrology and Hypertension) found the CTSC to be a source of valuable logistical support while she and fellow colleagues completed the largest translational study in transplantation at NYP/WC. As they searched for urine biomarkers that can indicate renal transplant rejection, the Clinical and Translational Research Unit – equipped with laboratories, inpatient and outpatient facilities, nursing and support staff – afforded a centralized location for biopsies, blood sampling, and patient monitoring. "The CTSC allows us to standardize our procedures and serves as a central resource for our research studies," says Dr. Dadhania.

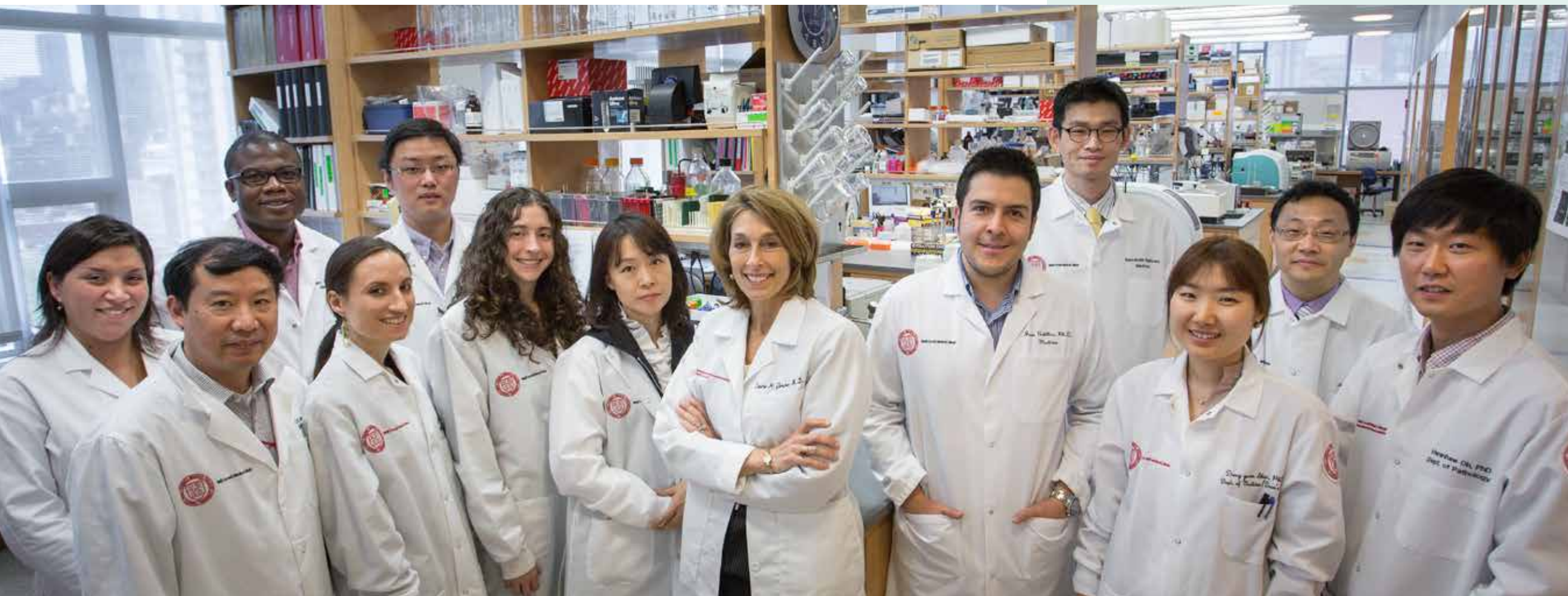
As the CTSC embarks on the future with a new round of funding from the NIH (as of 2012), new directions include: integration of library services, sponsorship of a Diagnostics Development Boot Camp, launching of a clinical research training fast-track workshop, and advancing urban-based research programs, to name a few. Under Dr. Imperato-McGinley's leadership, the CTSC is certain to keep the momentum going as it fulfills its vision – to improve public health through translational science that can transform a patient's life for the better.

No doubt the headlines will continue to read – five more years.

The staff assisting Dr. Imperato-McGinley in the management of a diverse roster of CTSC programs hails from across the globe – Eastern Europe (Lithuania, Russia, Poland), Southeast Asia (Vietnam, China, Thailand), South America (Brazil, Guyana, Columbia, Ecuador), Central America (Panama, El Salvador, Costa Rica), and the Caribbean (Dominican Republic, Jamaica, Puerto Rico).



# A New Hub of Scientific Discovery Located on E9: The Glimcher Laboratory



Left, front row:  
Chen Tan (Res. Assistant),  
Sebila Kratovac  
(Res. Assistant),  
Sarah Bettigole  
(Graduate student),  
Yeon-Suk Yang  
(Res. Assistant),  
Dr. Laurie Glimcher (PI),  
Juan R. Cubillos-Ruiz  
(Postdoc fellow),  
Dong Yeon Shin (Res.  
Assistant), Hwanhee Oh  
(Postdoc fellow)

Left, back row:  
Gabriela Martinezbravo  
(visiting Graduate Student),  
Stanley Adoro  
(Postdoc fellow), Xi Chen  
(Postdoc fellow),  
Kwang Hwan Park  
(Visiting fellow),  
Jae-Hyuck Shim  
(Assistant Professor)

Dr. Laurie H. Glimcher, the Stephen and Suzanne Weiss Dean of Weill Cornell Medical College, has brought her own laboratory to Weill Cornell – a brand new hub of scientific discovery located on E-9. The Glimcher Laboratory is housed within 2,371 square feet of space and is equipped with a full spectrum of state-of-the-art equipment. The research focus is on immune and ER stress responses in disease processes, skeletal biology and the study of cancer. Dr. Glimcher currently serves as Principal Investigator on 3 NIH-funded projects.

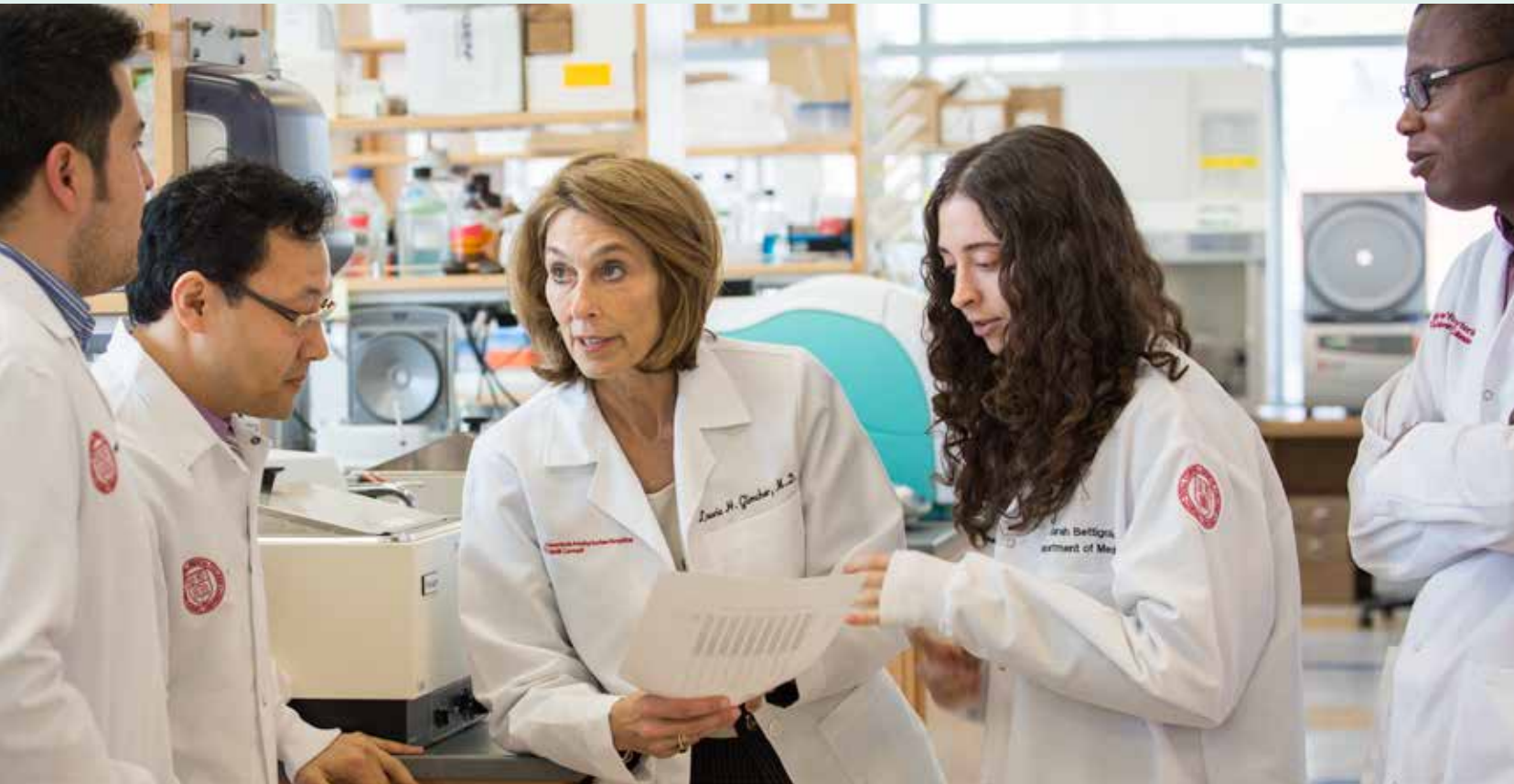
A world-renowned investigator in the fields of immunology and rheumatology and a Professor of Medicine in the Department of Medicine, Dr. Glimcher’s research is distinguished by its innovative biochemical and genetic approaches. While at Harvard, she and her team had achieved landmark advancements regarding the molecular pathways that regulate CD4 T helper cell development and activation, which opened the door to further elucidating the complex regulatory pathways that govern T helper cell responses: these pathways, driven by the T-bet and c-maf transcription factors, are critical to the development of protective immunity and the pathophysiologic immune responses underlying autoimmune diseases. Her team identified a transcription factor XBP1 that is critical in the ER stress response in multiple organs and secretory cells. In the area of skeletal biology, she and her team discovered a novel protein called Schnurri-3, which controls adult bone formation.

Dr. Glimcher’s post-doctoral trainees include Drs. Juan Cubillos-Ruiz, Stanley Adoro, Xi Chen, Alexander Espinosa and Anju Singh. *Dr. Cubillos-Ruiz* is focused on understanding the molecular mechanisms whereby transcription factor XBP1 imprints pro-tumoral functions in leukocytes that infiltrate the microenvironment of solid cancers. He is also studying the role of HIV-induced cellular microRNAs as orchestrators of T Cell depletion and progression to AIDS. *Dr. Adoro* studies the role of the E3 ligase transcription factors (Trim24 and Trim28) on hematopoietic stem cell differentiation and in the molecular pathogenesis of blood cancers. He is also carrying out a study on cytokines implicated in HIV-1 replication and AIDS. *Dr. Chen* is studying the function of the endoplasmic reticulum (ER)

response in the setting of immunity and cancer. These pathways play a role in allowing the survival and growth of tumor cells. *Dr. Espinosa* studies novel inducers of endoplasmic reticulum (ER) stress; he is investigating the mechanisms involved both *in vitro* and *in vivo* using RNAi library screens with Drosophila cells and genetically modified mice. He has generated a novel BAC transgenic mouse model used together with biochemical methods and RNA-sequencing techniques to detect proteins and RNA molecules bound by the important ER stress inducer IRE1. His ultimate goal is to achieve discoveries that will lead to potential new treatments for certain cancers. Anju Singh works on the stem cell biology of the skeletal system. And graduate student, *Sarah Bettigole*, is investigating the molecular mechanisms by which the transcription factor XBP-1 controls Type 2 immune responses in macrophages and eosinophils in disease models.

Plans are underway to expand the number of trainees, and there are two technicians (Chen Tan and Christina Lee) and an Assistant Professor in Pathology, Dr. Jae-Hyuck Shim, working in the lab. Dr. Shim works closely with a consultant and previous Glimcher trainee, Matthew Greenblatt, MD, PhD, from Brigham and Women’s Hospital. Their work focuses on the two key cell types in bone- the bone-forming osteoblast and the bone-resorbing osteoclast. Dysregulation of these two cell lineages underlies the pathogenesis of many human skeletal disorders, such as osteoporosis, rheumatoid arthritis, and Paget’s disease. By utilizing knowledge of certain pathways that are important mediators in the immune system – Schnurri-3, MAPK I (mitogen activated protein kinase), and PI3K (phosphoinositide 3-Kinase) – in collaboration with Dr. Glimcher, they seek to uncover the next generation of targeted therapeutics for the treatment of skeletal disorders.

The Glimcher Laboratory, taking a creative, eclectic approach to research, is one of many labs pioneering a new era in breakthrough research at WCMC/NYP. While trainees benefit from Dr. Glimcher’s mentorship in the laboratory setting, there is great promise on the horizon for better treatments at an opportune time for improving patient care. WCMC/NYP has seen increasing numbers of cancer patients in recent years, and conditions such as osteoporosis or rheumatoid arthritis, are sure to grow as the U.S. population ages. The spark of scientific discovery on E-9 serves as a model for the type of first-rate biomedical research enterprise that is set to find new solutions.





# New Technologies for Patients with Disorders of the Biliary System and Pancreas

Newly recruited to the Division of Gastroenterology and Hepatology, Dr. Michel Kahaleh serves as both Chief of Endoscopy at the Center for Advanced Digestive Care at NYP/WC and as Medical Director of NYP/WC's pancreas program. Since his arrival, there has been a 175% increase in advanced endoscopic interventional procedures and the first-ever pancreas program at NYP/WC has been launched.

In the advanced endoscopy suite, 2012 was a productive year for Dr. Kahaleh and team, which includes Dr. Reem Sharaiha, Dr. Brian Turner, Dr. Monica Gaidhane, Andrea Benvenuto, NP, Jennifer Millmann, RN, Armeen Jamal-Kabani, NP, and Mary Cassai, RN. The team has swiftly ushered in state-of-the-art technologies that are transforming the diagnosis and treatment of disorders of the biliary tract (bile ducts, gallbladder, and associated structures) and of the pancreas – both benign and cancerous. Their efforts focus on earlier diagnosis of GI (gastrointestinal) cancer and the implementation of minimally invasive techniques that can spare a patient from undergoing major surgery.

## ***A new space age probe and a self-expanding stent are improving patient care...***

Confocal endomicroscopy, involving a tiny space age probe (a microscope), has proven to be an illuminating tool in the Kahaleh team's arsenal. It can access previously hard-to-reach locations deep within the human body and provide real-time imaging (visualized on a screen) of blood vessels, mucosal structures, and epithelial tissues for precise diagnosis. Dr. Kahaleh uses a device to thread the tiny microscope through the narrow passages of the bile ducts that connect the liver to the small intestines. As the microscope is employed, the images are visualized on a large screen for thorough examination. Having used confocal endomicroscopy successfully for bile ducts, Dr. Kahaleh is now one of only a handful of doctors in the United States using this same technology for exploration of the pancreatic duct. This advance is significant, as it is allowing for earlier diagnosis of pancreatic cancer – a lethal cancer that has been notoriously difficult to uncover early.

## ***It may be benign but it could be life-threatening...***

There are also conditions – even though benign – that can actually be life-threatening, such as benign biliary strictures. When working properly, bile ducts within the biliary system serve a vital function in the human body. They aid in digestion by transporting bile, secreted by the liver, to the small intestine. These biliary strictures occur due to inflammatory disease, the passing of gallstones, or even a tumor. The blockages can cause pain and problems that may lead to jaundice, cirrhosis, and other conditions. Confocal endomicroscopy has enabled the team to locate these benign biliary strictures much more easily than in the past. They are also using it for detection of cancer – as biliary strictures may sometimes be cancerous.

Currently, most medical institutions use the old model of testing biliary strictures by using a small brush to scrape for cells which are then biopsied to see if they are benign or cancerous. "We are missing 20 to 30 percent of bile duct cancer, or other tumors, in this way," notes Dr. Kahaleh, "and that is unacceptable. If a tumor is found in the bile duct, it *can* be removed and a replacement can be fashioned out of the bowel. However, this requires a big operation for the patient. We would not want to undergo this type of operation unless absolutely necessary. That is why, by ruling out cancer as soon as possible in real-time using confocal endomicroscopy, we could hopefully reserve major surgery to patients who really need it. That would be a phenomenal advance in patient care."

With state-of-the-art technology in place for precise diagnosis, the team is also making progress in terms of treatment. In a multicenter analysis they have used a metal stent that is fully covered and self-expanding for the treatment of benign biliary strictures. The multicenter trial examined 133 patients from six medical centers: stents were implanted, removed after several months without complication, and resolution of strictures was found at high rates. The fully covered, self-expanding stent (FCSEMS) – representing a minimally invasive technique at its best – is a welcome advance from previous invasive surgery that has been associated with complications and mortality. The results of the multicenter

trial were published in the *Journal of Clinical Gastroenterology*, and the research paper's title posed the question: "Time to revisit our therapeutic options?"

"Benign biliary strictures can be managed and resolved with the new fully covered stents with flared ends in most cases, except patients with liver transplant," explains Dr. Kahaleh. "Our study findings are similar to the recent European study results in patients overseas who received these same metal stents."

## ***Pancreatic pseudocysts treated with a new high-tech kit...***

Yet another advancement – this one related to the pancreas – was first reported by the team in *Endoscopic Ultrasound*. In their initial research, they had discovered that a novel kit using an AXIOS stent delivery system (via ultrasonography EUS-guided access) showed promise as a treatment for the drainage and rapid decompression of pancreatic pseudocysts. Pancreatic pseudocysts develop in 10-20% of patients who have acute pancreatitis and they must be drained if they cause symptoms or complications; for example, infection or abdominal pain. Drainage of pancreatic pseudocysts has been known to be

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procedures**

technically challenging, time consuming, and limited in scope. Recently, the team evaluated the use of the novel kit in patients, finding that the kit's new metal stent is better at draining pancreatic pseudocysts than with plastic stents; this is because of its wider width, among other factors. Their recent data was published in *Endoscopic Ultrasound*.

Dr. Kahaleh and colleagues have produced in the last year 16 articles in peer-reviewed journals; 8 abstracts at international meetings; an ASGE planning grant and several industrial grants; an international registry of patients for use in multicenter trials; and a newly created live conference featuring innovations in gastroenterology. Held annually, the live conference hosts international faculty, presents live-case demonstrations streamed to the internet (NYP/WC), and holds hands-on workshops using simulation devices.

The launch of this new conference represents the highest levels of technological proficiency as exemplified by the advanced endoscopy suite at NYP/WC. As Dr. Kahaleh and colleagues share their emerging discoveries by opening new avenues of communication and training, results are certain to drive future frontiers in GI research and patient care.



Dr. Kahaleh (far left) with colleagues in an endoscopy suite.



# Suthanthiran Laboratory: A Model of Progress in Precision Medicine

...Breakthrough Tests for Kidney Transplant Patients Makes Monitoring Easier



“In the end, **we all work together** for the benefit of our patients – the real heroes of the story.”

*Dr. Suthanthiran*

On the heels of a breakthrough noninvasive test for kidney transplant patients, Dr. Manikkam Suthanthiran had just returned from a guest speakership at the first-ever nephrology conference held in Qatar and reported in *The Peninsula*, a Qatar newspaper featuring “local news with a global vision.” Invented in the Suthanthiran Laboratory, the breakthrough test marks the first sequencing of a human kidney allograft (a transplanted kidney organ) for the expression of microRNAs. The microRNAs are recently discovered small gene-messengers with “big effects” on many vital processes; one microRNA can control the levels of hundreds of other genes and proteins. The new test is one of many advancements accrued by the Suthanthiran Laboratory over the past 35 years. The nephrology conference held in Qatar reflects the impact of their work on the world stage.

“Never listen to anyone when they tell you it can’t be done,” says Dr. Suthanthiran. This is Dr. Suthanthiran’s motto on research, adopted early in his career while training at Harvard with Drs. John Merrill and Joseph Murray, who, with Dr. J. Hartwell Harrison, performed the first kidney transplant in 1954. “Their team had heard many times that a kidney transplant could never be achieved, but they did it using identical twins. Today, transplantation as a treatment is one of the great success stories, one of the medical miracles of our time. The transplant itself, however, is not the end of the story.”

Each year, more than 90,000 people – a number which has doubled over the past decade – wait on a list in hope of receiving a life-saving kidney. They may wait years, depending on factors such as availability of a kidney (from a living or deceased donor) and blood type match. Approximately 4,500 people die every year while waiting for a kidney transplant. It may sound startling, but even when a kidney is located and a transplant is performed, it will invariably fail. This happens through an immune process, either within a few minutes after the transplant or over time (up to 50 years).

“To achieve a 100% success rate following transplantation, to achieve tolerance of the transplanted organ, that is our primary goal – because when tolerance is achieved, a transplanted organ truly brings the gift of life,” says Dr. Suthanthiran. “All kidney transplants will have fibrosis ultimately. We have found this out after the fact when the fibrosis has already been established. But with our new test, now we think we can identify the fibrosis before it is fully established and we can prevent it. We now have an opportunity to manage transplant patients in a more precise, individualized fashion. This is good news since it moves us from the current one-size-fits-all drug treatment model to a much more personalized treatment plan. Right now, everyone gets a standard drug regime that is very imprecise, and we know that different patients have very different susceptibilities to immunosuppressive drugs used after transplantation. These are powerful drugs that can have life-threatening side effects. If we give too much of a drug, the patient could develop infection or cancer. If we give too little, they develop rejection of the transplanted organ. Now we can better monitor and adjust treatment. The Food and Drug Administration (FDA) approves immunosuppressive drugs based on their ability to deal with acute rejection of the organ.”



"Ultimately, we think that with this higher level of precision, we can prevent native kidney disease, such as diabetic nephropathy that occurs with diabetes and requires dialysis. So, the progress we have made with this new test transcends transplantation, as it holds much broader implications for the kidney."

Another plus, the novel test uses urine, rather than an invasive biopsy. "For a hypertension patient, you measure their blood pressure with a cuff. For a diabetic patient, you measure their blood glucose levels, and now we can monitor kidney transplant patients using urine samples rather than an invasive biopsy and make treatment patient specific," explains Dr. Suthanthiran. "You cannot carry out invasive biopsies monthly to see what's going on with a kidney, which is a very dynamic process. With urine, we can test monthly, or even weekly, making the monitoring process much easier for the patient. A non-invasive urine test is a good substitute for allograft needle biopsy and could be done repeatedly without any inconvenience to the patient. It's easier and safer."

In a first of its kind study, the test, after being devised in the Suthanthiran Lab, was moved to a multicenter trial supported by the National Institutes of Health involving five medical centers (Weill Cornell, University of Pennsylvania, Columbia University, Northwestern, University of Wisconsin – Madison). It was a blinded study, meaning the Suthanthiran team did not know the status of the patients. Assessing urine samples from about 500 kidney transplant patients, the team used the polymerase chain reaction (PCR) assay to process and measure for 10 different genes to detect the status of the kidney transplant. Their results were then sent to the NIH statistical core for further analysis. There are hundreds of genes that could be analyzed, but Dr. Suthanthiran notes, "We are always looking for the most parsimonious model; for example, we know that there are 3 genes that will predict rejection to a very high level and a 4-gene signature informative of fibrosis. Minimizing the number of genes that we test for is just more practical and helps to give us a clearer path towards diagnosis and use in the clinic."

Along the way, the Suthanthiran team heard that it would never be possible to isolate good quality messenger RNA from urine to do a gene expression test. Not only did the Suthanthiran Lab prove the urine test could be done, providing a diagnostic signature for patients at risk for acute organ rejection, the results from the Weill Cornell study have been published in *The New England Journal of Medicine* (2001 and 2005), and the land mark multicenter study will soon be published in the *The New England Journal of Medicine*. The studies on noninvasive diagnosis of fibrosis and microRNAs were published in *Transplantation*, the official journal of the International Society of Transplantation.



NYP/WC established a kidney transplantation program in 1963, the first in the tri-state area, and as of 2012, 4,000 transplantations have been completed (50% with living donors, 50% with deceased donors). Survival stats are 96% at the first year post-transplant, and 93% at 3 years. In 1977, Dr. Suthanthiran was recruited to NYP/WC to set up the medical center's first immunology lab. Today, the Suthanthiran Lab, known as the WCMC Gene Expression Monitoring (GEM) Lab, has 17 members, many of whom have been with the lab since its start. The lab has enjoyed unbroken NIH-funding, recruiting some of the finest researchers and staff from around the world. During 2012 alone, the laboratory had 7 NIH-funded projects ongoing.

As the future brings a switch from known therapies to new and experimental therapies, Dr. Suthanthiran believes that there can be no divisions between the fields needed for continued progress – medicine, surgery, pathology, immunology, and molecular biology. He and his team believe that three major challenges remain: Maximize Longevity of the Transplanted Kidney; Minimize Complications of Immunosuppressive Drug Therapy; and Promote Personalized Drug Treatment Plans.

## Elder Abuse Cannot be Treated in a Silo: Financial Abuse on the Rise



Dr. Lachs and Risa Breckman, LCSW

According to recent statistics from the National Center on Elder Abuse\* (Bureau of Justice), there were 5,961,568 cases of elder abuse in the year 2010, or 9.5% of the elder population, with the median age of elder abuse victims being 77.9 years.

There are many forms that elder abuse may take, including physical, emotional, and sexual abuse, as well as neglect and financial exploitation. Author of the book, *Treat Me Not My Age*, and co-chief of the Division of Geriatrics and Palliative Care, Dr. Mark Lachs is recognized throughout the United States as a proactive champion for the protection, safety, dignity, and respect of our elder population. Promoting awareness on the topic, he is frequently cited in the news media and often seen on expert panels reporting in Washington, D.C. In October of 2012, he testified in Washington, D.C., providing recommendations to the *Elder Justice Coordinating Council* on HIPPA and IRB issues related to the investigation of elder abuse.

"Elder abuse cannot be treated in a silo," explains Dr. Lachs, as the phenomena of elder abuse traverses many health and social welfare systems. "There are challenges faced by elder abuse researchers under HIPPA and IRB guidelines."

Coinciding with Dr. Lachs' presentation, HHS Secretary Kathleen Sebelius announced that the New York State Office for the Aging received an HSS elder abuse prevention grant. NYCEAC is a key partner on the NYS project. Risa Breckman, LCSW, Deputy Director of NYCEAC states, "Elder justice is fundamentally a human rights issue as freedom from fear and personal safety is at its core. With this funding, we can help

restore health and security to victimized older adults and prevent abuse from happening to others."

The New York State Office for the Aging (NYSOFA; Director, Greg Olsen, appointed by Gov Cuomo) will fund two enhanced multidisciplinary teams (E-MDTs), each with a unique feature of a forensic accountant, to investigate and intervene in cases of financial exploitation of older adults. NYSOFA's project partners include NYS Office of Children and Family Services Bureau of Adult Services (OCFS), Weill Cornell Medical Center's New York City Elder Abuse Center (NYCEAC), and Lifespan of Greater Rochester, Inc. (hereafter partners) and will implement in two New York State pilot sites: Manhattan (New York County) and Finger Lakes region (Monroe, Cayuga, Livingston, Ontario, Seneca, Wayne and Yates counties).

The goal is to pilot an intervention that prevents financial exploitation and elder abuse by bringing together entities with resources and skills to form a coordinated E-MDT that will provide improved and effective systems collaboration and specialized responses, resulting in restored safety and security to older adults. The study will focus on frail adults aged 60 and older residing in the pilot sites, showing financial exploitation signs, and who have high risk elder abuse victimization characteristics.



In 2009, Dr. Lachs was named Director of the first elder abuse center in the New York area, the NYC Elder Abuse Center (NYCEAC), which was the result of a longtime collaboration between several colleagues at Weill Cornell, Cornell University (Ithaca), and many NYC government organizations and community agencies.

In his recent testimony, Dr. Lachs listed six recommendations to the *Elder Justice Coordinating Council* which he believes will empower a dedicated, multidisciplinary group of individuals working to protect a vulnerable population:

- Convene an expert panel of ethicists, clinicians, and other community clinicians to explore and address HIPPA and IRB issues surrounding elder abuse; this instead of placing elder abuse under a general rubric of “domestic violence.”
- Encourage hospital and physician education about current HIPAA provisions regarding Domestic Violence disclosure, as the law is often interpreted and invoked erroneously to the detriment of victims.
- Encourage research in several areas with a focus on decision-making by protective service workers, while developing methods and techniques for accessing victims and protecting them to the greatest extent possible *while permitting their participation in elder abuse research*.
- Encourage IRBs be composed of members with research and clinical experience in domestic violence generally and elder abuse specifically.
- Provide guidance to the growing number of elder abuse teams multidisciplinary teams on how they may (a) Serve victims in an interdisciplinary fashion while maintaining HIPAA compliance; (b) Participate in elder abuse intervention research (and refer clients to such research).
- Advocate for a national voice and national leadership in the field at the federal level, so that these and other priorities be effectively implemented. The absence of a unified front in this regard is, ironically, an ageist state of affairs.

“Elder justice is **fundamentally a human rights issue as freedom** from fear and personal safety is at its core. With this funding, we can help restore health and security to victimized older adults and prevent abuse from happening to others.”

## DOM Strategic Plan Successfully Advances Quality Improvement in Patient Care

During 2012, Dr. Naina Sinha Gregory spearheaded one of many successful quality improvement projects proposed within the *DOM Strategic Plan*. Her particular project addressed diabetes. It is estimated that one-third of hospitalized patients have diabetes, or elevated blood glucose. Unfortunately, poor glucose control increases the risk for complications, including infection, in this group of patients. Optimizing glucose control, therefore, has become a priority. The question that Dr. Gregory’s project posed was: Can a computer order set improve control of diabetes for hospitalized patients? Her project found an answer, as she explains: “We were able to show that using a computer-based insulin order set significantly decreased the rate of low blood sugar (or hypoglycemia). This is an important patient safety issue as hypoglycemia is associated with negative outcomes including seizure, stroke or death.” Naina Sinha Gregory, MD is an Assistant Professor of Clinical Medicine in the Division of Endocrinology, Diabetes, and Metabolism.

It is estimated that **one-third of hospitalized patients** have diabetes, or elevated blood glucose.

# New Leadership Appointments



**David J. Christini, PhD**  
Vice Chair for Basic Research

Dr. David J. Christini has been appointed to Vice Chair for Basic Research, a role in which he is advancing the department’s mission in basic research, as well as the parent institutions of Weill Cornell Medical College and NewYork-Presbyterian Hospital. Dr. Christini received his PhD in Biomedical Engineering from Boston University, and joined our faculty after completing a postdoctoral fellowship in cardiac electrophysiology. He was promoted to Professor of Medicine (with tenure) in 2010, with secondary appointments in Physiology and Biophysics, Computational Biomedicine, and Biomedical Engineering at the University. Since 2009, he has served as Director of Basic Cardiovascular Research in the Greenberg Division of Cardiology. His research group, funded by the NIH, has been a leader in our understanding of cardiac electrophysiological dynamics from the cellular to the organ level, using experimental and computational approaches to study the mechanisms of arrhythmia initiation and in developing new arrhythmia therapies.

**Joseph T. Cooke, MD**  
Chief of the Division of Pulmonary and Critical Care Medicine

Dr. Joseph T. Cooke has been appointed to Chief of the Division of Pulmonary and Critical Care Medicine. He is also the Chief Quality and Patient Safety Officer of the Weill Cornell Physician Organization at Weill Cornell Medical College, and an Associate Professor of Clinical Medicine and Public Health. A graduate of the State University of New York Downstate, he completed residency and fellowship training at NYP-Weill Cornell, where he was also a Chief Medical Resident in 1990. He has been a full time faculty member of the Physician Organization since then. Throughout his career he has served as the MICU (Medical Intensive Care Unit) Director; Medical Director of Respiratory Therapy; and Director of the Remote ICU trial. He served as Chairman of the GNYHA Critical Care Leadership Network, and he continues as a member of the Medical Advisory Board for the New York Organ Donor Network. Annually listed as one of the best doctors in the Metropolitan area, he is the recipient of numerous teaching and leadership awards, and was recognized nationally in 2008 with the HRSA/CMS Medal of Honor for being a regional champion in Organ Donation.





# New Leadership Appointments

**Barbara L. Hempstead, MD, PhD**  
Associate Dean for Faculty Development

Dr. Barbara L. Hempstead has been appointed to Associate Dean for Faculty Development in the newly established Office of Faculty Development at Weill Cornell Medical College. In this role, Dr. Hempstead assists in the organization of departmental mentorship and leadership programs that form the cornerstone of successful academic careers through all stages of a career in medicine. An internationally-recognized physician-scientist and The O. Wayne Isom Professor of Medicine, Dr. Hempstead has dedicated her career to mentorship, while working with more than 30 undergraduate and graduate students, postdoctoral fellows and junior faculty in her laboratory over the years. She received her bachelor's degree from Tufts University and her medical degree, as well as a PhD in cellular biology, from Washington University School of Medicine's Medical Scientist Training Program. She completed her training at NYP/Weill Cornell in internal medicine and hematology and medical oncology and served previously as the Co-chief of the Division of Hematology and Medical Oncology. She is a member of the American Physicians, a past recipient of the Burroughs Wellcome Clinical Scientist Award in Translational Research, and a past chair of the Gordon Research Conference on Neurotrophic Factors. Over the last two decades, her laboratory has made major advancements in defining the biological actions of growth factors, called neurotrophins. While these factors have been extensively studied in the brain, where they promote neuronal survival and modulate memory formation, her laboratory identified important actions in the injured vasculature, where they can induce new blood vessel growth. In addition, her laboratory has identified unexpected activities of precursor forms of neurotrophins in promoting cell death and impairing brain function. These studies have clinical implications in acute neuronal injury, neurodegenerative disease, in complex behaviors of anxiety and depression, and in modulating the response to vascular injury.



**John P. Leonard, MD**  
Vice Chair for Clinical Research

Dr. John P. Leonard has been appointed to Vice Chair of Clinical Research in the Department of Medicine, a role in which he is advancing the broad mission of the department, as well as the parent institutions of Weill Cornell Medical College and NewYork-Presbyterian Hospital. He has also been appointed to Associate Dean of Clinical Research at WCMC. He serves as Chief of the Lymphoma/Myeloma Service and as Associate Director for Clinical Research of the Weill Cornell Cancer Center. The Richard T. Silver Distinguished Professor of Hematology and Medical Oncology, Dr. Leonard is an innovative, internationally recognized clinical investigator in the field of hematological malignancies. He is a pioneer of monoclonal antibody based therapies and leads major clinical trials funded by the NIH and conducted through the Cancer and Leukemia Group B (CALGB) of the National Cancer Institute. During the past two years he has spearheaded innovative initiatives in the Department of Medicine to facilitate cutting edge patient-oriented research.



# Honors and Awards



RESEARCH AWARDS

The Department of Medicine Annual 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.

Winner

Dr. Himisha Beltran  
*Topic:* Understanding Disease Heterogeneity in Advanced Prostate Cancer and Identification of New Drug Targets Using Next Generation DNA Sequencing  
Division: Hematology and Medical Oncology

Runner-Up

Dr. Kyu Y. Rhee  
*Topic:* A Chemically Revised View of Lehmann’s Magic Bullet: Implications for Rational Anti-Infectives Development  
Division: Infectious Diseases

Runner-Up

Dr. Thangamani Muthukumar  
*Topic:* Micro RNA Deep Sequencing of Human Kidney Allograft Fibrosis  
Division: Nephrology and Hypertension



Dr. Thangamani Muthukumar

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.

Winner

Dr. Aaron Viny  
*Topic:* MICA Polymorphism Identified by Whole Genome Array Associated with NKG2D-Mediated Cytotoxicity in T-Cell Large Granular Lymphocyte Leukemia

Second Place

Dr. Neha Mehta-Shah  
*Topic:* Bexarotene is Active Against Subcutaneous Panniculitis-Like T-Cell Lymphoma in Adult and Pediatric Populations

Runners Up

Dr. Daneng Li  
*Topic:* Pre-Operative Geriatric Assessment and Surgical Outcomes in Older Women With Gynecological Cancer

Dr. Eugene Licht  
*Topic:* The Role of Lactulose in the Prevention of Clostridium Difficile Diarrhea

The Department of Medicine Annual Fellows Research Award

Initiated in 2002, this award is presented annually to fellows within the Department of Medicine who have presented outstanding research.

Winner

Dr. Selin Somersan-Karakaya  
*Topic:* Novel Compounds that Kill Mycobacterium Tuberculosis (Mtb), Identification of *rv2466c* as a Candidate Gene in the Action of these Compounds

Runners-Up

Dr. Konstantinos Charitakis  
*Topic:* A Novel Role for Perinatal Myosin in Cardiac Development

Dr. Jyoti Mathad  
*Topic:* Screening for Mycobacterium Tuberculosis Infection among Pregnant Women: A Comparison of an Interferon-Gamma Release Assay with Tuberculin Skin Testing in Pune, India



2012 TEACHING AWARDS

Senior List  
(voted on by the Weill Cornell medical school’s senior class)

This award was established by the WCMC Class of 1994 to recognize 17 faculty members who have made a commitment to and demonstrated excellence in teaching. Of those 17, the following faculty members were selected from the Department of Medicine.

Dr. Charles L. Bardes

Dr. Salvatore Cilmi

Dr. Byron P. Demopoulos

Dr. Ernie Esquivel

Dr. Erica C. Jones

Dr. Richard Lin

Dr. B. Robert Meyer

Dr. Anthony Ogedegbe

Dr. Mark Pochapin

The Charles L. Bardes MD, Teaching Prize

The prize is awarded annually to a member of the faculty who, in the opinion of the prize committee, has been an outstanding teacher at the Weill Cornell Medical College, demonstrating leadership, dedication and concern for the students.

Dr. Ernie Esquivel

The Richard A. Herrmann, MD Teaching Award

The award is given to an outstanding teacher in the third year and is chosen by members of the third-year medical school class.

Dr. Richard Lin

Excellence in Teaching Awards

Cathleen Acres, BS, BS, MA  
Medicine, Patients & Society III

Dr. Jeffrey Fisher (Voluntary)  
Medicine, Patients & Society I Office Preceptor

Dr. Oren Friedman  
Advanced Biomedical Science

Dr. Jason Kendler  
Medicine, Patients & Society II

Dr. Herbert Lempel (Voluntary)  
Medicine, Patients, & Society I Office Preceptor

Dr. Shari Midoneck  
Introductory Clerkship

Dr. Dana Spivak  
Primary Care Clerkship

Dr. Suzanne Wenderoth  
Medicine Clerkship

Dr. Cecilia Yoon  
Medicine, Patients & Society I Office Preceptor

Excellence in Teaching (Voluntary Faculty Awards)

Dr. Richard Cohen

Dr. Jeffrey Fisher

Dr. Paul Miskovitz



VISITING PROFESSORS

The Richard T. Silver Visiting Professor  
February 14, 2012

Jerry Spivak, MD  
Johns Hopkins University School of Medicine

The Rogosin Institute Lecture  
April 3, 2012

Myles S. Wolf, MD, MMSc  
University of Miami Miller School of Medicine

The Mark S. Pecker, MD Clinical Master  
May 8, 2012

John S. Sergeant, MD, MACP, MACR  
Vanderbilt University Medical Center

The 2012 Lila A. Wallis Distinguished Visiting  
Professor in Women’s Health  
May 15, 2012

Laurie H. Glimcher, MD  
Weill Cornell Medical College

The SASS Foundation Visiting Professor  
June 19, 2012

Giorgio Trinchieri, MD  
Center for Cancer Research, NCI, NIH

The BH Kean-Boxer Family Foundation Lecture  
in Global Health  
October 9, 2012

Herbert L. DuPont, MD, MACP  
Baylor College of Medicine

The Aaron Feder Visiting Professor  
October 23, 2012

Joseph A. Kovacs, MD  
NIH Clinical Center, National Institutes of Health

The Ralph L. Nachman, MD Distinguished Visiting Professor  
November 13, 2012

Jeffrey I. Weitz, MD  
McMaster University

The Arthur Ashe Endowment-Christopher L. Barley, MD  
Lecture  
December 11, 2012

Myron S. Cohen, MD  
University of North Carolina at Chapel Hill

The Stephen Scheidt, MD Distinguished Visiting Professor  
December 18, 2012

Sanjiv Narayan, MD, PhD  
University of California, San Diego

Endowed Professorships & Chairs

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

Dr. Phyllis August  
Ralph A. Baer Professor of Medical Research

Dr. Carl Blobel (HSS)  
Virginia F. and William R. Salomon Chair in Musculoskeletal  
Research

Dr. Lewis C. Cantley  
Margaret and Herman Sokol Professor in Oncology Research

Dr. Mary E. Charlson  
William T. Foley Distinguished Professor in Medicine

Dr. Mary K. Crow  
Joseph P. Routh Professor of Rheumatic Diseases in Medicine  
Benjamin M. Rosen Chair in Immunology and Inflammation  
Research

Dr. Ronald G. Crystal  
The Bruce Webster Professor of Internal Medicine

Dr. Andrew J. Dannenberg  
Henry R. Erle, MD-Roberts Family Professor of Medicine

Dr. Orli R. Etingin  
Lisa and Sanford B. Ehrenkranz Professor in Women’s Health

Dr. Joseph J. Fins  
E. William Davis, MD Professorship of Medical Ethics

Dr. Richard R. Furman  
Richard A. Stratton Assistant Professorship in Hematology and  
Oncology

Dr. Laurie H. Glimcher  
The Stephen and Suzanne Weiss Dean

Dr. Steven R. Goldring  
Richard L. Menschel Research Chair

Dr. Antonio M. Gotto, Jr.  
Lewis Thomas University Professor

Dr. Barbara L. Hempstead  
O. Wayne Isom Professor of Medicine

Dr. Julianne L. Imperato-McGinley  
The Abby Rockefeller Mauzé Distinguished Professorship in  
Endocrinology in Medicine

Dr. Lionel B. Ivashkiv  
David H. Koch Chair for Arthritis and Tissue Degeneration  
Research

Dr. Ira M. Jacobson  
Vincent Astor Distinguished Professor of Medicine

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

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

Dr. Robert J. Kim  
David S. Blumenthal Assistant Professor of Medicine

Dr. Harvey Klein  
The William S. Paley Professor of Clinical Medicine

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

Dr. John P. Leonard  
Richard T. Silver Distinguished Professor of Hematology and  
Medical Oncology



Dr. Mary Crow

Dr. Bruce B. Lerman  
Hilda Altschul Master Professor of Medicine

Dr. Lia S. Logio  
Herbert J. and Ann L. Siegel Distinguished Professor of  
Medicine

Dr. C. Ronald MacKenzie  
C. Ronald MacKenzie, MD, Chair in Ethics and Medicine

Dr. Tomer M. Mark  
Morton Coleman Assistant Professor in Multiple Myeloma





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

Dr. Shari R. Midoneck  
Ehrenkranz Family/Orli R. Etingin, MD Associate Professor in  
Women’s Health

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

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



Dr. M. Carry Reid

Dr. Stephen A. Paget  
Stephen A. Paget, MD, Chair in Rheumatology

Dr. Alessandra B. Pernis  
Peter Jay Sharp Chair in Lupus Research

Dr. R. A. Rees Pritchett  
Louis & Gertrude Feil Professor of Clinical Medicine

Dr. M. Carry Reid  
Irving Sherwood Wright Professor in Geriatrics and Gerontology

Dr. Brendan M. Reilly  
Gladys and Roland Harriman Professor of Medicine

Dr. Isadore Rosenfeld  
The Ida and Theo Rossi Distinguished Professor of Clinical  
Medicine

Dr. Jane E. Salmon (HSS)  
Collette Kean Research Chair

Dr. Andrew I. Schafer  
The E. Hugh Luckey Distinguished Professor of Medicine

Dr. Ellen J. Scherl  
Jill Roberts Associate Professor of Inflammatory Bowel Disease

Dr. Sergio Schwartzman  
Franchellie M. Cadwell Chair

Dr. Eugenia L. Siegler  
Mason Adams Professor of Geriatric Medicine

Dr. Kendall A. Smith  
Rochelle Belfer Professor in Medicine

Dr. Charles Steinberg  
Howard and Carol Holtzmann Professor in Clinical Medicine

Dr. Kotha Subbaramaiah  
Jack Fishman Professor of Cancer Prevention

Dr. Manikkam Suthanthiran  
Stanton Griffis Distinguished Professor of Medicine

Dr. Alan M. Weinstein  
Thomas H. Meikle, Jr. Professor of Medical Education

Dr. Marc E. Weksler  
The Irving Sherwood Wright Professor of Geriatrics

Clinical Scholars

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

Dr. Paul Basciano  
Nan and Stephen Swid Research Scholar

Dr. Brian P. Bosworth  
Anne and Ken Estabrook Clinical Scholar in  
Gastroenterology

Dr. Carla Boutin-Foster  
Nanette Laitman Clinical Scholar in Public Health/  
Community Health

Dr. Leandro Cerchietti  
Raymond and Beverly Sackler Research Scholar

Dr. Ben-Gary Harvey  
James P. Smith Clinical Scholar Award (through July 2012)

Dr. James E. Ip  
Bruce B. Lerman Clinical Scholar

Dr. Elizabeth L. Jacobson  
Bonnie Johnson Sacerdote Clinical Scholar in Women’s  
Health

Dr. Robert J. Kaner  
James P. Smith M.D. Scholar

Dr. Laura Kirkman  
William Randolph Hearst Foundation Clinical Scholar in  
Microbiology & Infectious Diseases

Dr. Fay Yu-Huei Lin  
Abby Joseph Cohen Clinical Scholar

Dr. Louis Aronne



Dr. Gail Roboz

Dr. Christopher Liu  
Michael Wolk Heart Foundation Clinical Scholar Award in  
Cardiology

Dr. Veronica M. LoFaso  
Roland Balay Clinical Scholar

Dr. Bassem M. Masri  
Helen and Robert Appel Clinical Scholar

Dr. Allyson J. Ocean  
Anne Moore M.D. Clinical Scholar in Hematology-Oncology

Dr. M. Cary Reid, Jr.  
Joachim Silbermann Family Clinical Scholar in Geriatric  
Palliative Care

Dr. Kyu Young Rhee  
William Randolph Hearst Foundation Clinical Scholar in  
Microbiology & Infectious Diseases

Dr. Ellen K. Ritchie  
Madoff Family Clinical Scholar in Hematology-Oncology

Dr. Bryan J. Schneider  
Madeline and Stephen Anbinder Clinical Scholar in  
Hematology/Oncology

Dr. Felice Schnoll-Sussman (through March 31, 2012)  
Linda Horowitz Cancer Research Foundation Clinical Scholar in  
Gastroenterology



# New York Magazine (Best Doctors) & Castle Connolly

## ALLERGY

Dr. Daniel Burton\*  
Dr. Gillian Shepherd\*\*

## CARDIAC ELECTROPHYSIOLOGY

Dr. Bruce Lerman\*\*  
Dr. Steven Markowitz\*  
Dr. Miguel Valderrabano (Texas Methodist)\*

## CARDIOVASCULAR DISEASE

Dr. Holly Andersen\*\*  
Dr. James Blake \*  
Dr. David Blumenthal\*\*  
Dr. Adam Deutsch\*  
Dr. Richard Devereux\*  
Dr. Richard Fuchs\*  
Dr. Harvey Goldberg\*  
Dr. Antonio Gotto, Jr.\*  
Dr. Evelyn Horn\*\*  
Dr. Lawrence Inra\*\*  
Dr. Matteethra C. Jacob (Texas Methodist) \*  
Dr. Mazen Kamen\*  
Dr. Paul Kligfield\*  
Dr. Karla M. Kurrelmeyer (Texas Methodist)\*  
Dr. Eliot Lazar\*  
Dr. John J. Mahmarian (Texas Methodist)\*  
Dr. Bassem Masri\*  
Dr. David Miller\*  
Dr. Richard Mueller \*  
Dr. Sherif F. Nagueh (Texas Methodist)\*  
Dr. Martin Post\*  
Dr. Craig M. Pratt (Texas Methodist)\*  
Dr. Miguel A. Quinones (Texas Methodist)\*  
Dr. Howard S. Rubin (Texas Methodist)\*  
Dr. Richard Steingart (MSKCC)\*  
Dr. Theodore Tyberg\*  
Dr. Michael Wolk\*  
Dr. William A. Zoghbi (Texas Methodist)\*

## INTERVENTIONAL CARDIOLOGY

Dr. Neal Kleiman (Texas Methodist)\*

## ENDOCRINOLOGY, DIABETES, AND METABOLISM

Dr. Richard Bockman (HSS)\*\*  
Dr. David Brillon\*\*  
Dr. Willa Hseuh (Texas Methodist)\*  
Dr. Barry Klyde\*  
Dr. Richard Robbins (Texas Methodist)\*  
Dr. R. Michael Tuttle (MSKCC)\*\*  
Dr. Kathleen L. Wyne (Texas Methodist)\*

## GASTROENTEROLOGY

Dr. Paul Basuk\*  
Dr. Robert S. Brown, Jr. \*\*  
Dr. Michael Cantor\*  
Dr. Bradley Connor\*  
Dr. Robert Cooper\*  
Dr. Gulchin Ergun (Texas Methodist)\*  
Dr. Hans Gerdes (MSKCC)\*\*  
Dr. Howard Goldin\*  
Dr. Ira Jacobson\*\*  
Dr. Michel Kahaleh\*  
Dr. Robert Kurtz\*\* (MSKCC)  
Dr. Arnon Lambroza\*  
Dr. Arnold Markowitz (MSKCC)\*  
Dr. Franklin Marsh\*  
Dr. Paul Miskovitz\*\*  
Dr. Jerry Nagler\*  
Dr. Ian Sachs (Texas Methodist)\*  
Dr. Ellen Scherl\*\*  
Dr. Moshe Shike\*  
Dr. Michael J. Schmerin \*  
Dr. Meyer N. Solny \*

## GERIATRIC MEDICINE

Dr. Ronald Adelman\*  
Dr. Beatriz Korc-Grodzicki (MSKCC)\*  
Dr. Mark Lachs\*\*  
Dr. Bharathi Raman\*  
Dr. Eugenia Siegler\*  
Dr. George E. Taffet (Texas Methodist)\*

## HEMATOLOGY

Dr. Hugo R. Castro-Malaspina (MSKCC)\*  
Dr. Harvey Dosik\*  
Dr. John Leonard\*  
Dr. Peter Maslak (MSKCC)\*  
Dr. John J. McCarthy (Texas Methodist)\*  
Dr. Gerald Soff (MSKCC)\*  
Dr. Martin Tallman (MSKCC)\*\*  
Dr. David Wolf\*

## INFECTIOUS DISEASE

Dr. Barry Brause (HSS)\*\*  
Dr. Arthur Brown (MSKCC)\*  
Dr. Ashley Drews (Texas Methodist)\*  
Dr. Victor Fainstein (Texas Methodist)\*  
Dr. Marshall Glesby\*  
Dr. Barry Hartman\*\*  
Dr. David Helfgott\*  
Dr. Jonathan Jacobs\*  
Dr. Henry Murray\*  
Dr. Kent Sepkowitz (MSKCC)\*\*  
Dr. Paul Smith (HSS)\*  
Dr. Rosemary Soave\*

## INTERNAL MEDICINE

Dr. Louis Aronne\*  
Dr. Christopher Barley\*\*  
Dr. Thomas Baxter (Texas Methodist)\*  
Dr. Richard Cohen\*\*  
Dr. Symra Cohn\*  
Dr. Ward Cunningham-Rundles\*  
Dr. John F. Eichelberger (Texas Methodist)\*  
Dr. Orli Etingin\*\*  
Dr. Laura Fisher\*  
Dr. Flavia Golden\*  
Dr. Daniel Goldin\*  
Dr. Catherine Hart\*  
Dr. Richard A. Jackson (Texas Methodist)\*  
Dr. Margaret Lewin\*\*  
Dr. Samuel Mann\*  
Dr. Jennifer Meyer (Texas Methodist)\*  
Dr. Deena Nelson\*  
Dr. Mark Pecker\*  
Dr. Charles R. Steinberg\*

## MEDICAL ONCOLOGY

Dr. Carol A. Aghajanian (MSKCC)\*  
Dr. Dean Bajorin (MSKCC)\*  
Dr. Ellin Berman (MSKCC)\*  
Dr. George Bosl (MSKCC)\*\*  
Dr. Jenny Chang (Texas Methodist)\*  
Dr. Paul B. Chapman (MSKCC)\*\*  
Dr. Morton Coleman\*\*  
Dr. Julian Decter\*  
Dr. Maura N. Dickler (MSKCC)\*  
Dr. Darren Feldman (MSKCC)\*  
Dr. Eric J. Feldman\*  
Dr. Monica N. Fornier (MSKCC)\*  
Dr. Mitchell L. Gaynor (Voluntary)\*  
Dr. Subhash Gulati (Voluntary)\*  
Dr. Hani Hassoun (MSKCC)\*  
Dr. Steven Horwitz (MSKCC)\*  
Dr. Clifford Hudis (MSKCC)\*\*  
Dr. David Ilson (MSKCC)\*  
Dr. Ann A. Jakubowski (MSKCC)\*  
Dr. Joseph Jurcic (MSKCC)\*  
Dr. David Kelsen (MSKCC)\*\*  
Dr. Nancy E. Kemeny (MSKCC)\*\*  
Dr. Mark Kris (MSKCC)\*\*  
Dr. Lee M. Krug (MSKCC)\*  
Dr. Anne Moore\*\*  
Dr. Craig H. Moskowitz (MSKCC)\*  
Dr. Robert Motzer (MSKCC)\*  
Dr. David Nanus\*  
Dr. Larry Norton (MSKCC)\*\*  
Dr. Kenneth Offit (MSKCC)\*  
Dr. Eileen O'Reilly (MSKCC)\*\*  
Dr. Mark Pasmantier\*\*

Dr. David Pfister (MSKCC)\*\*  
Dr. Carol S. Portlock (MSKCC)\*  
Dr. Naiyer Rizvi (MSKCC)\*  
Dr. Gail Roboz\*  
Dr. Mark Robson (MSKCC)\*  
Dr. Joseph Ruggiero\*  
Dr. Paul J. Sabbatini (MSKCC)\*\*  
Dr. Leonard Saltz (MSKCC)\*\*  
Dr. David Scheinberg (MSKCC)\*  
Dr. Howard Scher (MSKCC)\*\*  
Dr. Nancy Sklarin (MSKCC)\*  
Dr. Susan Slovin (MSKCC)\*  
Dr. David Spriggs (MSKCC)\*  
Dr. David Straus (MSKCC)\*  
Dr. Scott Tagawa\*  
Dr. William Tap (MSKCC)\*  
Dr. Linda Vahdat\*  
Dr. Jedd Wolchok (MSKCC)\*  
Dr. Andrew Zelenetz (MSKCC)\*\*

## NEPHROLOGY

Dr. Phyllis August\*\*  
Dr. Jon Blumenfeld (Rogosin)\*\*  
Dr. Raymond Sherman\*

## PULMONARY DISEASE

Dr. Joseph Cooke\*\*  
Dr. Ana C. Krieger \*  
Dr. Daniel Libby\*\*  
Dr. Thomas Nash\*\*  
Dr. Abraham Sanders\*  
Dr. Diane Stover-Pepe (MSKCC)\*\*

## RHEUMATOLOGY (HSS)

Dr. Theodore Fields \*\*  
Dr. Allan Gibofsky\*  
Dr. Susan Goodman\*  
Dr. Steven Magid\*\*  
Dr. Joseph Markenson\*  
Dr. Stephen Paget\*  
Dr. Edward Parrish\*  
Dr. Jane Salmon (HSS)\*\*  
Dr. Sergio Schwartzman\*\*  
Dr. Sandra L. Sessoms (Texas Methodist)\*  
Dr. Harry Spiera (Mount Sinai)\*

\* Castle Connolly \*\* Castle Connolly and New York Magazine

Based on Castle Connolly America’s Top Doctors 12th edition (hard copy edition and on-line); New York Magazine’s Best Doctors of 2012. This information does not reflect Castle Connolly metro listings.



# Society Memberships

## IOM (INSTITUTE OF MEDICINE) OF THE NATIONAL ACADEMY OF SCIENCES (2012)

- Dr. Jeremiah A. Barondess (Emeritus)
- Dr. Joseph J. Fins
- Dr. Laurie H. Glimcher
- Dr. R. Gordon Douglas, Jr. (Emeritus)
- Dr. Antonio M. Gotto, Jr.
- Dr. Ralph L. Nachman
- Dr. Carl F. Nathan
- Dr. Jean W. Pape
- Dr. Andrew I. Schafer
- Dr. David J. Skorton

## ASSOCIATION OF AMERICAN PHYSICIANS (2012)

- Dr. Jeremiah A. Barondess (Emeritus)
- Dr. Morton D. Bogdonoff (Emeritus)
- Dr. Mary E. Charlson
- Dr. Bayard D. Clarkson (MSKCC Affiliate)
- Dr. Ronald G. Crystal
- Dr. Andrew J. Dannenberg
- Dr. R. Gordon Douglas, Jr (Emeritus)
- Dr. James A. Fagin (MSKCC Affiliate)
- Dr. Laurie H. Glimcher
- Dr. Antonio M. Gotto, Jr.
- Dr. Roy M. Gulick
- Dr. Katherine A. Hajjar (secondary appt)
- Dr. Barbara L. Hempstead
- Dr. Jules Hirsch (Rockefeller Affiliate)
- Dr. Alan N. Houghton (MSKCC)
- Dr. Julianne L. Imperato-McGinley
- Dr. Warren D. Johnson, Jr.
- Dr. Attallah Kappas (Rockefeller Affiliate-Emeritus)
- Dr. Ione Kourides (Voluntary)
- Dr. Mary Jeanne Kreek (Rockefeller Affiliate)
- Dr. Aaron J. Marcus (VA NY Harbor Healthcare System Affiliate)
- Dr. Paul A. Marks (MSKCC Affiliate)
- Dr. Henry W. Murray

- Dr. Ralph L. Nachman
- Dr. David M. Nanus
- Dr. Carl Nathan (secondary appt)
- Dr. Eric G. Pamer (MSKCC Affiliate)
- Dr. Marcus M. Reidenberg
- Dr. Neal Rosen (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. Manikkam Suthanthiran
- Dr. Marcel R.M. van den Brink (MSKCC Affiliate)
- Dr. Babette B. Weksler
- Dr. Marc E. Weksler
- Dr. Sidney J. Winawer (MSKCC Affiliate)
- Dr. Alastair J. J. Wood (Courtesy)

## THE AMERICAN SOCIETY FOR CLINICAL INVESTIGATION (2012)

- Dr. John D. Baxter (TMH Affiliate)
- Dr. Richard S. Bockman (HSS Affiliate)
- Dr. Morton D. Bogdonoff (Emeritus)
- Dr. Ralph Carmel (Brooklyn Methodist Affiliate)
- Dr. Bayard D. Clarkson (MSKCC Affiliate)
- Dr. Ronald G. Crystal
- Dr. Andrew Dannenberg
- Dr. R. Gordon Douglas, Jr (Emeritus)
- Dr. James A. Fagin (MSKCC Affiliate)
- Dr. Edward Paul Gelmann (Columbia Affiliate)
- Dr. Michael S. Glickman (MSKCC Affiliate)
- Dr. Laurie H. Glimcher
- Dr. Antonio M. Gotto, Jr.
- Dr. Roy M. Gulick
- Dr. Katharine A. Hajjar (secondary appt)
- Dr. Barbara L. Hempstead
- Dr. Jules Hirsch (Rockefeller Affiliate)
- Dr. Peter R. Holt (Rockefeller Affiliate)

- Dr. Alan N. Houghton (MSKCC Affiliate)
- Dr. James J.-D. Hsieh (MSKCC Affiliate)
- Dr. Katherine C. Hsu (MSKCC Affiliate)
- Dr. Lionel B. Ivashkiv
- Dr. Eric A. Jaffe (Adjunct)
- Dr. Attallah Kappas (Rockefeller Affiliate – Emeritus)
- Dr. Richard N. Kolesnick (MSKCC Affiliate)
- Dr. Ione A. Kourides (Voluntary)
- Dr. Jeffrey C. Laurence
- Dr. John P. Leonard
- Dr. Ross L. Levine (MSKCC Affiliate)
- Dr. Martin Lipkin (Rockefeller Affiliate)
- Dr. Aaron J. Marcus (VA NY Harbor Healthcare System Affiliate)
- Dr. Paul A. Marks (MSKCC Affiliate)
- Dr. Ari M. Melnick
- Dr. Henry W. Murray
- Dr. Ralph L. Nachman
- Dr. David M. Nanus
- Dr. Carl F. Nathan
- Dr. Kenneth Offit (MSKCC Affiliate)
- Dr. Eric G. Pamer (MSKCC Affiliate)
- Dr. Alessandra B. Pernis (HSS Affiliate)
- Dr. David N. Posnett
- Dr. Shahin Rafii
- Dr. Marcus M. Reidenberg
- Dr. Arleen B. Rifkind
- Dr. Michel Sadelain (MSKCC Affiliate)
- Dr. Charles L. Sawyers (MSKCC Affiliate)
- Dr. Andrew I. Schafer
- Dr. David A. Scheinberg (MSKCC Affiliate)
- Dr. Kendall A. Smith
- Dr. David Solit (MSKCC Affiliate)
- Dr. Manikkam Suthanthiran
- Dr. Marcel van den Brink (MSKCC Affiliate)
- Dr. Alan M. Weinstein
- Dr. Babette B. Weksler
- Dr. Marc E. Weksler
- Dr. Alastair J.J. Wood (Courtesy)

## SELECTED INDIVIDUAL HONORS

**Dr. Holly Andersen:** Member, Dartmouth Medical School Board of Overseers

**Dr. Phyllis August:** Member, Task Force on Treatment of Hypertension in Pregnancy; Invited Speaker, American Society of Hypertension Annual Meeting

**Dr. Brian Bosworth:** Fellow, American College of Gastroenterology; Admitted to AGA Academy of Educators

**Dr. David Calfee:** Elected Fellow, Society for Healthcare Epidemiology of America (SHEA); Elected Fellow, Infectious Diseases Society of America (IDSA)

**Dr. Juan Emilio Carillo:** Appointed to the Board of Directors, National Hispanic Medical Association

**Dr. Leandro Cerchietti:** Doris Duke Clinical Scientist Award

**Dr. Mary K. Crow:** Named a Master of the American College of Rheumatology

**Dr. Joseph J. Fins:** Elected Fellow, American Academy of Arts and Sciences; Inducted, Master of the American College of Physicians (MACP); Wesleyan University’s Distinguished Alumnus Award and also elected as *Trustee Emeritus for Life*; Laureate Award from the New York Chapter of the American College of Physicians (ACP)

**Dr. Paraskevi Giannakakou:** Mary Kalopathakes Award from the Hellenic Medical Society of New York

**Dr. Laurie H. Glimcher:** 2012 Ernst W. Bertner Memorial Award from The University of Texas MD Anderson Cancer Center; 2012 William B. Coley Award for Distinguished Research in Basic Immunology from the Cancer Research Institute; Dr. Luis Federico Leloir Prize of International Cooperation in Science, Technology and Innovation (Argentina)

**Dr. Roy Gulick:** Lifetime Achievement Award for invaluable contributions in the field of HIV medicine, medical education and research, 2012 HIV Congress in Mumbai, India; Annual Visiting Professor, Beth Israel-Deaconess/Harvard; HIV Medical Association (HIVMA) Clinical Educator Award, Infectious Diseases Society Association (IDSA)

**Dr. Yariv Houvras:** Elected to the International Thyroid Oncology Group’s Board of Directors

**Dr. Warren Johnson:** Board Member, Foundation Merieux USA; Keynote Speaker, Global Health Day, Yale School of Public Health

**Dr. Robert Kim:** Emerging Faculty Member, American College of Cardiology Foundation



**Dr. Mark Lachs:** Speaker, White House World Elder Abuse Awareness Day (Topic: New York City’s Elder Abuse Center)

**Dr. Meredith Lash-Dardia:** Fellow, American College of Physicians

**Dr. Jeffrey C. Laurence:** The Red Ribbon Foundation Visionary Award

**Dr. John P. Leonard:** Co-Director, American Society of Hematology’s Clinical Research Training Institute

**Dr. Michael Lockshin:** Lifetime Achievement Award, Lupus Foundation of America (National Leadership Award for Lupus Medical Advancement)

**Dr. Lia Logio:** Elected to the Council of the Association of Program Directors of Internal Medicine

**Dr. Cathleen London:** Appointed to the New York State Academy of Family Physicians’ Advocacy Commission

**Dr. Samuel Mann:** *Hypertension and You – Old Drugs, New Drugs, and the Right Drugs for Your High Blood Pressure* (Published by Rowman & Littlefield Publishers, Inc.)

**Dr. Steven Markowitz:** Appointed to the American Heart Association: Cardiac Electrophysiology Clinical Peer Review Study Group

**Dr. Bassem Masri:** Fellow, National Lipid Association

**Dr. Allyson Ocean:** Elected Chairperson, Medical Advisory Board and Board of Directors, Michael’s Mission, Inc.

**Dr. Jean Pape:** Co-chair, French HIV/AIDS Conference

**Dr. Richard Pasternak:** Received the title of “Champions of Heart & Stroke,” American Heart Association, 2012 New York City Heart Ball

**Dr. Jane E. Salmon:** Virginia Kneeland Frantz ’22 Award for Distinguished Women in Medicine, Columbia University College of Physicians and Surgeons Alumni Association

**Dr. Andrew I. Schafer:** Robert H. Williams Distinguished Professor Award from the Association of Professors of Medicine; Elected to the Institute of Medicine (IOM)

**Dr. Ellen Scherl:** Woman of Distinction Award in Medicine (19th Annual), Crohn’s and Colitis Foundation of America; Mentor Recognition Program Honoree, American Medical Association Women Physician’s Congress, AMA House of Delegates

**Dr. Richard T. Silver:** Lifetime Achievement Award, SASS Foundation

**Dr. David Skorton:** Exemplary President, Governmental Relations Award from the Association of Public and Land-grant Universities’ (APLU) Council on Governmental Affairs

**Dr. Kendall A. Smith:** Editor-in-Chief, *Frontiers in Immunology* (open access journal)

**Dr. Manikkam Suthanthiran:** Invited Chair, American Society of Nephrology Program Committee 2012 Annual Meeting

**Dr. Thomas J. Walsh:** Keynote Speaker, Australasian Society for Infectious Diseases 2012 Meeting, Freemantle, Australia; Editorial Advisory Board, *Journal of Infectious Diseases*; Visiting Professor, the National and Kapodistrian University of Athens School of Medicine; Opening Address, 30<sup>th</sup> Annual Meeting of the European Society of Pediatric Infectious Diseases, Thessaloniki, Greece; Elected President of the Medical Mycology Society of New York

**Dr. William A. Zoghbi:** President, American College of Cardiology



# Division Profiles



# Cardiology



**Bruce B. Lerman, MD**  
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. We have assembled internationally renowned programs that 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.

Clinically, our priorities are 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. Our highly sought after fellowship programs now total four. In addition to fellowships for cardiovascular disease, clinical cardiac electrophysiology, and interventional cardiology, we have launched advanced heart failure and transplantation cardiology. Dr. Evelyn Horn will serve as director of this new training program.

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 a majority of our faculty and almost all of 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 cutting-edge interventional and imaging laboratories, to outpatient consultative and ongoing care. Patient care covers all types of heart and vascular diseases, including, but not limited to, arrhythmias, coronary and peripheral arterial disease, valve disease, the Marfan syndrome and inherited heart diseases, as well as heart failure and transplantation cardiology. To allow 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 Electrophysiology Laboratory (Drs. Bruce Lerman, Steven Markowitz, Jim Cheung, Christopher Liu and James Ip) continues expansion of its program in catheter ablation for complex arrhythmias (including atrial fibrillation, atrial tachycardias, and ventricular tachycardias). There was significant growth in clinical activities related to complex rhythm device procedures, such as device lead extraction. In conjunction with the Cardiac Catheterization Laboratory, the Electrophysiology Laboratory has introduced percutaneous closure of the left atrial appendage to prevent strokes in atrial fibrillation. Active research projects include outcomes of catheter ablation for atrial fibrillation; characterization of complex atrial tachycardias; idiopathic ventricular tachycardia; risk stratification for sudden death; the relationship of heart failure and arrhythmias; and long-term outcomes after pacemaker and defibrillator implantation.

Dr. S. Chiu Wong continues his outstanding research, including a multicenter trial begun in 2012 for which he serves as principal investigator. The trials involve two centers in the United States and three in Germany and investigate arterial access site closure following invasive procedures. Dr. Wong is also working on research projects for renal artery denervation for the treatment of resistant hypertension, as well as mitral valve repair for treatment of mitral regurgitation in high risk patients.

Additionally, under the direction of Dr. Wong, the Catheterization Laboratory team (with the Department of Cardiothoracic Surgery) successfully treated over 100 patients with critical aortic stenosis (patients who were considered high risk or “not treatable” by our qualifying surgical colleagues). Additionally, the partnership between the Division of Cardiology and the Department of Cardiothoracic Surgery resulted in the creation of a new Valve Center dedicated to high-impact clinical research and optimization in the delivery of patient care.

Dr. Lerman, Division Chief, continues to serve on the editorial boards of *Circulation*, *Heart Rhythm*, *The Journal of Cardiac Electrophysiology* and *The Journal of Innovations in Cardiac Rhythm Management*. Dr. Steven Markowitz serves on the Electrophysiology Committee, American College of Cardiology, and on the editorial boards of *HeartRhythm* and *Journal of Interventional Cardiac Electrophysiology*.

We welcomed several highly skilled new recruits in 2012 who cover a wide swath of expertise in cardiology. Dr. Rebecca A. Acunce, who completed her residency training at NYP/WC and a fellowship at New York University, joins our faculty as a consultative cardiologist. Dr. James M. Horowitz, a graduate of



Dr. Lerman (third from left) with new recruits: Harsimran Singh, Henry Tran, Rebecca Ascunce, Luke Kim, Rajesh Swaminathan (l to r)

the University of Pennsylvania recently joined our team after his stellar service as Chief Resident with the Department of Medicine’s residency training program in internal medicine. A new NYP-sponsored award has been established in his name, which may be given to any chief resident from any department who demonstrates the shared values of “a collaborative patient-centered approach to patient care on the Weill Cornell campus.” Dr. Harsimran Singh, directs our adult congenital heart disease program and is also an interventional cardiologist. He holds an undergraduate degree from Princeton University and an MD from Yale. Dr. Rajesh V. Swaminathan received his MD from Duke University and completed residency training at Massachusetts General Hospital, Boston. With a research focus on mechanisms of vascular injury and remodeling, he is working in both the outpatient clinic and in the cardiac catheterization laboratory. Dr. Henry A. Tran, bringing expertise in cardiovascular diseases and echocardiography, received his MD from Georgetown University and completed residency training at New York University. The division also gained new recruits from Sound Shore Cardiology Associates, located in New Rochelle and Mamaroneck, thus expanding our patient care reach to the Westchester area. These new recruits are Drs. Richard Charney, Leonard J. Di Re, Paul Gerardi, and David Messinger.

Clinical services achieve superior outcomes in all areas, from cutting-edge interventional and imaging laboratories, to outpatient consultative and ongoing care.





**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.

Dr. Charlson with trainees.

## Clinical Epidemiology and Evaluative Sciences Research

The Division of Clinical Epidemiology and Evaluative Sciences Research draws upon the talents and experience of a multidisciplinary group of faculty based at Weill Cornell Medical College, Cornell University-Ithaca, 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, behavioral science, and health education. 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.

Several related areas of investigation include: studies to improve clinical outcomes; behavioral science research; health disparities research (under the leadership of Dr. Carla Boutin-Foster); research on complex patients with a significant burden of comorbidity; and comparative effectiveness. In order to stimulate and support new clinical, health services, and outcomes research within and outside the Department of Medicine, the division houses consultative services to investigators; e.g., informatics and data management support and training programs in clinical epidemiology and research methodology.

Under the auspices of the CEDREC and SCALE grants, expansion continues in the area of health disparities and community-based research. CEDREC established a new environmental justice core with Drs. Carla Boutin-Foster and Beverly Watkins, PhD, continuing to build on partnerships between Weill Cornell Medical College, Lincoln Hospital and Mental Health Center, Hunter College School of Nursing-City University of New York, and The Center for Healthful Behavior Change at New York University School of Medicine.

SCALE partners with the Northern Manhattan Perinatal Partnership (NMPP), an organization that focuses on improving health conditions, such as diabetes and obesity, in families who reside in Northern Manhattan. In addition to NMPP, several faith-based and community-based organizations in Harlem and the South Bronx have become critical partners in the division's research initiatives on health disparities. Drs. Carla Boutin-Foster and Erica Phillips-Caesar had an article, based on their research through CEDREC and SCALE, published in *The Journal of Immigrant and Minority Health* in October 2012. Dr. Boutin-Foster had a second article published in *The Journal of Immigrant and Minority Health* in December 2012. Dr. Ginger Winston received a NHLBI Minority Investigator Research Supplement under the mentorship of Dr. Mary Charlson, Division Chief, and CEDREC. Dr. Winston is engaged in primary data collection in the SCALE trial to examine relationships between body image dissatisfaction and weight loss; knowledge of the health risks of obesity and weight loss; and social network support and weight loss.



**Mary E. Charlson, MD**  
Chief, Division of Clinical Epidemiology and Evaluative Sciences Research

Executive Director, Center for Complementary and Integrative Medicine

William T. Foley Distinguished Professor of Medicine

Professor of Medicine  
Weill Cornell Medical College

Attending Physician  
NewYork-Presbyterian Hospital



Dr. Charlson, (Executive Director of the Center for Integrative Medicine at Weill Cornell Medical College and William T. Foley Distinguished Professor of Medicine) and Drs. Janey Peterson and Carla Boutin-Foster had three articles published in *JAMA Internal Medicine* (formerly *Archives of Internal Medicine*) in February 2012. Funded by a \$9.5 million grant, the papers detail three, randomized trials revealing that people can use positive affect and self-affirmation to help them make and sustain behavior change. The same intervention was used in all three studies. Patients were encouraged to think of small things in their lives that make them feel good, when they get up in the morning and throughout their day. Patients were asked to use self affirmation to help them overcome obstacles to their plan by recalling moments in their lives they are proud of.

The three-pronged designed study, which simultaneously tested the same intervention for different populations, was a first for National Institutes of Health (NIH) funded research, and began with an award to Weill Cornell Medical College in 2002. This intervention development approach is now more broadly used in the obesity-related behavioral intervention trial (ORBIT) sponsored by the NIH. The findings of the three trials is the basis for SCALE for overweight or obese patients. Dr. Charlson and faculty had two articles which further illuminated the findings of this study, one in the *Journal of Consulting and Clinical Psychology* in September 2012 and another in *BMC Medical Research Methodology* in November 2012.

*Consulting and Clinical Psychology* in September 2012 and another in *BMC Medical Research Methodology* in November 2012.



Dr. Boutin-Foster at SPARC, where she received a SPARC Mentoring Excellence Award.



## Clinical Pharmacology

The Division of Clinical Pharmacology remains actively involved in the World Health Organization (WHO) Essential Medicines program. This important global effort evaluates, updates and publishes a list of about 300 medicines that address the world's major medical problems. The program is designed to advise countries on which drugs should be considered priority purchases when health care resources are limited. Since 1975, the concept of prioritizing the purchase of essential medicines has been accepted in principle by 156 WHO member states. With student help, Dr. Reidenberg submitted, in 2012, a review of statins for children to be discussed at the Expert Committee meeting in 2013.

Dr. Reidenberg is an inventor of a drug to treat some cancers; trials are ongoing. He continues to advise the present sponsor on further development of this drug. He is also an investigator of a study to discover a new drug to reduce fatal arrhythmias in patients with heart attacks. "Notes on Therapeutics" on the Weill Cornell Medical College website continues to receive hundreds of visits at: [http://www.med.cornell.edu/cert/patients/notes\\_on\\_therapeutics.html](http://www.med.cornell.edu/cert/patients/notes_on_therapeutics.html)



**Marcus M. Reidenberg, MD**  
Chief, Division of Clinical Pharmacology

Professor of Pharmacology  
Professor of Medicine  
Professor of Public Health  
Weill Cornell Medical College



Dr. Flomenbaum (second from left) with the Toxicology team.





**Neal E. Flomenbaum, MD**  
Chief, Division of Emergency  
Medicine

Professor of Clinical Medicine  
Weill Cornell Medical College

Medical Director  
Emergency Medical Services  
Emergency Physician-in-Chief  
NewYork-Presbyterian  
Hospital

Of the 85,000 patients treated annually in the NewYork-Presbyterian Weill Cornell Emergency Department (ED), approximately 22,000 are subsequently admitted to inpatient services. In addition, the ED evaluates and stabilizes patients transferred to Weill Cornell from hospitals all over the world.

The Division of Emergency Medicine has been widely acknowledged for starting the first geriatric emergency medicine fellowship training program in 2005, and for opening the first geriatric emergency department in the New York metropolitan area in 2009. We provide state-of-the-art emergency care for all patients 24-hours a day, while teaching NYP/WC residents from every specialty how to provide that care. The NYP/Weill Cornell ED is officially designated as a 911 receiving hospital, a level I trauma center, a stroke center, a spinal cord injury center, and a psychiatric emergency receiving center. We are also the burn center for the City of New York, an accredited chest pain center, and we maintain one of the largest hospital-based ambulance services in the northeast, providing basic, advanced, and critical pediatric and adult prehospital care. NYP\*EMS is completely integrated with our emergency department and hospital care and medical supervision for all NYP EMTs and paramedics is provided by Weill Cornell EM faculty physicians. NYP ambulances operate throughout all five boroughs of NYC, north to Albany, east into Nassau County, and south and west to Central New Jersey. Our extensive disaster preparedness activities utilize the most advanced techniques in biological, chemical, radiation and “Hazmat” decontamination.

Senior Weill Cornell faculty attendings are present in the ED 24/7, working with residents, physician assistants, nurse practitioners, nurses and patient care facilitators in newly expanded state-of-the-art facilities. In recent years, we have raised patient satisfaction scores and reduced ED patient lengths of stay to record levels, despite dramatic increases in the number of annual patient visits and admissions. Since implementation of the EMR in the NYP/WC ED in 2010, we have worked with Hospital IT to monitor, modify and enhance it (as needed) while developing new ways to utilize its potential in furthering patient care and clinical research.

In Geriatric Emergency Medicine, we remain dedicated to anticipating and addressing the specific emergency care issues in this rapidly increasing segment of the population. The Division of Emergency Medicine created a first-of-its kind (non ACGME) Geriatric Emergency Medicine (GEM) Fellowship in 2005, and a state-of-the-art geriatric ED facility (Area C) in 2009. We offer both a one-year clinical

fellowship, and a two-year combination clinical/research fellowship, culminating in a master’s degree in Clinical Investigation from the Weill Cornell Graduate School of Medical Sciences. A collaborative research effort with colleagues from

the University of Toronto began in 2008, resulting in a paper co-authored by Dr. Neal Flomenbaum and published in the *Annals of Emergency Medicine*. Dr. Michael Stern, Co-Director of the fellowship, has authored several textbook chapters; most recently, on orthogeriatrics. He has also updated his innovative GEM curriculum for EM residents. Of the five abstracts submitted to national GEM and geriatric organizations, five were accepted for presentation or publication.

Another innovative pioneering practice is the Medical Toxicology Service, which continues to offer Weill Cornell physicians’ bedside and telephone consultations throughout the hospital for all patients acutely, or potentially poisoned, and those experiencing the effects of chronic overdoses, withdrawal syndromes, medication errors and adverse drug reactions. Since its inception in 2009, the toxicology service has provided over 700 consultations in the adult and pediatric EDs, internal medicine, critical care, neurology, surgery, psychiatry, and pediatric intensive care units and services.

The toxicology group consists of six faculty members: Dr. Flomenbaum, a senior co-author and co-editor of the last eight editions of *Goldfrank’s Toxicologic Emergencies*, and five WC faculty members board certified in both emergency medicine and medical toxicology, Drs. Brenna Farmer, Jane Prosser, Joseph Rella, Zhanna Livshits, and Dr. Rama Rao (director of the toxicology service). Nationally, Dr. Farmer serves as chair of the American College of Medical Toxicology Subcommittee on Pharmacy and Therapeutics, and Dr. Rao serves on the Medical Toxicology Sub-board for the American Board of Emergency Medicine. Regionally, our toxicology attendings work with the teaching faculty at the New York City Poison Control Center and collaborate on educational programs and research with the NYCPCC fellows-in-training and other faculty. At Weill Cornell, we also collaborate with the division of critical care on research involving presentations on drugs of abuse. Dr. Jane Prosser runs a clinical elective in Medical Toxicology at Weill Cornell. All members of our toxicology faculty have contributed to peer review publications and textbook chapters. In addition to direct patient care, the medical toxicology service is helping to enhance medication safety throughout the hospital.

Our unique Wilderness Medicine (WM) Program began in 2006 as a collaborative effort with Cornell Outdoor Education (COE) in Ithaca. It continues to make great strides in medical education, clinical research, and the provision of clinical care under extreme conditions. The WM group creates new courses and experiences for our residents, attending physicians, Weill Cornell medical students and Cornell University undergraduates, and our student electives annually draw participants from all over North America and abroad.

Working with faculty in our Global Emergency Medicine Program, the WM group is developing a training program to better equip humanitarian first-responders with the skills they need to be effective in disaster and crisis situations throughout the world. In the past two years collaborations have also been

initiated with Cornell’s Department of Botany in Ithaca to conduct translational research on botanicals that may be useful medically. We have also begun to explore the feasibility of a post-residency fellowship in wilderness and rural medicine designed, in part, to alleviate the severe physician shortages in rural New York State. The current academic year has been a busy one for the Global Emergency Medicine Program with faculty and residents serving in Tanzania, Iraq and South Sudan.

The faculty currently teaches several post-graduate and CME-credit courses, including the Global Health Emergencies Course – a rigorous two-week educational initiative aimed at training doctors, nurses, and mid-level providers engaged in international work. Attended by over 40 participants from around the world, the course faculty includes leading experts from international NGOs, UN agencies and Cornell, Columbia, Brown, Harvard Universities and UCLA. Dr. Satchit Balsari, Director of the Global EM Program, led a team of over 30 physicians from the US and India to implement a real-time surveillance system in the world’s largest gathering of pilgrims – the Kumbh Mela. Supported by Harvard School of Public Health, the team’s field work was covered by international media; *The New York Times*, *Times of India*, and several television channels. The Program continues its commitment to the Global Health Working Curriculum at WCMC, and supports the Global Health Grand Rounds – a monthly seminar series that has invited heads of state and global health leaders from around the world to address the Weill Cornell community.

The last two months of 2012 became an unprecedented test of our state of preparedness and our surge capacity, when three of the largest Manhattan hospitals suffered severe damage from Hurricane Sandy on October 29 and remained closed beyond the end of the year. In November and December our patient visits increased by 19.8% and our admissions by 4.3%, over the same two-month period to the year before. As the only remaining East Side Level I trauma center from the Battery to the Bronx, our trauma activation cases doubled. Remarkably, though the number of patients arriving by FDNY 911 dispatched ambulances increased by 61%, our ambulance turnaround time increased by less than a minute.

In 2012, the Division of Emergency Medicine has once again distinguished itself as an innovator in patient care, medical education, and clinical research.

In recent years, we have **raised patient satisfaction scores and reduced ED patient lengths of stay** to record levels, despite dramatic increases in the number of annual patient visits and admissions.

## Endocrinology, Diabetes and Metabolism

As part of a world-class academic medical center, the Division of Endocrinology, Diabetes and Metabolism is dedicated to fulfilling our mission of excellence in providing quality care to patients with endocrine and metabolic disorders; conducting promising research to advance the frontiers of endocrinology and diabetes; and training of highly motivated and dedicated physicians to become successful clinicians and physician-scientists. Division Chief, Dr. Imperato-McGinley serves as the Principal Investigator of the Weill Cornell NIH-funded Clinical and Translational Science Center (CTSC).

Established in 1997, our Diabetes Center provides the highest standard of care for patients with type 1 and type 2 diabetes mellitus. It offers a multidisciplinary team approach for diabetes care with comprehensive case management and the development of an individualized treatment plan. An expert team is composed of diabetologists, certified diabetes educators, and registered dietitians who are experienced in intensive diabetes management, including insulin pump therapy. The Center also has extensive experience in the management of gestational diabetes in patients with type 1 and type 2 diabetes mellitus. The Diabetes Center receives federal funding to support ongoing clinical research.

The division’s areas of expertise in clinical care include: general endocrinology; reproductive endocrinology, including the treatment of menstrual irregularities, hirsutism, and menopause; thyroid disease, with particular emphasis on thyroid cancer; disorders of calcium metabolism; and osteoporosis and metabolic bone disease. Should surgery be necessary for the treatment of an endocrine disorder, we also have an endocrine surgeon on-site.

The subspecialty program in Endocrinology, Diabetes and Metabolism is designed to provide the training and experience necessary to acquire all competencies to become an expert in this field. This comprehensive program fulfills the needs of trainees anticipating a clinical and/or basic endocrine research career in academia; those expecting to function as clinician-educators; and those interested in pursuing the clinical practice of endocrinology.

The Endocrinology, Diabetes and Metabolism fellowship is a joint program between NewYork-Presbyterian/Weill Cornell and Memorial Sloan-Kettering Cancer Center (MSKCC). A two-year training program accredited by the Accreditation Council for Graduate Medical Education (ACGME), fellows receive didactic and clinical instruction from faculty using the inpatient and ambulatory facilities at the hospitals. They also attend Metabolic Bone Clinic and conferences at the Hospital for Special Surgery (HSS). The first year of the fellowship is primarily clinical, while the second year emphasizes clinical investigation



**Julianne L. Imperato-McGinley, MD**

Chief, Division of  
Endocrinology, Diabetes,  
and Metabolism

Associate Dean for  
Translational Research and  
Educational Medicine

Director, Clinical and  
Translational Science Center  
(CTSC)

The Abby Rockefeller Mauzé  
Distinguished Professor of  
Endocrinology in Medicine

Professor of Medicine  
Weill Cornell Medical  
College

Attending Physician  
NewYork-Presbyterian  
Hospital



or basic research. Fellows are expected to have at least one paper prepared for publication in a peer-reviewed journal at the completion of their fellowship. An optional third year is devoted to further research training. Based on individual interest and past research experience, fellows may select mentors from a range of disciplines in the tri-institutional community and Rockefeller University, in both basic and clinical research. Additionally, our faculty is active in the training of Internal Medicine Residents and leads the Endocrinology Section of the Basis of Disease Course for Weill Cornell medical students.

The division conducts promising state-of-the-art research to generate new knowledge and improve understanding with the ultimate goal of applying the latest scientific and medical advances for the prevention, detection, and treatment of patients with endocrine diseases. Major areas of research include: Clinical and Translational Science Center (CTSC), for which Dr. Imperato-McGinley serves as the Principal Investigator of Weill Cornell Medical College’s \$49 million NIH-funded Clinical and Translational Science Award (CTSA); Androgens and Cognitive Function, and NIH-funded project



Dr. Rekah Kumar with  
Dr. Aaron Shulman

evaluating the effects of hormones in utero, and postnatally, on cognitive function in normal subjects and subjects with inherited androgen action defects; Molecular Genetics of Male Sexual Differentiation and Development, a study defining the genetic defects of subjects with inherited conditions affecting male sexual differentiation, particularly subjects with 5 $\alpha$ -reductase-2 deficiency; Molecular Genetics of 21 Hydroxylase Deficiency, a study to identify inherited genetic defects in the 21-hydroxylase enzyme in humans which result in genital ambiguity (genotype-phenotype relationships of this condition also being studied); The Epidemiology of Diabetes Intervention and Complications Trial (EDIC), a continuation of the multicenter Diabetes Control and Complications Trial (DCCT) evaluating the effect of intensive glucose control on both microvascular and macrovascular complications of diabetes; The Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial, a multicenter study of the effects of intensive versus conventional glucose, blood pressure and lipid treatment on cardiovascular disease in 10,000 individuals with type II diabetes mellitus; Molecular Basis of Sex Steroid Hormone Interaction in Prostate Diseases, a study focusing on androgen-estrogen interaction in the prostate and the development of specific estrogen analogs with fewer side effects for the hormonal therapy of prostate cancer; The Effects and Mechanisms of Dietary Fat in Prostate Development and Pathogenesis to facilitate development of strategies for prostate cancer prevention; and Chinese Herbal Medicine and Phytochemicals in Prostate Cancer studies to determine their effects in the treatment of prostate cancer in animal models, elucidating mechanisms of action, with the ultimate goal of proceeding to clinical trials in patients with advanced prostate cancer. In addition to a specific Chinese herbal formula, phytochemicals derived from Chinese herbs, such as genistein and camptothecin analogs, are also being evaluated.

New recruits during 2012 included Louis J. Aronne, MD, Professor of Clinical Medicine and Medical Director of the Center for Weight Management and Metabolic Clinical Research; David A. Cohen, MD, Assistant Professor of Medicine; and Rekah B. Kumar, MD, who, after completing her fellowship in the division, was appointed to Assistant Professor of Medicine.

## Gastroenterology and Hepatology



**Ira M. Jacobson, MD**  
Chief, Division of  
Gastroenterology and  
Hepatology

Vincent Astor Distinguished  
Professor of Medicine  
Professor of Medicine  
Weill Cornell Medical College

Attending Physician  
NewYork-Presbyterian  
Hospital

The Division of Gastroenterology and Hepatology, providing outstanding and compassionate patient care, offers first-rate clinical services in a wide range of subspecialty areas, including hepatology, inflammatory bowel disease, gastrointestinal reflux disease, advanced endoscopic diagnostic and therapeutic procedures, functional bowel disorders, gastrointestinal infections and gastrointestinal cancer prevention and treatment. During 2012, established a pancreas program, the first ever at NYP/ WC. Faculty are active in education and research. Numerous research projects and clinical trials are underway for the prevention and treatment of viral hepatitis, gastrointestinal cancers, Barrett’s esophagus, inflammatory bowel disease, pancreatic lesions, and other gastrointestinal diseases. The Division houses the Jay Monahan Center for Gastrointestinal Health; the Center for the Study of Hepatitis C; and The Jill Roberts Center for Inflammatory Bowel Disease.

Dr. Ira Jacobson, Division Chief, is directing an active clinical trials program aimed at developing new, more effective, and better tolerated treatments for chronic hepatitis C (HCV). The current standard of care for genotype 1 HCV infection, the most prevalent viral genotype in the U.S., is a combination of pegylated interferon, ribavirin, and one of two protease inhibitors, telaprevir and boceprevir. During 2012 two phase 3 programs involving newer protease inhibitors, simeprevir and faldaprevir, were substantially completed, along with a phase 3 trial evaluating peginterferon, ribavirin, and sofosbuvir, a nucleotide polymerase inhibitor. At the Annual Meeting of the American Association for the Study of Liver Diseases, Dr. Jacobson presented the results in patients with advanced liver fibrosis from a trial of a quadruple regimen consisting of peginterferon, ribavirin, the protease inhibitor danoprevir, and the nucleotide polymerase inhibitor mericitabine. He also presented the findings of a study of an interferon-free regimen of telaprevir, the non-nucleoside inhibitor VX-22 and ribavirin.

The development of interferon-free therapies is the most sought after goal in the field of hepatitis C. Trials of interferon-free therapy performed in 2012 included two phase 3 studies of sofosbuvir combined with ribavirin in the treatment of patients with genotypes 2 and 3, and a phase 2 study of daclatasvir, an NS5A replication complex inhibitor combined with sofosbuvir with or without ribavirin.

Dr. Michel Kahaleh, Chief of Endoscopy and Medical Director of NYP/Weill Cornell’s first pancreas program, led an outstanding year for advanced endoscopy. The volume of interventional procedures increased by 175%. New procedures performed included: endoscopic suturing, confocal endomicroscopy for early detection of GI cancers, photodynamic therapy and radiofrequency ablation for pancreatico-biliary cancers, endoscopic drainage of pseudocysts, and endoscopic necrosectomy and EUS-guided ERCP. The advanced group has launched international registries related to these novel procedures and participated in multicenter trials, validating probe-based confocal endomicroscopy in bile duct lesions and a novel metal stent for drainage of pancreatic pseudocysts. Their research produced 16 articles in

peer-reviewed journals; 8 abstract presentations at international meetings; and they secured an ASGE planning grant and several unrestricted grants from industry. They also launched an annual, live conference related to innovations in gastroenterology which featured an international faculty and included live demonstrations of advanced endoscopic procedures performed by the faculty at NewYork-Presbyterian Hospital.

Dr. Andrew Dannenberg’s laboratory is actively working on several projects, including NIH-sponsored studies, continuing to focus on strategies to reduce the cancer burden. Their research scope is wide-ranging, from mechanistic studies to elucidate the relationship between obesity, inflammation and cancer, to the development of a novel metabolomics-based strategy for the early detection of experimental colorectal neoplasia.

Dr. Steven Lipkin’s laboratory made major new contributions and published in leading journals: the CCR9/CCL25 axis is an important prognostic mechanism for colorectal cancer as a mechanism preventing metastasis lost in late stage tumors (*Journal of Clinical Investigation*); microRNAs 23 and 27 determined as prognostic markers for colon cancer (*Cancer Discovery*); and a new methodology devised using protein-interactome networks to classify genetic variants as causative mutations or benign polymorphism (*Nature Biotechnology*). Dr. Lipkin was appointed to the American Society of Clinical Oncology Cancer Prevention Committee and the Cancer Genetics Subcommittee and is writing an ASCO Family Cancer History intake form to be used by general community oncologists as a template. It will likely be utilized by physicians worldwide, setting the standard for clinical care.

Dr. Andrew Talal continued to study fine needle aspiration (FNA) of the liver as a method for intrahepatic sampling. FNA is a technique with decreased morbidity compared to conventional liver biopsy (CNB) and that allows for serial liver sampling. For the first time in humans, liver sampling was used to address differences in HCV RNA decline, pharmacokinetics, appearance of resistant variants, and

Numerous research projects and **clinical trials are underway for the prevention and treatment** of viral hepatitis, gastrointestinal cancers, Barrett’s esophagus, inflammatory bowel disease, pancreatic lesions, and other gastrointestinal diseases.



host genes between the liver and blood in patients under antiviral therapy with the protease inhibitor telaprevir (in a study performed in collaboration with Vertex Pharmaceuticals Inc.). Results were presented at the Presidential Plenary Session of the American Association for the Study of Liver Disease (AASLD) 2012 meeting.

The *Jill Roberts Center for Inflammatory Bowel Disease* (Dr. Ellen Scherl, Director; Dr. Brian P. Bosworth and Dr. Vinita Jacob, principal or co-investigators) activated five new studies including research on moderate to severely active Crohn's Disease, eating patterns and disease activity in patients with Inflammatory Bowel Disease (IBD), health care maintenance in patients with IBD, and safety and tolerability of Budesonide Foam in subjects with active ulcerative proctitis or proctosigmoiditis. Collaborations remain with institutions across the globe to establish international biobanks; explore the relationship between vitamin D and IBD health; and explore IBD genotypes. They include Columbia University, NYU, Yale University, Albert Einstein Hospital, Johns Hopkins Hospital, Rockefeller University, and a Microbiome Consortium headed by Dr. Kenneth Simpson at Cornell University, Ithaca, with facilities and institutions in New Mexico, North Carolina, Texas and Switzerland. In addition, collaborations continue with Dr. Andrew Dannenberg, Director of the WCMC-NYP Cancer Center, on two mediators in gastrointestinal inflammation studies; Dr. Simpson, on mucosa associated bacterial flora; and researchers at Weill Cornell Medical College on NOD 2 genotyping, hemangiogenesis and animal models of colon cancer and IBD. Dr. Scherl continues her work with the University of Leiden, Netherlands utilizing the IBD patient database to study the role of inflammatory markers in predicting the clinical course of IBD, and with the New York-Moscow IBD Journal Club via Skype. Dr. Scherl was recognized by the American Medical Association Women Physician's Congress as a Mentor Recognition Program honoree and by the CCFA as a Woman of Distinction in Medicine.

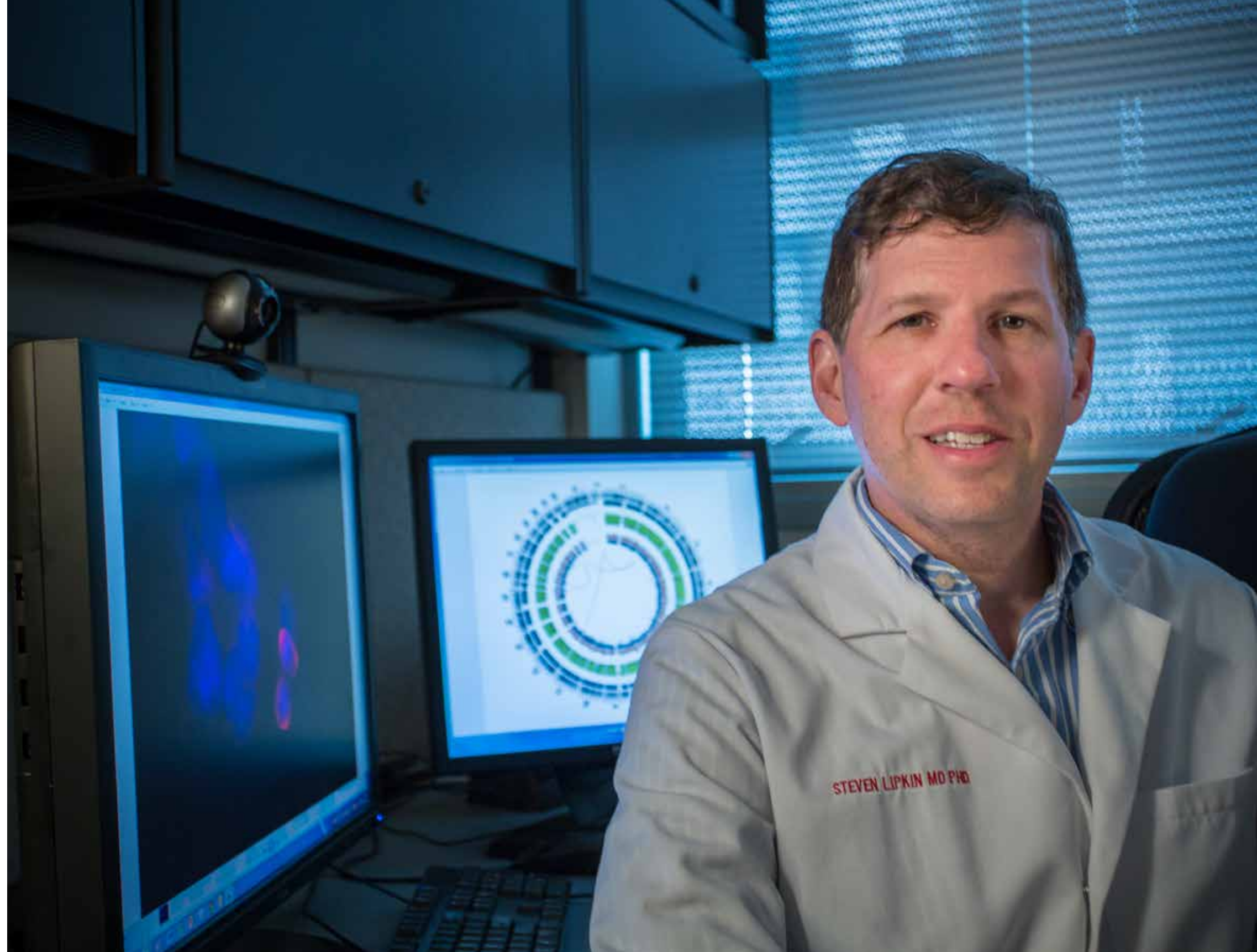
Dr. Bosworth co-authored an article on multiphoton tomographic imaging as an optical tool for the diagnosis of gastrointesintal inflammation and neoplasia, and participated in and published the findings of an ad hoc committee of the American Society for Gastrointestinal Endoscopy in September 2012 on the use of endoscopy simulators for training and assessing skill. Dr. Bosworth, the Anne and Ken Estabrook Clinical Scholar in Gastroenterology, continues as Program Director of the Gastroenterology and Hepatology Fellowship, and was named Vice President of the New York Society of Gastrointestinal Endoscopy.

The Jay Monahan Center (JMC) for Gastrointestinal Health has been working with the Center for Advanced Digestive Care (CADC) at Weill Cornell Medical Center to significantly grow programmatic efforts while serving as the 'clinical home' for the CADC's adjunctive patient care services. Through this collaboration, the hereditary cancer program has expanded to include an additional genetic counselor. Dr. Steven Lipkin has also joined the clinical team, providing consultative genetic services. The nutritional program has gained a full-time registered dietitian with inpatient/outpatient expertise. Social worker services added a full-time hire with expertise in both navigating inpatient referrals for social services and therapeutic counseling.

During 2012, the JMC geared up for its official opening of an Esophageal Function Laboratory for the evaluation of esophageal disorders and diseases including GERD, non-cardiac chest pain and swallowing disorders. The lab is equipped to offer a full range of diagnostic testing including; high-definition manometry with impedance, 24-hour pH analysis with impedance and Wireless 48-hour pH analysis. The lab will complement a CADC-sponsored multidisciplinary esophageal program co-directed by Dr. Felice Schnoll-Sussman and Dr. Nasser Altorki (Department of Cardiothoracic Surgery).

Dr. Lipkin is writing an ASCO Family Cancer History intake form to be used by general community oncologists as a template ...

**setting the standard for clinical care.**



JMC advocacy and outreach covered campaigns for colon cancer and pancreas cancer awareness, and the research program has been actively recruiting patients to several new clinical trials including a novel proteomic-based serum study for colon cancer screening and a Next-Generation Sequencing to evaluate transcriptomic changes associated with *H. pylori* infection and gastric cancer carcinogenesis.

The division welcomed two new recruits: Reem Z. Sharaiha, MD, MSc, who received her MD at the University of London, completed residency training at NYP/WC, where she also received a Master's in patient oriented research. She served a fellowship in gastroenterology at NYP/Columbia and at Johns Hopkins in advanced endoscopy. Her research interests include the pancreas and biliary tract. Dr. Sonal Kumar obtained her MD from Washington University School of Medicine; served her internal medicine residency at Barnes-Jewish Hospital at Washington University School of Medicine; and completed a fellowship in Gastroenterology at Brigham and Women's Hospital. She holds a Master's in Public Health from the Harvard School of Public Health.

Dr. Lipkin. At computer screen, which shows the CircosPlot of Dr. Lipkin's genome.



# Geriatrics and Palliative Care

The mission of the Division of Geriatrics and Palliative Medicine is to improve the quality of life for older people through the integration of high-quality clinical care; teaching of geriatric medicine; and advancing knowledge through scientific research. We seek to alleviate symptoms and other causes of human suffering through palliative care programs. The Division holds a number of federal and foundation grants and continues extensive clinical operations with a steady increase in patient volumes on the inpatient and outpatient services. U.S. News & World Report ranked NewYork-Presbyterian Hospital 11th in the nation in geriatric medicine.

A notable development during 2012 was a name change to the Division of Geriatrics and Palliative Medicine. This represents an important shift in the division's activities and a focus on palliative medicine (since the inception of the Palliative Care Consultation Service in 2005). Care for patients

suffering with chronic illness and chronic pain, as well as other significant issues relating to goals of care at the end of life, have become an intrinsic part of our role as geriatricians. We are increasingly focused on palliative care through patient care, teaching activities, and research efforts and collaborations. Six of our faculty members became board certified in palliative medicine in 2012, giving us a total of seven board certified physicians in this discipline. We have an active and successful Palliative Care Champions Training Program for both nurses and social workers at NYP/WC. The NIA-funded Roybal Center, directed by Dr. M. Cary Reid, investigates pain in later life and the role of palliative care in pain and symptom relief.

The Irving Sherwood Wright Center on Aging sees an ever-increasing number of geriatric outpatients annually (average age is over 80 with many vibrant centenarians). For patient satisfaction scores, the center continues to excel within the Ambulatory Care Network as one of the highest-ranking practices. Expanding our reach, The House Call Program provides comprehensive services to the most frail, homebound elderly patients, while maintaining a collaborative relationship with the highly regarded social services agency, DOROT. Activities in palliative care remain under the leadership of Dr. Ronald Adelman, Division Co-Chief, and Dr. Sonal Mehta, Assistant Director. The division's dedication to the prevention of elder abuse is exemplified by its NYC Elder Abuse Center which supports elder justice through multidisciplinary team activities in Manhattan and Brooklyn.

The Liz Claiborne Center for Humanism in Medicine, thanks to generous funding from the Liz Claiborne/Art Ortenberg Foundation, was launched in 2011. An educational hub for health care professionals and trainees in multiple disciplines, the mission enhances and integrates awareness,

attitudes, knowledge, and skills of palliative care, and promotes the profile and practice of medical humanism. Aiming to foster better consciousness and understanding of the human experience of our patients, and promoting self-reflection and professional growth among our healthcare professionals and trainees, the center supports the incorporation of the humanities and creative engagement in the practice of medicine and medical education. It hosted several relevant speakers in 2012, including a presentation at Geriatric Grand Rounds, given by Victoria Sweet, MD, from the University of California and the author of *God's Hotel – A Doctor, A Hospital and A Pilgrimage to the Heart Of Medicine*. Regular narrative medicine seminars and interdisciplinary meetings for clinical teams provide in-depth discussions on challenging clinical issues. A recent Grand Rounds speaker was Russell Hilliard, PhD, LCSW, LCAT, MT-BC, noted music therapist and Vice President of Supportive Care, Research, and Ethics at Seasons Hospice in Chicago, Illinois.

Medical residents often lack the opportunity to work with older adults who are not acutely ill, or to learn of the types of community-based services available that keep them well. The division continues to provide training to each PGY-2 resident assigned to a 4-week geriatric rotation in the following: two weeks managing a panel of patients on the 10N team; one week covering nights on the 10N team; one week in an outpatient module to introduce systems of care that address the medical and psychosocial needs of community-dwelling older adults. During the systems-based practice (outpatient) module, residents visit a PACE (Program of All-inclusive Care for the Elderly) site; make hospice and geriatrics



**Ronald D. Adelman, MD**  
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



**Mark S. Lachs, MD, MPH**  
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 Weill Cornell Medical College  
Attending Physician NewYork-Presbyterian Hospital



house calls; accompany geriatric care managers on client visits, visit a nursing home, an independent living site, and other levels of senior housing; see an elder abuse shelter; and assist with the division's transitional care clinic and the Wright Center's walk-in patients. They present one of their own WCIMA patients in the weekly geriatrics team meeting for discussion and advice. An oral exam/debriefing at the end of the week enables the residents to integrate their experiences within the context of their inpatient and outpatient responsibilities. For medical interns, increased exposure to palliative care is gained through a 12-hour educational series. Co-Chief Resident for Quality, Dr. Brian Eiss, also served in the division during 2012 as part of his one-year appointment with the Department of Medicine's residency training program in internal medicine.

Dr. Adelman second from right with fellows Drs. Veerawat Phongtunkuel, Sonica Bhatia, Wei Wang (l to r)



# Hematology and Medical Oncology



**David M. Nanus, MD**  
Chief, Division of Hematology and Medical Oncology  
Medical Director  
Genitourinary Oncology Program  
Mark W. Pasmantier  
Professor of Hematology and Oncology in Medicine  
Professor of Medicine  
Professor of Urology  
Weill Cornell Medical College  
Attending Physician  
NewYork-Presbyterian Hospital

At work in the Melnick Lab.

The Division of Hematology and Medical Oncology consists of 40 clinical researchers and 13 full-time scientists. There are six clinical services: Solid Tumor Oncology, Leukemia, Lymphoma, Myeloma, Stem Cell Transplant and Nonmalignant Hematology, operating at four sites: NewYork-Presbyterian Hospital Main Campus (third floor), Weill Greenberg Ambulatory Care Building (Solid Tumor Oncology), Oxford Building (Myeloma) and at the Woman’s Health Center at 425 East 61st Street (Breast Cancer). Each service contains disease-site specific programs. The Solid Tumor Service has active clinical and research programs in Breast Oncology, Gastrointestinal Oncology, Genitourinary Oncology and Thoracic Oncology, with developing programs and expertise in Head and Neck Oncology, Neuro-Oncology, and Endocrine Oncology.

Each of the programs works closely with faculty in the corresponding surgical oncology department, division or program. The Hematological Malignancies Program, under the direction of Dr. Eric Feldman, encompasses the Leukemia, Lymphoma, Multiple Myeloma, and Stem Cell Transplant Services. The Lymphoma and Myeloma Services contains several disease-specific programs, including the Chronic Lymphocytic Leukemia (CLL) Research Center and the Waldenstrom’s Macroglobulinemia Program. The Leukemia Service, in addition to acute and chronic leukemias, has developed programs in Myelodysplastic Syndromes and Myeloproliferative Disorders.

The division houses the largest group of clinical investigators in the College. Basic and translational research has benefitted from renovated research space and multiple new faculty recruits over the last six years. A major emphasis is placed on translational (bench-to bedside) studies. Dr. Lewis Cantley, who has an appointment in the division, was recruited to lead the Weill Cornell Cancer Center. The division will play a central role in the Weill Cornell Cancer Center working with Dr. Cantley to recruit basic science translational researchers to the Belfer Research Building (scheduled to open in 2014), as well as partnering with other divisions/departments to expand the research base through large collaborative grants.

Laboratory research faculty of the Belfer Institute of Hematology and Oncology are integrally 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. A major focus is the understanding of molecular mechanisms underlying individual patient sensitivity and resistance to chemotherapy or targeted treatment. These studies have the potential, not only to uncover certain aspects of fundamental cancer biology, but to lead to the development of novel biomarkers that can be used to tailor treatment



to the individual. An example of such a translational team effort is the TAXYNERGY prospective, multi-institution Phase II clinical trial in prostate cancer; with Dr. Scott Tagawa (principal investigator clinical side) and Dr. Evi Giannakakou (lead investigator basic science side) in which patient-derived circulating tumor cells are used to interrogate mechanisms of taxane resistance.

The Cancer Program at NYP/Weill Cornell was ranked number one at an academic medical center in the New York metropolitan area by *U.S. News and World Report* in 2012. Building a growing reputation in clinical care and clinical research, the clinical research program enrolled more than 450 research subjects into 120 different treatment studies, e.g., high-impact protocols across the entire spectrum of hematologic malignancies and solid tumors, and projects in areas of non-malignant hematology. The Weill Cornell Leukemia Program offers a wide variety of novel investigator-initiated, cooperative group, and industry-sponsored clinical trials. Dr. Gail Roboz, recognized internationally for her studies on myelodysplastic syndromes (MDS), is leading NewYork-Presbyterian/Weill Cornell Medical Center as one of six institutions selected to join the newly-founded MDS Clinical Research Consortium, focused on innovative research and clinical trials for MDS patients. The bone marrow transplant program continues to grow under the leadership of Dr. Koen van Besien with over 165 autologous and allogeneic stem cell transplants in 2012. Drs. John Leonard and Peter Martin are members of the Lymphoma Committee of the Alliance for Clinical Trials in Oncology, helping to direct the portfolio of trials for the NCI-supportive cooperative research group. Both lead ongoing national clinical studies through this venue. Dr. Manish Shah has significantly increased the number of correlative studies and investigator initiated studies in gastrointestinal malignancies.

The breast cancer research group (Drs. Ellen Chuang, Tessa Cigler, Anne Moore, Linda Vahdat) continue to work toward unraveling the process of metastases in patients with triple negative breast cancer (in collaboration with Dr. Vivek Mittal), with publications in *Cancer Cell* and *Annals of Oncology*.

The Breast Program hosted the 3rd *Annual Breast Cancer Survivorship Symposium* reaching over 200 participants. The agenda included topics of interest to survivors; the latest research on diet, nutrition, exercise and strategies for maintaining a healthy heart and bones, as well as the latest breast cancer research within and outside of Weill Cornell.

The Hospital-based oncology and hematology practices and infusion center, undergoing major renovations to create a state-of-the-art Center for Oncology and Hematological Care, is near completion for 2013. In 2012, the division opened a Myeloma Center (Oxford Building) under the direction of Dr. Ruben Niesvizky for the care of patients with plasma cell neoplasms. A center of patient care and clinical research, it allows patients to receive some of the newest agents to treat myeloma.

The Cancer Research and Treatment Fund, Inc. (“CR&T”) made a pledge to Weill Cornell Medical College to create the Richard T. Silver, M.D. Myeloproliferative (MPD) Disease Center to build the leading translational research and patient treatment center in the US for individuals with MPD. This Center will include a new senior lab-based clinician, Dr. Silver, and dedicated support staff. Dr. Andrew Schafer chairs the Advisory Board of the national Myeloproliferative Neoplasms (MPN) Research Foundation.

New faculty recruits included: Francine Garrett-Bakelman, MD, PhD, appointed Instructor in Medicine and Assistant Attending Physician. As a physician-scientist under the guidance of Dr. Ari Melnick, she is focused on epigenetic gene regulation in myeloid disorders in the elderly, and the development of novel, more effective therapies. Duane Hassane, PhD, from the Department of Pathology and Laboratory Medicine, was appointed Assistant Professor of Computational Biomedicine in Medicine, continuing bench research in genomics.

Allyson Ocean, MD, was promoted to Associate Professor of Clinical Medicine. Ari Melnick, MD was promoted to Professor of Medicine (with Tenure); Tsiporah Shore, MD, to Professor of Clinical Medicine; and Scott T. Tagawa, MD, to Associate Professor of Clinical Medicine. Richard R. Furman, MD, became the *Richard A. Stratton Assistant Professor in Hematology and Oncology*, continuing to develop and study novel therapies for patients with chronic lymphocytic leukemia. Maureen Lane, PhD, received a joint appointment as Director of the Hematology/Oncology



Newly recruited,  
Dr. Lewis Cantley



Translational Core Laboratory, and the Leukemia Biorepository and Personalized Medicine Center. Peter Martin, MD was appointed as Director of the Waterfall Waldenstrom Macroglobulinemia Consortium. His prospective lymphoma clinical database, a major resource to clinical and basic science investigators, has nearly reached the 500 patient mark.

David M. Nanus, MD was appointed to Chief, Division of Hematology and Medical Oncology; Evi Giannakakou, PhD to Director of Laboratory Research, Division of Hematology and Medical Oncology; John P. Leonard, MD became the Associate Dean for Clinical Research at WCMC; and Barbara L. Hempstead, MD, PhD, became the Associate Dean for Faculty Development. Joseph Ruggiero, MD was selected to be senior editor of the ASCO SEP 3rd Edition, the primary educational resource developed by the American Society of Clinical Oncology for continuing medical education.

It was a banner year in research funding. In an increasingly competitive climate, we are positioned to make even more remarkable strides and expand our already impressive research portfolio. Compared to 2011, there was a two-fold increase in research with 28 new grants awarded, including four R21s, six LLS, three industry-sponsored collaborative agreements, and several seed and CTSC (Clinical & Translational Science Center) grants. We saw a dramatic increase in grant submissions, with more than 80 competitive applications submitted. Dr. Leandro Cerchietti received 3 new grants totaling over \$800,000 in funding, including awards from the prestigious Doris Duke and ASH foundations. His exploration of markers and novel therapeutic targets in non-Hodgkin's lymphoma ranges from finding new ways to detect lymphomas before they become an incurable aggressive disease, to finding new cures and improving available treatment. Dr. Garrett-Bakelman received an NIH K08 and a prestigious ASH (American Society of Hematology) award. Four of our post-docs currently hold grants from ASH, DOD (Department of Defense), LRF (Lymphoma Research Foundation), and NIH (National Institutes of Health). Dr. Melnick was a lead principal investigator on two collaborative federal pilot grants, including one from the NIH-sponsored Physical Science Oncology Center (Cornell-Ithaca), serving to strengthen existing collaborations and laying groundwork for future multidisciplinary projects (e.g. PPG grants). He was also awarded a program grant from the LLS, three Starr Foundation grants, and a Special Collaborative grant from Gabrielle's Angels Foundation. A world-renowned expert in epigenetics, he and his team reported major research breakthroughs regarding the decoding of the software that drives acute lymphoblastic leukemia (ALL) published in *Cancer Discovery*. With nearly 40 publications as senior author and co-author over the past year, Dr. Melnick's highlights include articles in *Nature*, *Nature Chemical Biology*, and *Cancer Cell* (all cited by faculty of 1000), and senior-author articles in *Blood* and *Cancer Discovery*.

Dr. Hempstead received a major Pfizer research grant, signifying strong collaboration between WCMC and industry. Her studies of Huntington's Disease were recognized by the CHDI Foundation in their research award of over \$250,000. Dr. Monica Guzman expanded translational studies on leukemia stem cells and formed new collaborations at Weill Cornell and the Methodist Hospital Research Institute. Her studies with Dr. Roboz and Dr. Feldman, leaders of the Weill Cornell Leukemia Program, have established an active tumor bank and perfected cell isolation methods to capture and study the stem cells that give rise to human leukemia. She was the recipient of an NIH-R21 and one new LLS grant, and serves as a co-investigator on two additional LLS awards (one led by Dr. Niesvizky and the other by Dr. Hassane). She continues efforts to identify novel therapies to ablate chemotherapy-resistant leukemia stem cells. Dr. Giannakakou received \$2.6 million dollars from industry funding to perform functional analyses of circulating tumor cells (in the context of the TAXYNERGY prospective multi-institutional clinical trial in prostate cancer) with Drs. Nanus and Tagawa as clinical co-principal investigators.

Drs. Giannakakou and Vahdat each received a grant from the Manhassat Women's Coalition Against Breast Cancer (MWCBC) foundation for breast cancer research, \$100,000 and \$50,000 respectively. Dr. Joseph Scandura received a new NIH-R21 to study mechanisms of leukemia survival and relapse. Dr. Rita Shakhovich received an LRF (Leukemia Research Foundation) grant to integrate genomic and epigenetic changes in chronic lymphocytic leukemia. Dr. Shah received a grant from the DeGregorio Foundation, allowing him to use next-generation sequencing to study changes during gastric cancer carcinogenesis, and a \$1.8 million award to lead a multicenter phase II study in gastric cancer, working closely with Dr. Giannakakou to prospectively examine taxane resistance in clinical patient samples.

Dr. Jeffrey Laurence is submitting a T32 training grant in benign hematology, on behalf of the division, and in collaboration with 16 faculty across three institutions (including Rockefeller University and MSKCC) to educate and mentor post docs and fellows in the conduct of translational research related to problems in benign hematology.



Dr. Garrett-Bakelman received an NIH K08 award.



**Arthur T. Evans, MD, MPH**  
Chief, Division of Hospital Medicine  
  
Vice Chair of Faculty Development  
Professor of Medicine  
Weill Cornell Medical College  
  
Attending Physician  
NewYork-Presbyterian Hospital

# Hospital Medicine

The Division of Hospital Medicine was founded in the summer of 2009 with the arrival of Dr. Arthur Evans, who assumed the role of Division Chief after 20 years in clinical research, teaching, and both primary care and hospital-based medicine at Dartmouth, UNC, Rush, and Cook County Hospital. Dr. Sean Pickering joined the division in 2010 as Assistant Division Chief with a career dedicated to Academic Hospital Medicine since 1998.

With more than 30 faculty and expanding services, the division is focused on providing compassionate, effective, and efficient inpatient medical care and to advancing the profession through innovation, rigorous scientific inquiry, and continuous learning. It is responsible for the daily care of well over 100 hospitalized patients and provides general medical consultation year-round. The division's faculty members bring a wealth of experience and talent. Many have advanced training and degrees beyond board certification in internal medicine, including medical ethics, critical care, infectious diseases, emergency medicine, nephrology, medical informatics, pediatrics, geriatrics, molecular biology, and clinical epidemiology.

A significant barrier to communication among patient care providers is the geographic dispersion of inpatients and their care team members. Hospital Medicine continues to lead the effort towards teams being "localized" to dedicated units. Individual Hospital Medicine attending physicians are becoming increasingly assigned to the same units, working with nurses and other staff on those units to care for the same number of patients. This system supports "multidisciplinary" rounds, also initiated by Hospital Medicine, whereby input is considered and care plans discussed among all team members including physicians, nurses, social workers and care coordinators.

Because 60% of medical hospital admissions occur at night, Hospital Medicine initiated a new nocturnist service, with 2 faculty members working nightly. Nocturnists supervise overnight house staff and physician assistants, both in the care of patients and in the sign-out process, and they also teach a formal curriculum. Patients can now see a senior physician much sooner than before, and house staff get more feedback and attention. In a new "swing shift" role, a faculty member sees admissions every weekday in the evening from 4 pm to 2 am, a key period when there is a high number of admissions.

This significantly improved throughput and helped decompress the emergency room. Dr. Rebecca Florsheim, who primarily serves the role of "swing shift" mentioned previously, is also on the Hospital's Disaster Response Committee.

The division continues to supervise the triage process for inpatient admissions. This process requires effective communication among referring physicians, the emergency department, bed assignment personnel, and physicians on the various inpatient Medicine teams. Drs. Renuka Gupta, Chin Tang and Dan Crossman served as the Unit Medical Directors on three inpatient general medicine services and (along with Dr. Sean Pickering) promoted a multidisciplinary care approach, identifying opportunities for quality improvement and care efficiencies.

Drs. Anna Maw and Saraswati lobst designed and conducted a mandatory 12-hour course for interns on Basic Evidence-Based Medicine skills, focused on critically appraising the medical literature. Dr. Evans taught an advanced 18-hour course on Evidence Based Medicine for 3<sup>rd</sup> year resident. Drs. Anthony Ogedegbe, Anna Maw, Vishal Dodia and Sean Pickering serve on the Program Leadership Committee, interfacing Hospital Medicine with the

Residency Program in joint efforts to improve the education and experience of residents. Drs. Anna Maw, Ernie Esquivel and Richard Lin successfully developed an inpatient procedure service and offer training to both house staff and faculty on ultrasound-guided procedures. Dr. Rachel Dubroff combined her training in medicine and art and continues a unique program for first-year medical students using paintings and sculpture at the Metropolitan Museum of Art to enhance the students' observational skills.



Dr. Rachel Dubroff, "Art Class" at The Metropolitan Museum of Art.



Dr. Ernie Esquivel became the director of the 3<sup>rd</sup> year medicine clerkship for the medical school and continues to conduct a clinical elective for 4th-year medical students that allows students to work one-on-one with an experienced senior physician learning the clinical skills of caring for Medicine inpatients.

Dr. Amy Chused, with a strong background in Information Technology, is on the hospital Chemistry/IT Committee, Discharge Summary Task Force, IT User Group and various other committees that both assist with patient care and the division's efforts. Dr. Chin Tang, trained in Emergency Medicine, continues to improve the interface between Hospital Medicine through the Medicine and Emergency Medicine Care Review Committee. He is also on the Diabetes Care Council and the Sepsis Task Force. Dr. Richard Lin is on the NYP bi-campus Inpatient Pain Committee as well as the Department of Medicine End of Life Cancer Care Communication Committee. Drs. Evans and Pickering both serve on the Hospital Capacity Management Committee.

Dr. Jennifer Lee's focus is on quality and preventable readmissions. She is leading a CTSC pilot grant on *A Conceptual Model of Preventable Readmissions* using the perceptions of members of the "Patient Care Circle"; the resultant manuscript of this qualitative study is currently being written (with Dr. Sean Pickering). She continues to bridge Hospital Medicine and Quality Improvement, Co-Chairs the Quality Improvement and Patient Safety Committee and is on the NYP/WC Cornell Quality and Patient Safety Joint Executive Committee/Department of Medicine Quality Chair.

In the wake of the Superstorm Sandy, and resultant hospital closures in NYC last year, the division successfully coped with the enormous increase in patients seen at NYP/WC and also taught the visiting house staff from dislocated programs.

In addition, the hospitalist group continues to participate in several of the bi-campus HERCULES initiatives offering their expertise on in-patient care.

## Infectious Diseases

The Division of Infectious Diseases provides expertise in research, clinical care, and education. Internationally recognized physician-scientists conduct cutting-edge basic laboratory and patient-oriented research in infectious diseases, in New York City and abroad, in the Division's Global Health program with established sites in Brazil, Haiti, India and Tanzania. In New York City, research includes bacteriology (including antibiotic-resistant organisms), bioterrorism, food- and water-borne pathogens, fungi, hepatitis, HIV/AIDS, hospital-acquired infections, human papillomavirus (HPV), influenza, leishmaniasis, malaria, transplant/oncology infectious diseases and tuberculosis. The Division also leads research and training programs abroad in HIV/AIDS, HPV, HTLV-1, leishmaniasis, syphilis and tuberculosis.

Divisional faculty head the Weill Cornell Medical College/NewYork-Presbyterian Hospital Infectious Diseases Inpatient Consult Service, the HIV/AIDS Program, and Weill Cornell Infectious Disease Associates, an outpatient practice comprising faculty and fellow consultation services and Travel Medicine. The Travel Medicine Service has weekday, Saturday, and evening sessions and offers valuable comprehensive pre- and post-travel advice/vaccinations for adults, children, and families.

The Infectious Diseases Fellowship Training Program includes individualized training through faculty guidance, clinical rotations, mentored research, and didactic course work, for the next generation of infectious diseases specialists and physician-scientists. Our faculty members also teach and train medical students, internal medicine residents, and peer physicians in the latest strategies for diagnosis, management, and treatment of infectious diseases.

The Golightly Lab (Director: Dr. Linnie Golightly) is working on a novel noninvasive, cell phone-based device to diagnose and determine the severity of malaria (in collaboration with Dr. Alberto Bilenca of the Ben-Gurion University, Israel). Ultimate testing of the device is planned in Ghana. The lab also collaborates with John C. March, PhD, Cornell University Department of Engineering, to develop a quorum sensing-based cholera prophylactic using genetically engineered commensal bacteria; testing is planned in Port-au-Prince, Haiti (with colleagues from GHESKIO). The Rhee Lab (Director: Dr. Kyu Rhee) continues its highly innovative work on Mycobacterium tuberculosis (MTb) using novel mass spectrometry-based metabolomic approaches.



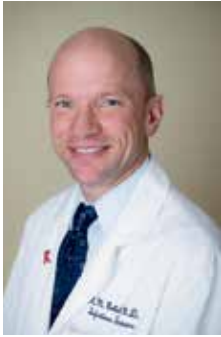
Above: The Golightly Lab (Director: Dr. Linnie Golightly) is working on a novel noninvasive, cell phone-based device to diagnose and determine the severity of malaria (in collaboration with Dr. Alberto Bilenca of the Ben-Gurion University, Israel).

The Cornell HIV Clinical Trials Unit (CCTU) conducts studies of HIV treatment and prevention and important pathogens in both HIV-infected and -uninfected people (e.g., hepatitis C, human papillomavirus (HPV), and influenza). The emergence of the 2009 H1N1 ("swine") strain of influenza raised awareness of the need to better characterize the current epidemiology of influenza and to develop novel therapeutic approaches. The CCTU is participating in four NIH-funded studies of influenza. The Transplant/Oncology Infectious Diseases Program (Director: Dr. Tom Walsh) continues to develop interactive laboratory research, translational/clinical research, and clinical care efforts.

GHESKIO (Groupe Haitien d'Etude du Sarcome de Kaposi et des Infections Opportunistes; Director: Dr. Jean Pape) conducts NIH-sponsored research with the AIDS Clinical Trials Group and the HIV Vaccine Trials Network. GHESKIO's extensive free clinics treated over 100,000 patients in 2012, including 40,077 patients receiving HIV counseling and testing; 1,666 patients newly diagnosed with tuberculosis; and 10,500 patients admitted for cholera. Construction on a new 35-bed TB hospital began in 2012 (with generous support from Becton Dickinson) and on a permanent cholera treatment center and Maternal Child Health Center – both of which are scheduled to open in late 2013.

The Tanzania Training Program (Mulago) (Director: Dr. Daniel Fitzgerald) trains health professionals in the design, implementation, and measurement of innovative health interventions; Dr. Jennifer Downs and Dr. Robert Peck in Mwanza, Tanzania, provide clinical care and conduct research on-site.

Two new recruits joined the division: Samantha Jacobs, MD, a clinician and clinical researcher in transplant-oncology infectious diseases; and Emily Shuman, MD, a new Associate Hospital Epidemiologist.

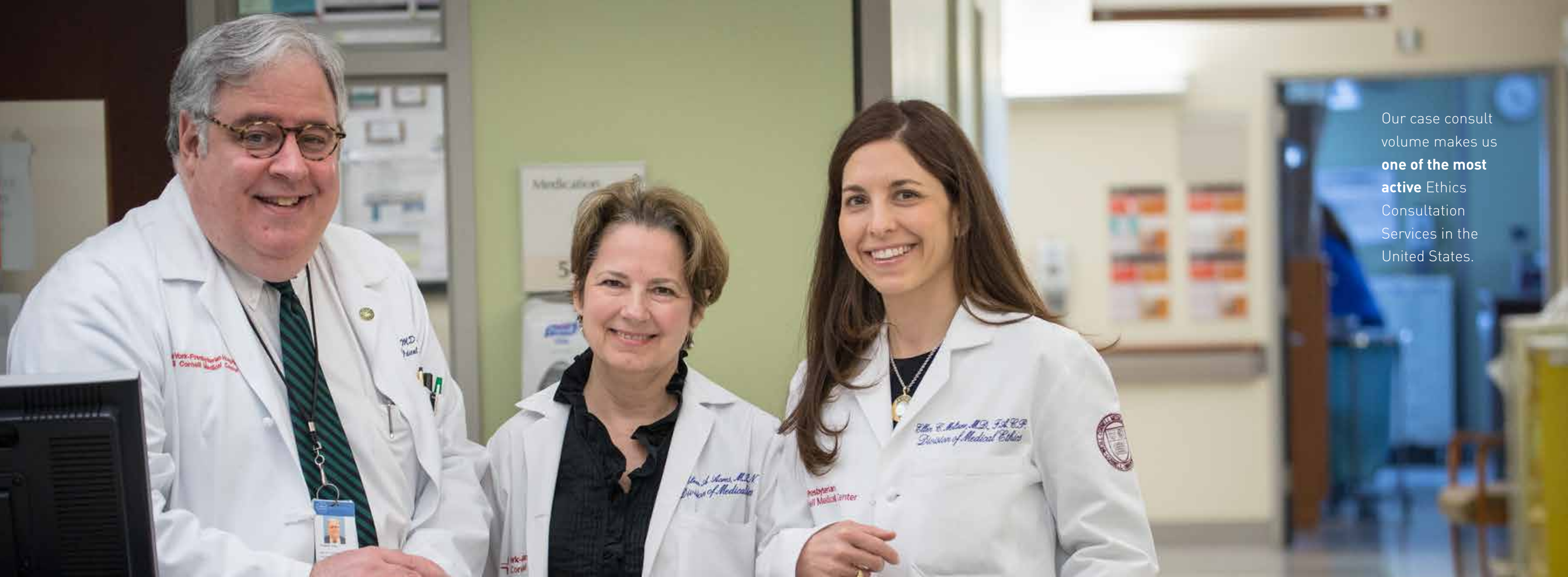


**Roy M. Gulick, MD, MPH**  
Chief, Division of Infectious Diseases

Professor of Medicine  
Weill Cornell Medical College

Attending Physician  
NewYork-Presbyterian  
Hospital





Our case consult volume makes us **one of the most active** Ethics Consultation Services in the United States.

L-R: Dr. Fins, Cathleen Acres, RN, Dr. Ellen Meltzer

## Medical Ethics

A very active year for the Division of Medical Ethics, we pursued our tripartite mission of medical education, ethics consultation, scholarship and research. The Division of Medical Ethics is jointly housed in Weill Cornell's Departments of Medicine and Public Health and is led by Dr. Joseph J. Fins.

The Division teaches medical students, house staff, and attending staff. Assisted by over 30 faculty members, we offer an eight-week introductory course in Medical Ethics to second-year Weill Cornell students on the history of medical ethics, methods in ethics consultation, and ethical issues across the life-span. We also consider ethical and regulatory issues in clinical research, so that students appreciate their responsibilities as clinicians and investigators. In our Third-Year Clerkship in Clinical Ethics and Palliative Care, students learn to address the humanistic and clinical challenges of providing compassionate and competent care at life's end. This two-week rotation, taken by all Weill Cornell students, is a unique offering in American medical education, as it demonstrates a strong pedagogical commitment to this essential dimension of medical practice.

Our educational programs for the house staff in the Department of Medicine have expanded and now include an addiction medicine module offered by Dr. Ellen Meltzer, as well as offerings in clinical ethics. A novel ethics curriculum developed by our Ethics Fellows and designed for medical residents will be featured as a peer-reviewed paper in the *Journal of General Internal Medicine*.

With our NewYork-Presbyterian Hospital colleagues in Patient Services Administration, the Ethics Consultation Service performed 204 ethics consults in 2012, affording wise counsel to patients, families, and staff regarding the ethical challenges confronted in patient care. Our case consult volume makes us one of the most active Ethics Consultation Services in the United States. Additionally, we have consulted with the Weill Cornell Institutional Review Board to provide

expertise for their deliberations. Cathleen Acres, RN, and Dr. Fins, along with colleagues from the Columbia campus of NewYork-Presbyterian Hospital, published the first institutional standards for credentialing clinical ethicists in the United States in the *Journal of Clinical Ethics*.

Dr. Fins continues a fruitful collaboration with Dr. Nicholas D. Schiff in the Department of Neurology as they co-direct the Consortium for the Advanced Study of Brain Injury (CASBI) at Weill Cornell and Rockefeller University. Dr. Fins's scholarship in neuroethics and disorders of consciousness will result in the expected publication of *Rights Come to Mind: Brain Injury, Ethics and The Struggle for Consciousness* from Cambridge University Press in 2013. Dr. Meltzer's focus is on the ongoing consideration of the ethics of advanced life-saving technologies. Cathleen Acres' work on ethics case consultation continues, and of special note, she received a Weill Cornell Teaching Award for Medicine Patient Society III, becoming the first nurse-faculty member to be so honored. Additionally, Dr. Fins is pursuing an intellectual history of the late Senator Daniel Patrick Moynihan's defense of academic medical centers, drawing upon the Moynihan Papers housed at the Library of Congress.

Collaboration has been a hallmark of the Division of Medical Ethics for many years. We are gratified to have had Dr. Andrew Shuman as an Ethics Fellow, while he also served as a Fellow in the Section of Head and Neck Surgery, Memorial Sloan-Kettering Cancer Center. Involving the broader Medical Center Community, we offered our Annual Seminar Series in Medical Ethics. This year it was thematically devoted to "Perspectives in Bioethics and Humanities." Notable speakers included Daniel Callahan, President *Emeritus* of the Hastings Center, Art Caplan, PhD, from New York University, Nancy Dubler, LLB, from Albert Einstein Medical Center, and Franklin G. Miller, PhD, of the Ethics Center at the NIH.

We look forward to expanding the East River Bioethics Club, inaugurated in conjunction with our local neighbors, the Hospital for Special Surgery, Memorial Sloan-Kettering Cancer Center and NYU-Langone Medical Center. This consortium will share speakers on a regular basis and promote discourse on medical ethics across New York City.



**Joseph J. Fins, MD, 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





Ongoing research has identified a **new and treatable mechanism** for kidney injury that we hope to translate into clinical practice.

Dr. Suthanthiran (r) with Dr. Muthukumar.

# Nephrology and Hypertension

The Division of Nephrology and Hypertension provides compassionate, comprehensive, state-of-the-art care to every patient afflicted with kidney disease and/or high blood pressure. *US News and World Report* has consistently ranked the NewYork-Presbyterian nephrology program in the top five programs in the country. In 2012, the NewYork-Presbyterian's kidney disease program was ranked number 3 nationally, the highest ranked specialty at the hospital.

The nephrology program excels in providing renal consultation services, dialysis therapy (about 6,000 dialysis per year at the Hospital) and kidney and pancreas transplantation (more than 200 kidney transplants per year with superior patient and transplant survival rates). Several innovations have been introduced in the transplantation arena: blood type (ABO) incompatible transplant; positive cross-match transplant; minimizing the amount of drugs patients need for successful transplantation; development of treatment protocols to reduce serious post-transplant complications (i.e., infection and malignancy); and, significantly, the development of noninvasive molecular assays for assessing transplant status and reducing the need for an invasive biopsy procedure.

The division's Hypertension Center is the only center in the greater New York metropolitan area devoted exclusively to patients with disorders of blood pressure and circulation. The division provides evidence-based clinical care for patients afflicted with acute or chronic kidney disease. We actively investigate factors predisposing individuals with hypertension to develop kidney failure. Hypertension faculty pursue research including pregnancy-induced hypertension, the mind-body link in hypertension, and personalized drug therapy for hypertension control. Ongoing research has identified a new and treatable mechanism for kidney injury that we hope to translate into clinical practice.

2012 was a great year for molecular medicine in the field of kidney transplantation. The division pioneered the development of noninvasive gene-based assays to ascertain transplant status (published in *The New England Journal of Medicine*); which had previously required an invasive biopsy procedure. Our original study, first conducted at Weill Cornell, led to an NIH-sponsored multicenter Cooperative Clinical Trial in Transplantation (about 500 subjects from 5 major transplant centers in the United States). The division's Gene Expression Monitoring (GEM) Laboratory functioned as the molecular core for this extensive study. Based on a bench-to-bedside approach, this study should lead to state-of-the-art, individualized care (personalized medicine) of transplant recipients. A major diagnostic company (Quest) has introduced a version of the molecular test as the first of its kind molecular test for kidney transplant recipients. And the division's faculty, collaborating with national and international scientists, sequenced – for the first time – human kidney allografts for expression patterns of small RNAs. A milestone in the field of transplantation, this pioneering study was published in *Transplantation* (December 15, 2012).

The ultimate goal in organ transplantation is transplant tolerance; transplantation of organs without the need for any drug therapy. The ability to transplant a human organ without drug therapy is of exceptional significance. The division contributed to the first ever report on tolerance of mismatched kidney transplants, published in *The New England Journal of Medicine*. In recognition of our contribution, NYP/WC has also been selected by the NIH to conduct innovative transplant tolerance trials (Principal Investigator: Dr. Choli Hartono). In this regard, we have identified a molecular signature in the urine of patients who are tolerant of kidney transplants, a seminal finding published in *The Journal of Clinical Investigation*.

Each year, we carry out more than 200 kidney transplants at New-York Presbyterian/Weill Cornell with a total of 4,000 kidney transplants performed as of 2012. Patient and graft survival rates continue to be stellar. The survival rate of kidney graft recipients was 93% following deceased donor transplantation, and the graft survival rate was 86%. Following evaluation of 221 kidney transplant programs in the United States, NYP/WC was one of only 8 hospitals to receive a HealthGrades Kidney Transplant Excellence Award. This recognition was awarded for the 3rd year in a row and was based on one- and three-year risk-adjusted patient survival, one-and three-year risk-adjusted graft survival, the rate at which wait-listed patients received transplants, and waitlist mortality.

The Division of Nephrology and Hypertension remains committed to the education and training of the next generation of renal and hypertension specialists. Our distinguished faculty members are highly sought after for their participation and leadership in national and international meetings. The renal fellowship program is highly competitive with hundreds of applications submitted for the four available positions.

New recruit, Darshana Dadhania, MD, MS, previously of the Rogosin Institute, now serves as an Associate Professor of Medicine in our division. She brings with her a unique immunologic and clinical expertise needed for transplants of high risk patients with kidney failure. She will direct the High Risk Kidney Transplantation Program in the Division of Nephrology, Department of Medicine, and Department of Transplantation Medicine at NYP/WC.



**Manikkam Suthanthiran, MD**  
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



# Pulmonary and Critical Care Medicine

The Division of Pulmonary and Critical Care Medicine employs expertise that is highly skilled in the diagnosis and treatment of patients with all types of breathing or lung disorders, as well as all disorders related to sleep. Physicians of Weill Cornell Pulmonary Associates provide advanced 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) by both Pulmonary/Critical Care faculty and fellows. Research interests focus on genetic medicine – the development of strategies for understanding and modifying gene expression in the treatment and/or prevention of human disease. Full-time faculty members teach in an outstanding, multifaceted educational program training students, residents, and fellows.

It was another year of remarkable accomplishments in clinical care, education, and research. The Division’s faculty received accolades and awards for their clinical care and dedication to education. With Dr. David Berlin serving as Director of the Medical Intensive Care Unit (MICU), clinical care was enhanced by an increase in faculty attending services during overnight hours. Under the leadership of Drs. Oren Friedman and Kapil Rajwani (critical care specialists), world-class care was provided to critically ill patients throughout the MICU, and the Hospital, via consultation and procedural services. Dr. Friedman has become the division’s expert in Cardiac Resuscitation and Therapeutic Hypothermia. Working with Drs. Kapil Rajwani and Kirana Gudi, simulation programs for providing ACLS (Advanced Cardiovascular Life Support) and insertion of Central Venous Catheters are in process for Department of Medicine residents. Division Chief, Dr. Joseph Cooke, who also serves as Chief Quality and Patient Safety Officer, in collaboration with Drs. Lia Logio, Laura Fanucchi, and Jennifer Lee, developed a Quality and Safety Training Program and a monthly House Staff Quality Conference for the Department of Medicine.

Training our clinical fellows in all aspects of pulmonary and critical care medicine, including sleep disorders, is a major focus. The teaching faculty maintains intensive teaching rounds in the MICU, Bronchoscopy Suite, Outpatient Clinic, and Pulmonary Consult Service, which is supplemented by faculty-led weekly lectures, course teachings, and hosting of case conferences.

The Pulmonary Inpatient Consult Service has developed into a robust program providing expert clinical care seven days a week. It is experiencing a significant increase in volume, while upgrading continuity of care for patients who are transitioning from inpatient to outpatient management. This development has led to successful interdisciplinary collaborations with specialists throughout the institution. Fellowship Director, Dr. Dana Zappetti, has developed an expertise in pulmonary complications of bone marrow transplantation. Dr. Thomas King continues to be an integral member of the Complex Spine Disease Service at Hospital for Special Surgery and moderates the William Briscoe Lung Club. At the Lung Club, fellows from the training programs throughout the area present their scientific work. Dr. Abraham Sanders hosts a monthly clinical Joint Case Conference where affiliates present complicated pulmonary cases. Dr. Robert Kaner hosts a multidisciplinary conference on diagnosis and management of Interstitial Lung Disease: radiologists, pathologists, and pulmonologists meet to correlate clinical with pathologic diagnoses, making recommendations on patient management or possible enrollment in clinical trials.

The Pulmonary Outpatient Service has seen significant growth. Strong emphasis has been placed on a patient-centered continuum of care through which patient services are coordinated within the division and throughout the larger health care system. The Pulmonary Procedure Service, under the direction of Dr. Ben-Gary Harvey, continues to embrace innovations in diagnostic and treatment services,

such as “EBUS” (endo-bronchial ultrasound) for the diagnosing and staging of mediastinal masses, lymphadenopathy and lung cancer. This is in addition to traditional bronchoscopy and laryngoscopy services. The Pulmonary Function Laboratory, led by Dr. Sanders, remains a vital component of the division’s continuum of care via expert and timely diagnostic services.

Weill Cornell’s newly relocated and renovated Weill Cornell Center for Sleep Medicine (run jointly by the Department of Medicine/Division of Pulmonary and Critical Care Medicine and Department of Neurology) is led by Dr. Ana Krieger, Medical Director, and other experts, in evaluating the full range of sleep problems. The team includes specialists in pulmonary medicine; neurology; internal medicine; ear, nose and throat (ENT); pediatrics; psychiatry; psychology; bariatric surgery; nutrition; and endocrinology. The center provides outpatient visits, at home sleep studies, and overnight studies. Patients are monitored by the use of advanced sleep-recording equipment in private rooms; there are also sleep study rooms equipped for pediatric and bariatric patients. By increasing the availability of physician services, the center has become a provider of choice for patients and referring physicians on a local, national, and international level.

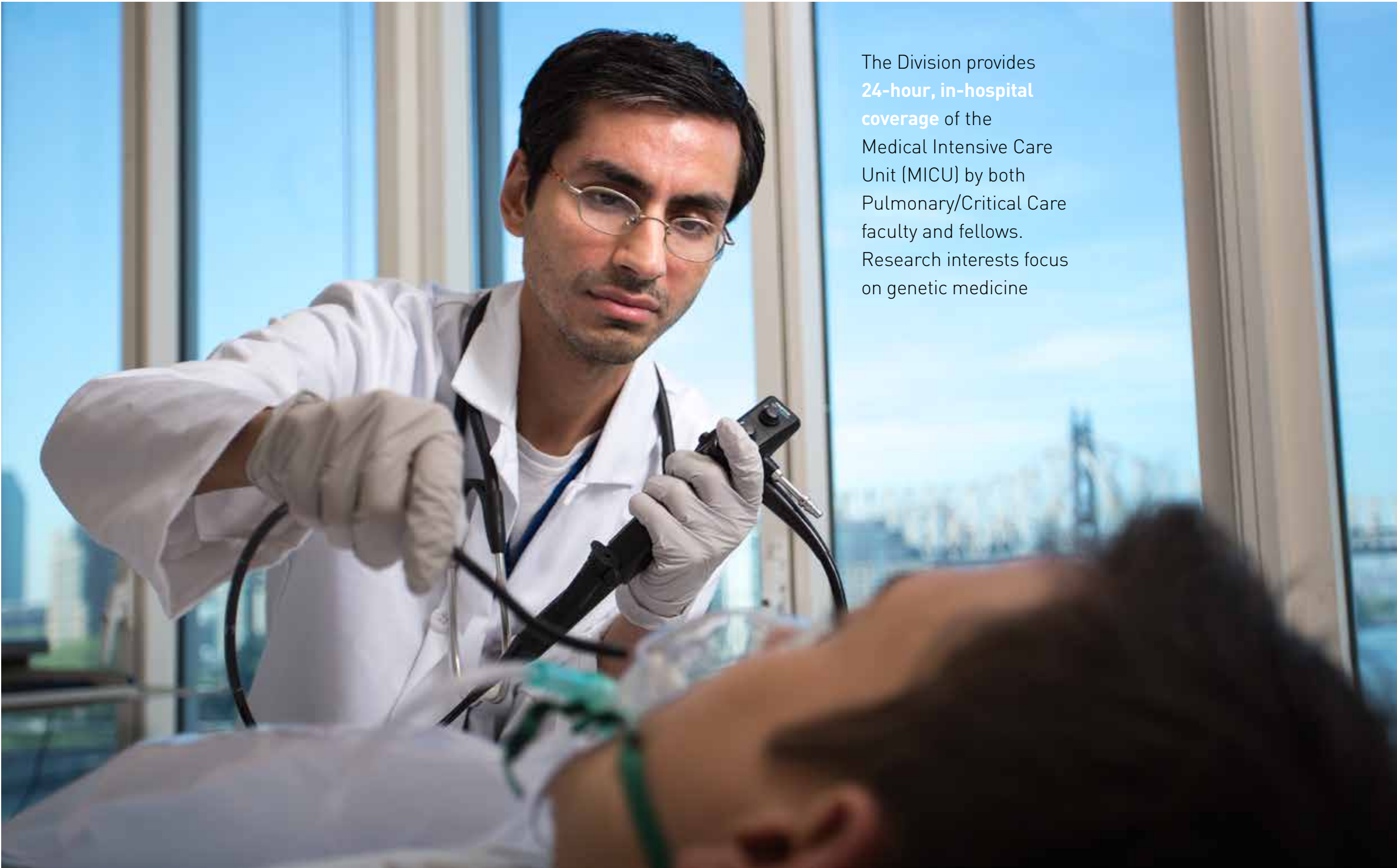
Research programs, in conjunction with Dr. Ronald Crystal and the Department of Genetic Medicine, include one of only 11 NIH-sponsored Idiopathic Pulmonary Fibrosis Clinical Research Network sites in the country (Dr. Robert Kaner); and studies of the molecular and genetic basis of accelerated emphysema development in smokers (Drs. Kaner, Ann Tilley, and Ben-Gary Harvey). Dr. Krieger is conducting NIH-funded clinical and translational research on the mechanisms of cardiovascular diseases and thrombosis in sleep apnea.

The division welcomed a new recruit in 2012, Dr. Meredith Turetz, an Assistant Professor of Medicine who will be working on our Pulmonary Consult Service.

Dr. Kapil Rajwani working in the MICU.



**Joseph T. Cooke, MD**  
Chief, Division of Pulmonary  
Chief, Quality & Patient  
Safety Officer  
  
Associate Professor of  
Clinical Medicine & Public  
Health



The Division provides  
**24-hour, in-hospital coverage** of the  
Medical Intensive Care  
Unit (MICU) by both  
Pulmonary/Critical Care  
faculty and fellows.  
Research interests focus  
on genetic medicine



# Rheumatology



**Mary K. Crow, MD**  
Chief, Division of Rheumatology

Joseph P. Routh Professor of Rheumatic Diseases in Medicine  
Professor of Medicine  
Weill Cornell Medical College

Benjamin M. Rosen  
Chair in Immunology and Inflammation Research

Attending Physician  
NewYork-Presbyterian Hospital

Based at Hospital for Special Surgery (HSS), the Division of Rheumatology is a well established national and international leader in clinical care of patients with autoimmune, inflammatory and musculoskeletal conditions, including those with some of the most complex of all medical diseases; research that has contributed to identification of novel therapeutic targets and new understanding of disease mechanisms; and innovative approaches to medical education and education research. In addition to its comprehensive approach to patients with rheumatologic disorders, the Division has responsibility for all of the pre- and post-surgical medical care of the more than 26,000 patients who undergo orthopaedic surgery procedures at HSS each year.

Clinical care, research and educational programs in rheumatology are dedicated to tapping insights derived from study and care of complex patients with autoimmune and inflammatory diseases to drive laboratory studies that result in new understanding, and ultimately novel treatments, for these complex diseases. The division's rich academic environment attracts the future leaders in academic rheumatology to its NIH T32 training grant-supported fellowship program.

Achieving optimal outcomes for patients is the goal of our 25 active consultative rheumatology practitioners, with more than 33,000 office visits in 2012, an increase of 7% over 2011, for disorders ranging from osteoarthritis and rheumatoid arthritis to the most complex patients with lupus, vasculitis, progressive systemic sclerosis or diagnostic dilemmas. A Practice Effectiveness Committee, led by Dr. Theodore Fields, regularly assesses opportunities for application of best practices across all practices in order to provide the most cost effective and efficient care. In addition to the patients evaluated in the rheumatology practices located at HSS, members of the rheumatology faculty supervise our trainees in providing rheumatology consultations for in-patients at New-York Presbyterian Hospital, as well as those patients at Memorial Sloan-Kettering Cancer Center. Our rheumatology clinics are also focused on serving the needs of patients, with more than 3,500 patient visits in 2012, but additionally, are the centerpiece of our fellowship program, led by Drs. Anne Bass and Jessica Berman. The division conducted a re-evaluation of the structure of our clinics with the goals of improving patient access and the educational experience for our fellows. Recommendations from Drs. Bass and Berman, along with those from a task force led by Dr. Sergio Schwartzman, include inauguration of a clinic dedicated exclusively to new patients, as well as a novel primary care rheumatology clinic directed by Dr. Hal Whitman and focused on evaluation of clinical problems typically encountered in the context of primary care medical practices.

In addition to providing timely access to patients referred from general medicine practices at NYPH, this new clinic provides an opportunity for WCMC/NYP residents to experience direct patient contact and one-on-one discussion of management with rheumatology faculty. A rich learning environment is also provided in the multidisciplinary clinic conferences following Monday Inflammatory Arthritis Clinic and Friday Lupus Clinic. These conferences are an opportunity for discussion of patient management, guided by recent literature and enriched by attendance of representatives from other WCMC specialties, including Dr. Joanna Harp from Dermatology and Dr. John Barnhill from Psychiatry. Both conferences emphasize consideration of patients who might be candidates for enrollment in clinical research studies

(observational and interventional). A new multi-institutional research initiative led by Dr. Kyriakos Kirou, in collaboration with Dr. Surya Seshan from WCMC Surgical Pathology, grew out of discussions in the Lupus Clinic Conference and will collect retrospective data on patients with microangiopathic nephropathy to understand the clinical course and optimal management of these patients.

The Rheumatology Division is recognized for its strong collaborations between bench scientists and

clinicians, and HSS rheumatologists are considered leaders in providing research data that supports development of new therapeutics. Studies directed by Dr. Lionel Ivashkiv, developed over two decades, have characterized the role of the so-called Jak-STAT molecular pathway in activation of inflammatory responses mediated by cytokines. His detailed analysis of the regulation of this important cell system contributed to the knowledge base essential for the recent approval of an oral agent for patients with rheumatoid arthritis. The Mary Kirkland Center for Lupus Research remains a focal point for rheumatology research at HSS. Dr. Alessandra Pernis has discovered the essential role of a cell signaling pathway, dependent on a transcription factor called interferon regulatory factor 4 (IRF4), in production of inflammatory mediators involved in both lupus and rheumatoid arthritis. She is studying the effect of currently available therapeutic agents on modulation of IRF4-dependent syndromes in murine models.

A Practice Effectiveness Committee, led by Dr. Theodore Fields, **regularly assesses opportunities for application of best practices** across all practices in order to provide the most cost effective and efficient care.



Dr. Stephen J. Di Martino (HSS) with patient.

Studies by Dr. Mary Crow's laboratory, based on analysis of a patient cohort developed by Dr. Kirou, have identified a central role for interferon-alpha in the pathogenesis of lupus and have provided strong rationale for several drug development programs that target interferon production or cellular response to interferon. Dr. Jane Salmon has had a longstanding interest in defining the pathologic mechanisms that account for tissue damage in lupus, and has provided important rationale for targeting the complement pathway in lupus patients at high risk for pregnancy complications.

Clinical research programs grew in 2012 with the leadership of Dr. Vivian Bykerk, who has embarked on development of a multicenter observational study of patients with early inflammatory arthritis. Dr. Susan Goodman led development of a collaborative research effort, along with Dr. Lisa Mandl and orthopedic surgeons Drs. Mark Figgie and Michael Alexiades, with the goal of identifying predictors of outcome of hip and knee arthroplasty in patients with rheumatic disease. Drs. Doruk Erkan and Michael Lockshin continued their development of the APS ACTION international consortium for studies of antiphospholipid syndrome. These important research projects supplement the diverse academic activities organized through the division's Centers of Excellence in SLE and Antiphospholipid Syndrome, directed by Dr. Salmon; Scleroderma, Vasculitis and Myositis, directed by Dr. Robert Spiera; and Inflammatory Arthritis, led by Research Director, Dr. Vivian Bykerk, and Clinical Director, Dr. Sergio Schwartzman. These academic programs develop initiatives in patient education, quality indicators, public communication, and development of collaborative research projects.



The HSS Academy of Rheumatology Medical Educators, co-directed by its founder Dr. Stephen Paget and Dr. Jessica Berman, completed selection and funding of three pilot education research grants to division faculty. The projects included further development of the Rheumatology Objective Structured Examination for Fellowship Trainees, directed by Dr. Berman; development of a curriculum for a Rheumatology Epidemiology Journal Club, led by Drs. Berman and Mandl; and a project with the goal of fostering professionalism, led by Dr. C. Ronald MacKenzie in collaboration with WCMC faculty. The HSS Academy has also sponsored two workshop meetings, bringing together participants from New York area medical schools, including NYU, Downstate, Stony Brook, as well as WCMC.

The division assures optimal preparation and post-operative management of patients undergoing orthopedic surgery at HSS. Dr. Linda Russell, Director of Perioperative Medicine, has demonstrated strong leadership in designing a comprehensive structure for efficient preoperative medical evaluation of patients scheduled for in-patient surgery and has developed new guidelines for laboratory, imaging, and consultative assessment of those patients based on current evidence-based literature. She oversees 11 internists and hospitalists who, along with 8 rheumatologists with active perioperative medical practices, collaborate with HSS surgeons to optimize medical status prior to surgery and monitor patients post-operatively. HSS is gaining nationwide recognition for its systematic approach and academic programs aimed at achieving optimal medical care for patients undergoing musculoskeletal procedures, with Dr. Russell presenting a featured state-of-the-art lecture on perioperative medicine at the Annual Scientific Meeting of the American College of Rheumatology in 2012.

Members of the Division of Rheumatology faculty are highly visible among the administrative leadership of HSS through their dedicated service to the institution. In addition to the essential role of Dr. Russell in Perioperative Medicine, Dr. Susan Goodman co-chairs the hospital's Multispecialty Peer Review Committee, and Dr. Steven Magid co-chairs the hospital's Quality Coordinating Committee. In 2012, Dr. Magid was named the Chief Medical Information Officer for HSS, an influential role as new information technology systems are rolled out in the hospital and office practices.

Members of the division were honored based on their significant academic and research achievements. Dr. Vivian Bykerk was promoted to Associate Professor of Medicine and Dr. Robert Spiera was promoted to Professor of Clinical Medicine. Dr. Crow was named a Master of the American College of Rheumatology, Dr. Salmon received the Virginia Kneeland Frantz '22 Distinguished Women in Medicine Award from the Columbia P & S Alumni Association, and Dr. Russell was the 2012 Women on the Move honoree from the Arthritis Foundation, New York Chapter. Dr. Michael Lockshin received the National Leadership Award for Lupus Medical Advancement from the Lupus Foundation of America, and Dr. Elana Bernstein, a rheumatology fellow, received the Distinguished Fellow Award from the American College of Rheumatology. Dr. MacKenzie was honored as the recipient of the C. Ronald MacKenzie, MD, Chair in Ethics and Medicine, and Dr. Steven Goldring was named the Richard L. Menschel Research Chair.



Dr. Alessandra B. Pernis

# Weill Cornell Internal Medicine Associates (WCIMA)



**Judy Tung, MD**  
Director, Weill Cornell Internal Medicine Associates  
Acting Chief, General Internal Medicine  
Associate Chair of Educational Affairs  
Associate Director, Internal Medicine Residency Program  
Associate Professor of Clinical Medicine  
Weill Cornell Medical College  
Associate Attending Physician  
NewYork-Presbyterian Hospital

WCIMA achieved Level 3 recognition from the National Committee for Quality Assurance as a Patient Center Medical Home in 2012. Additionally, the New York State Department of Health awarded NewYork-Presbyterian Hospital \$16M, over the next three years, to transform WCIMA and the other primary care practices into Hospital Medical Homes. The grant is awarded to New York State hospitals to expand the continuity training experience for primary care residents, including enhanced training for the resident physicians in the patient-centered medical home model for healthcare delivery.

The goal is to improve the coordination, continuity and quality of care for individuals receiving primary care services in outpatient primary care settings used by teaching hospitals to train resident physicians. WCIMA's recent innovations, including our 6+2 rotation schedule, our team-based model for continuity of care, and our structured end-of-year sign out process. The latter was described in a September 2012 publication (by Drs. Christina Harris and Erica Phillips-Caesar) in the *Journal of General Internal Medicine*; "Development of a Structured Year-End Sign-Out Program in an Outpatient Continuity Practice." These developments have positioned WCIMA for optimal growth as a hospital home.

WCIMA faculty continue to hold leadership positions within the organization. Dr. Judy Tung is currently Acting Chief of the Division of General Internal Medicine. Dr. Nicole Sirotin, who joined our faculty in 2011, now serves as the Medical Director for the Weill Cornell Center for Human Rights (WCCHR). WCCHR, founded in 2010, is the first medical student-run human rights clinic dedicated to providing forensic evaluations to survivors of persecution seeking asylum in the United States. Through a partnership with Physicians for Human Rights, WCCHR has conducted 98 medical and psychological evaluations for 87 asylum seekers from 35 countries with a 100% asylum grant rate for those who have gone to court. WCCHR is a national leader in training medical students to evaluate clients for signs of past physical and psychological trauma with over 166 students trained to date. The work of WCCHR furthers WCIMA's mission of instilling a strong dedication to service learning and care for the underserved and augments Dr. Sirotin's efforts in creating a new Vulnerable Populations curriculum emphasizing Global Health at Home. Also, Dr. Sirotin and peers published an article entitled "Structural Determinants of Food Insecurity and Low Dietary Diversity in Rwandan HIV+ Women" in the *Boston Medical Journal*.

Dr. Sanjai Sinha joined WCIMA in November 2012, recruited from the Department of Veteran Affairs. Dr. Sinha served as Director of the Residency Outpatient Primary Care Clinic at the James J. Peters VA Medical Center in the Bronx until 2010 when he was appointed Chief of Primary Care for the VA Hudson Valley Healthcare System. His achievements at the VA included securing NCQA certification for its 9 clinical sites as Patient Centered Medical Homes; leading the Patient Aligned Care Team (PACT)

into a systems redesign that improved access to care; and implementing panel management and utilizing team-based care. Dr. Sinha will serve as the Director of Care Management for the Weill Cornell Physician's Organization, in addition to serving as a clinician educator at WCIMA at the Irving Wright Center on Aging. WCIMA at the Wright Center is an extension of WCIMA located on 1484 First Avenue (between 77<sup>th</sup> & 78<sup>th</sup>). Other WCIMA members at the Wright Center are Dr. Fran Ganz-Lord, selected as a member of Cornell's Health Leadership Fellows Program; Dr. Lauren Acinapura, director of the WCIMA curriculum; and Dr. Matthew Press, Department of Public Health.



Dr. Ginger Watson with a resident in training at WCIMA.



Dr. Tung (far left) received the 2012 Cornell ACN Physician of the Year Award. The Department of Nursing gives this award to recognize physicians who consistently practice with nursing and support staff in a collaborative, collegial, and respectful manner. At the celebration: (L to R) Dr. Judy Tung, Stephen Toppin (Practice Supervisor), Patricia Deely (Nurse Clinician), Diego Arias (Practice Administrator)



# Iris Cantor Women’s Health Center

The Iris Cantor Women’s Health Center (ICWHC) offers the most comprehensive array of healthcare services, designed specifically for women, in a single location in New York City. All of the Center’s physicians are full-time faculty members of Weill Cornell Medical College and attending physicians at NewYork-Presbyterian/Weill Cornell Medical Center. Many of these physicians have set international standards for medical care through their pioneering research. A team of nurses, technicians and other healthcare professionals provide superb coordination of care at the Center. 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. A Health Education Resource Center is available on-site providing educational materials on physical, psychological and social issues that impact health.

Physicians at the ICWHC continued to provide comprehensive clinical care to both women and men. The Women’s Health Center also continued to assist in the development of the Iris Cantor Men’s Health Center, which opened in the summer of 2012, with Dr. Etingin involved in the planning, fundraising, and implementation phases. The new men’s health practice enhances the primary care network of Weill Cornell by providing access to seven physicians who deliver patient care to men focused on internal medicine, cardiology, endocrinology, hematology, and urology. The new center also houses the Department of Urology’s Institute for Bladder and Prostate Health. Clinical research collaborations between Men’s and Women’s Health are underway.

Women’s Health sponsored a number of community events in 2012. Monthly health education seminars were attended by more than 200 community members; topics included Women and Heart Disease, Dietary Supplements, Sleep, and others.



**Orli R. Etingin, MD**  
Director, Iris Cantor Women’s Health Center  
  
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

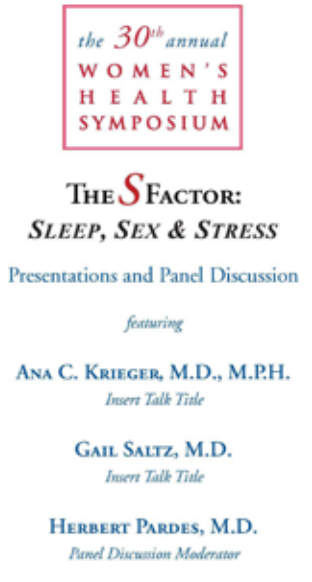


L-R: Drs. Pardes, Etingin, Saltz, (Joan and Sanford I. Weill center), Dr. Laurie Glimcher (Dean, WCMC), Dr. Krieger



L-R: Drs. Saltz, Krieger, and Pardes

This year’s (the 30th) annual Women’s Health Symposium, entitled “The S Factor: Sleep, Sex and Stress,” hosted over 300 women at the Citicorp Center and included Dr. Ana Krieger and Dr. Gail Saltz as guest speakers.



Faculty Members



# Department of Medicine Faculty

## Professors

Ronald D. Adelman, MD  
Louis J. Aronne, MD  
Phyllis August, MD, MPH  
Charles L. Bardes, MD  
David J. Brillon, MD  
James B. Bussel, MD  
Lewis C. Cantley, PhD  
Mary E. Charlson, MD  
Pamela Charney, MD  
David J. Christini, PhD  
Ronald G. Crystal, MD  
Andrew J. Dannenberg, MD  
Richard B. Devereux, MD  
Lewis M. Drusin, MD, MPH  
Orli R. Etingin, MD  
Arthur T. Evans, MD, MPH  
Oliver T. Fein, MD  
Eric J. Feldman, MD  
Joseph J. Fins, MD  
Neal E. Flomenbaum, MD  
Linda M. Gerber, PhD  
Patricia Giardina, MD  
Marshall Jay Glesby, MD, PhD  
Laurie H. Glimcher, MD  
Stanley J. Goldsmith, MD  
Antonio M. Gotto, Jr., MD, DPhil  
Lorraine J. Gudas, PhD  
Roy M. Gulick, MD, MPH  
Katherine A. Hajjar, MD  
Barbara L. Hempstead, MD, PhD  
Evelyn M. Horn, MD  
Julianne L. Imperato-McGinley, MD  
Jonathan L. Jacobs, MD  
Ira M. Jacobson, MD  
Stephen G. Jenkins, PhD  
Warren D. Johnson, Jr., MD  
Michel Kahaleh, MD  
Rainu Kaushal, MD  
Harvey Klein, MD  
Paul D. Kligfield, MD  
Mark S. Lachs, MD, MPH  
Jeffrey C. Laurence, MD  
John P. Leonard, MD  
Bruce B. Lerman, MD  
Martin Lipkin, MD  
Lia S. Logio, MD  
Samuel J. Mann, MD  
Aaron J. Marcus, MD  
Steven M. Markowitz, MD  
Ari M. Melnick, MD  
B. Robert Meyer, MD  
Anne Moore, MD  
Henry W. Murray, MD  
Alvin I. Mushlin, MD  
Ralph L. Nachman, MD  
David M. Nanus, MD  
Carl F. Nathan, MD  
Peter Michael Okin, MD  
Jean W. Pape, MD

Mark S. Pecker, MD  
Karl Pillemer, PhD, MA  
David N. Posnett, MD  
R.A. Rees Pritchett, MD  
Shahin A. Rafii, MD  
Marcus M. Reidenberg, MD  
Brendan M. Reilly, MD  
Mary J. Roman, MD  
Isadore Rosenfeld, MD  
Andrew I. Schafer, MD  
Tsiporah B. Shore, MD  
Eugenia L. Siegler, MD  
Richard T. Silver, MD  
David J. Skorton, MD  
Kendall A. Smith, MD  
James P. Smith, Jr., MD  
Charles R. Steinberg, MD  
Kotha Subbaramaiah, PhD  
Manikkam Suthanthiran, MD  
Linda T. Vahdat, MD  
Koen van Besien, MD, PhD  
Thomas J. Walsh, MD  
Alan M. Weinstein, MD  
Babette B. Weksler, MD  
Marc E. Weksler, MD  
Shing-Chiu Wong, MD

## Associate Professors

Holly Andersen, MD  
Susan Clark Ball, MD  
Geoffrey W. Bergman, MBBS  
Brian Bosworth, MD  
Carla Boutin-Foster, MD  
David P. Calfee, MD  
Carol Capello, PhD  
Juan Emilio Carrillo, MD, MPH  
Wallace A. Carter, Jr., MD  
Adam D. Cheriff, MD  
Ellen Chuang, MD  
Curtis Leland Cole, MD  
Joseph T. Cooke, MD  
Darshana M. Dadhania, MD  
Byron Paul Demopoulos, MD  
Maria T. DeSancho, MD  
Ruchuang Ding, MD  
Edgar Figueroa, MD, MPH  
Daniel W. Fitzgerald, MD  
Christine L. Frissora, MD  
Maya Gambarin-Gelwan, MD  
Paraskevi Giannakakou, PhD  
Linnie M. Golightly, MD  
Ben-Gary Harvey, MD  
James Paul Hollenberg, MD  
Ingrid Hriljac, MD  
Nathaniel Hupert, MD, MPH  
Erica C. Jones, MD  
Sian Jones, MD  
Robert Jeffrey Kaner, MD  
Yoon Kang, MD  
Jason S. Kendler, MD

Lisa M. Kern, MD  
Thomas K.C. King, MD  
Ana C. Krieger, MD  
Keith A. LaScalea, MD  
Eliot J. Lazar, MD  
Steven M. Lipkin, MD, PhD  
Veronica M. LoFaso, MD  
Charles Maltz, MD, PhD  
Joseph P. Mele, MD  
Samuel T. Merrick, MD  
Shari R. Midoneck, MD  
David H. Miller, MD  
Carlyle H. Miller, MD  
Robert M. Minutello, MD  
Susana R. Morales, MD  
Ruben Niesvizky, MD  
Roger Niles Pearse, MD, PhD  
Allyson J. Ocean, MD  
Fred N. Pelzman, MD  
Erica G. Phillips, MD  
Barrie L. Raik, MD  
Sharda D. Ramsaroop, MD  
M. Cary Reid, Jr., MD, PhD  
Kyu Young Rhee, MD, PhD  
Arleen B. Rifkind, MD  
Gail J. Roboz, MD  
Joseph T. Ruggiero, MD  
Abraham Sanders, MD  
Diana L. Santini, MD  
Robert A. Schaefer, MD  
Ellen J. Scherl, MD  
Manish A. Shah, MD  
Rosemary Soave, MD  
Carol L. Storey-Johnson, MD  
Adam Reed Stracher, MD  
Scott T. Tagawa, MD  
Andrew H. Talal, MD, MPH  
Judy Tung, MD  
Mary A. Vogler, MD  
Jonathan W. Weinsaft, MD  
Timothy Wilkin, MD  
Stephen Wilson, MD  
Hua Yang, MD  
Yuan-Shan Zhu, MD, PhD  
Michael A. Zull, MD

## Assistant Professors

Josyann Abisaab, MD  
Lauren Acinapura, MD  
Elizabeth L. Alexander, MD  
Alicia Alonso, PhD  
Monica Altman, MD  
Richard L. Altman, MD  
John Arbo, MD  
Elliot J. Arons, MD  
Rebecca R. Asuncne, MD  
Jason Baker, MD  
Jeffrey E. Ball, MD  
Satchit Balsari, MBBS  
John Thomas Barnard, MD

Paul Basciano, MD  
Cindy H. Baskin, MD  
Himisha Beltran, MD  
David Berlin, MD  
Doron Betel, PhD  
Tara F. Bishop, MD  
Ellen Blye, MD  
Gary J. Bouchard, PhD, PA-C  
Risa Breckman, MSW  
Juliet Caldwell, MD, BA  
Leandro Cerchietti, MD  
Joseph J. Chang, MD, MPH, FACP  
Macarthur Charles, MD, PhD  
Richard Charney, MD  
Jim W. Cheung, MD  
Harold Chin, MD  
Amy E. Chused, MD  
Tessa Cigler, MD  
Sunday Clark, MPH, ScD  
David A. Cohen, MD  
Carl Crawford, MD  
Daniel J. Crossman, MD  
Ype P. de Jong, MD, PhD  
Tessa del Carmen, MD  
Randi R. Diamond, MD  
J Leonard DiRe, MD  
Vishal H. Dodia, MD  
Jennifer A. Downs, MD  
Joan H.F. Drosopoulos, PhD  
Niels Dua, MD  
Rachel P. Dubroff, MD  
Nell Eisenberg, MD  
Ernie L. Esquivel, MD  
Brenna Farmer, MD  
Marc J. Felberbaum, MD  
Dmitriy V. Feldman, MD  
Jose L. Fernandez, MD  
Emily S. Finkelstein, MD  
Eva K. Flores, MD  
Rebecca L. Florsheim, MD  
Alyson N. Fox, MD  
Oren A. Friedman, MD  
Richard R. Furman, MD  
Christopher Gade, MD, MPH  
Fran A. Ganz-Lord, MD  
Flavio G. Gaudio, MD  
Elaine Y. Gee, MD  
Joy Gelbman, MD  
Paul Gerardì, MD  
Usama Gergis, MD  
John Travis Gossey, MD  
Peter W. Greenwald, MD  
Kelly Griffin, MD  
Kirana Gudi, MD  
Renuka Gupta, MD  
Monica L. Guzman, PhD  
Sandra M. Hall-Ross, MD  
Alexis Halpern, MD  
Christina Elaine Harris, MD  
Duane C. Hassane, PhD

Cathy J. Greene Hatcher, PhD  
Caren Heller, MD, MBA  
Margaret L. Hoffman, MD  
James M. Horowitz, MD  
Yariv Houvras, MD, PhD  
Hanson Hsu, MD  
Jonathan L. Hugo, MD  
Saraswati lobst, MD  
James E. Ip, MD  
Vinita E. Jacob, MD  
Helen Hyonji Lee, MD, MPH  
Elizabeth Leef Jacobson, MD  
Steven Kaplan, MD  
Anne S. Kastor, MD  
Melissa Dee Katz, MD  
Agnes S. Kim, MD, PhD  
Luke K. Kim, MD  
Robert J. Kim, MD  
Laura Kirkman, MD  
Ronald B. Kraft, MD  
Trine Krogh-Madsen, PhD, MSc  
Rekha B. Kumar, MD  
Sonal Kumar, MD  
Charles O. Kwon, MD  
Maureen E. Lane, PhD  
Richard I. Lappin, MD, PhD  
Meredith F. Lash-Dardia, MD  
Jennifer I. Lee, MD  
Moshe Lehrer, MD  
Richard Liebowitz, MD  
Fay Yu-Huei Lin, MD  
Richard J. Lin, MD, PhD  
Sophia Lin, MD  
Christopher F. Liu MD  
Cathleen G. London, MD  
Marcia Lux, MD  
Tomer M. Mark, MD  
Kristen M. Marks, MD  
Peter Martin, MD  
Johanna Martinez, MD  
Bassem M. Masri, MD  
Kedar S. Mate, MD  
Usha Mathur-Wagh, MBBS  
Anna Myint Maw, MD  
Sebastian Mayer, MD  
Margaret L. McNairy, MD  
Sonal S. Mehta, MD  
Ellen C. Meltzer, MD  
David B. Messenger, MD  
Raffaele Milizia, MD  
Renu Chawla Mital, MD  
Serena Mulhern, MD  
Thangamani Muthukumar, MD  
Nancy N. Nealon, MD  
Danielle Nicolo, MD, PhD  
Oksana Ocheretina, PhD  
Anthony Ogedegbe, MD  
Sonja Olsen, OMD  
Karin-Elizabeth Ouchida, MD  
Lucy N. Painter, MD

Robert N. Peck, MD  
Janey C. Peterson, EdD  
Sean P. Pickering, MD  
Elizabeta C. Popa, MD  
Matthew J. Press, MD  
Jane Prosser, MD  
Pouneh Kermani Rabbany, PhD, MSc  
Bharathi Raman, MD  
Carmen M. Ramis, MD  
Rama B. Rao, MD  
Jospeh G. Rella, MD  
Ellen Ritchie, MD  
Eric A. Rosenberg, MD  
Jia Ruan, MD, PhD  
Mirella Salvatore, MD  
Yaveen K. Santhiraj, MD  
Robert L. Savillo, MD  
Joseph M. Scandura, MD, PhD  
Ronald J. Scheff, MD  
Bryan J. Schneider, MD  
Felice Schnoll-Sussman, MD  
Audrey Schuetz, MD  
Aaron P. Schulman, MD  
Brian D. Schwartz, MD  
Marco Seandel, PhD, MD  
Sam Senturia, MD  
Rita Shaknovich, MD, PhD  
Reem Z. Sharaiha, MBBS  
Shahrokh Shariat, MD  
Lawrence Siegel, MD  
Harjot K. Singh, MD  
Harsimaran S. Singh, MD  
Vishwas A. Singh, MD  
Naina Sinha, MD  
Sanjai Sinha, MD  
Nicole Sirotin, MD  
Duane M. Smith, MD  
Vivian Sobel, MD  
Irina Sobol, MD  
Jeremy Sperling, MD  
Carolyn Robb Steinberg, MD  
Michael E. Stern, MD  
Hans Stohrer, MD  
Dean Straff, MD  
James Stulman, MD  
Rajesh V. Swaminathan, MD  
Massimiliano Szulc, PhD, MS  
Chin C. Tang, MD  
George Thomas, MD  
Ann Tilley, MD  
Henry A. Tran, MD  
Meredith L. Turetz, MD  
Brian G. Turner, MD  
Carlos M. Vaamonde, MD, MS  
Michael J. Vortmann, MD  
Jonathan A. Waitman, MD  
David Wenhan Wan, MD  
Beverly X. Watkins, PhD  
Luise L. Weinstein, MD

James R. Wilentz, MD  
Ginger J Winston, MD  
Franklin J. Wong, MD  
Jennifer K. Wright-McCarthy, MD  
Yi-Ming Yang, MD  
Cecilia J. Yoon, MD  
Dana Zappetti, MD  
Christine Zink, MD

## Instructors

William J. Ameres, PA-C, BS  
Edward Amores, MD  
Caitlin Anderson, MD  
David Anthony, MD, MPH  
Pamela Apolaya, MD  
Ryan Patrick Bayley, MD  
Rana Biary, MD  
Ilana Bragin, MD  
Amanda S. Carmel, MD  
Donald Catino, MD  
Brian Eiss, MD  
Paul J. Fenyves, MD  
Michael E. Ford, MD  
Francine Garrett-Bakelman, MD, PhD  
Hina Ghory, MD  
Samantha E. Jacobs, MD  
Marianna Karounos, DO  
Jennifer Kherani, MD  
Stephen Kuperberg, MD  
Jacqueline Mahal, MD  
Adrian Mei, MDCM  
Alia (aka) Maria Menezes, MD  
Mary Mulcare, MD  
Matthew T. O'Neill, MD  
Anjali Tripathi Pant, MD  
Kapil K. Rajwani, MD  
Mayra Ramirez, MA, PA-C  
Paula Roy-Burman, MD  
Michael J. Satlin, MD  
Christopher Schultz, MD  
Vivien Shiah, MD  
Mili Shum, MD  
Emily K. Shuman, MD  
Rachel Smerd, MD  
Peter A. Steel, MBBS  
Medea Y. Valdez, PA-C, BS  
Henry George Wei, MD  
Jessica L. Widmer, DO  
Gerardo L. Zullo, MD

## Network, Affiliate, Voluntary, and Emeritus Faculty

Omar I. Abdel-Wahab, MD  
Ahmad Salih Abdulhadi, MBChB  
Michael L. Abott, MD  
Ghassan Khaled Abou-Alfa, MD  
Sherly Abraham, MD  
Niraj N. Acharya, MBBS, MD  
Katafan Achkar, MD

Alberto M. Acosta, MD, PhD  
Carol A. Aghajanian, MD  
Jugal Agrawal, MBBS, MD  
Mohammad Abdul Ahad, MBBS  
Meena Ahluwalia, MBBS  
Hisham Abdul Aleem Abdul Ahmed, MBChB  
Juliet B. Aizer, MD  
Corina E. Akerele, MD  
Olakunle Akinboboye, MBBS  
David P. Akman, MD  
Safaa Hassan Ali Al Azewei, MBChB  
Salih Ali A. Hadi Al Marri, MBBS  
Abdulwahab Al Musleh, MD  
Ibrahim Yousif Mahmood Al Omary, MBChB  
Buthina Ibrahim Al Owainati, MBBS  
Ibrahim Al Shaar, MBBS  
Hussam Al Soub, MBBS  
Jassim Al Suwaidi, MBChB  
Jameela Al-Khowaiter Al-Ajmi, MD  
Ahmed A.R. Muhamad Al-Ani, MBChB  
Salah Abdul Aziz Al-Azab, MBBS  
Khalid Al-Badr, MD  
Alaa K. Al-Badran, MBChB  
Michael H. Alderman, MD  
Louis M. Aledort, MD  
Samar Al-Emadi, MBBS  
Nikolas Alexandrou, MD  
Mushtak Talib Abbas Algherbawe, MBChB  
Abdulzaiz A. Al-Hashemi, MBBS  
Rana Ali, MBBS  
Waleed Muhsin Ali, MBChB  
Sawsan H. Al-Izzi, MBChB  
Abdullatif Mohamed Alkhal, MBChB  
Robert Allan, PhD  
Mona Hass Al-Langawi, MBBS  
John P. Allegrante, MS, PhD  
Hassan Ali M. Al-Malki, MD  
Muna A.S. Almaslamani, MBBS  
Abdelrahman Almasri, MBBS  
Ahmed A.A. Al-Mohammed, MBBS  
Azza Awad Al-Mujalli, MD  
Noora Ahmad Al-Mutawa, MBChB  
Abdulrahman D. Alnabti, MD  
Saad Abdulfatah A. Al-Nuaimi, MBChB  
Reynaldo H. Alonso, MD  
Mourhege M. Al-Saloum, MD  
Ahmed Subhy H. Alsheikhly, MBChB  
Hashim Mohamed Al-Sayed, MBBS  
Suryanarayan Anand, MBBS  
Nanarao Anandarao, MBBS



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Christopher L.B. Nevins, MD  
Barney D. Newman, MD  
Marissa D. Newman, MD  
Kenneth K. Ng, MD  
Kaman Ng, MD  
Vincent Waikuen Ng, MD  
Julie C. Nguyen, MD  
Susan C. Nicholson, MD  
John P. Nicholson, Jr., MD  
Aryel Nicoleau, MD  
Carl Andre Nicoleau, MD, PhD  
Tanya Nikolova, MD  
Stephen David Nimer, MD  
Rudolph H. Nisi, MD  
Larry Norton, MD  
Michelle K. Nowak-Logozzo, MD  
Ariela Noy, MD  
Parirokh Nozad, MD  
Steve Esfandiar Nozad, MD  
Michel Ernest Nussbaum, MD  
Martin Nydick, MD  
Irwin Nydick, MD  
Roisin O’Cearbhail, MBChB  
Herbert F. Oettgen, MD  
Kenneth Offit, MD, MPH  
Adesuwa Okesanya, MD  
Ion Oltean, MD  
Anas Ahmed Omer, MBChB  
Kenneth Ong, MD  
Eileen M. O’Reilly, MBChB  
Ruth Osowsky, MD  
Aneta Ostrowska, MD  
Laszlo Osvath, MD

Jacob Ouseph, MD  
Stephen A. Paget, MD  
Joseph Thomas Paglia, MD  
Paul K. Paik, MD  
Shashishekhar Palekar, MBBS  
Jeffrey E. Paley, MD  
Maria Lia Palomba, MD  
Eric G. Pamer, MD  
Cynthia X. Pan, MD  
Esperanza B. Papadopoulos, MD  
Genovefa A. Papanicolaou, MD  
Benoit Jerry Papon, MD  
Firjeeth Paramba, MBBS  
Chong H. Park, MD  
Jae Hong Park, MD  
Richard Park, MD  
Sonal Shah Parr, MD  
Edward J. Parrish, MD  
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Mina Pastagia, MD  
Richard C. Pasternak, MD  
Raymond D. Pastore, MD  
Stephen M. Pastores, MD  
Leonard T. Pastula, II, DO  
Manisha Patel, MD  
Naveena Pathmakumar, MBBS  
Doru Paul, MD  
George W. Pelebecky, Jr., MD  
Orlando Perales, MD  
Miguel-Angel Perales, MD  
Jose A. Perez, Jr., MD  
Alan S. Perlman, MD  
Alessandra B. Pernis, MD  
Francis S. Perrone, MD  
Lynne V. Perry-Bottinger, MD  
Manana Petrov, MD  
David Gerard Pfister, MD  
Patricia Phan, MD  
Maria C. Pietanza, MD  
Anush S. Pillai, DO, BA  
Riccardo Pini, MD  
Zarina Pino (Motorwala), MD  
Heidi M. Pinkert, MD  
Ian Pinto, MBBS  
Martin Poliak, MD  
Doris M. Ponce, MD  
Jovan M. Popovich, MD  
Carol S. Portlock, MD  
John A. Posey, Jr., MD, PhD  
Rock Gerard Positano, DPM  
David H. Posner, MD  
Martin R. Post, MD  
Craig M. Pratt, MD  
Jacek J. Preibisz, DMSc, MD  
Joanna M. Preibisz, MD  
Luminita Pricop, MD  
Fernando Arturo Pujol-Morato, MD  
Prabhakar Putheti, PhD  
Miguel A. Quinones, MD  
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Stephen H. Rabinowitz, MD  
Michael R. Rabinowitz, MD  
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Arthur I. Radin, MD  
Allen Robert Radin, MD

Russell N. Radoff, MD  
Linda Radomski, MD  
James J. Rahal, MD  
Ali Rahlil, MBBSCh  
Rummana Rahman, MBBS  
Shafiqur Rahman, MBBS  
Ritesh Raichoudhury, MD  
Ravindra Rajmane, MD  
Marwan Ramadan, MBChB  
Ramya Ramakrishnan, MD  
Dharmarajan Ramaswamy, MBBS  
Gumpeni Rammohan, MBBS  
Elizabeth Ramos, MD  
Raajit K. Rampal, MD, PhD  
Dragos Rancea, MD  
Scott E. Rand, MD  
James A. Rand, MD  
Suhail Raoof, MBBS  
Kakil Ibrahim Rasul, MBChB  
Dana Rathkopf, MD  
Kanwar S. Rauhila, MBBS  
Carroll A. Rayner, MD  
Tasleem Raza, MBBS  
Rose A. Recco, MD  
Steven G. Reed, PhD  
Abdul Rehman, MBBS  
Lilian M. Reich, MD  
Steven F. Reichert, MD  
Bonnie S. Reichman, MD  
Diane Reidy-Lagunes, MD  
Daniel Reingold, JD  
Marshal Scott Reminick, MD  
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Charles M. Rice, PhD  
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Lee Woodland Riley, MD  
Deborah L. Rimler, MD  
Naiyer A. Rizvi, MD  
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Laura Robbins, DSW  
Richard J. Robbins, MD  
Richard B. Roberts, MD  
Mark E. Robson, MD  
Arnold M. Rochwarger, MD  
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A. Arturo Rodriguez, MD, MBA  
Steven A. Rogers, MD  
Nancy Roistacher, MD  
Ana E. Roman, MD  
David N. Rose, MD  
Yocheved Rose, MD  
Neal Rosen, MD, PhD  
Herman Rosen, MD  
Howard E. Rosenberg, MD  
Michael A. Rosenbluth, MD  
Albert M. Ross, MD  
Gary E. Rothbart, MD  
Monisankar Roy, MBBS

Debasish Roychoudhury, MBBS  
Marina Rozenberg, MD  
Howard S. Rubin, MD  
David Scott Rubin, MD  
Moshe Rubin, MD  
Andrea T. Ruskin, MD  
Linda A. Russell, MD  
Mary T. Ryan, MD  
James G. Ryan, MD  
Mabel M. Ryder, MD  
Mona Sabra, MD  
Stuart D. Saal, MD  
Paul Joseph Sabbatini, MD  
Reza Sabet, MD  
Ian L. Sachs, MD  
Michel Sadelain, MD, PhD  
Naghham D. Sadik, MBChB  
Massimiliano Sala, MD  
R. Benjamin Saldana, DO  
Anthony Saleh, MD  
Mansoura Fawaz Salem, MBChB  
Jane E. Salmon, MD  
Leonard B. Saltz, MD  
Lori Beth Saltzman-Gabelman, MD  
Ravinder Saluja, MBMS  
Cori Salvit, MD  
Lisa R. Sammaritano, MD  
Nelson Sanchez, MD  
Donna Sandidge, MD  
Jean T. Santamauro, MD  
Thomas Santucci, Jr., MD  
Housam Aldeen Sarakabi, MD  
Barry I. Saul, MD  
Craig Sauter, MD  
Charles L. Sawyers, MD  
Brian Scanlan, MD  
Wendy Schaffer, MD, PhD  
Livia Schapira, MD  
Lawrence L. Scharer, MD  
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Elaine J. Schattner, MD  
David Schechter, MD  
David A. Scheinberg, MD, PhD  
Howard I. Scher, MD  
Lawrence Scherr, MD  
Andrew N. Schiff, MD  
David Ross Schifter, MD  
Ralph E. Schlossman, MD  
Michael J. Schmerin, MD  
H. Alan Schnall, MD  
William J. Schneider, MD, MPH  
Steven J. Schneider, MD  
Melissa P. Schori, MD  
Avraham Schreiber, MD  
George Schroth, MD  
Christian M. Schupp, MD  
Eliot Schuster, MD  
Leonard H. Schuyler, MD  
Ernest Schwartz, MD  
Gary K. Schwartz, MD  
Simeon Schwartz, MD  
Fred S. Schwartz, MD  
Joseph S. Schwartz, PhD  
Sergio Schwartzman, MD  
John C. Sciales, MD



Richard F. Scofield, MD  
Stephen M. Scott, MD, MPH  
Jean E. Sealey, DSc  
Neil H. Segal, MD, PhD  
Sorana Segal-Maurer, MD  
Andrew D. Seidman, MD  
Susan Seo, MD  
Kent A. Sepkowitz, MD  
Joshua D. Septimus, MD  
David Serur, MD  
Sandra L. Sessoms, MD  
Amrita Sethi, MD  
Kenneth K. Sha, MBBS  
Nabeel Shaath, MBBSCh  
Adel M. Shabana, MBBSCh  
Nehad Shabarek, MD  
Rajendra C. Shah, MBBS  
Alpesh R. Shah, MBBS  
Dipan J. Shah, MD  
Monika Kanu Shah, MD  
Pari Shah, MD  
Nooruldin F. Shakir, MBBS  
Benson H. Shalette, MD  
Neil F. Shallish, MD  
Nedal Shami, MBBSCh  
Jerome B. Shapiro, MD, PhD  
Neil H. Shapiro, MD  
Atul Sharma, MD  
Manik Sharma, MBBS  
Manish Sharma, DO  
Puneeta Sharma, MBBS  
Vijay Kumar Sharma, PhD  
Rahul Sharma, MD  
Nitya Sharma (Srinivasan), MD  
Gillian M. Shepherd, MD  
Stanley Sherbell, MD  
Bruce E. Sherling, MD  
Eric J. Sherman, MD  
Raymond L. Sherman, MD  
Patricia Ann Shi, MD  
Christopher P. Shields, MD  
Moshe Shike, MD  
Maurice E. Shils, MD, DSc  
Morris A. Shorofsky, MD  
Meenal Shukla, MBBS  
Abdul Rahim M. Siam, MBBS  
Jonathan Siegal, MD  
Steven E. Siegel, MD  
Vasilios Sierros, MD  
Steven H. Silber, DO  
Jonathan Silberlitch, MD  
Jeffrey I. Silberzweig, MD  
Howard Silcoff, MD  
Todd L. Simon, MD  
Monisha Singh, MD  
Amit Singh, MD  
Dinesh Chandra Sinha, MD, MBBS  
Steven Jay Siskind, MD  
Diane M. Sixsmith, MD  
Nancy T. Sklarin, MD  
Michael Skelly, MD  
Alexander J. Slotwiner, MD  
Susan Faith Slovin, MD, PhD  
Anthony J. Smith, MD  
Paul T. Smith, MD

Charles Smithen, MD  
Alan G. Snart, MBBS, MD  
Gerarld A. Soff, MD  
Benny Soffer, MD, MBA  
Won Sohn, MD  
David B. Solit, MD  
Meyer N. Solny, MD  
Henry A. Solomon, MD  
Anthony A. Somogyi, MD  
Debbie R. Sonenblick, MD  
Prabhat Soni, MBBS  
Anita Soni, MBBS  
Girish M. Sonpal, MBBS  
Alan J. Sonsky, MD  
Julio E. Sotelo, MD  
Allison Spatz, MD  
Gabriel Spergel, MD  
Robert J. Spiegel, MD  
Harry Spiera, MD  
Robert Forman Spiera, MD  
Bruce S. Spinowitz, MD  
Irving M. Spitz, MD  
Dana Spivak, MD  
David R. Spriggs, MD  
Emmanuel L.G. St. Louis, MD  
Stacy Stabler, MD, PhD  
Dora J. Stadler, MD  
Zsofia K. Stadler, MD  
Martin Stallone, MD  
Lawrence E. Stam, MD  
Ioannis A. Stathopoulos, MD, PhD  
Randy Stein, MD  
Herman Steinberg, MD  
Richard M. Steingart, MD  
Kurt H. Stenzel, MD  
Richard Stern, MD  
Radomir Stevanovic, MD  
Mark Y. Sherman, MD  
Hans Stohrer, MD  
Diane E. Stover, MD  
Mitchell S. Strand, MD  
David J. Straus, MD  
Joan A. Stroud, MD  
Sheena G. Stubbers, MD  
Alison E. Suarez, MD  
Steven M. Sugarman, MD  
Chang Ho Suk, MD  
Mohammed Abd El-Sattar  
Suliman, MBChB  
John F. Sullivan, MD  
Sung Wu Sun, BM  
Wei Fun Sung, MD  
Ranjit Suri, MBBS  
George C. Surla, MD  
Lynn Swisher, MD  
John L. Szalyga, MD  
M. Javad Tabaeae-Zadeh, MD  
George E. Taffet, MD  
Michael Tafoya, MD  
Avraham Tal, MD  
Martin S. Tallman, MD  
Steve C. Tam, MD  
Kenneth C. Tam, MD  
William D. Tap, MD  
Stephen G. Targett, MBChB

Silvio Robert Tasso, MD  
Jaime Tavarez, MD  
Ying Taur, MD, MPH  
William John Tenet, MD  
Jeffrey Tepler, MD  
Mark J. Tessler, MD  
William Tew, MD  
Malcolm Thaler, MD  
Maria Theodoulou, MD  
George E. Thibault, MD  
Carolyn H. Thompson, MD  
Joseph Tibaldi, MD  
Roma Tickoo, MBBS  
Jitendra Tolia, MBBS  
Alexander Tomasz, PhD  
Emily S. Tonorezos, MD  
Frantz Torchon, MD  
Guillermo Torre-Amione, MD, PhD  
Jose D. Torres, MD  
Tiffany A. Traina, MD  
Nicholas Triantafillou, MD  
Theodore J. Trumble II, MD  
Robert M. Tuttle, MD  
Theodore I. Tyberg, MD, MSc  
Wesley Tzall, MD  
Eva Urtasun-Sotil, MD  
Sudhir P. Vaidya, MBBS, MS  
Miguel Valderrabano, MD  
Emmanuel Valery, MD  
Marcel Rudolf M. van den Brink,  
MD, PhD  
Robbart van Linschoten, MD  
Nicholas Jon Vander Els, MD  
Nitza A. Vanga, MD  
Lisa Catherine Vasanth (Varley), MD  
Stephen R. Veach, MD  
Saimamba Veeramachaneni, MBBS  
Sindhaghatta K. Venkatram, MBBS  
Usha Venugopal, MD, MBBS  
Michael Verdirame, DO  
Mohamud Verjee, MBChB  
Elizabeth Verna, MD  
Elvira Villafuerte, MD  
Adrienne Vincenzino, MD  
Annette M. Visconti, MD  
Nicholas G. Vogiatzis, MD  
Kristian Wachtell, MD  
Rachel Waldron, MD  
Lila A. Wallis, MD  
Mary Beth Walsh, MD  
Frederick A. Walther, MD  
Rimda Wanchoo, MBBS  
George K. Wang, MD, PhD  
John C.L. Wang, MD, PhD  
Craig Warschauer, MD  
Carolyn Wasserheit-Lieblich, MD  
Adrienne Wasserman, MD  
Julia Wattacheril, MD  
Muhammad Wattoo, MBBS  
Jenne Wax, MD  
Paul Webb, PhD  
Geoffrey Webber, MD  
Arnold L. Weg, MD  
Wehbeh A. Wehbeh, MD  
Clinton G. Weiman, MD

Jeremy A. Weingarten, MD  
Howard Weinstein, MD  
Jessica M. Weiser-McCarthy, MD  
Stephen R. Weiss, MD  
Gil Weitzman, MD  
David Wentzel, DO  
Mary H. White, MD  
Hendricks H. Whitman, III, MD  
Joseph Wiesel, MD  
Pamela G. Williams-Russo, MD, MPH  
Lucy Willis, MD  
Robert Wilson, MD  
Sidney J. Winawer, MD  
William L. Winters, Jr., MD  
Ruth L. Wintz, MD  
Natasha Withers, DO  
Robert E. Wittes, MD  
James F. Wittmer, MD  
Jedd Wolchok, MD, PhD  
David H. Woldenberg, MD  
David J. Wolf, MD  
Steven Wolinsky, MD  
Michael J. Wolk, MD  
Gena Won, MD  
David C. Wong, MD  
John Eu-Li Wong, MBBS  
Alastair J.J. Wood, MBChB  
Anton Wray, MD  
Steven Wright, MD  
David Lynn Wuest, MD  
Kathleen L. Wyne, MD, PhD  
Jiaqiong Susan Xu, PhD  
Hooman Yaghoobzadeh, MD  
Henry Jiann-Cherng Yan, MBBS  
Christine Yang-Kauh, MD  
Mohamed Abdel Daem M. Yassin,  
MBBS  
Arthur M.F. Yee, MD, PhD  
Benson Yeh, MD  
Anne Yim, MD  
Linus Yoe, MBBS  
Bernard Yonk, MD  
Serena Yoon, MD  
James W. Young, MD  
Christine Yu, MD  
Christine Mei-Yan Yu, MD  
Florence Yu, MD  
Kenneth Ho-ming Yu, MD  
Howard S. Yudin, MD  
Tasneem Zahra, MBBS  
George Zahrah, MD  
David Zakim, MD  
Andrew D. Zelenetz, MD, PhD  
Richard Zerkowitz, MD  
Nejat Zeyneloglu, MD  
Cynthia X. Zhang, MD  
Ming Zhu, MD, MS  
Wendy S. Ziecheck, MD  
Lara M. Zilberstein, MD  
Janice L. Zimmerman, MD  
Mahmoud A. Zirie, MBBS  
William A. Zoghbi, MD



# Research Highlights



# Research Highlights 2012

## CARDIOLOGY

### Mechanisms of Cardiac Alternans

Cardiac alternans is an electrophysiological instability that can trigger lethal cardiac arrhythmias. We are using a synergistic computational and experimental (patch clamping and subcellular calcium imaging) approach to determine its mechanism. In the past year we implemented the first experimentally viable method to quantify the relative contributions of ionic currents and subcellular calcium handling to the instability that triggers cellular alternans.

PI: David Christini, PhD  
Funding: NIH R01

### Predictive Multiscale Modeling of Atrial Fibrillation for Therapy Development

We are using large-scale computational modeling, informed by electrophysiological experiments, to predict the efficacy of pharmacological agents in controlling paroxysmal, persistent, and chronic atrial fibrillation in the presence of common human ion-channel polymorphisms. In the past year we improved the model to incorporate fibrosis, which is a structural deterioration that occurs to atrial tissue during prolonged atrial fibrillation.

PI: David Christini, PhD  
Funding: NIH R01

### Real-Time Development of Cardiac Cell Computer Models

Computer models of cardiac cells are widely used to predict and test arrhythmia therapies. Unfortunately, the equations underlying such models are often incorrect approximations, resulting from a model-development paradigm that is decades old and does not exploit modern automated search algorithms. We have developed a novel automated technique that merges dynamic experiment protocols with an automated search algorithm to significantly improve the realism of models of cardiac cells. We are currently working to apply this method to human atrial myocytes.

PI: David Christini, PhD  
Funding: NIH R01

### Transcriptional Regulation of Cardiovascular Development

This study defines the molecular and cellular requirements for cardiovascular development. It is investigating how cells in the developing myocardium, epicardium and coronary vessels are established through signals from transcription factors, microRNAs and chromatin-modifying enzymes. Knowledge gained from this study will provide a framework for designing therapeutic interventions to prevent congenital heart defects.

PI: Cathy Hatcher, MD  
Funding: Raymond & Beverly Sackler Foundation





Optimization of A-V and V-V Delay in CRT with Surface Electrocardiogram and Impedance Cardiography Compared to Echocardiography (ECGOPT)

The study compares a novel ECG-based A-V and V-V optimization algorithm with optimal A-V and V-V delays derived by echocardiography and impedance cardiography. The study will also assess whether the ECG based A-V and V-V optimization algorithm can yield significant clinical data to better optimize and increase responder rate. It will compare the results from the surface 12 lead ECG with that of traditional AV and VV optimization using Echo and ICG.

PI: Jim Cheung, MD  
Funding: New York Cardiac Center; Michael Wolk Heart Foundation

Late Sodium Current Blockade in High Risk ICD Patients, Ranolazine ICD Trial (RAID)

A multicenter study to determine whether Ranolazine (a novel drug with anti-ischemic and antiarrhythmic properties) administration will decrease the likelihood of having an arrhythmic event as a composite endpoint, consisting of ventricular tachycardia or ventricular fibrillation (VT/VF) requiring anti-tachycardia pacing (ATP) therapy, ICD shocks or death in high risk patients with ICD/CRT-D implanted for primary or secondary prevention of sudden death.

PI: George Thomas, MD  
Funding: NIH U01 (subaward from University of Rochester); Gilead Sciences, Inc.

Detect Fluid Early from IntrA-thoracic Impedance Monitoring (DEFEAT-PE)

A multicenter study to evaluate the safety and effectiveness of a specific feature called the "Impedance Monitoring Feature" in the CRT-D and ICD devices made by St. Jude Medical that has shown to be able to detect an increase in the amount of fluid in a person's body.

PI: Steven Markowitz, MD  
Funding: St. Jude Medical, Inc.

CVD In American Indians: Imaging and Cardiovascular Center (formerly "Cardiovascular Evaluation for the Strong Heart Study Phase V")

This study re-evaluated, by echocardiography, carotid ultrasound and computerized ECGs and performed initial popliteal ultrasound studies in ~3,200 members of 64 multi-generation American Indian families, and is in the planning phase of another examination to use magnetic resonance imaging to assess hepatic steatosis and abdominal aortic size.

PI: Richard Devereux, MD  
Funding: NIH U01

Genetic Epidemiology of Left Ventricular Hypertrophy

This study utilizes data from echocardiograms to identify genes contributing to abnormalities of left ventricular (LV) structure and function.

PI: Richard Devereux, MD  
Funding: NIH R01

Genetically-Associated Thoracic Aortic Aneurysm (GENTAC) Registry

This multicenter registry has enrolled over 2,600 patients with genetically-associated thoracic aortic aneurysms, with Cornell contributing the largest number of participants and the largest number of de-identified imaging studies. New findings include documentation of the long-term implications of emergency vs. elective proximal aortic surgery in Marfan patients, identified duplications in chromosome 16p13.1 as a risk factor for aortic dissections, and discovered a susceptibility for aortic aneurysms and dissections in non-Marfan patients spanning the FBN1 locus at 15q21.1.

PI: Richard Devereux, MD  
Funding: NIH NHLBI (subcontract from RTI International)

Randomized Clinical Trial of Beta Blocker Therapy (Atenolol) vs. Angiotensin II Receptor Blocker Therapy (Losartan) in Individuals with Marfan Syndrome

Follow-up of participants has exceeded expectations and the independent Data and Safety Monitoring Board has recommended study continuation after two interim reviews.

PI: Mary J. Roman, MD  
Funding: NIH U01; National Marfan Foundation

Automated ECG Interval Measurements by Four Major Manufacturers of Computerized Electrocardiographs

The purpose of this study is to use an FDA ECG database to compare automated ECG intervals made by algorithms of widely-used ECG manufacturers.

PI: Paul D. Kligfield, MD  
Funding: NIH U01; National Marfan Foundation

Predictors and Cardiovascular Outcomes Associated with ECG-Evident Left Ventricular Hypertrophy in a Large Population

The purpose of this study is to evaluate LVH at baseline in 1.6 million adults for cardiovascular outcomes and all-cause mortality after adjusting for other known and suspected predictors of outcomes in this well-defined population. The study will then examine serial assessment of Cornell voltage LVH on multiple ECGs in over 600,000 patients with multiple ECGs over time to determine if changing levels of ECG LVH are independent predictors of outcome in a general population.

PI: Peter Okin, MD  
Funding: Kaiser Permanente



Coronary Artery Disease and Heart Failure with Normal Ejection Fraction

Patients with HFNEF frequently have CAD, which may be a treatable cause of diastolic dysfunction, but the value of CAD screening in HFNEF is unknown. We propose to evaluate CAD by CCTA in patients with HFNEF and to correlate CAD burden with abnormalities by echocardiography and exercise physiology.

PI: Fay Y. Lin, MD  
Funding: American Heart Association

Delayed Enhancement MRI for Detection of Sub-Clinical Papillary Muscle Infarction

The goal is to elucidate novel structural mechanisms and predictive indices of post-myocardial infarction mitral regurgitation (MR), with focus on papillary muscle infarction

detected by DE-MRI tissue characterization as a longitudinal predictor of mitral regurgitation. Adjunctive research is employing developmental image segmentation approaches to study cardiac remodeling following acute myocardial infarction.

PI: Jonathan Weinsaft, MD  
Funding: NIH K23

The Natural History and Outcomes of Scleroderma Patients at High Risk or with Early Pulmonary Hypertension

This is an observational study of scleroderma patients to determine the time of pathologic progression of pulmonary hypertension from pre-pulmonary hypertension, to diagnosable pulmonary hypertension, to clinical worsening of disease.

PI: Evelyn Horn, MD  
Funding: Gilead Sciences, Inc.; Mackley Award for Sibley Hospital



Partner 2

This trial is to determine the safety and effectiveness of the Edwards SAPIEN XT™ device and delivery systems: NovaFlex (transfemoral access) and Ascendra2 (transapical access) in patients with symptomatic, calcific, severe aortic stenosis.

PIs: S. Chiu Wong, MD; Geoffrey Bergman, MBBS  
Funding: Edwards Lifesciences

Partner 1

The purpose of this trial is to determine the safety and effectiveness of the device and delivery systems (transfemoral and transapical) in high risk, symptomatic subjects with severe aortic stenosis.

PIs: S. Chiu Wong, MD; Geoffrey Bergman, MBBS  
Funding: Edwards Lifesciences

Renal Denervation in Patients With Uncontrolled Hypertension (SYMPPLICITY HTN-3)

The purpose of this multicenter, prospective, single-blind, randomized, controlled study is to assess the safety and effectiveness of renal denervation in subjects with uncontrolled hypertension.

PI: S. Chiu Wong, MD (MPI with Samuel Mann, MD)  
Funding: Medtronic, Inc.

Somatic Mutation in Idiopathic Ventricular Tachycardia

The purpose of this study is to test in a mouse model the hypothesis that somatic cardiac mutations in G<sub>s</sub>α during embryogenesis, and downstream effects on cAMP, cause right ventricular outflow tract tachycardia.

PI: Bruce Lerman, MD  
Funding: Raymond and Beverly Sackler Foundation

CLINICAL EPIDEMIOLOGY AND EVALUATIVE SCIENCES RESEARCH

Center of Excellence in Disparities Research and Community Engagement (P60)

Dr. Carla Boutin-Foster, as principal investigator, and Dr. Mary Charlson, as co-principal investigator, developed the Center for Excellence in Health Disparities Research and Community Engagement (CEDREC) which has over \$8 million in funding. The center involves Weill Cornell Medical College, Hunter College School of Nursing, Lincoln Medical Center/Renaissance Health System and New York University – Center for Healthful Behavior Change. The specific aims of CEDREC are: create an interdisciplinary academic and community research enterprise that expands capacity for conducting cutting-edge and transdisciplinary research and contribute to improving minority health and reducing health disparities in cardiovascular disease and cancer in Central Harlem and the South Bronx; train new minority investigators to conduct original minority health and

health disparities research while fostering their ability to obtain independent NIH funding; and build upon existing community-academic partnerships and forge new collaborations that will accelerate the dissemination of research findings to community stakeholders, inform novel community-based programs, and build their capacity for research.

PI: Carla Boutin-Foster, MD, MS; Co- PI: Mary E. Charlson, MD  
Funding: NIH/ NIMHD

SCALE: Small Changes and Lasting Effects (U01)

This multimillion dollar grant focuses on developing individual, family and faith-based mindful eating interventions targeted at reducing obesity in minority communities. The project is designed to develop and test different multilevel interventions in proof of concept trials to lay the basis for evaluating the effectiveness in large-scale clinical trials.

PI: Mary E. Charlson, MD  
Funding: NIH/NHLBI

Environmental Health Disparities Research Core

The Environmental Health Disparities Research Core (EH Core) is nested into the existing CEDREC (see above). The EH Core will facilitate dialogue between community-based organizations, local residents, and elected officials; and inform researchers, community members and policymakers through lectures, community forums, webinars, and didactic education.

PI: Carla Boutin-Foster, MD, MS  
Funding: NIH/NIMHD

Increasing Capacity and Public Trust: A Strategy for Building Effective Sustainable Community-Academic Partnerships through Mentoring, Education, Training and Workforce Development

A community-academic environmental health research collaborative with Good Old Lower East Side (GOLES), a community-based housing and economic justice organization seeking to expand its mission to include environmental justice and public health. The collaborative creates both formal and informal linkages between the local community and academic institutions through the employment and training of local residents as environmental health community organizers.

PI: Beverly Watkins, MA, PhD; Co-PI: Damaris Reyes (Director, GOLES)  
Funding: NIEHS

GOLES Healthy Aging Program (GHAP)

The GHAP follows an innovative strategy of actively engaging disadvantaged Lower East Side seniors in the planning and implementation of health promotion and disease prevention programming to help community elders maintain well-being and cognitive reserves throughout the life course.

PI: Beverly Watkins, MA, PhD  
Funding: The Fan Fox and Leslie R. Samuels Foundation, Inc.

Minority Investigator Research Supplement

Dr. Winston is engaged in primary data collection in the Small Changes and Lasting Effects (SCALE) trial to examine the relationship between body image dissatisfaction and weight loss; the relationship between knowledge of health risks of obesity and weight loss; and the relationship between social network support and weight loss.

PI: Ginger Watson, MD  
Funding: NHLBI (Funded Under SCALE: Small Changes and Lasting Effects (U01)

Pain as a Mediator of Behavior Change

The focus of this research will be to examine the role of pain as a mediator of physical activity over 12 months in a cohort of older patients with chronic cardiovascular disease.

PI: Janey Peterson, EdD  
Funding: NIA (Funded Under Roybal P30 Center Grant “Improving the Management of Pain in Later Life”)

Trial Using Motivational Interviewing and Positive Affect and Self-Affirmation in Hypertension (TRIUMPH)

TRIUMPH is a randomized controlled trial which builds on the findings of previous studies by testing a novel and multifaceted behavioral intervention framed on social cognitive theory, positive affect theory, and self-affirmation theory among African American patients with uncontrolled hypertension.

PI: Carla Boutin-Foster, MD, MS  
Funding: NIH/NIMHD

OASIS: Osteoarthritis Self-Improvement Study

This study tests an intervention framed upon the Health Promotion Model among African-Americans with a diagnosis of osteoarthritis to determine its impact on intention to undergo arthroscopic evaluation.

PI: Michael Parks, MD (HSS); Co-PI: Carla Boutin-Foster, MD, MS  
Funding: Zimmer Corporation

CLINICAL PHARMACOLOGY

A New Drug to Activate Peripheral Histamine 3 Receptors  
Activating the histamine 3 receptor lowers the epinephrine in the ischemic heart and should reduce arrhythmias. A series of novel compounds was made and screened to find a drug that will reduce arrhythmias in ischemic hearts.

PI: Marcus M. Reidenberg, MD  
Funding: NIH

EMERGENCY MEDICINE

Neurological Emergencies Treatment Trials (NETT)  
The NETT trials is a five-year grant to create a network of tertiary care emergency departments capable of conducting research in neurological emergency care. Recruitment is ongoing for the Platelet-Oriented Inhibition in New TIA Trial (POINT) whereas the Rapid Anticonvulsant Medication Prior to Arrival Trial (RAMPART) was completed.

PIs (WC Site): Neal Flomenbaum, MD; Matthew Fink, MD (Weill Cornell Neurology)  
Funding: NIH/NINDS

ENDOCRINOLOGY, DIABETES AND METABOLISM

American Recovery and Reinvestment Act Administrative Supplements for Comparative Effectiveness Research (CER) Workforce Development

This supplement has two objectives: to strengthen current formal educational opportunities in CER by increasing the scope and offerings in the track in outcomes and health services research; to offer an additional year of training in CER as a KL2 scholar to students who are enrolled in, or who have obtained, either a Master’s degree or certificate in clinical and translational research.

PI: Julianne L. Imperato-McGinley, MD; Co-PI: Alvin Mushlin, MD  
Funding: NIH

NIH T32 Training Grant

The Endocrine Research Training Program at Weill Cornell is a Tri-Institutional endeavor with participation from Memorial Sloan-Kettering Cancer Center and The Rockefeller University.

PI: Julianne L. Imperato-McGinley, MD  
Funding: NIH

Epidemiology of Diabetes Intervention and Complications (EDIC) Trial

The EDIC trial is a continuation study involving the Diabetes Control and Complications Trial (DCCT) cohort. The EDIC study has now followed nearly 1,400 individuals with type 1 diabetes for over 30 years.

PI: David Brillon, MD  
Funding: NIH/NIDDK

Action to Control Cardiovascular Risk in Diabetes (ACCORD) Study

The ACCORD trial compares intensive blood glucose, lipid and blood pressure control in over 10,000 persons with type 2 diabetes.

PI: David Brillon, MD  
Funding: NIH/NHLBI





**A Randomized, Placebo-controlled, Double-blind Investigation of the Effects of Potassium Citrate on Bone Metabolism in Postmenopausal Osteopenia**

The goal of this project is to determine the effects of the administration of an alkaline compound, potassium citrate, on bone turnover and bone mineral density.

PI: Naina Sinha, MD  
Funding: CTSC and Acidosis Research Fund

**Sex Steroids and Cardiovascular Disease Risk**

The objective of this study focuses on the effects of sex steroids on cardiovascular disease by examining surrogate markers of cardiovascular disease in patients with complete androgen insensitivity and 5 $\alpha$ -reductase-2 deficiency, and comparing these to normal controls.

PI: Julianne L. Imperato-McGinley, MD  
Funding: Cohen Fund

**Androgen Regulation of Endothelial Progenitor Cells and Endothelial Cells**

The major goal of this project is to study the effects and mechanisms of androgens on the regulation of endothelial progenitor cells and endothelial cells using human and animal models with defects in androgen actions, as well as *in vitro* cell cultures.

PI: Yuan-Shan Zhu, MD, PhD  
Funding: CTSC/NIH

**Genotype-Phenotype Analysis of CAH in the Dominican Population**

A continuing effort to elucidate the genotype-phenotype relationship of CAH in the Dominican population. The team has identified various mutations in the 21-hydrolase (CYP21) gene, and a specific mutation is identified in the Dominican population.

PI: Julianne L. Imperato-McGinley, MD; Yuan-Shan Zhu, MD, PhD  
Funding: Argenbright Research Fund

Research Highlights *continued*

Clinical and Translational Science Center

This is a major center grant to facilitate clinical and translational research among multiple partnering institutions.

PI: Julianne L. Imperato-McGinley, MD  
Funding: Astra Zeneca

**GASTROENTEROLOGY AND HEPATOLOGY**

A Phase 3 Study with Asunaprevir and Daclatasvir (DUAL) for Null or Partial Responders to Peginterferon Alfa-2a and Ribavirin (P/R), Intolerant or Ineligible to P/R Subjects and Treatment Naïve Subjects with Chronic Hepatitis C Genotype 1b Infection (A1447028)

The study seeks to estimate efficacy, as determined by the proportion of subjects with a 12 week sustained viral response (SVR 12), defined as HCV RNA <LOQ at post-treatment Week 12 for subjects who are null or partial responders to prior treatment with pegylated interferon/ribavirin or who are treatment-naïve.

PI: Ira Jacobson, MD  
Funding: Bristol Meyers Squibb

A Phase III, Randomized, Double-blind and Placebo Controlled Study of Once Daily BI201335, 240mg for 12 or 24 Weeks in Combination with Pegylated Interferon Alpha and Ribavirin in Patients with Genotype 1 Chronic Hepatitis C Infection who Failed a Prior PegINF/RBV Treatment

The study seeks to assess virological response 12 weeks post-treatment after the originally planned treatment duration.

PI: Ira Jacobson, MD  
Funding: Boehringer Ingelheim International

A Multicenter, Randomized, Double-blind, Placebo-Controlled, Phase 2b Study to Compare the Efficacy and Safety of Quadruple Therapy (VX-222, Telaprevir, Peginterferon-Alfa-2, Ribavirin) to Triple Therapy (with VX-222-Placebo) in Subjects With Genotype 1 Chronic Hepatitis C with Compensated Cirrhosis

The primary objective is to evaluate the antiviral efficacy of a quadruple drug regimen including, VX222, telaprevir, pegylated interferon (Peg-INF) and ribavirin (RBV), in subjects with genotype 1 chronic hepatitis C with compensated cirrhosis who are treatment naïve or were nonresponders (partial, or null, or relapsers to previous Peg-INF/RBV therapy).

PI: Ira Jacobson, MD  
Funding: Vertex

An Exploratory Phase IIA, Randomized, Open-Label Trial to Investigate the Efficacy and Safety of 12 weeks or 24 weeks of EMC435 in Combination with PSI-7977 with or without Ribavirin in Chronic Hepatitis C Genotype 1-Infected Prior Null Responders to PegInterferon/Ribavirin Therapy

The study is investigating the efficacy by sustained virologic response (SVR) 12 weeks after planned end of therapy (SVR12) of a 12-week or 24-week dual or triple regimen, including TMC435 (150mg once daily) plus PSI7977 (400mg once daily) with or without ribavirin (RBV) (1000-1200mg/day) in HCV genotype 1-infected subjects who are null responders to previous peginterferon (PegINF/RBV) therapy or HCV treatment-naïve.

PI: Ira Jacobson, MD  
Funding: Janssen Pharmaceuticals, Inc.

A Phase 3, Multicenter, Randomized, Double-blind, Placebo-Controlled Study to Investigate the Efficacy and Safety of GS-7977 + Ribavirin for 12 weeks in Subjects with Chronic Genotype 2 or 3 HCV Infection who are Interferon Intolerant, Interferon Ineligible or Unwilling to Take Interferon

The primary objectives of this study are to determine the efficacy and safety and tolerability of treatment with GS7977 plus ribavirin (RBV) compared to treatment with GS7977 placebo plus RBV placebo as measured by the proportion of subjects with sustained viral response 12 weeks after discontinuation of therapy (SVR12) and review of the accumulated safety data.

PI: Ira Jacobson, MD  
Funding: Gilead

Parallel, Open-Label, Randomized Study to Evaluate the Safety, Pharmacokinetics, and Pharmacodynamics of PSI-7977 in Combination with BMS-790052 with or without Ribavirin in Treatment Naïve Subjects Chronically Infected with Hepatitis C Virus Genotypes 1,2,or 3 BMS (A1444040)

The study seeks to estimate the rate of sustained virologic response (SVR) SVR12 in each treatment group, where SVR12 is defined as HCV RNA (<25 IU/ml) 12 weeks post-treatment.

PI: Ira Jacobson, MD  
Funding: Bristol Meyers Squibb

A Randomized, Open-Label, Multicenter Study to Evaluate the Antiviral Activity, Safety, and Pharmacokinetics, of ABT-450 with Ritonavir (ABT-450/r) in Combination with ABT-267 and/or ABT-333 with and without Ribavirin (RBV) for 8, 12 or 24 Weeks in Treatment-Naïve and Null Responder Subjects with Genotype 1 Chronic Hepatitis C Virus Infection (M11-652)

The primary objectives of this study are to assess the safety of all treatment regimens, and to compare the percentage of subjects achieving 24-week sustained viral response (SVR24) (HCV RNA <LLOQ at post-treatment Week 24).

PI: Ira Jacobson, MD  
Funding: AbbVie, Inc.



A Prospective, Longitudinal, and Multicenter Study to Get Definitive Data on Diagnostic Performance of pCLE for Indeterminate Biliary Stricture

We are evaluating the diagnostic value of probe based confocal laser endomicroscopy for the diagnosis of benign or malignant biliary strictures.

PI: Michel Kahaleh, MD  
Funding: MaunaKea Tec, Paris

AXIOS Stent and Delivery System for Endoscopic Drainage of Pancreatic Pseudocysts: A Multicenter, Prospective, Single-arm Study

We are evaluating the safety and efficacy of a novel stent for the endoscopic drainage of pancreatic pseudocysts. The unique stent has a dog bone design to prevent migration of the stent, thus enabling safer and more efficient drainage of pseudocyst during endoscopic therapy.

PI: Michel Kahaleh, MD  
Funding: Xlumena, Inc.

Identification of Early Biomarkers/Targets for Cancer Prevention Using Metabolomic Screening

The major goal of the project is to use metabolomics for the early detection of experimental colorectal neoplasia. Based on promising preclinical findings, efforts are under way to extend this line of investigation to humans.

PI: Andrew J. Dannenberg, MD  
Funding: NIH/NCI

Molecular Determinants of Intestinal Inflammation

This project seeks to elucidate the mechanisms that control mucosal homeostasis with a focus on inflammation, stem cell biology and mucosal regeneration. The ultimate goal is to develop new strategies to prevent or treat inflammatory bowel disease.

PI: Andrew J. Dannenberg, MD  
Funding: New York Crohn’s Foundation

Obesity, Inflammation and Breast Cancer

The mechanistic links between obesity, inflammation and breast cancer are being defined. An improved understanding of mechanism is already providing the basis for experimental interventions in women with the long-term goal of reducing the risk of cancer.

PI: Andrew J. Dannenberg, MD  
Funding: NIH/NCI; Breast Cancer Research Foundation; MSKCC Metastasis Research Center

Blood-based Biomarkers of Obesity-induced Breast Inflammation

The overarching goal of this project is to determine if a non-invasive signature of white adipose tissue inflammation can be identified. A multifaceted strategy that includes plasma metabolite profiling is being employed.

PI: Andrew J. Dannenberg, MD  
Funding: NIH/NCI

Chemokine 25-induced Signaling Suppresses Colon Cancer Invasion and Metastasis

We identified the CCR9/CCL25 axis as an important prognostic mechanism for colorectal cancer as a mechanism preventing metastasis lost in late stage tumors.

PI: Steven Lipkin, MD, PhD  
Funding: NCI/ NSF

miR-23a Promotes the Transition from Indolent to Invasive Colorectal Cancer

We identified microRNAs 23 and 27 as prognostic markers for colon cancer.

PI: Haiyuan Yu, PhD (Cornell University, Ithaca); Steven Lipkin, MD, PhD  
Funding: NCI

Three-dimensional Reconstruction of Protein Networks Provides Insight into Human Genetic Disease

We identified a new methodology using protein-interactome networks to classify genetic variants as causative mutations or benign polymorphisms.

PI: Haiyuam Yu (Cornell University, Ithaca); Steven Lipkin, MD, PhD  
Funding: CTSC Pilot Project

Novel Proteomic Blood-based Serology for Colon Cancer Screening

Examination of the accuracy of a novel serum protein-based assay for detecting/ruling out colon cancer in subjects undergoing routine colonoscopy and to assess the operating characteristics of the assay in subjects with suspected or previously diagnosed colon cancer.

PI: Felice Schnoll-Sussman, MD  
Funding: Onconome

The Role of H. Pylori in Changing the Tumor Microenvironment and Impact on Gastric Cancer Carcinogenesis

Obtaining biopsies of patients with H. pylori and gastric cancer to determine how the H. pylori infection can lead to gastric cancer, as well as provide information on possible intervention treatments that can be administered prior to the development of advanced gastric cancer.

PI: Felice Schnoll-Sussman, MD  
Funding: Onconome

Behavior and Lifestyle Changes in Barrett’s Esophagus

Survey of patients with Barrett’s esophagus to look at social and relationship factors that may affect the quality of life and health behaviors, as well as patient’s attitudes about their health behaviors.

PI: Felice Schnoll-Sussman, MD  
Funding: NCI

Hereditary Colon Cancer Syndromes

The primary goal is to help create an infrastructure resource that can enable the identification of genetic causes of cancer and environmental modifiers of cancer risk and prevent the death from CRC in patients with hereditary colorectal syndromes.

PI: Felice Schnoll-Sussman, MD  
Funding: Bloomingtondale’s Fund of the Macy’s Foundation

A Phase 3, Randomized, Double-blind, Placebo-controlled, Parallel-group, Multicenter Study to Evaluate the Safety and Efficacy of Ustekinumab Induction Therapy in Subjects with Moderately to Severely Active Crohn’s Disease Who Have Failed or Are Intolerant to TNF Antagonist Therapy (UNITI-1)

This study examines ustekinumab (an antibody medication that inhibits the inflammatory proteins IL-12 and IL-23) vs. a placebo (otherwise identical except without the ustekinumab antibody) given intravenously (by an IV) in adults with moderately to severely active Crohn’s disease.

PI: Ellen Scherl, MD  
Funding: Janssen Research and Development

A Phase 3, Randomized, Double-blind, Placebo-controlled, Parallel-group, Multicenter Study to Evaluate the Safety and Efficacy of Ustekinumab Maintenance Therapy in Subjects with Moderately to Severely Active Crohn’s Disease (IMUNITI)

Study to determine whether additional ustekinumab treatment is beneficial in patients with moderately to severely active Crohn’s disease who initially had a clinical response to IV ustekinumab in one of the 2 initial induction studies ([“UNITI-1”] or [“UNITI-2”]).

PI: Ellen Scherl, MD  
Funding: Janssen Research and Development

A Phase III, Multicenter, Placebo-controlled, Randomized, Double-blind Study to Evaluate the Safety and Efficacy of PROCHYMAL™ (ex vivo cultured adult human mesenchymal stem cells) Intravenous Infusion for the Induction of Remission in Subjects Experiencing Treatment-refractory Moderate-to-severe Crohn’s Disease

The objective of the present study is to establish the safety and efficacy of four administrations of PROCHYMAL in subjects experiencing treatment-refractory, moderate-to-severe Crohn’s disease.

PI: Ellen Scherl, MD  
Funding: Osiris Therapeutics

A Multicenter, Open-label Study to Evaluate the Safety of PROCHYMAL® (remestemcel-L) Intravenous Infusion in Subjects who have Received Previous Remestemcel-L Induction Treatment for Treatment-refractory Moderate-to-severe Crohn’s Disease

The objective of the study is to offer a defined course of open-label PROCHYMAL treatment to all subjects who enroll in the parent study, Protocol 603, to evaluate the safety in subjects with active Crohn’s disease who are resistant to standard Crohn’s disease therapies.

PI: Ellen Scherl, MD  
Funding: Osiris Therapeutics

A Multicenter National Prospective Study of Pregnancy and Neonatal Outcomes in Women with Inflammatory Bowel Disease

The purpose of this study is to determine whether the rates of congenital malformations, spontaneous abortion, preterm birth and small for gestational age (SGA) infants in a prospective national sample of women from the United States with IBD exposed to azathioprine/6MP or anti-TNF therapy are greater than those among IBD-affected women not exposed to these medications.

PI: Ellen Scherl, MD, in collaboration with Dr. Uma Mahadevan-Velayos, UCSF Center for Colitis and Crohn’s Disease, California  
Funding: Crohn’s Colitis Foundation of America Clinical Alliance

Prospective, Multicenter, Randomized, Double-Blind, Placebo-Controlled Trial Comparing REMICADE® (infliximab) and Placebo in the Prevention of Recurrence in Crohn’s Disease Patients Undergoing Surgical Resection Who Are at an Increased Risk of Recurrence (PREVENT)

The purpose of this study is to evaluate the therapeutic benefit (prevention of clinical and endoscopic disease recurrence) and safety of infliximab in the treatment of patients who are at an increased risk of recurrence of active CD after ileocolonic resection.

PI: Ellen Scherl, MD  
Funding: Janssen

Strategies by which HCV Evaded the Innate Immune System in Humanized Liver Mice

In order to establish a chronic infection hepatitis C virus (HCV) needs to inactivate the innate immune response in hepatocytes. Several innate immune pathways have been implicated in HCV



infection and for this project we focus on the RIG-I helicase and TLR7 signaling pathways, both of which can be inactivated by the viral protease. By using human liver chimeric mice in which protease-resistant signaling proteins have been overexpressed in human hepatocytes, we examine if inactivation of these pathways can prevent HCV from establishing infection.

PI: Ype de Jong, MD, PhD  
Funding: NIDDK

Screen for Factors that Influence Engraftment of Fetal Hepatoblasts and iPS-derived Hepatocyte-like Cells in Mice

Fetal human hepatoblasts and iPS-derived hepatocyte-like cells (iHLCs) share an immature phenotype. In contrast to adult human hepatocytes, both fetal hepatoblasts and iHLCs fail to repopulate livers of immunodeficient FAH<sup>-/-</sup> mice, that suffer from liver failure. We are screening lentiviral libraries expressing human shRNAs or cDNAs in their ability to enhance engraftment of both cell types in immunodeficient FAH<sup>-/-</sup> mice.

PI: Ype de Jong, MD, PhD  
Funding: Helmsley Foundation pilot award (through The Rockefeller University)

**GERIATRICS AND PALLIATIVE MEDICINE**

Edward R. Roybal Center for Research on Applied Gerontology  
Cornell-Columbia Translational Research Institute on Pain in Later Life (TRIPLL)

The grant creates a multi-institutional and interdisciplinary collaboration focused on implementing innovative strategies for improving pain management among older adults.

PI: M. Carrington Reid, MD, PhD  
Funding: NIH P30

K24 Mid-Career Investigator Award in Patient-Oriented Research in Aging

This program is intended to extend mentorship in aging research and to create a national mentorship program for junior investigators in the field of elder abuse.

PI: Mark Lachs, MD  
Funding: NIH K24

Providing Care Along a Continuum: Geriatric Palliative Care Training for Interdisciplinary Teams

This grant fosters teaching, curriculum development and evaluation skills in training interdisciplinary providers in geriatric palliative care.

PI: Sonal Mehta, MD  
Funding: HRSA K01

Building Care Bridges: Teaching Interdisciplinary Teams about Transitional Care

Development and implementation of educational curricula and interventions that teach inter-professional teams the necessary skills for effective communication, collaboration and coordination of care at points of transition.

PI: Sharda Ramsaroop, MD  
Funding: HRSA K01

Research Supplements to Promote Diversity in Health-Related Research/Improving the Management of Pain in Later Life

Utilizing 12 month longitudinal data for percutaneous coronary intervention (PCI) patients, this study will determine if pain is a mediator of health behavior change over 12 months; assess behavior change patterns over 12 months, stratifying for degree of pain, depression and/or stress; and evaluate the effect of pain on quality of life, combined major cardiac and neurologic morbidity/mortality and hospitalizations over 12 months.

PI: M. Carrington Reid, MD, PhD; Recipient: Peterson, Janey, EdD  
Funding: NIH/NIA

Treating Pain to Reduce Disability Among Older Home Health Patients

The overall goal of this comparative effectiveness research (CER) study is to reduce disability among older home health patients by treating their pain more effectively. The study will compare the effectiveness of usual care provided to older home health patients with activity-limited pain to usual care plus instruction by physical therapists (PTs) in a cognitive-behavioral pain self-management program (CBPSM).

PI: M. Carrington Reid, MD, PhD; Recipient: Christopher Murtaugh, PhD, Visiting Nurse Service  
Funding: AHRQ

Hartford Center of Excellence in Geriatric Medicine

The overarching goal of the Hartford Center of Excellence is to attract and train future academic leaders in geriatric medicine.

PI: M. Carrington Reid, MD  
Funding: The John A. Hartford Foundation

Advancing the Quality of Palliative Care through Clinician Education

The goal of this work is to develop, implement and seek ways to sustain a palliative care educational program at NYP/WC that will establish a campus-wide educational initiative that will complement and enhance the provision of palliative care services.

PI: Ronald Adelman, MD  
Funding: The Altman Foundation



NYC Elder Abuse Center

The NYC Elder Abuse Center is a collaborative approach to provide a much-needed multidisciplinary team (MDT) of experts to coordinate care and create solutions for the growing number of complex cases of elder abuse in NYC.

PIs: Mark Lachs, MD; Risa Breckman, LCSW  
Funding: Fan Fox and Leslie R. Samuels Foundation; Buckhantz Foundation; Gimbel Foundation; Jarvie Foundation; DHHS Administration on Aging (sub-contract with UC-Irvine); Grace B. Kerr Foundation

Developing Interdisciplinary Champions to Advance Hospital-Based Palliative Care

The project promotes the practice and principles of palliative care throughout NYP/WC by developing and supporting palliative care champions in nursing and social work in order

to expand exposure to, competencies in, and appreciation for, delivering quality care to patients with life-threatening illness and their families.

PI: Ronald Adelman, MD  
Funding: Fan Fox and Leslie R. Samuels Foundation; The New York Community Trust

Liz Claiborne Center for Humanism in Medicine

An educational center for health care professionals and trainees in multiple disciplines. Its mission is to enhance and integrate the awareness, attitudes, knowledge, and skills of the principles of palliative care, and to promote the profile and practice of medical humanism throughout the institution.

PIs: Ronald Adelman, MD; Randi Diamond, MD  
Funding: Liz Claiborne/Art Ortenberg Foundation



HEMATOLOGY AND MEDICAL ONCOLOGY

Epigenetic Therapy for Diffuse Large B Cell Lymphoma

The study seeks to establish the activity and safety of 5'azacytidine (MTI) and MGCD0103 (HDI) combination therapy in patients with recurrent DLBCL, and correlate response with specific epigenetic signatures.

PI: John Leonard, MD  
Funding: V Foundation

Differentiation Therapy for B-cell Lymphomas

The goals of the study are to Identify the target genes of the BCL6-MTA3 complex; define the biochemical contribution of the BCL6-MTA3 complex to repression of differentiation related target genes; develop a peptidomimetic inhibitor of the BCL6-MTA3 interaction; and determine the anti-lymphoma impact of MTA3 blockade in vitro and *in vivo*.

PI: Ari Melnick, MD  
Funding: Burroughs Wellcome Fund

Molecular Targeting of Diffuse Large B-cell Lymphoma

This study is testing the spectrum of lymphomas responsive to RI-BPI; and translated RI-BPI for use in clinical trials.

PI: Ari Melnick, MD  
Funding: NIH/NCI

Transcriptional Silencing by the Bcl-6 Oncoprotein

The study seeks to determine the mechanism of action of the BCL6 transcriptional repressor.

PI: Ari Melnick, MD  
Funding: NIH/NCI

Targeting the Heat Shock Response for the Therapy of DLBCL

The goal of the study is to determine the mechanism of action of Hsp90 inhibitors in DLBCL, and the spectrum of B-cell lymphomas that respond to Hsp90 inhibitors.

PI: Ari Melnick, MD  
Funding: NIH/NCI

Epigenetic Heterogeneity and Evolution in Leukemia

The study hypothesizes that deregulation of the DNA methylation machinery by IDH1, IDH2 and TET2 mutations induces a state of epigenetic instability in which subpopulations of leukemia cells acquire varying degrees of aberrant promoter methylation. We predict that this diversification continues as the disease progresses, leading to a clonally heterogeneous neoplasm in which different subclones are characterized by distinct gene methylation and gene expression patterns.

PI: Ari Melnick, MD  
Funding: NIH/NCI (PS-OC)

Therapeutic Targeting of the MALT1 Protein for Chemoresistant Lymphomas

The research seeks to prove that MALT1 is a therapeutic target in ABC-DLBCLs, and to develop small molecule inhibitors that will be translated for use in clinical trials.

PI: Ari Melnick, MD  
Funding: Leukemia & Lymphoma Society

A Mouse Model for Human Gastrointestinal Stromal Tumor

The project aims to investigate changes taking place during tumor development and progression with age in KitV558?/+ mice.

PI: Joseph M. Scandura, MD, PhD  
Funding: NIH/NCI (Subcontract from MSKCC)

Molecular Substrates of Translation at the Synapse

The goals are: to identify and characterize synaptically localized mRNAs in mouse hippocampus; and to identify and characterize synaptically localized microRNAs in mouse hippocampus.

PI: Doron Betel, PhD  
Funding: NIH (subcontract from Scripps)

Cellular Metabolism and Serum Metabolomic Profiling to Identify Prognostic Markers and Novel Therapeutic Targets in non-Hodgkin Lymphoma

The purpose of the study is to find new ways to detect lymphomas before they become an incurable and aggressive disease and to find new cures by improving the currently available treatment. We want to detect lymphomas using a drop of blood that we will process to separate thousands of chemical components.

PI: Leandro Cerchietti, MD  
Funding: Irma T. Hirschl Trust

Identification of Prognostic Markers and Novel Therapeutic Targets in non-Hodgkin Lymphoma Patients by Comprehensive Metabolomics

We propose to harness these methods to understand the basic mechanisms mediating altered metabolic status of B cell lymphomas and to develop diagnostic and therapeutic strategies based on metabolic signatures.

PI: Leandro Cerchietti, MD  
Funding: Doris Duke

Role of HSF1 in the Physiology and Malignancy of Germinal Centers

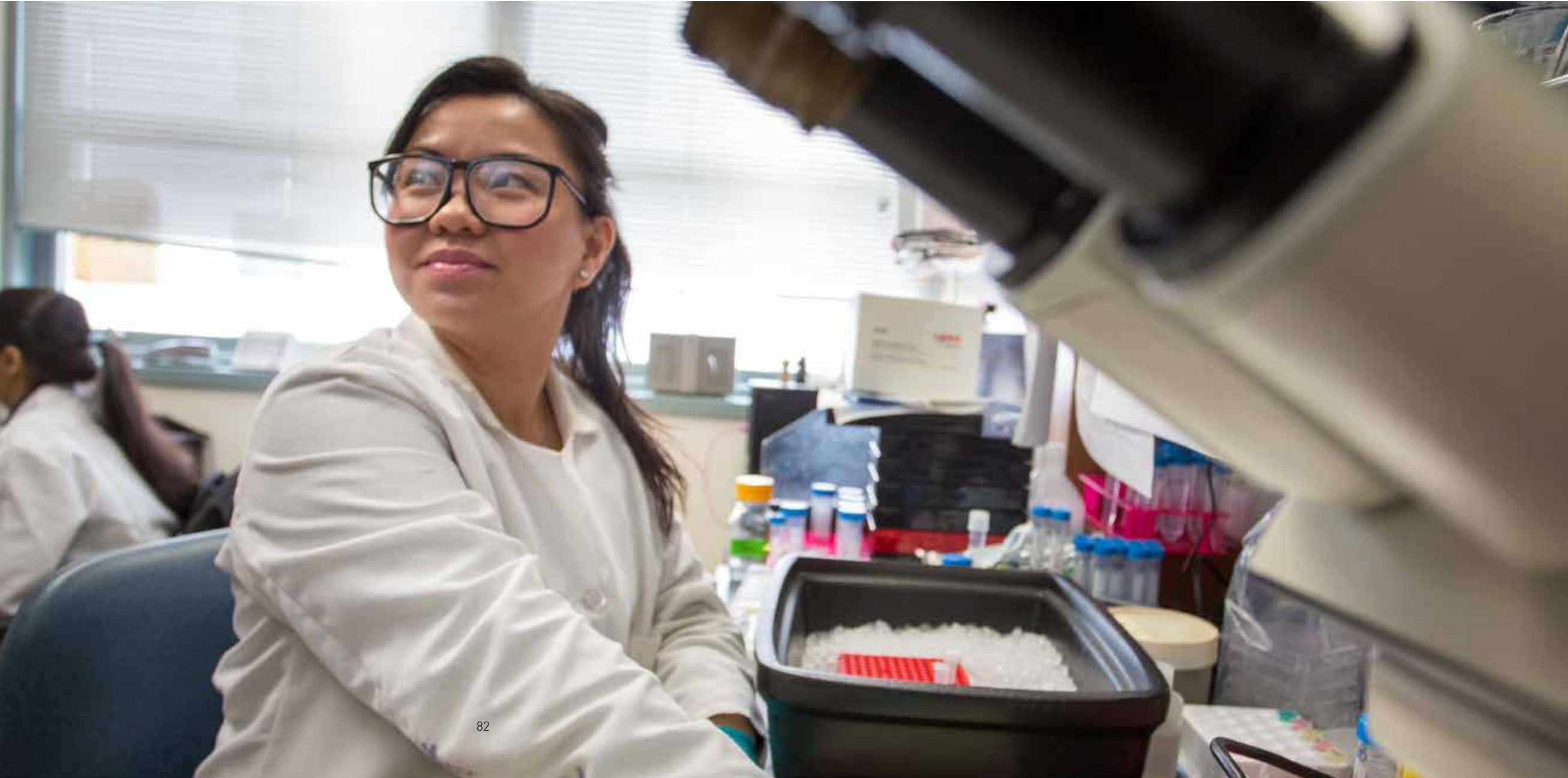
The study seeks to determine whether genetic and pharmacological ablation of HSF1 affect GC formation and immunoglobulin affinity maturation.

PI: Leandro Cerchietti, MD  
Funding: American Society of Hematology

Genetic and Epigenetic Basis of Relapse in Acute Myeloid Leukemia

NCI Mentored Clinical Scientist Research Career Development Award to Promote Diversity (K08).

PI: Francine Garrett-Bakelman, MD, PhD  
Funding: NIH/NCI





SOP Development for Cabazitaxel Clinical Trial

This contract includes a subcontract to Cornell University, Ithaca (Dr. Brian Kirby). This is a start-up contract funding preparation and development of SOP for the upcoming clinical trial. Prototype microfluidic device developed by Cornell will be tested for further use in full clinical trial Cabaz\_L\_06056.

PI: Paraskevi Giannakakou, PhD  
Funding: Sanofi Aventis

Mechanism of Action and Resistance of Cabazitaxel in Prostate Cancer

The study aims to determine the mechanism of action and resistance to Cabazitaxel; to investigate the molecular mechanism underlying the efficacy of Cabazitaxel in Docetaxel-resistant Prostate cancer patients; and to identify the CRPC patient population that would best benefit from Cabazitaxel treatment.

PI: Paraskevi Giannakakou, PhD  
Funding: Sanofi Aventis

A Role for Elevated Autophagy in Survival and Chemoresistance of Leukemia Stem Cells

The study will address whether autophagy represents a feasible therapeutic target and/or sensitizes LSCs to induction therapy, diminishing the likelihood of relapse.

PI: Monica Guzman, PhD  
Funding: NIH/NCI

Strategies to Eliminate Chemoresistant Leukemia Stem Cells During Remission

The long-term goal of this proposal is to improve therapeutic outcomes in acute myeloid leukemia (AML) by ablating residual leukemia stem cells (LSCs) in patients who have achieved complete remission.

PI: Monica Guzman, PhD  
Funding: Leukemia & Lymphoma Society

Significance and Mechanisms of Genomic Diversity in AML Stem Cells

We hypothesize that LSCs represent a center of high genomic diversity, which drives relapse and the emergence of refractory AML clones. LSC diversity at single cell resolution has not been examined to date.

PI: Duane Hassane, PhD  
Funding: Leukemia & Lymphoma Society

Enhancing BDNF Trafficking and Secretion in HD

We will examine, using newly generated reagents that maximize detection of endogenous BDNF (the bdnf-HA knockin mouse), how BDNF support of striatal neurons is impaired in HD.

PI: Barbara Hempstead, MD, PhD  
Funding: CHDI Foundation Inc.

Stem Cell Alterations in Lenalidomide Treated Myeloma Patients

The overall goal of this proposal is to elucidate the mechanisms that drive second primary malignancies (SPMs) in patients with multiple myeloma (MM) undergoing long-term lenalidomide treatment.

PI: Ruben Niesvizky, MD  
Funding: Leukemia & Lymphoma Society

Biophysical Activation of the Vascular Niche: Mechanisms for Leukemia Survival and Relapse

The project aims to investigate changes taking place during tumor development and progression with age in KitV558?/+ mice.

PI: Joseph M. Scandura, MD  
Funding: NIH/NCI (subcontract)

Next-Generation Sequencing to Evaluate Transcriptomic Changes Associated with H. pylori Infection and Gastric Cancer Carcinogenesis

The study seeks to gain valuable insight into the gastric bacterial content in each patient. We will have identified candidate pathways that may be responsible for gastric cancer carcinogenesis associated with chronic H. pylori infection and provide a valuable dataset for future investigation of the host-pathogen interaction.

PI: Manish Shah, MD  
Funding: DeGregorio Family Foundation

Integration of Epigenetic and Genomic Changes in Chronic Lymphocytic

We will perform microarray experiments, Mass Array Epityping data analysis, in vitro validation experiments.

PI: Rita Shaknovich, MD  
Funding: Leukemia Research Foundation

Immunologic and Pharmacologic Studies in Allotransplant

The overall objective of the K24 is to develop a clinical research program in transplantation that focuses on transplant immunology and on transplant pharmacology/ pharmacogenomics while preparing the next generation of investigators in this area.

PI: Koen van Besien, MD  
Funding: NIH/NCI

The Molecular Basis of Neuroendocrine Prostate Cancer (NEPC)

The broad objectives are to discover the genetic alterations found in NEPC, identify therapeutically targetable somatic mutations, and develop new treatment strategies for patients with NEPC.

PI: Himisha Beltran, MD  
Funding: Prostate Cancer Foundation

Fractionated, Dual Targeted Radioimmunotherapy for Follicular Lymphoma (FL)

The project aims to determine the biodistribution, tumor localization and pharmacokinetics of radiolabeled epratuzumab therapy, as well as any changes in targeting due to pretreatment withveltuzumab, and to establish the safety and efficacy of fractionated 90Y-epratuzumab tetraxetan (anti-CD22) given in combination with veltuzumab (anti-CD20) in patients with previously untreated, intermediate or high risk FL.

PI: Peter Martin, MD  
Funding: NIH/NCI

Pilot Project

This is a Pilot Project that aims to stimulate mutual project development between two campuses. It follows the lines of research in a main PSOC grant and provides additional funding for the main project.

PI: David M. Nanus, MD  
Funding: PS-OC Group, Ithaca

INFECTIOUS DISEASES

Metabolosomes: The Organizing Principle of TB Latency

This grant provides continuing support to test the idea that Mycobacterium tuberculosis is not just an unorganized bag of molecules, but rather, a highly structured cell that makes use of specific intracellular structures akin to metabolic organelles to enter and reside in an antibiotic tolerant state of latency. Knowledge of such structures holds the potential to shorten TB chemotherapies from months to days.

PI: Kyu Y. Rhee, MD, PhD  
Funding: Bill and Melinda Gates Foundation

Tuberculosis Drug Accelerator Program

This grant provides additional support to ongoing efforts to augment the TB drug development toolbox with state-of-the-art metabolomic profiling technologies. The specific goals of such tools are to provide direct biochemical readouts of the intrabacterial fates and actions of new and existing TB drugs within Mtb.

PI: Kyu Y. Rhee, MD, PhD  
Funding: Bill and Melinda Gates Foundation

Endothelial Progenitor Cells and the Pathogenesis of Cerebral Malaria

In collaboration with investigators at the Noguchi Memorial Institute of Medical Research (NMIMR) of the University of Ghana in Accra, the role of circulating endothelial progenitor cells in the pathogenesis of cerebral malaria is being investigated. The goal is to gain a better understanding of the role of microvascular damage and repair in the pathogenesis of the disease. The study may provide information supporting the use of novel augmentative therapies that promote microvascular repair mediated by circulating endothelial progenitor cells.

PI: Linnie M. Golightly, MD  
Funding: NIH R01

A Non-invasive Cell Phone Imaging Probe for Diagnosing Malaria

In collaboration with Alberto Bilenca of Ben-Gurion University of the Negev in Israel, Dr. Golightly is working to develop a cell phone imaging system that can non-invasively detect malaria parasites in the blood. The system uses a polarized laser to detect hemozoin crystals indicative of malaria parasite infection, as well as micro-obstructions in the circulatory system that result from the infection. Ultimate testing of the device is planned in Ghana in collaboration with colleagues at the NMIMR.

PI: Linnie M. Golightly, MD  
Funding: Bill and Melinda Gates Foundation - Grand Challenges

Signaling a Stop to Cholera

In collaboration with John March, a Bio-Engineer at Cornell University, a novel cholera prophylactic is being developed. The bacteria uses cell-to-cell signaling to coordinate its growth and virulence in the human gut. Strains of commensal bacteria that naturally reside in the gut are being engineered to express chemical signals used by cholera to abort the colonization process and allow the pathogen to pass through the GI system without causing symptoms. Ultimate testing is planned in Haiti.

PI: Linnie M. Golightly, MD  
Funding: Bill and Melinda Gates Foundation - Grand Challenges



Benefits of Universal Gown and Gloving (BUGG)

NYP/Weill Cornell was one of 20 US hospitals that participated in a multicenter, randomized-controlled trial of universal gown and gloving for the prevention of healthcare-associated infections in intensive care units.

PI: David P. Calfee, MD; Co-Is: Michael Satlin, MD; David Berlin, MD (Pulmonary/Critical Care); Oren Friedman, MD (Pulmonary/Critical Care); and Kirsis Ham, NP

Funding: Agency for Healthcare Research and Quality (AHRQ)

Cornell Clinical Trials Unit

The NIH-supported HIV clinical trials unit conducts trials in HIV treatment and prevention, complications of HIV and its therapies, immune-based therapies, and important co-infections in both HIV-infected and -uninfected individuals, such as hepatitis C, influenza, and human papillomavirus (HPV). New initiatives are studies of pre-exposure prophylaxis (PrEP) for HIV prevention and newer investigational drugs for hepatitis C infection.

PI: Roy Gulick, MD, MPH; Co-Is: Marshall Glesby, MD; Ira Jacobson, MD (Gastroenterology); Kristen Marks, MD; Bruce Schackman, PhD (Public Health); Mary Vogler, MD; Timothy Wilkin, MD

Funding: NIH U01

Doxycycline for COPD in HIV-Infected Patients

This pilot study aims to test the hypothesis that the commonly used antibiotic, doxycycline, will inhibit enzymes in the lung called matrix metalloproteinases, which are upregulated in HIV-infected smokers and may contribute to accelerated emphysema.

PIs: Robert Kaner, MD (Department of Genetic Medicine; Division of Pulmonary and Critical Care); Marshall Glesby, MD, PhD. Co-Is: Thomas Walsh, MD; Dominic Falcone, PhD (Departments of Pathology, Cell Biology and Anatomy)

Funding: NIH R34

Female Urogenital Schistosomiasis in Women in Rural Tanzania

This project has enrolled approximately 900 adolescent girls and women living in rural Tanzania and documented that women with both *S. haematobium* and *S. mansoni* infections had an ~5 times greater odds of being HIV-infected than women without schistosomiasis. Research is now underway to study prospectively whether antecedent schistosomiasis increases the risk of HIV acquisition and to explore alterations in mucosal immunity that cause the increased susceptibility to HIV infection in women with schistosomiasis.

PI: Jennifer A. Downs, MD; Co-Is: Warren D. Johnson, Jr., MD; Daniel W. Fitzgerald, MD

Funding: Clinical and Translational Science Center (CTSC), WCMC

Natural History and Pathogenesis of HPV/HIV Co-infection in Haiti

This grant provides support to compare the natural history of oncogenic HPV infection in HIV-1 infected women with uncontrolled HIV replication, low nadir CD4 count, and



persistent immune dysfunction due to a delay in ART initiation vs. a randomized control group of women receiving immediate ART. We will also determine the effect of HIV and HIV/HPV co-infection on the expression of genes that mediate the synthesis, catabolism, and signaling of prostaglandin E<sub>2</sub> in cervical cells obtained from a subset of the HIV-infected women in the Early versus Deferred ART Cohort and a control group of HIV-uninfected women.

PI: Daniel W. Fitzgerald, MD; Co-I: Andrew Dannenberg, MD  
Funding: NIH R01

Regulation of T cell Activation in Leprosy and its Reversal Reactions

This grant provides support for research in Brazil on the regulation of T cell activation in leprosy and its reversal reactions. The aims are to: determine the role of leprosy diagnostic delay and disease progression on the frequency, severity, and response to treatment of RR in leprosy patients in Natal, Brazil; and determine the extent to which the immunoregulatory molecules of T cell activation contribute to the clinical phenotype of leprosy disease and development of RR.

PI: Kathryn Dupnik, MD; Co-I: Warren Johnson, Jr., MD  
Funding: Burroughs Wellcome

MEDICAL ETHICS

Neuroethics and Disorders of Consciousness II: Expanding Research Infrastructure and Scholarship

We seek to assess the scope of misdiagnosis and neglect of patients with disorders of consciousness, address the ethical imperative to develop new measures of diagnosis and treatment, and to aid in the development of the Center for the Advanced Study of Brain Injury (CASBI) at Weill Cornell Medical College and The Rockefeller University Hospital.

PI: Joseph J. Fins, MD  
Funding: The Buster Foundation

Clinical and Translational Science Award

The goal of this project is to support, advance, and promote clinical and translational research enterprises at WCMC and collaborating institutions.

Role: Bioethicist and Head, Bioethics Core  
PI: Julianne L. Imperato-McGinley, MD  
Funding: NIH

NEPHROLOGY & HYPERTENSION

Bypass Angioplasty Revascularization Investigation in Type 2 Diabetes (BARI2D)

In the Bari 2D trial, 2,368 patients with both T2DM and heart disease were randomly assigned to undergo either prompt revascularization with intensive medical therapy or intensive medical therapy alone, and to undergo either insulin-sensitization or insulin-provision therapy.

Site PI: Phyllis August, MD  
Funding: NIH N01 (ACCORD)





The Action to Control Cardiovascular Risk in Diabetes Study Group; Effects of Intensive Glucose Lowering in Type 2 Diabetes

In the ACCORD Study, 10,000 T2DM, subjects were randomly assigned to an intensive regimen for glycemic control or standard therapy and followed for five years.

Site PI: Phyllis August, MD  
Funding: NIH

Targeting Inflammation Using Salsalate for Type 2 Diabetes-stage II (TNSAL –T2D)

The primary objective of the study is to determine whether salicylates represents a new pharmacological option for diabetes management.

Site Co-PI: Phyllis August, MD  
Funding: NIH

Kidney Disease in Type 2 Diabetes Mellitus: Biomarker Discovery and Novel Therapeutics

The main objectives are development of a novel treatment combination of an oral vitamin D analogue and an angiotensin receptor blocker for preventing progression of kidney disease in patients with type 2 diabetes, and novel and noninvasive molecular tests for identifying those at risk for progression and for suggesting mechanisms for treatment success/failure.

PI: Phyllis August, MD  
Funding: QNRF NPRP

A Multicenter, Phase 2, Open-label, Controlled, Extension Study for Stage 1 Subjects of Study A3921009 to Evaluate the Long-term Safety and Efficacy of CP–690,550 vs. Tacrolimus, when Co-administered with Mycophenolate Mofetil in Renal Allograft Recipients

This is a multicenter, Phase 2 study to evaluate the safety and efficacy of CP-690, 550 in renal transplant recipients.

PI: Darshana Dadhania, MD, MS  
Funding: Pfizer, Inc.

Using mTOR Inhibitors in the Prevention of BK Nephropathy

This is an open-label, randomized, prospective study to examine whether substitution of Tacrolimus with Sirolimus, an mTOR inhibitor, lowers BK viremia in post-transplant patients better than the typical reduction of calcineurin inhibition by Tacrolimus.

PIs: Darshana Dadhania, MD, MS; Sumit Mohan, MD, MPH  
(Collaborative Project with Columbia University)  
Funding: Pfizer, Inc.

Intestinal Microbiota and Acute Rejection of Renal Allografts

The overall objective is to discover an association between intestinal bacteria and rejection of transplanted kidneys.

PI: John R. Lee, MD  
Funding: NIH/CTSC

Nebivolol vs. Metoprolol: Comparative Effects on Fatigue and QOL

A frequently encountered side effect of beta-blockers is fatigue. Nebivolol, a new beta-blocker with vasodilating effects due to increased secretion of nitric oxide, appears less likely to cause side effects such as fatigue, impairment of glucose metabolism, and sexual dysfunction. This study is a double-blind crossover trial of nebivolol vs. metoprolol (the best-selling beta-blocker), 8 weeks on each drug, with the end points of fatigue, and treadmill time.

PI: Samuel Mann, MD  
Funding: Forest Research Institute, Inc.

Treatment of Resistant Hypertension: A Simplified Mechanistic Approach

Current guidelines for treatment of resistant hypertension offer only the general advice of increasing dosage or adding drugs. In a new approach, focusing on targeting mechanisms underlying resistant hypertension, an algorithm has been developed that offers a comprehensive and simplified treatment approach that narrows treatment choices to one or both of two treatment

options: strengthen the diuretic regimen, usually with addition of a potassium-sparing agent such as spironolactone; treat neurogenic hypertension with combined alpha- and beta-blockade.

PI: Samuel Mann, MD  
Funding: Medtronic Ardian, Inc.

Biomolecular Markers of Renal Allograft Status

The overall objective is to discover and validate biomarkers to predict acute rejection and chronic allograft nephropathy of human kidney transplant recipients using intragraft transcriptome sequencing and to develop noninvasive biomarkers of acute rejection and chronic allograft nephropathy by messengerRNA/microRNA profiling of urinary and peripheral blood cells.

PI: Thangamani Muthukumar, MD  
Funding: NIH/NIAID

Biomolecular Markers for Safe Minimization of Immunosuppression

The aim of this project is to investigate whether urinary cell/peripheral blood cell/allograft mRNA/miRNA profiles are informative of clinical outcomes in renal allograft recipients randomized to a standard dose tacrolimus vs. low dose tacrolimus regimen.

PI: Manikkam Suthanthiran, MD  
Funding: NIH-2 R37

FoxP3 Regulatory Network mRNA Profiles and Human Renal Transplant Outcomes

The central goal is to test the hypotheses that levels of mRNA for Foxp3 and levels of mRNAs for a mechanistically linked Foxp3 regulatory gene network are predictive of post-transplant allograft function, acute rejection severity and outcome and chronic allograft nephropathy.

PI: Manikkam Suthanthiran, MD  
Funding: NIH

Biomolecular Markers Predictive/Diagnostic of Renal Allograft Status

The main objective is to test the hypothesis that mRNA/miRNA expression patterns of intraoperative renal allograft biopsies are predictive of acute rejection and chronic allograft nephropathy.

PI: Manikkam Suthanthiran, MD  
Funding: QNRF NPRP

PULMONARY & CRITICAL CARE MEDICINE

Neurophysiologic Studies of Neurological Disorders of Consciousness Prospective Study of Survivors of Cardiac Arrest Treated with Therapeutic Hypothermia

A clinical study of patients who survive cardiac arrest whose neurologic injury is being treated with therapeutic hypothermia in our intensive care units.

PI: Nicholas Schiff, MD; Co-I: David Berlin, MD  
Funding: James S. McDonnell Foundation

Predictors of Oxidative Stress in Heart Failure Patients with Cheyne-Stokes Respiration

The study investigates of the role of increased levels of oxidative stress in patients with heart failure and Cheyne-Stokes respiration compared with healthy controls.

PI: Ana C. Krieger, MD, MPH  
Funding: American Heart Association National Center; NIH

Acoustic Rhinometry in Pediatric Sleep Apnea

This study tests the difference between obstructive sleep apnea (OSA) and primary snoring groups during acoustic rhinometry measurements of the nasopharynx. Positional airway changes were previously reported in adults with OSA, and further evaluation of the airway function in pediatric OSA is warranted.

PI: Ana C. Krieger, MD, MPH  
Funding: NIH



Mechanisms of Endothelial Cell Dysfunction in Sleep Apnea

This research will investigate potential mechanisms leading to the development of vascular problems in patients with sleep apnea.

PI: Ana C. Krieger, MD, MPH  
Funding: NIH

Sleep Bruxism and Central Sensitization in Myofascial Face Pain

The purpose of this project is to evaluate the presence of sleep related bruxism in patients with myofascial face pain.

PI (Weill Cornell Site): Ana C. Krieger, MD, MPH  
Funding: NIH

Regulation of Vascular Thrombosis in Sleep Apnea

This study investigates the presence of a specific genetic polymorphism in patients with sleep apnea as compared to healthy controls. This polymorphism causes the production of an alternative form of deaminase, which may alter patients' susceptibility to developing vascular thrombosis.

PI: Ana C. Krieger, MD, MPH  
Funding: Robert Wood Johnson Foundation

National Institute of Neurological Disorders and Stroke Genetics of Risk for Retinopathy among Qataris with Type 2 Diabetes

The research team aims to zero in on genetic locations associated with diabetes and find loci associated specifically with diabetic retinopathy – the deterioration of the retina as a symptom of diabetes. Drawing on the most advanced genetic analysis approach, they will evaluate single nucleotide polymorphisms – differences in DNA base pairs that show up as a disruption in expected patterns – among a sample of Qatari subjects. This project is one part of a collaborative effort to analyze diabetes at the genetic level in Qatar.

PI: Ronald Crystal, MD, WCMC; Co-Lead PI: Abdulbari Bener, PhD, WCMC-Q  
Funding: Qatar National Research Program's (QNRF); National Priorities Research Fund (NPRP)

Genetic Variability and Susceptibility to Type 2 Diabetes in the Qatari Population

This study will segregate three – TCF7L2, FTO and CDKN2B– of the 15 known genes associated with type 2 diabetes and, using the information gathered from European populations, compare the functionality of these genes in Qatari diabetics. The drug Metformin is a mainstay of therapy among European populations, with its effectiveness among Europeans related in part to another gene, SLC22A1 – the functionality of this drug will also be tested among Qatari subjects.

PI: Ronald Crystal, MD, WCMC (PI, New York); Co-Lead PI: Laith Abu-Raddad, PhD, WCMC-Q  
Funding: Qatar National Research Fund

Modulation of Genes Responsible for Cilia Length by Exposure to Cigarette Smoke.

PI: Ann Tilley, MD  
Funding: NIH 1 K23 HL103837001

RHEUMATOLOGY

Selective Regulation of Macrophage Activation

This project addresses the mechanisms that selectively regulate expression of specific subsets of inflammatory macrophage genes, allowing fine-tuning of distinct effector functions. The long-term goals are to understand mechanisms that selectively regulate macrophage effector functions important in human autoimmune and inflammatory diseases and to utilize this knowledge in development of new therapeutic approaches.

PI: Xiaoyu Hu, BM, PhD  
Funding: NIH R01

Signaling Cascades in Humoral Immunity and Autoimmunity

The project focuses on a novel protein termed IBP, a novel type of activator for Rho GTPases, hypothesizing that IBP is a novel regulator of T cell activation and homeostasis which is critical for the prevention of autoimmune pathophysiology.

PI: Alessandra Pernis, MD  
Funding: NIH R01; Alliance for Lupus Research

Inhibition of STAT3 and Inflammatory Cytokine Production

The long-term goals of this project are to elucidate mechanisms that control inflammatory cytokine production in macrophages and dendritic cells, and to develop new therapeutic approaches to modulating cytokine production during immune responses and inflammation.

PI: Lionel Ivashkiv, MD  
Funding: NIH R01

Vascular Quiescence and Stabilization in Immunity

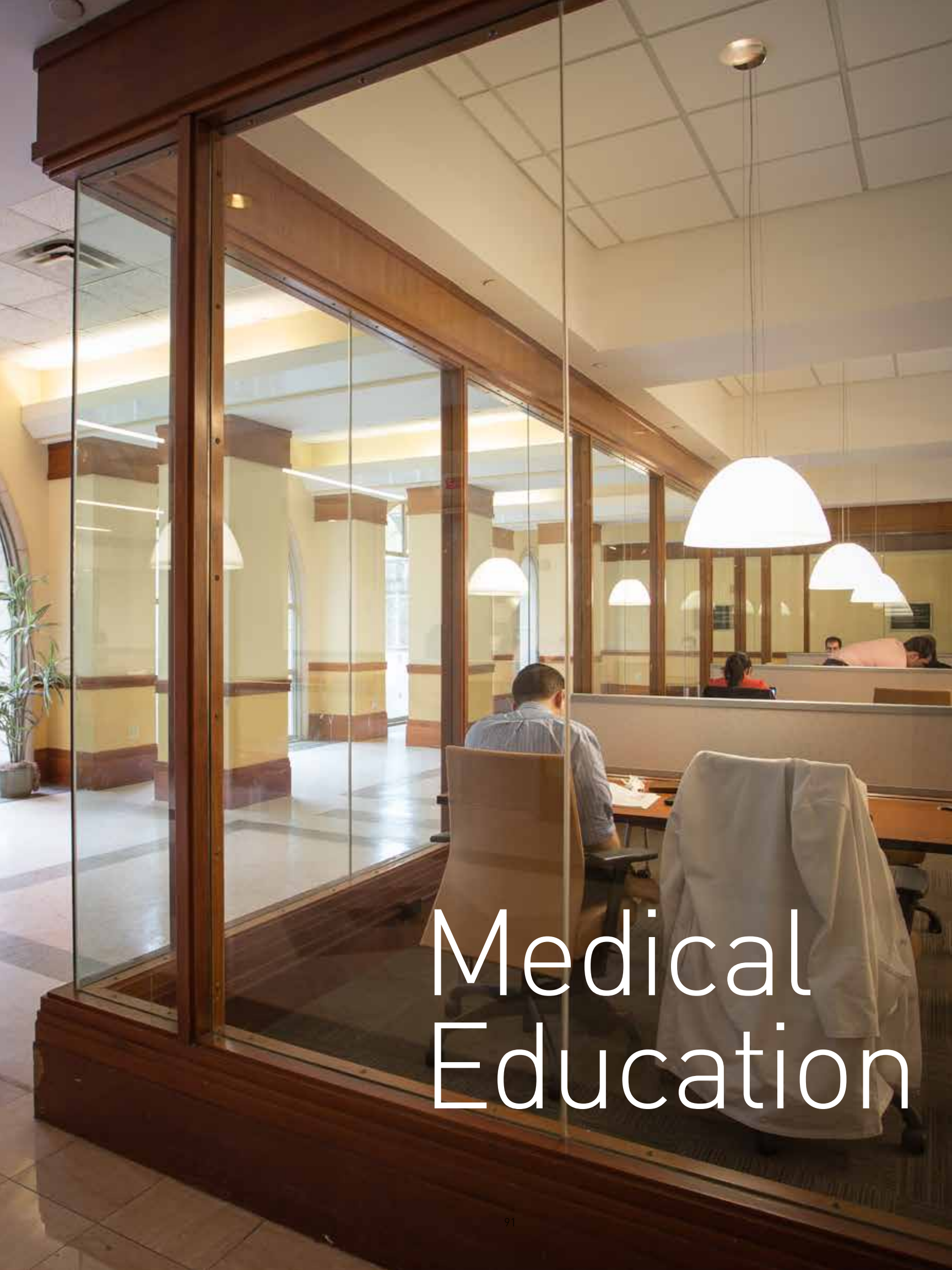
This project is testing the hypothesis that a dendritic cell subpopulation regulates vascular quiescence and stabilization in lymph nodes and that this vascular regulation is important for optimal immune responses.

PI: Theresa Lu, MD, PhD  
Funding: NIH R01; Lupus Research Institute

Inhibition of ROCK to Reverse T cell Dysfunction in SLE

Given that inhibition of ROCK activity is one of the key mechanisms responsible for the pleiotropic effects of statins, we will investigate the hypothesis that the ability of statins to interfere with ROCK activation, if harnessed effectively, can exert beneficial effects in SLE.

PI: Jane Salmon, MD; Alessandra Pernis, MD  
Funding: NIH R21; Lupus Research Institute







# Residency Training Program

The NewYork-Presbyterian Hospital/Weill Cornell Internal Medicine Residency Program has a long-standing tradition of excellence in its commitment to training extraordinary physicians and academic scholars. The residency program’s 36-month curriculum offers opportunities to learn all aspects of clinical medicine with robust training in both inpatient and outpatient settings, providing care for an eclectic patient population with a broad array of medical conditions. Residents benefit from working with world-renowned faculty at Weill Cornell Medical College, as well as at our three affiliate institutions, Memorial Sloan-Kettering Cancer Center, Hospital for Special Surgery, and The Rockefeller University. Regardless of their chosen career, our graduates are highly capable physicians; be it as clinical educator, physician-scientist or academic leader.

The residency program places a strong emphasis on authentic responsibility as a key element to learning both at the bedside and in searching the evidence for best practice. In addition to the learning through supervised practice, the program provides creative conferences and workshops to

enhance learning. Academic Time is a weekly 90-minute session targeted to each year of training that uses an interactive format with audience response clickers, real-time literature searching on iPads, and facilitated group discussions with faculty experts. Education Units linked to outpatient block time provide in-depth instruction on important topics like evidence based medicine, physical exam skills, and personalized patient-centered care. These two programs complement Morning report, Chairman’s Conference, Grand Rounds, Journal Club and M & M. The intellectual discourse was expanded this year to include the Senior Seminar Series. Each of our PGY3 residents presents a 25-minute talk on a topic of their choice working with a faculty advisor to become an expert on what is currently known on the issue. The senior talks have been a fabulous addition.

On the heels of our success with the 6 + 2 system (6 weeks of rotation assignment followed by 2 weeks of outpatient practice, the Outpatient Pod has enriched the outpatient experience of residents with increased continuity and newly added performance reports on clinical outcomes of each resident’s

panel of patients. Under the guidance of Dr. Fran Ganz-Lord, residents now receive personalized reports on the outcomes of their patients: quality measures in patients with diabetes mellitus, screening for preventive services, and discussing lifestyle modifications.

We have continued to grow our efforts around quality improvement and patient safety with the Chief Resident of Quality and Safety now in its second year. Residents have been actively engaged in highly visible changes in how we deliver patient care to both improve efficiency and decrease waste. Our simulation curriculum was expanded to include ultrasound-guided bedside procedures including central lines and paracenteses led by Dr. Kirana Gudi and assisted by Dr. Kapil Rajwani and Dr. Alyson Fox.

We continue to have many of our residents participate in research activities leading to national presentations and publications. The four finalists from the David E. Rogers Research Competitions were Dr. Aaron Viny, Dr. Neha Mehta-Shah, Dr. Daneng Li, and Dr. Eugene Licht.

Some of the high profile research efforts aided by our residents are listed below.

Batalden M, Warm E, **Logio L**. Beyond a Curricular Design of Convenience: Replacing the Noon Conference with an Academic Half Day in Three Internal Medicine Residency Programs. *Acad Med*. 2013 May; 88 (5): 1-8.

**Logio LS, Gudi K, Cilmi S**. Developmental core curriculum: A new model for Academic Time. *Academic Internal Medicine Insight* (in press).

**Logio LS, Zappetti D, Horowitz JM**. Guiding residents through the fellowship selection and application Process. In: Ficarola RD, editor. *The Toolkit Series: A Textbook for Internal Medicine Education Programs 11<sup>th</sup> Edition*. Washington DC: Association of Program Directors in Internal Medicine (in press).

Vertrees SM, Shuman AG, **Fins JJ**. Learning by Doing: Effectively Incorporating Ethics Education into Residency Training. *Journal of General Internal Medicine*, 2012; online 21 (November).

**NATIONAL PRESENTATIONS**

**Mehta S, Hottensen D, Diamond R**. Palliative Care 101 For Medical Interns: The Palliative Care Education Unit. Poster presented at the American Association for Hospice and Palliative Care 2013 Annual Assembly; New Orleans, LA.

**Fanucchi L, Cooke J, Logio L**. An action oriented patient safety conference model for the new millennium. Poster presented at: 4<sup>th</sup> Annual Integrating Quality Meeting of Association of American Medical Colleges, 2012 Jun 7-8; Chicago, IL.

**Carmel A, Fanucchi L, Lee J**. “Bolus” and “Drip” quality improvement curricula for internal medicine residents. Poster presented at: 35<sup>th</sup> Annual Meeting of the Society for General Internal Medicine, 2012 May 9-12; Orlando, FL.

**Ouchida K, Siegler E, Adelman R**. Case presentation as a direct observation method to evaluate internal medicine residents? Systems-based practice competency. Presented at: the Annual Scientific Meeting of the American Geriatrics Society, 2012 May 2-5; Seattle, WA.

**PUBLICATIONS:**

**Muhamed Baljevic**, Omar Abdel-Wahab, Raajit Rampal: Translocation [11;17] in de novo Myelodysplastic Syndrome Not Associated with Acute Myeloid or Acute Promyelocytic Leukemia. *Acta Haematol*, 2013;129:48-54.

**Rotman SR**, Bishop TF: Proton Pump Inhibitor Use in the U.S. Ambulatory Setting, 2002-2009. *Plos One* www.plosone.org, February 2013, Volume 8, Issue 2.

**Garment AR, Lee, WW**, Harris C, Phillips-Caesar E. Development of a Structured Year-End Sign-Out Program in an Ambulatory Care Practice. *JGIM* 2013: 28;114-120.

Fitzgerald, Daniel W., **Karl Bezak**, Oksana Ocheretina: The Effect of HIV and HPV Coinfection on Cervical COX-2 Expression and Systemic Prostaglandin E2 Levels. Published Online First, December 1, 2011; DOI:10.1158/1940-6207.CAPR-11-0496. *Cancer Prev Res*; 5 (1) January 2012.

**Zaniello, Ben A.**, Deborah A. Kessler, Katherine M. Vine: Seroprevalence of Chagas Infection in the Donor Population. *PLOSINeglected Tropical Diseases*, a peer-reviewed, open access journal.

The educational activities of the department continue to grow and gain national reputation. Dr. Ernie Esquivel and Dr. Anthony Ogedegbe are now assistant Dr. Charles Bardes in managing the third year medicine clerkship. Dr. Dana Zappetti coordinates the fourth year subinternship. We’ve continued to provide subinternships for the Weill Cornell - Qatar fourth years students as well. The residency program, led by Dr. Lia Logio, is assisted by a tremendous group of talented medical educators including Judy Tung, B. Robert Meyer, Kirana Gudi, Susana Morales, Christina Harris, and Monika Harris. They were given a 10-year accreditation cycle (until 2022!). Ms. Cathy Jalali, MEd, joined the Education Division and has added value in our efforts to improve rounding practices, encourage critical thinking, and aided our clinician educator faculty in their scholarship activities.

This year, a number of core faculty were added to the leadership group to serve as resident advisors in preparation for the ACGME’s Next Accreditation System: Dr. Eugenia Siegler, Dr. Jeff Silberzweig, Dr. Brian Bosworth, Dr. Vishal Dodia, and Dr. Dana Zappetti. 35 of our senior residents matched to highly competitive fellowship programs around the country, including a few who will stay on at Weill Cornell in our subspecialty divisions.

It has been another tremendously successful year for the program, even articulating a mission statement that guides us as we adapt to the next wave of changes in healthcare and medical education.

- To cultivate extraordinary physicians who consistently demonstrate their unwavering dedication to each individual patient in front of them
- To encourage thinking anew about medicine in both its science and its art
- To create a lifetime academic home for our medical community members



# Residents on the Move



**Marcus D. Goncalves, MD**

I entered medicine to cure disease. Throughout my training as a physician-scientist, I have been fascinated by the inner workings of the human body and invested in learning how to fix the problems that result in disease. My focus is on how the body stores energy and regulates metabolism which is important in conditions such as obesity, diabetes, and cardiovascular disease. Every day at NYP/WC we see the toll that these chronic illnesses play on the lives of patients. As a resident, my goal is to observe the complexities of patient care and identify areas that can be improved by my research in the future. Making people feel better is just a cherry on top.

**Jordan Nestor, MD**

I grew up uninsured, sought medical care through the clinics in one of the city's public hospitals, and wanted to become a physician to increase healthcare access to the disenfranchised, such as the Spanish-speaking Latinos in my community. I chose internal medicine when the relationship between poor access to care, worsening of chronic illness, and the burden of disease to one's quality of life became clear to me; for example, when manageable diseases like hypertension and diabetes go untreated and lead to complications, such as End Stage Renal Disease, with individuals requiring long-term hemodialysis, a treatment regimen that is life altering. Unfortunately, the burden of chronic disease frequently falls on poor patient populations, disproportionately Latino and African American communities. The opportunity to train in medicine at this time in our history, when we are expanding coverage to the uninsured while making efforts to improve health outcomes and control costs, is tremendously exciting. I feel fortunate to be training in this program where the priority is both the development of our clinical acumen and delivering excellent patient care to all those we serve. As prudent, thoughtful clinicians, we can all work towards eliminating healthcare disparities associated with limited access to care.







**Yecheskel Schneider, MD**

In the beginning of intern year I felt almost like a fraud when I would walk the wards in my white coat. I'd ask myself if the program made a mistake and if they chose an imposter. But with mentoring from experienced faculty, camaraderie from co-residents and from the patience of patients, who take the time to teach you how to care for them, fears and anxiety are transformed into confidence. You learn to trust what you know and seek help when you need it (and the help is always there). I am humbled that I am surrounded by such knowledgeable attendings, compassionate residents and patients whom I have the privilege to serve. My white coat has never fit so well as it does right now.



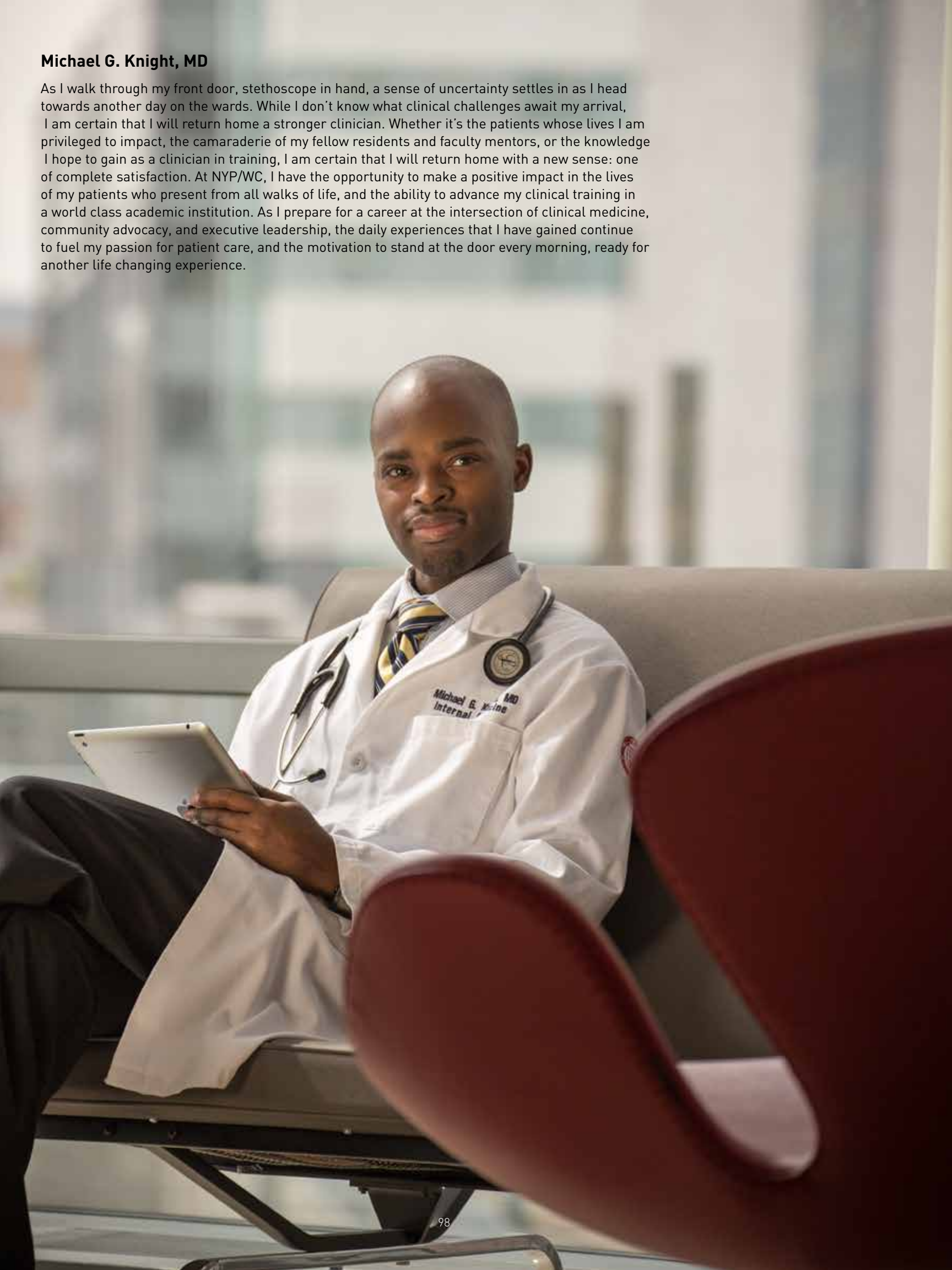
**Clara Tow, MD**

Starting my internal medicine residency training at NYP-WC, I knew I was entering an entirely new stage of my life that I could not even imagine. Joining the program has provided me with incredible knowledge and the ability to apply it towards helping others in the most essential moments. More importantly, however, it has given me a new family that supplies love, support, and teaching every step of the way. I could not be more grateful.



**Michael G. Knight, MD**

As I walk through my front door, stethoscope in hand, a sense of uncertainty settles in as I head towards another day on the wards. While I don't know what clinical challenges await my arrival, I am certain that I will return home a stronger clinician. Whether it's the patients whose lives I am privileged to impact, the camaraderie of my fellow residents and faculty mentors, or the knowledge I hope to gain as a clinician in training, I am certain that I will return home with a new sense: one of complete satisfaction. At NYP/WC, I have the opportunity to make a positive impact in the lives of my patients who present from all walks of life, and the ability to advance my clinical training in a world class academic institution. As I prepare for a career at the intersection of clinical medicine, community advocacy, and executive leadership, the daily experiences that I have gained continue to fuel my passion for patient care, and the motivation to stand at the door every morning, ready for another life changing experience.



**Heidi Charvet, MD**

Every day of my training, I feel lucky to be part of such a wonderful internal medicine program. My co-residents are bright, energetic, and passionate young physicians who I consider an honor to have as my life-long colleagues and friends. The faculty are enthusiastic about teaching and easily approachable. In addition to superb clinical training my experience at Cornell has been greatly enriched through my participation in the Housestaff Quality Council (HQC). The HQC meets regularly with hospital leadership and has an essential voice in the development of hospital policy and programs pertaining to patient safety. Through the HQC, I have had the opportunity to engage in patient safety and quality improvement projects with residents from all different specialties and with the mentorship of faculty at the leading edge of the field.





# Current Residents

## CHIEF RESIDENT

Lee Shearer, *Perelman School of Medicine at the University of Pennsylvania*

## QUALITY IMPROVEMENT CHIEF RESIDENT

Brian Eiss, *Georgetown University School of Medicine*

## SENIOR RESIDENTS (PGY3)

Allison Waridibo, *Faculty of Medicine, Imperial College London, UK*

Daniel Amoruso *UMDNJ-New Jersey Medical School*

Erinn Ayres, *University of Arizona College of Medicine*

Muhamed Baljevic, *Weill Cornell Medical College, Qatar*

Karl Bezak, *Vanderbilt University School of Medicine*

Isaac Bowman, *University of Texas Southwestern Medical Center at Dallas*

Augustine Chung, *Case Western Reserve University School of Medicine*

Robert Daly, *Harvard Medical School*

Anthony Daniyan, *University of Miami School of Medicine*

Mark Diamond, *Washington University School of Medicine*

David Fernandez, *State University of New York Upstate Medical University*

Timothy Ferng, *Wayne State University School of Medicine*

Jessica Furst, *Albert Einstein College of Medicine, Yeshiva University*

Timothy Glew, *Tulane University School of Medicine*

Jonathan Gordin, *Weill Cornell Medical College*

Parag Goyal, *University of Massachusetts Medical School*

Elizabeth Greig, *University of Miami School of Medicine*

Leon Igel, *Albert Einstein College of Medicine, Yeshiva University*

Kunal Karia, *Virginia Commonwealth University*

Scott Kramer, *Weill Cornell Medical College*

Joseph Krepp, *Stony Brook University School of Medicine*

Frank Lin, *Albany Medical College*

Amy Loden, *University of Missouri School of Medicine*

Lenette Lu, *Case Western Reserve University School of Medicine*

Sharayne Mark, *University of Rochester School of Medicine and Dentistry*

Joseph Marmora, *Loyola University of Chicago Stritch School of Medicine*

Adrian Mei, *New York Medical College*

John Morris, *University of Maryland School of Medicine*

Michael Mulock, *Jefferson Medical College of Thomas Jefferson University*

Karla Nieves, *University of Puerto Rico School of Medicine*

Olanma Okoji, *George Washington University School of Medicine and Health Sciences*

Jeffrey Okun, *Albert Einstein College of Medicine, Yeshiva*

Vikram Palanivel, *Perelman School of Medicine at the University of Pennsylvania*

Chiti Parikh, *UMDNJ-Robert Wood Johnson Medical School*

Stephen Rotman, *New York Medical College*

Kira Ryskina, *Mount Sinai School of Medicine*

Rachel Sanford, *Harvard Medical School*

Lourdes Sanso, *New York University School of Medicine*

David Seto, *UMDNJ-New Jersey Medical School*

Maryam Shafaei, *Weill Cornell Medical College, Qatar*

Stephanie Tang, *Northwestern University Feinberg School of Medicine*

Louis Waldman, *Perelman School of Medicine at the University of Pennsylvania*

Frances West, *Jefferson Medical College of Thomas Jefferson University*

Casey Wong, *Weill Cornell Medical College*

Micheas Zemedkun, *Harvard Medical School*

## JUNIOR RESIDENTS (PGY2)

Kathryn Arbour, *Weill Cornell Medical College*

Amiran Baduashvili, *Stony Brook University School of Medicine*

Thomas Baker, *Temple University School of Medicine*

George Bao, *University of California, Los Angeles David Geffen School of Medicine*

Michael Bender, *University of Rochester School of Medicine and Dentistry*

David Bennett, *UMDNJ-Robert Wood Johnson Medical School*

Michael Berlin, *Albert Einstein College of Medicine, Yeshiva University*

Anjori Bhatia, *Stony Brook University School of Medicine*

Sheng Cai, *Washington University School of Medicine in St. Louis*

Heidi Charvet, *New York Medical College*

Rowland Chavez, *Albert Einstein College of Medicine, Yeshiva University*

Claiborne Childs, *Georgetown University*

Mallory Delehanty, *Weill Cornell Medical College*

Celia Egan, *New York Medical College*

Laura Gingras, *Emory University School of Medicine*

Kati Glockenberg, *Albert Einstein College of Medicine, Yeshiva University*

Luke Godwin, *Warren Alpert Medical School of Brown University*

Celine Goetz, *Loyola University of Chicago Stritch School of Medicine*

Maday Gonzalez, *Albert Einstein College of Medicine, Yeshiva University*

Eric Goodman, *Weill Cornell Medical College*

Romona Kersellius, *UMDNJ-Robert Wood Johnson Medical School*

Danny Khalil, *Stony Brook University School of Medicine*

Chrisann Kyi, *Georgetown University*

Kevin Ma, *Washington University School of Medicine in St. Louis*

Fima Macheret, *Mayo Medical School*

Emily Marcus, *Johns Hopkins University School of Medicine*

Jonathan Mendelson, *George Washington University School of Medicine and Health Sciences*

Tiago Miguel, *New York University School of Medicine*

Jamie Mullally, *University of Rochester School of Medicine and Dentistry*

Nikola Natov, *Tufts University School of Medicine University*

Anil Punjabi, *University of California, Los Angeles David Geffen School of Medicine*

Alexandra Racanelli, *Virginia Commonwealth University School of Medicine*

Monica Saumoy, *Weill Cornell Medical College*

Katherine Saunders, *Weill Cornell Medical College*

Yechezkel Schneider, *New York University School of Medicine*

Michael Scordo, *UMDNJ-New Jersey Medical School*

Clara Tow, *Weill Cornell Medical College*

Surafel Tsega, *Weill Cornell Medical College*

Santosha Vardhana, *New York University School of Medicine*

Ashwin Vasan, *University of Michigan Medical School*

Brian West, *Mount Sinai School of Medicine*

David Wise, *Perelman School of Medicine at the University of Pennsylvania*

Kevin Wood, *University of Kansas School of Medicine*

## INTERN RESIDENTS (PGY1)

Sarah Adkins, *Columbia University College of Physicians and Surgeons*

Mohamed Al-Kazaz, *Weill Cornell Medical College - Qatar*

Mohini Aras, *State University of New York-Downstate Medical Center College of Medicine*

Kerri Aronson, *State University of New York Upstate Medical University*

Daniel Bachman, *State University of New York-Downstate Medical Center College of Medicine*

Sheila Bharmal, *Emory University School of Medicine*

Jennifer Chester, *Albert Einstein College of Medicine, Yeshiva University*

Erica Chu, *Baylor College of Medicine*

Shirley Cohen, *University of Michigan Medical School*

Amanda DeMauro, *University of Michigan Medical School*

Vinicius Domingues, *Universidade Estácio de Sá, Rio de Janeiro, Brazil*

Scott Drutman, *New York University School of Medicine*

Jason Dukes, *Columbia University College of Physicians and Surgeons*

Andrew Dunbar, *New York Medical College*

Guillermo Espinoza, *New York University School of Medicine*

John Ferrarone, *New York Medical College*

Marcus Goncalves, *Perelman School of Medicine at the University of Pennsylvania*

Sergey Gurevich, *Medical College of Wisconsin*

Horatio Holzer, *Weill Cornell Medical College*

Yulian Khagi, *Saint Louis University School of Medicine*

Michael Knight, *Case Western Reserve University School of Medicine*

James Kuo, *University of Washington School of Medicine*

Chrystal Landry, *Stony Brook University School of Medicine*

Richard Leiter, *Northwestern University Feinberg School of Medicine*

Emily Lu, *Emory University School of Medicine*

Elizabeth Maina, *Tulane University School of Medicine*

Patrick McNair, *University of South Florida College of Medicine*

Saif Muhsin, *College of Medicine, University of Baghdad, Iraq*

Jordan Nestor, *Albert Einstein College of Medicine, Yeshiva University*

Aleksey Novikov, *Warren Alpert Medical School of Brown University*

Marcia Paddock, *University of Washington School of Medicine*

Stephen Perazzelli, *SUNY-Downstate Medical Center College of Medicine*

Argelis Rivera, *Albert Einstein College of Medicine, Yeshiva University*



John Ruffino, *Weill Cornell Medical College*

Daniel Sanchez, *Mount Sinai School of Medicine*

Matthew Schoenfeld, *New York Medical College*

Adam Schwartz, *Mount Sinai School of Medicine*

Kaartiga Sivanesan, *Vanderbilt University School of Medicine*

Richard Wang, *Weill Cornell Medical College*

Rui Wang, *Sichuan University, Chengdu, China*

Bethel Woldu, *University of Colorado Denver School of Medicine*

Neeha Zaidi, *Mount Sinai School of Medicine*

William Zhang, *New York University School of Medicine*

Subspecialty Fellowship & Other Professional Pursuits

CARDIOLOGY

Timothy Glew  
*Beth Israel Medical Center, New York, NY*

Jonathon Gordin  
*UCLA Medical Center, Los Angeles, CA*

Parag Goyal  
*NewYork-Presbyterian/Weill Cornell Medical Center*

Joseph Krepp  
*Georgetown University Hospital, Washington, DC*

Frank Lin  
*NewYork-Presbyterian/Weill Cornell Medical Center*

Sharayne Mark  
*Hospital of the University of Pennsylvania, Philadelphia, PA*

Joseph Marmora  
*Loyola University Health System, Maywood, IL*

Michael Mulock  
*University of Pittsburgh Medical Center, Pittsburgh, PA*

Casey Wong  
*Barnes-Jewish Hospital at Washington University Medical Center, St. Louis, MO*

Micheas Zemedkun  
*Georgetown University Hospital, Washington, DC*

CRITICAL CARE

Samantha Brenner  
*Stanford University Medical Center, Palo Alto, CA*

ENDOCRINOLOGY

Jessica Furst  
*Columbia University Medical Center/New York Presbyterian, New York, NY*

Leon Igel  
*NewYork-Presbyterian/Weill Cornell Medical Center*

GERIATRICS

Erinn Ayres  
*NewYork-Presbyterian/Weill Cornell Medical Center*

Louis Waldman  
*Yale University, New Haven, CT*

GASTROENTEROLOGY

Karl Bezak  
*Hospital of the University of Pennsylvania, Philadelphia, PA*

Kunal Karia  
*NewYork-Presbyterian/Weill Cornell Medical Center*

Scott Kramer  
*New York University Langone Medical Center, New York, NY*

Olanma Okoji  
*St. Luke’s Hospital, New York, NY*

Jeffrey Okun  
*Montefiore Medical Center, New York, NY*

Stephen Rotman  
*Brigham and Women’s Hospital, Boston, MA*

GENERAL INTERNAL MEDICINE

Kira Ryskina  
*Hospital of the University of Pennsylvania, Philadelphia, PA*

HEMATOLOGY AND MEDICAL ONCOLOGY

Muhamed Baljevic  
*MD Anderson Cancer Center, Houston, TX*

Sheng Cai  
*Memorial Sloan-Kettering Cancer Center, New York, NY*

Robert Daly  
*University of Chicago Medical Center, Chicago, IL*

Anthony Daniyan  
*Memorial Sloan-Kettering Cancer Center, New York, NY*

Mark Diamond  
*Hospital of the University of Pennsylvania, Philadelphia, PA*

Peter Forsberg  
*NewYork-Presbyterian/Weill Cornell Medical Center*

Danny Khalil  
*Memorial Sloan-Kettering Cancer Center, New York, NY*

Neha Mehta Shah  
*Memorial Sloan-Kettering Cancer Center, New York, NY*

Rachel Sanford  
*MD Anderson Cancer Center, Houston, TX*

Maryam Shafae  
*MD Anderson Cancer Center, Houston, TX*

Santosha Vardhana  
*Memorial Sloan-Kettering Cancer Center, New York, NY*

David Wise  
*Memorial Sloan-Kettering Cancer Center, New York, NY*



INFECTIOUS DISEASES

Allison Waridibo  
*New York University Langone Medical Center, New York, NY*

Lenette Lu  
*Massachusetts General Hospital, Boston, MA*

NEPHROLOGY

Samantha Diaz  
*Duke University Hospital, Durham, NC*

PULMONARY AND CRITICAL CARE MEDICINE

Lourdes Sanso  
*NewYork-Presbyterian/Weill Cornell Medical Center*

Mae West  
*NewYork-Presbyterian/Weill Cornell Medical Center*

RHEUMATOLOGY

David Fernandez  
*Hospital for Special Surgery, New York, NY*

Other Professional Pursuits

GLOBAL HEALTH LEADERSHIP

Vikram Palanivel  
*Massachusetts General Hospital, Boston, MA*

CLASSICAL CHINESE ACUPUNCTURE APPRENTICESHIP

David Seto  
*Wang Ju-yi Applied Channel Theory Research Center, Beijing, China*

ACADEMIC APPOINTMENTS

Elizabeth Greig  
*Assistant Clinical Professor of Medicine, University of North Carolina, Chapel Hill, NC*  
*Academic Clinical Practice*

Amy Loden  
*Instructor of Medicine, Associate Program Director Primary Care Track, Washington, University in St. Louis*  
*Academic Clinical Practice*

Daniel Amoroso  
*NewYork-Presbyterian/Weill Cornell Medical Center*  
*Academic Hospitalist*

Isaac Bowman  
*Memorial Sloan-Kettering Cancer Center, New York, NY*  
*Academic Hospitalist*

Timothy Ferng  
*Memorial Sloan-Kettering Cancer Center, New York, NY*  
*Academic Hospitalist*

Adrian Mei  
*NewYork-Presbyterian/Weill Cornell Medical Center*  
*Academic Hospitalist*

John Morris  
*Georgetown University Hospital, Washington, DC*  
*Academic Hospitalist*

Karla Nieves  
*Memorial Sloan-Kettering Cancer Center, New York, NY*  
*Academic Hospitalist*



Fellowships

The Department of Medicine offers a variety of fellowship training opportunities in each of our divisions. All of our fellowships emphasize clinical and research training. These programs provide a challenging educational experience under the supervision and guidance of noted experts in their fields and demonstrate our commitment to ensuring that our physicians-in-training emerge as tomorrow’s leaders in their chosen fields.

ADVANCED HEART FAILURE CARDIOLOGY TRANSPLANT

The Fellowship Program in the Maurice R. and Corinne P. Greenberg Division of Cardiology at Weill Cornell Medical College/ New York-Presbyterian Hospital is a one year ACGME-accredited program that prepares highly qualified candidates for careers in Advanced Heart Failure and Transplant Cardiology. This fellowship will train fellows in the management of the advanced congestive heart failure patient population. This includes patients with: acute decompensated heart failure (left and right), destination or bridge to transplant mechanical assist devices, acute support devices, perioperative high risk conventional cardiac surgery, approved and investigational catheter or mini surgical valvular interventions; those needing evaluation for, and those who already underwent heart transplantation. An added strength of the program is in-depth training of the evaluation and management of pulmonary hypertension and exposure to patients with WHO Groups 1-5 PH. Cardiac Transplantation training portion occurs at NewYork Presbyterian Hospital-Columbia Medical Center. Highlights of this program include a strong collaboration with colleagues from cardiac imaging, catheterization lab (including structural heart disease program), electrophysiology, cardiothoracic surgery, cardiac anesthesia, rheumatology and oncology.

**Program Director:** Evelyn Horn, MD  
**Program Coordinator:** Lisa Brooks, (212) 746-2218  
**Duration of Training:** 1 year  
**Number of Positions:** 1

2012-2013 Fellow

Maria Karas, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

CARDIOLOGY

Under the auspices of the Maurice R. and Corinne P. Greenberg Division of Cardiology, this three or four-year program prepares highly qualified candidates for careers in investigative and clinical cardiology. Our fellows receive comprehensive experience in all major clinical and laboratory aspects of contemporary cardiology under the close supervision of full-time staff. In addition, each fellow is expected to participate in one or more areas of ongoing research during their training. Clinical care is the focus of the first two years, while the third and fourth years involve a more intensive, mentored experience in a particular clinical subspecialty or in basic research. An additional year (or more) of training/research in a subspecialty area can be arranged, as indicated/appropriate.

**Program Director:** Erica C. Jones, MD  
**Program Coordinator:** Lisa Brooks, (212) 746-2218  
**Duration of Training:** 3 years  
**Number of Positions:** 19

2012-2013 Fellows

Subhi Al-Aref, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Nisha Bavalia, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Konstantinos Charitakis, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Grace Chung, MD  
*University of Chicago*

Brian Cullingford, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Roderick Deano, MD  
*University of Chicago*

Abiola Dele-Michael, MD, MPH  
*University of Michigan*

Bobby Ghosh, MD  
*University of Michigan*

Sattar Gojraty, MD  
*University of Pennsylvania*

Albert Jung, MD, PhD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Ryan Kaple, MD  
*Massachusetts General Hospital*

Alexander Mauskop, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Lynn Punnoose, MD  
*Brigham and Women’s Hospital*

Joshua Schulman-Marcus, MD  
*NewYork-Presbyterian Hospital (Columbia Campus)*

Ashish M. Shah, MD  
*NewYork-Presbyterian Hospital (Columbia Campus)*

Samuel Volo, MD  
*Brigham and Women’s Hospital*

Joshua Weisbrot, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

David Yang, MD  
*Brigham and Women’s Hospital*

CLINICAL CARDIAC ELECTROPHYSIOLOGY (CCEP)

This fellowship within the Maurice R. and Corinne P. Greenberg Division of Cardiology provides advanced training in all aspects of invasive electrophysiology. Fellows attain expertise in catheter ablation of complex arrhythmias, including atrial fibrillation and ventricular tachycardias, as well as device implantation and management, with an emphasis on implantable defibrillators and cardiac resynchronization. The core of the fellowship consists of rotations in the Invasive Electrophysiology Laboratory, but fellows also rotate through the device clinic and inpatient and outpatient consultations. Fellows also participate in the ongoing basic and clinical research programs conducted within the electrophysiology laboratory.

**Program Director:** Jim W. Cheung, MD  
**Program Coordinator:** Lisa Brooks, (212) 746-2218  
**Duration of Training:** 1 year  
**Number of Positions:** 4

2012-2013 Fellows

Seth Bender, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Joshua Liez, MD  
*University of Pennsylvania Health System*

Faisal Siddiqi, MD  
*Yale-New Haven Hospital*

Michelle Spotnitz, MD  
*UMDNJ-Robert Wood Johnson*

INTERVENTIONAL CARDIOLOGY

A one-year advanced training fellowship in all aspects of interventional cardiology is also available through the Maurice R. and Corinne P. Greenberg Division of Cardiology. The program emphasizes a systematic, evidence-based approach to diagnostic and therapeutic coronary procedures, and enables fellows to develop expertise in pre- and post-procedural patient care in both inpatient and outpatient settings. Fellows are trained to perform percutaneous coronary interventions using state-of-the-art technologies, and are expected to participate in active clinical research efforts.

**Program Director:** Robert Minutello, MD  
**Program Coordinator:** Lisa Brooks, (212) 746-2218  
**Duration of Training:** 1 year  
**Number of Positions:** 2

2012-2013 Fellows

Praveen Khanna, MD  
*Yale New Haven Hospital*

Sean R. Wilson, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

CARDIOLOGY BROOKLYN PROGRAM

**Program Director:** Ciprian Nedelcu, MD  
**Program Coordinator:** Julie C. Quinonez, (718) 250-6952  
**Duration of Training:** 3 years  
**Number of Positions:** 6

2012-2013 Fellows:

Mohammad Ansari, MD  
*Beth Israel Medical Center*

Cesar Ayala-Rodriguez, MD  
*The Brooklyn Hospital Medical Center*

Sameer Kaul, MD  
*Wyckoff Heights Medical Center*  
*The Brooklyn Hospital Medical Center*

Khurram Liaqat, MD  
*The Brooklyn Hospital Medical Center*

Umesh Mishra, MD  
*The Brooklyn Hospital Medical Center*

Pawan Sarda, MD  
*The Brooklyn Hospital Medical Center*





ENDOCRINOLOGY, DIABETES, AND METABOLISM

This program is a comprehensive two-year training program that provides unique, in-depth clinical and academic experience in the field of endocrinology. Endocrine fellows receive a wide range of didactic instruction and clinical training in the inpatient and ambulatory facilities of three premier medical institutions: NewYork-Presbyterian Hospital, Memorial Sloan-Kettering Cancer Center and the Hospital for Special Surgery. The first year of the fellowship focuses on intensive clinical training, while the second year emphasizes clinical, translational or basic research. Our fellows are actively involved in shaping their education, gain ‘hands-on’ experience teaching residents and medical students and receive individualized instruction from nationally renowned clinicians and researchers. As appropriate, fellows may continue their training with an optional third year devoted to further research.

**Program Director:** David Brillon, MD  
**Program Coordinator:** Helen Carey, (212) 746-9939  
**Duration of Training:** 2 years  
**Number of Positions:** 4

2012–2013 Fellows

José Alemán, MD, PhD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Samim Enayat, MD  
*University of Virginia*

James Flory, MD, MSCE  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Oksana Lewis, MD  
*Montefiore Medical Center*

GASTROENTEROLOGY AND HEPATOLOGY

This three-year program attracts some of the best and brightest trainees who are interested in pursuing a career in academic medicine. Currently, two fellows are accepted into the program annually. The first year is largely consultative, and fellows maintain a weekly ambulatory patient practice. Second-year fellows are expected to be involved in basic or clinical research. Third year fellows continue the research projects developed in their second year, and have an opportunity to pursue specific areas of interest in inflammatory bowel disease, hepatology, liver transplantation, and cancer screening and prevention. Over the course of their training, fellows generally perform more than 600 upper endoscopies, 300 colonoscopies and a significant number of EUS (endoscopic ultrasound) and ERCPs (endoscopic retrograde cholangio pancreatography).

**Program Director:** Brian Bosworth, MD  
**Program Coordinator:** Ming Su, (646) 962-4700  
**Duration of Training:** 3 years  
**Number of Positions:** 7

2012–2013 Fellows

Michelle Cohen, MD  
*NewYork-Presbyterian Hospital (Columbia Campus)*

Arun Jesudian, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*



Nikhil Kumta, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Melissa Rosen, MD  
*Mount Sinai Medical Center*

Amir Soumekh, MD  
*Mount Sinai Medical Center*

Ethan Weinberg, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

GERIATRIC MEDICINE

This comprehensive fellowship program integrates outstanding, nationally recognized academic and clinical resources with the goal of training future clinical and academic leaders in geriatric medicine. Clinical training occurs in all appropriate geriatric settings: acute hospitals, long-term care facilities, patients’ homes, hospices, continuing care communities and ambulatory clinics. The second year of training focuses on completing an independent research project. Fellows can participate in a third year of training as clinician-researchers or clinician-educators through our Hartford Center of Excellence. One-year fellowship positions also become available from time to time for those unable to do the second year. Board certification can be obtained after completing a one-year fellowship.

**Program Director:** Barrie Raik, MD  
**Program Coordinator:** Quincy Leon, (212) 746-3539  
**Duration of Training:** 2 years  
**Number of Positions:** 4

2012–2013 Fellows

Sonica Bhatia, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Veerawat Phongtankuel, MD  
*Temple University Hospital*

Kiran Rayalam, MD  
*Wyckoff Heights Medical Center*

Wei Wang, MD  
*Bronx Lebanon Hospital Center*

HEALTH SERVICES RESEARCH

The goal of the T32 fellowship training program funded by the Agency for Healthcare Research and Quality is to train post-residency physicians to conduct interdisciplinary health services research. The objective is to train new physician-investigators to become independent researchers, using methodologically rigorous approaches to meet emerging health services research priorities: specifically, improving the effectiveness and outcomes of clinical practice, improving our ability to provide high-quality, cost-effective care, and assessing the effectiveness of health systems changes on outcomes, quality, cost and access to healthcare. The program emphasizes theoretical, methodological and practice foundations in health services research, clinical research and behavior sciences to enable physician-investigators to conduct research that will improve practice. A special emphasis of the program is to train researchers from diverse backgrounds, imparting the skills to address health concerns and challenges faced by minority populations in our unique urban environment. Graduates from our program are principal or co-principal investigators on grants totaling more than \$67 million.

**Program Director:** Mary E. Charlson, MD

**Administrator of Educational Programs:**  
Suzan Toro, (646) 962-5060

**Duration of Training:** 2 years  
**Number of Positions:** Number varies

2012–2013 Fellows

Pamela Eliach, MD  
*St. Luke’s Hospital*

Daniel Fish, MD  
*Weill Cornell Medical Center, Department of Surgery*

Urania Rappo, MD, PharmD  
*New York University School of Medicine*

Daniel Shirley, MD  
*University of Colorado Health Sciences Center*

Stephen Williams, MD  
*Mount Sinai Medical Center*

HEMATOLOGY AND MEDICAL ONCOLOGY

This three-year fellowship attracts outstanding fellows from a large national pool. First-year fellows rotate through the multiple clinical subspecialty services at NewYork-Presbyterian/Weill Cornell. The second year is devoted to supervised laboratory and/or clinical research. During the third year, fellows consolidate their educational experiences in the diagnosis and management of hematologic/neoplastic disorders, and continue research training.

**Program Director:** Ronald Scheff, MD  
**Program Coordinator:** Sarah Ahmad, (212) 746-6702  
**Duration of Training:** 3 years  
**Number of Positions:** 18

2012–2013 Fellows

John Allan, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Nancy Chan, MD  
*Robert Wood Johnson University Hospital - University of Medicine and Dentistry of New Jersey*

John Chapin, MD  
*Albert Einstein College of Medicine - Montefiore Medical Center*

Elan Diamond, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Bishoy Faltas, MD  
*Rochester University General Hospital*

Satyajit Kosuri, MD  
*SUNY Downstate Medical Center*

Emil Kuriakose, MD  
*University of Texas Southwestern Medical Center*

Adriana Rossi, MD  
*Thomas Jefferson University Hospital*

Sarah Rutherford, MD  
*Thomas Jefferson University Hospital*

Ashish Saxena, MD, PhD  
*Albert Einstein College of Medicine - Montefiore Medical Center*

Yael Zack, MD  
*Albert Einstein College of Medicine - Montefiore Medical Center*





INFECTIOUS DISEASES

Designed to foster clinical and academic excellence, this fellowship provides individualized training through faculty guidance, clinical rotations, mentored research and didactic course work. Graduates of the program are highly qualified for the practice of infectious diseases medicine, bench and clinical research, and for leadership roles in medicine. The minimum fellowship duration is two years (ACGME-required); however, most fellows complete three years of training. Inpatient and ambulatory care are emphasized during the first year. The second and third years of fellowship emphasize clinical and basic laboratory research, both at home and abroad in Haiti, Brazil, Ghana and Tanzania. Fellows also have the opportunity to pursue master's degrees in clinical epidemiology and clinical investigation at Weill Cornell.

**Program Director:** Kristen Marks, MD  
**Program Coordinator:** Marisol Valentin, (212) 746-7602  
**Duration of Training:** 2 years  
**Number of Positions:** 6

2012-2013 Fellows

- Bisrat Abraham, MD, MPH  
*The Johns Hopkins Hospital*
- Ashita Batavia, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*
- Leah Burke, MD  
*Yale-New Haven Hospital*
- Daniel Eiras, MD  
*Mount Sinai Medical Center*
- Flonza Isa, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*
- Matt McCarthy, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

NEPHROLOGY

Fellows receive clinical training to treat patients with complicated acid-base and fluid and electrolyte problems, hypertension, acute and chronic kidney diseases, and renal failure requiring replacement therapy with dialysis and kidney transplantation. Our fellows benefit from the vast clinical and research resources of the NewYork-Presbyterian Hospital, Weill Cornell Medical College, the Rogosin Kidney Center and the Memorial Sloan-Kettering Cancer Center. Fellows undertake a minimum of six months of dedicated elective time in clinical or bench research.

**Program Director:** Phyllis August, MD  
**Program Coordinator:** Frances Gillen, (212) 746-0822  
**Duration of Training:** 2 years  
**Number of Positions:** 8

2012-2013 Fellows

- Shuang-Ying Bao  
*New York Medical College (Richmond)*

Sean Campbell, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Layla Kamal, MD  
*Staten Island University Hospital*

Dinesh Kannabhiran, MBBS  
*St. Joseph Mercy Health System, Ann Arbor, Michigan*

John Lee, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Swati Mehta, MBBS  
*SUNY Upstate Medical University*

Patricia Myers-Gurevitch, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Dhaval Patel, MD  
*Robert Wood Johnson University Hospital - University of Medicine and Dentistry of New Jersey*

Guan Xu, MD  
*University of Texas Southwestern Medical Center*



PULMONARY DISEASE AND CRITICAL CARE MEDICINE

This three-year training program offers a structured curriculum encompassing rotations in a variety of medical and surgical intensive care units, pulmonary consultation, pulmonary pathology, sleep medicine and an ambulatory pulmonary office setting. Fellows are supervised by the Division’s renowned clinical faculty and participate in clinical or bench research in a wide breath of areas pertaining to the practice of pulmonary and critical care medicine.

**Program Director:** Dana Zappetti, MD  
**Program Coordinator:** Diane Hawkins, (212) 746-2908  
**Duration of Training:** 3 years  
**Number of Positions:** 15

2012-2013 Fellows

Adviteeya N. Dixit, MBBS  
*Rochester General Hospital*

Caroline Gulati, MD  
*University of Pennsylvania Medical Center*

Mary E. Harris, MD  
*Albert Einstein College of Medicine/Montefiore Medical Center*

Justina M. Hessel, MD  
*Albert Einstein College of Medicine/Montefiore Medical Center*

David H. Kung, MD  
*Yale-New Haven Hospital*

Julio A. Lanfranco Molina, MD  
*University of Miami/Jackson Memorial Hospital*

Laura J. Libby, MD  
*St. Vincent’s Hospital & NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Lindsay Lief, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Sarah O’Bierne, MD  
*New York University*

Dorothy Ryan, MBCh, BAO  
*Mater Misericordiae Hospital*

Eugene Shostak, MD  
*Lahey Clinic Medical Center*

RHEUMATOLOGY

The Hospital for Special Surgery (HSS) rheumatology fellowship combines broad-based, in-depth clinical and research experiences to deliver superb training to medical professionals. The clinical experience focuses on outpatient rheumatology clinics and inpatient Rheumatic Disease Unit (HSS), and inpatient consultative services at NewYork-Presbyterian Hospital and Memorial Sloan-Kettering Cancer Center. In addition, fellows have access to clinics in office-based orthopedics and other musculoskeletal areas (osteoporosis, neuromuscular disease, radiology and rehabilitation). They also participate in divisional research advancing knowledge in the basic and clinical sciences.

**Program Director:** Anne R. Bass, MD  
**Program Coordinator:** Amy Broffman, (212) 774-2189  
**Duration of Training:** 3 years (years 1 and 2 are ACGME-accredited)  
**Number of Positions:** 9

2012-2013 Fellows

Elana Bernstein, MD  
*Massachusetts General Hospital*

Soumya Chakravarty, MD, PhD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Reena Khianey, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Susan Kim, MD  
*NewYork-Presbyterian Hospital (Weill Cornell Campus)*

Lindsay Lally, MD  
*New York-Presbyterian Hospital (Weill Cornell Campus)*

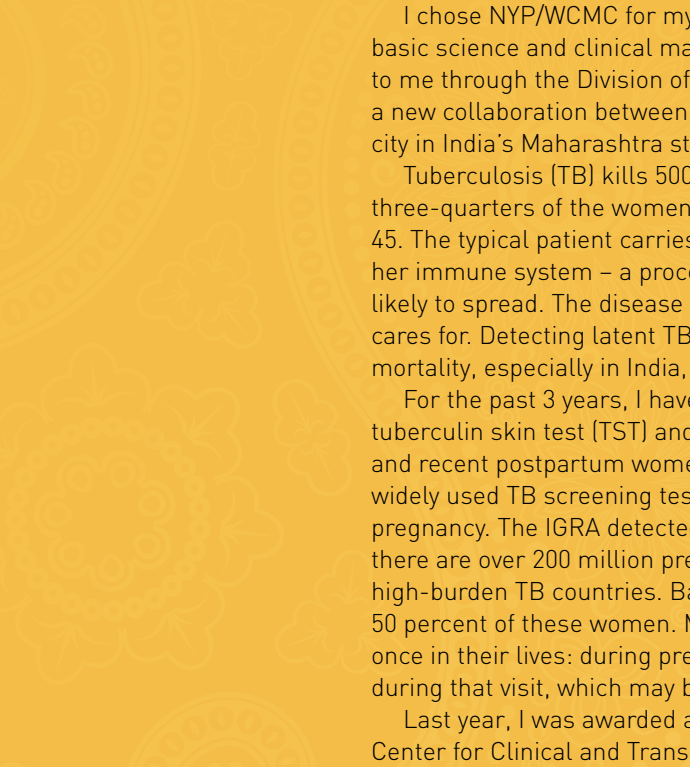
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Jyoti Mathad, MD: An International Fellowship in India Compares Two tests for Tuberculosis



Dr. Jyoti Mathad (left) in India with colleagues.

I chose NYP/WCMC for my fellowship because of its history of groundbreaking research in the basic science and clinical management of tuberculosis. With the support and expertise available to me through the Division of Infectious Diseases and the Center for Global Health, I have forged a new collaboration between WCMC and Byramjee Jeejeebhoy Medical College in Pune, a major city in India’s Maharashtra state.

Tuberculosis (TB) kills 500,000 women every year. In India, which leads the world in TB cases, three-quarters of the women suffering from the disease are of childbearing age, between 15 and 45. The typical patient carries the infection, unknowingly, for years. When pregnancy suppresses her immune system – a process that we still don’t fully understand – the infection is twice as likely to spread. The disease threatens the life of the woman, her baby, and the other children she cares for. Detecting latent TB before it reactivates is crucial to reducing both maternal and infant mortality, especially in India, which accounts for 20 percent of maternal deaths worldwide.

For the past 3 years, I have examined the performance of two different latent TB tests – the tuberculin skin test (TST) and the newer interferon gamma release assay (IGRA) – in pregnant and recent postpartum women in Pune. Our preliminary data suggests that the TST, the most widely used TB screening test in the world, does not reliably diagnose latent TB infection during pregnancy. The IGRA detected almost twice as many latent TB infections as the TST. Every year, there are over 200 million pregnancies in the world, 25 percent of which occur in one of the 22 high-burden TB countries. Based on our research, the TST may be missing the diagnosis in up to 50 percent of these women. Many young women in TB-endemic countries access health care only once in their lives: during pregnancy. It is vital for us to accurately screen and treat them for TB during that visit, which may be our only opportunity.

Last year, I was awarded a Global Health Fellowship by the Weill Cornell Medical College Center for Clinical and Translational Research (CTSC) to continue my work in India for the next

two years. The goal of this fellowship is to better understand the immunology of pregnancy as it relates to TB. We are using flow cytometry to measure additional cytokine concentrations in patient samples after *ex vivo* exposure to TB antigens. These data will describe the immune status of women at various gestational stages, which may help explain why pregnant women are at high risk for developing TB postpartum. Eventually, our work may lead to the identification of specific biomarkers in pregnancy to predict the development of active TB postpartum.





# Alumni

Margaret A. Hamburg, MD  
Commissioner of Food and Drugs  
United States of America

Internship and residency is like no other experience. I'll never forget those first days on the medical floors at what was then called New York Hospital – Cornell Medical Center, not knowing what situation would need to be managed, who was going to be presenting with what symptoms – and recognizing that I was now the one wearing the name tag that said “Dr.”. But the training was superb, and my fellow residents and I learned what we needed, not only to survive, but to do our jobs and do them well. We gained both the knowledge and the clinical skills required to practice internal medicine.

But my experiences as a resident taught me much more. They taught me to be humble, resilient, and optimistic. They taught me that I was capable of stepping up and taking responsibility – indeed that I was expected to do so. They taught me to think through problems and defend my decisions. And perhaps most important, they taught me that no matter how difficult the night – the morning always comes. These skills and this perspective have served me well in everything I have done since.

As a medical student, I had watched with dismay as a mysterious new illness emerged. By the time I was a resident in New York City in the mid 1980s, there were many patients with HIV/AIDS to take care of, but we had no effective treatments – and little seemed on the horizon. We could offer neither cure nor hope. For a young, idealistic doctor like myself, nothing could have been worse.

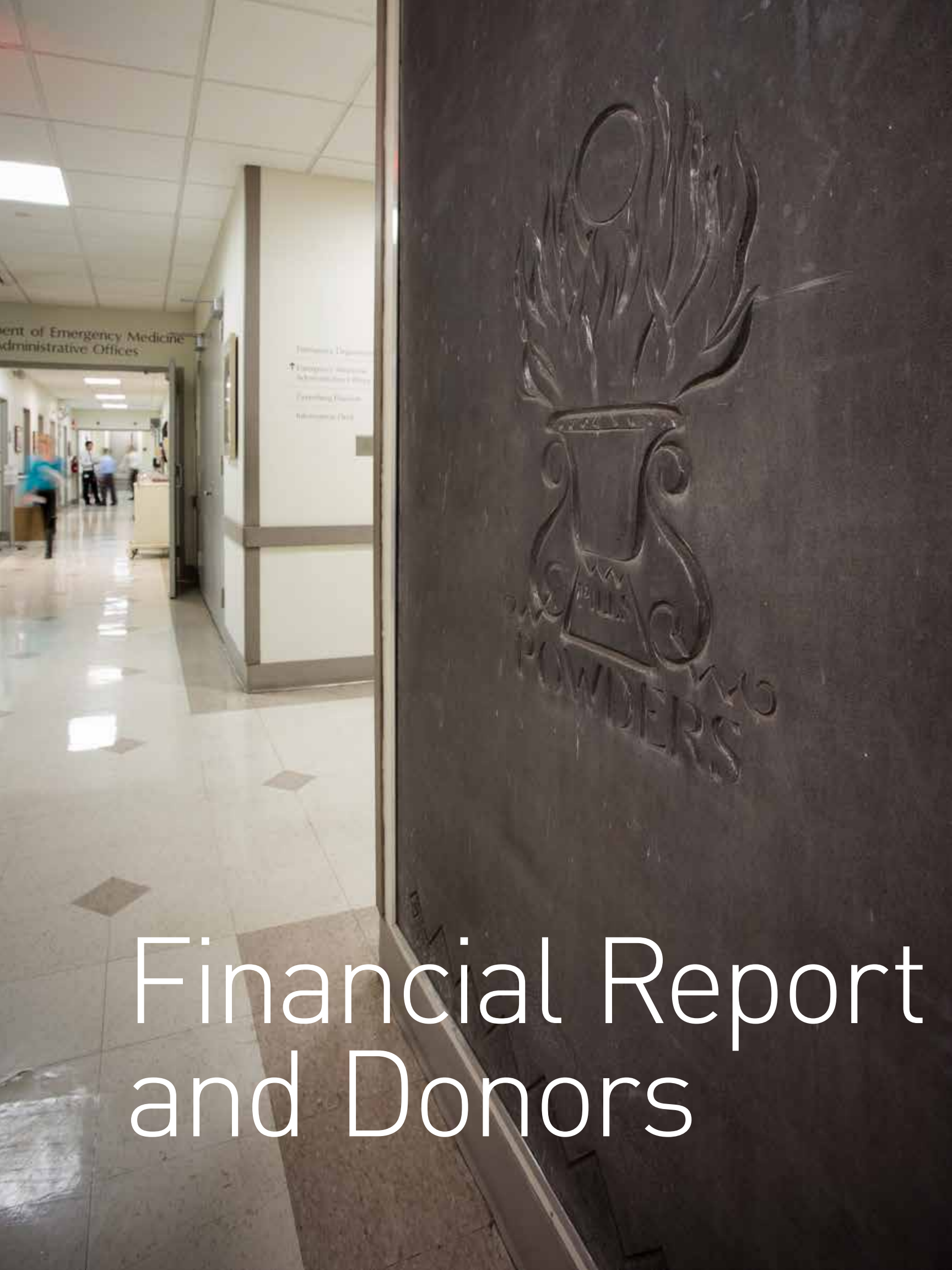
Those early days of HIV/AIDS also brought many lessons. The epidemic opened my eyes to the importance of research and global health, the need for an integrated health care system that harnesses the full continuum of medicine, science and public health, and that some of the greatest challenges in medicine exist at the interface of a broader set of social, ethical, political and legal concerns.

And it was those challenges that drew me to public health, and to a career in government and public service. To this day, I am grateful that my experience as an intern and resident at New York Hospital—Cornell Medical Center provided the knowledge and life lessons that prepared me for such a career.



Christine Laine, MD, MPH  
Editor, Annals of Internal Medicine

I clearly remember the elation I felt when I opened my Match Day envelope and saw the words, “New York Hospital-Cornell.” New York Hospital was unquestionably the place where I wanted to train and it did not disappoint. Training at New York Hospital meant learning to care for a patient population that was tremendously diverse – socioeconomically, ethnically, and clinically. There were actually times when rounds brought us from royalty in one hospital bed to a homeless person in the next. It also meant working alongside the world’s best physicians. Carol Storey-Johnson, my clinical attending, taught me that outpatient general medicine and outpatient care were every bit as challenging and professionally rewarding as inpatient subspecialty medicine. But not all of these outstanding physicians were faculty, many were my co-residents. Running across York Avenue in scrubs from hospital housing to hospital, we developed as professionals and forged friendships that have lasted decades. Work rounds, morning report, and chief’s rounds were intellectually stimulating experiences – even after sleepless nights spent caring for more than a few very sick patients. My residency class was the first group to live through resident work hours regulations. Years before these regulations spread to other locales, we struggled with their implementation at New York Hospital. We were also the first group for whom passing the internal medicine boards didn’t mean certification for life. I am proud when I hear of the impressive achievements of my New York Hospital colleagues. At New York Hospital I learned clinical medicine, developed the “art of medicine” skills necessary to truly care for a wide array of patients, and built the foundation for the rest of my professional life. Of course, there also was the beauty of training in a place where you could have any kind of food delivered to the MICU – even if it was 2 AM! I didn’t fully appreciate this benefit until I found myself in Boston for fellowship where the only 2 AM dining option was the hospital vending machine. I often think it would be really nice to have my career bring me back to New York Hospital one day.



# Financial Report and Donors



# 2012 Financial Report

The Department of Medicine continued to experience solid financial growth in fiscal year 2012 with total operating funds equaling \$220.5 million as compared with \$201.0 million in fiscal year 2011.

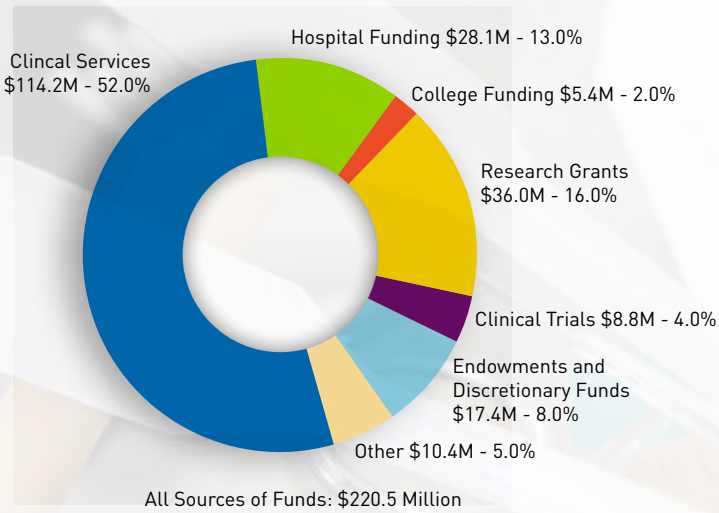
The Department’s clinical enterprise revenue increased by 14.9% over fiscal year 2011 and accounts for approximately 52% of the total sources of funds. As a result, patient care activities, as measured by annual outpatient visits and Work RVUs increased in fiscal year 2012 to 215,782 and 751,745 respectively.

The Department’s research grants activity held steady in 2012 with funding of \$35.6 million. Industry sponsored research increased by 8.6% in 2012 to \$8.8 million.

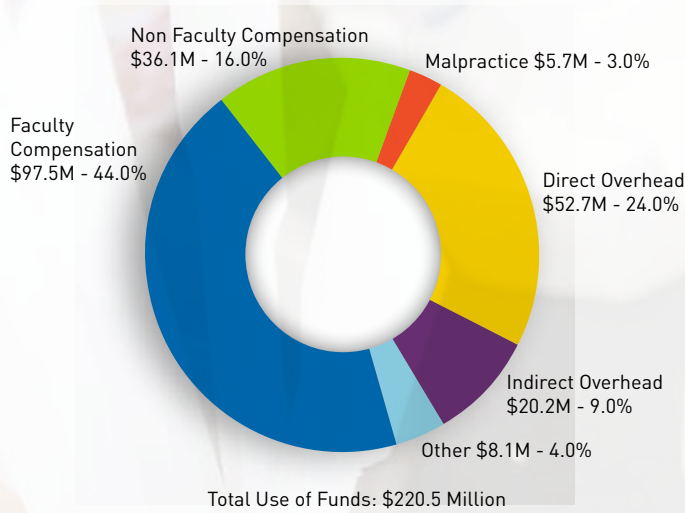
Medical education mission activities, which encompasses medical student education, the internal medicine residency program, and our 10 fellowship education programs continued to be a priority for the Department of Medicine during fiscal year 2012. The Department’s budget for these educational activities is approximately \$12.5 million annually.

The Department’s largest expense is its faculty, management, and staff costs which consume almost 60% of its total annual budget. The remaining 40% of expenses is distributed among direct expenses (24%), indirect expenses (9%), malpractice liability insurance (3%), and miscellaneous expenses (4%).

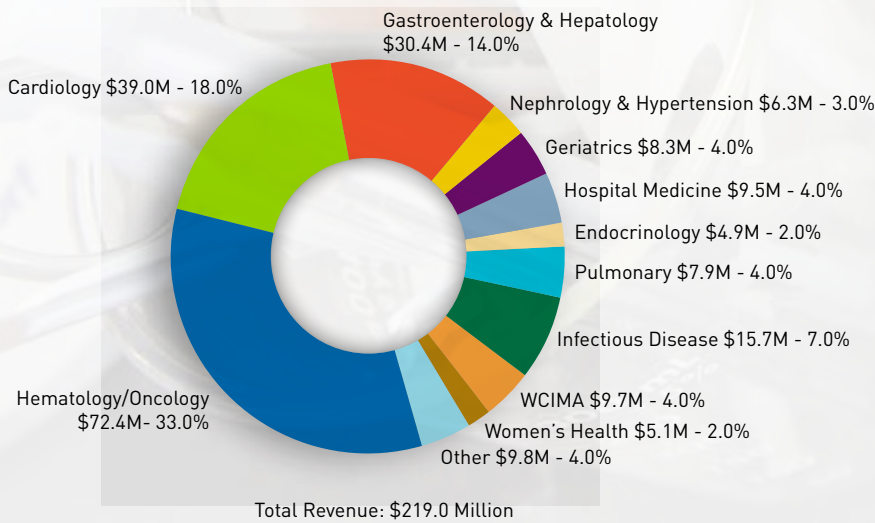
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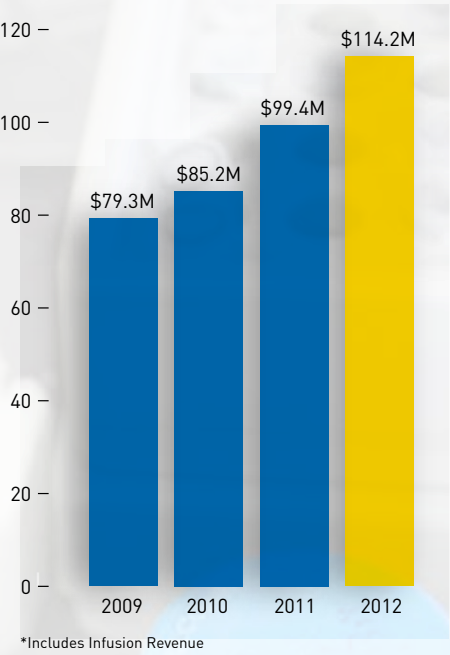
Uses of Funds (In Millions)



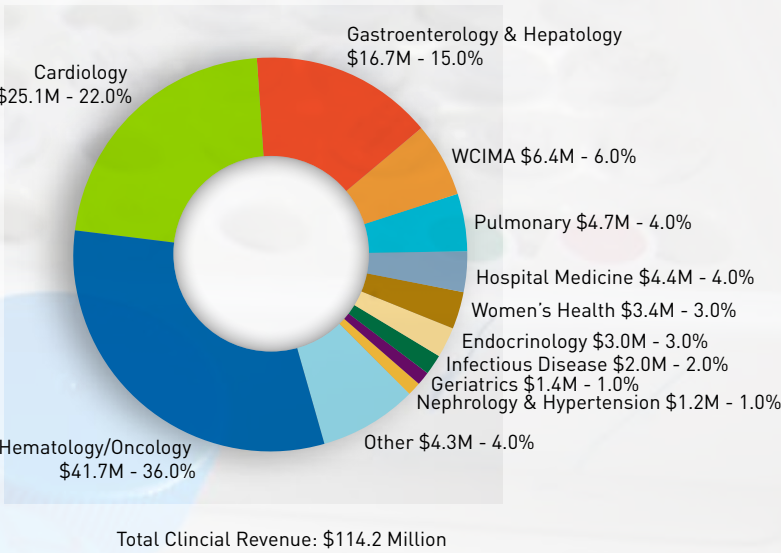
All Funds by Division Total Revenue (In Millions)



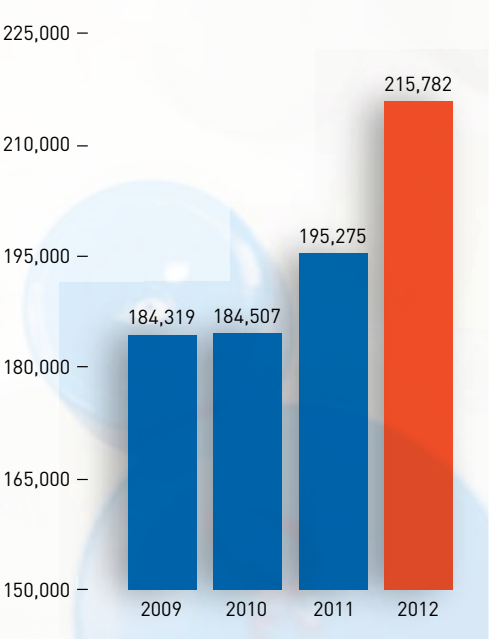
Annual Clinical Revenue Trend (In Millions)



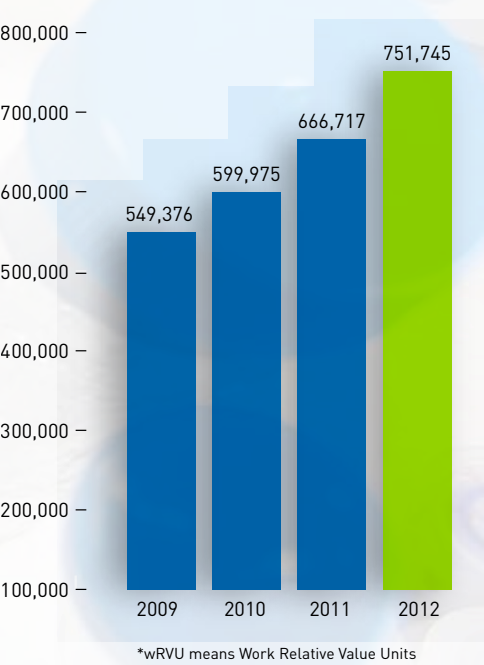
Clinical Revenue by Division (In Millions)



Annual Outpatient Visits

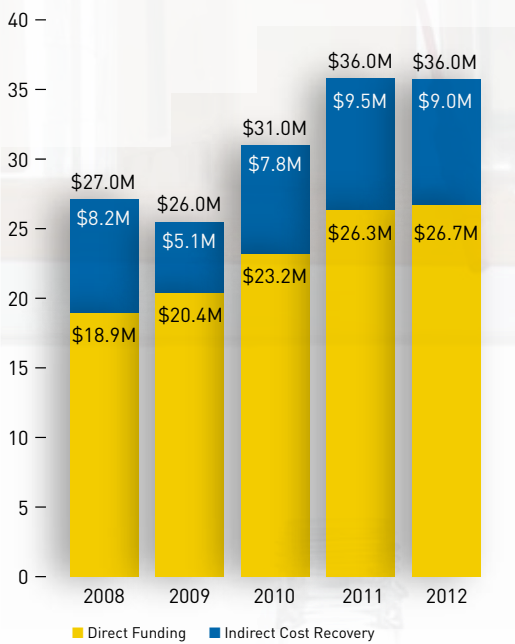


Annual wRVU Trend\*

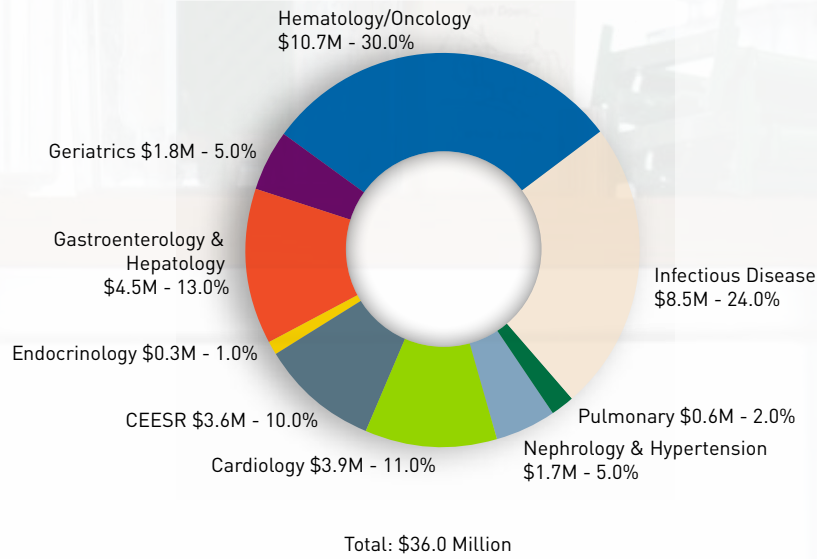




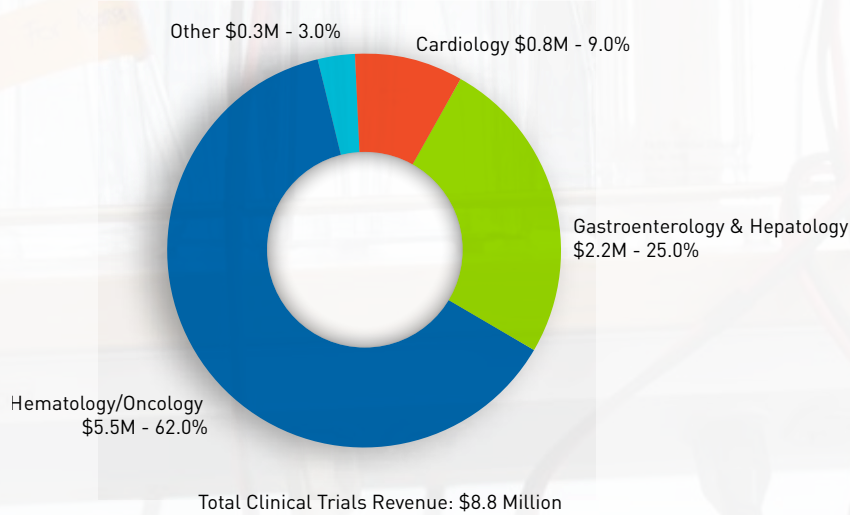
Research and Grant Expenditures Trend (In Millions)



Research and Grants (In Millions)



Clinical Trials Revenue (In Millions)



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