Mount Sinai
Department of Medicine
By the Numbers

*Mount Sinai ranks in the top 10 research programs in the U.S.
Mount Sinai
Department of Medicine
By the Numbers

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Throughout my training as a physician and a scientist, I was encouraged to focus on the numbers, to let the data guide my decisions. As chairman, I am fortunate to work with creative, dedicated faculty who generate a lot of terrific ideas that all deserve investment. In an era of limited resources, I turn again to the data to determine where to invest for the greatest return.

Looking at our current statistics, it is clear that the investments selected by our leadership team have the Department moving in the right direction.

The 632 physicians and scientists who comprise our faculty are clearly our most valued resources. It is the faculty’s daily investment of energy, passion, and knowledge that made it possible for the Department to leap from 17th in NIH funding to 10th position in just one year, a remarkable achievement. These same attributes led to a four percent increase in medical admissions and 15 percent growth in faculty practice volume, as well as creation of one of the most competitive medicine residency programs in the country.

In addition to our faculty, there is another group whose investments help make all our achievements possible... the 43 members of our Advisory Board. This remarkable group of business leaders is willing to take the risks necessary for true innovation. Examples of “Advisory Board Funds at Work” are noted throughout this Report. Beyond the specific examples highlighted, the Advisory Board funds have given faculty members the freedom to pursue ideas with great potential—a truly priceless gift.

Critically important investments have also come from Mount Sinai’s leadership. The beautiful new Center for Advanced Medicine and the creation of seven new institutes led by Department of Medicine faculty are among the most striking examples. Ultimately, however, the day-to-day institutional support is equally essential to our success.

At a time when the daily news regarding investments such as real estate and stocks is so often negative, it is my hope that as you read this Report you will find in the numbers and the text encouraging evidence that investment in science and health can still yield tremendous dividends.

Sincerely,

Paul Klotman, MD
Chair of Medicine
The Samuel Bronfman Department of Medicine leapt from number 17 to enter the rarified ranks of the top 10 research programs in the US. In 2007, the Department received $81.8 million from the National Institutes of Health (NIH).† This was the tenth highest amount received by any department of medicine at any medical school anywhere in the country.

Medicine faculty members at Mount Sinai are increasing the number of research grant applications they are submitting: submissions were up 10 percent in 2007 compared to 2006. Increasingly, they are competing successfully for ever larger percentages of the shrinking NIH budget.

Creativity, technical proficiency, resource availability, passion, and drive all contribute to the success our faculty members have encountered when competing for grants. As the NIH budget has tightened, they have worked that much harder—increasing the number of grant submissions by 10 percent in each of the last two years.

The results are obvious in looking at just the few grants highlighted here; funding has been obtained for fascinating research with the potential to extend and improve lives.

**CENTER OF EXCELLENCE**

The National Institute of Allergy and Infectious Diseases selected Mount Sinai as a Center of Excellence for Influenza Research and Surveillance, one of six nationally and the only one in New York City. The Center, which has been named the Center for Research in Influenza Pathogenesis, is under the leadership of principal investigator Adolfo García-Sastre, PhD, the Irene and Dr. Arthur M. Fishberg Professor of Medicine and Professor of Microbiology. Mount Sinai researchers and their collaborators will continue to conduct molecular studies to identify influenza virus genes associated with development of the disease, the adaptability of flu viruses in birds and mammals, and the transmission of flu viruses among different hosts.

†This number does not include contracts.
STROKE OUTCOMES
The National Institute of Neurological Disorders and Stroke is supporting collaboration between investigators in the Division of General Internal Medicine and the Department of Neurology to determine the long-term outcomes of carotid endarterectomy in the elderly. This builds on a study led by Ethan Halm, MD, Associate Professor, and published in Neurology in early 2007, demonstrating that fewer patients are now undergoing this commonly used stroke prevention surgery for inappropriate reasons.

PROTECTING POST-TRANSPLANT
Shortly after joining Mount Sinai in 2006, Peter Heeger, MD, Professor, received funding from the National Institute of Allergy and Infectious Diseases to study the cellular and molecular mechanisms involved in certain forms of allograft rejection. Dr. Heeger published a study in the Journal of Immunology in 2007 that identified a group of immune cell-produced proteins as potential targets to prevent or treat T cell mediated disease processes, including allograft rejection. He is also leading two multicenter prospective observational studies to assess the utility of noninvasive markers to identify patients at the highest risk of developing chronic graft injury. His plan is to use noninvasive markers to target specific therapies toward those at highest risk.

DISPARITIES IN IMMUNE DISORDER DIAGNOSIS
Charlotte Cunningham-Rundles, MD, Professor, is primary investigator, and Sergio Lira, MD, PhD, Professor, is co-primary investigator on a new program project grant from the National Institute of Allergy and Infectious Diseases to study primary immune deficiency in minority populations. It is estimated that 80 or so immune disorders affect between one in 500 and one in 500,000 in the general population. In published studies, there have been few minority patients documented with primary immunodeficiency diseases. The investigators hypothesize that primary immunodeficiency diseases exist; however, they are not usually recognized in minority and economically disadvantaged individuals. The investigators will test this hypothesis by making special attempts to locate and evaluate patients in a large urban hospital with multicultural patient populations.

UNDERSTANDING AND TREATING MPD
Ronald Hoffman, MD, Albert A. and Vera G. List Professor of Medicine, joined the Division of Hematology and Medical Oncology to build a comprehensive program in myeloproliferative disorders. Dr. Hoffman brought to Mount Sinai a program project grant from the National Cancer Institute to support five basic science projects and a number of clinical trials that will be conducted at centers across the US and in Italy. Anna Rita Migliaccio, PhD, Professor, and Mingjiang Xu, MD, PhD, Assistant Professor, were recruited in 2007 to further expand the MPD program.

HELPING HEROES
Within hours after the planes hit the World Trade Center on September 11, 2001, faculty, trainees, and staff from Mount Sinai began caring for the wounded. Remarkably, seven years after that devastating day, this work continues. Mary Ann McLaughlin, MD, Assistant Professor, and Mario Garcia, MD, Professor, recently received funding from the National Institute for Occupational Safety and Health to work with colleagues in the Department of Community and Preventive Medicine to screen law enforcement personnel for cardiovascular problems related to their work at Ground Zero.
When Dr. Klotman was appointed Chairman in 2002, the Department ranked 25th in NIH funding. Today it is in the top 10.
The FREEDOM (Future Revascularization Evaluation in Patients with Diabetes Mellitus: Optimal Management of Multivessel Disease) trial recruited over 1000 patients in 2007, making it the largest database of diabetic subjects with multivessel disease to date. Valentin Fuster, MD, PhD, Richard Gorlin, MD/Heart Research Foundation Professor and Chief of Cardiology is the principal investigator for this $25 million trial, funded by the National Heart, Lung and Blood Institute. The first goal of FREEDOM is to compare the effectiveness of percutaneous coronary intervention (PCI; also known as angioplasty) with drug-eluting stents versus the current standard of care, coronary artery bypass graft (CABG) surgery in patients with diabetes and multivessel coronary disease.

**1000 FOR FREEDOM**

The FREEDOM (Future Revascularization Evaluation in Patients with Diabetes Mellitus: Optimal Management of Multivessel Disease) trial recruited over 1000 patients in 2007, making it the largest database of diabetic subjects with multivessel disease to date. Valentin Fuster, MD, PhD, Richard Gorlin, MD/Heart Research Foundation Professor and Chief of Cardiology is the principal investigator for this $25 million trial, funded by the National Heart, Lung and Blood Institute. The first goal of FREEDOM is to compare the effectiveness of percutaneous coronary intervention (PCI; also known as angioplasty) with drug-eluting stents versus the current standard of care, coronary artery bypass graft (CABG) surgery in patients with diabetes and multivessel coronary disease.

**NIH Funding to the Department of Medicine ($ in millions)**

Department faculty increased the number of grant applications they submit to NIH by 10 percent over each of the last two years. The results are obvious; more funding for research with the potential to extend and improve lives.

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*This number does not include contracts.

**K to R**

One of the most challenging steps along the path to becoming an independent investigator is also one of the last; the transition from NIH-mentored awards (K awards) to independent awards (R awards). Four members of the Samuel Bronfman Department of Medicine faculty achieved this feat in 2007.

“One of my primary goals as Chairman of the Department has been to develop our own educational pipeline to recruit exceptional trainees who become outstanding faculty.”

Dr. Paul Klotman

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Michelle Gong, MD, Assistant Professor, was awarded a grant from the National Institute of Diabetes and Digestive and Kidney Diseases to examine the variability of institutional Review Board practices for surrogate consent for research in incapacitated adults, and the extent of disagreement between patients and surrogates about participation in critical care research studies.

Michael Ross, MD, Assistant Professor, was awarded a grant from the National Institute of Diabetes and Digestive and Kidney Diseases to determine the mechanisms by which the protein FAT10 contributes to the pathogenesis of HIV-associated nephropathy.

Juan Wisnivesky, MD, MPH, Assistant Professor, received a grant from the National Cancer Institute to use population-based data to evaluate the effectiveness of several treatments for early-stage lung cancer in elderly patients.
“All the measures are important, but what truly testifies to the strength of the research conducted by our faculty,” says Erwin Böttinger, MD, Vice Chair of Research for the Department of Medicine, “is how often their work is chosen by their peers to be published in the most prestigious journals in their fields.”

In 2007, the faculty in the Samuel Bronfman Department of Medicine published over 1100 papers in peer-reviewed journals. The small sampling provided here, and in the section of this Report dedicated to each division, provides a glimpse into the depth and breadth of the research in the laboratories and clinics of the Department.

**RELIEVING PAIN**

Individuals suffering from chronic pain who have found little or no relief were given reason to hope from a study led by Andreas Beutler, MD, Assistant Professor, and published in the *Proceedings of the National Academy of Sciences*. “Chronic pain patients often do not experience satisfactory pain relief from available treatments due to poor efficacy or intolerable side effects,” said Dr. Beutler. He and his Mount Sinai colleagues developed a novel gene therapy approach to alleviate chronic pain. They designed a viral vector to carry an endorphin gene into primary sensory neurons in order to activate opiate receptors selectively, in a rat model. Results showed that the rats remained symptom-free for an extended period of time.
Mount Sinai Journal of Medicine Reborn

Department of Medicine faculty members not only publish frequently in peer-reviewed journals, but they also serve in a wide array of editorial positions on many of these publications, including Blood, Nature Clinical Practice Cardiovascular Medicine, Hepatology, Viral Immunology, Insulin, Vascular Medicine, Journal of General Internal Medicine, and the Journal of the American Society of Nephrology.

In 2007, a number of members of the Department of Medicine were given the opportunity to serve on the editorial board of a journal near and dear to the hearts of everyone at Mount Sinai: The Mount Sinai Journal of Medicine, which began publishing in 1934 as a general medical journal. Over the years, the Journal chronicled the work of many of the giants of Mount Sinai’s illustrious past as well as the work of distinguished visitors.

The April 2007 issue inaugurated a new era for the Journal, which has since been renamed the Mount Sinai Journal of Medicine, which began publishing in 1934 as a general medical journal. Over the years, the Journal chronicled the work of many of the giants of Mount Sinai’s illustrious past as well as the work of distinguished visitors.

A clinical trial of sorafenib was halted prematurely when it was found that it helped patients with advanced liver cancer live 44 percent longer compared to patients who had not received the anti-cancer drug. “This is the first time that we’ve had an effective systemic treatment for liver cancer,” said Josep Llovet, MD. Visiting Associate Professor and Director of Research in Liver Cancer at the Mount Sinai School of Medicine, Professor of Research at the Institut d’Investigacions Biomediques August Pi i Sunyer Hospital Clinic in Barcelona, Spain, and lead author of the study, which was published in New England Journal of Medicine. Liver cancer is the third leading cause of cancer deaths globally and often results in death within a year of diagnosis. Sorafenib is the first effective oral systemic therapy for liver cancer patients ever approved by the FDA. Over 600 patients worldwide participated in the trial, with Mount Sinai as the single largest recruitment site.

44% LONGER LIVES FOR LIVER CANCER PATIENTS

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NONINVASIVE COLON CANCER SCREENING

Despite the fact that early detection can often mean long-term survival, colorectal cancer remains the second leading cause of cancer-related death in the country. According to the National Cancer Institute, more than half of those who should be getting colonoscopies do not. A study led by Steven Itzkowitz, MD, Dr. Burrill B. Crohn Professor of Medicine, and published in Gastroenterology, may change these grim statistics. He and his colleagues demonstrated that a new, noninvasive test accurately detected 86% of colon cancers. The test, manufactured by Exact Science, uses the DNA in stool samples to detect cancer. “For patients who are unwilling or unable to undergo colonoscopy, stool DNA testing offers a valuable and patient-friendly screening option,” said Dr. Itzkowitz.

TIMELY STEM CELL RELEASE

Paul Frenette, MD, Irene and Dr. Arthur M. Fishberg Professor of Medicine, and colleagues discovered that the release of blood stem cells from bone marrow is regulated by the brain through the cyclical human biological clock. This study, published in Nature, describes mechanisms at the molecular level in which signals from the biological clock in the brain are sent to bone marrow stem cell niches. Using a mouse model, the investigators demonstrated the rhythmic release and peak of stem cells in circulation during the mouse’s resting period, and that changes in the light cycle—an experimental “jet lag”—altered the release patterns. This is the first time a study has demonstrated that the brain regulates a stem cell niche. “The rhythmic oscillations of circulating stem cells suggest that harvest could be optimized by simply timing the collection of stem cells to the peak of release,” says Dr. Frenette.

44% LONGER LIVES FOR LIVER CANCER PATIENTS

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“Faculty research is frequently published in the most highly respected peer-reviewed journals.”

Dr. Erwin Böttinger
Kidney podocytes and the specialized structures that connect them form the final barrier that prevents loss of protein into the urine. In a study published in the Proceedings of the National Academy of Sciences, Peter Mundel, MD, Professor, and colleagues demonstrated that a protein called dendrin accumulates in the podocyte nuclease when there is injury to kidney structures because of disease. The investigators demonstrated a role for dendrin in signaling the podocyte to self-destruct. These results may lead to development of a mechanism to prevent the death of podocytes under pathological conditions.

**HIV IN THE KIDNEY**

When the HIV virus enters and infects the kidneys, causing HIV-associated nephropathy, podocytes proliferate and dedifferentiate — i.e. there are too many of them and they no longer function properly. These cells then begin to adhere to one another, forming clumps. Paul Klotman, MD, Murray M. Rosenberg Professor of Medicine and Chair, and colleagues have demonstrated previously that the adhesion molecule sidekick-1 is produced in large amounts in podocytes infected with HIV-1. In a recent paper published in *The FASEB Journal*, they demonstrated that sidekick-1 is an important mediator of the cell clumping that is characteristic of HIV-associated nephropathy.

**GLOWING SUCCESS**

Working with a new, fluorescent form of the HIV virus, Benjamin Chen, MD, PhD, Assistant Professor, measured how efficiently viruses pass from infected to uninfected T cells. The study, published in *The Journal of Virology*, demonstrated that direct cell contact enhances cellular uptake of the virus over ten thousand fold. This occurs through specialized structures called virological synapses. Additionally, he found that virological synapses may allow HIV to evade antibody based immunity to HIV.

**Dr. Kirsten Sadler-Edepli and her colleagues were able to identify a single gene in zebrafish that governs both embryonic liver development and regeneration of the liver after partial hepatectomy.**

**GENETIC CONTROL OF LIVER REGENERATION**

Zebrafish embryos are large, robust, and transparent and develop rapidly, externally to the mother, characteristics that make them excellent models for research. Kirsten Sadler-Edepli, PhD, Assistant Professor, and colleagues have used them to make significant contributions to the understanding of liver development, regeneration, and disease. In a study recently published in the *Proceedings of the National Academy of Sciences*, the investigators identified a single gene that governs both embryonic liver development and regeneration of the liver after partial hepatectomy. By developing a method to perform partial hepatectomy on these small fish, they were also able to demonstrate that zebrafish livers can regenerate.

**NEW TREATMENT FOR AA AMYLOIDOsis**

Amyloid A (AA) amyloidosis is a frequently fatal disorder that may arise as a complication of chronic inflammatory disorders. Few treatment options are available. Hence, the publication last year in the *New England Journal of Medicine* of research findings that demonstrated effectiveness of a new treatment was welcome news for doctors and patients. Mount Sinai was one of the recruitment sites for this multicenter study. According to Peter Gorevic, MD, Lillian and Henry M. Stratton, Professor of Medicine and Chief of Rheumatology, who was one of the authors and led the trial at Mount Sinai, “we were able to demonstrate the efficacy of eprodisate, specifically with regard to the rate of deterioration of renal disease.”
According to Dr. Charney, “these institutes are designed to facilitate breakthrough science. Each institute brings together scientists from multiple departments with diverse but complementary areas of expertise and will offer basic and clinical researchers the intellectual and physical space they need to do their very best work.”

“The strategic planning process led by Dr. Charney focused on selecting areas in which Mount Sinai already is, or has the potential to become, a world-leader,” said Dr. Klotman. “That over 50 percent of these areas fall within the purview of the Department of Medicine is a tribute to our historic leadership in many fields and to the outstanding faculty in the Department today.”

**CANCER INSTITUTE**

The goals of the Cancer Institute include improving diagnosis, prevention, and treatment of cancer through basic research as well as biobehavioral and epidemiology programs.

Mount Sinai has a long history of breakthrough cancer research, including description of the first successful treatment of bladder tumors; establishing lobectomy as a curative therapy for many lung cancers; demonstrating the effects of asbestos exposure in the formation of neoplasms; demonstrating the effectiveness of combination chemotherapy; proving that acute childhood leukemia is curable; and identifying KLF6 as a tumor suppressor gene defective in many forms of cancer. Under the leadership of Steven J. Burakoff, MD, Professor, who was recruited in 2007 (see page 75), the Cancer Institute will continue to build upon this record of achievement.
Mount Sinai's many accomplishments in cardiology include development of the first successful standardized cardiac stress test, discovery of the relationship between complex angiographic coronary lesion morphology and acute coronary events, invention of a noninvasive technique to view the human coronary arterial wall, and identification of proteins responsible for thrombosis and for inflammation in the blood vessel wall that contribute to restenosis following coronary angioplasty.

The Zena and Michael A. Wiener Cardiovascular Institute brings together leading clinicians and researchers to explore the underlying mechanisms of heart disease and pursue new preventive approaches, diagnostic procedures, and treatments under the leadership of Valentin Fuster, MD, PhD, Chief of Cardiology, Director of Mount Sinai Heart and the Marie-Josée and Henry R. Kravis Center for Cardiovascular Health, and the Richard Gorlin, MD/Heart and vascular disease and pursue new preventive approaches, diagnostic procedures, and treatments under the leadership of Valentin Fuster, MD, PhD, Chief of Cardiology, Director of Mount Sinai Heart and the Marie-Josée and Henry R. Kravis Center for Cardiovascular Health, and the Richard Gorlin, MD/Heart Research Foundation Professor.

EMERGING PATHOGENS INSTITUTE

In 1901, Nathan Brill, MD, described a form of endemic typhus that was later named Brill’s disease. Over a century later, Mount Sinai researchers continue to define the cutting-edge of research into infectious diseases. The reconstruction of the influenza virus that caused the 1918 pandemic, development of new approaches to vaccine production, and other initiatives have made Mount Sinai scientists leaders in international efforts to prepare for a possible influenza pandemic. This leadership role was codified in 2007 when the National Institute of Allergy and Infectious Diseases named Mount Sinai a Center of Excellence for Influenza Research and Surveillance.

Mount Sinai has also been a leader in HIV research since the early days of the AIDS epidemic. Mount Sinai investigators have provided major insights into the virus that causes AIDS and have helped develop innovative prevention and treatment strategies. The opening in 2007 of a Biosafety Laboratory Level 3+ at Mount Sinai, directed by Simon Daefler, MD, PhD, Assistant Professor, provides a safe environment in which to study influenza, HIV, and other emerging pathogens.

The Emerging Pathogens Institute, co-directed by Mary Klotman, MD, Chief of the Division of Infectious Diseases and Irene and Dr. Arthur M. Fishberg Professor of Medicine, and Adolfo García-Sastre, PhD, Professor of Microbiology and Immunology, brings together scientists from numerous fields to develop novel approaches to the prevention and treatment of infectious disease.

Advisory Board Funds at Work

Advisory Board member David Elliman provided a generous gift to support the Emerging Pathogens Institute, helping to purchase equipment needed to study viruses.

IMMUNOLOGY INSTITUTE

Because virtually every disease involves the immune system, specialists from a wide range of areas are essential to understanding and treating immune-related issues. Therefore, it is not just Mount Sinai’s historic achievements in immunology—which started in the 1920s when Gregory Schwartzman, MD, first defined immune system hypersensitivity—but also over a century and a half of accomplishments in cancer, infectious diseases, organ transplantation, and other areas, that provide the basis for the Immunology Institute.

Lloyd Mayer, MD, Chief of the Divisions of Clinical Immunology and Gastroenterology and the Dr. David and Dorothy Marksamer Professor of Medicine, and Sergio Lira, MD, PhD, Professor, are co-directors of the Immunology Institute. Initial goals for research include developing better immunosuppressive medications for use in organ transplantation, as well as finding alternatives to stem cell transplantation.

INSTITUTE FOR METABOLIC DISORDERS

Some of the most momentous discoveries related to diabetes have occurred at Mount Sinai. The first test for glucose in urine and the first oral medication for diabetes were both developed at Mount Sinai. Likewise, measurement of insulin and other hormones in the blood was made possible by invention of the radioimmunoassay by Mount Sinai researchers—a discovery that earned the Nobel Prize in 1977.

Today, Mount Sinai physicians and researchers witness the impact of the obesity epidemic every time they walk out the doors of the Medical Center, which borders a community with one of the highest diabetes rates in the country. Derek LeRoith, MD, PhD, Chief of the Division of Endocrinology, Diabetes, and Bone Diseases and the Lillian and Henry M. Stratton Professor of Molecular Medicine, is Director of the new Institute for Metabolic Disorders. Under his leadership, researchers will explore the relationship between diabetes and obesity, with particular attention to the role of genetics in the disease.

Advisory Board Funds at Work

The Immunology Institute and the Institute for Metabolic Disorders have received funds contributed by members of the DOM Advisory Board.
DOM faculty members lead seven of the 12 research institutes that form the cornerstones of the School of Medicine’s strategic plan.
INSTITUTE FOR MOLECULAR IMAGING

Molecular imaging, a new field that couples molecular biology with technology for in vivo imaging, is playing an increasingly important role in diagnosis and management of disease. State-of-the-art imaging technology—and the individuals with the skills and knowledge to utilize this technology—are critical to the advancement of research in many areas. Under the leadership of Zahi Fayad, PhD, Professor of Radiology and Medicine, the Institute for Molecular Imaging will focus on further developing the science of imaging, including the invention of new contrast agents and improved visualization technology.

CHARLES R. BRONFMAN INSTITUTE FOR PERSONALIZED MEDICINE

Evidence-based medicine has been the dominant approach to patient care for over a century and has led to major improvements in quality of care. However, with the completion of the Human Genome Project came the promise of personalized medicine. While evidence-based medicine takes a “one size fits all” approach, examining research to determine how the majority reacts to a given drug, personalized medicine will allow physicians to customize prevention and treatment strategies to each patient’s personal genome and history. Under the leadership of Erwin Böttinger, MD, Irene and Dr. Arthur M. Fishberg Professor of Medicine and Vice Chair of Research for the Department of Medicine, 2007 was a momentous year for the Charles R. Bronfman Institute for Personalized Medicine. Early in 2007, the Institute received a gift of $12.5 million from the Andrea and Charles Bronfman Philanthropies. Faculty and staff recruitment, as well as building necessary infrastructure, were major foci for the year.

Biobank

In September, 2007, the Charles R. Bronfman Institute for Personalized Medicine launched its most ambitious project: the construction of a bank of over 100,000 DNA samples linked to clinical information. The Biobank, as it is being called, will serve as a resource for investigators to connect genotype and phenotype and begin to tailor treatment and prevention strategies to specific needs. Recruitment for Biobank began in the Internal Medicine Associates. An incredible 85 percent of patients approached have consented to sharing their blood and medical histories. New recruitment sites and additional recruiters are being added through 2008. Researchers are already beginning to develop queries using Biobank samples to further science in several areas.
With the opening of the Center for Advanced Medicine (CAM), faculty, residents, fellows, staff and, most importantly, clinic patients now have a beautiful new home at Mount Sinai. Open spaces, natural lighting, and artwork capturing the splendor of nearby Central Park greet visitors as they enter the new building.

At the ribbon cutting for CAM, Kenneth L. Davis, MD, President and CEO of The Mount Sinai Medical Center and Gustave L. Levy Distinguished Professor, noted, “Mount Sinai sits in the most unusual place in the country, between the richest and poorest communities in America, and the fault line runs right through this campus. In fact, it runs right through this building. And it’s our challenge to do something about the healthcare disparities that are all around us. So, this state-of-the-art building is a reflection and continuation of our commitment to reduce those disparities and prevent chronic diseases.”

UNITED SPACE, UNITED LEADERSHIP

Bringing the clinics together under one roof was the first step in a larger plan for the Department of Medicine—to enhance patient care while improving the educational experience for fellows across subspecialties. Dr. Klotman created the position of Director of Ambulatory Care and Ambulatory Training in 2007 to spearhead efforts toward this goal; David Thomas, MD, Associate Professor, was selected to fill this role. His first major challenge was overseeing the design of the new CAM building to ensure it meets the requirements of both patient care and education.

“Before moving into CAM, clinics were scattered across Mount Sinai’s campus in various facilities, many of which had not had significant updates to their infrastructures in decades,” said Dr. Thomas. “Patients needed to navigate a complex maze to get from practice to practice, and there was little to no opportunity for faculty and trainees from different specialties to interact. In planning CAM, we were determined to change this.”

While bringing all of the clinics together, Dr. Thomas also began building a unified practice. Clinic and clerkship directors now meet regularly, identifying opportunities to bridge gaps and increase interaction among subspecialties. Standards for both patient care and education are being developed that will apply to all the medicine clinics in CAM.
“This state-of-the-art building is a reflection and continuation of our commitment to reduce healthcare disparities and prevent chronic diseases.”

Dr. Kenneth L. Davis
Walking the halls of CAM one sees exam rooms, offices, dedicated research space, desks for staff, clinical research recruitment rooms, and other specialized spaces. What one does not see are large areas dedicated to stockpiled medical charts: implementation of Epic Care Ambulatory Electronic Medical Record (Epic) has turned these into artifacts of medical history, putting floor space to better use. While still in their relative infancy compared to the written chart, which was introduced by Hippocrates in the fifth century BC, there is already abundant evidence in the medical literature that electronic medical records enhance quality of care. All of the Department of Medicine outpatient practices now use electronic medical records.

One of the chief advantages of seeking medical care at a major academic medical center is having access to cutting-edge advances through clinical trials. For investigators, the availability of patients from diverse ethnic backgrounds with varied medical conditions and histories is essential to conducting these trials.

CAM facilitates clinical trial enrollment by providing assigned space for recruitment in every clinical area. Clinical trial recruiters use this dedicated space to meet with patients when they come for clinic appointments. The dedicated recruitment area also provides a private place for recruiters to speak confidentially with patients participating in clinical trials.

On Saturday mornings, when most physicians’ offices and clinic doors are shut tight for the weekend, the doors of CAM remain open—not for business as usual, but for a rather unusual undertaking. The East Harlem Health Outreach Partnership (EHHOP), a free clinic founded and run by Mount Sinai medical students, welcomes all patients regardless of insurance status or ability to pay. A few students struggled for years to establish this free clinic. Then, one lucky day, news of their efforts reached the ears of Yasmin Meah, MD, Assistant Professor. She stepped in and helped the students overcome the legal and bureaucratic issues standing in their way. One year later, EHHOP opened its doors to East Harlem’s largely uninsured and immigrant population.

Today, in addition to providing care to nearly 300 residents in one of the country’s poorest neighborhoods, the program has inspired numerous students to make community service part of their professional lives. In part as recognition for her efforts on behalf of EHHOP and recognizing her many other contributions to students, patients, and the East Harlem community, Dr. Meah received the 2007 Humanism in Medicine Award from the American Association of Medical Colleges. She is the youngest person ever to receive this honor.
The Samuel Bronfman Department of Medicine Faculty Practice Associates has been on a substantial growth trajectory for the past couple of years. According to Stephen Sigworth, MD, Medical Director of the Department of Medicine Faculty Practices, two forces have driven this growth: operational enhancements and recruitment.

**15% Growth in FPA Volume**

*Enhancing Operations for Better Care*

On the operations side, back-end and front-end activities have been completely restructured to share resources among the numerous subspecialty practices, increasing efficiency and reducing expenses. Many of these operational changes also enhance the patient’s experience. For example, advanced insurance verification and appointment confirmation calls mean patients have the information they need before they arrive for an appointment, increasing the likelihood that all referrals and other documentation will be in order, thereby avoiding complications for both patients and the practice staff.

Most recently, Epic Care Ambulatory Electronic Medical Record (Epic) has been instituted in all the practices. Making the transition from scribbling notes on a chart to logging every detail in a computer is a major change for all providers, and the period of adjustment for some will likely continue for a while. However, the benefits are clear. Once physicians become comfortable using the new system, it is expected to lead to improvements in efficiency that will enhance the experience of care providers and patients. Additionally, and most importantly, many studies have demonstrated marked improvements in the quality of care that results from implementation of electronic medical record keeping.

“One significant benefit of going electronic has already materialized,” said Dr. Sigworth. “Before Epic, checking a patient’s chart entailed a phone call by the physician to a staff member, asking to have the chart pulled and delivered to the doctor’s office—with the significant time delay these steps entailed. Today, the chart is available with a simple mouse click.”
Transitioning from handwritten medical records to an electronic system is a massive undertaking and a tremendous adjustment for everyone. But, the benefits are already being seen in the Department’s outpatient practices.
Recruiting and retaining superb clinicians

“Even with the best operational infrastructure, a practice can only be as good as the physicians involved,” said Dr. Sigworth. “Mount Sinai has long been known for outstanding clinicians, a reputation that greatly facilitates recruitment.”

Richard Warner, MD, joined the full-time faculty of the Division of Gastroenterology recently as a Professor after decades of practicing in the community as a member of the voluntary faculty. Renowned for his expertise in carcinoid and other neuroendocrine tumors, Dr. Warner has pioneered many of the treatments for these conditions.

Mount Sinai physicians care for the largest population of patients with inflammatory bowel disease in the country.

Sharmila Anandassabapathy, MD, is the new Director of Endoscopy. She is developing an academic endoscopy program, building upon investments Mount Sinai has made in this area in the last few years, including the opening of a state-of-the-art endoscopy suite in 2006.

George Raptis, MD, MBA, Associate Professor, returned to Mount Sinai, where he had spent the majority of his career, after serving at Columbia University College of Physicians and Surgeons as Associate Chief of Clinical Affairs in Hematology-Oncology. He is applying his vast expertise in medical oncology to develop and grow the newly created Eva and Glenn Dubin Breast Care Center.

Jill Kalman, MD, Associate Professor, is Director the Cardiomyopathy Program, a multidisciplinary program with the mission to improve the quality of life for patients with heart failure. Dr. Kalman, a graduate of Mount Sinai’s internal medicine residency and cardiology fellowship programs, is well known for her clinical expertise and her development of novel therapies and technologies for all stages of heart failure.

Anne Maitland, MD, PhD, Assistant Professor, and Rosalia Ayuso, MD, Instructor, both graduates of Mount Sinai’s clinical immunology fellowship program, are expanding the Allergy and Immunology practice. Uma Ayyala, MD, former Chief Resident in the Mount Sinai Internal Medicine Residency Program recently joined the Pulmonary and Critical Care Practice. “My goal for all of our educational programs is that they attract the best trainees who will then become the best candidates to join our faculty,” said Dr. Klotman. “It is always with particular relish that I welcome our graduates to the faculty.”

Mount Sinai conducts the largest sarcoidosis program in the world and is one of only ten recognized centers of excellence for this disease. Adam Morgenthau, MD, Instructor, was recruited to further enhance the care provided to this patient population.

Elizabeth Uchitelle, MD, was recently appointed to aid in expansion of the faculty practice primary care services, particularly in the area of women’s health.

While physician providers lead many of the new initiatives, ancillary care providers are often equally essential for ensuring the highest quality care. The patients of Michael Mullen, MD, Associate Professor, are benefiting from the addition to the staff of nurse practitioner Angela Goldstein. Both the outpatient and home dialysis programs grew significantly in 2007 as the home dialysis program became the largest in New York City. This growth was due largely to the recruitment of social worker Yvett Barunstein and the creation of a new position, held by Fabiola Boutin, to educate patients and trainees about the benefits of peritoneal dialysis.
“Hospitalization used to be necessary for management of many diseases that can now be treated successfully at home, thanks to new medications and technologies,” said Navneet Kathuria, MD, Vice Chair of Quality for the Department of Medicine. “However, the patients who do need to be hospitalized today are sicker and in need of much more intensive services than those of even the recent past.”

Increased disease severity combined with a rising census—medical admissions increased by four percent in 2007 compared to 2006—requires heightened vigilance to ensure that all patients receive the highest quality of care. Through research and education, Department of Medicine faculty members are setting new standards for such care every day.

**INPATIENT SPECIALISTS**

As the management of inpatients becomes more complex, the need for physicians dedicated exclusively to the care of these patients during their hospital stays is climbing as well. These hospitalists are in great demand across the country. According to the Society of Hospital Medicine, “There are more new jobs available for hospitalists than in any aspect of internal medicine.”

Over the past few years, the Hospitalist Program at Mount Sinai has grown substantially. The focus of this growth has recently shifted from general hospitalists to individuals with subspecialty training. In the last year, for example, hospitalists specializing in emergency medicine and HIV infection have been added to the team. Plans are now in development to recruit additional hospitalists to focus on hematology/oncology, gastroenterology, and other specialties.
Inpatient Medical Admissions
Enhanced quality of care, increased efficiency, and recruitment and retention of outstanding faculty have enabled significant growth in medical admissions over the last few years.
ADVANCING EXCELLENCE THROUGH RESEARCH

To promote research designed to improve quality of care, the Department of Medicine awards grants to residents and fellows for research in this area through the Advancing Excellence in Medicine (ACEM) grant program.

ACEM Sample Grant

Keith Sigel, MD, former Medicine Chief Resident and current fellow in the Internal Medicine Program, received a grant to study the practice of informal (curbside) case consultations at Mount Sinai. Curbside consultations are frequent occurrences at many hospitals, but there is little written in the literature about them or their impact on quality of care. Dr. Sigel anonymously polled caregivers via an online survey about their use of curbside consultations in day-to-day patient care.

Advisory Board Funds at Work

The ACEM grant program is supported by funds contributed by members of the DOM Advisory Board.

HIGH QUALITY SLEEP

The Mount Sinai Center for Sleep Medicine recently received accreditation from the American Academy of Sleep Medicine (AASM). AASM accreditation is the gold standard for providers of sleep-related medical care. According to the AASM website, “As the national accrediting body for sleep disorders centers and laboratories for sleep-related breathing disorders, the AASM is the national accrediting body for sleep disorders centers and laboratories for sleep-related breathing disorders, the AASM identifies sleep medicine providers who offer the highest quality of medical care for people with sleep problems... The Standards for Accreditation ensure that sleep medicine providers display and maintain proficiency in areas such as testing procedures and policies, patient safety and follow-up, and physician and staff training.”

UHC/RAND STUDY

The Mount Sinai Hospital is one of the select participants in the University HealthSystem Consortium (UHC)/Rand 24/7 Project. This multicenter study is designed to identify best practices for patient flow, communications, and staffing workloads.

As part of this initiative, the use of text paging and online scheduling systems was piloted on two inpatient medicine units in 2007. The system allows nurses on each unit to send short text messages to physicians, reducing the need for nurses to wait by the phone for a return call. At the same time, it provides physicians with information they need to determine the matter’s urgency. The paging system was so well received that it has now been adopted on many other units.

Other quality-enhancing measures introduced as a result of the UHC/Rand study include multidisciplinary rounds of the UHC/Rand study include multidisciplinary rounds and use of a US Navy-developed communication system to standardize verbal communication on inpatient units.

DIALYSIS > TRANSPLANT > IMPROVED QUALITY OF LIFE

According to the End-Stage Renal Disease (ESRD) network, an outpatient hemodialysis program the size of the one at The Mount Sinai Hospital would be expected to have five to six patients receiving kidney transplants annually. Instead, in 2007, seventeen ESRD patients on hemodialysis received transplantations. This success was facilitated by the addition to the staff of a transplant liaison who works with social workers and doctors to help educate patients about transplantation and helps expedite their joining the organ recipient waiting list.

In addition to hemodialysis patients, patients from across the tri-state area and around the world are coming increasingly to Mount Sinai for kidney transplants. From 96 patients in 2003, the Kidney Transplant Program grew to 182 transplants in 2007.

Quality indicators for these procedures place Mount Sinai among the best in the country. The most recent data from the Scientific Registry of Transplant Recipients demonstrated that one year patient and graft survival at Mount Sinai were 99% and 96% for living-donor recipients, and 96% and 92% for deceased-donor recipients.

Educating for Better Care

The Mount Sinai Hospital rests on the border of East Harlem, a community with one of the highest rates of diabetes in the country. On average, patients with diabetes undergo longer hospital stays than those without the illness. This generality applies when patients are hospitalized for a wide range of diagnoses, which may or may not be related directly to their diabetes.

This past year, a team of diabetes experts led by Tracy Breen, MD, Assistant Professor, worked with physicians and nurses to increase their knowledge regarding management of diabetes for inpatients. As a result, there has been a significant decline in the ratio of observed versus expected length of stay for patients with diabetes as a comorbidity.

Advisory Board Funds at Work

Outreach efforts designed to help patients living with diabetes, or who are at risk for the disease, to live healthier and more productive lives, have benefited from the generous support of DOM Advisory Board member Peter Rothschild.
“The practice of medicine has changed dramatically over the last few decades, but changes on the horizon may prove even more momentous,” said Mark Babyatsky, MD, the Richard and Mortimer Bader Professor of Medicine, Vice Chair for Education in the Department, and Director of the Residency Program.

Contemporary translational research requires extensive clinician involvement to apply basic research findings in clinical settings. Meanwhile, the age of personalized medicine is rapidly approaching and with it the need for physicians with expertise in genomics. Moreover, the speed at which people, information, and pathogens can move around the planet makes all medicine international and all health policy global."

These are just some of the driving forces that led to dramatic changes within the Internal Medicine Residency Program at Mount Sinai and the creation of three tracks for specialization. In addition to the more traditional categorical and preliminary tracks, residents may now choose paths that provide extensive opportunities to develop the skills and knowledge needed for careers that focus on research, global health, and clinical genomics.

*3 Specialized Training Tracks & 18 Interns with Advanced Degrees*
RESEARCH

All Mount Sinai medicine residents conduct research, results of which they present at the Department’s annual Housestaff Research Day and often at national meetings. However, for those individuals committed to building careers in basic or translational research, the rigors of a resident’s schedule can mean years during which they lack the time and financial support to focus sufficient energies on research. The Research Track was developed specifically for these individuals.

The six- or seven-year program merges the traditional clinical training of the internist with the research training of the basic scientist. Internship, residency, and fellowship training in Internal Medicine and its subspecialties are combined and integrated with postdoctoral fellowship laboratory training. Faculty guidance is offered immediately upon entry into the program, while stipends are provided for research training.

All residents accepted into the research residency program become lifelong fellows of the Solomon Berson Society, a forum created especially for physician-scientist trainees in the Department of Medicine. This society brings together current and former residents, MD/PhD students, and others for quarterly conferences and readings of specific interest to its membership. Four individuals in the intern class of 2008 are enrolled in the research track. All four have already earned both their MD and PhD degrees and possess extensive research experience.

Dmitry Zamarin, MD, PhD

When Dmitry Zamarin first arrived in the New York City from the former USSR he was told that, as a new immigrant, he had little hope of a future in science and should resign himself to life in a service profession such as delivering pizza—a role he did, in fact, hold for a short time. But with his mother—a physician who took her boards and completed residency to continue in her profession when she came to America—as a role model, together with his passion for science, Dmitry defied the odds.

He chose Mount Sinai as the place to pursue his MD and PhD degrees because, he says, “Mount Sinai offered the best of both worlds, with a strong research and clinical program.” During medical school, Dmitry began working with Peter Palese, PhD, Professor and Chairman of Microbiology at Mount Sinai, using viruses to fight cancer. By the time he graduated, he had already submitted and published several papers in peer-reviewed journals and was awarded the 2006 Doctoral Dissertation Award.

When the time came to apply for residency, Mount Sinai once again offered the best of both worlds: the Research Track in the General Internal Medicine Residency Program. “It is the only program in New York that encouraged research during the first year. On the clinical side, thanks to the diverse patient populations at Mount Sinai and Elmhurst Hospital Center, I have diagnosed and treated conditions I never would have encountered elsewhere. Equally important, as I looked at other programs, it was clear that the Mount Sinai medicine residents are the happiest and enjoy the most support from their department.”

Goutham Narla, MD, PhD

The first resident to pursue this track was Goutham Narla, a graduate of Mount Sinai’s own MD/PhD program. As a graduate student, he played a major role in the discovery that KLF6 functions as a tumor suppressor gene. Subsequent to his initial work, he and his collaborators at Mount Sinai, as well as researchers around the world, have learned that KLF6 is implicated in many forms of cancer.

During his residency, Dr. Narla was able to continue his work on KLF6 while broadening his knowledge of genetics. After only two years of residency, he is already beginning to build an independent research program. In 2008, he received a Howard Hughes Medical Institute Physician-Scientist Early Career Award. Applicants for this prestigious and highly competitive award are evaluated for ability and promise for a research career; the quality and quantity of his or her formal research training; the commitment of the applicant’s research institution; the quality of the research environment; the applicant’s commitment to pursuing a biomedical research career; and the quality of the proposed research plan.

Dr. Narla plans to use his support from HHMI as he makes the transition from resident to faculty member. He also intends to further his studies of KLF6 by studying the gene in normal and cancerous human prostate tissue and by creating a mouse model to test whether deleting the normal gene and/or adding the mutant gene increases cancer risk and tumor spread. Eventually, he hopes to test therapies targeted against the mutant protein.

CLINICAL GENOMICS

Mount Sinai’s Internal Medicine/Genetics track is one of only six in the nation and the first and only such program to match two residents for one entering class. The departments of Medicine and Genetics and Genomic Sciences collaborate to offer an innovative American Board of Internal Medicine-approved five-year residency program, integrating the needs of traditional internal medicine training with comprehensive training in both monogenic and complex genetic disorders.

Mount Sinai is also taking the lead nationally by incorporating genetics into the curriculum for all medicine residents. Dr. Babayatsky is literally writing the book on this and, with grant support from Celera Genomics, he is developing a curriculum that will be used nationally to integrate clinical genomics into internal medicine.
The Internship Class of 2008: Facts and Figures

**Tracks:**
- Categorical: 33
- Preliminary: 12
- Research: 4
- Internal Medicine/Genomics: 2
- Global Health: 4

**Diversity:**
- 28 Women
- 23 Men

**Advanced Degrees:**
- MD / PhD: 6
- MPH: 6
- MS: 2
- MBA: 1
- MA: 2
- MEE: 1

**Medical Schools:**
- 23
GLOBAL HEALTH

Residents on the Global Health track have demonstrated commitment to improving the health of underserved communities. Specialized curricula, as well as clinical and research opportunities, help them develop the skills needed to incorporate global health knowledge into their careers.

Building on the success of this track, Mount Sinai increased global health content in the combined Medicine/Pediatrics Residency Program in 2008. Residents in this unique program receive full training in both medicine and pediatrics and earn a Masters of Public Health with a concentration in global health. In its first year, all four slots were filled in the Match by outstanding candidates.

Both educational programs are components of Mount Sinai’s growing Global Health Center, a multi-departmental initiative dedicated to improving health care for the underserved by training future leaders in global health. The Center’s part-time and affiliate faculty are renowned specialists in multiple fields, and include:

Holly Atkinson, MD, former President of Physicians for Human Rights
Richard Brennan, MBBS, MPH, Health Ward Director of the International Rescue Committee
Luke Hunter, PhD, Executive Director of Panthera
William B. Karesh, DVM, Vice President for Global Health Programs of the Wildlife Conservation Society
Alan Rabinowitz, PhD, President and CEO of Panthera
Jeffry Sacks, PhD, Director of the United Nations Millennium Development Project and Special Adviser to the United Nations Secretary General.

These international leaders in public health, conservation, and advocacy serve as both teachers and role models for what is possible with knowledge, hard work, and passion. These are important lessons, certainly, not only for residents committed to careers in global health, but to all future physicians. With their help and the help of other full time faculty, advocacy and global health are being worked into the curriculum for all residents in Internal Medicine at Mount Sinai.

Advisory Board Funds at Work

A generous gift from Mark Goodman, President of J. Josephson, Inc. and a member of the Department of Medicine Advisory Board is helping to support the Department’s global health initiatives.

Nahid Bhadelia, MD, MA

Nahid Bhadelia was born in Dhouraj, India. By the time she reached her teen years, she had already lived in four countries, eventually settling in Brookline, MA. She received her Masters in Law and Diplomacy from the Fletcher School of Law and Diplomacy and her MD from Tufts University School of Medicine. Her thesis focuses on the correlation between HIV infection rates and political stability; countries with higher than 20 percent prevalence of HIV experience increased food, health, and political instability.

As a participant in the Global Health Track, she conducted a survey project examining the knowledge of women in rural NorthEast Nicaragua regarding HIV/STDs and condom use, as well as their health care-seeking practices. She found that even though 50 percent of women reported knowing that condoms are protective against STDs, only eight percent of sexually active women used them.

According to Dr. Bhadelia, “To be involved in public health one must have a global health perspective.” Dr. Bhadelia is serving as one of four chief residents in Internal Medicine for the 2008/09 academic year.
3 Members of IOM
4 Members of NAS
16 Members of AAP
24 Members of ASCI
35 Best Doctors

PEER SELECTION
Faculty members associated with the Department are widely recognized by their peers as leaders in their respective fields, as demonstrated by their election to membership in prestigious organizations.

**National Academy of Sciences**
Barry Coller, MD
Clinical Professor
Kurt Hirschhorn, MD
Professor
Peter Palese, PhD
Professor
Rosalyn Yalow, PhD
Distinguished Service Professor and Nobel Laureate

**Institute of Medicine**
Barry Coller, MD
Clinical Professor
Valentin Fuster, MD, PhD
Professor
Kurt Hirschhorn, MD
Professor

**Association of American Physicians**
Steven Burakoff, MD
Professor
Barry Coller, MD
Clinical Professor
Terry Davies, MD
Professor
Scott Friedman, MD
Professor
Valentin Fuster, MD, PhD
Professor
Kurt Hirschhorn, MD
Professor

**American Society for Clinical Investigation**
Steven Atlas, MD
Associate Professor
George Atweh, MD
Professor
Margaret Baron, MD, PhD
Professor
Erwin Böttigter, MD
Professor
Barry Coller, MD
Clinical Professor
Terry Davies, MD
Professor
Paul Frienette, MD
Associate Professor

*632 Full-time & Voluntary Faculty Members*
American Society for Clinical Investigation, cont.
J. Scott Friedman, MD Professor
Valentin Fuster, MD, PhD Professor
Janice Gabriole, MD Professor
Kurt Hirschhorn, MD Professor
Ronald Hoffman, MD Professor
James Holland, MD Professor
Henry Janowitz, MD Professor
Paul Klotman, MD Professor Emeritus
Lester Salans, MD Professor
Elliot Rayfield, MD Professor
Lloyd Mayer, MD Professor
Jerome Waye, MD Clinical Professor
Mark Korsten, MD Professor
Steven Itzkowitz, MD Professor
Douglas Dieterich, MD Associate Clinical Professor
Lawrence Cohen, MD Associate Clinical Professor
Charlotte Cunningham-Rundles, MD, PhD, Assistant Clinical Professor
Ellen Buchbinder, MD Clinical Instructor
Maria Padilla, MD Associate Professor
Jonathan Winston, MD Associate Professor
Frances Wallach, MD Associate Professor
Jeffrey Gumprecht, MD Assistant Clinical Professor
Glenn Hammer, MD Assistant Clinical Professor
Jeffrey Gumprecht, MD Assistant Clinical Professor
Janice Gabriole, MD Associate Clinical Professor
Valentina Monti, MD Associate Clinical Professor
Gastroenterology
Lawrence Cohen, MD Associate Clinical Professor
Douglas Dieterich, MD Professor
Steven Itzkowitz, MD Professor
Mark Korsten, MD Professor
Blair Lewis, MD Clinical Professor
Lloyd Mayer, MD Professor
Jerome Wave, MD Clinical Professor
General Medicine
George Fisher, MD Adjunct Clinical Instructor
Albert Levy, MD Assistant Clinical Professor
Gregory Solomon, MD Adjunct Assistant Professor
Cardiology
Sanford Friedman, MD Associate Clinical Professor
Valentin Fuster, MD, PhD Professor
J. Anthony Gomes, MD Professor
Jonathan Halperin, MD Professor
Arthur Kennish, MD, PhD Assistant Clinical Professor
Jose Meller, MD Clinical Professor
Michael Poon, MD Associate Clinical Professor
Clinical Immunology
Ellen Buchbinder, MD Assistant Clinical Professor
Charlotte Cunningham-Bundes, MD, PhD, Professor
Clinical Science
Seymour Cohen, MD Adjunct Assistant Professor
Seymour Cohen, MD Adjunct Assistant Professor
Gerard Murphy, MD Chief of Section
Linda DeCherrie, MD Assistant Professor and Associate Director and Director of the Program, and Theresa Soriano, MD, Assistant Professor and Director of the Visiting Doctors Program, accepted the award on behalf of all the faculty and staff.

Best Doctors
New York magazine’s “Best Doctors ‘07” issue listed 35 Mount Sinai DOM faculty members.
Endocrinology
Terry Davies, MD Professor
Cardiology
Sanford Friedman, MD Associate Clinical Professor
Valentin Fuster, MD, PhD Professor
J. Anthony Gomes, MD Professor
Jonathan Halperin, MD Professor
Arthur Kennish, MD, PhD Assistant Clinical Professor
Jose Meller, MD Clinical Professor
Michael Poon, MD Associate Clinical Professor
Clinical Immunology
Ellen Buchbinder, MD Assistant Clinical Professor
Charlotte Cunningham-Bundes, MD, PhD, Professor
Clinical Science
Seymour Cohen, MD Adjunct Assistant Professor
Seymour Cohen, MD Adjunct Assistant Professor
Gerard Murphy, MD Chief of Section
Linda DeCherrie, MD Assistant Professor and Associate Director and Director of the Program, and Theresa Soriano, MD, Assistant Professor and Director of the Visiting Doctors Program, accepted the award on behalf of all the faculty and staff.

General Medicine
George Fisher, MD Adjunct Clinical Instructor
Albert Levy, MD Assistant Clinical Professor
Gregory Solomon, MD Adjunct Assistant Professor
Hematology-Oncology
Seymour Cohen, MD Associate Clinical Professor
Valentin Fuster, MD, PhD Professor
Steven Grunstein, MD Associate Clinical Professor
Kevin Troy, MD Associate Clinical Professor
Infectious Diseases
Glenn Hammer, MD Assistant Clinical Professor
Jeffrey Gumprecht, MD Assistant Clinical Professor
Michael Mullen, MD Associate Professor
Frances Wallach, MD Associate Professor
Liver Diseases
Douglas Dieterich, MD Professor
Nephrology
Barbara Murphy, MD Professor
Jonathan Winston, MD Associate Professor
Pulmonary
Maria Padilla, MD Professor
Rheumatology
Peter Gorevic, MD Professor
Mark Horowitz, MD Clinical Instructor
Liesle Kerr, MD Associate Professor

Awards and Honors
Every year, Department of Medicine faculty members receive numerous awards and honors from professional societies, foundations, universities, and other organizations. This sampling of awards from the past year captures some of the many accolades conferred upon the faculty.

Goutham Narla, MD, PhD, a graduate of Mount Sinai’s MD/PhD Program and the first resident in the newly created joint residency track in Internal Medicine and Medical Genomics, received a Howard Hughes Medical Institute Physician-Scientist Early Career Award.

The Society for General Internal Medicine (SGIM) honored several Mount Sinai physicians at its 2008 annual meeting. David Thomas, MD, Associate Professor of Medicine and Director of Ambulatory Care and Ambulatory Training in the Department, received the Mid-Atlantic Regional Award for Excellence as a Clinician-Educator in General Internal Medicine. The Visiting Doctors Program won the SGIM Clinical Practice Innovation Award. Theresa Soriano, MD, Assistant Professor and Director of the Program, and Linda DeCherrie, MD, Assistant Professor and Associate Director, received the award on behalf of all the faculty and staff.

Julie Magarian Blander, PhD, Assistant Professor, was selected as a 2007 Searle Scholar.

Yasmin Meah, MD, Assistant Professor, received the 2007 Humanism in Medicine Award from the American Association of Medical Colleges. She is the youngest person ever to receive this honor.

Barbara Murphy, MD, Irene and Dr. Arthur M. Fishberg Professor of Medicine and Chief of Nephrology, is President of the American Society of Transplantation. She also received the Lester Hoening Award from the Kidney and Urology Foundation of America.

Mario García, MD, Professor, was voted one of the top five cardiovascular imaging specialists in the United States by Diagnostic Imaging.

Valentin Fuster, MD, PhD, the Richard Gorlin, MD/Heart Research Foundation Professor and Chief of the Division of Cardiology, received the Polzer Prize from the European Academy of Sciences and Arts. He was also recently awarded the 2008 Ellis Island Medal of Honor from the National Ethnic Coalition of Organizations Foundation, Inc.

Charlotte Cunningham-Rundles, MD, PhD, Professor, received the Boyle Achievement Award from the Immune Deficiency Foundation.
New York magazine’s “Best Doctors ’07” issue listed thirty-five Mount Sinai DOM faculty members.
Kirsten Sadler-Edepli, PhD. Assistant Professor, received the March of Dimes O’Connor Research Fellowship, an American Gastroenterology Association Research Scholar Award, a Basil O’Connor March of Dimes Fellowship, and the Department of Defense Breast Cancer Research Award.

Joseph Odin, MD, PhD. Assistant Professor, received the American Liver Foundation Primary Biliary Cirrhosis Research Award and the American Gastroenterology Association Pilot Research Award.

Jorge Allina, MD. Assistant Professor, received an American Liver Foundation Research Scholar Award.

Paul Klotman, MD, Professor and Chair of the Department of Medicine, is Chair of the Research Committee of the Association of Professors of Medicine. This organization of departments of internal medicine represented by chairs and appointed leaders leads academic internal medicine, specifically in the education, research, and patient care arenas.

Scott Friedman, MD, Irene and Dr. Arthur M. Fishberg Professor of Medicine and Chief of Liver Diseases, is President-Elect of the American Association for the Study of Liver Diseases.

Douglas Dieterich, MD. Professor, Dr. Friedman, and Suzanne Rose, MD. Professor, advanced to fellowship in the American Society of Gastroenterology. Dr. Rose is also the Chair-Elect for the Group on Educational Affairs of the Association of American Medical Colleges.

Benjamin Chen, MD, PhD. Assistant Professor, received an Irma T. Hirschl and Monique Well-Caulier Career Scientist Award from the Irma T. Hirsch and Monique Well-Caulier Charitable Trusts. He was also named a Burroughs Wellcome Fund Investigator in Pathogenesis of Infectious Disease.

Josep Llovet, MD. Visiting Associate Professor, received the Excellence in Research Award from the College of Physicians of Barcelona.

Advisory Board Funds at Work
In addition to the many outside awards showered upon our faculty, Department of Medicine faculty members and trainees are often recognized with special honors within Mount Sinai and the Department. Advisory Board member Thomas Kaplan provided generous funding to create a new set of honors, the Kaplan Awards for Excellence in Medicine. Awarded annually, the Kaplan Awards recognize those faculty members and trainees who excel in training the next generation, provide high quality clinical care, and/or conduct innovative research.

2008 Kaplan Award Recipients
- Reza Akhtar, MD
  - Chief Resident
- Uma Ayyala, MD
  - Chief Resident
- Sonali Bose, MD
  - Chief Resident
- Ari Ciment, MD
  - Fellow
- Bruce Darrow, MD
  - Assistant Professor
- Adam Hernandez, MD
  - Chief Resident
- Elizabeth Kiefer, MD
  - Resident
- Katherine Krauskopf, MD
  - Intern

This sampling of awards from the past year captures some of the many accolades conferred upon the faculty.
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<th>Division of Cardiology</th>
<th>Division of Clinical Immunology</th>
<th>Division of Endocrinology, Diabetes &amp; Bone Disease</th>
<th>Division of Gastroenterology</th>
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<th>Division of General Internal Medicine</th>
<th>Division of Hematology &amp; Medical Oncology</th>
<th>Division of Infectious Diseases</th>
<th>Division of Pulmonary, Critical Care &amp; Sleep Medicine</th>
<th>Division of Rheumatology</th>
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If the last century was the century of physics, then this is the age of Cardiology.

Division of

Marie-Josée and Henry R. Kravis Center for Cardiovascular Health.

Sinai Heart, the Zena and Michael Wiener Cardiovascular Institute, and the Richard Gorlin, MD/Heart Research Foundation Professor, Director of Mount Sinai Heart, the Zena and Michael Wiener Cardiovascular Institute, and the Marie-Josée and Henry R. Kravis Center for Cardiovascular Health.

As one example, he notes that, “we are the only center in the tristate area that performs robotic catheter ablations for cardiac arrhythmias.” These procedures, which provide greater accuracy and safety than nonrobotic approaches, are performed under the directorship of Davendra Mehta, MD, Associate Professor, who notes that the volume of these procedures has risen by 15 percent over each of the past three years.

In the technology-rich field of interventional cardiology, Dr. Fuster points to the superb reputation of the Cardiac Catheterization Laboratory under the direction of Samin Sharma, MD, Zena and Michael A. Wiener Professor. For several years running, Dr. Sharma has been ranked the number one interventional cardiologist in New York State, with the highest number of cases performed and least number of complications.

“Cutting-edge information technology is also becoming increasingly essential to patient care,” notes Dr. Fuster. Diagnosis and treatment are being expedited through two Division-based initiatives. Consolidation of all cardiac-related imagery into one central system allows physicians to evaluate patients’ cardiac history over time rapidly and efficiently. In Echocardiography, the switch to electronic results reporting begun in 2005 and expanded in 2007 is providing faster results reporting and allowing remote access so doctors can query echo results anytime.

As the selection of achievements listed here indicates, the Division has experienced an exceedingly productive year.

- Of a number of national and international honors conferred upon Dr. Fuster in the past year, his election to membership in the European Academy of Arts and Sciences, and receipt of the Polzer Prize from that august body, stand out as among the most prestigious.

- Leadership positions in national professional societies, such as the American Heart Association and the American Board of Vascular Medicine, were conferred upon Division faculty members in 2007, including Eric Adler, MD, Assistant Professor; Jonathan Halperin, MD, Professor; Jeffrey Olin, MD, Professor; and Barry Stimmel, MD, Professor.

- Division faculty, residents, fellows and nursing staff participated in over 30 local community health fairs and screenings, providing cardiac risk assessment to the local community.

- Patient enrollment was completed for two important clinical trials. The Precise SKS study, led by Dr. Sharma and Annapoorna Kini, MD, Associate Professor, is a pilot study comparing the treatment of coronary artery bifurcation lesions with simultaneous kissing stents (SKS) versus standard one-stent technique. The second—BABY-2D, led by Michael Farkouh, MD, Associate Professor and Donald Smith, MD, Associate Professor—is a large study of 2,500 subjects designed to answer critical questions related to treating coronary artery disease in patients with type 2 diabetes.

- With the establishment of the Mount Sinai CVI Clinical Trials Unit, the Division has assumed coordinating roles in numerous international trials, including the 18,000-patient TARGET trial evaluating the efficacy of various anti-inflammatory medications.

- Mario Garcia, MD, Professor, was voted one of the Top Five Cardiovascular Imaging Specialists in the United States by Diagnostic Imaging North America.

- The first specialty heart failure/transplant fellowship was established for fellows completing their general cardiology fellowship.

GENE THERAPIES, STEM CELLS, AND REGENERATED HEARTS Cardiovascular Medicine on the Edge of Tomorrow

The Cardiovascular Research Center (CVRC), under the direction of Bogor Hajjar, MD, Arthur and Janet C. Ross Professor, has grown tremendously over the past year.

Dr. Hajjar’s own dedication to experimental gene therapies in heart failure received substantial support from numerous sources this past year. The first supports use of gene transfer techniques to alter calcium regulation in heart cells. The second takes a unique genetic approach to assessing the efficacy of injecting bone marrow-derived stem cells into hearts after myocardial infarction to prevent cardiac remodeling.

In addition to his own work, Dr. Hajjar has recruited a stellar team working in diverse areas of cardiac research:

- Dr. Adler, a graduate of the Division’s fellowship program, is collaborating closely with Dr. Hajjar on designing novel stem cell treatments for heart failure.

- Hina Chaudhry, MD, Associate Professor, is directing the newly established Cardiovascular Regenerative Medicine program. She is a leader in this rapidly developing field, which focuses on growing new cardiac and vascular tissue through gene and stem cell therapies.

- Jill Kalman, MD, Associate Professor, and director of the newly created Cardiomyopathy Program of the Heart Failure and Transplant Program, is an expert in research and treatment of congestive heart failure. On the clinical side, she has established the multidisciplinary Mount Sinai Heart Failure Program to improve quality of life for patients with heart failure.

- Assistant Professors Fadi Akar, MD, Yoshiaki Kawase, MD, Djamal Laboeche, MD, Jieju Chan, MD, and Thomas Weber, PhD, are each conducting independent research using leading-edge approaches to the study of heart failure that include optical mapping of arrhythmias and the use of experimental gene therapies to treat angiotensin-mediated hypertensions.

- Mary Ann McLaughlin, MD, Assistant Professor, and Dr. Garcia received funding from the National Institute for Occupational Safety and Health to work with colleagues in the Department of Community and Preventive Medicine to screen law enforcement personnel for cardiovascular problems related to their work at Ground Zero.
TARGETING ASTHMA OUTREACH AND MANAGEMENT FOR UNDERSERVED POPULATIONS

Much of the Division’s work in asthma research is fueled by increasing prevalence of the disease—especially in urban communities like those surrounding Mount Sinai.

Dr. Maitland directs the Division’s Asthma Surveillance Project, a community outreach program targeting inner city children and adults. Screening sessions are held in church halls, community centers, street fairs and other neighborhood locations.

To increase the number of screenings annually, Dr. Maitland is training volunteers to use spirometers. “Our hope is, with more screenings, we can make substantive inroads into the disease and improve residents’ quality of life,” she says.

While most asthma outreach is geared to children and young adults, Dr. Busse is focused on an often ignored population—the elderly. Last year, Dr. Busse published an article in the American Journal of Medicine noting that asthma often remains undiagnosed in older people. Her article addressed the complexities of identifying and managing asthma and other allergic respiratory diseases in this population.

In promising basic research, Dr. Busse is studying lung inflammation, mucus cell changes and airway hyperresponsiveness in mouse models of allergic asthma, comparing younger versus older mice. Her findings thus far demonstrate that pulmonary inflammation and changes in the airway occurred more frequently in older mice while, surprisingly, hyperresponsiveness occurred less. Her work is revealing that new approaches may be needed to manage asthma in elderly patients.

Following are highlights of the many outstanding accomplishments taking place within the Jeffrey Modell Division of Clinical Immunology over the past year.

• Dr. Lira was elected to membership in the Association of American Physicians.
• Dr. Lira joins Dr. Mayer in this esteemed organization along with 13 other Mount Sinai Department of Medicine colleagues.
• Dr. Mayer was elected Chairman of the National Scientific Advisory Committee of the Crohn’s and Colitis Foundation of America, whose mission is to fund cutting-edge research at major medical institutions.
• Anne Maitland, MD, PhD, Assistant Professor, and Rosalia Ayuso, MD, Instructor, both graduates of the Division’s Clinical Immunology Fellowship Program, joined the faculty.
• Dr. Cunningham-Rundles was elected to the board of directors of the American Academy of Allergy, Asthma and Immunology, the largest professional medical organization in the United States devoted to allergy and immunology. She also chairs the organization’s Task Force for Clinical Immunology Fellowships.
• Dr. Mayer is the principal investigator in a clinical trial to determine whether inhibition of interleukin-17 is effective in the treatment of Crohn’s disease. He is also the principal investigator in clinical trials of abatacept (Ocrecia™), an injectible antibody, for treating ulcerative colitis and Crohn’s disease.
• Drs. Cunningham-Rundles, Mayer, Lira, and Patricia Cortes, PhD, Assistant Professor, were recently awarded a project grant program grant from the National Institute of Allergy and Infectious Diseases for a collaborative effort to study defects in B cell function in primary immune deficiency.
• Paula J. Busse, MD, Assistant Professor, is leading a clinical trial investigating a new therapy for angioinuductic edema, a hereditary form of the syndrome that causes swelling within the deep layers of the skin.
• Dr. Cunningham-Rundles and coworkers reported in the Journal of Allergy and Clinical Immunology on a new genetic defect found in patients with common variable immunodeficiency who do not produce normal amounts of antibodies and are therefore susceptible to recurrent infections.
• A patent was filed by Dr. Mayer describing a strategy with which to develop oral vaccines through blockade of a group of proteins involved in suppression of immunity at mucosal surfaces.
• Julie Magarian Blander, PhD, Assistant Professor, was awarded a grant from the National Institute of Allergy and Infectious Diseases to study innate immune regulation of immunologic memory.
Bone Disease Endocrinology, Diabetes & Division of

Dr. LeRoith, former head of the Diabetes Branch of the National Institute of Diabetes and Digestive and Kidney Diseases, initiated creation of the Diabetes Center at Mount Sinai. “Our goal is to be a renowned, comprehensive inpatient and outpatient diabetes center,” said Dr. LeRoith. “To do so, we are improving diabetes management throughout the hospital. We are increasing training and education regarding diabetes management for all care providers—especially housestaff—as well as providing a seamless continuum of care between the inpatient and outpatient experiences.”

To attain these goals, Dr. LeRoith has focused on building a strong core team of diabetes professionals who provide direct care to patients, nurses, and patient care in diabetes and metabolic disorders.

A strong research program centered on increasing understanding of disease and developing new treatments is essential for the provision of cutting-edge patient care. With the highly regarded work of Dr. LeRoith, the Division has established itself as a leader in research, education, and patient care in diabetes and metabolic disorders.

Dr. LeRoith and colleagues at the Diabetes and Bone Disease Division have received two grants from the National Institute of Arthritis and Musculoskeletal and Skin Diseases to study the role of human insulin-like growth factor-1 (IGF-1) in bone biology. The grant will support studies involving two mouse models developed by Dr. Yakar and colleagues showing that targeted deletion of fatty acid synthase (FAS), a key enzyme for lipogenesis, produces lean mice.

An editorial by Dr. Buettner titled, “Does FASing out new fat in the hypothalamus make you slim?” was published in Cell Metabolism. The editorial focused on a recent study showing that targeted deletion of fatty acid synthase (FAS), a key enzyme for lipogenesis, produces lean mice.

Dr. LeRoith received a grant from the National Cancer Institute to study the increased risk of breast cancer in type 2 diabetes and the mechanisms involved.

Dina Green, MD, Assistant Professor, published “New Therapies for Diabetes,” a discussion of the potential role of hormones secreted by the gut in diabetes treatment, in Clinical Cornerstone.

It is estimated that diabetes currently affects 246 million people worldwide and is expected to claim 380 million by 2025. According to Division Chief Derek LeRoith, MD, PhD, Lillian and Henry M. Stratton Professor of Endocrinology, this global projection is reflected locally by the increasing number of patients treated by the Division who are newly diagnosed with diabetes or who may be suffering from the many common comorbidities of the disease.

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Many new initiatives improve diabetic patients’ quality of life

On average, patients with diabetes experience longer hospital stays than patients without the disease. This generality applies when patients are hospitalized for a wide range of issues, which may or may not be directly related to diabetes. Dr. LeRoith and Tracy Breen, MD, Assistant Professor and Director of the Diabetes Center are spearheading efforts to improve management of patients with diabetes throughout the hospital.

Dr. Breen led a team of diabetes experts who worked with physicians and nurses to increase knowledge regarding management of diabetes for inpatients. As a result, there has been a significant decline in the ratio of observed vs. expected length of stay for patients with diabetes as a comorbidity (see graph page 45). In a related initiative, Dr. Breen and the diabetes team worked with medical residents to create guidelines regarding rational inpatient use of insulin by housestaff.

The Division also mounted a pilot study of an insulin drip protocol in the non-ICU setting. The study was performed on two inpatient floors. Data culled from this study suggests that the protocol achieved good glycemic control with minimal induced hypoglycemia. Based on this pilot study, the goal is to create a non-ICU insulin drip protocol for hospital-wide use. Patients with diabetes are not forgotten once they are discharged.

It is well-known that many diabetics—especially the newly diagnosed—often experience poor glucose control without the support of their inpatient physicians and nurses. To combat this common problem, the Division developed a sophisticated system to track recently discharged patients to ensure they follow an aftercare plan that has been developed by a diabetologist specifically targeting diabetes-related comorbidities. To further assist patients with nutritional and self-care issues, the Division also hired a certified diabetes educator and nutritionist.
Division of Gastroenterology

“My goal is to ensure that Mount Sinai remains a world leader in gastroenterology research, clinical care, and education by recruiting the best clinicians and physician-scientists available. I believe we’re doing that.”

For example, new recruits Elana Maser, MD, Assistant Professor; Yuki Young, MD, Instructor; and Jonathan Potack, MD, Assistant Professor—all of whom exhibit strengths in IBD research and its applicability to patient care—are further enhancing Mount Sinai’s longstanding reputation as a regional IBD Center.

Richard Warner, MD, joined the full-time faculty as a Professor after decades of practicing in the community as a member of the voluntary faculty. Dr. Warner is internationally renowned for his expertise in the diagnosis and management of carcinoid and other neuroendocrine tumors. He is spearheading efforts along with Michelle Kim, MD, Assistant Professor, to establish a neuroendocrine tumor center at Mount Sinai.

Another stellar recruit, Sharmila Anadasabapathy, MD, is the new Director of Endoscopy. She is developing an academic endoscopy program that builds upon investments Mount Sinai has made in this area over the last few years, including the opening of a state-of-the-art endoscopy unit in 2006. Dr. Anadasabapathy is also developing a Barrett’s esophagus and esophageal cancer program. According to Dr. Mayer, “there is no similar program to my knowledge in the immediate area.”

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Adding it all together—growth through recruitment of outstanding faculty, achievement of cutting-edge research coupled with the strengths of faculty already in the division, and the development of new program initiatives—the Division of Gastroenterology continues to maintain the vitality that has won the highest regard of colleagues and patients alike.

NEW APPROACH HELPS STEER MINORITY PATIENTS AWAY FROM GI CANCER THREAT

Historically, urban minority populations are least likely to undergo colonoscopies. Dr. Itzkowitz and colleagues evaluated the impact of a patient navigator—a professional nonphysician working closely with patients—to improve colonoscopy completion rates among this city population. Of 688 patients who qualified for the procedure, 532 used the services of the patient navigator. Of these, 67 percent completed their procedures and the “no-show” rate among this group was only 9.8 percent, down from approximately 40 percent before institution of the navigator program.

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Over the past year or so, faculty members within the Division of Gastroenterology have distinguished themselves as laboratory researchers, teachers, clinicians, and public health advocates, publishing their work and thereby bringing the latest medical and scientific knowledge to the benefit of patients everywhere.

Following are Division highlights from the past year.

- A pivotal study, published in Gastroenterology by Steven Itzkowitz, MD, Professor, demonstrated that a new noninvasive test accurately detected 86% of colon cancers. The test, manufactured by Exact Science, examines DNA contained in stool samples to detect cancer.
- Thomas Ullman, MD, Assistant Professor, and colleagues published an article in Gastroenterology, demonstrating that chronic bowel inflammation is a risk factor for colorectal cancer in patients with ulcerative colitis.
- Dr. Ullman, Daniel Present, MD, Clinical Professor, and Arthur Kornbluth, MD, Clinical Professor, launched clinical trials for new treatments for Crohn’s disease and ulcerative colitis.
- The Division of Gastroenterology reached its goal of enrolling an initial 1000 patients in its Inflammatory Bowel Disease (IBD) biobank. Using DNA and protein taken from blood and tissue samples, the biobank, which aims to enroll 2000+ patients including affected and unaffected family members and control subjects, enables cutting-edge research in the genetics of IBD as well as the development of novel biomarkers for disease and disease activity.
- Suzanne Rose, MD, Professor, advanced to fellowship in the American Society of Gastroenterology. She is also the Chair-Elect for the Group on Educational Affairs of the Association of American Medical Colleges.
- Dr. Rose participated in a consensus conference conducted by the American Gastroenterological Association Institute Future Trends Committee. The conference report entitled, “The best of times and the worst of times: sustaining the future of academic gastroenterology in the United States” was published in Gastroenterology.
- Sita Chokhavati, MD, Associate Professor, was elected president of the New York Gastroenterology Association for 2007-2008.
"To say that our faculty is merely ‘involved’ with local and national professional societies would be an understatement," asserts Division Chief Thomas McGinn, MD, Clifford L. Spingran, MD, Professor in Primary Care Medicine. "Just look at the number of leadership positions held and the honors bestowed upon Division faculty in the past year. These highlight the impact they are having on the practice of medicine."

**HOSPITALISTS POINT TO THE FUTURE**

"Our clinical practices refer patients for approximately 1000 inpatient procedures annually, and with an average daily inpatient census of more than 100 patients, the Division averages more than 2,500 discharges each year," notes Dr. McGinn.

- **Dr. McGinn, Halm, and Carlton Moons, MD, Assistant Professor, evaluated the frequency with which hospital physicians recommended outpatient workups for patients discharged with unresolved medical issues.** The study, which was published in the Archives of Internal Medicine, also looked at the impact that availability of discharge summaries has on workup completion.
- **Theresa Soriano, MD, Assistant Professor, and colleagues published process quality indicators that are essential to high-quality home-based primary care in Annals of Internal Medicine.**
- **Deborah Korenstein, MD, Assistant Professor, and colleagues developed and implemented a database searching tutorial to help residents improve their searching skills for practicing evidence-based medicine. Results evaluating the success of this new tool were published in the Journal of General Internal Medicine.**
- **Dr. Halm, Juan Wisnivesky, MD, MPH, and Sue Marcus, PhD, Assistant Professors, are principal investigators on a new grant from the National Cancer Institute to use population-based data to evaluate the effectiveness of several treatments for early lung cancer in elderly patients.**
- **The National Institute of Neurological Disorders and Stroke awarded Drs. Halm and Wisnivesky, along with Stanley Tuhrim, MD, Professor of Neurology, a grant to investigate long-term outcomes of carotid endarterectomy in the elderly.**
- **Dr. Dunn is part of the steering committee of a multi-million dollar national grant to study perioperative warfarin management at 40 hospitals in North America.** Also, major research initiatives are in progress to study ways in which to improve the quality of discharge summaries and to evaluate the hospitalist’s role in the emergency department.
- **Improving Access to High Quality Care in East Harlem” is a new program funded by New York State Health Foundation and run by Dr. Halm to formally assess patients’ underlying asthma health beliefs and behaviors, with the goal of tailoring interventions to specific areas that need bolstering.**
- **With new funding from the American Cancer Society, Drs. Wisnivesky, Halm, Bickell, Saan Morrison, MD, Professor of Geriatrics and Adult Development, and John Mandel, MD, Assistant Professor of Community and Preventive Medicine, are examining cultural factors that may explain treatment differences.**
- **In a large and busy ambulatory care setting such as the IMA, internists often find that the time they can spend with ambulatory patients is stretched thin as the need to care for multiple hospitalized patients increases. Enter the hospitalist, a physician whose primary professional focus is the full-time care of hospitalized patients.**

Hospitallists, like their practice-based counterparts, engage in clinical care, teaching, research and leadership in the field of hospital medicine. Over the past year, the Division’s hospitalist program has expanded, while maintaining a consistently high standard of quality. "We hired an additional five full-time hospitalists," says Dr. Dunn, Director of the Hospitalist Group, "as well as five physician’s assistants dedicated to hospitalist practice.”

**Brief highlights of the past year’s achievements in research, education, and patient care demonstrate why Division faculty members are held in such high regard.**

- **Yasmin Meah, MD, Assistant Professor, received the 2007 Humanism in Medicine Award from the American Association of Medical Colleges. Dr. Meah is the youngest person ever to receive this honor.**
- **Mark Woodward, MD, Professor, was the primary author of new cardiovascular disease guidelines for Scotland. These new guidelines were developed to address some of the social inequities inherent in current risk calculation methods.**
- **Internal Medicine Associate of the Division of General Internal Medicine, the largest hospital-based clinic, moved from a building with aging infrastructure to occupy two floors of the modernized Center for Advanced Medicine (CAM). (See page 29 for more information on CAM.)**
Ronald Hoffman, MD, Professor, was recruited to launch a program in myeloproliferative disorders (MPD), a group of slow-growing blood cancers. In one of the few programs of its kind, Dr. Hoffman’s team provides comprehensive services for MPD patients and conducts translational research that circumvents the use of opioids by targeting neurons located in the central nervous system. The study was published in the Proceedings of the National Academy of Sciences. He also recently received funding from the NIH to study the epigenetic changes in the brain associated with chronic pain.

Doris Germain, PhD, Assistant Professor, and coworkers tackled resistance to cancer drug tamoxifen in treatment of estrogen receptor-positive breast cancers in an article that appeared in Cancer Research. Dr. Germain’s team presented evidence that the level of cyclin D1 expression and activated STAT3 are important markers that help predict response to tamoxifen treatment.

All 2007 graduating fellows went on to faculty positions at leading academic centers including Mount Sinai, Memorial Sloan-Kettering Cancer Center, and Duke University.

Building on Mount Sinai’s long history of converting laboratory discoveries into new patient treatments, a key component of the Cancer Institute is a clinical trials program implementing new laboratory discoveries developed by the faculty. According to Dr. Burakoff, the days of the lone researcher working in an isolated laboratory are a cliché. With translational medicine at the heart of the institute’s mission, isolation now “translates” into teamwork and dialogue among clinicians and research scientists for the ultimate benefit of the patient.

Andreas S. Beutler, MD, Assistant Professor, and his colleagues generated a great deal of interest in the international medical community and the media with their discovery of a gene-based approach to cancer-pain management that circumvents the use of opioids by targeting neurons located in the central nervous system. The study was published in the Proceedings of the National Academy of Sciences. He also recently received funding from the NIH to study the epigenetic changes in the brain associated with chronic pain.

The Division of Hematology and Medical Oncology has experienced substantial growth as represented by the addition of new faculty members, several major government awards, academic promotions, cutting-edge research, publications in high-impact national and international journals, groundbreaking new program development, and forward-looking educational initiatives.

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For cancer patients, creation of the Mount Sinai Cancer Institute heralds a new era of translational medicine. Directing the Cancer Institute is Dr. Burakoff, one of the nation’s leading oncologists. Dr. Burakoff was recruited to spearhead development of the state-of-the-art, patient-oriented, comprehensive cancer care facility. At the same time, as a renowned scientist, he is also overseeing expansion of Mount Sinai’s bench-to-bedside cancer medicine program through which advances in cancer research will be applied to the development of novel cancer therapeutics.

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As infectious diseases become increasingly global, where epidemics can quickly turn pandemic, and when biologic agents can become weapons, never has the study of infection been so vital to human health,” asserts Mary Klotman, MD, Irene and Dr. Arthur M. Fishberg Professor of Medicine.

Division of Infectious Diseases

Dr. Klotman’s primary objective as Division Chief is to recruit the best and the brightest clinicians as well as clinical and translational scientists in the field. “Without great science,” she says, “the discipline fails to advance.”

Robert Klein, MD, Professor, was jointly recruited with the newly formed Institute for Epidemiology, Biostatistics, and Prevention to serve as Director of Clinical Research. He will be helping to build a clinical trials program and developing his own research program on epidemiology of the metabolic complications of HIV.

In addition to continuing to recruit and mentor junior and senior scientists, Dr. Klotman notes that her long-term goals include facilitating multi-investigator translational research projects, strengthening collaborative projects involving basic and clinical researchers, enhancing clinical care and research in travel medicine and HIV/hepatitis coinfection, and establishing a strong ambulatory infectious disease program.

The following short list touches upon only a few of the Division’s research, education, and clinical activities and the many accomplishments of its faculty over the past year.

• Dr. Klotman co-authored, with Daniel Caplivski, MD, Assistant Professor and Director of the Travel Medicine Program, a comprehensive review article in the American Journal of Medicine on the safety and efficacy of travel medicine-related vaccines for HIV-positive travelers. She was also elected President of Duke University Medical Alumni Association.

• Mount Sinai became the only recognized NIH Center of Excellence for Influenza Research and Surveillance in New York City, and one of only six in the country. Principal investigator for the Center for Research in Influenza Pathogenesis is Adolfo García-Sastre, PhD, Professor of Microbiology, and Irene and Dr. Arthur M. Fishberg Professor of Medicine.

• Benjamin Chen, MD, PhD, Assistant Professor, received the Irma T. Hirschl-Monique Well-Caulier Career Scientist Award for work in HIV virology. He was also named a Burroughs Wellcome Fund Investigator in the Pathogenesis of Infectious Diseases. Dr. Chen recently received a grant from the National Institute of Allergy and Infectious Diseases (NIAID) to study viral transmission-enhancing structures called virological synapses, which may be key factors in allowing HIV to evade antibody-based immunity.

• Theresa L. Chang, PhD, Assistant Professor, is the principal investigator on a grant from NIAID to examine the function of defensins, tiny antimicrobial peptides, in HIV-1 pathogenesis and transmission.

• Lubbertus Mulder, PhD, Assistant Professor, is principal investigator on a NIAID grant to study genomic stability in early HIV-1 infection.

• Shirish Huprikar, MD, Assistant Professor, published a review article on the latest advances in treatment of infectious diseases in liver transplant recipients in Clinical Liver Disease.

• The Division’s Travel Medicine Program is now a major referral center for patients with leishmaniasis and the United Nations is increasingly using the program to prepare employees for travel evaluations. Dr. Caplivski has also partnered with Mount Sinai’s Global Health Center to prepare residents, students and attending physicians for living and working in Liberia, Honduras, Brazil, and Haiti.

• Alpha-defensins were the topic of research published in the Journal of Infectious Diseases by Mirella Salvatore, MD, Associate. The article reported on the antiviral activity of human alpha-defensin-1 (pH 5.5) against influenza virus in vitro.

• Dr. Mulder and colleagues published a study of HIV-1 integrase, a viral enzyme essential for HIV-1 infection, in the journal Virology.

• “HIV/AIDS epidemiology, pathogenesis, prevention, and treatment” is a review article that offers a global perspective on the HIV/AIDS pandemic. It was published in the Lancet by Viviana Simon, MD, MPH, Assistant Professor, and colleagues.

• Richard MacKay, MD, Assistant Professor, offered free HIV screening with a new rapid assay at several local community health fairs in 2007. He has also been working to increase the use of rapid testing throughout the Mount Sinai community.

WHEN IT COMES TO INFECTIOUS DISEASES, Education Must Be Ahead of the Bugs!

To ensure that the Fellowship Program in Infectious Diseases remains several steps ahead of the ever-changing nature of communicable disease, the program was redesigned to offer the most in-depth and comprehensive training available.

After completing the two-year fellowship program, notes Dr. Klotman, “the training in epidemiology, microbiology and related disciplines bestows an extremely high level of competence. The program offers a global, multidisciplinary perspective, which Dr. Huprikar (Assistant Director of the Infectious Disease Fellowship Program) helped foster.”

Division faculty members are also involved in efforts to enhance Mount Sinai’s Masters in Public Health (MPH) Program. Most recently, two courses were added to the curriculum, designed by Stephanie Factor, MD, MPH, Assistant Professor. “Now, this is an exciting new course,” effused Dr. Klotman about Dr. Factor’s course in epidemiology. “The list of topics and speakers is fascinating. Students are taught to measure disease frequency, describe patterns of disease occurrence, investigate outbreaks, identify the causes or risk factors for disease, assess the utility of diagnostic tests, and test the effectiveness of treatments.”

Another course designed by Dr. Factor addresses the growing threat of zoonotic diseases, which are transmitted from vertebrate animals to humans. “Special Topics in Zoonoses,” features guest lecturers from varied backgrounds—ecology, history, journalism, law, medicine, microbiology, and veterinary medicine—to provide a multidimensional view of factors contributing to the emergence of zoonotic diseases.

With the majority of emerging infections in the recent decades arising as zoonoses and the potential to use these microbes as biologic weapons, this is an extremely timely and exciting course,” declares Dr. Klotman.
Division of Liver Diseases

“Certainly one of the most gratifying,” notes Dr. Friedman, “is the pivotal role Mount Sinai played in the clinical trials of sorafenib (Nexavar), the first oral medication ever introduced to treat unresectable liver cancer.”

Liver cancer usually remains asymptomatic until it becomes advanced. It’s estimated that 40 percent of all liver cancer in the US is diagnosed at an advanced stage. Before the sorafenib trial, treatment options were limited.

Mount Sinai was the largest US recruitment site for clinical trials of the medication. When the drug proved effective during the trials, the FDA terminated studies and approved the drug, making sorafenib the first effective oral systemic medication for treating patients with advanced liver cancer.

The lead clinical investigator at Mount Sinai, Josep Llovet, MD, Associate Professor and Director of the Division’s Hepatocellular Carcinoma (HCC) Research Program, was also the lead international investigator for the sorafenib trials.

“Through his work on sorafenib and on HCC research generally, Dr. Llovet has become one of the world’s leading investigators in the field,” remarks Dr. Friedman of his colleague. “The attention paid to the sorafenib outcomes by experts in the country.

Such high visibility, remarks Dr. Friedman, is critical to his long-term goals of national and international attention to the Division and to Mount Sinai.

The following select achievements of the past year highlight the many ways in which faculty and fellows in the Division of Liver Diseases are drawing attention to liver disease. His term begins in 2009. He also became a Fellow of the American Gastroenterological Association.

The Division embarked upon a strategic partnership with the world renowned Chinese American Physicians, a group of community medical providers who treat tens of thousands of Asian patients, many of whom have active liver disease. Through joint continuing medical education programs and other initiatives, the partners hope to facilitate Asian patients’ access to advanced care and clinical trials.

Kirsten Sadler-Edepil, PhD, Assistant Professor, and colleagues identified a single gene that governs both embryonic liver development and regeneration of the liver after partial hepatectomy. The results of their study were published in the Proceedings of the National Academy of Sciences. In addition, Dr. Sadler-Edepil received the Department of Defense Breast Cancer Research Award, a Basil O’Connor March of Dimes Fellowship, and the American Gastroenterology Association Research Scholar Award.

Lawrence Liu, MD, Assistant Professor, in partnership with the Department of Genetics and Genomic Sciences, has begun treating patients with porphyria, a rare metabolic liver disease for which there are fewer than 10 experts in the country.

Division Chief Scott Friedman, MD, Irene and Dr. Arthur Fishberg Professor, was asked recently to recall some of the more significant events that have taken place within the Division over the past year.

CLINICAL TRIAL NOTEBOOK

In 2007 faculty in the Division launched several clinical trials of promising new therapies for liver diseases.

Douglas Dieterich, MD, Professor, is the primary investigator for a trial of protease inhibitor therapy for patients with HCV infection.

Dr. Bansal is supervising a clinical trial of a novel antibiotic therapy for patients with HCV fibrosis. Joseph Odin, MD, Assistant Professor, is the primary investigator for a trial of an immunosuppressive agent for patients with autoimmune hepatitis.

Even before the clinical trial stage, Division investigators keep their focus on what is needed to apply their discoveries to the benefit of patients. “Protecting intellectual property with patents is essential to this process,” points out Dr. Friedman. “Without patents it would be very challenging to generate the support needed to bring new therapies to patients.”

Dr. Llovet, Friedman, and Myron Schwartz, MD, Professor of Surgery, filed a patent application describing a pattern of abnormal genes which, when detected in a liver lesion already suspicious for cancer, makes this diagnosis highly likely. Another patent filing describes a specific DNA sequence present within some individuals’ KLF6 gene that may predispose them to a higher risk of some cancers—especially prostate cancer. This was filed by inventors John A. Martignetti, MD, PhD, Associate Professor of Genetics and Genomic Sciences, Goutham Nair, MD, PhD, Instructor, and Dr. Friedman.
Tri lateral Approach to Battling Kidney Disease in the Community

According to the National Kidney Foundation, an estimated 26 million American adults suffer from chronic kidney disease (CKD), a condition that is usually asymptomatic in early stages, yet becomes associated ultimately with high rates of cardiovascular events, morbidity, and mortality—even in younger patients. Cognizant of the disease’s prevalence within the local community, over the past 14 months the Division has instituted a tripartite program that addresses the disease from the perspectives of physician education, patient awareness, and disease identification and intervention.

Initially, the Division instituted education for physicians and other health care professionals at Mount Sinai, underscoring the need for recognition and early intervention in patients at risk for CKD. At the institutional level, the Division then introduced automated laboratory reporting of estimated glomerular filtration rate to alert physicians and other health care providers to patients with renal dysfunction requiring follow-up and treatment.

The Division also mounted an ongoing community-based education and screening program at health fairs held at Mount Sinai and in the surrounding communities. Of the initial 869 people screened (April-October, 2007), 150 were found to have CKD, and 55 were diagnosed with Stage 3+ CKD and referred for treatment.

DIVISION OF NEPHROLOGY

Currently, the Division manages one of the largest National Institutes of Health research budgets of its type in the country. It also bears the reputation as one of the best kidney research, treatment and transplantation centers in the country, with faculty members who are leading international experts in renal development, polycystic kidney disease, HIV-associated nephropathy, diabetic renal disease, hypertensive renal disease, gene therapy, transplantation, peritoneal dialysis, and hemodialysis.

Following are highlights of the many outstanding achievements of the Division of Nephrology during the past year.

- Dr. Murphy became President-Elect of the American Society of Transplantation. She also received the prestigious Lester Hoenig Award from the Kidney and Urology Foundation of America.
- Michael Lipkowitz, MD, Associate Professor, was elected to the editorial board of the Journal of the American Society of Nephrology.
- Four junior faculty members were awarded NIH-mentored scientist awards, K awards. This brings the total number to eight K awards within the Division. Of note, two of the eight K award recipients recently received their first R awards under the mentorship of Paul Kottman, MD, Professor and Chair.
- Peter Mundel, MD, Professor, and colleagues identified the role of the protein dendrin in signaling related to glomerular injury. In the paper published in the Proceedings of the National Academy of Sciences the authors noted that dendrin may provide a molecular target for tackling proteinuric kidney diseases.
- Paul Kottman, MD, Professor and Chair of the Department of Medicine, is Chair of the Research Committee of the Association of Professors of Medicine. This organization of departments of internal medicine represented by chairs and appointed leaders leads academic internal medicine, specifically in the education, research, and patient care arenas.
- Peter S. Heeger, MD, Professor, and coworkers discovered that immune cell-produced complement is a key factor regulating in vivo T cell immune responses. Results published in the Journal of Immunology identified complement as a potential target to prevent or treat T cell mediated disease.
- Dr. Heeger received funding from the National Institute of Allergy and Infectious Diseases to study the cellular and molecular mechanisms involved in certain forms of allograft rejection.
- Studies using genetics, pharmacogenetics, and mass spectrometry were begun to identify factors predicting progression of kidney disease and effectiveness of therapy in subjects from the African American Study of Kidney Disease and Hypertension (AASK) Study. The goal: to identify patients at increased risk for progressive renal disease, and to develop novel targets for therapeutic intervention.
- Michael Ross, MD, Assistant Professor, was named co-chair of the INSIGHT (International Network for Strategic Initiatives in Global HIV Trials) Renal Interest Group. Dr. Ross is coordinating studies on renal disease in patients with HIV/AIDS who are enrolled in multicenter, international, randomized, controlled antiretroviral treatment trials.
- Dr. Ross received a grant from the National Institute of Diabetes and Digestive and Kidney Diseases to determine the mechanisms by which the ubiquitin-like protein FAT10 contributes to the pathogenesis of HIV-associated nephropathy.
- Mindful of the high rate of hypertension and end-stage renal disease in the local community, the Division instituted an ambulatory blood pressure monitoring service and a new program in geriatric renal medicine, one of the only programs of its kind in the country.
- Home dialysis expanded from 40 to 46 patients, making it the largest such program in New York City. Added support for dialysis patients significantly increased the number of patients who received transplants and also decreased complications from dialysis. Commitment to further growth has been demonstrated by the Medical Center with the opening of the new unit in the new Center for Advanced Medicine (see page 29).
- The list of patients eligible for renal transplants at Mount Sinai is the fourth largest in the country, while renal transplant survival rates remain among the best in the country. For example, one-year patient and graft survival rates were 99% and 96% for adult living donor recipients.
- Drs. Murphy and Heeger initiated new clinical trials recently to develop targeted interventions for transplant recipients at high risk of graft rejection.
- The first graduates of the American Society of Transplantation/American Society of Nephrology Renal Transplant Fellowship Training Program successfully competed for prestigious academic positions at leading centers, including Mount Sinai.
“As I look back over my time at Mount Sinai, I am pleased to note that we were able to realize some superb research and patient care initiatives in the Division,” says Florette and Ernst Rosenfeld and Joseph Solomon Professor of Medicine Michael Iannuzzi, MD, who was appointed Division Chief in 2003 and has recently been recruited as Chairman of Medicine at SUNY-Upstate Medical University College of Medicine in Syracuse.

THE CATHERINE & HENRY J. GAisman

Division of Pulmonary, Critical Care & Sleep Medicine

“By the same token, the entire Department of Medicine also experienced exceptional growth in research, clinical practice, and education. Overall, this created a very stimulating environment. Looking forward, I hope I will engender the same level of intellectual and clinical vitality in my new position as I have enjoyed at Mount Sinai.”

Under Dr. Iannuzzi’s leadership, the Division has grown in both clinical practice and research. Patient volume, for example, has increased by more than 40 percent, while grant support has nearly tripled.

In addition, the Pulmonary Function Testing Laboratory, Advanced Lung Disease Program, and Asthma Program have all experienced significant growth over the past year, while average patient length of stay has decreased considerably. Meanwhile, the Division’s Center for Sleep Medicine received “gold standard” accreditation, even as the program continues to expand in terms of patient volume and services offered. (See “Perchance to Dream”).

As a researcher, Dr. Iannuzzi has made significant research contributions to understanding sarcoidosis, an immune system disorder, including discovery of genes linked to the disease. Thanks in part to his work, Mount Sinai is one of only 10 Centers of Excellence for sarcoidosis research, and the largest surgical center in the country offering a specialized lung valve for severe emphysema, wherein the valve is placed nonsurgically with a bronchoscope to reduce lung volume and improve patient comfort.

Dr. R. Nisha Aurora, MD, Assistant Professor, is collaborating with researchers from Johns Hopkins University on a new study involving members of the Mount Sinai Traumatic Brain Injury Support Group. The researchers aim to understand the role of sleep in community-dwelling individuals with chronic fatigue and a history of traumatic brain injury.

The following events and achievements highlight the great vitality and clinical and research excellence exhibited by the Division of Pulmonary, Critical Care and Sleep Medicine during the past year:

- Dr. Iannuzzi’s work on sarcoidosis and his membership in the Sarcoidosis Genomic Analysis (SAGA) consortium led to publication of results mapping specific genes responsible for disease development in African Americans. The study was published in Genes and Immunity.
- E. Neil Schachter, MD, Maurice Hexter Professor of Pulmonary and Community Medicine, is leading a study of air pollution and its effects on childhood asthma and cardiovascular health sponsored by the Electric Power Research Institute (EPRI). The study seeks to determine the impact of air pollution on human health, particularly by determining which components of air pollution are most closely associated with negative health impacts.
- Michelle Gong, MD, Assistant Professor, has received a grant from the National Heart Lung and Blood Institute to examine Institutional Review Board practices for determining surrogate consent for research in incapacitated adults involved in critical care research. In addition, a study led by Dr. Gong on early versus late intravenous administration of insulin in critically ill patients was published in Intensive Care Medicine.
- Judith E. Nelson, MD, JD, Professor, an expert in end-of-life issues, received a grant from the NIH to examine how the quality of palliative care is evaluated in the ICU setting. Dr. Nelson also published an article titled, “Communication about Chronic Critical Illness,” in the Archives of Internal Medicine.
- Timothy Harkin, MD, Associate Professor, is leading a clinical trial of a specialized lung valve for severe emphysema, wherein the valve is placed nonsurgically with a bronchoscope to reduce lung volume and improve patient comfort.
- Adam Morgenthau, MD, Instructor, was recruited to the Division following completion of the fellowship program in Pulmonary and Critical Care Medicine at Johns Hopkins Bayview Medical Center. He is co-director of the Sarcoidosis Clinic and responsible for the educational and quality components of the clinic.

The CATHERINE & HENRY J. GAisman

PERCHANCE TO DREAM

Center for Sleep Medicine Awarded “Gold Standard” Certification

Chronic sleep problems are not simply a nuisance—they can lead to serious illness including respiratory disorders and heart disease. Therefore, it is critical when patients seek help for sleep-related symptoms like sleep apnea or narcolepsy that diagnosis and treatment be quick, accurate, and effective.

At the Mount Sinai Center for Sleep Medicine, patients are known to get the very best care that the science of sleep medicine has to offer. This was verified when the Center received full accreditation from the American Academy of Sleep Medicine (AASM), the only national accrediting body for centers and laboratories treating sleep-related breathing disorders.

Because of its rigorous standards, AASM accreditation is considered the gold standard by which the medical community and the public can evaluate the quality of sleep medicine services.

According to Dr. Aurora, Director of the Center for Sleep Medicine, “AASM accreditation begins with a voluntary application process followed by scrupulous, multiple on-site evaluations by AASM staff. We felt that our sleep services are excellent and sought outside clinical confirmation from a top authority.”

The results of the AASM audit—an unconditional “A” report card—indicate that the Mount Sinai Center for Sleep Medicine meets all proficiency requirements for sleep-related testing, patient safety and treatment, as well as physician and staff training.

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Division of Rheumatology

These accomplishments continue a tradition that began in the 1950’s with the work of Drs. Alexander Gutman and Tsai-Fan Yu in gout, as well as the leadership of Dr. Harry Spiera and his interests in scleroderma, polymyalgia rheumatica, giant cell arteritis and Sjogrens disease. Dr. Gorevic’s studies in amyloidosis, cryoglobulinemia, and autoinflammatory diseases are likewise heralded.

“Mount Sinai is one of only four major referral centers for the amyloid diseases in the US. Our faculty practice has been steadily expanding at a rate of approximately 20 percent per year.”

Mount Sinai’s reputation for excellence in this field extends to education as well. Over one hundred candidates—including members of Mount Sinai’s housestaff—vied for the single fellowship position open this past year. Graduating fellow Jenny Diep, MD, valued her experience at Mount Sinai so highly that she decided to remain in the Division as a Clinical Instructor.

Highlights of the past year demonstrate the numerous ways in which the current faculty is building upon historical strengths in this field.

- A phase I clinical trial is currently in progress to study novel therapeutics for cardiovascular and neurological forms of transthyretin-associated amyloidosis, the most common form of hereditary amyloidosis.
- Positive results were obtained from a phase III trial for a novel therapy for patients with treatment-refractory gout. These results were presented to the Federal Drug Administration in April, 2008. The treatment was found to be more efficacious than a placebo in reducing uric acid and incidence of gout attacks, and in the disappearance of tophi (nodular masses of uric acid crystals).
- Leslie Kerr, MD, Associate Professor, and Michael Naarendorp, MD, Clinical Professor, staff two arthritis clinics at North General Hospital, bringing high quality care for rheumatic conditions closer to patients living in the East Harlem community.
- Mount Sinai is the second site in the United States where an NIH-funded international study is examining efficacy of diflunisal (Dolobid®) as a novel therapeutic agent for familial amyloidotic polyneuropathy, a genetic disease caused by mutations in the protein transthyretin.
- Mount Sinai provides the site for patient education, and members of the faculty have served as speakers for the Amyloidosis Support Network, a national organization that monitors research developments and provides patient support and information regarding amyloid diseases.
- Robert Spiera, MD, Adjunct Clinical Instructor, participated in NIH-sponsored studies of Wegener’s granulomatosis. Dr. Spiera is also examining the potential use of imatinib (Gleevec®) as a therapeutic agent for recent-onset scleroderma.

NOVEL TREATMENT FOR DEADLY CONDITION

Under Dr. Gorevic’s leadership, Mount Sinai participated in a multicenter clinical trial of a new treatment for amyloid A (AA) amyloidosis, a frequently fatal condition for which few treatments exist. Results of the phase II/III trial of eprodisate (Kiacta®) demonstrated its effectiveness in slowing the progression of AA amyloidosis-associated renal disease. The study’s results were published in the New England Journal of Medicine. In the discussion section of the article, the authors—including Dr. Gorevic—commented, “The drug directly targets formation of AA amyloid rather than the underlying inflammatory condition and is a member of a new class of compounds... This treatment approach has potential applicability to other types of amyloidosis, including AL amyloidosis, familial amyloidosis, and Alzheimer’s disease.”

Of the 187 patients who entered the initial study of eprodisate, 110 continued in the worldwide, open-label extension. Additional data related to safety and outcomes are being collected through this extension. Dr. Gorevic presented results from this study at the national meeting of the American College of Rheumatology in November 2007.
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