

## ACCELERATING SCIENCE — ADVANCING MEDICINE

Modern medicine is in the midst of a data revolution that is changing the way we evaluate and treat patients.

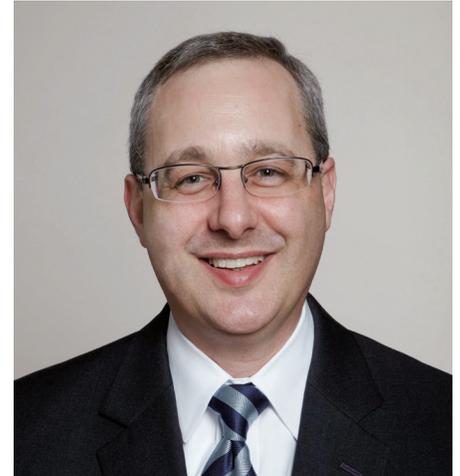
Data from genetics and genomics are becoming more medically useful, and together with rigorous history-taking, physical examination, and experiential intuition by the skillful physician, we can develop a far more detailed understanding of each patient to potentially outline a more precise treatment plan.

As physicians, we need to know how to organize, retain, and utilize this knowledge effectively. Mount Sinai has taken a strong lead in this area, launching the Icahn Institute for Genomics and Multiscale Biology and developing Minerva, one of the largest supercomputers in academic medicine today.

Within the Division of Gastroenterology, we created a new position—Director of Informatics

for Research, Outcomes, and Quality—to harness and focus these resources for patients with digestive diseases. Ashish Atreja, MBBS, MPH, has been recruited for this important role, with the goal of integrating clinical data in the electronic medical record, investigational data from high-throughput arrays and genetics, and physician- and patient-reported histories, to advance research and quality improvement. Dr. Atreja is also Assistant Professor of Medicine (Gastroenterology), Icahn School of Medicine at Mount Sinai.

Ultimately, Mount Sinai's mission is to become a national leader in understanding how medical informatics can transform care for all patients.



Bruce E. Sands, MD, MS, Chief, The Dr. Henry D. Janowitz Division of Gastroenterology, and the Dr. Burrill B. Crohn Professor of Medicine

<http://icahn.mssm.edu/gastroenterology>

### ■ NEW FRONTIERS

## Jean-Frédéric Colombel, MD, to Lead Mount Sinai's New Inflammatory Bowel Disease Center (IBDC)

Building on its reputation as a world leader in gastroenterology, Mount Sinai has named Jean-Frédéric Colombel, MD, as the Director of the Mount Sinai Inflammatory Bowel Disease Center (IBDC), which is scheduled to open in 2014. Dr. Colombel, who recently joined the faculty of the Icahn School of Medicine at Mount Sinai as Professor of Medicine (Gastroenterology), is an internationally renowned clinician and researcher in IBD and gastroenterology.



Jean-Frédéric Colombel, MD

Dr. Colombel is best known for his participation in the identification of NOD2 as a susceptibility gene for Crohn's disease and the identification of a new subtype of *Escherichia coli* associated with Crohn's disease, as well as the development of the Anti-Saccharomyces Cerevisiae Antibody (ASCA) test, which remains the most sensitive and specific marker for Crohn's disease. He has authored or co-authored more than 500 peer-reviewed articles, books, and book

chapters on IBD. Most recently, he was Professor of Hepatogastroenterology at Centre Hospitalier Universitaire de Lille in Lille, France, and President of the European Crohn's and Colitis Organization.

Dr. Colombel will lead a team of clinicians and researchers in a fully integrated, state-of-the-art facility to provide comprehensive IBD diagnostics and treatments for adults and children and to advance translational IBD research. The Center will offer patients a collaborative team of experts in gastroenterology, clinical immunology, nutrition, pathology, psychology, radiology, colorectal and laparoscopic surgery, and genetics and genomics. Its Young Adult IBD Transitional Program will assure a seamless transition from pediatric to adult gastroenterologists.

The Center's scientists will conduct genomic, proteomic, metabolomic, and microbiomic research to create disease models that would identify biomarkers for disease type and pathways, with the ultimate goal of developing approaches to disrupt the pathogenesis of the disease and to treat at-risk patients before IBD develops. Mount Sinai's IBD Registry and Biobank, which analyzes complex data at every stage of a patient's life, will drive this research and expand Mount Sinai's clinical trial capabilities.

## ■ INNOVATIVE CARE

# A Collaborative Approach to Treating Motility Disorders

In 2012, The Dr. Henry D. Janowitz Division of Gastroenterology opened a unique comprehensive center dedicated to the evaluation, diagnosis, and treatment of disorders of the muscles in the digestive tract. Nearly one in five Americans is estimated to have a motility disorder in the upper or lower GI tract, conditions such as achalasia, gastroesophageal reflux, functional disorders, irritable bowel syndrome, and gastroparesis, and anorectal disorders, including pelvic floor dyssynergia and fecal incontinence. The Mount Sinai Gastrointestinal Motility Center, led by Gina Sam, MD, MPH, Assistant Professor of Medicine (Gastroenterology), is the first of its kind in the New York City region.

Among the innovative procedures to be offered is high-resolution anorectal manometry in conjunction with pelvic floor retraining/biofeedback for patients with pelvic floor dyssynergia. For these patients, the muscles in the rectum and anus must be retrained to contract and relax in the

proper coordinated sequence. Dr. Sam will use a biofeedback machine that combines neuromuscular training with visual and verbal feedback to teach patients to coordinate their muscles for effective defecation. With treatment, patients generally receive relief about 75 percent to 85 percent of the time.

Dr. Sam has established a team of psychologists, nutritionists, colorectal surgeons, otolaryngologists, radiologists, and urogynecologists to fully address motility disorders. "The area of gastrointestinal motility is evolving and growing," says Dr. Sam. "It is imperative that we work closely with each patient to provide an individualized method of treatment."



Gina Sam, MD, MPH

## ■ NEW FACES



Ashish Atreja, MBBS, MPH

Dr. Atreja will develop data-driven approaches to patient care and research within the Division of Gastroenterology. For example, he plans to develop applications that support

**Ashish Atreja, MBBS, MPH,** recently joined Icahn School of Medicine at Mount Sinai as Director of Informatics for Research, Outcomes, and Quality. Dr. Atreja will develop data-driven approaches to patient care and research within

collaborative disease management, point-of-care registries, and clinical trial recruitment. Dr. Atreja is also collaborating with clinicians, researchers, and IT executives within and outside Mount Sinai to broaden the application of his work across other platforms and departments.

Dr. Atreja received his MBBS from All India Institute of Medical Sciences in India in 1999 and his MPH from the University of Illinois

at Chicago in 2001. He did his postdoctoral training in informatics at the Cleveland Clinic and Oregon Health and Science University, and completed his fellowship in Gastroenterology at the Cleveland Clinic.

Dr. Atreja has also been named Assistant Professor of Medicine (Gastroenterology) at Mount Sinai, specializing in Crohn's disease and Inflammatory Bowel Disease.

## ■ PATIENT-CENTERED CARE

# Using Advanced Imaging to Treat Malignancies

Diagnostic and therapeutic advances have improved outcomes in many cancers, however gastrointestinal malignancy remains a significant cause of mortality worldwide. Colorectal cancer, for example, is the third-leading cause of death in the United States, and pancreatic cancer has a five-year survival rate of only 6 percent. The incidence for esophageal cancer has increased by more than 400 percent over the past three decades due to rising rates of obesity and reflux disease.

The Mount Sinai Medical Center Endoscopy Center, scheduled to open later in 2013, will build on the state-of-the-art diagnostics and minimally invasive therapeutics that we offer to patients. Sharmila Anandasabapathy, MD, Chief of Endoscopy, and Associate Professor of Medicine (Gastroenterology), will lead the Center. Dr. Anandasabapathy is currently studying the use of advanced imaging technologies for the early detection of cancer in patients with esophageal and colon cancer. Her colleague, Christopher DiMaio, MD, Director of Therapeutic Endoscopy, and Assistant Professor of Medicine (Gastroenterology), and Pediatrics, is using endoscopic ultrasound and endoscopic retrograde cholangiopancreatography to diagnose, stage, and treat pancreatic malignancy in a safe-and-effective manner.

The Center will triple the size of the existing procedural space, offer patients a new level of care and comfort, and be a hub for launching robust endoscopic research and education programs in the United States, India, Central and South America, and China.



Christopher DiMaio, MD, Director of Therapeutic Endoscopy, and Assistant Professor of Medicine (Gastroenterology), and Pediatrics, with Sharmila Anandasabapathy, MD, Chief of Endoscopy, and Associate Professor of Medicine (Gastroenterology)