

A man in a white lab coat is shown in profile, talking on a black telephone. He is seated at a desk cluttered with stacks of papers, a computer monitor, and other office supplies. The background is dark, suggesting an office environment.

THE HENRY D. JANOWITZ
DIVISION OF GASTROENTEROLOGY

DR. LLOYD MAYER

Mount Sinai is consistently ranked among the top five gastroenterology centers in the nation. The irresistible combination of a storied history populated by giants in the field together with significant contemporary achievement has made Mount Sinai the medical center of choice for patients with gastrointestinal disorders, as well as for master clinicians, innovative researchers, and exceptional trainees in the field.

Since 2003, under the leadership of Division of Gastroenterology Chief Lloyd Mayer, MD, Dorothy and David Merksamer Professor of Medicine, coordination has been the major driving force in the Division. Research and clinical care initiatives are paired to facilitate translational research and provide comprehensive patient care in inflammatory bowel diseases (IBD), gastrointestinal cancers, women's gastrointestinal health, irritable bowel syndrome, therapeutic endoscopy, and related areas.

Newly created centers give patients one-stop access to numerous physician specialists, nurse practitioners, and nutrition and psychological counseling. Fellows, residents, and students have the benefit of mentors and teachers with diverse experience working together to provide unique perspectives and learning opportunities.

This coordinated approach is clearly yielding results. Research funding to the Division from the NIH nearly doubled between 2002 and 2006. In addition, the Division's Faculty Practice receipts more than doubled between 2003 and 2006.

IBD: Collaborating Across the Hall and Across the Country

Since the publication of the landmark study on regional enteritis—Crohn's disease—by Mount Sinai physician-researchers Burrill Crohn, MD, Leon Ginzburg, MD, and Gordon Oppenheimer, MD, the Hospital has been the leader in the care of inflammatory bowel disease (IBD). Today, Mount Sinai physicians care for the largest population of patients with IBD in the country.

In 2005 Maria Abreu, MD, Associate Professor of Medicine, joined the faculty and assumed the

leadership of the IBD Center at Mount Sinai. Dr. Abreu is the principal investigator of the IBD Center Clinical Phenotype Database and Tissue Repository, a collaborative effort with all physicians at Mount Sinai who treat IBD to collect clinical, genetic, and serologic data on over two thousand patients in order to identify genes, immunologic pathways, and biomarkers involved in these complex genetic disorders.

In a paper published in *Gastroenterology*¹ in 2006, Dr. Abreu and colleagues described an important link between structures known as toll-like receptors (TLRs; specifically TLR4), and the inflammation-associated enzyme, cyclooxygenase 2 (COX-2). They found that while TLR4 protects against cell death in the injured intestine, long-term TLR4 signaling may lower the threshold for colitis-associated cancer.

The Crohn's and Colitis Foundation of America (CCFA) chose Mount Sinai as a center of excellence for inflammatory bowel disease education. Select gastroenterology fellows from around the country spend a month at Mount Sinai learning about inflammatory bowel disease and the Division hosts practicing gastroenterologists for three-day learning programs.

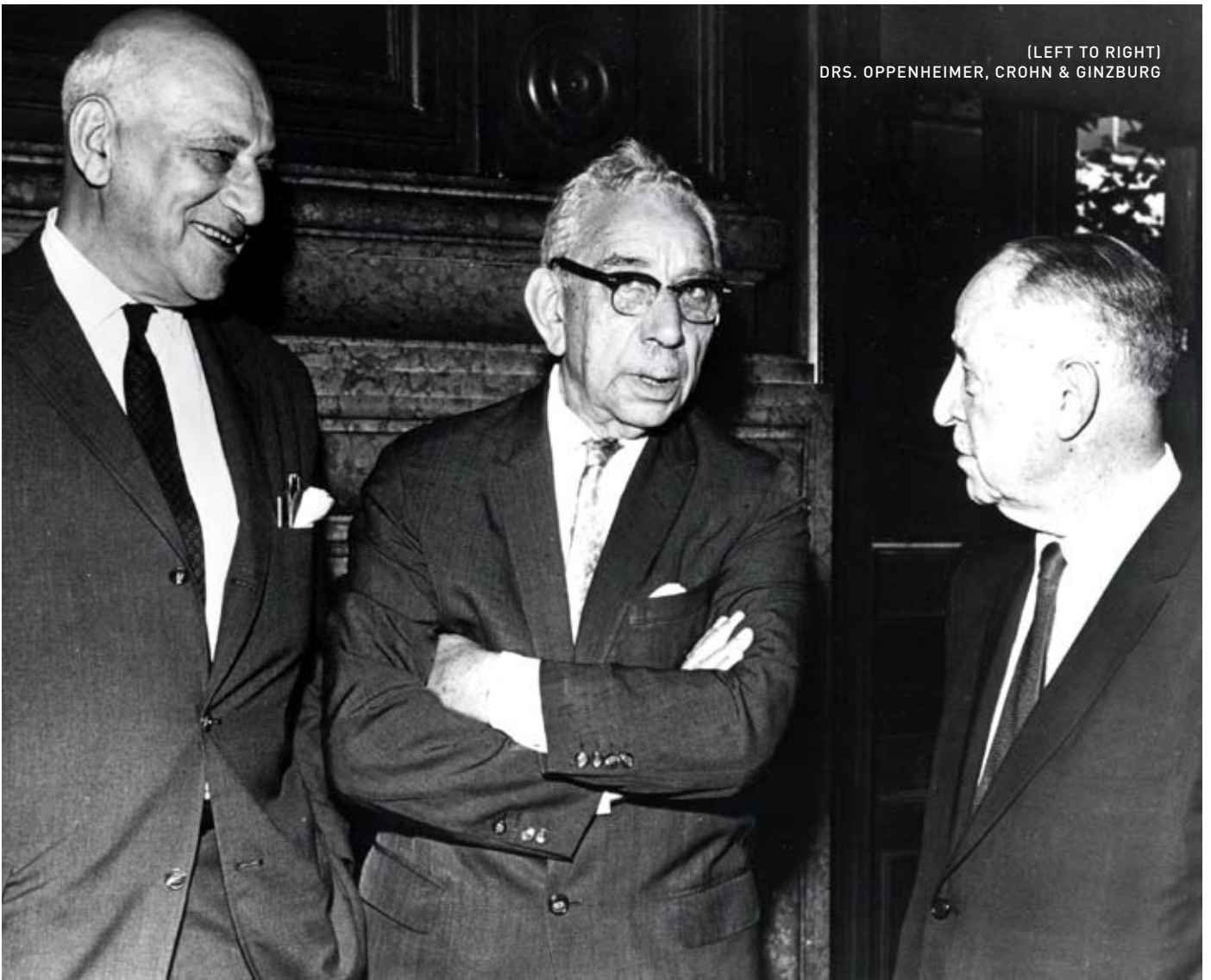
Stopping Cancer in its Tracks

Colorectal cancer is the second most common cause of cancer-related mortality in the United States. It is well recognized that screenings and removal of polyps can reduce the incidence of colorectal cancer.

The Division of Gastroenterology established an open-access service for screening colonoscopies

¹*Gastroenterology*. 2006;131:862-77.

(LEFT TO RIGHT)
DRS. OPPENHEIMER, CROHN & GINZBURG



WHAT'S IN A NAME?

There is perhaps no name more associated with Mount Sinai's leadership in gastroenterology than that of Burrill B. Crohn. But, the controversy that surrounded his most famous discovery could well have led to another name rising to prominence.

In October 1932, Crohn and Mount Sinai colleagues Leon Ginzburg and Gordon Oppenheimer published, *Regional Ileitis* in the *Journal of the American Medical Association*. This paper defined for the first time the disease that would later be known as Crohn's disease.

In the spring of that year, Crohn gave an oral presentation on the same subject at the annual meeting of the American

Medical Association. He was listed on the program as the sole author despite the undisputed contribution of his colleagues. Also in the spring of 1932, Ginzburg and Oppenheimer presented their own data before the American Gastroenterological Association without listing Crohn as an author.

Mount Sinai's Chief of Surgery, A.A. Berg convened a formal committee of inquiry that ultimately led to listing all three authors in alphabetical order, thus putting Crohn's name first and contributing to it being the one forever associated with the work.

through which patients are referred by their primary care physicians. Assistance with scheduling, preparation, and transportation is provided to underinsured patients. Through funding provided by the American Cancer Society and the Department of Medicine Adversary Board, the Division has also been able to provide free colonoscopies for uninsured New Yorkers. The program has reduced the waiting time for screening colonoscopy from over three months to less than one month.

Jennifer Christie, MD, Assistant Professor of Medicine and Director of the Women's Health and Motility Center at Mount Sinai, and colleagues in the Cancer Community Outreach Program within the Department of Oncological Sciences investigated why minority women are less likely to undergo this potentially life-saving screening. Their findings, published in the *Journal of the National Medical Association*², highlighted the importance of having doctors explain the procedure to their patients inasmuch as most patients will follow their physicians' recommendations.

For some patients, a colonoscopy is not possible because of other medical conditions or due to fear and anxiety about the procedure. Steven Itzkowitz, MD, Dr. Burrill B. Crohn Professor of Medicine and Director of the GI Cancer Center at Mount Sinai, may have found a solution. Working with EXACT Sciences Corporation, he is developing a stool-based screening test for colon cancer. In a large multi-center study published in *Clinical Gastroenterology and Hepatology*³, the test demonstrated 88 percent sensitivity for colorectal cancer with equal detection across all stages of cancer, regardless of the cancer's location in the colon.

Dr. Itzkowitz is also hoping to use screening tests to improve outcomes for patients with gastric cancer—the second leading cause of mortality from cancer. He received the AGA/Funderburg Research Scholar Award in Gastric Biology, the only grant awarded by the American Gastroenterological Association to study gastric cancers.

In 2006 Dr. Itzkowitz published a study in *Gastroenterology*⁴ that offered the first proof that

a group of genes known as the trefoil family is directly involved in the pathogenesis of gastric cancer. This work suggests that screening for genetic mutation may some day allow assessment of the metastatic potential of gastric cancers.

The steps required to assess a patient found to be at high risk for cancer are not always clear. Some physicians believe patients with ulcerative colitis and Crohn's disease with pre-cancer—termed dysplasia—should have their colons removed, while others advocate careful monitoring. Thomas Ullman, MD, Assistant Professor of Medicine, is conducting a study funded by the NIH to examine the optimal frequency of colonoscopies in this patient population.

All endoscopic procedures were enhanced in 2006 when The Mount Sinai Hospital opened a new, state-of-the-art endoscopy suite that incorporates the latest technology in a patient-friendly environment. Divyesh Sejpal, MD, Assistant Professor was appointed Chief of Therapeutic Endoscopy in 2006.

Immunity and the GI Tract

For the past several years Dr. Mayer has served as Chief of both the Division of Gastroenterology and the Division of Clinical Immunology. This unusual dual role has been possible because of his tandem interests in immunology and gastroenterology. He is principle investigator for a clinical trials group funded by an NIH program project grant that is investigating the innate and adaptive immune interactions in the human digestive system.

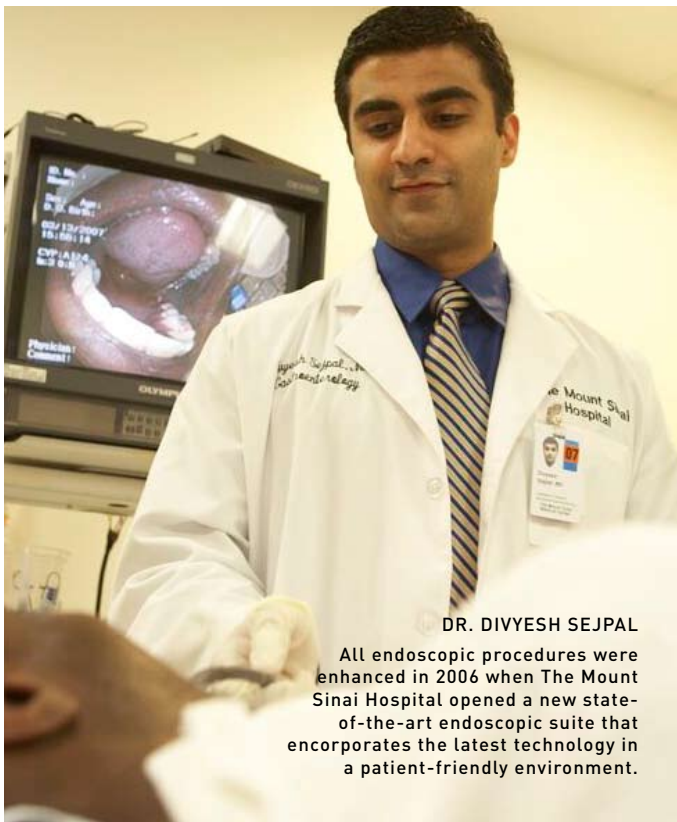
In 2005, he published a groundbreaking study⁵ that is changing the way investigators think about the intestinal immune system. He and his colleagues developed a novel approach that depended on careful microsurgery of mouse intestine. Their findings contradicted previous studies that had identified a specific group of mucosal lymph

²J Natl Med Assoc. 2005;97:1361-8.

³Clin Gastroenterol Hepatol. 2007 Jan;5(1):111-7.

⁴Gastroenterology. 2006;130:1696-706.

⁵J Clin Invest. 2005;115:2234-43.



DR. DIVYESH SEJPAL

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DR. STEVEN ITZKOWITZ is developing a stool-based screening test for colon cancer that has 88% sensitivity for colorectal cancer.

nodes and specialized intestinal epithelial cells as essential to the ability of the intestines to remain immunologically tolerant to the high load of food and bacterial antigens that sweep across their surface. By pinpointing other cells as having a role in this process, the study opened new avenues of investigation.

Training the Experts

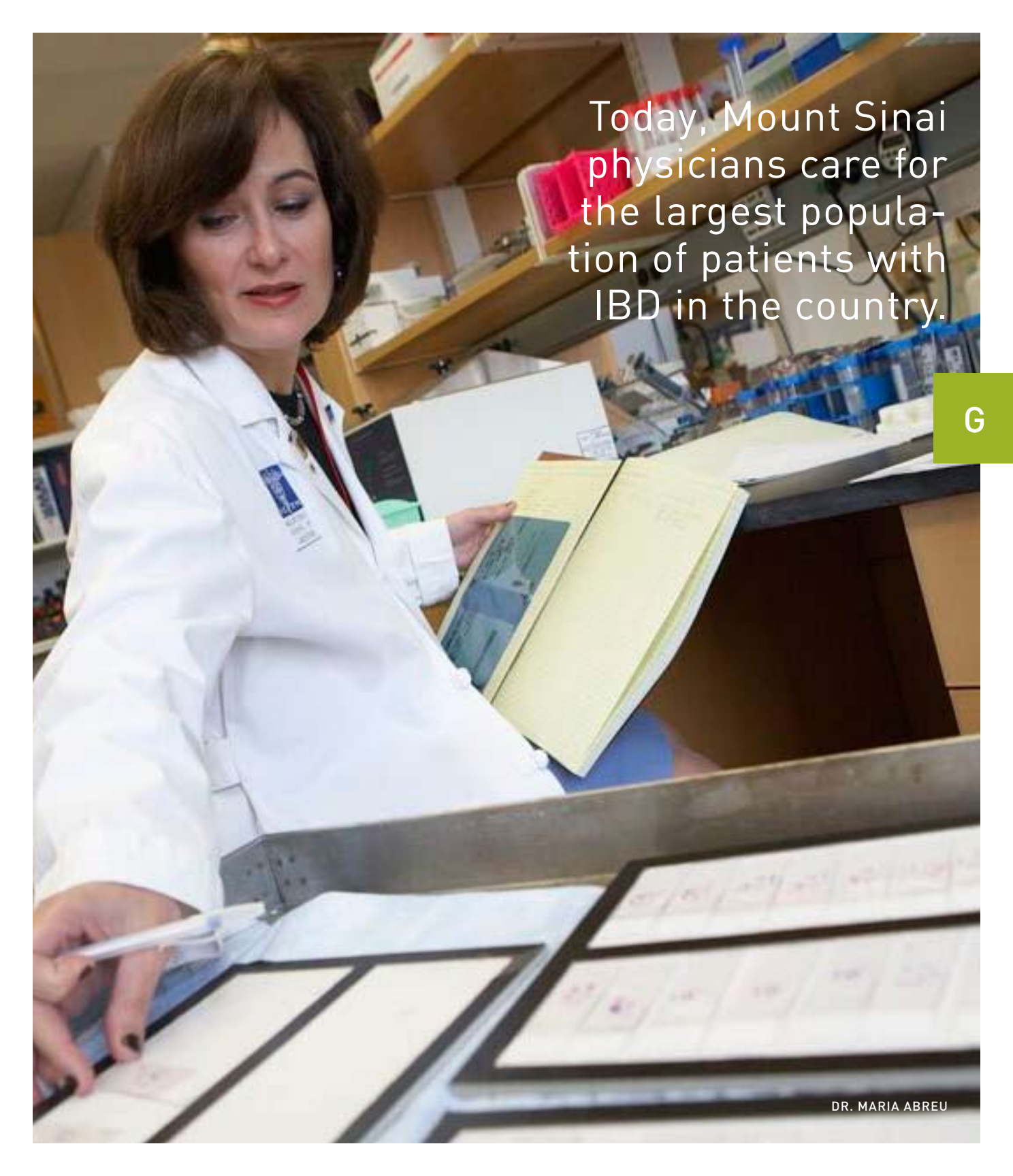
THE NATIONAL INSTITUTES OF HEALTH HAS BEEN FUNDING FELLOWSHIP TRAINING IN GASTROENTEROLOGY AT MOUNT SINAI SINCE 1958.

Under the joint leadership of Dr. Itzkowitz, MD, and Scott Friedman, MD, Chief of the Division of Liver Diseases, the Program receives over 330 applications a year for the four positions.

Many of the fellows accepted into the program already possess extensive research experience, but they come to Mount Sinai to avail themselves of the training needed to become leaders in the field.

Some of the most prestigious awards in the field are earned by Division fellows, including the American Gastroenterology Association/Foundation for Digestive Health and Nutrition Research Scholar Award and the Ruth L. Kirschstein National Research Service Award from NIH.

Gastroenterologists from all over the world come to Mount Sinai to learn about the latest advances in care for gastrointestinal disorders. For example, the Mount Sinai Inflammatory Bowel Disease Consultant's Course, held in 2005 and 2006 and co-directed by Asher Kornbluth, MD, Associate Clinical Professor, and Dr. Abreu, drew over 200 specialists to discuss critical issues relating to the treatment of IBD patients in their practices.



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