PENN GASTROENTEROLOGY

LEADING THE WAY

A LEGACY OF GASTROENTEROLOGY at the University of Pennsylvania goes back to 1803 when medical student John Richardson Young submitted his thesis, the first American attempt to study experimentally the chemistry of food and nutrition. Ten years later Philip Syng Physick, MD pioneered the use of the stomach pump, washing out the stomachs (and saving one) of twin 3-year-olds whose mother overdosed them on laudanum.

THE 20TH CENTURY USHERED IN THE MODERN AGE of gastroenterology. Following the landmark Flexner Report on medical education and lessons learned on the World War I battlefield, medical institutions geared up for specialty training. Penn's plan for a Graduate School of Medicine, conceived before the war, came to fruition afterward, along with the Graduate Hospital. At the Hospital of the University of Pennsylvania (HUP) and Graduate Hospital, Penn GI led the way in education, research and clinical care by the mid-1920s.

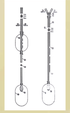
PENN INNOVATIONS HAVE CONTRIBUTED SIGNIFICANTLY to the specialty along the way. Of no less importance are dedicated faculty members who have mentored generations of gastroenterologists. By the 1970s all the chiefs of GI in Pennsylvania's leading medical centers had trained at Penn! Since the late 1990s NIH-funded research and clinical programs have flourished with centers for GI cancer, IBD, viral hepatitis, liver transplantation, interventional endoscopy, esophagology and swallowing, neuroendocrine tumors and GI epidemiology. And in 1997, Penn became one of only 16 funded major NIH GI/Liver Centers in the United States.

MID-1920s
ACADEMIC FOCUS

HUP, 34th and Spruce Streets, 1920s.
University of Pennsylvania Archives

Penn establishes two of the earliest academic medical divisions devoted exclusively to gastroenterology at the Hospital of the University of Pennsylvania (HUP), headed by T. Grier Miller, MD (M 1911), and at the Graduate Hospital, headed by Henry L. Bockus, MD.

1934
TUBE OPENS WINDOW TO THE INTESTINE



Longitudinal sections of double-lumened rubber tube (right) and of double-lumened tube with single-lumened tube attached (left).

T. Grier Miller, MD, first chief of the Gastrointestinal Section of the Medical Clinic of the Hospital of the University of Pennsylvania. Miller's work includes contributions to the management of gastrointestinal hemorrhage.

Drs. T. Grier Miller and W. Osler Abbott introduce the Miller-Abbott tube for intestinal decompression. The tube enables Miller, Abbott and W.G. Carr, MD to publish a series of classic papers on intubation studies of the small intestine. This work receives the First Award of the Radiologic Society of North America, the Gold Medal of the American Roentgen Ray Society, and the Special Certificate of Honor of the American Medical Association.

1945
THE ABC'S OF HEPATITIS

Joseph Stokes, Jr., MD. After World War II, Stokes, a specialist in infectious diseases of children, expands research at the Children's Hospital of Philadelphia, helps organize a full-time pediatric surgical service and organizes the Philadelphia Serum Exchange.
University of Pennsylvania Archives

John R. Neefe, MD.

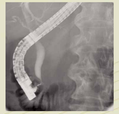
Drs. Joseph Stokes, Jr. (M 1920) and John R. Neefe (M 1940) recognize clinically two types of hepatitis in their patients decades before the viruses are identified as types B and C in 1965 and 1989, respectively. Stokes and Neefe also report that epidemic icteric hepatitis can be prevented or attenuated by the parenteral administration of human serum gamma globulin. In 1964 the US military designs a prophylaxis gamma globulin program to protect all military personnel in Asia.

1963
PENN GI INFUSED WITH BASIC SCIENCE

Frank P. Brooks, MD, Chief of Gastroenterology (1962-1975) and Professor of Medicine and Physiology.

Frank P. Brooks, MD (M 1943), a pioneering GI physiologist, establishes the NIH-funded Penn Training Program in Gastrointestinal Sciences, recognizing the importance of cellular and molecular biology in studying the digestive sciences. Brooks makes his greatest contributions in the areas of pancreatic physiology and motility, and central nervous system control of gastric function.

1971
SCOPING OUT GI AILMENTS



ERCP fluoroscopic image.

William Long, MD introduces ERCP (endoscopic retrograde cholangiopancreatography) to the Philadelphia region. By 1976 he becomes the first physician in the city to show that ERCP can remove and not just visualize gallstones in the bile duct. Long performs the procedure at the Hospital of the University of Pennsylvania, Philadelphia General Hospital and Graduate Hospital.

1993
INTRODUCING ENDOSCOPIC ULTRASOUND

EUS guided fine-needle aspiration of a lesion.

Drs. Gregory Ginsberg and Michael Kochman develop the region's first comprehensive endoscopic ultrasound (EUS) and EUS guided biopsy program.

2007
BUILDING BRIDGES FOR ADOLESCENT GI PATIENTS

The Joint CHOP-Penn Center for Digestive, Liver and Pancreatic Medicine is established, continuing collaboration between Penn GI and CHOP GI that goes back to the 1980s. The main focus of the Joint Center is transitional medicine, helping adolescents with GI disorders step from pediatric to adult care.

2011
PENN GASTROENTEROLOGIST HEADS ASGE

Gregory G. Ginsberg, MD.

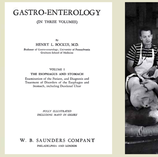
Gregory G. Ginsberg, MD is elected President of the American Society for Gastrointestinal Endoscopy, becoming the first Philadelphia GI physician to hold this prestigious post.

1933
A CASE FOR VITAMIN B

Katherine O'Shea Elsom, MD treating a patient, 1948.

As a Penn medical intern, Katherine O'Shea Elsom, MD (M 1930) begins the modern study of vitamin B deficiency in America at Philadelphia General Hospital (PGH) when she correctly deduces that a patient showing signs of pernicious anemia in fact suffers from vitamin B deficiency. At PGH and with the Gastrointestinal Section at HUP, Elsom investigates the effects of nutritional factors on the intestine and the control of infection.

1943
BOCKUS BOOK GOES TO PRESS



GASTRO-ENTEROLOGY
(IN THREE VOLUMES)
BY
HENRY L. BOCKUS, M.D.
Professor of Gastroenterology, University of Pennsylvania
Attending Physician of Medicine
VOLUME I
THE ESOPHAGUS AND STOMACH
Including Diseases of the Esophagus and Stomach and Disorders of the Esophagus and Stomach, Including Functional Tests
FULLY ILLUSTRATED
THIRD EDITION, REVISED AND ENLARGED
W. B. SAUNDERS COMPANY
PHILADELPHIA AND LONDON

Title page, first edition of *Gastro-Enterology*.
Hot Pot Library, University of Pennsylvania Archives

Henry L. Bockus, MD examining a Laotian patient, 1962. Bockus chaired the board of directory of MEDICO, an organization devoted to bringing medicine to underdeveloped areas.
University of Pennsylvania Archives

Henry L. Bockus, MD publishes the first edition of a three-volume study, *Gastro-Enterology*, a seminal textbook (5th edition published 1995). Starting at the Graduate Hospital in 1921, Bockus contributed to the training and education of several hundred physicians around the globe. In 1958, former students and residents formed the Bockus International Society of Gastroenterology to honor his contributions to the field.

1949
DUMPING SYNDROME UNRAVELED

Thomas E. Machella, MD

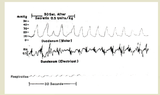
Thomas Emery Machella, MD (M 1935) recognizes and proves that the dumping syndrome is related to the entrance of hyperosmotic fluids into the small bowel. In 1953, Machella contributes to the literature on laboratory procedures in the diagnosis of pancreatic diseases.

1970
TAKING ON CROHN'S DISEASE

Table showing the best patient response to prednisone for the treatment of Crohn's disease.
Summers et al., Gastroenterology, Vol. 75 No.4, Part 2, October 1979

Julius Deren, MD serves as principal investigator for the Division of Gastroenterology's clinical trials in the NIH-funded National Cooperative Crohn's Disease Study. Penn is one of 14 medical centers whose clinical results contribute to the papers published for the study.

1969
ADVANCES IN ESOPHAGEAL MOTILITY



Myotonic/dry and pressure record obtained from the duodenum in a normal subject after intravenous injection of secretin (0.5 U per kilogram).

Sidney Cohen, MD pioneers esophageal motility studies in Philadelphia. He develops devices consisting of small tubes with pressure sensors that measure electrophysiology and motility of the esophagus and the entire intestinal tract. This work has application toward preventing some of the complications from scleroderma and achalasia, as well as treating the diseases.

1970s-1980s
DECADES OF PROGRESS

Sidney Cohen, MD, Chief of Gastroenterology (1973-1986)

These decades witness advances in research and clinical care in esophagology and GI motility. Penn's training of gastroenterologists increases.

1997-1998
DIVISION GROWS

Anil K. Rustgi, MD, Chief of Gastroenterology (1998-present)

Penn Presbyterian Medical Center and Penn Radnor Medicine are integrated into Penn GI.

2006
PREEMINENT GI JOURNAL ANCHORED AT PENN

Gastroenterology, July 2006.

Editorship of *Gastroenterology*, flagship journal in the field, starts a succession of years at Penn, edited by Anil K. Rustgi, MD, Division Chief and T. Grier Miller, Professor of Medicine. Numerous Penn faculty are contributing editors.

CONTINUING EXCELLENCE

Penn GI has contributed regionally and nationally renowned advances in liver diseases and liver transplantation (K. Raj Reddy, MD, Director), inflammatory bowel diseases (Gary Lichtenstein, MD, Director), esophagology and swallowing (Drs. David Metz and Gary Falk, Co-Directors), interventional endoscopy (Drs. Gregory G. Ginsberg and Michael Kochman), and other areas. NIH funding has grown substantially through new and interdisciplinary grants, prestigious academic honors have been bestowed upon GI faculty and fellows, and the presence of women and underrepresented minorities has increased in Penn Gastroenterology.