Mission Statement

The ACG Institute’s primary mission is to advance the field of clinical gastroenterology through education and research. Consistent with that mission, the ACG Institute for Clinical Research & Education serves as a forum in which to build on the goals of the College. The Institute promotes research in clinical gastroenterology, educates physicians and the public, and provides resources to support the future needs of clinical gastroenterology, GI patients, as well as young clinical investigators who as they develop careers in academic gastroenterology, enrich knowledge and treatments in digestive diseases.
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About The Institute

“The ACG Institute aims to meet the educational needs of clinical GI practitioners and other physicians with an interest in GI disease through its varied education offerings and through its support for clinical GI research and career development.”

- Edgar Achkar, MD, MACG | ACG Institute Director
INSTITUTE LEADERSHIP
2008-2009 BOARD OF DIRECTORS

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Christina M. Surawicz, MD, MACG
Bradley C. Stillman, Esq. | ACG Executive Director

Deputy Director, ACG Institute
Anne-Louise B. Oliphant
The American College of Gastroenterology exists to encourage interest and to advance knowledge about digestive health among physicians and the public. Within this broad landscape, the ACG Institute has assumed an increasingly important place in the life of the College. The ACG Institute’s distinct mission is to promote clinical research in gastroenterology, educate physicians and the public, and provide resources to support the future needs of clinical gastroenterology. The animating principle of the ACG Institute’s research and education programs is a deep commitment to improve patient care and to impact overall health outcomes for anyone who encounters a GI physician.

An essential element of the Institute’s mission is to help our members to become better gastroenterologists and clinical investigators. With that fundamental goal in mind, the Institute leadership takes a 360° view of the environment within which our member physicians learn, do research and practice medicine. The role of the Institute within the life of the College is to advance clinical research and education. In identifying priorities for the Institute, we aim to take a global perspective of clinical gastroenterology, and to incorporate the broad view of our specialty in everything we do.

In all that the ACG Institute works to accomplish on behalf of clinical GI practitioners, we try to anticipate those changes and challenges that most impact the practice of gastroenterology and work to meet them with innovation and creativity. As you review the activities and accomplishments of the Institute from 2008 through 2009, I invite you to consider the numerous examples of our global commitment to GI physicians. A commitment to improve their knowledge and skills, strengthen their clinical decision-making and efficiency, and to enhance the quality of care delivered to our patients.

Edgar Achkar, MD, MACG
ACG Institute Director
The American College of Gastroenterology is committed to improving the overall digestive health of the nation. Generous charitable donations to the ACG Institute Capital Campaign support crucial patient and physician education initiatives, and help to underwrite the College’s clinical research grants and career development awards.

CAMPAIGN OBJECTIVES: IMPROVING PATIENT CARE THROUGH RESEARCH & EDUCATION

The American College of Gastroenterology is determined to assure long-term and dependable funding for innovative clinical research, initiatives to enable physicians to ensure their patients the best care, and increased support of patient and public information programs. Our members believe this investment will advance our knowledge of digestive health and push the boundaries of excellence in clinical practice to new levels.

ACG INSTITUTE CAPITAL CAMPAIGN: WHERE WE STAND

Since its inception in 1994, the ACG Institute’s mission has been to fund clinical research, develop patient education programs and provide ACG members with opportunities to achieve excellence in practice and improve patient communication.

The Capital Campaign constitutes the single most ambitious undertaking by ACG in its recent history, and enjoys widespread recognition among our members, as well as high visibility at the College’s scientific meetings and in communications to ACG members, the media, and the public.

With over $17 million in pledges as of September, 2009, the Campaign has been an outstanding success. Launched in 2002, the original goal of $12 million was surpassed several years ago, reflecting the generous and visionary support of ACG members and contributors from the pharmaceutical and device sectors.

The College is grateful for the support of its members and partners from industry for their indispensable support for the mission of the ACG Institute. Virtually all of the major companies with a significant interest in the field of gastroenterology and digestive health have made generous commitments to support the mission of the ACG Institute and to assure its future viability. The College is proud of the remarkable success of the Campaign, with pledges from member physicians, group practices, and corporate partners exceeding $17 million – an unparalleled achievement.
Research and Education: Twin Pillars of the Institute

In the Capital Campaign, the College has been able to capitalize on the strengths of the Institute to develop a solid funding base to increase ACG’s commitment to support clinical GI research at even higher levels. This is why the Capital Campaign has been of such extreme importance – it has ensured a secure base of funding for the future growth of Institute-sponsored clinical research and education benefiting practicing GI clinicians.

Generous Campaign Supporters from Industry

The College has exceeded every expectation for the ACG Institute Capital Campaign. The Institute has attracted major support from companies without whose demonstrated vision and generosity this success would not have been possible. The College has worked to ensure that our members and the broader GI community recognize their leadership and generosity.

The College recognizes with great thanks the contributions of:

- AstraZeneca, LLP
- Centocor, Inc.
- TAP Pharmaceutical Products, Inc.
- Abbott Laboratories
- Boston Scientific
- Procter & Gamble
- Roche Laboratories, Inc.
- Salix Pharmaceuticals, Inc.
- Olympus America, Inc.
- Prometheus Therapeutics & Diagnostics
- Shire
- ConMed Endoscopic Technologies
- Given Imaging
**CAPITAL CAMPAIGN DONOR LIST**

The College is grateful to the individual physicians whose generous ongoing support is essential to this ambitious undertaking and to those companies whose dedication to excellence in clinical gastroenterology is making such a difference in the Campaign’s remarkable success. This list includes gifts over $1,000 as of September 28, 2009.

**Corporate Gifts**

**Institute Founder**
- AstraZeneca, LLP
- Centocor, Inc.
- TAP Pharmaceutical Products, Inc.

**Leadership Circle**
- Abbott Laboratories
- Boston Scientific
- Procter & Gamble
- Roche Laboratories, Inc.
- Salix Pharmaceuticals

**Platinum Benefactor**
- Olympus America, Inc.
- Prometheus Therapeutics & Diagnostics

**Silver Benefactor**
- ConMed Endoscopic Technologies
- Given Imaging

**Named Gifts**
- Virginia Gastroenterological Society and Old Dominion Society of Gastroenterology Nurses and Associates: Emily Couric Annual Lecture
- Dr. & Mrs. J. Edward Berk: Berk/Fise Clinical Achievement Award
- Meretek Diagnostics, Inc. & Otsuka Pharmaceutical Co., Ltd., in honor of David Y. Graham, MD, MACG

**Major Gift $25,000 to $99,999**
- Edgar Achkar, MD, MACG
- Luis A. Balart, MD, MACG
- Dr. & Mrs. Lawrence J. Brandt
- William D. & Elizabeth Carey
- Dr. & Mrs. Delbert L. Chumley
- Dr. & Mrs. Jack A. Di Palma
- Thomas F. & Mary Ellen R. Fise
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- Douglas K. Rex, MD, FACG
- Dr. & Mrs. Joel E. Richter
- Barbara & William Rosenthal
- Shodeen Family Foundation
- Texas State Society for Gastroenterology and Endoscopy

**Sponsor $10,000-$24,999 (continued)**
- Sarkis J. Chobanian, MD, FACG
- Juan R. Colon Pagan, MD, MACG
- Mary Courim in honor of Dr. Sheldon Taub
- Dr. & Mrs. Ira L. Flax
- Amy E. Foxx-Orenstein, DO, FACG
- David Y. Graham, MD, MACG
- John F. Gray, MD, FACG
- Philip O. Katz, MD, FACG
- Seymour Katz, MD, MACG
- Peter R. McNally, DO, FACG
- Jeffrey A. Murray, MD, FACG
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- Harry E. Sarles, Jr., MD, FACG
- Marvin M. Schuster, MD, MACG
- Scott M. Tenner, MD, FACG
- Col. Roy K.H. Wong, MD, FACG

**Benefactor $5,000 to $9,999**
- James L. Achord, MD, MACG
- Harriet & Arthur H. Aufses, Jr., MD, MACG
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- Carol A. Burke, MD, FACG
- Robert B. Cameron, MD, FACG
- Kiron M. Das, MD, PhD, FACG
- Wm. Kern Deschner, MD
- Kenneth R. DeVault, MD, FACG
- Atilia Ertan, MD, MACG
- Francis L. Farraye, MD, FACG
- Joseph F. Fitzgerald, MD, MACG
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- Marc Kudisch, MD
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- Christina Surawicz, MD, MACG
- Albert C. Svoboda, Jr., MD, MACG
- Jerome D. Waye, MD, MACG
- Rowen K. Zetterman, MD, MACG

**Group Practice Gift of $100,000**
- Digestive Health Associates of Texas
  - Sindhu Abraham, MD
  - Eric Argao, MD
  - Adnan S. Badr, MD
  - John H. Baker, MD
  - David Bass, MD, FACG
  - Brandon Bloch, MD
  - Sally Brooks, MD
  - Kendall Brown, MD
  - Balu Chandra, MD
  - Ravi Chittajallu, MD
  - Blair Conner, MD
  - Brian Cooley, MD, FACG
  - Octavio De La Pena, MD
  - Daniel C. DeMarco, MD, FACG
  - Son T. Do, MD
  - Boyce Estes, MD
  - David Ferney, MD
  - Stephen Ferney, MD, FACG
  - David Gifford, MD, FACG
  - Markus Goldschmiedt, MD
  - James Hakert, MD
  - J. Kent Hamilton, MD
  - Gerald Isbell, MD
  - Donald Johnson, MD, FACG
  - Bilal Khan, MD
  - Janardhan Konda, MD
  - Kurt Lange, MD
  - John Lee, MD
  - Jeffrey Linder, MD
  - Katherine Little, MD
  - Gordon Luk, MD, FACG
  - Randal Macurak, MD, FACG
  - David Magee, MD
  - Damien Mallat, MD
  - Mark Miller, MD
  - Jeffrey Mills, DO, FACG
  - James J. Nackley, II, MD
  - Daniel Polter, MD
  - Anjaneya Puppala, MD, FACG
  - Thomas Rogoff, MD
  - Ruben Sandovol, MD
  - Harry Sarles, Jr., MD, FACG
  - Lawrence Schiller, MD, FACG
  - Armond Schwartz, MD
  - John Secor, MD
  - Paul Tarnasky, MD, FACG
  - Prasad Vallurupalli, MD, FACG
  - Narasimharao Vemula, MD, FACG
  - Howard Weiner, MD
  - Michael Weisberg, MD
  - Jeffrey Weinstein, MD
Group Practice Gift of $100,000
(continued)
Annette Whitney, MD
Leon Wolf, MD
Catherine Yaussy, MD
Walter Young, MD
Paul Zopolsky, MD, FACG

Group Practice Gift of $50,000
North Shore Gastroenterology and Endoscopy Center of Westlake, OH
Iqbal Ahmed, MD, FACG
Edmund Blades, MD
Carl de Haan, MD
Craig K. Harris, MD
James Harris, MD, FACG
Khaled Issa, MD
Michael Springer, MD
Robert F. Straub, MD
Mousab Tabbaa, MD
Luke Weber, MD

Gastroenterology Center of the Mid-South, Memphis, TN
Michael S. Dragutsky, MD, FACG
Daniel E. Griffin, MD, FACG
Alan D. Samuels, MD, FACG

Group Practice Gift of $25,000
Memphis Gastroenterology Group
Richard S. Aycock, MD
Edward L. Cattau, Jr., MD, FACG
Randall C. Frederick, MD
Terrance L. Jackson, MD
Michael J. Levinson, MD
Myron Lewis, MD, MACG
Bryan F. Thompson, MD
T. Carter Towne, MD
Lawrence D. Wruble, MD, FACG
Gary A. Wruble, MD

Gastroenterology Consultants of Louisville
Edward W. Adler, MD, FACG
Mitchell Kaplan, MD
Martin D. Mark, MD, FACG
Gerard V. Siciliano, MD, FACG

Gastroenterology Consultants of San Antonio
Michael K. Bay, MD, FACG
Delbert L. Chumley, MD, FACG
Fred H. Goldner, MD, FACG
Patrick A. Masters, MD, FACG
J. Thomas Swan, MD, FACG

Digestive & Liver Specialists of Houston
M. Tarek Al-Assi, MD
Ernst R. Dorsch, MD, FACG
Ira L. Flax, MD, FACG
Robert A. Herman, MD, FACG
Martin Mauk, MD

Alaska Digestive Center
Ronald J. Boisen, MD, FACG
Richard M. Farleigh, MD, FACG
Daryl M. McClendon, MD
Brian F. Sweeney, Sr., MD
Brian F. Sweeney, Jr., MD

Group Practice Gift of $25,000
Digestive Specialists, Inc. of Kettering, OH
Salma Akram, MD
Christopher J. Barde, MD
Malay Dey, MD
Harold Fishman, MD
Ramesh K. Gandhi, MD, FACG
Richard Houston, MD
Rajkamal Jit, MD
David M. Novick, MD
Teressa J. Patrick, MD
Narayan S. Peddanna, MD
Marios C. Pouagare, MD
Jigna Thakore, MD
Bikram Verma-Ansil, MD

Alphabetical listing of institutions, physicians, and contributors begins on the next page.
ACG INSTITUTE LEADERSHIP INITIATIVE

The ACG Institute Leadership Initiative was introduced in 2008. The goal of this innovative program is to develop opportunities for current and future leaders within the College and clinical gastroenterology in general to obtain important leadership training and skills development. The primary objective is for ACG’s physician leaders to become stronger participants in the world of clinical gastroenterology – and stronger contributors to the life of the College.

One of the cornerstones of this larger Initiative will be the ACG/Salix Leadership Training Award. The ACG Institute has identified established and emerging leaders within the College who have been invited to take multi-day executive leadership training through one of the major executive education programs at top U.S. business schools, including Northwestern University, University of Pennsylvania, Harvard University and others.

The College appreciates the support of Salix and its corporate leadership, and shares their belief that an investment in individual physician leaders is an investment in the specialty of gastroenterology with a potential to enhance not only the role our leaders play in the College but ultimately the many roles they play in their organizations, their communities, and our world.

ABOUT THE ACG/SALIX LEADERSHIP TRAINING AWARD

Because ACG believes that strengthening leadership skills among the physician volunteers whose contributions of time and talent are the fuel that runs the work of the College, the Institute identified several programs from those offered by the nation’s business schools which will be appropriate to cultivate and enhance the leadership skills of the awardees, and enhance their contributions to the College.

The College will work with each award winner to identify an appropriate leadership program during the year in which the award is given. The Awardees will provide a written report to the ACG leadership about the experience. Awardees and Salix will be recognized at the ACG Annual Meeting and Postgraduate Course for the year in which the award is given.
Jean-Paul Achkar, MD, FACP
Chair, ACG Educational Affairs Committee
Staff Physician, Division of Digestive Diseases
The Cleveland Clinic Foundation

Carol A. Burke, MD, FACP
ACG Trustee, Past Chair, ACG Educational Affairs Committee
Director, Center for Colon Polyps & Cancer
The Cleveland Clinic Foundation

Cmdr. Brooks D. Cash, MD, FACP
Chair, ACG Public Relations Committee
Director, Colon Health Initiative
National Naval Medical Center
Integrated Chief of Medicine
Walter Reed National
Military Medical Center

Lin Chang, MD
Center for Neurobiology of Stress
UCLA Division of Digestive Diseases

William D. Chey, MD, FACP
Incoming Co-Editor, American Journal of Gastroenterology
Professor of Medicine, Director, GI Physiology Lab
University of Michigan

Delbert L. Chumley, MD, FACP
ACG Vice President
Gastroenterology Consultants of San Antonio

Sunanda V. Kane, MD, FACP
ACG Trustee, Past Chair, Women in GI Committee Associate
Professor of Medicine
Mayo Clinic

Philip O. Katz, MD, FACP
ACG President-Elect
Chair, Department of Gastroenterology
Albert Einstein Medical Center

Samir A. Shah, MD, FACP
Chair, ACG Board of Governors
Clinical Associate Professor of Medicine
Warren Alpert School of Medicine
Brown University

Brennan M. Spiegel, MD, FACP
ACG Research Committee, ACG Task Force on IBS
Assistant Professor of Medicine
VA Greater Los Angeles Healthcare System
David Geffen School of Medicine at UCLA

Anne C. Travis, MD
Chair, ACG Women in GI Committee
Associate Director GI Fellowship Program
Brigham and Women’s Hospital

Ronald J. Vender, MD, FACP
ACG Treasurer
Chief Medical Officer, Yale Medical Group
Yale University School of Medicine

ACG Leaders Who Have Accepted the Salix Leadership Training Award
“Through the ACG Institute, we work toward better understanding of digestive health, toward improving the treatment and management of digestive disease, and most importantly, we cultivate the next generation of academically-committed clinical researchers whose knowledge and skills will strengthen the future of gastroenterology.”

- Eamonn M.M. Quigley, MD, FACG | ACG President 2008-2009
Clinical gastroenterology research is the key to identifying breakthroughs that will make a difference in patient care. With charitable support from the Capital Campaign, the ACG institute invests in promising clinical investigators tackling some of the most important challenges in the field of gastroenterology. An indirect, but perhaps more long lasting, effect is that supporting clinical research feeds the pipeline to our specialty by attracting bright young individuals who are determined to be not only good physicians but also discriminating clinical researchers.

Milestones & Measurements: ACG Support for Clinical GI Research

Through its support for clinical GI research, the Institute has achieved great visibility in the gastrointestinal community and has made an impact on the careers of many talented GI investigators.

- Founded in 1994, the Institute has provided funding to 456 investigators for research directly relating to the clinical gastrointestinal practice.

- With the announcement of 2009 research awards, the College surpassed the $10 million mark for support of clinical research.

- Grant support from the Institute for 2008 of $812,959 included three Junior Faculty Development Grants and 17 Clinical Research Awards.

- In 2009, the ACG Institute received almost 100 excellent proposals for support of clinical research in gastroenterology and career development.

- The Institute invested $962,900 in clinical research in 2009, including four Junior Faculty Development Grants of $150,000 each to support career development.

Commitment to Clinical GI Research and Career Development

The College, under the auspices of the ACG Institute for Clinical Research & Education, has invested over $10 million in support of clinical research grants and career development awards over the years. This major investment in the careers and talents of clinical investigators furthers ACG’s goal to foster clinical breakthroughs in gastroenterology and hepatology.

By supporting research that promises to improve patient care and strengthen practitioners’ capabilities, the College is supporting the future of clinical gastroenterology.
The ACG Research Committee is responsible for the review of grant applications and the ACG Board of Trustees votes upon its recommendations. The outgoing Research Chair is Nicholas J. Shaheen, MD, MPH, FACG and incoming Chair is Bret A. Lashner, MD, FACG.

**Track Record of Success**

The College is proud of the successful track record of its funded investigators in publishing their work, particularly in *The American Journal of Gastroenterology*, and presenting their findings at the ACG Annual Scientific Meeting. Grantees of the Clinical Research Award are encouraged to submit their work to *The American Journal of Gastroenterology*, and are required to submit an abstract of their final project to ACG’s Annual Scientific Meeting. ACG career development awardees are also required to submit a mid-term report to the Research Committee.
ACG Junior Faculty Development Grant
Investing in the Careers of Promising Investigators

The Junior Faculty Development Grant is a two-year award designed to support a junior faculty member or mid-career clinical investigator of outstanding promise to establish an independent, productive career in gastroenterology or hepatology.

Dr. Shaheen has guided the Research Committee in its grant review responsibilities for the past three years. “We have picked great candidates for the Junior Faculty award over the years, and are proud of their accomplishments and of the Institute’s support for their research careers,” he commented.

ACG Junior Faculty Development Grants

2008

Jasmohan Singh Bajaj, MD, MBBS, MS
Virginia Commonwealth University
The Natural History of Minimal Hepatic Encephalopathy and its Effect on Psychosocial Outcomes

Alphonso Brown, MD, MS Clin. Epi.
Beth Israel Deaconess Medical Center, Harvard Medical School
The Role of Angiopoietin-2 in the Development and the Severity of Acute Pancreatitis

Evan Dellon, MD
University of North Carolina, Chapel Hill
Biomarkers of Eosinophil Activation and Inflammation for Diagnosis of Eosinophilic Esophagitis

2009

Curtis K. Argo, MD, MS
University of Virginia
Histological and Biological Impact of Pravastatin in Patients with NAFLD

Ajay Bansal, MBBS
Veterans Affairs Medical Center, Kansas City
Quantitative Variability of Molecular Biomarkers in Barrett’s Esophagus

Ganapathy A. Prasad, MD
Mayo Clinic Foundation
Epidemiology of Barrett’s Esophagus: A Population-based Study

Bechien U. Wu, MD, MPH
Brigham & Women’s Hospital
Early Goal Directed Fluid Resuscitation in Acute Pancreatitis: A Randomized Controlled Trial
According to Institute Director Dr. Edgar Achkar, “This career development award is considered the jewel in the crown of the ACG Institute’s research program because of the outstanding track record of funded investigators and particularly their contributions in terms of publications, presentations at the ACG Annual Meeting, and the remarkable success in securing prestigious NIH funding.”

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>Carlo DiLorenzo, MD</td>
<td>Children’s Hospital of Columbus</td>
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<tr>
<td></td>
<td>G. Richard Locke III, MD, FACP</td>
<td>Mayo Clinic Foundation</td>
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<tr>
<td>1998</td>
<td>Sapna Syngal, MD, MPH, FACP</td>
<td>Dana Farber Cancer Institute</td>
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<td></td>
<td>Zobair Younossi, MD, MPH, FACP</td>
<td>INOVA Fairfax Center for Liver Diseases</td>
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<td>1999</td>
<td>Naga P. Chalasani, MD, FACP</td>
<td>Indiana University</td>
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<tr>
<td></td>
<td>Nicholas Shaheen, MD, MPH, FACP</td>
<td>University of North Carolina, Chapel Hill</td>
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<tr>
<td>2000</td>
<td>Yvonne Romero, MD, FACP</td>
<td>Mayo Clinic Foundation</td>
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<td></td>
<td>John Inadomi, MD, FACP</td>
<td>University of California at San Francisco</td>
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<tr>
<td>2001</td>
<td>Chinyu Su, MD</td>
<td>University of Pennsylvania</td>
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<tr>
<td>2002</td>
<td>Deborah Fisher, MD</td>
<td>Duke University</td>
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<td></td>
<td>Kirti Shetty, MD</td>
<td>Georgetown University Medical Center</td>
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<td>2003</td>
<td>Bo Shen, MD, FACP</td>
<td>The Cleveland Clinic Foundation</td>
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<td>Yuri Ann Saito, MD, MPH</td>
<td>Mayo Clinic Foundation</td>
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<td></td>
<td>Yehuda Ringel, MD</td>
<td>University of North Carolina, Chapel Hill</td>
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<td></td>
<td>George Ioannou, MD</td>
<td>University of Washington</td>
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<tr>
<td>2004</td>
<td>Thomas A. Ullman, MD, FACP</td>
<td>Mt. Sinai School of Medicine</td>
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<td></td>
<td>Elena M. Stoffel, MD</td>
<td>Brigham &amp; Women’s Hospital</td>
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<td>2005</td>
<td>Shahnaz Sultan, MD</td>
<td>University of Florida</td>
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<tr>
<td>2006</td>
<td>Albena D. Halpert, MD</td>
<td>Boston Medical Center</td>
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<td></td>
<td>Julie L. Polson, MD</td>
<td>University of Texas, Southwestern</td>
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<td></td>
<td>Claudia O. Zein, MD</td>
<td>Case Western/Cleveland VA Medical Center</td>
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<tr>
<td>2007</td>
<td>Brian W. Behm, MD</td>
<td>University of Virginia</td>
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<tr>
<td></td>
<td>Gregory S. Sayuk, MD</td>
<td>Washington University St. Louis</td>
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<tr>
<td></td>
<td>Marcelo F. Vela, MD</td>
<td>Medical University of South Carolina</td>
</tr>
</tbody>
</table>
Each year, the College offers Clinical Research Awards of up to $35,000 for original clinical research. The mission of the ACG Clinical Research Awards program is to fund innovative research that is patient-care oriented. The Committee also considers proposals for pilot awards of up to $10,000 within this category.

### ACG Clinical Research Awards

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Institution</th>
<th>Project Title</th>
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<td>2008</td>
<td>Johane P. Allard, MD</td>
<td>The Toronto General Hospital</td>
<td>Alterations in the Hepatic and Erythrocytes’ Phospholipids in Patients with Non-Alcoholic Fatty Liver Disease or Chronic Hepatitis C Infection</td>
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<td></td>
<td>Farah Bahrani-Mougeot, PhD</td>
<td>Carolinas Medical Center</td>
<td>Determination of the Microbial Etiology of Spontaneous Bacterial Peritonitis: A Molecular Approach</td>
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<td>Eric Benchimol, MD</td>
<td>The Hospital for Sick Children</td>
<td>The Incidence and Outcomes of Childhood Onset Inflammatory Bowel Disease in Ontario, Canada</td>
</tr>
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<td></td>
<td>Marc Bissonnette, MD</td>
<td>The University of Chicago</td>
<td>Role of ErbB Signals in Malignant Transformation of Barrett’s Esophagus</td>
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<td></td>
<td>Rok Seon Choung, MD</td>
<td>Mayo Clinic</td>
<td>Incidence, Prevalence and Costs of Diabetic Gastroparesis 1995 to 2006: A U.S. Population-Based Study</td>
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<td>Jeffrey Cloud, MD, MPH</td>
<td>University of Virginia</td>
<td>Quantitative Variations of Fecal Flora in Recurrent Clostridium Difficile Associated Diarrhea</td>
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<td>Darwin Conwell, MD</td>
<td>Brigham and Women’s Hospital</td>
<td>Comparison of Magnetic Resonance Imaging of the Pancreas to Secretin Stimulated Pancreas Function Test in the Diagnosis of Chronic Pancreatitis</td>
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<td>Jessica Davila, PhD</td>
<td>Baylor College of Medicine</td>
<td>Process of Care and its Effect on Outcomes for Locally Advanced and Metastatic Pancreatic Cancer</td>
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<td>Kerry Dunbar, MD</td>
<td>Johns Hopkins University School of Medicine</td>
<td>Confocal Endomicroscopy for Evaluation of Gastroesophageal Reflux Disease</td>
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Kanwar Gill, MBBS
Mayo Clinic Jacksonville
*Minimally Invasive Detection of Lymphatic Micrometastases in Pancreatic Cancer*

Binu John, MD
The Cleveland Clinic Foundation
*The Role of Derangement in Creatine Metabolism in Skeletal Muscle Wasting in Liver Cirrhosis*

Benjamin Levitzky, MD
The Cleveland Clinic Foundation
*Propofol in Combination with Opioids and Benzodiazepines vs. Opioids and Benzodiazepines Alone Titrated to Moderate Sedation for Esophagogastroduodenoscopy*

Rohit Makkar, MD
The Cleveland Clinic Foundation
*Psychological Factors in Irritable Pouch Syndrome and Other Pouch Disorders*

Francisco Marrero, MD
The Cleveland Clinic Foundation
*Does a Catheter Across the LES Obstruct the Flow of Liquids into the Stomach while Recumbent? If Yes, Can This be Prevented by Either a Smaller Bolus Size or Posture Change?*

Michael Rosen, MD
Vanderbilt University
*The Role of IL-13 and NKT Cells in New-Onset Pediatric Ulcerative Colitis*

Sameer Saini, MD, MSc
University of Michigan Health System
*Time Trends in Colonoscopy Quality in the United States between 2000 and 2006*

Stacie Vela, MD
Medical University of South Carolina
*Proteomic Analysis of Intraductal Papillary Mucinous Neoplasm Cyst Aspirate*
ACG CLINICAL RESEARCH AWARDS, continued

INNOVATIVE ORIGINAL RESEARCH ADVANCING GI PATIENT CARE

2009

Tasneem Ahmed, MD  
The Cleveland Clinic Foundation  
*Predictors of Post-Operative Recurrence After Ileocolic Resection for Crohn’s Disease*

Sumeet K. Asrani, MD  
Mayo Clinic College of Medicine  
*Epidemiology of Alcoholic Liver Disease: A Population Based Study*

Ashish Atreja, MD, MPH  
The Cleveland Clinic Foundation  
*Impact of Patient Reported Outcomes on Quality of Life and Disease in Crohn’s Disease: A Prospective Trial*

Lauren Bell, PhD  
Indiana University  
*Effect of Acute Hepatic CYP2E1 Inhibition on Hepatic Insulin in Adult Overweight/Adult Obese Healthy Volunteers*

Bruno Chumpitazi, MD  
Baylor College of Medicine  
*The Effect of a Low Fermentable Substrate Diet on Child Irritable Bowel Syndrome Symptoms*

Jonah B. Essers, MD  
Massachusetts General Hospital  
*A Genotype-Based Approach to Classifying Inflammatory Bowel Disease*

Tamas A. Gonda, MD  
Columbia University Medical Center  
*Global Methylation In Barrett’s Esophagus Before and After Endoscopic Radiofrequency Ablation*

Jennifer Guy, MD  
UC-San Francisco  
*Effectiveness of Surveillance for Hepatocellular Carcinoma in a Large Managed Care Organization*

Fasiha Kanwal, MD, MSHS  
Saint Louis University  
*Quality of Care in Patients with Cirrhosis*
David J. Kearney, MD
Seattle Institute for Biomedical and Clinical Research
Pyrosequencing to Identify Changes in Intestinal Microbiota Following a Stress-Reduction Course

Felix W. Leung, MD
Sepulveda Research Corporation-VA Greater Los Angeles Healthcare System
RCT Water Infusion vs. Air for Scheduled Unsedated Colonoscopy

Michael J. Levy, MD
Mayo Clinic College of Medicine
Prospective Randomized Trial of EUS Guided Celiac Ganglia Neurolysis Versus EUS Guided Celiac Plexus Neurolysis for Pancreatic Cancer Pain

Yuri A. Saito-Loftus, MD, MPH
Mayo Clinic College of Medicine
A Case-Control Family Study Evaluating the Role of Childhood Trauma in the Development of Irritable Bowel Syndrome

Marina Silveira, MD
Mayo Clinic College of Medicine
Modafinil in the Treatment of Fatigue in Patients with Primary Biliary Cirrhosis

Harminder Singh, MD
University of Manitoba
Biophosphonate Use and Risk of Colorectal Cancer: A Population-Based Study
ACG Clinical Research Grants
A Significant Engine of Original Research and Publication

The Institute is proud of the measurable impact its grant funding is having in clinical gastroenterology. To assess the effectiveness of the grant program, the ACG Institute commissioned an objective and thorough assessment of its overall investment in clinical research for the past 25 years. The ACG Institute is grateful to Dr. Nicholas Shaheen, Chair of the ACG Research Committee from 2007 to 2009, and to his colleagues Dr. Seth Crockett and Dr. Evan Dellon, all of the University of North Carolina at Chapel Hill, whose comprehensive review was published in May 2009 in *The American Journal of Gastroenterology* as “A 25-Year Analysis of the American College of Gastroenterology Research Grant Program: Factors Associated With Publication and Advancement in Academics.”

“Given the stated goals of our grant program – to fund innovative research that is patient-oriented and to assist promising clinical researchers to develop research careers that have a direct bearing on clinical gastrointestinal practice - these data demonstrate our success in meeting our goals, and document a vibrant, cost-effective, fruitful effort, of which all College members can be proud. As other funding opportunities for clinical investigators in gastroenterology shrink due to diminished resources, the College’s program continues to expand and to address a vital need in our field,” explained Dr. Shaheen.

### Highlights of the 25-Year Analysis of ACG’s Clinical Research Grants (Crockett, Shaheen & Dellon)

- ACG clinical research grants provide a significant engine of original research and publication.
- All subject areas within GI were substantially represented in the awards process.
- A high proportion of awardees published the results of their funded research and entered academics.
- A majority of clinical research awards translated into publication in journals with a substantial impact factor.
- Of those who received ACG research awards, 62 percent went on to academic careers, which is much higher than the national average for recent graduating fellows.
- Factors associated with publication and future academic career of the recipient include the size of grant, which may be a proxy for size and significance of study.
- A significant proportion of past ACG awardees have now achieved leadership positions within academic institutions, including a number of GI division chiefs and one dean of a School of Medicine.
INTRODUCTION
The American College of Gastroenterology (ACG) established a funding program for research in gastroenterology (GI) in 1983. The ACG funds individual clinical research awards as well as career development awards for junior faculty. Awards are distributed annually for clinical research in gastrointestinal
The American Journal of Gastroenterology (AGA) 2008 membership database by a competitive process similar to that used by the National Institutes of Health (NIH). Applicants must submit a detailed research grant proposal and awardees are selected on the basis of the quality, feasibility, and strength of their research proposals, academic backgrounds, and research environments.

The ACG funds clinical research awards up to a budget of $35,000, whereas junior faculty career awards are currently set at $75,000 per year for 2 years. In 2008, the ACG reported funding 17 clinical research proposals totaling approximately $363,000 in a variety of subject areas. In addition, career development awards were also distributed to three junior faculty members. The stated purpose of these grants is to support "innovative research" that is "patient-oriented" with "direct applicability to clinical care" (1) and to invest "in the careers of those individuals whose work in academic and clinical settings will define the specialty of GI in the new millennium" (2). Awardees are required to submit a final report of their research project within 18 months of receipt of funding.

Because it is currently unknown to what extent the provision of these awards meets the stated goals of the program, we sought to assess the yield of the grants with respect to publications, and to determine factors predictive of success. Specifically, we examined factors related to recipients ultimately publishing the results of their funded projects. We also assessed the proportion of past recipients remaining in the academic medicine.

METHODS

Subjects and variables

We used the ACG databases to identify all the individual project grant recipients and junior investigator awards from 1983 until 2008. This database also contained information about the award amount and the year of the original grant, the title of grant proposal, as well as the academic rank of the recipient, degree, gender, and institution at time of receipt of the grant. Using progress reports from the recipients and by searching PubMed, we then collected and verified data on publication status of the project results, field of study, number of Medline publications since award, current academic appointment, and leadership positions. Current academic appointment included instructor, assistant professor, associate professor, or full professor. Leadership positions were considered to be as follows: division chief; center director; fellowship program director; or other administrative role. Center director was defined by a title of "director" of a center of research or specialty patient care within the awardees current institution. Past dollar amounts were converted to 2008 dollars by assuming a 3% per year inflationary factor.

Search criteria

To determine the current employment position of each of the awardees, an initial search was performed on their last known location of employment using the ACG and American Gastroenterological Association (AGA) 2008 membership directories. If this was unsuccessful, a search was performed using a public search engine (www.google.com) to identify the website of their current place of employment. If the search engine yielded multiple or conflicting positions, or did not yield data, a phone call was placed to the last known location of employment to track the employment status of the individual. Data assessed included current academic title, leadership positions, fellowship dates, gender, and degrees held.

To assess the number of publications since award, a PubMed search of the MEDLINE-indexed literature (www.pubmed.gov) was performed for each awardee, using the last name and the first initial. GI-related publications between July of the award year and present were assessed; for recipients of multiple awards, publications from the date of the first award were used in the per-awardee analysis. For investigators with common names, searches were additionally performed with the middle initial (if available), full first name, and keywords (such as GI). A PubMed search with keywords from the grant title was also performed for each investigator to determine whether or not they had published based on their grant. A publication was deemed relevant if a paper was published with an identical or similar title as the grant, or the recipient reported a related publication in an interim or end-of-grant report to the ACG. All recipient-reported data were confirmed using PubMed. To allow for time to do the research (research grants are on a 12-month term, with faculty development grants on a 24-month term) as well as delays inherent in the publication process, a minimum of 24 months from the granting of the award to manuscript publication was required for inclusion in the publication metric. Therefore, only awards through 2006 are included in the final analyses.

Rank of the recipient institution in NIH research dollars was tabulated based on published data on institutional grants from the NIH Research Portfolio Online Reporting Tool (http://report.nih.gov). To further obtain an objective measure of the significance of the work, we assessed journal impact rank for all publications using the ISI Web of Knowledge (http://isiknowledge.com). Current NIH funding status was ascertained with the use of the Computer Retrieval of Information on Scientific Projects database (CRISP) (http://crisp.cit.nih.gov).

Statistical analysis

Statistical analysis was performed using Stata version 9 (StataCorp, College Station, TX). Routine descriptive statistics were initially performed. Bivariate analysis was conducted using Chi-square tests (or Fischer’s Exact test when appropriate) for comparisons between categorical variables. Comparisons between continuous variables were performed with Student's t-tests (means) or Wilcoxon rank-sum tests (medians). Analyses of publication metrics were performed on a per award basis, whereas analyses of academic status were performed on a per-awardee basis for the first award only. To evaluate predictors of publication and remaining in academics, multivariable analysis was performed with logistic regression using all covariates of interest in the models.
RESULTS

Award demographics
A total of 396 clinical research awards totaling $5,374,497 ($6,867,937 in 2008 dollars) were awarded in the 25-year time period between 1983 and 2008 to 341 awardees. For the period between 1983 and 2006 to which the analysis was restricted, a total of 368 individual research awards totaling $4,775,502 ($6,261,861 adjusted to 2008 dollars) were awarded to 264 individuals (Table 1). The mean award value was $13,000. Females represented 72 (20%) of awardees, and fellows in training received 125 awards (47%). Forty-eight investigators received multiple awards. The median NIH rank of the grantee’s institution was 39; however, this distribution was broad (interquartile range 18–66). The most commonly funded areas of research were endoscopy (22% of awards), motility/functional disorders (21%), and upper GI (including Helicobacter pylori, gastroesophageal reflux disease, gastric and esophageal cancer, and Barrett’s esophagus) (19%). Figure 1 displays the breakdown of awards by category.

Publication of funded research
Publication based on grant-funded research occurred in 255 of the awards (69%; Table 2). The mean time to publication was 2.7 years. The mean impact factor of the journal of publication was 6.7 (range 0.7–52.6). In the bivariate analysis, awards that led to publication had a higher mean value than those that did not ($13,700 vs. $11,400, P = 0.02). Pilot awards ($≤$10,000) were less likely to be translated into publications, although this did not reach statistical significance (P = 0.06). No other factors we assessed (e.g., degree, gender, NIH rank of home institution, or subject area) were significantly associated with publication (Table 3). In the multivariate analysis, higher award value was again associated with subsequent publication (odds ratio (OR) = 1.04, confidence interval (CI) = 1.01–1.08), and motility/functional topic was weakly associated with non-publication (OR = 0.42, CI = 0.18–0.99) (Table 5). Overall, the mean cost in grant dollars per published paper based on the research was $14,875.

Academic success of awardees
One hundred ninety-five of the awardees (62%) are currently in academic positions, including 61 full professors, 51 associate professors, and 46 assistant professors (Table 2). One former awardee is dean of a medical school, 20 are now GI division chiefs, 31 are center directors, and 2 are fellowship directors. The mean career publications and mean publications per year at the time of grant receipt, 1983–2006 (Figure 1) displays the breakdown of awards by category.

Table 1. Characteristics of Research Awards and awardees at the time of grant receipt, 1983–2006

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number or percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total awards, 1983–2006 (n)</td>
<td>368</td>
</tr>
<tr>
<td>Number of pilot grants awarded ($≤$10,000)</td>
<td>133</td>
</tr>
<tr>
<td>Total individual awardees (n)</td>
<td>313</td>
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<tr>
<td>Multiple awardees (n)</td>
<td>48</td>
</tr>
<tr>
<td>Mean award value ($ ± s.d., range)</td>
<td>13,000 ± 8,500 (1,000–35,000)</td>
</tr>
<tr>
<td>Median award value ($, IQR)</td>
<td>10,000 (6,400–18,000)</td>
</tr>
<tr>
<td>Total dollars awarded (original $ 2008 $)</td>
<td>4,775,502 (6,261,861)</td>
</tr>
<tr>
<td>Educational degree of awardees (n, %)</td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>306 (98)</td>
</tr>
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<td>Master’s</td>
<td>26 (8)</td>
</tr>
<tr>
<td>PhD</td>
<td>7 (2)</td>
</tr>
<tr>
<td>Fellow in training at time of award (n, %)</td>
<td></td>
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<td>Yes</td>
<td>125 (47)</td>
</tr>
<tr>
<td>No</td>
<td>140 (53)</td>
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<tr>
<td>Unknown</td>
<td>48</td>
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<tr>
<td>Gender (n, %)</td>
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<tr>
<td>Male</td>
<td>296 (80)</td>
</tr>
<tr>
<td>Female</td>
<td>72 (20)</td>
</tr>
<tr>
<td>Unknown</td>
<td>8</td>
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<tr>
<td>Mean NIH rank of institution (as.d., range)</td>
<td>60.0 ± 87.7 (1–707)</td>
</tr>
<tr>
<td>Median NIH rank of institution (IQR)</td>
<td>39 (18–66)</td>
</tr>
<tr>
<td>Research subject area (n, %)</td>
<td></td>
</tr>
<tr>
<td>Hepatology/liver transplantation</td>
<td>64 (17)</td>
</tr>
<tr>
<td>Motility/functional GI disorders</td>
<td>78 (21)</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>79 (22)</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>40 (11)</td>
</tr>
<tr>
<td>Upper GI (GERD, Barrett’s esophagitis or gastric cancer, Helicobacter pylori, ulcer disease)</td>
<td>71 (19)</td>
</tr>
<tr>
<td>Colorectal cancer/polyps</td>
<td>35 (10)</td>
</tr>
<tr>
<td>Pancreaticobiliary</td>
<td>30 (8)</td>
</tr>
<tr>
<td>Other*</td>
<td>27 (7)</td>
</tr>
</tbody>
</table>

GERD, gastroesophageal reflux disease; GI, gastroenterology; IQR, interquartile range; NIH, National Institutes of Health.
*One person with 5 awards, 4 with 3 awards, and 43 with 2 awards. Data presented on a per awardee basis; 29 grant recipients have multiple degrees. *Includes MPH, MSci, MMSc, MSHS, MS, MHS, MSPH, and MBA. *Examples of other topics include celiac disease, gender disparities and health services research, and pure basic science not relatable to one of the listed research subject areas.
less common (15 vs. 27%, \(P = 0.01\)). Compared with those who did not, those who stayed in academics had higher mean numbers of publications (44.7 vs. 12.6%, \(P < 0.01\)) and publications per year since award (4.3 vs. 1.1%, \(P < 0.01\)). In the multivariate analysis, receipt of multiple awards was associated with staying in academics (\(OR = 6.14, CI = 1.69 – 22.26\)), whereas fellow status at the time of award was negatively associated with the remaining in academics (\(OR = 0.15, CI = 0.06 – 0.36\)) (Table 5).

Junior investigator awards

The ACG also distributed 27 Junior Investigator Awards between 1997 and 2008 to 27 different recipients (see Table 6), totaling $3,000,000 ($3,398,004 in 2008 dollars). For the period between 1997 and 2006 to which the analysis was restricted, a total of 21 awards totaling $3,000,000 ($3,398,004 in 2008 dollars) were awarded to 21 individuals. Women represented 11/21 (52.4%) of Junior Investigator awardees. The mean NIH rank of the institution of recipient was 31.8, but the data were again widely dispersed (range 2 – 182). The most common area of research funded was hepatology/liver transplantation (33%), followed by motility/functional GI disorders (23%) (Figure 2). Publication resulted from 19/21 (90%) of the funded investigations, and 13/21 (70%) presented their research at the National ACG meeting. Full publication occurred in journals with a mean impact factor of 7.1. All but one awardee (20/21, 95%) have remained in academics, including 2 full professors, 4 associate professors, and 10 assistant professors. One former recipient is now a division chief, and six are center directors. One-third of recipients currently serve as principal investigators on grants funded by the NIH (7/21).

DISCUSSION

The goal of the grant-funding program established by the ACG is to foster, stimulate, and facilitate important research projects. Equally important is the subsequent publication of the findings of the funded research projects in peer-reviewed journals so as to disseminate the results of the...
awardees’ efforts to the larger community of gastroenterologists and the medical profession as a whole. Another goal of research grant programs (especially in the case of the career development junior faculty awards) is to help support trainees and young investigators in establishing careers in academic medicine, and thereby to encourage academic careers.

Table 3. Bivariate analysis of characteristics associated with publications

<table>
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<tr>
<th>Characteristic</th>
<th>Publication (n=255)</th>
<th>No publication (n=113)</th>
<th>P valuea</th>
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<tr>
<td>Mean award value ($± s.d.)</td>
<td>13,700±8,600</td>
<td>11,400±8,000</td>
<td>0.02</td>
</tr>
<tr>
<td>Pilot award ($&lt;10,000)</td>
<td>84 (33)</td>
<td>49 (43)</td>
<td>0.06</td>
</tr>
<tr>
<td>Educational degree of awardees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>251 (98)</td>
<td>110 (97)</td>
<td>0.48</td>
</tr>
<tr>
<td>Master’s</td>
<td>26 (10)</td>
<td>7 (6)</td>
<td>0.22</td>
</tr>
<tr>
<td>PhD</td>
<td>7 (3)</td>
<td>4 (4)</td>
<td>0.74</td>
</tr>
<tr>
<td>Fellow in training at time of grant (n, %)</td>
<td>88 (39)</td>
<td>45 (50)</td>
<td>0.09</td>
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<tr>
<td>Gender (n, %)</td>
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<td></td>
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<tr>
<td>Male</td>
<td>205 (80)</td>
<td>91 (81)</td>
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</tr>
<tr>
<td>Female</td>
<td>50 (20)</td>
<td>22 (19)</td>
<td></td>
</tr>
<tr>
<td>Mean NIH rank of institution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(± s.d.)</td>
<td>62.8±92.8</td>
<td>53.2±73.4</td>
<td>0.36</td>
</tr>
<tr>
<td>Median NIH rank of institution</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(IQR)</td>
<td>39 (18–67)</td>
<td>38 (18–65)</td>
<td>0.68</td>
</tr>
<tr>
<td>Research subject area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatology/liver transplantation</td>
<td>41 (16)</td>
<td>23 (21)</td>
<td>0.30</td>
</tr>
<tr>
<td>Motility/functional GI disorders</td>
<td>50 (20)</td>
<td>28 (25)</td>
<td>0.25</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>58 (23)</td>
<td>21 (19)</td>
<td>0.39</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>26 (10)</td>
<td>14 (13)</td>
<td>0.51</td>
</tr>
<tr>
<td>Upper GIa</td>
<td>49 (19)</td>
<td>22 (20)</td>
<td>0.92</td>
</tr>
<tr>
<td>Colorectal cancer/polyps</td>
<td>24 (9)</td>
<td>11 (10)</td>
<td>0.90</td>
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<tr>
<td>Pancreaticobiliary</td>
<td>22 (9)</td>
<td>8 (7)</td>
<td>0.63</td>
</tr>
<tr>
<td>Other</td>
<td>21 (8)</td>
<td>6 (5)</td>
<td>0.33</td>
</tr>
</tbody>
</table>

GI, gastroenterology; IQR, interquartile range; NIH, National Institutes of Health.

*a Data presented on a per award basis. b P value calculated with chi-square (or Fischer’s Exact test) for categorical variables and by t test for continuous variables. For median values, Wilcoxon rank-sum test was used. c Upper GI includes: GERD, Barrett’s, esophageal or gastric cancer, H. pylori, and peptic ulcer disease.

Table 4. Bivariate analysis of characteristics associated with remaining in academics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Academic (n=195)</th>
<th>Non-academic (n=112)</th>
<th>P b</th>
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<tbody>
<tr>
<td>Mean award value ($± s.d.)</td>
<td>13,700±8,750</td>
<td>10,030±5,950</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Pilot award ($≤10,000)</td>
<td>69 (35)</td>
<td>52 (46)</td>
<td>0.06</td>
</tr>
<tr>
<td>Educational degree of awardees</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>MD</td>
<td>191 (98)</td>
<td>109 (97)</td>
<td>0.55</td>
</tr>
<tr>
<td>Master’s</td>
<td>22 (11)</td>
<td>4 (4)</td>
<td>0.02</td>
</tr>
<tr>
<td>PhD</td>
<td>6 (3)</td>
<td>1 (1)</td>
<td>0.22</td>
</tr>
<tr>
<td>Fellow in training at time of grant (n, %)</td>
<td>56 (33)</td>
<td>68 (71)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Gender (n, %)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>152 (78)</td>
<td>97 (87)</td>
<td>0.06</td>
</tr>
<tr>
<td>Female</td>
<td>43 (22)</td>
<td>15 (13)</td>
<td></td>
</tr>
<tr>
<td>Mean NIH rank of institution</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(es.d.)</td>
<td>64.5±93.4</td>
<td>53.9±88.6</td>
<td>0.35</td>
</tr>
<tr>
<td>Median NIH rank of institution</td>
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<td></td>
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</tr>
<tr>
<td>(IQR)</td>
<td>39 (18–69)</td>
<td>37 (15–59)</td>
<td>0.24</td>
</tr>
<tr>
<td>Research subject area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatology/liver transplantation</td>
<td>36 (18)</td>
<td>17 (15)</td>
<td>0.48</td>
</tr>
<tr>
<td>Motility/functional GI disorders</td>
<td>38 (19)</td>
<td>25 (23)</td>
<td>0.53</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>47 (24)</td>
<td>18 (16)</td>
<td>0.11</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>29 (15)</td>
<td>8 (7)</td>
<td>0.05</td>
</tr>
<tr>
<td>Upper GIa</td>
<td>30 (15)</td>
<td>30 (27)</td>
<td>0.01</td>
</tr>
<tr>
<td>Colorectal cancer/polyps</td>
<td>17 (9)</td>
<td>11 (10)</td>
<td>0.73</td>
</tr>
<tr>
<td>Pancreaticobiliary</td>
<td>17 (9)</td>
<td>10 (9)</td>
<td>0.93</td>
</tr>
<tr>
<td>Other</td>
<td>15 (8)</td>
<td>6 (5)</td>
<td>0.45</td>
</tr>
<tr>
<td>Publication resulting from the grant (n, %)</td>
<td>150 (77)</td>
<td>60 (54)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mean time to publication (es.d.)</td>
<td>2.6±2.0</td>
<td>3.1±2.0</td>
<td>0.11</td>
</tr>
<tr>
<td>Mean impact factor of journal</td>
<td>6.9±5.9</td>
<td>6.5±3.8</td>
<td>0.67</td>
</tr>
<tr>
<td>Mean career publications to date</td>
<td>44.7±50.7</td>
<td>12.6±24.4</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Median career publications to date (IQR)</td>
<td>33 (13–61)</td>
<td>5 (2–12)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Mean publications per year (es.d.)</td>
<td>4.3±3.8</td>
<td>1.1±1.9</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Median publications per year (IQR)</td>
<td>4 (2–6)</td>
<td>0 (0–1)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Multiple awards given (n, %)</td>
<td>43 (22)</td>
<td>5 (4)</td>
<td>&lt;0.01</td>
</tr>
</tbody>
</table>

GI, gastroenterology; IQR, interquartile range; NIH, National Institutes of Health.

*b Data presented on a per awardee basis for first award only. c P value calculated with χ² (or Fischer’s Exact test) for categorical variables and by t test for continuous variables. For median values, Wilcoxon rank-sum test was used.

c Upper GI includes: GERD, Barrett’s, esophageal or gastric cancer, H. pylori, and peptic ulcer disease.

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Women comprised 20% of research awardees and 52% of Junior Faculty awardees, despite the fact that only 16% of GI fellowship positions are occupied by women in the United States (3). Interestingly, in the bivariate analysis, a larger proportion of female recipients than male recipients were currently in academic careers (74 vs. 61%), but this was not statistically significant (P=0.06). Gender was not associated with publication from the grant or selection of academic career in the multivariate analysis.

We found that a majority of clinical research awards translated into publication in journals with a substantial impact factor. The mean impact factor of the publications was 6.7. For reference, the impact factors of Gastrointestinal Endoscopy, the American Journal of Gastroenterology, and Gastroenterology are 5.9, 6.1, and 11.7, respectively. The factor most strongly associated with publication was the amount of the award. One potential explanation for this observation would be that larger awards correspond to larger studies, which had a higher baseline likelihood of publication. Indeed, there was a trend towards nonpublication for pilot awards, however this was not statistically significant. Sherer et al. showed that full publication of study results was associated with larger sample size (4). Other authors have shown that statistically significant results correspond to publication in high-impact journals, and that studies with positive results were more likely to be published, specifically in the field of GI (5,6). We did not gather data on oral or poster presentations or abstracts generated from funded research (for individual research awards), which were most likely generated at a higher rate than peer-reviewed publications. Although these abstracts are important, they were concentrated on publication in peer-reviewed journals, as this harder-to-achieve outcome is more likely to impact clinical care.

Several aspects of our methodology deserve further consideration. We chose not to use a survey of recipients, so as to avoid responder bias, and instead to evaluate publication status as objectively as possible with electronic databases. Past studies show the limitations of surveys in this setting, with similar studies using surveys reporting response rates ranging from 66 to 70% (7,8). We analyzed 100% of recipients. It is possible that our literature search and publication assignment criteria were skewed our results to overestimation of publications for common surnames (9), we used a thorough search strategy for these cases, with first and middle initials and keywords, and when necessary, hand review of articles. The observation that those who did not stay in academics had very low numbers of (or no) publications would be expected, and suggests the validity of our methods. Our classification of papers as having originated from the grants was, in some cases, largely circumstantial—the publication was on the same topic with a similar title, using similar methods and was temporally related to the grant. Although it is most likely that this methodology yielded some misclassification of papers, an in-depth tracing of funding source for each of the over 6,000 papers published by the 313 awardees was not feasible (and unlikely to be successful, given that many publications in GI do not report a funding source (10)). Also, we may be missing some grant-related publications that will occur

| Table 5. Multivariate analysis of predictors of academic careers and publications* |
|---------------------------|----------------|
| Predictors                | OR (95% CI)    |
| For remaining in an academic career by gender | |
| Amount of grant*           | 1.06 (1.00, 1.12) |
| Master’s degree            | 1.16 (0.33, 4.10) |
| Female*                   | 0.83 (0.33, 2.11) |
| NIH rank*                 | 1.02 (0.98, 1.06) |
| Hepatology topic           | 1.65 (0.37, 7.38) |
| Motility topic             | 1.16 (0.27, 5.10) |
| Endoscopy topic            | 2.25 (0.70, 7.23) |
| IBD topic                 | 2.32 (0.47, 11.54) |
| Upper GI topic             | 0.76 (0.19, 3.01) |
| Colorectal cancer topic    | 1.18 (0.19, 7.22) |
| Pancreaticobiliary topic   | 1.43 (0.27, 7.56) |
| Other topic                | 1.24 (0.20, 7.69) |
| Time to publication        | 0.88 (0.74, 1.06) |
| Impact factor of journal*  | 1.03 (0.95, 1.12) |
| Year of award*             | 1.03 (0.95, 1.12) |
| Receiving multiple awards  | 6.14 (1.69, 22.26) |
| For publishing from a grant* | |
| Amount of grant*           | 1.04 (1.01, 1.08) |
| Master’s degree            | 1.39 (0.56, 3.44) |
| Female*                   | 0.89 (0.47, 1.68) |
| NIH rank*                 | 1.01 (0.98, 1.05) |
| Hepatology topic           | 0.48 (0.19, 1.23) |
| Motility/functional topic  | 0.42 (0.18, 0.99) |
| Endoscopy topic            | 0.89 (0.42, 1.86) |
| IBD topic                 | 0.61 (0.23, 1.60) |
| Upper GI topic             | 0.59 (0.25, 1.41) |
| Colorectal cancer topic    | 0.71 (0.25, 2.02) |
| Pancreaticobiliary topic   | 0.85 (0.31, 2.35) |
| Other topic                | 0.82 (0.22, 2.98) |
| Year of award*             | 0.99 (0.93, 1.04) |

OR, odds ratio; CI, confidence interval; GI, gastroenterology; IBD, inflammatory bowel disease; IQR, interquartile range; NIH, National Institutes of Health; OR, odds ratio.
*For remaining in an academic career, the publication variable was dropped due to co-linearity. Analysis carried out on a per awardee basis for first award only. OR is per $1,000 dollar increments. *OR is per one unit of impact factor increments. Analysis carried out on a per award basis.
A 25-year Analysis of the ACG Research Grant Program

Table 6. Characteristics of Junior Faculty Development Awards at the time of grant receipt and outcomes of awardees, 1997–2006

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number or percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total awards, 1997–2006 (n)</td>
<td>21</td>
</tr>
<tr>
<td>Total awardees (n)</td>
<td>21</td>
</tr>
<tr>
<td>Multiple awardees (n)</td>
<td>0</td>
</tr>
<tr>
<td>Mean award value ($± s.d., range)</td>
<td>100,000±27,900 (60,000–150,000)</td>
</tr>
<tr>
<td>Total dollars awarded (original $; 2008 $)</td>
<td>3,000,000 (3,398,004)</td>
</tr>
<tr>
<td>Educational degree of awardees (n, %)</td>
<td></td>
</tr>
<tr>
<td>MD</td>
<td>21 (100)</td>
</tr>
<tr>
<td>Master’s1</td>
<td>6 (29)</td>
</tr>
<tr>
<td>PhD</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Fellow in training at time of award (n, %)</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0 (0)</td>
</tr>
<tr>
<td>No</td>
<td>21 (0)</td>
</tr>
<tr>
<td>Gender (n, %)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>10 (48)</td>
</tr>
<tr>
<td>Female</td>
<td>11 (52)</td>
</tr>
<tr>
<td>Mean NIH rank of institution (s.s.d., range)</td>
<td>31.8±39.6 (2–182)</td>
</tr>
<tr>
<td>Median NIH rank of institution (IQR)</td>
<td>18 (7–39)</td>
</tr>
<tr>
<td>Research subject area (n, %)</td>
<td></td>
</tr>
<tr>
<td>Hepatology/liver transplantation</td>
<td>7 (33)</td>
</tr>
<tr>
<td>Motility/functional GI disorders</td>
<td>5 (23)</td>
</tr>
<tr>
<td>Endoscopy</td>
<td>1 (5)</td>
</tr>
<tr>
<td>Inflammatory bowel disease</td>
<td>3 (14)</td>
</tr>
<tr>
<td>Upper GI (GERD, Barrett’s, esophageal or gastric cancer, H. pylori, ulcer disease)</td>
<td>2 (10)</td>
</tr>
<tr>
<td>Colorectal cancer/polyps</td>
<td>3 (14)</td>
</tr>
<tr>
<td>Pancreaticobiliary</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Other</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Publication resulting from the grant (n, %)</td>
<td>19 (90)</td>
</tr>
<tr>
<td>Mean time to publication (years ± s.d., range)</td>
<td>2.5±1.5 (0–6)</td>
</tr>
<tr>
<td>Mean impact factor of journal (s.s.d., range)</td>
<td>7.1±5.6 (1.3–25.6)</td>
</tr>
<tr>
<td>Mean career publications to date (s.s.d., range)</td>
<td>33.2±34.8 (2–122)</td>
</tr>
<tr>
<td>Median career publications to date (IQR)</td>
<td>17 (11–50)</td>
</tr>
<tr>
<td>Mean publications per year (s.s.d., range)</td>
<td>4.5±3.1 (1–12)</td>
</tr>
<tr>
<td>Median publications per year (IQR)</td>
<td>4 (2–5)</td>
</tr>
<tr>
<td>Current position (n, %)</td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>20 (95)</td>
</tr>
<tr>
<td>Non-academic</td>
<td>1 (5)</td>
</tr>
</tbody>
</table>

Table 6. Continued

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number or percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current academic rank (n, %)</td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>2 (11)</td>
</tr>
<tr>
<td>Assistant professor</td>
<td>10 (56)</td>
</tr>
<tr>
<td>Associate professor</td>
<td>4 (22)</td>
</tr>
<tr>
<td>Professor</td>
<td>2 (11)</td>
</tr>
<tr>
<td>Unknown (n)</td>
<td>2</td>
</tr>
<tr>
<td>Academic leadership position obtained (n, %)</td>
<td></td>
</tr>
<tr>
<td>Division chief</td>
<td>1 (11)</td>
</tr>
<tr>
<td>Center director</td>
<td>6 (67)</td>
</tr>
<tr>
<td>Fellowship director</td>
<td>—</td>
</tr>
<tr>
<td>Other</td>
<td>2 (22)</td>
</tr>
<tr>
<td>Obtained subsequent NIH funding (n, %)</td>
<td>7 (33)</td>
</tr>
<tr>
<td>GI, gastroenterology; IQR, interquartile range; NIH, National Institutes of Health.</td>
<td></td>
</tr>
</tbody>
</table>
| * Award values are the total amount for the two-year period of the award. Includes: five with MPH and one with MSc. *Publications per awardee as listed on MEDLINE/PubMed. *Includes: one each with a K07, K08, K23, K24, and R03; one with a K24, U01, and R01; and one with a K24 and R01.

Figure 2. Breakdown of junior faculty awards by category. Note: some awards were classified in multiple categories. IBD: inflammatory bowel disease, CRC: colorectal cancer. *Upper GI includes gastroesophageal reflux disease, Barrett’s esophagus, gastric and esophageal cancer, and H. pylori.
in the future. Missed publications for this reason would be expected primarily for awardees in 2006, however, and publication occurred in 11/15 (73%) of 2006 clinical research awardees and 2/3 (67%) of 2006 Junior Faculty awardees, which is similar to the overall rate of publication (69%).

We found that 62% of those who received research awards went on to academic careers, which is much higher than the national average for recent graduating fellows (11). A significant proportion of past awardees have now achieved leadership positions within academic institutions, including a number of GI division chiefs and one dean of a School of Medicine. We did not find predictive variables apart from award amount in our multivariate analysis for an academic appointment. Most of the junior faculty development awardees remain in academics, as might be expected given that the competitive nature of the award demands significant academic achievement before receiving it, and that recipients had ostensibly made their career choices before applying for and receiving their grant support from the ACG. Nevertheless, the publication and presentation rates were high among this group.

Little is known about the factors influencing career choice in the field of GI. Oxentenko et al. (12) conducted an analysis of the first job choices of graduating fellows from the Mayo fellowship program. Though they did not use a logistic regression model, very few of their demographic and fellowship criteria were significantly associated with selection of an academic career apart from race, with Asians (including South Asians) and Caucasians more likely to pursue academic careers. We did not assess the effect of race in our study. Overall, it might be the receipt of the award itself that was the strongest predictor in our cohort for remaining in academics. To what degree the receipt of such award influenced the ultimate career choice, as opposed to serving as a marker for already academically-inclined trainees and junior faculty cannot be determined from the present data and will await further study.

While there are no previously published studies of society grant funding in the field of GI, similar studies have been published for other specialties. Miller et al. (7) conducted a survey of recipients of Canadian Anesthesiologists’ Society research awards for the period of 1985–2005, and reported that the mean number of original publications per recipient post-award was 30.1 (range 0–115). Amongst respondents, 91% were in tenure track faculty positions, and 35% of the awardees were full professors. In addition, the authors found that 83% of recipients served as mentors during their careers, and the mean number of graduate students mentored was 18 (range 1–185). Young et al. (8) conducted a similar study of recipients of Society for Academic Emergency Medicine Research Grant Awards. Among the 19 respondents, 100% remained in academic medicine with a median 1.8 original publications per year since the end of their grant period. In addition, 74% of respondents went on to receive federal funding in their subsequent careers. Therefore, our results show that ACG grant recipients have similar rates of pursuing academic careers compared with other specialties.

In conclusion, society research grants such as those offered by the ACG provide a significant engine of original research and publication. All subject areas within GI were substantially represented in the awards process. A high proportion of awardees published the results of their funded research and entered academics. The factors associated with publication and future academic career of the recipient include the size of grant, which may be a proxy for size and significance of study.

CONFLICT OF INTEREST

Guarantor of the article: Seth D. Crockett, MD.

Specific author contributions: Crockett participated in the data collection, analysis, interpretation, and drafted the manuscript. Dellon performed the statistical analysis, data interpretation, and edited the manuscript. Bright performed the data collection. Shaheen initiated and oversaw the project, performed data interpretation, and edited the manuscript. All authors approved the final manuscript.

Financial support: The ACG funded the data collection portion of this project. Dr Dellon is a current holder of an ACG Junior Faculty Development Award, and Dr Shaheen is a past holder of this award. This research was supported, in part, by a grant from the NIH (T32 DK07634).

Potential competing interests: None.

ACKNOWLEDGMENTS

We acknowledge the contributions of Anne-Louise Oliphant at the ACG for her assistance with data collection. We are also grateful to Gavin C. Harewood, MD, MSc, and Tuba Esfandyari, MD, MSc, for their assistance in generating the initial version of the database used in the analysis.

Study Highlights

WHAT IS CURRENT KNOWLEDGE

✓ While results of the American College of Gastroenterology (ACG) grant application process are made available to the membership of the College on an annual basis, no comprehensive assessment of the characteristics of the recipients or outcomes of these awards has been performed.

WHAT IS NEW HERE

✓ In this analysis of the 25-year ACG research grant program, the majority of ACG grant recipients published the results of their research and remained in academics.

✓ Predictors of academic careers included higher award values, holding an advanced degree, and publication resulting from the award.

REFERENCES


The American Journal of GASTROENTEROLOGY

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“The role of the Institute within the life of the College is to advance the twin objectives of supporting research and education. In identifying priorities for the Institute, we aim to take a global perspective of clinical gastroenterology, and to incorporate the broad view of our specialty in every initiative undertaken by the Institute.”

- Edgar Achkar, MD, MACG | ACG Institute Director
**EDUCATION**

*The ACG Institute has a direct impact on ACG members through the educational programs intended for them and through initiatives meant to raise public awareness of various GI disorders. On the patient education level, the Institute works to develop the best education base for GI patients.*

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**EVIDENCE-BASED APPROACHES TO CLINICAL CHALLENGES**

With the emergence of evidence-based medicine approaches to clinical recommendations, the ACG Institute has had the opportunity in recent years to employ this strategy with great success. The Institute has convened expert working groups that conduct systematic reviews of clinical science and develop graded treatment recommendations based on these meta-analyses. In 2002, we developed the first Evidence-based Position Statement on the Management of IBS, and in 2005, convened a Task Force on Chronic Constipation whose work clarified the range of options for this common GI disorder.

**New Systematic Review on Management of Irritable Bowel Syndrome**

Irritable Bowel Syndrome (IBS) is one of the most common disorders managed by gastroenterologists. There have been numerous changes in the clinical landscape in recent years and new evidence has emerged on the benefits and risks of drugs used to treat IBS. For patients, this has created confusion, particularly as new therapies have been introduced.

In order to critically evaluate the rapidly expanding research about IBS and to assess the evidence of efficacy of new IBS drugs and treatments, the ACG IBS Task Force in 2008 performed a comprehensive meta-analysis of the evidence on therapies for IBS. The group updated its 2002 evidence-based position statement on IBS therapies. This new Systematic Review on the Management of Irritable Bowel Syndrome was published in January 2009 as a supplement to *The American Journal of Gastroenterology*. These peer-reviewed recommendations were adopted by the College and offer clinicians new graded recommendations on testing and treatment of this chronic, recurrent functional disorder of the gastrointestinal tract that affects all aspects of daily life for its sufferers. They can be accessed online at http://www.acg.gi.org/media/releases/ajg2008122a.pdf.

“For the gastroenterologist seeing patients with IBS, the ACG recommendations offer the opportunity to make clinical decisions based on a thorough assessment of the evidence.”

- Eamonn M.M. Quigley, MD, FACG
  ACG President 2008-2009
  Member, ACG IBS Task Force

**Promoting Global IBS Awareness: World Digestive Health Day 2009**

To mark World Digestive Health Day, May 29th, 2009, the ACG participated in global observances of this awareness day organized by the World Gastroenterology Organisation (WGO). “Through a collaborative partnership, we saw significant opportunities for ACG and WGO to elevate the dialogue concerning IBS in connection with World Digestive Health Day,” commented ACG’s President Eamonn M.M. Quigley, MD, FACG who also serves this year as WGO President. Events in forty-three countries throughout May aimed to bring attention to IBS and
its impact on global health. Each year, the WGO designates a particular issue in digestive health as a focus for World Digestive Health Day.

A coordinated media and patient education effort provided the opportunity to focus media and consumer attention on the issue of IBS and to drive individuals to ACG’s Web site for information and insight about IBS diagnosis and treatment. The scientific underpinning for ACG’s communications strategy was the recently published meta-analysis of IBS therapies by the ACG IBS Task Force, whose work resulted in ACG’s “Evidence-Based Recommendations on the Management of IBS.” Ultimately, ACG’s primary objectives were to urge patients to see a physician about their IBS symptoms, and to encourage those already diagnosed with IBS, but whose symptoms still persist, to discuss new treatment options with their clinicians.

**New Interactive IBS Patient Education Tools**

Among the College’s top priorities for its IBS education efforts on World Digestive Health Day, was the creation of enduring materials that deliver tangible benefits for both undiagnosed and diagnosed IBS sufferers. ACG developed new education materials for the ACG Web site that bring the issue of IBS to life, provide a mechanism for patients to identify their IBS symptoms, and present ACG’s evidence-based recommendations on IBS in a consumer-friendly way. The College is grateful to Takeda Pharmaceuticals North America, Inc. for its grant to support media outreach and awareness activities on IBS in conjunction with WDHD.

On May 29, 2009, ACG introduced two new interactive tools aimed at helping to provide answers and hope to millions of Irritable Bowel Syndrome (IBS) sufferers struggling for relief. The first Web education tool – also called “The IBS Test” – is intended to help undiagnosed individuals recognize the signs and symptoms of irritable bowel syndrome (IBS). The second – called the “IBS Treatment Matrix” – offers basic information, as well as graded recommendations, on sixteen categories of IBS therapies. Both tools are available at www.ibsrelief.org, a microsite developed by ACG.
ADDRESSING THE OBESITY EPIDEMIC

Obesity is now recognized as a chronic disease with considerable morbidity. The prevalence of obesity in the United States has more than doubled in the past half century. Nearly three-quarters of adults are either overweight or obese, adding a staggering burden to our current health care system. In 2008, the College committed resources to the development of a national obesity education initiative with expert leadership from a multi-disciplinary task force under the direction of ACG 2007-2008 President, Amy E. Foxx-Orenstein, DO, FACG.

“The ACG recognizes that the epidemic of obesity is a problem at the forefront of American public health concerns and considers it imperative that GI physicians engage in efforts to define new treatment options, refine existing approaches, and enhance the management of associated complications.”

- Amy E. Foxx-Orenstein, DO, FACG
ACG 2007-2008 President
Chair, ACG Obesity Task Force

The primary objective in creating an enhanced focus on nutrition, metabolism and obesity was to bring the clinical and scientific expertise of GI physicians to bear in formulating solutions to the obesity epidemic—both at the national health policy level and in terms of advancing clinical practice. A major goal of the work of the ACG Obesity Task Force was to develop strategies to encourage a fundamental shift in the way GI physicians see their role and approach their overweight and obese patients.

The ACG Institute believes the growing epidemic of obesity is of particular relevance to gastroenterologists because of the clearly documented associations of obesity with a number of gastrointestinal disease risk factors and outcomes, including mortality rates and unfavorable risk profiles. The health implications posed by overweight and obesity involve a wide spectrum of disease states, including many gastrointestinal diseases, such as gastroesophageal reflux, Barrett’s esophagus, erosive esophagitis, steatohepatitis/ nonalcoholic fatty liver disease (NAFLD), cholelithiasis, pancreatitis, and cancers of the GI tract, particularly colorectal and esophageal cancers.

Tools for GI Physicians to Counsel Overweight and Obese Patients

While historically much of ACG’s CME activity on the issue of obesity and overweight has involved complications of bariatric surgery, debates on medical vs. surgical treatment of obesity, and approaches to patients with weight-related GI disease, not until 2008 did the College develop a program to encourage GI physicians to take a holistic view of obese patients. The Obesity Task Force created a comprehensive suite of physician and patient education tools, The ACG Obesity Resource Kit. Working with a talented medical illustrator and graphic design team, the group developed visually engaging new print and online tools to help a busy gastroenterologist to start the conversation with their overweight or obese patients, with the ultimate goal of helping patients to better manage their health problems and to change their medical course.

“To make a meaningful difference in the obesity epidemic, our members must be willing to talk to their patients about their weight and the risk it poses to their overall health, as well as the specific risk of GI diseases,” explained Dr. Foxx-Orenstein.
New understanding of the role of central adiposity as a risk factor for GI disease informed one of the key educational tools of the ACG obesity campaign. Among the many materials in ACG’s resource kit for physicians was a wall chart featuring an anatomical illustration of a “metabolic woman” showing damage to GI organs related to obesity. The poster also featured a Body Mass Index (BMI) table and directions for patients to measure waist circumference. The College wanted to reinforce with its member physicians the message that waist circumference provides an independent prediction of risk beyond BMI. The poster underscored ACG’s call-to-action to its members to make the determination of every patient’s Body Mass Index (BMI) and waist circumference a part of their office routine – just like other vital signs.

To support this change among its members, the College also shared links to online BMI calculators as well as BMI calculator software programs to download to PalmPilots or other PDAs. These materials were introduced at the 2008 Annual Scientific Meeting.

To support the GI physician in making recommendations to patients about weight control, the College also developed practical patient education tools, pamphlets, check lists and tips, including diet and physical activity guides, grocery shopping tips, a food diary and other resources. The College sought to empower its members by sharing principles of effective obesity counseling, including strategies for GI physicians to become more skillful and empathetic communicators. The ACG Obesity Resource Kit also offered guidance on ways to reduce bias against overweight and obese patients in their practices and included information to improve GI clinicians’ knowledge of nutrition, multi-disciplinary treatments and community resources. All of these materials can be viewed online at www.acg.gi.org/obesity.

The ACG Obesity Initiative created new tools to educate about the importance of measuring BMI and waist circumference, as well as educational resources on weight bias in the health care setting, among the many diverse resources developed by the College for both physician and patient audiences. ACG is grateful to The Allergan Foundation Women’s Initiative for support of printing and distribution of the BMI poster and Physician Reference.
Participation in the Campaign to End Obesity (“CEO”)

ACG has been a member of the Campaign to End Obesity (CEO) in Washington since its inception. The CEO was established to bring together organizations and individuals from across an array of interests to collaborate in the fight to reverse America’s costly obesity epidemic. This diverse stakeholder group works to educate policymakers on the issue of weight and health. The College contributes time, resources, and expertise to this national coalition that includes leaders from medicine, government, and industry whose purpose is to develop legislative and regulatory strategies to address the obesity epidemic. ACG's partnership with CEO offers the College a platform for action and a voice in the national dialog and a representative from ACG serves as Co-Chair of the Health System Restructuring work group.

ACG Obesity Task Force

The ACG Institute is grateful to the following experts for their leadership and contributions to the work of the ACG Obesity Task Force:

Carol A. Burke, MD, FACG, Cleveland Clinic Foundation
Michael R. Charlton, MD, Mayo College of Medicine
Amy E. Foxx-Orenstein, DO, FACG, Mayo College of Medicine
Hashem B. El-Serag, MD, FACG, Baylor College of Medicine
Lisa Ganjhu, DO, St. Luke’s-Roosevelt Hospital
David A. Greenwald, MD, FACG, Montefiore Medical Center
David A. Johnson, MD, FACG, Eastern Virginia Medical School
Joel E. Lavine, MD, PhD, UC San Diego, Deptartment of Pediatric GI
Philip R. Schauer, MD, Cleveland Clinic Foundation
ACG COLORECTAL CANCER PREVENTION ACTION PLAN

Colorectal Cancer Prevention: Among Our Highest Priorities

One of the single most important aspects of the Institute’s education mission is to educate physicians and the public about colorectal cancer detection and prevention. Colorectal cancer has been a significant and longstanding focus for the education, public policy and public awareness activities of the College. Under the auspices of the Institute, the ACG Colorectal Cancer Prevention Action Plan has been a channel to fund larger research initiatives on colorectal cancer prevention.

The Institute believes that in colonoscopy, GI physicians wield one of the most powerful tools in preventive medicine because of the ability to both detect pre-cancerous polyps and remove them, thereby eliminating the potential for colorectal cancer. As an organization, promoting awareness of the lifesaving potential of colorectal cancer screening has consistently been one of the Institute’s highest priorities.

Colorectal Cancer Education: Empowering GI Physicians to Serve as Community Health Advocates

Over the years, ACG’s commitment to colorectal cancer awareness spans activities as varied as the development of educational tools for patients and physicians, the promulgation of screening guidelines, advocacy on Capitol Hill, at the state level and before regulatory agencies, as well as collaboration with numerous other national organizations. ACG has been an important participant in the national dialogue on colorectal cancer prevention, but the aspect we want to emphasize here is the way that ACG engages its members as community advocates and creates opportunities and provides support for GI physicians to contribute their expertise as public health advocates in their local communities.

Each year, the month of March is designated as National Colorectal Cancer Awareness Month. ACG has over the years sponsored a range of activities but a perennial strategy which has delivered remarkable results is a campaign to engage our leaders in a letters to the editor campaign each year. The “Hometown Papers” initiative each March offers the ACG state and regional governors, ACG Public Relations Committee, and other ACG leaders the encouragement, information and tools they need to draft compelling letters or bylined articles for their local newspapers and we provide the contact information of the local papers in their state or region.

Our belief is that a heartfelt, original letter from a practicing physician in the community is more effective than a barrage of clever, paid advertising, has more credibility with readers, and is ultimately more effective in engendering the behavior change we seek – patients deciding to get screened for colorectal cancer. Moreover, the screening age population of adults over age 50 we seek to reach with our message is the ideal readership demographic for newspapers. This effort is a clear example of a great match between the message and the medium, and we aim to equip ACG member physicians to be excellent messengers.

Another aspect of our annual March activities is a radio media tour which offers ACG physician spokespeople to radio stations across the nation. Many of these interviews are during peak “drive time” when listeners are tuned in and when a health message has the best potential to reach consumers in the course of their “lifepath” when it can be most impactful. We aim to give our members the skills to ensure the interviews are engaging and accessible and each year, we are amazed at the number and quality of the interviews.
Investing in Major Projects to Improve Colorectal Cancer Screening

The ACG Colorectal Cancer Prevention Action Plan is an ambitious, multi-faceted effort approved by the ACG Board of Trustees in 2004. Under this plan, the ACG Institute has devoted significant resources to large research grants on specific clinically important topics in colorectal cancer prevention – research whose aim is to improve the safety, effectiveness and acceptability of colonoscopy, and other colorectal cancer prevention strategies.

The foundation of the Action Plan is the ACG Institute’s conviction that clinical gastroenterology must take up the challenge to take a very close look at today’s preferred colorectal cancer prevention method, colonoscopy, and to make it even better, and to encourage development of new prevention strategies. Under the Action Plan, the ACG Institute has issued two RFAs, resulting in substantial awards of $363,000 in total to three investigators whose projects evaluate colonoscopy as a colorectal cancer screening methodology.

Multi-Center Randomized Trial of Chromocolonoscopy

With $100,000 in funding through the ACG Colorectal Cancer Prevention Action Plan, Dr. Charles Kahi and colleagues conducted a large, multi-center study that was the first randomized and prospective study utilizing chromocolonoscopy (with indigo carmine dye) in the United States. The researchers looked at high-definition chromocolonoscopy and whether it increased overall adenoma detection or yielded any increase in detection of flat adenoma and small adenoma compared with high-definition white light colonoscopy. Dr. Kahi will present his findings at the ACG Annual Scientific Meeting and a paper has been accepted for publication by the Red Journal as “High Definition Chromocolonoscopy Study: Findings and Implications for Colorectal Cancer Screening.”

New or Missed Colorectal Cancer after Colonoscopy

The goal of Dr. Linda Rabeneck’s research funded through the Colorectal Cancer Prevention Action Plan is to investigate new or missed colorectal cancers after colonoscopy and their risk factors. Among patients with a new or missed colorectal cancer, the specific aim is to identify the contributing factors (e.g., missed lesion, incompletely removed lesion, cancer with DNA mismatch repair deficiency and microsatellite instability.) Dr. Rabeneck is conducting a population-based case-control study to address this specific aim. The cases are individuals with a new or missed colorectal cancer following colonoscopy. The controls are a random sample of individuals previously identified as having a detected colorectal cancer. Work is underway to abstract the charts of the cases and controls and to compare the distribution of patient, cancer, polypectomy, colonoscopy, and endoscopist factors among the two groups.

Colonoscopy Quality and Outcomes in Clinical Practice

Dr. Ko and her colleagues received a grant under the Colorectal Cancer Prevention Action Plan to examine measures of colonoscopy quality and outcomes, including procedure completion, polyp or cancer detection rates, and complications. Using Medicare claims data, their goal is to identify variables that may influence colonoscopy quality which they believe have clear implications for optimizing the quality of colorectal cancer screening programs. To date, they have completed the majority of the data analysis, and are writing several manuscripts. The first manuscript looks at how provider characteristics, such as specialty or colonoscopy volume, influence polyp detection, biopsy, and polypectomy rates. Another manuscript examines how provider characteristics influence rates of early repeat colonoscopy and complications, while a final paper in draft examines the use of anesthesiologist assistance during colonoscopy.
Anticipating the Crisis: Implications of the Hepatitis C Epidemic for the Community Gastroenterologist

A major public health crisis that has an impact on the health of millions of Americans looms on the horizon and presents a significant challenge for gastroenterologists and our colleagues in hepatology – the epidemic of Hepatitis C infection. Hepatitis C infection is highly prevalent in the United States and is the leading cause of cirrhosis and hepatocellular carcinoma (HCC) and a leading indication for liver transplantation. Startling recent news that rates of HCC have tripled in the United States from 1975 to 2005 reinforces the magnitude of the problem in which an estimated 3.4 million Americans are chronically infected with Hepatitis C virus (HCV). Many infected with HCV will develop cirrhosis, suffer complications such as variceal bleeding, and are at risk for liver failure or liver cancer.

Another equally troubling trend is the steady increase of incidence in HCV infection contrasted with the sharp decline in new cases of HCV being treated. One of the issues that the College has identified is that our hepatology colleagues feel they are working at maximum capacity. With only approximately 1,500 hepatologists in this country, there is a clear and pressing need for GI physicians able to treat patients with chronic viral liver diseases like HCV. Adding to the complexity of the epidemic are the demographics of the infected population; many of whom are low income racial and ethnic minorities, or are co-infected with HIV, or are incarcerated.

On the horizon, however, there is some reason for optimism. The armamentarium of HCV therapies is expanding with the arrival of new protease inhibitors and polymerase inhibitors which look promising in combination with current therapies of pegylated interferon and ribavirin, both in terms of sustained viral response and improved tolerability for patients which, in turn, may help to improve compliance with therapy.

To assess the scope and implications of this challenge, the College has utilized a variety of strategies including survey research among ACG members, physician focus group research, and even an omnibus public awareness survey (e.g., a Harris Poll.) The objective of this research was to assess the current practice patterns and needs for education around HCV therapy, and to identify those challenges which are most pressing for GI clinicians.

Plans to Enhance Educational Offerings on HCV

Findings from our needs assessment research have informed plans for new educational programs. Among the ACG Institute’s goals for the ACG HCV program is to meet the specific interest among ACG members for education on integrating mid-level health care providers into GI practices and using them effectively to help treat HCV patients. Dr. Mitchell L. Shiffman is spearheading this effort, which includes plans for a resource guide and database referral system. The ACG Institute is grateful to Roche for its support of this project which holds great potential to make a meaningful difference in the treatment of HCV in the United States.
WORKING WITH CARDIOVASCULAR EXPERTS TO REDUCE DANGERS OF GI INJURY FROM NSAIDS AND ANTIPLATELET AGENTS

As more Americans survive and live with heart disease in addition to conditions that require them to take NSAIDs, such as arthritis, inflammation and related musculoskeletal pain, managing the risk of GI injury and bleeding will become an increasingly important part of cardiovascular care.

Antiplatelet drug treatment is considered a cornerstone in cardiovascular prevention. Because NSAIDs are so widely used in the United States, there was consensus among the ACG, the American College of Cardiology (ACC) and the American Heart Association (AHA) that specialists need practical measures to manage competing risks and help improve patient safety.

ACG had the opportunity to work with the ACC and AHA in a collaboration to reduce the risk of gastrointestinal problems and to improve public health. In October 2008, the three organizations published “An Expert Consensus Document on Reducing the Gastrointestinal Risks of Antiplatelet Therapy and NSAID Use” simultaneously in *The American Journal of Gastroenterology* and the journal *Circulation* offering guidelines outlining a stepwise approach for reducing the risk of ulcers and gastrointestinal bleeding among patients using NSAIDs along with antiplatelet agents.

For the College and the ACG Institute, this type of collaboration typifies our ongoing commitment to reach out to colleagues in other specialties with whom we share patients to ensure that these patients receive the best possible care.

**PARTICIPATING IN THE ACC/ACG/AHA WRITING COMMITTEE ON BEHALF OF ACG**

James Scheiman, MD, FACP, Co-Chair, University of Michigan, Ann Arbor

Neena S. Abraham, MD, FACP, Baylor College of Medicine

Francis K.L. Chan, MD, FACP, The Chinese University of Hong Kong

David A. Johnson, MD, FACP, Eastern Virginia Medical School

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PARTICIPATION IN NATIONAL COALITIONS AND COORDINATING BODIES IN THE GI WORLD

The American College of Gastroenterology embraces as part of its core mission representing the interests of clinical gastroenterologists and their patients in national policy fora. Under the auspices of the ACG Institute, the College participates in and contributes to various national coalitions. This work exemplifies the spirit of collaboration with stakeholders across the spectrum of health policy and advocacy organizations who share ACG’s interest in promoting digestive health.

WGO – World Gastroenterology Organisation

The World Gastroenterology Organisation and the American College of Gastroenterology in 2009 agreed to a joint collaboration in which the organizations agreed to work in concert on a variety of key educational initiatives both in the United States and around the world. The goal of this partnership is to build upon the unique strengths and capacities of each organization to create synergies that promise to expand and enhance education for gastroenterologists worldwide. The initial agreement, which will last for a period of 5 years, covers a number of important educational programs while opening the door to further collaboration on multiple fronts. ACG shares WGO’s commitment to “Train the Trainers” (TTT) and its approach to providing clinician educators with the skills needed to teach adult learners effectively. During the past several years, ACG has become a frequent participant in TTT meetings across the world by sponsoring attendees and faculty. Through joint efforts involving media and strategic communications, both groups will maximize their potential to deliver important health messages to patients in conjunction with World Digestive Health Day each May. Finally, ACG and the WGO have also pledged to explore opportunities to work together in support of the WGO’s initiative to develop and support Training Centers around the world.

NCCRT – National Colorectal Cancer Roundtable

ACG has been represented at the National Colorectal Cancer Roundtable by Dr. Douglas K. Rex, ACG Past President, since its founding in 1997. Supported by the American Cancer Society and the U.S. Centers for Disease Control & Prevention, the NCCRT now is the preeminent advocacy organization in the area of colorectal cancer prevention with membership of more than 60 organizations. Each year, the Roundtable brings together a remarkable coalition of public and private sector organizations to focus attention on improving utilization of colorectal cancer screening, enhancing professional practice and supporting the interests of patients and survivors.

DDNC – Digestive Disease National Coalition

The DDNC is an advocacy coalition comprised of all the most active GI physician and patient groups representing a broad range of digestive disease interests. ACG has provided leadership and financial support to DDNC over many years based on its belief in the strong voice that DDNC brings to Congress and the federal agencies on issues of importance to gastroenterologists and their patients.

Peter A. Banks, MD, MACG, (pictured with Senator Edward M. Kennedy at the DDNC), has served since 1996 as ACG Representative to the DDNC.
NDDIC – National Digestive Diseases Information Clearinghouse Advisory Panel

The National Institute of Diabetes, Digestive & Kidney Diseases (NIDDK) at the National Institutes of Health sponsors an excellent public information resource, the National Digestive Diseases Information Clearinghouse (NDDIC.) This hotline service and educational clearinghouse constitutes a major benefit to consumers in the United States. The NDDIC’s clearinghouse function provides telephone support to health information seekers, disseminates patient information from NIDDK, hosts an excellent Web site, manages a comprehensive database of patient resources on digestive health, and publishes a comprehensive list of patient advocacy organizations for consumers. ACG for many years has been a member of an oversight panel for NIDDC at the invitation of the Director of NIDDK, and each year participates in a meeting on the status of NIDDC’s many activities.
Overview of the ACG Institute for Clinical Research & Education

Founded in 1994, the ACG Institute for Clinical Research & Education has emerged as a major source of funding for patient care oriented gastroenterology research, and an active and effective sponsor of educational programming for consumers and physicians alike.

Advancing Knowledge About Digestive Disease Through Clinical Research

Over the years, the ACG Institute has provided funding to 456 investigators for research directly relating to the clinical gastrointestinal practice. With the announcement of 2009 research awards, the College surpassed the $10 million mark for support of clinical research.

Through its support for original clinical GI research, the Institute has achieved great visibility in the gastrointestinal community and has made an impact on the careers of many talented GI investigators. Through the Clinical Research Award, the ACG Institute invests in promising clinical investigators tackling some of the most important challenges in the field of gastroenterology. An indirect, but perhaps more long lasting, effect is that supporting clinical research feeds the pipeline to our specialty by attracting bright young individuals who are determined to be not only good physicians but also discriminating clinical researchers.

A top priority for the ACG Institute is to fund career development awards. The ACG Junior Faculty Development Grant is considered the jewel in the crown of the ACG Institute’s research program because of the outstanding track record of funded investigators and particularly their contributions in terms of publications, presentations at the ACG Annual Meeting, and the remarkable success in securing prestigious NIH funding.

Enhancing Patient Care Through Physician Education

The Institute has staked a claim in the life of the College through the excellence of its educational initiatives. Whether educating consumers about screening for colorectal cancer or about serious GI disorders, or providing state-of-the-art educational tools for physicians to enhance their practice, the Institute has become an undisputed educational leader.

Under the auspices of the ACG Institute, many of the most distinguished clinicians, researchers and academics in the field of gastroenterology have contributed to the educational mission of the College by writing and editing an impressive array of physician and patient education tools.

The hallmark of the ACG Institute since its inception has been to share first-class educational materials with GI subspecialists, as well as primary care physicians, internal medicine specialists and family practitioners.

Promoting Awareness of Digestive Health Through Public Education

Along with clinical research and physician education, public education is the third corner of the Institute’s pyramid of strength. Using its own funds, without support from other partners, the Institute has made a major financial commitment to supporting patient education on colorectal cancer screening and prevention. Partnerships with companies and organizations which share ACG’s mission to promote public awareness to digestive health have supported recent initiatives on the dangers of NSAIDs to the gut, obesity, hepatitis C, and irritable bowel syndrome, among other timely and relevant topics.

About the American College of Gastroenterology

The American College of Gastroenterology (ACG) was founded in 1932 to advance the scientific study and medical practice of diseases of the gastrointestinal tract. The College promotes the highest standards in medical education and is guided by its commitment to meeting the individual and collective needs of clinical GI practitioners.