

# MEET THE ROME FOUNDATION



ALMOST THREE DECADES OF SERVICE TO PATIENTS IN THE FIELD OF  
DISORDERS OF GUT-BRAIN INTERACTION (FUNCTIONAL GI DISORDERS)





# ABOUT THE ROME FOUNDATION

The Rome Foundation is an independent not for profit 501(c) 3 organization whose mission is to improve the lives of people with functional GI disorders, now called Disorders of gut-brain interaction. The foundation provides support for activities designed to create scientific data and educational information to assist in the diagnosis and treatment of disorders of DGBIs. For almost 3 decades, beginning with the first working team committee at Roma '88 (see figure 1), the Rome organization has sought to legitimize and update our knowledge of the field. This has been accomplished by bringing together scientists and clinicians from around the world to classify and critically appraise the science of gastrointestinal function and dysfunction.

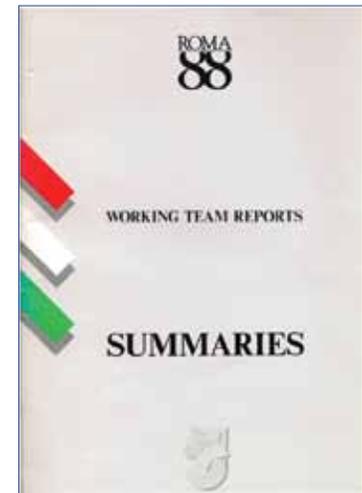


Figure 1

This knowledge permits clinical scientists to make recommendations for diagnosis and treatment that can be applied in research and clinical practice. The Rome Foundation is committed to the continuous development, legitimization and preservation of the field of DGBI through science-based activities. We are inclusive and collaborative, patient-centered, innovative and open to new ideas. Figure 2 shows our organizational structure.

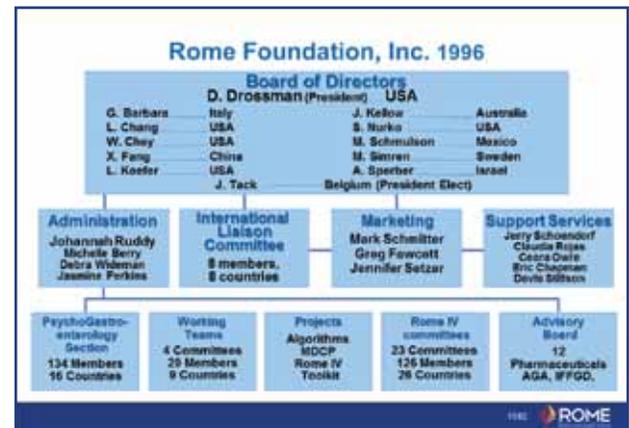


Figure 2

## GOALS OF THE ROME FOUNDATION

- Promote global recognition and legitimization of DGBIs
- Advance the scientific understanding of their pathophysiology
- Optimize clinical management for these patients
- Develop and provide educational resources to accomplish these goals

## FOR ALMOST 30 YEARS THE ROME FOUNDATION HAS:

- Developed the first classification system for FGIDs (1990)
- Developed and validated questionnaires for research (1993)
- Epidemiological study of FGIDs (Rome I, 1993); First global study (2017)
- Criteria adopted by pharmaceuticals and regulatory agencies (Rome II, 2000)
- Provides a forum for interaction among industry and regulatory agencies (Advisory Council, 2002)
- Translations of questionnaires and educational products (Rome III, 2006)
- Annual research awards (2007); collaboration with AGA (2014)
- Global educational expansion: Asia, Latin America, Eastern Europe (2010)
- Expanded membership through associates program (2010)
- International symposia (Endpoints/Outcomes, IBS-Global Perspective)
- Diagnostic algorithms (2010)
- Multi-Dimensional Clinical Profile (2014)
- Rome IV launch of 6 books and online format (2016)
- Intelligent software learning application - Rome IV Interactive Clinical Decision Toolkit (2017)
- Communication 202 and other advanced tools to enhance communication skills (2018)

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BOOKLET BY CEARA OWRE DESIGN

## CONTACT INFORMATION

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- Research Institute (RFRI)
- Global Study
- Public Relations
- Rome IV
- Sponsors - Information/Opportunities
- Sponsorship of Rome Activities
- Upcoming Events/Symposia
- Website
- Financials
- Sponsors - Contracts/Billing

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**jruddy@theromefoundation.org**

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- Purchasing Educational Products

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- Marketing
- Bulk Orders of Rome IV Products
- International book sales
- Copyright & Licensing
- Translations

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# ETHICS POLICY

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## **The Rome Foundation Members Relations with the Pharmaceutical Industry Guidelines**

*The Rome Foundation takes ethics and conflict of interest issues very seriously, and therefore, developed specific guidelines to which its members are held. Completed disclosure forms for Rome Foundation are kept on file by Rome Foundation administration.*

Members of the Rome Foundation are involved with the development of creative educational products including book chapters, journal articles, monographs, CD slide sets and other materials. Other activities include research to validate the diagnostic criteria and questionnaire development. The results of these processes are widely based and publicly recorded, and has gained the confidence of professional groups, researchers, the pharmaceutical industry and regulatory agencies around the world. Since much of the funding of the Rome process is derived from the pharmaceutical industry, it is important that the committee's work be independent of sponsor influence and that any perception of its direction by industry or conflict of interest of its members be avoided. Therefore, the members of the Rome Foundation hereby agree to the following principles:

1. No Rome Foundation Member shall be a regular employee (>50% time) of any pharmaceutical company or any group with a commercial interest in the Rome process.
2. The Rome Board shall not undertake projects on behalf of individual companies or commercial concerns, nor will it enter into any confidential agreements with them.
3. Rome Foundation Members shall declare and have on record any relationship with the pharmaceutical industry or other commercial entity that may be supporting the Rome process. These relationships must be updated biennially. In principle, members should not confine their advisory board, consulting or speaking arrangements to only one company.
4. No Rome Foundation Members shall represent the Rome Foundation to a regulatory agency that is adjudicating acceptance of a drug or device for functional gastrointestinal disorders by a regulatory agency.
5. No Rome Foundation Member shall advocate a drug for the treatment of a functional gastrointestinal disorder, nor support its application to a regulatory agency or drug funding authority in the name of the committee. Members may do so as individuals.
6. When consulting or lecturing, members shall ensure that it be known they are acting as individuals, not on behalf of the Rome Foundation. This applies to members' relationships to pharmaceutical companies, regulatory agencies or any other group with a vested interest in the Rome process. This does not apply when the Rome Committee is sponsoring a meeting or is invited to present at a meeting.
7. No pharmaceutical company or other interested commercial concern shall directly reimburse Board Members or Subcommittee Members for Rome activities.
8. Communications of an academic nature involving the Rome Foundation with the pharmaceutical industry shall be conducted through the Rome Advisory Council (RAC). The RAC consists of representatives of all Rome Foundation sponsors, Rome Board members and representatives of interested scientific and regulatory agencies. Representations and proposals by industry regarding the Rome process submitted to the Board shall be discussed and debated at RAC meetings. Board members may interact with industry as individuals but not on Rome matters or as Board representatives.
9. Industry representatives may not sit on the Rome subcommittees, nor should they be seen to have undue influence on the deliberations of any subcommittee. Representations from Industry regarding subcommittee activities should be addressed to the Board through the RAC.



## Jan Tack, MD, PhD President, Rome Foundation

Professor and Head of Department, TARGID  
University of Leuven  
Head of Clinic, Gastroenterology Division  
University Hospitals Leuven  
Leuven, Belgium

Professor Jan Tack is currently Head of the Division of Gastroenterology and Hepatology in the Leuven University Hospital, a Professor in Internal Medicine at the University of Leuven, and a founding researcher of TARGID (the Translational Research Center for Gastrointestinal Disorders) at the University of Leuven. He graduated summa cum laude in 1987 from the University of Leuven and specialized in internal medicine and gastroenterology at the same institution. A research fellow at the Department of Physiology at the Ohio State University, Columbus, Ohio, USA, from 1989 to 1990, he has been conducting research at Leuven University since 1990. Professor Tack's scientific interest focuses on neurogastroenterology and motility, and includes diverse topics such as the pathophysiology and management of gastrointestinal functional and motor disorders (including functional dyspepsia, gastroparesis, gastroesophageal reflux disease, globus, dysphagia, dumping syndrome, chronic constipation, IBS and opioid-induced bowel dysfunction), the physiology and pharmacology of the enteric nervous system, GI hormones and the control of satiation and food intake.

Professor Tack was the promotor of more than 45 Ph.D. fellows. He currently supervises a research group which comprises 10 Ph.D. fellows, 5 postdocs and 5 technical/support staff. He has published more than 740 articles and 45 book chapters on various aspects of scientific and clinical gastroenterology, generating an h-index of 84.

Professor Tack won several awards for Basic and Clinical Research in GI Science. Professor Tack is incoming President of the Rome Foundation, Past-President of the European Society of Esophagology, and Past-President of the International Society for Diseases of the Esophagus. He has served as first Editor-in-chief of the United European Gastroenterology Journal, and as co-editor for *Neurogastroenterology and Motility*, *Gastroenterology*, *Gut* and *Digestion*. He serves or has served as a member of the editorial board of *Gastroenterology*, *American Journal of Gastroenterology*, *Alimentary Pharmacology and Therapeutics*, *Journal of Internal Medicine*, *Bailliere's Best Practice and Research in Clinical Gastroenterology*, *Annals of Gastroenterology* and *Journal of Gastroenterology*.

### Advisory Council

Communications of an academic nature involving the Rome Foundation with the pharmaceutical industry are conducted through the Rome Advisory Council. The Advisory Council consists of representatives of all Rome Foundation sponsors, Rome Board members, the American Gastroenterological Association (AGA), the International Foundation for Functional Gastrointestinal Disorders (IFFGD) and representatives of interested scientific and regulatory agencies. Each year the Advisory Council meets to discuss present ongoing Foundation activities and topics of general interest. Members also prepare presentations of general interest to the members for discussion at these meetings.

#### Members of the Advisory Council

**Acino**

**Arena Pharmaceuticals**

**Allergan, Plc.**

**Biomerica**

**Commonwealth Diagnostics Intl. Inc.**

**Danone Nutricia Research**

**Ironwood Pharmaceuticals**

**Nestle Health Science**

**Salix Pharmaceuticals**

**Takeda Pharmaceuticals**

#### Academic Advisory Council

**American Gastroenterological Association**

**International Foundation for Functional Gastrointestinal Disorders**



## Douglas A. Drossman, MD

### Chief of Operations and President Emeritus, Rome Foundation

Professor Emeritus of Medicine and Psychiatry  
 Co-Director Emeritus, UNC Center for Functional GI and Motility Disorders  
 UNC School of Medicine  
 President, Center for the Education and Practice of Biopsychosocial Care LLC  
 Drossman Gastroenterology PLLC  
 Chapel Hill, NC, USA

Dr. Drossman received his M.D. degree at Albert Einstein College of Medicine and obtained his medical residency at the University of North Carolina School of Medicine and NYU – Bellevue Medical Center. He subspecialized in biopsychosocial (psychosomatic) medicine at the University of Rochester School of Medicine and in Gastroenterology at the University of North Carolina.

In 2012, Dr. Drossman founded the Drossman Center for the Education and Practice of Biopsychosocial Care (DrossmanCare) care to help train physicians in relationship centered biopsychosocial care. The training emphasis is on communication skills to enhance the patient provider relationship particularly with the care of difficult to diagnose and manage patients with disorders of gut-brain interaction.

Dr. Drossman is Professor Emeritus of Medicine and Psychiatry at the University of North Carolina School of Medicine where he was on staff from 1977 through 2011. He was founder in 1993 and served as co-director of the UNC Center for Functional Gastrointestinal and Motility Disorders. He was founder, past chair (1989-1993) and newsletter editor of the Functional Brain-Gut Research Group of the AGA, Chair (since 1989) and President of the board of the Rome Foundation, past Chair of the Functional GI American Digestive Health Foundation's Digestive Health Initiative (1999-2001) and of the Motility and Nerve-Gut Section of the AGA Council (2003-2005). He is Past-President of the American Psychosomatic Society (1997), a Fellow of the American College of Physicians, a Master of the American College of Gastroenterology, and is on the Board of Directors of the International Foundation for Functional GI Disorders (IFFGD). He has served on three committees of the Institute of Medicine Committee on Gulf War and Health, has been an Ad Hoc member of NIH/NCCAM Advisory board, and is on the NIH-National Commission on Digestive Diseases.

Dr. Drossman has written over 500 articles and book chapters, a GI Procedure Manual, and textbook of Functional GI disorders, and has served on six editorial and advisory boards in Gastroenterology, psychosomatic medicine, behavioral medicine, and patient health. He served 5-years as Associate Editor of the journal Gastroenterology and was the Gastroenterology Section Editor of the Merck Manual for 17 years.

Dr. Drossman's research relates to the clinical, epidemiological, psychosocial and treatment aspects of gastrointestinal disorders. He has developed and validated several assessment

measures (e.g., illness severity and quality of life for IBD and IBS, a physician-patient relationship questionnaire, and an abuse severity scale) for clinical research, is involved in epidemiological and psychosocial outcomes research, and has also studied brain imaging in IBS and trauma. He was principal investigator on several NIH sponsored research grants with over \$15,000,000 in funding. This included a multi-center grant for treatment (antidepressant and cognitive behavioral treatment) of the functional bowel disorders. He also consults with regulatory and pharmaceutical agencies regarding the design and evaluation of treatment trials. He is a recipient of the Janssen Award for Clinical Research (1999), the American Psychosomatic Society President's Award (2003), the AGA Joseph B. Kirsner – Fiterman Award in Clinical Research (2005) and the AGA Mentors Research Scholar Award (2007). He has also received several "Who's Who", "Patient Choice" and "Best Doctors" citations over the past 15 years.

Dr. Drossman's educational and clinical interests relate to the psychosocial and behavioral aspects of patient care. He has produced numerous articles and videotapes on the biopsychosocial aspects of medical care, medical interviewing and the patient-doctor relationship. He is a Charter Fellow of the American Academy of Communication in Health Care and as President of DrossmanCare, he facilitates workshops to develop clinical skills in physician patient communication. Since 2013 he has produced internationally over 50 workshops and webinars on communication skills. He received the AGA Distinguished Educator Award (2004), the American College of Gastroenterology Journal Award (2011), David Sun Lecturer Award (2012), was identified as a "Best Gastroenterologist" in Men's Health (2007) and in Woman's Health (2008) and is featured as one of 12 gastroenterologists in a book "Best Gastroenterology Practices" (2007).

With regard to the Rome Foundation, Dr. Drossman was founder and President of the Board for almost 30 years. He has been editor in chief of Rome I, II, III and IV books, the MDCP and Diagnostic Algorithm books, and the Rome IV Interactive Clinical Decision Toolkit (GI Genius) an interactive software diagnostic and treatment program. He has just formed a partnership between DrossmanCare and the Rome Foundation to develop educational videos, workshops and symposia to enhance the patient provider relationship through teaching advanced communication methods. Beginning in June 2019 Dr. Drossman will transition to become President Emeritus and Chief of Operations of the Rome Foundation.



## Giovanni Barbara, MD

Department of Digestive Diseases and Internal Medicine  
University of Bologna, Italy

Giovanni Barbara graduated Summa cum Laude in Medicine at the University of Bologna, Italy. He subsequently qualified in Internal Medicine and then in Gastroenterology at the same University.

He was trained partly in London, UK and completed a three years post-doctoral research fellowship in neuro-immunology at McMaster University in Canada. Currently he is involved in clinical gastroenterology diagnostic and therapeutic endoscopy, teaching and research at the Department of Internal Medicine and Gastroenterology of the University of Bologna.

Professor Barbara's main research interest relate to basic and clinical aspects of neurogastroenterology, functional gastrointestinal disorders, microbiota and mucosal immunity,

and he has authored numerous indexed peer-reviewed articles and reviews on these topics, published in various biomedical journals, including *Gastroenterology*, *Gut*, *Journal of Clinical Investigation* and *Trends in Pharmacological Science*. He is, or has been, a member of the Editorial Board of *Gut*, *American Journal of Gastroenterology*, *Neurogastroenterology and Motility*, the *American Journal of Physiology* and other international scientific Journals.

Professor Barbara has received numerous national and international awards including the Master Award in Gastroenterology from the American Gastroenterological Association. He is currently Member of the Board of Directors of the Rome Foundation and President of the European Society of Neurogastroenterology and Motility (ESNM).



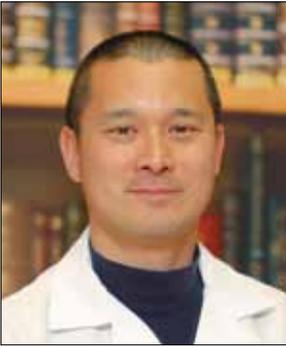
## Lin Chang, MD, AGAF FACG

Professor of Medicine in the Vatche and Tamar Manoukian Division of Digestive Diseases and Department of Medicine David Geffen School of Medicine at UCLA  
Los Angeles, CA, USA

Lin Chang, MD, is a Professor of Medicine and Vice-Chief of the Vatche and Tamar Manoukian Division of Digestive Diseases, Department of Medicine at the David Geffen School of Medicine at UCLA. She serves as the Co-Director of the G. Oppenheimer Center for Neurobiology of Stress and Resilience at the David Geffen School of Medicine at UCLA. She is also Program Director of the UCLA Gastroenterology Fellowship Program. Dr. Chang's clinical expertise is in functional gastrointestinal disorders. She is a NIH funded investigator studying brain-gut interactions underlying irritable bowel syndrome (IBS). Specifically, her research is focused on the pathophysiology of IBS related to stress, early life adversity, sex differences, genetic and epigenetic factors, and gut microbiome and the treatment of IBS.

Dr. Chang is the recipient of the Janssen Award in

Gastroenterology for Basic or Clinical Research and the AGA Distinguished Clinician Award. She is a member of the Rome Foundation Board of Directors, Chair of the Rome Advisory Council, and was a member of the Rome IV Editorial Board and Functional Bowel Disorders Committee. Dr. Chang previously served as President of the American Neurogastroenterology and Motility Society (ANMS). She is Associate Editor of *Clinical Gastroenterology and Hepatology*. She is a fellow of the American Gastroenterological Association (AGA) and was recently selected to be Clinical Research Councilor of the AGA Governing Board. She is also a fellow of the American College of Gastroenterology. Dr. Chang is a member of the FDA GI Drug Advisory Committee and the NIH Clinical, Integrative, Molecular Gastroenterology (CIMG) Study Section. She has authored more than 115 original research articles, 55 review articles, and 20 book chapters on her specialty interests.



## William D. Chey, MD, AGAF, FACG, FACP

Timothy T. Nostrant Collegiate Professor of Gastroenterology & Nutrition Sciences  
 Director, GI Physiology Laboratory  
 Director, Nutrition & Behavioral Medicine Program  
 Medical Director, Michigan Bowel Control Program  
 Division of Gastroenterology  
 University of Michigan Health System  
 Ann Arbor, MI, USA

Dr. Chey received his BA degree from the University of Pennsylvania and medical degree & training in internal medicine at the Emory University School of Medicine. He completed a fellowship in gastroenterology at the University of Michigan in Ann Arbor. Following fellowship, Dr. Chey has remained at the University of Michigan, where he is currently Timothy T. Nostrant Collegiate Professor of GI & Nutrition Sciences. He has helped to found and directs a number of programs at the University of Michigan including the Nutrition & Behavioral Medicine Program and Michigan Bowel Control Program.

His research interests focus on the diagnosis and treatment of the functional bowel disorders, acid-related disorders, and *Helicobacter pylori* (*H. pylori*) infection. Dr. Chey has received funding for his research from federal and private sources.

Dr. Chey has authored more than 300 manuscripts, reviews and book chapters. He is Editor Emeritus of the *American*

*Journal of Gastroenterology* (2010-2015), *Clinical & Translational Gastroenterology* (2011-2014). Dr. Chey is a member of the Board of Trustees of the American College of Gastroenterology. Dr. Chey joined the Board of Directors of the Rome Foundation in 2010 and is a member of the editorial board of the Rome IV criteria. He is a Counsel member of the American Neurogastroenterology & Motility Society and Advisory Board of the International Foundation of Functional GI Disorders.

He has been elected to "Best Doctors" since 2001 and "America's Top Doctors" since 2009. In 2015, Dr. Chey was named as one of the "190 Gastroenterologists to Know" by Becker's ASC. In 2014, Dr. Chey was inducted into the Clinical Excellence Society of the Department of Medicine, received the Dean's Outstanding Clinician Award, and was inducted into the League of Research Excellence at the University of Michigan. In 2015, he was inducted into the League of Clinical Excellence at UM and received the Distinguished Clinician Award from the American Gastroenterological Association.



## Xiucui Fang, MD

Professor of Medicine  
 Department of Gastroenterology  
 Peking Union Medical College Hospital  
 Chinese Academy of Medical Sciences and Peking Union Medical College  
 Beijing, China

Dr. Xiucui Fang works in the Department of gastroenterology of Peking Union Medical College Hospital (PUMC hospital), Chinese

Academy of Medical Sciences and Peking Union Medical College, Beijing, China.

She graduated from Sun Yat-sen University of Medical Sciences in 1984, and completed her internship and residency training program in internal medicine in PUMC Hospital. From 1987 to 1990, she completed the Master program in internal medicine and gastroenterology at Peking Union Medical College. And then, she completed her fellowship in the gastroenterology, and worked in PUMC hospital as an attending physician (from 1990), associate professor (from 1995), full professor (from 2006). She was a visiting scholar of enteric nervous system team in the Ohio State University, USA (2002-2005). Dr. Fang's research is focused on irritable bowel syndrome and enteric nervous system.

Dr. Fang was the secretary (from 2000) and the vice chair (2007-2018) of the Chinese Society of Gastrointestinal Motility. She served as a vice editor-in-chief or editor of Chinese Journals and peer-reviewed journals. She published more than 60 original research articles and 6 books on Disorders of Gut - Brain Interaction (DGBI).

In 2008, Dr. Xiucui Fang together with Dr. Meiyun Ke translated Rome III textbook into Chinese, this is the first foreign language version of Rome textbook, then they continued to introduce the Rome criteria in the Chinese Medical Tribune with the special column, whose activities spread the Rome criteria and related knowledge of DGBIs in China. Dr. Fang joined to the Rome IV team as a member of Multi-cultural Aspects of FGIDs Committee. In 2016, she organized Chinese colleagues to translate Rome IV textbook into Chinese, she is also a coeditor-in-chief of Chinese version of MDCP (second edition), and the principal reviewer of Chinese version DGBIs for Primary Care and Non-GI Clinicians. Dr. Fang is the fellow of Rome Foundation; she also served as the member of international liaison committee.



## Laurie Keefer, PhD

Associate Professor of Gastroenterology and Psychiatry  
Icahn School of Medicine at Mount Sinai  
New York, NY, USA

Laurie Keefer, PhD is a clinical health psychologist specializing in gastroenterology. She received her PhD from SUNY Albany in 2003 where she studied group-based cognitive therapy for IBS, and then continued her training as a resident and fellow in health psychology at Rush University in Chicago IL. In 2006, she set up one of the first fully integrated GI Psychology programs in the country at Northwestern University, where she was on the faculty for 10 years. During this time she built an NIH funded research program focused on the development and implementation of brain-gut psychotherapies for IBS, GERD and IBD and received the first NIH funded Training Grant (T32) for GI Physiology and Psychology, focused on preparing young professionals for careers in psychogastroenterology. She has held elected leadership positions in the field, including as a member of Council for the American Neurogastroenterology and Motility Society and as a Commissioner for the American Psychological Association's

Commission for the Recognition of Specialties and Proficiencies in Professional Psychology.

Dr. Keefer is Director of the Gaining Resilience through Transitions [GRITT™]-IBD Program at the Icahn School of Medicine at Mount Sinai in NYC, overseeing a multidisciplinary team of clinicians and scientists to provide early, effective psychosocial care for high risk pediatric and adult patients with Inflammatory Bowel Diseases. Her current research program focuses on resilience and the application of positive psychology interventions in this population.

Prior to joining the Rome Board, Dr. Keefer served as Co-Chair of the Rome IV Centrally mediated disorders of GI Pain committee and Member of the Rome IV Psychosocial Committee. She is the founder and Director of the Rome Foundation's Psychogastroenterology Group, focused on supporting and connecting clinicians and scientists around the world who seek to advance science and practice at the intersection of gastroenterology and psychology.



## John E. Kellow, MD, MB BS, MD, FRACP

Associate Professor and Head of the Discipline of Medicine  
Sydney Medical School-Northern  
University of Sydney  
Sydney, Australia

Dr. John Kellow is currently Associate Professor and Head of the Discipline of Medicine, Northern Clinical School, University of Sydney, and Gastroenterologist and Director of the Neurogastroenterology Unit at Royal North Shore Hospital, Sydney. Dr. Kellow graduated MBBS from the University of Sydney and subsequently received his doctorate (MD) from that university. He was made a Fellow of the Royal Australasian College of Physicians (FRACP) in 1985. Dr. Kellow was a University of Sydney Travelling Fellow at the Mayo Clinic, USA in 1984-1985, and was a Commonwealth Medical Fellow at the Royal London Hospital Medical College, UK in 1986. He is a member of the Gastroenterological Society of Australia, The American Gastroenterological Association, The American Neurogastroenterology and Motility Society, and the European

Society of Neurogastroenterology and Motility. Dr. Kellow has published extensively including original research papers, book chapters and reviews. His primary and long-standing research interests are neurogastroenterology and the pathophysiology and treatment of the functional gastrointestinal disorders. He is a Board Member of the Rome Foundation, and a member of the Advisory Board of the International Foundation for Functional Gastrointestinal Disorders. He serves on the Editorial Boards of a number of international journals in gastroenterology. He has also had a long-standing interest in undergraduate and postgraduate medical education, curriculum development and assessment, and was previously Associate Dean (Assessment) Faculty of Medicine, University of Sydney.



## Samuel Nurko, MD, MPH

Professor of Pediatrics  
Harvard Medical School  
Director of the Center for Motility and Functional Bowel Disorders  
Boston Children's Hospital  
Boston, MA, USA

Samuel Nurko, MD, MPH is a Professor of Pediatrics at Harvard Medical School, and Director of the Center for Motility and Functional Bowel Disorders at Boston Children's Hospital. He was born

and raised in Mexico City where he completed his medical education at the Universidad Nacional Autónoma de México. He moved to the U.S. in 1981 for his pediatric residency at Boston City Hospital and Massachusetts General Hospital, and later completed his fellowship in pediatric gastroenterology at Boston Children's Hospital. After his fellowship, he returned to Mexico for 5 years and worked at the Hospital Infantil de México, devoting his efforts to developing effective and affordable treatments for children with severe malnutrition and diarrhea. In 1993 he returned to Boston and created the Motility Center which provides state of the art evaluation and care of children with motility and functional gastrointestinal disorders, offering innovative techniques and multidisciplinary approaches for diagnosis and treatment.

Dr. Nurko is a recognized leader in the field and has distinguished himself during his tenure as an academic, NIH-funded clinical researcher, teacher, and mentor. He has a long-standing interest, and dedication to patient-oriented research and has written more than 250 manuscripts, reviews and book chapters. Dr. Nurko has made major contributions to

the understanding of motility and functional GI disorders in children, as well as on the effect of other inflammatory or allergic conditions on the GI tract. His clinical and research interests have focused in understanding the pathophysiology and establishing the best approach and treatments for these disorders, and he has been a pioneer in the development and validation of new techniques to their study. He has participated in many National and International Committees and Task Forces to establish standards for motility procedures and training in motility. He has participated in the development of International based guidelines for the treatment of constipation in children, and was chair of the Rome IV neonatal and toddler functional gastrointestinal disorders committee. He was Associate Editor of the Journal of Pediatric Gastroenterology and Nutrition, and founder of the Neurogastroenterology Committee of NASPGHAN. He has been recipient of the Senior Investigator Award from IFFGD as well as the Research Mentor Award from the AGA. Recently he was portrayed in the Major Motion Picture: "Miracles from Heaven".

Dr. Nurko has been very active in providing care and fostering education in Latin America. He works closely with minority premed students. He's been formally recognized by the Hispanic community and received the Milagros para Niños award for clinical excellence, and recognition from the Hispanic Chamber of Commerce, and the City of Boston for his service to the Latin community.



## Max J. Schmulson W., MD

Professor of Medicine  
Laboratorio de Hígado, Páncreas y Motilidad (HIPAM)-Unit of Research in Experimental Medicine  
Faculty de Medicina-Universidad Nacional Autónoma de México (UNAM)  
Hospital General de México  
Mexico City, Mexico

Dr. Schmulson was born in Barranquilla-Colombia and received his MD degree from the Pontificia Universidad Javeriana of Santa Fe de Bogotá, where

he trained in Internal Medicine. He continued his Gastroenterology training in the Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán (INCMNSZ) in Mexico City, graduating with the award for the Best Residency-Graduation Thesis. While under the mentorship of Emeran Mayer at UCLA, he focused on the differences in symptoms, motility and visceral sensitivity of IBS patients according to the bowel habit predominance. Upon returning to Mexico, he worked in the INCMNSZ for 6 years, and in 2005 he was appointed Full Professor of Medicine of the Universidad Nacional Autónoma de México (UNAM) and currently works in the Laboratory of Liver, Pancreas and Motility (HIPAM) of the Unit of Research in Experimental Medicine. Dr. Schmulson's research is focused on the epidemiology of DGBIs, the immunological factors and the microbiota/microbiome associated with IBS. He also works in Clínica Lomas Altas in Mexico City where he runs the Motility Unit and in the Gastroenterology and Endoscopy Group in the Centro Médico ABC.

Dr. Schmulson has published more than 90 papers on peer-reviewed journals, 4 books and 58 book chapters on Functional Gastrointestinal Disorders. In 6 opportunities he received the award "Dr. Abraham Ayala Gonzáles" and the Epidemiological Research award from the Mexican Gastroenterological

Association. He worked in the Latin American Consensus on IBS and coordinated the Latin American Consensus on Chronic Constipation. Dr. Schmulson previously served as Chair of the Membership Committee of the Functional Brain Gut Research Group. In 2006, as a founding member of the Latin American Society for Neurogastroenterology he served as the first President. He has also served as Editor in Chief of the Revista de Gastroenterología de México from 2012-2014 and as Associated Editor of the American Journal of Gastroenterology from 2010-2015. Currently he is Founder and Co-Editor in Chief of the journal NeurogastroLATAM Reviews.

He is a National Researcher (SNI-II) and a member of the National Academy of Medicine in Mexico. Regarding the Rome Foundation, Dr. Schmulson worked on the Spanish translation of the Rome II Modular Questionnaire and Rome III Adult Questionnaire, on the Management and Design of Treatment Trials Committee of the Rome CD Slide Set and was a charter member of the International Liaison Committee serving as Chair from 2009 to 2013. He also served in the Multinational Working Team that released its report in 2014, in the Multi-Cultural Aspects and Design of Treatment Trials chapters of Rome IV and is a current member of the DGBIs Global Study Executive Committee, Co-Director of the Biobank and Biomarker Core of the recently created Rome Foundation Research Institute and liaison between the ILC and the Board of Directors of the Rome Foundation.



## Magnus Simrén, MD, PhD

Professor of Gastroenterology  
University of Gothenburg  
Senior Consultant, Department of Internal Medicine  
Sahlgrenska University Hospital  
Gothenburg, Sweden

Dr. Magnus Simrén graduated from medical school, University of Gothenburg in 1991, and afterwards completed his internship and fellowship in internal medicine at the County Hospital of Lidköping. From 1998 to 1999, Doctor Simrén completed his fellowship in gastroenterology at Sahlgrenska University Hospital. He defended his thesis entitled "Irritable Bowel Syndrome: Pathophysiological and clinical aspects" in 2001. He was a research fellow at the University of Leuven, Belgium, in 2002, a visiting research scientist at the Center for Functional GI and Motility Disorders, University of North Carolina (UNC), Chapel Hill, NC, United States 2015-2016, and currently holds a position as Adjunct professor at UNC (2017-). Since 2013 he has a combined position as Professor of Gastroenterology at the University of Gothenburg, and Senior Consultant at the Sahlgrenska University Hospital in Gothenburg, Sweden.

Dr. Simrén is head of the Neurogastroenterology Unit at Sahlgrenska University Hospital. His main research areas are the pathogenesis and pathophysiology of functional GI disorders, as well as the treatment of these disorders and the importance of brain-gut interactions. He

has published more than 260 original articles and also written book chapters on GI motility diseases and functional GI disorders, and is currently supervisor for eighteen PhD students and three Post-Docs. Doctor Simrén has been the President of the Scandinavian Association for Gastrointestinal Motility (SAGIM), Scientific Secretary to the Swedish Society of Gastroenterology, and served as council member for several international organizations. He has been the chair of the United European Gastroenterology (UEG) Scientific Committee 2013-2017, and is currently the UEG Secretary General (2018-2021), and a member of the UEG council (2013-2021). He has been working as Deputy Editor and Associate Editor of Gut (2005-2009), and Clinical Editor of Neurogastroenterology and Motility (2012-2016). Doctor Simrén is a member of the Rome Foundation Board of Directors since 2011. 2010-2012 he chaired the Rome Foundation Working team on "Intestinal microbiota in functional bowel disorders", and has served as a member of the Rome IV committees for Functional Bowel Disorders and Centrally Mediated Disorders of GI Pain. Dr Simren is the Research Director of the Rome Foundation Research Institute (RFRI) 2017-.



## Ami Sperber, MD, MSPH, AGAF

Emeritus Professor of Medicine  
Faculty of Health Sciences  
Ben-Gurion University  
Negev, Israel

Dr. Ami D. Sperber is Emeritus Professor of Medicine in the Faculty of Health Sciences of Ben-Gurion University of the Negev, Israel. He was born and raised in New York City and immigrated to Israel at the age of 23. In 1981 he received his MD degree in Israel and in 1992 he completed an MSPH (Master of Science in Public Health) degree from the Department of Health Behavior and Health Education in the School of Public Health of the University of North Carolina at Chapel Hill.

In addition to continued involvement in patient care, Dr. Sperber has conducted extensive research on IBS including (a) the local and global epidemiology of IBS and other DGBIs, (b) co-morbidity in DGBIs, in particular sleep impairment and fibromyalgia, and (c) psychosocial aspects of DGBIs. He is the author of a book, in Hebrew, on IBS for the general public in Israel, which emphasizes the biopsychosocial approach to diagnosis and treatment and presents an empathetic description of the disorder, its diagnosis and treatment. The book was translated into English and is available as an e-book on Amazon ([https://www.amazon.com/Things-Heart-Others-Their-Belly-ebook/dp/B00668RUSK/ref=sr\\_1\\_1?ie=UTF8&qid=1550225981&sr=8-1&keywords=Ami+Sperber](https://www.amazon.com/Things-Heart-Others-Their-Belly-ebook/dp/B00668RUSK/ref=sr_1_1?ie=UTF8&qid=1550225981&sr=8-1&keywords=Ami+Sperber)).

com/Things-Heart-Others-Their-Belly-ebook/dp/B00668RUSK/ref=sr\_1\_1?ie=UTF8&qid=1550225981&sr=8-1&keywords=Ami+Sperber).

Dr. Sperber has led the Rome Foundation global initiative since its inception. In 2011 he initiated and co-chaired the first international symposium on IBS-the Global Perspective. He chaired the RF Working Team on Multinational, Cross-cultural Research, which published its final report in January 2014 and has published three papers. He chaired the Rome IV chapter committee on Cross-cultural factors in FGIDs. He contributed 4 cross-cultural cases to the Rome IV Multidimensional Clinical Profile (MDCP) book. He currently chairs the Executive Committee of the DGBI Global Epidemiology study, which is being conducted in 33 countries around the world. He is the ongoing head of the Rome Foundation Translation Project. Dr. Sperber has published on cross-cultural, multinational research and translation methodology and been invited to speak on these and other topics at meetings around the world.

# Rome Foundation Administration



**Johannah Ruddy**  
Executive Director



**Michelle Berry**  
Sales & Exhibit Coordinator



**Eric Chapman**  
Information Technology  
Director



**Chaitanya Pabbati, MD**  
Technical Consultant



**Claudia Rojas**  
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**Mark Schmitter**  
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Copyright & Licensing Coordinator



**Jerry Schoendorf**  
Medical Illustrator



**Heather Solender**  
Executive Assistant to Chief  
of Operations



**Davis Stillson**  
Videographer



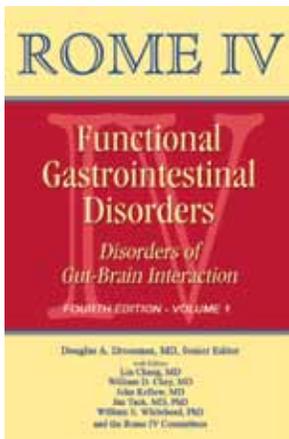
**Ceara Owre**  
Technical and Media Coordinator



**Debra Wildeman**  
Finance Director

## Rome Foundation Educational Resources

Provides unique, comprehensive and up to date learning tools for clinicians caring for patients with Disorders of Gut Brain Interaction - DGBI (formerly called Functional GI Disorders - FGIDs)



After five years of work by 120 investigators in over two dozen countries (see Figure 3) Rome IV published in 2016 still represents the collective efforts of the world's best minds in research in the disorders of gut-brain interaction (formerly functional GI disorders).

This has led to the publication of several products.

### Rome IV Books and Printed Educational Materials—for Research, Diagnosis, and Treatment

**Rome IV Functional Gastrointestinal Disorders – Disorders of Gut-Brain Interaction.** The basis of our educational materials begins with this two volume set. With several new chapters, updates in pathophysiology and new diagnostic and treatment recommendations the Rome IV book set provides complete learning of the DGBIs. In addition, there are 5 additional books:

**Rome IV Diagnostic Algorithms for Common GI Symptoms** is the second edition of our useful algorithmic approach to evaluating common GI symptoms. It is designed to aid clinicians by guiding them through a logical pathway to diagnosis. It features new sets presenting symptoms and includes pediatric algorithms.

**Rome IV Multidimensional Clinical Profile for Functional Gastrointestinal Disorders (MDCP)**, in its second edition puts the Rome approach to DGBI care into practice using a case-based learning format (72 cases). The unique multicomponent approach to treatment takes into consideration not just the diagnosis, but meaningful clinical subset information, impact of the disorder, psychosocial comorbidities and physiological features including biomarkers, all as part of a case-based approach.

**Rome IV Functional Gastrointestinal Disorders for Primary Care and Non-GI Clinicians** provides access of Rome IV information to doctors on the front lines of clinical care as well as other nongastroenterological physicians. Indeed, the Rome Foundation philosophy and approach to DGBIs is modified into more concise information to meet the needs of the busy nonspecialist clinician.

**Rome IV Pediatric Functional Gastrointestinal Disorders – Disorders of Gut-Brain Interaction** provides in one volume all the information that will help clinicians navigate the difficult diagnostic conditions presented by young patients and their families. The book contains the Rome IV clinical chapters, the pediatric diagnostic algorithms and MDCP cases as well as questionnaires and criteria for diagnosis.

**Rome IV Diagnostic Questionnaires and Tables for Investigators and Clinicians** provides the framework for further epidemiological and clinical research on DGBIs according to the Rome IV criteria. In just the last 9 months since the launch of these print books thousands have been sold internationally through individual and bulk sales. We now look forward to expanding our educational effort by utilizing other ways to educate.

### Rome IV Digital Products – Expanding Rome's Learning Resources

We have learned through our marketing research that younger clinicians and scientists are moving away from hard copy books to digital platforms for learning. Thus, beginning in 2017 our efforts have been to reach this larger audience through our digital products; this includes Rome IV online, the Rome IV Interactive Clinical Decision Toolkit, e-books through Amazon.com and our Rome IV slide sets. Let me take a moment to tell you about how these products offer more for our audience.

**Rome IV Online.** We have captured all of the Rome IV books and placed them on a digital platform [www.romeonline.org/product/rome-iv-online-collection-all-six-rome-iv-books-online/](http://www.romeonline.org/product/rome-iv-online-collection-all-six-rome-iv-books-online/). For a small fee (subscriptions for 1, 6, 12 months or 10 years) the user can: 1) review thousands of pages of content, over 50% more information than in the printed books, 2) easily and intuitively navigate chapters within a book or across all books, 3) do free text searching in the entire platform using clear displays, similar to doing a google search, 4) access over 700 high quality graphic images not available in the printed books, 5) purchase and download for a nominal fee any of these images as PowerPoint slides for self learning or teaching. Rome IV Online is a popular option for clinicians, investigators and institutions as it will always be password accessible on any digital platform. Discount options are available for those purchasing companion hard copy Rome IV books.

**Rome IV GI Genius (formerly Interactive Clinical Decision Toolkit).** This intelligent software system addresses the sophistication and complexity of DGBI diagnosis and treatment by interactively assisting practitioners in achieving optimal clinical outcomes, and in real time. It offers an online way to access both the Rome IV Diagnostic Algorithms and the Rome IV Multidimensional Clinical Profile for FGIDs (MDCP). But in addition, the information is modifiable; expert clinicians from the Foundation's Board of Directors have refined this information to fit the intelligent software platform. Furthermore, since the print books won't be modified until Rome V, we have created the means to enhance the content of the toolkit by adding information on new scientific studies and treatments that are reviewed and vetted by Rome Foundation experts. Thus, the toolkit is a dynamic interactive tool that provides the most up to-date clinical information, all in one place.



Figure 3. Rome IV Participants

The program guides practitioners through a series of diagnostic and treatment pathways to offer the best clinical options (Figure 4). Navigation is very flexible, letting the user explore, select, and deselect different decision points in any order. At each decision point, users have dynamic access to relevant information and citations to confirm their conclusions or to provide enhanced guidance. Furthermore, users can work with the program in real time when caring for patients. They can enter clinical information and come back weeks later to input the clinical response and update the database, moving through new diagnostic or treatment pathways as needed. The intelligent software program also continues to learn from user input. When decision branches occur that contain uncertainties, the information is made available to the board of experts who modify the algorithm to improve its performance. We believe that this innovative program will aid practitioners around the world to successfully access Rome expertise, diagnose and treat patients, increase their own knowledge and credentials, and contribute to outcomes-based learning facilitated by this constantly learning system.

**E-books through Amazon.com.** For those interested in e-books, the Rome IV product line (Rome IV volumes 1 and 2, MDCP, algorithms, pediatric, primary care and questionnaire books) are available for download through Amazon E-book platforms and have within book search capability. E-books cost the same as the printed version and can be purchased individually or through bulk discounts.

**Rome IV slide sets.** The Rome IV slide sets (Figure 5) created by the Rome IV chapter committees contains all the graphical images used in our Rome IV education materials: 1) Rome IV complete slide set, with images and videos from the print and online Rome IV chapters, and 58 slides of the Rome IV diagnostic criteria 2) Rome IV MDCP slide set, containing 72 cases (2-3 slides each case) containing the history, the MDCP categories and the recommended treatments, and 3) Rome IV algorithm slide set that includes 35 slides for presentation. Images can be purchased individually or as complete sets through our online bookstore, or individually through Rome IV online. Each multicolor image has a legend and up to date references; thus, sets are available for self-learning or for PowerPoint presentation at meetings and conferences. All printed and online educational materials will be available for bulk order at discounted prices, and Rome Foundation

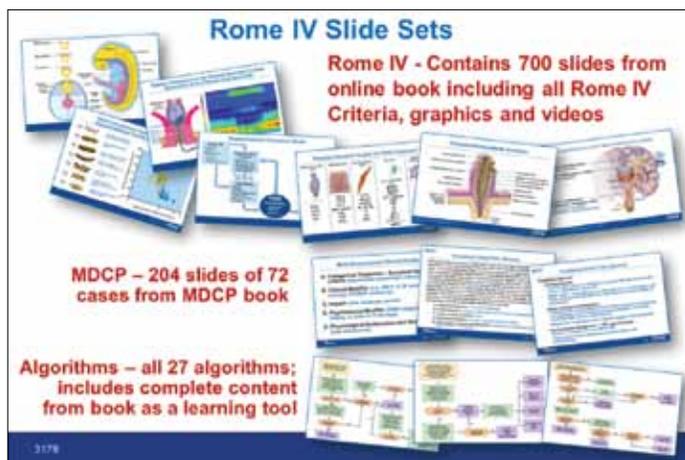


Figure 5. Rome IV slide sets

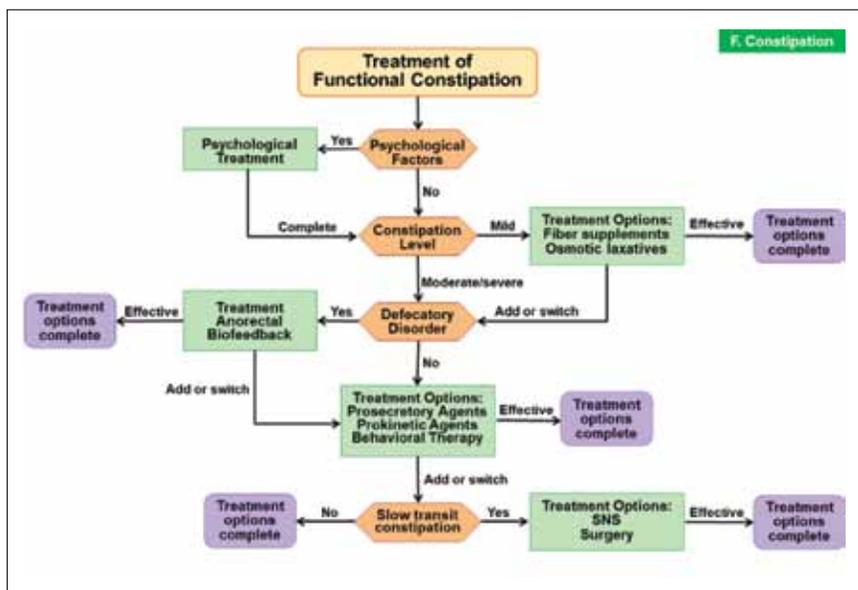


Figure 4. Rome IV Toolkit treatment pathway for treating Functional Constipation

sponsors will receive an additional 20% off the discounted price. For further information, and to receive a listing of bulk order prices, please contact Mark Schmitter, marketing manager, at mschmitter@theromefoundation.org.

**Communication 202.** In collaboration with DrossmanCare, the Rome Foundation has developed a new educational initiative using innovative methods to teach communication skills as a means to improve the patient provider relationship. Communication 202 is a downloadable video series that contains six difficult to diagnose and manage case vignettes where the patient provider interaction is explored. Each case demonstrates: 1) an ineffective interview, 2) an effective interview, 3) an interview of the patient in character describing his or her experience with the two encounters, and 4) a moment by moment critique of the interviews where a deeper understanding of the dialog and its effects are explored.

#### Major Educational Symposia, Webinars and Podcasts

A new feature in recent years has been the development by ourselves or with educational vendors to produce satellite symposia, webcasts and other programs with enduring digital material. This has included webinars for gastroenterologists to 12 middle eastern countries (sponsored by Acino Pharmaceuticals), in collaboration with the American College of Physicians and on our own website. Our partners have included Medscape, Paradigm, Haymarket, and PER. In addition, we have developed programs for primary care physicians including at the American College of Physicians and the American Academy of Physician Assistants. This past year we have developed a series of 4 regional programs to teach DGBI using a more interactive approach with panel discussions, small group teaching and the use of MDCP, GI Genius and communication skill methods. These sessions are targeted to mid level providers, mental health professionals, dietitians and primary care providers. We are also developing a series of workshops to teach difficult case management using the diagnostic algorithms, the MDCP and GI genius and videos demonstrating communication skills.

The Rome Foundation continues in its mission to provide unique, comprehensive and up to date learning tools for clinicians caring for patients with DGBIs.

## Rome IV Chapter Committees

FUNDAMENTALS OF NEUROGASTROENTEROLOGY: BASIC SCIENCE (KELLOW)*	FUNDAMENTALS OF NEUROGASTROENTEROLOGY: PHYSIOLOGY/MOTILITY-SENSATION (WHITEHEAD)*	INTESTINAL MICROENVIRONMENT AND FGIDs (CHEY)*	PHARMACOLOGICAL PHARMACOKINETIC AND PHARMACOGENOMIC ASPECTS OF FGIDs (TACK)*
<p><b>David Grundy, MD, Chair</b> (UK)  <b>Stephen Vanner, MD, Co-Chair</b> (Canada)            Beverley Greenwood-Van Meerveld, PhD (US)            Gary M. Mawe, PhD (US)            Terez Shea-Donahue, PhD (US)            Elena Verdu, MD, PhD (Canada)            Jackie D. Wood, PhD (US)</p>	<p><b>Guy E. Boeckxstaens, MD, PhD, Chair</b> (Belgium)  <b>Henry P. Parkman, MD, Co-Chair</b> (US)            Fernando Azpiroz, MD (Spain)            Michael Camilleri, MD (US)            Sigrid Elsenbruch, PhD (Germany)            Lesley A. Houghton, PhD (US)            Greger Lindberg, MD (Sweden)            Daniel Sifrim, MD, PhD (UK)</p>	<p><b>Eamonn M. Quigley, MD, Chair</b> (US)  <b>Giovanni Barbara, MD, Co-Chair</b> (Italy)            Christine Feinle-Bisset, PhD (Australia)            Uday C. Ghoshal, MD (India)            Javier Santos, MD, PhD (Spain)            Stephen Vanner, MD (Canada)            Nathalie Vergnolle, PhD (France)            Erwin G. Zoetendal, PhD (Netherlands)</p>	<p><b>Michael Camilleri, MD, Chair</b> (US)  <b>Lionel Bueno, MD, Co-Chair</b> (France)            Viola Andresen, MD (Germany)            Myung-Gyu Choi, MD (Korea)            Fabrizio De Ponti, MD, PhD (Italy)            Anthony Lembo, MD (US)</p>
<p><b>Age, Gender and Women's Health and the Patient</b> (Chang)*</p>	<p><b>Multicultural Aspects of FGIDs</b> (Chang)*</p>	<p><b>Biopsychosocial Aspects of Functional Gastrointestinal Disorders</b> (Drossman)*</p>	<p><b>Esophageal Disorders</b> (Tack)*</p>
<p><b>Margaret M. Heitkemper, PhD, Co-Chair</b> (US)  <b>Lesley A. Houghton, PhD, Co-Chair</b> (UK)            Michael D. Crowell, PhD (US)            Anton Emanuel, MD (UK)            Alben Halpert, MD (US)            James A. McRoberts, PhD (US)            Brenda B. Toner, MD (Canada)</p>	<p><b>Ami Sperber, MD, Chair</b> (Israel)  <b>Carlos Francisoni, MD, Co-Chair</b> (Brazil)            Xiucui Fang, MD (China)            Shin Fukudo, MD, PhD (Japan)            Mary-Joan Gerson, MD (US)            Jin-Yong Kang, MD, PhD (UK)            Max J. Schmulson W., MD (Mexico)</p>	<p><b>Rona L. Levy, PhD, Chair</b> (US)  <b>Lukas Van Oudenhove, MD, PhD, Co-Chair</b> (Belgium)            Michael D. Crowell, PhD (US)            Douglas A. Drossman, MD (US)            Alben Halpert, MD (US)            Laurie Keefer, PhD (US)            Jeffrey Lackner, PsyD (US)            Tasha B. Murphy, MD (US)            Bruce D. Naliboff, PhD (US)</p>	<p><b>Ronnie Fass, MD, Chair</b> (US)  <b>John E. Pandolfino, MD, Co-Chair</b> (US)            Qasim Aziz, PhD (UK)            C. Prakash Gyawali, MD (US)            Hiroto Miwa, MD, PhD (Japan)            Frank Zerbib, MD, PhD (France)</p>
<p><b>GASTRODUODENAL DISORDERS</b> (CHEY)*</p>	<p><b>BOWEL DISORDERS</b> (TACK)*</p>	<p><b>CENTRALLY MEDIATED DISORDERS OF GI PAIN</b> (KELLOW)*</p>	<p><b>GALLBLADDER AND SPHINCTER OF ODDI DISORDERS</b> (KELLOW)*</p>
<p><b>Nicholas J. Talley, MD, PhD, Chair</b> (Australia)  <b>Vincenzo Stanghellini, MD, Co-Chair</b> (Italy)            Francis K. L. Chan, MD (China)            William L. Hasler, MD (US)            Juan Malagelada, MD, PhD (Spain)            Hidekazu Suzuki, MD, PhD (Japan)            Jan Tack, MD, PhD (Belgium)</p>	<p><b>Fermín Mearin, MD, Chair</b> (Spain)  <b>Brian E. Lacy, MD, Co-Chair</b> (US)            Lin Chang, MD (US)            William D. Chey, MD (US)            Anthony Lembo, MD (US)            Magnus Simrén, MD, PhD (Sweden)            Robin Spiller, MD (UK)</p>	<p><b>Peter J. Whorwell, MD, Chair</b> (UK)  <b>Laurie Keefer, PhD, Co-Chair</b> (US)            Douglas A. Drossman, MD (US)            Elspeth Guthrie, MD (UK)            Kevin Olden, MD (US)            Magnus Simrén, MD, PhD (Sweden)            Kirsten Tillisch, MD (US)</p>	<p><b>Grace H. Elta, MD, Chair</b> (US)  <b>Peter B. Cotton, MD, Co-Chair</b> (US)            C. Ross Carter, MD (Scotland)            Enrico Stefano Corazzari, MD (Italy)            Pankaj Jay Pasricha, MD (US)</p>
<p><b>ANORECTAL DISORDERS</b> (WHITEHEAD)*</p>	<p><b>CHILDHOOD FGIDs: NEONATE/TODDLER</b> (CHANG)*</p>	<p><b>CHILDHOOD FGIDs: CHILD/ADOLESCENT</b> (CHEY)*</p>	<p><b>DESIGN OF TREATMENT TRIALS FOR FGIDs</b> (WHITEHEAD)*</p>
<p><b>Adil E. Bharucha, MD, Chair</b> (US)  <b>Satish S. C. Rao, MD, PhD, Co-Chair</b> (US)            Giuseppe Chiarioni, MD (Italy)            Richelle Felt-Bersma, MD, PhD (Netherlands)            Charles H. Knowles, PhD (UK)            Allison Malcolm, MD (Australia)            Arnold Wald, MD (US)</p>	<p><b>Samuel Nurko, MD, Chair</b> (US)  <b>Marc A. Benninga, MD, Co-Chair</b> (Netherlands)            Christophe Faure, MD (Canada)            Paul E. Hyman, MD (US)            Ian St James-Roberts, PhD (UK)            Neil L. Schechter, MD (US)</p>	<p><b>Carlo Di Lorenzo, MD, Chair</b> (US)  <b>Jeffrey S. Hyams, MD, Co-Chair</b> (US)            Miguel Saps, MD (US)            Robert J. Shulman, MD (US)            Annamaria Staiano, MD (Italy)            Miranda A.L. van Tilburg, PhD (US)</p>	<p><b>Brennan Spiegel, MD, Chair</b> (US)  <b>Jan E. Irvine, MD, Co-Chair</b> (Canada)  <b>Jan Tack, MD, PhD, Co-Chair</b> (Belgium)            Michael Crowell, PhD (US)            Kok-Ann Gwee, MD, PhD (Singapore)            Meiyun Ke, MD (China)            Max Schmulson, MD (Mexico)            William W. Whitehead, MD (US)</p>

\*Chapter Associate Editor

## Rome IV Working Team Committees

MICROBIOTA	CROSS-CULTURAL	FOOD & FGIDs	SEVERITY	ASIAN-ROME	BRAIN IMAGING
Magnus Simrén, MD, PhD, Chair (Sweden) Giovanni Barbara, MD, Co-Chair (Italy)	Ami Sperber, MD, Chair (Israel)	William D. Chey, MD, Co-Chair (US) Jan Tack, MD, PhD, Co-Chair (Belgium)	Douglas Drossman, MD, Chair (US) Lin Chang, MD, Co-Chair (US)	Kok-Ann Gwee, MD, PhD, Chair (Singapore) William E. Whitehead, PhD, Co-Chair (US)	Emeran Mayer, MD, Chair (US) Qasim Aziz, PhD (UK) Co-Chair
Brennan Spiegel, MD (US) Robin Spiller, MD (UK) Stephen Vanner, MD (Canada) Elena Verdu, MD, PhD (Canada) Peter Whorwell, MD (UK) Erwin Zoetendal, MD (Netherlands)	Enrico Corazziari, MD (Italy) Shin Fukudo, MD, PhD (Japan) Charles Gerson, MD (US) Uday Ghoshal, MD (India) Kok-Ann Gwee, MD, PhD (Singapore) Pali Hungin, MD (UK) Max Schmulson, MD (Mexico) Lynn Walker, PhD (US) William E. Whitehead, PhD (US)	Fernando Azpiroz, MD (Spain) Sheila Crowe, MD (US) Shanti Eswaran, MD (US) Peter Gibson, MD (Australia) Sue Shepherd, PhD (Australia)	Nicholas Bellamy, DSc (Australia) Hugo Gallo-Torres, MD (US) Fermin Mearin, MD (Spain) Nancy Norton (US) Peter Whorwell, MD (UK)	Young-Tae Bak, MD (South Korea) Andrew Chua, MD (Malaysia) Uday Ghoshal, MD (India) Sutep Gonlachanvit, MD (Thailand) Xiao-Hua Hou, MD, PhD (China) Ching Liang Lu, MD (Taiwan) Chen Minhu, MD, PhD (China) Hiroto Miwa, MD, PhD (Japan)	Doug Bremner, MD (US) Mark Kern, PhD (US) Braden Kuo, MD (US) Richard Lane, MD, PhD (US) Bruce Naliboff, PhD (US) Irene Tracey, PhD (UK)
Overview of IBS/functional disorders and evolution of Microbiome role.	Develop plans to facilitate multinational research in the FGIDs, and formulate recommendations and guidelines for FGID research from a cross-cultural perspective.	Systematic assessment of the interaction between food/nutrients and FGID symptom pathogenesis and treatment.	Summarize current research and to make recommendations as to how the concept of severity should be integrated in investigative studies as well as applied in clinical practice.	Conduct a multinational survey using standardized methodology to confirm these observations and make recommendations for the development of Rome IV criteria that are more inclusive for Asian patients.	Developed a consensus understanding of various brain imaging modalities as related to FGIDs. Presented an update of lit. in this area, made recs. for future standardization in their use for patients.

## Rome IV Support Committees

QUESTIONNAIRE	SYSTEMATIC REVIEW	MULTI-DIMENSIONAL CLINICAL PROFILE	PRIMARY CARE
William E. Whitehead, PhD (US)	Paul Moayeddi, MD (Canada)	Douglas Drossman, MD (US)	Pali Hungin, MD (UK)
Olafur Palsson, PsyD (US) Ami Sperber MD (Israel) Brennan Spiegel, MD (US) Robin Spiller, MD (UK) Jan Tack, MD, PhD (Belgium) Miranda van Tilburg, PhD (US) Lynn Walker, PhD (US) Yunsheng Yang, MD (China)	William D. Chey, MD (US) Hashem El-Serag, MD (US) Alexander Ford, MD (UK) Grigoris Leontiadis, MD, PhD (Canada)	Fernando Azpiroz, MD, PhD (Spain) Lin Chang, MD (US) William D. Chey, MD (US) John Kellow, MD (Australia) Magnus Simrén, MD, PhD (Sweden) Robin Spiller, MD (UK) Jan Tack, MD, PhD (Belgium) William E. Whitehead, PhD (US)	Bill Cayley, MD (US) Lin Chang, MD (US) Niek DeWit, MD, PhD (Netherlands) Joel Heidelbaugh, MD (US) Jean Muris, PhD (Netherlands) Ceciel Rooker (US) Greg Rubin, MD (UK) Bohumil Seifert, PhD (Czech Republic) W. Grant Thompson, MD (Canada)
Ensured that the questionnaire accurately reflected the criteria, was translatable into key languages and was validated through cooperation with. Reviewed the existing body of literature relevant to the chapter committee topics, and provided 500-2000 articles reviewed by the relevant chapter committee.	Reviewed the existing body of literature relevant to the chapter committee topics, and provided 500-2000 articles reviewed by the relevant chapter committee.	Provided subcategorization of FGIDs beyond the diagnostic criteria that is helpful in treatment. The profiles will vary among individuals with the same diagnosis. This related (for example) to subsetting IBS into IBS-C, D or M, addressing the type/degree of physiological dysfunction (e.g. with fecal incontinence) or biomarkers, the presence of psychosocial comorbidities, and overall severity/disability.	Applied the Rome IV criteria in a fashion that is beneficial to primary care physicians and health care extenders.



# The Rome Foundation Comprehensive Global Initiative

Ami Sperber, MD

**Background:** Over the past 10 years the Rome Foundation has put in place a multifaceted global initiative to implement the goals of the Foundation on a global level. This initiative is depicted in the figure 6 and described in the text below.

The Rome Board of Directors established a Global Committee, chaired by Dr. Ami Sperber, to coordinate all activities on the global level and to collaborate with other Rome Foundation committees such as the Education and Research committees. The structure of the Global Committee is depicted in the figure 7.

## 1. International Liaison Committee (ILC) and International Associates Program

The ILC is chaired by Dr. Uday Ghoshal from India and is composed of representatives from different regions of the world. It is organized on a regional basis with the following regions working semi-autonomously under ILC auspices to promote the Rome Foundation global initiative in each region:

- Eastern Europe
- Asia
- Africa
- Middle East
- Latin America
- Western Europe, North America, Australia/New Zealand

## 2. RF Translation Project

- To provide quality, validated translations of RF material into as many languages as possible, in particular the Rome IV adult and pediatric diagnostic questionnaires, diagnostic criteria, books, clinical algorithms, multi-dimensional clinical profile (MDCP).
- To translate other RF-copyrighted questionnaires, notably the IBS symptom severity scale (IBS-SSS), the Bristol Stool Form Scale (BSFS), the IBS-Quality of Life scale (IBS-QOL), and the Celiac Disease Quality of Life questionnaire (CD-QOL), and many others.
- To establish regulations for the licensing and use of Rome material in the framework of academic research and commercial clinical trials.
- The Rome IV adult diagnostic questionnaire has now been

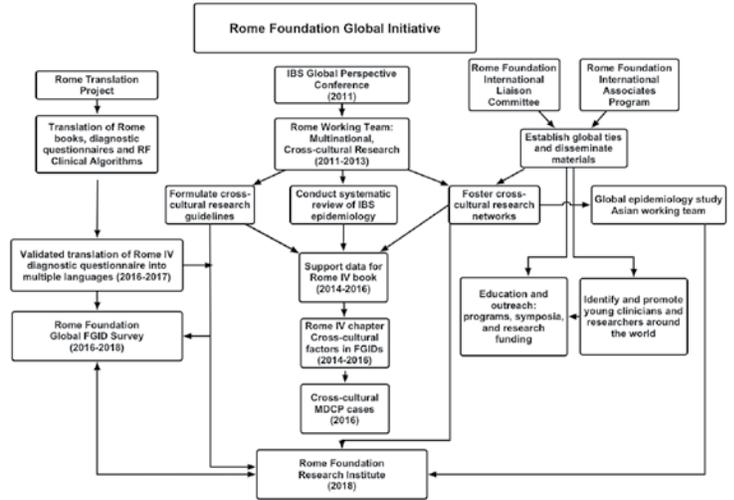


Figure 6. Rome Foundation Global Initiative

translated into close to 25 languages and “localized” for many others and the Rome IV pediatric questionnaires are being translated into multiple languages.

The translation project website can be seen at: [www.theromefoundation.org/products/rome-translation-project/](http://www.theromefoundation.org/products/rome-translation-project/). The following are available on the website:

- Downloadable RF translation guidelines (updated in June 2017).
- A list of available language versions and translation projects.
- A request form for translated material.
- Licensing and fees information.

## 3. IBS Global Perspective Conference

This conference, initiated by the RF and organized in collaboration with the WGO, was held in Milwaukee, WI in April 2011. It was co-chaired by Drs. Sperber and Eamonn Quigley. Over 100 participants from around the world, including gastroenterologists, psychologists, nurses, and other health care providers, attended the meeting.

Among the aims of the meeting were to:

- Foster greater interest in the global aspects of IBS.
- Foster the development of cross-cultural competence in the clinical and research arenas.
- Foster international research networks and improve the quality of multinational research in IBS.
- A summary of the conference was published in the Red Section of AJG (Am J Gastroenterol 2012;107: 1602-1609). The article is online at [www.nature.com/ajg/journal/v107/n11/pdf/ajg2012106a.pdf](http://www.nature.com/ajg/journal/v107/n11/pdf/ajg2012106a.pdf).

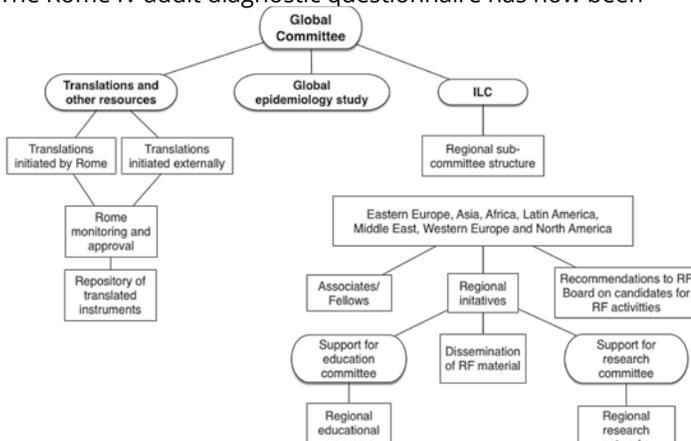


Figure 7. Rome Foundation Global Committee

#### 4. RF Working Team on Cross-cultural, Multinational Research in FGIDs

This working team, chaired by Dr. Sperber and comprised of 18 members and consultants from all around the world, completed its major task and published a final report in January 2014. This report is available for download at: [www.theromefoundation.org/working-teams-and-committees/multinational-committee/](http://www.theromefoundation.org/working-teams-and-committees/multinational-committee/). It has also published three scientific papers in the medical literature. Please see the section of RF Working Teams for full details on this working team.

#### 5. RF Asian Working Team

The Asian working team committee is chaired by Dr. Kok-Ann Gwee from Singapore and co-chaired by Dr. William E. Whitehead.

The working team aims were to:

- Design a trans-Asian survey.
- Develop and validate translations of survey instruments in Asian languages.
- Carry out a survey of 200+ patients with a clinical diagnosis of IBS and 200+ with functional dyspepsia drawn from clinic sites in participating Asian countries.
- Develop and publish recommendations for Rome IV that are appropriate for Asian patients.

This working team has already published several papers reporting the results of its work: Kewin Tien Ho Siah et al. Rome Foundation-Asian working team report: Asian functional gastrointestinal disorder symptom clusters. *Gut*. 2017

Lishou Xiong et al. Rome foundation Asian working team report: Real world treatment experience of Asian patients with functional bowel disorders. *Journal of Clinical Gastroenterology and Hepatology*. 2017.

#### 6. Rome IV book chapter on Cross-cultural aspects of FGIDs

This new chapter, published in 2016, expanded on material that appeared in the Rome III book on "Gender, Age, Society, Culture, and the Patient's Perspective in the Functional Gastrointestinal Disorders." The chapter committee membership reflected the global membership of the Rome Foundation and the chapter drew on material provided by the Working Team. The chapter has been published as a chapter in the Rome IV book, in the online version of the book, and as an article for the special issue of *Gastroenterology* devoted to Rome IV.

#### 7. Cross-cultural MDCP cases

The Rome IV book "Multidimensional Clinical Profile (MDCP)" includes four cases with a cross-cultural background and focus.

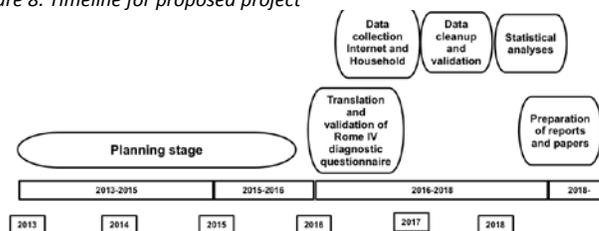
#### 8. A Global Epidemiology Study of FGIDs (see Figure 8 for the global study timeline)

Achieving a clear picture of the epidemiology of FGIDs is very problematic, as discussed in detail in the recent Rome Foundation working team paper published in *Gut* (Sperber et al. The global prevalence of IBS in adults remains elusive due to the heterogeneity of studies: a Rome Foundation working team literature review. 2016, 66:1075-1082.

The aims of the present study are to:

- To conduct a Rome Foundation-sponsored multinational, collaborative global study of the epidemiology of IBS using the Rome IV questionnaire.

Figure 8. Timeline for proposed project



- Base the study design on the recommendations of the RF Working Team on Multinational, Cross-cultural Research.

*Conduct of the Study* (see Figure 9 for a map of the participating countries)

- Data collection has been completed in all 33 countries.

*Analysis of results and publication*

- We have developed and disseminated a protocol document on policy for data access, statistical analyses, and publications.
- We have established three committees to conduct the three main aspects of the study once data collection is completed:
  - Publication committee
  - Database committee
  - Statistical analysis cores
    - Central statistical analysis core
    - Regional analyses cores

*Anticipated outcomes:*

- A clearer picture of the global epidemiology of FGIDs, using uniform and appropriate cross-cultural research methodology,
- Enhanced understanding of FGID pathophysiology.
- Publication of the study results at the local, regional, and global levels.
- Validation of the new Rome IV diagnostic criteria
- Establishment of a RF database with over 75,000 from the global study with a potential for ongoing future data mining.
- Validated translations of the Rome IV adult diagnostic questionnaire into multiple languages approved by the RF for future academic and commercial research on IBS and the other FGIDs.

We expect that the first, global, paper will be submitted for publication to a major journal, by the summer of 2019.

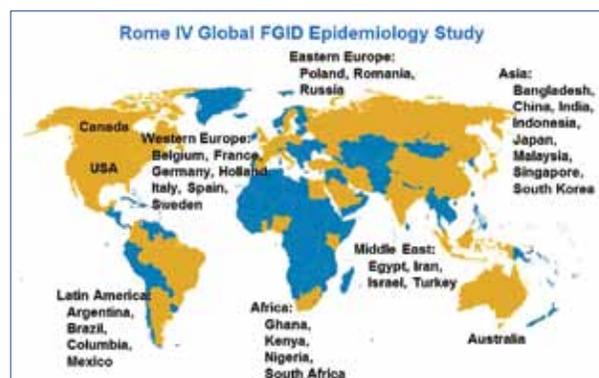


Figure 9. Participating Countries

## International Liaison Committee

The International Liaison Committee (ILC) of the Rome Foundation aims to expand its activities globally to help improve the life of patients with functional gastrointestinal disorders (FGID)/disorders of gut-brain interaction (DGBI). This is done by assisting in several ways: a) global dissemination of Rome educational materials and activities, b) setting up liaisons with regional organizations, c) motivating young researchers globally to study DGBI and mentoring them, d) increasing awareness through educational and scientific activities, and e) initiating multinational and cross cultural research and publications. Our efforts are promoted mainly in areas where these activities are lacking such as in Eastern Europe, Middle East, Asia-Pacific, and Latin America. A new initiative being started by the ILC is a project to learn about the different diagnostic pathways

and therapeutic approaches used for DGBI in different areas of the world. This will be conducted based on the information obtained from the Rome IV Interactive Clinical Decision Toolkit (GI Genuus) used by Gastroenterologists from different areas such as those previously mentioned. The information gathered will help to establish educational programs for physicians and other care givers of patients with DGBI.

The ILC is chaired by Uday C Ghoshal (India) and other members include Enrico Corazziari (Italy), Dan Dumitrascu (Romania), Xiucai Fang (China), Carlos Francisconi (Brazil), Shin Fukudo (Japan), Carolina Olano (Uruguay), and Ami Sperber (Israel). Max Schmulson (Mexico) serves as the liaison between the ILC and the Board of Directors of the Rome Foundation.

### Committee Composition

**Uday Ghoshal, MD — Chair**  
*India*

**Enrico Stefano Corazziari, MD**  
*Italy*

**Dan L. Dumitrascu, MD**  
*Romania*

**Xiucai Fang, MD**  
*China*

**Carlos F. M. Francisconi, MD**  
*Brazil*

**Shin Fukudo, MD, PhD**  
*Japan*

**Carolina Olano, MD, M Ed.**  
*Uruguay*

**Max J. Schmulson W., MD**  
*Mexico*

**Ami D. Sperber, MD, MSPH**  
*Israel*

## Rome Psychogastroenterology Group

### ADMINISTRATION

Laurie Keefer, PhD, Chair  
Sarah Kinsinger, PhD, ABPP, Co-Chair  
Douglas A. Drossman, MD, Rome Board Liaison

The Rome Psychogastroenterology Group was formed by US-based GI clinical health psychologists Laurie Keefer, PhD and Sarah Kinsinger, PhD, ABPP in 2018 based on a need to connect and support an emerging, international group of professionals interested in the clinical and scientific intersection of psychology and gastroenterology. Supported by the Rome Foundation Board, our mission is to: 1) promote the use of evidence-based behavioral treatments for GI disorders internationally; 2) encourage development of interdisciplinary psychosocial GI programs in gastroenterology practices through expert consultation and lectureships; 3) connect with national and international GI organizations to enhance the visibility of GI Psychology providers and encourage collaboration; and 4) expand our field into previously under-studied areas of psychogastroenterology (e.g. inflammatory bowel diseases, chronic pancreatitis). There are several planned activities for the working group, including the development of high-quality training opportunities at national meetings or through webinars for mental health professionals interested in working with the GI population. We are also setting up opportunities to consult with gastroenterologists and administrators interested in developing a GI behavioral program at their institution. We already host



Laurie Keefer, PhD



Sarah Kinsinger, PhD, ABPP

an active listserv for clinical support and an online, searchable membership directory through our website. In our first year, we accrued a membership of 125 professionals from 16 countries and look forward to growing! To become a member, please register on our website at <https://romegipsych.org/register/>, or email [gastropsych@gmail.com](mailto:gastropsych@gmail.com) for more information.

**Aim:** To provide structure and opportunity for growth for mental health professionals around the world engaged in the research and practice of PsychoGastroenterology

**Rationale:** The first organization dedicated to training, quality improvement and promotion of research and practice in PsychoGastroenterology

### Initiatives:

- APA endorsed training for mental health providers
- Online training videos, webinars and case conferences
- Online materials, treatment manuals, recordings for patients and clinicians
- Consultations to help clinicians, investigators and administrators develop programs locally
- Visiting PsychoGastroenterology Scholarships
- Searchable Membership directory
- Building a Social media presence #gastropsych

## Rome Foundation Working Team on Pediatric Clinical Trials

Historically, the Rome Foundation was seminal in its efforts to develop criteria for diagnosis of the disorders of gut-brain interaction (FGIDs). The Rome criteria were rapidly accepted by all regulatory agencies for clinical trials. However, a major gap regarding clinical trials has been in the realm of pediatric disorders which have not had standard recommendations for research. Accordingly, The Rome Foundation has sponsored the development of a committee to develop guidelines for clinical trials in pediatric FGIDs. Under the leadership of Miguel Saps MD, the Rome Foundation Pediatric Committee on Clinical Trials also consisting of other expert in pediatric clinical research and study design: Marc Benninga, MD, PhD; Carlo Di Lorenzo, MD; John Lavigne, PhD; Adrian Miranda, MD; Miranda van Tilburg PhD, and Jan Taminiu, MD have undertaken this initiative. After three years of hard work, the committee in collaboration with the European Medicines Agency, completed its directive to develop a document on recommendations for clinical trials in IBS for children. **It was published last November, 2016 in *Neurogastroenterology and Motility* (Saps M et al, *Neurogastroenterol Motil* 2016;28:1619-1631 PM:27477090).**

As a second task of the Rome Foundation Pediatric Committee on Clinical Trials, Dr Saps invited a group of experts to provide

recommendations for clinical trials for pediatric functional constipation: Marc Benninga, MD, PhD; Carlo Di Lorenzo, MD; John Lavigne, PhD; Samuel Nurko, MD, PhD, Ilan Koppen, MD, and Jan Taminiu, MD. **These guidelines were published in January, 2018 in *Neurogastroenterology and Motility* (Koppen IJN, Saps M, et al, *Neurogastroenterol Motil.* 2018;30(4):e13294.)**

The IBS and functional constipation guidelines were presented by Carlo Di Lorenzo, MD; John Lavigne, PhD; Samuel Nurko, MD, PhD and Miguel Saps, MD at the Gastroenterology Regulatory Endpoints and the Advancement of Therapeutics (GREAT V WORKSHOP) for Pediatric Irritable Bowel Syndrome and Pediatric Functional Constipation cosponsored by the FDA, AGA, ACG and the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) on March 28th, 2018.

Moving ahead, the committee will undertake the development of guidelines for pharmacological clinical trials in children with functional dyspepsia. Beginning in 2018, this committee has been meeting with the FDA to advise them on their recommendations to provide guidelines for pediatric clinical trials.

### Committee Composition:

**Miguel Saps, MD, Chair**  
(USA)

**Marc Benninga, MD, PhD**  
(Netherlands)

**Carlo Di Lorenzo, MD**  
(USA)

**John Lavigne, PhD**  
(USA)

**Adrian Miranda, MD**  
(USA)

**Jan Taminiu, MD, PhD**  
(Netherlands)

**Miranda van Tilburg, PhD**  
(USA)



## The Rome Foundation Research Institute (RFRI).

Magnus Simrén, MD

Scientific developments during recent years offer the potential for our knowledge of DGBIs to expand significantly. However, research exploring these novel approaches often occurred in relatively small single-center patient cohorts in advanced research centers. The Rome consensus process, which generates the Rome criteria and Working Team Reports on specific aspects of DGBIs, readily identifies the gaps in our knowledge. Advancing the field requires standardized state-of-the-art data collection, preferably with a broad international scope. While several databases may already exist, they are usually confined to a single center and are not constituted using uniform data-collection methods. There is now a compelling need to advance the science through a research infrastructure that will integrate a well-coordinated international research program by expert investigators with creation of a patient database and biobank for prospective studies to implement advanced DGBI phenotyping, identify risk factors, develop suitable biomarkers, evaluate novel or emerging diagnostic tools, guide choices of existing therapies, and advance therapeutic innovation and optimization. The Rome Foundation is uniquely able to bring in world class investigators and to recruit patients internationally using uniform validated selection criteria for conduct of research studies in DGBIs. The Rome Foundation also has a portfolio of Rome IV and other questionnaires in multiple languages and can also license from our extensive library a large variety of research questionnaires developed for and used in the DGBI population.

With this as a background, the Rome Foundation has initiated the Rome Foundation Research Institute (RFRI), to provide an infrastructure for multi-site multidisciplinary research. The aim of RFRI is to create an international academic research institute that advances scientific understanding of the disorders of gut-brain interaction. Through a process of growth and gradual increase in the number, scope, and types of projects, as well as the number of centers involved in the projects, the Rome Foundation wants to advance the Research Institute to become the global leader in DGBI research. The Rome Foundation believes the best opportunity for achieving these goals will be to actively collaborate with Industry, other academic non-Rome stakeholders and funding agencies.

The institute is directed by Dr. Magnus Simrén (Research Director), who together with Drs. Jan Tack and Douglas Drossman form an executive committee who coordinate the activities in RFRI. The work within RFRI will be done on the RFRI Cores with dedicated tasks, in line with project needs.

The Administrative Core will be responsible for the oversight of the RFRI, which includes research, training, and education-dissemination activities, and for the overall administration of the RFRI, involving clinical services research, training, collaboration with sponsors and outside agencies, and education. The Biometry, Data Management and Analysis Core will be responsible for providing and/or ensuring the standards for high quality data management systems, quality assurance processes and statistical analytic methodology aspects for the RFRI. The Clinical Research Network Core will be responsible for providing the infrastructure and maintaining the standards for clinical investigative studies involving epidemiological, clinical, outcomes, and treatment studies. This Core serves as a clearinghouse for research and is responsible for identification and selection of study centers. The Biobank and Biomarker Core will be responsible for defining relevant biomarkers and protocols to analyze these, and for identifying centers and sites with expertise and infrastructure necessary to collect, store and analyze biological samples for large-scale multinational research project. The Education, Dissemination and Media Relations Core will serve primarily to assure quality control in the dissemination of research knowledge that is accumulated from the RFRI.

Within RFRI different studies and research programs will or have been started, with a large multicenter study aiming at defining relevant biomarkers in functional GI disorders (ROBOT – ROme foundation BiOMarker project) being one example, and a clinical trial currently running in primary care in Belgium (the DOMINO trial) being another. The research organization planned for our future trials with a network of international research centers is currently being implemented through our large, global epidemiology study the Rome Foundation Global Epidemiology Study, and the organization developed in this study will form the backbone of new studies within RFRI. Moreover, within RFRI a large network of expert investigators from all continents of the world has been identified, and these investigators will participate in future trials run by RFRI. Currently several projects focusing on different aspects of DGBIs are planned with RFRI industry partners and sponsors, and these will be launched during 2019. So, the future for RFRI looks bright with several projects running or being in an advanced planning stage, and with this unique setup and organization we are confident that we will be able to change the landscape of DGBIs and advance the current state of knowledge about these disorders. We would also like to thank Ironwood Pharmaceuticals for their sponsorship of the RFRI.



## Copyright and Licensing Committee

Olafur Palsson PsyD,  
Copyright and Licensing Committee Chief of Operations

The Rome Foundation has long offered research questionnaires for licensing. However, recently the list of instruments it has available for that purpose has expanded significantly because we have are acquiring an increasing number of copyrights, translations and localizations of the various questionnaires for international research use. Because of this, it was becoming increasingly difficult to manage this activity. Therefore, the Rome Foundation formed a Copyright and Licensing Committee this past Fall to organize the questionnaire offerings and streamline the licensing process. It is work in progress, but substantial improvements have already been made. The person who now interacts directly with and serves people seeking questionnaires is Mark Schmitter, marketing manager, and the other committee members include Ami Sperber and Douglas Drossman as co-chairs, Olafur Palsson as chief of operations, and Johannah Ruddy, and Jennifer Layton as administrators.

Among the most commonly requested questionnaires for licensing currently are the Bristol Stool Form Scale, the IBS Severity Scale Score (IBS-SSS), and the IBS-QOL, and of course the adult and pediatric Rome IV diagnostic questionnaires. However, several other useful questionnaires are also available. Many of these instruments are already in stock in a wide variety of language and country adaptations. For example, the Bristol Stool Form Scale can now be obtained from the Rome Foundation in almost 90 different translations and country adaptations. Further, when a questionnaire in the foundation's

portfolio are needed in a language or country localization that is not already available, the Copyright and Licensing Committee can offer step-by-step guidance for getting such translations or adaptations done responsibly and professionally.

If you are a researcher, academician, clinician or student looking for validated research questionnaires in the functional GI area, your first stop should be the Rome copyright and licensing page, where you will see on our newly revised web form a list of the questionnaires you can get, and where you can directly request exactly what you need: [www.theromefoundation.org/products/copyright-and-licensing/](http://www.theromefoundation.org/products/copyright-and-licensing/).

Licensing questionnaires from the Rome Foundation will require a licensing fee if you have funding for your project (for example, if you need the instruments for a grant-funded research study or for commercial purposes). If you have no such funding, there is no fee for use of the questionnaires except a standard processing fee. Note, however, that you must have a license in order to use any and all of the questionnaires that the Rome Foundation offers, even if you are only going to use them in an unfunded project.

We hope that you will take advantage of our ever-expanding resource of the Rome Foundation's questionnaire collection, and we strive to make the process of obtaining these instruments as efficient and helpful as possible. We look forward to hearing from you and helping you with your questionnaire needs!

## Rome Foundation Mentorship Program



Jan Tack, MD



Magnus Simrén, MD

In line with the mission of the Rome Foundation to improve the lives of people with functional gastrointestinal disorders, one of our goals is to advance the understanding of their pathophysiology and optimal clinical management, through high quality research. For young investigators who are interested in setting up research in functional gastrointestinal disorders, there is often a lack of availability of experienced guidance and mentorship. Already in 2016, the Rome Foundation set up a Young Investigator Mentoring Program to address this need. The program is co-chaired by Magnus Simrén and Jan Tack and is co-organized by Dianne Bach and Michael Stolar, well-known from their past work for the AGA Institute.

A call for Young Investigators to submit brief outlines of research projects goes out early in the year. Based on the originality and relevance of the proposed studies, and the potential for improvement through peer feedback, 4 to 5 international applicants are selected. At a meeting during DDW, they briefly present their project before a panel of experienced researchers

in functional gastrointestinal disorders, who provide feedback, identify pitfalls or opportunities and give recommendations to optimize study design, conduct and outcome parameters. One year later, the young investigators present a brief progress report on their research.

This program clearly fulfills a need, as we have seen applicants from very diverse origins on highly varied topics. Five applicants were selected in 2017 and four in 2018. The 2019 call closed on April 1st. The interactions with the panel of experts are lively and feedback from the candidates confirmed a high level of appreciation of the comments and recommendations they received. The mentorship program creates a unique opportunity for early stage researchers to start their studies in an optimized conditions, and also provides them with a network of experts to consult during the planning, execution or analysis of studies. A new call for applications will go out early in 2020, for a Rome mentoring meeting at DDW 2020.

**Membership in the Associates of Rome program has grown to 1800 members in 84 countries since its inception in 2010.**

**Associates  
OF ROME**

We have revitalized the Rome Associates program this past year and are happy to announce that all current Associates receive special discounts on Rome products, certificates commemorating their association and copies of the 2018 Working Team papers published last year. If you are interested in joining the Associates program, please sign up today on our website!

### Members are enjoying benefits such as:

- Discounts on Rome products
- Quarterly newsletters
- Conference registration discounts
- Certificate of Association
- Specially designed Associates of Rome pin

### New Associates Benefit!

All Associates of Rome are eligible to download up to 15 Rome IV slides from the Rome IV Slide Set for FREE from our website.

**To join, please visit our website at [www.theromefoundation.org/associates-of-rome-program](http://www.theromefoundation.org/associates-of-rome-program).**



# Rome Criteria: Setting the Stage for Research in the 21st Century

The Rome Foundation has carried many roles since its inception but perhaps most important is its influence on the field relating to the genesis and maturation of disorders of gut-brain interaction (DGBI). Since Rome IV was published in 2016, we have been systematically replacing “functional GI disorders – FGID” with DGBI because it is a more scientifically based description of these disorder and is less stigmatizing. To understand this, we must be clear on the distinction regarding

	“Organic” GI disorder	Motility disorder	Functional GI disorder
Primary domain	Organ morphology	Organ function	Illness experience
Criterion	Pathology (disease)	Altered motility	Symptoms
Measurement	Histology Pathology Endoscopy Radiology	Motility Visceral sensitivity	Motility Visceral sensitivity Symptom criteria (Rome) Psychosocial
Treatment options	Medications Surgery Ther. endoscopy	Pro / anti-kinetics Surgery Pacing / Stimulator	Pro / anti-kinetics Antinociceptives Antidepressants Behavioral
Examples	Esophagitis Peptic ulcer IBD Colon cancer	Diffuse esoph. spasm Gastroparesis Pseudo-obstruction Colonic inertia	Esoph. chest pain Functional dyspepsia IBS Funct. abdominal pain

Figure 11

classification of the various gastrointestinal disorders. As shown in Figure 11, we have traditionally defined disorders based on evident pathology (organic GI disorder), altered motility (motility disorder) or symptoms (functional GI disorder, using the original term). The Rome Foundation in developing and promoting the use of symptom-based criteria have in effect created the concept of functional GI disorders, now called more appropriately disorders of gutbrain interaction<sup>1</sup>. Historically the functional GI disorders had their genesis almost 30 years ago (Figure 12) when a symptom-based classification system developed. While gastrointestinal symptoms have been reported by individuals for millennia, the classification

into syndromes first began with research on GI motility in the 1940’s and 1950’s. At this time notable GI physiologists like Stuart Wolf and Tom Almy<sup>2,3</sup> attempted to correlate gut motility changes with symptoms. Motility research was dominant in the latter half of the 20th century. However, by the late 1980’s it was becoming evident that motility alone was not sufficient to explain GI symptoms or symptom-based disorders. A breakthrough occurred around 1990 with two new entries into the field. First was the research by William Whitehead<sup>4, 5</sup>, Emeran Mayer<sup>6</sup>, and others who began to report the concept of visceral hypersensitivity, i.e., characterizing pain reports by what later was recognized as augmented afferent signaling rather than motility. The second was the classification system for functional GI disorders published in 1990 which evolved into the Rome Criteria. This symptom-based classification categorized patients with various symptom patterns into diagnoses that were amenable to many research models as shown in Figure 12. This has had a major impact on our scientific understanding of these disorders. Currently the Rome criteria are used by regulatory agencies, investigators and clinicians around the world.

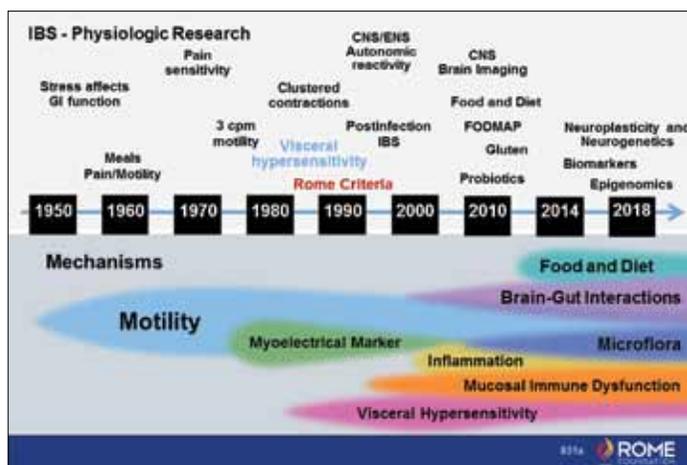


Figure 12

## Reference List

1. Drossman DA, Functional Gastrointestinal Disorders: History, Pathophysiology, Clinical Features and Rome IV, *Gastroenterol* 2016;126:2-1279.
2. Almy T P. Experimental studies on the irritable colon. *Am J Med* 1951;10:60.
3. Wolf S, Almy T P. Experimental observations on cardiospasm in man. *Gastroenterol* 1949;13:401-421.
4. Whitehead W E, Holtkotter B, Enck P, Hoelzl R, Holmes K D, Anthony J, Shabsin H S, Schuster M M. Tolerance for rectosigmoid distention in irritable bowel syndrome. *Gastroenterol* 1990;98:1187-1192.
5. Mayer E A, Raybould HE. Role of visceral afferent mechanisms in functional bowel disorders. *Gastroenterol* 1990;99:1688-1704.
6. Drossman D A, Thompson W G, Talley N J, Funch-Jensen P, Janssens J, Whitehead W E. Identification of subgroups of functional bowel disorders. *Gastroenterology International* 1990;3:159-172.

## Research Program

The Rome Foundation has sponsored research by young investigators since 2007. The goals of the research program, chaired by Magnus Simren, MD, are two: (1) to increase knowledge of the epidemiology and pathophysiology of the Disorders of Gut-Brain Interaction (DGBI); and (2) to interest young investigators in research and clinical practice in the area of Disorders of Gut-Brain Interaction (DGBI) and motility disorders.

### Rome—AGA Research Award

The Research Committee is charged with developing guidelines for an annual research award program, overseeing the process of soliciting applications and reviewing them, and monitoring the progress of grants awarded through semiannual reports from awardees. Through a partnership with the American Gastroenterological Association, we award two grants of up to \$50,000 annually to postdoctoral research fellows, junior faculty, or established investigators seeking to develop new areas of research.

Applications may address any aspect of functional gastrointestinal and motility disorders from basic science to clinical diagnosis, treatment, health care delivery, epidemiology, or validation of the Rome diagnostic criteria. Basic and translational research applications should describe the relevance to the diagnosis and management of functional GI and motility disorders. Applications are submitted to the AGA and are reviewed by an independent panel of AGA and Rome Foundation appointed scientists. Rome Board members are not eligible to apply. Grants awarded in previous years are as follows:

#### 2019 – TWO AWARDS

**Principal Investigator: Joan W. Chen, MD**

Title: *Single-Arm Pilot Trial of Digital Cognitive Behavioral Therapy in Gastroesophageal Reflux Disease Patients with Insomnia*

**Principal Investigator: Arpana Gupta, PhD**

Title: *Cognitive Behavioral Therapy Leads to Bidirectional Changes in Brain-Gut Axis for Obesity*

#### 2018 – TWO AWARDS

**Principal Investigator: Faranak Fattahi, PhD**

Title: *Modeling diabetic gastroparesis using human pluripotent stem cells.*

**Principal Investigator: Shaoyong Yu, MD**

Title: *Expression and function of an "itch" receptor MrgprC11 in sensory afferent neurons in the GI tract.*

#### 2017 – TWO AWARDS

**Principal Investigator: Giuseppe Cipriani, PhD (USA)**

The contribution of circulating monocytes on gastric muscularis propria in the development of diabetic gastroparesis.

**Principal Investigator: Geoffrey Preidis, MD, PhD (USA)**

Title: *Bile Acid Receptor Mediated Dysmotility in Protein-Energy Undernutrition.*

#### 2016 – TWO AWARDS

**Principal Investigator: Izumi Kaji, PhD (USA)**

Title: *Enteric neural FFA3 activation regulates colonic motility.*

**Principal Investigator: Ans Pauwels, MPharmSc, PhD (Belgium)**

Title: *Is refractory gastro-esophageal reflux disease a disease spanning the organic-functional spectrum? Role of visceral hypersensitivity.*

#### 2015 – TWO AWARDS

**Principal Investigator: Miranda van Tilburg, PhD (USA)**

Title: *Validation of the pediatric Rome IV criteria.*

**Principal Investigator: Madhusudan Grover MBBS (USA)**

Title: *Barrier function alterations in post-infectious irritable bowel syndrome.*

#### 2014 – TWO AWARDS

**Principal Investigator: Stacy Menees, MD, MS (USA)**

Title: *A randomized controlled trial to assess the efficacy of the low FODMAP diet in patients with fecal incontinence and loose stools.*

**Principal Investigator: Kok Ann Gwee, FAMS, FRCP, PhD (Singapore)**

Title: *The Chinese and Caucasian Brain Study: A neuroanthropological evaluation of the ROME III criteria.*

#### 2013

**Principal Investigator: Maria Vicario, PhD (Spain)**

Title: *Identification of signaling pathways and active biological networks associated with the role of eosinophils in stress-induced exacerbations of IBS.*

#### 2012

**Principal Investigator: Nicholas J. Talley, MD, PhD (Australia)**

Title: *Usefulness of Rome III symptoms, psychological characteristics and cytokines in accurately diagnosing FGIDs.*

#### 2011

**Principal Investigator: Lars Agreus, MD, PhD (Sweden)**

Title: *Functional dyspepsia and functional heartburn: Natural history of symptoms in the general population and validity of Rome III upper gastrointestinal diagnostic criteria.*

#### 2010

**Principal Investigator: Javier Santos Vicente, MD (Spain)**

Title: *Role of mucosal eosinophils in the physiopathology of intestinal inflammation in irritable bowel syndrome.*

#### 2009

**Principal Investigator: Miranda van Tilburg, PhD (USA)**

Title: *Validation of the Child/Adolescent Rome III Criteria.*

#### 2008

**Principal Investigator: Madhulika Varma, MD (USA)**

Title: *Comprehensive validation of the Rome III constipation module.*

### Ray Clouse Award for the Best Paper

The Rome Foundation established an award in memory of Ray E. Clouse, MD, a gastroenterologist and scholar at Washington University School of Medicine and a devoted member of the Rome Foundation. Ray's academic career spanned 27 years of research, teachings and writings that has left an indelible mark in the field of functional gastrointestinal and motility disorders and of gastroenterology in general.

The Rome Foundation will present a \$1000 prize to the first author of the best research article published in the field of Functional Gastrointestinal or Motility Disorders for the preceding calendar year. This prize will be presented at the current year's Rome Foundation Reception at DDW. The following individuals have been winners of the Ray Clouse Prize:

#### 2019

**Gry Irene Skodje, MD, (Norway)**

Title: *Fructan, Rather Than Gluten, Induces Symptoms in Patients With Self-Reported Non-Celiac Gluten Sensitivity. Gastroenterology. 2018 Feb;154(3):529-539.e2*

#### 2018

**Sara Botschuijver, MSc, (The Netherlands)**

Title: *Intestinal Fungal Dysbiosis Is Associated With Visceral Hypersensitivity in Patients With Irritable Bowel Syndrome and Rats. Gastroenterology 2017;153:1026–1039.*

- 2017**  
**Mira M. Wouters, PhD (Belgium)**  
 Title: *Histamine Receptor H1-Mediated Sensitization of TRPV1 Mediates Visceral Hypersensitivity and Symptoms in Patients With Irritable Bowel Syndrome.* *Gastroenterology* 2016;150:875-887. PMID: 26752109.
- 2016**  
**NJ Talley, MD, PhD (Australia)**  
 Title: *Effect of Amitriptyline and escitalopram on functional dyspepsia: a multicenter, randomized controlled study.* *Gastroenterology* 2015;149:340-9. PMID: 25921377.
- 2015**  
**Annette Fritscher-Ravens, MD, PhD (Germany)**  
 Title: *Confocal endomicroscopy shows food-associated changes in the intestinal mucosa of patients with irritable bowel syndrome.* *Gastroenterology* 2014; 147;1012-20. PMID: 25083606.
- 2014 – TWO AWARDS**  
**Kirsten Tillisch, MD (USA)**  
 Title: *Consumption of fermented milk product with probiotic modulates brain activity.* *Gastroenterology* 2013;144:1394-401. PMID 23474283.
- Maria Vazquez-Roque, MD (USA)**  
 Title: *A controlled trial of gluten-free diet in patients with irritable bowel syndrome-diarrhea: effects on bowel frequency and intestinal function.* *Gastroenterology* 2013;144:903-11. PMID: 23357715.
- 2013**  
**Mats B.O. Lowen (formerly Larsson), MD, PhD (Sweden)**  
 Title: *Brain responses to visceral stimuli reflect visceral sensitivity thresholds in patients with irritable bowel syndrome.* *Gastroenterology* 2012;142:463-72. PMID: 22108191.
- 2012**  
**Nathalie Bertiaux-Vandaele, (France)**  
 Title: *The expression and the cellular distribution of the tight junction proteins are altered in irritable bowel syndrome patients with differences according to the disease subtype.* *Am J Gastroenterol* 2011;106:2165-73. PMID: 22008894.
- 2011 – TWO AWARDS**  
**QiQi Zhou, MD, PhD (USA)**  
 Title: *MicroRNA-29a regulates intestinal membrane permeability in patients with irritable bowel syndrome.* *Gut* 2010;59:775-84. PMID: 2891786.
- Tamira K Klooker, MD (Netherlands)**  
 Title: *The mast cell stabilizer ketotifen decreases visceral hypersensitivity and improves intestinal symptoms in patients with irritable bowel syndrome.* *Gut* 2010;59:1213-21. PMID: 20650926.
- 2010**  
**Hanneke Beaumont, MD, PhD (Netherlands)**  
 Title: *The position of the acid pocket as a major risk factor for acidic reflux in healthy subjects and patients with GORD.* *Gut* 2010;59:441-51. PMID: 19651625.
- 2009 – TWO AWARDS**  
**Anurag Agrawal, PhD, MRCP (UK)**  
 Title: *Bloating and distention in irritable bowel syndrome: The role of visceral sensation.* *Gastroenterology* 2008;134:1882-9. PMID: 18455167.
- John E. Pandolfino, MD (USA)**  
 Title: *Achalasia: A new clinically relevant classification by high-resolution manometry.* *Gastroenterology* 2008;135:1526-33. PMID: 18722376.
- 2008**  
**Krisztina Gecse, MD (Hungary)**  
 Title: *Increased faecal serine protease activity in diarrhoeic IBS patients: a colonic luminal factor impairing colonic permeability and sensitivity.* *Gut* 2008;57:591-9. PMID 18194983.
- Ken Heaton Award for Most Cited Paper**  
 The Rome Foundation also offers a \$1000 prize for the most frequently cited research paper on functional gastrointestinal and motility disorders. This award is named in honor of the late Kenneth Heaton for his ground-breaking contributions to the development of positive diagnostic criteria for irritable bowel syndrome (the Manning Criteria) and the pathophysiology of constipation (the Bristol Stool Scale). Dr. Heaton (1936 - 2013) was a Consultant Physician at the Bristol Royal Infirmary, and Reader in Medicine at the University of Bristol. The Rome Foundation Board of Directors selects this paper based on the Science Citation Index, and the winner is announced at Digestive Disease Week. Articles on functional gastrointestinal and motility disorders published from January to December in the penultimate year before DDW and indexed in PubMed will be evaluated. Note that there is a one-year lag between the publication of the paper and its consideration for the prize; this is to allow enough time for the paper to be recognized and cited. This \$1000 prize will be presented at the Rome Foundation Reception at DDW. Previous winners of this award are listed below:
- 2019**  
**Keith McIntosh, MD (Canada)**  
 Title: *FODMAPs alter symptoms and the metabolome of patients with IBS: a randomized controlled trial.* *Gut.* 2017 Jul;66(7):1241-1251.
- 2018**  
**Doris Vandeputte, PhD (Belgium)**  
 Title: *Stool consistency is strongly associated with gut microbiota richness and composition, enterotypes and bacterial growth rates.* *Gut.* 2016 Jan;65(1):57-62. doi: 10.1136/gutjnl-2015-309618. Epub 2015 Jun 11.
- 2017**  
**G De Palma, (Canada)**  
 Title: *Microbiota and host determinants of behavioural phenotype in maternally separated mice.* *Nature Communications* 2015;6: 7735. doi: 10.1038/ncomms8735. PMID: 26218677.
- 2016**  
**Emma P. Halmos, PhD (Australia)**  
 Title: *A diet low in FODMAPs reduces symptoms of irritable bowel syndrome.* *Gastroenterology* 2014;146:67-75. PMID:24076059.
- 2015**  
**Jessica Biesiekierski, PhD (Australia)**  
 Title: *No Effects of Gluten in Patients with Self-Reported Non-Celiac Gluten Sensitivity after Dietary Reduction of Fermentable, Poorly-Absorbed, Short-Chain Carbohydrates.* *Gastroenterology* 2013;145:320-8. PMID: 23648697.
- 2014 – TWO WINNERS:**  
**Madhusudan Grover, MBBS (USA)**  
 Title: *Clinical-histological associations in gastroparesis: results from the gastroparesis clinical Research Consortium.* *Neurogastroenterol Motil* 2012;24:531-9. PMID: 22339929.
- Natasha Koloski, PhD (Australia)**  
 Title: *The brain-gut pathway in functional gastrointestinal disorders is bidirectional: a 12-year prospective populationbased study.* *Gut* 2012;61:1284-90. PMID: 22234979.
- Rome Foundation – Aldo Torsoli Foundation Research Award**  
 The Rome Foundation also hands out a joint award with the Aldo Torsoli Foundation in the area of Functional GI Disorders. This award is given to a mid-level or senior level clinician researcher with an academic record of research, education, and patient care in the area of gut brain interactions (DGBIs). Candidates must have completed an MD or PhD and be currently active in DGBI research. The recipient of the award is selected by a joint Scientific Selection Committee composed of six members, three from each Foundation. The award of \$10,000 will be presented during the Rome Foundation Annual Reception at DDW. Following DDW, the recipient will also give a lecture about their work, which will eventually be available for online streaming.
- 2019**  
**Roberto De Giorgio, MD (Italy)**



## What Do You Hear? Optimizing the Patient-Provider Relationship A multi-component curriculum teaching communication skills to improve patient-centered care.

Douglas A. Drossman, MD

There is growing evidence that patient and clinician satisfaction is becoming increasingly compromised in our health care system due to an ineffective patient provider relationship<sup>1</sup>. Patients have become dissatisfied with the care they receive, and physicians feel burdened and distressed. Ultimately, this unfulfilled need reduces quality of care and leads to mutual dissatisfaction between patient and provider. This is particularly relevant for patients with Disorders of Gut-Brain Interaction (DGBI) formerly called functional GI disorders<sup>2</sup>, where medical evaluations for structural diagnoses are negative and psychological stigma may be imposed<sup>3</sup>. Adding to this, in current times and with this group of patients, clinicians often feel pressured to focus their time on “sicker” patients, or to prioritize RVUs toward procedures rather than provide face to face care<sup>4</sup>.

The Rome Foundation is looking to find ways to resolve this problem. The Foundation’s global network of education to clinicians about these disorders, and its marketing capability and personnel resources have established a partnership with the Center for Education and Practice of Biopsychosocial Care (DrossmanCare [www.drossmancenter.com](http://www.drossmancenter.com)) who have for years created educational programs in communication skills training. We are now establishing a program to facilitate learning of these communication skills<sup>1</sup> and optimizing patient centered care<sup>5</sup>.

This collaboration is intended to benefit health care providers treating patients with DGBI’s in a fashion that is unprecedented: a curriculum to teach more effective communication skills that would be disseminated to clinicians and trainees. This curriculum uses written, visual and interactive methods to teach the process of patient centered care and effective communication skills even in the most challenging clinical interactions. Many of these educational materials have already been used at national and international fora over the years, however this collaboration will lead to more extensive dissemination of these educational tools.

**Aim.** To create a collaborative, multimodal educational program to teach communication skills, patient centered care, psychosocial assessment, and shared decision making to optimize the patient-provider relationship among patients with disorders of gut-brain interaction.

**Objectives.** We propose to develop a curriculum to teach several sectors of health care: gastroenterologists in academic practice and community care, fellows in training, clinicians in primary care, medical students and mid-level providers.

**Implementation:** The curriculum and its educational products will include:

**1. Educational videos as downloads or DVDs for teaching and self-learning.** Many of these videos are available as downloads or as DVDs. Some examples include: a video showing ineffective and effective teaching of a patient presenting with IBS: <http://bit.ly/2H7MHb3> or a TED-like lecture explaining why patients with DGBIs may be stigmatized and ways to prevent this through effective communication: <http://bit.ly/2HbpVDy>. The most recent collaborative effort is to produce “Communication 202: A deeper understanding of GI Illness through a Patient-Centered Approach” <http://bit.ly/2LKQuMY>. This program

## COMMUNICATION 202

of 6 challenging case scenarios is currently available for self learning or teaching on our website ([www.communication202.org](http://www.communication202.org)). Newer programs are being developed over the next year to teach clinicians brief (2-3 minutes) but effective approaches to explain to patients a variety of the most relevant topics for the DGBI. Examples include: how to explain to a patient about using a central neuromodulator, how to discuss the brain-gut axis, how to go on a FODMAP diet, what is the microbiome, and many more.

**2. Symposia, satellite symposia and webinars.** A major focus of our current and upcoming programs is to develop new symposia to gastroenterologists, trainees, mid level and allied health care practitioners in these skills. One example this past year is a webinar where a panel discussion, including myself, Alben Halpert MD and Johannah Ruddy, executive director of the Rome Foundation addressed IBS including the use of the MDCP and algorithms (segment 1) and then effective communication methods (segments 2 and 3). Finally we showed a video of the Johannah’s personal experience of illness which as published in the December 2018 issue *Gastroenterology*. These four webinar video segments can be viewed here: <http://bit.ly/2qfcd08> and a discussion about Johannah’s article here: <https://romedross.vide0/2CH7gu8>. Several more webinars are scheduled for the next year.

**3. Educational workshops for faculty and trainees at medical centers.** We have begun conducting workshops on site at medical centers to teach effective communication methods. In early October I was invited to be a visiting professor to the GI program at Johns Hopkins Medical Center. They also requested a 3 ½ hour workshop to all GI faculty on communications skills based on a need to increase faculty skills in this area. Johannah Ruddy co-facilitated the session with me and it was successfully conducted using lectures, video discussion, role play and small group facilitation. Based on the success of this program (including patient feedback) we have

been reinvented back for a more intensive one day workshop of advanced training. Subsequently, I conducted a similar workshop for psychiatry faculty at Columbia University Medical Center. Drs. William Chey (GI) and Joel Heidelbaugh (Primary care) have requested a similar program for us to conduct at the University of Michigan for faculty. We are eager to expand this to other medical centers.

**4. Publications on Communication and guidelines (e.g., Working Team Report).** The Foundation has successfully published working team reports in high quality peer reviewed journals on a variety of topics over the last year including post-infection IBS and central neuromodulators. For the next year we plan to develop a working team report that includes an evidence based review and provide guidelines to clinicians on how to communicate effectively with their patients.

**5. 1½ day intensive seminars (“Train the Trainers”) to recruit future faculty.** We are also interested in training future faculty to teach communication. We plan to build upon the value of our key opinion leaders in the field who frequently lecture on the most up to date knowledge and effectively participate in complex case discussions. Accordingly, we are developing a day and a half program to teach these educational leaders advanced interview skills. The program will involve lectures, demonstrations, small group teaching with patient simulators, and Balint type teaching where clinicians shared their difficulties in managing some patients. The program faculty will serve as facilitators for this seminar. A previous effort in this regard was the 1 ½ day Rome Foundation - AGA workshop on communication skills. Faculty participants

included Drs. Drossman, Halpert, Chey and Chang and a brief presentation of this program can be viewed here: <http://bit.ly/2s4U6Td>. An overview of the program with lectures (on Friday) and video links of the communication workshops (on Saturday) can be reviewed here: <http://bit.ly/2HWxXw4>. The content included demonstrations of interviewing from a multi-cultural context: <http://bit.ly/2DC3g1A>, how to manage a difficult spousal situation in a woman with abdominal pain (Albena Halpert and Davis Stillson) <http://bit.ly/2KyHrzd> and others. These and future programs will allow for continuation of our educational efforts nationally and regionally.

**6. Visiting scholar preceptorship programs.** For many years, gastroenterologists, trainees, psychologists, pharma executives and mid-level providers have visited Dr. Drossman’s practice to be precepted to learn communication skills. [www.drossmancenter.com/services/mentoring-coaching/](http://www.drossmancenter.com/services/mentoring-coaching/). In addition, the Rome Foundation instituted a visiting scholar program where faculty, practitioners and trainees can visit key programs to learn about DGBI. We are now expanding this program to have visitors learn communication skills with other faculty (e.g. with Drs. Halpert, Chang and Chey) as well.

As you can see the Foundation has made a major effort to develop this curriculum. Some has already been done, some are planned. We do hope you would consider supporting such an effort and we are interested in submitting educational grants to your programs to accomplish this. If you are interested please contact Johannah Ruddy M.Ed. at [jruddy@theromefoundation.org](mailto:jruddy@theromefoundation.org)

*In Figure 1A, there is a lack of engagement. The doctor is avoiding eye contact while looking at the medical record, and is turned away from the patient. He waves his hand in a way that dismisses the patient. The patient in turn is looking down with slumped shoulders and with crossed arms and legs displaying passivity and non-acceptance.*



*In Figure 1B, the doctor is facing the patient and making good eye contact. The finger on his chin indicates both receptive thinking and active engagement. To the patient this communicates interest and acceptance by the doctor of what she is saying. The reinforces the patient to say more as she looks back at him with an open posture and active gesturing.*

1. Drossman DA. 2012 David Sun Lecture: Helping your patient by helping yourself: How to improve the patient-physician relationship by optimizing communication skills. *American Journal of Gastroenterology*. 2013;108(5):521-528.
2. Drossman DA. Functional Gastrointestinal Disorders: History, Pathophysiology, Clinical Features and Rome IV. *Gastroenterology*. 2016;148(6):1262-1279.
3. Drossman DA. Functional GI Disorders: What's in a Name? *Gastroenterology*. 2005;128(7):1771-1772.
4. Drossman DA. Medicine has become a business. But what is the cost? *Gastroenterology*. 2004;126(4):952-953.
5. Medicine Io. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Vol 1. 1 ed: National Academy of Sciences; 2001.

## Education Program

### Education Committee

The Rome Education Committee, chaired by Lin Chang, MD, was formed by the Rome Foundation Board at the December 2007 strategic planning meeting to educate physicians and other health care providers about Disorders of Gut-Brain Interaction (DGBI) through a variety of approaches. Since that time, we have developed a host of educational tools and programs which reflect the latest research, designed to guide health care providers with the most current and practical tools in the field of DGBI. Some of the programs under the Education Program have included the Rome Foundation - AGA Institute Lectureship at DDW each year, the Regional CME Symposia for Nurse Practitioners and Physician Assistants, and various symposia, webinars and workshops. All of our educational programs and tools have been updated based on the Rome IV recommendations.

### Primary Care Book

For many years, the Rome Foundation has heard from primary care physicians that our educational materials are “too complex, cumbersome, and not efficient” for practical day-to-day use. Taking this as a challenge, in 2010 the Board of Directors prioritized the effort to find ways to learn more about how primary care physicians understand and approach diagnosis and treatment of DGBIs. We approached Pali Hungin, MD, a leading expert in the primary care of Disorders of Gut Brain Interactions (DGBIs), and he formed an international committee of primary care clinicians working in DGBI, and this group has led our educational materials for primary care. The Rome Foundation Primary Care Committee also published two articles on how non-gastroenterologists see DGBIs and the Rome IV primary care book. This then led to the primary care book as a distillation of Rome IV knowledge targeted to the needs of primary care providers. This efficiently organized book is designed to help the busy primary care physicians and other non-gastroenterological providers who see patients with these disorders.

### Multi-Dimensional Clinical Profile (MDCP)

The MDCP is a unique learning tool which redefines the way clinicians can care for their patients who have even the most complex disorders. The Rome Foundation gathered the world's leading experts to create an intuitive learning model that incorporates how good clinicians approach treatment of these disorders. The key factors are organized into a simple and logical 5-component framework that addresses not only diagnosis, but severity as well as psychosocial and physiological features. Using this information, we provide a treatment plan uniquely targeted to the patient. The Rome Foundation had over 30 original MDCP cases published in our 1<sup>st</sup> edition book. We updated the content and added additional Rome IV diagnoses, along with 72 cases in our 2<sup>nd</sup> Edition book. These MDCPs, which covers the full spectrum of Disorders of Gut Brain Interaction, from mild to severe, are meant to be clinically valuable to students, practitioners in both gastroenterology and primary care, health care extenders, or anyone who treats patients with DGBIs. After completion of these case exercises, the reader will be well prepared to address the full spectrum of treatment options available to help our patients.

### Lecture Programs

The Rome Foundation sponsors a variety of lectures and professional meetings. Since 2008, we have an annual Rome-AGA Institute lectureship at DDW as well as Rome Symposia at Conferences around the world. As we completed Rome IV, we had many Rome symposia that were focused on the new Rome IV information as part of our Rome IV launch. Our International Visiting Professorship and Lectureship Program was conducted in 2015-2017 (see below). This unique program allows key experts to disseminate the new knowledge of DGBIs at a global level. Additionally, we have conducted a series of regional meetings geared to allied health care providers and primary care physicians to further educate these providers with both diagnosis and treatment options for patients suffering from DGBIs.

### Rome Foundation Visiting Scholar Program

The Rome Foundation Visiting Scholar Program is another way for

researchers and clinicals to visit with key leaders in DGBI and learn not just about advanced research techniques and patient focused care but also advanced communication skills to assist them in better managing their patients and get one on one advice on more advanced patient scenarios that they might be encountering in their own patient populations.. These programs allow for fellows and junior faculty to spend two to three days on site with our board members and shadow them in clinic. They observe the clinical interaction and then debrief at the end of the clinic day on what they experienced. They also meet with departmental heads and investigators as available depending on their research interest. This program is critical in developing the next generation of providers in becoming skilled communicators and exceptional physicians managing and treating patients with DGBI.

### Rome Foundation Regional CME Symposia for Nurse Practitioners, Physician Assistants & Primary Care Physicians

The Rome Foundation has launched regional symposia aimed at providing both diagnostic and treatment education for clinicians on the most common brain-gut disorders. In 2017, Rome conducted a needs assessment among NPs and PA's and found a gap in knowledge for both diagnosis and treatment of issues such as IBS, Functional Constipation, Functional Heartburn and Esophageal Disorders. Experts in the DGBI field give didactic lectures on these topics. In addition, there are interactive workshops on patient-provider communication skills and a case-based session using the MDCP and interactive toolkit. In 2018-2019, we conducted four sessions in New Mexico, Texas, New York and South Carolina. These will continue with three other sessions through 2020 in Chicago, Los Angeles and North Carolina.

### GI Genius

The Rome Foundation in partnership with LogicNets®, the developer of an intelligent decision-support automation platform produced the GI Genius, formerly known as the Rome IV Interactive Clinical Decision Toolkit. This new intelligent software system addresses the sophistication and complexity of DGBI diagnosis and treatment by providing an online resource to assist practitioners in achieving optimal clinical outcomes. It offers a powerful online and interactive approach for accessing the combination of the Rome IV Diagnostic Algorithms and the MDCP treatment guidelines on-demand and at the point of care. In 2019 we added more information on the the psychosocial aspects of patient care and the use of neuromodulators and behavioral interventions to help clinicians know when they should consider centrally targeted treatments. We also included all of the Rome IV diagnostic and treatment recommendations for the pediatric populations, making this software incredibly valuable to pediatricians and pediatric gastroenterologists.

### Rome IV Slide Sets

The Rome Foundation has developed over 700 images and slides for Rome IV and additionally two other slide sets for presentation: the Rome IV Multi-Dimensional Clinical Profile (MDCP) slide set and the Rome IV Diagnostic Algorithms set. The slides include notes and references covering the information provided in the Rome IV book. Designed by the world's leading experts in functional GI disorders, the program allows for self-learning and presentations using the most up-to-date information. Purchase the entire slide set collection, specific modules by topic, or individual slides. They are available exclusively from the Rome Foundation website.

### Website

Our updated and redesigned website provides educational information to the public and to health care professionals. Visitors can view our news and updates, order our educational products, download the Rome IV criteria, learn about our research grant programs and educational programs, view videos of the communication skills workshop, and learn about meetings and events. In addition, visitors can request licensing to use the Rome IV questionnaires and all of the other research instruments, including the BSFS. Visitors may also join our mailing list or become an Associate to receive periodic updates on Rome Foundation activities and our quarterly e-newsletters.

## Rome Foundation/AGA Institute Lectureships at DDW

In 2008, the Rome Foundation and the American Gastroenterological Association (AGA) launched a “prime time” lectureship at DDW with the goal to have outstanding speakers present on the broader areas of health care as related to the functional GI and motility disorders.

At DDW in May 2019, we are pleased to have three speakers discuss “Making Treatment Choices for Functional GI Disorders (Disorders of Gut–Brain Interactions)”.

The talks will be:

- Medical and Psychological Comorbidities Influencing Therapeutic Choices with Lin Chang.
- The Role of Biomarkers in Patient Management with Magnus Simrén.
- Clinical and Patient Factors that Affect Treatment Outcome with Jan Tack.



Lin Chang, MD



Magnus Simrén, MD



Jan Tack, MD

### Previous Lectures from this series are listed below:

- **2018** - “Post-infection Functional GI Disorders (FGIDs)” with Giovanni Barbara, University of Bologna, Italy; “Gut Microbiome-Brain Interactions: Relevance for FGIDs” with Premysl Bercik, McMaster University, Canada; “Microbiota Modulation in FGIDs: Probiotics, Antibiotics and FMT” with Eamonn M. Quigley, Houston Methodist, USA
- **2017** - “EndoFLIP for Functional Esophageal Disorders” with John Pandolfino, Northwestern University, USA; “Magnetic Resonance Imaging of the Intestine in IBS and Chronic Constipation” with Robin Spiller, University of Newcastle, Australia; and “Novel Brain Imaging Techniques in IBS” with Emeran Mayer, David Geffen School of Medicine at UCLA
- **2016** - “Overview of Rome IV: Changes in Criteria and New Educational Concepts” with Douglas A. Drossman, Drossman Center; “Functional Gastrointestinal Disorders” with Nicholas J. Talley, University of Newcastle, Australia; “Lower Gastrointestinal Functional Bowel Disorders” with Fermin Mearin, Hospital Quirón Teknon, Spain
- **2015** - “Clinical Practice and Research for FGIDs in the Technology Era”. “Clinical practice in a social media environment” with Ryan Madnick MD; University of North Carolina; “Use of health information technology in clinical practice” with William D. Chey MD; University of Michigan; “How health information technology on the internet can be used in clinical research” with Patrick Furey; ConsumerSphere
- **2014** - “Understanding and Treating the Brain’s Contribution to Pain”: “Central mechanisms of pain” with Irene Tracey, PhD; Oxford Centre for Neuroethics; “Behavioral interventions for pain management” with Laurie Keefer, PhD; Northwestern University;
- “Centrally targeted pharmacotherapy for chronic abdominal pain” with Douglas A. Drossman, MD; Center for Biopsychosocial Patient Care and UNC
- **2013** - “The Role of Food Sensitivities and Microbiota in Functional GI Disorders” with Sheila Crowe, MD from the University of California in San Diego, CA; “Food sensitivities and food allergies: The clinical perspective” and Kevin Whelan, PhD from King’s College, London; “Understanding the mechanisms underlying the interaction of food and gut microbiota in FGIDs”
- **2012** - “Intestinal Permeability: Does it Explain the Symptoms of Functional GI Disorders?” with Giovanni Barbara, MD from the University of Bologna; “Regulation of Intestinal Permeability in Health and Disease” with Alessio Fassano, MD from the University of Maryland and “Esophageal Permeability: Does it Explain the Symptoms of NERD?” with Roy Orlando, MD from the University of North Carolina at Chapel Hill
- **2011** - “The Role of Neurogenesis in the Brain” with Tarique Perera MD from Columbia University in NYC and “The Role of Neurogenesis in the Enteric Nervous System and its Implications for Functional GI Disorders.” with Michael D. Gershon MD from Columbia University in NYC
- **2010** - “Understanding Gut Microbiota: A New Era in Gastroenterology.” with Dr. Erwin G. Zoetendal from Wageningen, Netherlands
- **2009** - “Motility Assessments for Functional GI Disorders: How far does it get us?” with Dr. Juan-R. Malagelada, Professor of Gastroenterology at Hospital Universitari Vall d’Hebron in Barcelona
- **2008** - “Lessons from our Patients” with Ms. Gina Kolata, Science Writer for the New York Times

## GI Genius, formerly known as the Rome IV Interactive Clinical Decision Toolkit

The GI Genius has continued to be updated. In addition to updates to the scientific content for the treatment of Functional Gastrointestinal Disorders, we have made updates to the clinical information, and treatment recommendations for adults. To support these changes, additional references have been included throughout the program to help improve the user experience of our program. Additionally, we have updated the psychosocial treatment and evaluation portion of the program, to help our users best serve the needs of their patients in a comprehensive way.

Furthermore, the Rome Foundation is excited to announce the Pediatric Diagnostic and Treatment algorithms in our interactive toolkit. Working with Dr. Samuel Nurko, the Rome Foundation is also happy to release new diagnostic algorithms for recurrent nausea and vomiting, early satiation and epigastric pain, and abdominal pain, along with the corresponding treatment



algorithms. Each of these new diagnostic and treatment algorithms is complete with up-to-date scientific information supporting each clinical decision, with supporting references.

With these new updates, the Rome Foundation hopes to continue to serve as the gold standard for the diagnosis and treatment for all patients with FGIDs.

## Rome Working Team

## Working Team on Gut-Brain Neuromodulators for DGBIs (Disorders of Gut-Brain Interaction)

We are pleased to announce that this working team has been successful in its efforts this year to bring to attention new ways to treat gastrointestinal pain. The use of centrally targeted medications (gut-brain neuromodulators) including various classes of antidepressants, anxiolytics, the newer atypical antipsychotics, and alpha 2 ligand agents have shown benefit in somatic pain syndromes, yet their investigation in disorders of gut brain interaction has been very limited and the clinical application of these agents within clinical practice lacks sophistication, precision and specificity. Furthermore, there are very little data available on the differential effects of central treatments on specific types of GI symptom (i.e. epigastric pain, pain in IBS, abdominal bloating, early satiation, belching, nausea, and non-cardiac chest pain) and no centrally targeted agent has been approved by a regulatory agency for these disorders.

This working team successfully published their article in the March issue of *Gastroenterology* and was featured on the cover (see Figure 13). The article, **“Neuromodulators for Functional Gastrointestinal Disorders (Disorders of Gut-Brain Interaction): A Rome Foundation Working Team Report”** (*Gastroenterology* 2018;154:1140-1171), discusses central neuromodulators as follows:

- Reviews psychiatry, medicine and gastroenterology on their physiological effects on the brain and gut
- Reviews available studies on the treatment of GI pain, as to their overall efficacy and selective value over other treatments
- Discusses differential actions of these medications (e.g., SSRI, SNRI, TCA, atypicals, etc.) on GI pain
- Identifies GI and other adverse events and side effects of the various agents.
- Recommends the selection of agents for various clinical profiles (e.g. IBS-D, C, functional dyspepsia, CVS, chest pain, nausea/vomiting/ weight loss, etc.)
- Provides recommendations as to how treatment should be introduced to the patient through the use of effective communication
- Clarifies how opioid agents relative to non-opioid agents are used to manage pain in FGIDs.

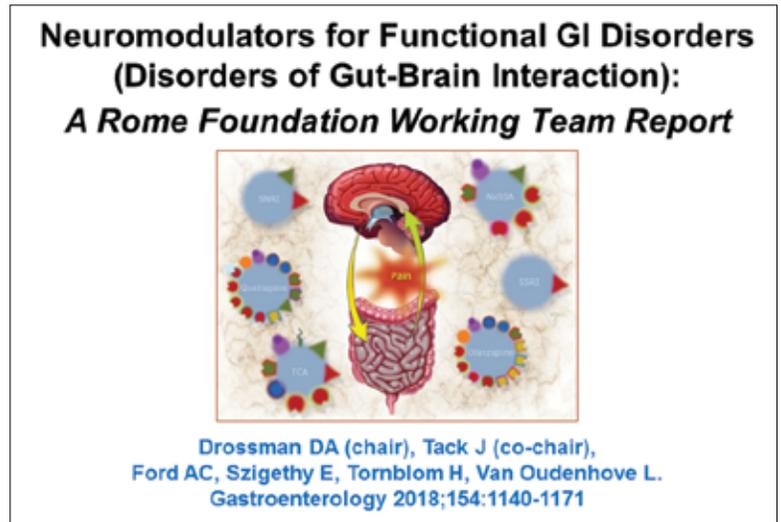


Figure 13

### Committee Composition

**Douglas A. Drossman, MD, Chair**  
(Gastroenterology, Psychiatry/  
Psychosomatic Medicine)  
US

**Jan Tack, MD, PhD, Co-Chair**  
(Gastroenterology, GI physiology)  
Belgium

**Alex Ford**  
(Gastroenterology, Meta-analysis)  
UK

**Eva Szigethy**  
(Psychiatry)  
US

**Hans Ford Tornblom**  
(Gastroenterology)  
Sweden

**Lukas Van Oudenhove, MD, PhD**  
(Psychiatry)  
Belgium

## Rome Working Team Post-Infection IBS

### Rationale and Objectives

There is consistent evidence indicating that functional dyspepsia (FD) and irritable bowel syndrome (IBS) can develop following an episode of acute infectious gastroenteritis, with an overall OR of 2.5 for the presence of a FGID at six months post-infection compared to controls. Several new data have been published in the last 10 years on post-infectious functional GI disorders, particularly detailing the epidemiology, risk factors, pathophysiology and the involvement of the microbiota. For these reasons, our Working Team took on the task to comprehensively review the literature in this area and make consensus-based recommendations.

### The objectives of this working team were to:

- Critically review the existing literature on the role of infections in functional GI disorders, with focus on clinical and translational aspects. This will include epidemiological issues, risk factors, the role of microbiota and the immune system, the relevance of animal models, diagnosis, prognosis, and management.
- Based on the literature search, provide recommendations how to implement the current knowledge into clinical practice, in order to improve the health of our patients.
- Give recommendations for future work to improve the current knowledge on post-infectious functional GI disorders.
- Summarize the results in an extensive, and clinically useful, review.

Manuscript published in *Gastroenterology* 2019;156:46-58.

## Rome Working Team

## The Role of Brain Imaging in Functional GI Disorders

Since the last Brain Imaging Working Team report published in 2009 (*Neurogastroenterol Motil* 2009;21:579-596), there has been an exponential growth in publications related to brain imaging approaches to study symptom based disorders, including chronic pain, disorders of mood and affect and functional GI disorders. In addition to the traditional fMRI and PET approaches, there also has been a dramatic expansion of imaging technologies (including resting state, structural, diffusion tensor imaging, MR spectroscopy, optical imaging, magnetic encephalography) and analysis strategies (including multivariate, connectivity, machine learning). The integration of insights gained from brain imaging data with those obtained from a) peripheral biological investigations and b) epidemiological and psychosocial studies has been slow.

The Working Team has reviewed and published findings from the fields of chronic pain, disorders of mood and affect and DGBIs, identify the key relevance of these findings for a better understanding for the pathophysiology of DGBIs, for biomarker identification and for a better understanding of pharmacological and non-pharmacological treatment approaches. Emphasis has been placed on identifying clinically relevant applications of the knowledge gained from these studies in terms of a better understanding of the pathophysiology of DGBIs, and in terms of the development and assessment of more effective treatments. Based on these insights, the Team has made recommendations for future study design to address gaps in current knowledge. **The committee's work has been summarized in a review article which has been accepted for publication in Gut: "Manuscript ID gutjnl-2019-318308 entitled "The Role of Brain Imaging in Disorders of Brain Gut Interactions - A Rome Working Team Report".**

### Committee Composition:

Giovanni Barbara, Chair (*Italy*)  
 Madhusudan Grover, Co-Chair (*USA*)  
 Premysl Bercik (*Canada*)  
 Maura Corsetti (*UK*)  
 Uday Ghoshal (*India*)  
 Lena Ohman (*Sweden*)  
 Mirjana Rajilić-Stojanović (*Serbia*)

### Committee Composition

Emeran Mayer, MD, Chair (*US*)  
 Qasim Aziz, MD, Co-chair (*UK*)  
 David Borsook, MD, (*US*)  
 Sigrid Eisenbruch, MD (*Germany*)  
 Lisa Kilpatrick, PhD (*US*)  
 Jennifer Labus, PhD (*US*)  
 Petra Schwienhardt, MD (*Canada*)  
 Irene Tracy, PhD (*UK*)  
 Lukas Van Oudenhove, MD (*Belgium*)

## Rome Foundation - Asian Neurogastroenterology and Motility Association Working Team

The Rome - Asian working team was established in 2010 as a partnership between the Asian Neurogastroenterology and Motility Association (ANMA) and the Rome Foundation with the goals of developing culturally sensitive translations of the Rome III Diagnostic Questionnaire and carrying out a multinational survey of functional gastrointestinal disorders in Asia.

The co-chairs of the working team were Kok-Ann Gwee (Singapore) and William Whitehead (U.S.A.), and the secretary was Andrew Chua (Malaysia). Other members of the team were Chen Min-hu (China), Hou Xiao-hua (China), Hiroto Miwa (Japan), Uday Ghoshal (India), Sutep Gonlachanvit (Thailand), and Bak Young-tae (Korea). The goals of the survey were to examine the appropriateness of the Rome III criteria for Asian patients and to broaden the understanding of FGIDs and strengthen their diagnosis and treatment in Asia.

### Specific Aims:

1. Design a transnational survey for China, Taiwan, India, Japan, South Korea, Thailand, Malaysia, Singapore, Philippines, and Indonesia.
2. Develop and validate translations of survey instruments in target languages with guidance from Dr. Ami Sperber of the Rome Foundation.
3. Carry out a survey of patients with any FGID diagnoses presenting to primary and secondary care centers across multiple sites in Asia.
4. Understand the symptom presentation and diagnostic challenges, with a view to presenting recommendations appropriate to Asia.

### Current Status:

The survey was completed in October 2013. A total of 1805 patients were recruited. The following two papers resulting from this study have been published.

**Ghoshal UC, Gwee KA, Chen M, Gong XR, Pratap N, Hou X, Syam AF, Abdullah M, Bak YT, Choi MG, Gonlachanvit S, Chua AS, Chong KM, Siah KT, Lu CL, Xiong L, Whitehead WE. Development, Translation and Validation of Enhanced Asian Rome III Questionnaires for Diagnosis of Functional Bowel Diseases in Major Asian Languages: A Rome Foundation-Asian Neurogastroenterology and Motility Association Working Team Report. J Neurogastroenterol Motil. 2015 Jan 1;21(1):83-92. doi: 10.5056/jnm14045. PMID: 25537673; PMCID: 4288097.**

**Rahman MM, Ghoshal UC, Rowshon AH, Ahmed F, Kibria MG, Hasan M, Gwee KA, Whitehead WE. Translation and validation of enhanced Asian Rome III questionnaires in Bengali language for diagnosis of functional gastrointestinal disorders. J Neurogastroenterol Motil 2016;22:240-70. PMID:26690730**

### Committee Composition

Kok Ann Gwee MD, PhD  
Chair  
Singapore

William E. Whitehead, PhD  
Co-Chair  
USA

Young-Tae Bak, MD  
South Korea

Minhu Chen MD, PhD  
China

Andrew Seng Boon Chua, MD  
Malaysia

Uday C. Ghoshal, MD  
India

Sutep Gonlachanvit, MD  
Thailand

Xiaohua Hou, MD, PhD  
China

Ching-Liang Lu, MD  
Taiwan

Hiroto Miwa MD, PhD  
Japan

## Cross-Cultural Multinational Research

The working team on Cross-cultural, Multinational Research in the Functional Gastrointestinal Disorders has completed its work. The final report of the working team is available as a downloadable pdf file at [www.theromefoundation.org/working-teams-and-committees/multinational-committee/](http://www.theromefoundation.org/working-teams-and-committees/multinational-committee/).

### The final report relates to:

#### Methodological issues in multinational research:

- Study design
- Potential research areas
- Availability and development of appropriate study instruments
- Translation and validation of study instruments
- Subject recruitment
- Culturally appropriate endpoints and outcomes

#### Fostering of multinational research

- Development of research networks
- Formulation of multinational research guidelines for FGIDs
- Collaboration with pharmaceutical companies and regulatory Agencies

In addition, the working team has published three papers. **Schmulson M, Corazziari E, Ghoshal UC, S Myung S-J, Gerson**

**CD, Quigley EMM, Gwee K-A, Sperber AD (2014) A four-country comparison of healthcare systems, implementation of diagnostic criteria, and treatment availability for Functional Gastrointestinal Disorders. A Report of the Rome Foundation Working Team on Cross-Cultural, Multinational Research. Neurogastroenterology and Motility 26:1368-1385.**

View online here - <https://www.ncbi.nlm.nih.gov/pubmed/25087451>

**Sperber AD, Gwee KA, Hungin AP, Corazziari E, Fukudo S, Gerson C, Ghoshal UC, Kang J-Y, Levy RL, Schmulson M, Dumitrascu D, Gerson M-J, Chen M, Myung S-J, Quigley EMM, Whorwell PJ, Zarzar K, Whitehead WE. (2014) Conducting multinational, cross-cultural research in the functional gastrointestinal disorders: issues and recommendations. A Rome Foundation working team report. *Alimentary Pharmacology and Therapeutics* 40:1094-1102**

View online here - <http://onlinelibrary.wiley.com/doi/10.1111/apt.12942/abstract>

**Sperber AD, Dumitrascu D, Fukudo S, Gerson C, Ghoshal UC, Gwee KA, Hungin APS, Kang JY, Minhu C, Schmulson M, Bolotin A, Friger M, Freud T, Whitehead W. (2016) The global prevalence of IBS in adults remains elusive due to the heterogeneity of studies: a Rome Foundation working team literature review. *Gut*. 2017 Jun;66(6):1075-1082. doi: 10.1136/gutjnl-2015-311240. *Epub* 2016 Jan 27.**

## Food and Diet Committee

### Rome Foundation Working Team on the Role of Food in Functional GI disorders

#### **Background:**

A number of factors have been suggested to play a role in the pathogenesis of IBS including disturbed motility, the brain-gut axis, genetic factors, impaired gut barrier function, immunologic dysregulation, the gut microbiome, and psychosocial factors. More recently, there has been increasing attention on the role of food in IBS. Patients have long associated their IBS symptoms with the ingestion of certain foods, combinations of foods, or a meal itself. In fact, more than 60% of IBS patients report worsening of symptoms after meals; 28% of these within 15 minutes after eating and 93% within 3 hours. Unfortunately, the relative lack of empiric data proving a causal link or consistently documenting symptom improvement has caused health care providers to view dietary interventions with skepticism. Further, gastroenterologists and primary care providers receive virtually no structured training in dietary interventions for IBS. This lack of enthusiasm for dietary counseling has increasingly caused providers to be misaligned with their patients who commonly ask for more holistic solutions for their IBS symptoms. Out of desperation, many providers recommend or passively stand by as their patients empirically attempt various dietary manipulations, such as the elimination of fatty foods, fruits, gluten, milk/dairy products, or modifying dietary fiber content. This haphazard approach leads to inconsistent results which can be frustrating for both patients and providers.

It is now clear that a number of disorders and diseases can masquerade as or exacerbate the symptoms of IBS. For example, few clinicians would dispute that celiac disease and lactose intolerance are important considerations in patients presenting with IBS symptoms. However, these two well defined disorders likely represent the tip of the iceberg as it pertains to the role of food in IBS. For these reasons, the Rome Foundation has decided to formulate a multidisciplinary group to carefully evaluate the evidence which supports a role of food in the pathogenesis and management of FGIDs.

#### **Key Questions addressed:**

Members of the working group will be charged with addressing a number of key questions as outlined below. Whenever possible, the working group will try to conduct a systematic review of the literature to identify the best possible evidence to answer each of the key questions. The same set of questions will be applied to the most prevalent FGIDs including GERD/heartburn, functional dyspepsia, irritable bowel syndrome, bloating, diarrhea and constipation.

#### **1. Physiology of food's effects in the GI tract:**

How does the GI tract handle food?  
How does the GI tract sense nutrients?  
Consequences of nutrient sensing on perception?

#### **2. Pathophysiology:**

Is nutrient handling different in FGIDs?

#### **3. Food intake and symptoms in FGID:**

- Does food intake exacerbate symptoms in FGID and if so, by what mechanism/s?
- Is food intake altered in patients with FGID?
- Can food challenges be used to measure symptom patterns and severity in FGIDs?
  - Reflux provocative meals in GERD
  - Nutrient challenge tests in FD
  - Meal-related symptom measurements in FD and gastroparesis
  - Meal-related exacerbations in IBS and bloating
- Can changes in food intake be used to improve symptoms in FGIDs and if so, by what mechanism/s?
- Can specific nutritional interventions ("functional foods") be used to improve symptoms in FGIDs and if so, by what mechanisms?

#### **Result:**

The Committee has generated a series of articles on the role of food in FGIDs which were published in the American Journal of Gastroenterology in May 2013.

**The Role of Food in the Functional Gastrointestinal Disorders: Introduction to a Manuscript Series. Am J Gastroenterol 2013; 108:694–697; doi:10.1038/ajg.2013.62;**

#### *Committee Composition*

William D. Chey, MD  
Michigan, USA  
Co-Chair

Jan Tack, MD, PhD  
Leuven, Belgium  
Co-Chair

Fernando Azpiroz, MD, PhD  
Barcelona, Spain

Sheila Crowe, MD  
California, USA

Shanti Eswaran, MD  
USA

Peter Gibson, MD  
Australia

Sue Shepherd, PhD  
Australia

## The Role of the Intestinal Microbiota in FGIDs

The pathogenesis and pathophysiology of patients with functional gastrointestinal disorders remains incompletely understood. During the last years, the role of intestinal microbiota in the development of functional gut problems has received great interest, with a steadily increasing numbers of research projects assessing this. For instance, it has been convincingly demonstrated that one of the most well established risk factors for developing IBS is having a bacterial or viral gastroenteritis. However, why some, but definitely not all, subjects with a gastroenteritis go on to develop longstanding symptoms, whereas others regain their gut health within a week, is not altogether clear. Moreover, there are also suggestions that patients with IBS have abnormal composition of the colonic bacterial flora, as well as controversial findings that small intestinal bacterial overgrowth is a major factor in IBS. New treatment options for functional GI disorders based on these findings have also appeared, such as non-absorbable antibiotics, and prebiotics, probiotics and synbiotics. Even though these findings are very intriguing and of great interest for researchers in the field, their relevance of some of these is unclear. Especially, their potential implications for the daily care of our patients are not well established.

### **The specific goals of the Working team were:**

- To critically review the existing literature on the role of gut microbiota in functional GI disorders (FGIDs), with focus on clinical and translational aspects. This included the relevance of post-infectious IBS, alterations in composition of small and large intestinal microflora in FGIDs, the clinical usefulness of antibiotics and probiotics in FGIDs, as well as a thorough review on the basic/translational science literature with potential clinical relevance for this group of patients. A specific focus was on new methodology to assess the relevance of gut microbiota in FGIDs and potential drawbacks and pitfalls with previously used methods.
- Based on the literature search, provide recommendations how to implement the current knowledge into clinical practice, in order to improve the health of our patients.
- To give recommendations for future work in order to improve the current knowledge on the role of gut microbiota in functional GI disorders.

The report summarizing the work of the group was published in *Gut* in January 2013.

**Simrén M, Barbara G, Flint HJ, Spiegel BM, Spiller RC, Vanner S, Verdu EF, Whorwell PJ, Zoetendal EG; Rome Foundation Committee. Intestinal microbiota in functional bowel disorders: a Rome foundation report. *Gut* 2013 Jan;62(1):159-76)**

### *Committee Composition*

#### **Chair**

Magnus Simrén, MD  
Gothenburg, Sweden

#### **Co-Chair**

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Brennan Spiegel, MD  
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#### *Translational:*

Stephen Vanner, MD  
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Elena Verdu, MD, PhD  
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#### *Basic/Microbiology:*

Erwin Zoetendal, PhD  
Wageningen, Netherlands

Harry Flint, PhD  
Aberdeen, UK

## Severity in IBS

Measuring severity in functional GI disorders (FGIDs) is necessary to guide diagnostic evaluation, risk assessment, and treatment decisions. However, there has been a dearth of consensus regarding severity in irritable bowel syndrome (IBS) and other FGIDs. In late 2005, the Rome Foundation assembled a working group to develop guidelines for severity assessment in FGID. This committee was comprised of members with different areas of expertise but with a mutual interest in severity and in establishing clear health outcomes assessment. In 2011 the committee members published a document that summarized the literature on the concept of severity in IBS, its methods of assessment as well as guidelines for future work in this area.

**The article was published in the American Journal of Gastroenterology. Drossman DA, Chang L, Bellamy N, Gallo-Torres H, Lembo A, Mearin F, Norton N, Whorwell P, Severity in Irritable Bowel Syndrome: A Rome Foundation Working Team Report. Am J. Gastroenterol 2011;106:1749-1759.**

### Committee Composition

Douglas A. Drossman, MD, Chair Chapel Hill, NC, USA	Anthony Lembo, MD Boston, MA, USA
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Hugo E. Gallo-Torres, MD, PhD, PNS Rockville, MD, USA	Peter Whorwell, PhD Manchester, UK

## Guidelines for Brain Imaging in the DGBIs

A working team on brain imaging in the functional GI disorders was organized after the completion of the Rome III. This committee, led by Emeran Mayer (Chair) and Qasim Aziz (Co-Chair), began their work in July 2005 developing documents on brain imaging in the functional GI disorders. Additional committee members selected for the project were Doug Bremner (Emory University), Mark Kern (Medical College of Wisconsin), Braden Kuo (Harvard), Richard Lane (University of Arizona), Bruce Naliboff (UCLA), and Irene Tracey (University of Oxford).

The charge to this committee was to review available literature on standards for brain imaging assessment in medicine and establish recommendations for the conduct of brain imaging studies in the functional GI disorders.

The committee developed an outline, assigned topics to committee members, and worked through email to develop drafts of the brain imaging document. The members then convened a meeting just before attending the 12th Annual Meeting of the Organization for Human Brain Mapping in Florence, Italy and again in Cambridge in September 2006, to review and revise the documents to resolve any gaps or conflicts.

Since that time the committee has worked diligently to ensure that this keystone document for brain imaging in FGIDs was further updated by new research in the literature. In addition, members of the UCLA Center for Neurobiology & Stress assisted in further updating the report with new literature and responded to peer reviews for publication.

**The journal article was published in *Neurogastroenterology & Motility*, May 2009. Mayer EA, Aziz Q, Coen S, Kern M, Labus JS, Lane R, Kuo B, Naliboff B, Tracey; Brain imaging approaches to the study of functional GI disorders: A Rome Working Team Report; *Neurogastroenterology & Motility*; 21(6), Pages 579 - 596, May 2009**

### Committee Composition

Emeran A. Mayer, MD, Chair David Geffen School of Medicine at UCLA, Center for Neurovisceral Sciences & Women's Health UCLA Los Angeles, CA, USA
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J. Douglas Bremner, MD Atlanta VA Medical Center Decatur, GA, USA Emory University School of Medicine Atlanta, GA, USA
Mark Kern, PhD Medical College of Wisconsin Dysphagia Institute Milwaukee, WI, USA
Braden Kuo, MD Harvard Medical School Massachusetts General Hospital Boston, MA, USA
Richard D. Lane, MD, PhD University Of Arizona Tucson, AZ, USA
Bruce D. Naliboff, PhD David Geffen School of Medicine at UCLA Center for Neurovisceral Sciences & Women's Health UCLA Los Angeles, CA, USA
Irene Tracey, PhD University of Oxford Oxford, UK

## Outcomes/Endpoints in Pharmaceutical Clinical Trials

Because of the complexity of the functional gastrointestinal disorders, it has been difficult over the years to determine which outcome measures and endpoints should be used in clinical trials of pharmaceutical agents. Some trials have used a global relief measure as a primary endpoint, while others have focused on symptom improvement.

The Rome Foundation has approved initiative for a strategic group to explore the behavior of different outcome measures and endpoints that have been used in large clinical trials for irritable bowel syndrome. This effort is consistent with the Rome III Design of Treatment Trials documents that recommend additional research to address outcomes and endpoints in the functional gastrointestinal disorders.

### **Brief Summary of Plan**

#### *Aims*

To conduct a systematic review and meta-analysis of the psychometric and performance characteristics of primary endpoints used in large multicenter therapeutic trials for irritable bowel syndrome using pharmacological approaches, specifically:

- global assessment of relief
- adequate or satisfactory relief of IBS pain or discomfort
- integrative symptom severity scores

The results of this study were published in *Gastroenterology*, December 2009.

**Brennan Spiegel, Michael Camilleri, Roger Bolus, Viola Andresen, William D. Chey, Sheri Fehnel, Allen Mangel, Nicholas J. Talley, and William E. Whitehead. Psychometric Evaluation of Patient-Reported Outcomes in Irritable Bowel Syndrome Randomized Controlled Trials: A Rome Foundation Report, Volume 137, Issue 6, December 2009, Pages 1944-1953.e3**

### **Committee Composition**

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Allen Mangel, MD, PhD  
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Emeran A. Mayer, MD  
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UCLA  
Center for Neurovisceral Sciences &  
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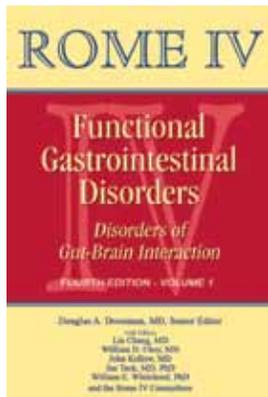
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System  
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Nicholas J. Talley, MD, PhD  
Mayo Clinic  
Jacksonville, FL, USA

William Whitehead, PhD  
Co-Director of the Center for  
Functional GI & Motility Disorders  
University of NC at Chapel Hill  
Chapel Hill, NC, USA

## Rome IV Educational Books

The Rome IV educational materials include several books, each serving different purposes. They are available as hard copy books and as part of the Rome Online online subscription.



**VOLUME 1 \$99.95**

**VOLUME 2 \$99.95**

**TWO-VOLUME PACKAGE AS HARD COPY OR E-BOOK \$149.95**

### Rome IV Functional Gastrointestinal Disorders – Disorders of Gut-Brain Interaction (Fourth Edition)

As with earlier book editions beginning in 1994, the Rome IV textbook is a comprehensive update of knowledge in DGBIs and in the Rome IV diagnostic criteria. It is a 1,500-page, two-volume book created by 117 internationally recognized clinicians and investigators in the field.

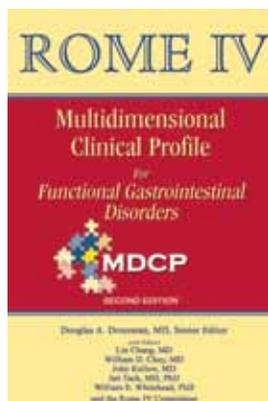
As with earlier book editions beginning in 1994, the Rome IV textbook is a comprehensive update of knowledge in DGBIs and in the

Rome IV diagnostic criteria. It is a 1,500-page, two-volume book created by 117 internationally recognized clinicians and investigators in the field.

**Volume I** contains a comprehensive set of background chapters on neurogastroenterology (basic science and physiology); pharmacology,

pharmacokinetics and pharmacogenomics; age, gender, women's health and the patient's perspective; cross-cultural aspects of DGBIs; the role of the microenvironment (food and microbiota); and biopsychosocial aspects of assessment and management.

**Volume II** provides the key clinical information on 33 adult and 17 pediatric DGBIs from esophagus to anorectum, as well as a newly developed chapter on centrally mediated disorders of gastrointestinal pain. For each DGBI we provide recent information on the epidemiology, pathophysiology, and psychosocial aspects along with evidence- and consensus-based recommendations on diagnosis and treatment. Volume II also contains new information and the revised Rome IV diagnostic criteria for adult and pediatric DGBIs. Also there are appendices that contain key reference information including the Rome IV diagnostic criteria tables, a comparison of the Rome III and Rome IV criteria, a flowchart to assist in the biopsychosocial assessment of patients with DGBIs and how to treat or when to seek a mental health consultant. There are also the validated Rome IV pediatric and adult questionnaires criteria for epidemiological and clinical research.



**SOFT COVER OR E-BOOK \$49.95**

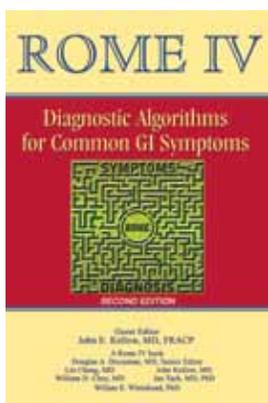
### Rome IV Multidimensional Clinical Profile for Functional Gastrointestinal Disorders: MDCP (Second Edition)

The MDCP redefines the ways in which clinicians can care for patients having even the most complex functional GI disorders. The 2nd edition is a case-based learning module that updates the content of the first MDCP book published in 2015. There are over 70 cases, more than double that in the first edition, and all cases are revised to meet the Rome IV diagnostic standards.

The book helps the clinician understand the complexity and dimensionality of these disorders. Discerning clinicians recognize that just making a diagnosis is not sufficient to determine treatment. For example, a patient with IBS-D having mild and occasional symptoms of abdominal discomfort and loose stools and functioning without impairment would be treated quite differently than a patient with the same diagnosis having continuous severe and disabling pain and comorbid anxiety disorder with fears of incontinence when leaving the house.

We accomplished this task in a short time by acquiring the expertise of our Rome IV chapter committees, who revised the previous cases to meet Rome IV guidelines and added newer diagnostic entities

(such as OIC—opioid-induced constipation, narcotic bowel syndrome, cannabinoid hyperemesis syndrome, and esophageal reflux hypersensitivity) and who also provided additional cases to increase the variety of clinical presentations that occur in real-life practice, often with dual or multiple diagnoses. Thus, this 2nd edition truly addresses the full depth and breadth of clinical decision-making for DGBIs. Furthermore, we have added 18 pediatric cases (neonate-toddler and child-adolescent) and 4 cases where sociocultural influences affect symptom presentation, and where treatment must be geared to the patient's cultural perspective. In this way, any diagnosis, for example, IBS or dyspepsia, has multiple clinical cases ranging from mild to severe, with or without associated comorbidities or sociocultural influences or with psychological comorbidities. As before, the MDCP identifies and classifies five components of every case scenario that include the categorical Rome diagnosis (Category A), additional subclassifications leading to more specific treatments (Category B, e.g., IBS-D or IBS-C, EPS or PDS), the personal impact of the disorder on the patient (Category C), psychosocial influences (Category D), and physiological abnormalities or biomarkers (Category E). This framework is intuitively clear and the organizational approach is both pragmatic and useful. The 1st edition of the book was translated into Spanish, and the MDCP concept has been promoted by academic organizations including at the AGA's Annual Freston conference (article in AGA Institute's GI & Hepatology News) and at two webinars sponsored by the ACG (ACG-sponsored webinars).



## Rome IV Diagnostic Algorithms for Common GI Symptoms

(Second Edition)

**Soft Cover or e-book \$39.95**

The diagnostic criteria, designed primarily for research, has a limited role in clinical practice. Patients don't go to doctors complaining of IBS, or sphincter of Oddi dysfunction; they present with symptoms of abdominal pain, nausea, vomiting and constipation, among others.

Accordingly, the Foundation initiated

a multiyear committee process to address this concern by incorporating diagnostic decision making, information about testing and the use of the symptom-based criteria into a series of clinical algorithms.

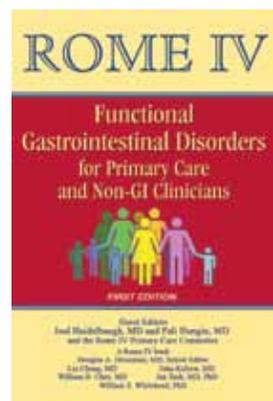
For the 1st edition published in 2010 as a special issue of the American Journal of Gastroenterology, 15 common gastrointestinal symptom presentations were created, and from that entry point, the committees developed evidence-based and cost-effective diagnostic pathways that followed each of these clinical presentations.

This 2nd edition, with guest editor John Kellow, MD, was developed concurrent with that of the Rome IV book. Thus we called upon the Rome IV chapter committee members to accomplish this update and revision with the creation of new algorithms, all consistent with Rome IV diagnostic guidelines and criteria. Now there are 19 algorithms for adults, and 10 for neonates, toddlers, children and adolescents. The book is organized into 8 separate chapters that cover the symptom

presentations of the primary GI regions in adults (esophagus, gastroduodenal, biliary, bowel, anorectal and centrally mediated abdominal pain) as well as the symptom presentations in neonates-toddlers and children-adolescents.

Each chapter has an introductory discussion section to help the reader understand the nature and underlying pathophysiology of the symptoms relative to that region or age group and then move on to discuss for each chapter anywhere from two to fourteen algorithms. Then for each algorithm we include features that bring the information to clinical reality: a) a case report linked to the algorithm in order to demonstrate real-life application, b) a color-coded algorithm graphic using standard "yes-no" decision tree methodology for branched decision making, c) links for each box to information that explains in detail the reasons for the clinical decision or the diagnostic assessment method and d) up-to-date references to support the clinical information. Thus, each common GI symptom yields a clinically meaningful diagnostic algorithm image and incorporates diagnostic testing recommendations, ending with specific diagnoses. When other structural disorders are excluded, the path leads to the Rome diagnostic criteria and ultimately the diagnosis of the DGBI.

Finally, there is an appendix that includes the Rome IV Diagnostic Criteria for reference and also the Rome IV Psychosocial Alarm Questionnaire to help providers decide when in the evaluation is referral to a mental health consultant recommended.



## Rome IV Functional Gastrointestinal Disorders for Primary Care and Non-GI Clinicians

(First Edition)

**Soft Cover or e-book \$24.95**

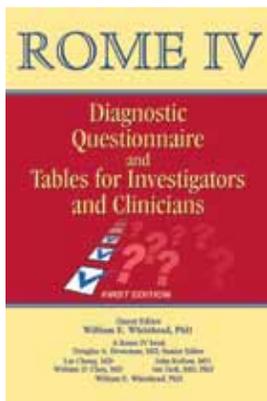
As noted, one of the Rome IV initiatives was that of reaching a larger audience of non-gastroenterologists. We have partnered with leaders in the primary care field to create a primary care book, co-edited by Joel Heidelbaugh, MD, and Pali Hungin, MD.

For many years, the Rome Foundation has heard from primary care physicians that our educational materials are "too complex, cumbersome, and not efficient" for practical day-to-day use. Taking this as a challenge, in 2010 the Board of Directors prioritized the effort to find ways to learn more about how primary care physicians understand and approach diagnosis and treatment of DGBIs. We approached Pali Hungin, MD, a leading expert in the primary care of DGBIs, to help us develop a mechanism for the Foundation to offer relevant educational materials for primary care. This led to formation of the Rome Foundation Primary Care Committee, which published two articles on how non-gastroenterologists see DGBIs, and this eventually culminated in the Rome IV primary care book. This efficiently organized

book is designed to help the busy primary care physicians and other nongastroenterological providers who see patients with these disorders.

The book is organized into 12 chapters that cover the spectrum of DGBIs, but in a fashion that is specifically designed to address the diagnoses most commonly seen, with emphasis on "how to" diagnosis and treatment information. Chapters first address the burden of DGBIs on the patient and their relation to other functional somatic syndromes. Following this is general information relating to diagnostic and management strategies for primary care, patient-centered approaches to care, and then an understanding of these disorders from a biopsychosocial perspective.

The second part addresses the most important DGBIs: esophageal, gastroduodenal (functional dyspepsia), bowel (e.g., IBS and constipation), anorectal (e.g., dyssynergic defecation and incontinence), childhood disorders for neonates-toddlers and children-adolescents, centrally mediated disorders of GI pain (e.g., chronic pain and narcotic bowel syndrome) and finally multicultural aspects of DGBIs. The book concludes with the comprehensive list of the Rome IV DGBIs and their diagnostic criteria.



## Rome IV Diagnostic Questionnaires and Tables for Investigators and Clinicians

(First Edition)

**Soft Cover or e-book \$34.95**

The Rome Foundation maintains a major commitment to the creation and dissemination of good research in the field of DGBIs. To properly study patients having these disorders we need to identify them in as precise a way

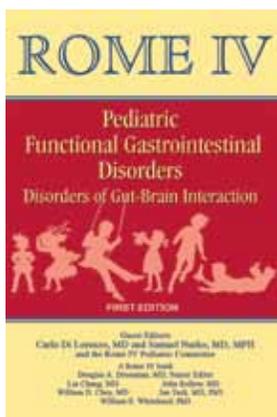
as possible. Hence, we have proposed, created and disseminated the use of diagnostic criteria and questionnaires for epidemiological and clinical research. As such the Rome criteria have been recommended by the U.S. FDA, the EMA and other regulatory agencies for clinical trials, and they remain the only method used to diagnose patients by epidemiological surveys.

To maintain this initiative for Rome IV, we developed an extensive multinational program to first create the Rome criteria through our Rome IV chapter committees, and, in addition, validate and also translate the questionnaires containing these criteria research. We have done this not only for adults but also adolescents and young children.

This book, guest edited by William Whitehead, PhD, provides, in one compact volume, all that is needed for researchers and clinicians to perform studies in English-speaking countries. The book begins with an introduction by Dr. Whitehead, follows with chapters about DGBIs and the Rome IV process, and then contains a chapter on the development and validation of the Rome IV questionnaires.

The second section is the heart of the book: 1) the diagnostic questionnaires for adult functional GI disorders, 2) the psychosocial alarm questions for DGBIs to help clinicians decide when to refer patients for mental health treatment, and 3) the diagnostic questionnaires for pediatric DGBIs with questionnaire sets for children and adolescents as well as neonates and toddlers.

Finally the appendices provide supplemental information including a reference table of all the Rome IV diagnostic criteria, a comparison table between Rome III and Rome IV criteria for investigators who may have used Rome III in previous studies, and finally a psychosocial assessment flowchart created by the Biopsychosocial committee to guide clinicians in the biopsychosocial care of their patients.



## Rome IV Pediatric Functional Gastrointestinal Disorders – Disorders of Gut-Brain Interaction

(First Edition)

**Soft Cover or e-book \$59.95**

The field of pediatric DGBIs has grown over the last two decades, and for this reason we have decided to publish a separate book on pediatric DGBIs, which is extracted from the main Rome IV chapter material.

This book has an introduction by co-guest editors Samuel Nurko, MD (chair of the Neonate-Toddler Committee) and Carlo Di Lorenzo, MD (chair of the Child-Adolescent Committee).

Following this are the two updated and expanded pediatric chapters of Rome IV and also newly validated sets of the pediatric diagnostic questionnaires and criteria, a series of pediatric Multidimensional Clinical Profile (MDCP) cases for the Rome IV book, and a set of diagnostic algorithms for both neonate-toddler and child-adolescent. Thus, the pediatric gastroenterologist can possess a complete but compact book on DGBIs relative to his or her specialty.

## Rome App



The Rome Foundation App for iOS and Android is a brand new tool that gives quick access on your mobile device to: The Rome Criteria, Diagnostic Algorithms, a large video library as well as easy links to all of the educational resource products available

This mobile application allows users to interact with the Rome Foundation's educational resources in a new and convenient way. The application allows for direct availability of the adult and pediatric Rome IV criteria and is available for co-purchase along with access to the Rome IV Clinical Decision Toolkit. Users will also have access to several features including:

- the Rome IV criteria for diagnosing DGBI,
- the Rome IV diagnostic algorithms (for a small user fee)
- educational videos demonstrating effective communication techniques, lectures, how to use the MDCP, algorithms and GI Genius, webinars and satellite symposia
- Access to our social media (Twitter, Instagram and Facebook)
- Information about all Board members
- Meet the Rome Foundation, a comprehensive view of all Rome programs and activities
- a product information page to order educational materials
- a quick link to the Rome Foundation website to search for more information

This App was developed in conjunction with our collaborators at Precisions Marketing Partners and is another step taken by the Rome Foundation to remain at the forefront of medical education for all clinicians treating FGIDs.

## Rome IV Online Subscriptions

A *major* enhancement to our educational program will be to provide all books online on a subscription basis, allowing the individual to do free-text searching across all book platforms. For example, searching "functional dyspepsia" will lead to links in the Rome IV books, algorithms, MDCP, pediatrics and primary care.

We believe that this will be a very popular option for clinicians and investigators as it will always be accessible through a password and can be purchased with several options.

### Subscription prices:

- One month: \$29.95**
- Six months: \$159.95**
- One year: \$297.95**
- Lifetime: \$497.95**  
(life of book ~ 10 years)

## Rome IV Online Subscription Bulk Order Pricing

BULK ORDERS	1-9	10-24	25-49	50-99	100-249	250-499	500-999	1000+
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<b>LIFETIME (ABOUT 10 YEARS)</b>	\$497.95	\$448.00	\$423.25	\$398.50	\$373.50	\$348.50	\$298.75	\$248.95

## Rome IV Slide Sets

### Rome IV MDCP Slide Set

The MDCP is an effective educational tool not only for case-based self-learning but also for presentation at conferences. This slide set contains 72 cases (2-3 slides each case containing the history, the MDCP categories and the recommended treatments.

**MDCP slide set of 204 images \$29.95/set**

### Rome IV Slide Set

The online version of the Rome IV book contains over 650 images and videos from the print and online Rome IV chapters, and 58 slides of the Rome IV diagnostic criteria. Each image has a legend and reference for self-learning or for the PowerPoint presentation at meetings.

**Total slide set of almost 700 PowerPoint images \$595.95 or \$5/image**

### Rome IV Diagnostic Algorithm Slide Set

This set of 35 slides includes all the clinical presentations in the Rome IV Diagnostic Algorithm book. Each slide shows the recommended algorithm for each diagnostic workup and also included is the text information explaining the decision pathways

**Slide set of 35 images \$29.95/set**

## GI Genius Interactive Clinical Decision Toolkit



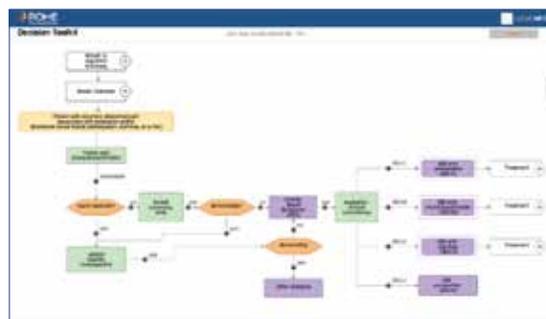
**GI Genius Interactive Clinical Toolkit: \$149.95 (1 year license)**



This new intelligent software program created by the Rome Foundation and LogicNets addresses the sophistication and complexity of diagnosis and treatment through an intelligent platform that interactively helps practitioners achieve the most optimal clinical outcomes. Using the database of knowledge through combining the diagnostic algorithm and MDCP books the program takes the clinician from assessment to treatment using decision pathways created by the Rome Foundation Board of Directors and the Rome IV chapter committee members.

Participants learn interactively. The program responds to input by the clinician and then interactively guides practitioners through optimal diagnostic and treatment pathways. The intelligent software also continues to learn. User input is retained and catalogued. When decision branches occur that contain uncertainties, the information is presented to the board of experts who help modify the algorithm in order to improve its performance.

This program will aid practitioners around the world to successfully access Rome expertise, diagnose and treat patients, increase their own knowledge and credentials, and contribute to outcomes-based learning facilitated by this constantly learning system.



## Communication 202 - New Innovative Video Learning Tool

# COMMUNICATION 202

This innovative video learning tool teaches the sophistication and complexity of the medical interview as a means to optimize the patient provider relationship. Within the context of a clinical visit, the program demonstrates educational techniques to improve communication skills, by employing simulations of ineffective and effective interview technique as well as detailed critique of the interview methods. This knowledge leads to patient centered care, effective psychosocial assessment, and shared decision making. The information provided within the interview applies to patients with most any medical diagnosis.

Visit [www.communication202.org](http://www.communication202.org) for more information.

Created by Douglas A. Drossman, MD in collaboration with Rome Foundation and DrossmanCare.



Communication 202 \$149.95



## Visit our booth at the following conferences in 2019

**DDW - Booth # 746**  
**May 19-21, 2019**  
**San Diego, CA**

**WGO**  
**September 21-23, 2019**  
**Istanbul, Turkey**

**UEGW**  
**October 20-22, 2019**  
**Barcelona, Spain**



## Collaboration

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The Rome Foundation seeks to collaborate with and support membership organizations that share similar goals:

- Promote global recognition and legitimization of DGBIs
- Advance the scientific understanding of their pathophysiology
- Optimize clinical management for these patients
- Develop and provide educational resources to accomplish these goals

The Rome Foundation continues to establish collaborative efforts with academic and public organizations as well as regulatory agencies that share similar goals to advance the field of functional GI and motility disorders and to help those patients so afflicted. Our previous and current associations are with the IFFGD, AGA Institute, ANMS, FDA, EMA, ACG, GI Health Foundation and Focus Med-Ed.

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## Rome Foundation Sponsors

The Rome Foundation is grateful to our industry sponsors who continue to financially support our mission to advance and promote the field of functional gastrointestinal disorders through research and educational initiatives.



Benefits of Rome Foundation Sponsorship include the following:

- Pre-release access and opportunity to review Rome committee recommendations on Rome criteria revisions
- Pre-release access to all academic documents
- Acknowledgment in all marketing publications and projects
- Collaboration on educational activities of interest
- Ability to become a Rome Foundation Research Institute Sponsor
- Waiver of licensing fees on use of Rome Foundation research instruments and intellectual property for use in clinical trials. (e.g. Bristol Stool Scale, IBS-SSS, Rome Diagnostic Criteria, etc.)
- Participation in annual advisory meetings of the Rome Foundation Advisory Council at DDW
- Opportunity to make presentations at Rome Foundation Advisory Council meetings
- Participation in Rome Foundation sponsored conferences
- Opportunity to sponsor research grants through the Rome Foundation Research Institute
- Opportunity to sponsor and participate in symposia and meetings
- Discount on bulk orders of Rome products
  - Rome IV books
  - Computer-Based Learning Program
  - Working team report

## Rome Board Member First or Last Author Publications (alphabetical order) in 2018

- Ananthakrishnan, A. N., A. G. Singal, and **L. Chang**. 2019. 'The Gut Microbiome and Digestive Health - A New Frontier', *Clin Gastroenterol Hepatol*, 17: 215-17.
- Aziz, I., O. S. Palsson, H. Tornblom, A. D. Sperber, W. E. Whitehead, and **M. Simren**. 2018a. 'Epidemiology, clinical characteristics, and associations for symptom-based Rome IV functional dyspepsia in adults in the USA, Canada, and the UK: a cross-sectional population-based study', *Lancet Gastroenterol Hepatol*, 3: 252-62.
- Aziz, I., O. S. Palsson, H. Tornblom, A. D. Sperber, W. E. Whitehead, and **M. Simren**. 2018b. 'The Prevalence and Impact of Overlapping Rome IV-Diagnosed Functional Gastrointestinal Disorders on Somatization, Quality of Life, and Healthcare Utilization: A Cross-Sectional General Population Study in Three Countries', *Am J Gastroenterol*, 113: 86-96.
- Aziz, I., H. Tornblom, O. S. Palsson, W. E. Whitehead, and **M. Simren**. 2018. 'How the Change in IBS Criteria From Rome III to Rome IV Impacts on Clinical Characteristics and Key Pathophysiological Factors', *Am J Gastroenterol*, 113: 1017-25.
- Barbara, G.**, C. Cremon, and F. Azpiroz. 2018. 'Probiotics in irritable bowel syndrome: Where are we?', *Neurogastroenterol Motil*, 30: e13513.
- Barbara, G.**, M. Grover, P. Bercik, M. Corsetti, U. C. Ghoshal, L. Ohman, and M. Rajilic-Stojanovic. 2019. 'Rome Foundation Working Team Report on Post-Infection Irritable Bowel Syndrome', *Gastroenterology*, 156: 46-58 e7.
- Barbaro, M. R., C. Cremon, V. Stanghellini, and **G. Barbara**. 2018. 'Recent advances in understanding non-celiac gluten sensitivity', *F1000Res*, 7.
- Beinvogl, B., E. Burch, J. Snyder, N. Schechter, A. Hale, Y. Okazaki, F. Paul, K. Warman, and **S. Nurko**. 2018. 'Multidisciplinary Treatment Reduces Pain and Increases Function in Children With Functional Gastrointestinal Disorders', *Clin Gastroenterol Hepatol*.
- Bonilla, S., and **S. Nurko**. 2018. 'Focus on the use of antidepressants to treat pediatric functional abdominal pain: current perspectives', *Clin Exp Gastroenterol*, 11: 365-72.
- Brenner, D. M., L. S. Dove, D. A. Andrae, P. S. Covington, C. Gutman, and **W. D. Chey**. 2018. 'Radar plots: A novel modality for displaying disparate data on the efficacy of eluxadoline for the treatment of irritable bowel syndrome with diarrhea', *Neurogastroenterol Motil*: e13331.
- Chang, L.**, C. Di Lorenzo, G. Farrugia, F. A. Hamilton, G. M. Mawe, P. J. Pasricha, and J. W. Wiley. 2018. 'Functional Bowel Disorders: A Roadmap to Guide the Next Generation of Research', *Gastroenterology*, 154: 723-35.
- Chey, W. D.** 2018. 'Diet and Irritable Bowel Syndrome', *Gastroenterol Hepatol (N Y)*, 14: 309-12.
- Chey, W. D.**, C. W. Howden, and G. I. Leontiadis. 2018. 'Clarifying the Houston Consensus on Helicobacter pylori', *Clin Gastroenterol Hepatol*, 16: 2003-04.
- Clevers, E., W. E. Whitehead, O. S. Palsson, A. D. Sperber, H. Tornblom, L. Van Oudenhove, J. Tack, and **M. Simren**. 2018a. 'Factor Analysis Defines Distinct Upper and Lower Gastrointestinal Symptom Groups Compatible With Rome IV Criteria in a Population-based Study', *Clin Gastroenterol Hepatol*, 16: 1252-59 e5.
- Craven, M. R., L. Kia, L. C. O'Dwyer, E. Stern, T. H. Taft, and **L. Keefer**. 2018. 'Systematic review: methodological flaws in racial/ethnic reporting for gastroesophageal reflux disease', *Dis Esophagus*, 31.
- Cremon, C., M. R. Barbaro, M. Ventura, and **G. Barbara**. 2018. 'Pre- and probiotic overview', *Curr Opin Pharmacol*, 43: 87-92.
- Cremon, C., S. Guglielmetti, G. Gargari, V. Taverniti, A. M. Castellazzi, C. Valsecchi, C. Tagliacarne, W. Fiore, M. Bellini, L. Bertani, D. Gambaccini, M. Cicala, B. Germana, M. Vecchi, I. Pagano, M. R. Barbaro, L. Bellacosa, V. Stanghellini, and **G. Barbara**. 2018. 'Effect of Lactobacillus paracasei CNCM I-1572 on symptoms, gut microbiota, short chain fatty acids, and immune activation in patients with irritable bowel syndrome: A pilot randomized clinical trial', *United European Gastroenterol J*, 6: 604-13.
- Drossman DA**. From Pretending to Truly Being OK: A Journey from Illness to Health with Post-Infection IBS: The Provider's Perspective. *Gastroenterology*. 2018. PMID: 30419208.
- Drossman DA, Tack J**, Ford AC, Szegedy E, Tornblom H, Van Oudenhove L. Neuromodulators for Functional GI Disorders (Disorders of Gut-Brain Interaction): A Rome Foundation Working Team Report. *Gastroenterology*. 154(4):1140-1171, 2018.
- Fan, W., G. Fei, X. Li, X. Wang, C. Hu, H. Xin, X. Sun, Y. Li, J. D. Wood, and **X. Fang**. 2018. 'Sera with anti-enteric neuronal antibodies from patients with irritable bowel syndrome promote apoptosis in myenteric neurons of guinea pigs and human SH-Sy5Y cells', *Neurogastroenterol Motil*, 30: e13457.
- Farhadi, A., D. Banton, and **L. Keefer**. 2018. 'Connecting Our Gut Feeling and How Our Gut Feels: The Role of Well-being Attributes in Irritable Bowel Syndrome', *J Neurogastroenterol Motil*, 24: 289-98.
- Frandemark, A., H. Tornblom, S. Jakobsson, and **M. Simren**. 2018. 'Work Productivity and Activity Impairment in Irritable Bowel Syndrome (IBS): A Multifaceted Problem', *Am J Gastroenterol*, 113: 1540-49.
- Grinsvall, C., H. Tornblom, J. Tack, L. Van Oudenhove, and **M. Simren**. 2018. 'Relationships between psychological state, abuse, somatization and visceral pain sensitivity in irritable bowel syndrome', *United European Gastroenterol J*, 6: 300-09.
- Ju, T., B. D. Naliboff, W. Shih, A. P. Presson, C. Liu, A. Gupta, E. A. Mayer, and **L. Chang**. 2018. 'Risk and Protective Factors Related to Early Adverse Life Events in Irritable Bowel Syndrome', *J Clin Gastroenterol*.
- Keefer, L.** 2018. 'Behavioural medicine and gastrointestinal disorders: the promise of positive psychology', *Nat Rev Gastroenterol Hepatol*, 15: 378-86.
- Keefer, L.**, O. S. Palsson, and J. E. Pandolfino. 2018. 'Best Practice Update: Incorporating Psychogastroenterology Into Management of Digestive Disorders', *Gastroenterology*, 154: 1249-57.
- Lenhart, A., C. Ferch, M. Shaw, and **W. D. Chey**. 2018. 'Use of Dietary Management in Irritable Bowel Syndrome: Results of a Survey of Over 1500 United States Gastroenterologists', *J Neurogastroenterol Motil*, 24: 437-51.
- Lin, L. D., and **L. Chang**. 2018. 'Using the Rome IV Criteria to Help Manage the Complex IBS Patient', *Am J Gastroenterol*, 113: 453-56.
- Menees, S. B., C. V. Almario, B. M. R. Spiegel, and **W. D. Chey**. 2018. 'Prevalence of and Factors Associated With Fecal Incontinence: Results From a Population-Based Survey', *Gastroenterology*, 154: 1672-81 e3.
- Nybacka, S., L. Ohman, S. Storsrud, M. Mybeck, L. Bohn, K. Wilpart,

- A. Winkvist, U. Bengtsson, H. Tornblom, and **M. Simren**. 2018. 'Neither self-reported atopy nor IgE-mediated allergy are linked to gastrointestinal symptoms in patients with irritable bowel syndrome', *Neurogastroenterol Motil*, 30: e13379.
- Pohl, D., L. Van Oudenhove, H. Tornblom, B. Le Neve, **J. Tack**, and **M. Simren**. 2018. 'Functional Dyspepsia and Severity of Psychologic Symptoms Associate With Postprandial Symptoms in Patients With Irritable Bowel Syndrome', *Clin Gastroenterol Hepatol*, 16: 1745-53 e1.
- Polster, A., P. Friberg, V. Gunterberg, L. Ohman, B. Le Neve, H. Tornblom, M. Cvijovic, and **M. Simren**. 2018. 'Heart rate variability characteristics of patients with irritable bowel syndrome and associations with symptoms', *Neurogastroenterol Motil*, 30: e13320.
- Polster, A. V., O. S. Palsson, H. Tornblom, L. Ohman, **A. D. Sperber**, W. E. Whitehead, and **M. Simren**. 2019. 'Subgroups of IBS patients are characterized by specific, reproducible profiles of GI and non-GI symptoms and report differences in healthcare utilization: A population-based study', *Neurogastroenterol Motil*, 31: e13483.
- Rosen, R., J. M. Garza, N. Tipnis, and **S. Nurko**. 2018. 'An ANMS-NASPGHAN consensus document on esophageal and antroduodenal manometry in children', *Neurogastroenterol Motil*, 30.
- \*Ruddy, J.** 2018. 'From Pretending to Truly Being OK: A Journey From Illness to Health With Postinfection Irritable Bowel Syndrome: The Patient's Perspective', *Gastroenterology*, 155: 1666-69.
- Schmulson, M. J.**, and A. C. Frati-Munari. 2019. 'Bowel symptoms in patients that receive proton pump inhibitors. Results of a multicenter survey in Mexico', *Rev Gastroenterol Mex*, 84: 44-51.
- Shah, E., and **W. D. Chey**. 2018. 'Editorial: recurrence of Helicobacter pylori infection-still the same after all these years', *Aliment Pharmacol Ther*, 47: 131-32.
- Shah, E. D., C. V. Almario, B. M. R. Spiegel, and **W. D. Chey**. 2018. 'Lower and Upper Gastrointestinal Symptoms Differ Between Individuals With Irritable Bowel Syndrome With Constipation or Chronic Idiopathic Constipation', *J Neurogastroenterol Motil*, 24: 299-306.
- Shah, E. D., J. D. Farida, S. Menees, J. R. Baker, and **W. D. Chey**. 2018. 'Examining Balloon Expulsion Testing as an Office-Based, Screening Test for Dyssynergic Defecation: A Systematic Review and Meta-Analysis', *Am J Gastroenterol*, 113: 1613-20.
- Simren, M.** 2018. 'Manipulating the Gut Microbiome as a Treatment Strategy for Functional Gastrointestinal Disorders', *Gastroenterology*, 155: 960-62.
- Simren, M.**, and **J. Tack**. 2018. 'New treatments and therapeutic targets for IBS and other functional bowel disorders', *Nat Rev Gastroenterol Hepatol*, 15: 589-605.
- Simren, M.**, H. Tornblom, O. S. Palsson, M. A. L. van Tilburg, L. Van Oudenhove, J. Tack, and W. E. Whitehead. 2018. 'Visceral hypersensitivity is associated with GI symptom severity in functional GI disorders: consistent findings from five different patient cohorts', *Gut*, 67: 255-62.
- Singendonk, M. M. J., T. I. Omari, N. Rommel, M. P. van Wijk, M. A. Benninga, R. Rosen, and **S. Nurko**. 2018. 'Novel Pressure-Impedance Parameters for Evaluating Esophageal Function in Pediatric Achalasia', *J Pediatr Gastroenterol Nutr*, 66: 37-42.
- Spierings ELH, **Drossman DA**, Cryer B, Jamal MM, Losch-Beridon T, Mareya SM, Wang M. Efficacy and Safety of Lubiprostone in Patients with Opioid-Induced Constipation: Phase 3 Study Results and Pooled Analysis of the Effect of Concomitant Methadone Use on Clinical Outcomes. *Pain Med*. 2018 Jun 1;19(6):1184-1194.
- Szigethy E, Knisely M, **Drossman DA**. Opioid misuse in gastroenterology and non-opioid management of abdominal pain. *Nat Rev Gastroenterol Hepatol*. 2018 Mar;15(3):168-180. doi: 10.1038/nrgastro.2017.141. Epub 2017 Nov 15.
- Tack, J.**, J. Aberle, J. Arts, M. Laville, J. M. Oppert, G. Bender, S. Bhojru, T. McLaughlin, T. Yoshikawa, A. Vella, J. Zhou, V. Q. Passos, P. O'Connell, and A. P. Van Beek. 2018. 'Safety and efficacy of pasireotide in dumping syndrome-results from a phase 2, multicentre study', *Aliment Pharmacol Ther*, 47: 1661-72.
- Tack, J.**, and M. Camilleri. 2018. 'New developments in the treatment of gastroparesis and functional dyspepsia', *Curr Opin Pharmacol*, 43: 111-17.
- Tack, J.**, M. Corsetti, M. Camilleri, E. M. Quigley, **M. Simren**, H. Suzuki, N. J. Talley, H. Tornblom, and L. Van Oudenhove. 2018. 'Plausibility criteria for putative pathophysiological mechanisms in functional gastrointestinal disorders: a consensus of experts', *Gut*, 67: 1425-33.
- Tack, J.**, and J. E. Pandolfino. 2018. 'Pathophysiology of Gastroesophageal Reflux Disease', *Gastroenterology*, 154: 277-88.
- Tack, J.**, J. Pokrotnieks, G. Urbonas, C. Banciu, V. Yakusevich, I. Bunganic, H. Tornblom, Y. Kleban, P. Eavis, M. Tsuchikawa, and T. Miyagawa. 2018. 'Long-term safety and efficacy of acotiamide in functional dyspepsia (postprandial distress syndrome)-results from the European phase 3 open-label safety trial', *Neurogastroenterol Motil*, 30: e13284.
- Tack, J.**, K. Van den Houte, and F. Carbone. 2018. 'Gastrointestinal motility disorders', *Curr Opin Gastroenterol*, 34: 428-35.
- Tanaka Y, Kanazawa M, Palsson OS, van Tilburg MA, Gangarosa LM, Fukudo S, **Drossman DA**, Whitehead WE. Increased Postprandial Colonic Motility and Autonomic Nervous System Activity in Patients with Irritable Bowel Syndrome: A Prospective Study. *Journal of Neurogastroenterology and Motility*. 24(1):87-96, January 2018.
- Törnblom H, **Drossman DA**. Psychotropics, Antidepressants, and Visceral Analgesics in Functional Gastrointestinal Disorders. *Curr Gastroenterol Rep*. 2018;20(12):58. Published 2018 Nov 5. doi:10.1007/s11894-018-0664-3
- Vidlock, E. J., S. Mahurkar-Joshi, J. M. Hoffman, D. Iliopoulos, C. Pothoulakis, E. A. Mayer, and **L. Chang**. 2018. 'Sigmoid colon mucosal gene expression supports alterations of neuronal signaling in irritable bowel syndrome with constipation', *Am J Physiol Gastrointest Liver Physiol*, 315: G140-G57.
- Vork L, Keszthelyi D, Mujagic Z, Kruijmel JW, Leue C, Ponten I, Tornblom H, **Simren M**, Albu-Soda A, Aziz Q, Corsetti M, Holvoet L, **Tack J**, Rao SS, van Os J, Quetglas EG, **Drossman DA**, Masclee AAM. Development, content validity, and cross-cultural adaptation of a patient-reported outcome measure for real-time symptom assessment in irritable bowel syndrome. *Neurogastroenterol Motil*. 2018;30(3). PMID: 29106029.
- Wiley, J. W., and **L. Chang**. 2018. 'Functional Bowel Disorders', *Gastroenterology*, 155: 1-4.

**\*denotes Rome Foundation Executive Director, not a Board Member**

**MISSION - TO IMPROVE THE LIVES OF PEOPLE WITH DISORDERS OF GUT-BRAIN INTERACTION**