



## PRESIDENT'S REPORT

**Douglas A. Drossman, MD**  
President, Rome Foundation  
Senior Editor, Rome III Book

It is with great pleasure that I send this update on Rome Foundation activities and also regarding Rome IV. We are a global organization that continues to direct our energies toward improving patient care through education and research.

### ADMINISTRATION

We have increased our administrative staff to meet the growing activities. In 2012 Ms. **Claudia Rojas** joined our administrative staff in her role as the Rome Foundation Latino Coordinator. She was most helpful setting up and administering our programs in Bogota and Panama City in 2012 and will now administer our outreach educational programs and recruit new associates from Latin America. Special thanks also go to Ms. **Jamie Dumont** who for several years has successfully coordinated our Rome Foundation booth and exhibit activities. She is always available to answer questions and provide educational materials for visitors. Through Jamie's efforts the booths are well organized and filled with educational materials; our booth has been an access point for members and visitors at national and international meetings. Ms. **Ceara Owre** our webmaster ([www.theromefoundation.org](http://www.theromefoundation.org)) keeps the site informative, attractive and easy to navigate. Recently she has recently imbedded links to videos of our programs. Ms. **Michele Pickard** has been expanding her administrative role to accommodate the growth of the new scientific committees. She is now coordinating over 25 committees including the 16 new Rome IV chapter committees in addition to assisting the Board of Directors, and handling our licensing and research activities. Ms. **Ceciel Rooker** is our main outreach person to industry and is responsible for seeking and serving as a liaison to potential and current sponsors, developing new fund-raising programs, and marketing our educational materials, lectures and related programs. She is also gearing up to take on more responsibility as Managing Editor for the Rome IV book. Ms. Rooker is assisted by Ms. **Krista Smoak** and we are most grateful to Krista for helping to keep all marketing activities organized and efficient. Finally, we are grateful to Mr. **Wink Hilliard**, our executive director who serves as the liaison for our sponsors and effectively handles the financial aspects of the Foundation meeting coordination.

### ROME IV WILL BE ONLINE

By 2016 we believe that most all educational information will be available by computer access and we have moved in that direction. Online versions of Rome IV will provide more opportunities for learning since they may be purchased with unlimited access,

download individual chapters or even do text searching for specific information. In addition we will be incorporating cross-links to other chapters and have considerably more graphic material by updating our Rome III computer based learning program slides and our clinical algorithms. We will also publish a supply of printed books including special editions for pediatrics, and primary care as well as the Rome IV questionnaires. Finally, several translations of the Rome IV book will be available within one year of the English publication.

### ROME IV SYMPOSIUM

The big news this year is at DDW 2013 we held our Rome IV symposium to update the 16 Chapter Committees on the knowledge the Foundation has acquired in the past few years, to inform them of the work of our support committees and to allow our sponsors to present meaningful scientific information relating to the FGIDs. The recent and ongoing initiatives presented at the Rome IV symposium included:

**Published Working Team Reports.** Several completed reports are currently available:

- *Brain Imaging Approaches to the Study of Functional GI Disorders: A Rome Working Team Report.* Mayer E. et al. *Neurogastroenterology and Motility* 2009;21:579-596.
- *Psychometric Evaluation of Endpoints in IBS Randomized Controlled Trials: A Rome Foundation Working Group Report.* Camilleri E. et al. *Gastroenterology* 2009;137:1944-1953.
- *Severity in Irritable Bowel Syndrome A Rome Working Team Report.* Drossman DA et al. *American Journal of Gastroenterology* 2011;106:1749-1759.
- *Intestinal Microbiota in Functional Bowel Disorders: A Rome Foundation Report.* Magnus Simren et al. *GUT* 2013;62:159-176.

**Ongoing Working Team Committees.** These working teams, which are still ongoing, presented their work at the Symposium and are now preparing for publication.

- *Asian Working Team for Functional GI Disorders.* Kok-Ann Gwee MD, PhD (Singapore) Chair; William E. Whitehead Ph.D. (USA) Co-Chair.
- *Rome Foundation Working Team on the Relationship Between Food and Functional GI Disorders.* William D. Chey (USA) Co-Chair; Jan Tack (Belgium) Co-Chair. This

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work is about to be published in the American Journal of Gastroenterology.

- Rome Foundation Working Team on Multi-National Cross Cultural Research in FGIDs. Ami Sperber MD (Israel) Chair.

**Support Committees.** These committees began their work in 2011 and will continue until publication of Rome IV in 2016.

- Questionnaire Committee (William Whitehead, USA, Chair) will create and validate the Rome IV diagnostic questionnaire and within a year we will have translations available.
- Systematic Review Committee (Paul Moayeddi, Canada, Chair) has already provided high quality background articles for the chapter committees and over the next two years will be doing systematic meta-analyses for their review and consideration in the chapter publications.
- Primary Care Committee (Pali Hungin, UK) is developing a publication on how primary care clinicians manage patients with the FGIDs and then the chapter recommendations will be “translated” to primary care physicians in a book at the time of Rome IV.
- Multi-Dimensional Clinical Profile Committee (Douglas Drossman, USA) is creating a template to help clinicians address the full spectrum the patient’s clinical condition in order to provide more directed therapeutic options.

#### **MULTI-DIMENSIONAL CLINICAL PROFILE (MDCP) FOR ROME IV**

A new initiative for Rome IV is the MDCP which we hope will be an effective aid to help clinicians in planning treatment for their patients with FGIDs. The Rome I, II, and III diagnostic system includes categorical conditions (i.e., present or not) and have been helpful particularly for classifying patients for research studies. However, they don’t capture the full dimensionality of a patient’s clinical profile. For example an IBS patient seen in primary care may be treated quite differently from a patient with the same diagnosis seen at a major medical center, the latter having with more severe symptoms, psychological co-morbidities or more severe physiological disturbances. Therefore the multi-dimensional clinical profile will permit an ability to cover the full dimensionality of the patient not only in terms of the diagnosis but also in terms of any clinical modifiers (e.g., IBS-C, D, or M), the impact of the condition (mild, moderate or severe), the presence of any psychosocial modifiers, or the degree of physiological dysfunction and biomarkers. The MDCP committee is currently creating a template using case examples for the new chapter committees to review and modify as needed.

#### **ROME FOUNDATION EDUCATIONAL PROGRAMS AND PRODUCTS**

**Rome Foundation – AGA Institute Communication Skills Workshop.** We are pleased to report that the Communication Skills workshop is now available online at the Rome Foundation website: [http://www.theromefoundation.org/meetings\\_events/communication\\_workshop.cfm](http://www.theromefoundation.org/meetings_events/communication_workshop.cfm) and is also available for CME credits on the AGA website <http://www.gastro.org/aga-rome>. This 1½ day communication skills workshop provides learning modules that address effective medical interviewing, communication techniques and management skills relating to patients with FGIDs. By using a series of lectures, demonstrations, small group sessions and live facilitated

interviews, attendees were provided the opportunity to improve their clinical techniques from experienced facilitators. The faculty included Doug Drossman MD, William Chey MD, Lin Chang MD, Alben Halpert MD and Vicky Kowlowitz PhD.

**Sixth Annual Rome Foundation-AGA Institute Lectureship.** In 2008 we 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. This year’s theme will be: **“The Role of Food Sensitivities and Microbiota in Functional GI Disorders”**. Dr. Kevin Whelan will speak on: “Understanding the mechanisms underlying the interaction of food and gut microbiota in FGIDs”, and Dr. Sheila Crowe MD will speak on: “Food sensitivities and food allergies; the clinical perspective”. **The Lectureship will be held on Sunday, May 19 from 8:00 – 9:30 AM in Room 109A in the Orlando Convention Center in Orlando, Florida.** We hope you will attend.

**Rome Foundation Diagnostic Algorithms for Common Gastrointestinal Symptoms.** In 2010 we produced a tool for clinical practice. The algorithms provide diagnostic strategies for the most common GI symptoms. They begin with patient complaints such as diarrhea, vomiting, or abdominal pain, and this information is presented using a case history format. Then, standardized decision tree formats lead the reader toward ordering proper diagnostic studies to get to specific diagnoses. The program also contains extensive annotations for each algorithm as well as supplementary referenced information. There are 15 clinical algorithms that help gastroenterologists and primary care physicians make cost-wise and efficient diagnoses of functional GI or other structural disorders. Thanks to the support of Procter & Gamble, Ironwood Pharmaceuticals, Synergy, Takeda Pharmaceuticals and Zeria Pharmaceuticals we are able to provide the algorithms as offprints, CDs and online download at no charge [http://theromefoundation.org/education/clin\\_algorithms.cfm](http://theromefoundation.org/education/clin_algorithms.cfm). At DDW 2013, we will also offer a Rome Foundation iPhone/iPad application that includes the algorithms. Finally the algorithms will be revised in 2016 to meet the new Rome IV diagnostic guidelines and will also include modifications in diagnostic evaluation based on geographic area.

**Other Educational Materials in Print.** We continue to publish several educational resources.

- **Rome III book.** This book serves as the most complete reference source for information on the functional GI disorders. The book is endorsed and co-marketed by the AGA.
- **Computer-Based Learning Program.** This is a self-learning computer-based application that conveys in a graphically pleasing format up-to-date information on the functional GI disorders. In addition, slides can be purchased separately for individual presentation. The knowledge base builds upon and updates Rome III knowledge published in 2006. A total of 30 world experts worked on six modules and there are a total of 800 images available. This program is endorsed by the AGA and will be updated to provide extensive graphics and illustrations for the online version of Rome IV
- **Understanding the Irritable Gut: The Functional Gastrointestinal Disorders.** This book is now available at a reduced price (\$15.00). The book “translates”

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# ROME FOUNDATION BOARD OF DIRECTORS



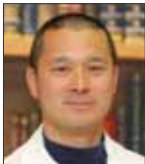
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**William E. Whitehead, PhD**  
Chapel Hill, NC, USA

**OUR MISSION IS:**  
**“TO IMPROVE THE LIVES OF PEOPLE WITH FUNCTIONAL GI DISORDERS.”**

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the essentials of *Rome III*, but focuses on information that is relevant to primary care clinicians, health care extenders and a patient audience. There are chapters on the patient's perspective by Nancy Norton, President of IFFGD, as well as chapters that cover basic GI anatomy and physiology, the physician/patient relationship in care, and general management fundamentals. The book then follows *Rome III* by succinctly covering the major functional GI disorders (IBS, functional constipation, functional dyspepsia, heartburn, incontinence, and belching and bloating) in a symptom-based fashion.

#### INTERNATIONAL INITIATIVES AND ACTIVITIES

We are continuing to expand our efforts to increase global awareness of the functional GI disorders.

**International Liaison Committee (Dan Dumitrascu MD, Chair).** This committee is charged to increase awareness of the functional GI disorders at a global level. This year Dr. Max Schmulson (Mexico) retired as chair after a highly productive 3 years. Under his leadership several Rome Foundation educational programs were held in Latin America, Eastern Europe and Asia. Dr. Schmulson has been succeeded by Dan Dumitrascu MD (Romania) and we look forward to his upcoming leadership. Other members of the committee include Enrico Corazziari MD (Italy), Carlos Francisconi MD (Brazil), Shin Fukudo MD, PhD (Japan), Meiyun Ke (China), Max Schmulson (Mexico) and Ami Sperber MD (Israel).

**Associates of Rome Program.** The Associates program has grown to 500 members representing over 67 countries on 6 continents. The Associates are highly represented in academic programs throughout the world.

**Rome Foundation Fellows.** A new initiative this year was the establishment of the Rome Foundation Fellowship (RFF) designation in recognition to those distinguished individuals internationally who have made special effort to help promote the field of functional GI disorders primarily through their committee work in the Rome Foundation.

**Rome Foundation – China Global Initiative.** In September, 2012 the Rome Foundation was invited to present symposia on their activities to Sanyo Island and Beijing China. The highlight of the Beijing meeting was the dedication of the Rome Foundation and North American Education Foundation wing within the Chinese PLA Hospital (the world's largest hospital with 6500 beds). In the future members will go to educate the Gastroenterologists in China at future symposia and workshops. This dedication was presented by Dr. Yunsheng Yang, Chief of Gastroenterology at the hospital and also President of the Chinese Society of Gastroenterology

**Rome Foundation Translations.** The translation committee has translated the Rome III book into Chinese, Japanese, Spanish and Portuguese, and the Rome III Diagnostic Questionnaire into 22 languages and several more are in progress. The Rome Diagnostic Algorithms for Common GI Symptoms has also been translated into Spanish, Chinese and Portuguese. The translation committee, coordinated by Ami Sperber MD has helped expand knowledge of the functional GI disorders internationally. For Rome IV translations of the book will be made into several languages within one year of the initial English publication. Dr. Sperber who heads the committee is recognized for his research in cross-cultural aspects of FGIDs and for his work in translating and validating research questionnaires into multiple languages.

It is with the generous support of our 20 industry sponsors that we are able to fulfill our mission: **“To improve the lives of people with functional GI disorders”** and our three goals, to: **“Promote clinical recognition and legitimization of the functional GI disorders”**, **“Develop a scientific understanding of their pathophysiological mechanisms,** and **Optimize clinical management for patients with FGIDs.** Also on behalf of the Rome Foundation Board we also want to thank all our members for their hard work and our friends for their interest and support.



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Subscribe to our mailing lists to receive The Rome Foundation's quarterly e-newsletter and free e-mail updates on:

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Complete the form on our website to sign up: [www.theromefoundation.org/join\\_mailing](http://www.theromefoundation.org/join_mailing)



## ROME TRANSLATION PROJECT - UPDATE

AMI D. SPERBER, MD, MSPH

CHAIR, ROME FOUNDATION  
TRANSLATION PROJECT

The translation project continues to expand as we are now working with 23 languages. Please see the table below for the available languages:

LANGUAGE	ALL ADULT MODULES *	ADULT IBS MODULE STAND-ALONE	ADULT FD MODULE STAND-ALONE	ADULT FC MODULE STANDALONE	PEDIATRIC	ALARM QUESTIONS	PSYCHOSOCIAL ALARM QUESTIONNAIRE
ARABIC	IN PROGRESS	NO	NO	NO	YES	NO	NO
CHINESE	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	YES	YES	YES
CZECH	NO	NO	NO	YES	NO	NO	NO
DUTCH	NO	YES	NO	NO	NO	NO	NO
ENGLISH	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	YES	YES	YES
FRENCH	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	NO	YES	YES
GERMAN	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	YES	YES	YES
GREEK	NO	NO	NO	NO	YES	NO	NO
HEBREW	YES**	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	NO	YES	YES
HUNGARIAN	NO	NO	NO	YES	NO	NO	NO
ITALIAN	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	YES	NO	YES	NO
JAPANESE	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	YES	YES	YES
KOREAN	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	NO	NO	NO
MALAY-BAHASA	NO	YES	YES	NO	NO	YES	YES
NORWEGIAN	YES**	YES	NO	NO	YES**	NO	NO
PHILIPINO	NO	NO	NO	NO	IN PROGRESS	NO	NO
PORTUGUESE	NO	TO BE STARTED	YES	NO	NO	NO	NO
ROMANIAN	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	NO	NO	NO
SLOVAK	NO	NO	NO	YES	NO	NO	NO
SPANISH	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	YES	YES	YES
SWEDISH	YES	INCLUDED IN "ALL ADULT MODULE"	INCLUDED IN "ALL ADULT MODULE"	NO	YES	NO	YES
THAI	NO	NO	NO	NO	YES	NO	NO
TURKISH	NO	NO	NO	NO	YES	NO	NO

\*All adult modules includes Functional Dyspepsia (FD) module, IBS module, Alarm questions, and psychosocial alarm questionnaire.

\*\*Will be available shortly



## ROME FOUNDATION RESEARCH PROGRAM

WILLIAM E. WHITEHEAD, PHD  
CHAIR, RESEARCH COMMITTEE

The Rome Foundation has a 9-year history of sponsoring research. The goals of the research program have been three-fold: (1) to test the validity of the diagnostic criteria so that revisions to the criteria can be empirically based; (2) to increase knowledge of the prevalence and epidemiology

of the FGIDs, especially in non-Western countries, in order to provide new insights into pathophysiology; and (3) to interest young investigators in research and clinical practice in the area of functional gastrointestinal disorders (FGIDs) and motility disorders.

### ROME FOUNDATION RESEARCH AWARD

*see page 7 for the 2013 recipient*

The Rome Foundation provides a \$50,000 research grant each year. Preference is given to applications that (1) test the validity and/or utility of the Rome III diagnostic criteria, (2) assess the epidemiology of functional GI and motility disorders, or (3) advance knowledge of outcome assessment or trial design for FGID treatment trials. The applications receive an NIH-style review by an independent review committee. This year the review committee was chaired by Dr. Brooks Cash, Professor of Medicine at the Uniformed Services University for the Health Sciences and Chief of Medicine at Walter Reed Army Medical Center.

### RAY CLOUSE PRIZE FOR THE BEST RESEARCH ARTICLE ON FUNCTIONAL GASTROINTESTINAL AND MOTILITY DISORDERS 2012

*see page 8 for the 2012 recipient*

In 2008, the Rome Foundation created 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. This award recognizes the author of the best original research paper published in the functional gastrointestinal and motility disorders for the calendar year preceding each DDW. While many papers are nominated by the Board of the Rome Foundation, anyone may submit a nomination by briefly describing how the paper will impact the field of functional gastroenterology and motility along with a pdf of the paper. Rome Foundation board members are ineligible. The best paper is selected by a vote of the Rome Foundation board.



Ray E. Clouse, MD

### RAY CLOUSE PRIZE FOR THE MOST CITED ARTICLE IN FUNCTIONAL GASTROINTESTINAL AND MOTILITY DISORDERS 2011

*see page 9 for the 2011 recipients*

Each year the Rome Foundation awards a prize of \$500 for the most frequently cited paper on functional gastrointestinal disorders in the penultimate year before DDW. The methodology is straightforward: we use the Web of Science search engine to rank order the most frequently cited original research paper identified by the search terms "functional gastrointestinal disorder", "functional bowel disorder", "Irritable bowel syndrome", "IBS", or "FGID". We exclude reviews and papers on which a board member of the Rome Foundation is an author. The reason for going back two years to select the prize is to minimize the impact of time since publication on the number of citations; if we were to select the most recent year, a paper published early in the year would have an advantage over a paper published at the end of the year.



## ROME FOUNDATION RESEARCH GRANT AWARD

2013 WINNER – MARÍA VICARIO PÉREZ

### María Vicario Pérez, PhD

*Senior Investigator  
Digestive Diseases Research Unit  
Hospital Vall d'Hebron  
Barcelona, Spain*

Dr. Vicario is senior researcher at the Vall d'Hebron Institut de Recerca, in Barcelona, Spain. She graduated in Pharmacy at Universidad Complutense de Madrid and received her Master's degree in Physiology of the Gastrointestinal Tract, and her PhD in Pharmacy at the Universitat de Barcelona. She completed her four-year postdoctoral fellowship in Mucosal Immunology both in the Digestive Diseases Research Unit at Hospital Vall d'Hebron and in the Allergy and Immunology Unit in Cincinnati Children's

Hospital Medical Center, in Cincinnati, Ohio. Her research is focused on the study of neuro-immune mechanisms underlying gastrointestinal dysfunction as a potential nexus to prevalent diseases, associated with altered motility and hypersensitivity. She combines the study of esophageal inflammatory diseases and functional gastrointestinal disorders with academic and mentorship activities. She has recently been awarded the "2012 Rising Star Award" of the Spanish Society of Pathological Diseases.

**Title:** *Distinctive humoral activity in the intestinal mucosa of IBS. New approach to IBS etiopathogenesis.*

#### ABSTRACT:

**Background:** Despite the high prevalence of irritable bowel syndrome (IBS), specific diagnostic procedures as well as efficacious therapies are lacking, accounting for an enormous economic impact for the society. Low-grade intestinal inflammation and abnormal immunological function are implicated in IBS pathophysiology. Most studies identify mast cells and T lymphocytes as the main populations accounting for the inflammatory infiltrate. Moreover, studies in our group have demonstrated the association between mast cells and structural abnormalities in the epithelial barrier, both related to the severity of symptoms. Importantly, the intestine harbours the largest immunological organ in the body in terms of number of leukocytes and antibody production, being the humoral response a key element of the barrier function and intestinal homeostasis. However, in IBS, a disorder characterized by altered intestinal permeability and increased local immunological activity, the contribution of B lymphocytes has not been addressed. Interestingly, data from our group, indicate increased density of both B lymphocytes and plasma cells, the latter

displaying closer proximity to nerve endings in the jejunal mucosa in diarrhoea-predominant IBS compared to controls. Although preliminary, molecular markers of class-switch recombination are highly expressed in the intestinal mucosa of patients and not in blood, suggesting increased local immune mechanisms in IBS.

**Aims:** To identify the contribution of B cells to the pathophysiology of IBS and characterize the intestinal Ig profile secreted, as well as the neuroimmune mechanisms promoting plasma cell survival and Ig production, in order to identify new disease mechanisms and design innovative therapeutic strategies for IBS.

**Methods:** We will obtain peripheral blood, jejunal aspirate, jejunal biopsies and feces from IBS (Rome III criteria) and healthy volunteers, in which cellular and molecular components of the humoral response will be studied. Furthermore, we will study the association between biological findings and clinical symptoms (based on Rome III criteria). In parallel, neuro-immune mechanisms of Ig production will also be studied.

# RAY CLOUSE PRIZE

## FOR THE BEST RESEARCH ARTICLE ON FUNCTIONAL GASTROINTESTINAL AND MOTILITY DISORDERS 2012

**THIS YEAR'S AWARD GOES TO:**



**Mats Lowén (formerly Larsson), MD**  
 Department of Gastroenterology  
 Linköping University  
 Sweden

Dr. Lowén is a PhD resident in internal medicine and gastroenterology and hepatology in the Department of Gastroenterology, UHL, County Council of Östergötland in Linköping, Sweden. His PhD studies focus on "Functional Magnetic Resonance Imaging of the Brain in Functional Gastrointestinal Disease"

in the Department of Clinical and Experimental Medicine/Gastroenterology, Center for Medical Image Science and Visualization (CMIV), Linköping University. He received his MD from Karolinska Institute in Stockholm in 2004.

**Larsson, M, Tillisch K, Craig AD, Engström M, Labus J, Naliboff B, Lundberg P, Ström M, Mayer E, Walter S. *Brain responses to visceral stimuli reflect visceral sensitivity thresholds in patients with irritable bowel syndrome.* Gastroenterol 2012;142:463-472.**

### ABSTRACT:

**Background & Aims:** Only a fraction of patients with irritable bowel syndrome (IBS) have increased perceptual sensitivity to rectal distension, indicating differences in processing and/or modulation of visceral afferent signals. We investigated the brain mechanisms of these perceptual differences.

**Methods:** We analyzed data from 44 women with IBS and 20 female healthy subjects (controls). IBS symptom severity was determined by a severity scoring system. Anxiety and depression symptoms were assessed using the hospital anxiety and depression score. Blood oxygen level-dependent signals were measured by functional magnetic resonance imaging during expectation and delivery of high (45 mmHg) and low (15 mmHg) intensity rectal distensions. Perception thresholds to rectal distension were determined in the scanner. Brain imaging data were compared among 18 normosensitive and 15 hypersensitive patients with IBS and 18 controls. Results were reported significant if peak P-values were  $\leq .05$ , with family-

wise error correction in regions of interest.

**Results:** The subgroups of patients with IBS were similar in age, symptom duration, psychological symptoms, and IBS symptom severity. Although brain responses to distension were similar between normosensitive patients and controls, hypersensitive patients with IBS had greater activation of insula and reduced deactivation in pregenual anterior cingulate cortex during noxious rectal distensions, compared to controls and normosensitive patients with IBS. During expectation of rectal distension, normosensitive patients with IBS had more activation in right hippocampus than controls.

**Conclusions:** Despite similarities in symptoms, hyper- and normosensitive patients with IBS differ in cerebral responses to standardized rectal distensions and their expectation, consistent with differences in ascending visceral afferent input.



# RAY CLOUSE PRIZE

## FOR THE MOST CITED ARTICLE IN FUNCTIONAL GASTROINTESTINAL AND MOTILITY DISORDERS 2011

**THIS YEAR'S PRIZE GOES TO:**



### **Jessica R. Biesiekierski, PhD**

*Department of Medicine and Gastroenterology  
Monash University  
Box Hill Hospital  
Australia*

Dr. Biesiekierski recently completed her PhD at Monash University. The focus of her study investigated the effects of gluten and other dietary carbohydrates as inducers of gastrointestinal symptoms in adults without celiac disease. She is a member of The Gastroenterological Society of

Australia (GESA) and The Australian Institute of Food Science and Technology (Inc. (AIFST). She has recently been awarded the 2012 Science of Nutrition in Medicine & Healthcare Best Poster Presentation and the 2011 Nutrition Society of Australia Early Career Travel Award.

**Biesiekierski JR, Newnham ED, Irving PM, Barrett JS, Haines M, Doecke JD, Shepherd SJ, Muir JG, Gibson PR. *Gluten causes gastrointestinal symptoms in subjects without celiac disease: A double-blind randomized placebo-controlled trial. Am J Gastroenterol 2011;106:509-14. Cited 52 times. [Corresponding author: Peter R Gibson, Monash University, Box Hill Hospital, Department of Medicine & Gastroenterology, Box Hill, Vic 3128, Australia.]***

#### **ABSTRACT:**

**Objectives:** Despite increased prescription of a gluten-free diet for gastrointestinal symptoms in individuals who do not have celiac disease, there is minimal evidence that suggests that gluten is a trigger. The aims of this study were to determine whether gluten ingestion can induce symptoms in non-celiac individuals and to examine the mechanism.

**Methods:** A double-blind, randomized, placebo-controlled rechallenge trial was undertaken in patients with irritable bowel syndrome in whom celiac disease was excluded and who were symptomatically controlled on a gluten-free diet. Participants received either gluten or placebo in the form of two bread slices plus one muffin per day with a gluten-free diet for up to 6 weeks. Symptoms were evaluated using a visual analog scale and markers of intestinal inflammation, injury, and immune activation were monitored.

**Results:** A total of 34 patients (aged 29-59 years,

4 men) completed the study as per protocol. Overall, 56% had human leukocyte antigen (HLA)-DQ2 and/or HLA-DQ8. Adherence to diet and supplements was very high. Of 19 patients (68%) in the gluten group, 13 reported that symptoms were not adequately controlled compared with 6 of 15 (40%) on placebo ( $P=0.0001$ ; generalized estimating equation). On a visual analog scale, patients were significantly worse with gluten within 1 week for overall symptoms ( $P=0.047$ ), pain ( $P=0.016$ ), bloating ( $P=0.031$ ), satisfaction with stool consistency ( $P=0.024$ ), and tiredness ( $P=0.001$ ). Anti-gliadin antibodies were not induced. There were no significant changes in fecal lactoferrin, levels of celiac antibodies, highly sensitive C-reactive protein, or intestinal permeability. There were no differences in any end point in individuals with or without DQ2/DQ8.

**Conclusions:** "Non-celiac gluten intolerance" may exist, but no clues to the mechanism were elucidated.



## INTERNATIONAL LIAISON COMMITTEE

### DAN L. DUMITRASCU, MD — CHAIR

Professor of Medicine  
University of Medicine and Pharmacy  
Head, 2nd Medical Department  
Iuliu Hatieganu, Cluj, Romania

The Rome Foundation congratulates Dan Dumitrascu, MD (Romania) in his new role as the chair of the International Liaison Committee. Prof. Dumitrascu currently serves on the Faculty of Medicine at the University of Medicine and Pharmacy in Cluj, Romania. Dr. Dumitrascu will succeed Max Schmulson,

MD, beginning with DDW 2013. Dr. Schmulson has chaired the committee since 2009.

The Rome Foundation would like to thank Dr. Schmulson for his excellent work and congratulate Dr. Dumitrascu in his new role.

#### Committee Composition



**Enrico Stefano Corazziari, MD**  
Professor of Gastroenterology  
Faculty of Medicine  
University "La Sapienza"  
Rome, Italy



**Shin Fukudo, MD, PhD**  
Tohoku University Graduate School of  
Medicine  
Professor & Director  
Department of Behavioral Medicine  
Sendai, Miyagi, Japan



**Max J. Schmulson W., MD**  
Professor of Medicine  
Faculty de Medicina  
Universidad Nacional Autónoma  
de México (UNAM)  
México City, D.F., Mexico



**Carlos F. M. Francisconi, MD**  
Assistant Professor of Medicine  
Federal University Rio Grande do Sul  
School of Medicine  
Pontifical School of Medicine of Rio,  
Grande do Sul Porto Alegre, Brazil



**Meiyun Ke, MD**  
Professor of Medicine  
Department of Gastroenterology  
Peking Union Medical College Hospital  
Chinese Academy of Medical Science  
China



**Ami D. Sperber, MD, MSPH**  
Professor of Medicine  
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**Contact Claudia Rojas to join... [crojas@theromefoundation.org](mailto:crojas@theromefoundation.org)**

# THE ROLE OF FOOD IN FUNCTIONAL GI DISORDERS

## WORKING TEAM REPORT

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 commissioned a multidisciplinary group to carefully evaluate the evidence which supports a role of food in the pathogenesis and management of FGIDs.

The specific goals of the Working Team are to review and summarize the following key areas:

1. Food effects on physiology of the GI tract
2. The role of food in the development of GI symptoms
3. Potential dietary interventions for FGIDs
4. Future directions for translational and clinical research addressing the role of food in FGIDs.

The working group has completed their assessment of the interaction between food/nutrients and FGID symptom pathogenesis and treatment. The committee has produced 7 articles that cover the range of knowledge in this area: introduction, general physiology, carbohydrates, fiber, proteins, lipids, and design of treatment trials. These articles have been compiled into a special edition of the American Journal of Gastroenterology that will be published in May of 2013.

### Committee Composition



**William D. Chey, MD, Co-Chair**  
Ann Arbor, Michigan, USA



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



**Fernando Azpiroz, MD**  
Barcelona, Spain



**Sheila Crowe, MD**  
Charlottesville, Virginia, USA



**Shanti Eswaran, MD**  
Ann Arbor, Michigan, USA



**Peter Gibson, MD, FRACP**  
Box Hill, Victoria, Australia



**Susan Shepherd, PhD**  
Box Hill, Victoria, Australia

# The Rome Foundation/AGA Institute Lectureship at Digestive Disease Week 2013

*“The Role of Food Sensitivities and Microbiota in  
Functional GI Disorders”*



*Kevin Whelan, PhD  
King's College  
London*

*Understanding the mechanisms  
underlying the interaction of food  
and gut microbiota in FGIDs*



*Sheila Crowe, MD  
University of California,  
San Diego*

*Food sensitivities and food  
allergies: The clinical perspective*



DDW 2013  
Orlando Florida



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## ROME FOUNDATION – AGA INSTITUTE COMMUNICATION SKILLS WORKSHOP

IMPROVING THE MEDICAL INTERVIEW AND THE PHYSICIAN PATIENT RELATIONSHIP WITH  
PATIENTS HAVING FUNCTIONAL GI DISORDERS

JUNE 2012  
CHAPEL HILL, NC



The Rome Foundation collaborated with the AGA Institute and held a communication skills workshop in June 2012. Facilitators were Doug Drossman MD, Lin Chang MD, William Chey MD, and Vickie Kowlowitz PhD. The purpose was to help clinicians enhance their communication skills and optimize their interactions with patients having IBS and other functional GI disorders. This CME accredited workshop is now available online on both the Rome and AGA websites.

### VIDEOS NOW AVAILABLE FROM THE ROME - AGA INSTITUTE COMMUNICATION SKILLS WORKSHOP

[www.theromefoundation.org/meetings\\_events/communication\\_workshop\\_agenda.cfm](http://www.theromefoundation.org/meetings_events/communication_workshop_agenda.cfm)  
[www.gastro.org/education-meetings/online-education/agarome-foundation-communication-skills-workshop-recorded-sessions](http://www.gastro.org/education-meetings/online-education/agarome-foundation-communication-skills-workshop-recorded-sessions)

### WE ARE PLEASED TO PROVIDE SOME OF THE ARTICLES THAT HAVE BEEN PUBLISHED OVER THE LAST YEAR THAT HIGHLIGHT THE ROME CRITERIA.

- 1: van Tilburg MA, Squires M, Blois-Martin N, Leiby A, Langseder A. Test of the child/adolescent Rome III criteria: agreement with physician diagnosis and daily symptoms. *Neurogastroenterol Motil.* 2013 Apr;25(4):302-e246. doi: 10.1111/nmo.12056. Epub 2012 Dec 6. PubMed PMID: 23216900.
- 2: Drossman DA. 2012 David Sun Lecture: Helping Your Patient by Helping Yourself-How to Improve the Patient-Physician Relationship by Optimizing Communication Skills. *Am J Gastroenterol.* 2013 Mar 19. doi: 10.1038/ajg.2013.56. [Epub ahead of print] PubMed PMID: 23511457.
- 3: Engsbro AL, Begtrup LM, Kjeldsen J, Larsen PV, de Muckadell OS, Jarbøl DE, Bytzer P. Patients Suspected of Irritable Bowel Syndrome-Cross-Sectional Study Exploring the Sensitivity of Rome III Criteria in Primary Care. *Am J Gastroenterol.* 2013 Feb 19. doi: 10.1038/ajg.2013.15. [Epub ahead of print] PubMed PMID: 23419383.
- 4: Tack J, Talley NJ. Functional dyspepsia-symptoms, definitions and validity of the Rome III criteria. *Nat Rev Gastroenterol Hepatol.* 2013 Feb 12;10(3):134-41. doi: 10.1038/nrgastro.2013.14. Epub 2013 Feb 12. PubMed PMID: 23399526.
- 5: Kok L, Elias SG, Witteman BJ, Goedhard JG, Romberg-Camps MJ, Muris JW, Moons KG, de Wit NJ. Application of the Rome III criteria is not likely to reduce the number of unnecessary referrals for colonoscopy in primary care. *Eur J Gastroenterol Hepatol.* 2013 Jan 15. [Epub ahead of print] PubMed PMID: 23325277.
- 6: Karabulut GS, Beşer OF, Erginöz E, Kutlu T, Cokuğraş FÇ, Erkan T. The Incidence of Irritable Bowel Syndrome in Children Using the Rome III Criteria and the Effect of Trimebutine Treatment. *J Neurogastroenterol Motil.* 2013 Jan;19(1):90-3. doi: 10.5056/jnm.2013.19.1.90. Epub 2013 Jan 8. PubMed PMID: 23350053; PubMed Central PMCID: PMC3548133.
- 7: Dong YY, Chen FX, Yu YB, Du C, Qi QQ, Liu H, Li YQ. A school-based study with Rome III criteria on the prevalence of functional gastrointestinal disorders in Chinese college and university students. *PLoS One.* 2013;8(1):e54183. doi: 10.1371/journal.pone.0054183. Epub 2013 Jan 18. PubMed PMID: 23349820; PubMed Central PMCID: PMC3548818.
- 8: Ahmed AB, Matre K, Hausken T, Gregersen H, Gilja OH. Rome III subgroups of functional dyspepsia exhibit different characteristics of antral contractions measured by strain rate imaging - a pilot study. *Ultraschall Med.* 2012 Dec;33(7):E233-40. doi: 10.1055/s-0032-1313073. Epub 2012 Dec 17. PubMed PMID: 23247728.
- 9: Lee YY, Waid A, Tan HJ, Chua AS, Whitehead WE. Rome III survey of irritable bowel syndrome among ethnic Malays. *World J Gastroenterol.* 2012 Nov 28;18(44):6475-80; discussion p. 6479. doi: 10.3748/wjg.v18.i44.6475. PubMed PMID: 23197894; PubMed Central PMCID: PMC3508643.
- 10: Burgers R, Levin AD, Di Lorenzo C, Dijkgraaf MG, Benninga MA. Functional defecation disorders in children: comparing the Rome II with the Rome III criteria. *J Pediatr.* 2012 Oct;161(4):615-20.e1. doi: 10.1016/j.jpeds.2012.03.060. Epub 2012 May 11. PubMed PMID: 22578584.
- 11: Dang J, Ardila-Hani A, Amichai MM, Chua K, Pimentel M. Systematic review of diagnostic criteria for IBS demonstrates poor validity and utilization of Rome III. *Neurogastroenterol Motil.* 2012 Sep;24(9):853-e397. doi:10.1111/j.1365-2982.2012.01943.x. Epub 2012 May 28. Review. PubMed PMID: 22632582.



## AN UPDATE FROM THE INTERNATIONAL FOUNDATION FOR FUNCTIONAL GASTROINTESTINAL DISORDERS (IFFGD)

By Jill Godsey

For more than two decades, IFFGD has been working together with patients, families, clinicians, researchers, and other health professionals to improve the quality of life for people impacted by functional GI and motility disorders. Whether by raising awareness, advocating on behalf of patients and professionals, or supporting research to advance science, we are committed to our mission and grateful for the support we receive from the functional GI and motility disorders community.

### Research Grant Applications & Awards

We are currently calling for Grant Applications supporting innovative research related to idiopathic gastroparesis. We are offering three research grants, each \$40,000, that were made possible by member support through our grassroots organization, the Digestive Health Alliance (DHA.org), and other donations made specifically in the interest of furthering research of gastroparesis. We invite applications to be made through our web page at [www.iffgd.org/gp-grants](http://www.iffgd.org/gp-grants). The deadline for applying is midnight, September 3, 2013.

Continuing our commitment to research, we presented the 2013 IFFGD Research Awards to eight active investigators whose work is advancing understanding of functional GI and motility disorders in adults and children. The award winners were chosen from among dozens of highly qualified nominees. Recipients were specially recognized at the 10th International Symposium on Functional Gastrointestinal Disorders in Milwaukee and each received a \$7,500 prize. We congratulate the Awardees on their achievements:

- Enrico Corazziari, M.D., Senior Clinical Investigator
- Jan Tack, M.D., Ph.D., Senior Clinical Investigator
- Gary Mawe, Ph.D., Senior Basic Investigator
- L. Ashley Blackshaw, Ph.D., Senior Basic Investigator
- Carlo Di Lorenzo, M.D., Senior Pediatric Investigator
- Niranga Manjuri Devanarayana, M.D., Junior Pediatric Investigator
- Lukas Van Oudenhove, Ph.D., Junior Clinical Investigator
- Muriel Larauche, Ph.D., Junior Basic Investigator



### International Symposium

We organized and hosted our CME accredited, biennial symposium in April, once again bringing together professionals from all over the world to review advances in the field, network with peers, and discuss best practices for caring for patients living with these chronic conditions. Thank you to all that attended, shared your knowledge and experiences, and helped make the meeting a success.

### FGIMD Bill Reintroduced

The Functional Gastrointestinal and Motility Disorders Research Enhancement Act has been reintroduced in the U.S. House of Representatives under the number H.R. 842. This ground-breaking piece of legislation, aimed to expand research at NIH in the area of functional GI and motility disorders, is one of many bills that did not become law during its first introduction. We are very pleased that Congressman F. James Sensenbrenner (R-WI-5) reintroduced it in the 113th Congress. Congressman James Moran (D-VA-8) quickly cosponsored the bill ensuring bipartisan support. We need your help to move this bill forward in Congress.

H.R. 842 is important for all of us. In addition to raising awareness about functional GI and motility disorders, the bill will grant NIH new authority to expand the research portfolio, as well as call on the FDA to improve review, approval, and oversight of treatments for these conditions. Please take just a minute to help make this revenue neutral bill a reality. Visit our webpage at [www.iffgd.org/hr842action](http://www.iffgd.org/hr842action) to contact your House Member.

Through our efforts to promote advocacy, encourage education, raise awareness, and support research, IFFGD is focused on progress and making the needs of the functional GI and motility disorders community known. We are grateful for your ongoing support and pleased to continue to work with you on behalf of those impacted by these disorders. Thank you for all you do.

# The Rome Foundation Proudly Presents



the latest educational resources for all health care professionals and patients concerned with functional gastrointestinal disorders (FGIDs)



Rome Clinical Algorithms

The Diagnostic Algorithms for Common Gastrointestinal Symptoms are now available on CD-ROM.

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The Rome Foundation is committed to develop and support research and education to help people with Functional GI Disorders.

Learn more about any of our educational materials at: [www.theromefoundation.org](http://www.theromefoundation.org)



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## ABOUT THE ROME FOUNDATION

The Rome Foundation is an independent not for profit 501(c) 3 organization that provides support for activities designed to create scientific data and educational information to assist in the diagnosis and treatment of functional gastrointestinal disorders (FGIDs). Our mission is to improve the lives of people with functional GI disorders.

Over the last 20 years, the Rome organization has sought to legitimize and update our knowledge of the FGIDs. 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. 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 FGIDs through science-based activities. We are inclusive and collaborative, patient-centered, innovative and open to new ideas.

The goals of the Rome Foundation are to:

- Promote clinical recognition and legitimization of the functional GI disorders
- Develop a scientific understanding of their pathophysiological mechanisms
- Optimize clinical management for patients with FGIDs



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