



DIGEST



UNC
SCHOOL OF MEDICINE

Our mission is to advance the biopsychosocial understanding and care of patients with functional GI & motility disorders through research, training and education.



GIUSEPPE CHIARIONI, MD

Division of Gastroenterology, University of Verona, AOUI Verona , Italy

Dr. Giuseppe Chiarioni was born in Rovigo, Italy in 1958. He graduated in Medicine magna cum laude at the University of Bologna School of Medicine, Italy in 1982 and specialized magna cum laude in Gastroenterology and Digestive Endoscopy at the University of Verona School of Medicine, Italy in 1986. Dr. Chiarioni also specialized in Psychotherapy at the European School of Hypnotic Psychotherapy of the AMISI Foundation in Milano, Italy in 2004. He continued his studies at Johns Hopkins University as a research fellow and is an adjunct Associate Professor of Medicine in the Center For Functional GI and Motility Disorders at UNC.

He was the recipient of a Rotary Foundation Scholarship for the Academic Year 1986/87 and spent this year working as a research fellow at the Division of Gastroenterology of the University of Maryland and at the Gastrointestinal Division of Francis Scott Key Medical Center, The Johns Hopkins University School of Medicine, Baltimore, USA. He worked with Prof. Marvin M Schuster and Prof. William E Whitehead who pioneered the use of biofeedback in fecal incontinence. He trained in gastrointestinal motility and biofeedback techniques and was actively involved in research projects. Observing clinical practices for diagnosis and management of motility disorders was also part of his training.

Dr. Chiarioni serves as a member of the ROME IV Functional Anorectal Disorders Committee of the

Rome Foundation and is a reviewer for multiple scientific journals.

He has transformed the understanding of the pathophysiology and treatment of pelvic floor disorders. He has contributed much to the knowledge of biofeedback, constipation, and pelvic floor dyssynergia.

In 2005, Dr. Chiarioni collaborated with Drs. Whitehead and Salandini, to publish an article in the journal *Gastroenterology* that changed the way biofeedback was used as a treatment for patients with slow transit constipation and dyssynergic defecation.

Prior to the publication of this paper, the consensus view was that biofeedback was a non-specific treatment which improves the symptoms of slow transit constipation as well as dyssynergic defecation. It was also believed by many gastroenterologists that improvements with biofeedback might be due to a placebo effect since the St. Mark's group reported that patient education and verbal guidance without a biofeedback signal was equally effective.

Chiarioni's 2005 study dispelled both these misperceptions. He recruited a group of 52 patients with delayed whole gut transit and symptoms of severe constipation, and then subdivided this group into two subsets based on whether they also displayed paradoxical contractions of their pelvic floor muscles when tested by anorectal manometry.



RECOGNITION OF ACHIEVEMENT:

MIRANDA VAN TILBURG, PHD
ASSOCIATE PROFESSOR, DEPARTMENT OF MEDICINE

The faculty and staff at the Center would like to take the opportunity to applaud Dr. Miranda van Tilburg for her recent promotion to Associate Professor of Medicine. Dr. van Tilburg has worked with the UNC Center for Functional GI and Motility Disorders since 2002.

She received her PhD and Master's degree in Health and Economic Psychology at Tilburg University in the Netherlands. Dr. van Tilburg's research efforts encompass multiple facets involved in pediatric and adult IBS and FGID's. She has published over 80 articles and abstracts on topics including the role of abuse in unexplained GI symptoms in children, parental response to children's abdominal pain, and the use of hypnosis and guided imagery for the treatment of children with chronic abdominal pain.

Dr. van Tilburg is currently conducting a research study that is using cognitive behavioral therapy (CBT) to help parents influence how their child perceives and deals with the pain. More information on this study can be found on page 6.

Over the past decade, the UNC Center for Functional GI and Motility Disorders has enjoyed significant grant support from a number of private foundations and corporations. These grants have ranged from sponsorships of specific events (symposia or CME courses) to unrestricted grants in support of fellowships and the Center's education and training effort. Support for the Digest Newsletter is provided by Takeda Pharmaceuticals North America, Inc.



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The Center's director is **William E. Whitehead, PhD**, Professor of Medicine and Gynecology.

For more information about the Center, please visit our website at WWW.MED.UNC.EDU/IBS

DIGEST

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CONTENTS

Cover	Giuseppi Chiaroini, MD	(Continued on Page 13)
2	Recognition of Achievement:	
	Miranda van Tilburg, PhD	
4	Farewell Tribute: Christine Dalton, PA-C	
6	Guiding Parents on How to Manage Their Child's Pain:	
	Miranda van Tilburg, Ph.D.	
8	Validation of new IBS Questionnaire: The RPSQ and CMCQ	
10	Research Subjects Needed	
14	DDW 2013	
18	Nurses' Health Study - Examining Longitudinal Risk Factors for Fecal Incontinence	
20	"Retirement" : Life after UNC	
	Douglas A. Drossman	
24	Introduction of new Personnel to the Center	
25	Opportunity to Support	



FAREWELL TRIBUTE

CHRISTINE DALTON, PA-C

The truth that has guided Christine Dalton, PA-C, throughout her life has been her passion for helping people. Prior to her career as a physician's assistant, she was a math and science teacher, and remembers realizing that the naturally successful students did not need much assistance in passing her class; it was the children who had a history of poor performance due to problems at home that needed the most help. Her persona of empathy, compassion, thoughtful listening, and discipline has shaped the direction of her career. "I always loved being around people...and really think it's important to help people, whether they are an 8th grader who has an attitude because they are going through a life stressor or a patient who just wants to put the name of a diagnosis to their symptoms; to know why they feel so bad."

Chris graduated with a B.S. in Biology. After a few years teaching math and science she returned to Bowman Gray School of Medicine in Winston-Salem NC for training as a PA and graduated in 1983. Soon afterwards she began working with Drs. Don Castel and Joel Richter, two gastroenterologists who dominated the study of esophageal motility disorders in the 1980's and 1990's, and became the Co-Director of their Esophageal Physiology and Disease program. She was awarded second prize by the American College of Gastroenterology for her paper on "The Changing Faces of the Nutcracker Esophagus" in 1988, and received the

Teaching Award at Bowman Gray School of Medicine the same year. Chris became the President of the Piedmont Association of Physician Assistants in 1992. Prior to leaving UNC, she was a Research Instructor in the Division of Digestive Diseases in the School of Medicine at UNC Chapel Hill. She has authored over 150 publications and has presented more than 20 lectures nationally.

Her research and patient care has contributed greatly to advancing the understanding of functional GI disorders and their treatment. She assisted Dr. Douglas Drossman in the evolution of the ROME Criteria for functional gastrointestinal disorders, and was also instrumental in pharmaceutical trials that led to the FDA approval of proton pump inhibitors and histamine blockers for the treatment of gastroesophageal reflux. Chris has also assisted in the development of treatment protocol for narcotic bowel syndrome, and has carried out research leading to improved understanding of GI motility disorders and the gut-brain interaction.

Chris understands that having a disorder such as functional abdominal pain or IBS whose diagnosis is based on symptoms rather than colonoscopy or endoscopy, can be frustrating for patients and physicians alike. In an article published in the American Journal of Gastroenterology, ("After hours telephone calls from patients with functional or organic diagnosis. Do

physicians and patient perceptions differ?" 2002 Am. J. Gastro: 97(9)) she found that GI fellows who were responsible for after-hours telephone calls from patients believed the symptoms of patients with functional bowel disorders were less serious and that their requests for care were less reasonable when compared to organically diagnosed patients. Chris' determination to treat these patients with the same time, validation, and acceptance of the disorder was a driving force to help bring functional GI disorders into the mainstream of research and discovery of novel treatment options.

Chris left the Center in January 2013. Patients that were being seen by her will be transitioned to physicians with the Center. New patients can call the scheduling line (919-966-2259) to be seen for functional gastrointestinal disorders.

The physicians, faculty, staff, and patients will dearly miss the charisma, passion, and patience Chris Dalton brought to the Center and to the University of North Carolina Hospitals.



Chris Dalton, PA-C with Danielle Maier, MPAS PA-C.

INFORMATION FOR NEW AND RETURNING PATIENTS

Scheduling an Appointment:

- All new patients must be referred by a physician.
- Have your physician fill out and fax in a referral form to **919-966-8929**.

Forms can be found at:

<http://med.unc.edu/ibs/patient-care/information-for-patients>

- If you have any questions or need to reschedule an appointment, please call **919-966-6000**.





GUIDING PARENTS ON HOW TO MANAGE THEIR CHILD'S PAIN

- MIRANDA VAN TILBURG, PH.D.

Dr. Miranda van Tilburg is an Associate Professor of Medicine in the Division of Gastroenterology and Hepatology. She received her Masters degree in Economic Psychology and her Ph.D. in Health Psychology at Tilburg University in the Netherlands. She also completed a 3 year postdoctoral fellowship in Endocrinology and Medical Psychology at Duke University Medical Center.

Dr. van Tilburg's research interests include adult and pediatric functional abdominal pain, IBS, constipation, and fecal incontinence.

Small children who skin their knee or hurt themselves in another way, are often observed to first look at their parent before either starting to cry or brushing it off and continue playing. It is normal for children to look up at adults for guidance when something new or stressful happens. As parents we can influence our child's pain experience. In a series of studies Dr. Levy, from the University of Washington in Seattle, and Dr. Whitehead, from UNC, showed that children learn how to deal with stomachaches by watching how their parents responded to them.

First, children learn from observing how parents react to their own pain. If abdominal pain disrupts the parent's normal activities, this may signal to the children that tummy troubles are serious and should be given attention. Drs. Levy and Whitehead found that children of

parents with Irritable Bowel Syndrome are more likely to visit a doctor for abdominal pain. Genes were only partly to blame for the tendency for abdominal pain to run in families; in fact what a person learns from their social environment has an equal or greater influence.

Second, children learn from parental reactions to the child's pain. If parents ignore the pain, the child may feel it is nothing to worry about. In an experiment Dr. Walker (Vanderbilt University) observed that children reported less severe pain if the parents distracted their child from the pain. Following up on these findings, Dr. Levy showed that teaching both parents and children how to respond to pain was helpful in reducing the child's stomachaches. Parent's reaction to their child's pain was one of the most important factors in how the children fared.

Although parents are not the reason the child is in pain, parents can influence how the child perceives and deals with pain. Parents would like no more than to stop the pain. In a study led by Dr. van Tilburg, parents reported feeling inadequate when they are not able to reduce their child's pain. Making your child feel happy and healthy is of great importance to all parents. Dr. van Tilburg also found that parents of children with recurring stomachaches have unique struggles, such as deciding when to take the child to the doctor, when to keep them

out of school, what foods will be safe to give to their child and how to reduce stress. Thus, there is a unique opportunity to guide parents in more effectively managing their child's abdominal pain. Physicians are often too busy to answer all these questions and many families do not have access to qualified therapists or dietitians. Therefore, easily accessible help is needed to support these families.

At UNC and the University of Washington, we obtained a grant from the National Institutes of Health to continue this line of research. Our goal is to determine if giving parents information and support can reduce a child's pain severity and disability. In this study all parents are asked to meet with a research clinician for three weekly visits, either by phone or in person. Parents receive information on various issues such as diet, school, and when to ask about the child's pain. We compare interventions with two different educational components, as well as phone and in-person delivery.

Our goal is to enroll 300 families into this study. We are in the middle of data collection and no preliminary findings are available. However, almost all parents have been satisfied with the information they received. If we find that this type of education and support is helpful, it can be easily implemented in pediatrician offices due to the limited numbers of contacts needed and the opportunity to deliver the intervention by phone. This may provide unique and additional support to families of children with abdominal pain.

If you are interested in participating in this study, please see pages 10 - 11 for details on how to become involved.



Dr. van Tilburg working with an adolescent.

ADVANCES IN IBS DIAGNOSIS AND TREATMENT:

VALIDATION OF NEW QUESTIONNAIRES UNIQUE TO IBS

Drs. Whitehead and Palsson, along with Elizabeth MacLean and Marsha Turner, developed two questionnaires: The Recent Physical Symptoms Questionnaire (RPSQ) and the Comorbid Medical Conditions Questionnaire (CMCQ), to examine the overlap and prevalence of unrelated physical symptoms in a patients with IBS.

The UNC Center for Functional GI and Motility Disorders has made progressive steps toward creating reliable and valid questionnaires to assess the somatization and comorbidity of non-gastrointestinal symptoms in patients with irritable bowel syndrome, or IBS.

Currently, there are only a few published studies that address coexisting symptoms between one or a few disorders and IBS. In order to remedy this issue, the Center performed a literature review from 1965 to 2011 which identified 16 comorbid medical conditions and 26 non-gastrointestinal physical symptoms that were shown to be significantly higher in IBS patients.

The CMCQ is a self-report questionnaire that lists 16 non-gastrointestinal medical diagnosis identified from the literature review (fibromyalgia, migraines, depression, chronic pelvic pain, interstitial cystitis, etc.). IBS was also included to assess for any overlapping disorders from the list. The response options are “yes”, “no”, and “don’t know”. The RPSQ is a physical symptom questionnaire that lists 26 significant physical symptoms (headache, constant tiredness, stiff muscles, sleeping difficulties, etc.). This questionnaire

assesses whether the patient has the symptom, frequency of the symptom, and the overall symptom burden on the patient. The response options are “never or only once”, “less than one day a week”, “at least 1-2 days a week”, “most days”, and “every day”.

There were 2 studies to determine the reliability of the questionnaires. Study 1 tested the concurrent validity, internal consistency, and test-retest reliability. The study’s results suggested the RPSQ may be used in future IBS screenings to identify patients who may need cognitive-behavioral therapy, hypnosis treatment, or both, because patients who need such treatments have high somatization tendencies.

Study 2 created a comparison of IBS patients to healthy controls and additional tests of psychometric properties, which concluded the CMCQ scores were significantly higher in IBS patients. The importance of these results is that health care providers may be unsuccessful in targeting only IBS symptoms; rather, they should use a broader medical approach when creating an effective treatment plan.

To establish internal consistency and test-retest reliability in Study I patients who met ROME II criteria for IBS were asked to complete the RPSQ, CMCQ, and an established questionnaire to measure for somatization; the Cornell Medical Index (CMI). Test-retest reliability and internal consistency were satisfactory. The CMI evaluates GI, psychiatric, non-psychiatric, and non-GI symptoms. Both the RPSQ and CMCQ were significantly correlated with the CMI demonstrating concurrent validity.



The patient age or the number of years of diagnosed IBS was not significant, so the questionnaire did not have to be modified or adjusted for patient's age or years diagnosed. It was expected for women to have higher mean scores on the CMCQ than men (3.5 vs. 1.8; $P < 0.01$) on several conditions (fibromyalgia, headaches, and depression) as the general consensus is that these symptoms occur at a higher rate in women than men.

Testing concurrent validity was also the primary goal of the second study. Rome II diagnosed IBS participants were compared to the healthy population. The RPSQ and CMCQ were administered and compared against an already validated questionnaire for somatization and psychological symptoms; the Brief Symptom Inventory-18 (BSI-18). The BSI-18 evaluates the degree of psychological stress experienced, with subscales of anxiety, depression, and somatization. The study found that individuals diagnosed with IBS scored higher on the CMCQ than the healthy population. IBS patients were also more likely to be diagnosed with a majority of the medical conditions listed in the questionnaire when compared to the healthy population. The RPSQ was also found to correlate with the scores from the BSI-18.

Overall, the aims of creating disease-specific scales to measure somatization and comorbidity in IBS were achieved. The identification of patients with high rates of comorbid symptoms in the early stages of treatment may improve outcomes and reduce health care costs by helping clinicians select more appropriate treatments. The assessment

of somatization may also reduce the cost of medical management in areas of treatment such as extra diagnostic tests, medications, and consecutive visits to the physician for follow up.

References

1. MacLean EW, Palsson OS, Turner MJ, et al. Development and validation of new disease-specific measures of somatization and comorbidity in IBS. *J Psychosom Res* 2012; 73:351-5.

RESEARCH SUBJECTS NEEDED

CAUSES OF SYMPTOMS STUDIES

Healthy Controls Needed for Research Study

We are conducting a research study investigating a broad range of factors that may cause or influence IBS. We are looking for subjects without IBS or any other gastrointestinal (stomach or bowel) symptoms to participate.

Participation

- Must be a female between the ages of 30 - 59.
- Must have not experienced any gastrointestinal symptoms within the last 3 months.
- Must fill out various health questionnaires & physiological testing
- Involves one 4 hour visit.
- Participants completing the study will receive \$100.
- For more information on how to sign up please visit: www.uncmedresearch.com/ibs or call toll free 866-227-0067

Principal Investigator
William E. Whitehead, PhD

Research Nurse
Angela Kibiy, RN
(919) 843-9755
akibiy@med.unc.edu

Genetic and Environmental Factors that Cause or Influence IBS

This study involves measuring the relationship between genes, the environment, and various psychological and health factors in men and women with IBS. Individuals who participate are required to come to two study visits.

Participation

- Must be 18 years or older
- Must be diagnosed with IBS by a physician.
- Participants completing the study will receive \$250.
- For more information on how to sign up please visit: www.uncmedresearch.com/ibs or call toll free 866-227-0067

Principal Investigator
William E. Whitehead, PhD

Research Nurse
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Energy Metabolism in Pediatric Chronic Abdominal Pain

This study is looking at the way cells handle energy and how they play a role in children who have chronic stomachaches.

Parents of children between the ages of 4 - 18 with and without chronic stomachaches will be asked to complete a phone interview about their family's health history. Participation involves one phone interview and no visits to UNC.

We are looking for mothers of children who either:

- Have been diagnosed, by a physician, with chronic abdominal pain (This includes functional abdominal pain, recurrent abdominal pain, or irritable bowel syndrome) OR
- Have never been diagnosed with chronic abdominal pain.

Principal Investigator:
Dr. Miranda van Tilburg

Contact Information

Dr. Miranda van Tilburg
919-843-0688
abdominalpainstudy@unc.edu

More information:
abdominalpainstudy.doodlekit.com



CAUSES OF SYMPTOMS STUDIES

RESEARCH SUBJECTS NEEDED

Parents of Children who suffer from frequent stomachaches needed for a Research Study

Would you like to learn new ways to manage your child's stomachaches?

Researchers at UNC are conducting a research study evaluating different methods for parents to manage their child's stomachaches.

You may be eligible if:

- Your child is between the ages of 7 - 12.
- Your child has frequent stomachaches.

Participation

- 3 - 30 minute training sessions
- Parents and children complete 5 surveys over the course of 1 year
- Parents receive \$150 and children receive \$25.

Principal Investigator
Dr. Miranda van Tilburg

Contact Information

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919-843-0688
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Rifaximin Phase II Trial for the treatment of IBS-D

The UNC Center for Functional GI and Motility Disorders is currently conducting a Phase III drug trial to investigate the long-term efficacy of Rifaximin for the treatment of IBS-D symptoms.

Rifaximin is a non-absorbed antibiotic currently approved by the FDA for the treatment of Traveler's Diarrhea and Hepatic Encephalopathy. Previous studies have shown significant improvement of symptoms with Rifaximin treatment in subjects with IBS-D.

Eligibility requirements:

- At least 18 years of age
- Diagnosed with IBS-D or have experienced the symptoms (abdominal pain, bloating, and diarrhea) at least 3 days per month over the last 3 months.
- No history of inflammatory bowel disorders
- Colonoscopy with biopsy within the last 2 years or willing to have one for the study

Eligible participants will be asked to complete up to 9 visits during which vital measurements will be taken along with blood, urine, and stool samples. In addition, participants will be asked to keep a daily log of their symptoms over the course of the study.

Primary Investigator:
Yehuda Ringel, MD

Contact Information
Katharine Thurlow
919-843-1003

TREATMENT STUDIES

RESEARCH SUBJECTS NEEDED

Participants with IBS-D needed for an investigational drug research study.

Need Men and Women 18-80 years old with IBS-D

The purpose of this research study is to try to evaluate an investigational drug for improving diarrhea predominant Irritable Bowel Syndrome (IBS-D).

To be eligible, you must be between 18-80 years old, diagnosed with IBS-D and had a colonoscopy within 5 years.

- Complete the electronic diary throughout entire study
- Complete a no-cost physical exam and lab work
- Self-administering study medication twice daily
- Complete up to ten study visits at UNC Hospital over a 34-week period

Primary Investigator:
Spencer Dorn, MD

Contact Information
Meley Woldeghebriel
919-966-8328
meley_woldeghebriel
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Men and Women Needed for Anal Fissure Research Study

Has your physician diagnosed you with an anal fissure? The UNC Center for Functional GI and Motility Disorders is conducting a research study to evaluate an investigational drug (diltiazem).

Eligibility: To be eligible, you must be over the age of 18 and less than or equal to 75 years old, and diagnosed with an anal fissure. You must be able to complete a daily phone diary for the entire study about overall anal fissure related pain.

Participation includes:

- Documenting anal fissure pain daily
- Documenting bowel movements and symptoms
- Giving blood samples
- Completing a no-cost physical exam
- Completing 5 visits during the 5-week study
- Self - administering study medication three times a day

Primary Investigator:
Spencer Dorn, MD

Contact Information
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Safety and Efficacy of FDA Approved Rifaximin on IBS patients with Diarrhea (IBS-D)

The UNC Center for Functional GI and Motility Disorders is currently Conducting a Phase III drug trial to investigate the long-term efficacy of Rifaximin for the treatment of IBS-D symptoms. Rifaximin is a non-Absorbed antibiotic currently approved by the FDA for the treatment of Traveler's Diarrhea and Hepatic Encephalopathy.

Eligibility requirements:

- At least 18 years of age
- Diagnosed with IBS-D or have experienced the symptoms (abdominal pain, bloating, and diarrhea) at least 3 days per month over the last 3 months.
- No history of inflammatory bowel disorders
- Colonoscopy with biopsy within the last 2 years or willing to have one for the study.

Eligible participants will receive:

- Study-related care at no cost
- Study medication
- Colonoscopy at no cost (if applicable)
- Up to \$600 in compensation

For more information and to see if you qualify, please visit
<https://www.acurian.com/clinicalstudies.html>

Principal Investigator
Yehuda Ringel, MD

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Dr. Guiseppi Chiarioni Continued

All were treated with 5 sessions of pelvic floor biofeedback. There were two principal findings: Biofeedback resulted in adequate relief of constipation for 71% of patients with dyssynergia but in just 8% of the slow transit only patients. Secondly, the patients with evidence of both dyssynergia and slow transit normalized their transit following biofeedback whereas the patients with only slow transit showed no change.

The latter finding suggests that delays in transit in this group were secondary to the outlet dysfunction. Since the publication of this study, diagnostic guidelines for constipation have been modified to state that when patients show evidence of both delayed transit and dyssynergia, one should first treat the dyssynergia with biofeedback to see if the transit delays resolve before initiating treatment for slow transit constipation.

In 2006, Dr. Chiarioni conducted a research study on the effectiveness of improving the symptoms of constipation in patients who had dyssynergic defecation by comparing the use of laxatives to biofeedback therapy. Previous studies were uncontrolled and suggested that biofeedback would improve symptoms, but it was unknown if laxatives would work as well as biofeedback. The use of laxatives was thought to be a possible, as it would be a less expensive alternative to biofeedback. However, the results of the study showed clearly that biofeedback was superior to laxatives and it was proposed that it should be one of the first treatment options to be made available to this population for the treatment of dyssynergic defecation.

This study was important to further the knowledge of treatment options for patients with dyssynergic defecation, as it was the first in a series of large randomized controlled trials to establish the specific value of biofeedback for

this type of constipation in adults and also led to the standardization of the biofeedback training protocol.

Dr. Chiarioni is currently working on identifying effective, minimally invasive, and low cost diagnostic tests to diagnose subtypes of constipation. In 2011, he submitted preliminary results which indicate that this study will also have a substantial impact on the ways providers diagnose and treat these conditions.

Dr. Chiarioni's research and dedication to the field of functional GI disorders has greatly influenced the way clinicians diagnose and treat individuals with these disorders. He has developed many novel treatment options and has changed diagnostic and treatment criteria for patients with constipation and FGID's.



DDW 2013

Center faculty and investigators will be well represented in presentations and posters at Digestive Diseases Week 2013 May 18 - 21 in Orlando, Florida.

DDW is the premier research and clinical forum for scientists and clinicians within digestive diseases which includes gastroenterology, liver disease and gastrointestinal surgery. The American Gastroenterology Association (AGA) represents

gastroenterologists. The UNC Center plays an important role that is spanning this decade in developing programs that focus on research and education for those with functional gastrointestinal disorders.

ORAL SESSIONS - SCIENTIFIC SESSION

SATURDAY, MAY 18

DDW Translational Symposium

Symposia Title: **The Intestinal Microbiome and the Gut- Brain Axis**

Title: TARGETING THE MICROBIOME IN THE TREATMENT OF GI DISORDERS

Yehuda Ringel, MD

SUNDAY, MAY 19

DDW Research Forum

Symposia Title: **Microflora-ENS Interactions**

Title: MOLECULAR CHARACTERIZATION OF THE INTESTINAL MICROBIOTA IN PATIENTS WITH AND WITHOUT ABDOMINAL BLOATING.

Yehuda Ringel, Andrew K. Benson, Ian M. Carroll, Jaehyoung Kim, Nitsan Maharshak, Ryan Legge, Tamar Ringel-Kulka

MONDAY, MAY 20

AGA Presentation

Symposia Title: **Problem - Based Learning**

Title: CONSTIPATION: DIAGNOSIS AND MANAGEMENT WHEN THE PELVIC FLOOR IS THE CULPRIT

Yolanda Scarlett, MD

TUESDAY, MAY 21

Committee Sponsored Symposium

Symposia Title: **Meeting the Challenges of Recertification: A Changing Landscape**

Title: PANEL DISCUSSION: QUESTION AND ANSWER

Yolanda Scarlett, MD

TUESDAY, MAY 21

DDW Clinical Symposium

Symposia Title: **Bloating and Abdominal Distension**

Title: WHAT IS THE ROLE OF GUT MICROBIOTA?

Yehuda Ringel, MD

DDW Continuing Education Series

Symposia Title: **Maintenance of Certification Courses**

Title: 2012 UPDATE - GI

Yolanda Scarlett, MD

POSTER SCIENTIFIC SESSION

SATURDAY, MAY 18

Symposia Title: **Functional Gastrointestinal Disorders: Psychosocial and Psychotherapeutic**

Title: COMPARISON OF AGREEMENT BETWEEN REPORTS OF SATISFACTORY RELIEF AND GLOBAL IMPROVEMENT IN PATIENTS WITH IBS: A CROSS-CULTURAL STUDY BETWEEN THE US AND JAPAN

Motoyori Kanazawa, William E. Whitehead, Olafur S. Palsson, Masae Shinozaki, Yusuke Okuyama, Shin Fukudo

Symposia Title: **Anorectal Motility and Functional GI Disorders Including Fecal Incontinence, Pelvic Floor Disorders:**

Pathophysiology, Diagnosis and Treatment
Title: FECAL INCONTINENCE: WHAT DETERMINES WHICH PATIENTS CONSULT PHYSICIANS AND WHICH PHYSICIANS SCREEN?

Lalitha Kunduru, Sung M. Kim, Steve Heymen, William E. Whitehead



POSTER SCIENTIFIC SESSION

SATURDAY, MAY 18

Symposia Title: Anorectal Motility and Functional GI Disorders Including Fecal Incontinence, Pelvic Floor Disorders: Pathophysiology, Diagnosis and Treatment
Title: DYSSYNERGIC DEFECATION CAN BE DIAGNOSED BY QUESTIONNAIRE AND PHYSICAL EXAMINATION
Giuseppe Chiarioni, Sung Min. Kim, William E. Whitehead

SUNDAY, MAY 19

Symposia Title: Pediatric IBD 2
Title: PAIN AND DISEASE STATE IN PEDIATRIC CROHN'S DISEASE: IMPACT ON OUTCOMES.
Tilburg, M.A.L., Claar, R.L., Abdullah, B., Sherif, D., Whitehead, W.E., & Levy, R.L.

Symposia Title: Pediatric Functional and Motility Disorders 1
Title: SEASONAL VARIATION IN FUNCTIONAL ABDOMINAL PAIN IS ASSOCIATED WITH CHANGES IN ANXIETY, SLEEP, PARENTAL RESPONSE TO PAIN, EATING AND EXERCISE.
Shen, J., Palsson, O., & van Tilburg, M.A.L.

MONDAY, MAY 20

Symposia Title: Constipation, IBS and Other GI Colonic Motility and Functional Disorders: Pathophysiology, Genetics and Molecular Epidemiology and the Microbiome
Title: OVERLAP OF IBS WITH NORMAL TRANSIT CONSTIPATION BUT NOT DYSSYNERGIC DEFECATION
Giuseppe Chiarioni, Sung Min. Kim, William E. Whitehead

Symposia Title: Pediatric IBD 3
Title: PAIN BELIEFS AND COPING INFLUENCE DISEASE SEVERITY IN CHILDREN WITH IBD
Dalia Sherif, Miranda A. Van Tilburg, Bisher Abdullah, Shelby L. Langer, Melissa M. DuPen, Mohammed O. El-Majzoub, Rona Levy

Symposia Title: Gastroparesis, Functional Dyspepsia and Other Gastroduodenal and Intestinal Motility and Functional Disorders: Diagnosis, Evaluation and Treatment
Title: APPLYING THE ROME III QUESTIONNAIRE IN ASIA LEADS TO SUBSTANTIAL MISCLASSIFICATION OF IRRITABLE BOWEL SYNDROME (IBS) PATIENTS AS FUNCTIONAL DYSPEPSIA (FD)
Xiaorong Gong, Kok Ann Gwee, William E. Whitehead, Minhu Chen, Xiao-hua Hou, Nitesh Pratap, Uday C. Ghoshal, Ari F. Syam, Murdani Abdullah, Myung-Gyu Choi, Young-Tae Bak, Suteh Gonlachanvit, Ching-Liang Lu, Kewin Tien Ho Siah

Symposia Title: Education and Training
Title: TWITTER USE AS A PLATFORM FOR RAPID DISSEMINATION OF INFORMATIVE CONTENT FROM DIGESTIVE DISEASE WEEK IS INCREASING
Ryan D. Madanick, Peter S. Fleming, Renuka Kadali, Leybelis Padilla, Rupali Prabhukhot, Lee Sigmon, Tejas Desai

POSTER SESSIONS - CLINICAL

TUESDAY, MAY 21

Symposia Title: Constipation, IBS and Other Colonic Motility and Functional Disorders: Diagnosis, Evaluation, and Treatment
Title: VALIDATION OF RESPONSE SCALES FOR ROME DIAGNOSTIC QUESTIONNAIRE
William E. Whitehead, Olafur S. Palsson, Elisa Cascade

Symposia Title: Constipation, IBS and Other Colonic Motility and Functional Disorders: Diagnosis, Evaluation, and Treatment
Title: SYMPTOM EPISODE PATTERNS IN IRRITABLE BOWEL SYNDROME (IBS)
Olafur S. Palsson, Jeffrey S. Baggish, William E. Whitehead

Symposia Title: Oropharyngeal and Esophageal Motility and Functional Esophageal Disorders
Title: PREVALENCE OF ESOPHAGEAL SYMPTOMS BY ROME III CRITERIA IN ASIA AND THEIR ASSOCIATION WITH OTHER FUNCTIONAL GASTROINTESTINAL DISORDERS.
Kewin Tien Ho Siah, Kok Ann Gwee, William E. Whitehead, Minhu Chen, Xiao-hua Hou, Nitesh Pratap, Uday C. Ghoshal, Ari F. Syam, Murdani Abdullah, Myung-Gyu Choi, Young-Tae Bak, Sutej Gonlacharvit, Ching-Liang Lu, Xiaorong Gong

Symposia Title: Constipation, IBS and Other Colonic Motility and Functional Disorders: Diagnosis, Evaluation, and Treatment
Title: SYMPTOM EPISODE PATTERNS IN IRRITABLE BOWEL SYNDROME (IBS)
Olafur S. Palsson, Jeffrey S. Baggish, William E. Whitehead

Symposia Title: Constipation, IBS and Other Colonic Motility and Functional Disorders: Diagnosis, Evaluation, and Treatment
Title: SYMPTOM EPISODE PATTERNS IN IRRITABLE BOWEL SYNDROME (IBS)
Olafur S. Palsson, Jeffrey S. Baggish, William E. Whitehead

TUESDAY, MAY 21

Symposia Title: Gastroparesis, Functional Dyspepsia and Other Gastroduodenal and Intestinal Motility and Functional Disorders: Pathophysiology, Genetics and Molecular Epidemiology
Title: FOOD-SPECIFIC IGG4 ANTIBODY TITERS IN SUBJECTS WITH FOOD HYPERSENSITIVITY.
Ringel-Kulka, T., van Tilburg, M.A.L., Palsson O.S., Thurlow, K., Ramsden, C., & Ringel, Y.

Symposia Title: Gastroparesis, Functional Dyspepsia and Other Gastroduodenal and Intestinal Motility and Functional Disorders: Pathophysiology, Genetics and Molecular Epidemiology
Title: MOLECULAR CHARACTERIZATION OF THE INTESTINAL MICROBIOTA FOCUSING ON SUBGROUPS OF PATIENTS WITH IRRITABLE BOWEL SYNDROME.
Yehuda Ringel, Andrew K. Benson, Ian M. Carroll, Jaehyoung Kim, Nitsan Maharshak, Ryan Legge, Tamar Ringel-Kulka



PICTURES FROM PREVIOUS DDW SESSIONS

ORAL PRESENTATIONS DURING DDW



POSTER PRESENTATIONS DURING DDW



Pictures are property of © Digestive Disease Week

The Nurses' Health Study was established by Dr. Frank Speizer in 1976. The interest of the longitudinal study was to focus on identifying women using oral contraceptives and observing any associated long term consequences. More specifically, Dr. Speizer concentrated on the responses of registered nurses because "they would be able to respond with a high degree of accuracy to brief, technically-worded questionnaires and would be motivated to participate in a long term study."¹ The nurses responded to an original set of questionnaires and sequential follow-up questionnaires every two years thereafter. Two consequential studies followed in 1989 and 2010. A Nurses' Health Study II was established by Dr. Walter Willet and his colleagues, who wanted to study a younger population than the original cohort. The Nurse's Health Study II gathered information on disease, obstetrical history, hormone use, and collected blood and urine samples from a percentage of the responders.¹ Furthermore, another study was conducted, Nurses' Health Study III, which was novel because it was entirely web based instead of paper based.

In the 2013 publication "Risk Factors for Fecal Incontinence in Older Women,"² the investigators Mary Townsend, Catherine Matthew, William Whitehead, and Francis Grodstein examined data from the Nurses' Health Study from 2008 to current; as the questions of incontinence were added in 2008. Several statistically significant risk factors, such as increase in age, increase BMI and lack of physical exercise, parity (number of pregnancies), race, and other medical diseases, were identified.

An increase in age was significantly correlated with an increase in fecal incontinence (FI). Nine percent of individuals who were between 62 – 64 years of age reported liquid or solid stool while 17% of individuals who were between the ages of 85 – 87 reported liquid or solid stool incontinence.² In a previous study by Dr. Whitehead, the prevalence of FI increased from 2.6% for men and women in their twenties to 15.3% in individuals over the age of 70.⁷

The increase in BMI, decrease in physical exercise, and functional limitations are also factors that correlated with an increased risk of FI. Women who responded as having a higher BMI (>30kg/m²) had a greater risk of fecal incontinence.^{2,3} There is a discrepancy among studies to how strong the correlation is between BMI and the risk or severity of FI, but the general consensus that there is an increased risk for FI in those who are obese.^{2,4} This is most likely because of the excess pressure and weight that is exerted on the rectum and pelvic floor muscles. A disease that is generally associated with obesity, such as diabetes, also plays a role in increasing the risk for FI. One of the conditions associated with diabetes is diabetic neuropathy and this disorder has been linked to decreases in internal anal sphincter tone and reduction in rectal sensation.⁶

Pregnancy and childbirth tend to increase the risk for having fecal incontinence in women.^{2,4} Similar studies have looked at the obstetrical history and obstetric trauma and found that these factors increase the risk of FI; specifically women who underwent an episiotomy or operative deliveries (Use of forceps and / or vacuum) are at increased risk.⁴ The data from the Nurses' Health Study suggests that women who have 1 -2 births have about a 30 percent increased risk of having fecal incontinence and women who have 3 or more births, have an increased risk of approximately 58 percent. However, studies vary on results of the weight of the heaviest child at birth and its impact of the risk of having FI.^{2,4}

African American women had a much lower rate of fecal incontinence than Caucasian women. The Nurses' Health Study suggested that African American women had a 59 percent lower risk than Caucasian women.² This, however, could be due to a low response rate from African American women. In several studies, there were fewer than 10 percent of African American women that participated in the research study.^{2,4,5} Another possible anomaly could be if the individual is sick during the intake of questionnaires, their data would be missing



from research and would over-estimate the reduction in risk.² More research needs to be conducted in a population based study to examine if the samples currently available are accurately representing FI rates in the African American population.

The importance of understanding risk factors for FI as well as the correlation with other medical disorders can assist in updating and establishing protocols for assessment and treatment. The Nurses' Health Study identified important criteria needed to reduce the risk of FI. There is a need to implement more conservative solutions, such as reducing BMI, increasing the amount of physical activity, and reducing isolation for functionally limited individuals. Other factors, such as obstetrical injury, are inherently harder to avoid, and there is a continued need to understand the relationship between difference in race and the risk for FI.

Mary Townsend, ScD is an Associate Epidemiologist at Brigham and Women's Hospital at Harvard Medical School. She is concerned with women's health and aging. She also devotes her time to research cognitive function and dementia.

Francine Grodstein, ScD is an Associate Professor and epidemiologist at Brigham and Women's Hospital at Harvard University Medical School. She spent over 15 years studying the data associated with the Nurses' Health Study; primarily focusing on cognitive function, cardiovascular disease prevention, and the public health consequences of incontinence in women.

Catherine Matthews, MD is the Division Chief in Urogynecology and Reconstructive Pelvic Surgery at the University of North Carolina at Chapel Hill. Her research focus is on anal sphincter injury, fecal incontinence, sexual dysfunction, and robotic surgery in gynecology.

William Whitehead, PhD is the Director for the Center for Functional GI and Motility Disorders at the University of North Carolina at Chapel Hill. His research interests include the physiological and psychological mechanisms responsible for functional bowel disorders, causes and treatments for pelvic floor disorders and fecal incontinence, and constipation.

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“Retirement” : or Life After UNC

Douglas A. Drossman, MD

It's been over a year since I left full time status at UNC and I'm very pleased that Bill Whitehead asked me to provide an update on my activities and plans. After 35 years on the faculty at UNC, I faced many transition issues and adjustments, some very good and some a bit challenging. My adjunct appointment at UNC gives me academic privileges and teaching opportunities with the GI fellows, and I remain as an advisor and co-director emeritus of the UNC Center for Functional GI and Motility Disorders. This allows me to retain some of the enjoyable parts of UNC as I move forward. Although I have taken on new activities, I am enjoying life in a different way with a greater sense of freedom and opportunity to pursue my interests. There is more time for relaxation at home, getting up later and even watching TV shows in the evening like “Downton Abbey” and “Homeland” with my wife, Debbie, and dog, Ralph; something I hadn't done before. I want to give very special thanks to my associates who helped me through the transition, including Andrew Greganti, Marschall Runge, Bill Whitehead, and many others too numerous to name. I am particularly grateful to Debbie, who has been a tremendous source of support, input and encouragement throughout the transition.

During my UNC career I did many things, research, clinical care, teaching, and administration. I also acquired a significant number of outreach activities: visiting professorships, consulting with industry, working on national and international committees, and collaborating on research and teaching programs around the world. Over the last few years I began to feel constrained with administrative responsibilities and thought I was spending more time doing what I had to do than what I wanted to do especially as more and more outside opportunities emerged. I questioned whether I could be as happy, productive and personally fulfilled at UNC in my future years as I had been in the past.

Division chief Bob Sandler annually requests each faculty member to write not only about the previous year's activities but also to include a list of future goals. In my last document, the goals were to:

1. Develop methods to promote biopsychosocial understanding in global research, clinical care and teaching related to functional GI disorders;
2. Find ways to expand my teaching efforts with regard to the patient-doctor relationship and communication skills;
3. Learn ways to use social media marketing to promote knowledge of the FGIDs and communication skills;
4. Finalize the research on my ongoing projects;
5. Try to preserve and develop a legacy for the UNC Center for Functional GI and Motility Disorders, and
6. Work toward Rome IV. It's pleasing to know that I have continued to make progress toward these goals and now have more opportunities to do so.

Below is a summary of my activities and future plans.

1. Research. Wrapping up 30 years of research was a big adjustment. My research career was strongly influenced by a great physician and educator, George Engel MD, who coined the term “Biopsychosocial Model”. His mentorship helped shape the research in GI psychosocial outcomes, the influence of abuse and trauma on GI health, centrally targeted treatment for FGIDs (antidepressant and CBT), the development of quality of life and related health status instruments, and the use of brain imaging assessing the role of stress factors in the pain experience. This work was augmented and nurtured through the resources at our UNC Center for Functional GI and Motility Disorders, one of the greatest Centers of its kind. Fortunately, the products of our original NIH work, beginning in the 1980's is now well accepted and progressing thanks to many other skilled investigators in the Center and around the world. I'm pleased to have played a part.

As part of the transition, I ended a 20 year research collaboration and co-directorship

of the UNC Center with Bill Whitehead, and the directorship of our research biometry core but I have had opportunities to continue the research in other ways. Fortunately, I was able to transfer my remaining clinical trial funds and projects to Spencer Dorn MD, a protégé and rising star in the area of health services research, and the balance of my funds to Bill Whitehead and the UNC Center for Functional GI and Motility Disorders for its infrastructure needs. I now enjoy the benefits of being a co-investigator with Peter Cotton at MUSC looking at the clinical and psychosocial outcomes of Sphincter of Oddi dysfunction, and with William Chey and Jacob Kurlander (formerly a resident at UNC, now a fellow at U. Michigan) in developing a research scale to assess the quality of the patient-physician relationship. I am also pleased to continue to mentor several investigators throughout the country on their research projects.

2. Education. A major passion in my life has been to work as an educator, and I continue to believe that good clinician-teachers are undervalued. I was fortunate to get to know Ryan Madanick at UNC and enjoy his energy and commitment in teaching; he was the first to help me understand the essentials of social media in medicine. I do hope he will help the national organizations like AGA and ACG develop training programs and awards to help encourage more educators in the field.

As a fellow I started a clinical skills conference for faculty that has since continued for 35 years. Since teaching the GI fellows has been one of my great pleasures, I'm very grateful to continue this conference with the fellows and to also work with them through phone consultations and referrals of their most challenging clinical cases.

While gastroenterology had long been the basis for my teaching, I am now focusing more on teaching the essentials of communication skills and techniques to improve the patient provider relationship. I began this with Dr. Engel and later in the 1990's with the American Academy on Communication and Healthcare. Over the last year I was given opportunities to promote this globally: I participated in the "12 Gurus" health conference in NYC, March 2012. At this conference national educators addressed innovative methods in health care. My presentation addressed the stigmatization



Doug Drossman, MD and Kellie Bunn, PA-C

of patients with FGIDs in modern society and offered techniques to enhance the doctor-patient dialog¹. In June, our training center (see below) produced a 1 ½ day CME accredited symposium: "The Rome Foundation AGA Institute Communication Skills Workshop" and the lectures and workshops are now available at:

http://www.romecriteria.org/meetings_events/communication_workshop.cfm;

In particular, please be sure to review the Saturday afternoon communication workshops. In August, at WXXI in Rochester NY, I filmed two PBS shows: "Mystery Diagnosis" where I had to diagnose an unusual clinical presentation² and "Second Opinion – IBS"³ which involved one of my IBS patients, Erin Slater, who shared the challenges of dealing with her symptoms and health care providers. In October, I was awarded the David Sun Lectureship at the American College of Gastroenterology meeting on "Helping your patients by Helping Yourself: How to Improve the Patient-Physician Relationship"⁴ and the publication detailing this information was just published in the April issue of the American Journal of Gastroenterology⁵. Several days later I presented the same topic to the United European Gastroenterology Week in Amsterdam and in November to the Pan American Gastroenterology Meetings in Panama City.

3. Patient Care. To me, the most fascinating part of clinical care is to understand the complex mind-body aspects of GI illness, particularly

the functional GI disorders (FGIDs), and to help in the management of patients so affected⁶. There have always been challenges to accomplishing this: poor reimbursement for spending the time needed to understand these disorders and establish the necessary relationship-centered care, helping patients ignore dualistic biomedical dogma that lead to stigmatization, helping patients understand their conditions as “real” and manageable, and helping to educate the referring physicians in ways to successfully continue in their patient care. With the assistance of my physician assistant, Ms. Kellie Bunn PA-C, we have established a specialty practice in FGIDs www.drossmangastroenterology.com and are most pleased we have to received referrals both locally and from around the world.

4. Center for Education and Practice of Biopsychosocial Care. My vision has been to “translate” the teachings of patient-centered Biopsychosocial care to other physicians in practice and training, and now I am able to do that with greater time and opportunity. Almost a decade ago⁷ I became concerned with emerging difficulties in health care, due to an increasing financial burden from growing drug costs, increasing emphasis on ordering expensive and at time unneeded procedures that are highly reimbursed and increased pressures to see more patients in less time. This has led to a loss in training of the values and skills necessary to enhance patient-doctor communication, and in an erosion of financial support for clinical educators⁵. Most clinicians are not sufficiently trained in patient centered biopsychosocial care, as recommended over a decade ago by the Institute of Medicine⁸. They are not skilled in active listening, making good clinical observation and judgments to effectively diagnose and subsequently work with patients in plans of care that lead to better outcomes. Instead many clinicians approach human illness from a dualistic (i.e., organic vs. functional) perspective⁹, order studies to “rule out organic disease”, or to reduce malpractice suits in a litigious society; even though malpractice suits relate more to poor patient doctor communication and lack of caring, than to not doing the right tests¹⁰.

Accordingly, (perhaps in a “Quixotic” fashion) I have sought to improve health care by creating a Center (www.drossmancenter.com) that teaches communication skills and ways

to improve the patient-doctor relationship. Relying on 30 years of experience, we are presenting lectures and workshops (such as the Rome Foundation AGA Communication Workshop - see above) and creating new educational methods through social and digital media. I’m joined by Ceciel Rooker, my administrative colleague who has worked with me for several years, my nephew Mark Drossman, an accomplished creative director for NYC marketing agencies, Davis Stillson, a videographer with whom I’ve worked for over 30 years at UNC, and Craig Mathews who helped set up the business plan. I am collaborating with talented educators and clinicians who provide the content and training for future programs: and an old friend and Drexel Medical Center Dean of Education, Dennis Novack MD, a former member of the UNC Center, Albena Halpert, now at Boston University, Steven Locke MD from Harvard Univ., and Lin Chang from UCLA who is also on the Board of the Rome Foundation. It has been a learning experience to become familiar with business models, the growing social media and digital world and the challenging process of moving projects from academia into the realm of an entrepreneurial start-up company. Despite watching “Shark Tank” I’ve felt like a fish out of water in learning these methods. I am hopeful that within a short period of time we will have a thriving enterprise to accomplish our lofty goals.

5. Rome Foundation. I have been so grateful for the ability to develop and direct a large multi-national organization that focuses on helping patients with functional GI disorders through research and education (www.theromefoundation.org). Since leaving UNC my activity in this sector has doubled in time, effort and scope, all of which I very much enjoy. It’s a great privilege to work with some of the greatest investigators and clinicians in the field including Bill Whitehead who is a member of the Board of Directors and a collaborator with me on this work for 20 years. Some of the most exciting initiatives currently developing include the publication of Rome IV in 2016, the establishment of global initiatives including training sessions in China and educational programs in Eastern Europe and Latin America. With the leadership of Ami Sperber MD from Israel, we are making the FGID world a smaller place through several projects: multinational working teams that



update knowledge and develop diagnostic criteria, translations of the Rome criteria, workshops on cross cultural competence and an ambitious epidemiological survey to assess functional GI disorders in over 25 countries. We are also hoping to aid clinicians in managing patients with more complex GI disorders by developing a Multi-Dimensional Clinical Profile and this will be launched with Rome IV.

I want to thank all my colleagues, friends, staff and patients who I've had the pleasure to work with at UNC, and for the many enjoyable years I had there. I hope the Center continues to lead and flourish, and I hope to continue my connection with the Center for many years to come.



As President of the Rome Foundation Dr. Drossman is involved with international outreach activities. Here at the invitation of Yunsheng Yang Chief of Gastroenterology, Rome Foundation Board members, also including John Kellow (Australia), Lin Chang (USA) and Amy Sperber (Israel) are dedicating a training wing to teach functional GI disorders to physicians at Beijing PLA Hospital, one of the largest hospitals in the world.

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WELCOME TO THE CENTER



Sung Min Kim is a research assistant (RA) working with Drs. William Whitehead and Steve Heymen. She will be working primarily on the Educational-Behavioral-Medical Treatment for Fecal Incontinence research study. As the main RA for this research study, Sung Min is attempting to see if a Home Health initiated intervention for the treatment of fecal incontinence has a more enduring effect of reducing incontinence episodes over a time span of 6 weeks and 6 months. She graduated with a bachelors degree Biology from Wake Forest University.



Kirsten Ambrose is the Project Director for the Center. Currently, she is responsible for submission of grants, preparing and maintaining budgets for multiple projects, preparation of annual reports, research study implementation, and many other essential aspects to help the Center run smoothly. Kirsten also oversees all the research studies associated with Drs. Whitehead, Palsson, and Heymen. She graduated with a Masters in Exercise Science, from The George Washington University, and her bachelors degree in Psychology, from Carnegie Mellon University. Kirsten enjoys sailing a trimaran and blogging about Fibromyalgia.



Stefanie Twist is the Center Coordinator. She is responsible for managing the logistics for the Center's investigators as well as formulating itineraries for distinguished guests and visiting domestic and international faculty. She is also coordinator for a Urogynecology research study that is collaborating with the Center looking at surgical interventions for the treatment of fecal incontinence in women. She graduated with a bachelors degree in Psychology. Outside of work, she enjoys watching documentary films, visiting historical sites, and fishing.



Angela Kibiy is a research nurse working with Dr. William Whitehead. She will be working primarily on the Psychophysiology of Irritable Bowel Syndrome research study. As the research nurse, she will be enrolling healthy and IBS subjects to participate in this study. She will be looking at the genetic and environmental factors that cause and influence IBS. Angela is a registered nurse with a Masters in Public Health, from the University of Massachusetts, and her Bachelors in Nursing, from the University of Eastern Africa. Outside of work, she enjoys reading, traveling, and biking.



Robin Dever, RN is the nurse coordinator. Ms. Dever received her Associate Degree in Nursing from Durham Technical Community College. She has worked previously in New Jersey at Shore Memorial Hospital and in UNC GI Procedures before coming to work for the Center as a Nurse Coordinator. She will be assisting Drs. Yehuda Ringel, Spencer Dorn, Yolanda Scarlett, and Danielle Maier, PA-C.

**UNC CENTER FOR FUNCTIONAL GI AND
MOTILITY DISORDERS:**
How to Treat IBS Effectively
Expert Update for Health Professionals

Friday, November 1, 2013: Center Research Symposium

Findings from research conducted at UNC

1. Accidental Bowel Leakage
2. Internet – Facilitated Medical Research and Patient Care
3. Diagnosis and Management of FGID's

Saturday, November 2, 2013:

CME Program on How to Treat IBS Effectively

1. Pharmacologic Treatment Options
2. Probiotics, Antibiotics, and Diet
3. Effective Psychological Interventions
4. The Rome Criteria in Clinical Practice

The CME event on November 2 will be streamed live and accessible to view on the internet.

CME Credits will be Awarded for Online and In-Person Participation.

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The symposia will be held in
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William Chey, MD
Lin Chang, MD
Spencer Dorn, MD
Olafur Palsson, PsyD
Sheila Crowe, MD
Ryan Madanick, MD
Laurie Keefer, PhD

Magnus Simren, MD
Douglas Drossman, MD
William Whitehead, PhD
Miranda van Tilburg, PhD
Steve Heymen, PhD
Catherine Matthews, MD
Nancy Zucker, PhD

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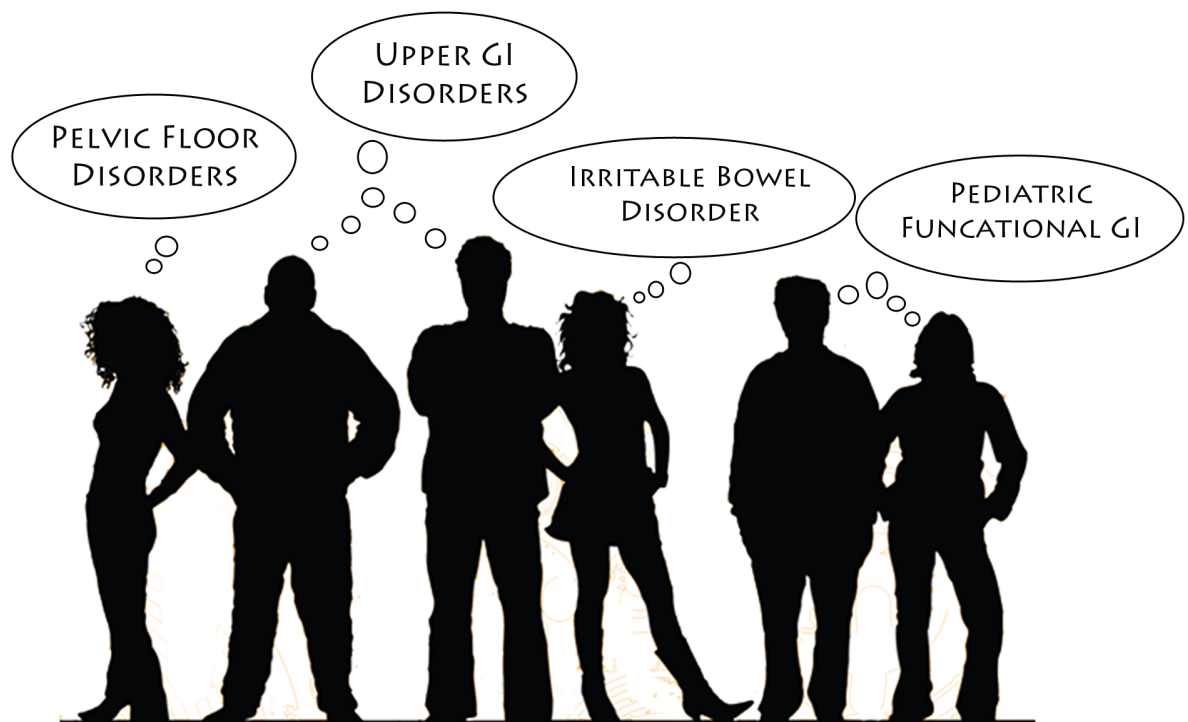
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For Information on registration, please contact Stefanie Twist at
Stefanie_Jeremiah@med.unc.edu

For Information on opportunities to sponsor this program,
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Contributions from individual donors and grants from foundations and corporations are essential to enhancing and expanding the Center's comprehensive and multi-disciplinary approach to clinical care, research, training and education in functional GI and motility disorders.

Memorial Research Fund

The Alan Wayne Ducoff Memorial Fund provides an opportunity for families and friends to remember and honor their loved ones by making a designated contribution to the Center's research program. To make a donation to the Alan Wayne Ducoff Memorial Fund, please check off the appropriate box on the donation form.



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