

AMERICAN NEUROGASTROENTEROLOGY & MOTILITY SOCIETY ANNUAL MEETING



**August 11 – 13, 2023 • Fairmont Austin • Austin, TX**



**Young Investigator Forum**

August 9–10, 2023

**ANMS Advanced Motility Program for Fellows**

August 10, 2023

**Clinical Course**

New Approaches and Best Practices in Complex Patient Care

August 11, 2023

**Scientific Program**

Advancing patient care through cutting-edge research

August 12–13, 2023

begins August 11 • Welcome • Poster Session

**Young Investigator Forum**

**Wednesday, August 9, 2023**

6:00–9:00 pm

Dinner (*invitees only*)

**Thursday, August 10, 2023**

7:00 am–5:15 pm

Program

**ANMS Advanced Motility Program for Fellows**

**Thursday, August 10, 2023**

7:30 am–8:00 pm

Program

**Clinical Course • New Approaches and Best Practices in Complex Patient Care**

**Thursday, August 10, 2023**

4:00–6:00 pm

Registration

4:00–6:00 pm

Exhibitor Setup

**Friday, August 11, 2023**

7:00 am–5:30 pm

Registration

7:00–8:00 am

Breakfast • Visit Exhibits

**7:50–8:00 am**

**Welcome • Reena Chokshi, G. Nicholas Verne**

**8:00–9:15 am**

**Session 1: Challenges and Opportunities in Esophagology**

Moderators: Benjamin Elsbernd, Anh Nguyen

8:00 am

**How to better integrate manometry into the GERD evaluation**

*Reena Chokshi*

8:15 am

**FLIP vs. HREM in pediatrics**

*Eric Chiou*

## Friday, August 11, 2023 *continued*

8:30 am	<b>Globus: Functional, mechanical, or both?</b> <i>Kerry Dunbar</i>
8:45 am	<b>Compassionate NGM care: Addressing DEI in your practice</b> <i>John Pandolfino</i>
9:00 am	<b>Discussion</b>
<b>9:15–10:15 am</b>	<b>Session 2: All the Latest Guidelines</b> Moderators: <i>Rita Knotts, Stuart Spechler</i>
9:15 am	<b>How do I apply ACG gastroparesis guidelines to my practice?</b> <i>Braden Kuo</i>
9:30 am	<b>How do I apply AGA bloating guidelines to my practice?</b> <i>Baharak (Baha) Moshiree</i>
9:45 am	<b>How do I apply AGA IBS-C guidelines to my practice?</b> <i>Lin Chang</i>
10:00 am	<b>Discussion</b>
10:15–10:45 am	Break • <b>Visit Exhibits</b>
<b>10:45 am–12:00 pm</b>	<b>Session 3: All the Questions Patients Ask</b> Moderators: <i>Carlo Di Lorenzo, Neha Patel</i>
10:45 am	<b>Will my Mediterranean, plant-based, low FODMAP diet fix everything?</b> <i>Kate Scarlata</i>
11:00 am	<b>I still have abdominal pain; is this MALS, SMA or twisted bowel?</b> <i>Rina Sanghavi</i>
11:15 am	<b>Which probiotics should I give my kid? Targeting the microbiome in DGBIs</b> <i>Geoff Preidis</i>
11:30 am	<b>How does marijuana actually affect my gut?</b> <i>David Levinthal</i>
11:45 am	<b>Discussion</b>
<b>Parallel Lunches • Choose one • Visit Exhibits</b>	
12:00–1:00 pm	<b>Lunch</b> • no speaker • Visit Exhibits
12:00–1:00 pm	<b>Lunch Symposium • Visit Exhibits</b> <b>Speeding Up Gastroparesis: A journey through the past, present, and future of gastroparesis therapies</b> Moderator: <i>Linda Nguyen</i>
12:00 pm	<b>Time to redesign study design in gastroparesis?</b> <i>Brian Lacy</i>
12:15 pm	<b>Facts, fallacies, and the future of prokinetics (in gastroparesis)</b> <i>Linda Nguyen</i>
12:30 pm	<b>Gastric peroral endoscopic pyloromyotomy (G-POEM)</b> <i>Jennifer Christie</i>
12:45 pm	<b>Panel Discussion</b>

Program *continued*

**Friday, August 11, 2023** continued

1:10–2:10 pm	<b>ANMS Lifetime Achievement Award</b> Introduction: <i>G. Nicholas Verne</i> <b>Shanthi Srinivasan</b> <b>Functional Bowel Disorders</b> <b>Dissecting mechanisms from the gut to the brain: New insights and future directions</b>
<b>2:10 pm– 3:10 pm</b>	<b>Session 4: Colon and Anorectal Health &amp; Evaluation</b> Moderators: <i>Bruno Chumpitazi, Erin Toto</i>
2:10 pm	<b>Treating IBS in IBD</b> <i>Brooks Cash</i>
2:25 pm	<b>When is medical management not enough? A surgeon's perspectives</b> <i>Lily Cheng</i>
2:40 pm	<b>Anorectal evaluation in trauma survivors: Tips for clinicians</b> <i>Christina Jagielski</i>
2:55 pm	<b>Discussion</b>
3:10 pm	Break • Visit Exhibits
<b>3:40 – 5:00 pm</b>	<b>Session 5: Innovation in Neurogastroenterology &amp; Motility</b> Moderators: <i>Jason Baker, Ellen Stein</i>
3:40 pm	<b>New gizmos and gadgets in the motility lab</b> <i>Afrin Kamal</i>
3:55 pm	<b>Digital platforms in behavioral health</b> <i>Jessica Salwen-Deremer</i>
4:10 pm	<b>Artificial intelligence in motility</b> <i>Eric Shah</i>
4:25 pm	<b>Gravity and the gut: A hypothesis of irritable bowel syndrome</b> <i>Brennan Spiegel</i>
4:40 pm	<b>Discussion</b>
<b>5:00–6:00 pm</b>	<b>Women in Neurogastroenterology &amp; Motility Session</b> Moderator: <i>Lin Chang</i> Panel: <i>Baha Moshiree, Megan Riehl, Shanthi Srinivasan</i> The goal of the session is to create a network of women pursuing a career in Neurogastroenterology and Motility (NGM) and develop programs to overcome systemic barriers, capture new opportunities, and grow leadership skills. This year, we are focusing on Career Development. Dr. Fasiha Kanwal will discuss her professional journey and lessons learned in research, clinical work, and leadership positions. This talk will be followed with a panel discussion with women investigators and clinicians in NGM.
5:00 pm	<b>Mix &amp; Mingle</b>
5:10 pm	<b>Welcome • Lin Chang</b>
5:15 pm	<b>Being an academic physician (physician scientist)</b> <i>Fasiha Kanwal, Baylor College of Medicine</i>
5:45 pm	<b>Panel Discussion</b>
6:00 pm	<b>Adjourn</b>
<b>5:30 –7:30 pm</b>	<b>Welcome Reception • Poster Session •</b> ODD numbers presented, beginning at 6:00 pm

# Scientific Program • Advancing patient care through cutting-edge research

**Saturday, August 12, 2023**

<b>6:00–7:00 am</b>	<b>Yoga</b> • Palm Court, poolside, 7th floor • <i>Open to paid participants</i>	
7:00 am–5:00 pm	<b>Registration</b>	
7:00–8:00 am	Breakfast • <b>Visit Exhibits</b>	
<b>7:50–8:00 am</b>	<b>Welcome</b> • <i>Beverley Greenwood-Van Meerveld, G. Nicholas Verne</i>	
<b>8:00–9:00 am</b>	<b>Distinguished Investigator Award for Women in Neurogastroenterology</b> Introduction: <i>G. Nicholas Verne</i> • Moderator: <i>Linda Nguyen</i> <b>Beverley Greenwood-Van Meerveld</b> <b>Stress as a Risk Factor for Visceral Pain in Adulthood: What have we learned from animal models?</b>	
<b>9:00–10:30 am</b>	<b>Basic Advances Making an Impact in Understanding GI Pathophysiology</b> Moderators: <i>Kirsteen Browning, Brian Gulbransen</i>	
9:00 am	<b>Gut feelings: Mechanosensing in the gastrointestinal tract</b> <i>Arthur Beyder</i>	
9:20 am	<b>Enteric nervous system in neonatal necrotizing enterocolitis</b> <i>Shanthi Srinivasan</i>	
9:40 am	<b>Are we close to targeting enteric glia in gastrointestinal diseases and motility disorders?</b> <i>Fievos Christofi</i>	
10:00 am	<b>RET signaling persists in the adult intestine and stimulates motility by limiting PYY release from enteroendocrine cells</b> <i>A Shepherd, L Feinstein, S Sabel, D Rastelli, E Mezhibovsky, L Matthews, A Muppirala, A Robinson, MD Gershon, M Rao</i> Boston, MA; New York, NY. <i>Boston Children's Hospital</i> <b>Young Investigator Finalist</b> <span style="float: right;"><b>Abstract 1</b></span>	
10:15 am	<b>Single-cell RNA sequencing of murine nodose ganglia elaborates on lateral asymmetry of sensory vagal signaling</b> <i>K Hui, Q Li, L Liu, LA Goff, SC Hicks, S Kulkarni, TH Moran, PJ Pasricha</i> Baltimore, MD; Scottsdale, AZ; Boston, MA. <i>Johns Hopkins University</i> <span style="float: right;"><b>Abstract 2</b></span>	
10:30 am	Break • <b>Visit Exhibits</b>	
<b>11:00 am–12:30 pm</b>	<b>Parallel Session 1</b> <b>Bioelectric Medicine: Its role in neurogastroenterology</b> Moderators: <i>David Levinthal, Jennifer Wellington</i>	<b>Parallel Session 2</b> <b>Bugs in the Gut: How does the microbiome alter gut function?</b> Moderator: <i>Kristen Smith-Edwards, Sean Spencer</i>
11:00 am	<b>Ambulatory electrogastrography recording</b> <i>David Kunkel</i>	<b>Changes in the gut microbiome following SARS-CoV-2 and the development of post-infectious IBS</b> <i>Shreya Raja</i>
11:20 am	<b>Gastric electrical stimulation in children with severe nausea and vomiting</b> <i>Neetu Puri</i>	<b>Manipulating the microbiome to treat GI disease</b> <i>Eamonn Quigley</i>
11:40 am	<b>Stimulating the gut from near and far: Future directions for neuromodulation of gut function</b> <i>Jiande Chen</i>	<b>Bugs beyond the bowel: Neonatal bacterial infection and the developing microbiota–gut–brain axis</b> <i>Mélanie Gareau</i>

Program continued

**Saturday, August 12, 2023** continued

12:00 pm	<p><b>A long-term follow-up study of clinical outcomes and quality of life confirming the success of pyloroplasty and gastric electrical stimulation in patients with gastroparesis</b>  <i>R Elamrati, S Prakash, B Davis, JR Diaz, M Basha-shati, RW McCallum, I Sarosiek</i>                      El Paso, TX. <i>Paul L Foster School of Medicine</i>  <b>Abstract 3</b></p>	<p><b>FODMAPs modulate the proteolytic activity of the gut microbiota to alter colonic afferent nerve excitability</b>  <i>C Baker, A Bennett, M Guzman-Rodriguez, C Tuck, S Vanner, D Reed, A Lomax</i>                      Kingston, Ontario. <i>Queen's University</i> <b>Abstract 5</b></p>
12:15 pm	<p><b>A novel, non-invasive, 6-day wireless motility patch demonstrates unique myoelectrical patterns in patients with dyspepsia, gastroparesis and vomiting</b>  <i>BE Lacy, A Navalgund, L Axelrod, S Axelrod, J Accurso, DJ Cangemi</i>                      Jacksonville, FL; Mountain View, CA. <i>Mayo Clinic</i>  <b>Abstract 4</b></p>	<p><b>Fruit and vegetable enriched diet in mice humanized with irritable bowel syndrome microbiota increases proteolytic activity</b>  <i>A Edwinston, J Kong, L Till, M Breen-Lyles, L Yang, J Chen, G Farrugia, M Grover</i>                      Rochester, MN. <i>Mayo Clinic</i>  <b>ANMS Travel Awardee</b> <b>Abstract 6</b></p>
<b>12:30–2:00 pm</b>	<b>Poster Session</b> • EVEN numbers presented • <b>Lunch</b> • Visit Exhibits	
<b>2:00–3:30 pm</b> Parallel Sessions 3 & 4	<p><b>Parallel Session 3</b>  <b>Food as Friend and Foe? The complex connection between eating behaviors, diet restriction &amp; the gut–brain–microbiome axis</b>                      Moderators: <i>Meredith Craven, Laurie Keefer</i></p>	<p><b>Parallel Session 4</b>  <b>The Brain in the Gut: New frontiers in enteric nervous system biology</b>                      Moderators: <i>Julia Ganz, Purna Kashyap</i></p>
2:00 pm	<p><b>Shared pathophysiological mechanisms between gastrointestinal motility disorders and disordered eating: Chicken or the egg?</b>  <i>Miranda van Tilburg</i></p>	<p><b>Enteric neurogenesis and the immune system</b>  <i>Jaime Belkind-Gerson</i></p>
2:20 pm	<p><b>Psychological and quality of life considerations in the dietary management of functional gastrointestinal &amp; motility disorders</b>  <i>Sophie Abber</i></p>	<p><b>Sensing microbial signals through enteric and vagal neuronal pathways</b>  <i>Lihua Ye</i></p>
2:40 pm	<p><b>How discrimination gets under the skin to impact obesity: Perspectives from the brain and gut microbiome</b>  <i>Arpana Gupta</i></p>	<p><b>Applications of single-cell sequencing technology to the enteric nervous system</b>  <i>Richard Guyer</i></p>
3:00 pm	<p><b>Perinatal high fat diet exposure alters gabaergic signaling in the dorsal motor nucleus of the vagus</b>  <i>KE Carson, K Browning</i>                      Hershey, PA. <i>Pennsylvania State University College of Medicine</i>  <b>Young Investigator Finalist</b> <b>Abstract 7</b></p>	<p><b>Multomics approach identifies enteric neuron subtypes and molecular mechanisms underlying disorders of gut–brain interaction</b>  <i>A Majd, MN Richter, RM Samuel, A Cesiulis, Z Ghazizadeh, J Wang, F Fattahi</i>                      San Francisco, CA; Stanford, CA. <i>University of California San Francisco</i>  <b>Young Investigator Finalist</b> <b>Abstract 9</b></p>
3:15 pm	<p><b>Revealing the role of environmental enrichment in ameliorating symptoms of post-infectious IBS</b>  <i>AM Orock, E Mohammadi, A Johnson</i>                      Oklahoma City, OK. <i>Oklahoma University Health Science Center</i>  <b>Abstract 8</b></p>	<p><b>Reconstructions of sparsely labeled murine intrinsic primary afferent neurons in optically cleared full thickness jejunum and colon</b>  <i>AL Harb, ASO Nino, MKH Foysal, A Beyder, DR Linden</i>                      Rochester, MN. <i>Mayo Clinic</i>  <b>ANMS Travel Awardee</b> <b>Abstract 10</b></p>
3:30–4:00 pm	<b>Break</b> • Visit Exhibits	



**Saturday, August 12, 2023** continued

<b>4:00–5:45 pm</b> <b>Parallel Sessions 5 &amp; 6</b>	<b>Parallel Session 5</b> <b>How Does the Vagus Link Brain–Gut Disorders and Trauma?</b> Moderators: <i>Katja Karrento, Jacek Kolacz</i>	<b>4:00–5:45 pm</b> <b>Parallel Sessions 5 &amp; 6</b>	<b>Parallel Session 6</b> <b>Immune and Microbiotal Dysregulation in DGBI and GI Dysmotility</b> Moderators: <i>Greg Sayuk, Amy Shepherd</i>
4:00 pm	<b>The power of the vagus nerve in controlling stress and disease: Are we ready for the paradigm shift?</b> <i>Peter Staats</i>	4:00 pm	<b>Gastroparesis: Idiopathic or immunopathic?</b> <i>William Hasler</i>
4:30 pm	<b>Vagus neurostimulation and cholinergic signaling in controlling inflammation and metabolism</b> <i>Valentin A. Pavlov</i>	4:25 pm	<b>Functional dyspepsia and foregut eosinophilia</b> <i>Maria Vazquez Roque</i>
5:00 pm	<b>Brainstem response to auricular vagal nerve stimulation</b> <i>Roberta Sclocco</i>	4:50 pm	<b>Contribution of luminal mediators to pain in DGBI</b> <i>Alan Lomax</i>
5:30 pm	<b>Panel Discussion</b>	<b>Abstract 11</b> • withdrawn	
		5:15 pm	<b>Youth with abdominal pain predominant disorders of gut–brain interaction have more sleep disturbances than healthy peers: A school-based study</b> <i>N Santucci, CAV Benitez, C King, K Byars, T Dye, M Saps</i> Cincinnati, OH; Cali, Valle del Cauca; Miami, FL. <i>Cincinnati Children's Hospital Medical Center</i> <b>Abstract 12</b>
<b>6:00–7:30 pm</b> <b>Parallel Theme Symposia</b> light refreshments	<b>Parallel Theme Symposium</b> <b>Hands-On Neurogastroenterology &amp; Motility Procedures</b> Adult • Pediatric • non-CME Moderators: <i>Jason Baker, Reena Chokshi</i>	<b>6:00–7:30 pm</b> <b>Parallel Theme Symposia</b> light refreshments	<b>Parallel Theme Symposium</b> <b>Colon–Bladder Cross-Talk in Chronic Pain Disorders: What is the latest?</b> Moderators: <i>Arthur Beyder, Beverley Greenwood-Van Meerveld</i>
<ul style="list-style-type: none"> <li>An interactive, hands-on session with experts who will demonstrate and interpret difficult cases, recording annotations, standard protocols, and equipment functionality.</li> <li>Vendors will display anorectal and esophageal manometry and pH impedance. Each vendor will pose 3 to 5 equipment-related questions.</li> <li>A raffle will be held and a prize will be awarded to the entry with the highest number of correct answers.</li> </ul>		6:00 pm	<b>Clinical manifestations of colon–bladder cross-talk</b> <i>Greg Sayuk</i>
		6:25 pm	<b>GU and GI co-morbidities: Neural circuits regulating visceral functions</b> <i>Anna Malykhina</i>
		6:50 pm	<b>Spinal neuron–glia–immune interaction in cross organ sensitization</b> <i>Liya Y. Qiao</i>
		7:10–7:30 pm	<b>Panel Discussion</b>

**Sunday, August 13, 2023**

7:00–10:00 am	<b>Registration</b>
7:00–8:00 am	Breakfast • <b>Visit Exhibits</b>
<b>8:00–8:15 am</b>	<b>W. Jerry Dodds, MD and Sushil K. Sarna, PhD Lectureship</b> Introduction: <i>Beverley Greenwood-Van Meerveld</i> <b>Gary Mawe</b> <b>Serotonin: Lately it occurred to me, what a long, strange trip it's been</b>

**Sunday, August 13, 2023** continued

<b>8:15–10:00 am</b>	<b>Plenary Abstract Session</b> Moderators: <i>Leila Neshatian, Maria Vazquez</i>
8:15 am	<b>Uncovering impaired nigro-vagal modulation of the proximal colon in a rat model of environmental Parkinson's Disease</b> <i>T Xing, G Nanni, CR Burkholder, KN Browning, RA Travagli</i> Hershey, PA; Newport, NC. <i>Penn State College of Medicine</i> <b>ANMS Travel Awardee</b> <span style="float: right;"><b>Abstract 13</b></span>
8:30 am	<b>Effects and mechanisms of transcutaneous electrical acustimulation for preventing acute radiation proctitis in patients with cervical cancer</b> <i>F Li, T Zhou, Y Wang, Y Xu, L Lin, JD Chen</i> Ann Arbor, MI; Ningbo, Zhejiang; Nanjing, Jiangsu. People's Hospital affiliated with Ningbo University; The First Affiliated Hospital with Nanjing Medical University; <i>University of Michigan</i> <b>Young Investigator Finalist</b> <span style="float: right;"><b>Abstract 14</b></span>
8:45 am	<b>Optogenetic stimulation of enteric cholinergic neurons: immunomodulatory role in colitis</b> <i>AA Rahman, RG Stavelly, L Ott, W Pan, K Oishi, C Han, T Ohkura, R Hotta, AM Goldstein</i> Boston, MA, Mass General Hospital; <i>Harvard Medical School</i> <span style="float: right;"><b>Abstract 15</b></span>
9:00 am	<b>Recognition and diagnosis of rumination syndrome is improving with time</b> <i>M Jia, PL Lu, J Sabella, NB Puri, D Yang, K Vaz, D Yacob, CD Lorenzo, AKV Diest</i> Columbus, OH. Nationwide Children's Hospital; <i>Ohio State University College of Medicine</i> <b>ANMS Travel Awardee</b> <span style="float: right;"><b>Abstract 16</b></span>
9:15 am	<b>Early life adversity disrupts sexual dimorphism of enteric glial genes and functions</b> <i>J Gonzales, C Dharshika, W Morales-Soto, J McClain, BD Gulbransen</i> East Lansing, MI. <i>Michigan State University</i> <b>Young Investigator Finalist</b> <span style="float: right;"><b>Abstract 17</b></span>
9:30 am	<b>Ineffective esophageal motility: Characterization and outcomes across pediatric neurogastroenterology and motility centers in the US</b> <i>TA Davis, BD Rogers, A Llanos-Chea, A Krasaelap, C Desai, M Jayaraman, M Saps, CP Gyawali, D Patel</i> St Louis, MO; Miami, FL; Kansas City, MO; St. Louis, MO. University of Miami; Children's Mercy KC; Saint Louis University School of Medicine, <i>Washington University School of Medicine</i> <b>Young Investigator Finalist</b> <span style="float: right;"><b>Abstract 18</b></span>
9:45 am	<b>Small bowel motility assessment using magnetic resonance enterography in children with irritable bowel syndrome and controls</b> <i>AJ Benitez, SSB Venkatakrishna, K Guevara, M Kidd; A Menys, H Mousa, RO Heuckeroth, SA Anupindi, SD Serai</i> Philadelphia, PA; Cape Town, Western Cape; London, Plymouth., University of Stellenbosch; University College London; <i>Children's Hospital of Philadelphia</i> <b>Young Investigator Finalist</b> <span style="float: right;"><b>Abstract 19</b></span>
10:00–10:30 am	Break • Visit Exhibits
<b>10:30 am–12:00 pm</b>	<b>Distinguished Lectures</b> Moderators: <i>Adil Bharucha, Jose Garza</i>
10:30 am	<b>Vagal control of gastric functions: Diet, development, and is it all our mother's fault?</b> <i>Kirsteen Browning</i>
11:00 am	<b>Disorders of gut–brain interaction: A journey across the lifespan</b> <i>Miguel Saps</i>
11:30 am	<b>Curing fecal incontinence</b> <i>Satish Rao</i>
12:00 pm	<b>Adjourn</b>

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## **Appetite Regulation, Satiety, Obesity, and Nutrition**

### **Poster No.**

- 1 Meal-eating characteristics among patients with symptoms of gastroparesis; relationships to delays in gastric emptying**  
*A Barrett, KP Johnson, ME Halabi, HP Parkman*  
Philadelphia, PA. *Temple University School of Medicine*  
**Abstract 20**
- 2 Stool short chain fatty acids promote weight loss in obese patients with increased risk for colorectal cancer**  
*C Enunwa, J Christie, D Flanders, BL Elbert II, TR Ziegler, H Fowler, B Cousineau, BJ Rolls, B Methé, S O'Keefe, TJ Hartman*  
Atlanta, GA; Pittsburgh, PA; University Park, PA. Department of Medicine, Division of Digestive Diseases, Emory University School of Medicine; Department of Biostatistics and Bioinformatics, Department of Epidemiology, Rollins School of Public Health, Emory University; Department of Medicine, Division of Gastroenterology, Hepatology, and Nutrition, University of Pittsburgh; Department of Medicine, Division of Endocrinology, Metabolism and Lipids, Emory University School of Medicine; Nutrition and Health Sciences, Rollins School of Public Health, Emory University; Department of Nutritional Sciences, The Pennsylvania State University; Pulmonary, Allergy and Critical Care Medicine, Center for the Microbiome and Medicine, University of Pittsburgh; Department of Medicine, Division of Gastroenterology, Hepatology, and Nutrition, University of Pittsburgh; Department of Epidemiology, Rollins School of Public Health and Winship Cancer Institute, Emory University, *Emory University School of Medicine*  
**Abstract 21**
- 3 Using gut transit times to increase weight loss in obese patients at increased risk for colorectal cancer**  
*C Enunwa, J Christie, D Flanders, BL Eberhart II, TR Ziegler, H Fowler, B Cousineau, BJ Rolls, B Methé, SJD O'Keefe, TJ Hartman*  
Atlanta, GA; Pittsburgh, PA; University Park, PA. Department of Medicine, Division of Digestive Diseases, Emory University School of Medicine; Department of Biostatistics and Bioinformatics, Department of Epidemiology, Rollins School of Public Health, Emory University; Department of Medicine, Division of Gastroenterology, Hepatology, and Nutrition, University of Pittsburgh; Department of Medicine, Division of Endocrinology, Metabolism and Lipids, Emory University School of Medicine; Nutrition and Health Sciences, Rollins School of Public Health, Emory University; Department of Nutritional Sciences, The Pennsylvania State University; Pulmonary, Allergy and Critical Care Medicine, Center for the Microbiome and Medicine,

### **Poster No.**

- University of Pittsburgh; Department of Medicine, Division of Gastroenterology, Hepatology, and Nutrition, University of Pittsburgh; Department of Epidemiology, Rollins School of Public Health and Winship Cancer Institute, Emory University, *Emory University School of Medicine*  
**Abstract 22**
- 4 Vagal sensory neurons and gut microbiota mediate the satiating effects of inulin fiber in rats**  
*A Singh, S Patra, L Wallace, GD Lartigue, K Sharkey, P Chelikani*  
Philadelphia, PA; Amarillo, TX; Calgary, Alberta., Texas Tech University; University of Calgary; *Monell Chemical Senses Center, University of Pennsylvania*  
**ANMS Travel Awardee**  
**Abstract 23**

## **Biliary, Pancreatic and Small Intestinal Physiology, Pathophysiology, and Clinical Disorders**

- 5 Relationships of brain fog to SIBO, IMO, gastroparesis, and irritable bowel syndrome; use of a brain fog questionnaire**  
*ME Halabi, R Arwani, Z Malik, S Rao, H Parkman*  
Philadelphia, PA; Georgia, GA., Medical College of Georgia, Augusta University; *Temple University*  
**Abstract 24**
- 6 6 hour cecal entry on scintigraphy to measure small bowel transit: indications, findings, relation of delayed gastric emptying to SB delays**  
*JN Winters, M Yang, WL Hasler*  
Scottsdale, AZ. *Mayo Clinic Arizona*  
**Abstract 25**
- 7 Protective role of ursodeoxycholic acid (UDCA) on gallbladder smooth muscle in gallstone disease**  
*B Lavoie, MJ Kwasnik, OB Balemba, GM Mawe*  
Burlington, VT; Moscow, ID. *University of Vermont*  
**Abstract 26**
- 8 Plecanatide simultaneously improves multiple symptoms of irritable bowel syndrome with constipation (IBS-C): A unique composite endpoint analysis of randomized, phase 3 trials**  
*G Sayuk, AP Laitman, C Allen, PS Schoenfeld*  
St. Louis, MO; Bridgewater, NJ; Detroit, MI; Salix Pharmaceuticals; John D. Dingell Veterans Affairs Medical Center, *St. Louis Veterans Affairs Medical Center*  
**Abstract 27**
- 9 Severe small bowel postprandial response in functional dyspepsia is associated with similar symptoms as gastroparesis**  
*B Surjanhata, IG López, B Kuo*  
Boston, MA; Barcelona, Catalonia, University of Vic Facultat de Medicina; *Massachusetts General Hospital*  
**Abstract 28**



# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Brain–Gut Axis in Health and Disease

### Poster No.

- 10 Abnormal temporal summation associated with primary somatosensory functional connectivity changes in response to pain challenge in cyclic vomiting syndrome**  
*SA Bolender, R Staley, W Bulhan, R Sclocco, R Garcia, R Barbieri, V Napadow, B Kuo*  
Boston, MA; Charlestown, MA. *Massachusetts General Hospital* **Abstract 29**
- 11 GI consultation is under-utilized in Parkinson's Disease and significantly affects diagnosis and management of symptoms**  
*JJ Chang, S Gadi, A Videnovic, B Kuo, TS Pasricha,*  
Boston, MA; Durham, NC. *Duke University Health System; Massachusetts General Brigham. Tufts University School of Medicine* **Abstract 30**
- 12 Ex-vivo electrical stimulation of the vagus nerve induces responses in enteric glia**  
*M Hanscom, BD Gulbransen*  
East Lansing, MI. *Michigan State University* **Abstract 31**
- 13 Quantifying activity of the extrinsic autonomic nervous system to assess autonomic dysfunction in chronic gastrointestinal motility disorders**  
*JD Huizinga, A Hussain, L Liu, M Alam, X Chen, M Pan, J Chen*  
Hamilton, Ontario. *McMaster University* **Abstract 32**
- 15 Ntx-1175, a novel charged sodium channel blocker, is effective in reducing stress and post-inflammatory induced visceral hypersensitivity in vivo**  
*E Noor-Mohammadi, CO Ligon, B Greenwood-Van Meerveld, N Zheng, BM Cole, JL Ellis, AC Johnson*  
Oklahoma City, OK; Waltham, MA. *Nocion Therapeutics; University of Oklahoma Health Sciences Center* **Abstract 33**
- 16 Irritable bowel syndrome therapy and cost in uninsured**  
*J Song, T Samardzic, XJ Wang*  
New Haven, CT; Rochester, MN. *Mayo Clinic; Yale New Haven Hospital* **Abstract 34**
- 17 Study on the mechanism of acupuncture in the PAG in IBS-D patients based on resting-state fMRI**  
*T Zhao, J Sun, L Pei*  
Ann Arbor, MI; Nanjing, Jiangsu, China. *Nanjing University of Chinese Medicine* **Abstract 35**

## Colon and Anorectum: Physiology, Pathophysiology, and Clinical Disorders

- 18 Digital rectal examinations findings and symptoms profiles in patients with levator ani syndrome**  
*A Aziz, Y Yan, B Inal, B Marsh, A Tyra, E Askin, A Sharma, S Rao*  
Augusta, GA. *Augusta University* **Abstract 36**

### Poster No.

- 19 Clinical manifestations of gastrointestinal amyloidosis. A case series**  
*J Dvorak, W Ahrens, J Wellington, B Moshiree*  
Charlotte, NC. *Atrium Health* **Abstract 37**
- 20 The impact of pelvic measurements by DXA scan on fecal incontinence: NHANES 2005-2006 analysis**  
*B Hiramoto, M Muftah, R Flanagan, E Shah, WW Chan*  
Boston, MA; Lebanon, NH, *Dartmouth-Hitchcock Medical Center; Brigham and Women's Hospital* **Abstract 38**
- 21 Waist circumference–height ratio as a modifiable risk factor for fecal incontinence: NHANES 2005-2010 analysis**  
*B Hiramoto, R Flanagan, M Muftah, E Shah, WW Chan*  
Boston, MA; Lebanon, NH. *Dartmouth-Hitchcock Medical Center; Brigham and Women's Hospital* **Abstract 39**
- 22 Assessment of diarrhea in patients with irritable bowel syndrome with constipation (IBS-C) treated with tenapanor: a pooled safety analysis of the phase 3 studies**  
*K Staller, S Wolgamott, S Zhao, Y Yang, S Edelstein, DP Rosenbaum, A Lembo*  
Boston, MA; Bloomfield Township, MI; Waltham, MA. *Scope Medical Group; Ardelyx, Inc.; Beth Israel Deaconess Medical Center and Harvard Medical School; Massachusetts General Hospital* **Abstract 40**
- 23 The longitudinal anal high-pressure zone: is this a useful barrier in fecal incontinence?**  
*B Inal, Y Yan, R Wang, A Aziz, B Marsh, A Tyra, M Afzali, A Sharma, S Rao*  
Augusta, GA. *Augusta University*  
**Young Investigator Finalist** **Abstract 41**
- 24 Parasympathetic and sympathetic dysfunction in patients with chronic constipation**  
*L Liu, X Chen, M Pan, A Hussain, M Alam, JD Huizinga, J Chen*  
Hamilton, Ontario. *McMaster University* **Abstract 42**
- 25 A novel non-invasive 6-day wireless patch system (WPS) reveals reduced colonic activity in patients with predominant “unsatisfactory” bowel movements**  
*BE Lacy, A Navalgund, L Axelrod, S Axelrod, J Accurso, D Cangemi*  
Jacksonville, FL; Mountain View, CA. *Mayo Clinic Jacksonville* **Abstract 43**
- 26 Comparison of symptoms and quality of life (QoL) in community women and clinic patients with fecal incontinence (FI)**  
*N Oblizajek, KR Bailey, AE Bharucha*  
Rochester, MN. *Mayo Clinic* **Abstract 44**

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 27 Rectal sensory differentiation pattern: comparing healthy subjects and patients with and without fecal urgency**  
*T Patcharatrakul, S Samutrangsi, S Gonlachanvit*  
Bangkok, Krung Thep Mahanakhon (Bangkok).  
*Chulalongkorn University* **Abstract 45**
- 28 Beneficial effects of vibrating capsule on colonic microbiome in Parkinson's Disease**  
*S Rao, D Brenner, A Lembo, WD Chey, B Curtin, EM Quigley*  
Augusta, GA; Chicago, IL; Boston, MA; Ann Arbor, MI; Baltimore, MD; Houston, TX. *Augusta University Medical Center* **Abstract 46**
- 29 Applying deep learning approach to medical imaging for the diagnosis of dyssynergic defecation (DD)**  
*P Rattanachaisit, S Sangnark, T Patcharatrakul, S Gonlachanvit, P Vateekul*  
Bangkok, Krung Thep Mahanakhon (Bangkok).  
*Chulalongkorn University* **Abstract 47**
- 30 Utilizing a machine learning approach on a symptoms questionnaire for diagnosing dyssynergic defecation (DD)**  
*P Rattanachaisit, S Sangnark, T Patcharatrakul, S Gonlachanvit, P Vateekul*  
Bangkok, Krung Thep Mahanakhon (Bangkok).  
*Chulalongkorn University* **Abstract 48**
- 31 Air passageways through the anal canal in patients with fecal incontinence and low anterior resection syndrome**  
*Y Wang, K Futaba, H Gregersen*  
San Diego, CA; Hong Kong, Hong Kong. Chinese University of Hong Kong; *California Medical Innovations Institute* **Abstract 49**
- 32 Functional endoscopy for visualization of the anorectal junction**  
*Y Wang, D Sun, H Gregersen*  
San Diego, CA; Chongqing, China, Chongqing University; *California Medical Innovations Institute* **Abstract 50**
- 33 Velocity of fecal expulsion in FI patients compared to normal subjects**  
*Y Wang, F Field, S Eisenstein, 1S Kassab, H Gregersen*  
San Diego, CA. 3DT Holdings, LLC; University of California, San Diego; *California Medical Innovations Institute* **Abstract 51**
- 34 Use of digital rectal exam compared with high-resolution anorectal manometry in the diagnosis of dyssynergic defecation in pediatrics, preliminary results**  
*ET Monjaraz, CZ Pérez, FZ Mondragón, EM Barrios, KI Arellano, JFC León, RC Bustamante, JR Mayans*  
Ciudad de México, Distrito Federal. *Instituto Nacional de Pediatría* **Abstract 52**

## Diversity, Equity, Inclusion Research

### Poster No.

- 35 An education intervention to enhance health care professional understanding of digestiven and disordered gut-brain interaction needs in sexual and gender minority communities**  
*J Clukey, A Goldowsky, S Paul, C Velez*  
Boston, MA; Chicago, IL. Boston Medical Center; University of Chicago Medicine, *Massachusetts General Hospital* **Abstract 53**
- Enteric Nervous System Neurobiology and Circuitry: Neurons, Glia, Smooth Muscle Cell, ICC**
- 36 Microplastics and enteric neurons- implication in enteric neurodegeneration**  
*A Balasubramaniam, S Malipeddi, Y Liu, SM Mwangi, S Srinivasan,*  
Atlanta, GA. *Emory University* **Abstract 54**
- 37 Non-rigid registration for gastrointestinal calcium imaging supported by synthetic data generation**  
*BB Barth, ER Redington, NA Pelot, WM Grill*  
Durham, NC. *Duke University*  
**ANMS Travel Awardee** **Abstract 55**
- 38 C1qa muscularis macrophages regulate gastrointestinal motility through close association with enteric neurons**  
*M D'Ambrosio, M Eldesouki, S Dahal, A Mercado-Perez, A Beyder, G Farrugia, G Cipriani*  
Rochester, MN. *Mayo Clinic* **Abstract 56**
- 39 Diversity of mouse jejunum smooth muscle cell mechanosensitivity**  
*V Joshi, SI Niloy, PR Strege, K Knutson, A Wegner, O Friedrich, G Farrugia, A Beyder*  
Rochester, MN; Erlangen, Bayern. Institute of Medical Biotechnology, Friedrich-Alexander-University Erlangen-Nürnberg. *Mayo Clinic* **Abstract 57**
- 40 Aging-associated tissue stiffness regulates gastrointestinal smooth muscle cell function through Piezo1**  
*V Joshi, K Knutson, E Laible, A Wegner, DR Linden, G Farrugia, A Beyder*  
Rochester, MN. *Mayo Clinic* **Abstract 58**
- 41 Intestinal enteroendocrine cell optogenetic stimulation drives epithelial secretion**  
*K Knutson, AS Ortegon, X Yu, H Kacmaz, AJ Treichel, M Grover, G Farrugia, DR Linden, A Beyder*  
Rochester, MN; *Mayo Clinic* **Abstract 59**

Poster Session, continued

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 42 Gastrointestinal disease-related single-nucleotide variants (SNVs) colocalize with CIS-regulatory elements (CRES) of the electrical slow wave (SW)-associated gene SLC4A4 in a human model of pacemaker interstitial cells of cajal (ICC)**  
*M Shahnaj, A Bhagwate, F Bonfiglio, J Lee, Y Hayashi, NR Wertish, PR Strege, Y Zhang, DR Linden, G Cipriani, LC Hsi, MF Romero, M D'Amato, G Farrugia, T Ordog Rochester, MN; Naples, Campania; Derio, Pais Vasco (Basque Country). University of Naples Federico II; 3CIC bioGUNE–Basque Research and Technology Alliance. Mayo Clinic* **Abstract 60**
- 43 Mir-10b-5p beneficially regulates gut resident macrophage polarization in mice with diabetic gut dysmotility**  
*R Singh, S Ha, H Zogg, H Park, S Debnath, BG Jorgensen, G Baek, H Cho, S Ro Reno, NV. University of Nevada, Reno* **Young Investigator Finalist** **Abstract 61**
- 44 Network mechanisms that produce rhythmic motility in proximal colon**  
*K Smith-Edwards Rochester, MN. Mayo Clinic* **Abstract 62**
- 45 Enteric nervous system maturity improves sip syncytium development in human intestinal organoids**  
*JE Lewis, AC Dorn, DJ Sequeira, PS Chakraborty, AL Speer Houston, TX. UTHHealth Houston* **Abstract 63**
- 46 Components of the endocannabinoid system are present in the fetal and early postnatal gastrointestinal tract**  
*M Sunil, A Pugazhendhi, K Uthayakumaran, J Chhoker, A MacAndrew, T Podinic, SK Raha, EM Ratcliffe Hamilton, Ontario. McMaster University* **Abstract 64**
- 47 Modulation of enteric glial s100b following gut inflammation and effects on neuronal and glial activity**  
*B Thomasi, MM Ahmadzai, B Gulbransen East Lansing, MI; Iowa, IA. University of Iowa; Michigan State University* **ANMS Travel Awardee** **Abstract 65**
- 48 Diet-driven dysbiosis decreases lifespan in Hirschsprung disease mice**  
*N Tjaden, M Lou, M Liou, J Eisenberg, S Schneider, N Lassoued, L Litichevskiy, G Yan, S Anderson, C Thaiss, N Pilon, R Heuckeroth Philadelphia, PA; Montréal, Québec. Perelman School of Medicine at University of Pennsylvania; Université du Québec à Montréal; Children's Hospital of Philadelphia* **Young Investigator Finalist** **Abstract 66**

## Poster No.

- 49 Vascular endothelium in the irritable bowel syndrome**  
*ZT Verne, Q Zhou, BB Zhang, GN Verne College Station, TX; Memphis, TN. Texas A&M; University of Tennessee Health Science Center* **Abstract 67**
- 50 Smooth muscle phenotypic class switching in response to mechanical stress: a story told by RNA seq**  
*S Wolfson, S Hashmi, K Beigel, S Anderson, M Weiner, SC Heo, R Heuckeroth Philadelphia, PA. University of Pennsylvania. The Children's Hospital of Philadelphia* **Young Investigator Finalist** **Abstract 68**
- Epidemiology, Genetics, Cross-Cultural and Psychosocial Factors in Functional GI Disorders in Adults**
- 51 Is severity of fecal incontinence associated with psychosocial distress?**  
*Y Yan, B Inal, A Aziz, D Ayyala, A Samad, K Han, J Clukey, B Marsh, T Amanda A Sharma, B Kuo, K Staller, S Rao Boston, MA, Augusta, GA. Augusta University* **Abstract 69**
- 52 Bloating and abdominal distension in subjects with disorders of gut–brain interaction (DGBI) on the US-Mexico border: What is the role of pictograms?**  
*M Bashashati, MJ Schmulson, I Sarosiek, SE Elhanafi, MJ Zuckerman El Paso, TX; Mexico City, Mexico. Universidad Nacional Autónoma de México; Texas Tech El Paso* **Abstract 70**
- 53 Incident DGBIs in healthcare workers during the COVID-19 pandemic**  
*MP Pathipati, J Sethurathnam, K Staller Boston, MA. Massachusetts General Hospital* **Abstract 71**
- 54 Characterization of gastrointestinal disorders within a dyspareunia patient population**  
*C Silvernale, G Harris, K Staller Philadelphia, PA; Boston, MA. Massachusetts General Hospital; Sidney Kimmel Medical College* **Abstract 72**
- 55 The role of Tenascin-X in idiopathic gastroparesis: WGS analysis**  
*SP Smieszek, JL Carlin, D Xiao, G Birznieks, MH Polymeropoulos Bethesda, MD. Vanda Pharmaceuticals* **Abstract 73**
- 56 Persistent nausea and vomiting in gastroparesis (PNVGP): Real-world evidence from a large US database**  
*HP Parkman, H Ferdosi, YJ Chen, Z Huang, N Stylopoulos, J Williams, J Tack Philadelphia, PA; Cambridge, MA; Leuven, Brabant Wallon, Takeda Development Center Americas, Inc.; KU Leuven; Temple University School of Medicine* **Abstract 74**

Poster Session, continued

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 57 Machine learning finds social media posts of IBS patients characterized by diet and negative mood**  
*N Derian, J Massell, A Ramalingam, KJV Kempen, MV Tilburg*  
Huntington, VA; Basel, Basel-Stadt; Washington, DC; Fayetteville, NC. University of Basel; Georgetown University; Cape Fear Valley Health; *Marshall University* **Abstract 75**
- 58 Patients with irritable bowel syndrome are reluctant to post on social media**  
*N Derian, J Massell, A Ramalingam, T Ajele, E Bills, MV Tilburg*  
Huntington, VA; Basel, Basel-Stadt; Fayetteville, NC., University of Basel; Cape Fear Valley Health; *Marshall University* **Abstract 76**

## Esophageal Physiology, Pathophysiology, and Clinical Disorders

- 59 Characterization of two distinct calcium signaling behaviors in interstitial cells of Cajal within the gastroesophageal junction**  
*CA Cobine, KI Hannigan, EPN Bhraonain, KM Sanders*  
Reno, NV. *University of Nevada, Reno School of Medicine* **Abstract 77**
- 60 Implications of esophageal function in patients with connective tissue disorders undergoing lung transplantation**  
*J Daboul, MQ Chan, KA Perry, JP Rosenheck, D Nunley, G Balasubramanian*  
Columbus, OH. Division of Gastroenterology, Hepatology, and Nutrition, The Ohio State University Wexner Medical Center; Division of General and Gastrointestinal Surgery, The Ohio State University Wexner Medical Center; Division of Pulmonary, Critical Care & Sleep Medicine, The Ohio State University Wexner Medical Center; *The Ohio State University Wexner Medical Center* **Abstract 78**
- 61 A case series of high resolution pharyngeal manometry: Impact of lung transplantation on deglutitive oropharyngeal dynamics**  
*J Daboul, MQ Chan, KA Perry, JP Rosenheck, D Nunley, G Balasubramanian*  
Columbus, OH. Division of Gastroenterology, Hepatology, and Nutrition, The Ohio State University Wexner Medical Center; Division of General and Gastrointestinal Surgery, The Ohio State University Wexner Medical Center; Division of Pulmonary, Critical Care & Sleep Medicine, The Ohio State University Wexner Medical Center; *The Ohio State University Wexner Medical Center* **Abstract 79**

## Poster No.

- 62 A comparative analysis of esophageal motility disorders between pediatric and adult populations at a tertiary care center**  
*TA Davis, D Patel, BD Rogers, CP Gyawali*  
St Louis, MO. *Washington University School of Medicine* **Abstract 80**
- 63 Relationship of upright and supine values for integrated relaxation pressure (IRP) during high resolution esophageal manometry**  
*ME Halabi, YD Kim, Z Malik, M Smith, H Parkman*  
Philadelphia, PA; New York City, NY., Mount Sinai Hospitals. *Temple University* **Abstract 81**
- 64 Dysphagia in non-obstructive Schatzki's ring is associated with ongoing acid reflux rather than structural or manometric changes**  
*A Fein, H Qureshi, N Saeed, A Sobieh, B Ismail*  
Lexington, KY. *University of Kentucky* **Abstract 82**
- 65 Discordant findings on esophagogastric junction opening between impedance planimetry and high-resolution manometry are more common among patients with elevated body-mass index**  
*M Muftah, R Flanagan, B Hiramoto, J Cai, W Chan*  
Boston, MA. *Brigham and Women's Hospital* **Abstract 83**
- 66 Normal esophageal contractile response on impedance-planimetry is highly predictive of normal esophageal transit on timed barium esophagram and bolus clearance on impedance-manometry**  
*M Muftah, R Flanagan, B Hiramoto, J Cai, W Chan*  
Boston, MA. *Brigham and Women's Hospital* **Abstract 84**
- 67 Contractile response on impedance-planimetry and multiple rapid swallow response on high-resolution manometry predict bolus transit and esophageal emptying on timed barium esophagram**  
*M Muftah, R Flanagan, B Hiramoto, J Cai, W Chan*  
Boston, MA. *Brigham and Women's Hospital* **Abstract 85**
- 68 Guided elimination diet and food reintroduction by esophageal allergy testing pilot study (EAT pilot study)**  
*B Freiberg, M Guerra, MH Nathanson, FI Hsu, M Sanchez*  
Cleveland, OH; New Haven, CT; Fairfield, CT. Yale University School of Medicine; Hartford HealthCare; *Cleveland Clinic Foundation* **Abstract 86**
- 69 Older age is associated with clinically relevant esophagogastric junction outflow obstruction and greater integrated relaxation pressures**  
*B Glickman, N Bar, A Trikola, C Vélez, K Staller, B Kuo*  
Burlington, VT. *Massachusetts General Hospital*  
**Peter J. Kahrilas Esophageal Trainee Travel Awardee**  
**Abstract 87**

Poster Session, continued



# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 70 Compartmentalized pressurization is a novel prognostic factor in hypercontractile esophagus**  
*AR Leopold, P McCarthy, A Nair, G Xie*  
Baltimore, MD. *University of Maryland Medical Center*  
**Young Investigator Finalist Abstract 88**
- 71 Esophageal scintigraphy for diagnosis of functional dysphagia**  
*S Pomenti, SS Parhizgar, A Mintz, DA Katzka*  
New York, NY. *New York–Presbyterian Columbia University*  
**Abstract 89**
- 72 Manometric changes and factors associated with post-treatment peristalsis return in achalasia**  
*P Poonyam, S Jangsirikul, T Patcharatrakul, R Pittayanon, P Mekaroonkamol, S Gonlachanvit*  
Pathumwan, Krung Thep Mahanakhon (Bangkok).  
*Chulalongkorn University Abstract 90*
- 73 Reflux characteristics in older adults with gastroesophageal reflux disease (GERD) between recumbent positions in daytime and nighttime**  
*P Rattanachaisit, Kantimon, T Patcharatrakul, S Gonlachanvit,*  
Bangkok, Krung Thep Mahanakhon (Bangkok).  
*Chulalongkorn University Abstract 91*
- 74 Inflammatory bowel disease is associated with an increased risk of developing gastroesophageal reflux disease and its complications**  
*X Wang, Z Wright, G Song*  
Huntington, VA; Cleveland, OH. *Metrohealth Medical Center, Case Western Reserve University. Marshall University School of Medicine Abstract 92*
- 75 The relationship between gastroesophageal reflux disease and chronic kidney disease**  
*X Wang, G Song*  
Huntington, VA; Cleveland, OH., *MetroHealth Medical Center, Case Western Reserve University. Marshall University School of Medicine Abstract 93*

## Gastric Physiology, Pathophysiology, and Clinical Disorders

- 76 Reversed pre-diabetes, pre-diabetes, and type 2 diabetes patients' stool filtrates decrease gastrointestinal propulsive motility, and muscle contractility, ex vivo**  
*OB Balemba, A Aunjum, C Bowen, L Durk, M Antush, G Glivar, R Geidl, CA Vella*  
Moscow, ID. *University of Idaho Abstract 94*

## Poster No.

- 77 The predictors of outcomes of gastric electrical stimulation and surgical pyloroplasty in refractory gastroparesis: gastric emptying scintigraphy, pyloric endoflip or interstitial cells of cajal?**  
*M Bashashati, I Sarosiek, BR Davis, O Padilla, B Lee, A Ortega, S Elhanafi, RW McCallum*  
El Paso, TX. *Texas Tech El Paso Abstract 95*
- 78 Pooled efficacy analysis of tradipitant in idiopathic and diabetic gastroparesis study VP-VLY-686-3301 and VP-VLY-686-2301**  
*JL Carlin, C Polymeropoulos, MA Fisher, PD Moszczynski, GJ Johannsen, C Xiao, G Birznieks, MH Polymeropoulos*  
Washington, DC. *Vanda Pharmaceuticals Abstract 96*
- 79 Efficacy analysis of tradipitant in idiopathic and diabetic gastroparesis in study VP-VLY-686-3301**  
*JL Carlin, C Polymeropoulos, MA Fisher, PD Moszczynski, GJ Johannsen, C Xiao, G Birznieks, MH Polymeropoulos*  
Washington, DC. *Vanda Pharmaceuticals Abstract 97*
- 80 A baseline severity inflation analysis in study VP-VLY-686-3301 of tradipitant in gastroparesis**  
*JL Carlin, C Polymeropoulos, C Xiao, G Birznieks, MH Polymeropoulos*  
Washington, DC. *Vanda Pharmaceuticals Abstract 98*
- 81 High sympathetic tone and reactivity in patients with severe gastrointestinal dysmotility**  
*J Chen, M Alam, X Chen, D Zhang, Y Jiang, M Pan, L Liu, A Hussain, JD Huizinga*  
Hamilton, Ontario. *McMaster University Abstract 99*
- 82 Cyclic Vomiting Syndrome: Streamlining patient care through creation of an electronically implemented quality improvement project**  
*J Dvorak, S Saboori, B Moshiree*  
Charlotte, NC. *Atrium Health Abstract 100*
- 83 The relationship between gastroparesis and pancreatitis: analysis of real-world data and outcomes**  
*YD Kim, ME Halabi, HP Parkman*  
Philadelphia, PA. *Temple University Abstract 101*
- 84 Comparison of water loading to liquid nutrient loading on gastric myoelectric activity in normal subjects**  
*HP Parkman, R Cooper, A Barrett, T Abell, S Calder, G O'Grady*  
Wayne, PA; Philadelphia, PA. *Temple University Abstract 102*

Poster Session, continued



# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 85 Thoracic neuromodulation shows global & long-term improvement in proof-of-concept study: Considering an alternative treatment pathway**  
*D Shimoga, D Staurisky, A Eubanks, A Tyra, T Karunaratne, A Sharma*  
Augusta, GA. *Medical College of Georgia, Augusta University*  
**Abstract 103**

## GI Motility and Functional GI Disorders in Children and Adolescents

- 86 Withdrawn** **Abstract 104**
- 87 Median Arcuate Ligament Syndrome should be suspected in patients with delayed gastric emptying: A single center case series experience**  
*M Botros, B Trivedi, B Harper, G Galura, B Davis, R McCallum*  
El Paso, TX. *Texas Tech University Health Sciences Center, Department of Surgery; Texas Tech University Health Sciences Center, Division of Gastroenterology; Texas Tech University Health Sciences Center, Department of Internal Medicine*  
**Abstract 105**
- 88 Advancing diagnostic evaluation for dysphagia in children: Importance of high resolution esophageal manometry and implications for pediatric centers**  
*P Dani, L Fitzharris, L Dorfman, S Mansl, K El-Chammas, L Fei, A Kaul*  
Cincinnati, OH. *Cincinnati Children's Hospital* **Abstract 106**
- 89 The diagnostic value of barium swallow compared to pH impedance in the detection of pediatric gastroesophageal reflux**  
*TA Davis, BD Rogers, R Bhardwaj, CP Gyawali*  
St Louis, MO. *Washington University School of Medicine*  
**Abstract 107**
- 90 The yield of left-sided colonic manometry in identifying colonic dysmotility in pediatric patients**  
*L Dorfman, K El-Chammas, S Mansi, A Kaul*  
Cincinnati, OH. *Cincinnati Children's Hospital Medical Center*  
ANMS Travel Awardee **Abstract 108**
- 91 Vagus nerve schwann cell erythropoietin receptors are critical for early functional recovery of intestinal motility after postoperative ileus**  
*PK Govindappa*  
Tucson, AZ. *University of Arizona College of Medicine*  
Young Investigator Finalist **Abstract 109**

## Poster No.

- 92 The effects of anxiety on pediatric high-resolution anorectal manometry and its association with reported constipation symptoms**  
*M Hashmi, C Baker*  
Farmington, CT. *Connecticut Children's, University of Connecticut School of Medicine* **Abstract 110**
- 93 Functional dyspepsia: a five-year follow up of symptom severity and burden in pediatric patients**  
*M Hashmi, J Mokha, J Hyams, C Baker*  
Farmington, CT; New Orleans, LA. *Ochsner Hospital for Children. Connecticut Children's, University of Connecticut School of Medicine*  
ANMS Travel Awardee **Abstract 111**
- 94 Safety of linaclotide in pediatric patients with functional constipation: a pooled analysis of placebo-controlled, randomized-controlled trials**  
*J Khlevner, J Hyams, M Saps, CD Lorenzo, G Rodriguez, W Xie, S Huh, D Weissman, S Nurko*  
New York, NY; Hartford, CT; Miami, FL; Columbus, OH; North Chicago, IL; Boston, MA. *Connecticut Children's Medical Center; University of Miami; Nationwide Children's Hospital; AbbVie Inc.; Ironwood Pharmaceuticals Inc.; Boston Children's Hospital. Columbia University Irving Medical Center* **Abstract 112**
- 95 Long-term safety of linaclotide in treating functional constipation in pediatric patients aged 6–17 years: interim analysis of an ongoing, open-label, phase 3, extension trial**  
*M Saps, S Nurko, G Rodriguez, W Xie, S Huh, J Hyams, J Khlevner, CD Lorenzo*  
Miami, FL; Boston, MA; North Chicago, IL; Hartford, CT; New York, NY; Columbus, OH. *Boston Children's Hospital; AbbVie Inc.; Ironwood Pharmaceuticals Inc.; Connecticut Children's Medical Center; Columbia University Irving Medical Center; Nationwide Children's Hospital. University of Miami* **Abstract 113**
- 96 Efficacy and safety of linaclotide in treating functional constipation in pediatric patients aged 6–17 years: a phase 3, pivotal, randomized, placebo-controlled trial.**  
*J Khlevner, CD Lorenzo, S Nurko, G Rodriguez-Araujo, W Xie, S Huh, J Hyams, M Saps*  
New York, NY; Columbus, OH; Boston, MA; North Chicago, IL; Hartford, CT; Miami, FL. *Nationwide Children's Hospital; Boston Children's Hospital; AbbVie Inc.; Ironwood Pharmaceuticals Inc.; Connecticut Children's Medical Center; University of Miami. Columbia University Irving Medical Center* **Abstract 114**

Poster Session, continued

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 97 Impact of diagnostic testing on outcomes of children with rumination syndrome**  
*J Khoo, AKV Diest, J Sabella, D Yang, N Bali, K Vaz, D Jacob, CD Lorenzo, P Lu*  
Columbus, OH. *Nationwide Children's Hospital*  
**Abstract 115**
- 98 Withdrawn** **Abstract 116**
- 99 Duplicate** **Abstract 117**
- 100 Chronic nausea is associated with worse psychosocial and functioning outcomes in children with DGBI**  
*NR Santucci, J Li, K Graham, J Hardy, R Sahay, MM Miller*  
Cincinnati, OH. *Cincinnati Children's Hospital Medical Center*  
**Abstract 118**
- 101 Auricular allodynia is associated with worse outcomes in DGBI children and adolescents undergoing neurostimulation**  
*NR Santucci, K El-Chammas, J Li, S Mansi, K Graham, J Hardy, R Sahay*  
Cincinnati, OH. *Cincinnati Children's Hospital Medical Center*  
**Abstract 119**
- 102 Improved longitudinal physical symptoms, psychological co-morbidities, and functioning in children and adolescents seen in a multi-disciplinary specialty DGBI clinic**  
*N Santucci, K Graham, J Hardy, R Sahay, M Miller*  
Cincinnati, OH. *Cincinnati Children's Hospital Medical Center*  
**Abstract 120**
- 103 Psychological dysfunction, comorbidities and health care cost utilization in a pediatric DGBI clinic**  
*N Santucci, K Graham, J Hardy, M Miller*  
Cincinnati, OH. *Cincinnati Children's Hospital Medical Center*  
**Abstract 121**
- 104 Colonic dysmotility in children with functional constipation and psychiatric and developmental disorders**  
*N Scoggins, A Leone, A Kroon Van Diest, R Sanchez, N Bali, K Vaz, D Jacob, MD, C Di Lorenzo, PL Lu*  
Columbus, OH. *Nationwide Children's Hospital*  
**Abstract 122**
- 105 Precutaneous electrical nerve field stimulation saves cost to parents and insurers of adolescents with irritable bowel syndrome**  
*E Shah, S Eswaran, K Harer, A Lee, B Nojkov, P Singh, W Chey*  
Ann Arbor, MI. *University of Michigan*  
**Abstract 123**

## Poster No.

- 106 Topical treatment of the anal sphincter for children with functional constipation**  
*A Usman, D Yang, H Ahmad, S Srinivas, RJ Wood, N Bali, K Vaz, D Jacob, CD Lorenzo, PL Lu*  
Columbus, OH. *The Ohio State University College of Medicine. Nationwide Children's Hospital*  
**Abstract 124**
- 107 Variation in referral to behavioral health for behavioral treatment of rumination**  
*J Webster, K Baber, S Mayer-Brown, E Maxwell, M Downing*  
Philadelphia PA. *The Children's Hospital of Philadelphia*  
**Abstract 125**

## Gut Electric Stimulation and Recording

- 108 Optimization of sacral nerve stimulation parameter in a computational model of colonic motility**  
*BB Barth, WM Grill*  
Durham, NC. *Duke University*  
**Abstract 126**
- 109 Neurostimulation enhances cardiac vagal efficiency in adolescents with functional nausea: effects influenced by medication use.**  
*J Kolacz, OK Roath, K Kovacic*  
Columbus, OH; Brookfield, WI. *Medical College of Wisconsin; Ohio State University*  
**Abstract 127**

## Microbiome and Probiotics in GI Health and Disease

- 110 Abnormal glucose breath test does not correlate with patients' self-reported symptoms and their severity**  
*JDvorak, M McArthur, J Baker, Z Almanzar, LT Finzetto, J Wellington, B Moshiree, S Rao*  
Charlotte, NC; Foley, AL; Augusta, GA. *Anxrobotics, Augusta University; Atrium Health*  
**Abstract 128**
- 111 Intestinal microbial metabolite indole-3-carboxaldehyde inhibits intestinal motility**  
*H Liu, M Chen, W Zhong, B Wang, L Zhou*  
Tianjin, Tianjin. *Tianjin Medical University General Hospital*  
**Abstract 129**
- 112 Oral butyrate prevents the effect of chronic morphine on the expression of Reg3γ and inhibition of antimicrobial activity of the ileum**  
*KH Muchhala, M Kang, HI Akbarali*  
Richmond, VA. *Virginia Commonwealth University*  
**ANMS Travel Awardee** **Abstract 130**
- 113 Supplements for GI symptoms: A market overview**  
*J Song, XJ Wang*  
Rochester, MN. *Mayo Clinic*  
**Abstract 131**

Poster Session, continued

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

**114 Region-specific sampling from humans improves mouse models of the small intestine microbiota**  
*S Spencer, R Culver, E Lemus Silva, S Higginbottom, D Shalon, J Sonnenburg, KC Huang*  
San Mateo, CA. *Stanford University*  
Young Investigator Finalist **Abstract 132**

**115 Intestinal methanogen overgrowth (IMO) is associated with both delayed small bowel and colonic transit time (TT) on the wireless motility capsule (WMC)**  
*SM Talamantes, F Steiner, S Spencer, L Neshatian, I Sonu*  
Palo Alto, CA. *Stanford University School of Medicine*  
**Abstract 133**

## Neuroimmune Modulation of Secretomotor, Vasomotor, Pain and Barrier Functions in Health and Disease

**116 Evidence of protease-mediated pro-nociceptive effects of fecal supernatants from inflammatory bowel disease**  
*C Baker, T Alward, H Wood, S Vanner, D Reed, A Lomax*  
Kingston, Ontario. *Queen's University* **Abstract 134**

**117 Investigating the relationship between luminal mediators and abdominal pain in Crohn's disease patients**  
*HM Wood, PM Sheth, SJ Vanner, DE Reed, AE Lomax*  
Kingston, Ontario. *Gastrointestinal Diseases Research Unit, Queen's University*  
ANMS Travel Awardee **Abstract 135**

## New Methods and Approaches to Understanding Neurogastroenterology and Motility

**118 Haustral rhythmic motor patterns of the human large bowel, associated with ICC networks, revealed by ultrasound**  
*AN Hussain, Z Zhang, J Yu, R Wei, H Arshad, J Lew, C Jagan, Y Wang, J Chen, JD Huizinga*  
Hamilton, Ontario; Waterloo, Ontario, University of Waterloo; *McMaster University* **Abstract 136**

**119 Preliminary study on positron emission tomography imaging with <sup>11</sup>C-ER176 to delineate macrophage activation in diabetic gastroparesis**  
*E Maalouf, HA Khasawneh, L Wei, S AlAsfoor, M Breen-Lyles, CE Bernard, G Farrugia, BJ Kemp, VJ Lowe, AH Goenka, M Grover*  
Rochester, MN. *Mayo Clinic* **Abstract 137**

**120 Low-rank tensor-based motion correction for abdominal cine-MRI data preserves gastric peristalsis**  
*RS Sclocco, J Coll-Font, V Napadow, C Nguyen, B Kuo*  
Boston, MA. *Massachusetts General Hospital* **Abstract 138**

## Poster No.

**121 Interpretation of 13C-Spirulina gastric emptying breath test (GEBT)**  
*CE Williams, E McClain*  
Brentwood, TN. *Cairn Diagnostics* **Abstract 139**

## Pharmacotherapy and Pharmacogenomics

**122 Prescription medication use in chronic idiopathic constipation in the USA from the healthcare professional perspective: A retrospective observational study**  
*D Brenner, B Moshiree, E Shah, J DeCourcy, N Reynolds, T Taylor-Whiteley, J Jiang, M Boules, M Lu, B Terreri*  
Chicago, IL; Charlotte, NC; Hanover, NH; Bollington, Cheshire; Lexington, MA. Atrium Health Wake Forest University School of Medicine; Geisel School of Medicine, Dartmouth College; Adelphi Real World; Takeda Pharmaceuticals USA, Inc.; *Feinberg School of Medicine, Northwestern University* **Abstract 140**

**123 Treatment-free interval (TFI): A novel approach to assessing real-world treatment response among patients with irritable bowel syndrome with diarrhea (IBS-D) treated with rifaximin or eluxadoline**  
*BE Lacy, P Gagnon-Sanschagrin, Z Heimanson, R Bungay, R Bellefleur, A Guérin, AA Dashputre, B Bumpass, D Borroto, G Joseph*  
Jacksonville, FL; Montreal, Quebec; Bridgewater Township, NJ. Analysis Group; Salix Pharmaceuticals; Bausch Health; *Mayo Clinic* **Abstract 141**

**124 Erythropoietin level declines after acute gut injury and possible biomarkers exist to assess improvement in postoperative ileus**  
*W Elfar, F Ghishan, P Kiela, JC Elfar, PK Govindappa*  
Tucson, AZ. Department of Pediatrics and Orthopedics and Sports Medicine, Children's Steel Research Center, *University of Arizona College of Medicine* **Abstract 142**

**125 Withdrawn** **Abstract 143**

**126 Nasal metoclopramide reduces healthcare visits in diabetic gastroparesis patients with and without prior oral metoclopramide history**  
*DC Kunkel, M Cline, M Shokoohi, J Kish, R McCallum*  
San Diego, CA; Cleveland, OH; Burlington, Ontario; El Paso, TX., Cleveland Clinic; Eversana; Texas Tech University Health Sciences Center; *University of California San Diego* **Abstract 144**

Poster Session, continued

# POSTER SESSION • All posters on view Friday & Saturday

**FRIDAY • 6:00–7:30 PM • Odd Numbers Presented** | **SATURDAY • 12:30–2:00 PM • Even Numbers Presented**

## Poster No.

- 127 Management of chronic idiopathic constipation in US patients from the healthcare professional perspective: a retrospective observational study**  
*B Moshiree, D Brenner, ED Shah, JD Courcy, N Reynolds, T Taylor-Whiteley, J Jiang, M Lu, B Terreri, M Boules*  
Charlotte, NC; Chicago, IL; Hanover, NH; Bollington, Cheshire; Lexington, MA. Feinberg School of Medicine, Northwestern University; Geisel School of Medicine, Dartmouth College; Adelphi Real World; Takeda Pharmaceuticals USA, Inc.; *Atrium Health* **Abstract 145**
- 128 A novel charged sodium-channel blocker, NTX-1175, is effective in reducing acute visceral hypersensitivity in vivo**  
*E Noor-Mohammadi, C Ligon, B Greenwood-Van Meerveld, N Zheng, B Cole, J Ellis, AC Johnson*  
Oklahoma City, OK; Nocion Therapeutics, Waltham, MA. *University of Oklahoma Health Sciences Center* **Abstract 146**
- 129 Stress or inflammation induces colonic hypersensitivity in a humanized proteinase-activated receptor 2 knock-in rat**  
*E Noor-Mohammadi, CO Ligon, K Lariosa-Willingham, J Stratton, K Mackenzie, B Greenwood-Van Meerveld, AC Johnson*  
Oklahoma City, OK; Redwood City, CA, Teva Pharmaceuticals. *University of Oklahoma Health Sciences Center* **Abstract 147**
- 130 Association between symptoms in irritable bowel syndrome with diarrhea (IBS-D): A pooled correlation and tricomposite endpoint analysis of two phase 3, randomized, placebo-controlled, rifaximin trials**  
*K Staller, BE Lacy, GS Sayuk, SSC Rao, HA Karsan, L Neshatian, TN Lunsford, C Allen, Z Heimanson, DM Brenner*  
Boston, MA; Jacksonville, FL; St Louis, MO; Augusta, GA; Atlanta, GA; Stanford, CA; Scottsdale, AZ; Bridgewater, NJ; Chicago, IL. Mayo Clinic; St Louis Veterans Affairs Medical Center; Augusta University; Atlanta Gastroenterology Associates; Stanford University; Salix Pharmaceuticals; Northwestern University; *Harvard Medical School* **Abstract 148**

## Psychogastroenterology and Behavioral Interventions

- 131 Implementation of an online single-session behavioral pain management class for centrally-mediated abdominal pain syndrome and IBS**  
*S Javed*  
Pittsburgh, PA. *Allegheny Health Network* **Abstract 149**

## Poster No.

- 132 “One more tool in the tool belt”: A qualitative study investigating patient and clinician opinions on the use of psychometrics for functional gastroduodenal disorders**  
*M Law, E Bartlett, G Sebaratnam, I Pickering, CN Andrews, C Keane, A Gharibans, G O’Grady, S Calder*  
Auckland, Waiheke; Calgary, Alberta, Alimetry Ltd.; University of Calgary, *The University of Auckland* **Abstract 150**
- 133 Cognitive behavioural therapy-based interventions for functional gastroduodenal disorders: A systematic review**  
*M Law, G Sebaratnam, E Bartlett, I Pickering, CN Andrews, C Varghese, A Gharibans, G O’Grady, S Calder*  
Auckland, Waiheke; Calgary, Alberta, Alimetry Ltd.; University of Calgary, *The University of Auckland* **Abstract 151**
- 134 A successful case of brain-gut therapy, including cognitive behavioral therapy and gut-directed hypnosis, for complex functional abdominal pain**  
*DJ Miller, B Moshiree, E Thakur*  
Winston-Salem, NC; Charlotte, NC. *Wake Forest University School of Medicine, Atrium Health* **Abstract 152**
- 135 Pain catastrophizing is associated with worse functioning in pediatric FAPD patients**  
*NR Santucci, M Miller, J Li, K Graham, J Hardy*  
Cincinnati, OH. *Cincinnati Children’s Hospital Medical Center* **Abstract 153**
- 136 Staff assessment of trauma informed practice in a high volume medical procedures unit**  
*J Naftaly, WD Chey, CH Jagielski*  
Ann Arbor, MI. *University of Michigan* **Abstract 154**
- 137 Systematic review of yoga for gastrointestinal disorders**  
*E Thakur, J Shapiro, J Wellington, S Sohl, S Danhauer, B Moshiree, K Koch*  
Charlotte, NC; Houston, TX; Winston-Salem, NC.; Wake Forest School of Medicine; *Atrium Health, Gastro Health and Nutrition* **Abstract 155**

## Sex Differences in Neurogastroenterology and Motility

- 138 Sex differences in the effect of the luminal mediators from irritable bowel syndrome patients on abdominal pain**  
*A Bennett, CC Baker, TA Alward, SJ Vanner, DE Reed, AE Lomax*  
Kingston, Ontario. *Queen’s University* **Abstract 156**

