



American Neurogastroenterology and Motility Society 2021 ANMS Annual Meeting

Clinical Course

Providing the best clinical care for our patients

August 13, 2021

Scientific Program

Advancing patient care through cutting-edge research

August 13 (6 pm) – August 15, 2021



Westin Boston Seaport District
Boston, Massachusetts

JOINTLY ACCREDITED PROVIDER
INTERPROFESSIONAL CONTINUING EDUCATION

Clinical Course • Providing the best clinical care for our patients

Thursday, August 12, 2021

4:00–6:00 pm	Registration
4:00–6:00 pm	Exhibitor Setup

Friday, August 13, 2021

7:00 am–5:30 pm	Registration
7:00–7:50 am	Breakfast • Visit Exhibits
7:50–8:00 am	Welcome • Introduction • John Pandolfino, Braden Kuo
8:00–9:20 am	What's New in the Treatment of Esophageal Disorders Moderators: Walter Chan, Christopher Velez
8:00–8:20 am	Pediatric and Adult Perspective LPR in children: Novel treatments Rachel Rosen Adult issues in extraesophageal reflux: A case-based review Wai-Kit Lo includes 4-minute Q & A
8:20–8:35 am	Provocative testing Reena Chokshi
8:35–9:05 am	Point • Counterpoint Incorporating endo-FLIP as routine assessment of esophageal disorders C. Prakash Gyawali and Marcelo Vela includes 4-minute Q & A
9:05–9:20 am	Approach to EGJOO and spastic disorders Sravanya Gavini

program continued

Friday, August 13, 2021 continued

9:20–10:20 am	Gastric and Small Bowel Motility: Bridging the Gap Moderators: <i>Jennifer Cai, Allen Lee</i>
9:20–9:40 am	Point • Counterpoint Functional dyspepsia & gastroparesis: Identical or different beasts? <i>Linda Nguyen and David Kunkel</i> includes 2-minute Q & A
9:40–10:00 am	Pediatric and Adult Perspective Gastric and small bowel motility testing: What are the options and is it necessary – Pediatric perspective <i>Samuel Nurko</i> Gastric and small bowel motility testing: What are the options and is it necessary – Adult perspective <i>Braden Kuo</i> includes 4-minute Q & A
10:00–10:20 am	Gastroparesis therapy development pipeline: Are we optimistic or doomed to fail? <i>P. Jay Pasricha</i>
10:20–10:40 am	Break • Visit Exhibits
10:40 am–12:20 pm	Bridging the Gap: Pediatric to Adult Moderators: <i>Sarah Ballou, Claire Zar-Kessler</i>
10:40–11:00 am	Pediatric and Adult Perspective Cyclic vomiting syndrome: The pediatric version <i>Desale Yacob</i> Cyclic vomiting syndrome: Pediatric versus adult <i>Thangam Venkatesan</i> includes 4-minute Q & A
11:00–11:20 am	Developmental considerations for psychogastroenterology integration: Kids are not just mini adults <i>Bradley Jerson</i>
11:20–11:40 am	Feeding and eating disorders in the gastroenterological setting <i>Jennifer Thomas</i>
11:40 am–12:00 pm	RN and APP Perspective Building a support system around the GI motility patient: The role of the triage RN and APP <i>Maria Grifone and Andrea Thurler</i> includes 4-minute Q & A
12:00–12:20 pm	Psychological interventions in functional GI disease <i>Helen Burton-Murray</i>

Parallel Lunches • Choose one • Visit Exhibits

12:20–1:25 pm	Lunch • no speaker • Visit Exhibits
12:20–1:25 pm	Lunch Symposium • Alnylam sponsored • Visit Exhibits Diagnostic Dilemmas: Gastrointestinal manifestations in rare disease <i>Baha Moshiree, Linda Nguyen</i>

program continued

Friday, August 13, 2021 continued

1:30–2:30 pm	ANMS Chung Owyang Distinguished Lecture Introduction: <i>John Wiley, John Pandolfino</i> Microbial–host interaction modulates serotonin signaling in the gut <i>Chung Owyang</i>
2:30–3:30 pm	The Colon – Where do we go from here? Moderators: <i>Kyle Staller, Johanna Iturrino</i>
2:30–2:50 pm	Anorectal manometry and pelvic floor testing in a clinical practice: Essential tools in the management of constipation and fecal incontinence? <i>Amol Sharma</i>
2:50–3:10 pm	Constipation pharmacotherapy <i>Judy Nee</i>
3:10–3:30 pm	Point • Counterpoint IBS-C vs CIC: Should I test or treat differently? <i>Baha Moshiree</i> IBS-C vs CIC: Do not test or treat differently! <i>Greg Sayuk</i> includes 2-minute Q & A
3:30–3:50 pm	Break • Visit Exhibits • Grand Ballroom Foyer
3:50–4:30 pm	Clinical Research: Factors to Consider in Trial Design Moderator: <i>Hiroshi Mashimo</i>
3:50–4:10 pm	From bench to bedside: How to translate motility innovations to clinical care? <i>Eric Shah</i>
4:10–4:30 pm	State-of-the-Art Lecture The power of placebo <i>Anthony Lembo</i>
4:30–6:00 pm	Women in Neurogastroenterology • Open to all women working in neurogastroenterology and motility. Moderator: <i>Linda Nguyen</i>
4:30 pm	Welcome • <i>Beverley Greenwood-Van Meerveld</i>
4:35 pm	Highlights of ANMS survey <i>Lin Chang</i>
4:40 pm	ANMS – Where are we now and where are we going? <i>John Pandolfino</i>
4:45 pm	Promoting a culture of diversity, inclusion and equity: Investing in our future <i>John Pandolfino</i>
5:00 pm	Skills Development <ul style="list-style-type: none"> • Personal Branding • <i>Linda Nguyen</i> • Mentoring and Beyond • <i>Lin Chang</i> • The Art of Negotiating • <i>Beverley Greenwood-Van Meerveld</i>
5:15 pm	Small group discussions about the topics discussed in Skills Development <ul style="list-style-type: none"> • Break up into three groups • Discuss plans to use new skills
5:45 pm	Mix and Mingle • then go to Welcome Reception

Scientific Program • Advancing patient care through cutting-edge research

Friday, August 13, 2021

7:00 am–5:00 pm	Registration
6:00–7:30 pm	Welcome Reception • Poster Session

Saturday, August 14, 2021

7:00 am–5:00 pm	Registration
7:00–7:50 am	Breakfast • Visit Exhibits
7:50–8:00 am	Welcome • John Pandolfino
8:00–9:00 am	Distinguished Investigator Award for Women in Neurogastroenterology Introduction: <i>Beverley Greenwood-Van Meerveld</i> The role of brain peptides in the regulation of gut function: A 40 year journey <i>Yvette Taché</i>
9:00–10:30 am	Session 1 Basic Advances Making an Impact in Understanding GI Pathophysiology Moderators: <i>Lin Chang, John Wiley</i>
9:00–9:20 am	Gastroparesis omics <i>Madhu Grover</i>
9:20–9:40 am	Parkinson's disease, its GI effects, and new treatments from top to bottom <i>William Hasler</i>
9:40–10:00 am	Microbiome in IBS and visceral hypersensitivity <i>David Reed</i>
10:00–10:15 am	Gastric motility characterization from GI-MRI using a deep-learning-based automatic method <i>X Wang, J Cao, M Choi, Z Liu</i> Ann Arbor, MI, <i>University of Michigan</i>
	Abstract 1
10:15–10:30 am	Intracolonic administration of guanylate cyclase C agonist linaclotide inhibits chronic psychological stress-induced activation of central nociceptive pathways to relieve visceral pain in rats <i>C O Ligon, G Hannig, B Greenwood-Van Meerveld</i> Oklahoma City, OK, <i>University of Oklahoma Health Sciences Center</i>
	Abstract 2
10:30–11:00 am	Break • Visit Exhibits
10:00 am–12:00 pm	Allied Health Professionals • Parallel Session GI Physiology Laboratory and Testing Moderators: <i>Jason Baker, Erik Reilly</i>
10:00–10:20 am	Esophageal manometry: Interpretation and pitfalls <i>Hilary Urgas</i>
10:20–10:40 am	Anorectal manometry: Interpretation and pitfalls <i>Barbara Brien</i>
10:40–11:00 am	Discussion
11:00–10:20 am	Minor variations: A primary on pediatric motility testing <i>Claire Zar-Kessler</i>
11:20–11:40 am	Breath testing: Preparation, performance, and interpretation <i>Jason Baker</i>
11:40 am–12:00 pm	Discussion

program continued

Saturday, August 14, 2021 continued

11:00 am–12:30 pm Parallel Sessions	Parallel Session 1 Does the Model Matter? Insights into ENS Development using Different Animal Models Moderators: <i>Robert Heuckeroth, M. Maya Kaelberer</i>	Parallel Session 2 Beyond the Gut in Functional GI Disorders Moderators: <i>Joseph Croffie, Shanthy Srinivasan</i>
11:00–11:20 am	ENS development in zebrafish <i>Julia Ganz</i>	FGIDs, autonomic dysfunction, and EDS: What's the connection? <i>Miguel Saps</i>
11:20–11:40 am	ENS development in chick, mouse, and human: Variations on a theme <i>Allan Goldstein</i>	Electroceutical therapy: What's the latest? <i>Katja Kovacic</i>
11:40 am–12:00 pm	Stem cell therapies for enteric neuropathies <i>Alan Burns</i>	Virtually better: VR as a new clinical tool in neurogastroenterology <i>Brennan Spiegel</i>
12:00–12:15 pm	Dysfunctional enteric and autonomic neurons innervating proximal colon in Hirschsprung's disease mouse models <i>KM Smith-Edwards, BS Edwards, BM Davis</i> Pittsburgh, PA, <i>University of Pittsburgh</i> Abstract 3	Evaluation of bidirectional gut and brain axis in patients with dyssynergic defecation <i>Y Yan, J Remes-Troche, K Tantiphlachiva, E Coss-Adame, A Erdogan, SC Rao</i> Augusta, GA, <i>Augusta University Medical Center</i> Abstract 5
12:15–12:30 pm	Cell-autonomous loss of retinoic acid receptor signaling causes diverse stage-specific enteric nervous system defects in mice <i>RO Heuckeroth, T Gao, E Wright-Jin, R Sengupta, JB Anderson, CL Mendelsohn</i> Philadelphia, PA, St. Louis, MO, New York, NY <i>The Children's Hospital of Philadelphia</i> Abstract 4	Modulation of visceral pain by the prefrontal cortex-bed nucleus of the stria terminals pathway <i>AC Johnson, CO Ligon, B Greenwood-Van Meerveld</i> Oklahoma City, OK <i>Veterans Affairs Health Care System</i> Abstract 6
12:30–2:00 pm	Lunch • Poster Session • Visit Exhibits	
2:00–3:30 pm Parallel Sessions	Parallel Session 3 Enteric Neural Neuroimmune Signaling Moderator: <i>Tamas Ordog, Meenakshi Rao</i>	Parallel Session 4 Latest Innovations in Esophageal Physiology Testing and Treatment Moderators: <i>Joan Chen, Abraham Khan</i>
2:00–2:20 pm	Role of mast cells in early-life stress-related GI dysfunction <i>Adam Moeser</i>	The role of ICC in the esophagus: Is there an esophageal pacemaker? <i>Kenton Sanders</i>
2:20–2:40 pm	Neuro-immune crosstalk and enteric nervous system remodeling in inflammatory bowel disease <i>Milena Bogunovic</i>	How does foregut surgery alter peristalsis and LES function? <i>Walter Chan</i>
2:40–3:00 pm	Regulation of enteric immunity: A cytokine's cellular stratification of function <i>Ruaidhri Jackson</i>	Using mathematics and mechanics to study esophageal function: Using in-silico models <i>Dustin Carlson</i>
3:00–3:15 pm	Enteric glia sensitize nociceptor TRPV1 during acute inflammation through connexin-43–dependent prostaglandin-E2 release <i>W Morales-Soto, J McClain, BD Gulbransen</i> East Lansing, MI, <i>Michigan State University</i> ANMS Travel Award Abstract 7	Esophagogastric junction compliance in pediatric eosinophilic esophagitis and achalasia <i>J Barsamian, AJ Benitez, S Budhu, AB Muir, A Gharibans, KN Fiorino, P Mamula, H Mousa</i> San Diego, CA, Philadelphia, PA, Hauraki Plains, New Zealand <i>Children's Hospital, San Diego</i> Abstract 9 ANMS Peter J. Kahrilas Esophageal Trainee Travel Award

program continued

Saturday, August 14, 2021 continued

3:15–3:30 pm	SARS-CoV-2 induces enteric neuronal production of vasoactive intestinal peptide as a potential mechanism of COVID-19-associated diarrhea <i>P He, P Tedbury, A Gracz, SM Mwangi, G Li, D Merlin, SG Sarafianos, S Srinivasan</i> <i>Atlanta, GA, Emory University</i> Abstract 8	Comparison of patients diagnosed with ineffective esophageal motility according to the Chicago Classification v3.0 and v4.0 definitions, 2011–2019 <i>AW Tuan, N Syed, R Panganiban, RY Lee, S Dalessio, S Pradhan, J Zhu, A Ouyang</i> <i>Hershey, PA, Penn State Hershey Medical Center</i> ANMS Travel Award Abstract 10
3:30–4:00 pm	Break • Visit Exhibits	Break • Visit Exhibits
4:00–5:45 pm Parallel Sessions	Parallel Session 5 Nonneuronal Cells in Enteric Reflexes <i>Moderators: Tor Savidge, Catia Sternini</i>	Parallel Session 6 Genetic Diseases Causing GI Dysmotility <i>Moderators: Kirsteen Browning, Baha Moshiree</i>
4:00–4:25 pm	Role of enteric glia in colonic motility <i>Brian Gulbransen</i>	Intestinal dysmotility in zebrafish models of ASD <i>Julia Dallman</i>
4:25–4:50 pm	Role of muscularis macrophages in delayed gastric emptying <i>Gianluca Cipriani</i>	Autism spectrum disorders and gut dysfunction: Environmental and genetic risk factors <i>Kara Margolis</i>
4:50–5:15 pm	Role of ICCs and PDGFα cells in the regulation of neuromuscular transmission in the internal anal sphincter <i>Caroline Cobine</i>	Cystic fibrosis and other CFTR channelopathies' impact on gut function crisis: Microbiome and opioid tolerance <i>Arthur Beyder</i>
5:15–5:30 pm	Mitochondrial dysfunction in interstitial cells of Cajal predisposes female diabetic mice to gastroparesis <i>SA Saravanaperumal, Y Hayashi, GB Gajdos, JR Voisin, AM Wright, DR Linden, LJ Maher III, AE Bharucha, T Ordog</i> <i>Rochester, MN, Mayo Clinic</i> Abstract 11	RET signaling in enteroendocrine cells regulates gut motility in a sex-dependent manner <i>A Shepherd, L Feinstein, S Sabel, D Rastelli, E Mezhibovsky, L Matthews, MD Gershon, M Rao</i> <i>Boston, MA, New York, NY</i> <i>Boston Children's Hospital</i> Abstract 13
5:30–5:45 pm	Functional and regional heterogeneity of glial cells in the enteric nervous system <i>L Seguela, G Esposito, B Gulbransen</i> <i>East Lansing, MI, Rome, Italy</i> <i>Michigan State University</i> Abstract 12	α-synuclein gene knockout disrupts cholinergic neuromuscular transmission causing colonic dysmotility <i>NK Yelleswarapu, Evan Ziehl, J Galligan</i> <i>East Lansing, MI, Michigan State University</i> Abstract 14 ANMS Travel Award
6:00–7:30 pm Parallel Theme Symposia	Parallel Theme Symposium Abdominal Pain: The role of visceral organ cross talk <i>Sponsored by Ironwood Pharmaceuticals</i> <i>Moderator: David Levinthal</i>	Parallel Theme Symposium Allied Health • Hands-On Session Anorectal and esophageal manometry, pH testing, and additional adjunct technology <i>Moderator: Jason R. Baker</i>
6:05–6:30 pm	Bowel–bladder interactions in IBS <i>G. Nicholas Verne</i>	<ul style="list-style-type: none"> This will be an interactive session. Vendors will display or perform live or video demonstrations of anorectal and esophageal manometry, pH testing, and additional adjunct technology. Vendors will pose 3 to 5 questions related to their equipment for the attendees to answer. A raffle will be held for the most correct answers. The winner will receive an Apple watch.
6:30–6:55 pm	Mechanisms of visceral organ crosstalk <i>Beverly Greenwood-Van Meerveld</i>	
6:55–7:20 pm	Gastrointestinal and bladder co-morbidities in children: Is there a role for visceral organ cross-talk? <i>Jose Garza</i>	
7:20–7:30 pm	Panel Discussion	

Sunday, August 15, 2021 • 8:00 am – 12:00 pm

7:00–10:00 am	Registration
7:00–8:00 am	Breakfast • Visit Exhibits
8:00–9:00 am	W. Jerry Dodds, MD and Sushil K. Sarna, PhD Lectureship Introduction: <i>John Pandolfino</i> IBS From Crib to Adulthood: Novel Clinical and Physiologic Insights <i>Lin Chang</i>
9:00–10:00 am	Plenary Abstract Session Moderators: <i>Tijs Louwies, Maria Vazquez Roque</i>
9:00–9:15 am	Symptoms improve more by combining diet or neuromodulator therapy with prokinetics vs. prokinetics alone in suspected gastroparesis <i>WL Hasler, Y Bai, A Lee, B Moshiree, SC Rao, RW McCallum, HP Parkman, L Nguyen, J Wo, I Sarosiek, M Schulman, B Kuo</i> Ann Arbor, MI, Minneapolis, MN, Charlotte, NC, Augusta, GA, El Paso, TX, Philadelphia, PA, Palo Alto, CA, Indianapolis, IN, Largo, FL, Boston, MA, <i>University of Michigan</i> Abstract 15
9:15–9:30 am	Spectrum of gastrointestinal disorders in patients with eating disorders and relationship to eating disorder remission <i>MN Almeida, CJ Silvernale, A Samad, F Rao, HB Murray, K Staller</i> Boston, MA, <i>Massachusetts General Hospital</i> Abstract 16
9:30–9:45 am	Altered gut afference-related brain connectivity in functional dyspepsia is linked to slower gastric peristalsis – A multimodal gut–brain axis MRI study <i>R Sclocco, H Fisher, R Staley, K Han, C Nguyen, A Mendez, V Napadow, B Kuo</i> Boston, MA, <i>Massachusetts General Hospital</i> Abstract 17
9:45–10:00 am	A monoclonal anti-CGRP antibody decreases visceral hypersensitivity in experimental models of stress-induced irritable bowel syndrome <i>E Noor-Mohammadi, C Ligon, K Mackenzie, J Stratton, S Shnider, B Greenwood-Van Meerveld,</i> Oklahoma City, OK, Redwood City, CA, <i>University of Oklahoma Health Sciences Center</i> Abstract 18
10:00–10:30 am	Break • Visit Exhibits
10:30 am–12:00 pm	ANMS Distinguished Lectures Moderators: <i>John Pandolfino, G. Nicholas Verne</i>
10:30–11:00 am	30 years in neurogastroenterology: Lessons learned <i>Carlo Di Lorenzo</i>
11:00–11:30 am	Central nervous system plasticity in experimental models of stress-Induced visceral pain <i>Beverley Greenwood-Van Meerveld</i>
11:30 am–12:00 pm	The role of the brain–gut axis in inflammatory bowel disease <i>Keith Sharkey</i>
12:00 pm	Adjourn

Poster Session • begins next page

Poster Session • All posters will be up Friday and Saturday

Friday • 6:00–7:30 PM • Odd Numbers presented | Saturday • 12:30–2:00 PM • Even Numbers presented

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

Poster No.

- 1 Symptomatic response to rifaximin monotherapy in intestinal methanogen overgrowth**
B Zoll, R Hernandez, T Keo, HN Ryan, E Toto, JC Reynolds, NK Ahuja
Philadelphia, PA, *The Hospital of the University of Pennsylvania* **Abstract 19**
- 2 Clinical associations with lactulose breath test results in a retrospective single-center cohort**
B Zoll, R Hernandez, T Keo, MD, HN Ryan, E Toto, JC Reynolds, NK Ahuja
Philadelphia, PA, *The Hospital of the University of Pennsylvania* **Abstract 20**

Brain Gut Axis in Health and Disease

- 3 Individuals with irritable bowel syndrome in the general population report increased sensitivity to foods, caffeine and medications**
S Ballou, K Scarlata, OS Palsson
Boston, MA, Medway, MA, Chapel Hill, NC, *Beth Israel Deaconess Medical Center* **Abstract 21**
- 4 Withdrawn**
- 5 Withdrawn**
- 6 Brain fMRI activity follows the gastric rhythm and encodes the power fluctuations of gastric electrical activity in rats**
J Cao, X Wang, Y Zhang, Z Liu
Ann Arbor, MI, *University of Michigan* **Abstract 24**
- 7 3D imaging and computational quantitation of extrinsic and intrinsic cholinergic innervation in the enteric nervous system (ENS) of the pig colon: Implications in the cholinergic anti-inflammatory pathway (CAP)**
PQ Yuan, T Li, M Mulugete, M Larauche, JP Bellier, Y Tache
Los Angeles, CA, Otsu, Shiga, Japan, *University of California, Los Angeles* **Abstract 25**

Colon and Anorectum: Physiology, Pathophysiology, and Clinical Disorders

- 8 Clinical impact of incremental balloon inflation volumes during simulated defecation in anorectal manometry: Analysis of the London classification for disorders of anorectal function**
JR Baker, M Jarvis, E Thakur, P Grier, B Moshiree
Charlotte, NC, *Atrium Health* **Abstract 26**

Poster No.

- 9 Functional dyspepsia overlap syndromes in patients with refractory functional constipation**
T Boyd, M Paz, I Ahmad, F Rao, A Samad, C Silvernale, H Burton Murray, K Staller
Boston, MA, *Harvard Medical School* **Abstract 27**
- 10 Shallow contraction waves in the canine colon**
H Gregersen, Y Wang, M Wang, X Guo, F Field, M Nelson, W Combs, G Kassab
San Diego, CA, *California Medical Innovations Institute* **Abstract 28**
- 11 Biofeedback efficacy assessed using the Fecobionics device**
H Gregersen, A Chen, WW Leung, C Wong, T Mak, S Ng, K Futaba
San Diego, CA, Shatin, Hong Kong, *California Medical Innovations Institute* **Abstract 29**
- 12 How accurate is patient's recall of bowel symptoms for fecal incontinence: A comparative study of self-report vs prospective stool diary**
A Hudgi, Y Yan, R Wang, B Inman, A Sharma, SC Rao
Augusta, GA, *Augusta University Medical Center* **Abstract 30**
- 13 Rectal sensation in patients with chronic constipation: What factors are associated with rectal hyposensitivity?**
E Koo, B Nojkov, WD Chey, G Ezell, J Chen
Ann Arbor, MI, *University of Michigan* **Abstract 31**
- 14 Withdrawn**
- 15 Withdrawn**
- 16 Long-term impact of constipation drug therapies on upper gastrointestinal symptom profiles and quality of life of patients with suspected gastroparesis with normal versus delayed colonic transit**
B Moshiree, A Lee, B Kuo, SC Rao, J Semler, Y Bai, L. Nguyen, H Parkman, R McCallum, I Sarosiek, J Wo, M Schulman, W Hasler
Charlotte, NC, Ann Arbor, MI, Boston, MA, Augusta, GA, Buffalo, NY, New York, NY, Palo Alto, CA, Philadelphia, PA, El Paso, TX, Indianapolis, ID, Largo, FL, *Atrium Health* **Abstract 34**
- 17 Joint hypermobility, autonomic dysfunction, gastrointestinal dysmotility and autoimmunity (JAG-A) – Clinical associations and the response to intravenous immunoglobulin therapy**
J Pasricha, M McKnight, R Burns, L Villatoro, G Barahona, K Hui, R Bulat, G Treisman, G Yenokyan
Baltimore, MD, *Johns Hopkins University* **Abstract 35**

Poster Session • All posters will be up Friday and Saturday

Friday • 6:00–7:30 PM • Odd Numbers presented • Saturday • 12:30–2:00 PM • Even Numbers presented

Poster No.

- 18 Stiff person syndrome is commonly associated with gastrointestinal symptoms and dysmotility**
J Pasricha, L Villatoro, G Barahona, M McKnight, R Burns, J Koshorek, S Newsome
Baltimore, MD, *Johns Hopkins University* **Abstract 36**
- 19 Higher Fabry's disease deposition level is associated with diarrhea and faster colonic transit**
B Surjanhata, I Guerrero López, LR Zukerberg, F Rao, H Burton Murray, C Zar-Kessler, B Kuo
Boston, MA, Barcelona, Spain, *Boston Medical Center* **Abstract 37**
- 20 Gastrointestinal symptom burden and quality of life in patients with anorectal spastic motor disorders and irritable bowel syndrome (IBS)**
EA Terry, GS Sayuk, RV Chokshi, VM Kushnir, MK Rude, CP Gyawali
St. Louis, MO, *Washington University/Barnes-Jewish Hospital* **Abstract 38**

Enteric Nervous System Neurobiology and Circuitry: Neurons, Glia, Smooth Muscle Cell, ICC

- 21 Rhythmic organization of Ca²⁺ transient clusters in ICC-MY of the stomach**
S Baker, C Sireika, M Moore, W Leigh, SJ Hwang, S Ward, K Sanders
Reno, NV, *University of Nevada, Reno* **Abstract 39**
- 22 Abnormalities of the enteric nervous system may contribute to post pull-through dysmotility in Hirschsprung disease**
S Bhawe, R Guyer, M Omer, A Rahman, R Hotta, A Goldstein
Boston, MA, *Massachusetts General Hospital* **Abstract 40**
- 23 A population of mouse small intestine intrinsic primary afferent neurons are advillin positive and mechanosensitive**
S Chen, C Alcaïno, S Whiteman, K Hawkins, G Farrugia, DR Linden, A Beyder
Rochester, MN, *Mayo Clinic* **Abstract 41**
ANMS Travel Award
- 24 Derivation of enteric glia from hPSCs for modeling and treatment of metabolic inflammation**
H Majd, S Farahvashi, R Samuel, S Das, S Bhat, H Asgharian, S Eftekari, J Yu, K Kamath, M Mirzaei, H Goodarzi, F Fattahi
San Francisco, CA, *University of California, San Francisco* **Abstract 42**
- 25 Gastrointestinal dysmotility is common in patients with autonomic nervous system disorders**
LA Pace, J Hemp, MM Cortez, BP Goodman
Salt Lake City, UT, Scottsdale, AZ, *Metrodora Institute* **Abstract 43**

Poster No.

- 26 Establishing a stem cell model to uncover the mechanism of chemotherapy-induced enteric neuropathy**
MN Richter, RM Samuel, H Majd, J Wu, A Arab, B Vora, F Fattahi
San Francisco, CA, *University of California, San Francisco* **Abstract 44**
- 27 Enteric mesenchymal cells support the growth of enteric neural stem cells postnatally**
R Stavely, S Bhawe, WL Ho, WK Pan, AA Rahman, N Bousquet, M Omer, J Ulloa, R Guyer, N Nagy, AM Goldstein, R Hotta
Boston, MA, Budapest, Hungary, *Harvard Medical School/Massachusetts General* **Abstract 45**
- 28 Cholinergic and nitrergic neurons in the submucosal plexuses of the human sigmoid colon**
C Sternini, L Cabanillas, M Mazzoni, F Caremoli, K Ibarra, A Acosta, P Clavanzani, R De Giorgio
Los Angeles, CA, Bologna, Italy, Ferrara, Italy, *University of California, Los Angeles* **Abstract 46**

Epidemiology, Genetics, Cross-Cultural and Psychosocial Factors in Functional GI Disorders in Adults

- 29 Factors of early life abuse, stressful life events, and family history for developing abdominal pain disorders of gut-brain interaction**
JR Baker, A Lenhart, J Zia, L Keefer, C Axelrod, PL Yang, M Saps, M Heitkemper, L Chang
Charlotte, NC, Los Angeles, CA, Seattle, WA, New York, NY, Miami, FL, *Atrium Health* **Abstract 47**
- 30 Prevalence of undiagnosed acute hepatic porphyria in cyclic vomiting syndrome**
S Cheng, E Yu, Z Garacci, AL Erwin, T Venkatesan
Milwaukee, WI, Cleveland, OH, *Medical College of Wisconsin* **Abstract 48**
ANMS Travel Award
- 31 Diagnostic testing delays and telemedicine: Motility patient pandemic perspectives**
M Paz, K Skarbinski, H Burton Murray, K Staller, B Kuo, C Velez
Boston, MA, *Massachusetts General Hospital* **Abstract 49**
- 32 Long-term burden of hospitalizations and readmissions in achalasia**
S Sarvepalli, N Husain
Houston, TX, Mount Pleasant, MI, *Baylor College of Medicine* **Abstract 50**
ANMS Travel Award
- 33 Impact of COVID-19 on irritable bowel syndrome in a Minnesota population**
XJ Wang, B Murphy, MK Breen-Lyles, J Fox
Rochester, MN, *Mayo Clinic Rochester* **Abstract 51**

Poster Session • All posters will be up Friday and Saturday

Friday • 6:00–7:30 PM • Odd Numbers presented | Saturday • 12:30–2:00 PM • Even Numbers presented

Esophageal Physiology, Pathophysiology, and Clinical Disorders

Poster No.

- 34 Manometric esophagogastric junction barrier metric as predictors of gastroesophageal reflux**
S Babbar, A Khan, R Knotts
New York, NY, *New York University School of Medicine*
Abstract 52
- 35 Use of the EsoFLIP dilator in a pediatric achalasia cohort**
AJ Benitez, S Budhu, H Mousa, K Fiorino, P Mamula
Philadelphia, PA, *Children's Hospital of Philadelphia*
Abstract 53
- 36 Sars-CoV-2 (COVID-19) prospective quality control project: Exploring a patient profile relative to scheduling a motility laboratory procedure related to Sars-CoV-2 anxiety**
M Jarvis, B Moshiree, E Thakur, P Grier, JR Baker
Charlotte, NC, *Atrium Health*
Abstract 54
- 37 Pneumatic dilation is safe in elderly patients with achalasia: A multicenter cross-sectional study**
N Bar, TS Pasricha Boston, K Staller, CD Velez, T Thurm, SD Ben-Ami, R Dekel, Y Ron Y, B Kuo
Tel Aviv, Israel, Boston, MA, *Tel Aviv University*
Abstract 55
- 38 Utility of baseline impedance ratio measured during high resolution impedance manometry in identification of erosive esophagitis and/or Barrett's esophagus**
U Patel, L Akanbi, M Elsheikh, S Stephens, K Wong, M M Plymale, JS Roth, L Selby, B Ismail
Lexington, KY, Cairo, Ad Daqahliyah, Egypt, *University of Kentucky*
Abstract 56
- 39 Paraneoplastic achalasia in the setting of a neuroendocrine tumor, a case report**
S Sarvepalli, N Husain, Nisreen
Houston, TX, *Baylor College of Medicine*
Abstract 57
- 40 Decreased distal esophageal impedance in Barrett's esophagus: Variations with dysplasia**
SS Shah, D Shahsavari, MS Smith, HP Parkman, Z Malik
Philadelphia, PA, New York, NY, *Temple University Hospital*
ANMS Travel Award
Abstract 58
- 41 Cannabis use is associated with esophageal motility disorders characterized by impaired inhibition**
KY Song, DL Snyder, MD Crowell, MF Vela
Scottsdale, AZ, *Mayo Clinic Arizona*
Abstract 59
- 42 Clinical and demographic variables among patients with ineffective esophageal motility using Chicago Classification v4.0**
AW Tuan, N Syed, R Panganiban, RY Lee, S Dalessio, S Pradhan, J Zhu, A Ouyang
Hershey, PA, *Penn State Hershey Medical Center*
Abstract 60

Poster No.

- 43 Implications of esophageal contractility in post-lung transplant patients**
PS Um, MQ Chan, K Polacek, A Hinton, BC Keller, DR Nunley, G Balasubramanian
Columbus, OH, *The Ohio State University College of Medicine*
Abstract 61
- 44 Early life factors in eosinophilic esophagitis: A systematic review and meta-analysis**
E Wilder, C Winskill, Y Jia, P He, R Betensky, A Khan, F Francois, R Knotts
New York, NY, *NYU Langone Health*
Abstract 62
- 45 Proximal reflux on impedance-pH, not patient-reported symptoms, predicts worse pulmonary function in interstitial lung disease**
JC Zhou, WK Lo, WW Chan
Boston, MA, *Harvard Medical School*
Abstract 63

Gastric Physiology, Pathophysiology, and Clinical Disorders

- 46 Nutritional deficiencies and predictors of mortality in gastroparesis patients**
W Amjad, W Qureshi, MA Shabbir, R Singh, S Richter
Menands, NY, Worcester, MA, Albany, NY, Fort Wayne, ID, *Albany Medical Center*
Abstract 64
- 47 Clinical predictors of failure of symptom improvement in gastroparesis**
W Amjad, A Malik, MA Shabbir, A Batool, S Richter
Menands, NY, Chicago, IL, Albany, NY, *Albany Medical Center*
Abstract 65
- 48 Tradipitant, a novel neurokinin-1 receptor antagonist, showed continued improvement in nausea and other symptoms associated with gastroparesis in an open-label extension of a phase II clinical trial**
JL Carlin, MA Fisher, MS Bagger, DS Madonick, CQ Kupersmith, M Lopez Lascrain, C Xiao, G Birznies, MH Polymeropoulos
Washington, DC, *Vanda Pharmaceuticals*
Abstract 66
- 49 Withdrawn**
- 50 Can gastric half emptying time (T_{1/2}) in gastric emptying scintigraphy replace conventional retention values for evaluating gastroparesis?**
R Gardella, P Silver, D Shahsavari, AH Maurer, HP Parkman
Philadelphia, PA, *Lewis Katz School of Medicine at Temple University*
Abstract 68
- 51 Systematic assessment of the quality of smartphone applications for gastroesophageal reflux disease**
MJ Gould, C Lin, CM Walsh
Toronto, Ontario, Canada, *The Hospital for Sick Children*
Abstract 69

Poster Session, continued

Poster Session • All posters will be up Friday and Saturday

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Poster No.

- 52 Meal eating characteristics of patients with gastroparesis**
GG Hagopian, KP Johnson, D Shahsavari, HP Parkman
Philadelphia, PA, *Temple University School of Medicine*
Abstract 70
- 53 Frequency of GLP-1 analogs use in diabetic patients with delayed gastric emptying (GE): A retrospective study**
MA Kalas, GM Galura, A Deoker, RW McCallum
El Paso, TX, *Texas Tech University Health Sciences Center El Paso*
Abstract 71
- 54 Subtypes of gastroparesis (GP) and functional dyspepsia (FD) based on gastric myoelectrical activity (GMA) in response to the water load satiety test (WLST)**
KL Koch, ML Van Natta, HP Parkman, RW McCallum, B Kuo, I Sarosiek, TL Abell, M Grover, G Farrugia, R Shulman, J Tonascia, F Hamilton, PJ Pasricha, for the NIH/NIDDK Gastroparesis Clinical Research Consortium
Winston-Salem, NC, Baltimore, MD, Philadelphia, PA, El Paso, TX, Boston, MA, Louisville, KY, Rochester, MN, Houston, TX, Bethesda, MD, *Wake Forest School of Medicine*
Abstract 72
- 55 A new antibody assay may help identify abnormalities in patients with the symptoms of gastroparesis**
P Mathur, A Kedar, A Stocker, L McElmurray, BD Rogers, A Tansel, C Pinkston, GL Norman, T Abell
Louisville, KY, Pittsburgh, PA, *University of Louisville*
Abstract 73
- 56 Patient treatment pathway patterns at an academic tertiary motility referral center**
S Condon, W Cai, P Mathur, A Stocker, L McElmurray, BD Rogers, T. Abell, A Tansel
Louisville, KY, Pittsburgh, PA, *University of Louisville*
Abstract 74
- 57 Longer acidification time on wireless motility capsule (Smartpill™) correlates with gastroesophageal reflux disease**
SJ Rodriguez, JW Blackett, D Jordokovsky
New York, NY, *Columbia University Medical Center*
Abstract 75
- 58 Withdrawn**
- 59 Withdrawn**
- 60 Pyloric diameter and distensibility profiles of patients unresponsive to G-POEM who sought further botulinum toxin injection after myotomy**
L Watts, G Ezell, JR Baker, N Bowers, R Law, WL Hasler
Ann Arbor, MI, Charlotte, NC, Rochester, MN, *Michigan Medicine*
Abstract 78

Poster No.

- 61 Performance characteristics of scintigraphic measurement of gastric emptying of solids in diabetes with gastroduodenal symptoms or gastroparesis**
T Zheng, K Vosoughi, D Burton, M Camilleri
Rochester, MN, *Mayo Clinic*
Abstract 79
- GI Motility and Functional GI Disorders in Children and Adolescents**
- 62 Abdominal trauma in children and the incidence of disorders of gut brain interaction**
T Adamos, A Chogle, E Ornelas, A Ralbovsky, K Visnagra
Orange, CA, *Children's Hospital of Orange County (CHOC)*
Abstract 80
- 63 Withdrawn**
- 64 A case report: Gut directed hypnotherapy in resolution of refractory IBS in a pediatric patient**
A Bapatla, P Luttig, M Serrano
Washington, DC, *MedStar Georgetown University Hospital*
Abstract 82
- 65 Improvement in quality of life after auricular percutaneous electrical nerve field stimulation treatment in functional abdominal pain disorders**
A Chogle, A Ralbovsky, E Ornelas
Orange, CA, *Children's Hospital of Orange County (CHOC)*
Abstract 83
- 66 Withdrawn**
- 67 Determining the placebo response in randomized controlled trials for pediatric constipation: A systematic review and meta-analysis**
MJ Gould, K Huysentruyt, Y Vandenplas, MA Marcon
Toronto, Ontario, Canada, Brussels, Belgium, *The Hospital for Sick Children*
Abstract 85
- 68 Behavioral factors and gastric electrical stimulation in children with nausea and vomiting**
K Hawa, N Hurwitz, J Sabella, K Ryan, S Janse, A Kroon Van Diest, N Bali, D Yacob, C Di Lorenzo, P L Lu
Columbus, OH, *Nationwide Children's Hospital*
Abstract 86
- 69 ERK1/2 activation preserves gastric pacemaker stem cells in aging**
Y Hayashi, DR Linden, GB Gajdos, SA Saravanaperumal, T Ordog, Rochester, MN, *Mayo Clinic*
Abstract 87
- 70 Prevalence of gastrointestinal symptoms in cystic fibrosis: Results of a prospective multicenter study – GALAXY**
B Moshiree, JA Freeman, P Vu, U Khan, SL Heltshe, SJ Schwartzberg, S Freeman, D Riva, CH Goss, M Sathe, GALAXY Investigators[†]
Charlotte, North NC, Atlanta, GA, Seattle, WA, Minneapolis, MN, Boston, MA, Bethesda, MD, Dallas, TX, [†]26 other study sites, *Atrium Health*
Abstract 88

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Poster No.

- 71 Schwann cell precursors in the aganglionic segment of Hirschsprung disease have a capacity to generate neurons in the gut**
W Pan, R Stavely, S Bhavé, R Guyer, A Rahman, M Omer, N Bousquet, AM Goldstein, R Hotta
 Boston, MA, *Massachusetts General Hospital* **Abstract 89**
- 72 Motility in Parkinson's disease: Is a multidisciplinary approach the best move?**
S Rao, M Jarvis, J Baker, E Thakur, M Hirsch, B Moshiree
 Charlotte, NC, *Atrium Health* **Abstract 90**
- 73 Withdrawn**
- 74 Withdrawn**
- 75 Withdrawn**
- 76 Efficacy of transcutaneous posterior tibial nerve stimulation in children with functional constipation**
M Saps, G Hungria, A Linero, M Mendez, E Villamarin, C Velasco-Benitez
 Miami, FL, Cali, Colombia, *University of Miami* **Abstract 94**
- 77 Jejunostomy tubes in patients with gastroparesis does not protect against readmission for lower respiratory infection**
S Sarvepalli, SM Sarvepalli
 Houston, TX, Mt. Pleasant, MI, *Baylor College of Medicine* **Abstract 95**
- 78 Significant temporal association of esophageal air events (supragastric belches, gastric belches, and air swallows) with hiccups: A case study in an adolescent**
FW Woodley, K Williams, C Di Lorenzo, H Michel
 Columbus, OH, *Nationwide Children's Hospital* **Abstract 96**
- 79 Should all asymptomatic infants under the age of 12 months undergoing impedance testing be assessed for aerophagia?**
FW Woodley, S Ciciora, K Vaz, Karla, K Williams, C Di Lorenzo
 Columbus, OH, *Nationwide Children's Hospital* **Abstract 97**
- 80 Increased occurrence of high amplitude propagating contractions on next day colon manometry for refractory pediatric constipation**
GM Zacur, L Watts, G Ezell, L Wild, M Ralls, JR Baker, WL Hasler
 Ann Arbor, MI, Charlotte, NC, *Michigan Medicine* **Abstract 98**

Gut Electric Stimulation and Recording

- 81 Intestinal electrical stimulation synchronized with intestinal slow wave ameliorates glucagon-induced hyperglycemia in rats**
SY Li, P Moussalli, H Zhu, J Chen
 Ann Arbor, MI, *University of Michigan* **Abstract 99**

Poster No.

- 82 Efficacy of gastric electrical stimulation (GES) in gastroparesis (GP): A systematic review and meta-analysis**
A Malik, U Farooq, M Nadeem, W Amjad, K Zakharia
 Villa Park, IL, Berwyn, IL, Oklahoma City, OK, Albany, NY, Iowa City, IA, *Loyola University Medical Center* **Abstract 100**
- 83 Response of bioelectric therapy for abdominal pain may be related to gastric tissue cell counts**
W Cai, S Diamond, P Tirumanisetty, A Stocker, L McElmurray, P Mathur, A Tansel, BD Rogers, W Starkebaum, C Pinkston, T Abell
 Louisville, KY, Minneapolis, MN, Pittsburgh, PA, *University of Louisville* **Abstract 101**

Microbiome and Probiotics in GI Health and Disease

- 84 Compositional and functional characterization of gut microbiome in slow transit constipation patients**
K Han, F Rao, B Kuo, K Staller, H Khalili
 Boston, MA, *Massachusetts General Hospital* **Abstract 102**
- 85 Withdrawn**
- 86 Diagnostic yield and microbial characteristics of duodenal aspirate and culture for SIBO or SIFO**
PP Uy, MM Asfari, J Sun, AL Cartelle, E Jimenez,
 T Karunaratne, S Arshad, A Sharma, SC Rao
 Augusta, GA, *Augusta University Medical Center* **Abstract 104**

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

- 87 Impact of neuromodulators for treatment of spastic chest pain after Heller myotomy for achalasia**
M Aggarwal, J McMichael, SL Gabbard
 Cleveland, OH, *Cleveland Clinic* **Abstract 105**
- 88 Catechol-O-methyltransferase drives cell-specific nociceptive signaling via the enteric miR-155/TNF- α axis**
L Yang, Q Zhou, L Yang, M Verne, B Zhang, J Fields, GN Verne
 Memphis, TN, *University of Tennessee Health Science Center (UTHSC)* **Abstract 106**

New Methods and Approaches to Understanding Neurogastroenterology and Motility

- 89 Healthy vs Hirschsprung: Bringing clarity to visualizing the enteric nervous system in children**
JD Eisenberg, KD Graham, A Lemke, R Cerón, BJ Wilkins, A Naji, RO Heuckeroth
 Philadelphia, PA, Cincinnati, OH, *Children's Hospital of Philadelphia* **Abstract 107**

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Poster No.

- 90 Unbiased detection and analysis of interstitial cell of Cajal classes by single-cell chromatin assay**
F Gao, KH Kim, GB Gajdos, SA Saravanaperumal, Y Hayashi, JH Lee, AE Bharucha, T Ordog
Rochester, MN, *Mayo Clinic* **Abstract 108**
- 91 Improved Fecobionics test for anorectal function assessment**
H Gregersen, Y Wang, M Wang, X Guo, F Field, M Nelson, W Combs, G Kassab
San Diego, CA, *California Medical Innovations Institute* **Abstract 109**
- 92 First case report using anal irrigation system to treat constipation in a visually impaired patient**
M Jarvis, J Baker, M Kennelly, A Herr, E Thakur, B Moshiree
Atrium Health, Charlotte, NC, *Atrium Health* **Abstract 110**
- 93 Development and implementation of a novel hybrid model for neurogastroenterology and motility fellowship**
S Javed, JC Reynolds, EL Toto, PK Kapavarapu, KN Fiorino, H Mousa, DA Piccoli, NK Ahuja
Philadelphia, PA, *University of Pennsylvania* **Abstract 111**
- 94 Chronic intestinal pseudo-obstruction is associated with methane overproduction**
MZ Khan, R Lyu, S Gabbard
Cleveland, OH, *Cleveland Clinic* **Abstract 112**
- 95 MoPill: Noninvasive assessment of gastric emptying and gastric motility**
R McCallum, K Espino, I Sarosiek
El Paso, TX, *Texas Tech University Health Sciences Center El Paso* **Abstract 113**
- 96 Accelerated contrast-enhanced gastrointestinal MRI captures whole-stomach motor events in rats**
X Wang, J Cao, U Scheven, Z Liu
Ann Arbor, MI, *University of Michigan* **Abstract 114**

Pharmacotherapy and Pharmacogenomics

- 97 Treatment satisfaction and improvement in quality of life with plecanatide among patients with chronic idiopathic constipation and irritable bowel syndrome with constipation: Analyses from four phase 3 trials***
DM Brenner, C Chang, E Shah, K Chong, SM Lorenzen, GS Sayuk
Chicago, IL, Albuquerque, NM, Lebanon, NH, Bridgewater, NJ, St. Louis, MO, *Northwestern University Feinberg School of Medicine* ***Presenting on Saturday Abstract 115**

Poster No.

- 98 Plecanatide is effective in severely constipated patients with chronic idiopathic constipation and irritable bowel syndrome with constipation**
B Cash, A Sharma, SM Lorenzen, L Chang
Houston, TX, Augusta, GA, Bridgewater, NJ, Los Angeles, CA, *University of Texas Health Science Center* **Abstract 116**
- 99 Chronic colonic and bladder hypersensitivity induced by pelvic irradiation is attenuated by guanylate cyclase-C agonist IW-3300**
CO Ligon, G Hannig, C Higgins, B Greenwood-Van Meerveld
Oklahoma City, OK, Boston, MA, *University of Oklahoma Health Sciences Center* **Abstract 117**
- 100 Patterns of IBS-D medication use in patients with IBD**
RR Sharma, C Ramos Rivers, DJ Levinthal, E Szigethy, F Koutroumpakis, M Ahsan, MD, J Dueker, ER Johnston, AM Barrie, JR Harrison, MB Schwartz, J Hashash, D Babiechenko, G Tang, DG Binion, A Tansel
Pittsburgh, PA, *University of Pittsburgh Medical Center* **Abstract 118**
- 101 Patterns of IBS-C medication use in patients with IBD**
RR Sharma, C Ramos Rivers, DJ Levinthal, E Szigethy, F Koutroumpakis, M Ahsan, MD, J Dueker, ER Johnston, A Barrie, JR Harrison, MB Schwartz, J Hashash, D Babichenko, G Tang, DG Binion, A Tansel
Pittsburgh, PA, *University of Pittsburgh Medical Center* **Abstract 119**
- 102 Eighteen-month interim analysis of efficacy and safety of givosiran, an RNAi therapeutic for acute hepatic porphyria, in the ENVISION open label extension**
DJ Kuter, S Keel, CJ Parker, DC Rees, U Stölzel, P Ventura, M Balwani, L Gouya, A Simon, S Liu, JJ Ko, S Rhyee, SM Silver
Boston, MA, Seattle, WA, Salt Lake City, UT, London, United Kingdom, Chemnitz, Germany, Modena, Italy, New York, NY, Paris, France; Cambridge, MA, Ann Arbor, MI, *Massachusetts General Hospital* **Abstract 120**
- 103 SC methyl naltrexone in patients with advanced illness and OIC: The impact of baseline laxative use**
QT Yu, ED Shah, NE Slatkin, N Stambler, RJ Israel
Loma Linda, CA, Lebanon, NH, Bridgewater, NJ, New York, NY, *Loma Linda University Health* **Abstract 121**
- ANMS Travel Award**

Poster Session, continued

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Psychogastroenterology and Behavioral Interventions

Poster No.

- 104 Environmental enrichment prevents stress-induced epigenetic changes in gene expression at the central nucleus of the amygdala to inhibit visceral hypersensitivity**

*A Orock, T Louwies, B Greenwood-Van Meerveld
Oklahoma City, OK, University of Oklahoma Health
Sciences Center*

Abstract 122

ANMS Travel Award

- 105 Environmental enrichment reduces stress-induced visceral pain through modulation of microglia-mediated neuronal plasticity in the central nucleus of the amygdala**

*T Yuan, B Greenwood-Van Meerveld
Oklahoma City, OK, University of Oklahoma Health
Sciences Center*

Abstract 123

Sex Differences in Neurogastroenterology and Motility

Poster No.

- 106 Stress-induced visceral pain in female rats is associated with epigenetic remodeling in the central nucleus of the amygdala**

*T Louwies, B Greenwood-Van Meerveld
Oklahoma City, OK, University of Oklahoma Health
Sciences Center*

Abstract 124

- 107 MoPill: A noninvasive measure of small bowel segmentation and the role of gender**

*I Sarosiek, K Espino, R McCallum
El Paso, TX, Texas Tech University Health Sciences Center
El Paso*

Abstract 125



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