Dear Faculty, Staff, Trainees, Alumni, and Friends,

It’s May and that means it’s time for GI & Hepatology’s version of the Academy Awards – Digestive Diseases Week. DDW 2024 will once again provide an opportunity for Michigan faculty to shine. Our faculty will play key roles in a wide range of educational activities and report their groundbreaking research to clinicians and scientists from around the world. This year, our faculty will deliver an astounding 129 invited lectures (22) and scientific presentations (25 oral presentations and 82 posters). Of particular note, Allie Schulman (GLP-1 agonists and Endoscopy) will speak at the ASGE Presidential Plenary Session scheduled for Saturday morning, May 18. Jessica Mellinger will enlighten us on alcoholic liver disease and Megan Adams will review the latest colorectal cancer screening guidelines at the AGA Postgraduate Course. Allie Schulman will discuss endobariatric therapies at the ASGE Postgraduate Course. UM faculty will play a prominent role in AGA section Distinguished Abstract Plenary (DAP) sessions. Jacob Kurlander’s work will be featured on the Clinical Practice Section DAP and Jiande Chen’s research on the Obesity, Metabolism and Nutrition DAP. John Wiley will be honored with the Research Mentor Award during the Neurogastroenterology & Motility Section DAP. Oral presentations by Prashant Singh and Shanti Eswaran will expand our understanding of the role of food in the illness experience and treatment of patients with Disorders of Gut-Brain Interaction. In this edition of DIGEST, we provide capsule summaries of some of the division’s most impactful presentations. We also provide a full listing of invited lectures and scientific presentations by our talented and distinguished faculty. We hope that you use this document as a road map to plan your DDW experience and it helps you to stay on the cutting edge of the latest science and best practices for your patients. In between the exceptional science and education, I hope you can find time to join us at the annual University of Michigan DDW Reception on Saturday evening from 6-8 pm on the rooftop of the Cambria Hotel. I hope to see you all in DC and GO BLUE!!

William D. Chey, MD, AGAF, FACP, FACC, RFF
H. Marvin Pollard Professor of Gastroenterology
Chief, Division of Gastroenterology and Hepatology
Professor, Department of Internal Medicine
Professor, Department of Nutritional Sciences

Pictured above: Bill & Janine Chey with first grandchild, Amelia Rose.
ACG Clinical Research Leadership Program
Joy Chang
Kira Newman
Prashant Singh

AGA Leadership Program: AGA FORWARD
Jorge Machicado

Career Development Awards
Jeffrey Berinstein: K23
Shirley Cohen-Mekelburg, K23
Jorge Machicado, ACG Junior Faculty Development Award
Andrew Read, KO8

Conversion from K to R Awards:
Jessica Mellinger
Nataliya Razumilava
## 2024 Leadership Roles

<table>
<thead>
<tr>
<th>Name</th>
<th>Role and Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>William D Chey, MD, FACG, AGAF, FACP, RFF</td>
<td>Vice President, ACG, Vice President, IFFGD</td>
</tr>
<tr>
<td>John Kao, MD</td>
<td>AGA Nominating Committee 2024-2025</td>
</tr>
<tr>
<td>Anna Lok, MD</td>
<td>Program Mentor, AGA FORWARD</td>
</tr>
<tr>
<td>Nataliya Razumilava, MD</td>
<td>Councilor, AGA GI Oncology Section</td>
</tr>
<tr>
<td>Joel Rubenstein, MD</td>
<td>AGA Nominating Committee 2023-2024</td>
</tr>
<tr>
<td>Allison Schulman, MD, MPH, FASGE</td>
<td>Chair, Association for Bariatric Endoscopy (ABE) through the ASGE</td>
</tr>
<tr>
<td>Elena Stoffel, MD, MPH</td>
<td>Chair, AGA GI Oncology Section</td>
</tr>
<tr>
<td>Grace Su, MD</td>
<td>Chair, AGA GI Oncology Section</td>
</tr>
</tbody>
</table>
UM GI & Hepatology: A Tradition of National Leadership

H. Marvin Pollard  
President, AGA, 1959

William D. Chey  
Editor-in-Chief, American Journal of Gastroenterology, 2010-2015

Tachi Yamada  
President, AGA, 1996

Bishr Omary  
Editor-in-Chief, Gastroenterology, 2011-2016

Grace Elta  
President, ASGE, 2007

Elliot Tapper  
Editor-in-Chief, Hepatology Communications, 2022-present

Richard Boland  
President, AGA, 2011

Megan Adams  
Editor-in-Chief, GI & Hepatology News (2022-2027)

John Allen  
President, AGA, 2014

Anna Lok  
President, AASLD, 2017

Bishr Omary  
President, AGA, 2020

John Inadomi  
President, AGA, 2021

John Carethers  
President, AGA, 2022

Grace Su  
President, AASLD, 2025

William D. Chey  
President, ACG, 2026

Michael Lucey  
President, AASLD, 2027

ACG Capitol Hill Day 2024  
Left to Right: Shanti Eswaran, Bill Chey, Justin Brandler, Jeffrey Berinstein
The adult healthy human pancreas has been poorly studied given lack of indication to obtain tissue from the pancreas in the absence of disease and rapid postmortem degradation.

Through our partnership with our local organ donation procurement facility, we leveraged cutting-edge transcriptomic and spatial technologies to further our understanding of this organ prior to the development of pathologic disease.

Acquisition of donor pancreata for research purposes was approved by the Gift of Life research review group. Donor pancreata not eligible for transplant or for whom there were no eligible recipients were collected for research. Upon arrival to the laboratory, the donor pancreas was dissected by a clinically-trained pancreatobiliary surgeon. Single cell RNA sequencing was performed using the 10x Genomics Platform. Spatial transcriptomics of FFPE blocks was performed using the GeoMX Nanostring Platform.

Histopathological analysis of the samples surprisingly revealed pancreatic intraepithelial neoplasia (PanIN) lesions in over half of our cohort of 60 samples. PanIN, the most common precursor lesion to pancreatic cancer, is microscopic and cannot be detected with conventional radiology; thus, its prevalence in the general healthy population was previously unknown.

Integrating single cell RNA sequencing and spatial transcriptomics, we compared healthy pancreata to pancreatic cancer and observed distinct transcriptomic signatures in the microenvironment of these tissues, particularly in the fibroblast and myeloid compartments. Examination of the epithelial compartment of neoplastic lesions revealed that PanIN cells from healthy pancreata were remarkably similar in transcriptional profile to cancer cells, suggesting that neoplastic pathways are initiated early in tumorigenesis.

Further investigation to identify mechanisms that promote PanIN progression to malignancy bears important clinical significance, as results may have the possibility to be leveraged for early detection and therapeutic strategies.
Although acute pancreatitis (AP) was traditionally considered a self-limited condition, emerging data has demonstrated that AP can lead to a long-term effect in pancreatic endocrine and exocrine function.

PAPPEI (Post-Acute Pancreatitis Pancreatic Exocrine Insufficiency) was a longitudinal cohort study that aimed to evaluate the incidence of exocrine pancreatic insufficiency (EPI) after AP.

Between 2017 and 2021, 112 patients with AP were enrolled at 3 US academic centers and provided fecal elastase during hospital admission. Of these, 85 patients provided fecal elastase at 12 months from enrollment.

The 1-year incidence of EPI after AP was 34% (severe EPI in 22% and mild in 12%).

Moderately severe or severe AP, idiopathic etiology, and pre-existing diabetes were independently associated with increased risk of EPI at 1-year of AP.

EPI occurred not only in patients with moderately severe/severe AP, but also following mild interstitial AP; albeit, with lower incidence.

In a quarter of patients with EPI at the time of AP hospitalization, pancreatic function spontaneously recovers over the subsequent year.
Automated Body Composition And Liver And Spleen Analysis Are Associated With Mortality, Incident Cirrhosis, And Hepatic Decompensation In Metabolic Dysfunction-Associated Steatotic Liver Disease

Vincent L. Chen, Brian A. Derstine, Brian E. Ross, Binu Enchakalody, Peng Zhang, Grace L. Su

- Metabolic dysfunction-associated steatotic liver disease (MASLD) affects 1/3 of adults in the US and is a leading cause of end-stage liver disease
- MASLD is associated with obesity, but obesity is a crude way to measure body composition and may hide important subtleties in how fat, muscle, and other tissues affect outcomes
- Liver and spleen-related traits including size and shape may also affect prognosis in people with MASLD
- We used an automated platform to look at how body composition and liver/spleen traits affect risk of death and development of cirrhosis or decompensation in people with MASLD
- Several parameters were associated with liver-related complications, including spleen volume, liver volume and shape, muscle volume, and visceral and subcutaneous fat density
- Many parameters were also associated with mortality
- Compared to important clinical predictors including Fibrosis-4 score and body mass index, adding morphomics predictors resulted in markedly superior prediction of incident cirrhosis and mortality in MASLD

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Clinical only</th>
<th>Morphomics only</th>
<th>Clinical and morphomics</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver-related events (24 cases)</td>
<td>0.82 (0.72-0.91)</td>
<td>0.85 (0.76-0.95)</td>
<td>0.89 (0.80-0.99)</td>
<td>0.083</td>
</tr>
<tr>
<td>Incident cirrhosis (35 cases)</td>
<td>0.76 (0.68-0.85)</td>
<td>0.78 (0.67-0.89)</td>
<td>0.87 (0.77-0.96)</td>
<td>0.028</td>
</tr>
<tr>
<td>Mortality (75 cases)</td>
<td>0.77 (0.71-0.83)</td>
<td>0.83 (0.78-0.88)</td>
<td>0.85 (0.81-0.90)</td>
<td>0.00012</td>
</tr>
</tbody>
</table>
A low FODMAP diet (LFD) is the most evidence-based diet in the treatment of patients with irritable bowel syndrome (IBS) but is difficult to operationalize in clinical practice.

We have reported that the FODMAPs most likely to trigger symptoms are fructans and galacto-oligosaccharides (GOS).

In a double-blind, multi-center, pilot study, we compared the efficacy of a simplified version of LFD (FODMAP-simple), which only restricted fructans and GOS, with a traditional LFD (restricting fructans, GOS, fructose, lactose, and polyols) in patients with IBS.

In mITT analysis, FODMAP-simple and the traditional LFD led to similar benefits for abdominal symptoms including pain and bloating.

FODMAP-simple was better tolerated and had fewer dropouts than the LFD.

Less restrictive "bottom-up" strategies for the LFD deserve further study.
Does The Mediterranean Diet Have Similar Efficacy As A Low FODMAP Diet In Irritable Bowel Syndrome? Results From A Pilot Randomized Controlled Trial

Prashant Singh, Sofia Iram, Samuel Chey, Samara Rifkin, Gregory Dean, Asaf Kraus, Christine Lothen-Kline, Jane Muir, Shanti L. Eswaran, William D. Chey

- A low FODMAP diet (LFD) improves global symptoms in patients with IBS but is a restrictive diet, and puts patients at risk for micronutrient deficiencies, and prolonged restriction.
- The Mediterranean diet (MD) with its overall health benefits has been proposed as a non-restrictive dietary approach to IBS but has never been directly compared with LFD.
- We compared the efficacy of an MD with LFD in a pilot-feasibility, randomized controlled trial.
- LFD & MD improved abdominal symptoms including pain & bloating in the majority of patients with IBS.
- Global endpoints trended towards greater benefit for the LFD than MD.

MD vs. LFD in our study
- MD Improved abdominal symptoms in the majority of patients with IBS
- The magnitude of abdominal and global symptom improvement with LFD was greater than MD
- Larger studies are needed before MD can be recommended in clinical practice for IBS
Disaccharidases are brush border enzymes that digest disaccharides to monosaccharides for absorption across the intestinal epithelium. Patients with disaccharidase deficiency (DD) may experience similar symptoms to IBS-D and functional diarrhea (FD), but the prevalence of DD in symptomatic adults is poorly defined. We performed a multicenter study assessing the prevalence of DD in patients with IBS-D and FD. Disaccharidase (DA) enzyme activity was measured from small bowel biopsies obtained from 199 IBS-D and FD patients. The most common enzyme deficiency was lactase (see Table), but a substantial minority of patients had (9.5%) were identified with non-lactase deficiency. Disaccharidase deficiency may be an important and overlooked causes for symptoms in US patients with IBS-D or FD.
Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) are increasingly used for the management of diabetes and obesity due to their efficacy in glycemic control, cardiovascular risk reduction, and additional benefits like appetite suppression. These medications are known to delay gastric emptying and potentially increase the risk of retained gastric solid food contents, raising concerns about aspiration and airway compromise during endoscopic interventions. As the number of patients taking GLP-1 RAs increases exponentially, there continues to be ambiguity among practicing gastroenterologists regarding the management of these medications prior to procedures. This presidential plenary will review the data to date and provide more specific guidance on approaching and triaging endoscopic procedures.
Rooms are in the Walter E. Washington Convention Center, unless indicated otherwise. Posters are listed by poster number, at the end of each day. The poster sessions are from 12:30 - 1:30 PM in Hall A.

**SATURDAY, MAY 18**

8:00 AM • Clinical Symposium 145A

**Best of DDW In Chinese**

**Moderator: John Kao**

8:45 AM • Research Forum 152ab

**Tracing Pancreatic Tumor Evolution Through Space And Time**


9:44 AM • ASGE Presidential Plenary Ballroom C

**J. Edward Berk Award Lecture: State-of-the-Art Presentation: The Skinny On GLP-1 Agonist And Endoscopy**

Allison R. Schulman

10:00 AM • Research Forum 152AB

**Artificial Intelligence in GI Cancer Screening and Therapeutics**

**Moderator: Ryan Stidham**

10:00 AM • Clinical Symposium 151A

**Collaborative Care In Motility**

**Eric Dinesh Shah**

10:12 AM • Debate 202A

**Alcohol Associated Liver Disease/Liver Transplant: Pro Argument**

**Jessica L. Mellinger**

10:50 AM • Clinical Symposium 151B

**Incorporating A GI Expert Dietitian In A GI Academic Center (Case/Study/Demo)**

**William D. Chey, Amanda Lynett**

11:15 AM • Clinical Symposium 151B

**Incorporating a GI Expert Dietitian into your GI Practice: Panel Discussion**

Lauren Cornell, Tamara D. Freuman, Eric S. Goldstein, William D. Chey, Amanda Lynett

11:15 AM • Clinical Symposium 151A

**Multidisciplinary Approach to High Quality Care: Panel Discussion**

**Eric Dinesh Shah,** Carolyn Newberry, Xavier Llor, David A. Leiman, Deepak V. Gopal

12:30 PM • Postgraduate Course Luncheon 151A

**A Review Of New CRC Screening Guidelines**

**Megan A. Adams**

4:00 PM • Clinical Symposium 149AB

**American Gastroenterology Association Gender Equity Project**

**Moderator: Kira Newman**

4:00 PM • Research Forum 140AB

**Deciphering the Innate Immune Landscape and Host-Microbial Interactions in IBD**

**Moderator: Shrivas Bishu**

4:12 PM • Postgraduate Course 145B

**Is A Simplified Low FODMAP Restriction Phase Possible? Results From A Multicenter, Double-Blind, Pilot-Feasibility, Randomized Controlled Trial**

**Prashant Singh, Samuel Chey, Gregory Dean, Shanthi L. Eswaran,** Johanna Iturrino, Judy Nee, Vikram Rangan, Anthony Lembo, William D. Chey

4:48 PM • Research Forum 145B

**Efficacy Of A Novel, Discrimatory P-Value Based, IGG Assay-Guided Elimination Diet By IBS Subtype: Results From A Multicenter, Randomized, Double-Blind, Sham-Controlled Study**

**Prashant Singh, William D. Chey, Will Takakura,** Anthony Lembo

4:55 PM • Postgraduate Course Ballroom AB

**Epidemiology Of Alcohol Associated Liver Disease**

Jessica L. Mellinger

**POSTER SESSIONS • Saturday**

**Behavioral Therapy For Functional Heartburn: Recommendation Statements**


**C-Reactive Protein Is A Better Predictor Of 90-day Colectomy Than Calculated Baseline Infliximab Clearance In Acute Severe Ulcerative Colitis**

Daniel Aintabi, Priya Kathuria, Dustin Romain, Charlotte Larson, Nicholas R Tedesco, **Shirley Cohen-Mekelburg, Peter D.R. Higgins, Jeffrey Berinstein**

**Comparing Serial And Current Liver Stiffness Measurements To Predict Decompensation In Compensated Advanced Chronic Liver Disease Patients**

Yu Jun Wong, **Vincent L. Chen,** Asim Abdulhamid, Tosetti Giulia, Huttkan Navadurong, Apichat Kawdeech, Jessica Cristiu, Michael W. Song, Thaninee Prasopkokkorn, Kai Le Ashley Tiong, Pooja Devan, Jean Ee Neo, Pimsiri Sripongpun, Catherine A. Stedman, Sombat Treeprasertsuk, Massimo Primignani, Jing Hieng Ngu, Juan Abraldes

**Development And Validation Of The “Pick-Up-Strics” Score To Predict Fibrostenosis In Patients With Eosinophilic Esophagitis Prior To Endoscopy**

Joy W. Chang, Sean LaFata, Timothy S. Gee, Walker D. Redd, Trevor Barlowe, Cary C. Cotton, Swathi Eluri, Craig Conover Reed, Evan S. Dellon
SATURDAY, MAY 18 (cont’d)

Diagnostic Classification Systems for Disorders of Gut-Brain Interaction Should Include Psychological Symptoms
Michael P. Jones, Gerald J. Holtmann, Jan F. Tack, Florencia Carbone, William D. Chey, Natasha A Koloski, Ayesha Shah, Shrikant Ishyer Bangdiwala, Ami D. Sperber, Olafur S Palsson, Nicholas J. Talley

Digital Assessment Of Family Cancer History In Outpatient Gastroenterology Settings Identifies Individuals At Risk For Hereditary Cancer Syndromes
Sarah Austin, Erika Hanson, Liliana Arida-Moody, Tannaz Guivatchian, Erika Koepe, Elizabeth Rizzo, Jennifer Jane Griggs, Kenneth Resnicow, Elena M. Staffel

Efficacy Of Fully Covered Self-expandable Metal Stents With Anchoring Double Pigtail Plastic Stents For Treatment Of Biliary Strictures: A Systematic Review And Meta-Analysis
Fadi Hawa, Alejandra Vargas, Priyata Dutta, Elit Quingalahua, Ricardo A. Marin-Tamayo, Ana Rosa Vilela Sangay, Jean M. Chalhoub, Jorge D. Machicado

Eliciting Three Distinct Treatment Preference Archetypes In Eosinophilic Esophagitis May Have Implications For Selecting Therapies
Joy W. Chang, Kelcie Brophy, Kerry A Ryan, Joel H. Rubenstein, Evan S. Dellon, Lauren P Wallner, Raymond De Vries

Mohamed Abdelnabi, Lydia Watts, Prashant Singh, Ruiting Li, Ankhbayar Lkhagva, Shengnan Duan, Shuhan Liu, Bo Wen, Jason Baker, Aleksas Matvekas, William D. Chey, William L Hasler, Saeid Raofi, Wei-Jhe Sun, Heather Boyce, Minori Kinjo, Manjunath Pai, Duxin Sun, Borko Nojkov

Gender Disparities In Gastroenterology Authorship And Academic Roles
Aaron Tabibzadeh, Shahroz Fatima, Leah Kim, Kevin Liu, Amy Ou, Elissa Lin, Gregory Faulx, Sophia Popov, Vassil A. Popov, Allison R Schulman, Renee Williams, Violeta Popov

Intraoperative And Postoperative Outcomes In Tofacitinib-treated Acute Severe Ulcerative Colitis Patients Undergoing Total Abdominal Colectomy
Charlotte Larson, Jeffrey Berinstein, Dustin Romain, Nicholas R Tedesco, Priya Kathuria, Jakob Benedikt Seidelin, Peronne Dige Ovesen, Mathieu Uzzan, Brad D Constant, Alaa El-Hussuna, Peter D.R. Higgins, Casper Steenholdt

Knowledge, Attitudes, Work And Training Experiences Related To Minoritized Sexual And Gender Identities Among Healthcare Workers In Gastroenterology And Hepatology In North America
Tzu-Hao (Howard) Lee, Nikki Duong, Douglas Simonetto, Sandra M. Quezada, Dennis J Spencer, Sonali Paul, Kira L Newman

Long-term Indwelling Plastic Stents (LTIS) Can Reduce Pancreatic Fluid Collections (PFC) Recurrence After Resolution With Endoscopic Transmural Drainage (ETD): A Retrospective Study
Fadi Hawa, Albert Ha, Esteban Urias, Zheyi Han, Thomas Hunold, George M. Philips, Allison R. Schulman, Jorge D. Machicado, Richard Kwon, Erik-Jan Wamsteker

Multiple Biosimilar Infliximab Switching Is Not Associated With Adverse Outcomes In Inflammatory Bowel Disease: A Real-World Effectiveness Analyses In A National U.S. Cohort
Jason Ken Hou, Codey Pham, Anthony Xu, Shubhada Sangsry, Varsha Modi, Akbar Waljee

Non-Steroidal Anti-inflammatory Drugs (NSAIDs) Reduce Severity And Length Of Stay In Patients With Acute Pancreatitis (AP): A Systematic Review And Meta-Analysis
Alejandra Vargas, Priyata Dutta, Fadi Hawa, Jean M Chalhoub, Elit Quingalahua, Ana Rosa Vilela Sangay, Ricardo A. Marin-Tamayo, Antonio Mendoza Ladd, Jorge D. Machicado

Novel Automated Smart Toilet Allows Objective Longitudinal Assessment Of Bowel Movements - Preliminary, Home-Based, Experiences
Sonia Grego, Walker Gray Resney, Brian Stoner, Samee K Berry, William D. Chey, Borko Nojkov

Patients With Cirrhosis View Ambulatory HCC Screening Results More Rapidly Than Providers, Especially Younger And White Patients
Beverly Kyalwazi, Jonathan Melendez-Torres, John Deng, Robert Turer, Timothy P. Hogan, Elliot B. Tapper, Donglu Xie, Sruhti Yekkaluri, Amit G. Singal, Jeremy Louisaint

Prevalence Of Steatotic Liver Diseases And Associated Risk Factors In Sexual And Gender Minorities In The United States
Tzu-Hao (Howard) Lee, George T. Cholankeril, Donghee Kim, Ajaz Ahmed, Fasiha Kanwal, Ruben Hernaez, Kira L Newman

Preventive Effects Of Auricular Vagal Nerve Stimulation For Chemotherapy-Induced Constipation In Rats Based On RNA-SEQ Analysis
Sidan Long, Yan Wang, shuangshuang ji, Shiyi Li, Jiande Chen

Real-World Use Of Patient Reported Outcome Measures At A Large Tertiary Inflammatory Bowel Disease Center
Jessica L Sheehan, Laura Johnson, Shirley Cohen-Mekelburg, Peter D.R. Higgins

The Impact Of Age On Disorders Of Gut Brain Interaction
Tia Andrade, Vikram Rangan, Johanna Iturrino, Prashant Singh, Chethan Ramprasad, Subhash Kulkarni, Judy Nee, Anthony Lembo, Sarah Ballou

SUNDAY, MAY 19

8:00 AM • Clinical Symposium 152AB

Coefficient Of Fat Absorption: Past, Present And Future
Matthew J. DiMagno

8:00 AM • Research Forum 202B

Oropharyngeal and Esophageal Motility Disorders
Moderator: Joan Chen

8:00 AM • Translational Symposium 103AB

Immuno-Oncology For The Gastroenterologist: Therapeutic Advances And Implications For Management
Moderator: Nataliya Razumilava

10:00 AM • Clinical Symposium 154AB

The Role Of Food In The Pathophysiology Of Disorders Of Gut-Brain Interaction
William D. Chey
**SUNDAY, MAY 19 (cont’d)**

### Electrical Acupuncture at Acupoint ST36 Relieves Visceral Pain In A Rodent Model Of Chronic Pancreatitis

Shuangshuang Ji, Sidan Long, Shiying Li, Md Jahangir Alami, Jiande Chen

### Exam Quality Of Liver Ultrasound And Dynamic Contrast-enhanced MRI And Impact On Early-Stage HCC Detection In Patients With Cirrhosis

Karim Seif El Dahan, Takeshi Yokoo, Mishal Mendiratta-Lala, David T Fetzer, Matthew S. Davenport, Darine Daher, Nicole E. Rich, Edward Yang, Neerah Dilip Parikh, Amit G. Singal

### Impact Of Living With An Ileal-Pouch Anal Anastomosis: Netography Of Individuals With Diverse Sexual Orientations And Practices

Darine Daher, Daniela Guerrero Vinsard, Ashok Kumbamu, Kira L Newman, Sunandha V. Kane, Victor G. Chedd

### Machine Learning Advanced Fibrosis And At-risk Mash (ALADDIN) With A Web-based Calculator For Probability Prediction


### Metabolomic Profiling Of Portal And Peripheral Venous Blood Demonstrates Impairment In L-Serine Abundance And Homocysteine Degradation Within Portal Venous Circulation For Patients With MASLD And Advanced Fibrosis

Thomas J. Wang, Shi Su, Durga Thakral, David Cohen, Marvin Ryoo

### Mortality Outcomes In Individuals With Metabolic Dysfunction-associated Steatotic Liver Disease Without Alcohol Consumption vs Moderate Alcohol Consumption: A Nationwide Cohort Study

Majd B. Aboona, Pojsakorn Danpanichkul, Vincent L. Chen, Donghee Kim, Juan Pablo Arab, Karn Wijarnpreecha

### Office-Based Testing For An Evacuation Disorder Using The Point-Of-Care Rectal Expulsion Device (RED) Supports Cost Effective Adoption Of The AGA/ACG Chronic Constipation Guideline

Eric Dinesh Shah, William D. Chey

### Opposing Effects Of TM6SF2 Genotype On Hepatic And Cardiac Outcomes Based On Clinical Risk Factors In The UK Biobank

Vincent L. Chen, Antonino Oliveri, Chinmay Raut, Yanyhua Chen, Kelly Cushing-Damm, Elizabeth Speliotes

### Predictors Of Health-related Quality Of Life In Metabolic Dysfunction-Steatotic Liver Disease In A Prospective Cohort

Anushka Dalvi, Blake Czapla, Vincent L. Chen

### Prevalence And Etiologies Of Non-Responsive Celiac Disease: A Systematic Review And Meta-Analysis

Nishant Aggarwal, Unnati Bhatia, Vignesh Dwarkanathan, Achintya D Singh, Prashant Singh, Vineet Ahuja, Govind K Makharia

### Prevalence Of Cirrhosis And Extrahepatic Manifestations Among Lean And Non-lean Individuals With Metabolic Dysfunction-associated Steatotic Liver Disease

Leith K. Ghani, Majd B. Aboona, Pooja Rangan, Vincent L. Chen, Cheng Han Ng, Daniel Huang, Mark Muthiah, Donghee Kim, Moises I. Nevah Rubin, Mai Ai Thanda Han, Michael B. Fallon, Karn Wijarnpreecha

### Prognostic Accuracy Of Vibrati-control Transient Elastography-Based Predictors In People With Diabetes And Obesity

Venkata Sai J. Jasty, Kai Le Ashley Tiong, Majd B. Aboona, Michael W. Song, Esteban Urias, Claire S. Faulkner, Pooja Devan, Jean Ee Neo, Karn Wijarnpreecha, Yu Jun Wong, Vincent L. Chen

### Racial Disparities In Prevalence Of Cirrhosis And Extrahepatic Manifestations In Metabolic Dysfunction-Associated Steatotic Liver Disease

Majd B. Aboona, Leith K. Ghani, Pooja Rangan, Vincent L. Chen, Cheng Han Ng, Daniel Huang, Mark Muthiah, Donghee Kim, Moises I. Nevah Rubin, Mai Ai Thanda Han, Michael B. Fallon, Karn Wijarnpreecha

### Regulation Of Gastric Epithelial Cell Transcriptional Programs By Bone Morphogenetic Protein Signaling

Andrea Todisco, Tsutomu Takeda, Justin Colacino, Maria Mao, Akihito Nagahara

### Self-Stigma, Discrimination, And Inflammatory Bowel Disease Disclosure Are Associated With Disease Activity

Kira L Newman, Jessica N Pfaftaly, Patricia A Wren, Millie Dascomb Long, Peter D.R. Higgins

### The Salivary Microbiome As A Noninvasive Screening Tool For Barrett’s Esophagus

Jesus Mario Luevano, Joel H. Rubenstein, Rebecca Clare Fitzgerald, Anne-Catrin Uhlemann, Heekuk Park, Hossein Khiabanian, Tal Korem, Julian A Abrams

### Using Routinely Collected Patient Reported Outcome Measures To Efficiently Identify Mental Health Disorders In Inflammatory Bowel Disease Clinics

Jessica L Sheehan, Laura Johnson, Shirley Cohen-Mekelburg, Peter D.R. Higgins

---

**MONDAY, MAY 20**

8:00 AM • Plenary Session  Ballroom A

AGA Clinical Science Plenary
Moderator: Elena M. Stoffel

8:00 AM • Translational Symposium  145AB

Emerging Tests For Screening/Early Detection Of GI (and other) Cancers
Moderator: Neerah D. Parikh

8:20 AM • Clinical Symposium  144ABC

Chronic Fistulae: Plugging The Leak
Allison R. Schulman

9:20 AM • Research Symposium  102AB

Auricular Vagal Nerve Stimulation Improves Hyperglycemia By Enhancing Release Of Postprandial Incretin Hormones And Vagal Efferent Activity In Type 2 Diabetic Rats
Fei Li, Gao-Jue Wu, Yan Li, Shiying Li, Md Jahangir Alam, Jiande Chen

10:00 AM • State-of-the-Art Lecture  201

Nutrition, frailty, sarcopenia for the cirrhotic patient
Moderator: Pratima Sharma

10:42 AM • Topic Forum  143ABC

Radioimmune, Fluoroscopic, And Endosonographic Predictors Of Failed Endoscopic Ultrasound (EUS)-Guided Transgastric Stent Placement In Patients With Roux-en-y Gastric Bypass Anatomy
POSTER SESSIONS • Monday

A Multicenter Study Of The Real-World Effectiveness Of Risankizumab In Crohn’s Disease
Manar Askar, Seema Belani, Jalpa Devi, Katherine Huang, Abdul Khan, Hyder Said, Anish Patel, Shrinnivas Bishu, Richa Shukla, Marc Fenster, Ryan C Ungaro, Andres Yarur, Parakkal Deepak, Amanda M Johnson

Elevated Methylyglyoxal Formation In Diabetes: Its Implication In Delayed Gastric Emptying And The Involvement Of Atp-Sensitive Potassium Channel Shiyong Li, Gao-Jue Wu, Fei Li, Jiaqun Chen

Genetically Predicted Ulcerative Colitis Is Associated With Increased Risk For Clostridioides Difficile Infection
Kelly Cushing-Damm, Yanhua Chen, Xiaomeng Du, Annapurna Kuppa, Chinhmay Raut, Antonino Oliveri, Vincent L Chen, Brett Vanderwerff, Matthew Zawistowski, Krishna Rao, Peter D.R. Higgins, Elizabeth K Speliotes

Health Outcomes, Discrimination, And Stigma Among Sexual And Gender Minority People With Inflammatory Bowel Disease
Kira L Newman, Patricia A Wren, Millie Doscomb Long, Peter D.R. Higgins

Histologic Diagnosis Of Pancreatic Cystic Lesions (PCLS) With Fine Needle Biopsy (FNB): Predictors Of Positive Histology And Effect On Treatment Decisions
Ankit Mishra, Dhiraj K Peddu, Thomas Hunold, George M Philips, Erik-Jan Wamsteker, Richard Kwon, Allison R Schuman, Jiaqi Shi, Eileen Carpenter, Jorge D. Machicado

Is It Time To Stop Performing Routine Endoscopic Sphincterotomies When Placing Biliary Stents? A Systematic Review And Meta-Analysis
Priyata Dutta, Elit Quingalahua, Ricardo Marin, Alejandra Vargas, Jean M. Chalhoub, Fadi Hawa, Jorge D. Machicado

Medications For Alcohol Use Disorder Are Increasingly Prescribed In Patients With Severe Alcohol-Related Liver Disease With A Favorable Safety And Tolerability Profile
Abhishek Shenoy, Venkata Sai J. Jasty, Sarah Nasser, Sarah Uttal, Robert J. Fontana

Real-World Treatment Patterns Among Newly Diagnosed Patients With Erosive Esophagitis In The US
Dhyanesh A. Patel, Nicholas . Shaheen, Bonnie Bui, Murali Gopal, Rinu Jacob, Benjamin Chastek, Christina Landis, Eric Dinesh Shah

Reducing Low Value Care: The Overuse Of Corticosteroid Premedication For Infliximab Infusions
Jeffrey Gibbs, Akbar K. Waljee, Brooke Kenney, Shirley Cohen-Mekelburg

Standardized Order Sets For Risk-based Colorectal Cancer Screening Increase Utilization Of Stool-based Test
Shanti L. Eswaran, Stacy B. Menees, Tammy Ellies, Elizabeth Spranger, Elena M. Stoffel

Trainee Participation And Outcomes In High-Risk ERCP: A Secondary Analysis Of The Stent Versus Indomethacin (SVI) Trial Dataset

TUESDAY MAY 21

8:00 AM • Research Forum
Epidemiology and Screening for Barrett’s Esophagus and Gastric Cancer
Moderator: Joel H. Rubenstein
**TUESDAY MAY 21**

8:00 AM • **Research Forum**

**Pancreatic Cancer Biology and Clinical Therapeutics**

Moderator: Eileen Carpenter

8:50 AM • **Clinical Symposium**

**How Can AI Expand And Enhance Our Research: Present And Future**

Grace L. Su

10:00 AM • **State-of-the-Art-Lecture**

**New Approaches to Hepatobiliary Cancers**

Moderator: Grace L. Su

10:15 AM • **Research Forum**

**Accuracy Of Real-time EUS-Guided Confocal Laser Endomicroscopy Interpretation For Discerning Specific Types Of Pancreatic Cystic Lesions: Insights From A Multicenter Prospective Study**

Jordan Burlen, Daniel M Jones, Wei Chen, Stacey Culp, Samer El-Dika, Margaret G Keane, Jorge D. Machicado, Rahul Pannala, Mohamed O. Othman, Thiruvengadam Muniraj, Neil Sharma, Jessica Lynn Widmer, Shaffer Mok, Anjuli Luthra, Mandeep Sawhney, Antonio Mendoza Ladd, Kavel Visrodia, Tamas A. Gonda, Phil A. Hart, Megan E Fry, Somashekar G Krishna

10:18 AM • **Clinical Symposium**

**Risk Stratification In Barrett’s Esophagus - From Screening To Therapy**

Joel H. Rubenstein

11:12 AM • **Translational Symposium**

**Analysis Of The Healthy Human Pancreas Reveals Frequent Neoplastic Lesions With A Distinct Microenvironment**

Eileen Carpenter, Ahmed Elhossiny, Padma Kadiyala, Brian Griffith, Jay Li, Jiaqi Shi, Filip Bednar, Timothy Frankel, Marina Pasca Di Magliano

11:15 AM • **Research Forum**

**Symptoms Do Not Predict Sucrose Malabsorption On Breath Testing**

Colin Wu, Katha Makwana, Samantha Proctor, Sarah Ballou, Vikram Rangan, Johanna Itturino, Prashant Singh, Anthony Lembo, Judy Nee

11:15 AM • **State-of-the-Art-Lecture**

**Paam For Hepatocellular Carcinoma Risk Stratification In Patients With Cirrhosis: Multicenter Phase 3 Biomarker Validation Studies In The U.S.**


2:00 PM • **Research Forum**

**Phase IIA Trial Of Encapsulated Rapamycin (ERAPA) In Patients With Familial Adenomatous Polyposis To Reduce Intestinal Polyp Burden: 6 Month Interim Results**

Carol A. Burke, Elena M. Stoffel, Carole Macaron, John C. Fang, Peter P. Stanich, Randy Wright, Paul E. Wise, Gautam N. Mankaney, Ankur Tiwari, Kayleigh Herrick-Reynolds, Vance Sohn, N. Jewel Samadder

2:48 PM • **Research Forum**

**Progressive Impairment Of Gastrointestinal Myoelectrical And Motor Activities And Autonomic Function During The Development Of Type 2 Diabetes In Rats**

Gao-Jun Wu, Fei Li, Yan Li, Shiyi Li, Md Jahangir Alam, Jiaqi Shi, Jiaqi Shi, Eileen Carpenter, Jorge D. Machicado

4:32 PM • **Topic Forum**

**The Multiview Perspective (MVP) Study: A Blinded, Tandem Prospective Trial Of Forward-View Versus Side-View Examination During ERCP**

Steven N. Steinway, Kunal Jajoo, Raj Shah, Thomas J. Wang, Thomas R. McCarty, Nappachai Siranart, Pichamol Jirapinyo, Linda S. Lee, Christopher C. Thompson, Amit S. Grover, Marvin Ryou

4:36 PM • **Research Forum**

**Does The Mediterranean Diet Have Similar Efficacy As A Low FODMAP Diet In Irritable Bowel Syndrome? Results From A Pilot Randomized Controlled Trial**

Prashant Singh, Sofia Iram, Samuel Chey, Samara Riffkin, Gregory Dean, Asaf Kraus, Christine Lothen-Kline, Jane Muir, Shanti L. Eswaran, William D. Chey

4:54 PM • **Translational Symposium**

**Effects Of Auricular Vagal Nerve Stimulation On Gastrointestinal Motility**

Jiande Chen

5:00 PM • **Research Forum**

**Regulation Of Intraepithelial CD8+ T Cell Interaction With Epithelial MHC-I By Absent In Melanoma 2 In Gastric Pre-Neoplastic Lesions**

Mohamad El-Zaatari, Min Zhang, Sho Kitamoto, Helmut Grasberger, Nobuhiko Kamada, John Y. Kao

**POSTER SESSIONS • Tuesday**

**Accuracy And Agreement Of EUS Fine Needle Biopsy (FNB) In Diagnosing The Type And Malignant Component Of Pancreatic Cystic Lesions (PCLS)**


**Assessing US Healthcare Disparities In IBS Diagnosis: A National Survey**

Christopher Velasquez Almario, Jwingen Liu, Carolyn S. Higgins, William D. Chey, Lin Chang

**Clinical Benefits Of Hepatocellular Carcinoma Surveillance In A Contemporary Cohort Of At-Risk Patients**

Darine Daher, Karim Seif El Dahan, Nicole E. Rich, Nobibah Tayob, Vincent Merrill, Daniel Huang, Ju Dong Yang, Anand V. Kulkarni, Fasiha Kanwal, Jorge A. Marrero, Neehar D. Parikh, Amit G. Singal

**Cost-Drivers Of Healthcare Expenditures In Inflammatory Bowel Disease**

Jeffrey Berinstein, Shrinivas Bishu, John I. Allen, Gil Melmed, Sameer K Berry

**Diagnostic Journey Of Patients With Chronic Idiopathic Constipation In The USA: Analysis From A Cross-Sectional Observational Study**

Eric Dinesh Shah, Joanna de Courcy, Jeanne Jiang, Mei Lu, Baha Moshiree, Neil A Reynolds, Teresa Taylor-Whiteley, Brian Terrier, Darren M. Brenner
Effectiveness Of Upadacitinib For Patients With Acute Severe Ulcerative Colitis: A Case-Control Study

Efficacy Of Tenapanor In Patients With Irritable Bowel Syndrome With Constipation (IBS-C): A Post Hoc Analysis Of Patients With And Without Prior Use Of Other IBS-C Prescription Medications From The Phase 3T3mpo-1 And 3mpo-2 Studies
Eric Dinesh Shah, Brian E. Lacy, Yang Yang, Susan Edelstein, David P Rosenbaum

EGD Delay In Patients Presenting With Upper Gastrointestinal Bleed At A Community Hospital: A Retrospective Study
Venkata Rajasekaran, Joyce Kim, Eunhee Koh, Samah H. Syed, Micaela Alcala, Paloma B. Alvarez Cordoliani, Gautam Dagur, Raja R. Sappati

Episode Of Care Model Provides A More Accurate Estimate Of Costs For Patients With Ibd Compared To The Traditional Calendar Year Model
Jeffrey Berinstein, Shrinivas Bishu, John I. Allen, Gil Melmed, Sameer K Berry

Erosive Esophagitis Is Associated With High Health Care Resource Utilization And Frequent Changes In Medications
Nicholas J. Shaheen, Dhyanesh A. Patel, Bonnie Bui, Murali Gopal, Rinu Jacob, Benjamin Chastek, Christina Landis, Eric Dinesh Shah

Evolution At The US Food And Drug Administration: Scoping Review To Assess Risk Tolerance Of FDA For New Medical Devices And Technology In Gastroenterology
Shan Xue, Megan M Hennessey, Rebecca Z Strigenz, Eric Dinesh Shah

Immunotherapy Versus Lenvatinib In Advanced Hepatocellular Carcinoma: A Multicenter, Nationwide Propensity Score Matching Analysis
Wee Han Ng, Yee Hui Yeo, Amit G. Singal, Hyunseok Kim, Yun Wang, Walid S. Ayoub, Hirsh D. Trivedi, Alexander Kuo, Nicole E. Rich, Neeshar D. Parikh, Zhiyong Guo, Guangming Li, Binwei Duan, Kevin Sheng-Kai Ma, Ju Dong Yang

Is There A Correlation Between Gastrointestinal Symptoms, Weight Loss, And Fecal Elastase-1 Levels Following An Acute Pancreatitis Episode? A Multicenter Prospective Cohort Study
Joseph Bejiani, Stacey Culp, Melica Nikahd, Anna E Philips, Vikesh Singh, Somashekar G Krishna, Mitchell L Ramsey, Jorge D. Machicado, Pedram Paragami, Samuel Han, Peter Lee, Phil A. Hart, Georgios Papachristou

Long-term Effectiveness And Durability Of SARS-COV-2 Vaccination Among Patients With Inflammatory Bowel Disease

Magnitude Of SARS-COV-2 Spike Antibody Level Following Vaccination Is Not Associated With Risk Of Developing Symptomatic Covid-19 Among Patients With Inflammatory Bowel Disease

Most Screening Colonoscopy Patients Have Out-Of-Pocket Costs For Colon Preps Contrary To The ACA Mandate: A Real-World Analysis From A Large Dataset
Eric Dinesh Shah, Audrey H. Calderwood, tin, Joshua J Levy

Multi Center Validation Of Video-Based Deep Learning To Interpret Anorectal Manometry
Zarif Azher, Brian D Ginnebaugh, David Justin Levinthal, Nelson Valentin, Joshua J Levy, Eric Dinesh Shah

Multicenter Comparison Of Abbreviated MRI Versus Ultrasound For Detecting Early-Stage Hepatocellular Carcinoma In Patients With Cirrhosis

Preventive Effects Of Electrical Stimulation At ST36 On Water Avoidance Stress-induced Visceral Hyperalgiesia And Intestinal Barrier Function In Rats
Tingting Zhao, John W Wiley, Jiande Chen

Proteomic Signatures For Fecal Urgency And Disease Clearance In Patients With Ulcerative Colitis In The SPARC IBD Cohort
Shivani Shah Mattay, SIYAN CAO, Kritikha Shenoy, Jiyannan Li, Shrinivas Bishu, James D. Lewis, Raymond K. Cross, Themistocles Dassopoulos, Matthew A Ciorda, Xiuli Liu, Jinsheng Yu, Parakkal Deepak

Quiessent Crohn’s Disease Patients With Persistent Symptoms Show Enrichment Of Sulfur Metabolites And Sulfur Metabolic Pathways
Real-World Effectiveness And Safety Of Ozanimod In Ulcerative Colitis: A Multicenter Study
Stephen Lieto, Nicholas Scalzo, Katherine Huang, Abdul Khan, Anthony Xu, Joel Pekow, Palak Rajauria, Malek Ayoub, Amanda M Johnson, Andres Yarur, Anish Patel, Shrinivas Bishu, Richa Shukla, Mark T. Osterman, Damemarie Paul, Uyen Sokol, Soba Tharmarajah, Garrett Lawlor, Harris Ahmad, David T. Rubin, Bruce E. Sands, da M Johnson, Parakkal Deepak

Real-World Effectiveness And Safety Of Upadacitinib In Crohn’s Disease: A Multicenter Study
Jalpa Devi, NAVREET MALHI CHOWLA, Abdul Khan, Katherine Huang, Nikhil Reddy, Joel Pekow, Anish Patel, Shrinivas Bishu, Richa Shukla, Marc Fenster, Ryan C Ungaro, Andres Yarur, Amanda M Johnson, Parakkal Deepak

Reproducibility Of The Rectal Sensory Function Assessment With Repetitive Rectal Balloon Distensions In Patients With Irritable Bowel Syndrome (IBS)
Shiyuan Gong, Muhammad Khawar Ali, Jiande Chen, Colin Burnett, Lydia Watts, Jieyun Yin, Borko Nojkov

Risk Of Hepatocellular Carcinoma Amongst Subcentimeter Nodules On Surveillance Ultrasound: A Systematic Review
Eden Koo, Karim Seif El Dahan, Darine Daher, Neeshar D. Parikh, Amit G. Singal

HONORABLE MENTION

VIDEO: Endoscopic Ultrasound (EUS)-Guided Coil Embolization Of A Refractory Pseudoaneurysm
Ravi Kankotia, Abhishek Satishchandran, Shantanu Warholpolde, Allison R Schulman

VIDEO: EUS-Guided Coloduodenostomy For Management Of Afferent Limb Syndrome-Induced Pancreatitis In A Patient With Donor Duodenojejunostomy
Abhishek Satishchandran, Seth Waits, Meredith Barrett, Allison R Schulman

Above: Chief, Bill Chey & 2023-2024 GI Fellows

Above: 2023 UMCGR/GI Division Research Retreat

Above: GI/Hep Fellows Debate
## Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAMS, Megan A.</td>
<td>4, 12</td>
</tr>
<tr>
<td>BERINSTEIN, Jeffrey</td>
<td>2, 12, 13, 14, 17, 18</td>
</tr>
<tr>
<td>BISHU, Shrinivas</td>
<td>12, 14, 16, 17, 18, 19</td>
</tr>
<tr>
<td>CARPENTER, Eileen</td>
<td>5, 12, 16, 17</td>
</tr>
<tr>
<td>CHANG, Joy W.</td>
<td>2, 12, 13</td>
</tr>
<tr>
<td>CHEN, Jiande DZ</td>
<td>13, 14, 15, 16, 17, 18, 19</td>
</tr>
<tr>
<td>CHEN, Joan</td>
<td>12, 13, 14</td>
</tr>
<tr>
<td>CHEN, Vincent</td>
<td>7, 12, 14, 15, 16</td>
</tr>
<tr>
<td>CHEY, William D.</td>
<td>1, 3, 4, 8, 9, 10, 12, 13, 14, 15, 17, 18</td>
</tr>
<tr>
<td>COHEN-MEKELBURG, Shirley</td>
<td>2, 12, 13, 15, 16, 18</td>
</tr>
<tr>
<td>CUSHING-DAMM, Kelly</td>
<td>15, 16</td>
</tr>
<tr>
<td>DIMAGNO, Matthew</td>
<td>13</td>
</tr>
<tr>
<td>FONTANA, Robert</td>
<td>14, 16</td>
</tr>
<tr>
<td>ESWARAN, Shanti</td>
<td>8, 9, 10, 12, 14, 16, 17</td>
</tr>
<tr>
<td>GIUVATCHIAN, Tannaz</td>
<td>13</td>
</tr>
<tr>
<td>HIGGINS, Peter DR</td>
<td>12, 13, 15, 16, 18</td>
</tr>
<tr>
<td>KAMADA, Nobuhiko</td>
<td>17, 18</td>
</tr>
<tr>
<td>KAO, John Y</td>
<td>12, 17</td>
</tr>
<tr>
<td>KURLANDER, Jacob E</td>
<td>14</td>
</tr>
<tr>
<td>KWON, Richard</td>
<td>12, 13, 14, 15, 16, 17</td>
</tr>
<tr>
<td>LEE, Allen</td>
<td>18</td>
</tr>
<tr>
<td>LOK, Anna</td>
<td>3, 4</td>
</tr>
<tr>
<td>MACHICADO, Jorge</td>
<td>2, 6, 12, 13, 14, 15, 16, 17, 18</td>
</tr>
<tr>
<td>MELLINGER, Jessica</td>
<td>2, 12, 16</td>
</tr>
<tr>
<td>MENEES, Stacy</td>
<td>16</td>
</tr>
<tr>
<td>NAFTALY, Jessica</td>
<td>15</td>
</tr>
<tr>
<td>NEWMAN, Kira</td>
<td>2, 12, 13, 15, 16</td>
</tr>
<tr>
<td>NOJKOV, Borko</td>
<td>13, 19</td>
</tr>
<tr>
<td>PARIKH, Neehar</td>
<td>15, 17, 18, 19</td>
</tr>
<tr>
<td>PERUMALSWAMI, Ponni</td>
<td>14</td>
</tr>
<tr>
<td>PHILIPS, George M</td>
<td>12, 13, 15, 16, 17</td>
</tr>
<tr>
<td>RAZUMILAVA, Nataliya</td>
<td>2, 3, 13</td>
</tr>
<tr>
<td>READ, Andrew</td>
<td>2</td>
</tr>
<tr>
<td>RIEHL, Megan</td>
<td>12</td>
</tr>
<tr>
<td>RIFKIN, Samara</td>
<td>7, 17</td>
</tr>
<tr>
<td>RUBENSTEIN, Joel H</td>
<td>3, 13, 14, 15, 16, 17</td>
</tr>
<tr>
<td>SAINI, Sameer Dev</td>
<td>14</td>
</tr>
<tr>
<td>SCHULMAN, Allison R</td>
<td>3, 11, 12, 13, 14, 15, 16, 17, 19</td>
</tr>
<tr>
<td>SHAH, Eric</td>
<td>12, 14, 15, 16, 17, 18</td>
</tr>
<tr>
<td>SHARMA, Pratima</td>
<td>15</td>
</tr>
<tr>
<td>SINGH, Prashant</td>
<td>2, 8, 9, 12, 13, 14, 15, 16, 17</td>
</tr>
<tr>
<td>SPELIOTES, Elizabeth</td>
<td>15, 16</td>
</tr>
<tr>
<td>STIDHAM, Ryan</td>
<td>12, 18</td>
</tr>
<tr>
<td>STOFFEL, Elena M</td>
<td>3, 13, 14, 15, 16, 17</td>
</tr>
<tr>
<td>SU, Grace</td>
<td>3, 4, 7, 16, 17</td>
</tr>
</tbody>
</table>

## Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEAN, Gregory</td>
<td>8, 9, 12, 17</td>
</tr>
<tr>
<td>GIBBS, Jeffrey</td>
<td>13, 16</td>
</tr>
<tr>
<td>HAWA, Fadi</td>
<td>13, 17</td>
</tr>
<tr>
<td>HUNOLD, Thomas</td>
<td>13, 17</td>
</tr>
<tr>
<td>KIM, Joyce</td>
<td>18</td>
</tr>
<tr>
<td>SATISHCHANDRAN, Abhishek</td>
<td>19</td>
</tr>
<tr>
<td>SHEELHAN, Jessica</td>
<td>13, 15, 18</td>
</tr>
<tr>
<td>SHENOY, Abhishek</td>
<td>16</td>
</tr>
<tr>
<td>TAKAKURA, Will</td>
<td>12</td>
</tr>
<tr>
<td>UTTAL, Sarah</td>
<td>16</td>
</tr>
</tbody>
</table>

Index