



ALL Sessions Times are Eastern Time (ET)

How to Find Your Local Time for a Session

If you are in the **Central** time zone, subtract 1 hour, e.g., 11:00 AM ET is 10:00 AM CT

If you are in the **Mountain** time zone, subtract 2 hours, e.g., 11:00 AM ET is 9:00 AM MT

If you are in the **Pacific** time zone, subtract 3 hours, e.g., 11:00 AM ET is 8:00 AM PT

Special thanks to Dr. Melinda (Mindy) Engevik from the Medical University of South Carolina who granted the ASIP permission to use her fluorescent image to advertise and promote the PISA 2024 Young Investigators Virtual Meeting.

Tuesday, November 5

Welcome to the PISA 2024 Virtual Meeting

Satdarshan (Paul) Singh Monga, MD, ASIP President
University of Pittsburgh

SESSION 1 - Liver Pathobiology Young Investigator Short Talks

2:00 - 4:00 PM

Co-Chairs: Vik Meadows, PhD • Rutgers University
JaNýa Brown • University of Maryland, Baltimore

- 2:00 - 2:15 PM
Abstract 1 - HNF1B Controls the Cell's Commitment to Hepatic Fate
Carla Martinez-Morant, Francesca Di-Furio, Stephen A. Duncan
Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC
- 2:15 - 2:30 PM
Abstract 2 - Role of Autophagy in Hepatic Proteome and its Post-translational Modification
Kamal Baral, Leah Spade, Arissa Mercer, Sadisha Shrestha S, Arya A Chandrasekhar, Gang Liu, Xiao-Ming Yin, and Bilon Khambu
Department of Pathology and Laboratory Medicine, School of Medicine, Tulane University, New Orleans, LA
- 2:30 - 2:45 PM
Abstract 3 - Role of DEK in Liver Fibrosis
Arya Chandrasheker^{1,2}, Niani Bailey¹, Nickol Wahby¹, Kamal Baral¹, Leah Spade¹, Arissa Mercer¹, and Bilon Khambu¹
¹Tulane School of Science and Engineering, Tulane University, New Orleans, LA; ²Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, New Orleans, LA
- 2:45 - 3:00 PM
Abstract 4 - Neutrophil Infiltration via STING Signaling Promotes Inflammation in Primary Sclerosing Cholangitis
Abid Anwar^{1,2}, Maleeha Kalaiger^{1,2}, Sofia Jerez Ortega^{1,2}, Jordan Young^{1,2}, Usman Yaqoob^{1,2}, Kaitlin Friesland^{1,2}, Robert C. Huebert^{1,2,3}, Nidhi Jalan-Sakrikar^{1,2,3}
¹Division of Gastroenterology and Hepatology, ²Gastroenterology Research Unit, ³Center for Cell Signaling in Gastroenterology; Mayo Clinic, Rochester, MN

- 3:00 - 3:15 PM
Abstract 5 - Targeting CRM1-HMGB1 Nuclear Translocation in Type 2 Diabetes-Driven Metabolic Dysfunction Associated Steatotic Liver Disease
Prabu Paramasivam^{1,2}, Brittany Coffman³, Jaya Rajaiya⁴, Satdarshan Paul Monga⁵, Roberto Ivan Mota Alvidrez^{1,2,6,7,8}
¹Pharmaceutical Sciences, College of Pharmacy, University of New Mexico, Albuquerque, NM; ²Clinical and Translational Sciences Center, University of New Mexico, Albuquerque, NM; ³Raymond G. Murphy New Mexico Veterans Affairs Medical Center, Albuquerque, NM; ⁴Department of Molecular Genetics and Microbiology, University of New Mexico School of Medicine, Albuquerque, NM; ⁵Department of Pathology, University of Pittsburgh School of Medicine and Pittsburgh Liver Research Center, University of Pittsburgh and University of Pittsburgh Medical Center, Pittsburgh, PA; ⁶Biomedical Engineering Department, University of New Mexico, Albuquerque, NM; ⁷Cardiovascular and Metabolic Diseases (CVMD) Signature Program, University of New Mexico, Albuquerque, NM; ⁸Autophagy, Inflammation, Metabolism CoBRE, University of New Mexico, Albuquerque, NM
- 3:15 - 3:30 PM
Abstract 6 - Hepatocyte-Specific MET Deletion Exacerbates Liver Damage and Impairs Regenerative Response in Acetaminophen-Induced Hepatotoxicity Model
Siddhi Jain, Ranjan Mukherjee, Gillian Williams, George K. Michalopoulos, Wendy M. Mars, and Bharat Bhushan
Department of Pathology, School of Medicine, Pittsburgh Liver Research Center, University of Pittsburgh, Pittsburgh, PA
- 3:30 - 3:45 PM
Abstract 7 - Targeting EGFR as a Novel Strategy for Treating Acetaminophen Hepatotoxicity
Gillian Williams, Siddhi Jain, Ranjan Mukherjee, and Bharat Bhushan
Department of Pathology and Pittsburgh Liver Research Center, University of Pittsburgh School of Medicine, Pittsburgh, PA
- 3:45 - 4:00 PM
Abstract 8 - Effects of Hepatocyte-Specific EGFR and ERBB3 Deletion in Murine Fast-Food Diet Model of MASLD
Shehnaz Bano, Matthew A. Copeland, John W. Stoops, Anne Orr, Joseph Locker, Wendy M. Mars, George K. Michalopoulos, and Bharat Bhushan
Department of Pathology and Pittsburgh Liver Research Center, School of Medicine, University of Pittsburgh, Pittsburgh, PA

SESSION 2 - Wisdom From The Pros: Navigating Different Career Paths in Biomedical Science

4:00 - 5:00 PM

Moderator: Priscilla Kyi, MS, BS • Medical College of Wisconsin

Session Description: This session will introduce trainees to alternative career options in biomedical medicine. The panel members will discuss how trainees can navigate career paths outside academia. The panelists will also answer questions on the benefits and challenges of pursuing these careers.

- 4:00 - 4:20 PM
Patent Agent
Peter Volberding, PhD • Quarles & Brady, LLC
- 4:20 - 4:40 PM
Medical Writer
Chris Goetz, PhD • Medtronic
- 4:40 - 5:00 PM
Questions & Answers

SESSION 3 - Cardiovascular and Pulmonary Disease Young Investigator Short Talks

5:00 - 6:00 PM

Chair: Taylor Ticer, PhD • Dartmouth Hitchcock Medical Center

- 5:00 - 5:15 PM
Abstract 9 - Endothelial Senescence Mediates Hypoxia-induced Vascular Remodeling in the Lung
Priscilla Kyi^{1,2}, Mrudula Joshi^{1,2}, Mikaela Scheer¹, Tadanori Mammoto^{1,3}, and Akiko Mammoto^{1,2}
¹Department of Pediatrics, ²Department of Cell Biology, Neurobiology and Anatomy, and ³Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, WI
- 5:15 - 5:30 PM
Abstract 10 - Sex-Dependent Differences in Lung Vascular Regeneration
Mrudula Joshi^{1,2}, Priscilla Kyi^{1,2}, Mikaela Scheer¹, Tadanori Mammoto^{1,3}, and Akiko Mammoto^{1,2}
¹Department of Pediatrics, ²Department of Cell Biology, Neurobiology and Anatomy, and ³Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, WI
- 5:30 - 5:45 PM
Abstract 11 - Endothelial Cell STING Contributes to Capillary Rarefaction and Systolic Dysfunction Induced by Cardiac Pressure Overload
Erin Sanders¹, Noah Wagner¹, Abraham L. Bayer¹, Sasha Smolgovsky¹, Brandon Theall¹, Mark Aronovitz¹, Robert Blanton², Kuljeet Kaur¹, and Pilar Alcaide¹
¹Department of Immunology, Tufts Graduate School of Biomedical Sciences, Boston, MA; ²Molecular Cardiology Research Institute, Tufts Medical Center, Boston, MA
- 5:45 - 6:00 PM
Abstract 12 - Differential Contributions of Cell Specific STING to the T-Cell Immune Response in Doxorubicin Cardiotoxicity
Abraham L. Bayer, Erin Sanders, Noah Wagner, Sasha Smolgovsky, and Pilar Alcaide
Department of Immunology, Tufts University, Boston MA

6:00 PM

Meeting Adjournment

Wednesday, November 6

SESSION 4 - More than a Scientist: Maintaining Life Outside of Lab

2:00 - 3:00 PM

Moderator: Sarah Dooley, BS • Medical University of South Carolina

Session Description: This session will center on maintaining relationships and activities outside academic and research responsibilities. The panel members will talk about their challenges, how they define work-life balance, and their advice on overcoming difficulties.

- 2:00 - 2:15 PM
Pre-Doctoral Trainee
Allison Trouten • Medical University of South Carolina
- 2:15 - 2:30 PM
Post-Doctoral Fellow
Cortney Gensemer, PhD • Medical University of South Carolina
- 2:30 - 2:45 PM
Tenured Faculty
Mark Frey, PhD • Children's Hospital of Los Angeles

- 2:45 - 3:00 PM
Assistant Professor
Victoria Weis, PhD • Wake Forest University

SESSION 5 - Inflammation and Ophthalmology Young Investigator Short Talks

3:00 - 4:30 PM

Co-Chairs: Abraham Bayer, BS • Tufts University
Sarah Dooley, BS • Medical University of South Carolina

- 3:00 - 3:15 PM
Abstract 13 - Exploring the Effects of Epigallocatechin-3-Gallate on the Disaggregation of Serum Amyloid A1 Fibrils
Natalie G. Horgan¹, Anabela Djurovic-topalovic¹, Hannah IR Charles¹, Natsumi Kobayashi², Tomoaki Murakami², Jessica S. Fortin¹
¹Basic Medical Sciences, College of Veterinary Medicine, Purdue University, West Lafayette IN; ²Laboratory of Veterinary Toxicology, Tokyo University of Agriculture and Technology, Fuchu, Tokyo, Japan
- 3:15 - 3:30 PM
Abstract 14 - Persisting Neuroinflammation After 18-weeks in SARS-CoV-2 Infected African Green Monkeys
Meredith Mayer¹, Linh Hellmers¹, Anne Le², Jason Dufour^{3,4}, Lara Doyle-Meyers^{3,4}, Jay Rappaport^{1,5}, Kasi Russel-Lodigie^{3,4}, and Tracy Fischer^{1,5}
¹Tulane National Primate Research Center, Division of Comparative Pathology, Covington, LA; ²Gigantest, Baltimore, MD; ³Tulane Nation Primate Research Center, Division of Veterinary Medicine, Covington, LA; ⁴Tulane University School of Medicine, Department of Medicine, New Orleans, LA; ⁵Tulane University School of Medicine, Department of Immunology and Microbiology, New Orleans, LA
- 3:30 - 3:45 PM
Abstract 15 - High-Intensity Interval Training Decreases Circulating HMGB1 in Individuals with Insulin Resistance; Plasma Lipidomics Identifies Associated Cardiometabolic Benefits
Gabriela Martinez Bravo^{1,2,3†}, Prabu Paramasivam^{1,3†}, Gabriella F. Bellissimo⁴, Quiteria Jacquez^{1,3}, Huayu Zheng¹, Fabiano Amorim⁴, and Roberto Ivan Mota Alvidrez^{1,2,3,5,6}
¹Pharmaceutical Sciences, College of Pharmacy, University of New Mexico, Albuquerque, NM; ²Biomedical Engineering Department, University of New Mexico, Albuquerque, NM; ³Clinical and Translational Sciences Center, University of New Mexico, Albuquerque, NM; ⁴Health, Exercise and Sports Sciences, University of New Mexico, Albuquerque, NM; ⁵Cardiovascular and Metabolic Diseases (CVMD) Signature Program, University of New Mexico, Albuquerque, NM; ⁶Autophagy, Inflammation, Metabolism CoBRE, University of New Mexico, Albuquerque, NM
†Authors served as co-first authors
- 3:45 - 4:00 PM
Abstract 16 - Epigenetic Changes and Photoreceptor Neuroprotection in a Mouse Retinitis Pigmentosa Model
Lu Huang^{1,2}, Lydia Tai Wai², Kin-Sang Cho², Ajay Ashok², Maximilian Braun², Menglu Yang², Karen Chang², Anton Lennikov², Sarita Pooranawattanukul², Julie Chen², Farris Elzaridi², Hio Tong Kam², Shuhong Jiang², Yizhen Tang², Qingfeng Li¹, and Dong Feng Chen²
¹Department of Plastic and Reconstructive Surgery, Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China; ²Department of Ophthalmology, Schepens Eye Research Institute of Massachusetts Eye and Ear, Harvard Medical School, Boston, MA
- 4:00 - 4:15 PM
Abstract 17 - Deciphering Pathogenic Cytokine Interplay in Retinal Inflammation, Angiogenesis and Fibrosis: A Transcriptomic Approach
Fergus McLellan¹, Pei Qin Ng², Kelvin Huang¹, Pete A. Williams³, and Daisy Y. Shu¹
¹School of Optometry and Vision Science, University of New South Wales, Sydney, NSW, Australia; ²Department of Plant Science, University of Cambridge, Downing Street, Cambridge CB2 3EA, Cambridgeshire, UK; ³Division of Eye and Vision, Department of Clinical Neuroscience, St. Erik Eye Hospital, Karolinska Institutet, Stockholm, Sweden

- 4:15 - 4:30 PM

Abstract 18 - From Brain to Eye: Repurposing Dimethyl Fumarate to Target Vascular Endothelial Growth Factor-Induced Angiogenesis in Retinal Endothelial Cells

Kelvin Huang¹, Pei Qin Ng^{2,3}, Fergus McLellan¹, Mong Linh Vuong^{2,4}, Alena Appiah², Menglu Yang², Suman Chaudhary², Anton Lennikov², Zhengping Hu², and Daisy Y. Shu¹

¹School of Optometry and Vision Science, University of New South Wales, Kensington, New South Wales, Australia;

²Ophthalmology, Schepens Eye Research Institute of Massachusetts Eye and Ear, Boston, MA; ³University of Cambridge, Cambridge, United Kingdom; ⁴Technische Universität München, Munich, Bavaria, Germany

SESSION 6 - Pursuing a Career in Biomedical Research in the US as an International Trainee

4:30 - 5:30 PM

Moderators: Rodrigo Machado Florentino, PhD • University of Pittsburgh

JaNya Brown • University of Maryland, Baltimore

Session Description: This session will focus on international trainees' training and research paths in the United States. The panelists will also share their personal experiences, challenges, and advice on navigating these challenges.

- 4:30 - 4:45 PM

R&D Scientist

Luma Melo, PhD • Brightseed

- 4:45 - 5:00 PM

Post-Doctoral Fellow

Dipika Gupta, PhD • New York University

- 5:00 - 5:15 PM

Post-Doctoral Fellow

Ramona Emig, PhD • Tufts University School of Medicine

- 5:15 - 5:30 PM

Pre-Doctoral Trainee

Carla Martinez-Morant, BS • Medical University of South Carolina

5:30 PM

Meeting Adjournment

Thursday, November 7

SESSION 7 - Cancer Pathobiology and Molecular Diagnostics Young Investigator Short Talks

2:00 - 3:15 PM

Co-Chairs: Nathaniel Lartey, MPhil, PhD • University of Michigan

Maria Zambrano, BS • Tufts University

- 2:00 - 2:15 PM

Abstract 19 - Histamine Receptor 1 Expression is Increase in Head and Neck Cancer Tumors and is Associated with Poor Patient Outcomes

Selene Shore¹, and Mindy Engevik^{1,2}

¹Department of Regenerative Medicine & Cell Biology, Medical University of South Carolina, Charleston, SC; ²Department of Pharmacology & Immunology, Medical University of South Carolina, Charleston, SC

- 2:15 - 2:30 PM

Abstract 20 - Physical Activity Regulates Proteolytic Pathways to Protect Against Cancer-Mediated Cardiac Cachexia

Zoe P. Libramento, Louisa Tichy, and Traci L. Parry

University of North Carolina at Greensboro, Department of Kinesiology, Greensboro, NC

- 2:30 - 2:45 PM
Abstract 21 - Selection for a Preferred Threshold Level of PI3K Activation in Myc-Driven Mammary Carcinogenesis
Maryknoll Linscott^{1,2}, Jerry Ren^{1,2}, Shelley Gestl², Carrie Barnum^{1,2}, Travis Leonard², and Edward Gunther^{2,3}
¹Medical Scientist Training Program, Penn State College of Medicine, Hershey, PA; ²Gittlen Laboratories for Cancer Research, Penn State College of Medicine, Hershey, PA; ³Department of Medicine, Penn State Health Milton S. Hershey Medical Center, Hershey, PA
- 2:45 - 3:00 PM
Abstract 22 - A 5-Year Study Involving Clinical Cases to Determine Copy Number Distribution of SMN1 and SMN2 Genes in Spinal Muscular Atrophy Testing across Medical Facilities in New Hampshire
Debopriya Chakraborty¹, Diana M. Toledo^{1,2}, and Joel A. Lefferts¹
¹Clinical Genomics and Advanced Technology (CGAT), Department of Pathology and Laboratory Medicine, Geisel School of Medicine at Dartmouth, Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Clinical Research Sequencing Platform Laboratory, The Broad Institute at MIT and Harvard, Cambridge, Massachusetts
- 3:00 - 3:15 PM
Abstract 23 - Next-Generation Sequencing as a Reliable Method of Quantifying Bone Marrow Engraftment in Bone Marrow Transplant Patients
Taylor D. Ticer¹, Donald C. Green¹, Sophie J. Deharvengt¹, Wahab A. Khan¹, Joel A. Lefferts¹
¹Department of Pathology and Laboratory Medicine, Geisel School of Medicine at Dartmouth, Dartmouth Hitchcock Medical Center, Lebanon, NH

SESSION 8 - We Have to Talk: Navigating Difficult Conversations in the Lab

3:30 - 4:30 PM

Moderator: Maria Zambrano, BS • Tufts University

Session Description: This session will focus on anxiety-provoking topics that commonly arise in the lab. The panelists will share their advice on communicating effectively among lab members and addressing conflicts between mentors and mentees.

- 3:30 - 3:45 PM
Assistant Professor
Michele Alves, PhD • Florida International University
- 3:45 - 4:00 PM
Instructor
Zhengping Hu, MD, PhD • Schepens Eye Research Institute of Massachusetts Eye and Ear
- 4:00 - 4:15 PM
Associate Professor
Aimee Shen, PhD • Tufts University
- 4:15 - 4:30 PM
Director
Lindsay Edwards, PhD • Zag Bio

SESSION 9 - Gastrointestinal Pathobiology Young Investigator Short Talks

4:30 - 6:00 PM

Co-Chairs: Yekaterina Krutsenko, BSc • University of Pittsburgh

Priscilla Kyi, MS, BS • Medical College of Wisconsin

- 4:30 - 4:45 PM
Abstract 24 - Akkermansia Muciniphila Alone Increases Small Intestine Tuft Cell Population via Succinate Production
Rachel Edens¹, Jordan Rucker¹, Sarah A. Dooley¹, Rachel Stubler¹, Piper McKee¹, Thomas Horvath², Kristen Engevik¹, Melinda A. Engevik^{1,3}, and Amy C. Engevik¹

¹Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC; ²Department of Pathology, Texas Children's Hospital, Houston TX; ³Department of Microbiology and Immunology, Medical University of South Carolina, SC

- 4:45 - 5:00 PM

Abstract 25 - Distinct Mucin Profiles are Associated with Inflammation in Ulcerative Colitis Patients

Alyssa Gutierrez¹, Anna Tingler¹, Amy Engevik¹, and Melinda A. Engevik^{1,2}

¹Department of Regenerative Medicine & Cell Biology, Medical University of South Carolina, Charleston, SC; ²Department of Microbiology & Immunology, Medical University of South Carolina, Charleston, SC

- 5:00 - 5:15 PM

Abstract 26 - High Fat Diet Alters Gastric Homeostasis Leading to Metaplasia

Charulekha Packirisamy¹, Annika Matthiesen², Pooja Pradeep², Janet Boggs², Sarah A. Dooley¹, Rachel Edens¹, Piper McKee¹, Catrina Robinson², and Amy C. Engevik¹

¹Department of Regenerative Medicine and Cell Biology, Medical University of South Carolina, Charleston, SC; ²Department of Neurology, Medical University of South Carolina, Charleston, SC

- 5:15 - 5:30 PM

Abstract 27 - Antibiotic-Induced Alterations in Gut Microbiota and Their Effect on Mucus Production in the Cystic Fibrosis Colon

Anna Tingler¹, Rachel Bernard², Rachel Edens¹, Jennifer K. Spinler^{3,4}, Thomas D. Horvath^{3,4}, Numan Oezguen^{3,4}, Lisa S. Zhang², Anthony M. Haag^{3,4}, Amy C. Engevik¹, Daniel C. Payne⁶, Maribeth R. Nicholson², and Melinda A. Engevik^{1,5}

¹Department of Regenerative Medicine & Cell Biology, Medical University of South Carolina, Charleston, SC; ²Division of Pediatric Gastroenterology, Hepatology, and Nutrition, Monroe Carell Junior Children's Hospital at Vanderbilt, Nashville TN; ³Department of Pathology, Texas Children's Hospital, Houston TX; ⁴Department of Pathology & Immunology, Baylor College of Medicine, Houston TX; ⁵Department of Microbiology & Immunology, Medical University of South Carolina, Charleston, SC; ⁶Division of Viral Diseases, Centers for Disease Control and Prevention, Atlanta GA

- 5:30 - 5:45 PM

Abstract 28 - Claudin-23 Expression in Intestinal Epithelial Cells Surrounding Mucosal Wounds Enhances Wound Repair In Vivo

Kristen M. Lozada-Soto^{1,2,3*}, Arturo Raya-Sandino^{3*}, Vicky Garcia-Hernandez³, Miguel Quiros³, Charles A. Parkos³, and Asma Nusrat³

¹Medical Scientist Training Program, University of Michigan Medical School, Ann Arbor, MI; ²Molecular and Cellular Pathology Graduate Program, Rackham Graduate School, University of Michigan, Ann Arbor, MI; ³Department of Pathology, University of Michigan Medical School, Ann Arbor, MI

*K.L-S. and A.R.-S. contributed equally to the work presented in this abstract.

- 5:45 - 6:00 PM

Abstract 29 - Enhancing the Expression of Barrier Structure Proteins in Human Colon Organoids: An In Vitro Study of Combined Mesalazine and Aquamin Treatment

Gillian Moraga, Shannon McClintock, Daniyal M. Nadeem, Isabelle Harber, James Varani, and Muhammad N. Aslam

Department of Pathology, University of Michigan, Ann Arbor, MI

6:00 - 6:15 PM

Closing Remarks/Announcement of Award Recipients

Satdarshan (Paul) Singh Monga, MD, ASIP President
University of Pittsburgh

6:15 PM

Meeting Adjournment