

Scientific Program

SATURDAY, OCTOBER 21, 2023

Your society leadership is working for you! All three society Councils will be meeting on Saturday. These meetings are for Council members and invited guests only. Please come to the society **business meetings** during the course of the conference to hear all the latest news for each society. Business meeting times are listed in this program.

ASIP Council Meeting

7:00 AM–5:00 PM

Location: Audubon (Third Floor)

ASMB Council Meeting

1:00–3:00 PM

Location: Vienna (Third Floor)

HCS Council Meeting

3:00–6:00 PM

Location: Sussex (Third Floor)

Council Dinners

Off-Site

SUNDAY, OCTOBER 22, 2023

Session 001: ASIP Neuropathology – Vasculopathies in Cognitive Impairment and Dementia

8:30–11:00 AM

Sponsored by the ASIP Neuropathology Scientific Interest Group

Co-Chair: Elaine Bearer, MD, PhD ▪ University of New Mexico

Co-Chair: Gary Rosenberg, MD ▪ University of New Mexico

Location: Grand A

- Chair - Welcome and Introductions
- 8:30–9:00 AM
A Dynamic Duo: The Vicious Cycle of Microvascular Damage and Alzheimer's Disease
Elaine Bearer, MD, PhD ▪ University of New Mexico
- 9:00–9:30 AM
Vascular Contributions to Aging-Related Dementia
Gary Rosenberg, MD ▪ University of New Mexico
- 9:30–10:00 AM
What is 'Alzheimer's Disease'? The Neuropathological Heterogeneity of Clinically Defined Alzheimer's Dementia
Julie A. Schneider, MD ▪ Rush University
- 10:00–10:30 AM
Mild Traumatic Brain Injury Induces Microvascular Injury and Accelerates Alzheimer-like Pathogenesis in Mice
Zhen Zhao, PhD ▪ University of Southern California
- 10:30–11:00 AM
Neuropathologic Substrates of Vascular Cognitive Impairment: What Are They and How Do They Help Us Understand Pathogenesis?
Harry V. Vinters, MD ▪ University of California, Los Angeles
- ***Questions and Answers***

Session 002: ASIP Liver Pathobiology – Mechanisms of Hepatotoxicity and Liver Injury

8:30–11:00 AM

Sponsored by the ASIP Liver Pathobiology Scientific Interest Group

Co-Chair: Wen-Xing Ding, PhD ▪ University of Kansas Medical Center

Co-Chair: Lindsey Kennedy, PhD ▪ Indiana University

Location: Imperial A

- Chair - Welcome and Introductions
- 8:30–8:55 AM
Phosphatidic Acid in Acetaminophen-induced Liver Injury
Mitchell R. McGill, PhD ▪ University of Arkansas Medical School
- 8:55–9:20 AM
New Insights on Blood Coagulation in Acetaminophen-induced Liver Injury
James Luyendyk, PhD ▪ Michigan State University
- 9:20–9:45 AM
Lysosomal Biogenesis in Acetaminophen-Induced Liver Injury
Wen-Xing Ding, PhD ▪ University of Kansas Medical Center
- 9:45–10:10 AM
Macrophages Repair Necrotic Liver Lesions
Bin Gao, PhD ▪ National Institutes of Health

- 10:10–10:35 AM
Sphingosine-1 Phosphate Signaling in Alcohol-associated Liver Disease
Huiping Zhou, PhD ▪ Virginia Commonwealth University
- 10:35–11:00 AM
Mast Cell Regulation of Alcoholic Fatty Liver Disease
Heather Francis, PhD ▪ Indiana University
- **Questions and Answers**

Session 003: ASIP Young Scientist Leadership Award Lecture and Meritorious Trainee Award Lectures

8:30–11:00 AM

Location: Imperial D

Co-Chair: Joud Mulla ▪ University of Pittsburgh

Co-Chair: ZhengPing Hu, MD, PhD ▪ Schepens Eye Research Institute of Mass. Eye & Ear, Harvard Medical School

Session Description: This session will feature short talks from trainee meritorious awardees (Experimental Pathology-in-Training and Merit Awardees, Experimental Pathologist-in-Graduate Training and Merit Awardees) and the ASIP Young Scientist Leadership Award lecture.

- Chair - Welcome and Introductions
- 8:30–8:45 AM
Diverse Bacteria Possess Histamine Decarboxylase Genes and are Capable of Generating Histamine
Kristen Engevik, PhD ▪ Baylor College of Medicine
2023 Experimental Pathologist-in-Training Award Recipient
- 8:45–9:00 AM
Acinetobacter Calcoaceticus Stimulates Inflammation in the Gastrointestinal Tract
Janiece Glover, MS, BS ▪ Medical University of South Carolina
2023 Experimental Pathologist-in-Graduate Training Award Co-Recipient
- 9:00–9:15 AM
Complete Response of CTNNB1-Mutated Tumors to RNAi-Mediated Beta-Catenin Inhibition in Aggressive Immunocompetent Mouse Models
Brandon Lehrich, BS ▪ University of Pittsburgh
2023 Experimental Pathologist-in-Graduate Training Award Co-Recipient
- 9–9:30 AM
Inflamed Intestinal Endothelial Cells Establish Self-Regulatory Niches via IL16 Dependent Recruitment of CD4 Expressing Vessel-Associated Macrophages
Xing-Sheng Ren, PhD ▪ Northwestern University
2023 Experimental Pathologist-in-Training Merit Award Recipient
- 9:30–10:00 AM
Noradrenergic Stimulation Reconfigures Brain States
Taylor Uselman, BS ▪ University of New Mexico
2023 Experimental Pathologist-in-Graduate Training Merit Award Recipient
- 10:00–11:00 AM
Unique and Novel Role for Smooth Muscle Cell ABCA in Cholesterol Efflux in Atherothrombosis
Roberto Mota Alvidrez, MD ▪ University of New Mexico
2023 ASIP Young Scientist Leadership Award Recipient

Session 004: ASMB Guest Symposium: TERMIS: Engineering the Matrix for Healing

10:00 AM–12:00 PM

Location: Grand D

Co-Sponsored by: The Tissue Engineering and Regenerative Medicine International Society, Inc. (TERMIS)

Chair: Ashley Brown, PhD ▪ North Carolina State University and UNC-Chapel Hill

Session Description: This guest symposium will focus on new developments in the application of extracellular matrix (ECM) based and ECM inspired technologies for tissue engineering and regenerative medicine. This session will emphasize strategies for engineering the matrix for healing.

- Chair - Welcome and Introductions
- 10:00–10:30 AM
Extracellular Matrix and Islets Interactions and Their Role in Pathogenesis, Preservation, and Treatment
Cherie Stabler, PhD ▪ University of Florida
- 10:30–11:00 AM
A Thy-1 Negative Inflammatory Fibroblast Subpopulation Emerges as a Key Determinant of Fibrotic Outcomes to Biomaterials Daniel Abeyayehu, PhD ▪ University of Virginia
- 11:00–11:30 AM
Structural and Mechanical Stability of Hemostatic Blood Clots
Valerie Tutwiler, PhD ▪ Rutgers University
- 11:30–11:45 AM
ABSTRACT 006 - *Regenerating the Pediatric Tympanic Membrane with a Decellularized Cartilage Matrix in an In Vivo Rat Model*
Paul M. Gehret ▪ University of Pennsylvania
- 11:45 AM–12:00 PM
ABSTRACT 007 - *A Novel Treatment for Scleroderma Fibrosis: The CCN3-Based Peptide BLR-200 Impairs Bleomycin-Induced Skin Fibrosis*
Andrew Leask, PhD ▪ University of Saskatchewan

Session 005: ASMB Guest Symposium: Marfan Foundation: Aortic Disease in Marfan Syndrome and Related Conditions

10:00 AM–12:00 PM

Location: Imperial C

Co-Chair: Josephine Grima, PhD ▪ The Marfan Foundation

Co-Chair: Lynn Sakai, PhD ▪ Oregon Health & Science University

- 10:00–10:30 AM
Targeting Aortic Aneurysm in Marfan Syndrome Mice
Silvia Smaldone, PhD ▪ Regeneron
- 10:30–11:00 AM
Sex-Specific Pathologies in the Aorta and Fat Tissue of Marfan Mice
Dieter P. Reinhardt, PhD ▪ McGill University
- 11:00–11:30 AM
Leveraging Molecular Patterns of Resiliency in Females to Understand Drivers of Aneurysm Severity in Marfan Syndrome
Sarah Parker, PhD ▪ Cedars-Sinai
- 11:30–11:45 AM
ABSTRACT 008 - *Fibulin-4 and Fibulin-5 Serve Distinct, Non-Overlapping Functions in Elastic Fiber Assembly and Cardiovascular Physiology*
Michelle Lin, PhD ▪ Washington University in St. Louis School of Medicine

- 11:45 AM–12:00 PM
ABSTRACT 009 - O-Glucose Modification of Fibrillin Epidermal Growth Factor Repeats is Essential for Mouse Lung Development
Sanjiv Neupane, PhD ▪ Stony Brook University

Session 006: ASMB Guest Symposium: OARSI: Recent Progress in Osteoarthritis Research

10:00 AM–12:00 PM

Co-Sponsored by: The Osteoarthritis Research Society International (OARSI)

Chair: Frank Beier, PhD ▪ Western Bone and Joint Institute, University of Western Ontario

Location: Venezia

- 10:00–10:30 AM
Mouse Models to Understand Osteoarthritis Pathophysiology
Frank Beier, PhD ▪ University of Western Ontario
- 10:30–11:00 AM
The Role of Peripheral Nerves in Osteoarthritis
Anne-Marie Malfait, MD, PhD ▪ Rush University
- 11:00–11:30 AM
Omic Strategies in Osteoarthritis
Mohit Kapoor ▪ NielsenIQ
- 11:30–11:45 AM
ABSTRACT 010 - Type V Collagen is Essential for the Development of Knee Articular Cartilage and Meniscus
Bryan Kwok ▪ Drexel University
- 11:45 AM–12:00 PM
ABSTRACT 011 - NG2/CSPG4 Regulates Hypertrophic Differentiation in Mandibular Condylar Cartilage
David A. Reed, PhD ▪ University of Illinois, Chicago

Session 007: HCS Concurrent: Higher Order Multi-Analyte Interrogation of Tissue

10:00 AM–12:00 PM

Chair: Francesca Duncan, PhD ▪ Northwestern University

Location: Murano

- 10:00–10:30 AM
Multimomics Analysis of Human Bone Marrow Microenvironment
Kai Tan, PhD ▪ University of Pennsylvania
- 10:30–10:50 AM
ABSTRACT 012 - Mapping the Interactome of Matrisome Targets Using Extracellular Proximity Labeling (ePL)
David Peeney, PhD ▪ National Cancer Institute, National Institutes of Health
- 10:50–11:10 AM
ABSTRACT 013 - Expanding the Pool of Transplantable Livers Using Molecular Profiling and Histopathological Analysis
Ankita Srivastava, PhD ▪ Thomas Jefferson University
- 11:10–11:30 AM
ABSTRACT 014 - Hyaluronic Acid Production and Matrix Stiffening Promote Biliary Epithelial Cell Proliferation in Early Primary Sclerosing Cholangitis
Lorand Vancza, MD ▪ Stanford University
- 11:30–11:50 AM
ABSTRACT 015 - A New Journey for Cancer Research -Targeting Glycosylation: Glysite™ Scout Glycan Screening Kits for Comprehensive Detection of Glycan Expression
Shuhui Chen, PhD ▪ Vector Labs

Session 008: HCS Symposium: Viral Persistence - What Did COVID Teach Us About Preparing for the Next Pandemic?

10:00 AM–12:00 PM

Co-Chair: A. Sally Davis, DVM, PhD, DACVP, DACVM ▪ Horner Davis Consulting

Co-Chair: Stephen Hewitt, MD, PhD ▪ National Institutes of Health

Location: Imperial B

- 10:00–10:30 AM
When Immunity Causes Mischief on Ways of Rebalancing Immune Responses to Counteract Viral Immunopathology
Barry T. Rouse, DVM, PhD, DSc ▪ University of Tennessee Knoxville
- 10:30–11:00 AM
Dengue Immunity and Pathogenesis: Exploring Host-Virus Interaction and Identifying New Research Directions
Marcos J. Ramos-Benitez, PhD ▪ Ponce Health Sciences University/Ponce Research Institute
- 11:00–11:30 AM
SARS-CoV-2 Infection and Persistence in the Human Body and Brain at Autopsy
Sabrina Ranelli, PhD ▪ National Institutes of Health
- 11:30 AM–12:00 PM
Panel Discussion, Questions and Answers

Session 009: ASIP Trailblazers – Young Investigator Short Talks

11:00 AM–12:00 PM

Sponsored by the ASIP Committee for Career Development and the ASIP Women in Pathology

Co-Chair: Andrew Duncan, PhD ▪ University of Pittsburgh

Co-Chair: Pilar de la Puente, PhD ▪ Sanford Research

Location: Grand A

- Chair - Welcome and Introductions
- 11:00–11:05 AM
Pilas Pues: Becoming a Researcher and Building Community
Vik Meadows, PhD ▪ Rutgers University
- 11:05–11:10 AM
Bringing Together Technology and Brain Health: My Path to Pathology
Taylor Uselman ▪ University of New Mexico
- 11:10–11:15 AM
Through the Endothelium and Beyond!
Nakisha S. Rutledge, PhD ▪ University of Chicago
- 11:15–11:20 AM
How Opportunities Shape Our Scientific Career
Francisco Carrillo-Salinas, PhD ▪ Tufts University
- 11:20–11:25 AM
My Brazilian Magical Formula in Science Career
Michele Joana Alves, PhD ▪ The Ohio State University
- 11:30–11:35 AM
Surviving and Thriving: From Microbes to Me
Janiece Glover, MS, BS ▪ Medical University of South Carolina
- 11:35–11:40 AM
Emerging Approaches of IL-6-Driven Endothelial Dysfunction
Ramon Bossardi Ramos, PhD ▪ Albany Medical College

- 11:40–11:45 AM
From Sydney to Boston: My International Eye Research Career
Daisy Shu, PhD ▪ Schepens Eye Research Institute/Harvard Medical School
- ***Questions and Answers***

Session 010: ASIP Trainee Highlights Poster Session

12:00–1:00 PM

Location: Grand A

Session Description: This Highlights poster session will feature the 20 posters noted below from trainee members, selected from submitted abstracts. Diversity within the society (geographic, organ system, approach, etc.) will be featured.

- Louisa Tichy, MS ▪ University of North Carolina at Greensboro
ABSTRACT 136 - *Tumor Bearing Results in Metabolic Dysfunction and Skeletal Muscle Wasting in Apc(min/+) Mice*
- Rachel Edens, BS ▪ Medical University of South Carolina
ABSTRACT 210 - *Commensal Microbes Limit Fusobacterium Nucleatum Colonization of Human Bacterial Bioreactors*
- Giesse Albeche Duarte, BA, MS ▪ Albany Medical College
ABSTRACT 146 - *Integrin alpha3beta1 Regulates Mmp9 mRNA Alternative Polyadenylation in Skin Tumors and Wounds*
- Erika Arias ▪ Northwestern University
ABSTRACT 253 - *PECAM-1 Blockade Modulates Leukocyte Extravasation into the Subcortex After Ischemic Stroke and Reperfusion*
- Junyan Tao, BS ▪ University of Pittsburgh
ABSTRACT 227 - *Co-Activation of Beta-catenin with Nuclear Factor Erythroid 2-Related Factor 2 and MET: Biological and Therapeutic Implications*
- Stephen Richbart, BS ▪ Marshall University
ABSTRACT 152 - *The Use of the Three-Dimensional Spherical Invasion Assay to Measure the Invasive Activity of Human Cancer Cells*
- Anya Singh-Varma, BS ▪ University of Pittsburgh School of Medicine
ABSTRACT 225 - *Stellate Cell Wnts Regulate Endothelial Cell-Hepatocyte Zonation to Maintain Hepatic Metabolic and Proliferative Homeostasis*
- Amanda Sugrue, BS ▪ Marshall University
ABSTRACT 179 - *The Matrigel Duplex Assay: A Sensitive Method to Measure Retinal Angiogenesis*
- Taiwo Ademoye, BS, MS ▪ Purdue University
ABSTRACT 242 - *Evaluation of the Alpha-synuclein and Tau Anti-fibrillary Activity of 2-Amino-4-Methoxybenzothiazole Derivatives*
- Esther Arpigny ▪ University of Liège
ABSTRACT 137 - *Identification of the Roles of ADAMTS12 Secreted by Stellate Cells during Tumor Progression in Cholangiocarcinoma*
- Asm Sakhawat Hossain, MS Pharm ▪ University of Tsukuba
ABSTRACT 176 - *A Novel Mutation in the Hybrid1 Domain of the Fibrillin 1 Gene Causes an Abnormal Skin Phenotype*
- Siddhi Jain, PhD ▪ University of Pittsburgh
ABSTRACT 224 - *Pivotal Role of MET in Promoting Liver Regeneration Following Acetaminophen Hepatotoxicity Identified Using Liver-Specific Knock-Out and Pharmacological Inhibition Strategies in Mice*
- Michele Alves, PhD ▪ The Ohio State University
ABSTRACT 241 - *Brainstem CircRNAs Regulation in Neonatal Sepsis*

- Chhavi Goel, PhD ▪ University of Pittsburgh
ABSTRACT 220 - Targeted Hepatocyte-Specific β -catenin Overexpression Facilitates Improved Biliary Repair During Intrahepatic Cholestasis
- Vivienne Fang, BS ▪ Northwestern University
ABSTRACT 218 - The Role of CCR2+ Myeloid Cell Transmigration in Non-Proliferative Diabetic Retinopathy
- Joy Winfield ▪ Columbia University
ABSTRACT 139 - GP78 Expression Activates Breast Cancer Tumor Growth Through Immunogenetic, Lipogenic, and Endoplasmic Reticulum Stress Relief Pathways
- Reagan Light ▪ Marshall University
ABSTRACT 247 - Use of Structure-Activity Relationship (SAR) Studies to Design Region B Capsaicin Analogs with Robust Anti-Cancer Activity
- Maryam Alanjawi ▪ University of Pittsburgh
ABSTRACT 252 - The Histone Modification H3K4me2 and the DNA Demethylase TET2 Coordinately Regulates Microvascular SMC Recruitment and Coverage During Hindlimb Ischemia-Induced Angiogenesis
- Justin Merritt, BS ▪ Marshall University
ABSTRACT 255 - The Inhibition of the Alpha7-Nicotinic Acetylcholine Receptor Blocks Retinal Angiogenesis: Potential Applications in ARMD and Diabetic Retinopathy
- Kushal Modi ▪ Marshall University
ABSTRACT 248 - Anti-Cancer Activity of Non-Pungent Region C Capsaicin Analogs

ASMB: Matrix Biology Editorial Board Meeting (By Invitation Only)

12:00–1:00 PM

Location: Audubon

By Invitation Only

HCS: Business Meeting and Luncheon (RSVP Required for Luncheon)

12:15–1:00 PM

Location: Murano

Join the leadership of the Histochemical Society to discuss the business of the past year and the goals for the coming year. Nominations for a council position will be accepted and awardees will be recognized. **ALL are invited to attend. Please RSVP for lunch.**

Session 011: ASIP Cancer Pathobiology – Cancer Metabolism, Metastasis, and Therapeutic Implications

1:00–4:00 PM

Sponsored by the ASIP Cancer Pathobiology Scientific Interest Group

Co-Chair: Qing Zhang, PhD ▪ UT Southwestern Medical Center

Co-Chair: Piyali Dasgupta, PhD ▪ Marshall University

Location: Imperial A

- Chair - Welcome and Introductions
- 1:00–1:45 PM
Cellular Decisions and the Language that Unites Them
Jared Rutter, PhD ▪ University of Utah
- 1:45–2:30 PM
Targetable Metabolic Dependencies of Latent Brain Metastatic Cells
Srinivas Malladi, PhD ▪ University of Texas Southwest Medical Center

- 2:30–3:15 PM
Nutrients' Influences on Cancer
Jing Chen, PhD ▪ University of Chicago
- 3:15–4:00 PM
Targeting Iron Metabolism in Cancer
Mei Yee Koh, PhD ▪ University of Utah
- **Questions and Answers**

Session 012: ASIP and SCVP Cardiovascular Pathobiology – Ramifications of SARS-CoV-2 Infection on the Heart

1:00–4:00 PM

Co-Sponsored by the Society for Cardiovascular Pathology (SCVP)

Co-Chair: James Stone, MD, PhD ▪ Massachusetts General Hospital

Co-Chair: Jonathon W. Homeister, MD, PhD ▪ University of North Carolina

Location: Imperial B

- Chair - Welcome and Introductions
- 1:00–1:35 PM
A History of Humans and Coronaviruses: From Obscurity to SARS-CoV-2
Stephen Goldstein, PhD ▪ University of Utah
- 1:35–2:10 PM
Modeling Cardiac SARS-CoV-2 Infection Using Induced Pluripotent Stem Cells
Arun Sharma, PhD ▪ Cedars-Sinai Medical Center
- 2:10–2:45 PM
SARS-CoV-2 Affects Electrical and Mechanical Function of Human Pluripotent Stem Cell-Derived Cardiomyocytes
Silvia Marchiano, PhD ▪ University of Washington
- 2:45–3:20 PM
Differential Cardiomyocyte Dysfunction Induced by Natural and Stabilized SARS-CoV-2 Spike Protein Variants
Roberto Cattaneo, PhD ▪ Mayo Clinic
- 3:20–3:55 PM
Targets and Immune Pathogenesis of SARS-CoV-2 in the Cardiovascular System
Kory J. Lavine, MD, PhD ▪ Washington University
- **Questions and Answers**

Session 013: ASIP Liver Pathobiology – Liver Growth Control: From Maintenance and Regeneration to Disease

1:00–4:00 PM

Co-Sponsored by the ASIP Regenerative Medicine and Stem Cells Scientific Interest Group and the ASIP Liver Pathobiology Scientific Interest Group

Co-Chair: Andrew W. Duncan, PhD ▪ University of Pittsburgh

Co-Chair: Vik Meadows, PhD ▪ Rutgers University

Location: Grand D

- Chair - Welcome and Introductions
- 1:00–1:30 PM
Stranger Things: Nuclear Receptors and Liver Biology
Sayeepriyadarshini (Sayee) Anakk, PhD ▪ University of Illinois Urbana-Champaign
- 1:30–2:00 PM
Network Modeling of Liver Renewal and Regeneration Dynamics

- Raj Vadigepalli, PhD ▪ Thomas Jefferson University
- 2:00–2:30 PM
The Role of Beta-Catenin in Cholestatic Liver Disease
Kari Nejak-Bowen, MBA, PhD ▪ University of Pittsburgh
- 2:30–3:00 PM
Engineering Liver Tissues for Disease Modeling and Regenerative Medicine
Regeant Panday, PhD ▪ University of Illinois at Chicago
- 3:00–3:30 PM
Fishing for Liver Cancer Therapeutics
Kimberley Evason, MD, PhD ▪ University of Utah
- 3:30–4:00 PM
Hepatic Ploidy Populations in Compensatory Liver Regeneration
Andrew W. Duncan, PhD ▪ University of Pittsburgh
- ***Questions and Answers***

Session 014: ASMB Concurrent: Matrix Degradation: MMPs, ADAMTS, and Proteases

1:00–2:30 PM

Location: Imperial D

Chair: Dirk Hubmacher, PhD ▪ *Icahn School of Medicine at Mount Sinai*

- 1:00–1:30 PM
ADAMTS Proteases and ADAMTS-Like Proteins in Skeletal Muscle
Dirk Hubmacher, PhD ▪ Icahn School of Medicine at Mount Sinai
- 1:30–1:45 PM
ABSTRACT 016 - Collagen Distribution in Mouse Embryo Abdominal Wall
Kentaro Ikemura, PhD ▪ Okayama University
- 1:45–2:00 PM
ABSTRACT 017 - Conditional Inactivation of ADAMTS6 Improves Aortic Wall Structure in Mouse Models of Marfan Syndrome
Deborah E. Seifert ▪ Case Western Reserve University
- 2:00–2:15 PM
ABSTRACT 018 - Regulation of TIMPs Through MMP-Dependent Cleavage
Sasha Coates-Park ▪ National Institutes of Health
- 2:15–2:30 PM
ABSTRACT 019 - Unveiling New Immunomodulatory Actions of the Extracellular Protease ADAMTS1: Involvement of Different Substrates at Different Scenarios
Juan Carlos Rodríguez-Manzanaque, PhD ▪ GENYO. Centre for Genomics and Oncological Research: Pfizer/Universidad de Granada/Junta de Andalucía

Session 015: ASMB Concurrent: Host-Tumor Interactions

1:00–2:30 PM

Location: Grand A

Chair: Michael R. Angelo, PhD ▪ Stanford University

- 1:00–1:30 PM
A Spatial Framework for Tumor Immune Interactions in Breast Cancer
Michael R. Angelo, PhD ▪ Stanford University

- 1:30–1:45 PM
ABSTRACT 020 - Modeling the Influence of Stroma in Ovarian Cancer Drug Resistance in a Microvascularized Multiniche Tumor-On-a-Chip
Pilar de la Puente, PhD ▪ Sanford Research
- 1:45–2:00 PM
ABSTRACT 021 - Early Lung Cancer Progression is Driven by Resident Fibroblast-Produced Extracellular Matrix Protein Tenascin-C
Shiela C. Samson, PhD ▪ University of Utah
- 2:00–2:15 PM
ABSTRACT 022 - Microbial-Host Co-Metabolite Hippurate Reduces Breast Cancer Growth and Modulates Tumor Fibrosis
Adam S. Wilson ▪ Wake Forest University School of Medicine
- 2:15–2:30 PM
ABSTRACT 023 - Deciphering the Dual Role of ADAMTS2 on Cancer Progression: From ECM to Immunity
Joannes Loïc ▪ University of Liège

Session 016: ASMB Concurrent: Matrix Resources, Big Data, and Data Integration

1:00–2:30 PM

Location: Imperial C

Chair: Valerio Izzi, PhD ▪ University of Oulu

- 1:00–1:30 PM
Tool Building for the ECM Community
Valerio Izzi, PhD ▪ University of Oulu
- 1:30–1:45 PM
ABSTRACT 027 - MatrisomeDB: An ECM Proteomics Tool to Facilitate Biomarker Discovery
Nandini Kapoor ▪ University of Illinois, Chicago
- 1:45–2:00 PM
ABSTRACT 026 - Multi-Omics Characterization of Matrisome Dynamics During IPF Pathogenesis
Sarah Lloyd ▪ AbbVie
- 2:00–2:15 PM
ABSTRACT 025 - Mechanical Stiffness Regulates Epigenetic Control of Cardiac Fibroblast Gene Expression
Jordan E. Morningstar ▪ Medical University of South Carolina
- 2:15–2:30 PM
ABSTRACT 024 - Investigating the Regulatory Impact of Collagen Type XI N-terminus Domain (NTD) Variants on Collagen Self-assembly Kinetics and Insights on the Molecular Interactions
Abu Sayeed Chowdhury ▪ Boise State University

Session 017: HCS Concurrent: Cancer: Imaging Immuno-Oncology

1:00–2:30 PM

Location: Murano

Co-Chair: Lisa Ann Ridnour, PhD ▪ National Institutes of Health

Co-Chair Stephen M. Hewitt, MD, PhD ▪ National Institutes of Health

- 1:00–1:30 PM
Adjuvant COX Inhibition Augments Type I Interferons, STING Signaling and Cytolytic T Cell Infiltration in Irradiated Murine 4T1 TNBC Tumors
Lisa Ann Ridnour, PhD ▪ National Institutes of Health
- 1:30–2:00 PM
Macroscopy FRET FLI Monitors Cancer Antibody Drug-Target Engagement In Vivo
Margarida Barroso, PhD ▪ Albany Medical College

- 2:00–2:15 PM
ABSTRACT 028 - Immune Checkpoint Protein Expression Patterns in Gastric Cancer: Unraveling the Immunological Landscape
Babajide Oluwaseun Ajayi, PhD ▪ Ajayi Crowther University
- 2:15–2:30 PM
ABSTRACT 029 - Fluorescence Resonance Energy Transfer Based Molecular Beacon Probe for In Situ Hybridization
Narantsog Choijookhuu, PhD ▪ University of Miyazaki

Session 018: HCS Concurrent: Tissue Clearing and Expansion

1:00–2:30 PM

Chair: Douglas L. Rosene, PhD ▪ Boston University School of Medicine

Location: Venezia

- 1:00–1:25 PM
ABSTRACT 033 - A New View: Quantifying Cellular Spatial Relationships in CLARITY-Processed Tissue from the Rhesus Monkey Brain
Farzad Mortazavi, PhD ▪ Chobanian & Avedisian School of Medicine
- 1:25–1:35 PM
ABSTRACT 030 - Rac1 Promotes Kidney Collecting Duct Repair by Mechanically Coupling Cell Morphology to Mitotic Entry
Fabian Bock, MD, PhD ▪ Vanderbilt University Medical Center
- 1:35–1:45 PM
ABSTRACT 031 - Quantitative Digital Image Analysis of Whole Slide Images to Investigate White Matter Rarefaction in Alzheimers Disease
Dana Julian ▪ University of Pittsburgh School of Medicine
- 1:45–1:55 PM
ABSTRACT 032 - Non-Invasive Electric Stimulation Suppresses Microglia Activation and Angiogenesis Through the Mediation of Mitochondrial Potential and Ca²⁺ Signaling in Microglia and Endothelial Cells
Anton Lennikov, MD, PhD ▪ Schepens Eye Research Institute of Massachusetts Eye and Ear/Harvard Medical School
- 1:55–2:20 PM
Expansion Microscopy: Development, Application, and Future Directions
Jinyoung Kang, PhD ▪ Massachusetts Institute of Technology
- **Questions and Answers**

Session 019: ASMB Concurrent: Fibronectin and the Developmental Biology of ECM

2:45–4:15 PM

Location: Imperial D

Chair: Sophie Astrof, PhD ▪ Rutgers University/NJ Med School Newark

- 2:45–3:15 PM
Pleiotropic and Cell Type-Specific Roles of Fibronectin in Cardiovascular Development
Sophie Astrof, PhD ▪ Rutgers University/NJ Med School Newark
- 3:15–3:30 PM
ABSTRACT 034 - Versican Mediates the Crosstalk Between Keratinocytes and Dermal Papilla Cells in Hair Follicles
Xi Chen, PhD ▪ Stony Brook University
- 3:30–3:45 PM
ABSTRACT 035 - Development of A Novel Mouse Strain With a Multifunctional and Switchable Tagged Allele of COL4A1
Mao Mao, PhD ▪ University of California, San Francisco
- 3:45–4:00 PM
ABSTRACT 036 - Subendothelial Fibronectin Disrupts Endothelial Cell Monolayer Integrity
Henry Resnikoff ▪ Princeton University

- 4:00–4:15 PM
ABSTRACT 037 - Longitudinal Mechanical, Histological and Functional Analysis of Myxomatous Mitral Valve Disease in Marfan Syndrome Mice
Brittany A. Gonzalez, PhD ▪ Cincinnati Children's Hospital Medical Center

Session 020: ASMB Concurrent: Biomaterials

2:45–4:15 PM

Location: Grand A

Chair: Jamal Lewis, PhD ▪ University of California, Davis

- 2:45–3:15 PM
Advances in Engineering Particles for Inflammatory Disease Therapy
Jamal Lewis, PhD ▪ University of California, Davis
- 3:15–3:30 PM
ABSTRACT 038 - Vascular Elastic Lamellae Fabricated In Vitro by a Layer-by-Layer Method
Shota Tanifuji, PhD ▪ Tokyo Medical University
- 3:30–3:45 PM
ABSTRACT 039 - Magnetic Extracellular Vesicle Delivery System for Matrix Synthesis for Abdominal Aortic Aneurysm Repair
Ande X. Marini ▪ University of Pittsburgh
- 3:45–4:00 PM
ABSTRACT 040 - A Decellularized Cartilage Matrix Approach to Pediatric Airway Reconstruction
Paul M. Gehret, PhD ▪ University of Pennsylvania
- 4:00–4:15 PM
ABSTRACT 041 - A Regulatory Role for Macrophages in Fibroblast Circadian Rhythm and Collagen-I Deposition
Katherine Lowles ▪ University of Manchester

Session 021: ASMB Concurrent: Genetics of Matrix Disorders

2:45–4:15 PM

Location: Imperial C

Chair: Fransiska Malfait, MD, PhD ▪ Center for Medical Genetics, University of Ghent

- 2:45–3:15 PM
Pain Mechanisms in Heritable Collagen Disorders: Lessons Learned from the Ehlers-Danlos Syndromes
Fransiska Malfait, MD, PhD ▪ Center for Medical Genetics, University of Ghent
- 3:15–3:30 PM
ABSTRACT 042 - Effects of Fibrillin-1 loss on Osteoarthritis Development
Blandine Poulet, PhD ▪ University of Liverpool
- 3:30–3:45 PM
ABSTRACT 043 - Using Suppressor Genetics to Identify Therapeutic Targets for Thoracic Aortic Aneurysm in a Mouse Model of Neonatal Marfan Syndrome (nMFS)
Silvia Smaldone, PhD ▪ Regeneron Pharmaceutical, Inc.
- 3:45–4:00 PM
ABSTRACT 044 - Expanding the Mutational and Phenotypic Spectrum in Elastin-Driven Disease Through a Gene-First Approach
Beth Kozel, MD, PhD ▪ National Heart, Lung, and Blood Institute, National Institutes of Health
- 4:00–4:15 PM
ABSTRACT 045 - The Role of Fibronectin in Mediating the Progression of TGF- β 1-Induced Renal Fibrosis in a 3D Culture Model
Kristin Kim ▪ Virginia Commonwealth University

Session 022: HCS Concurrent: Neuropathology and Neuro-Inflammation

2:45–4:15 PM

Location: Venezia

Chair: Douglas L. Rosene, PhD ▪ Boston University School of Medicine

- 2:45–3:15 PM
The Inconvenient Truth About CTE
Ann C. McKee, MD ▪ Boston University
- 3:15–3:30 PM
ABSTRACT 046 - *Brain Endothelial Transcriptome in Response to Endotoxemia*
Shuhan Lu ▪ Albany Medical College
- 3:30–3:45 PM
ABSTRACT 047 - *Microglia Transcriptome Suggests Persistent Activation and Impaired Oxidative Phosphorylation in Alzheimers Disease*
Tracy Fischer, PhD ▪ Tulane National Primate Research Center
- 3:45–4:00 PM
ABSTRACT 048 - *Reduction in the Expression of Tight Junction Proteins at 4-Weeks Post-SARS-CoV-2 Infection in Non-Human Primates*
Meredith Mayer ▪ Tulane National Primate Research Center
- 4:00–4:15 PM
ABSTRACT 049 - *The Effects of a Closed Head Injury on Anxiety-like Behaviors in Male Rats*
Taysha M. Jiménez-Rivera ▪ University of Puerto Rico

Session 023: HCS Concurrent: Beyond Mapping: Driving New Discoveries by Harnessing Multi-Modal Data

2:45– 4:15 PM

Location: Murano

Co-Chair: Alexandra Naba, PhD ▪ University of Illinois, Chicago

Co-Chair: Francesca Duncan, PhD ▪ Northwestern University

- 2:45–3:15 PM
Building a Comprehensive Human Reference Atlas
Richard Conroy, PhD ▪ Office of Strategic Coordination, National Institutes of Health
- 3:15–3:45 PM
Leveraging Hubmap Data to Build the Human ECM Atlas
Alexandra Naba, PhD ▪ University of Illinois, Chicago
- 3:45–4:15 PM
The Power of One: New Insights Gained from a Single Cell Reproductive Cell Atlas
Sue Hammoud, PhD ▪ University of Michigan

Session 024: Presidents' Welcome and Meritorious Award Lectures

4:30–6:00 PM

Co-Sponsored by the American Society for Matrix Biology, the Histochemical Society, and the American Society for Investigative Pathology

Co-Chair: Jeffrey H. Miner, PhD ▪ Washington University School of Medicine – *ASMB President*

Co-Chair: Alejandro P. Adam, PhD ▪ Albany Medical College – *HCS President*

Co-Chair: William A. Muller, MD, PhD ▪ Northwestern University – *ASIP President*

Session Description: This session will feature meritorious awards lectures from each of the partnering Societies – ASMB, HCS, ASIP

Location: Imperial A&B

ASIP Rous-Whipple Award Lecture

- 4:30–5:00 PM
TIMPs: Emerging Roles in Tissue Homeostasis and Cancer Progression
William Stetler-Stevenson, MD, PhD ▪ National Cancer Institute

HCS George Gomori Awardee

- 5:00–5:30 PM
Back to the Future with George Gomori
Denis Baskin, PhD ▪ University of Washington

ASMB Senior Investigator Awardee

- 5:30–6:00 PM
Mysteries of the Collagen Triple Helix
Hans Peter Bachinger ▪ Oregon Health and Science University

Session 025: Keynote Lecture

6:00–7:00 PM

Location: Imperial A&B

- ***Disease-Specific Changes in Extracellular Matrix and Targeted Drug Delivery***
Erkki Ruoslahti, MD, PhD ▪ Sanford Burnham Presbyterian Medical Discovery Institute
Albert Lasker Basic Medical Research Awardee

Opening Reception – ASMB, HCS, and ASIP

7:00–9:00 PM

Location: Garden Courtyard

MONDAY, OCTOBER 23, 2023

Session 026: Education/Career Development Session - We Have to Talk: Navigating Challenging Conversations

7:00–8:30 AM

Co-Sponsored by the ASIP Committee for Career Development and the Education Committee

Co-Chair: Taylor Ticer ▪ Medical University of South Carolina

Co-Chair: Patricia D'Amore, PhD ▪ Schepens Eye Research Institute of Mass. Eye & Ear, Harvard Medical School

Location: Grand A

Session Description: The goal of this session is to provide participants with practical advice on how to manage difficult conversations, from both the mentor's and the mentee's perspective. The workshop will be divided into two parts: (i) a didactic lecture, followed by (ii) an audience participation activity. The lecture, titled "Navigating Troubled Waters," will be delivered by several ASIP members who will address the conversation from the mentor's and trainee's perspective and viewpoint. The presentation will cover how to prepare for a difficult conversation, tips for effective communication, and how to conclude the conversation.

The second part of the session will be an interactive group activity which involves ASIP members who will assist in role-play different scenarios, and this will be followed by audience discussion about pros and cons of the conversation. Volunteers from the audience will then be asked to implement what they learned from the didactic portion to act out other scenarios; this will also be followed by audience discussion. By the end of the session, audience members will have gained new tools on navigating difficult conversations with a mentor or mentee in a way that will be productive for both parties involved.

Session 027: ASIP Mucosal Pathobiology – Cellular and Microbial Cross-Talk on the Mucosal Interfaces

8:30–10:30 AM

Sponsored by the ASIP Vascular and Mucosal Pathobiology Scientific Interest Group

Co-Chair: Andrei Ivanov, PhD ▪ Cleveland Clinic Foundation

Co-Chair: Asma Nusrat, MD ▪ University of Michigan

Location: Murano D

- Chair - Welcome and Introductions
- 8:00–8:35 AM
Interplay Between Neutrophils and Mucosal Epithelia During Inflammation and Repair
Charles Parkos, MD, PhD ▪ University of Michigan
- 8:35–9:10 AM
Enigmatic Role of Gasdermins in Gut Mucosal Immunity
Theresa Pizarro, PhD ▪ Case Western Reserve University
- 9:10–9:45 AM
Digging Up the Roots of Asthma Endotypes
Donald N Cook, PhD ▪ National Institute of Environmental Health Sciences
- 9:45–10:20 AM
Mechanisms of Protective and Pathological Hyaluronan Remodeling in Inflammatory Bowel Disease
Aaron C. Petrey, PhD ▪ University of Utah
- ***Questions and Answers***

Session 028: ASMB Plenary: Sex, Age, and ECM

8:30–10:00 AM

Chair: Karen Posey, PhD, ▪ McGovern Medical School

Location: Imperial A

- 8:30–9:00 AM
Sex-Specific In Vitro Models of Aortic Valve Stenosis
Brian Aguado, PhD ▪ University of California San Diego

- 9:00–9:30 AM
Sex Differences in Heritable Thoracic Aortic Disease
Julie De Backer, MD, PhD ▪ Ghent University Hospital, Belgium
- 9:30–10:00 AM
Engineering the Adipose Tissue Matrix
Evangelia Bellas, PhD ▪ Temple University
ASMB Junior Investigator Awardee

Session 029: ASMB and HCS Plenary: Proteoglycans and Inflammation

8:30–10:00 AM

Co-Chair: Liliana Schaefer, MD ▪ Goethe University

Co-Chair: Ambra Pozzi, PhD ▪ Vanderbilt University School of Medicine

Location: Imperial B

- 8:30–9:00 AM
Hyaluronan Matrix as a Treatment Target in Viral Pneumonia
Stavros Garantziotis, MD ▪ National Institute of Environmental Health Sciences
- 9:00–9:30 AM
Towards the Universality and Targeting of TLR Signaling: Developing Novel Therapeutics
Rashmin C. Savani, MB, ChB ▪ University of Florida, Gainesville
- 9:30–10:00 AM
Proteoglycan Regulation of Tumor Lymphangiogenesis
Renato V. Iozzo, MD, PhD (Honoris causa) ▪ Sidney Kimmel Medical College at Thomas Jefferson University

Session 030: ASIP Liver Pathobiology

8:30–10:00 AM

Co-Chair: Chhavi Goel, PhD ▪ University of Pittsburgh

Co-Chair: Vik Meadows, PhD ▪ Rutgers University

Location: Imperial D

- 8:30–8:45 AM
ABSTRACT 050 - *Identifying a Metabolomics-Based Serum Signature of Hepatic HNF4alpha Downregulation*
Udayan Apte, PhD ▪ University of Kansas Medical Center
- 8:45–9:00 AM
ABSTRACT 051 - *Overexpression of Atg7 in Mouse Liver Paradoxically Suppresses Autophagy*
Yuanyuan Li, PhD ▪ Tulane University School of Medicine
- 9:00–9:15 AM
ABSTRACT 052 - *Acetaminophen-Induced Acute Liver Injury is Differentially Regulated by Diploid and Polyploid Hepatocytes*
Sierra Wilson, BA ▪ University of Pittsburgh
- 9:15–9:30 AM
ABSTRACT 053 - *Inhibition of Wnt/beta-catenin Signaling as a Novel Therapeutic Strategy for Porphyria*
Anu Balogun, MSc ▪ University of Pittsburgh
- 9:30–9:45 AM
ABSTRACT 054 - *Dual Loss of β - and γ -Catenins from Cholangiocytes Leads to Acute Cholestasis and Mortality due to Hepatobiliary Injury and Maladaptation as Revealed by Single-Nucleus RNA Sequencing*
Yekaterina Krutsenko, BSc ▪ University of Pittsburgh
- 9:45–10:00 AM
ABSTRACT 055 - *Maternal Obesogenic Diets Alter the Microbiome-Dependent Weaning Reaction and Variably Promote Non-Alcoholic Fatty Liver Disease in Offspring*
Vung Lian ▪ Washington University School of Medicine


Session 031: ASIP Blood Vessel Club  The Vasculature in Normal and Pathologic Conditions

8:30–10:00 AM

Co-Chair: Patricia A. D'Amore, PhD ▪ Schepens Eye Research Institute of Mass. Eye & Ear, Harvard Medical School

Co-Chair: David Sullivan, PhD ▪ Northwestern University

Location: Grand D

Session Description: The Blood Vessel Club  is an annual gathering at the ASIP annual meeting. Over the many years that this group has met there have astounding developments and advancements. From the early days when establishing the vascular endothelium in vitro was a major breakthrough in the field to the elegant and sophisticated approaches and models of today, anyone with an interest in the vasculature (and that should be everyone because all tissues are vascularized!) will find home here.

- Chair - Welcome and Introductions
- 8:30–8:50 AM
Novel Roles for Platelets in Infection and Inflammation
Robert A. Campbell, PhD ▪ University of Utah
- 8:50–9:10 AM
Neutrophils Recruitment in Stroke - An Early Opportunity to Regulate Neuroinflammation in the Ischemic Brain
David P. Sullivan, PhD ▪ Northwestern University
- 9:10–9:30 AM
Charting the Vascular Connectome Under Physiological Conditions and Disease
Joseph F. Arboleda-Velasquez, MD, PhD ▪ Mass Eye and Ear, Harvard Medical School
- 9:30–9:50 AM
The Ins and Outs of Neutrophil Trafficking in Cancer
Tanya N. Mayadas, PhD ▪ Brigham and Women's Hospital, Harvard Medical School
- ***Questions and Answers***

Session 032: ASIP: STP Guest Society Session - Applications of Molecular Pathology to Early Drug Discovery and Development

8:30–10:00 AM

Chair: David Hutto, DVM, PhD, DACVP ▪ Boehringer Ingelheim

Location Imperial C

- Chair - Welcome and Introductions
- 8:30–9:15 AM
Application of Molecular Pathology to Investigative Preclinical Safety Assessment
Mathieu Marella, PhD ▪ The Janssen Pharmaceutical Companies of Johnson & Johnson
- 9:15–10:00 AM
Understanding the Biology of Oncolytic Viruses
David Hutto, DVM, PhD, DACVP ▪ Boehringer Ingelheim

Coffee Break

10:00–10:30 AM

Location: Ballroom Reception

Session 033: Joint Plenary Session – Fibrosis: Fibrosis Across Organ Systems

10:30–12:00 PM

Co-Sponsored by the American Society for Matrix Biology, the Histochemical Society, and the American Society for Investigative Pathology

Co-Chair: Jeffrey H. Miner, PhD ▪ Washington University School of Medicine

Co-Chair: Liliana Schaefer, MD ▪ Goethe University Frankfurt

Co-Chair: Andrei Ivanov, PhD ▪ Cleveland Clinic Foundation

Location: Imperial A&B

- Chair - Welcome and Introductions
- 10:30–11:00 AM
Mechanisms of Fibrogenesis in Inflammatory Bowel Disease
Florian Rieder, MD ▪ Cleveland Clinic
- 11:00–11:30 AM
The Epithelium Takes Center Stage in Fibrosis
Melanie Koenigshoff, MD, PhD ▪ University of Pittsburgh
- 11:30 AM–12:00 PM
The New Frontier of Antifibrotic Therapies – Rationale and Development
Scott L. Friedman, MD ▪ Mount Sinai
- ***Questions and Answers***

Lunch and Poster Session

12:00–2:00 PM

Location: Grand Ballroom B&C

Matrix Biology Editorial Board Meeting

12:00–1:00 PM

Location: Audubon

By Invitation Only

Lunch with the ASMB Publication Committee – Special Issues

1:00–2:00 PM

Location: Vienna

Join the ASMB Publication Committee to talk about plans for upcoming special issues of Matrix Biology. If you have a topic for a future special issue or if you are interested in becoming a guest editor, bring your lunch and join our conversation! Lunch provided in the main meeting area, the Vienna Room is located on the third floor.

Session 034: ASIP Outstanding Investigator Award Lecture

Location: Imperial A

- 1:00–2:00 PM
Epigenetic Control of Cancer Metastasis and Immune Evasion
Qin Yan, PhD ▪ Yale University

Session 035: ASMB Concurrent: Update on Collagen Biology

2:00– 3:30 PM

Chair: Joan Chang, PhD ▪ *University of Manchester*

Location: Imperial B

- 2:00–2:30 PM
(Circadian) Regulation of Collagen-I Homeostasis? New Paradigms and Considerations
Joan Chang, PhD ▪ University of Manchester
- 2:30–2:45 PM
ABSTRACT 056 - *The Role of Microvilli in the Organization of Apical Extracellular Matrix*
Ava Niazi ▪ University of Utah
- 2:45–3:00 PM
ABSTRACT 057 - *Fused in Sarcoma: An RNA-DNA binding protein with Pro-Fibrotic Activity*
Manuel Chiusa, PhD ▪ Vanderbilt University School of Medicine
- 3:00–3:15 PM
ABSTRACT 058 - *A Bidirectional Cross-Talk Between the Adherens Junction - Associated RNAi Machinery and the Extracellular Matrix Regulates Colon Epithelial Cell Behavior*
Amanda Daulagala, PhD ▪ Medical University South Carolina
- 3:15–3:30 PM
ABSTRACT 059 - *Collagen Degradative Pathways Ensure Cervical Remodeling During Pregnancy*
Mariano Colon-Caraballo, PhD ▪ UT Southwestern Medical Center

Session 036: ASMB Concurrent: Elastic Fibers

2:00–3:30 PM

Chair: Anand Ramamurthi, PhD ▪ Lehigh University

Location: Imperial D

- 2:00–2:30 PM
Elastic Matrix Regenerative Platforms for In Situ Tissue Repair
Anand Ramamurthi, PhD ▪ Lehigh University
- 2:30–2:50 PM
ABSTRACT 060 - *Fibulin-1 Supports BM Stretching During Ovulation in C. elegans*
Adam WJ Soh, PhD ▪ Duke University
- 2:50–3:10 PM
ABSTRACT 062 - *Spatio-Temporal Expression of EP4 Regulates Vascular Intimal Hyperplasia Through Fibulin-1*
Shigekuni Okumura, MD ▪ Tokyo Medical University
- 3:10–3:30 PM
ABSTRACT 063 - *MFAP4 Forms Octamers Required for Functional Interactions with Elastogenic Proteins*
Michael R. Wozny, PhD ▪ McGill University

Session 037: ASMB Concurrent: Matrix and Receptors in Development

2:00–3:30 PM

Chair: Brian Stramer, PhD ▪ Kings College London

Location: Imperial C

- 2:00–2:30 PM
Dissecting Basement Membrane Dynamics During Drosophila Development
Brian Stramer, PhD ▪ Kings College London
- 2:30–2:45 PM
ABSTRACT 064 - *Multiple Cell Types Influence Extracellular Matrix Dynamics During Planarian Regeneration*
Ekasit K. Sonpho, PhD ▪ Stowers Institute for Medical Research
- 2:45–3:00 PM
ABSTRACT 065 - *Delineating the Timeline of SNED1 Fibrillogenesis and Assembly in the Extracellular Matrix*
Leanna Leverton ▪ University of Illinois at Chicago
- 3:00–3:15 PM
ABSTRACT 066 - *Fibronectin-Mediated Physiological and Pathological Mechanisms in Skeletal Development*
Neha Dinesh, PhD ▪ McGill University, Montreal
- 3:15–3:30 PM
ABSTRACT 067 - *Temporally-Restricted Patterns of Endothelial Cell Collagen IV Expression Determined with a Novel Knockin' Col4a1-GFP Mouse Line (HCS Post-Doctoral Trainee Awardee)*
Nathaniel Lartey, PhD ▪ University of Michigan Medical School

Session 038: ASIP President's Symposium – Regulation and Consequences of Transendothelial Migration – Part I

2:00–3:30 PM

Chair: William A. Muller, MD, PhD ▪ Northwestern University

Location: Imperial A

- Chair - Welcome and Introductions
- 2:00–2:45 PM
Transendothelial Migration from the Endothelial Cell Perspective
William A. Muller, MD, PhD ▪ Northwestern University
- 2:45–3:30 PM
Transendothelial Migration from the Leukocyte Perspective
Minsoo Kim, PhD ▪ University of Rochester
- ***Questions and Answers***

Session 039: HCS and ASIP Concurrent: Lung Fibrosis

2:00–3:30 PM

HCS Co-Chair: Charles W. Frevert, DVM, ScD ▪ University of Washington School of Medicine

ASIP Co-Chair: Piyali Dasgupta, PhD ▪ Joan C. Edwards School of Medicine, Marshall University

Location: Grand D

- 2:00–2:30 PM
Defining the Cell Types that Drive Idiopathic Pulmonary Fibrosis Using Combined Transcriptomics and Proteomics
Oliver Eickelberg, MD, FERS, ATSF ▪ University of Pittsburgh
- 2:30–3:00 PM
The Functional Role of Pericytes in Lung Injury and Repair
Chi Hung, MD ▪ University of Washington School of Medicine
- 3:00–3:30 PM
New Insights into the Molecular Mechanisms of IPF - A Translational Approach
Malgorzata Wygrecka, PhD ▪ Justus Liebig University

Session 040: HCS Guest Society Session: The Japan Society of Histochemistry and Cytochemistry Presents Current Trends and Best Paper

2:00–3:30 PM

Chair: Stephen Hewitt, MD, PhD ▪ National Institutes of Health, Editor in Chief of the Journal of Histochemistry & Cytochemistry

Location: Venezia

- 2:00–2:30 PM
Immunohistochemistry and My Scientific Career
Paul K. Nakane, PhD ▪ Retired
- 2:30–3:00 PM
Current Topics in Japan Society of Histochemistry and Cytochemistry: Digests From Recent Takamatsu Prize and Young Investigator Award Winners Works
Takehiko Koji, MD, PhD ▪ Nagasaki University and Daisuke Tsuruta/Osaka Metropolitan University
- 3:00–3:30 PM
Top Cited Articles in Acta Histochemica et Cytochemica, the Official Journal of Japan Society of Histochemistry and Cytochemistry
Daisuke Tsuruta, MD, PhD ▪ Osaka Metropolitan University and Takehiko Koji/Nagasaki University

Coffee Break

3:30–4:00 PM

Location: Ballroom Reception

Session 041: ASMB Concurrent: Basement Membrane: Structure and Function

4:00–5:30 PM

Chair: M. Peter Marinkovich, MD ▪ Stanford University

Location: Imperial B

- 4:00–4:30 PM
Gene Therapy for Epidermolysis Bullosa
M. Peter Marinkovich, MD ▪ Stanford University
- 4:30–4:45 PM
ABSTRACT 068 - Non-Cell-Autonomous Deposition of Ectopic Laminin α 2 in the Glomerular Basement Membrane in Alport Syndrome
Kohei Omachi, PhD ▪ RIKEN Center for Biosystems Dynamics Research (BDR)

- 4:45–5:00 PM
ABSTRACT 069 - Antibody Mediated Binding of Amyloid Beta Causes Degradation of Collagen IV in the Basement Membrane of Viable Microvessels Isolated from Brains with Alzheimer's Disease Neuropathology
May J. Reed, MD ▪ University of Washington
- 5:00–5:15 PM
ABSTRACT 070 - Dual Linker Protein Repair of the Lama2-Null Dystrophic Mouse by AAV Somatic Gene Therapy
Peter D. Yurchenco ▪ Rutgers University
- 5:15–5:30 PM
ABSTRACT 071 - Cryo-EM Reveals the Molecular Basis of Laminin Polymerization and LN-lamininopathies
Arek Kulczyk, PhD ▪ Rutgers University

Session 042: ASMB Concurrent: New Approaches to Modelling Matrix Changes in Human Development and Disease

4:00–5:30 PM

Chair: Rachel Lennon, BMedSci, BMBS, PhD, FRCPCH ▪ University of Manchester

Location: Imperial D

- 4:00–4:30 PM
Basement Membrane Turnover in Alport Syndrome
Rachel Lennon, BMedSci, BMBS, PhD, FRCPCH ▪ University of Manchester
- 4:30–4:45 PM
ABSTRACT 072 - Pgp-1 Deficiency Results in Intestinal Defects in C. Elegans, Modeling Human Disease
MaKenna DeYoung ▪ University of South Carolina Upstate
- 4:45–5:00 PM
ABSTRACT 073 - Human 3D Organotypic Co-Culture Model of Pleura
Peggy Stock, PhD ▪ University Hospital Leipzig
- 5:00–5:15 PM
ABSTRACT 074 - A Comparative Analysis of Pulmonary Arterial Hypertension in Human Subjects and in Experimental Rodent Models
Lan Zhao ▪ Stanford University
- 5:15–5:30 PM
ABSTRACT 075 - MET and Fibroblast Growth Factor 19 Co-Expression in Hepatocellular Carcinoma: Molecular Biology and Clinical Relevance
Brandon M. Lehrich ▪ University of Pittsburgh

Session 043: ASMB Concurrent: Matricellular Proteins

4:00–5:30 PM

Chair: Davy Vanhoutte, PhD ▪ Cincinnati Children's Hospital Medical Center

Location: Imperial C

- 4:00–4:30 PM
ABSTRACT 079 - Thrombospondin-1 Regulates Skeletal Muscle Mass in a TGF- β -Smad2/3-ATF4-Dependent Manner
Davy Vanhoutte, PhD ▪ Cincinnati Children's Hospital Medical Center
- 4:30–4:45 PM
ABSTRACT 076 - In Situ Engineering of Stromal Cell-Derived Extracellular Matrix to Restore Functionality of the Aging Bone Marrow Niche
Milos Marinkovic, PhD ▪ University of Texas Health Science Center at San Antonio
- 4:45–5:00 PM
ABSTRACT 077 - Elucidating the Role of Anti-aging Matrix Fibulin 7 in Skin Inflammatory Disease Psoriasis
Erna Raja, PhD ▪ University of Tsukuba, Japan
- 5:00–5:15 PM
ABSTRACT 078 - Next-Generation Formulation of Curcumin, Ameliorates Growth Plate Chondrocyte Stress and Increases Limb Growth in a Mouse Model of Pseudoachondroplasia
Jacqueline T. Hecht, PhD ▪ McGovern Medical School at UTHealth Houston

- 5:15–5:30 PM
ABSTRACT 192 - Nanostring Gene Expression Analysis of Normal and Glaucomatous Trabecular Meshwork Cells With and Without the N700S Thrombospondin-1 Polymorphism
 Kate Keller, PhD ▪ Oregon Health & Science University

Session 044: ASIP President’s Symposium – Regulation and Consequences of Transendothelial Migration – Part II
 4:00–5:30 PM

Chair: William Muller, MD, PhD ▪ Northwestern University

Location: Imperial A

- Chair - Welcome and Introductions
- 4:00–4:45 PM
Consequences of Transendothelial Migration
 Sussan Nourshargh, PhD ▪ Queen Mary University of London
- 4:45–5:30 PM
Role of Emigrated Leukocytes in Resolution of Inflammation
 Charles N. Serhan, PhD, DSc ▪ Brigham and Women’s Hospital, Harvard Medical School
- **Questions and Answers**

Session 045: HCS and ASIP Concurrent: Liver Pathobiology - Liver Fibrosis: Mechanisms and Signaling Pathways with JHC Lecture
 4:00–5:30 PM

Co-Chair: Heather Francis, PhD ▪ Indiana University

Co-Chair: Liliana Schaefer, MD ▪ Goethe University

Location: Grand D

- 4:00–4:35 PM
Deciphering Mast Cell-Cholangiocyte Crosstalk: Implications for Liver Fibrosis Pathogenesis and Therapy
 Heather Francis, PhD ▪ Indiana Center for Liver Research, Indiana University School of Medicine
- 4:40–5:15 PM
JHC Lecture: Liver Fibrosis: Novel Concepts and Therapeutic Approaches
 Detlef Schuppan, MD, PhD ▪ Institute of Translational Immunology, University Medical Center of the Johannes Gutenberg University Mainz
- 5:15–5:30 PM
ABSTRACT 080 - Dose-Dependent Changes in Hepatic Fibrin(ogen) Deposition Reveals a Pathological Role of Fibrin Polymerization in Acetaminophen-induced Acute Liver Failure
 Zimu Wei ▪ Michigan State University

ASIP Business Meeting and Awards Presentations

5:30–7:00 PM

Chair: William Muller, MD, PhD ▪ Northwestern University

Location: Imperial A

ASIP Society-Wide Reception

7:00–9:00 PM

Location: Imperial A

ASIP President’s Reception (By Invitation Only)

9:00–11:00 PM

Location: Private

Session 046: ASMB Organized Career Mentoring Roundtables

7:00–8:30 AM

Location: Grand A

Round Table Breakfast – Open to all

Join colleagues for lively discussion around various career focused topics. Select a table by topic or by mentor, feel free to change tables halfway through. Mentors and topics will be listed on the meeting app.

Session 047: Picking Your Mentors and Minding Your Mentees

7:00–8:30 AM

Co-Chair: Julie Randolph-Habecker, PhD ▪ Pacific Northwest University

Co-Chair: Wendy Mars, PhD ▪ University of Pittsburgh

Co-Chair: Dan Milner, MD ▪ American Society for Clinical Pathology

Co-Chair: Michele Alves, PhD ▪ Ohio State University

Location: Venezia

Session Description: The concept of the importance of building a Board of Mentoring Directors for career success will be introduced, including how to identify what constitutes a healthy relationship between the mentor and mentee. Case-based discussions with a panel of mentors and mentees at various stages of their careers will be used to help both mentors and mentees understand what constitutes various mentoring roles and best practices for each.

SESSION 048: ASIP & The Italian Society of Pathology and Translational Medicine (SIPMeT) Joint Session: Inflammation and the Inflammasome

8:30–10:00 AM

Co-Chair: Massimiliano Corsi Romanelli, MD, PhD ▪ University of Milan

Co-Chair: Francesco Curcio, PhD ▪ University of Udine

Location: Murano

- Chair - Welcome and Introductions
- 8:30–9:00 AM
Initiation of Inflammation: Roles of the Inflammasome(s)
William A. Muller, MD, PhD ▪ Northwestern University
- 9:00–9:30 AM
ST-2/IL-33 Pathway and Cardiac Fibrosis: Animal and Human Models
Massimiliano M. Corsi Romanelli, MD, PhD ▪ University of Milan
- 9:30–10:00 AM
The Power of -Omics in Diagnostics
Francesco Curcio, PhD ▪ University of Udine

Session 049: ASMB and HCS Joint Plenary: Kidney in Health and Disease

8:30–10:00 AM

Location: Imperial A

Co-Chair: Doug Gould, PhD, University of California at San Francisco

Co-Chair: Liliana Schaefer, MD, Goethe University

- 8:30–9:00 AM
Integrins and the Kidney
Roy Zent, MD, PhD ▪ Vanderbilt University Medical Center
- 9:00–9:30 AM
Role of Mononuclear Phagocytes in Kidney Inflammation and Fibrosis
Christian Kurts, MD ▪ University Clinic of Bonn

- 9:30–10:00 AM
Digging Deep: Regulators of Tissue Repair
Valerie Horsley, PhD ▪ Yale School of Medicine
ASMB 2023 Renato Iozzo Awardee for Outstanding Research in Matrix Biology

Session 050: ASIP Gene Expression Workshop: Transcriptional Control in Cancer

8:30–10:00 AM

Sponsored by the ASIP Gene Expression Scientific Interest Group

Co-Chair: Qin Yan, PhD ▪ Yale University

Co-Chair: Anu R. Balogun ▪ University of Pittsburgh

Location: Grand D

- Chair - Welcome and Introductions
- 8:30–9:00 AM
The Role of IDR and Phase Separation in Oncogenesis
Gang (Greg) Wang, PhD ▪ University of North Carolina
- 9:00–9:30 AM
Regulation of TAZ Transcription and Hippo Signaling by Phase Separation
Kunxin Luo, PhD ▪ University of California, Berkeley
- 9:30–10:00 AM
Illuminating Dark Proteome-Mediated Transcriptional Control in Cancer by Live-Cell Single-Molecule Imaging
Sasha Chong, PhD ▪ Caltech
- ***Questions and Answers***

Session 051: ASIP Tissue Injury and Cancer Biology – Extracellular Vesicles in Disease

8:30–10:00 AM

Co-Chair: Xiao-Ming Yin, MD, PhD ▪ Tulane University

Co-Chair: Ronen Sumagin, PhD ▪ Northwestern University

Location: Imperial C

- Chair - Welcome and Introductions
- 8:30–8:50 AM
Biogenesis and Biology of Tumor Microvesicles
Crislyn D'Souza-Schorey ▪ University of Notre Dame
- 8:50–9:10 AM
Extracellular Vesicles Regulate Inflammation in Liver Injury
Xiao-Ming Yin, MD, PhD ▪ Tulane University
- 9:10–9:30 AM
Extracellular Vesicles Facilitate Immune Effector Functions in Gut Inflammation
Ronen Sumagin, PhD ▪ Northwestern University
- 9:30–9:50 AM
Small Extracellular Vesicles: Insights into Chemotherapy-induced Metastasis
Hong-Gang “HG” Wang, PhD ▪ Milton S. Hershey Medical Center
- ***Questions and Answers***

Session 052: ASIP Mucosal Pathobiology Minisymposium

8:30–10:00 AM

Co-Chair: Taylor Ticer ▪ Medical University of South Carolina

Co-Chair: Sarah Dooley ▪ Medical University of South Carolina

Location: Imperial D

- 8:30–8:45 AM
Abstract 081 - *Intestinal Epithelial Recruitment of Neutrophils to Sites of Colonic Mucosal Injury*
Saranyaraajan Varadarajan, PhD ▪ University of Michigan
- 8:45–9:00 AM
Abstract 082 - *Thrombospondin-1 Enhances Epithelial Migration During Colonic Wound Repair*
Zachary Wilson, PhD ▪ University of Michigan
- 9:00–9:15 AM
Abstract 083 - *Spatially Separated Intraepithelial and Lamina Propria Neutrophils Present Distinct Functional Identities in Inflamed Colonic Mucosa*
Lenore K. Yalom ▪ Northwestern University
- 9:15–9:30 AM
Abstract 084 - *Neutrophil-Derived Myeloperoxidase Disrupts Epithelial Tight Junctions by Chlorination of Occludin Tyrosines*
Ian Cartwright, PhD ▪ University of Colorado Anschutz Medical Campus
- 9:30–9:45 AM
Abstract 085 - *Rotavirus Infection Elicits Host Responses via P2Y1 Purinergic Signaling*
Kristen Engevik, PhD ▪ Baylor College of Medicine
- 9:45–10:00 AM
Abstract 086 - *Coactosin-Like Protein 1 is a Novel Regulator of the Intestinal Epithelial Barrier Integrity and Repair*
Susana Lechuga Villarauz, PhD ▪ Cleveland Clinic Foundation

Coffee Break

10:00–10:30 AM

Location: Imperial Ballroom Reception

Session 053: ASMB, HCS, ASIP Joint Society Plenary Session – Cellular and Extracellular Mechanisms in Atherosclerosis

10:30–12:00 PM

Co-Sponsored by the American Society for Matrix Biology, the Histochemical Society, and the American Society for Investigative Pathology

Co-Chair: Lynn Sakai, PhD ▪ Shriner's Hospital Research Center, and Oregon Health & Science University

Co-Chair: Alejandro Pablo Adam, PhD ▪ Albany Medical College

Co-Chair: Jonathon W. Homeister, MD, PhD ▪ University of North Carolina

Location: Imperial A&B

- Chair - Welcome and Introductions
- 10:30–11:00 AM
Epigenetic Control of Smooth Muscle Functions During Vascular Remodeling
Delphine Gomez, PhD ▪ University of Pittsburgh
- 11:00–11:30 AM
Smooth Muscle Cell-Matrix Adhesion in the Artery Wall
George Tellides, MD, PhD ▪ Yale School of Medicine
- 11:30 AM–12:00 PM
Flow-Dependent Drivers of Endothelial Vasoprotection in Atherogenesis
Guillermo Garcia-Cardena, PhD ▪ Brigham and Women's Hospital, Harvard Medical School
- ***Questions and Answers***

Lunch and Poster Session

12:00–2:00 PM

Location: Grand Ballroom B&C

ASMB Business Meeting

12:05–12:30PM

Location: Murano

All ASMB members are invited to attend this brief meeting. Travel awardees will be recognized, and society business will be reviewed.

ASMB: Lunch and Posters with High School Students from SLC

12:30–2:00 PM

Location: Murano

Session 054: ASIP Cotran Early Career Investigator Award Lecture

Location: Grand D

- 1:00–2:00 PM
Neutrophil Phenotypic and Functional Plasticity in Gut Inflammation and Colon Cancer
Ronen Sumagin, PhD ▪ Northwestern University

Session 055: ASMB Concurrent: Tissue Injury/Regeneration/Intervention;

2:00–3:30 PM

Chair: Madeleine Oudin, PhD ▪ Tufts University

Location: Imperial B

- 2:00–2:30 PM
Roles of the ECM in Cancer Metastasis and Drug Resistance
Madeleine Oudin, PhD ▪ Tufts University
- 2:30–2:45 PM
ABSTRACT 091 - Treating Vocal Fold Scarring: Leveraging Decorin as a Regulator of Vocal Fold Extracellular Matrix Structure in Development and Repair
Ryan M. Friedman ▪ University of Pennsylvania/Children's Hospital of Philadelphia
- 2:45–3:00 PM
ABSTRACT 092 - Migrational Decision Making in Response to Multiple Directional Extracellular Matrix Cues
Ian Schneider, PhD ▪ Iowa State University
- 3:00–3:15 PM
ABSTRACT 093 - Cardiac Fibroblast-MHCII Contributes to Cardiac Pathophysiology in Doxorubicin-Induced Cardiomyopathy
Maria Antonia Zambrano ▪ Tufts University
- 3:15–3:30 PM
ABSTRACT 094 - Examining the Effects of Nanoscale Patterning of TGF β Receptors and Viscoelastic Material Properties on Regulating TGF β Signaling
Aryssa Simpson, PhD ▪ North Carolina State University/University of North Carolina at Chapel Hill

Session 056: ASMB Concurrent: Matrix on Diet

2:00–3:30 PM

Chair: David R. Soto Pantoja, PhD, Wake Forest School of Medicine Comprehensive Cancer Center

Location: Imperial C

- 2:00–2:30 PM
Influence of Thrombospondin-1/CD47 Signaling on the Crosstalk Between the Gut Microbiome and Metabolism
David R. Soto Pantoja, PhD ▪ Wake Forest School of Medicine Comprehensive Cancer Center
- 2:30–2:45 PM
ABSTRACT 095 - Evaluating the Therapeutic Potential of Antibiotics and Gut Microbiota Modulation for Intrahepatic Cholestasis Using a Murine Model
Shu-hao Hsu, PhD ▪ National Taiwan University College of Medicine
- 2:45–3:00 PM
ABSTRACT 096 - Cullin 3-NRF2 Axis Links Reductive Stress to Hepatic Metabolic Inflexibility in Obesity
Lijie Gu ▪ University of Oklahoma Health Sciences Center
- 3:00–3:15 PM
ABSTRACT 098 - Understanding the Role of EGFR and PPAR γ in NAFLD Utilizing Hepatocyte-Specific Deletion in Adult Mice
Shehnaz Bano, PhD ▪ University of Pittsburgh
- 3:15–3:30 PM
ABSTRACT 101 - Extracellular Matrix Viscoelasticity Promotes Liver Cancer Progression in Ore-Cirrhotic NASH
Weiguo Fan, PhD ▪ Stanford University

Session 057: ASIP Infectious Disease Workshop – Utilizing Alternative Model Systems to Study Infectious Diseases

2:00–3:30 PM

Sponsored by the ASIP Infectious Diseases Scientific Interest Group

Co-Chair: Taylor Ticer, BS ▪ Medical University of South Carolina

Co-Chair: Melinda (Mindy) Engevik, PhD ▪ Medical University of South Carolina

Location: Venezia

- Chair - Welcome and Introductions
- 2:00–2:20 PM
Drosophila
Rheinallt Jones, PhD ▪ Emory University
- 2:20–2:40 PM
C. elegans
Jessica H. Hartman, PhD ▪ Medical University of South Carolina
- 2:40–3:00 PM
Organoids
Melinda (Mindy) Engevik, PhD ▪ Medical University of South Carolina
- 3:00–3:20 PM
Galleria
Philip Rather, PhD ▪ Emory University
- ***Questions and Answers***

Session 058: ASIP Breast Cancer Workshop: The Intersection Between Breast Cancer and the Matrix

2:00–3:30 PM

Sponsored by the ASIP Breast Cancer Scientific Interest Group

Co-Chair: Bethany Hannafon, PhD ▪ University of Oklahoma Health Sciences Center

Co-Chair: Dennis Jones, PhD ▪ Boston University

Co-Chair: Maryknoll Linscott ▪ Penn State College of Medicine

Location: Grand D

- Chair - Welcome and Introductions
- 2:00–2:30 PM
Fibrocytes: A Novel Cell Population Promoting Obesity-induced Breast Tumor Desmoplasia
Lisa Arendt, DVM, PhD ▪ University of Wisconsin-Madison
- 2:30–3:00 PM
Mechanobiology and Engineered In Vitro 3D Models to Better Understand Breast Cancer Growth and Metastasis
Delphine Gourdon, PhD ▪ University of Glasgow, Scotland United Kingdom
- 3:00–3:30 PM
Extracellular Matrix Biophysical Properties as Regulators of Cancer
Claudia Fischbach-Teschl, PhD ▪ Cornell University
- ***Questions and Answers***

Session 059: ASIP Speed-Networking with Your Science: Getting to Know Your Neuropathology SIG Compatriots

2:00–3:30 PM

Sponsored by the ASIP Neuropathology Scientific Interest Group

Co-Chair: Christi Kolarcik, PhD ▪ University of Pittsburgh

Co-Chair: Jessica Fortin, DVM, PhD ▪ Purdue University

Co-Chair: Michele Alves, PhD ▪ The Ohio State University

Location: Grand A

Session Description: Our Neuropathology Scientific Interest Group (SIG) is evolving, and we want you to be a part of this evolution! Please join other ASIP members interested in neuroscience, neuropathology, neurological disorders, and the nervous system in general as we reconnect with old friends and forge new relationships. The goals of this session are to create a forum for social and intellectual exchange and to engage members at all levels with an interest in the mechanisms underlying normal and pathological processes related to neuroscience. The format will model a speed-networking event to maximize interactions and engagement across the group. We hope this lays the foundation for a more vibrant Neuropathology SIG that represents the diversity of work across our Society in this scientific arena!

Session 060: HCS Concurrent: Interorganelle Communication in Health and Disease

2:00–3:30 PM

Chair: Margarida Barroso, PhD ▪ *Albany Medical College*

Location: Imperial D

- 2:00–2:30 PM
Spatial Regulation of Mitophagy
Jonathan Friedman, Ph.D. ▪ UT Southwestern
- 2:30–3:00 PM
Lysosomal Dynamics in Parkinson's Disease
Luis Bonet-Ponce, PhD ▪ Ohio State University
- 3:00–3:15 PM
ABSTRACT 099 - SIRP α Expression is Associated with Breast-to-Brain Metastasis Through Modulation of Fibronectin in the Tumor Microenvironment
Yu-Ting Tsai ▪ Wake Forest School of Medicine
- 3:15–3:30 PM
ABSTRACT 100 - DMT1-Dependent Endosome-Mitochondria Interactions Regulate Mitochondrial Iron Translocation and Metastatic Outgrowth
Margarida M. Barroso, PhD ▪ Albany Medical College

Session 061: HCS and ASIP Joint Session: Cell-Cell Interactions in Inflammation

2:00–3:30 PM

Co-Chair: Nathaniel Lartey, PhD ▪ University of Michigan

Co-Chair: Alejandro Adam, PhD ▪ Albany Medical College

Location: Murano

- 2:00–2:30 PM
Intercellular Junctions: Modulators of Endoplasmic Reticulum Morphology, Dynamics, and Stress
Andrew P. Kowalczyk, PhD ▪ Penn State College of Medicine
- 2:30–3:00 PM
Body Sculpting: The Cellular Machines That Construct the Vertebrate Embryos
John B. Wallingford, PhD ▪ University of Texas at Austin
- 3:00–3:30 PM
Nanoscale Protein Architecture of Cell-Cell Adhesion Complexes
Alexa Mattheyses, PhD ▪ University of Alabama at Birmingham

Session 062: ASMB Concurrent: Immunomatrix and Fibrosis

2:00–3:30 PM

Chair: Jennifer H. Elisseeff, PhD ▪ Johns Hopkins University

Location: Imperial A

- 2:00–2:30 PM
The Adaptive Immune System and Senescence in Fibrosis Progression
Jennifer H. Elisseeff, PhD ▪ Johns Hopkins University

- 2:30–2:45 PM
ABSTRACT 087 - Antimicrobial Peptides Reduce Bacterial-Induced Myofibroblast Differentiation Abrogating Subglottic Stenosis in Mice
Matthew R. Aronson ▪ University of Pennsylvania
- 2:45–3:00 PM
ABSTRACT 088 - A Biomarker of Collagen Type-I Degradation is Associated with Cardiac Fibrosis and Inflammation in Patients with Liver Cirrhosis
Emily Martin ▪ Nordic Bioscience and University of Copenhagen
- 3:00–3:15 PM
ABSTRACT 089- Lung Mesenchymal Cell Apoptosis and Plasticity Revealed by a BCL2 Overexpression Mouse Model
Maria Jose Gacha Garay ▪ MD Anderson Cancer Center - University of Texas Health Houston
- 3:15–3:30 PM
ABSTRACT 090 - Fibro-Inflammatory Changes in the Aging Ovarian Matrisome Inform Potential Ovarian Cancer Pathways
Shweta S. Dipali ▪ Northwestern University

Session 067: ASIP Ocular Pathobiology Scientific Interest Group Organizational Meeting

2:00 PM-3:30 PM

Sponsored by the ASIP Ocular Pathobiology Scientific Interest Group

Chair: Patricia A. D'Amore, PhD ▪ Schepens Eye Research Institute of Mass. Eye & Ear, Harvard Medical School

Location: Vienna (third floor)

Session Description: Members of the Ocular Pathobiology SIG will hold an organizational meeting to discuss plans for future events and initiatives that will serve the interests and needs of the members of the SIG.

Coffee Break

3:30–4:00 PM

Location: Ballroom Reception

Session 063: ASMB Concurrent: Iozzo Award Session

Announcement of the Founders Award: Simon Schwörer

4:00–5:30 PM

Chair: ASMB Award Committee Chair

Location: Imperial B

Session Description: ASMB Founders' Awardee is recognized. Then, six finalists will present their work in competition for the Iozzo Post-Doc and Trainee Awards

- 4:00–4:15 PM
Metabolic Control of Matrix Synthesis
Simon Schwörer, PhD ▪ University of Chicago
ASMB 2023 Founders' Awardee
- 4:15–4:25 PM
ABSTRACT 066 - Fibronectin-Mediated Physiological and Pathological Mechanisms in Skeletal Development
Neha Dinesh ▪ McGill University
- 4:25–4:35 PM
ABSTRACT 090 - Fibro-Inflammatory Changes in the Aging Ovarian Matrisome Inform Potential Ovarian Cancer Pathways
Shweta Dipali ▪ Northwestern University
- 4:35–4:45 PM
ABSTRACT 206 - Transcription Factor HOXA5 is Mechanically Regulated in Pulmonary Fibroblasts via Integrin α V Signaling
Andrew Miller ▪ University of Virginia
- 4:45–4:55 PM
ABSTRACT 094 - Examining the Effects of Nanoscale Patterning of TGF β ² Receptors and Viscoelastic Material Properties on Regulating TGF β Signaling
Aryssa Simpson, PhD ▪ North Carolina State University/University of North Carolina at Chapel Hill

- 5:00–5:15 PM
ABSTRACT 144 - Unraveling the Molecular Basis of SNED1-Mediated Cell Adhesion
Dharma Pally, PhD ▪ University of Illinois Chicago
- 5:15–5:30 PM
ABSTRACT 058 - Cross-Talk Between the Extracellular Matrix and the Cell-cell Junction-Associated RNAi Machinery Regulates Colon Cancer Cell Behavior
Amanda Daulagala, PhD ▪ Medical University of South Carolina

Session 064: ASMB Concurrent: Post-Doc Special Interest Session: ECM Mechanosensing and Cell Behavior

4:00–5:30 PM

Co-Chair: Ryan J. Petrie, PhD ▪ Drexel University

Co-Chair: Guilherme Nader, PhD ▪ Children’s Hospital of Philadelphia/University of Pennsylvania Perelman School of Medicine

Location: *Grand A*

- 4:00–4:15 PM
Matrix Rigidity favors Genetic Instability -- From Single Cell Studies to Big Data
Dennis Discher, PhD ▪ University of Pennsylvania
- 4:15–4:30 PM
Tumor Cell Response to ECM Targeted Therapy
Suzanne Ponik, PhD ▪ University of Wisconsin-Madison
- 4:30–4:45 PM
Myosin-Independent Mechanosensing of Cell Spreading: Mechanistic Insights from Biophysical Modeling and Simulations
Tamara Bidone, PhD ▪ University of Utah
- 4:45–5:00 PM
Compromised Nuclear Envelope Integrity Leads to Tumor Cell Invasion
Guilherme Nader, PhD, Children’s Hospital of Philadelphia and University of Pennsylvania Perelman School of Medicine
- 5:00–5:10 PM
ABSTRACT 101 - Decorin Maintains Cartilage Surface Integrity and Chondrocyte Mechanotransduction During Aging
Mingyue Fan ▪ Drexel University
- 5:10–5:20 PM
ABSTRACT 102 - Effects of Collagen V on Fibril Morphology and Fibroblast Adhesion and Contractility
Sangyoon Joshua Han, PhD ▪ Michigan Technological University
- 5:20–5:30 PM
ABSTRACT 103 - P-Glycoprotein Trafficking is Dependent on Myosin Vb in Intestinal Cells
Sarah Aline Dooley ▪ Medical University of South Carolina

Session 065: ASMB Concurrent: Imaging the Matrix

4:00–5:30 PM

Chair: Sarah Calve, PhD, *University of Colorado, Boulder*

Location: *Grand D*

- 4:00–4:30 PM
3D Visualization of the Extracellular Matrix During Musculoskeletal Development
Sarah Calve, PhD ▪ University of Colorado, Boulder
- 4:30–4:45 PM
ABSTRACT 104 - Type III Collagen Regulates Matrix Architecture and Mechanoperception During Cutaneous Wound Healing
Daniel C. Stewart, PhD ▪ University of Pennsylvania
- 4:45–5:00 PM
ABSTRACT 105 - TGFβ2 Induced Ultrastructure and Morphometric Changes in the Mouse Trabecular Meshwork
Timur Mavlyutov, PhD ▪ University of Wisconsin-Madison

- 5:00–5:15 PM
ABSTRACT 106 - *The Development of the Extracellular Matrix of the Brain*
Igal Sterin ▪ University of Utah
- 5:15–5:30 PM
ABSTRACT 107 - *Collagen Fibers within Dystrophic Skeletal Muscle Extracellular Matrix Dynamically Re-align and Resist Enzymatic Digestion in a Strain Dependent Fashion*
Ross Paul Wohlgemuth ▪ University of California, Davis

Session 066: ASIP Meet-the-Expert – Exploring Scholarly Publishing & Science Communications

4:00–5:30 PM

Sponsored by the ASIP Women in Pathology

Co-Chair: Pilar Alcaide, PhD ▪ Tufts University

Co-Chair: Traci Parry, PhD ▪ University of North Carolina at Greensboro

Co-Chair: Nakisha Rutledge, PhD ▪ University of Chicago

Co-Chair: Francisco Carrillo-Salinas, PhD ▪ Tufts University

Location: Imperial A

Session Description: If you have a flair for writing, editing, reviewing, communicating, and disseminating your science to experts as well as audiences with diverse backgrounds, this session may be for you. Join us for a panel discussion with scientists who chose and built successful careers in scientific publishing and science communications.

Panelists:

- Martha Furie, PhD ▪ Stony Brook University
- Chhavi Chauhan, PhD ▪ American Society for Investigative Pathology
- Liliana Schaefer, MD ▪ Goethe University

Session 068: ASIP Digital Pathology and Artificial Intelligence Applications in the Biotech Industry

4:00–5:30 PM

Sponsored by the ASIP Pathology in Biotech and Industry Scientific Interest Group

Co-Chair: Cary Austin, MD, PhD ▪ Genentech, Inc.

Co-Chair: Sripad Ram, PhD ▪ Pfizer, Inc.

Location: Murano

- 4:00–4:25 PM
From Macro to Micro: 3D Spatiotemporal Analysis of Nanoparticles in Tumor Tissue Using VIOLA Technology
Sripad Ram, PhD ▪ Pfizer, Inc.
- 4:25–4:45 PM
Digital Pathology and AI Approaches to Biomarker Discovery
Suzana S. Couto, DVM, PhD, Dip ACVP ▪ Neomorph
- 4:45–5:05 PM
Spatially-Informed, AI-Powered Assessment of the Tumor Immune Microenvironment at Massive Scale and Single Cell Resolution
Jenifer Giltneane, MD, PhD ▪ Genentech
- 5:05–5:25 PM
Artificial Intelligence-Powered Detection and Characterization of Fibrosis in Liver Histology
Lara P Murray, PhD ▪ PathAI

Session 069: HCS Concurrent with the Immunohistochemistry and Microscopy SIG: Organoids and 3-D models

4:00–5:30 PM

Co-Chair: A. Sally Davis, DVM, PhD, DACVP, DACVM ▪ Horner Davis Consulting

Co-Chair: Alexandra Chang-Graham, MD, PhD ▪ Stanford University

Location: Imperial D

- 4:00–4:30 PM
Patient-Derived Micro-Organospheres Enable Clinical Precision Oncology
Xiling Shen ▪ Terasaki Institute & Xilis, Inc.

- 4:30–4:45 PM
ABSTRACT 108 - Fibrotic Fibro-Adipogenic Progenitors Impair Myogenesis Through Extracellular Matrix Deposition
Taryn Loomis ▪ University of California, Davis
- 4:45–5:00 PM
ABSTRACT 109 - LPS and Cytokines-Induced Pro-Inflammatory Insult: Upregulation of Barrier Proteomic Expression in Human Colonoids
Muhammad N. Aslam, MBBS ▪ The University of Michigan
- 5:00–5:15 PM
ABSTRACT 110 - Loss of Myosin 5b Results in Mislocalization of Intestinal Alkaline Phosphatase and a More Susceptible Epithelium
Rachel Stubler ▪ Medical University of South Carolina
- 5:15–5:30 PM
ABSTRACT 111 - Biofabricated Microcapsules Facilitate Formation of Matrigel-free 3D Tumor Model Alternatives
Arun Asif, PhD ▪ Albany Medical College

Session 070: HCS Concurrent: Cardiac Fibrosis

4:00–5:30 PM

Chair: Taben M. Hale, PhD ▪ University of Arizona

Location: Imperial C

- 4:00–4:30 PM
Extracellular Matrix Regulation in the Hypertensive Heart: Does Sex Matter?
Taben M. Hale, Ph.D. ▪ University of Arizona, College of Medicine – Phoenix
- 4:30–5:00 PM
Chromatin Signaling in Cardiac Fibrosis
Timothy A. McKinsey, PhD ▪ University of Colorado Anschutz Medical Campus
- 5:00–5:15 PM
ABSTRACT 112 - Novel Role of Endothelial Cell Stimulator of Interferon Genes (STING) in Systolic Dysfunction and Adverse Cardiac Remodeling Induced by Cardiac Pressure Overload
Erin Sanders ▪ Tufts University
- 5:15–5:30 PM
ABSTRACT 113 - Regulating Senescence Via PADI Inhibition in Cardiac Myofibroblasts, May Help the Fibrosis in Dilated Cardiomyopathy
Alia Sadiq, PhD ▪ Cedars-Sinai Medical Center

Session 071: ASIP Gold-Headed Cane Award Lecture

5:30–6:30 PM

Location: Imperial A&B

- ***HPV and Cancer***
Peter M. Howley, MD ▪ Dana-Farber/Harvard Cancer Center, Harvard Medical School

ASIP Scientific Interest Group Networking and Social Event

6:30–9:00 PM

Location: Grand A&D, and Grand Reception

ASMB Social – Off Site at Bewilder Brewing Co.

7:00–9:00 PM

Pre-registration is required.

Location: 445 S. 400 W. SLC, UT 84047 (walking distance from the hotel)

<https://bewilderbrewing.com/>

Session 072: Education/Career Development Session - Elevate Your Communication Skills: A Masterclass in Verbal and Visual Communication

7:00–8:30 AM

Co-Sponsored by the ASIP Committee for Career Development

Co-Chair: Daisy Shu, PhD ▪ Schepens Eye Research Institute, Harvard Medical School

Co-Chair: Traci Parry, PhD ▪ University of North Carolina at Greensboro

Location: Murano

Session Description: Effective communication is critical for a successful career in scientific research. This session features experts in visual and verbal communication that will help create thought-provoking and engaging presentations that clearly highlight the most important points of your talk. Our vocal coach will provide tips on how to harness the best tone and pitch of your voice and our graphic designer will reveal how to assemble clear and concise visual aids with an emphasis of effective slide design. In this session you will learn tips on improving audience engagement to maximize your message through powerful tools from leading experts in vocal and visual communication.

Valerie Kittel, Trained Communications and Public Speaking Coach

Valerie is a theatre-trained communicator and public speaking coach based in Salt Lake City, Utah. Drawing from 35+ years professional experience in theatre she combines presentation delivery techniques, psychology, and the latest communication research to help professionals develop a strong and influential speaking style.

Session 073: ASMB Plenary: Infection and ECM

8:30–10:00 AM

Chair: Enid R. Neptune, MD ▪ John Hopkins Medicine

Location: Imperial A

- 8:30–9:00 AM
Crosslinking Mechanisms in Hyaluronan Matrices and Their Roles in Health and Disease
Anthony Day, BA, MA, DPhil ▪ University of Manchester
- 9:00–9:30 AM
Hot-Spots for Biofilm Infections: The Role of Host ECM Proteins and Their Conformation
Rikke Louise Meyer ▪ Aarhus University
- 9:30–10:00 AM
Transmembrane and Multiplexin Collagens in Development and Pathobiology
Taina Pihlajaniemi, MD, PhD ▪ University of Oulu
International Society for Matrix Biology 2023 Distinguished Investigator Awardee

Session 074: ASIP Organoids Models of Disease

8:30–10:00 AM

Co-Chair: Ronen Sumagin, PhD ▪ Northwestern University

Co-Chair: Melinda (Mindy) Engevik, PhD ▪ Medical University of South Carolina

Location: Grand D

- Chair - Welcome and Introductions
- 8:30–8:50 AM
Organoid Modeling of Epithelial Force Sensing
Arthur Beyder, MD, PhD ▪ Mayo Clinic
- 8:50–9:10 AM
Using 3D Organoids to Define Functional Roles for Cell Populations in Esophageal Homeostasis and Cancer
Kelly A. Whelan, PhD ▪ Temple University

- 9:10–9:30 AM
Using Liver Organoids to Better Understand Cellular Trafficking and Liver Biology
Amy Engevik, PhD ▪ Medical University of South Carolina
- 9:30–9:50 AM
Dissecting Host Immune Responses to Enteric Microbes Using Human Enteroid-Immune Cell Co-Cultures
Nicholas Zachos, PhD ▪ Vanderbilt University
- **Questions and Answers**

Session 075: ASIP Cancer Pathobiology Minisymposium

8:30–10:00 AM

Co-Chair: Louisa Tichy ▪ University of North Carolina at Greensboro

Co-Chair: Joy Winfield ▪ Columbia University

Location: Imperial D

- 8:30–8:45 AM
ABSTRACT 114 - Rapid Region-Based Detection AI Accurately Localizes Oral Squamous Cell Carcinoma Tumors
Benjamin Martin, BSc ▪ University of Toronto
- 8:45–9:00 AM
ABSTRACT 115 - Promoting Immune Cell Activation and Recruitment via the Interferon Response Factor-2 (IRF2) Reduces Disease Burden in β -catenin-Mutated HCC Models
Evan Delgado, PhD ▪ University of Pittsburgh
- 9:00–9:15 AM
ABSTRACT 116 - NF- κ B Activation in HCCs with CTNNB1 Mutations Reduces Immune Escape and Inhibits Disease Pathogenesis
Panari Patel ▪ University of Pittsburgh
- 9:15–9:30 AM
ABSTRACT 117 - Nuclear Factor Erythroid 2-related Factor 2 and MET Co-activation Induces Hepatocellular Carcinoma in Mice
Brandon M. Lehrich ▪ University of Pittsburgh
- 9:30–9:45 AM
ABSTRACT 118 - Distinct Cooperating Oncogenes and Reproductive History Promote the Progression of Specific Ras-mutant Premalignant Clones in Multistage Murine Breast Cancer Models
Maryknoll Linscott ▪ Penn State College of Medicine
- 9:45–10:00 AM
ABSTRACT 119 - Lenvatinib Monotherapy in a Novel Acral Melanoma Patient Derived Xenograft (PDX) Cohort
Eric Smith, MD, PhD ▪ Huntsman Cancer Institute

Session 076: ASIP Pathobiology of Inflammation Minisymposium

8:30–10:00 AM

Co-Chair: Francisco Carrillo-Salinas, PhD ▪ Tufts University

Co-Chair: Erika Arias ▪ Northwestern University

Location: Murano

- 8:30–8:45 AM
ABSTRACT 120 - The Effect of Noncanonical Inflammasome Caspase-11 on Tissue Factor Release in Trauma-Induced Coagulopathy and Organ Damage
Joud Mulla, MS ▪ University of Pittsburgh
- 8:45–9:00 AM
ABSTRACT 218 - The Role of CCR2+ Myeloid Cell Transmigration in Non-proliferative Diabetic Retinopathy
Vivienne Fang, BS ▪ Northwestern University
- 9:00–9:15 AM
ABSTRACT 122 - Identifying Mechanisms Regulating Transendothelial Migration of Neutrophils in the Lungs During Acute Airspace Disease
Maureen Haynes, BS ▪ Northwestern University

- 9:15–9:30 AM
ABSTRACT 123 - *HES1 Loss and Counteracting ATOH1 Up-regulation Promotes Intestinal Stem Cell Regeneration of Ulcerative Colitis*
Bingqing Zou, MD, PhD ▪ Methodist Hospital Research Institute
- 9:30–9:45 AM
ABSTRACT 124 - *Deletion of MyD88 in T-Cells Improves Anti-Tumor Immunity in Melanoma*
Abraham Bayer, BS ▪ Tufts University Graduate School of Biomedical Sciences
- 9:45–10:00 AM
ABSTRACT 125 - *Spatial Transcriptomics Identifies Epithelial Cell Control of Neutrophil Chemotaxis in the Human Female Genital Mucosa*
Francisco Carrillo-Salinas, PhD ▪ Tufts University

Session 077: HCS Plenary: Sphingolipids in Health and Disease

8:30–10:00 AM

Chair: Josef Pfeilschifter, Goethe University

Location: Imperial B

- 8:30–9:00 AM
The Multiple Faces of S1P in Renal Fibrosis
Andrea Huwiler, PhD ▪ University of Bern, Switzerland
- 9:00–9:30 AM
Bioactive Lipids Modulation of Development, Homeostasis and Pathology
Timothy Hla, PhD ▪ Harvard Medical School, Boston
- 9:30–10:00 AM
Sphingosine-1-Phosphate Signaling in Neuron-astrocyte Interactions
Sandeep Singh, PhD ▪ Virginia Commonwealth University School of Medicine, Richmond, VA

Coffee Break

10:00–10:30 AM

Location: Imperial Ballroom Reception

Session 078: ASMB, HCS, and ASIP Joint Plenary Session – Cancer Progression and Metastasis

10:30 AM–12:00 PM

Co-Sponsored by the American Society for Matrix Biology, the Histochemical Society, and the American Society for Investigative Pathology

Co-Chair: Bethany Hannafon, PhD ▪ University of Oklahoma Health Sciences Center

Co-Chair: Rolf Brekken, PhD ▪ UT Southwestern Medical Center

Co-Chair: Stephen Hewitt, MD, PhD ▪ National Institutes of Health

Location: Imperial A&B

- Chair – Welcome and Introductions
- 10:30–11:00 AM
Influence of Extracellular Matrix Tumor Microenvironment on Drug Response and Resistance
Taru Muranen, PhD ▪ Harvard Medical School, Beth Israel Deaconess Medical Center, Dana Farber/Harvard Cancer Center
- 11:00–11:30 AM
Mechanical, Architectural, and Biochemical Interactions in Tumor Microenvironment that Drive Cancer Progression
Paolo Provenzano, PhD ▪ University of Minnesota
- 11:30 AM–12:00 PM
The Role of DDR1 and Fibrillar Collagens in Pancreatic Cancer Progression
Howard Crawford, PhD ▪ Henry Ford Cancer Center
- ***Questions and Answers***

MEETING ADJOURNMENT 12:00 PM