American Society for Investigative Pathology
Experimental Biology 2021 – Virtual and Interactive

2021 Scientific Program & Events Guide

Tuesday - April 27, 2021

Symposium: The Gut Microbiota and Disease - Session I
8:30 AM - 11:30 AM

Chair: Xiao-Ming Yin, MD, PhD ▪ Tulane University
Co-Chairs: Wenke Feng, PhD ▪ University of Louisville
Maria Pilar Alcaide, PhD ▪ Tufts University
José Otero, MD, PhD ▪ The Ohio State University

Session Description: Humans carry a vast number of bacteria and other microbiota species from birth, and you may be more bacteria than you are you. An increasing importance of microbiota in human health and diseases has been recognized. Whatever your research subjects are, chances are that they may be influenced by the microbiota. This symposium will discuss the impact of gut microbiota on diseases ranging from neurodegeneration to diabetes, from the liver to the heart, and from the immune cells to the bone.

- Chair - Welcome and Introductions
- 8:30 AM - 9:00 AM
  Gut Microbiota, Bile Acids Receptor, and Metabolism
  John YL Chiang, PhD ▪ Northeast Ohio Medical University
- 9:05 AM - 9:35 AM
  Hepatic Autophagy, Microbiota, and Liver Injury
  Xiao-Ming Yin, MD, PhD ▪ Tulane University
- 9:40 AM - 10:10 AM
  Gut Microbiota, Fatty Liver Disease, and Hepatocellular Carcinoma
  Bernd Schnabl, MD ▪ University of California, San Diego
- 10:15 AM - 10:45 AM
  Intestinal Barrier Function and Metabolic Liver Disease
  Wenke Feng, PhD ▪ University of Louisville
- 10:50 AM - 11:20 AM
  Fecal Transplantation and Immune Regulation in Liver Disease
  Shirish Barve, PhD ▪ University of Louisville

Minisymposium: Pathobiology of Lung Disease
8:30 AM - 11:00 AM

Co-Chairs: Piyali Dasgupta, PhD ▪ Marshall University
Sonika Patial, PhD, DVM, DACVP ▪ Louisiana State University

Session Description: Abstract-Driven Short Talks (15-minutes each w/Q&A)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
8:30 - 8:45	Richa Lamichhane	Myeloid-cell-specific Ablation of Tristetraprolin (TTP) Increases the Susceptibility of Female mice to Bleomycin-induced Lung Injury and Fibrosis	Abstract **L5217**
8:45 - 9:00	Megan Blackburn	Acute Over-Ventilation Does Not Cause Lung Damage in Hemorrhaged Swine	Abstract **R2125**
9:00 - 9:15	Ye Zeng	Anisodamine hydrobromide protects against acute lung injury in septic rats induced by lipopolysaccharide or cecal ligation and puncture via inhibiting apoptosis and pyroptosis	Abstract **R2246**
9:15 - 9:30	Elissa Hult	Protection of Lyz2Cre+HBEGF-/- mice from bleomycin-induced lung fibrosis	Abstract **R1999**
9:30 - 9:45	Yao Zou	Inflammasome Activation and Exosome Release in the Lung during Chronic Obstructive Pulmonary Disease: Potential Therapeutic Target of Acupuncture	Abstract **R3056**
9:45 - 10:00	Denis Naumov	Effect of TRPV4 Polymorphisms on the Development of Airway Response to Increased Inspiratory Load	Abstract **R3451**
10:00 - 10:15	Limei Wang	The expression and significance of heparinase, MMP-9 in lung tissue of rat pulmonary hypertension model	Abstract **R1887**
10:15 - 10:30	Tendai Hunyenyiwa	ROBO/SLIT in Obesity-dependent Changes in Angiogenesis and Lung Regeneration	Abstract **R2181**

Minisymposium: Mucosal Inflammation and Leukocyte Trafficking

8:30 AM - 11:00 AM

Chair: Melinda Engevik, PhD ▪ Medical University of South Carolina
Co-Chair: David Sullivan, PhD ▪ Northwestern University

Session Description: Abstract-Driven Short Talks (15-minutes each w/Q&A)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
8:30 - 8:45	David Sullivan	Live Animal Imaging of Calcium Signaling During Transendothelial Migration Demonstrates Tight Temporospatial Regulation Coordinated by Endothelial Cell TRPC6, IQGAP1, and CaMKIIδ	Abstract **L5366**
8:45 - 9:00	Yichen Li	Role of Guanylate-binding Protein 5 in Colonic Inflammation	Abstract **R2745**
9:00 - 9:15	Shanshan Wang	Entamoeba histolytica-Induced Activation of Caspase-4 Regulates Gasdermin D Cleavage to Mediate IL-1β Secretion in Macrophages	Abstract **R2818**
9:15 - 9:30	Romain Ballet	A CD22-Shp1 phosphatase axis controls integrin β7 display and B cell function in mucosal immunity	Abstract **R2188**
9:30 - 9:45	Xiaocai Yan	Neonatal Intestinal Macrophages Promote Microvascular Development through an IGF-1-dependent Mechanism and Lack of Macrophage-derived IGF-1 Predisposes Newborn Mice to Necrotizing Enterocolitis	Abstract **R2189**
9:45 - 10:00	Ruth Wang	Microbiota-derived butyrate is an endogenous inhibitor of HIF prolyl-hydroxylases	Abstract **R2441**
10:00 - 10:15	Melinda Engevik	Clostridioides difficile is Chemoattracted to Oligosaccharides Released by Mucin- Degrading Microbes	Abstract **R4395**
10:15 - 10:30	Sijing Cheng	Altered gut microbiome in FUT2 loss-of-function mutants in support of personalized medicine for inflammatory bowel diseases	Abstract **R2702**
10:30 - 10:45	Sheng Gao	Comprehensive microbiota alterations in IBD and improved diagnostic accuracy for IBD using multi-kingdom microbial features	Abstract **R3269**
10:45 - 11:00	Affan Siddiq	Giardia releases extracellular vesicles which can modulate growth and behavior of commensal bacteria	Abstract **R1946**

Career Conversations – Doing Business in Science

9:00 AM - 10:00 AM
Sponsored by the ASIP Committee for Career Development and Diversity

Chair: Verónica Contreras-Shannon, PhD ▪ St. Mary's University

Session Description: Every scientist is cut from a different mold! Join us for Doing Business in Science - a conversation with Drs. Bryan Brown and Cavan Bailey about their careers in Entrepreneurship/Start-Ups and Scientific Consulting, respectively. Both will provide insights about their career, their daily life, advice to trainees interested in a similar path, and answer your questions about their career journey. This is a great opportunity to learn about the many career possibilities available to you and to build your network!

- Technology/Entrepreneur/Startups
  Bryan Brown, PhD ▪ University of Pittsburgh
- Scientific Consulting
  Cavan Bailey, PhD ▪ First Principles Advisory Group

Symposium: Single Cell Transcriptome and Epigenome Analysis, Using the Power of One to Interrogate Heterogeneity
9:00 AM - 12:00 PM

Chair: Philip Iannaccone, MD, PhD ▪ Northwestern University
Co-Chairs: Qin Yan, PhD ▪ Yale University
David C. Williams, Jr., MD, PhD ▪ University of North Carolina, Chapel Hill

Session Description: Recent advances in transcriptomics have shown that gene expression states vary tremendously from cell to cell. This variation is essential in development where the specification of fate depends on controlled heterogeneity. In cancer, genetic and epigenetic changes results in highly heterogeneous expression states despite clonal origins. This session will present the emerging single-cell technologies in transcriptomics and epigenomics, data analysis pipeline, and the biological significance of these data.

- Chair - Welcome and Introductions
- 9:00 AM - 9:45 AM
  Methods for Calibration, Imputation, Visualization and Differentiation Between Samples in scRNA-seq Data Analysis
  Yuval Kluger, PhD ▪ Yale University
- 9:45 AM - 10:30 AM
  Single-Cell Genomics in Cancer Immunotherapy
  Ansuman Satpathy, MD, PhD ▪ Stanford University
- 10:30 AM - 11:15 AM
  Single Cell Epigenomic Analysis of the Anatomy and Neuronal Circuitry of the Brain
  ZhuZhu Zhang, PhD ▪ Salk Institute
- 11:15 AM - 12:00 PM
  Integrative RNA and Chromatin Analysis of Single Cells in Human Tissues
  Kun Zhang, PhD ▪ University of California, San Diego

ASIP Chat Lounge - Meet the ASIP Executive Officer
10:00 AM - 11:00 AM
- William B. Coleman, PhD ▪ American Society for Investigative Pathology

Career Mentoring Session: Finding Your Path: Alternative Careers for Health Scientists
10:00 AM - 12:00 PM

Chair: Jennifer Sanders, PhD ▪ Rhode Island Hospital and Brown University
Co-Chairs: David Sullivan, PhD ▪ Northwestern University
Marina Anastasiou, MSc ▪ Tufts University
Chhavi Chauhan, PhD ▪ American Society for Investigative Pathology

Session Description: This is the first session in a webinar series aiming to describe careers for MD/PhD or PhD-trained pathology scientists that fall outside the traditional professorship track. PhD scientists working in various fields and settings will share insights and give advice to trainees looking to explore alternative paths. With health scientists employed in various commercial settings from biotech companies to industrial operations and law and editorial services, a foundation in research can lead to unexpected and attractive career options. This session will be of interest to undergraduates, graduate/medical students, or post-doctoral fellows.

- Chair - Welcome and Introductions
- 10:00 AM - 10:30 AM
  Thinking Beyond the Bench: Transferring Your Academic Training to the Business of Biotech
  Sylvia Eash, PhD ▪ Alliance Management & Business Development
- 10:30 AM - 11:00 AM
  Expecting the Unexpected: How to Cultivate Your Passions into Potential Career Paths
  Ruchama Chaya Steinberg, PhD ▪ Dragonfly Mental Health
- 11:00 AM - 11:30 AM
  Jargon as Gatekeeping: Why We Must Make Our Language Accessible
  Jordan Greer, MSc ▪ Cell Press

- 11:30 AM - 12:00 PM
  Strategic Positioning to Keep Your Options Open
  Harinder Singh, PhD ▪ University of California - Irvine

ASIP Chat Lounge - Meet the ASIP Marketing and Communications Manager
11:00 AM - 12:00 PM

- Gina LaBorde ▪ American Society for Investigative Pathology

ASIP Highlights Session: I Am An ASIP Member and This Is My Science
12:00 PM - 1:30 PM
Sponsored by the ASIP Committee for Career Development and Diversity

Chair: Edward A. Medina, MD, PhD ▪ University of Texas Health Science Center
Co-Chairs: Titus A. Reaves, PhD ▪ Medical University of South Carolina
Nakisha Rutledge, BSc ▪ Northwestern University

Session Description: As a Society, we cannot escape the identity crisis we have confronted in the past - what is pathology and how do pathologists fit into the basic framework of biomedical science? This is an ongoing challenge that requires our members to educate others regarding the nature of the discipline of experimental pathology and how our research describes and investigates the pathology, pathogenesis, and pathophysiology of specific diseases at the molecular, cellular, organ, and organismal level. Overcoming this identity crisis requires effort on the part of each ASIP member and our success will be evident as we continue to attract bright and enthusiastic young investigators into the diverse field of experimental pathobiology.

The American Society for Investigative Pathology presents I Am An ASIP Member and This Is My Science a dynamic and inspiring session featuring ASIP Scientists on the Cutting Edge of Discovery briefly, present their research, accomplishments, career journeys, and service to ASIP. This session highlights the diversity among our membership, and provides trainees, young scientists, pathologists, and the members of the larger scientific community the opportunity to become inspired by Trailblazers in the field of investigative pathology.

- Chair - Welcome and Introductions
- 12:00 PM - 12:05 PM
  My Adaptation through Innovation: Elasticity, Thickness, and Pigmentation is More than Skin Deep
  Cecelia C. Yates, PhD ▪ University of Pittsburgh
- 12:05 PM - 12:10 PM
  Probing the Many Secret Lives of the Flesh-Eating Pathogen: A Ridiculous, Misguided, and Fulfilling Walk
  James Musser, MD, PhD ▪ Houston Methodist Hospital
- 12:10 PM - 12:15 PM
  Bench to Bedside: Bridging The Gap
  Kelsey Dillehay McKillip, PhD ▪ University of Cincinnati
- 12:15 PM - 12:20 PM
  Resolvin Cancer
  Dipak Panigrahy, MD ▪ Harvard Medical School
- 12:20 PM - 12:25 PM
  Understanding Aggressive Breast Cancer Phenotypes
  Celina Kleer, MD ▪ University of Michigan
- 12:25 PM - 12:30 PM
  e Combination: My Pathway to Translational Biophysics
  David C. Williams, Jr., MD, PhD ▪ University at North Carolina at Chapel Hill
- 12:30 PM - 12:35 PM
  Transforming Patient's Lives With Science: It Takes a Village
  Cary Austin, MD, PhD ▪ Genentech
- 12:35 PM - 12:40 PM
  My Career in Pathology: Serendipity and Society Support
  Martha B. Furie, PhD ▪ Stony Brook University
- 12:40 PM - 12:45 PM
  Studying Oxygen Sensing in Cancer: My Personal Journey
  Qing Zhang, PhD ▪ UT Southwestern Medical Center

- 12:45 PM - 12:50 PM
  Trailblazing or Bushwhacking? Uncovering Foam Cell Biology in an Unlikely Place
  Verónica Contreras-Shannon, PhD ▪ St. Mary's University
- 12:50 PM - 12:55 PM
  Chromosome Variations in the Liver — Cool, But Why Should We Care?
  Andrew Duncan, PhD ▪ University of Pittsburgh
- 12:55 PM - 1:00 PM
  It's a Wonderful Life: Being a Physician Scientist in Clinical Pathology
  Robinna Lorenz, MD, PhD ▪ Genentech, Inc.
- 1:00 PM - 1:05 PM
  My Personal Mexican Standoff: Reckoning Diabetic Vasculopathy
  Roberto I. Mota Alvidrez, MD, MS ▪ University of Pittsburgh
- 1:05 PM - 1:10 PM
  It's Been All Growth Factors, All the Time
  Patricia A. D'Amore, PhD, MBA ▪ Massachusetts Eye & Ear/Harvard Medical School
- 1:10 PM - 1:15 PM
  Making the Most of Rejection: Lessons Learned from Transplant Pathology
  Richard Mitchell, MD, PhD ▪ Brigham and Women's Hospital/Harvard Medical School

Young Scientist Leadership Award Lecture
1:30 PM - 2:00 PM

Introduction - Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh

Dr. Preziosi will format her award lecture as a career development talk. She has always been passionate about helping earlier-stage trainees navigate their careers, and is hoping they can learn from her experiences. In the past few years her career has taken unexpected, but welcome, turns outside of her original career goals, and ASIP has been helping her every step of the way. Her talk will feature her experiences as a graduate student, postdoc, industry scientist, and now a life science consultant, and the advice and insight that she gathered at each stage. She hopes attendees will benefit from her talk regardless of their career stage and their current goals.

- ***A Personal Story of Career Development – From Early-stage Student to Starting a Career, and Navigating the Steps in Between***
  Morgan Preziosi, PhD ▪ FENIX Group International

ASIP Chat Lounge - Meet *The American Journal of Pathology (AJP)* Team
2:00 PM - 3:00 PM
- Martha Furie, PhD ▪ Stony Brook University
- Emily Essex ▪ American Society for Investigative Pathology

Minisymposium: Neuropathology
2:00 PM - 4:30 PM

Chair: Christi Kolarcik, PhD ▪ University of Pittsburgh
Co-Chair: Karam Soliman, PhD ▪ Florida A&M University

Session Description: Abstract-Driven Short Talks (15-minutes each)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
2:00 - 2:15	Ibolya Rutkai	SARS-CoV-2-associated neuropathology in non-human primates	Abstract **R3000**
2:15 - 2:30	Michele Alves	Dysregulation of breathing control through distinct molecular mechanisms of the brainstem cell population in neonatal sepsis	Abstract **R4668**
2:30 - 2:45	Erin Saito	Alzheimer's Disease Alters Oligodendrocytic Glycolytic and Ketolytic Gene Expression	Abstract **R2461**
2:45 - 3:00	Paul Savchenko	Mitochondria Damage as Early Indicator in an APPNL-G-F Mouse Model of Alzheimer's Disease	Abstract **R3367**
3:00 - 3:15	Cohner Secora	Traumatic Brain Injury Exacerbates Alzheimer's Disease Pathology in the Retina of Rats	Abstract **R4690**
3:15 - 3:30	Nadia Hossainy	Methylparaben Increases Expression of the Gamma-Glutamyltransferase 6 Gene Associated With Autism Spectrum Disorder in the Lan-5 Neuroblastoma Cell Line	Abstract **R4700**

3:30 - 3:45	Nirthieca Suthakaran	O-GlcNAc Transferase OGT-1 and the Ubiquitin Ligase EEL-1 Modulate Seizure Susceptibility in C. elegans	Abstract **R1915**
3:45 - 4:00	Barber Kimberly	The Antioxidant Effects of Cardamonin in LPS-Activated BV-2 Microglial Cells	Abstract **R1480**

Minisymposium: Pathobiology of Cancer

2:00 PM - 4:30 PM

Chair: Douglas Stairs, PhD ▪ Penn State College of Medicine
Co-Chair: Qing Zhang, PhD ▪ UT Southwestern Medical School

Session Description: Abstract-Driven Short Talks (15-minutes each)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
2:00 - 2:15	Amanda Caruso	The Crosstalk between Tumor Stroma Components and ESR1 Mutant Breast Cancer Cells Remodels Tumor Microenvironment and Enhances Tumor Growth and Progression	Abstract **R3453**
2:15 - 2:30	Giusi La Camera	Adipocyte-derived Exosomes: Novel Insight in the Link between Obesity and Breast Cancer	Abstract **R3529**
2:30 - 2:45	Samia Messeha	Gene Expression Alterations Associated with Sanguinarine-Induced Antiproliferative effects and Apoptosis in Triple-Negative Breast Cancer Cells	Abstract **R463**
2:45 - 3:00	Brittany Wilson	Analysis of microRNAs in Urinary Exosomes of Tumor-bearing Mice as a Non-invasive Tool for Lymphoma Diagnosis	Abstract **R3201**
3:00 - 3:15	Jian Chen	Loss of RNA Binding Protein, ZFP36L1, promotes EMT in hepatocellular cancer cells by regulating EMT-inducing transcription factor ZEB2	Abstract **R4347**
3:15 - 3:30	Na Jiao	Fusobacterium nucleatum, a reproducible microbial marker for CRC prescreening	Abstract **R3241**
3:30 - 3:45	Mark Gorrell	Associations between DPP9 expression, survival and gene expression signature in human hepatocellular carcinoma: Comprehensive in silico analyses	Abstract **R4490**
3:45 - 4:00	Anngela Adams	Variable GILT protein expression in melanoma cells of metastatic tumor specimens	Abstract **R315**
4:00 - 4:15	Carolina Mejia Peña	Development of a Novel 3D Model to Investigate the Role of Heterogeneity in Ovarian Cancer Chemoresistance	Abstract **R2599**
4:15 - 4:30	Alexander Sougiannis	Emodin Administration Depolarizes Tumor Associated M2-Type Macrophages in the Colorectal Cancer Tumor Microenvironment	Abstract **R3894**

Minisymposium: Pathobiology of Liver Disease

2:00 PM - 5:00 PM

Chair: Vik Meadows, MS, BS ▪ Indiana University
Co-Chair: Kari Nejak-Bowen, PhD ▪ University of Pittsburgh

Session Description: Abstract-Driven Short Talks (15-minutes each)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
2:00 - 2:15	Lindsey Kennedy	Secretin Treatment Promotes Hepatic Progenitor Cell Activation, Ductal-Canalicular Junction Formation and Amelioration of Liver Damage in a Model of Late-Stage Primary Biliary Cholangitis	Abstract **R1679**
2:15 - 2:30	Xiaojuan Chao	SQSTM1/p62 Inhibits whereas Nrf2 Promotes Tumorigenesis by Inducing Cell Population Remodeling and Metabolic Reprograming in Mouse Livers with mTORC1 Activation and Defective Autophagy	Abstract **R1924**
2:30 - 2:45	Hui Qian	Dual role of p62/SQSTM1 in acetaminophen-induced early acute injury and late recovery in mice	Abstract **R2482**
2:45 - 3:00	Gang Liu	Hepatic Autophagy Deficiency Leads to Increased Production of Extracellular Vesicles	Abstract **R2600**
3:00 - 3:15	Akanksha Sharma	Differential Effects of Endotoxin Lipopolysaccharide on Stellate Cells and Portal Fibroblasts: Implications in Fibrosis Originating in Central Versus Portal Injury	Abstract **R4097**

3:15 - 3:30	Vik Meadows	ASBT Vivo-Morpholino Decreases Hepatic Mast Cell, Fibrosis and Biliary Senescence in Mdr2-/- Mice	Abstract **R3480**
3:30 - 3:45	Adeola Michael	Investigating liver fibrosis in a humanized mice model of sickle cell disease	Abstract **R4498**
3:45 - 4:00	Matthew McMillin	Thrombospondin-1 Inhibition Reduces Nrf2 Activity and Increases Liver Injury during Acetaminophen-Induced Hepatotoxicity	Abstract **R2127**
4:00 - 4:15	Leila Gobejishvili	Increased hepatic JNK activation by ethanol is mediated by transcriptional suppression of mitogen-activated protein kinase phosphatase 1 (Mkp1): role of cAMP-specific protein kinase A	Abstract **R3948**
4:15 - 4:30	Evan Delgado	Diploid hepatocytes promote compensatory liver regeneration following acetaminophen induced acute liver injury	Abstract **R4673**
4:30 - 4:45	Jinqiang Zhang	EZH2 Drives Cholangiocarcinogenesis Through Downregulation of Tumor Suppressors Genes via Histone Methylation And microRNAs	Abstract **R2196**

Symposium: Disease Modeling with iPSC: From Cells to Organoids
2:00 PM - 5:00 PM

Chair: Philip M. Iannaccone, MD, PhD ▪ Northwestern University
Co-Chairs: Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh
Ivana Delalle, PhD, MD ▪ Alpert Medical School, Brown University

Session Description: The availability of human iPSC from various disease states presents an unprecedented opportunity to examine pathology and physiology in an intact tissue context. The decades since the early descriptions of stem cell derived "embryoid bodies", the first example of "organoids," have seen major advances in directed differentiation of stem cells and their organization into small structures mimicking normal organs. Organoids can be used to interrogate altered physiology and toxicology or as test beds for therapeutic intervention. Patient derived iPSC have been used to advance our understanding of many aspects of disease states. This session will highlight recent advances in both organoids and the use of directed differentiation of human iPSC in the study of disease.

- Chair - Welcome and Introductions
- 2:00 PM - 2:35 PM
  Cellular Regenerative Components in Liver Disease
  George Michalopoulos, MD, PhD ▪ University of Pittsburgh
- *2:35 PM - 3:10 PM*
  Emergence of Sophisticated Network and Oscillations in a Human Brain Organoid Model
  Alysson Muotri, PhD ▪ University of California, San Diego
- 3:10 PM - 3:45 PM
  iPSC-Derived Hepatocytes to Model Ebola Virus Infection
  Gustavo Mostoslavsky, MD, PhD ▪ Boston University
- 3:45 PM - 4:20 PM
  Stem Cell Models of Hematopoiesis
  Vasil Galat, PhD ▪ Northwestern University
- 4:20 PM - 4:55 PM
  Modeling Genetic Epilepsies with Human iPSCs and Brain Organoids
  Jenny Hsieh, PhD ▪ University of Texas, San Antonio

Symposium: The Gut Microbiota and Disease - Session II
2:00 PM - 5:00 PM

Chair: Xiao-Ming Yin, MD, PhD ▪ Tulane University
Co-Chairs: Wenke Feng, PhD ▪ University of Louisville
Maria Pilar Alcaide, PhD ▪ Tufts University
José Otero, MD, PhD ▪ The Ohio State University

Session Description: Humans carry a vast number of bacteria and other microbiota species from birth, and you may be more bacteria than you are you. An increasing importance of microbiota in human health and diseases has been recognized. Whatever your research subjects are, chances are that they may be influenced by the microbiota. This symposium will discuss the impact of gut microbiota on diseases ranging from neurodegeneration to diabetes, from the liver to the heart, and from the immune cells to the bone.

- Chair - Welcome and Introductions

- 2:00 PM - 2:30 PM
  Gut Microbiome and Immune Response
  Aleksander D. Kostic, PhD ▪ Harvard University
- 2:35 PM - 3:05 PM
  The Microbiome-Brain-β Cell Axis in Metabolic Syndrome
  Rachel J. Perry PhD ▪ Yale University
- 3:10 PM - 3:40 PM
  Dietary Metabolism, the Gut Microbiome and Cardiovascular Health
  Wai Hong Wilson Tang, MD ▪ Cleveland Clinic Lerner College of Medicine/Case Western Reserve University
- 3:45 PM - 4:15 PM
  Gut Microbiota and Neurodegeneration
  Ali Keshavarzian, MD ▪ Rush University Medical Center
- 4:20 PM - 4:50 PM
  Gut Microbiota Impact on Osteoimmunology and Skeletal Metabolism
  Chad M. Novince, DDS, MSD, PhD ▪ Medical University of South Carolina

Symposium: The "Ins" and "Outs" of Vascular Inflammation
2:00 PM - 5:00 PM
Sponsored by the ASIP and the North American Vascular Biology Organization (NAVBO)

Chair: William Muller, MD, PhD ▪ Northwestern University

Session Description: Virtually all pathology involves inflammation, and inflammation requires a functioning vascular system. The interactions of leukocytes with cells and components of the vasculature are critical for the natural progression and resolution of inflammation. This session will start with a symposium highlighting some new developments in our understanding of the mechanisms that promote migration of leukocytes into inflamed tissue, and the consequences of those interactions for the promotion and regression of inflammation. This will be followed by an extended discussion involving audience members as well as the speakers to put these findings into context with each other and with other developments in the field. We hope that this conversation will elicit critical questions for future research.

- 2:00 PM - 2:30 PM
  Mechanisms of Integrin Activation During Neutrophil Arrest
  Klaus Ley, MD ▪ La Jolla Institute for Immunology
- 2:30 PM - 3:00 PM
  Endothelial Cell Regulation of Transendothelial Migration: New Roles for Old Friends
  William Muller, MD, PhD ▪ Northwestern University
- 3:00 PM - 3:30 PM
  Neutrophil Reverse Transmigration: Mechanisms and Significance
  Sussan Nourshargh, PhD ▪ University of London, London, United Kingdon
- 3:30 PM - 4:00 PM
  Resolution of Inflammation in Atherosclerosis
  Ira Tabas, MD, PhD ▪ Columbia University
- 4:00 PM - 5:00 PM
  Panel Discussion with extensive audience participation

ASIP Chat Lounge - Meet the ASIP Committee for Career Development and Diversity (CCDD) Chair
3:00 PM - 4:00 PM
- Edward Medina, MD, PhD ▪ University of Texas Health Science Center

ASIP Chat Lounge - Meet the ASIP Education Committee Chair
4:00 PM - 5:00 PM
- Elaine Bearer, MD, PhD ▪ University of New Mexico Health Science Center

Rous-Whipple Award Lecture
5:00 PM - 6:00 PM

Introduction - Xiongwei Zhu, PhD ▪ Case Western Reserve University

- ***Pathology in Alzheimer Disease: A Protective Response?***
  George Perry, PhD ▪ University of Texas at San Antonio

Women in Pathology – Leadership Development Event – Part I
6:00 PM - 7:00 PM
Sponsored by the ASIP Women in Pathology Community

Co-Chairs: Maria Pilar Alcaide, PhD ▪ Tufts University
Jennifer Sanders, PhD ▪ Brown University
Nakisha Rutledge, BSc ▪ Northwestern University
Francisco Carrillo-Salinas, PhD ▪ Tufts University

Session Description: Confident leadership requires time and self-reflection about one's current strengths, as well as areas for development. Putting energy and intention toward developing these areas can help us not only build our authentic leadership presence and voice, but also result in greater interpersonal effectiveness and impact. In this interactive 1-hour workshop with Leadership Coach Deb Elbaum, attendees will get clearer about their current leadership skills and identify where they can put attention to be even more successful in their current or future role.

- ***Confident Leadership: What Kind of Leader Do You Want To Be?***
  Deb Elbaum, MD ▪ Executive Coaching and Leadership Development

Wednesday - April 28, 2021

Career Conversations – Publish or Perish
8:00 AM - 9:00 AM
Sponsored by the ASIP Committee for Career Development and Diversity

Chair: Marina Anastasiou, MSc ▪ Tufts University

Session Description: Every scientist is cut from a different mold! Join us for Publish or Perish - a conversation with Drs. Chhavi Chauhan and Diane Bielenberg about their careers in Scientific Editing & Writing, and Academic Research & Teaching, respectively. Both will provide insights about their career, their daily life, advice to trainees interested in a similar path, and answer your questions about their career journey. This is a great opportunity to learn about the many career possibilities available to you and to build your network!

- Scientific Editing and Writing
  Chhavi Chauhan, PhD ▪ American Society for Investigative Pathology
- Academic Research and Teaching
  Diane Bielenberg, PhD ▪ Boston's Children's Hospital

ASIP Chat Lounge - Meet the ASIP Program Committee Chair
8:30 AM - 9:30 AM

- Jonathon Homeister, MD, PhD • University of North Carolina

Society of Toxicologic Pathology (STP) Symposium: Animal Models in Basic Research and Preclinical Science: The Critical Role of the Toxicologic Pathologist
8:30 AM - 11:30 AM
Sponsored by the ASIP Environmental and Toxicologic Pathology Scientific Interest Group

Chair: Mark Hoenerhoff, DVM, PhD ▪ University of Michigan
Co-Chair: Jack Harkema, PhD, DVM ▪ Michigan State University

Session Description: Veterinary toxicologic pathologists play an integral role in biomedical and basic sciences, through translation of preclinical in vivo data for the study of human disease, development of new technologies and medical interventions, and drug development. Toxicologic pathologists also play a role in determination of chemical/drug adversity in animals and humans, and help predict relevance to humans taking into account mechanisms and margin of safety. Working with researchers, clinicians, and toxicologists, toxicologic pathologists can help facilitate a better understanding of disease processes through interpretation of animal models, drug development, and improve translatability of preclinical data in the "bench to bedside" approach to patient care. Through expanding interdisciplinary collaborations with the human medical field and other disciplines, toxicologic pathologists are central to the "One Health" concept at the intersection of all aspects of health care for humans, animals, and environmental health. This session will showcase the role veterinary toxicologic pathologists play in basic research, investigative pathology, drug development, and imaging modalities to strengthen translatability of animal data to the clinic in collaboration with other scientists. This session will also highlight how toxicologic pathologists can inform on the validity, use, relevance, and power of animal models to study human disease.

- Chair - Welcome and Introductions

- 8:30 AM - 9:15 AM
  How Toxicologic Pathologists Can Improve the Translatability and Reproducibility of Animal Models
  Thomas Rosol, DVM, PhD, DACVP ▪ Ohio University, College of Osteopathic Medicine
- 9:15 AM - 10:00 AM
  Innate Lymphoid Cell Mediation of Ozone-induced Non-allergic Asthma
  Jack Harkema, DVM, PhD, DACVP ▪ Michigan State University College of Veterinary Medicine
- 10:00 AM - 10:45 AM
  Animal Models to Support Vaccine Development
  Rani Sellers, DVM, PhD, DACVP ▪ Pfizer Inc.
- 10:45 AM - 11:30 AM
  In-Vivo Imaging to Improve Translatability of Preclinical Research in Drug Development
  Martin Guillot, DVM, MSc, PhD ▪ Charles River Laboratories, Montreal

Symposium: The Great Debate - Fibrosis Across Organs: Triggers, Pathways, and Cellular Plasticity
8:30 AM - 11:30 AM
Co-Sponsored by the ASIP and the American Society for Matrix Biology (ASMB)

Chair: Titus A. Reaves, PhD ▪ Medical University of South Carolina
Co-Chair: Mangesh Kulkarni, PhD ▪ University of Pittsburgh

Session Description: Fibrosing diseases are a broad spectrum of entities from organ-specific involvement to multi-system diseases with high morbidity and mortality and significantly unmet clinical needs. Progress in elucidating the pathogenesis of the fibroproliferative components across various diseases, including the critical roles of key cell types and the molecular mechanisms driving the transcriptional activation involved in the induction of fibrosis, has highlighted many new areas of therapeutic investigation and are currently underway. This session is designed to bring together translational biomedical researchers from a wide range of disciplines to discuss complex pathophysiologic mechanisms that underlie fibrosing diseases. You won't want to miss the hot topic debate on Power Cell – Fibroblast or Macrophage that will follow the session talks.

- Chair - Welcome and Introductions
- 8:30 AM - 9:00 AM
  Fibrosis in PDA Initiation and Progression Collagen Activation of DDRs as a Driver of Fibrosis and Cancer Progression
  Rolf A. Brekken, PhD ▪ UT Southwestern Medical Center
- 9:00 AM - 9:30 AM
  Origin of Fibrosis in the Central Nervous System
  Jae K. Lee, PhD ▪ University of Miami Health System
- 9:30 AM - 10:00 AM
  Toward Personalized TGFβ Inhibition for Cancer
  Huocong Huang, MD, PhD ▪ UT Southwestern Medical Center
- 10:00 AM - 10:30 AM
  Macrophage-Fibroblast Interactions in Fibrotic Processes
  Bryan Brown, PhD ▪ University of Pittsburgh
- 10:30 AM - 11:00 AM
  Heterocelluar Crosstalk in Skin Fibrosis
  Cecelia C. Yates, PhD ▪ University of Pittsburgh
- 11:00 AM - 11:30 AM
  State of Science Debate: Power Cell – Fibroblast or Macrophage

Breast Cancer Workshop - Tumor Microenvironment in Breast Cancer Progression
9:30 AM - 11:30 AM
Sponsored by the ASIP Breast Cancer Scientific Interest Group

Chair: Bethany Hannafon, BS, PhD ▪ University of Oklahoma Health Sciences Center
Co-Chair: Piyali Dasgupta, PhD ▪ Marshall University

Session Description: This session will examine the role of the tumor microenvironment in primary breast cancer development to metastatic dissemination and therapeutic resistance. Attendees will hear from leaders in the breast cancer field about tumor-host crosstalk mediated by extracellular vesicles, the role of the immune microenvironment in cancer

progression, tumor cell dormancy and its role in therapeutic resistance, and the role of the lymph node tumor microenvironment in the progression of lymph node breast cancer metastases.

- Chair - Welcome and Introductions
- 9:30 AM - 10:00 AM
  Cancer - Host Crosstalk Through Extracellular miRNA
  Shizhen Emily Wang, PhD ▪ University of California, San Diego
- 10:00 AM - 10:30 AM
  Epigenetic Regulation of Immune Microenvironment and Breast Cancer Metastasis
  Qin Yan, PhD ▪ Yale University
- 10:30 AM - 11:00 AM
  Lymph Node Metastases Induce Loss of High Endothelial Venules and Lack of Lymphocyte Infiltration
  Dennis Jones, PhD ▪ Boston University
- 11:00 AM - 11:30 AM
  Neutralizing Protumor Inflammation: Lessons Learned from Preclinical Mouse Models
  Lisa Coussens, PhD ▪ Oregon Health & Science University

ASIP Chat Lounge - Meet the ASIP Executive Officer
10:00 AM - 11:00 AM

- William B. Coleman, PhD ▪ American Society for Investigative Pathology

Blood Vessel Club™: Gut Microbiota in Vascular Disease
10:00 AM - 12:00 PM
Sponsored by the ASIP Inflammation/Immunopathology Scientific Interest Group and the Vascular and Mucosal Pathobiology Scientific Interest Group

Chair: Jonathon W. Homeister, MD, PhD ▪ University of North Carolina at Chapel Hill

Session Description: This symposium explores the newest discoveries into the role the gut microbiome has in the pathobiology of vascular diseases. Presentations by national and international experts in the field will focus on the mechanisms by which the gut microbiome can modulate both atherosclerotic vascular disease and hypertensive vascular disease.

- Chair - Welcome and Introductions
- 10:00 AM - 10:40 AM
  The Role of Gut Microbiota-Derived Metabolites in Blood Pressure Regulation
  David Durgan, PhD ▪ Baylor College of Medicine
- 10:40 AM - 11:20 AM
  A Dysfunctional Gut-Brain Axis in Hypertension
  Mohan Raizada, PhD ▪ University of Florida
- 11:20 AM - 12:00 PM
  Role of the Gut Microbiota in Atherosclerotic Cardiovascular Disease
  Debby PY Koonen, PhD ▪ University Medical Center Groningen, The Netherlands

ASIP Chat Lounge - Meet the ASIP Liver Pathobiology SIG Leaders
10:00 AM - 12:00 PM

- Satdarshan Paul Monga, MD ▪ University of Pittsburgh
- Kari Nejak-Bowen, PhD ▪ University of Pittsburgh

Planning for Success: Navigating Your First Faculty Position
11:00 AM - 1:00 PM
Sponsored by the ASIP Committee for Career Development and Diversity

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

Session Description: Feeling overwhelmed as you wrangle your first faculty position? Come hear from our experienced faculty as they impart valuable advice and tactics on successfully planning, transitioning into, adapting, (and surviving!) your first years as a faculty member.

- Chair - Welcome and Introductions

- 11:00 AM - 11:30 AM
  Planning is Good: Adapting is Even Better
  Richard Mitchell, MD, PhD ▪ Brigham and Women's Hospital/Harvard Medical School
- 11:30 AM - 12:00 PM
  The Sad and Mistaken Fallacy of Planning for Success
  James Musser, MD, PhD ▪ Houston Methodist Hospital
- 12:00 PM - 12:30 PM
  The Trouble With Saying Yes Too Quickly and Not Saying No Soon Enough
  Abigail Cox, PhD, DVM ▪ Purdue University
- 12:30 PM - 1:00 PM
  The Five Stages of Transitioning Into Your First Faculty Position
  Verónica Contreras-Shannon, PhD ▪ St. Mary's University

ASIP Chat Lounge - Meet the ASIP President and President-Elect
1:00 PM - 2:00 PM
- Richard Mitchell, MD, PhD ▪ Brigham & Women's Hospital
- Patricia D'Amore, PhD ▪ Schepens Eye Research Institute/Harvard Medical School

ASIP Chat Lounge - Meet the ASIP Breast Cancer SIG Leaders
2:00 PM - 3:00 PM
- Bethany Hannafon, PhD ▪ University of Oklahoma
- Dennis Jones, PhD ▪ Boston University

Symposium: Fixing Fatty Liver
2:00 PM - 5:00 PM
Sponsored by the ASIP Liver Pathobiology Scientific Interest Group

Chair: Kari Nejak-Bowen, MBA, PhD ▪ University of Pittsburgh

Session Description: In this session, we will approach the problem of non-alcoholic fatty liver disease (NAFLD) through improved understanding of the cellular and molecular mechanisms involved in disease progression. Recent advances in gut-liver axis, microbiome, and inflammation in the pathogenesis of NAFLD will be also discussed. Finally, we will explore novel signaling pathways that can be targeted for treatment of NAFLD.

- Chair - Welcome and Introductions
- 2:00 PM - 2:30 PM
  Cholesterol and Bile Acid Metabolism in Fatty Liver Disease
  Tiangang Li, PhD ▪ University of Oklahoma Health Sciences Center
- 2:30 PM - 3:00 PM
  Bile Acid Receptors and NAFLD
  Huiping Zhou, PhD ▪ Virginia Commonwealth University
- 3:00 PM - 3:30 PM
  Gut Permeability in NASH: Role of Mucosal Immune Cells, Microbiota, and Bile Acids
  Reben Raeman, PhD ▪ University of Pittsburgh
- 3:30 PM - 4:00 PM
  Novel Treatments for NAFLD
  Naga P. Chalasani, MD ▪ Indiana University
- 4:00 PM - 4:30 PM
  Inhibition of EGFR Receptor Prevents and Reverses Extreme NAFLD
  George K. Michalopoulos, MD, PhD ▪ University of Pittsburgh
- 4:30 PM - 5:00 PM
  Stress-Responsive Gene FKBP5 Mediates Alcohol-induced Liver Injury Through the Hippo Pathway and CXCL1 Signaling
  Suthat Liangpunsakul, MD ▪ Indiana University

Symposium: Novel Regulators and Functions of Epithelial Junctions
2:00 PM - 5:00 PM

Chair: Sean Colgan, PhD ▪ University of Colorado
Co-Chair: William Muller, MD, PhD ▪ Northwestern University

Session Description: Epithelial junctions are key regulators of tissue integrity and homeostasis, and their compromise contributes to the pathogenesis of inflammatory and immune disorders. This symposium will highlight recent developments in this exciting area of research and will touch upon developmental and disease pathways. The talks will cover the role of intercellular junction proteins in a range of tissues, including simple and complex epithelia.

- Chair - Welcome and Introductions
- 2:00 PM - 2:45 PM
  Going In Circles Gets You Somewhere: Signaling Mechanisms That Coordinate Cell Movements For Epithelial Migration
  Sally Horne-Badovinac, PhD ▪ The University of Chicago
- 2:45 PM - 3:30 PM
  Actin and Myosin-Dependent Regulation of Epithelial Apical Junctions: How Many Skeletons are in the Closet?
  Andrei I. Ivanov, PhD ▪ Lerner Research Institute of Cleveland Clinic Foundation
- 3:30 PM - 4:15 PM
  How Desmosomal Cadherins Help to Create Complex Epithelia
  Kathleen Green, PhD ▪ Northwestern University
- 4:15 PM - 5:00 PM
  Regulation of Simple Epithelial Wound Repair by Desmosomal Cadherin, Desmocollin 2
  Asma Nusrat, MD ▪ University of Michigan

Pathobiology Course for Research Scientists: Resolution of Inflammation

2:00 PM - 5:00 PM
Sponsored by the ASIP Education Committee

Chair: Dipak Panigrahy, MD ▪ Beth Israel Deaconess Medical Center/Harvard Medical School
Co-Chair: Alexander Sougiannis, PhD ▪ Medical University of South Carolina

Session Description: Unresolved inflammation is a major mechanism of pathogenesis in many human diseases. A paradigm shift is emerging in our understanding of the pathogenesis of inflammation which results not only from persistent activation of inflammatory signals, but also from the active loss of pro-resolution mechanisms. Differentiating between the suppression and resolution of inflammation driven by pro-resolution mediators is critical for the treatment of various inflammatory diseases.

- Chair - Welcome and Introductions
- 2:00 PM - 2:45 PM
  Resolvins and Novel Pro-Resolving Mediators (SPM) are Immunoresolvent Agonists
  Charles N. Serhan, PhD ▪ Brigham and Women's Hospital/Harvard Medical School
- 2:45 PM - 3:30 PM
  Dysregulation of Resolution in Atherosclerosis
  Gabrielle Fredman, PhD ▪ Albany Medical College
- 3:30 PM - 4:15 PM
  Pro-Resolving Mediators as Novel Diagnostic and Prognostic Biomarkers for Personalized Medicines
  Jesmond Dalli, PhD, FHEA ▪ BARTS and the London School of Medicine and Dentistry, London, England
- 4:15 PM - 5:00 PM
  Pro-Resolving Lipid Mediators in Tissue Repair
  Matthew Spite, PhD ▪ Brigham and Women's Hospital/Harvard Medical School

Symposium: Coagulation and Fibrinolytic Factors and Innate Immunity

2:00 PM - 5:00 PM

Chair: Wendy Mars, PhD ▪ University of Pittsburgh
Co-Chair: Steven Gonias, MD, PhD ▪ University of California, San Diego

Session Description: Proteins involved in both the coagulation and fibrinolysis pathways do much more than their well-described historical roles affecting the formation and dissolution of clots. This session will highlight data from leaders in the field who are studying the function of hemostasis factors in innate immunity.

- Chairs - Welcome and Introductions
- 2:00 PM - 2:45 PM
  Coagulation Signaling in Immunity
  Wolfram Ruf, MD ▪ The Scripps Research Institute

- 2:45 PM - 3:30 PM
  Fibrinogen and Innate Immunity in Neurological Disease
  Katerina Akassoglou, PhD ▪ University of California, San Fancisco
- 3:30 PM - 4:15 PM
  The Role of Plasminogen/Plasmin in Experimental Polymicrobial Sepsis
  Lirlândia Pires de Sousa, PhD ▪ Universidade Federal de Minas Gerais, Brazil
- 4:15 PM - 5:00 PM
  Cellular Receptors for Fibrinolysis Proteins in Innate Immunity
  Steven Gonias, MD, PhD ▪ University of California

Outstanding Investigator Award Lecture
5:00 PM - 6:00 PM

Introduction - Abul Abbas, MBBS ▪ University of California, San Francisco

- ***Autophagy and Secretion in Cancer***
  Jayanta Debnath, MD ▪ University of California, San Francisco

Club Hepatomania™ Meet the Liver Experts – All Duct Up
6:00 PM - 8:00 PM
Sponsored by the ASIP Liver Pathobiology Scientific Interest Group

Co-Chairs: Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh
Kari Nejak-Bowen, PhD, MBA ▪ University of Pittsburgh

Session Description: The selected experts for this session possess broad expertise in cholangiocyte biology, cholangiopathologies, biliary fibrosis, liver development, and liver repair using experimental models.

- Chair - Welcome and Introductions
- ***The Contributions and Complications of Ductular Reaction in Fibrosis-driven Hepatic Diseases***
  Heather Francis, PhD, FAASLD ▪ Indiana University

  Zebrafish as a Model for the Plasticity of Hepatocytes and Cholangiocytes During Regeneration
  Donghun Shin, PhD ▪ University of Pittsburgh
- Group Discussions

Thursday - April 29, 2021

ASIP Town Hall Meeting
7:30 AM - 8:30 AM

Chair: Richard Mitchell, MD, PhD ▪ Brigham and Women's Hospital
Co-Chairs: Patricia D'Amore, PhD ▪ Schepens Eye Research Institute, Harvard Medical School
William B. Coleman, PhD ▪ American Society for Investigative Pathology

Session Description: Are you a new member of the ASIP and want to become more involved? Are you interested in working with the ASIP leadership and committees? Join us for open conversation in a casual virtual environment where we network together with the common goal of building a stronger ASIP.

ASIP Chat Lounge - Meet the ASIP President and President-Elect
8:30 AM - 10:00 AM

- Richard Mitchell, MD, PhD ▪ Brigham & Women's Hospital
- Patricia D'Amore, PhD ▪ Schepens Eye Research Institute/Harvard Medical School

Career Conversations – Innovation
9:00 AM - 10:00 AM
Sponsored by the ASIP Committee for Career Development and Diversity

Chair: Verónica Contreras-Shannon, PhD ▪ St. Mary's University

Session Description: Every scientist is cut from a different mold! Join us for Innovations - a conversation with Drs. Karthika Perumal and Robinna Lorenz about their careers in Patent Law and Biotechnology, respectively. Both will provide insights about their career, their daily life, advice to trainees interested in a similar path, and answer your questions about their career journey. This is a great opportunity to learn about the many career possibilities available to you and to build your network!

- Biotechnology
  Robbina Lorenz, MD, PhD ▪ Genentech
- Patent Law
  Karthika Perumal, PhD ▪ Womble Bond Dickinson

Symposium: Mechanisms of Hepatic Tumorigenesis
9:00 AM - 12:00 PM
Sponsored by the ASIP Liver Pathobiology Scientific Interest Group

Chairs: Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh
Co-Chair: Heather Francis, PhD, FAASLD ▪ Indiana University

Session Description: This symposium will provide up-to-date research (both clinical and translational) on liver cancer, specifically in hepatocellular and cholangiocarcinoma. Tumor phenotypes and signaling mechanisms will be discussed along with the role of the tumor microenvironment and cellular reprogramming. The overarching goals of this session are to provide a better understanding of the tumor microenvironment and cellular signaling events that regulate tumorigenesis in both hepatocellular and cholangiocarcinoma cancers, and to identify potential targetable components for treatment of liver cancers.

- Chair - Welcome and Introductions
- 9:00 AM - 9:30 AM
  From PSC to Cholangiocarcinoma: The Role of Mast Cells and Inflammation
  Heather Francis, PhD, FAASLD ▪ Indiana University
- 9:30 AM - 10:0 AM
  NOTCH-YAP1/TEAD-DNMT1 Axis ERegulates Hepatocyte Reprogramming into Intra-Hepatic Cholangiocarcinoma
  Sungjin Ko, DVM, PhD ▪ Univesity of Pittsburgh
- 10:00 AM - 10:30 AM
  Beta-Catenin, Tumor Microenvironment, and Immuno-Oncology
  Armaia Lujambio, PhD ▪ Mount Sinai
- 10:30 AM - 11:00 AM
  Mechanism of Liver Metastasis Enhanced by Fatty Liver
  Ekihiro Seki, MD, PhD ▪ Cedars Sinai Medical Center
- 11:00 AM - 11:30 AM
  mTORC2/Akt Signaling Cascade During Hepatic Carcinogenesis
  Xin Chen, PhD ▪ University of California, San Francisco
- 11:30 AM - 12:00 PM
  Deciphering the Anti-Oncogenic Effects of Pro-Oncogenic Molecules in the Liver
  Gen-Sheng Feng, PhD ▪ University of California, San Diego

VAMP Symposium: Immune Regulation of Barrier Forming Cells
9:30 AM - 12:00 PM
Sponsored by the ASIP Vascular and Mucosal Pathobiology Scientific Interest Group

Chairs: Jennifer Brazil, PhD ▪ University of Michigan
Co-Chair: Francis W. Luscinskas, PhD ▪ Brigham & Women's Hospital

Session Description: Interactions at the immune-gastrointestinal epithelial interface are implicated in the chronic mucosal inflammation that is characteristic of inflammatory bowel disease. Immune cell intestinal epithelial interactions also play a critical role in the response to parasitic worms and during food induced anaphylactic reactions. Therefore, this symposium will highlight critical cellular and molecular interactions at the intestinal epithelial barrier under homeostasis and disease, discuss key steps that regulate the trafficking of neutrophils (key innate immune cells implicated in pathologic mucosal tissue damage) and detail how specialized epithelial cells (tuft cells) act as intestinal immune sentinels.

- Chair - Welcome and Introductions
- 9:30 AM - 10:05 AM
  Type-2 Immunity at the Intestinal Epithelial Barrier
  Simon Hogan, PhD ▪ University of Michigan
- 10:05 AM - 10:40 AM
  Intermittent Rolling is a Striking Defect of the Neutrophil Extravasation Cascade Caused by Myosin1e Deficiency
  Michael Schnoor, PhD ▪ CINVESTAV, Mexico City, Mexico

- 10:40 AM - 11:15 AM
  Intestinal Tuft Cells: Immune Sentinels and Effectors
  Jakob von Moltke, PhD ▪ University of Washington
- 11:15 AM - 11:30 AM
  Abstract R3672 – ***Gut Dysbiosis and Barrier Disruption are Associated with Diastolic Dysfunction in a Novel Mouse Model of Heart Failure with Preserved Ejection Fraction***
  Francisco J. Carrillo-Salinas, PhD ▪ Tufts University
- 11:30 AM - 11:45 AM
  Abstract R2096 – ***Insights into the Impact of Inflammatory Acidification on the Mucosa***
  Ian M. Cartwright, PhD ▪ University of Colorado Anschutz Medical Campus
- 11:45 AM - 12:00 PM
  Abstract R2078 – ***Structural and Chemical Alterations to the Intestinal Mucus Barrier During Giardia duodenalis Infection***
  Elena Fekete, BSc ▪ University of Calgary

ASIP Chat Lounge - Meet the ASIP Gene Expression SIG Leaders
10:00 AM - 11:00 AM
- David Williams, MD, PhD ▪ University of North Carolina
- Qin Yan, PhD ▪ Yale University School of Medicine
- Philip Iannaccone, MD, PhD ▪ Northwestern University

Symposium: Emerging Technologies From the Bench Disrupting Diagnosis and Care Near the Bedside
10:00 AM - 12:00 PM
Sponsored by the ASIP Molecular Diagnostic Pathology Scientific Interest Group

Chair: D. Hunter Best, PhD ▪ University of Utah
Co-Chair: Gregory J. Tsongalis, PhD ▪ Dartmouth-Hitchcock Health System

Session Description: This session will explore emerging genomic and molecular diagnostic tools that are being rapidly adopted in patient care, in the process transforming and disrupting the standard approach to clinical challenges as diverse as newborn diagnostics, microbiology, and oncology.

- Chair - Welcome and Introductions
- 10:00 AM - 10:30 AM
  Precision Medicine: Where Time and Technology Meet
  Gregory J. Tongalis, PhD ▪ Dartmouth-Hitchcock Health System
- 10:30 AM - 11:00 AM
  Measuring More in Biology: Getting Signal Compression Do all the Hard Work
  Aditya Rajagopal, PhD ▪ CalTech
- 11:00 AM - 11:30 AM
  Host Response and Point-of-Care Nanopore Sequencing for Diagnosis of Infections: Changing the Paradigm
  Charles Chiu, MD, PhD ▪ University of California, San Francisco
- 11:30 AM - 12:00 AM
  Rapid Genomic Medicine in Pediatric ICUs: A New way of Practicing Medicine
  Stephen Kingsmore, MD, DSc ▪ Rady Children's Institute for Genomic Medicine

ASIP Chat Lounge - Meet the ASIP Executive Officer
11:00 AM - 12:00 PM
- William B. Coleman, PhD ▪ American Society for Investigative Pathology

HCS, ASIP, AAA Symposium: Geographic Information System (GIS) for Tissues and Tumors: Mapping Quantitative Data into an Anatomical Context
12:00 PM - 2:00 PM
Sponsored by the ASIP, the Histochemical Society, and the American Association for Anatomy

Chair: Paul Goodwin, PhD ▪ Cytiva

Session Description: Histochemistry is the science of identifying biomolecules in context of biological structures. The science is moving from qualitative and descriptive to quantitative and precise. Moreover, adjacent tools have been established that provide quantitative data but lack the structural context (-omics). For example, we can identify and enumerate immune cells but we struggle with quantitative descriptors of their place relative to important anatomical structures such as blood vessels, extracellular matrix, and even other cells. This session brings together speakers to talk about data analytics in context of

geospatial descriptors and biologists (anatomists, pathologists, physiologists, etc.) who are working with spatial mapping of quantitative data within biological systems.

- 12:00 PM - 12:30 PM
  Keynote: Using Telescope as Microscope: Applying Geospatial Analysis Within an Anatomical Context
  Xun Shi, PhD ▪ Dartmouth College
- 12:30 PM - 12:50 PM
  "Google Maps" For Tissue Biology - How to Find Topographic Biomarkers?
  Denis Schapiro, PhD ▪ Harvard Medical School and The Broad Institute of Harvard and MIT
- 12:50 PM - 1:10 PM
  Spatial Analysis of Multiplex Immunohistochemistry Data Enables Systems Analysis of Hypoxia and Improved Stratification of Lung Cancer Patient Outcomes
  Parag Mallick, PhD ▪ Canary Center at Stanford Cancer
- 1:10 PM - 1:30 PM
  Mapping the Spatial Architecture of Human Tissues in Health and Disease with Multiplexed Ion Beam Imaging
  Erin F. McCaffrey ▪ Stanford University
- 1:30 PM
  Panel Discussions

Minisymposium: Endothelial Cells in Immunity and Cardiovascular Disease
2:00 PM - 4:30 PM

Chair: Pilar Alcaide, PhD ▪ Tufts University
Co-Chair: Kathryn Hendee, PhD ▪ Medical College of Wisconsin

Session Description: Abstract-Driven Short Talks (15-minutes each)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
2:00 - 2:15	Kathryn Hendee	Twist1 Signaling in Age-dependent Decline in Angiogenesis	Abstract **R2593**
2:15 - 2:30	Theresa Dinh	A genomic address code directs assembly and function of NKX2-3:COUP-TFII complexes that drive organotypic expression of the mucosal vascular addressin	Abstract **R2535**
2:30 - 2:45	Guangbi Li	Control of TRPML1 Channel Activity and Lysosome Trafficking by Acid Ceramidase in Mouse Coronary Arterial Endothelial Cells	Abstract **R4045**
2:45 - 3:00	Marina Anastasiou	Stimulator of Interferon Genes (STING) regulates Re-endothelialization Following Vascular Injury	Abstract **R1616**
3:00 - 3:15	Ramon Bossardi Ramos	SOCS3 Limits Pro-Inflammatory Signature in Septic Endothelium	Abstract **R1790**
3:15 - 3:30	Nigeste Carter	Human Coronary Artery Endothelial Cells Release Extracellular Vesicles that Have Angiostatic and Anti-Proliferative Effects	Abstract **R4612**
3:30 - 3:45	Menglan Xiang	A Single-Cell Transcriptional Roadmap of the Mouse and Human Lymph Node Lymphatic Vasculature	Abstract **R4027**
3:45 - 4:00	Kevin Brulois	Single cell trajectories reveal a developmental sequence from angiogenic capillary progenitors to mature high endothelial cells	Abstract **R4300**
4:00 - 4:15	Angela Glading	Protein Kinase Cα (Pkcα) Regulates the Nucleocytoplasmic Shuttling of KRIT1	Abstract **R4269**

The Journal of Histochemistry & Cytochemistry Lecture
2:00 PM - 3:00 PM

Chair: Stephen Hewitt, MD, PhD ▪ Editor, Journal of Histochemistry and Cytochemistry ▪ National Cancer Institute/National Institutes of Health

Session Description: Over 53% of PhDs are awarded to women. Yet, only 12% of recognized innovators in the United States are women. Women and diverse employees have technical skill and knowledge, yet their contributions are not patented at the same rate as those of their male counterparts. These statistics suggest that our organizations may not be capturing the full contribution of a large segment of our technical workforce – resulting in significant lost opportunity costs (e.g., unpatented inventions, delayed disclosures, etc.) The insights and perspectives of women are necessary to solve the monumental

challenges our organizations face. Join HCS and the Journal of Histochemistry & Cytochemistry as we explore what is needed to help organizations move the needle on achieving gender parity in innovation.

- ***Gender Diversity in Innovation Toolkit Created by IPO***
  Mercedes K. Meyer, PhD, JD ▪ Drinker Biddle and Reath, LLP

Presidential Symposium: Second Chapters: Careers in Academia After a Life in the Lab
2:00 PM - 4:00 PM

Chair: Richard N. Mitchell, MD, PhD ▪ Brigham and Women's Hospital and Harvard Medical School

Session Description: Hard-wired into the ASIP Mission Statement is the promotion of the "discovery, advancement, and dissemination of basic and translational knowledge in experimental pathology and related disciplines." This is achieved by many of the ASIP membership through their research pursuits—and the associated publications and meeting presentations. However, ASIP has an equally important responsibility (also highlighted in the Mission Statement) in "disseminating knowledge…and fostering educational activities"…across the spectrum from undergraduates to industry, and from politicians to emeritus professors. Indeed, Ramzi Cotran always strongly believed that one couldn't be a good pathologist and investigator without being a stellar educator. It's equally important to emphasize that sharing our discoveries requires a robust editorial process, and couldn't be accomplished without a solid and enlightened ASIP leadership in support of the Society and its meetings. Consequently, the goal of the ASIP President's Symposium at EB2021 is to spotlight the administrative, editorial, and educational roles played by ASIP members, and share the trials and tribulations—and the satisfaction—that can come from contributing to the core ASIP mission in ways outside of the laboratory.

- 2:00 PM - 2:30 PM
  Leveraging Unexpected Opportunities: from Endothelium to Editor-in-Chief
  Martha Furie, PhD ▪ Stony Brook University
- 2:30 PM - 3:00 PM
  From the Ivory Tower to the Great Society
  William B. Coleman, PhD ▪ American Society for Investigative Pathology
- 3:00 PM - 3:30 PM
  From Flexner to Gen Z: Basic Science Educators - Hang onto Your Hats and Enjoy the Ride
  Peter Anderson, DVM, PhD ▪ University of Alabama at Birmingham
- 3:30 PM - 4:00 PM
  George Bernard Shaw Wasn't Entirely Correct
  Richard N. Mitchell, MD, PhD ▪ Brigham and Women's Hospital and Harvard Medical School

Symposium: Deep Learning and Artificial Intelligence in Pathology
2:00 PM - 5:00 PM

Chair: Stanley Cohen, MD ▪ Rutgers University
Co-Chair: John Tomaszewski, MD ▪ University of Buffalo

Session Description: The use of artificial intelligence has become ubiquitous in many aspects of human endeavor including medicine. In particular, Pathology is well-positioned to take advantage of this methodology both because of our heavy reliance on large amounts of laboratory data and the need for high level image interpretation. This session will begin with an overview of the underlying mechanisms of artificial intelligence and deep learning, followed by examples of the implementation of AI in solving problems such as tumor grading, interactions between tumors and the host's immune response, with the ultimate aim of prognostic prediction. The session will conclude with progress in the fusion of multiple pathology data streams via AI-based strategies.

- Chair - Welcome and Introductions
- 2:00 PM - 2:35 PM
  Data Analytics Comes of Age
  John Tomaszewski, MD ▪ University of Buffalo
- 2:35 PM - 3:10 PM
  AI 101: What is AI and How are It's Algorithmic Strategies Implemented?
  Stanley Cohen, MD ▪ Rutgers University
- 3:10 PM - 3:45 PM
  Deep Learning based Pathomic Biomarkers
  Joel Saltz, MD ▪ Stony Brook Medicine
- 3:45 PM - 4:20 PM
  Reducing Intra- and Inter-Observer Variability via AI Assistance
  Faisal Mahmood, MD ▪ Brigham and Women's Hospital/Harvard Medical School

- 4:20 PM - 4:55 PM
  Deep Leaning Driven Data Fusion as Pathology's New Frontier
  John Tomaszewski, MD ▪ University of Buffalo
- ***Summary***
  Stanley Cohen, MD ▪ Rutgers University

ASIP Business Meeting and Award Presentations
5:00 PM - 6:30 PM
Chair: Richard N. Mitchell, MD, PhD ▪ Brigham and Women's Hospital and Harvard Medical School

Session Description: During this session, members will hear reports from the President, Secretary Treasurer, and other members of the ASIP Council (Committee Chairs) with respect to the state of Society operations, programs, and finances. In addition, the 2021 meritorious awards will be presented, and Trainee and Young Faculty Scholar Awardees will be recognized. The event will conclude with the ceremonial passing of the gavel to the President of the Society.

Women in Pathology – Leadership Development Event – Part II
6:30 PM - 7:30 PM

Co-Chairs: Maria Pilar Alcaide, PhD ▪ Tufts University
Jennifer Sanders, PhD ▪ Brown University
Nakisha Rutledge, BSc ▪ Northwestern University
Francisco Carrillo-Salinas, PhD ▪ Tufts University

Session Description: The mission of the Women in Pathology Session 2 at EB 2021 is to build upon what is learned in Session 1 about confident leadership. Attendees will engage in conversations focused on the following topics, and discuss how these sessions have contributed to shape their confidence, and career paths.

- Resilience and wellness
- Managing your inner critic
- Active listening and difficult conversation
- Vision and setting boundaries

Friday - April 30, 2021

Career Conversations – Government and Science Policy
8:00 AM - 9:00 AM
Sponsored by the ASIP Committee for Career Development and Diversity

Chair: Daisy Shu, PhD ▪ Schepens Eye Research Institute

Session Description: Every scientist is cut from a different mold! Join us for Government and Policy - a conversation with Drs. Yvette Seger and William Stetler-Stevenson about their careers in Public Policy and Research in Government, respectively. Both will provide insights about their career, their daily life, advice to trainees interested in a similar path, and answer your questions about their career journey. This is a great opportunity to learn about the many career possibilities available to you and to build your network!

- Public Policy
  Yvette Seger, PhD ▪ Federation of Amercian Scieties for Experimental Biology
- Research and Government
  William Stetler-Stevenson, MD, PhD ▪ National Cancer Institute, NIH

Symposium: Drinking from the Firehose: Progress in the Practical Uses of Big Data
8:30 AM - 11:30 AM

Chair: Dan Milner, Jr., MD, MSc, FASCP ▪ American Society for Clinical Pathology
Co-Chair: Kevin Gardner, MD, PhD ▪ Columbia University Medical Center

Session Description: Human diagnostic medicine has always been fed by the vast array of research from the bench but with considerable lag from first discovery to clinical use. The advent of advance information technology, increasing computational capacity, and enormous data per patient has hastened research efforts. Translation into immediate, practical clinical applications occur constantly, creating a flooding river of data acquisition, analysis, and interpretation. In this session, four leaders at the forefront of their fields will discuss specific examples of big data and the immediate and future impacts on human health. From the areas of transfusion medicine, digital pathology, informatics, and immunomics, the flood of science and data will be presented through the lens of complex yet practical big data projects and explain how to prepare for and benefit from them in both the research laboratory and the clinical sphere.

- Chair - Welcome and Introductions
- 8:30 AM - 9:15 AM
  Blood Group Typing at the Genome Level
  William Joseph Lane, MD, PhD ▪ Brigham and Women's Hospital
- 9:15 AM - 10:00 AM
  Digital Pathology Predictive Analysis
  Anant Madabhushi, PhD ▪ Case Western Reserve University
- 10:00 AM - 10:45 AM
  Supporting the NIDDK Kidney Precision Medicine Project (KPMP): Standing up the U-M Pathology AI/Data Visualization Center and Core Lab - Five Years in Retrospect
  Ulysses Balis, MD ▪ University of Michigan
- 10:45 AM - 11:30 AM
  Big-Data: Immunomics in Pathology and Medicine
  Ramy Arnaout, MD, DPhil ▪ Beth Israel Deaconess Hospital

ACVP-ASIP Symposium: Comparative Hemostasis and Thrombosis
9:00 AM - 11:00 AM
Sponsored by the ASIP Veterinary and Comparative Pathology Scientific Interest Group and the American College of Veterinary Pathologists (ACVP)

Chair: Nora L. Springer, DVM, PhD, DACVP ▪ Kansas State University
Co-Chair: Katherine N. Gibson-Corley, DVM, PhD, DACVP ▪ Vanderbilt University

Session Description: Veterinary scientists discuss cutting edge research in canine hemostasis and thrombosis and correlate to the equivalent human disease.

- Chair - Welcome and Introductions
- 9:00 AM - 9:40 AM
  Canine Lipoproteins Alter Endothelial Cell Function, Fibrinolysis, and Fibrin Clot Structure
  Erica Behling-Kelly, DVM, PhD, DACVP ▪ Cornell University
- 9:40 AM - 10:20 AM
  Inherited Platelet Function Disorders in Animals With Comparison to Their Human Counterparts
  Peter Christopherson, DVM, PhD, DACVP ▪ Auburn University
- 10:20 AM - 11:00 AM
  Immune-Mediated Hemolytic Anemia, NETs, and Thrombosis: Tangled Together?
  Dana LeVine, DVM, PhD, DACVIM ▪ Iowa State University

XXth Annual Workshop in Graduate Education in Pathology: Training and Fellowship Grants
9:00 AM - 11:00 AM
Sponsored by the ASIP Education Committee

Chair: Titus A. Reaves, PhD ▪ Medical University of South Carolina
Co-Chair: José Otero, MD, PhD ▪ The Ohio State University

Session Description: This session will focus on everything the prospective grantee needs to know about training grants (T's, and F's) that score and get funded. The information presented will be invaluable as the grant environment is a constantly evolving. Preparation is essential to overcome the challenges facing grant writers coupled with being knowledgeable on the types of training grants that are best for your individual situation. The speaker, Dr. McManus has extensive experience as she has been a PI for a number of years, and has had success in writing and obtaining all types of grants. Attendees will understand the current state of the industry and the information presented will assist the grant writer to enter and stay at the forefront of the process. The session concludes with Dr. Jackie Bader, an early career researcher, who was successful in obtaining one of these training grants.

- Chair - Welcome and Introductions
- 9:00 AM - 10:00 AM
  Training Grant F's and T's
  Linda McManus, PhD ▪ University of Texas Health San Antonio
- 10:00 AM - 11:00 AM
  Pathway to Post-Doc Through NIH's F99/K00: The Bigger, Better Alternative to an F31 Fellowship
  Jackie Bader, PhD ▪ Vandebilt Medical Center

ASIP Chat Lounge - Meet the ASIP Executive Officer
10:00 AM - 11:00 AM

- William B. Coleman, PhD ▪ American Society for Investigative Pathology

Symposium: Precision Oncology: The Promise for Translating Personal Genomics into Clinical Action
10:00 AM - 12:00 PM

Chair: Kevin Gardner, MD, PhD ▪ Columbia University Medical Center
Co-Chair: Elizabeth Whitley, DVM, PhD ▪ MD Anderson Cancer Center

Session Description: Tapping into the vast amount of information stored in the genome holds great promise for the development of targeted, patient-specific clinical decision-making. In this symposium, we highlight several vanguard studies that support developing knowledge-based therapeutics and preventions for cancer. The first presentation of this symposium will focus on the use of genomic technologies and bioinformatics analysis to determine relationships between germ-line and somatic alterations in populations and cancer risk and progression. The second presentation will delve into hereditary differences in Vitamin D metabolism and prostate cancer aggressiveness and mortality. The third presentation will describe genetic and environmental factors among Latina women that affect the risk of developing breast cancer or of having progressive disease.

- Chair - Welcome and Introductions
- 10:00 AM - 10:40 AM
  Population and Tumor Heterogeneity in Cancer Genomics and Precision Oncology
  John Carpten, PhD ▪ Keck School of Medicine of the University of Southern California
- 10:40 AM - 11:20 AM
  The Role of Vitamin D Signaling in Prostate Cancer Disparities
  Richard Kittles, PhD ▪ City of Hope
- 11:20 AM - 12:00 PM
  Tumor Genomics in Latina Breast Cancer
  Susan Neuhausen, PhD ▪ City of Hope

Cotran Early Career Investigator Award Lecture
11:00 AM - 12:00 PM

Introduction - Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh

Session Description: Chronic cholestatic liver disease results from bile secretory defects or impairment of bile flow, and there are few effective medical therapies available. The Wnt/beta-catenin signaling pathway has a well-described role in liver physiology and pathology. Our findings demonstrate that modulation of this pathway also alters the progression of cholestasis. We recently identified a role for beta-catenin in regulating bile acid metabolism during cholestasis induced by bile duct ligation (BDL). Loss of beta-catenin from hepatocytes results in notable protection from liver injury, fibrosis, and ductular response, which coincides with decreased total hepatic bile acids secondary to enhanced farnesoid X receptor (FXR) activation. This led to the identification of a novel association between beta-catenin and FXR that is unresponsive to bile acids or FXR agonists but sensitive to beta-catenin inhibition. Exogenous suppression of beta-catenin expression during cholestatic injury negatively regulates bile acid synthesis and also alters the bile acid composition in liver and gallbladder, suggesting a potential therapeutic opportunity for modulating beta-catenin in cholestatic patients. Surprisingly, however, exogenous knockdown of beta-catenin in a second model of cholestasis, the Mdr2 KO mouse, exacerbates rather than alleviates hepatobiliary injury, leading to a significant increase in ductular reaction and fibrosis compared to Mdr2 KO alone. In contrast to the protective effect of beta-catenin loss in the BDL model, beta-catenin knockdown in Mdr2 KO interfered with expression of BA transporters, hepatocyte polarity, canalicular structure, and the regenerative response, with the resulting imbalance between ongoing injury and restitution leading to worsening of the Mdr2 KO phenotype. Thus, the role of beta-catenin in regulating bile acid synthesis and composition in the liver is pleiotropic, and suitable therapeutic inhibition of beta-catenin in cholestatic liver diseases should be context-dependent.

- ***Therapeutic Implications of Modulating Beta-Catenin in Cholestasis***
  Kari Nejak-Bowen, PhD, MBA ▪ University of Pittsburgh

ASIP Chat Lounge - Meet the ASIP Research and Science Policy (RSPC) Chair
11:00 AM - 12:00 PM

- Kelsey McKillip, PhD ▪ University of Cincinnati

Mentoring Workshop: The ABCs of the IDP
12:00 PM - 1:30 PM
Sponsored by the ASIP Education Committee and the ASIP Committee for Career Development and Diversity

Chair: Roberto I. Mota Alvidrez, MD ▪ University of Pittsburgh

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

Session Description: This session will showcase the ability of a successful and efficient IDP in eliminating difficult conversations in mentor-mentee interactions. Our speakers will highlight the importance of writing a successful IDP throughout your scientific career. The workshop will face out difficult scientific scenarios in which having a well outlined IDP is beneficial in all stages of scientific career.

- Chair - Welcome and Introductions
- 12:00 PM - 12:30 PM
  The IDP: Your Road from Here to There
  Patricia A. D'Amore, PhD, MBA ▪ Massachusetts Eye & Ear/Harvard Medical School
- 12:30 PM - 1:00 PM
  Beyond the IDP - Self-Evaluation of Progress Over an Entire Career
  Elaine Bearer, MD, PhD ▪ University of New Mexico Health Science Center
- 1:00 PM - 1:30 PM
  Workshop: Avoiding Difficult Conversations: Creating An IDP

ASIP Chat Lounge - Meet the ASIP Vascular and Mucosal Pathobiology (VAMP) Sig Leaders

1:00 PM - 2:00 PM

- Asma Nusrat, MD ▪ University of Michigan
- David Sullivan, PhD ▪ Northwestern University
- Michael Schnoor, PhD ▪ Centro de Investigacion y de Estudios Avanzados (CINVESTAV)
- Dan Milner, MD MSc(Epi) MBA ▪ American Society for Clinical Pathology
- Bill Luscinskas, PhD ▪ Brigham & Women's Hospital

Minisymposium: Tissue Barriers and Intercellular Junctions

2:00 PM - 4:00 PM

Chair: Andrei Ivanov, PhD ▪ Cleveland Clinic Foundation
Co-Chair: Kris Chadee, PhD ▪ University of Calgary

Session Description: Abstract-Driven Short Talks (15-minutes each)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
2:00 - 2:15	Joanna Cunanan	Shroom3 regulates epithelial differentiation during tubular repair after ischemia reperfusion injury	Abstract **R2199**
2:15 - 2:30	Shuhan Lu	Role of endothelial SOCS3 in brain permeability and retinal vascular leukoembolization	Abstract **R1791**
2:30 - 2:45	Michelle Smith	JAM-A signals through the Hippo pathway to regulate intestinal epithelial proliferation	Abstract **L5127**
2:45 - 3:00	Anny-Claude Luissint	CAR-Like Membrane Protein (CLMP) Regulates Intestinal Epithelial Cell Proliferation and Prevents Tumor Growth	Abstract **L5279**
3:00 - 3:15	Menglu Yang	RvD2 stimulates conjunctival goblet cell secretion by activating multiple Ca2+-dependent intracellular signaling pathways	Abstract **R1844**
3:15 - 3:30	Camilla Schinner	Disruption of the desmoglein adhesive interface causes Arrhythmogenic Cardiomyopathy	Abstract **R2693**
3:30 - 3:45	Hayley Gorman	FCGBP stabilizes colonic MUC2 mucin structural integrity in innate host defense against Entamoeba histolytica	Abstract **R451**

Minisymposium: Novel Insights into Cardiac Function and Myocardial Response to Injury

2:00 PM - 4:00 PM

Chair: Traci Parry, PhD ▪ University of North Carolina at Greensboro
Co-Chair: Jonathon Homeister, PhD ▪ University of North Carolina, Chapel Hill

Session Description: Abstract-Driven Short Talks (15-minutes each)

- Chair - Welcome and Introductions

Presentation Time	Presenting Author	Abstract Title	Abstract Number
2:00 - 2:15	Jie Wang	SNAP29 Restricts Cardiac Arrhythmias by Insulating A Subset of Desmosomal Proteins and Connexin43 from Autophagic Degradation	Abstract **R2621**

2:15 - 2:30	Sasha Smolgovsky	Combined Risk Factors Induce T Cell-Mediated Diastolic Dysfunction in a Novel Mouse Model of Heart Failure with Preserved Ejection Fraction (HFpEF)	Abstract **R1600**
2:30 -2:45	Ethan Kwan	Contributions of Myocardial Hypertrophy and Stiffening to Right-Ventricular Remodeling in a Rat Model of Pulmonary Arterial Hypertension	Abstract **R4104**
2:45 - 3:00	Hong-Mei Xue	Hyperhomocysteinemia Exacerbates Myocardial Ischemia-Reperfusion Injury: Role of ER Stress and Autophagy	Abstract **R2692**
3:00 - 3:15	Traci Parry	Endurance Exercise Abolishes Cancer-Mediated Cardiac Dysfunction and Metabolic Alterations	Abstract **L5511**
3:15 - 3:30	Wen-Tao Sun	Regulation of Cyclic Nucleotide Phosphodiesterase 1 by Endoplasmic Reticulum Stress Contributes to Homocysteine-induced Cardiac Hypertrophy	Abstract **R2690**
3:30 - 3:45	Si-Qiang Zheng	Genetic Analysis of the CITED2 Gene Promoter in Isolated and Sporadic Congenital Ventricular Septal Defects	Abstract R**2655**
3:45 - 4:00	Harshada Ketkar	Metabolic Environment Alters the Transcriptomic Landscape of the Aged Heart	Abstract **R4504**

SCVP-ASIP Joint Symposium: Clonal Hematopoiesis: Impact on Inflammation and Cardiovascular Disease – Cardiac Pathology

2:00 PM - 4:00 PM

Sponsored by the ASIP Inflammation/Immunopathology Scientific Interest Group and the Society for Cardiovascular Pathology (SCVP)

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

Session Description: The acquisition of aberrant clonal cell populations within the bone marrow has been observed during aging. It is now becoming clear that such clonal hematopoiesis may play important roles in age-related diseases, particularly inflammatory and age-related diseases of the cardiovascular system such as atherosclerosis. This session will involve leaders in the field sharing their insights into this new and evolving area of disease-related research.

- Chair - Welcome and Introductions
- 2:00 PM - 2:40 PM
  Clonal Hematopoiesis in Aging
  Rafael Bejar, MD, PhD ▪ University of California, San Diego
- 2:40 PM - 3:20 PM
  Clonal Hematopoiesis and Atherosclerotic Cardiovascular Disease
  Siddharth Jaiswal, MD, PhD ▪ Stanford University
- 3:20 PM - 4:00 PM
  Mechanistic Links Between Clonal Hematopoiesis and Age-Related Disease
  Kenneth Walsh, PhD ▪ University of Virginia

SIPMeT Symposium: Epigenetic Regulation and Cancer

2:00 PM - 5:00 PM

Sponsored by ASIP and the Società Italiana di Patologia e Medicina Traslazionale/Italian Society of Pathology and Translational Medicine (SIPMeT) Co-Sponsored by the ASIP Gene Regulation Scientific Interest Group

Chair: Massimiliano Corsi Romanelli, PhD, MD ▪ University of Milan, Milan Italy
Co-Chair: Francesco Curcio, MD ▪ University of Udine, Udine, Italy

Session Description: In this session, we will explore the role of epigenetic regulation in cancer development and therapy. The talks will include new and innovative methodologies, molecular studies, and novel targets for treatment.

- Chair - Welcome and Introductions
- 2:00 PM - 2:45 PM
  Targeting Epigenome for Cancer Treatment and Prevention
  Lucia Altucci, MD, PhD ▪ University of Naples, Naples Italy
- 2:45 PM - 3:30 PM
  Molecular Mechanisms of Epigenetic (Mis)Regulation
  Tatiana Kutateladze, PhD ▪ University of Colorado
- 3:30 PM - 4:15 PM
  Expanding the Toolbox for Characterizing Epigenetic Protein-Protein Interactions Mediated by Post-Translational Modification
  Marcey Waters, PhD ▪ University of North Carolina at Chapel Hill

- 4:15 PM - 5:00 PM
  Epigenetic Regulation and TKI Resistance in EGFR-Mutant Lung Cancer: A New Role of SMARCA4
  Fernando J. de Miguel, PhD ▪ Yale Cancer Center

Expert Roundtable: Toward Understanding and Containing the COVID-19 Pandemic
2:00 PM - 5:00 PM

Chair: Chhavi Chauhan, PhD ▪ American Society for Investigative Pathology

Session Description: This session will touch upon numerous dimensions of understanding and containing the ongoing global pandemic. This timely session is structured for various experts to present short lightening talks sharing updates on mechanisms underlying COVID-19 infections and its pathogenesis as well as exploring and predicting outcomes based on underlying co-morbidities. The experts will also share updates on the current and emerging treatments for containing the global COVID-19 pandemic. The lightening talks will be followed by a live moderated Q&A session based on audience questions. This session will appeal to researchers, clinicians, companies developing COVID-19 surveillance, management, and treatment products, as well as the caregivers and lay public."

- Chair - Welcome and Introductions
- 2:05 PM - 2:15 PM
  Analysis of 30,000 SARS-CoV-2 Genomes, Houston, Texas: Should We Fear the Scariants?
  James Musser, MD, PhD ▪ Houston Methodist Hospital
- 2:15 PM - 2:25 PM
  The Race for a COVID-19 Vaccine
  Emily Erbelding, MD, MPH ▪ National Institute of Allergy and Infectious Diseases/National Institutes of Health
- 2:25 PM - 2:35 PM
  View of the COVID-19 Tsunami from the Trenches of a Clinical Molecular Lab
  Gregory J. Tsongalis, PhD ▪ Dartmouth-Hitchcock Medical Center
- 2:35 PM - 2:45 PM
  Mitigating COVID-19 in Meat and Poultry Processing Plants
  A. Sally Davis, DVM ▪ Kansas State University
- 2:45 PM - 2:55 PM
  Pathobiology of COVID-19: Insights into Pathophysiology and Pathogenesis From Autopsy-Based Clinicopathological Correlation
  L. Maximilian Buja, MD ▪ University of Texas Science Center – Houston
- 2:55 PM - 3:05 PM
  The Pathophysiology of COVID-19 From an Autopsy Pathologist's Perspective
  Richard Vander Heide, MD, PhD, MBA ▪ Louisiana State University Health Science Center
- 3:05 PM - 3:15 PM
  The NIH COVID Autopsy Consortium: An Effort At Systematic Understanding of SARS-CoV-2 Infection
  Stephen Hewitt, MD, PhD ▪ National Cancer Institute - NIH
- 3:15 PM - 3:25 PM
  Empowering Clinical Informatics for COVID: The National COVID Cohort Collaborative (N3C)
  Michael G. Kurilla, MD, PhD ▪ National Center for the Advancement of Translational Sciences
- 3:25 PM - 5:00 PM
  Moderated Question and Answer Session