

PATHOBIOLOGY



Mechanisms of Disease 2024

Annual Meeting of the American Society for Investigative Pathology

Meeting Program

BALTIMORE | APRIL 20-23



THE JOURNAL OF MOLECULAR DIAGNOSTICS

Advancing Genomic Medicine and Informatics

***The Journal of Molecular Diagnostics: Advancing
Genomic Medicine and Informatics***



Table of Contents

Planning Committee.....	5
Awardees.....	6
General Information.....	9
Exhibitors & Sponsors.....	13
Maps.....	14
Scientific Program.....	17

PATHOBIOLOGY

 *Mechanisms of Disease* **2024**
Baltimore | April 20-23

Meritorious Award Lectures

Session 007: ASIP Cotran Early Career Investigator Award Lecture

Saturday, April 20
1:00–2:00 PM
Baltimore B

The Role of Commensal Microbes in Intestinal Health and Infection



Melinda A. Engevik, PhD
Assistant Professor
Medical University of South Carolina

Session 012: Rous-Whipple Award Lecture

Saturday, April 20
5:00–6:00 PM
Baltimore A

Plasticity of the Mucosal Barrier: Insights into Regulation of Epithelial Homeostasis and Repair



Asma Nusrat, MD
F. Peyton Rous Professor,
Director of Experimental Pathology
University of Michigan

Session 013: 2023 FASEB Excellence in Science Award Lecture

Saturday, April 20
6:00–7:00 PM
Baltimore A

The Microscope as a Tool for Disease Discovery



Elaine Jaffe, MD
NIH Distinguished Investigator
National Cancer Institute, Center for
Cancer Research
National Institutes of Health

Session 020: Outstanding Investigator Award Lecture

Sunday, April 21
1:00–2:00 PM
Baltimore A

Oxygen Sensing Signaling in Cancer: The Past, Present, and Future



Qing Zhang, PhD
Associate Professor
University of Texas Southwestern

Session 027: Gold-Headed Cane Award Lecture

Sunday, April 21
5:00–6:00 PM
Baltimore A

Mast Cells and IgE Can Enhance Survival in Defense Against Venoms and Staphylococcus aureus



Stephen J. Galli, MD
Mary Hewitt Loveless, MD
Professor in the School of Medicine
and Professor of Pathology and of
Microbiology and Immunology
Stanford University School
of Medicine

Session 038: Young Scientist Leadership Award Lecture

Tuesday, April 23
1:00–2:00 PM
Baltimore A

Mitochondrial Dysfunction: The Powerhouse of Retinal Fibrosis



Daisy Y. Shu, PhD
Scientia Senior Lecturer
University of New South Wales

2024 Planning Committee

Kari Nejak-Bowen, PhD, Chair
University of Pittsburgh

D. Hunter Best, PhD
University of Utah

Triet Bui, PhD
Northwestern University

Piyali Dasgupta, PhD
Marshall University

Wen-Xing Ding, PhD
University of Kansas

Andrew Duncan, PhD
University of Pittsburgh

Bethany Hannafon, PhD
University of Oklahoma Health Sciences Ctr.

Andrei Ivanov, PhD
Cleveland Clinic Foundation

Dennis Jones, PhD
Boston University

Bilon Khambu, PhD
Tulane University

Christi Kolarcik, PhD
University of Pittsburgh

Wendy Mars, PhD
University of Pittsburgh

Jayshree Mishra, PhD
Texas A&M University

Maryknoll Palisoc Linscott, MS
Penn State College of Medicine

Ramon Bossardi Ramos, PhD
Albany Medical College

Douglas Stairs, PhD
Penn State College of Medicine

James R. Stone, MD, PhD
Massachusetts General Hospital

Ronen Sumagin, PhD
Northwestern University

Michael Thompson, MD, PhD
Washington University School of Medicine

Elizabeth Whitley, DVM, PhD
Pathogenesis, LLC

Menglu Yang, MD, PhD
Schepens Eye Research Institute of
Massachusetts Eye and Ear

Xiao-Ming Yin, MD, PhD
Tulane University School of Medicine

ASIP 2024 Awardees

Gold-Headed Cane Award

Stephen J. Galli, MD
Stanford University School of Medicine

Rous-Whipple Award

Asma Nusrat, MD
University of Michigan

Outstanding Investigator Award

Qing Zhang, PhD
University of Texas Southwestern

Cotran Early Career Investigator Award

Melinda A. Engevik, PhD
Medical University of South Carolina

Women in Pathology Early Career Award for Advancement of Women in Experimental Pathology

Cecelia C. Yates, PhD
University of Pittsburgh School of Medicine

Women in Pathology Award for Advancement of Women in Experimental Pathology Award

Michael A. Gimbrone, Jr., MD
Harvard Medical School/Brigham and Women's Hospital

Young Scientist Leadership Award

Daisy Y. Shu, PhD
University of New South Wales

Robbins Distinguished Educator Award

Jonathon W. Homeister, MD, PhD
University of North Carolina School of Medicine

GALL Trainee Scholar Award for Excellence in Cardiovascular Research

Shea Ricketts, BA
University of North Carolina at Chapel Hill

Ibrahim Adeola Ahmed, MS
University of Pittsburgh

Gotlieb Undergraduate Student in Pathobiology Scholar Award

George Morcos
University of Pittsburgh

Monga Family Trainee Scholar Award for Excellence in Cardiovascular Research

Jordann Lewis, BA
University of Pittsburgh

Monga Family Trainee Scholar Award for Excellence in Liver Pathobiology Research

Oluwashanu Balogun, MSc
University of Pittsburgh

Monga Family Trainee Scholar Award for Excellence in Neoplasia Research

Cole Hladik, MSc
University of Oklahoma Health Sciences Center

Weijie Ma, PhD
Dartmouth Health

Marion and Lawrence (Larry) Muller Memorial Fund - ASIP Trainee Scholar Award for Excellence in Inflammation Research

Maria Zambrano
Tufts University

Joud Mulla, MS
University of Pittsburgh

Marion and Lawrence (Larry) Muller Memorial Fund - ASIP Trainee Scholar Award for Excellence in Neurodegenerative Disease Research

Anika Ayyalaraju, BS
The Ohio State University

Taiwo Ademola Ademoye, MS
Purdue University

**Histochemical Society Sponsored Trainee
Travel Award**

Kristen Engevik, PhD
Baylor College of Medicine

Meredith Mayer, BS
Tulane University

Rachel Stubler, BS
Medical University of South Carolina

Annika Kamath, BS
Boston Children's Hospital

Shehnaz Bano, PhD
University of Pittsburgh

**Fred Sanfilippo-ASIP Visiting Lectureship
Award Recipients**

Pilar de la Puente, PhD
University of South Dakota/Sanford Research

Traci Parry, PhD
University of North Carolina at Greensboro

Michael Thompson, MD, PhD
Washington University School of Medicine in St.
Louis

Sharifa Love-Rutledge, PhD
University of Alabama at Huntsville

**George K. Michalopoulos Junior Faculty
Scholar Award**

Nayden G. Naydenov, PhD
Cleveland Clinic

Ramon Bossardi Ramos, PhD
Albany Medical College

Monga Family Junior Faculty Scholar Award

Ian Cartwright, PhD
University of Colorado Anschutz Medical
Campus

Amy C. Engevik, PhD
Medical University of South Carolina

**Dani and Erik Zander Junior Faculty
Scholar Award**

Daisy Y. Shu, PhD
University of New South Wales

**ASIP Experimental Pathologist-in-Training
Award (EPIT)**

Vik Meadows, PhD
Rutgers University

**ASIP Experimental Pathologist-in-Training
Merit Award (EPIT)**

Michele Alves, PhD
The Ohio State University

**ASIP Experimental Pathologist-in-Graduate
Training Award (EPIGT)**

Maryknoll Linscott, MS
Penn State College of Medicine

**ASIP Experimental Pathologist-in-Graduate
Training Merit Award (EPIGT)**

Abraham (Abe) Bayer, BS
Tufts University

A.D. Sobel Trainee Scholar Award

Sarah Dooley, BS
Medical University of South Carolina

Janiece Glover, MS, BS
Medical University of South Carolina

Brandon Lehrich, BS
University of Pittsburgh

Kristen Lozada Soto, BS
University of Michigan

Louisa Tichy, BS, MS
University of North Carolina at Greensboro

Saranyaraajan Varadarajan, PhD
University of Michigan

**ASIP Summer Research Opportunity Program
in Pathology (SROPP) Scholar Award**

Nicholas Wang

Schepens Eye Research Institute of Mass. Eye
and Ear

Joy Winfield

Columbia University

ASIP Trainee Scholar Award

Taylor Ticer, BS

Medical University of South Carolina

Manisha Dagar, PhD

Cedars Sinai Medical Center

Zoe Libramento, BS

University of North Carolina at Greensboro



**Unlock the power of
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scale.**



Download **whitepaper**



General Information

Welcome to Pathobiology 2024! All sessions will be held on the fifth floor of The Renaissance Baltimore Harborplace Hotel. Below you will find information that will be helpful while on-site during the meeting. If you have any questions, make your way to the registration desk (Maryland Foyer) or the ASIP “DEN” (Maryland B).

Registration Hours

The meeting registration desk is located in the Maryland Foyer on the fifth floor of The Renaissance Baltimore Harborplace Hotel. Name badges can be picked up at the registration desk. The desk will be staffed during the following hours:

- Saturday, April 20 8:00 AM–5:00 PM
- Sunday, April 21 8:00 AM–5:00 PM
- Monday, April 22 8:00 AM–5:00 PM
- Tuesday, April 23 8:00 AM–12:00 PM

Registration

Registration fees include the main conference scientific sessions, access to the meeting app, online poster sessions, and the meals included below. Registration fees exclude hotel costs. On-site registration will be accepted through the website only.

Catering

Included in registration fees are the following catered events:

- Saturday, Sunday, Monday, and Tuesday breakfast
- Saturday, Sunday, Monday, and Tuesday boxed lunches
- Saturday, Sunday, and Monday evening receptions

Internet Access

Internet access is provided in the guest rooms for those staying onsite at The Renaissance Baltimore Harborplace Hotel within the meeting block. Complimentary access is also provided by the ASIP in the meeting spaces.

Network: Renaissance_CONF

Password: ASIP

Business Meetings

All ASIP members are encouraged and invited to attend the Society Business Meeting on Monday, April 22 from 5:15–6:30 PM in Baltimore A. The advice and guidance of the membership on current society issues is welcome in these “open forum” meetings. If you are not currently a member, applications are available in the ASIP DEN (Maryland B). Non-members are welcome at business meetings to learn more about the ASIP community.

Poster Sessions

All posters are available for preview on the Joint Meeting app for registered meeting participants. In-person poster boards will be set-up in the Baltimore Foyer on the fifth floor, outside of the session rooms. All posters will be on display throughout the entire meeting. In-person poster presentations will take place in two separate sessions.

Odd number board numbers will formally present on Monday, April 22 from 12:00–2:00 PM, while even numbers boards will formally present on Tuesday, April 23 from 12:00–2:00 PM.

- Poster Session I: Monday, April 22 12:00–2:00 PM
- Poster Session II: Tuesday, April 23 12:00–2:00 PM

The organizers are not responsible for any materials posted. Push pins will be provided. Set-up and breakdown for poster boards is as follows:

Poster Set-up

Set-up posters starting Saturday, April 20 at 8:00 AM

Poster Break-down

Remove posters by Tuesday, April 23 at 2:00 PM

Society-Wide President's Reception and Networking Event

Monday, April 21 from 7:00–10:00 PM

Offsite (Spirit of Baltimore Dinner Cruise)

- 6:30 PM Walk Over to Boat Dock from Renaissance Hotel
- 7:00 PM Check-In & Boarding Begins
- 7:25 PM Safety Announcement
- 7:30 PM Cruise Begins
- 7:45 PM Buffet Opens
- 10:00 PM Boat Returns to Dock, Guests Disembark

Exhibits

Please take time to visit the exhibit displays in the Baltimore Foyer area during the breaks and poster sessions. See the exhibitor listing for detailed information regarding our sponsoring companies.

Exhibits Schedule:

Saturday, April 20	8:00 AM–5:00 PM
Sunday, April 21	8:00 AM–5:00 PM
Monday, April 22	8:00 AM–5:00 PM
Tuesday, April 23	8:00 AM–12:00 PM

Accompanying Persons

Guests are welcome to enjoy the city during the conference hours. There are many sites and attractions within walking distance. For the most complete information about the local area and things to do while in Baltimore, check out the Visit Baltimore website or contact the hotel concierge at (410) 547-1200.

Special Needs

Registrants with special needs are invited to contact the Registration Desk or hotel concierge for assistance.

Liability

Neither the host venue nor the organizers can be held responsible for any personal injury, loss, damage to private property or additional expense incurred as a result of delays or changes in air, rail, sea, road or other services. All participants are encouraged to make their own arrangements for health and travel insurance.

Photography and Recording Policy

Pathobiology 2024 is committed to honoring the rights of copyright owners and to respectful sharing of scientific research and data. Attendees are expected to adhere to this policy. Icons will be sent to you in a separate email message for you to place on your poster to indicate if you agree or not to have your abstract presentation photographed or recorded

Health and Safety Guidelines

Travel and the gathering of people in a public place incurs the risk of communicable diseases, including COVID-19. All meeting attendees should take personal responsibility to keep yourselves, other attendees, exhibitors, vendors, and staff safe, prior to and during Pathobiology 2024.

Mask wearing is optional throughout the meeting but strongly recommended (face masks will be made available onsite upon request at the registration desk.) You are encouraged to practice health and safety habits that make you most comfortable.

Regardless of vaccination status, if you have symptoms of COVID-19, have tested positive, or are sick prior to traveling to the meeting, please do not attend the meeting. Email Lisa McFadden (Lmcfadden@asip.org) to discuss your participation as a presenter/chair/poster presenter so that other arrangements can be made. Refund requests will be reviewed on a case-by-case basis.

In the event the local and state COVID-19 guidelines change, this information will be communicated to all attendees via the meeting app Whova. The Pathobiology 2024 Planning Committee has the right to add health and safety requirements as deemed necessary.

Thank you in advance for your understanding and cooperation!

Research Grant Proposal Deadline: February 1st



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**Call for research grant applications for
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The American Journal of Pathology

Official journal of the American Society for Investigative Pathology

The American Journal of Pathology, official journal of the American Society for Investigative Pathology, published by Elsevier, Inc., publishes high-quality original research reports, reviews, and commentaries related to the molecular and cellular basis of disease.

The Editor welcomes basic, translational, and clinical investigations that directly address mechanisms of pathogenesis or provide a foundation for future mechanistic inquiries. Examples of such foundational investigations include data mining, identification of biomarkers, molecular pathology, and discovery research. Foundational studies that incorporate deep learning and artificial intelligence are also welcome. High priority is given to studies of human disease and relevant experimental models using molecular, cellular, and organismal approaches.

A subscription to *The American Journal of Pathology* is included with membership to the ASIP, and publication fees are discounted for Regular Members.

ajp.amjpathol.org



ASIP
American Society for Investigative Pathology



2022 Journal
Impact Factor*

6.0

*Journal Citation Reports®
(Clarivate Analytics, 2023)

2022
CiteScore®
10.5
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Editor-in-Chief:
Martha Furie, PhD

Exhibitors & Sponsors

Thank you to our exhibitors and sponsors for making this meeting possible!

American Journal of Pathology

ajp.amjpathol.org

Booth 1



Federation of American Societies for Experimental Biology (FASEB)

faseb.org

Booth 6



American Society for Investigative Pathology (ASIP)

asip.org

Booth 1



The Histochemical Society (HCS)

histochemicalsociety.org

Booth 7



Association for Molecular Pathology (AMP)

amp.org

Booth 2



NIH Stimulating Peripheral Activity to Relieve Conditions (SPARC)

commonfund.nih.gov/sparc

Booth 10



BD Life Sciences

bdbiosciences.com

Booth 9



Optics 11 Life

optics11life.com

Booth 4



Digital Pathology Association (DPA)

digitalpathologyassociation.org

Booth 5



Earlier.org

earlier.org



Process Record Slide Limited (PRS)

ihc-prs.com

Booth 8



Elsevier

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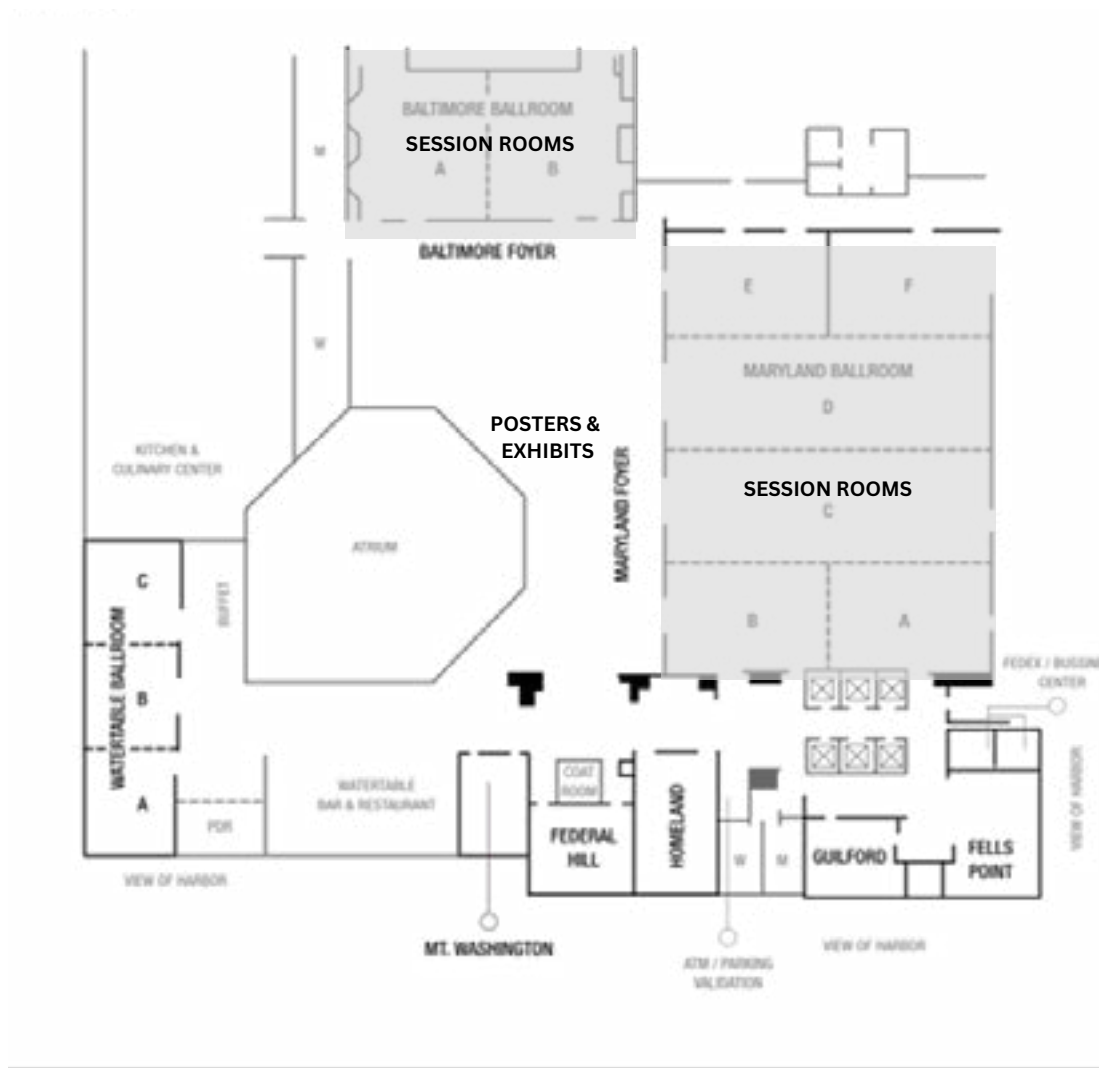
Booth 3



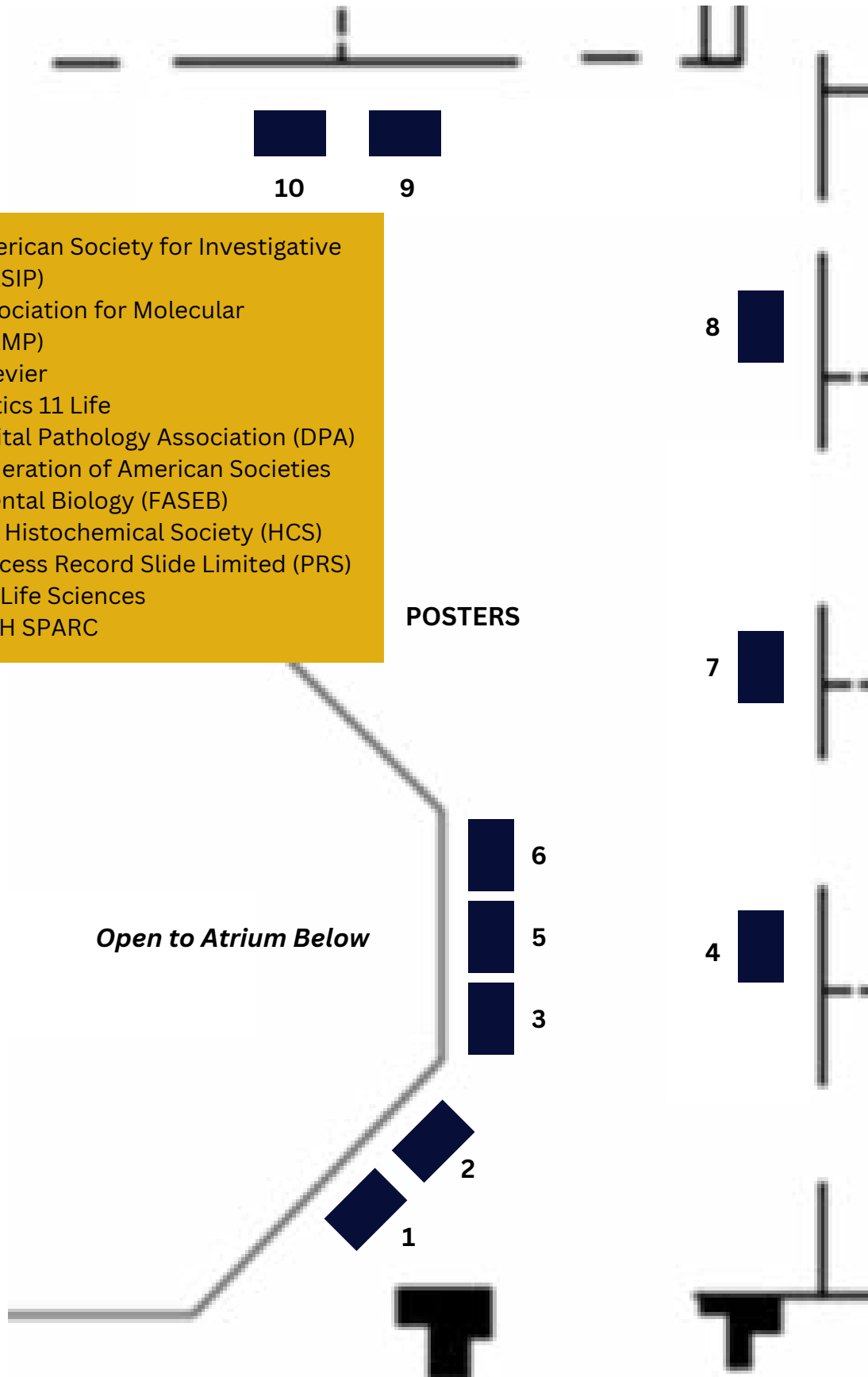
Funding for this conference was made possible (in part) by 1R13AR083265-01 from the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) and all co-funding support provided by National Heart, Lung, and Blood Institute (NHLBI). The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices, or organizations imply endorsement by the U.S. Government. This conference is also supported by a grant from Genentech, a member of the Roche Group.

Pathobiology 2024 Meeting Map

The Renaissance Baltimore Harborplace Hotel Fifth Floor

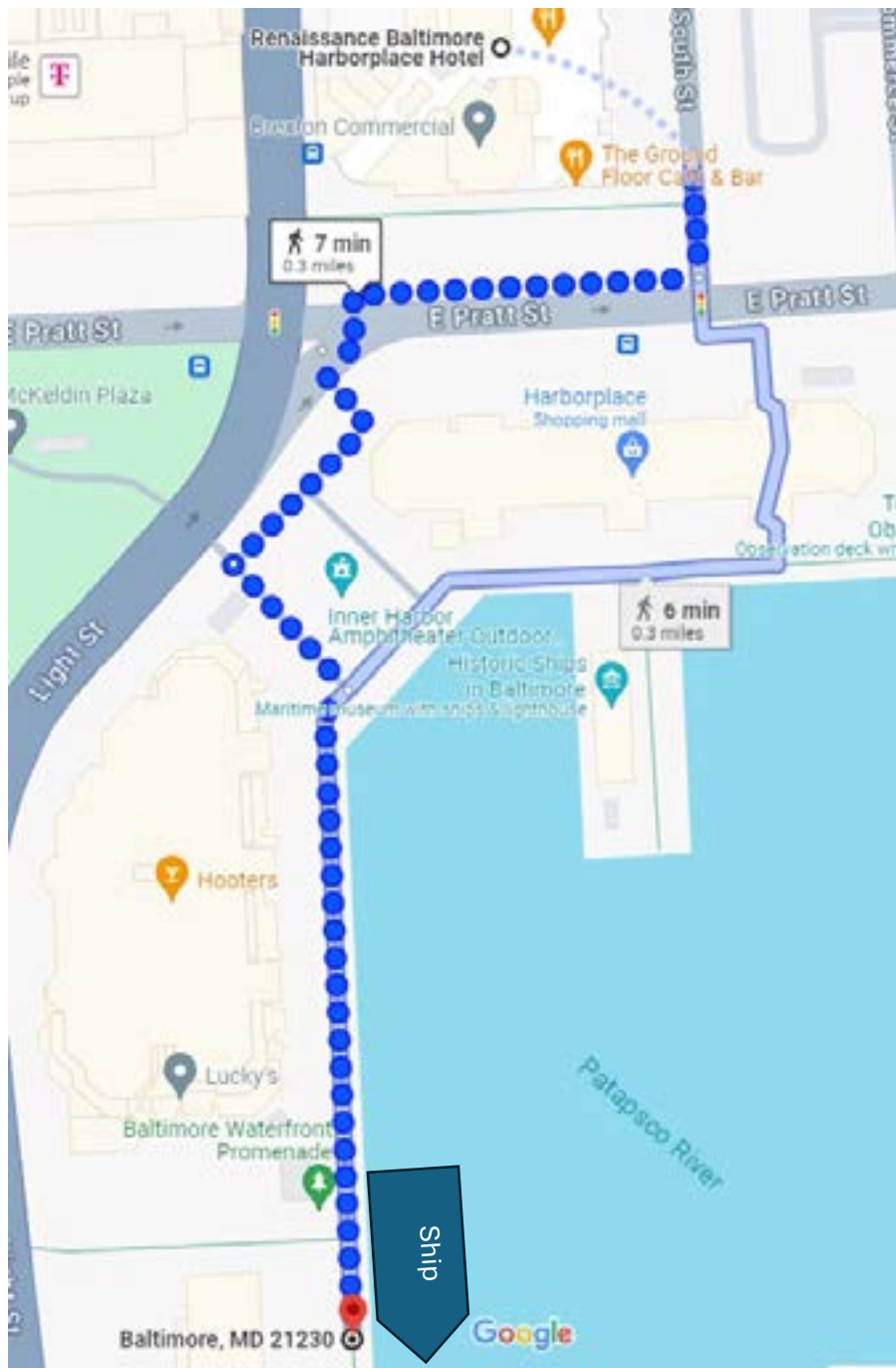


SESSION ROOMS





Walking from Renaissance Baltimore Harborplace Hotel for City Cruises



Scientific Meeting Program

FRIDAY, APRIL 19, 2024

ASIP Council Meeting

7:00 AM-5:00 PM

Homeland, 5th Floor

ASIP Council Dinner (By Invitation Only)

6:00-9:00 PM

The Capital Grille

Baltimore, MD

The ASIP “DEN” (Discover, Engage, Network)

Maryland B

ASIP Wellness and Meditation Room

Maryland A

SATURDAY, APRIL 20, 2024

Session 001: Symposium – Cancer and Obesity – Biological Insights and Potential Interventions

8:30-11:30 AM

Session Room: Baltimore A

Co-Chair: Bethany N. Hannafon, PhD ▪ University of Oklahoma College of Medicine

Co-Chair: Maryknoll P. Linscott, MS ▪ Penn State College of Medicine

Session Overview: Adults with obesity are at a greater risk for various health conditions, including heart disease, type 2 diabetes, and cancer. The exact environmental factors and biological mechanisms linking obesity, diabetes, and increased cancer risk are not fully understood. The underlying contributors for this increased risk might involve chronic inflammation, altered hormone levels, and changes in cellular signaling pathways which create an environment conducive to cancer development. Given the increasing prevalence of obesity in the U.S. population and its association with cancer risk, there is a pressing need to better understand these connections. Identifying effective interventions to prevent obesity-related cancers is crucial, especially considering the diverse and varied populations affected. The presentations in the session aim to shed light on these issues from various angles. This includes examining the relationship between obesity and cancer through an epidemiologic lens, addressing disparities in cancer risk and outcomes among different racial and ethnic groups, and delving into the underlying biological mechanisms that link excess body fat, diabetes, and cancer.

- **Chair - Welcome and Introductions**
- 8:30-9:15 AM
Intercepting Adiposity-related Metabolic Dysfunction to Break the Obesity-cancer Link
Mary C. Playdon, PhD, MPH ▪ University of Utah
- 9:15-10:00 AM
Diabetes Risk After Breast Cancer Treatment: The Impact of Endocrine Therapy on Adipose Tissue Expansion
Elizabeth Wellberg, PhD ▪ University of Oklahoma College of Medicine
- 10:00-10:45 AM
Ovarian Cancer and Obesity
Ramandeep Rattan, PhD ▪ Wayne State University

- 10:45-11:30 AM
Racial Disparities in Obesity-driven Endometrial Cancer
Victoria L. Bae-Jump, MD, PhD ▪ University of North Carolina School of Medicine

Session 002: Symposium – Neuropathology - Insights into Nervous System Care: Understanding Dysfunction and Maintaining Healthy Networks

8:30-11:30 AM

Session Room: Baltimore B

Co-Sponsored by the ASIP Neuropathology Scientific Interest Group

Co-Chair: Christi L. Kolarcik, PhD ▪ University of Pittsburgh School of Medicine

Co-Chair: Jessica S. Fortin, DVM, PhD ▪ Purdue University College of Veterinary Medicine

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

Session Overview: This session will feature speakers discussing molecular and cellular mechanisms involved in neuropathology. Encompassing advancements in neuropathology research from aging brain, neuronal circuits, cognitive processes and modern surgical framework, we expect to provide a positive interaction between experts in the field with experimental pathology researchers. We hope this session promoted by Neuropathology SIG engages members at all levels interested in advancing their knowledge in neuroscience, neuropathology, and neurological disorders.

- **Chair - Welcome and Introductions**
- 8:30-9:10 AM
The Neuroinflammatory Hypothesis of Alzheimer's: Microglial Dysfunction at the Crossroads
Tracy Fischer, PhD ▪ Tulane National Primate Research Center
- 9:10 AM-9:25 AM
Abstract NEUR001 - Neuroinflammation and Elevated Neuronal Amyloid-Beta Suggest Accelerated Brain Aging in SARS-CoV-2 Infected Rhesus Macaques
Meredith Mayer, BS ▪ Tulane University
- 9:25-10:05 AM
Progress in Alzheimer's Drug Discovery
Jessica S. Fortin, DVM, PhD ▪ University College of Veterinary Medicine
- 10:05-10:20 AM
Abstract NEUR002 - Inhibition of Tau Oligomerization and Seeding with Small Molecules for Neurodegenerative Disease Therapeutics
Taiwo Ademoye, BS, MS ▪ Purdue University
- 10:20-10:55 AM
Abstract NEUR003 - The Interplay Between Inflammation and Metabolism in the Neural Control of Breathing
Michele J. Alves, PhD ▪ The Ohio State University
- 10:55-11:10 AM
Abstract NEUR004 - Neurotensin Modulation in Ultrasonic Vocalizations of Neonatal Sepsis Model
Anika Ayyalaraju ▪ The Ohio State University
- 11:10-11:30 AM
Abstract NEUR005 - Exploring the Effects of Novel Small Drug Treatments on ALS Causing Mutations in Profilin-1
Joshua Cooper ▪ University of Pittsburgh

Session 003: Symposium – Molecular Mechanisms in Ocular Pathobiology

8:30-11:30 AM

Session Room: Maryland E

Co-Sponsored by the ASIP Ocular Pathobiology Scientific Interest Group

Co-Chair: Daisy Y. Shu, PhD ▪ University of New South Wales, Sydney

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

Session Overview: Interestingly, the eye is an organ that is not covered during clinical training in pathology. In spite of this fact, there are a number of ocular pathologies that have proven amenable to mechanistic studies *in vitro* and *in vivo*. By understanding the pathogenic mechanisms driving ocular disease initiation and progression, we can develop more efficacious and targeted therapies to prevent blindness. This session will provide examples of the basic investigations from the front to the back of the eye as we learn about the latest research findings from leading eye researchers in the cornea and retina.

- 8:30-8:40 AM

Chair - Welcome and Introductions

- 8:40-9:10 AM

Regulation of Microglia Activation in Retinal Angiogenesis

Anton Lennikov, MD, PhD ▪ Schepens Eye Research Institute of Mass Eye and Ear, Harvard Medical School

- 9:15-9:45 AM

The Yin and Yang of Muller Cells in Age-related Macular Degeneration

Malia M. Edwards, PhD ▪ Wilmer Eye Institute, John Hopkins School of Medicine

- 9:50-10:20 AM

Nuclear Receptor Expression and Activity Regulates Pathobiology Associated with Age-related Macular Degeneration

Goldis Malek, PhD ▪ Duke University School of Medicine

- 10:20-10:55 AM

Electrifying Solutions: Microcurrent Stimulation for Corneal Disease Management

Menglu Yang, MD, PhD ▪ Schepens Eye Research Institute of Mass Eye and Ear, Harvard Medical School

- 11:00-11:30 AM

Genetic, Anatomical, and Molecular Insights into Microvascular Dysfunction in Age-related Macular Degeneration

Robert Mullins, PhD ▪ University of Iowa Health Care

Session 004: Symposium – Exploring Mechanisms of Host Pathogen Interactions

8:30-11:30 AM

Session Room: Maryland D

Co-Sponsored by the ASIP Infectious Disease Scientific Interest Group

Co-Chair: Melinda A. Engevik, PhD ▪ Medical University of South Carolina

Co-Chair: Janiece S. Glover, MS ▪ Medical University of South Carolina

Session Overview: This session will highlight host pathogen interactions as an important factor in infectious disease. The speakers will discuss mechanisms involved with various infectious diseases, with consideration of both the host and the pathogen, and will describe how cutting-edge technology is applied to studying the host and diverse microorganisms. Through this session, we hope to foster collaboration among researchers from multiple disciplines and create a more comprehensive understanding of the factors influencing host pathogen interactions.

- **Chair - Welcome and Introductions**

- 8:30-9:15 AM

The Tissue Specific Consequences of Plasmodium Falciparum Interaction with Endothelium-Cerebral and Placental Malaria

David J. Sullivan, MD ▪ Johns Hopkins Malaria Research Institute

- 9:15-10:00 AM
Molecular Mechanisms Contributing to Significantly Reduced β -lactam Susceptibility and Increased Fitness of *Streptococcus Pyogene*
Randall J. Olsen, MD, PhD ▪ Houston Methodist, Weill Cornell Medical College
- 10:00-10:45 AM
Host Response Mediates CNS Injury in SARS-CoV-2 Infected Non-Human Primates
Tracy Fischer, PhD ▪ Tulane University
- 10:45-11:30 AM
Immunity and Immune Evasion in *M. tuberculosis* Infection
Clifford V. Harding, MD, PhD ▪ Case Western Reserve University School of Medicine

Session 005: Career Development Session – *I Am an ASIP Member and This is My Science: ASIP Trailblazers*

11:30 AM-1:00 PM

Session Room: Maryland C

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

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

Co-Chair: George Perry, PhD ▪ The University of Texas at San Antonio

Session Overview: As a Society, we cannot escape the identity crisis we have confronted in the past - what is investigative pathology and how do experimental 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, young investigators, 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**
- 11:00-11:05 AM
It's All About the Neutrophil
Ian Cartwright, PhD ▪ University of Colorado Anschutz Medical Campus
- 11:05-11:10 AM
Lymphatics in Cancer Progression: Active Players or Silent Killers?
Sanjukta Chakraborty, PhD ▪ Texas A&M University Health Science Center
- 11:10-11:15 AM
Investigating the Aggregation Inhibition
Jessica Fortin, DVM, PhD ▪ Purdue University
- 11:15-11:20 AM
Figuring Out Why We Have Mast Cells
Stephen Galli, MD ▪ Stanford University School of Medicine
- 11:20-11:25 AM
Ductal Carcinoma In situ: To Progress, or Not to Progress, That is the Question
Bethany Hannafon, PhD ▪ University of Oklahoma Health Sciences Center

- 11:25-11:30 AM
Lesser-Known Routes: Parallels in My Scientific Journey and Study of the Lymphatic System
Dennis Jones, PhD ▪ Boston University
- 11:30-11:35 AM
Research, Advocacy, and ASIP in the Fight Against ALS
Christi Kolarcik, PhD ▪ University of Pittsburgh
- 11:35-11:40 AM
It's a Wonderful Life: Being a Physician-Scientist in Clinical Pathology
Robinna Lorenz, MD, PhD ▪ Genentech – A Member of the Roche Group
- 11:40-11:45 AM
My Path to Associate Professor: Destiny Meets a Long and Winding Road
Kari Nejak-Bowen, PhD ▪ University of Pittsburgh
- 11:45-11:50 AM
The Aging Brain Reveals the Biology in Pathology
George Perry, PhD ▪ The University of Texas at San Antonio

Session 006: ASIP Trainee Highlights Poster Session

12:00 PM-1:00 PM

Session Room: Maryland C

Session Description: This Highlights poster session will feature the 20 posters noted below from EPIGT and EPIGT Merit awardees, EPIT and EPIT Merit awardees and Trainee scholar awardees, and selected submitted abstracts. Diversity within the society (geographic, organ system, approach, etc.) will be featured.

- **ABSTRACT NEUR004 - *Neurotensin Modulation in Ultrasonic Vocalizations of Neonatal Sepsis Model***
Anika Ayyalaraju ▪ The Ohio State University
- **ABSTRACT 005 - *Halting Axonogenesis in Cancer***
Annika Kamath, BS ▪ Boston Children's Hospital
- **ABSTRACT 006 - *Modulation of Sulfatase 2 Influences Invasive Programs in Pre-Invasive Breast Cancer***
Cole Hladik, MS ▪ University of Oklahoma Health Sciences Center
- **ABSTRACT 013 - *Flash Proton Irradiation Reduces Salivary Gland Dysfunction and Restores AQP5 Expression in Mice***
George Morcos ▪ University of Pennsylvania
- **ABSTRACT 014 - *Cardiac Fibroblast-MHCII Contributes to Cardiac Fibrosis, Systolic Dysfunction, and Cardiac Atrophy Through T-Cell-Derived IFN γ in Doxorubicin Cardiomyopathy***
Maria Zambrano, BS ▪ Tufts University
- **ABSTRACT 015 - *Anti-PD-1 Immune Checkpoint Inhibitor Therapy Induces Dilated Cardiomyopathy in Tumor Bearing Mice***
Louisa Tichy, MS ▪ University of North Carolina at Greensboro
- **ABSTRACT 016 - *Skeletal and Cardiac Muscle Dysfunction and Wasting in Male and Female Tumor Bearing Mice***
Zoe Libramento, BS ▪ University of North Carolina at Greensboro
- **ABSTRACT 019 - *Acinetobacter species are Elevated in Inflammatory Bowel Disease and Drive Colitis Animal Models***
Janiece Glover, MS, BS ▪ Medical University of South Carolina

- **ABSTRACT 020 - *Understanding the Influence of Klebsiella Pneumoniae on Clostridioides Difficile Pathogenesis***
Taylor Ticer, BS ▪ Medical University of South Carolina
- **ABSTRACT 031 - *Non-Pungent Region B Capsaicin Analogs display Growth-inhibitory Activity in human Small Cell Lung Cancers***
Kaitlyn Conley ▪ Marshall University
- **ABSTRACT 033 - *Claudin-23 Upregulation in Wound-Associated Intestinal Epithelial Cells Enhances Mucosal Wound Repair in Vivo***
Kristen Lozada-Soto, BS ▪ University of Michigan
- **ABSTRACT 034 - *Myosin Vb Deficiency Disrupts Colonic Architecture and Mucin Composition***
Sarah Dooley, BS ▪ Medical University of South Carolina
- **ABSTRACT 035 - *Genomic DNA Activates the Synthesis of Adenosine Deaminase RNA-Specific Binding Protein (ADAR1) in Myoepithelial Cells of the Lacrimal Gland***
Nicholas Wang ▪ Schepens Eye Research Institute of Mass. Eye and Ear
- **ABSTRACT 043 - *Gp78 Expression Differentially Prognosticates Breast Cancer Survival Based on Race***
Joy Winfield ▪ Columbia University

Session 007: Cotran Early Career Investigator Award Lecture

1:00-2:00 PM

Session Room: Baltimore B

- **Welcome and Introductions**
Pilar Alcaide, PhD ▪ Tufts University School of Medicine
- ***The Role of Commensal Microbes in Intestinal Health and Infection***
Melinda A. Engevik, PhD ▪ Medical University of South Carolina

Session 008: Symposium – *Cell Death and Survival in Inflamed Tissues*

2:00-5:00 PM

Session Room: Maryland E

Co-Sponsored by the ASIP Vascular and Mucosal Pathobiology Scientific Interest Group

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

Co-Chair: Stacy Lloyd, PhD, MPH ▪ Baylor College of Medicine

Session Overview: Tissue inflammation leads to cell death, which could play either tissue-protective or damaging functions. This symposium on cell death and survival will discuss recent exciting developments in this field. Multiple mechanisms of cell death in inflamed tissues will be described and non-canonical molecular pathways that initiate cell death will be discussed. In addition, the symposium will highlight recently discovered protective mechanisms that limit cell death under homeostatic and inflammatory conditions.

- **Chair - Welcome and Introductions**
- 2:00-2:45 PM
Resilience to Immune-mediated Damage in the Gut
Ken Cadwell, PhD ▪ University of Pennsylvania School of Medicine
- 2:45-3:30 PM
Macrophages and Neutrophils Orchestrate Acute Inflammatory Response
Alexander Poltorak, PhD ▪ Tufts University
- 3:30-4:15 PM
Markers and Mechanisms of Ferroptotic Cell Death
Zachary T. Schafer, PhD ▪ University of Notre Dame

- 4:15-5:00 PM
The Missing Leak: Mitochondrial Plasticity in Development and Disease.
Elizabeth A. Jonas, MD ▪ Yale University

Session 009: Symposium – Location, Location, Location: Spatial Transcriptomics in Pathology

2:00-5:00 PM

Session Room: Baltimore B

Co-Sponsored by the ASIP Gene Expression Scientific Interest Group

Co-Chair: Michael Thompson, MD, PhD ▪ Washington University School of Medicine

Co-Chair: Vik Meadows, PhD ▪ Rutgers University

Session Overview: An emerging methodology in the field of pathology is spatial transcriptomics. This approach bridges single cell sequencing with spatial analysis to identify where in the tissue transcripts are being expressed. This session will offer four talks that provide insight into how spatial transcriptomics is being utilized for research into the molecular mechanisms of disease pathogenesis. The session will also highlight how spatial transcriptomics can be utilized for biomarker identification for diagnostic purposes.

- **Chair - Welcome and Introductions**
- 2:00-2:45 PM
Liver Zonation: Spatial Insights and Implications in Hepatocellular Cancer
Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh School of Medicine
- 2:45-3:30 PM
Spatially Resolved Profiling of the Metastatic Osteosarcoma Microenvironment
Troy McEachron, PhD ▪ National Cancer Institute
- 3:30-4:15 PM
Identification of Novel Biomarkers for Locally Invasive Brain Tumors Using Spatial Transcriptomics
George J. Zanazzi, MD, PhD ▪ Dartmouth-Hitchcock Medical Center
- 4:15-5:00 PM
Impact of Neuropathological Lesions in the Human Brain on Local Microenvironment Gene Expression
Keri Martinowich, PhD ▪ Johns Hopkins University School of Medicine

Session 010: Symposium – Insights into Potential Mechanisms of Post-Acute Sequelae of SARS-CoV-2 Infection

2:00-5:00 PM

Session Room: Maryland D

Co-Chair: James R. Stone, MD, PhD ▪ Massachusetts General Hospital, Harvard Medical School

Co-Chair: Faye Victoria C. Casimero, MD ▪ Massachusetts General Hospital, Harvard Medical School

Session Overview: A little over four years after the start of the COVID-19 pandemic, we are currently in a pandemic of Long COVID also known as the Post-Acute Sequelae of SARS-CoV-2 infection (PASC). Millions of Americans are afflicted by this chronic condition suffering from a myriad of symptoms including brain fog, dysautonomia, tachycardia, chest pain, and chronic fatigue. The precise mechanisms underlying this condition remain elusive with potential etiologies including SARS-CoV-2 viral persistence, aberrant immune responses, reactivation of other latent viruses, and disordered coagulation. This session will highlight current insights into PASC based on human studies and animal models.

- **Chair - Welcome and Introductions**
- 2:00-2:45 PM
Impact of Persistent Viral Infections on Human Health: Implications for COVID-19 and PASC
Timothy J. Henrich, MD ▪ University of California at San Francisco

- 2:45-3:30 PM
In Vivo Cellular Alteration Resulting From SARS-CoV-2 Infection
Stephen M. Hewitt, MD, PhD ▪ National Cancer Institute
- 3:30-4:15 PM
Post-Acute Metabolic Sequelae of SARS-CoV-2 Infection in Non-Human Primates
Kristin Sauter, PhD ▪ Oregon Health and Science University
- 4:15-5:00 PM
Using the Hamster Model to Determine the Molecular Drivers of Long COVID
Benjamin tenOever, PhD ▪ New York University

Session 011: Women in Pathology Special Session – Using Questions for Connecting, Collaborating, and Building Confidence

2:00-5:00 PM

Session Room: Maryland C

Co-Chair: Pilar Alcaide, PhD ▪ Tufts University

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

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

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

Session Overview: In this session, we'll discuss questions as a brain-focusing tool and we'll bring in some neuroscience by connecting certain types of questions to effective prefrontal cortex thinking. We'll also discuss coaching and the different types of questions we can ask ourselves and others for clarity, confidence, and problem-solving. There will be two big interactive components: (i) structured peer coaching to build confidence, and (ii) Question Storming. Each table will have a Question Storming session by choosing one of 4 potential topics. Participants will leave this session with an action plan to put their insights and favorite questions to use with specific people and groups.

Session Facilitator: Deb Elbaum, MD ▪ Deb Elbaum Coaching, LLC

Session 012: Rous-Whipple Award Lecture

5:00-6:00 PM

Session Room: Baltimore A

- **Welcome and Introductions**
Sean Colgan, PhD ▪ University of Colorado
- ***Plasticity of the Mucosal Barrier: Insights into Regulation of Epithelial Homeostasis and Repair***
Asma Nusrat, MD ▪ University of Michigan

Session 013: FASEB Excellence in Science Award Lecture

6:00-7:00 PM

Session Room: Baltimore A

- **Welcome and Introductions**
Robinna Lorenz, MD, PhD ▪ Genentech – A Member of the Roche Group
- ***The Microscope as a Tool for Disease Discovery***
Elaine Jaffe, MD, NIH Distinguished Investigator, Laboratory of Pathology ▪ National Cancer Institute, Center for Cancer Research, National Institutes of Health, Bethesda, MD

Women in Pathology Networking Event

7:00-9:00 PM

Session Room: Maryland

Session 014: Symposium – Remodeling of Epithelial and Endothelial Barriers in Disease States

8:30-11:30 AM

Session Room: Baltimore A

Co-Sponsored by the ASIP Vascular and Mucosal Pathobiology Scientific Interest Group

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

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

Session Overview: Epithelial and vascular barriers play key roles in the regulation of body defense and tissue homeostasis. Disruption of these tissue barriers is a hallmark of various inflammatory disorders. This symposium will bring together world-leading experts studying epithelial and endothelial barrier dysfunctions in different organs. Novel cellular cross-talks and signaling mechanisms mediating barrier disruption will be discussed. Pathophysiological consequences of leaky epithelial and vascular barriers in various gastrointestinal and pulmonary diseases will be highlighted.

- **Chair - Welcome and Introductions**
- 8:30-9:15 AM
DAMPening the Pulmonary Endothelial Barrier in Inflammation
Pratap Karki, PhD ▪ University of Maryland School of Medicine
- 9:15-10:00 AM
Impact of Lung Disease on Pulmonary Barrier Function
Michael Koval, PhD ▪ Emory University School of Medicine
- 10:00-10:45 AM
Epithelial Remodeling in the Setting of Allergic Inflammation
Amanda B. Muir, MD ▪ Children's Hospital of Philadelphia
- 10:45-11:30 AM
Phosphatase Regulation of Epithelial Barrier Function in Inflammatory Bowel Disease
Declan F. McCole, PhD ▪ University of California, Riverside

Session 015: Workshop – Breast Cancer Workshop – Cutting Edge Technologies for the Future of Breast Cancer Prevention, Detection, and Screening

8:30-11:30 AM

Session Room: Baltimore B

Co-Sponsored by the ASIP Breast Cancer Scientific Interest Group

Co-Chair: Bethany N. Hannafon, PhD ▪ University of Oklahoma College of Medicine

Co-Chair: Dennis Jones, PhD ▪ Boston University

Co-Chair: Maryknoll P. Linscott, MS ▪ Penn State College of Medicine

Session Overview: Breast cancer stands as the most prevalent cancer and a leading cause of cancer-related deaths among women in the U.S., impacting approximately 1 in 8 women during their lifetime. Despite improved survival rates attributed to enhanced screening and innovative therapies, breast cancer incidence remains on the rise globally. This highlights the imperative of developing fresh strategies for breast cancer prevention, detection, and screening. The presentations within this session aim to unveil cutting-edge technologies that are collectively reshaping these areas. These innovations offer the prospect of an improved understanding of cancer risk, earlier disease detection, more accurate diagnoses, and personalized treatment plans, ultimately elevating patient outcomes.

- **Chair - Welcome and Introductions**

- 8:30-9:15 AM
Emerging Biomarker Testing in Breast Cancer: The Pathologist's Roles and Perspectives
Kristen E. Muller, DO ▪ Dartmouth-Hitchcock Medical Center
- 9:15-10:00 AM
Single-Cell Approaches to Uncovering the Intersections of Differentiation, Cancer Risk, and Tumorigenesis in the Breast
Kenneth Gray, PhD ▪ Harvard Medical School
- 10:00-10:45 AM
Postpartum Breast Cancer is a Novel Subtype Identified by Use of Archival FFPE Tissues and Cutting-Edge Omics
Pepper Schedin, PhD ▪ Oregon Health & Science University
- 10:45-11:30 AM
Molecular Markers in Liquid Biopsy of Breast Cancer
Saraswati Sukumar, PhD ▪ Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University

Session 016: Symposium – Endothelial-Cardiomyocyte Interactions in Development and Disease

8:30-11:30 AM

Session Room: Maryland F

Co-Sponsored by the Society for Cardiovascular Pathology

Co-Chair: James R. Stone, MD, PhD ▪ Massachusetts General Hospital, Harvard Medical School

Co-Chair: Shea N. Ricketts, BS ▪ University of North Carolina School of Medicine

Session Overview: There is increasing evidence that cardiac endothelial cells play important roles in the heart in part by communicating with cardiac myocytes. This session will highlight recent advances in our understanding of the roles of both vascular endothelium and lymphatic endothelium within the myocardium.

- **Chair - Welcome and Introductions**
- 8:30-9:30 AM
An Engineered Organotypic Model for the Study of Flow-dependent Endothelial Cell-cardiomyocyte Interactions
Guillermo García-Cardena, PhD ▪ Brigham and Women's Hospital
- 9:30-10:30 AM
Endothelial and T-Cell Regulators of Cardiac Inflammation and Pathophysiology
Pilar Alcaide, PhD ▪ Tufts University
- 10:30-11:30 AM
Dissecting the Functional Roles of Cardiac Lymphatics in Heart Repair
Guillermo Oliver, PhD ▪ Northwestern University

Session 017: Symposium – Decoding Organ Function and Disease via Molecular, Cellular, and Tissue Engineering

8:30-11:30 AM

Session Room: Maryland E

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

Co-Chair: Douglas Stairs, PhD ▪ Penn State College of Medicine

Session Overview: This session brings together experts at the forefront of molecular, cellular, and tissue engineering to explore the transformative potential of these interdisciplinary approaches in unraveling the complexities of organ function and disease. The presentations offer a glimpse into the fascinating world where biology and engineering converge, presenting innovative methodologies and technologies that not only deepen our understanding of biological

systems but also hold the promise of revolutionizing healthcare diagnostics and treatments. By presenting diverse topics, from organoids mimicking natural systems to AI-driven antibiotic discovery and microphysiological models of metastasis, the session showcases the diverse ways in which science and technology synergize to pave the way for a future where precision medicine and regenerative therapies become increasingly achievable realities.

- **Chair - Welcome and Introductions**
- 8:30-9:05 AM
That “Gut” Feeling: Using Organoids to Explore Intestinal Function
Melinda A. Engevik, PhD ▪ Medical University of South Carolina
- 9:05-9:40 AM
Decoding Black Box of Human Development Via an Ex Utero Stem Cell Model of Human Embryo
Mo R. Ebrahimbhani, MD ▪ University of Pittsburgh
- 9:40-10:15 AM
Dissecting Immune Biology Using De Novo Engineered Cytokine Mimetics
Jamie B. Spangler, PhD ▪ Johns Hopkins University
- 10:15-10:50 AM
Artificial Intelligence for Antibiotic Discovery
Cesar de la Fuente, PhD ▪ University of Pennsylvania
- 10:50-11:25 AM
Microphysiological Model of Liver Metastasis
Amanda M. Clark, PhD ▪ University of Pittsburgh

Session 018: Symposium – SIPMeT Guest Society Symposium: Pathophysiology of Human Diseases: Cellular and Molecular Pathways

8:30-11:30 AM

Session Room: Maryland D

Sponsored by the AIP and the Italian Society of Pathology and Translational Medicine

Co-Chair: Massimiliano M. Corsi Romanelli, MD, PhD ▪ University of Milan, IRCCS Istituto Auxologico Italiano

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

Session Overview: With proper knowledge of the body’s normal structure and function, and the ways in which these can become disordered, comes the ability to understand disease and to design rational and effective treatment. In addition, of course, the relationship between pathophysiology and disease is a two-way street. Diseases may be viewed as “experiments of nature” that may uncover previously unknown or unappreciated physiologic mechanisms, and the investigation of these physiologic mechanisms in normal individuals advances our fundamental biomedical knowledge. Therefore, it is important to understand normal structure and function, and how they can become disordered, and apply this knowledge to disease.

- **Chair - Welcome and Introductions**
- 8:30-9:30 AM
Linking the Autophagy/Lysosomal Pathway to Inflammasome Activation in Heart Failure
Antonio P Beltrami, MD, PhD ▪ University of Udine
- 9:30-10:30 AM
The AGE-RAGE System: An Intriguing Pathway in Human Diseases
Elena Dozio, PhD ▪ University of Milan, IRCCS Istituto Auxologico Italiano
- 10:30-10:45 AM
Abstract SIP006 - Bacterial Polyphosphates Reprogram the Innate and Adaptive Host Defense to Infection
Markus Bosmann, MD ▪ Boston University

- 10:45-11:00 AM
Abstract SIP007 - Regulatory Influence of JunB on Endothelial Gene Expression and Chromatin Accessibility During Long-Term Inflammatory Response
Ramon Bossardi Ramos, PhD ▪ Albany Medical College
- 11:00-11:15 AM
Abstract SIP008 - Understanding the Mechanisms and Origins of First Responder Dendritic Cells for Improved Vaccine Responses
Nakisha Rutledge, PhD ▪ University of Chicago
- 11:15-11:30 AM
Abstract SIP009 - SARS-CoV-2 Spike Protein and Pulmonary Arterial Hypertension: Implications for COVID-19 and Vaccines
Yuichiro Suzuki, PhD ▪ Georgetown University

Session 019: Career Development Session – Building a Positive and Productive Research Laboratory Culture

11:30-1:00 PM

Session Room: Maryland C

Co-Chair: Diane R. Bielenberg, PhD ▪ Boston Children's Hospital

Co-Chair: Zheng Ping Hu, MD, PhD ▪ Schepens Eye Research Institute

Session Overview: Laboratory culture is as important to productive research as proper culture media is to healthy cells in vitro. A successful research enterprise is not merely the gathering of individual scientists, but requires an inclusive, collaborative, and nurturing environment. As the principal investigator or lab manager, how do you lead your trainees and develop a lab culture that is both positive and productive? In this session, you'll gain practical insights from experts in the field about the essentials of creating an efficient and fruitful lab environment, mentoring and management skills to ensure a creative and motivated atmosphere, and time management techniques to maintain communication while optimizing productivity. Come discover strategies for fostering a positive, diverse, and thriving laboratory culture for improved research outcomes.

- **Chair - Welcome and Introductions**
- 11:30-11:50 AM
Elevate Your Lab: Inspiring Growth Through Effective Mentorship and Management
Patricia D'Amore, PhD ▪ Schepens Eye Research Institute, Massachusetts Eye and Ear, Harvard Medical School
- 11:50 AM-12:10 PM
Building a Balanced Work Hard, Play Harder Culture in the Lab
Roberto I. Mota Alvidrez, MD ▪ University of New Mexico
- 12:10-12:30 PM
Embracing the Turmoil: Unleashing Time Management Excellence Amidst Chaos and Executive Dysfunction
Onur Kanisicak, PhD ▪ The Ohio State University Wexner Medical Center
- 12:30-1:00 PM
Panel Discussion

Session 020: Outstanding Investigator Award Lecture

1:00-2:00 PM

Session Room: Baltimore A

- **Welcome and Introductions**
Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh School of Medicine

- ***Oxygen Sensing Signaling in Cancer: The Past, Present, and Future***
Qing Zhang, PhD ▪ University of Texas Southwestern

Session 021: Symposium – Metabolism and Cell-Cell Crosstalk in Chronic Liver Disease and Liver Cancer

2:00-5:00 PM

Session Room: Baltimore A

Co-Sponsored by the ASIP Liver Pathobiology Scientific Interest Group

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

Co-Chair: Vik Meadows, PhD ▪ Rutgers University

Session Overview: The focus of this session will be on the basic mechanisms of metabolism, liver cell-cell crosstalk, cell repopulation, and microenvironment changes in chronic liver diseases such as alcoholic hepatitis, NASH, and liver cancer.

- **Chair - Welcome and Introductions**
- 2:00-2:30 PM
Understanding of Tumor Heterogeneity and Tumor Evolution in Liver Cancer
Lichun Ma, PhD ▪ National Cancer Institute, National Institutes of Health
- 2:30-3:00 PM
Mitochondrial Dynamics and Innate Immunity in Alcohol-associated Liver Cancer
Wen-Xing Ding, PhD ▪ University of Kansas Medical Center
- 3:00-3:30 PM
Mechanisms of Fatty Liver Promote a Metastatic Tumor Microenvironment
Ekihiro Seki, PhD ▪ Cedars-Sinai Medical Center
- 3:30-4:00 PM
Cholangiocytes and Hepatocytes Transdifferentiation in Chronic Liver Disease
Kari N. Nejak-Bowen, MBA, PhD ▪ University of Pittsburgh School of Medicine
- 4:00-4:30 PM
Nitrogen Metabolism in Liver Cancer
Wei-Xing Zong, PhD ▪ Rutgers University
- 4:30-5:00 PM
Remodeling of Mitochondrial Metabolism in Fatty Liver Diseases
Nishanth E. Sunny, PhD ▪ University of Maryland

Session 022: Workshop – Blood Vessel Club – Pathobiology of the Largest Vessel: Aortopathies

2:00-5:00 PM

Session Room: Maryland E

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

Co-Chair: Marc K. Halushka, MD, PhD ▪ Johns Hopkins University School of Medicine

Session Overview: Once the heart finishes its systolic contraction each second, a bolus of roughly 70 cc's of semi-viscous fluid is ejected at 120 mm of Hg into a roughly 2 cm diameter elastic tube that needs to buffer the pulsatile forces and adequately distribute the blood to all tissues in the body. When that tube (AKA: the aorta) becomes stiff or – alternatively – dilates, there is aberrant circulation, and even the possibility of catastrophic rupture or thrombosis, pathologies that can impact up to 10% of the population over age 60. While there is an increasingly robust understanding of the cellular and molecular mechanisms underlying some of the aortopathies, this is an area ripe for investigation and intervention.

- **Chair - Welcome and Introductions**

- 2:00-2:45 PM
Genetic Aortopathies: From Marfan to Loeys-Dietz, and Beyond
Elena Gallo MacFarlane, PhD ▪ Johns Hopkins University School of Medicine
- 2:45-3:30 PM
IgG4-Associated Aortitis
James R. Stone, MD, PhD ▪ Massachusetts General Hospital, Harvard Medical School
- 3:30-4:15 PM
More Complicated Than We Thought: Aortic Single Cell Analyses
Yanming Li, PhD ▪ Baylor College of Medicine
- 4:15-5:00 PM
Abdominal Aortic Aneurysms: What's New in Pathogenesis?
Ekaterina Koltsova, MD, PhD ▪ Cedars-Sinai Medical Center

Session 023: Symposium - Microbiome and Disease

2:00-5:00 PM

Session Room: Baltimore B

Co-Chair: Melinda A. Engevik, PhD ▪ Medical University of South Carolina

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

Session Overview: The microbiome is generally thought of in relationship to the health of our intestinal flora. However, over time the role of the microbiome in our general health and well-being has come under increasing scientific scrutiny and this simplistic viewpoint of studying the microbiome in our gut is no longer warranted. This session will highlight aspects of the microbiome in a diversity of conditions ranging from its relationship to the brain to how we can regulate it with simple changes in our diet.

- **Chair - Welcome and Introductions**
- 2:00-2:45 PM
The Microbiome-Gut-Brain Axis in Health and Disease
Dennis W. Simon, MD ▪ University of Pittsburgh School of Medicine
- 2:45-3:30 PM
The Airway Microbiome in Respiratory Infections
Elodie Ghedin, PhD ▪ National Institute of Allergy and Infectious Diseases, National Institutes of Health
- 3:30-4:15 PM
Dietary Interventions to Mitigate the Effects of Antibiotic-induced Dysbiosis
Michael J. Morowitz, MD ▪ University of Pittsburgh
- 4:15-5:00 PM
Gut Microbiota Interplays with Hepatic Autophagy to Regulate Injury
Xiao-Ming Yin, MD, PhD ▪ Tulane University School of Medicine

Session 024: Minisymposium – Cancer Pathobiology Abstract-Driven Presentations

2:00-5:00 PM

Session Room: Maryland F

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

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

- **Chair - Welcome and Introductions**

- 2:00-2:20 PM
Abstract CAN010 - Unraveling the Role of Adiponectin on Hormone-Resistant Breast Cancer Stem Cells
Giuseppina Daniela Naimo, PhD ▪ University of Calabria
- 2:20-2:40 PM
Abstract CAN011 - Phosphorylation of Stard10 Progress Alcohol-Induced Breast Cancer
Manisha Dagar, PhD ▪ Cedars Sinai Medical Center
- 2:40-3:00 PM
Abstract CAN012 - Distinct Cooperating Oncogenes Promote the Progression of Specific Ras-Mutant Premalignant Clones in Multistage Murine Breast Cancer Models
Maryknoll Linscott, MS ▪ Penn State College of Medicine
- 3:00-3:20 PM
Abstract CAN013 - The Tumor-Stroma Bipartite IGF-1/IGF-1R/YAP1 Axis Makes Y537S Mutant Breast Cancer Cells Able to Remodel Tumor Microenvironment Converting Resident Fibroblasts into CAFs
Luca Gelsomino, PhD ▪ University of Calabria
- 3:20-3:40 PM
Abstract CAN014 - A Novel Role of Exosomal MAT2A in the Development of Colorectal Liver Metastases
Monica Justo, MD ▪ Cedars Sinai Medical Center
- 3:40-4:00 PM
Abstract CAN015 - Targeting JAG1 Overcomes Pancreatic Cancer Immunotherapy Resistance by Reinvigorating cDC1 and CD8 T-Cells
Bingqing Zou, MD, PhD ▪ Houston Methodist Hospital Research Institute
- 4:00-4:20 PM
Abstract CAN016 - Cancer Cell Reprogramming by RNAi-mediated Beta-Catenin Inhibition in CTNNB1-Mutated Hepatocellular Carcinoma
Brandon Lehrich, BS ▪ University of Pittsburgh
- 4:20-4:40 PM
Abstract CAN017 - Isolation and Characterization of a Novel Mammary Adenocarcinoma, MCa-P1362, with Hormone Receptor Expression, HER-2 Positivity, and Enrichment in Cancer and Mesenchymal Stem Cells
Samir Jana ▪ Boston University Chobanian & Avedisian School of Medicine

Session 025: Symposium: Development and Application of Spatial 'Omics' and Multiplexing Technologies in the Biopharmaceutical Industry

2:00-5:00 PM

Session Room: Maryland D

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

Co-Chair: Cary Austin, MD, PhD ▪ Genentech – A Member of the Roche Group

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

Session Overview: This session will explore recent scientific and technological advances in spatial ‘omics’ and tissue multiplexing technologies in biotechnology, and pharma industry. Thought leaders across a broad set of industry settings will provide attendees with an in-depth perspective on these novel tissue-based technologies are making an impact in the discovery and development of new drugs to address unmet medical needs and will highlight some of the activities currently underway within pathology departments in biotech and the pharmaceutical industry.

- **Chair - Welcome and Introductions**
- 2:00-2:05 PM
Introductory Remarks

- 2:05-2:40 PM
Employing Novel Spatial Technologies to Enable Drug Discovery
Lisa McGinnis, PhD ▪ Genentech – A Member of the Roche Group
- 2:40-3:15 PM
Bridging Tissue Based Technologies in the Omics Era
Sangeetha Mahadevan, PhD ▪ Gilead Sciences
- 3:15-3:50 PM
Characterizing Immune Aggregate Composition and Architecture in Chronic Inflammatory Disease by Hyperplex Spatial Proteomics
Tyler Risom, PhD ▪ Genentech – A Member of the Roche Group
- 3:50-4:25 PM
Deriving Spatially Predictive Biomarkers in Patients Treated with T-Cell Directed Therapy for Solid Tumors
Travis Hollmann, MD, PhD ▪ Bristol-Myers Squibb
- 4:25 PM – 5:00 PM
Proteomap - An Affordable Cyclic Immunofluorescence Imaging Workflow for Discovery Science
Shoh Asano, PhD ▪ Pfizer

Session 026: ASMB Symposium: Dissecting Disease Disparities from the Bench and the Genome

2:00-5:00 PM

Session Room: Maryland C

Chair: Enid R. Neptune, MD, FCCP, ATSF ▪ Johns Hopkins School of Medicine

Session Overview: Several highly burdensome clinical disorders show both high prevalence and increased disease severity in specific ethnic communities. The underlying basis of these disparities is poorly understood and plausibly represent a conflation of multiple intrinsic and extrinsic determinants. We consider whether these conditions might provide a window to elucidate unexamined biological mechanisms that underlie health disparities. In this Symposium, we focus on six chronic complex disorders that disproportionately afflict communities of color. We feature experts on the manifestations of these disorders, the pathogenetic mechanisms and the possible factors that contribute to the racial partitioning. We further discuss a unifying approach to identify the pathways that drive disparities in fibrotic disorders and how this effort will lead to novel and possibly personalized treatments.

- **Chair - Welcome and Introductions**
- 2:00-2:05 PM
Introductory Remarks
Enid R. Neptune, MD, FCCP, ATSF ▪ Johns Hopkins School of Medicine
- 2:05-2:35 PM
Cancer Control in the 21st Century: Observations on Disparities in Health
Otis W. Brawley, MD ▪ Johns Hopkins Sidney Kimmel Comprehensive Cancer Center
- 2:35-2:55 PM
Genetics of Fibroproliferative Diseases
Jacklyn N. Hellwege, PhD ▪ Vanderbilt University
- 2:55-3:15 PM
Breaking Research Silos to Address Health Disparities
Paula S. Ramos, PhD ▪ Medical University of South Carolina

- 3:15-3:35 pm
Deciphering Genetic Contributions to Racial Disparities in Lung Fibrosis: Pathways to Personalized Treatment
Ayodeji Adegunsoye, MD ▪ University of Chicago
- 3:35-3:55 pm
Keloid Disease: A Potential Model to Study Tumorigenesis in African American Patients
Lamont R. Jones, MD, MBA, FACS ▪ Henry Ford Health
- 3:55-4:25 pm
Investigation of Gut Microbial induction of PD-1/HIF-1alpha Signaling in Interstitial Lung Disease
Wonder P. Drake, MD ▪ University of Maryland
- 4:25-5:00 PM
Panel Discussions

Session 027: Gold-Headed Cane Award Lecture

5:00-6:00 PM

Session Room: Baltimore A

- **Welcome and Introductions**
Robinna G. Lorenz, MD, PhD ▪ Genentech – A Member of the Roche Group
- ***Mast Cells and IgE Can Enhance Survival in Defense Against Venoms and Staphylococcus aureus***
Stephen J. Galli, MD, Mary Hewitt Loveless, MD ▪ Stanford University School of Medicine

Scientific Interest Group Networking Event and Trainee Scholar Awards Presentation

6:00-8:00 PM

Session Room: Maryland C

MONDAY, APRIL 22, 2024

Session 028: Symposium – *Innate Immune Cells in Tissue Injury and Resolution*

8:30-11:30 AM

Session Room: Baltimore A

Co-Chair: Ronen Sumagin, PhD ▪ Northwestern University Feinberg Medical School

Co-Chair: Jennifer Brazil, PhD ▪ University of Michigan

Session Overview: Innate immune cells play important roles in maintaining tissue homeostasis as well as serving both protective and pathological roles in various disease states. This session will discuss various aspects of innate immunity and cross organ representation of their functions in inflammation and tissue injury. This includes expert presentations on Paneth cell, neutrophil, dendritic cell, and macrophage biology in gut, brain, and cardiac injury.

- **Chair - Welcome and Introductions**
- 8:30-9:05 AM
Paneth Cell Mitochondrial Function and Innate Immunity
Arrianne L. Theis, PhD ▪ University of Colorado School of Medicine
- 9:05-9:40 AM
Innate Mechanisms of Cardiac Inflammation
Edward B. Thorp, PhD ▪ Northwestern University Feinberg Medical School

- 9:40-10:15 AM
Neuroinflammation and Stroke: Mechanisms of Neutrophil Recruitment and Infiltration Following Ischemia/Reperfusion
Ayush Batra, MD ▪ Northwestern University Feinberg Medical School
- 10:15-10:50 AM
Remodeling of Non-mucosal Tissue Compartments in IBD: Enteric Nervous System
Milena Bogunovic, MD, PhD ▪ University of Massachusetts
- 10:50-11:25 AM
CD18 Deletion in Neutrophils Protect Male but Not Female Mice from Myocardial Ischemia-Reperfusion Injury
Zhichao Fan, PhD ▪ University of Connecticut

Session 029: Workshop – Liver Workshop: Spatiotemporal Liver Zonation and Consequences in Metabolic Regenerative Disease

8:30-11:30 AM

Session Room: Baltimore B

Co-Sponsored by the ASIP Liver Pathobiology Scientific Interest Group

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

Co-Chair: Bilon Khambu, PhD ▪ Tulane University School of Medicine

Session Overview: Recent technological developments such as spatial transcriptomics and single-cell sequencing, have revealed how heterogeneous liver cellular populations are in physiological and pathological conditions. In order to harness the potential therapeutic targets for liver disease treatment, understanding liver zonation mechanistically and its role in liver disease development is essential. This workshop will focus on recent understandings of liver zonation, its implications for liver degeneration and regeneration, as well as the techniques available to study it.

- **Chair - Welcome and Introductions**
- 8:30-9:10 AM
Signaling Pathways and Regulators of Metabolic Zonation
Satdarshan Paul Singh Monga, MD ▪ University of Pittsburgh School of Medicine
- 9:15-9:55 AM
Role of Autophagy in Liver Zonation
Bilon Khambu PhD ▪ Tulane University School of Medicine
- 10:00-10:40 AM
Micropatterning of Liver Zonation and Disease Modeling
Salman R. Khetani, PhD ▪ University of Illinois Chicago
- 10:45-11:25 AM
Zonation of Hepatic Tumorigenesis
Liya Pi, PhD ▪ Tulane University

Session 030: Formal Course: Pathobiology for Basic Scientists Course – Molecular and Cellular Mechanisms Underlying Neuropathology

8:30-11:30 AM

Session Room: Maryland E

Co-Sponsored by the ASIP Education Committee and the ASIP Neuropathology Scientific Interest Group

Co-Chair: Jessica S. Fortin, DVM, PhD ▪ Purdue University College of Veterinary Medicine

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

Session Overview: This session will feature speakers discussing molecular and cellular mechanisms involved in neuropathology. Encompassing advancements in neuropathology research including the aging brain, neuronal circuits, cognitive processes, and the modern surgical framework, we expect to provide a positive interaction between experts in the field with experimental pathology researchers. We hope this session promoted by the Neuropathology Scientific Interest Group engages members at all levels interested in advancing their knowledge in neuroscience, neuropathology, and neurological disorders.

- **Chair - Welcome and Introductions**

- 8:30-9:15 AM

- ***The Aging Brain Reveals the Biology in Pathology***

- George Perry, PhD ▪ The University of Texas at San Antonio

- 9:15-10:00 AM

- ***The Cognitive Framework for Modern Surgical Neuropathology***

- Jose J. Otero, MD, PhD ▪ The Ohio State University College of Medicine

- 10:00-10:45 AM

- ***Cells, Synapses, and Circuits in Neurodegeneration***

- Christi L. Kolarcik, PhD ▪ University of Pittsburgh School of Medicine

- 10:45-11:30 AM

- ***Examining Vascular Contributions to the Pathobiology of Cognitive Impairment***

- Elaine L. Bearer, MD, PhD ▪ University of New Mexico Health Sciences

12:00-2:00 PM

Poster Viewing Session 1 – Odd Poster Numbers

Session Room: Baltimore Foyer

Poster Categories:

- Cancer Pathobiology
- Cardiac Pathobiology
- Epigenetics
- Infectious Diseases
- Liver Pathobiology
- Lung Pathobiology
- Mucosal Pathobiology
- Obesity and Disease
- Microscopy
- Neuropathology

Session 031: Education Session – Addressing Race-Based Medicine in Pathology Research and Education

12:00-2:00 PM

Session Room: Maryland C

Organized by the ASIP Education Committee

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

- **Chair - Welcome and Introductions**

- 12:00-12:30 PM

- ***Race in Medicine: Data or Distraction***

- Andrea Deyrup, MD ▪ Duke University School of Medicine

- 12:30-1:00 PM
Reporting Race and Ethnicity and Inclusive Language in Biomedical Publication
Annette Flanagan, RN, MA, FAAN ▪ JAMA and JAMA Network

Session 032: President's Symposium – Microbiota Regulation of Pathobiology, Immunity, and Disease

2:00-5:00 PM

Session Room: Baltimore A

Chair: Robinna G. Lorenz, MD, PhD ▪ Genentech – A Member of the Roche Group

Session Overview: The microbiome is now considered to be a key contributor to both human health and disease. This session will detail multiple models that are being utilized to provide a critical understanding of the complex interactions occurring between the microbiome and the host. Unique animal models including Wilding, germ-free, and gnotobiotic mice, as well as human translational studies will be presented. This data will demonstrate how exposure to a diverse microbiota early in life can influence the developing immune system and ultimately impact the development of immune-mediated diseases.

- **Chair - Welcome and Introductions**
- 2:00-2:45 PM
Wild-Type Microbiota in Preclinical Models of Inflammation and Metabolism
Barbara Rehermann, MD ▪ National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health
- 2:45-3:30 PM
Immunotherapy Through Microbiome Modification to Prevent Infections in Critical Illness
Braedon McDonald, MD ▪ University of Calgary
- 3:30-4:15 PM
Immune Crosstalk with the Gut Mucus-associated Microbiota
Craig Maynard, PhD ▪ University of Alabama at Birmingham
- 4:15-5:00 PM
IL-22 Effects on the Gut Microbiome in Mice and Humans
Mary Keir, PhD ▪ Genentech – A Member of the Roche Group

ASIP Business Meeting and Meritorious Awards Presentations

5:15-6:30 PM

Session Room: Baltimore A

Chair: Robinna G. Lorenz, MD, PhD ▪ Genentech – A Member of the Roche Group

Society-Wide President's Reception and Networking Event

7:00-10:00 PM

Spirit of Baltimore Dinner Cruise

- 6:30 PM Walk Over to Boat Dock from Renaissance Hotel
- 7:00 PM Check-In & Boarding Begins
- 7:25 PM Safety Announcement
- 7:30 PM Cruise Begins
- 7:45 PM Buffet Opens
- 10:00 PM Boat Returns to Dock, Guests Disembark

Session 033: Symposium – Inter-Organ Communication in Tissue Homeostasis and Pathology

8:30-11:30 AM

Session Room: Baltimore A

Co-Chair: Jayshree Mishra, PhD ▪ Texas A&M University

Co-Chair: Narendra Kumar, PhD ▪ Texas A&M University

Session Overview: Inter-organ communication (IOC) is one of the main physiological processes required for tissue homeostasis and maintenance of health. Disturbances to IOC have been attributed with important roles in a broad spectrum of disease states. More recent literature on the molecular and sub molecular understanding on inter-organ communication have identified IOC as a gatekeeper for metabolic health, maintenance of pathways involved tissue homeostasis, and protection from diseases. This session will explore the recent scientific advances in our understanding of IOC including attention to ideas as diverse as the microbiota-gut-brain axis, Gut-immune interactions, gut-liver axis and the impact of DNA damage response on tissue cross talk and several signaling mediators of IOC. Presentations from Inter-organ communication through leaders across a broad set of academic settings will provide attendees with an in-depth perspective on how IOC as discipline is making an impact in tissue-based research and the discovery and development of new targets and drugs to address unmet medical needs and will highlight some of the activities currently proceeding within the pathology departments in the academic setting. Moreover, the session will make for a unique experience, an opportunity to gather, network, exchange ideas and expose us to challenging research on how the fine balance in the talk between the organs keep us healthy and how the loss in translation of these talks could result diseases state requiring precise interventions.

- **Chair - Welcome and Introductions**
- 8:30-9:15 AM
Gut-Brain Communication in Homeostasis and Pathology of Alzheimer's Disease
Narendra Kumar, PhD ▪ Texas A&M University
- 9:15-10:00 AM
Human Multiorgan Micro Physiological Systems Provide Novel Insight into Interorgan Communication in Health and Disease
Martin Trapecar, PhD ▪ John Hopkins School of Medicine
- 10:00-10:45 AM
The Role of STING in the Liver/Gut Axis During Liver Injury
Shannon S. Glaser, PhD ▪ Texas A&M University School of Medicine
- 10:45-11:30 AM
Homeostasis Involving DNA Damage Response and Cell Interactions During Liver Regeneration
Sanjeev Gupta, MD ▪ Albert Einstein College of Medicine

Session 034: Symposium – Artificial Intelligence Tools in Biomedical Research

8:30-11:30 AM

Session Room: Baltimore B

Co-Chair: Maryknoll P. Linscott, MS ▪ Penn State College of Medicine

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

Session Overview: This session will focus on the use of various artificial intelligence tools used in biomedical research, especially in the advancement of cancer research.

- **Chair - Welcome and Introductions**

- 8:30-9:05 AM
The Impact of Digital Pathology and AI Tools in Cancer Research
Yukako Yagi, PhD ▪ Memorial Sloan Kettering Cancer Center
- 9:05-9:40 AM
Unsupervised Patient Stratification Based on Omics Data
Olga Zolotareva, PhD ▪ University of Hamburg
- 9:40-10:15 AM
Multi-Modal Foundation Models and Pan-Cancer Atlases: Generative Artificial Intelligence and Information Retrieval for Achieving Diagnostic and Prognostic Consensus
Hamid R. Tizhoosh, PhD ▪ Mayo Clinic
- 10:15-10:50 AM
Artificial Intelligence in Health Research
Joon Lee, PhD ▪ University of Calgary
- 10:50-11:25 AM
Novel Slide-free Optical Methods, Novel Mathematics for Analysis of Tumor Histology and Structural Microenvironment
Richard M. Levenson, MD ▪ University of California, Davis

Session 035: Minisymposium – Liver Pathobiology Abstract-Driven Presentations

8:30-11:30 AM

Session Room: Maryland E

Co-Chair: Vik Meadows, PhD ▪ Rutgers University

Co-Chair: Oluwashanu Balogun, MSc ▪ University of Pittsburgh

- **Chair - Welcome and Introductions**
- 8:30-8:55 AM
Abstract LIV018 - Phosphorylation of Ubiquitin Conjugating Enzyme 9 Regulates De- Novo Lipogenesis in Alcohol-Associated Liver Disease
Swati Chandla, PhD ▪ Cedars-Sinai Medical Center
- 8:55-9:20 AM
Abstract LIV019 - Hepatic Stellate Cells Participate in a Wnt Signaling Network to Regulate Hepatocyte Function via Liver Zonation
Tyler Yasaka, BS ▪ University of Pittsburgh
- 9:20-9:45 AM
Abstract LIV020 - Hepatocyte-Specific Deletion of EGFR Does Not Affect Steatosis but Enhances Fibrosis in a Fast-Food Diet Model of MASLD
Shehnaz Bano, PhD ▪ University of Pittsburgh
- 9:45-10:10 AM
Abstract LIV021 - Inhibition of Wnt/Beta-Catenin Signaling as a Novel Therapeutic Strategy for Acute Hepatic Porphyria(s)
Oluwashanu Balogun, MSc ▪ University of Pittsburgh
- 10:10-10:35 AM
Abstract LIV022 - Ruminococcus Gnavus Colonization Induces Transient Hepatic Steatosis and Inflammation in Gnotobiotic-Mice
Vik Meadows, PhD ▪ Rutgers University

- 10:35-11:00 AM
Abstract LIV023 - *β-catenin Driven Suppression of POU2F1-CXCL13 Axis Restricts Lymphoid Aggregation Impacting Response to Immunotherapy in CTNNB1-Mutated Hepatocellular Cancers*
Brandon Lehigh, BS ▪ University of Pittsburgh
- 11:00-11:25 AM
Abstract LIV024 - *The Impact of Biological Sex on Coagulopathy and Inflammatory Responses Post-Trauma*
Joud Mulla, BS, MS ▪ University of Pittsburgh

Session 036: Minisymposium – Mucosal Pathobiology Abstract-Driven Presentations

8:30-11:30 AM

Session Room: Maryland D

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

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

- **Chair - Welcome and Introductions**
- 8:30-8:50 AM
Abstract MUC025 - *The Role of Epithelial LTB4/BLT1 Signaling in Resolution of Colonic Mucosal Wounds*
Saranyaraajan Varadarajan, PhD ▪ University of Michigan
- 8:50-9:10 AM
Abstract MUC026 - *Identification of Protocadherins as a Novel Tuft Cell Marker*
Rachel Stubler, BS ▪ University of South Carolina
- 9:10-9:30 AM
Abstract MUC027 - *Novel Insights Into Neutrophil-Derived Mediators of Inflammatory Resolution*
Ian Cartwright, PhD ▪ University of Colorado Anschutz Medical Campus
- 9:30-9:50 AM
Abstract MUC028 - *Purinergic Receptors are Downregulated in Patients with Inflammatory Bowel Disease*
Kristen Engevik, PhD ▪ Baylor College of Medicine
- 9:50-10:10 AM
Abstract MUC029 - *Characteristics of Placebo - Gut Microbiota Interactions in Female Patients with Familial Mediterranean Fever Disease*
Elya Pepoyan, PhD ▪ Armenian National Agrarian University
- 10:10-10:30 AM
Abstract MUC030 - *Maternal Obesogenic Diet Alters Microbiome, Bile Acid Homeostasis, and Weaning Reaction in Young Mouse Offspring*
Michael Thompson, MD, PhD ▪ Washington University School of Medicine
- 10:30-10:50 AM
Abstract MUC031 - *Non-Muscle Myosin IIA Regulates Intestinal Epithelial Cell Interactions with Attaching-Effacing Bacteria*
Nayden Naydenov, PhD ▪ Cleveland Clinic
- 10:50-11:10 AM
Abstract MUC032 - *Dsg2 Truncation in Inflammatory Bowel Disease Causes Lethal Intestinal Barrier Breakdown in Mice*
Daniela Kugelmann, MD ▪ Ludwig Maximilian University of Munich

Session 037: Education Session – Practical Applications in Artificial Intelligence

11:30 AM-1:00 PM

Session Room: Maryland C

Organized by the ASIP Education Committee

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

Co-Chair: Dan A. Milner Jr., MD, MSc, MBA ▪ Libragem Consulting, LLC

Session Overview: In this session, we delve into the cutting-edge realm of artificial intelligence, with a specific focus on ChatGPT, and its transformative influence on the practice of pathology. This educational session aims to unravel the intricacies of AI and its profound implications for pathologists in both research and clinical settings. The session will commence with an overview of ChatGPT, an advanced language model developed by OpenAI, and its capabilities in understanding and generating human-like text. Attendees will gain insights into the underlying technologies, learning mechanisms, and the potential applications of ChatGPT in pathology. Our expert speakers, comprising leading researchers and practitioners in the field of AI and pathology, will shed light on how ChatGPT can enhance research methodologies. From automating data analysis to accelerating literature reviews, discover how AI can revolutionize the pace and efficiency of research endeavors in pathology.

In the clinical practice segment, attendees will explore real-world applications of ChatGPT in pathology diagnostics. The session will showcase how AI-driven tools can assist pathologists in image analysis, aiding in the identification of subtle patterns and anomalies that may be challenging for the human eye. Whether you are a seasoned pathologist looking to stay at the forefront of technological advancements or a researcher eager to explore new tools, this educational session promises to be a captivating exploration of the intersection between ChatGPT, artificial intelligence, and the future of pathology.

- **Chair - Welcome and Introductions**
- 11:30-11:45 AM
ChatGPT – Valuable Tool or Dangerous Application of Artificial Intelligence?
Dan A. Milner Jr., MD, MSc, MBA ▪ Libragem Consulting, LLC
- 11:45 AM-12:00 PM
Applications of Modern Machine Learning and Artificial Intelligence In Various Aspects of Pathology
Alexander Baras, MD, PhD ▪ Johns Hopkins Sidney Kimmel Comprehensive Cancer Center
- 12:00-12:15 PM
AI-Based Integration of 3D Anatomy, Molecular, and Genomic Profiling for Better Understanding Pancreatic Cancer Initiation
Ashley Kiemen, PhD ▪ Johns Hopkins University School of Medicine
- 12:15-12:30 PM
Generative AI for Computational Pathology
Pratik Shah, PhD ▪ University of California, Irvine
- Q&A Session

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Deadline is June 1.



12:00-2:00 PM

Poster Viewing Session 2 - Even Poster Numbers

Session Room: Baltimore Foyer

Poster Categories:

- Cancer Pathobiology
- Cardiac Pathobiology
- Epigenetics
- Infectious Diseases
- Liver Pathobiology
- Lung Pathobiology
- Mucosal Pathobiology
- Obesity and Disease
- Microscopy
- Neuropathology
- Vascular Biology

Session 038: Young Scientist Leadership Award Lecture

1:00-2:00 PM

Session Room: Baltimore A

- **Welcome and Introductions**
Patricia D'Amore, PhD ▪ Schepens Eye Research Institute of Mass. Eye & Ear, Harvard Medical School
- ***Mitochondrial Dysfunction: The Powerhouse of Retinal Fibrosis***
Daisy Y. Shu, PhD ▪ University of New South Wales, Sydney

Session 039: Symposium – The Impact of Artificial Intelligence-based Tools on Research Integrity and Scholarly Publishing: A Boon or a Peril

2:00-5:00 PM

Session Room: Baltimore A

Co-Chair: Maryknoll P. Linscott, MS ▪ Penn State College of Medicine

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

Session Overview: This session will explore the impact of AI-based tools on research integrity and scholarly publishing, listing the challenges as well as recommendations to tackle these challenges and highlighting the emerging opportunities.

- **Chair - Welcome and Introductions**
- 2:00-2:45 PM
Ethical Issues in Using Artificial Intelligence in Writing Scientific Papers
David B. Resnik, JD, PhD ▪ National Institute of Environmental Health Sciences, National Institutes of Health
- 2:45-3:30 PM
Artificial Intelligence and the Ethics of Scholarly Publishing: Balancing Innovation and Integrity
Chirag Jay Patel ▪ Cactus Communications
- 3:30-4:15 PM
Research Integrity Indicators in the Age of Artificial Intelligence
Leslie D. McIntosh, PhD ▪ Digital Science

- 4:15-5:00 PM
Artificial Intelligence-Driven Transformation of Research Communications
Julia K. Kostova, PhD ▪ Frontiers Media Limited

Session 040: Minisymposium – Cardiovascular Pathobiology Abstract-Driven Presentations

2:00-5:00 PM

Session Room: Maryland E

Co-Chair: Zheng Ping Hu, MD, PhD ▪ Schepens Eye Research Institute

Co-Chair: Maria Zambrano, BS ▪ Tufts University

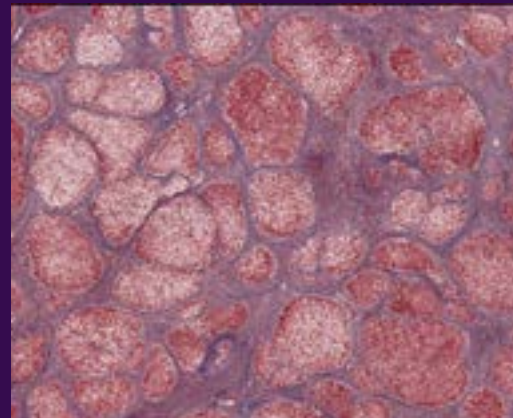
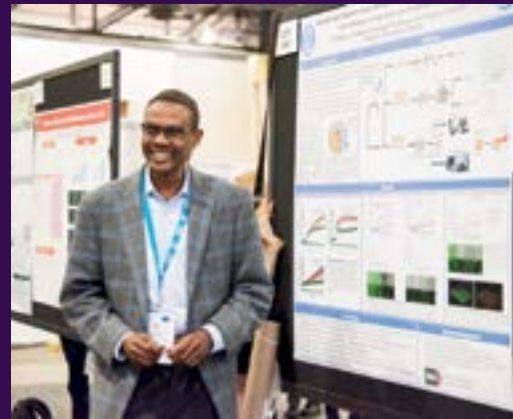
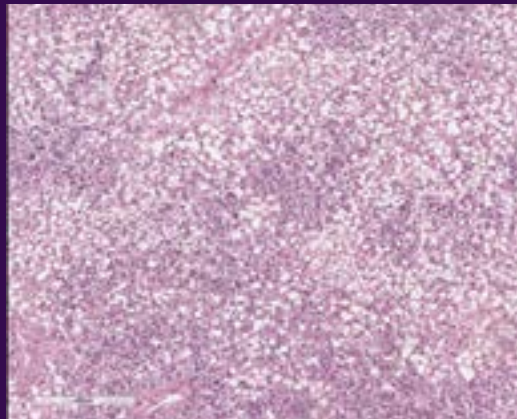
- **Chair - Welcome and Introductions**
- 2:00-2:20 PM
Abstract CARD033 - Genetically Modified and Patient-derived iPSC Cardiomyocytes with NOTCH1 Mutations Display Mitochondrial and Sarcomere Disorganization
Jordann Lewis, BA ▪ University of Pittsburgh
- 2:20-2:40 PM
Abstract CARD034 - PTBP1 Regulates Cardiac Fibrosis through Modulating Alternative Splicing
Shea Ricketts, BA ▪ University of North Carolina at Chapel Hill
- 2:40-3:00 PM
Abstract CARD035 - Cytotoxic T-Cells Drive Doxorubicin Induced Cardiac Fibrosis and Systolic Dysfunction
Abraham Bayer, BS ▪ Tufts University
- 3:00-3:20 PM
Abstract CARD036 - Apremilast, a PDE4 Inhibitor, Enhances Cardiomyocyte Cohesion in a Plakoglobin-Dependent Manner and May Have Therapeutic Potential to Treat Arrhythmogenic Cardiomyopathy
Konstanze Stangner, MD ▪ Ludwig Maximilian University of Munich
- 3:20-3:40 PM
Abstract CARD037 - Occlusion of Microvessels and Vasa Vasorum in Vascular Remodeling
Nataliia Shults, MD, PhD ▪ Georgetown University
- 3:40-4:00 PM
Abstract CARD038 - Long Non-Coding RNA, CASC15, Regulates Smooth Muscle Cell Size, Proliferation, and Migration
Ibrahim Ahmed, MS, BS ▪ University of Pittsburgh
- 4:00-4:20 PM
Abstract CARD039 - Dimethyl Fumarate Suppresses Pathological Angiogenesis and Enhances the Glycolytic Capacity of Retinal Endothelial Cells
Daisy Y. Shu, PhD ▪ University of New South Wales, Sydney

MEETING ADJOURNMENT 5:00 PM

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