



Pre-Program

Saturday, October 13th

1:00 – 4:00 pm Special Interest Group Satellites

Enabling Technologies for Leukocyte Research

Location:

Chair: Daniel Irimia, Harvard Medical School

Coyote

- Microfluidic Devices for CD64+ Neutrophils Counting and Sepsis Diagnostic, Rashid Bashir, *U. Illinois Urbana Champaign #118*
- Neutrophil Extracellular Trap-Inspired Microfluidics and Biomaterials, Shuichi Takayama, *Georgia Tech*
- High-throughput Purification and Viral Transduction of Leukocytes, Ken Kotz, *DRAPER Labs, Boston*
- Label-free Enrichment of Mononuclear Cells from Blood, Thomas Laurell, *Lund Uni., Sweden #117*
- How Neutrophils Seal off Sites of Bacterial and Fungal Infections. Alex Hopke, *Harvard Medical School*

Microbiome, Mucosal Immunology and Aging

Location:

Chairs: Rebecca Fuldner, NIA/NIH & Alan Landay, Rush

Buzzard

- Differential Effects of Aging on CD8+ T-cells in the Gut vs. Peripheral Blood, Beth Jamieson, *UCLA*
- Inflammaging and the Microbiome: A Dangerous Liaison, Alan Landay, *Rush*
- Inflammaging, Microbiome and the Multi-organ Response to Injury, Elizabeth J. Kovacs, *UC Denver*
- HIV and the Aging Gut: Inflammatory Consequences of Mucosal Immune Dysfunction, Cara Wilson, *UC Denver*
- The Impact of Age and Gut Microbiota on T Cells in Autoimmune Arthritis, Joyce Wu, *University of Arizona*

Emerging Concepts in NLR Sensing and Signaling

Location:

Chairs: Irving Coy Allen, Virginia Tech & Ed Miao, UNC Chapel Hill

Eagle

- Inflammasomes: Linking infection and inflammation, Vijay Rathinam, *UConn Health Schl. of Med.*
- The NLRC4 Inflammasome in Host Defense, Youssef Aachoui, *UNC Chapel Hill*
- The NLRP1 Inflammasome, Andrew Sandstrom, *University of California Berkeley*
- Regulation of Inflammasome and Inflammatory Responses by Myxoma Virus: An Oncolytic Poxvirus, Masmudur Rahman, *Arizona State University*
- Inflammasome Signaling in Neuroinflammation and Injury, John Lukens, *University of Virginia*
- Beyond the Inflammasome: Regulatory NLRs in Immune System Homeostasis, Irving Coy Allen, *Virginia Tech*

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Joint Meeting of Society for Leukocyte Biology &
International Endotoxin and Innate Immunity Society
“Myeloid Cells: Development, Environment and Inflammation”



October 14-16, 2018
Sheraton Grand at Wild Horse Pass, Chandler, Arizona

Sunday, October 14th

Registration	Speaker Ready Room	Exhibits
8:00 am – 6:00 pm Komatke Foyer	8:00 am – 6:00 pm Rattlesnake	12:00 pm – 5:00 pm Komatke Foyer

9:00 – 11:00 am **Poster Flash Talks: Highlighted**
Poster Session Presentations

Chairs:
Stephania Libreros, *Harvard*;
Shuvasree Sengupta, *University of Michigan*

Location:
Pipai Kave
Ballroom

Neutrophils and Phagocyte Functions: Co-Chair: Krystal Colon-Rivera

Obese, Diabetic Mice Demonstrate Immune Dysfunction and Renal Injury Following Trauma, Lynn Frydrych, *University of Michigan* #94

A High Content Microfluidic Assay for Leukocyte Activity, Felix Ellett, *Massachusetts General Hospital* #95

Inhibition of Human Neutrophil Inflammatory and Apoptotic Caspases Regulate IL-1 β Production and Neutrophil Lifespan during *Toxoplasma gondii* Infection, Tatiane S. Lima, *University of California, Irvine* #96

Mechanisms of *H. pylori*-Induced Neutrophil Nuclear Hypersegmentation, Stephanie Silva-Del Toro, *University of Iowa* #102

Myeloid Cell Development, Differentiation, and Novel Functions: Co-Chair: Lynn Frydrych

Adipose-Resident Myeloid-Derived Suppressor Cells Modulate Immune Cell Homeostasis in Healthy Mice, Katlin Stivers, *University of Louisville* #77

Ramifications of a Shift in Myeloid Cell Phenotype Exacerbates Anemia of Critical Illness, Kuzhali Muthumalaiappan, *Loyola University Chicago, Stritch School of Medicine* #78

Enhanced Myelopoiesis and Aggravated Arthritis in *S100a8*-deficient Mice, Joan Defrene, *Université Laval* #79

Characterization of Low-Density Neutrophil Subpopulations in HIV-1-Infected Individuals, Krystle Ong, *University of Alabama at Birmingham* #93

Inflammatory Signaling in Leukocytes: Co-Chair: Kuzhali Muthumalaiappan

Platelets Influence Regulatory T Cell Proliferation and Activity during Sepsis, Elisabetta Liverani, *Temple University* #31

The Effect of Advanced Age and Alcohol Consumption on Alveolar Macrophage Response to *Streptococcus pneumoniae*, Holly Hulsebus, *University of Colorado* #41

JAK3 Restrains *Porphyromonas gingivalis*-Induced Inflammatory Responses Through Ubiquitination-mediated Wnt3a Signaling, Zhen Gu, *University of Louisville* #42

Chronic Super-low Dose Lipopolysaccharide Exposure Skews Macrophages to a Non-resolving Low-grade Inflammatory State through Simultaneous Upregulation and Suppression of Pro-inflammatory and Homeostatic Mediators, Allison Rahtes, *Virginia Tech* #44

Leukocytes and Host Interactions: Co-Chair: Elisabetta Liverani

The Role of Hyperuricemia in Modulating Autophagy Flux and Inflammasome Activation during Bacterial Infection in Macrophages, Susu Zughair, *College of Medicine, Qatar University* #8

Identification of LMAN1 as a Receptor for House Dust Mite (HDM), Madelyn Miller, *Uni. of Central Florida* #16

IL-10 Protects Against Neuron Death in *Staphylococcus epidermidis* Biofilm and Microglia Co-cultures, Kathryn Woods, *University of Arkansas for Medical Sciences* #54

S100A14 can Stimulate Activation of Immune Cells and Crosstalk between NK Cells and Monocytes, Krystal Colon-Rivera, *The Wistar Institute* #67

11:00 am - 1:00 pm MTTG (Members in Transition and Training) Workshop: State-of-the-Art High-Resolution Imaging Modalities *Pre-registration required, Presented in partnership with the Histochemical Society*



Chairs:
Stephania Libreros, *Harvard*;
Shuvasree Sengupta, *University of Michigan*

Location:
Coyote/Buzzard/
Eagle

Two to Tango: Imaging and scRNA-seq to Study Niche-related Macrophage Heterogeneity, Daniel Saban, *Duke University*

Multiscale Imaging: From Super-resolution to Optical Imaging, Margarida Barroso, *Albany Medical College*

Images of Industry: Finding Microscopic Answers with Megapixels, Robert Moody, *GE Healthcare*

12:00 - 1:00 pm Lunch on your own

1:00 - 1:05 pm President's Welcome

Chairs:
Lee-Ann Allen, *SLB President*;
Egil Lien, *IEIIS President*

Location:
Pipai Kave
Ballroom

1:05 - 3:00 pm SLB and IEIS Junior Awards

Chairs:
Nick Lukacs, *University of Michigan*; Egil Lien, *UMASS*

Location:
Pipai Kave Ballroom

SLB Student Presidential Award Finalist

1:05 pm

Micro Manipulator: *Yersinia pestis* Actively Alters the Neutrophil Degranulation Response, Amanda Pulsifer, *University of Louisville* #1

1:20 pm

A Novel Role of p38 MAPK in the Retinoic Acid-induced Expression of CD103 in Human Dendritic Cells, Mandi Roe, *Montana State Uni.* #2

1:35 pm

Gene Expression Profiling of Intima-infiltrating Macrophages in Early Human Atherosclerosis, Charles Yin, *Western University* #83

SLB Junior Faculty/Postdocs Presidential Award Finalist

1:50 pm

TAK1 Restricts Spontaneous Activation of the NLRP3 Inflammasome, Prajwal Gurung, *University of Iowa* #25

2:05 pm

MAPK Regulation of the Resolution of Inflammation Following LPS-Induced Acute Lung Injury, Matthew Long, *University of Washington* #26

IEIS Young Investigator Awardees

2:20 pm

Structural Basis for Lipopolysaccharide Capture and Extrusion by ABC Transporter LptB2FG, Yanyan Li, *Harvard Medical School* #3

2:35 pm

Role of Lipid A Hydroxylation in *Pseudomonas aeruginosa* Persistence and Infection, Courtney Chandler, *University of Maryland, Baltimore* #55

3:00 – 3:15 pm Coffee Break, Komatke Patio & Foyer

3:15 - 4:15 pm SLB Mid-Level Award Talks

Chairs:
Lee-Ann Allen, *University of Iowa*;
Nick Lukacs, *University of Michigan*

Location:
Pipai Kave Ballroom

3:15 pm Dolph Adams Awardee

***Toxoplasma gondii* Induces IL-1 β Production and Pyroptosis-independent Release from Primary Human Monocytes through the Syk Signaling Pathway**, Melissa Lodoen, *UC Irvine* #24

3:45 pm Jeanette Thorbecke Awardee

Neutrophil-specific Knockout Demonstrates a Role for Mitochondria in Regulating Neutrophil Motility in Zebrafish, Qing Deng, *Purdue University* #82

4:15 - 5:00 pm IEIS Senior Level Awards

Chair:
Egil Lien, *UMASS*

Location:
Pipai Kave Ballroom

4:15 pm Alois H. Nowotny Award

Alison Scott, *University of Maryland*

4:30 pm Frederick B. Bang Award

TBA

4:45 pm Sheldon E. Greisman Award

Andrei Medvedev, *posthumous*

5:00 - 5:15 pm Comfort Break, Komatke Patio & Foyer

5:15 - 6:15 pm SLB Legacy Keynote Lecture

SLB Legacy Awardee

More than a License to Kill: The Many Roles of the Leukocyte NADPH Oxidase

Mary Dinauer, Washington University in St. Louis

Chair:

Lee-Ann Allen, *University of Iowa*

Location:

Pipai Kave Ballroom

6:30 - 8:30 pm Opening Reception, Komatke Patio & Foyer

Monday, October 15th

Registration	Speaker Ready Room	Exhibits
8:00 am – 5:00 pm Komatke Foyer	8:00 am – 5:00 pm Rattlesnake	8:00 am – 5:00 pm Komatke Foyer

7:00 - 9:00 am

**Professional Development Workshop
Breakfast: Team Science
Coyote/Buzzard/Eagle**

Chair: Shannon Wallet, *East Carolina University*
Featuring: Kevin Wooten

Team Science, it's not just for trainees! Cover topics including Team Science definition, modeling, and dynamics, this session will benefit attendees at all career levels and includes experiential exercises. *Pre-registration required*

OR

8:00 – 9:00 am

**Networking Breakfast
Komatke Patio & Foyer**

Enjoy a continental breakfast while networking with fellow attendees.

9:00 - 9:30 am IEIIS Member Business Meeting

Join fellow IEIIS members to learn the latest updates from IEIIS.

Chair:

Egil Lien, *UMASS*

Location:

Pipai Kave Ballroom

9:30 - 11:00 am Plenary II: Myeloid Cell Development, Differentiation, and Novel Functions

Chairs:

Susu Zughailer, *Qatar College of Med.*; Robert Clark, *UTHSCSA*

Location:

Pipai Kave Ballroom

9:30 am
TLR Signaling, Macrophage Development, and Macrophage Activation Syndrome, Jessica Hamerman, *Benaroya Research Institute*

9:50 am
Dendritic Cell Development and Function, Ken Murphy, *Washington University in St. Louis*

10:10 am
Monocyte Heterogeneity and Origins, Helen Goodridge, *Cedars Sinai*

10:30 am
The Role of Gasdermin D in IL-1 beta Production by Neutrophils, Eric Pearlman, *University of California, Irvine*

11:00 am – 1:00 pm Poster Session I Lunch, Komatke DEFG

Enjoy lunch while browsing the **odd** numbered poster presentations

1:00 pm - 2:30 pm Concurrent Sessions 1 & 2

Concurrent Session 1: Leukocytes in Immune Privilege Sites

Chairs: Darren Lee, *Oklahoma University College of Medicine, Dean McGee Eye Institute*; Catherine Ptaschinski, *University of Michigan*

Location: Pipai Kave Ballroom

Featured Speakers:

1:00 pm **Neuroprotective Specialization for Microglia in Degenerative Diseases of the Retina**, Daniel Saban, *Duke University School of Medicine*

1:20 pm **Obesity and Autoimmune Uveitis**, Darren Lee, *Oklahoma University College of Medicine, Dean McGee Eye Institute*



Selected Talks:

1:40 pm **The Early Expansion of Anergic NKG2A^{pos}/CD56^{dim}/CD16^{neg} NK Represents a Therapeutic Target in Haploidentical Haematopoietic Stem Cell Transplantation**, Domenico Mavilio, *University of Milan* #50

1:55 pm **The Dark Side of a Commensal: A Commensal Bacterium Precipitates Ocular Surface Inflammation in a Model of Muckle-Wells Syndrome**, Rachel Caspi, *NIH, NEI* #51

2:10 pm **Macrophage-derived Tgf- β Drives the Expansion of Tolerogenic CD103^{int} DCs in the Lungs of Neonatal Mice**, Aaron Silva Sanchez, *University of Alabama at Birmingham* #52

Concurrent Session 2: Best of JLB and Innate Immunity

Chairs: Luis Montaner, *Journal of Leukocyte Biology*; Otto Holst, *Innate Immunity*

Location: Komatke ABC

Featured Speakers:

1:00 pm **Platelets at the crossroads of NETs**, Mirta Schattner, *Instituto de Medicina Experimental (IMEX) (Journal of Leukocyte Biology)*

1:20 pm **The Interrelationship between Phagocytosis, Autophagy and Formation of Neutrophil Extracellular Traps Following Infection of Human Neutrophils by Streptococcus pneumoniae**, Tom Evans, *University of Glasgow (Innate Immunity)*

OR

Selected Talks:

1:40 pm **Immune Triage: Prioritization of the Innate Immune Response when Faced with Multiple Simultaneous Insults**, Amanda Jamieson, *Brown University* #84 (SLB Women & Diversity Paper of the Year Awardee)


2:00 pm **LincRNA-EPS and lincRNA-Cox2 Regulate Expression of Inflammatory Cytokines in Macrophages and Mice Treated with TLR2 and TLR4 Agonists or during *Klebsiella pneumoniae* Infection, but are Dispensable for Endotoxin Tolerance**, Federica Agliano, *University of Connecticut Health Center* #27 (IEIS Theresa L. Gioannini Awardee)

2:30 - 3:00 pm Coffee Break, Komatke Patio & Foyer

OR

2:30 - 3:00 pm Coffee with the JLB EIC, Gila Monster

Meet the *Journal of Leukocyte Biology* Editor-in-Chief, Luis Montaner, during this special coffee break. Discuss your manuscript ideas and learn about the submission process.

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3:00 pm - 4:30 pm Concurrent Sessions 3 & 4

Concurrent Session 3: Inflammatory Signaling in Leukocytes

Chairs: Jonathan Kagan, *Boston Children's Hospital, Harvard Med. Schl*; Jamie Sturgill, *Uni. of Kentucky*

Location: Pipai Kave Ballroom

Featured Speakers:

3:00 pm **Initiation and Regulation of Innate Immunity**, Jonathan Kagan, *Boston Children's Hospital, Harvard Medical School*

3:20 pm **Infectious Models Reveal a Unique Role for Caspase-7 after Cytotoxic Lymphocyte Attack**, Ed Miao, *University of North Carolina School of Medicine, Chapel Hill #116*

Selected Talks:

3:40 pm TBA

3:55 pm **Toll-like Receptor-10 is a Novel Regulator of Immune Responses in Human Plasmacytoid Dendritic Cells**, Patricia Fitzgerald-Bocarsly, *Rutgers New Jersey Medical School #29*

4:10 pm **TLR8-dependent Innate Recognition and inflammasome activation by Methanogenic Archaea in Human Phagocytes**, Holger Heine, *Research Center Borstel - Leibniz Lung Center #30*

OR

Concurrent Session 4: Neutrophils and Phagocyte Functions

Chairs: Sergio Grinstein, *University of Toronto*; Kari Ann Shirey, *University of Maryland*

Location: Komatke ABC

Featured Speakers:


3:00 pm ***F. tularensis* BLPs and TLR1 Regulate Human Neutrophil Lifespan**, Lee-Ann Allen, *University of Iowa, Carver College of Medicine*

3:20 pm **The Cytoskeleton and the Pericellular Coat Dictate the Responsiveness of Phagocytic Receptors**, Sergio Grinstein, *University of Toronto*

Selected Talks:

3:40 pm **Extracellular Adenosine Enhances the Ability of Neutrophils to Kill *S. pneumoniae* by Blunting IL-10 Production**, Elsa Bou Ghanem, *University at Buffalo #85*

3:55 pm **Targeting ADAM17 with a mAb as a Potential Therapeutic Intervention in Sepsis**, Hemant Mishra, *University of Minnesota #86*

4:10 pm **The Nucleation Promoting Factor Wiskott-Aldrich Syndrome Protein and Scar Homolog (WASH) Differentially Regulates Granule Subsets Secretion and the Oxidative Response in Neutrophils**, Sergio Catz, *Scripps Institute #87* 

4:30 - 5:00 pm Coffee Break, Komatke Patio & Foyer

OR

4:30 - 5:00 pm Coffee with the Innate Immunity EIC, Gila Monster

Meet the *Innate Immunity* Editor-in-Chief, Otto Holst, during this special coffee break. Discuss your manuscript ideas and learn about the submission process.

5:00 – 6:30 pm Plenary III - Metabolism & Physiology in Inflammation and Immunity


Chairs:
 Holger Heine, *Research Center Borstel*; Ruth Montgomery, *Yale University*

Location:
 Pipai Kave Ballroom

5:00 pm
Host-microbe Interactions: Harnessing Co-evolution to Treat Disease, Janelle Ayres, *Salk Institute*

5:20 pm
Fueling Phagocyte Functions, Daniel McVicar, *NIH/NCI*

5:40 pm
Innate Immune Recognition and Signaling in *Drosophila*, Neal Silverman, *University of Massachusetts Medical School*

6:00 pm
Class IIa Histone Deacetylases are Molecular Links between Regulated Cell Metabolism and Inflammatory Outputs of TLR-Activated Macrophages, Matthew Sweet, *The University of Queensland #115* 

7:00 – 9:00 pm Social Mixer, Akimel Lawn

Tuesday, October 16th

Registration	Speaker Ready Room	Exhibits
8:00 am – 3:30 pm Komatke Foyer	8:00 am – 3:30 pm Rattlesnake	8:00 am – 3:30 pm Komatke Foyer

7:00 - 9:00 am
Women & Diversity Workshop
Breakfast: Effectively Communicating Science: Getting the Word Out
Coyote/Buzzard/Eagle

Chair: Amanda Brown, *Johns Hopkins University*
 Featuring: Beth Garvy and Cynthia Leifer
 Communication of research findings is at the core of what a scientist does. Come learn how to communicate your science to policy makers and the public. *Pre-registration required*

OR


8:00 – 9:00 am
Networking Breakfast
Komatke Patio & Foyer
 Enjoy a continental breakfast while networking with fellow attendees.

9:00 - 9:30 am SLB Member Business Meeting

Join fellow SLB members for award announcements and to learn the latest updates about SLB.

Chair:
 Lee-Ann Allen, *University of Iowa*

Location:
 Pipai Kave Ballroom

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9:30 - 11:00 am Plenary IV - The Microbiome in Inflammation and Immunity

Chairs:

Anne Pereira, *OUHSC*; Jason Barker, *University of Iowa*

Location:

Pipai Kave Ballroom

9:30 am
Commensal Fungal Metabolism and Host Immunity, Yan Shi, *Tsinghua University*

9:50 am
Host Immunity to Commensal Fungi, David Underhill, *Cedars Sinai*

10:10 am
Microbial Dysbiosis Drives Age-associated Inflammation which Impairs Myeloid Development, Dawn Bowdish, *McMaster University*

10:30 am
Mechanisms of Chronic Inflammation Associated with Microbial Dysbiosis in a Rhesus Macaque Model of Environmental Enteric Disease, Ilhem Messaoudi, *Uni. of California, Irvine*

11:00 am – 1:00 pm Poster Session II Lunch, Komatke DEFG

Enjoy lunch while browsing the even numbered poster presentations

1:00 - 2:30 pm Concurrent Sessions 5 & 6

Concurrent Session 5: Ligands of Innate Immunity: Structure & Function

Chairs: Bob Ernst, *University of Maryland*; Michael Shehat, *University of Central Florida*

Location: Pipai Kave Ballroom

Featured Speakers:

1:00 pm **Recent Examples of Structure and Structure-function Analysis of LPS and Lipid A**, Otto Holst, *Research Center Borstel*

1:20 pm **Structure Matters – Modification of the Lipid A Component of Lipopolysaccharide (LPS) LPS Alters Host Immune Responses**, Bob Ernst, *University of Maryland*

Selected Talks:

1:40 pm **Synthesis and Function of Symbiotic Bacterial Lipopolysaccharide Partial Structures**, Atsushi Shimoyama, *Osaka University* #56

1:55 pm **The TLR4 Agonist Monophosphoryl Lipid A Induces Dynamic Reprogramming of Macrophage Metabolism for Enhancement of Antimicrobial Functions and Infection Resistance**, Julia Bohannon, *Vanderbilt Uni. Medical Center* #57

2:10 pm **A Distinct Late Acyl Transferase Contributes to Synthesis of KDO-containing Lipopolysaccharide in *Francisella***, Jason Barker, *University of Iowa* #58

Concurrent Session 6: Host Receptors and Microbes

Chairs: Trude Flo, *Norwegian Univ. of Science and Technology*; Hemant Mishra, *Univ. of Minnesota*

Location: Komatke ABC

Featured Speakers:

1:00 pm **Single-cell Dynamics of Pyroptosis in *M. tuberculosis* Infected Macrophages**, Trude Flo, *Norwegian University of Science and Technology*

1:20 pm **Mechanisms Controlling Innate Immune Responses to Nucleic acids**, Kensuke Miyake, *University of Tokyo, Institute of Medical Science*


Selected Talks:

1:40 pm **Differential Signaling through TLR7 or TLR8 Determines the Phenotype of Human Monocytes during RNA Virus Infection**, Margarita Dominguez-Villar, *Yale University* #4

1:55 pm **Inflammasomes Confer Protection via IL-18 and Pyroptosis, and are Negatively Regulated by IFN- γ -dependent Nitric Oxide during *Brucella* Infection**, Jerod Skyberg, *University of Missouri* #5

2:10 pm **Novel Role of Gastric Releasing Peptide (GRP)-Mediated Signaling in the Host Response to Influenza Infection**, Kari Ann Shirey, *University of Maryland School of Medicine* #6

OR

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2:30 – 3:30 pm Closing Reception, Beehive Patio, Komatke Patio & Foyer

3:30 - 5:00 pm Plenary V - Inflammation and Cell

Death in Host-pathogen Interactions

Chairs:

Lou Justement, *UAB*; Amy Hise,
Case Western Reserve Uni.

Location:

Pipai Kave
Ballroom

3:30 pm

Detecting and Responding to Microbial Viability, Julie Blander, *Weill Cornell Medicine*

3:50 pm

Bacterial Type III Secretion System Effectors Regulate of IL-1b Production and Cell Death, Egil Lien, *University of Massachusetts Medical School*

4:10 pm

Sensing and Reacting to Pathogens at the Skin Barrier, Gabriel Nunez, *University of Michigan*

4:30 pm

Novel Strategies for Targeting Innate Immune Responses to Influenza, Stefanie Vogel, *University of Maryland School of Medicine*