

Legacy Award Lecture (July 5th, 12-1pm ET)

Sepsis, Chocolate, and Mitochondria in Trouble, **Charles McCall**, *Wake Forest School of Medicine*
Join for this live presentation and Q&A session

Topical Sessions

The following sessions are live events where pre-recorded invited talks and select abstracts will be played. During the pre-recorded presentations, the audience may interact with the speakers via the Q&A tool and type questions and comments to which the speakers will reply. *If time allows* at the end of the session, a live Q&A and discussion will take place. An email reminder will be sent to registrants one hour before the live session with a link to join along with a “join now” button placed on the event page.

Immunity Across the Life Span (Tues., July 6th, 11am - 12:30pm ET) Moderated by Nick Lukacs

- Microglia, Microbes, and Neural Development, **Staci Bilbo**, *Duke University*
- Microbe-mediated Regulation of Host NAD Metabolism and its Implication in Aging and Cancer, **Xiaoling Li**, *National Institute of Environmental Health Sciences*

Selected Abstracts:

- Heightened Intestinal Permeability and Neuroinflammation in Scald-Burn Injured Aged Mice, **Travis Walrath**, *University of Colorado Denver Anschutz Medical Campus*
 - Bacille Calmette-Guerin Provides Protection from Polymicrobial Sepsis in Neonatal Mice, **Jaimar Rincon**, *University of Florida*
 - Diverse Homeostatic and Immunomodulatory Roles of Macrophages in Human Placenta, **Suhas Sureshchandra**, *University of California Irvine (Spotlight Abstract Award)*
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Tissue Resident Macrophages (Thurs., July 8th, 11am - 12:30pm ET) Moderated by Michelle Visser

- Protective Role of Eosinophils in Hepatic Ischemia Reperfusion Injury, **Cynthia Ju**, *McGovern Medical School, University of Texas*
- Skin Resident Macrophage Actions in Health and Disease, **Carlos Henrique Serezani**, *Vanderbilt University*

Selected Abstracts:

- scRNA-Seq and Functional Profiling of Alveolar Macrophages with Alcohol Use, **Sloan Lewis**, *University of California, Irvine (Presidential Student Finalist)*
- Mechanosensation in Macrophages Protects the Lung from Infection-Associated Lung Injury, **Rachel Scheraga**, *Cleveland Clinic*
- Epigenetic Regulation of Monocytes: Synergistic Effects of IL-4 and TNF-alpha, **Ruoxi Yuan**, *Hospital for Special Surgery (Spotlight Abstract Award)*

Neuroinflammation (Tues., July 13th, 11am - 12:30pm ET) Moderated by Anne Pereira

- Alarmin-mediated Control of Brain Infection, **Tajie Harris**, *University of Virginia*
- The Microglia-lymphocyte Interface in Brain Development, **Anna Molofsky**, *UCSF Weill Institute for Neurosciences*
- Viral-mediated Dysregulation of Lipoprotein Metabolism in the Brain, **Amanda Brown**, *Johns Hopkins*

Intestinal Immunity (Thurs., July 15th, 11am - 12:30pm ET) Moderated by Domenico Mavilio

- Neutrophils Mold Tissue Metabolism During Active Mucosal Inflammation, **Sean Colgan**, *University of Colorado*
 - Gut Epithelial Metabolism as a Key Driver of Microbiota Imbalance Associated with Non-communicable Disease, **Mariana Byndloss**, *Vanderbilt University*
 - The Unexpected Role of Granzyme B in CD4+ T Cell Differentiation and its Impact in Intestinal Pathogenicity, **Danyvid Olivares-Villagomez**, *Vanderbilt University*
- Selected Abstracts:
- Impact of Inflammatory Acidosis on Intestinal Mucosa, **Ian Cartwright**, *University of Colorado Anschutz Medical Campus*
 - CD8+ T-Cells Mediate Colon Epithelial Cell Death in HIV Pathogenesis, **Leah Froehle**, *The Ragon Institute of MGH, Harvard, and MIT*

Cancer (Tues., July 20th, 11am - 12:30pm ET) Moderated by Vijaya Iragavarapu

- Myeloid-derived Suppressor Cells in Regulation of Tumor Progression, **Dmitry Gabrilovich**, *AstraZeneca*
- Neutrophils and Their Contribution to Cancer Metastasis, **Leah Cook**, *University of Nebraska*
- Tumor Virus-induced Metabolic Reprograming, **Jae Jung**, *USC*

Selected Abstracts:

- Transcriptomic Analysis of Monocytes of Colorectal Cancer Patients, **Irina Larionova**, *Tomsk State University*
- HLA-DR+ Monocytes Correlates with Response to Chemotherapy in Cancer Patients, **Marina Patysheva**, *Cancer Research Institute, Tomsk National Research Medical Center, Russian Academy of Sciences*

Context Dependent Immune Adaptation (Thurs., July 22nd, 11am - 12:30pm ET) Moderated by Vidula Vachharajani

- Immune Adaption in Sepsis Survivors: New Endotypes and New Approaches, **Lyle Moldawer**, *Uni. of Florida*
- B Cell Dynamics During Neurotropic Coronavirus Infection, **Cornelia Bergmann**, *Cleveland Clinic Lerner College of Medicine*
- Fueling the Revolution: Targeting Metabolism to Enhance Cancer Immunotherapy, **Jonathan Powell**, *Johns Hopkins University*

Selected Abstracts:

- Plasma Microvesicles Released from Burn Injury Modulate Immune Phenotype, **Micah Willis**, *UNC-CH (Presidential Student Finalist)*
- VISTA in Treg-mediated Tissue Protection and Survival in Murine Sepsis, **Chyna Gray**, *Brown University/ Rhode Island Hospital*

Immunometabolism I (Tues., July 27th, 11am - 12:30pm ET) Moderated by David Underhill

- Mitochondria Regulation of Immunity, **Navdeep Chandel**, *Northwestern University*
 - Burying the Dead: Efferocytosis of Apoptotic Cells Reprograms Dendritic Cell Metabolism, **Alexandra Medeiros**, *UNESP*
 - Metabolic Regulation of HIV-1 Replication and Reservoir Persistence, **Harry Taylor**, *SUNY Upstate Medical University*
- Selected Abstracts:
- Ethanol Exposure Impairs Phagocytosis and Glycolysis in Macrophages via SIRT2, **Anugraha Gandhirajan**, *Lerner Research Institute* (Abstract Merit Finalist)
 - Peripheral and Pulmonary Expression of Immunometabolic Genes After Burn-Inhalation Injury, **Cressida Mahung**, *University of North Carolina* (Presidential Junior Faculty/Postdoc Winner)

Immunometabolism II (Thurs., July 29th, 11am - 12:30pm ET) Moderated by Lee-Ann Allen

- Immunometabolic Regulation of Inflammation, **Emily Goldberg**, *UCSF*
 - Krebs Cycle Reborn in Macrophages, **Luke O'Neil**, *Trinity College Dublin*
 - *Dolph O. Adams Awardee*: A Critical Role for SLC37A2 in Macrophage Inflammation and Metabolic Homeostasis,, **Xuwei Zhu**, *Wake Forest School of Medicine*
- Selected Abstracts:
- Inhibition of Pyruvate Dehydrogenase Kinases Promotes Macrophage NLRP3 Inflammasome Inactivation, **Allison Meyers**, *Wake Forest School Of Medicine* (Spotlight Abstract Award)
 - Macrophage Reprogramming Driven by TLR/MyD88 Activation Confers Infection Resistance, **Allison Owen**, *Vanderbilt University Medical Center* (Abstract Merit Finalist)

COVID 19: Adaptive Immunity (Tues., August 3rd, 11am - 12:30pm ET) Moderated by Luis Montaner

- Pathogenic Inflammation in COVID-19 Patients, **Miriam Merad**, *Icahn School of Medicine at Mount Sinai*
 - Immunotherapy of COVID-19, **Richard Hotchkiss**, *Washington University St. Louis*
 - Innate Immune Dysfunction in COVID-19, **Catherine Blish**, *Stanford University*
- Selected Abstracts:
- Antigen-presenting Cells in Severe Covid-19 Present Defects in Antiviral Immunity, **Maha Ladjemi**, *INSERM* (Spotlight Abstract Award)
 - ADAM17 Inhibition is Protective in a Mouse Model of Covid-19, **Nathaniel Lartey**, *CINVESTAV* (Presidential Student Finalist)

Western Lifestyle: Metaflammation (Thurs., August 5th, 11am - 12:30pm ET) Moderated by Cherie Butts

- Multifaceted Action of Macrophages in Diseases, **Beiyang Zhou**, *UCONN Health*
- Deconvoluting Macrophage Heterogeneity in the Pathogenesis of Non-alcoholic Steatohepatitis, **Joel Schilling**, *Washington University School of Medicine*
- Diet, Lipids, and Anti-Tumor Immunity, **Lydia Lynch**, *Harvard*

Video Abstract Sessions

The following sessions are each one hour sessions where pre-recorded, 5min video abstracts will be presented with concurrent Q&A. If time allows, there will also be additional open Q&A and discussion time at the end of each session.

Session I (Friday, September 17, 3-4pm ET)

Cancer

- Human Ovarian Cancer Ascites Impairs Anti-tumor NK Cell Effector Functions, **Antonio Hrvat**, *University Hospital Essen, University of Duisburg-Essen* (Abstract Merit Finalist)
- The Interplay Between Calcium Phosphate Nanoparticles and Ovarian Cancer Immunotherapy, **Antonio Hrvat**, *University Hospital Essen, University of Duisburg-Essen*
- Oral Neutrophils Mirror Systemic and Local Changes in Head-and-Neck Cancer, **Ekaterina Pylaeva**, *University Hospital Essen*
- cAMP Bursts Control T Cell Directionality by Actinmyosin Cytoskeleton Remodeling, **Morgane Simao**, *Cochin Institute*
- Manipulation of Plasma Cell Differentiation by Kaposi Sarcoma Herpesvirus Infection, **Jennifer Totonchy**, *Chapman University*

Context Dependent Immune Adaptation

- Adenosine Regulates Cytotoxic CD4 T Lymphocytes in *Trypanosoma cruzi* Infection, **Maria Aoki**, *Universidad Nacional de Cordoba*
- Sex Influences Production and Activation of Plasmablasts and Plasma Cells, **Peter Pioli**, *Western Michigan University Homer Stryker M.D. School of Medicine*
- Titanium Nanoparticles Enhance Production and Suppress GDF-15 Clearance in Macrophages, **Lina Silva Bermudez**, *Medical Faculty Mannheim, Heidelberg University* (Abstract Merit Finalist)
- Traction Force Microscopy of Human Neutrophils During Critical Illness, **Hadley Witt**, *Brown University / Rhode Island Hospital* (Spotlight Abstract Award)

Session II (Friday, September 24th, 3-4pm ET)

COVID 19: Adaptive and Innate Immunity

- COVID-19 Severity is Linked to CD27-IgD- B Cell Subsets Numbers, **Jose Maravillas-Montero**, *Universidad Nacional Autónoma de México*
- Role of CD14 in Macrophage Activation by SARS-CoV-2 Spike Protein, **Shalaka Metkar**, *CUNY School of Medicine*

Immunity Across the Life Span

- Heightened Ethanol-Induced Intestinal Dysfunction and Liver Inflammation in Aged Mice, **Rachel McMahan**, *University of Colorado Anschutz Medical Campus*
- Epithelial MHC-II Dictates Tissue-resident CD4+ Memory TRM Cell Activities, **Anukul Shenoy**, *Boston University School of Medicine*

- Neutrophil Immunosenescence Leaves Vaccinated Aged Hosts Susceptible to Pneumococcal Pneumonia, **Shaunna Simmons**, *University of Buffalo*

Immunometabolism

- Immunometabolism is Differentially Regulated by *Staphylococcus aureus* Biofilm and Hypoxia, **Christopher Horn**, *University of Nebraska Medical Center* (Spotlight Abstract Award)
- Sex-related Variations Targeting Purinergic Signaling Pathways in Platelets During Sepsis, **Elisabetta Liverani**, *North Dakota State University*
- Hyperglycemia Compromises Cell-protective Scavenging of Hemoglobin-haptoglobin Complexes via CD163, **Laura Matuschik**, *Medical Faculty Mannheim, Heidelberg University*
- Regulating PARP1 Mediated Dendritic Cell Function Attenuates RSV Infection Severity, **Mohamed Mire**, *University of Michigan* (Abstract Merit Finalist)
- Hematopoietic-SLC37A2 Deficiency Accelerates Atherosclerosis in LDLrKO Mice, **Zhan Wang**, *Wake Forest Health Sciences* (Abstract Merit Finalist)

Session III (Friday, October 1, 3-4pm ET)

Intestinal Immunity

- Liver Matrix-Bound-Nanovesicles (MBV) Alter with Alcohol and Differentially Influence Macrophages, **Bashar Al Matour**, *UPMC*
- Dexamethasone Reduces Crohn's Disease-like Ileitis in SHIP Deficient Mice, **Matthew Luzentales-Simpson**, *University of British Columbia* (Abstract Merit Finalist)
- CD47 Inhibits Aberrant Inflammation and Death of Ptpn6spin Mice, **Lalita Mazgaen**, *University of Iowa* (Abstract Merit Finalist)
- Timing of Microbial Colonization Differentially Affects Colorectal Cancer, **Daniel Zegarra Ruiz**, *MSKCC* (Spotlight Abstract Award)

Tissue Resident Macrophages

- LOX-1 Regulates Alveolar Macrophages and Limits Pneumonia Induced Lung Injury, **Filiz Korkmaz**, *Boston University School of Medicine*

Miscellaneous

- Correlation Between Monocyte Subsets and Serum Cytokines Under Steady-state Conditions, **Romin Adhikari**, *Morgan State University*
- Extracellular Vesicles From A23187-treated Neutrophils Activate STING in Macrophages, **Edwina Allen**, *Central Michigan University*
- Outer Sheath Proteins of Oral Treponemes Inhibit Phosphoinositide Neutrophil Signaling, **Natalie Anselmi**, *SUNY Buffalo* (Abstract Merit Finalist)
- Withaferin A Inhibits Neutrophil Functions and Promotes Neutrophil Apoptosis, **Rosemary Bayless**, *North Carolina State University*
- Fate Mapping Myeloid-derived Suppressor Cells During *Staphylococcus aureus* Biofilm Infection, **Blake Bertrand**, *University of Nebraska Medical Center* (Spotlight Abstract Award)



Session IV (Friday, October 8, 3-4pm ET)

Miscellaneous

- Phosphatidylserine Receptor Enhancement of SARS-CoV-2 Entry: AXL, a Therapeutic Target, **Dana Bohan**, *University of Iowa* (Abstract Merit Finalist)
- Uncovering the Causes of Common Variable Immunodeficiency, **Lucia Borlle**, *Cornell University*
- Role of NLRP3 Inflammasome in Periodontitis : Friend or Foe?, **Banndith Cheat**, *Université de Paris* (Abstract Merit Finalist)
- Mycobacterium Tuberculosis Establishes a Vicious Circle Interruptible for Host-directed Therapy, **Tobias Dallenga**, *Research Center Borstel*
- MicroRNA Family Increase Susceptibility to Leishmania Infection in Human Macrophages, **Juliane Fernandes**, *University of São Paulo*
- Inhibition of Na⁺/Ca²⁺ Exchanger Activates NADPH Oxidase and Induces NETosis, **Minoru Inoue**, *Kyoto University* (Abstract Merit Finalist)
- Phagocytosis of ALOOH Adjuvant Redirects the Trafficking of gd-Pertussis Toxin, **Javier Jaldin-Fincati**, *University of Toronto at Scarborough*
- TLR9 Knockout in Non-Hematopoietic Cells Protects Mice From Influenza/MRSA Super-infection, **Helen Rich**, *University of Michigan*
- Neutrophils Promote Protective Antibodies Against Bacterial Polysaccharide Independently of IFN- γ , **Essi Tchalla**, *University at Buffalo*
- Lysosome Fusion Maintains Phagosome Integrity During Fungal Infection, **Johannes Westman**, *The Hospital for Sick Children*