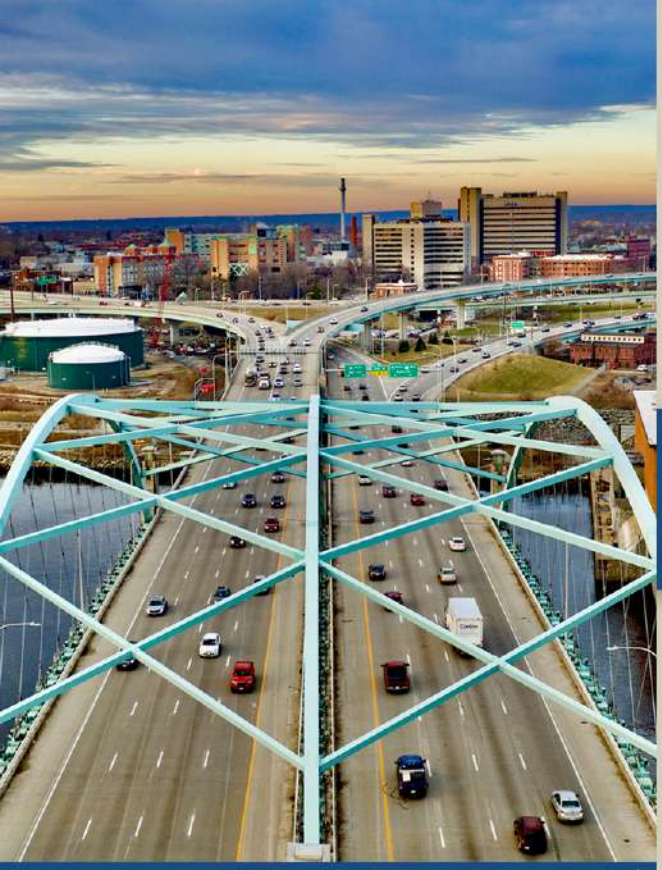
18th Annual "Advances in Inflammation Research" Virtual Symposium

October 7 & 8, 2021
Providence, RI



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Featured Speakers:

Douglas Green, PhD
Chair, Immunology Department
St. Jude Children's Research Hospital
Memphis, TN

James Lederer, PhD
Associate Professor of Surgery
Brigham & Women's Hospital, Harvard Medical School
Boston, MA

Jessica Moreland, MD
Professor, Division Chief of Pediatric Critical Care
UT Southwestern Medical Center
Dallas, TX

Luke O'Neill, PhD
Professor, Chair of Biochemistry
Trinity Biomedical Biosciences Institute
Trinity College Dublin
Dublin, Ireland

Thursday, October 7th

Zoom ID: 401 444 1234

12:00-12:05pm **Welcome and Introductions - J. Albina**

12:05-12:45pm **Luke O'Neill, PhD** Host - D. Heffernan
Adventures in Inflammation Research

1:00-2:00pm **Junior Investigator Presentations + Q&A**

2:30-3:10pm **Jessica Moreland, MD** Host - C. Lefort
Neutrophils in Immune Homeostasis: Nets, NADPH Oxidase and Toll-Like Receptor Signaling

Friday, October 8th

Zoom ID: 401 444 1234

1:00 - 1:40pm **Douglas Green, PhD** Host - J. Reichner
LAP and LANDO: Noncanonical Functions of Autophagy Proteins in Inflammation

2:00-2:40pm **James Lederer, PhD** Host - J. Reichner
Deconstructing Complex Inflammatory Responses to Injury, Infection and Other Diseases by Single Cell Mass Cytometry (CyTOF)

Sponsored by the Division of Surgical Research, Department of Surgery
Rhode Island Hospital/Brown University

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For more information call (401) 444-0188

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Rhode Island Hospital, Division of Surgical Research, 593 Eddy Street, Providence, RI 02903
Email: Inflammation@lifespan.org

18th Annual "Advances in Inflammation Research" Symposium

Speaker Biographies

Douglas Green, PhD

Dr. Green's laboratory investigates fundamental molecular processes involved in cell survival and death, and how these processes operate in other cellular contexts and disease states. Their research into cell death, noncanonical functions of survival pathways, and the cell biology of T lymphocytes encompasses a variety of technical approaches that include targeted and global metabolomics, proteomics, transcriptomics and diverse computational tools. Together they strive to understand the complex world of how cells eat, live, and die. Another area of investigation focuses on the discovery of a new molecular pathway that revolves around the self-survival mechanism called autophagy. In these studies, they explore the noncanonical functions of autophagy proteins in the processes of LC3-associated phagocytosis (LAP) and LC3-associated endocytosis (LANDO).

James Lederer, PhD

Dr. Lederer's lab addresses how traumatic injuries activate, modulate, and influence the immune system and immunity. They develop immunotherapies to protect critically injured people from infections and complications from trauma. They are also developing immune targeted medical countermeasures to help protect individuals that may be exposed to radiation or radiation combined traumatic injuries following accidental or intentional radionuclear events. Due to the complex nature of trauma immunology, they use systems immunology approaches like CyTOF mass cytometry to study the cells and mediators of the injury, radiation, and infection response. Advances made by this research have contributed to the concept that traumatic injuries alter immune homeostasis, which has provided him and others with insights for developing novel interventional therapies that could beused to reduce the morbidity and mortality associated with trauma.

Jessica Moreland, MD

Dr. Moreland is a physician-scientist with a research program centrally focused on the theme of neutrophilic inflammation, in the context of human disease, with a specific interest in the neutrophil NADPH oxidase. For several years, we have sought to define the role of the neutrophil NADPH oxidase (Nox2) in neutrophil priming by infectious and inflammatory stimuli. Our laboratory identified intracellular NADPH oxidase-derived ROS as critical mediators of endotoxin priming and demonstrated regulation of Nox2 in this setting by the ion transporter ClC-3. More recently, she has become interested in how pro-inflammatory stimuli and cellular outputs are balanced by anti-inflammatory responses to restore host homeostasis. The concept of compartmentalization of Nox-derived ROS giving rise to localized signaling is a central theme of her current work, including a novel anti-inflammatory role for Nox2.

Luke O'Neill, PhD

Dr. O'Neill's research is centered on the molecular basis of inflammation, with a particular emphasis on innate immunity, toll-like receptors, inflammasomes and metabolic reprogramming in macrophage activation. A key focus of his research group is on macrophage activation and its regulation in health and disease. Specific areas include the NLRP3 inflammasome, immunometabolism and inflammatory cytokines. The group are exploring the role of Krebs cycle-derived metabolites in the induction of inflammatory cytokines and how reprogramming can lead to an anti-inflammatory profile that will boost resolution of inflammation.