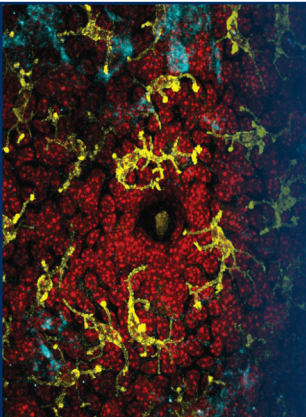




Regulation and Dysregulation of Innate Immunity in Disease

February 18–22, 2018 | Fairmont Hotel Vancouver | Vancouver, British Columbia | Canada

Scientific Organizers:

Lynda M. Stuart, Bill & Melinda Gates Foundation, USA

Kathryn J. Moore, New York University Medical Center, USA

Kate L. Jeffrey, Massachusetts General Hospital, Harvard Medical School, USA

The innate immune system is fundamental to protect us from pathogens. Although the core components were first elucidated in model organisms such as Drosophila and mice, exactly how they are regulated in human health and contribute to disease remains to be fully defined. Over the past several years, our ability to study the innate immune response has been enabled by a number of transformative tools that can be used to assess gene expression, cellular physiology and gene function. Such technological advances have begun to reveal new components of the innate immune system and have led to a better understanding of its regulation and dysregulation. Importantly, these new insights have allowed us to better understand the pathophysiological basis of certain human diseases and to identify new therapeutic targets to alleviate them. This conference aims to gather different viewpoints on the field of innate immunity to discuss advances in signaling and regulatory networks and to understand how their dysregulation contributes to immunopathologies and auto-inflammatory conditions.

Session Topics:

- Looking for More: Screening in the Innate Immune System
- Gene Regulatory Networks in Innate Immunity
- Epigenetic Regulation of Host Defense
- Innate Defense at the Mucosa
- Entraining Immunity
- Metabolic Control of Innate Immune Cells
- In the Balance: Immunodeficiencies and Auto-Inflammation
- Pyroptosis, Necroptosis and Inflammatory Death

Scholarship Application & Discounted Abstract Deadline: October 18, 2017

Abstract Deadline: November 16, 2017

Discounted Registration Deadline: December 18, 2017



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Upper image of T immune cells surrounding hair follicles in mouse skin courtesy of National Institute of Allergy and Infectious Diseases, NIH

Meeting Hashtag: #KSinnateimm

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KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Regulation and Dysregulation of Innate Immunity in Disease (B9)

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SUNDAY, FEBRUARY 18

Arrival and Registration

MONDAY, FEBRUARY 19

Welcome and Keynote Address

Kate A. Fitzgerald, University of Massachusetts Medical School, USA
Regulation of Inflammation by Non-Coding RNAs and Nucleic Acid Binding Proteins

Looking for More: Screening in the Innate Immune System

Ido Amit†, Weizmann Institute, Israel
Talk Title to be Announced

Lynda M. Stuart, Bill & Melinda Gates Foundation, USA
Transposon Mutagenesis Screens for Host Resistance

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Gene Regulatory Networks in Innate Immunity

Julian C. Knight, University of Oxford, UK
Insights into Regulation of Innate Immune Responses Leveraging Human Genetic Variation

Alex K. Shalek, Massachusetts Institute of Technology, USA
Learning More by Looking at Less – Single Cell Analyses of Pathogen Responses

Matthew L. Albert, Genentech, Inc., USA
Geographical Variations in the Human Innate Immune Response to Pathogens

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 20

Epigenetic Regulation of Host Defense

Kate L. Jeffrey, Massachusetts General Hospital, Harvard Medical School, USA

Loss of Epigenome Reader SP140 Disrupts Macrophage Transcriptional Programs and Contributes to Crohn's Disease

Gioacchino Natoli, IEO, European Institute of Oncology, Italy
Genomic Landscapes in Inflammation

Mélanie Hamon, Institut Pasteur, France
Streptococcus Pneumoniae Induced Epigenetic Alterations

Stephen T. Smale, University of California, Los Angeles, USA
Molecular Mechanisms Regulating Stimulus-Specific Transcriptional Cascades

Short Talk(s) Chosen from Abstracts

Innate Defense at the Mucosa

Ramnik Xavier, Massachusetts General Hospital and Broad Institute, USA

Different LPS Exposures Instructs Immune Fate

P'ng Loke, New York University School of Medicine, USA
Alternatively Activated Macrophages of Tissue or Monocyte Origin

Daniel Mucida, Rockefeller University, USA
Tissue Adaptation of Intestinal Macrophages

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 21

Entraining Immunity

Mihai G. Netea, Radboud University, Netherlands
Trained Immunity: A Memory for Innate Host Defense

Judith E. Allen, University of Manchester, UK
Macrophage Education on Site

Eicke Latz, University of Bonn, Germany
Innate Immune Memory of Western Diet

Musa M. Mhlanga, University of Cape Town, South Africa
Immune Genes are Primed for Rapid Transcription by Proximal lncRNAs Located in Preformed Nuclear Compartments

Short Talk(s) Chosen from Abstracts

Metabolic Control of Innate Immune Cells

Kathryn J. Moore, New York University Medical Center, USA
Non-coding RNAs Coordinate the Physiology of Innate Immune Cells

Edward J. Pearce, Max Planck Institute of Immunobiology and Epigenetics, Germany
Metabolic Control of Myeloid Responses

Javier E. Irazoqui, University of Massachusetts Medical School, USA
TFEB: From Lysosome Storage to Innate Defense

Short Talk Chosen from Abstracts

THURSDAY, FEBRUARY 22

In the Balance: Immunodeficiencies and Auto-Inflammation

Catherine (Lynn) Hedrick, La Jolla Institute for Allergy and Immunology, USA
Human Monocyte Heterogeneity as Revealed by High Dimensional Mass Cytometry

Andrew Oberst, University of Washington, USA
The RIP Kinases as Modulators of Inflammation and Immunity

Kim Newton, Genentech, Inc., USA
Cell Death as a Driver of Inflammation

Virginia Pascual, Cornell University, USA
Talk Title to be Announced

Short Talk(s) Chosen from Abstracts

Pyroptosis, Necroptosis and Inflammatory Death

Thirumala-Devi Kanneganti, St. Jude Children's Research Hospital, USA

Regulation of Inflammasome Activation and Cell Death

Julie Magarian Blander, Weill Cornell Medicine, Cornell University, USA

Phagocyte Responses to Dying Cells

Vishva M. Dixit, Genentech, Inc., USA
Gasdermin-D: How to Punch Holes in a Dying Cell

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

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FRIDAY, FEBRUARY 23

Departure