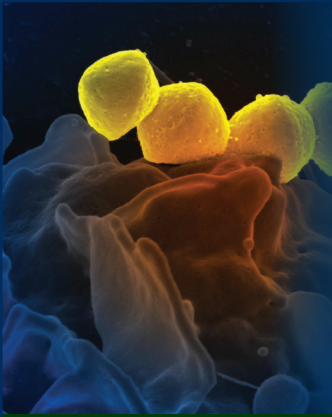




Myeloid Cells

April 8–12, 2018 | Beaver Run Resort | Breckenridge, Colorado | USA

Scientific Organizers:

Edward J. Pearce, Max Planck Institute of Immunobiology and Epigenetics, Germany

Florent Ginhoux, Singapore Immunology Network, Singapore

Ana-Maria Lennon-Duménil, Curie Institute, France

This Keystone Symposia conference is the eighth in a series of related Keystone Symposia conferences that have played a pivotal role in emphasizing and focusing myeloid cell research. High-throughput approaches are revealing previously unappreciated complexity in myeloid cell development and function. This ninth meeting focuses on addressing these issues at the basic levels of ontogeny and cellular activation, in the areas of niche specialization, cell/cell interactions, tissue repair, regeneration and development, and infectious and neoplastic disease. The goals of the conference are to bring together interdisciplinary groups of researchers to attempt to reveal areas of research synergy in a rapidly evolving field, and to generate a vision of critical areas of future research on myeloid cells. The meeting includes a focus on disease that will serve to emphasize the medical relevance of myeloid cell research. Emphasis on the application of cutting-edge immunological approaches in omics, imaging and cell biology makes the conference of general interest to scientists working in these areas of basic and clinical research.

Session Topics:

- Ontogeny and Differentiation
- Priming and Tolerance
- Inflammation
- Regeneration/Repair/Development
- Activation
- Cancer
- Niche Specialization
- Myeloid Crosstalk

Scholarship Application & Discounted Abstract Deadline: December 7, 2017

Abstract Deadline: January 9, 2018

Discounted Registration Deadline: February 7, 2018



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 Group A Streptococcus (Streptococcus pyogenes) bacteria on primary human neutrophil courtesy of National Institute of Allergy and Infectious Diseases, NIH

Meeting Hashtag: #KSmyeloid

www.keystonesymposia.org/18D2

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SUNDAY, APRIL 8

Arrival and Registration

MONDAY, APRIL 9

Welcome and Keynote Address

Kenneth M. Murphy, HHMI/Washington University School of Medicine, USA
Dendritic Cell Differentiation

Ontogeny and Differentiation

Florent Ginhoux, Singapore Immunology Network, Singapore
Human Dendritic Cells: From Development to Functions

Joachim L. Schultze, LIMES Institute, University of Bonn, Germany
Human Monocytes, Monocyte-derived Cells, Dendritic Cells and Tissue Macrophages Revisited

Ido Amit, Weizmann Institute, Israel
The power of ONE: Immunology in the age of single cell genomics

Venetia Bigley, Newcastle University, UK
Short Talk: Differential IRF8 Requirement Defines two Pathways of Human Dendritic Cell Development in vivo

Lai Guan Ng†, Singapore Immunology Network, Singapore
Short Talk: Developmental Analysis of Bone Marrow Neutrophils Reveals Populations Specialized in Expansion, Trafficking and Effector Functions

Workshop 1: Infection

Lu Huang, Cornell University, USA
Different Macrophage Lineages Exhibit Distinct Metabolic States and Support Differential Growth of Mycobacterium tuberculosis in vivo

Livia Lacerda†, Institut Pasteur, France
Novel Macrophage Subsets Differentially Impact Bladder Immunity to Uropathogen Infection

Sang Hun Lee†, NIAID, National Institutes of Health, USA
Mannose Receptor (MRhi), M2 Dermal Macrophages Mediate Non-Healing Leishmania Major Infection in a TH1immune Environment

Rejane Rua, NIH, USA
Infection and Natural Inflammatory Aging Drive Monocyte Engraftment into the Meninges that Impairs CNS Immunity

Nan Zhang†, Washington University in St. Louis, USA
Clotting Initiated by Factor V+ Resident Peritoneal Macrophages Rapidly Limits Systemic Microbial Dissemination and Accounts for the "Macrophage Disappearance Reaction"

Bibo Zhu, Mayo Clinic, USA
Reciprocal Regulation of Lung Resident Alveolar Macrophage Function and Repopulation by β -Catenin and PPAR- γ Dictates Host Morbidity and Tissue Recovery from Respiratory Viral Infection

Priming and Tolerance

Martin Guilliams, Ghent University - VIB, Belgium
Talk Title to be Announced

Caetano Reis e Sousa, Francis Crick Institute, UK
Dendritic Cells as Drivers of Immunity

Jordi C. Ochando, Mount Sinai School of Medicine, USA
Preventing Trained Immunity Promotes Immunological Tolerance

Anders Etzerodt, Aarhus University, Denmark
Short Talk: Tissue-Resident Macrophages in Omentum Play a Key Role in Development of Metastatic Ovarian Cancer

Poster Session 1

TUESDAY, APRIL 10

Inflammation

Andrés Hidalgo, Fundación CNIC, Spain
Rhythms of Neutrophils in Homeostasis

Mariana J. Kaplan, National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, USA
Neutrophils in Autoimmune Diseases

Mihai G. Netea, Radboud University, Netherlands
Innate Immunity in Sepsis

William C. Gause, Rutgers New Jersey Medical School, USA
Macrophage and Neutrophil Interactions during Pulmonary Inflammation

Andreas Schlitzer, University of Bonn, Germany
Short Talk: Lung-Specific Innate Immune Memory Controls Reactivity of Mononuclear Phagocytes to Acute and Chronic Inflammation

WonJae Lee, University of Texas MD Anderson Cancer Center, USA
Short Talk: Tumor-Induced Neutrophil Extracellular Traps Promote Formation of the Pre-Metastatic Niche in Ovarian Cancer

Regeneration/Repair/Development

Paul Martin, University of Bristol, UK
Live Imaging Inflammation in Wound Healing and Cancer

Sonia Garel, INSERM, France
Microglia and Neurons Interactions during Development

Limin Shang, Novimmune SA, Switzerland
Selective CD47 Targeting to Harness Macrophage Activity to Control Tumor Growth

Guillaume Dumenil, PARCC, France
Short Talk: Neisseria Meningitidis Detection by Perivascular Macrophages Fails to Recruit Neutrophils Sufficiently Early to Control Vascular Damages

Poster Session 2

WEDNESDAY, APRIL 11

Activation

Luke A. J. O'Neill, Trinity Biomedical Sciences Institute, Ireland
Krebs Cycle Repurposed for Cytokines in Macrophages

Edward J. Pearce, Max Planck Institute of Immunobiology and Epigenetics, Germany
Metabolic Control of Alternative Macrophage Activation

Ana-Maria Lennon-Duménil, Curie Institute, France
A Unique Population of Intra-Epithelial Dendritic Cells Restricted to the Upper Region of the Small Intestine

Rab K. Prinjha, GlaxoSmithKline, UK
Epigenetic Changes during Activation

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Philippe J. Benaroch, Institut Curie, INSERM, France
Short Talk: Siglec-1 Expression by Human Dendritic Cell Precursors Enables HIV-1 Replication and Dissemination to CD4+ T Cells
Brian T. Edelson, Washington University School of Medicine, USA
Short Talk: The Transcription Factor Bhlhe40 Regulates Large Peritoneal Macrophages and Type 2 Immunity

Workshop 2: Cancer

Faezzah Baharom, National Institutes of Health, USA
Targeting Dendritic Cells and Monocytes with a Nanoparticle Neoantigen-TLR7/8 Agonist Vaccine Induces Anti-Tumor CD8 T Cell Immunity
Katherine Bremel, Seattle Children's Research Institute, USA
Genetically Engineered Macrophages as an Immunotherapy for Solid Tumors
Mytrang Do†, Weill Cornell Medical College, USA
mTORC1- Dependent Regulation of Macrophage Response in Tumor
Hiroki Ishii†, National Cancer Institute, USA
miR-130a and -145 Reprogram Myeloid Derived Suppressor Cells and Enhance Anti-Tumor Immunity
Sarah E. Corcoran†, Ireland
The Small Molecule NLRP3 Inhibitor MCC950 Potently Inhibits the Production of the Mature Forms of Caspase 1, IL-1b and IL-18 ex Vivo in PBMCs from Familial Cold Autoinflammatory Syndrome (FCAS) Patients
Karen Olivia Dixon, Harvard Medical School/Brigham and Women's Hospital, USA
The Co-Inhibitory Molecule TIGIT Contributes to Suppressor Function of Dendritic Cells
Hai Huang†, University of Pittsburgh, USA
Neutrophil Extracellular Traps Promote Inflammation and Hepatocellular Carcinoma in Nonalcoholic Steatohepatitis

Cancer

Romina S. Goldszmid, NCI, National Institutes of Health, USA
Microbiota: Key Modulator of the Tumor Microenvironment
Catherine (Lynn) Hedrick, La Jolla Institute for Allergy and Immunology, USA
Monocytes in Tumor Metastasis
Matthew F. Krummel, University of California, San Francisco, USA
Imaging of Myeloid Cell in Tumors
Julie Helft†, Institut Curie, France
Short Talk: High Dimensional Analysis of the Myeloid Cell Landscape in Human Breast Cancer Metastatic Lymph Nodes

Poster Session 3

THURSDAY, APRIL 12

Niche Specialization

Alison Clare Lloyd, University College London, UK
The Role of Macrophages in Peripheral Nerve Homeostasis and Regeneration
Clint S. Robbins, Toronto General Research Institute, Canada
The Microbiome and Tissue Macrophage Dynamics

Gwendalyn J. Randolph, Washington University, USA
Serosal Macrophages
Steffen Jung, Weizmann Institute of Science, Israel
Studying Microglia and BM Graft-derived CNS Macrophages - Transcriptomes, Epigenomes and Responsiveness to Challenge
Daniel R. Saban†, Duke University School of Medicine, USA
Short Talk: A Novel Microglia-Restricted Niche in the Retina Is Associated with Neuroprotection
Sebastiaan De Schepper, KU Leuven, Belgium
Short Talk: Self-Maintaining Embryonic Gut Macrophages are Essential for Intestinal Homeostasis

Workshop 3: Ontogeny/Different Tissue Populations

Anna E. Beaudin, University of California, Merced, USA
Regulation of Tissue Resident Macrophage Development by IL7R
Sarah A. Dick, University Health Network, Canada
Using Single Cell Genomics and Genetic Fate Mapping to Define Cardiac Macrophage Heterogeneity and Cardioprotective Functions
Laufey Geirsdottir†, Uniklinik Freiburg, Germany
What Makes a Microglia? Comparing Relatives in the Molecular Age
Rebecca Gentek, Centre d'Immunologie de Marseille-Luminy CIML, France
Tissue Resident Mast Cells are of Dual Hematopoietic Origin
Chang Liu, National Heart, Lung, and Blood Institute, USA
Distribution and Functions of Embryonic Microglial cells in the Immunoprivileged Central Nervous System
Zhaoyuan Liu, Shanghai Jiao Tong University, China
A Universal Fate Mapper Mouse Model of Blood Circulating Monocytes

Myeloid Crosstalk

Venizelos Papayannopoulos, Francis Crick Institute, UK
Neutrophils in the Regulation of Inflammation
Daniel Robert Engel, Institute of Experimental Immunology and Imaging, Germany
Myeloid Cells at Mucosal Sites
Tim Lämmermann, Max Planck Institute of Immunobiology and Epigenetics, Germany
Myeloid Cell Dynamics at Local Sites of Inflammation, Infection and Anaphylaxis

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

FRIDAY, APRIL 13

Departure