

Keystone Symposia at Lake Tahoe

Transcription and RNA Regulation in Inflammation and Immunity

Granlibakken Tahoe | Lake Tahoe, California, USA | February 2–5, 2019

Scientific Organizers:

Silvia Monticelli, Institute for Research in Biomedicine, Switzerland

K. Mark Ansel, University of California, San Francisco, USA

Sarah Teichmann, Wellcome Sanger Institute, UK

Gioacchino Natoli, Humanitas University, Italy

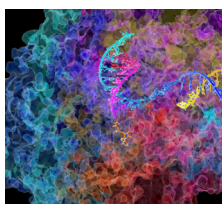
The immune system is a heavily armed but carefully tuned defense that must mount protective responses against invading pathogens, while at the same time avoiding excessive inflammation and inappropriate responses that can lead to severe tissue damage and disease. Properly regulated immune responses are the result of a complex interplay between chromatin modifications, transcription factors and post-transcriptional regulators that operate collectively within each cell to regulate the gene expression programs that control immune cell differentiation, maintenance of cell identity, and the orchestration of functional responses in a dynamic environment. Recent technical advances in genomics and single-cell analyses have brought new ideas and perspectives to investigation of the regulation of gene expression, and our understanding of the mechanisms and regulatory networks that operate in the immune system is advancing at an unprecedented rate. This conference will be important to define the most impactful open questions and future challenges in the field of transcriptional and post-transcriptional control of immune cells, and it will bring together rapidly expanding and evolving communities. The exchange of scientific knowledge and technical capabilities will foster opportunities for collaborations and interdisciplinary interactions among groups of scientists working on disparate aspects of regulation of gene expression in inflammation and immunity, highlighting the latest innovations and discoveries while shaping future directions for the field.

Plenary Session Topics:

- Transcriptional Mechanisms of Immune Cell Development
- Workshop 1
- Single Cell Approaches to Immune System Complexity
- Transcriptional and Epigenomic Control of Immune Responses
- Workshop 2: The 3D Genome: Long-Range Interactions in Immune System Development and Function
- Pathologic Dysregulation of Transcription
- Noncoding Genome and Post-Transcriptional Control in Immunity
- Workshop 3
- RNA Binding Proteins and RNA Methylation in Immunity

Abstract Deadline: Oct 30, 2018; Discounted Registration Deadline: Nov 29, 2018

Visit www.keystonesymposia.org/19B1 for more details.



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Transcription and RNA Regulation in Inflammation and Immunity (B1)

February 2-5, 2019 • Granlibakken Tahoe • Tahoe City, California, USA

Scientific Organizers: Silvia Monticelli, K. Mark Ansel, Sarah Teichmann and Gioacchino Natoli

Supported by the Directors' Fund

Abstract & Scholarship Deadline: October 18, 2018 / Abstract Deadline: October 30, 2018 / Discounted Registration Deadline: November 29, 2018

SATURDAY, FEBRUARY 2

Arrival and Registration

SUNDAY, FEBRUARY 3

Welcome and Keynote Address

Stephen T. Smale, University of California, Los Angeles, USA
Bridging the Layers: An Integrative Approach to Transcriptional Regulation of Inflammation

Transcriptional Mechanisms of Immune Cell Development

Ellen V. Rothenberg, California Institute of Technology, USA
Transcriptional Control of Lineage Choice in Lymphocyte Commitment

Dan R. Littman, HHMI/New York University School of Medicine, USA
Interplay between Immune System Development and the Intestinal Microbiome

Amanda G. Fisher, MRC Clinical Sciences Centre, Imperial College London, UK

Talk Title to be Announced

Short Talk(s) Chosen from Abstracts

Workshop 1

Short Talks Chosen from Abstracts

Single Cell Approaches to Immune System Complexity

Sarah Teichmann, Wellcome Sanger Institute, UK
Single-Cell Transcriptional Analyses in Adaptive Immunity

Ido Amit, Weizmann Institute, Israel
The power of ONE: Immunology in The Age of Single Cell Genomics

Muzlifah A. Haniffa, Newcastle University, UK
Functional Heterogeneity of Human Mononuclear Phagocytes

Short Talk(s) Chosen from Abstracts

Poster Session 1

MONDAY, FEBRUARY 4

Transcriptional and Epigenomic Control of Immune Responses

Anjana Rao, La Jolla Institute for Allergy and Immunology, USA
TET methylcytosine oxidases, immune responses and cancer

John J. O'Shea, NIAMS, National Institutes of Health, USA
Genomic Views of Lymphocyte Differentiation and Activation

Gioacchino Natoli, Humanitas University, Italy
The Macrophage Epigenome and Inflammatory Gene Expression

Christopher K. Glass, University of California, San Diego, USA
Roles of Tissue Environment in Shaping Macrophage Identities in Health and Disease

Short Talk(s) Chosen from Abstracts

Workshop 2: The 3D-Genome: Long-Range Interactions in Immune System Development and Function

Short Talks Chosen from Abstracts

Pathologic Dysregulation of Transcription

Rab K. Prinjha, GlaxoSmithKline, UK
Epigenetic Drug Discovery

Alex Marson, University of California, San Francisco, USA
Reprogramming Human Immune Cell Circuitry

Andrea Schietinger, Memorial Sloan Kettering Cancer Center, USA
Transcription Factors and Epigenetic Programs in Cancer Immunology

Short Talk(s) Chosen from Abstracts

Poster Session 2

TUESDAY, FEBRUARY 5

Non-Coding Genome and Post-Transcriptional Control in Immunity

K. Mark Ansel, University of California, San Francisco, USA
Mapping RNA Interfaces, Fate and Function in Lymphocytes

Silvia Monticelli, Institute for Research in Biomedicine, Switzerland
Transcriptional and Posttranscriptional Regulation of Human T Lymphocyte Pathogenic Potential

Jorge Henao-Mejia, University of Pennsylvania and Children's Hospital of Philadelphia, USA
Long Non-Coding RNAs

Kate A. Fitzgerald, University of Massachusetts Medical School, USA
Long Non-Coding RNAs

Short Talk(s) Chosen from Abstracts

Workshop 3

Short Talks Chosen from Abstracts

RNA Binding Proteins and RNA Methylation in Immunity

Martin Turner, Babraham Institute, UK
RNA-Binding Proteins as Regulatory Elements of the Immune System

Vigo Heissmeyer, University of Munich, Germany
Cooperative Regulation of T Cell Fate Decisions by RNA-Binding Proteins

Richard A. Flavell, HHMI/Yale University School of Medicine, USA
New Guardians of Mucosal Immunity

Short Talk Chosen from Abstracts

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

WEDNESDAY, FEBRUARY 6

Departure