



FRONTIERS IN BASIC IMMUNOLOGY 2023

September 27–28

AGENDA

WEDNESDAY, SEPTEMBER 27, 2023

8:30 a.m. **Welcome Remarks**
Glenn Merlino, Ph.D., Scientific Director for Basic Research, Center for Cancer Research, NCI

8:40 a.m. **Welcome Remarks**
Naomi Taylor, M.D., Ph.D., Center for Cancer Research, NCI

SESSION 1 **Immune Cell Development, Thymus-Style**
Chairs: Christian Mayer, Ph.D., and Stanley Adoro, Ph.D.

8:45 a.m. **Transcriptional Determination of T Lineage Fate**
Alfred Singer, M.D., Center for Cancer Research, NCI

9:05 a.m. **CD4 T Cell Differentiation, in the Thymus and Beyond**
Rémy Bosselut, M.D., Ph.D., Center for Cancer Research, NCI

9:25 a.m. **Thymic Formation of CD8 T Cell Repertoire**
Yousuke Takahama, Ph.D., Center for Cancer Research, NCI

9:45 a.m. **The Anatomy, Regulation, and Function of Glucocorticoids Produced in the Thymus**
Jonathan Ashwell, M.D., Center for Cancer Research, NCI

10:05 a.m. **BREAK**

10:35 a.m. **The Role of the Transcription Factor BRD4 in Thymic Development**
Dinah Singer, Ph.D., Center for Cancer Research, NCI

10:55 a.m. **Notch1 Sets the Molecular Clock for T Cell Development**
Roxane Tussiwand, Ph.D., Center for Cancer Research, NCI

11:05 a.m. **Gene Regulatory Mechanisms Establishing T-Cell Identity**
Ellen Rothenberg, Ph.D., California Institute of Technology

11:30 a.m. **LUNCH BREAK AND POSTER SESSION**

SESSION 2 **Immunity-Pathophysiology Crosstalk**
Chairs: Alfred Singer, M.D., and Avinash Bhandoola, Ph.D.

12:45 p.m. **Not Done Yet: Unexpected Facets of Complement Activities in Cell Physiology**
Claudia Kemper, Ph.D., National Heart, Lung, and Blood Institute, NIH

1:05 p.m. **Immune-Mediated Mechanisms of Adaptive and Maladaptive Tissue Responses**
Shruti Naik, Ph.D., New York University

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AGENDA (CONTINUED)

- 1:30 p.m. **EGR2: Steering Pathogenic Th17 Cell Function in CNS Autoimmune Disease**
Vanja Lazarevic, Ph.D., Center for Cancer Research, NCI
- 1:50 p.m. **Immune Calibration of Neuroendocrine Homeostasis**
Chuan Wu, M.D., Ph.D., Center for Cancer Research, NCI
- 2:10 p.m. **Neuroimmune Interactions in Enteric Nervous System**
Vijay Kuchroo, DVM., Ph.D., Harvard Medical School
- 2:35 p.m. **BREAK**
- SESSION 3 Cancer Immunology: Part 1**
Chairs: Pamela L Schwartzberg, M.D., Ph.D. and Hyun Park, Ph.D.
- 3:05 p.m. **The Role of the Intestinal Microbiome in Cancer Immunotherapy**
Marcel van den Brink, M.D., Ph.D., Memorial Sloan Kettering Cancer Center
- 3:30 p.m. **Understanding Microbiota Regulation of the Tumor Microenvironment and Response to Cancer Therapy**
Romina Goldszmid, Ph.D., Center for Cancer Research, NCI
- 3:50 p.m. **Turning the Table on Oncogenic Herpesviruses: Vaccination with a Gammaherpesvirus with Targeted Mutations in Genes Required for Replication and Latency Protects Against Wild-Type Virus Pathogenesis in the Host**
Laurie Krug, Ph.D., Center for Cancer Research, NCI
- 4:10 p.m. **Discovery of Novel Epigenetic Mechanisms that Control T Cell-Mediated Tumor Immunity**
Kai Wucherpfenning, M.D., Ph.D., Dana-Farber Cancer Institute

THURSDAY, SEPTEMBER 28, 2023

- SESSION 4 Innate Immunity**
Chairs: Romina Goldszmid, Ph.D., and Vanya Lazarevic, Ph.D.
- 8:30 a.m. **Innate Lymphoid Cells: Development, Differentiation, and Dynamics**
James Di Santo, M.D., Ph.D., Pasteur Institute
- 8:55 a.m. **Different Developmental Pathways Generate Functionally Distinct Populations of Natural Killer Cells**
Avinash Bhandoola, M.B., B.S., Ph.D., Center for Cancer Research, NCI
- 9:15 a.m. **The Cytokine Receptor DR3 Controls iNKT Cell Immunity**
Hyun Park, Ph.D., Center for Cancer Research, NCI
- 9:35 a.m. **Memory Responses by Innate T Cells**
Mitchell Kronenberg, Ph.D., La Jolla Institute for Immunology
- 10:00 a.m. **Regulation of Barrier Immunity**
David Artis, Ph.D., Weill Cornell Medical School
- 10:25 a.m. **BREAK**
- SESSION 5 Immune Cell Signaling**
Chairs: Laurie Krug, Ph.D., and Jonathan Ashwell, M.D.
- 10:55 a.m. **Dynamic Membrane Changes Controlling TCR Signaling**
Gillian Griffiths, FMedSci, FRS, Cambridge University
- 11:20 a.m. **Apoptosis and B Lymphocyte Repertoire Selection**
Christian Mayer, Ph.D., Center for Cancer Research, NCI

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AGENDA (CONTINUED)

- 11:40 a.m. **Defining the Role of Lck-Coreceptor Association in T Cell Receptor Signaling and Fate Specification**
Nicole La Gruta, Ph.D., Monash University
- 12:05 p.m. **Formation of the Tetrameric Protein Complex Containing Phospholipase-Cy1 During T Cell Activation**
Lawrence Samelson, M.D., Center for Cancer Research, NCI
- 12:25 p.m. **LUNCH BREAK AND POSTER SESSION**
- SESSION 6 Immune Cell Function**
Chairs: Daniel McVicar, Ph.D., and Chuan Wu, M.D., Ph.D.
- 1:40 p.m. **PI3 Kinase and Balancing T Cell Activation Under Exhaustion**
Pamela Schwartzberg, M.D., Ph.D., National Institute of Allergy and Infectious Diseases, NIH
- 2:00 p.m. **A Proteostasis Link to Cell Autonomous T Cell Dysfunction**
Stanley Adoro, Ph.D., Center for Cancer Research, NCI
- 2:20 p.m. **Nutrient-Driven Proliferation in Mucosal Germinal Centers**
Jagan Muppidi, M.D., Ph.D., Center for Cancer Research, NCI
- 2:40 p.m. **BREAK**
- SESSION 7 Cancer Immunology: Part 2**
Chairs: Dinah Singer, Ph.D., and Jagan Muppidi, M.D., Ph.D.
- 3:10 p.m. **LAG3: The Third Checkpoint Inhibitor**
Dario Vignali, Ph.D., University of Pittsburgh
- 3:35 p.m. **A Role for Aco1-Mediated Itaconate in Cancer and Metabolic Disease**
Daniel McVicar, Ph.D., Center for Cancer Research, NCI
- 3:55 p.m. **Steering Cancer Immunotherapies in the High-Dimensional Space of Leukocyte Activation**
Grégoire Altan-Bonnet, Ph.D., Center for Cancer Research, NCI
- 4:15 p.m. **Metabolic Crosstalk in T Lymphocyte Effector Function**
Naomi Taylor, M.D., Ph.D., Center for Cancer Research, NCI
- 4:35 p.m. **Closing Remarks**