MONDAY, JANUARY 25

Welcoming Remarks and Keynote Address (8am Denver/Mountain Time Start) (EK16)

* Diane Mathis, Harvard Medical School, USA
  Session Chair
* Marc Y. Donath, University Hospital Basel, Switzerland
  Session Chair
Bruce M. Spiegelman, Dana-Farber Cancer Institute, USA
Adipose Inflammation: Many Players and Many Regulatory Functions

Welcoming Remarks and Keynote Address (8am Denver/Mountain Time Start) (EK14)

* Erik A. Sahai, Francis Crick Institute, UK
  Session Chair
* Alec Kimmelman, New York University Langone Medical Center, USA
  Session Chair
* Johanna A. Joyce, University of Lausanne, Switzerland
  Session Chair
Matthew G. Vander Heiden, Massachusetts Institute of Technology, USA
Impact of Nutrient Availability on Cancer Metabolic Dependencies

Immunometabolism: The Metabolic View (8:40am Denver/Mountain Time Start) (EK16)

* Janelle S. Ayres, The Salk Institute for Biological Studies, USA
  Session Chair
* Diane Mathis, Harvard Medical School, USA
  Control of Metabolism by Immune Cells
Vishwa Deep Dixit, Yale University, USA
Immunometabolic Regulation of Aging
Ana Domingos, University of Oxford, UK
Neuroimmunometabolism
Emily Vohralik, UNSW Sydney, Australia
Short Talk: Regulation of Adipose Tissue Beiging by Krüppel-Like Factor 3 (KLF3) and Eosinophils

Metabolic Effects on the Immune System (8:40am Denver/Mountain Time Start) (EK14)

* Erik A. Sahai, Francis Crick Institute, UK
  Session Chair
* M. Celeste Simon, University of Pennsylvania, USA
  Metabolic Symbioses in Stressful Tumor Microenvironments
Costas A. Lyssiotis, University of Michigan, USA
Metabolic Networks in the Tumor Microenvironment
Siva Karthik Varanasi, The Salk Institute for Biological Studies, USA
Short Talk: Tumor Metabolism Shapes Antigen Presentation and Adaptive Immune Responses

Hilary A. Coller, University of California, Los Angeles, USA
Short Talk: Cancer-Associated Stroma Requires Autophagy to Promote Tumor Growth by Maintaining Melanoma-Associated Fibroblasts and Suppressing Th1-Type Immune Responses
Eline C. Brombacher, LUMC, Netherlands
Short Talk: Activation of Nutrient-Sensor AMPK in Tumor-Associated Dendritic Cells Promotes Tolerogenic Responses and Compromises the Anti-Tumor Immunity

The CNS Microenvironment (10:45am Denver/Mountain Time Start) (EK14)

* Alec Kimmelman, New York University Langone Medical Center, USA
  Session Chair
Frank Winkler, University Hospital Heidelberg, Germany
Brain Tumor Cells Interconnect to a Functional and Resistant Network
Johanna A. Joyce, University of Lausanne, Switzerland
Charting the Immune Landscape across Diverse Brain Cancers
* Michael E. Pacold, New York University Medical Center, USA
  Brain Metastasis Adaptation to the Metabolic Niche of the Central Nervous System
Gino Ferraro, Harvard Medical School, Massachusetts General Hospital, USA
Short Talk: Fatty Acid Synthesis is Required for Breast Cancer Brain Metastasis

Immunometabolism: The Immunologist View (10:20am Denver/Mountain Time Start) (EK16)

* Vishwa Deep Dixit, Yale University, USA
  Session Chair
Christoph Hess, University Hospital Basel/University of Cambridge, Switzerland
From Patient to Molecular Understanding of Immunometabolism
Luke A. J. O'Neill, Trinity Biomedical Sciences Institute, Ireland
Krebs Cycle Repurposed for Cytokines
Janelle S. Ayres, The Salk Institute for Biological Studies, USA
Metabolic Adaptations in Host-Microbe Interactions
* Ruth A. Franklin, Harvard University, USA
  Stress Responses and Disease Tolerance
Katrin Andreasson, Stanford University, USA
Short Talk: Metabolic Reprogramming of Myeloid Cells Reverses Cognitive Decline in Aging

Meet the Editors (Joint) (2pm Denver/Mountain Time Start)
Ubaldo E. Martinez Outschoorn, Thomas Jefferson University/Frontiers, USA
Stephanie Ailsa Houston, Journal of Experimental Medicine, USA
Lise Roth, European Molecular Biology Organization, Germany

* Session Chair † Invited but not yet accepted     Program current as of January 8, 2024.
For the most up-to-date details, visit https://www.keystonesymposia.org.
**Catarina Sacristán**, Cell Press, USA

**TUESDAY, JANUARY 26**

**Clinical Translation: Unmet Needs (8am Denver/Mountain Time Start) (EK16)**

Session Chair
*Morris J. Birnbaum*, Retired Pfizer, Inc., USA  
Session Chair
*Maria Mesquida*, F. Hoffmann-La Roche Ltd, Switzerland  
*Marc Y. Donath*, University Hospital Basel, Switzerland  
IL-1beta in Physiology and Treatment of Metabolic Diseases
*Tom Thuren*, Novartis Pharmaceuticals, USA  
Requirement to Implement Anti-Inflammatory Treatment of Cardiometabolic Diseases
*Elena Carcarino*, INSERM, France  
Short Talk: Epigenomic Regulation of IL-1B Enhancers in Type 2 Diabetes

**Metastatic Colonisation (8am Denver/Mountain Time Start) (EK14)**

*Johanna A. Joyce*, University of Lausanne, Switzerland  
Session Chair
*Ruth Scherz-Shouval*, Weizmann Institute of Science, Israel  
Session Chair
*Sarah-Maria Fendt*, VIB-KU Leuven, Belgium  
Metabolic Rewiring Boosting Metastasis Formation
*Mikala Egeblad*, Cold Spring Harbor Laboratory, USA  
Activating a Collaborative Innate-Adaptive Immune Response to Restrain Metastasis
*Matthew F. Krummel*, University of California, San Francisco, USA  
Imaging the Tumor Microenvironment in Five Dimensions
*Heather Christofk*, University of California, Los Angeles, USA  
Targeting Cancer Asparagine Dependence
*Kevin B. Walsh*, Genentech, USA  
Short Talk: VEGF Blockade Augments CD8+ T Cell Activity by Amplifying Tumor Hypoxia

**The Pancreatic Tumor Microenvironment (10:25am Denver/Mountain Time Start) (EK14)**

*Johanna A. Joyce*, University of Lausanne, Switzerland  
Session Chair
*Lewis C. Cantley*, Dana Farber Cancer Institute, USA  
Insulin and Cancer
*Mara H. Sherman*, Memorial Sloan Kettering Cancer Center, USA  
Mechanisms and Consequences of Pancreatic Cancer Stromal Evolution

**Andrea M. Amitrano**, University of Rochester School of Medicine & Dentistry, USA  
Short Talk: Regulation of CD8+ T Cell Metabolism and Migration with Optogenetics
*Patricia Altea Manzano*, VIB-KU Leuven Center for Cancer Biology, Belgium  
[NOT AVAILABLE ON DEMAND] Short Talk: Environmental Fatty Acids Support Changes in Histone Acetylation that Promote Breast Cancer Metastasis
*Felix Hartmann*, Stanford University, USA  
Short Talk: Single-Cell Metabolic Regulome Profiling of Human Immune Cells in the Tumor Microenvironment
*Tanya Schild*, Weill Cornell Medicine, USA  
Short Talk: NADK Regulation by Oncogenic KRAS Signaling is Essential for PDAC

**Insulin Production and Action (10:00am Denver/Mountain Time Start) (EK16)**

*Marc Y. Donath*, University Hospital Basel, Switzerland  
Session Chair
*Alan R. Saltiel*, University of California, San Diego, USA  
Inflammatory Links Between Obesity and Energy Metabolism
*Bruce Verchere*, University of British Columbia, Canada  
Islet Amyloid Polypeptide and Islet Inflammation
*Elise Dalmas*, INSERM, France  
Innate Immunity in the Pancreatic Islet Niche
*Feyza Engin*, University of Wisconsin-Madison, USA  
Short Talk: Targeting Beta Cell Unfolded Protein Response in Type 1 Diabetes
*Katia Monsorno*, University of Lausanne, Switzerland  
Short Talk: Lactate Metabolism in the Control of Microglial Function

**Poster Session 1 (12pm Denver/Mountain Time Start)**

**Career Roundtable (Joint) (1pm Denver/Mountain Time Start)**

*Donita C. Brady*, University of Pennsylvania, USA
*Matthew G. Vander Heiden*, Massachusetts Institute of Technology, USA
*Tom Thuren*, Novartis Pharmaceuticals, USA

**WEDNESDAY, JANUARY 27**

**Adipose Tissues (8am Denver/Mountain Time Start) (EK16)**

*Elise Dalmas*, INSERM, France  
Session Chair
*Bruce M. Spiegelman*, Dana-Farber Cancer Institute, USA  
Session Chair

* Program current as of January 8, 2024.*
*For the most up-to-date details, visit [https://www.keystonesymposia.org](https://www.keystonesymposia.org).*

* Session Chair † Invited but not yet accepted
Tumor Metabolism and the Microenvironment (EK14)

Scientific Organizers: Erik A. Sahai, Alec Kimmelman and Johanna A. Joyce

January 25-28, 2021 • Virtual at your computer

Sponsored by AstraZeneca, Cell Research and Gilead Sciences, Inc.

Therapeutic Targeting of Metabolism and the TME (10:10am Denver/Mountain Time Start) (EK14)

Identifying the Metabolic Dependencies of Cancer Cells (8am Denver/Mountain Time Start) (EK14)

Therapeutic Targeting of Metabolism and the TME

Integrating Metabolism and Immunity (EK16)

Scientific Organizers: Marc Y. Donath, Tom Thuren, Bruce M. Spiegelman and Diane Mathis

Sponsored by AbbVie Inc., Astellas Pharma Inc., Cell Research, Merck & Co., Inc. and Novo Nordisk A/S

Keystone Symposia
on Molecular and Cellular Biology

January 25-28, 2021 • Virtual at your computer

Sponsored by AstraZeneca, Cell Research and Gilead Sciences, Inc.
Integrating Metabolism and Immunity (EK16)
Scientific Organizers: Marc Y. Donath, Tom Thuren, Bruce M. Spiegelman and Diane Mathis
Sponsored by AbbVie Inc., Astellas Pharma Inc., Cell Research, Merck & Co., Inc. and Novo Nordisk A/S

Tumor Metabolism and the Microenvironment (EK14)
Scientific Organizers: Erik A. Sahai, Alec Kimmelman and Johanna A. Joyce
January 25-28, 2021 • Virtual at your computer
Sponsored by AstraZeneca, Cell Research and Gilead Sciences, Inc.

Dina Chokr, INSERM, Centre de Recherche des Cordeliers, France
Short Talk: Impact of Histone Lysine Demethylase 6B on Adipose Tissue Macrophage Plasticity

Karin E. de Visser, Netherlands Cancer Institute, Netherlands
How the Genetic Makeup of Breast Cancer Shapes the Immune Landscape

Erik A. Sahai, Francis Crick Institute, UK
Towards a Holistic Understanding of Tumor Architecture

Ruth Scherz-Shouval, Weizmann Institute of Science, Israel
Transcriptional Heterogeneity of Cancer-Associated Fibroblasts in the Tumor Microenvironment

Hannah Bell, University of Michigan, USA
Short Talk: Microbiota Metabolic Exchange Is Critical for Colorectal Cancer Redox Homeostasis and Growth

Christina Schmidt, University of Cambridge, UK
Short Talk: TRACER, a 3D-Model to Study the Influence of the Microenvironment on the Metabolic Profile of Fumarate Hydratase-Deficient Cells

Ralph J. DeBerardinis, University of Texas Southwestern Medical Center, USA
Compartmentalized Metabolism in Physiological States of Growth

Erika L. Pearce, Johns Hopkins University, USA
Metabolic Regulation of the Immune Metabolism

Alec Kimmelman, New York University Langone Medical Center, USA
Metabolic Crosstalk in PDAC

Fabricio Loayza-Puch, German Cancer Research Center, Germany
Short Talk: Dual Ribosome Profiling Uncovers Metabolic Limitations in Distinct Cellular Populations of the Tumor Microenvironment

Marina Fukano, Rosalind & Morris Goodman Cancer Research Centre, McGill University, Canada
[NOT AVAILABLE ON DEMAND] Short Talk: Investigating Intra-Tumour Metabolic Heterogeneity in Triple-Negative Breast Cancer

Closing Remarks (11:50am Denver/Mountain Time Start) (EK16)
Networking Lounge (12pm Denver/Mountain Time Start) (EK16)

*Session Chair † Invited but not yet accepted     Program current as of January 8, 2024.
For the most up-to-date details, visit https://www.keystonesymposia.org.