KEYSTONE SYMPOSIA
on Molecular and Cellular Biology

Tumor Metabolism and the Microenvironment (EK14)
January 25-28, 2021 • Virtual at your computer

Scientific Organizers: Erik A. Sahai, Alec Kimmelman and Johanna A. Joyce
Sponsored by AstraZeneca, Cell Research and Gilead Sciences, Inc.

MONDAY, JANUARY 25

Welcoming Remarks and Keynote Address (8am Denver/Mountain Time Start)
* Erik A. Sahai, Francis Crick Institute, UK
* Alec Kimmelman, New York University Langone Medical Center, USA
* Johanna A. Joyce, University of Lausanne, Switzerland

Matthew G. Vander Heiden, Massachusetts Institute of Technology, USA
Impact of Nutrient Availability on Cancer Metabolic Dependencies

Metabolic Effects on the Immune System (8:40am Denver/Mountain Time Start)
* Erik A. Sahai, Francis Crick Institute, UK
* 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, 275.00
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, 150.00
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)
* Alec Kimmelman, New York University Langone Medical Center, USA
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

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
Catarina Sacristán, Cell Press, USA

TUESDAY, JANUARY 26

Metastatic Colonisation (8am Denver/Mountain Time Start)
* Johanna A. Joyce, University of Lausanne, Switzerland
* Ruth Scherz-Shouval, Weizmann Institute of Science, Israel
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, 275.00
Short Talk: VEGF Blockade Augments CD8+ T Cell Activity by Amplifying Tumor Hypoxia

The Pancreatic Tumor Microenvironment (10:25am Denver/Mountain Time Start)
* Johanna A. Joyce, University of Lausanne, Switzerland
Lewis C. Cantley, Weill Cornell Medicine, USA
* Mara H. Sherman, Oregon Health & Science University, 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, 275.00
[NOT AVAILABLE ON DEMAND] Short Talk: Environmental Fatty Acids Support Changes in Histone Acetylation that Promote Breast Cancer Metastasis

Felix Hartmann, 275.00
Short Talk: Single-Cell Metabolic Regulome Profiling of Human Immune Cells in the Tumor Microenvironment

Tanya Schild, 150.00
Short Talk: NADK Regulation by Oncogenic KRAS Signaling is Essential for PDAC

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

Identifying the Metabolic Dependencies of Cancer Cells (8am Denver/Mountain Time Start)
* Erik A. Sahai, Francis Crick Institute, UK
Christina Schmidt, 150.00
Short Talk: TRACER, a 3D-Model to Study the Influence of the Microenvironment on the Metabolic Profile of Fumarate Hydratase-Deficient Cells

Metabolic Compartmentalisation (10:15am Denver/Mountain Time Start)
*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, 275.00
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 (12pm Denver/Mountain Time Start)
Networking Lounge (12:10pm Denver/Mountain Time Start)