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**

**Session Chair**

E. A. Sahai, Francis Crick Institute, UK

**Session Chair**

A. Kimmelman, New York University Langone Medical Center, USA

**Session Chair**

J. A. Joyce, University of Lausanne, Switzerland

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) (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  
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Matthew G. Vander Heiden, Massachusetts Institute of Technology, USA

**Impact of Nutrient Availability on Cancer Metabolic Dependencies**

**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

Luke A. J. O'Neill, Trinity Biomedical Sciences Institute, Ireland

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

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* Session Chair † Invited but not yet accepted  
Program current as of February 29, 2024.
For the most up-to-date details, visit [https://www.keystonesymposia.org](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
Marina Mesquida, F. Hoffmann-La Roche Ltd, Switzerland
Anti-Inflammatory Treatment of Diabetic Eye Complications
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) (EK16)
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
**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.

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**Integrating Metabolism and Immunity (EK16)**

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

* Erik A. Sahai, Francis Crick Institute, UK  
  Session Chair

* Karen H. Vousden, Francis Crick Institute, UK  
  [NOT AVAILABLE ON DEMAND] Metabolic Control of Invasion and Metastasis

* Eileen P. White, Rutgers Cancer Institute of New Jersey, USA  
  Autophagy and Systemic Metabolism

* Navdeep S. Chandel, Northwestern University, USA  
  Mitochondrial Regulation of Cancer

* Donita C. Brady, University of Pennsylvania, USA  
  New Sides for an Old Coin: Copper as an Intracellular Mediator of Autophagy viaULK1/2 Kinase Signaling

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**Liver (10:10am Denver/Mountain Time Start) (EK16)**

* Gwendalyn J. Randolph, Washington University, USA  
  Session Chair

* Alan R. Saltiel, University of California, San Diego, USA  
  Session Chair

* Michael Karin, University of California, San Diego, USA  
  Mitochondrial DNA Metabolism and IL-1 Mediated Inflammation

* Evanna Mills, Dana-Farber Cancer Institute, USA  
  Thermogenic Fat as a Modifier of the Immune Response

* Morris J. Birnbaum, Retired Pfizer, Inc., USA  
  Therapeutic Approaches for the Treatment of Non-Alcoholic Fatty Liver Disease

* Han Wang, Ohio State University, Comprehensive Cancer Center, USA  
  Short Talk: Neutrophil Extracellular Traps Promote the Differentiation of Tregs through Metabolic Reprogramming to Impair Cancer Immunosurveillance in NASH Liver

* Sabine Daemen, Washington University in St. Louis, USA  
  Short Talk: Recruited Monocyte-Derived Macrophages Regulate Hepatic Crown-Like Structure Formation and Liver Fibrosis in NASH

* Jin Young Huh, Seoul National University, South Korea  
  Short Talk: Tank-Binding Kinase 1 Regulates the Localization of Tregs through Metabolic Reprogramming to Impair Cancer Immunosurveillance in NASH Liver

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**Muscle/Cardiovascular (8am Denver/Mountain Time Start) (EK16)**

* Ana Domingos, University of Oxford, UK  
  Session Chair

* Helga Ellingsgaard, Centre for Physical Activity Research, Copenhagen, Denmark  
  IL-6, a Physiological Regulator of Adipose Tissue Mass in Humans

* Mark A. Febbraio, Monash Institute of Pharmaceutical Sciences, Australia  
  Treatment of Type 2 Diabetes and Age-Related Sarcopenia with the Designer Cytokine ICFc

* Amy J. Wagers, Harvard University, USA  
  Stem Cell Metabolism and Muscle Regeneration

* Shuang Zhang, Harvard Medical School/Massachusetts General Hospital, USA  
  Short Talk: Bone Marrow Adipocytes Fuel Fatty Acid Metabolism Directed Myelopoiesis after Myocardial Infarction

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

Intercellular Signaling Networks in the TME (8am Denver/Mountain Time Start) (EK14)
*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

Metabolic Compartimentalisation (10:15am Denver/Mountain Time Start) (EK14)
*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)