

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Metabolic Decisions in Development and Disease (EK27)

March 24-25, 2021 • Virtual at your computer

Scientific Organizers: Irene Miguel-Aliaga, Ralph J. DeBerardinis and A.J. Marian Walhout

Sponsored by Novo Nordisk A/S

WEDNESDAY, MARCH 24

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

***Irene Miguel-Aliaga**, Imperial College London, UK
Session Chair

Olivier Pourquié, Harvard Medical School, USA
Role of Warburg-Like Metabolism in Cell Fate Control in Vertebrate Development

Metabolic Control of Gene Expression and Developmental Decisions (8:40am Denver/Mountain Time Start)

***Irene Miguel-Aliaga**, Imperial College London, UK
Session Chair

Kathryn E. Wellen, University of Pennsylvania, USA
Crosstalk between Metabolic Pathways, Signaling Networks and the Epigenome

***Lydia Finley**, Memorial Sloan Kettering Cancer Center, USA
Metabolic Control of Cell Fate Decisions in Stem Cells and Cancer Cells

Alexander Aulehla, European Molecular Biology Laboratory, Germany
Glycolytic Flux Control of Mouse Embryo Segmentation

Alex Gould, Francis Crick Institute, UK
Metabolic Responses to a Stressful Start in Life

Aurelio Teleman, Deutsches Krebsforschungszentrum, Germany
Regulation of Growth and Signaling by a Lipid Metabolite

William Tu, University of California, Los Angeles, USA
Short Talk: The Role of Tryptophan Metabolism in Cell Fate Decisions and Development

Poster Session 1 (11:30am Denver/Mountain Time Start)

Meet the Editors (12:30pm Denver/Mountain Time Start)

Angela R. Parrish, Nature Communications, USA

Nestor Saiz, Rockefeller University Press, USA

Sejal K. Vyas, Cell Press, USA

Deniz Senyilmaz Tiebe, EMBO, Germany

Stefan Galander, Company of Biologists, UK

Metabolic Communication across Cells and Tissues (2pm Denver/Mountain Time Start)

Irene Miguel-Aliaga, Imperial College London, UK
Sex Differences in Inter-Organ Metabolic Coupling

***Norbert Perrimon**, Harvard Medical School, USA
Inter-Organ Communication Pathways Involved in Organ Wasting

Wendy S. Garrett, Harvard School of Public Health, USA
[NOT AVAILABLE ON DEMAND] Sulfur Amino Acids and the Gut Microbiota in Chronic Kidney Disease and Colorectal Cancer

Lora V. Hooper, University of Texas Southwestern Medical Center, USA
Regulation of Lipid Metabolism by the Microbiome and the Circadian Clock

Tadashi Uemura, Kyoto University, Japan

[NOT AVAILABLE ON DEMAND] Impacts of Nutrition Histories in Juvenile Stages on Growth and Later Life Events

***A.J. Marian Walhout**, University of Massachusetts Medical School, USA

Structure, Function and Evolution of Biological Networks

Wei Wei, Stanford University, USA

Short Talk: Cell Type-Selective Secretome Profiling In Vivo

THURSDAY, MARCH 25

Maintenance and Perturbation of Metabolic Networks (8am Denver/Mountain Time Start)

Theodore Alexandrov, European Molecular Biology Laboratory, Germany

Spatial Metabolomics in Tissues and Single Cells

Ayelet Erez, Weizmann Institute of Science, Israel
Amino Acids Metabolic Cross Talks between the Cancer and Its Host

***Markus Ralser**, Francis Crick Institute, UK

Dynamics in Metabolic Networks

Joshua D. Rabinowitz, Princeton University, USA

Metabolic Remodeling in Cancer and Infection

***Sarah-Maria Fendt**, VIB-KU Leuven, Belgium

[NOT AVAILABLE ON DEMAND] Metabolic Plasticity in Cancer Metastasis

Anupama Hemalatha, Yale University, USA

Short Talk: Metabolic Adaptation to Oncogenic Mutations in Mouse Skin by Live Imaging

Paula Gutierrez Perez, Research Institute of Molecular Pathology - IMP, Austria

Short Talk: miR-1 Sustains Muscle Physiology by Controlling V-ATPase Complex Assembly

Networking Lounge (11am Denver/Mountain Time Start)

Career Roundtable (12pm Denver/Mountain Time Start)

Sarah-Maria Fendt, VIB-KU Leuven, Belgium

A.J. Marian Walhout, University of Massachusetts Medical School, USA

Paul Barrett, NIA, National Institutes of Health, USA

Poster Session 2 (1pm Denver/Mountain Time Start)

Metabolic Disorders (2pm Denver/Mountain Time Start)

***Ralph J. DeBerardinis**, University of Texas Southwestern Medical Center, USA

Metabolic Transitions and Anomalies in Development

Navdeep S. Chandel, Northwestern University, USA
Mitochondrial Metabolic Signaling in Stem Cell Function and Immunity

Juan Landoni, University of Helsinki, Finland

Short Talk: The Consequences of Increased mtDNA Replication Frequency: From Premature Ageing to Neonatal Disease

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* **Jared Rutter**, University of Utah - Dept Biochemistry, USA

Mitochondrial Metabolism and Cellular Decisions

Jason Locasale, Duke University, USA

The Impact of Cellular Metabolism on Chromatin Dynamics and Epigenetics

Heather Christofk, University of California, Los Angeles, USA

[NOT AVAILABLE ON DEMAND] Metabolic Control of Signaling and Cell Fate Decisions

Closing Remarks (4:50pm Denver/Mountain Time Start)