

# 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

**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

**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**, Journal of Experimental Medicine, 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, 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)**