

Conference Program

Sunday, June 7

7:00 p.m.-8:00 p.m. Welcoming Remarks and Opening Keynote Session
Grand Ballroom E-K

Insights into cancer metabolism through personalized genomic analyses
Victor E. Velculescu, Johns Hopkins Kimmel Cancer Center, Baltimore, MD

8:00 p.m.-9:00 p.m. Opening Reception
Grand Ballroom Foyer

Monday, June 8

7:00 a.m.-8:00 a.m. Breakfast
Grand Ballroom Foyer

8:00 a.m.-10:00 a.m. Plenary Session 1: Cancer Metabolic Pathways
Grand Ballroom E-K
Session Chairperson: David M. Sabatini, MIT Whitehead Institute for Biomedical Research, Cambridge, MA

Regulation of glutamine metabolism in proliferating and quiescent mammary epithelial cells
Jonathan L. Coloff, Harvard Medical School, Boston, MA

Metabolic heterogeneity in cancer cells and tumors
Ralph J. DeBerardinis, UT Southwestern Medical Center, Dallas, TX

Regulation of metabolism to impact cancer cell proliferation
Matthew G. Vander Heiden, MIT Koch Institute for Integrated Cancer Research, Cambridge, MA

Metabolic adaptation in cancer
Karen H. Vousden, Beatson Institute for Cancer Research, Glasgow, United Kingdom

This session will not include proffered papers.

10:00 a.m.-10:30 a.m. Break
Grand Ballroom Foyer

10:30 a.m.-12:30 p.m. Plenary Session 2: Therapeutic Targets from Cancer Metabolism
Grand Ballroom E-K
Session Chairperson: Alec C. Kimmelman, Dana-Farber Cancer Institute, Boston, MA

De novo purine biosynthesis dictates glutamine dependency of glioblastoma cells
Eyal Gottlieb, Beatson Institute for Cancer Research, Glasgow, United Kingdom

Exploiting cancer metabolism for cancer therapy
Nissim Hay, University of Illinois at Chicago, Chicago, IL

Metabolic reprogramming supports cell growth and survival in cancer
Almut Schulze, University of Würzburg, Würzburg, Germany

Role of mitochondrial folate transporter in metabolism of tumor cells*
Ilya Kovalenko, Bayer Pharma AG, Berlin, Germany

A small molecule inhibitor of PHGDH reveals coordination between serine synthesis and 5,10-methylene tetrahydrofolate utilization*
Michael E. Pacold, Whitehead Institute, Cambridge, MA

12:30 p.m.-2:00 p.m. Lunch on own

2:00 p.m.-4:30 p.m. Plenary Session 3: Signaling Pathways and Cancer Metabolism
Grand Ballroom E-K
Session Chairperson: Almut Schulze, University of Würzburg, Würzburg, Germany

Isocitrate dehydrogenase mutations in cancer
Tak W. Mak, Campbell Family Institute for Breast Cancer Research, University of Toronto, University Health Network, Toronto, ON, Canada

Linking oncogenic signaling to metabolism through mTOR
Brendan D. Manning, Harvard School of Public Health, Boston, MA

Systematic approaches to understanding cellular metabolism
David M. Sabatini, MIT Whitehead Institute for Biomedical Research, Cambridge, MA

Mitochondrial metabolism regulation of cancer
Navdeep S. Chandel, Northwestern University, Chicago, IL

p53 inhibits the expression of the pyrimidine catabolic gene dihydropyrimidine dehydrogenase (DPYD)*
Prashanth Ravishankar Gokare, Fox Chase Cancer Center, Philadelphia, PA

HIF-2 α dependent lipid storage promotes endoplasmic reticulum homeostasis in clear cell renal cell carcinoma*
Bo Qiu, University of Pennsylvania, Philadelphia, PA

4:30 p.m.-7:00 p.m. Poster Session A with Reception
Grand Ballroom A-D

*Short talks from proffered papers

Tuesday, June 9

7:00 a.m.-8:00 a.m. Breakfast
Grand Ballroom Foyer

8:00 a.m.-10:00 a.m. Plenary Session 4: Alterations of Nutrient/Fuel Sensing in Cancer
Grand Ballroom E-K
Session Chairperson: Eyal Gottlieb, Beatson Institute for Cancer Research, Glasgow, United Kingdom

The LKB1-AMPK pathway reprograms cancer cell metabolism
Reuben J. Shaw, Salk Institute, La Jolla, CA

Metabolic adaptation pathways in lung cancer
Russell G. Jones, McGill University, Montreal, QC, Canada

Aspartate metabolism links the urea cycle with nucleic acid synthesis in cancerous proliferation*
Shiran Rabinovich, Weizmann Institute of Science, Rehovot, Israel

Identification of metabolic dependencies in tuberous sclerosis and lymphangioleiomyomatosis*
Harilaos Filippakis, Brigham and Women's Hospital, Harvard Medical School, Boston, MA

10:00 a.m.-10:30 a.m. Break
Grand Ballroom Foyer

10:30 a.m.-12:30 p.m. Plenary Session 5: Emerging Approaches to Study Metabolism
Grand Ballroom E-K
Session Chairperson: Ralph J. DeBerardinis, UT Southwestern Medical Center, Dallas, TX

Imaging tumor metabolism
Kevin M. Brindle, Cancer Research UK Cambridge Research Institute, Cambridge, United Kingdom

Mapping metabolic drivers of cancer using chemoproteomic and metabolomic platforms
Daniel Nomura, University of California, Berkeley, CA

Isotope-based metabolomics for pathway discovery in cancer
Gary Patti, Washington University, St. Louis, MO

Functional identification of a mitochondrial glutamine carrier using isotope tracers*
Christian Metallo, University of California, San Diego, La Jolla, CA

Genome-wide screen reveals role for lipid homeostasis in protein scavenging*
Michel Nofal, Princeton University, Princeton, NJ

12:30 p.m.-3:00 p.m. Poster Session B and Lunch
Grand Ballroom A-D

*Short talks from proffered papers

3:00 p.m.-5:00 p.m. Plenary Session 6: Autophagy and Metabolic Stress in Cancer
Grand Ballroom E-K
Session Chairperson: Navdeep S. Chandel, Northwestern University, Chicago, IL

Autophagy, metabolism, and pancreatic cancer
Alec C. Kimmelman, Dana-Farber Cancer Institute, Boston, MA

Role of autophagy in metabolism and tumor survival
Eileen P. White, Rutgers-The Cancer Institute of New Jersey, New Brunswick, NJ

Hypoxia, metabolism, and tumor progression
M. Celeste Simon, Abramson Family Cancer Research Institute, Philadelphia, PA

Exploiting metabolic alterations in therapy-induced senescence and drug resistance in a transgenic mouse lymphoma model by reverse and forward omics
Clemens A. Schmitt, Charité - Universitätsmedizin Berlin, Berlin, Germany

This session will not include proffered papers.

5:00 p.m.- Evening off/Dinner on own

Wednesday, June 10

7:00 a.m.-8:00 a.m. Breakfast
Grand Ballroom Foyer

8:00 a.m.-10:00 a.m. Plenary Session 7: Metabolic Effects on Epigenetics and Gene Expression
Grand Ballroom E-K
Session Chairperson: Anneke C. Blackburn, Australian National University, Acton, Australia

Elevated fumarate and dysregulated metabolism in diabetes and cancer
Patrick J. Pollard, Sahlgrenska Academy, Gothenburg, Sweden

Use of viruses to study cancer metabolism
Heather R. Christofk, University of California, Los Angeles, CA

Acetyl-CoA metabolism, gene regulation, and stress management
Kathryn E. Wellen, University of Pennsylvania School of Medicine, Philadelphia, PA

SHMT2 drives DNA/histone hypermethylation phenotype in cancer*
Jiangbin Ye, Memorial Sloan Kettering Cancer Center, New York, NY

Serine biosynthesis from glucose regulates folate availability*
Caroline A. Lewis, The Koch Institute for Integrative Cancer Research at MIT, Cambridge, MA

10:00 a.m.-10:15 a.m. Break
Grand Ballroom Foyer

*Short talks from proffered papers

10:15 a.m.-12:15 p.m. Plenary Session 8: Systemic Metabolic Alterations and Cancer
Grand Ballroom E-K
*Session Chairperson: Kathryn E. Wellen, University of Pennsylvania School of
Medicine, Philadelphia, PA*

Obesity, metabolism, and cancer: Mechanistic insights from transdisciplinary studies
Stephen D. Hursting, University of North Carolina at Chapel Hill, Chapel Hill, NC

Identifying metabolic liabilities in obesity-associated pancreatic cancer
Nada Y. Kalaany, Boston Children's Hospital, Boston, MA

Exercise, energy balance, and cancer
Nathan A. Berger, Case Western Reserve University, Cleveland, OH

Tissue-of-origin dictates the metabolic fate of branched chain amino acids in mutant Kras-driven cancers*
Jared R. Mayers, Massachusetts Institute of Technology, Cambridge, MA

Transcriptional regulation of metabolism by MLX and its binding partners is essential for tumor cell survival and spermatogenesis*
Patrick A. Carroll, Fred Hutchinson Cancer Research Center, Seattle, WA

12:15 p.m.-1:15 p.m. Closing Keynote
Grand Ballroom E-K

Looking ahead: Clinical application of advances in cancer metabolism
Elizabeth A. Maher, UT Southwestern Medical Center, Dallas, TX

1:15 p.m.-1:30 p.m. Closing Remarks / Departure
Grand Ballroom E-K

*Short talks from proffered papers