Keystone Symposia: Metabolism and Cancer Progression

(Joint with "Cell Death Pathways: Apoptosis, Autophagy and Necrosis")

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March 12–17, 2010 • Fairmont Hotel Vancouver • Vancouver, British Columbia • Canada

Scientific Organizers: Eileen P. White, Craig B. Thompson and Chi Van Dang

Program Faculty & Talks

Robert T. Abraham, Wyeth Pharmaceuticals, USA
Therapeutic Modulation of mTOR in Cancer

Joan S. Brugge♦◊, Harvard Medical School, USA
Diversity of Cell Death Pathways in Organogenesis and Oncogenesis

Lewis C. Cantley♦*◊, Harvard Medical School, USA
Tyrosine Kinases and Tumor Cell Metabolism

Peter F. Carmeliet, University of Leuven, Belgium
Oxygen, Metabolism and Angiogenesis

Jason A. Chesney, University of Louisville, USA
Coupling Glycolysis With Cell Cycle Progression

John L. Cleveland, The Scripps Research Institute, USA
Therapeutic Modulation of Autophagy in Cancer

Chi Van Dang, Johns Hopkins University School of Medicine, USA
Regulation of Cancer Metabolism by Myc

Nika N. Danial, Dana Farber Cancer Institute, USA
Talk Title to be Determined

Gerard I. Evan◊, University of California, San Francisco, USA
Inhibiting Oncogenes for Cancer Therapy

Valeria Fantin, Agios Pharmaceuticals, USA
Metabolic Signaling in Cancer

Eyal Gottlieb, Beatson Institute for Cancer Research, UK
Metabolism of Cancer Cells

Douglas R. Green◊, St. Jude Children's Research Hospital, USA
The Mitochondrion: The Weapon Employed in Apoptopic Suicide

Uwe Haberkorn, University Hospital Heidelberg, Germany
Imaging Metabolism in Cancer

Michael N. Hall, University of Basel Biozentrum, Switzerland
mTOR Signaling of Growth and Metabolism

Adrian L. Harris, Molecular Oncology Laboratories, UK
pH Regulation and Carbonic Anhydrase in Tumor Cells

Marja Jäättelä◊, Danish Cancer Society, Denmark
The Lysosome: A Novel Therapeutic Target?

William G. Kaelin Jr., Dana Farber Cancer Institute, USA
Dioxygenases as Therapeutic Targets in Cancer

Sally A. Kornbluth, Duke University Medical Center, USA
Metabolic Control of Apoptotic Regulators

Guido Kroemer◊, INSERM, U848, Institut Gustave Roussy, France
Metabolic Signaling in Cancer

Sybille Mazurek, Universität Gießen, Germany
Pyruvate Kinase M2 and Cancer

Steven L. McKnight, University of Texas Southwestern Medical Center, USA
Lessons from Metabolic Regulation in Yeast

Noboru Mizushima◊, Tokyo Medical and Dental University, Japan
Role of Autophagy in Protein Metabolism

David M. Sabatini, Whitehead Institute for Biomedical Research, USA
mTOR Signaling

Reuben J. Shaw, The Salk Institute, USA
Glucose Metabolism and Cancer

Craig B. Thompson*◊, Abramson Family Cancer Center and Research Institute, University of Pennsylvania, USA
Therapeutic Exploitation of Metabolic Differences between Normal and Cancer Cells

Karen H. Vousden◊, Beatson Institute for Cancer Research, UK
Control of Metabolism by p53

Cheryl L. Walker, University of Texas MD Anderson Cancer Center, USA
TSC1/2 in Cancer

Eileen P. White◊, Rutgers University, USA
Autophagy Tumor Suppression by Protein Quality Control

Kwok-Kin Wong, Dana-Farber Cancer Institute, USA
Role of LKB1 in Lung Cancer

Yue Xiong, University of North Carolina at Chapel Hill, USA
Acetylation Regulation of Metabolism

♦Keynote speaker. *Session chair. ◊Joint speaker.
Program subject to change. Current as of October 12, 2009.

Recently the metabolic requirements of tumor cells and the links to common pathway alterations in human cancers have been gradually emerging. It is now apparent that metabolic demand in tumor cells is high due to deregulation of cell growth, and that this constitutive activation of growth signaling pathways can disconnect cellular metabolism from nutrient and growth factor availability. Subversion of cellular metabolism for biosynthetic purposes is required to sustain deregulated tumor cell growth but can also restrict energy production that can limit tumor cell adaptation to metabolic stress. Hypoxic and acidic conditions in the tumor microenvironment are byproducts of these events and are common features of the tumor microenvironment that can activate stress responses, influence tumor growth and impair treatment. Many of the oncogenic pathways altered in tumor cells modulate cell metabolism while enabling growth in these adverse conditions. Adaptation of tumor cells to stress through activation of the catabolic pathway of autophagy and its role in damage mitigation and promoting tumor cell survival to metabolic stress is also now emerging. The vision for this meeting is to bring together leaders in the fields of cancer, signaling and metabolism to discuss emerging discoveries and their application to improving cancer therapy.

Program Plenary Sessions & Workshops:

- Metabolism Regulation in Model Organisms
- Workshop 1: PI3 Kinase Regulation and Cancer
- Metabolic Differences between Normal and Cancer Cells
- Metabolic Adaptation in Cancer (Joint)
- Therapeutic Modulation of Metabolism
- Survival and Death in Development and Disease (Joint)
- Workshop 2: Metabolic Assessment and Regulation
- Cancer and Predisposition Genes
- mTOR and Nutrient Sensing
- Hypoxia and Metabolic Stress

Deadlines:

Abstract & Scholarship: November 12, 2009
Late-Breaking Abstract: December 10, 2009
Early Registration: January 12, 2010

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