Cell Death Pathways: Apoptosis, Autophagy and Necrosis

Joint meeting with: Metabolism and Cancer Progression

Sponsored by Genentech BioOncology

March 12-17, 2010

Fairmont Hotel Vancouver • Vancouver, British Columbia • Canada

Organizers: Guido Kroemer, Junying Yuan and Eileen P. White

Meeting Topics:

- Apoptosis Pathways
- Workshop 1: Methods for the Detection of Non-Apoptotic Cell Death
- Non-Apoptotic Pathways in Model Organisms
- Metabolic Adaptation in Cancer (Joint)
- Autophagic Pathways
- Survival and Death in Development and Disease (Joint)
- Workshop 2: Pathological Implications of Non-Apoptotic Cell Death
- Cell Death Induction for Cancer Therapy
- Non-Conventional Cell Death Pathways
- Immunologic Cell Death

Early Registration Deadline:
January 12, 2010

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Keystone Symposia: Cell Death Pathways: Apoptosis, Autophagy and Necrosis
(Joint with "Metabolism and Cancer Progression")

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Scientific Organizers: Guido Kroemer, Junying Yuan and Eileen P. White

Program Faculty & Talks

John M. Abrams, University of Texas Southwestern Medical Center, USA
Dying Like Flies: Cell Death Regulatory Networks in Drosophila

Matthew L. Albert, Institut Pasteur, France
The Immunogenicity of Distinct Cell Death Modalities

David W. Andrews, McMaster University, Canada
Mechanisms of Mitochondrial Membrane Permeabilization by Pro-Apoptotic Bcl-2 Family Proteins

Dale E. Bredesen, Buck Institute for Age Research, USA
A Cell Perspective on Neurodegeneration

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

Suzanne Cory, Walter and Eliza Hall Institute of Medical Research, Australia
The Bcl-2 Family: An Achilles' Heel for Cancer?

Ana Maria Cuervo, Albert Einstein College of Medicine, USA
Chaperone-Mediated Autophagy in Organismal Aging

Vojo Deretic, University of New Mexico, USA
Autophagy in Host Pathogen Interactions: From Defense and Survival to Cell Death

Vishva M. Dixit, Genentech, Inc., USA
Regulation of Apoptosis by DUBs and IAPs

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

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

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

Daniel J. Klionsky, University of Michigan, USA
Regulation of Autophagy

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

Anthony G. Letai, Dana-Farber Cancer Institute, USA
Diagnosing and Exploiting Cancer's Addiction to Blocks in Apoptosis

Hyam I. Levitsky, Johns Hopkins School of Medicine, USA
Therapeutic Cancer Vaccination with Dead Cells

Frank Madeo, University of Graz, Austria
Programmed Cell Death in Yeast: Subroutines, Mechanisms and Purposes

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

Thomas P. Neufeld, University of Minnesota, USA
Autophagic Pathways in Drosophila: Good or Evil?

Saul H. Rosenberg, Abbott Laboratories, USA
Bcl-2 Family Inhibitors for the Treatment of 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

Peter Vandenabeele, VIB, Ghent University, Belgium
Necrosis: Signal Transduction and Intercellular Communication

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

Loren Walensky, Dana-Farber Cancer Institute, USA
Biophysical Exploration of Bcl-2-Like Proteins

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

Michael B. Yaffe, Massachusetts Institute of Technology, USA
Mitotic Catastrophe: Mechanisms and Therapeutic Induction

Junying Yuan*, Harvard Medical School, USA
Necroptosis: A Type of Cellular Necrotic Cell Death Mechanism

Leigh S. Zawel, Novartis Institutes for BioMedical Research, USA
Modulating Apoptosis as a Therapeutic Strategy for Cancer Treatment

Laurence Zitvogel, Institut Gustave Roussy, France
How Dying Tumor Cells Elicit an Immune Response

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

Homeostatic and pathological cell death can occur through a multiplicity of different mechanisms including apoptosis, autophagy, necrosis and others. The morphological and functional definitions of distinct cell death modalities are emerging, and the relationships between different lethal pathways are being determined. However, the exact nature of the molecular switches that determine which subroutines cells disintegrate are elusive. Moreover, the relative contributions of different cell death modalities to the avoidance of cancer or degenerative diseases remain to be defined. In cancer, in particular, where defects in cell death are prevalent and the survival of undead cells enables progression and treatment resistance, restoration of cell death pathways is an important and achievable therapeutic goal. Finally, distinct cell death modalities may remain immunologically silent or trigger an immune response, through mechanisms that are still elusive. The 2010 Keystone Symposia meeting on Cell Death Pathways *will address the normal regulation and pathogenic dysfunction of distinct cell death modalities, present new strategies for therapeutic cancer cell induction and address the immunogenicity of distinct cell death types.*

Program Plenary Sessions & Workshops:

- Non-Apoptotic Pathways
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- Immunologic Cell Death

Deadlines:

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

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