Save the Date for the 2014 Keystone Symposia meeting on:

**Mitochondrial Dynamics and Physiology**

**February 18–23, 2014**

Santa Fe Community Convention Center  
Santa Fe, New Mexico, USA

Scientific Organizers: Rodrigue Rossignol and Heidi M. McBride

*joint with the meeting on “The Chemistry and Biology of Cell Death”*

*The conference will:*

- Provide a multi-disciplinary consideration of mitochondrial research spanning various domains of biology and medicine including innate immunity, bioenergetics and chemoresistance, and disease ranging from neurodegenerative, psychiatric and cardiovascular disorders to cancer and rare diseases;

- Incorporate a session on regenerative medicine dedicated to the emerging role of mitochondrial physiology in stem cell biology and development;

- Provide additional opportunities for interdisciplinary interactions as a result of the joint meeting on “The Chemistry and Biology of Cell Death,” which will share a keynote address and plenary session with this meeting.

For more information and to view the full program, visit [www.keystonesymposia.org/14Q5](http://www.keystonesymposia.org/14Q5)

Discounted Abstract Deadline: **October 17, 2013**  
Student/Postdoc Scholarship Application Deadline: **October 17, 2013**  
Abstract Deadline: **November 21, 2013**  
Discounted Registration Deadline: **December 17, 2013**
TUESDAY, FEBRUARY 18
Arrival and Registration

WEDNESDAY, FEBRUARY 19
Keynote Session (Joint)
*Guy S. Salvesen, Sanford-Burnham Medical Research Institute, USA
*Rodrige Rossignol, University of Bordeaux, France
Vishva M. Dixit, Genentech, Inc., USA
Signaling Lessons from Death Receptors: The Inflammasome and Beyond
Jodi Nunnari, University of California, Davis, USA
The Behavior of Mitochondria

Mitochondria and Death (Joint)
*Sally A. Kornbluth, Duke University Medical Center, USA
*Heidi M. McBride, McGill University, Canada
David W. Andrews, Sunnybrook Research Institute, Canada
Shedding Light on the Mechanisms of Action of Bcl-2 Family Proteins
Richard J. Youle, NINDS, National Institutes of Health, USA
Damage Control - How the Pink1/Parkin Pathway Can Regulate Removal of Impaired Mitochondria by Autophagy
Dhyan Chandra, Roswell Park Cancer Institute, USA
Short Talk: Macromolecular Changes on Mitochondria and their Impact on DNA Damage-Induced Apoptotic Cell Death
Luca Scorrano, University of Padova, Italy
Role of Mitochondrial Dynamics in Embryogenesis

Mitochondrial Architecture (Q5)
*David C. Chan, California Institute of Technology, USA
Nikolaus Pfanner, University of Freiburg, Germany
Biogenesis and Architecture of Mitochondria
Thomas Langer, CECAD Research Center, Germany
Proteolysis Control of Mitochondrial Membrane Dynamics
Peter Rehling, University Medical Centre Göttingen, Germany
Biogenesis of Mitochondrial Membrane Protein Complexes
Victoria L. Hewitt, Medical Research Council, UK
Short Talk: The Role of SAM and ERMES Complexes in Candida albicans Mitochondria

Fundamental Death Mechanisms (Q6)
*John Silke, Walter and Eliza Hall Institute of Medical Research, Australia
Douglas R. Green, St. Jude Children's Research Hospital, USA
Aptoptotic and Non-Apoptotic Developmental Cell Death in Mice
Andreas E. Strasser, Walter and Eliza Hall Institute of Medical Research, Australia
The Role of the BCL-2 Regulated (Mitochondrial) Apoptotic Pathway in Morphogenesis during Mouse Development

THURSDAY, FEBRUARY 20

Mitochondrial Dynamics (Q5)
*Jodi Nunnari, University of California, Davis, USA
Heidi M. McBride, McGill University, Canada
The Physiological Implications of Mitochondrial SUMOylation
Gia K. Voeltz, University of Colorado Boulder, USA
Snapshots of ER-Mediated Mitochondrial Constriction Sites
Henry N. Higgs, Geisel School of Medicine at Dartmouth, USA
A Role for Actin, Formins and Myosin II in Mammalian Mitochondrial Fission
Stefan Strack, University of Iowa, USA
Regulation of Mitochondrial Fission in Neuronal Development and Synaptic Plasticity
Robert A. Screaton, Sunnybrook Research Institute, Canada
Short Talk: Genome-Wide RNAi Screen Identifies ROMO1 as an Essential Redox-Dependent Regulator of Mitochondrial Dynamics

Chemical Biology (Q6)
*Jennie R. Lill, Genentech, Inc., USA
Mark B. Hampton, University of Otago, New Zealand
Reactive Oxygen Species and Cell Death
Brent R. Stockwell, Columbia University, USA
Probing Cell Death with Small Molecules
Matthew S. Bogyo, Stanford University School of Medicine, USA
A Chemical Biology Approach for the Selective Imaging and Inhibition of Caspases
Sarah H. MacKenzie, North Carolina State University, USA
Short Talk: A Natural Peptide Binds to an Allosteric Site in Caspase-3
Sharan R. Srinivasan, University of Michigan, USA
Short Talk: Allosteric Inhibitor of Hsp70 Reveals its Role at the Intersection of Multiple Cell Death Pathways
Guillaume Lessene, Walter and Eliza Hall Institute of Medical Research, Australia
Short Talk: Novel, Potent and Selective Inhibitors of the Pro-Survival BCL-2 Family Member BCL-XL

Poster Session 2
Workshop 1: Mitochondrial Research and Drug Discovery (Q5)
*Thomas Langer, CECAD Research Center, Germany
Workshop 1: Autophagy and Mitophagy (Q6)
*Lisa M. Lindqvist, Walter and Eliza Hall Institute of Medical Research, Australia
Bcl-2, Bcl-xL and Mcl-1 Are Not Major Regulators of Autophagy
Juliane Cruz Campos, University of Sao Paulo, Brazil
Disrupted Mitochondrial Dynamics and Impaired Autophagy in Heart Failure: Impact of Exercise Training
Isabella Caniggia, Lunenfeld-Tanenbaum Research Institute, Canada
Disruption of Sphingolipid Metabolism Augments Placental Autophagy
Kelly Sullivan, University of Colorado, USA
Mechanisms of p53-Dependent Cell Fate Choice
Aditya Murthy, Genentech, Inc., USA
A Crohn’s Disease Mutation in the Autophagy Gene Atg16L1 Facilitates its Caspase-Mediated Degradation
Gavin Clive Higgins, Baker IDI Heart and Diabetes Institute, Australia
Impaired Mitophagy Activity in Experimental Diabetic Nephropathy
Malle Kuum, University of Tartu, Estonia
Directed Laser Irradiation-Based Method to Study Selective Mitophagy in Neurons
Baris Bingol, Genentech, Inc., USA
DUBs Regulate the Parkin/PINK1 Mitophagy Pathway
Mitochondria as Signaling Platform (Q5)
*Andrew G. Dillin, University of California, Berkeley, USA
Marcia C. Haigis, Harvard Medical School, USA
Mitochondrial Dynamics in Metabolic Adaptation
Zhijian James Chen, University of Texas Southwestern Medical Center, USA
The Mitochondrial Pathway of Antiviral Innate Immune Response

David C. Chan, California Institute of Technology, USA
Molecular Regulation of Mitochondrial Dynamics
Andrea Rasola, Università degli Studi di Padova, Italy
Short Talk: The Mitochondrial Chaperone TRAP1 and Neoplastic Transformation
"Deathomics" (Q6)
*Matthew S. Boggo, Stanford University School of Medicine, USA
Jennie R. Lill, Genentech, Inc., USA
Caspase Substrate Discovery
James A. Wells, University of California, San Francisco, USA
Caspase Kinetics
Harris G. Fienberg, Stanford University, USA
Network Rewiring Is Critical for Non-Genetic Resistance to TRAIL
James A. Ciulow, Imperial College London, UK
Short Talk: Unravelling the Targets of Electrophilic Natural Products using Quantitative Activity-Based Chemical Proteomics

FRIDAY, FEBRUARY 21

Quality Control (Q5)
*Richard J. Youle, NINDS, National Institutes of Health, USA
Cole M. Haynes, University of Massachusetts Medical School, USA
Coordinating Repair and Regeneration of Defective Mitochondrial via the UPRmt
Jared Rutter, University of Utah, USA
Functionalizing the Unannotated Mitochondrial Proteome
Dario C. Altieri, Wistar Institute, USA
Mitochondrial Chaperones
Koji Okamoto, Osaka University, Japan
Targeting Autophagy for Mitochondrial Clearance
Giovanni Bénard, INSERM, France
Short Talk: Mitochondrial Turnover and Energy Metabolism

Post-Translational Control of Cell Death (Q6)
*Andreas E. Strasser, Walter and Eliza Hall Institute of Medical Research, Australia
John Silke, Walter and Eliza Hall Institute of Medical Research, Australia
cIAPs and Sharpin Regulate TNF/MLKL Dependent Necroptotic Cell Death and Developments in Targeting this Axis in Disease
Henning Walczak, University College London, Cancer Institute, UK
New Traits of TRAIL in Cancer
Marion MacFarlane, MRC Toxicology Unit, UK
Death Receptor Mechanisms: The ‘FLIP’ Side of the DISC
Guy S. Salvesen, Sanford-Burnham Medical Research Institute, USA
Proteolytic Crosstalk in Cell Death and Survival

* Session Chair † Invited but not yet accepted Program current as of May 31, 2018. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit www.keystonesymposia.org/14Q5 and www.keystonesymposia.org/14Q6.
Yoshiiha Kaizuka, National Institute for Materials Science, Japan

Short Talk: Signal Protein Clusters in Plasma Membranes Involved in Death Signaling and Adaptive Immunity

Workshop 2: RIP3/Necroptosis (Q6)

*Kim Newton, Genentech, Inc., USA

Susana L. Orozco, University of Washington, USA
RIPK1 both Positively and Negatively Regulates RIPK3 Oligomerization and Necroptosis.

Carlos F. Lopez, Vanderbilt University, USA
Exploring how Cells Commit to Apoptotic or Necrotic Cell-Death

Francis Ka-Ming Chan, University of Massachusetts Medical School, USA
Necrotic and Non-Necrotic Functions of RIP3 in Injury-Induced Inflammation

Mordechay Gerlic, Sackler Faculty of Medicine, Tel Aviv University, Israel
RIPK1 Regulates Cell Death Driven Systemic Inflammation

Edward S. Mocarski, Emory University, USA
Small Molecule RIP3-Kinase Inhibitor-Induced Apoptosis

Stem Cells and Development (Q5)

*Luca Scorrano, University of Padova, Italy

Jahar Bhattacharya, College of Physicians & Surgeons, Columbia University, USA
Mitochondrial Transfer from Bone-Marrow-Derived Stromal Cells to Pulmonary Alveoli Protects Against Acute Lung Injury

Carla Koehler, University of California, Los Angeles, USA
Correcting Human Mitochondrial Mutations with Targeted RNA Import

Mireille Khacho, University of Ottawa, Canada
Short Talk: Mitochondrial Dynamics in the Regulation of Stem Cell Maintenance and Cell Fate Decisions

Alison M. Burkart, Joslin Diabetes Center, USA
Short Talk: Dissecting Relationships between Insulin Resistance and Mitochondrial Metabolism in Human iPSC Cells

Konstanze F. Winklhofer, Ruhr University Bochum, Germany
Short Talk: Talk Title to be Announced

Michael A. Frohman, Stony Brook University, USA
Roles for the Lipid-Signaling Enzymes MitoPLD and Lipin 1 in Mitochondrial Dynamics, piRNA Biogenesis, and Spermatogenesis

Death Meets Survival (Q6)

*Douglas R. Green, St. Jude Children's Research Hospital, USA

Pamela M. Holland, Surface Oncology, USA
Death Receptor Agonists for Cancer: Which Is the Right TRAIL?

Marion C. Bonnet, INSERM U976-Hopital St-Louis, France
Death and Survival of Keratinocytes

Kim Newton, Genentech, Inc., USA
Death by Kinases RIP1 and RIP3

Ben A. Croker, Boston Children’s Hospital, USA
Short Talk: Fas Controls Neutrophil Lifespan during Viral Infection and Is Negatively Regulated by TLR and IL-18 Signaling

Poster Session 3

SATURDAY, FEBRUARY 22

Environmental Control of Mitochondrial Physiology (Q5)

Andrew G. Dillin, University of California, Berkeley, USA
The Conserved Histone Lysine Demethylase PHF8 Regulates Mitochondrial ETC-Mediated Longevity

*Lluís Fajas, Université de Lusanne, Switzerland
Participation of CDK4 in the Regulation of Mitochondrial Metabolism and Energy Homeostasis

Erika L. Pearce, Max Planck Institute of Immunobiology and Epigenetics, Germany
Lipid Metabolism, Mitochondria, and Memory T Cell Generation

Christian Frezza, Hutchinson/MRC Research Centre, UK
Altered Mitochondrial Metabolism in Cancer

Sameer Kulkarni, Nestle Institute of Health Sciences, Switzerland
Short Talk: Impact of Liver-Specific Deletion of Mfn1 and Mfn2 in Metabolic Health

Leveraging Model Organisms (Q6)

*Marian MacFarlane, MRC Toxicology Unit, UK

Eli Arama, Weizmann Institute of Science, Israel
A Mitochondrial-Based Rate-Limiting Mechanism for Caspase Activation during Sperm Differentiation in Drosophila

Hyung Don Ryoo, New York University Langone Medical Center, USA
Regulating the Subcellular Distribution of a Pro-Apoptotic Protein, Hid

Kim McCall, Boston University, USA
Non-Apoptotic Cell Death in Drosophila Oogenesis

Eric H. Baehrecke, University of Massachusetts Medical School, USA
Regulation and Function of Autophagy during Cell Death

Keren Yacobi Sharon, Weizmann Institute of Science, Israel
Short Talk: Germ Cell Death: A Physiological Alternative Cell Death Pathway in Drosophila

Barbara Conradt, Ludwig-Maximilians-Universitat, Germany
Short Talk: C. elegans CED-3 Caspase Regulates Centrosome Asymmetry in an Apoptotic Death

Workshop 2: Emerging Topics in Mitochondrial Dynamics and Physiology (Q5)

*Cole M. Haynes, University of Massachusetts Medical School, USA
Mitochondrial Dynamics and Physiology (Q5)

Scientific Organizers: Rodrigue Rossignol and Heidi M. McBride
Sponsored by Nestlé Institute of Health Sciences

The Chemistry and Biology of Cell Death (Q6)

Scientific Organizers: Guy S. Salvesen, Matthew S. Bogyo and Jennie R. Lill
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