

PROGRAM

Metabolism of Cell Death and its Ramifications for Therapeutics and Drug Development

Conference location: National University of Singapore, Singapore

June 29-July 1, 2012

Organizers:

Shazib Pervaiz, Richard Lockshin, and Zahra Zakeri

Friday June 29th 12:00pm – 5:00pm:

Welcome Introduction and awards

Chair: Zahra Zakeri, Dept. of Biology, Queens College of CUNY, USA

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| 12:00-12:15pm | Introduction and welcome
Zahra Zakeri: Queens College, U.S.A. |
| 12:15-12:45pm | Presenting Award to Dr. Kimchi
Richard A. Lockshin: St. Johns University, U.S.A |
| 12:45-1:45pm | Programmed cell death: from single gene studies towards global network analysis
Adi Kimchi: Weizmann Inst., Israel |
| 1:45-2:15pm | The hows and whys of IAPs as revealed by multi-gene deletions and SMAC-mimetics
David Vaux: WEHI Institute and LaTrobe University, Australia |
| 2:15-2:30pm | Coffee |
| 2:30-3:00pm | Regulation of apoptosis signaling by the outer mitochondrial membrane protein MOAP-1 and Bax-beta
Victor C Yu: National University of Singapore, Singapore |
| 3:00-3:30pm | BID stimulates the ATR-directed DNA damage response to replicative stress to maintain hematopoietic stem and progenitor cell function- insights into maintenance of hematopoietic stem cell function in aging organisms
Sandra Zinkel: Vanderbilt University School of Medicine, USA |
| 3:30-4:00pm | Exposure of phosphatidylserine to the cell surface
Shigekazu Nagata: Kyoto University, Japan |
| 4:00-4:30 pm | TAM Receptors Control Phagocytosis of Apoptotic Cells
Raymond Birge: Univ. Med. Dent. New Jersey, USA |
| 4:30-4:45 pm | Activation of Lysosomal Function in the Course of Autophagy via mTORC1 Suppression and Autophagosome-Lysosome Fusion |

Han-Ming Shen, National University of Singapore

4:45-5:00pm **Novel function and age-dependent changes of the ubiquitin system in selective autophagy**

Esther Wong Nanyang Technological University, Singapore

Saturday June 30th 9:00am –5:PM

Cell death Metabolism: Redox and Energetics

Chair: Simone Fulda: Univ. of Ulm, Germany

9:00-9:30am **intracellular redox status and cell fate regulation by the Bcl-2 family**
Shazib Pervaiz: National University of Singapore, Singapore

9:30-10:00am **Metabolic vulnerabilities and cancer cell death.**
David Hockenbery Fred Hutchinson Cancer Research Center USA

10:00-10:30am **Ongogene driven redox cell survival mechanisms'**
Thomas G Cotter University College Cork Ireland

10:30-11:00am **Coffee Break**

11:00-11:30am **Effect of ceramide depletion on cellular bioenergetics, survival, and autophagy**
Scott A. Summers: Duke-National University of Singapore, Singapore

11:30-11:45am ***XF Mito Stress Test reveals metabolic dysfunctions underlying cellular degeneration and guides translational studies"***
David A. Ferrick: Chief Scientific Officer, Seahorse Bioscience

11:45- 12:00pm **Identification of gamma-tocotrienol as a novel chemosensitizer in xenograft mouse model of human gastric cancer**
Gautam Sethi National University of Singapore, Singapore

12:00-2:00pm **Lunch and poster presentation and WORKSHOP OF INDUSTRY OR TRANSLATIONAL IMPLICATION**

Chair: Marianne J Cronje: Univ. Johannesburg, South Africa

2:00-2:30pm **Revisiting the pathways activated upon the induction of intracellular redox imbalance and their role in tumorigenesis and tumor cells' resistance to chemotherapy**
Marie-Veronique Clement: National University of Singapore, Singapore

2:30-3:00pm **Unfolding the role of ROS-mediated ER stress in immunogenic apoptosis of cancer cells**

Patrizia Agostinis: University of Leuven Belgium

3:00- 3:30pm Targeting IAP proteins for tumor cell sensitization to cell death
Simone Fulda: Univ. of Ulm, Germany

3:30-5:00pm Coffee: and WORKSHOP ON BUILDING A CAREER IN SCIENCE : Panel Discussion on Tactics for Junior Scientists and Women. Panelists Patrizia Agostinis, Marie-Veronique Clement; Adi Kimchi; Sandra Zinkel, Ana Maria Cuervo, Devrim Gozuacik, Boris Zhivotovsky, Simone Fulda

Saturday July 1th 9:00am – 5:00pm

Role of autophagy & apoptosis in metabolic health and aging

Chair: Raymond Birge: Univ. Med. Dent. New Jersey, USA **Chair:**

9:00-9:30am Discovery of new autophagy regulators
Devrim Gozuacik: Sabanci University, Turkey

9:30-10:00am Selective autophagy in aging and age-related pathologies
Ana Maria Cuervo, Einstein Medical College, USA

10:00-10:15am Secreted frizzled-related protein 4 expression is positively associated with responsiveness to cisplatin of ovarian cancer cell lines in vitro and with lower tumour grade in mucinous ovarian cancers.

Arun Dharmarajan, The University of Western Australia, Western Australia

10:15-10:30am Age-dependent relationships between reactive oxygen species and hsp70 in human neutrophils under cell stress conditions.
Kovalenko E.I., - Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia

10:30-11:00am Coffee Break

Chair: Nader Maghsoudi: Shahid Beheshti University, Iran

11:00-11:30am Inhibition of prenyl protein carboxymethylation induces autophagic cell death
Mei Wang: National University of Singapore, Singapore

11:30-12:00am Lung cancer: mechanisms of resistance and sensitivity to treatment.
Boris Zhivotovsky: Karolinska Institute, Sweden

12:00-2:00pm Lunch and Posters and WORKSHOP OF INDUSTRY OR TRANSLATIONAL IMPLICATION (2nd round)

Chair: Shazib Pervaiz: National University of Singapore, Singapore

2:00-2:30pm The serendipitous discovery of the selective apoptotic-inducing abilities of novel metal phosphine compounds in cancer cells
Marianne J Cronje, Univ. Johannesburg, South Africa

- 2:30-3:00pm** **Regulation of cellular survival by p53 and p73 – implications for cancer therapy**
Kanaga Sabapathy: National University of Singapore, Singapore
- 3:00--3:30pm** **Future Anti-Cancer Therapeutic Targets: Putting the Carts Before the Horses?**
Tak Mak, Advanced Medical Discovery Unit, University of Toronto, Canada
- 3:30-4:00pm** Coffee
- 4:00-4:30pm** **Therapeutic targeting Myc dependency in cancer cells: new pathway implicated in tumorigenesis and targeted therapy.**
Yu Qiang: National University of Singapore, Singapore
- 4:30-4:45pm** **The mechanism by which a novel palladacycle aj-5 exerts its anti-tumour activity in breast cancer cells involves apoptosis and autophagy**
Aliwaini S* University of Cape Town.
- 4:45-5:00pm** **Closing remarks: Zahra Zakeri**