2017 Singapore Symposium on Metabolic Diseases
16-17 November 2017
Breakthrough and Discovery Theatrettes, Level 4, Matrix, 30 Biopolis Street

Programme

16 Nov 2017 (Day One)

08:30 – 09:00 Registration

Opening Remarks

09:00-09:10 Lim Chuan Poh, Chairman, A*STAR

Britton Chance Memorial Award Lecture ***(Chair: Han Weiping, SBIC, A*STAR)***

09:10-09:20 Introduction to Britton Chance Memorial Award (Award presentation by Chairman A*STAR)

09:20-10:00 Tamas Horvath, Yale University School of Medicine
Hypothalamic Hunger-Promoting Neurons in Control of Brain Development and Adult Functions

10:00-10:30 Tea Break (30 mins)

Session One: Central Regulation of Metabolism ***(co-Chairs: Matthew Hirschey, Duke University; Li Peng, Tsinghua-Peking Center for Life Sciences)***

10:30-10:40 Sabrina Diano, Yale University School of Medicine
Mitochondrial Dynamics in Central Regulation of Metabolism

10:40-10:45 Q and A

10:45-10:55 Kim Min-Seon, University of Ulsan College of Medicine
Hypothalamic Inflammation and Macrophages in Obesity

10:55-11:00 Q and A

11:00-11:10 Fu Yu, Singapore Bioimaging Consortium, A*STAR
Feeding Regulation by Hypothalamic Somatostatin Neurons

11:10-11:15 Q and A

Session Two: Diabetic Nephropathy ***(co-Chairs: Tai E-Shyong, National University Health System; Park Kyong-Soo, Seoul National University)***

11:15-11:25 Lim Su Chi, Khoo Teck Puat Hospital Singapore
Diabetic Kidney Disease (DKD) – What Have We Learned from Our Cohorts?

11:25-11:30 Q and A

11:30-11:40 Maria Gomez, Lund University Diabetes Centre
In vivo Inhibition of Nuclear Factor of Activated T cells (NFAT) Signaling Restores Microvascular Endothelial Function in Diabetic Mice

11:40-11:45 Q and A

11:45-11:55 Mark Cooper, Monash University
Molecular and Cellular Mechanism Complicated in Diabetic Complications

11:55-12:00 Q and A

12:00-12:10 Thomas Coffman, Duke-NUS Medical School
Building a Better Mouse Model of Diabetic Nephropathy

12:10-12:15 Q and A

12:15-13:20 Lunch (1 hr 5 mins)

2017 SSMD Special Keynote Lecture ***(Chair: Han Weiping, SBIC, A*STAR)***

13:20-14:10 Thomas C. Südhof, Stanford University
APOE, Synapses, and Alzheimer's Disease

Session Three: Bioenergetics and Metabolic Programming ***(co-Chairs: Kim Jae Bum, Seoul National University; Pierce Chow, National Cancer Centre Singapore)***

14:10-14:20 Lee In-Kyu, Kyungpook National University
Mitochondria - ER Association as a Therapeutic Target for Insulin Resistance

14:20-14:25 Q and A

14:25-14:35 Xu Feng, Institute of Molecular and Cell Biology, A*STAR
Narciclasine Attenuates Diet-Induced Obesity by Promoting Oxidative Metabolism in Skeletal Muscle

14:35-14:40 Q and A

14:40-14:50 Pei Duanqing, Chinese Academy of Sciences
Cell Fate Decisions during Somatic Cell Reprogramming

14:50-14:55 Q and A

14:55-15:05 Lin Shengcai, Xiamen University
Aida Down Regulates Enzymes for Lipid Synthesis and Storage through ER-associated Degradation Pathway

15:05-15:10 Q and A

15:10-15:40 Tea Break (30mins)

Session Four: Fatty Liver and NASH ***(co-Chairs: Xu Aimin, The University of Hong Kong; Dan Yock Young, National University Health System)***

15:40-15:50 Kohjiro Ueki, National Center for Global Health and Medicine
Hepatic Sdf2l1 Controls Appropriate Responses to Feeding-induced ER Stress and Metabolism through Regulation of ER Associated Degradation (ERAD)

15:50-15:55 Q and A

15:55-16:05 Yoshihiro Ogawa, Kyushu University
Metabolic Organ Network in Non-alcoholic Steatohepatitis (NASH)

16:05-16:10 Q and A

16:10-16:20 Yang Xiaoyong, Yale University School of Medicine
Calcium-dependent O-GlcNAc Signaling Couples Liver Autophagy to Nutrient Homeostasis

16:20-16:25 Q and A

16:25-16:35 Kim Young-Bum, Harvard Medical School; Beth Israel Deaconess Medical Center
ApoJ is a Novel Hepatokine Regulating Muscle Glucose Metabolism and Insulin Sensitivity

16:35-16:40 Q and A

16:40-16:50 Zhang Chen-Yu, Nanjing University
Pancreatic Islet-secreted miR-29s are Delivered into the Liver and Result in Mouse Hepatic Insulin Resistance

16:50-16:55 Q and A

2017 SSMD Special Keynote Lecture ***(Chair: Han Weiping, SBIC, A*STAR)***

16:55-17:35 Li Peng, Tsinghua-Peking Center for Life Sciences
The Cellular Basis of Obesity and Fatty Liver Disease

17:50 Transport to venue for Welcome Dinner (speakers and invited guests)

18:30-21:30 Welcome Reception and Dinner (speakers and invited guests)

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17 Nov 2017 (Day Two)

SSMD Outstanding Achievements Award Lecture ***(Chair: Han Weiping, SBIC, A*STAR)***
(Award presentation by Dean Duke-NUS Medical School)

09:00-09:40 Philipp Scherer, UT Southwestern Medical Center
White Adipose Tissue Physiology, Mitochondrial Function and Adiponectin

Session Five: Lipid Metabolism and Adipose Tissue Biology ***(co-Chairs: Philipp Scherer, UT Southwestern Medical Center; Zhang Chen-Yu, Nanjing University)***

09:40-09:50 Kim Jae Bum, Seoul National University
Macrophage VLDLR Mediates Obesity-induced Insulin Resistance with Adipose Tissue Inflammation

09:50-09:55 Q and A

09:55-10:05 Liu Yong, Wuhan University
The ER Stress Sensor IRE1α in Adipose Inflammation and Energy Imbalance

10:05-10:10 Q and A

10:10-10:20 Xu Aimin, The University of Hong Kong
Dysfunctional MDM2-P53 Axis Causes Adipose Senescence, Lipoatrophy and Type-2 Diabetes

10:20-10:25 Q and A

10:25-10:35 Park Kyong Soo, Seoul National University
Loss of SENP2 Promotes Browning of White Adipose Tissues

10:35-10:40 Q and A

10:40-10:50 Sun Lei, Duke-NUS Medical School
RNA Binding Protein, Ybx2, Regulates RNA Stability during Cold-induced Brown Fat Activation

10:50-10:55 Q and A

10:55-11:05 Chen Yan, Chinese Academy of Sciences
A Golgi Protein Regulates Autophagy and Lipid Metabolism

11:05-11:10 Q and A

11:10-11:40 Tea Break (30 mins)

Session Six: **Vascular Biology and Heart Failure** ***(co-Chairs: Chen Yan, Chinese Academy of Sciences; Peter Shepherd, Auckland University)***

11:40-11:50 Wang Yu, The University of Hong Kong
Endothelial SIRT1 as a Novel Target for the Prevention of Early Vascular Aging

11:50-11:55 Q and A

11:55-12:05 Roger Foo, National University of Singapore
Tackling Heart Failure Treatment through the Epigenome

12:05-12:10 Q and A

12:10-12:20 Gary Sweeney, York University
Iron Overload and its Significance in Metabolic Syndrome Complications

12:20-12:25 Q and A

12:25-12:35 Philip Lee, Singapore Bioimaging Consortium, A*STAR
Cardio-metabolic imaging in Metabolic Diseases with Hyperpolarized Carbon-13 MRI

12:35-12:40 Q and A

12:40-12:50 Ding Chunming, Wenzhou Medical University
Cancer Precision Medicine through Precise Molecular Tests

12:50-12:55 Q and A

12:55-13:40 **Lunch (45 minutes)**

2017 SSMD Outstanding Young Investigator Award Lecture ***(Chair: Han Weiping, SBIC, A*STAR)***
(Award presentation by Executive Director, SBIC)

13:40-14:20 Song Bao-Liang, Wuhan University
New Insights into Cholesterol Metabolism

Session Seven: **Diabetes Etiology and Prevention (I)** ***(co-Chairs: David Piston, Washington University in St. Louis; Liu Yong, Wuhan University)***

14:20-14:30 Tai E-Shyong, National University Health System, Singapore
Identifying Pathways Relevant to Human Insulin Resistance in Asians

14:30-14:35 Q and A

14:35-14:45 Wang Cong-Yi, Huazhong University of Science & Technology
Epigenetic Factors Serve as a Bridge to Link Environmental Exposures to the Pathogenesis of Diabetes and Diabetic Complications

14:45-14:50 Q and A

14:50-15:00 Bernhard Boehm, Nanyang Technological University, Singapore
Linking Autoimmune and Metabolic Diabetes

15:00-15:05 Q and A

15:05-15:15 Adrian Teo, Institute of Molecular and Cell Biology, A*STAR
Mutations in Hepatocyte Nuclear Factors that Lead to Diabetes

15:15-15:20 Q and A

15:20-15:50 Tea Break (30mins)

Session Eight: Diabetes Etiology and Prevention (II) ***(co-Chairs: Kim Young-Bum, Harvard University; Song Bao-Liang, Wuhan University)***

15:50-16:00 Yusuf Ali, Nanyang Technological University
Lipid Droplets and Paracrine Inflammatory Signals Contributes to beta-cell Dysfunction in Type-2 Diabetes

16:00-16:05 Q and A

16:05-16:15 David Piston, Washington University in St. Louis
Normalizing Alpha Cell Glucagon Secretion as a Diabetes Therapy

16:15-16:20 Q and A

16:20-16:30 Peter Thorn, University of Sydney
Polarity in Beta Cells: Functional Significance and Mechanisms of Cell Orientation

16:30-16:35 Q and A

16:35-16:45 Peter Shepherd, Auckland Cancer Society Research Centre; Maurice Wilkins Centre
Understanding the Role of Adherens Junctions in Regulated Vesicle Trafficking Processes Controlling Glucose Metabolism

16:45-16:50 Q and A

16:50-17:00 Matthew Hirschey, Duke University Medical Center
Mitochondrial Sirtuin 4 Controls Leucine Metabolism and Insulin Secretion

17:00-17:05 Q and A

17:05-17:15 Miriam Cnop, Université Libre de Bruxelles
Monogenic Forms of Diabetes as Models of β cell Organelle Dysfunction in Type 2 Diabetes

17:15-17:20 Q and A

18:00 Transport to dinner (overseas speakers)

END OF SYMPOSIUM