Keystone Symposia in Korea

Drivers of Type 2 Diabetes: From Genes to Environment

Grand Hilton Seoul | Seoul, South Korea | October 7–11, 2018

Held in advance of the 2018 International Congress on Diabetes and Metabolism, October 11–13, 2018

Scientific Organizers:

Kyong Soo Park, Seoul National University College of Medicine, South Korea
Young-Bum Kim, Harvard Medical School, USA
Zoltan P. Arany, University of Pennsylvania, USA

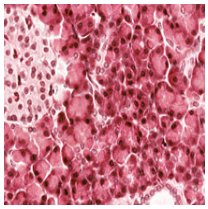
The prevalence of diabetes mellitus is increasing worldwide and is a major threat to global public health that requires urgent action. Over the last few decades, significant advances have been made in terms of identifying novel susceptibility genes and signaling pathways that play pivotal roles in the pathogenesis of diabetes and its related metabolic disorders. However, a major gap in understanding the current global epidemic of diabetes is the lack of knowledge regarding how molecular interactions between the environment and susceptibility genes are regulated within an altered metabolic milieu. This conference will address these unresolved gaps in the etiopathogenesis of diabetes and focus on the latest advances that are linked to the molecular drivers of diabetes mellitus. Topics include: systemic regulation of adipocytes in diabetes; microvesicles, noncoding RNA and intercellular communications; physiological drivers in hunger and energy homeostasis; epigenetics and metabolic control in diabetes; novel signaling players related to insulin resistance; adaptation of beta cells to chronic metabolic stress; environmental triggers in diabetes and metabolic diseases; and molecular targets for nutrient sensing and signaling. The organizers anticipate that this meeting will bring about a major shift in addressing the causes of diabetes mellitus, as the topics emphasized in this meeting have not yet been widely explored. Through the novel diabetes research presented, this meeting should provide evidence-based insight to favorably impact people with diabetes worldwide.

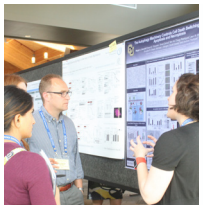
Plenary Session Topics:

- Epigenetics and Metabolic Control in Diabetes
- Environmental Triggers in Diabetes and Metabolic Diseases
- Physiological Drivers in Hunger and Energy Homeostasis
- Microvesicles, Noncoding RNA and Intercellular Communications
- Novel Signaling Players Linking to Insulin Resistance
- Adaptation of Beta Cells to Chronic Metabolic Stress
- Molecular Targets for Nutrient Sensing and Signaling
- Workshop 2: Novel Therapeutic Targets for Diabetes Mellitus
- Systemic Regulation of Adipocytes in Diabetes

Scholarship/Discounted Abstract Deadline: June 7, 2018; Abstract Deadline: July 10, 2018; Discounted Registration Deadline: August 7, 2018

Visit **www.keystonesymposia.org/18S1** for more details.



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SUNDAY, OCTOBER 7

Arrival and Registration

MONDAY, OCTOBER 8

Epigenetics and Metabolic Control in Diabetes

Mark I. McCarthy, University of Oxford, UK
The Genetic and Epigenetic Architecture of Type 2 Diabetes

Juleen R. Zierath, Karolinska Institutet, Sweden
Altered DNA Methylation of Glycolytic and Lipogenic Genes in Liver from Obese and Type 2 Diabetic Patients

Yoshihiro Ogawa, Kyushu University, Japan
Role of DNA Methylation in Early Life and its Impact in Later Life

Charlotte A. Ling, Lund University, Sweden
Epigenetic Mechanisms Linking Environmental Factors and Type 2 Diabetes

Short Talk(s) Chosen from Abstracts

Workshop 1

Short Talks Chosen from Abstracts

Environmental Triggers in Diabetes and Metabolic Diseases

Chirag J. Patel, Harvard Medical School, USA
Integrating the Exposome and Genome for Metabolic Diseases

Kristin L. Eckel-Mahan, McGovern Medical School at the University of Texas Health Science Center, USA
Interdependence of Nutrient Metabolism and the Circadian Clock System

David D. Moore, Baylor College of Medicine, USA
Talk Title to be Announced

Short Talk(s) Chosen from Abstracts

Poster Session 1

TUESDAY, OCTOBER 9

Physiological Drivers in Hunger and Energy Homeostasis

Jens C. Brüning, Max Planck Institute for Metabolism Research, Germany
Hypothalamic Control of Fuel Metabolism in Obesity

Min-Seon Kim, University of Ulsan College of Medicine, South Korea
Hypothalamic Inflammation in Diet Induced Obesity

Allison W. Xu, University of California, San Francisco, USA
Coordinated Regulation of Dietary Preference and Energy Balance

Vincent Prevot, INSERM, University of Lille, France
Role of Hypothalamic Tanycytes in Metabolic Homeostasis

Short Talk(s) Chosen from Abstracts

Poster Session 2

Microvesicles, Noncoding RNA, and Intercellular Communications

Chen-Yu Zhang, Nanjing University, China
Pancreatic Islet-Released miR-29 Family Members Travel to Liver and Contribute to Hepatic Insulin Resistance

Markus Stoffel, ETH Zürich, Switzerland
MicroRNA Networks in Metabolic Tissues

Soazig Le Lay, INSERM. University of Angers, France
Extracellular Vesicles Derived from Adipocytes and Obesity-Associated Metabolic Dysfunctions

Short Talk Chosen from Abstracts

WEDNESDAY, OCTOBER 10

Novel Signaling Players Linking to Insulin Resistance

Barbara B. Kahn, Beth Israel Deaconess Medical Center, Harvard Medical School, USA
Novel Class of Signaling Lipids with Beneficial Metabolic Effects

Kohjiro Ueki, University of Tokyo, Graduate School of Medicine, Japan
Aging-Induced Sarcopenia and Insulin Resistance

Andrew C. Adams, Eli Lilly and Company, USA
FGF21 Signaling in Insulin Action

Young-Bum Kim, Harvard Medical School, USA
ApolipoproteinJ (ApoJ) Is a Novel Regulator of Insulin Resistance

Short Talk(s) Chosen from Abstracts

Adaptation of beta Cell to Chronic Metabolic Stress

Susumu Seino, Kobe University Graduate School of Medicine, Japan
Beta Cell Glutamate Metabolism in Insulin Secretion

Lori Sussel, University of Colorado, USA
Pancreatic Beta-Cell Identity and Function in Diabetes

Yuval Dor, Hebrew University-Hadassah Medical School, Israel
The effect of Glucose on beta Cell Regeneration

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, OCTOBER 11

Molecular Targets for Nutrient Sensing and Signaling

E. Dale Abel, University of Iowa, Carver College of Medicine, USA
Autophagy and Nutrient Sensing

Zoltan P. Arany, University of Pennsylvania, USA
Diabetes and Branched Amino Acid Metabolism

Kyong Soo Park, Seoul National University College of Medicine, South Korea
Novel Target for Lipid Sensing and Signaling

Feifan Guo, Institute for Nutritional Sciences, China
Amino Acids and Metabolic Diseases

Short Talk(s) Chosen from Abstracts

Workshop 2: Novel Therapeutic Targets for Diabetes Mellitus

Short Talks Chosen from Abstracts

Systemic Regulation of Adipocytes in Diabetes

Philipp E. Scherer, University of Texas Southwestern Medical Center, USA
The Adipocyte in Systemic Energy Regulation

Aimin Xu, University of Hong Kong, China
Crosstalk between Brown and White Adipose Tissue for Adaptive Thermogenesis

David E. James, University of Sydney, Australia
Molecular Mapping of Insulin Action in Adipocytes

FRIDAY, OCTOBER 12

Departure