

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Obesity: From Cell to Patient - RESCHEDULING IN PROGRESS (J5)

Scientific Organizers: Kevin L. Grove, Rachel L. Batterham and Shane T. Hentges

Supported by the Directors' Fund

## Diabetes: Many Faces of the Disease - RESCHEDULING IN PROGRESS (J6)

Scientific Organizers: Lori Sussel, Juleen R. Zierath and Laura C. Alonso

January 29-February 2, 2021 • Fairmont Hotel Vancouver • Vancouver, BC, Canada

Supported by the Directors' Fund

Scholarship Deadline: October 15, 2020 / Abstract Deadline: October 29, 2020 / Discounted Registration Deadline: December 2, 2020

### FRIDAY, JANUARY 29

#### Arrival and Registration

### SATURDAY, JANUARY 30

#### Welcome and Keynote Address (Joint)

**Morris F. White**, Boston Children's Hospital, Harvard Medical School, USA

*Peripheral and Central Faces of Hepatic Insulin Resistance*

#### Gut Instincts: Influence of the Intestine on Glucose Homeostasis (Joint)

**Mary-Elizabeth Patti**, Joslin Diabetes Center, USA  
*Hypoglycemia After Bariatric Surgery: Lessons Learned About Intestinal Control of Glucose Metabolism*

**Max Nieuwdorp**, University of Amsterdam, Netherlands  
*Does the Disease Start with the Gut Microbiome?*

**Roy Taylor**, Newcastle University, UK  
*The Impact of Caloric Restriction on Liver and Pancreas*

#### Short Talks Chosen from Abstracts

#### Workshop and Panel 1: Patient Engagement (J5)

\***Rachel L. Batterham**, University College London, UK

#### Short Talks Chosen from Abstracts

#### Workshop and Panel 1: Insulin Resistance vs. Beta Cell Function (J6)

#### Short Talks Chosen from Abstracts

#### Central Adaptations to Body Weight Change (J5)

**Hans Rudolf Berthoud**, Pennington Biomedical Research Center, USA

*Central Effects of Bariatric Surgery*

**Stephanie E. Fulton**, University of Montreal, Canada  
*Curbing Hedonia: Neurometabolic Adaptations to High-Fat Diet and Obesity*

**Dana M. Small**, Yale University School of Medicine, USA  
*Rethinking Food Reward: Implications for Overeating*

#### Short Talks Chosen from Abstracts

#### Personalized Therapeutics for T2D: Are We there Yet? (J6)

**Jose C. Florez**, Massachusetts General Hospital, USA  
*Have GWAS Helped Classify Diabetes?*

**Emma Ahlqvist**, Lund University, Sweden  
*Subclassifying Diabetes by Combining GWAS and Clinical Phenotyping*

**Paul W. Franks**, Lund University, Sweden  
*Lifestyle Effects in the Context of Precision Medicine*

#### Short Talks Chosen from Abstracts

#### Poster Session 1

### SUNDAY, JANUARY 31

#### The Future Treatments for Patients with Obesity (J5)

**Lotte Bjerre Knudsen**, Novo Nordisk A/S, Denmark  
*GLP-1: An Incretin and a Neuropeptide with Simultaneous Cardiovascular Risk Reduction*

**Murielle M. Veniant**, Amgen Inc., USA  
*Approaches to Decrease Weight in Obese Individuals with Therapeutic Agents*

**Shirly Pinto**, Kallyope, USA  
*Targeting Gut-Brain Circuits Mediating Satiety for the Treatment of Obesity*

#### Speaker to be Announced

#### Short Talks Chosen from Abstracts

#### Type 2 Diabetes: One Size Doesn't Fit All (J6)

**Ellen E. Blaak**, Maastricht University, Netherlands  
*T2D Associated with Different Obesity Metabolic Phenotypes*

**Alka M. Kanaya**, University of California, San Francisco, USA  
*Ethnic Influences on Type 2 Diabetes*

**Kristen Jane Nadeau**, University of Colorado Denver, USA  
*Emerging Aspects of T2D in Youth*

**Bret H. Goodpaster**, Translational Research Institute for Metabolism and Diabetes, USA

*Fat Accumulation in Muscle: Implications for Diabetes*

#### Short Talks Chosen from Abstracts

#### Workshop and Panel 2: Health Disparities in Diabetes and Obesity (Joint)

**Alka M. Kanaya**, University of California, San Francisco, USA

**Carmella Evans-Molina**†, Indiana University, USA

**Rory J. McCrimmon**, University of Dundee, UK

**Carla J. Greenbaum**, Benaroya Research Institute at Virginia Mason, USA

#### A Gut Feeling: How the Gut Speaks to the Brain (J5)

**Rachel L. Batterham**, University College London, UK  
*Gut Hormones and Nutrient Sensing*

**Darleen A. Sandoval**, University of Michigan, USA  
*Using Bariatric Surgery to Understand the Regulatory Role of the Gut in Metabolism*

**Diego V. Bohórquez**, Duke University Medical Center, USA  
*A Gut Choice for Sugars*

#### Short Talks Chosen from Abstracts

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### Non-Classical T1D (J6)

**Carmella Evans-Molina**, Indiana University, USA

*Understanding Late Onset T1D*

**Matthew B. Johnson**, University of Exeter Medical School, UK

*Genetic Insights into Autoimmune Diabetes*

**Kevan C. Herold**, Yale University, USA

*Cancer Immunotherapy and T1D*

**Short Talks Chosen from Abstracts**

### Poster Session 2

### MONDAY, FEBRUARY 1

#### Feeding Behavior: Top Down or Bottom Up? (J5)

**Linda Rinaman**, Florida State University, USA

*Top Down Control of Appetite*

**Lori M. Zeltser**, Columbia University, USA

*Anorexia Nervosa: Perceptions of Appetite*

**Michael Krashes**, NIDDK, National Institutes of Health, USA

*Appetite and Motivation*

**Gary J. Schwartz**, Albert Einstein College of Medicine, USA

*Bottom Up Control of Appetite*

**Short Talks Chosen from Abstracts**

#### The Failing beta Cell in T1D and T2D (J6)

**Laura C. Alonso**, Weill Cornell Medicine, USA

*ER Stress: The Good, the Bad and the Ugly*

**Marc Prentki**, Montreal Diabetes Research Center, Canada

*Insulin Hypersecretion as an Initiator of Insulin Resistance*

**Chantal Mathieu**, KU Leuven, Belgium

*Dialog Between the Immune System and the Beta Cell*

**Lori Sussel**, University of Colorado Anschutz Medical Campus, USA

*Beta Cell Dysfunction Contributes to T1D*

**Short Talks Chosen from Abstracts**

#### Workshop 3: Dialog with Speakers (Joint)

#### Fetal/Neonatal Programming of Obesity Risk: Impact of Maternal Metabolic Health (J5)

**Anny Xiang**, Kaiser Permanente, USA

*Outcomes of Maternal Obesity and Diabetes in Children*

**Elinor L. Sullivan**, Oregon National Primate Research Center, USA

*The Influence of Maternal Nutrition and Metabolic State on Offspring Risk for Psychiatric Disorders*

**Stephanie Wesolowski**, University of Colorado Denver, USA

*Programming Liver Disease*

**Short Talks Chosen from Abstracts**

### Liver Dysfunction in Metabolic Disease (J6)

**Juleen R. Zierath**, Karolinska Institutet, Sweden

*Skeletal Muscle Mediators and Exercise-Induced Adaptations*

*Governing Insulin Sensitivity in Type 2 Diabetes*

**Anastasia Kralli**, Johns Hopkins Medical School, USA

*The Role of Mitochondrial Function in Obesity and Metabolic Disease*

**Joseph T. Brozinick**, Eli Lilly and Company, USA

*Insulin Sensitivity in T2D*

**Short Talks Chosen from Abstracts**

### Poster Session 3

### TUESDAY, FEBRUARY 2

#### Adipose Tissue Communication (J5)

**Philipp E. Scherer**, University of Texas Southwestern Medical Center, USA

*Adipocyte-Mediated Organ Crosstalk*

**Ana Domingos**, University of Oxford, UK

*Sympathetic Innervation of Adipose Tissue*

**Sean M. Hartig**, Baylor College of Medicine, USA

*Adipose Tissue Communication via Exosomes*

**Camilla Charlotte Schéele**, University of Copenhagen, Denmark

*Brown Adipocytes in Human Metabolism*

**Short Talks Chosen from Abstracts**

#### Novel Therapeutic Strategies: Mechanisms and Applications (J6)

**Richard D. DiMarchi**, Indiana University and Novo Nordisk, USA

*Overview of Existing and Emerging Therapies for T2D*

**Rory J. McCrimmon**, University of Dundee, UK

*Mechanisms of Therapies for T2D and Potential Crossover to T1D*

**Carla J. Greenbaum**, Benaroya Research Institute at Virginia Mason, USA

*Anti CD3 Therapy for T1D; New Promise for an Old Therapy*

**Allan Ertmann Karlsen**, Novo Nordisk, Denmark

*Stem Cell Mediated Treatments for Diabetes*

**Short Talks Chosen from Abstracts**

#### Workshop 4: Hot Topics (J5)

**Short Talks Chosen from Abstracts**

#### CNS Control of Energy Homeostasis and Blood Glucose (Joint)

**Shane T. Hentges**, Colorado State University, USA

*POMC Neurons: Distinct Roles in Food Intake, Metabolism and Glucose Regulation*

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**Michael A. Cowley**, Monash University, Australia

*Hypothalamic Control of Glucose Homeostasis*

**Martin G. Myers, Jr.**, University of Michigan, USA

*Hypothalamic Control of Hypoglycemic Counter Regulatory Mechanism*

**Michael W. Schwartz**, University of Washington, USA

*Role of the Brain in Diabetes Pathogenesis and Treatment*

**Short Talks Chosen from Abstracts**

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers)**

**WEDNESDAY, FEBRUARY 3**

**Departure**