

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Neuronal Control of Appetite, Metabolism and Weight (Z5)

Scientific Organizers: Lora K. Heisler and Scott M. Sternson

Sponsored by Arena Pharmaceuticals, Inc. and Novo Nordisk A/S.

Gastrointestinal Control of Metabolism (Z6)

Scientific Organizers: Randy J. Seeley, Matthias H. Tschöp and Fiona M. Gribble

May 9-13, 2017 • Tivoli Hotel and Congress Center • Copenhagen, Denmark

Sponsored by MedImmune and Novo Nordisk A/S.

Abstract & Scholarship Deadline: January 12, 2017 / Abstract Deadline: February 9, 2017 / Discounted Registration Deadline: March 9, 2017

TUESDAY, MAY 9

Arrival and Registration

WEDNESDAY, MAY 10

Welcome and Keynote Session (Joint)

Stephen O'Rahilly, University of Cambridge, UK
Metabolic Disease; Lessons from Natural Human Variation

Speaker to be Announced

Nutrient Sensing and Gut Signaling (Joint)

Ronald M. Evans, The Salk Institute for Biological Studies, USA
Nutrient Sensing Signaling Pathways Modulating Metabolic Health

Kristina Schoonjans, École Polytechnique Fédérale de Lausanne – EPFL, Switzerland
Bile Acid Signaling in Metabolic Disease

Short Talk(s) Chosen from Abstracts

Workshop 1: Disorders and Diseases Associated with Weight Loss (Z5)

Short Talks Chosen from Abstracts

Workshop 1 (Z6)

Short Talks Chosen from Abstracts

Interactions between Ingestive Signals and Reward Circuits (Z5)

Michael A. Cowley, Monash University, Australia
Neural Circuits Underlying Feeding Behavior

Suzanne Lee Dickson, Sahlgrenska Academy, Gothenburg University, Sweden
Brain Ghrelin Signaling and Food Reward Behavior

Christian Lüscher, University of Geneva, Switzerland
Neural Mediators of Food Reinforcement and Addiction

Short Talk Chosen from Abstracts

Gut Bacteria as Cause and Treatment of Metabolic Diseases (Z6)

Fredrik Bäckhed, University of Gothenburg, Sweden
Gut Bacteria and the Regulation of Gut Function

Martin J. Blaser, New York University School of Medicine, USA
Effects of the Early-Life Microbiota on the Development of Metabolic Illnesses

Nathalie Delzenne, Université Catholique de Louvain, Belgium
Modulation of the Gut Microbiome for Treatment of Metabolic Disorders

Short Talk Chosen from Abstracts

Poster Session 1

THURSDAY, MAY 11

Emerging Energy Homeostasis Neurocircuitry (Z5)

Sabrina Diano, Yale University School of Medicine, USA
Brain Circuits Underpinning Appetite

Martin G. Myers, Jr., University of Michigan, USA
CNS Targets of Leptin Regulating Glucose Homeostasis

Joseph T. Bass, Northwestern University, USA
SCN-AgRP Neuronal Circuit in the Circadian Control of Energetics

Lori M. Zeltser, Columbia University, USA
Role of the Stress Axis in Energy Balance

Short Talk(s) Chosen from Abstracts

Stem Cells, Gut–Pancreas Development I (Z6)

Fiona M. Gribble, Cambridge Institute for Medical Research, University of Cambridge, UK
The Biology of Enteroendocrine Cells

Heiko Lickert, Institute of Diabetes and Regeneration, Germany
Key Aspects of Gut Cell Lineage

James M. Wells, Cincinnati Children's Hospital Research Foundation, USA
Organoids for Study of Metabolic Disease

Lori Sussel, University of Colorado, USA
Beta Cell Failure in Type 2 Diabetes

Short Talk(s) Chosen from Abstracts

Signaling from Periphery to Brain to Modulate Energy Balance (Joint)

Jeffrey M. Friedman, Rockefeller University, USA
Role of Leptin in the Regulation of Body Weight

Randy J. Seeley, University of Michigan, USA
How the Gut Regulates Metabolic Status

Ivan de Araujo, Yale University School of Medicine, USA
What Does Sugary Food do to the Brain?

Short Talk Chosen from Abstracts

Poster Session 2

FRIDAY, MAY 12

Hypothalamic Signals Modulating Hunger and Complex Behavior (Z5)

Scott M. Sternson, HHMI/Janelia Research Campus, USA
Motivational Mechanisms Controlling Hunger

Garret D. Stuber, University of North Carolina at Chapel Hill School of Medicine, USA
Neural Circuits Mediating Motivated Behavior

Tamas L. Horvath, Yale School of Medicine, USA
Appetite Circuits in the Regulation of Complex Behavior

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Roger D. Cone, Vanderbilt University, USA
Melanocortins as a Target for Obesity Treatment

Short Talk(s) Chosen from Abstracts

Controversies in Obesity/Diabetes Treatment. Surgery vs. Devices vs. Medicines. What Does the Future Hold? (Z6)

Manoel Galvao Neto, Florida International University - FIU, USA
New Endolumenal Approaches to Diabetes

Karine Clément, ICAN, France
Can the Microbiome be a Treatment for Metabolic Disease

Tina Vilsboll, Gentofte Hospital of the University of Copenhagen, Denmark
The Effectiveness of New Diabetes Medications

David E. Cummings, University of Washington, USA
Metabolic Surgery: Mechanisms and Use of "Bariatric" Operations to Treat Diabetes

Short Talk(s) Chosen from Abstracts

Workshop 2 (Z6)

Short Talks Chosen from Abstracts

Cutting Edge Approaches in Obesity Research (Z5)

Bryan Roth, University of North Carolina, Chapel Hill, USA
Chemogenetic Approaches for Circuit Modulation

Andres Lozano, University of Toronto, Toronto Western Hospital, Canada
Deep Brain Stimulation to Improve Obesity

Speaker to be Announced

Short Talk Chosen from Abstracts

Stem Cells, Gut-Pancreas Development II (Z6)

Andrew B. Leiter, University of Massachusetts Medical School, USA
The Origins of Different Cell Types in the Gut

Speaker to be Announced

Susumu Seino, Kobe University Graduate School of Medicine, Japan
Beta-cell Glutamate Signaling in Insulin Secretion

Short Talk Chosen from Abstracts

Poster Session 3

SATURDAY, MAY 13

Pharmacotherapies for Obesity and Type 2 Diabetes (Joint)

Lora K. Heisler, University of Aberdeen, UK
Modifying CNS 5-HT Circuits to Reverse Obesity and Type 2 Diabetes

Ruth E. Gimeno, Eli Lilly & Company, USA
Current and Emerging Targets for Obesity Treatment

Daniel J. Drucker, Mt. Sinai Hospital, Canada
Molecular Mechanisms for Gut Hormone Action

Matthias H. Tschöp, Helmholtz Zentrum München and Technische Universität München, Germany
Gut Peptide Combination Therapy to Treat Obesity

Short Talk(s) Chosen from Abstracts

Workshop 2: CNS Regulation of Adipose Tissue (Z5)

Short Talks Chosen from Abstracts

Programming Obesity: Early Environmental Influences (Z5)

Elinor L. Sullivan, Oregon National Primate Research Center/OHSU, USA
Maternal Metabolic and Dietary Environmental Influences on Offspring Metabolic Health and Behavior

John R. Speakman, University of Aberdeen, UK
Molecular Mechanisms of Macronutrient Drivers of Appetite

Jens C. Brüning, Max Planck Institute for Metabolism Research, Germany
Effect of Insulin on Brain Development and Metabolic Programming

Novel Aspects of Gut Function (Z6)

Thue W. Schwartz, University of Copenhagen, Denmark
Nutrient Metabolite Sensing through Enteroendocrine GPCR's

Gilles Mithieux, INSERM, France
Central Regulation of Metabolism Initiated by Glucose Production in the Gut

Tony K.T. Lam, Toronto General Research Institute, Canada
Gut Nutrient Sensing

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Z5)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Z6)

SUNDAY, MAY 14

Departure