



Organ Crosstalk in Obesity and NAFLD

January 21–25, 2018 | Keystone Resort | Keystone, Colorado | USA

Scientific Organizers:

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

Bei B. Zhang, Pfizer Inc., USA

Christoph Buettner, Mount Sinai School of Medicine, USA

Joint with the meeting on *Bioenergetics and Metabolic Disease*

Neural and humoral communication among peripheral organs and the brain is critical in coordinating whole body energy homeostasis in health and disease. Nutrient and hormone sensing take place in multiple organs with the central nervous system as a site of integration of these diverse signals, governing this coordination. Within this multi-organ framework, the liver occupies a central role in determining systemic glucose and lipid metabolism in obesity and clinically relevant metabolic pathophysiology, particularly non-alcoholic fatty liver disease (NAFLD) and fibrosis. Identification and characterization of the modes and consequences of organ cross-talk is essential to fill existing gaps in knowledge and to promote the development of therapeutic strategies to treat obesity and metabolic disease. This conference brings together experts in the novel, multidisciplinary evaluation of organ cross-talk, using innovative combinations of molecular, genetic, physiological, pharmacological and systems neuroscience approaches to: 1) Provide a unique and timely perspective, and 2) Inspire interactions directed toward basic, clinical and translational research in integrative metabolism. Finally, the joint staging of this conference in conjunction with the conference on "Bioenergetics and Metabolic Disease" will strategically leverage presentations targeting the biology of metabolism and nutrient availability in obesity with those focused on the biology of energy utilization. Taken together, this novel combination will provide a coherent, powerful and comprehensive understanding of and appreciation for the complex.

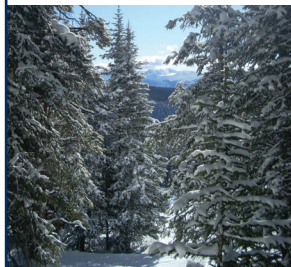
Session Topics:

- Central Modulation of Metabolism (Joint)
- Workshop 1: Emerging Therapeutic Targets for Metabolic Disease (Joint)
- Sweet Spots in the Brain: Central Glucose Sensing and Peripheral Glucose Homeostasis
- Adipose Plasticity and Metabolism (Joint)
- Hepatic Metabolism in Obesity
- Hepatic Dysfunction in NASH and NAFLD
- The Many Scars of Obesity: Systemic Fibrosis and Hypothalamic Gliosis
- Feel Your Gut: The Gut-Brain-Food Connection
- Workshop 2: Hot Topics in Obesity and Metabolism (Joint)
- Fat on the Brain: Adipose-Brain Crosstalk

Scholarship Application & Discounted Abstract Deadline: September 28, 2017

Abstract Deadline: October 26, 2017

Discounted Registration Deadline: November 29, 2017



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Meeting Hashtag: #KSorgan
www.keystonesymposia.org/18J3

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Organ Crosstalk in Obesity and NAFLD (J3)

Scientific Organizers: Gary J. Schwartz, Bei B. Zhang and Christoph Buettner

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Bioenergetics and Metabolic Disease (J4)

Scientific Organizers: Patrick Seale, Kendra K. Bence and P. Darrell Neuffer

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SUNDAY, JANUARY 21

Arrival and Registration

MONDAY, JANUARY 22

Welcome and Keynote Address (Joint)

Jens C. Brüning, Max Planck Institute for Metabolism Research, Germany
Control of Integrative Physiology by the Melanocortin Circuitry

Central Modulation of Metabolism (Joint)

Matthew R. Hayes, University of Pennsylvania, USA
Metabolic Neuropeptides as Modulators of Energy Balance, Motivation and Reward

Christoph Buettner, Mount Sinai School of Medicine, USA
Brain Control of Adipose Tissue Functionality as a Determinant of Hypothalamic and Liver Function

Daniel L. Marks, Oregon Health & Science University, USA
Central Mechanisms in Cancer Cachexia

Short Talk(s) Chosen from Abstracts

Workshop 1: Emerging Therapeutic Targets for Metabolic Disease (Joint)

Short Talks Chosen from Abstracts

Sweet Spots in the Brain: Central Glucose Sensing and Peripheral Glucose Homeostasis (J3)

Sarah Stanley, Icahn School of Medicine at Mount Sinai, USA
New Tools to Study the Role of Glucose-Sensing Neurons

Gregory James Morton, University of Washington, USA
CNS Mechanisms Governing Diabetic Hyperglycemia

Greg S. B. Suh, New York University School of Medicine, USA
Feeding and Nutrient Sensing in Flies and Mice

Short Talk Chosen from Abstracts

Brown and Beige Fat Thermogenesis (J4)

Patrick Seale, University of Pennsylvania, USA
Molecular Regulation of Brown and Beige Adipogenesis

Sheila Collins, Sanford Burnham Prebys Medical Discovery Institute, USA
Receptor Systems and Signaling Mechanisms in White and Brown Adipocytes

Evan D. Rosen, Beth Israel Deaconess Medical Center, Harvard University, USA
Epigenomic Characterization of Beige Adipocyte Plasticity

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, JANUARY 23

Keynote Address (Joint)

Bruce M. Spiegelman, Harvard Medical School, USA
Pathways that Control Cellular and Organismal Energy Metabolism

Adipose Plasticity and Metabolism (Joint)

Susan K. Fried, Icahn School of Medicine at Mount Sinai, USA
Sex- and Depot- Dependent Mechanisms Shaping Fat Distribution and Metabolic Health

Philipp E. Scherer, University of Texas Southwestern Medical Center, USA
Adipose Fibrosis in Metabolic Regulation

Barbara B. Kahn, Beth Israel Deaconess Medical Center, Harvard Medical School, USA
Control of Systemic Metabolism by de novo Lipogenesis in Adipose

Short Talk(s) Chosen from Abstracts

Hepatic Metabolism in Obesity (J3)

Rosalind A. Coleman, University of North Carolina at Chapel Hill, USA
Compartmentalization of Hepatic Lipid Metabolism

Morris J. Birnbaum, Pfizer Inc., USA
Regulation of Hepatic Lipid Accumulation

Baoliang Song, Wuhan University, China
New Explorations on the Ancient Cholesterol Molecule

Short Talk Chosen from Abstracts

Mitochondria: Form and Function (J4)

Jodi Nunnari, University of California, Davis, USA
Mitochondrial Behavior

Mary-Ellen Harper, University of Ottawa, Canada
Acute Control of the Uncoupling Proteins: Redox, ROS Feedback Loops and Post-Translational Modifications

Daniel P. Kelly, University of Pennsylvania, USA
Transcriptional Control of Mitochondrial Fuel Metabolism

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, JANUARY 24

Hepatic Dysfunction in NASH and NAFLD (J3)

Gyongyi Szabo, University of Massachusetts Medical School, USA
Inflammasome Activation Pathways in NAFLD and NASH

Samuel Klein, Washington University School of Medicine, USA
Biochemical, Metabolic and Clinical Implications in Obesity and NASH

Gerald I. Shulman, HHMI/Yale University School of Medicine, USA
Targeting Mitochondria to Treat NAFLD, NASH and Type 2 Diabetes

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Elizabeth J. Parks, University of Missouri, USA
Drug Development in NAFLD: From Lipogenesis to Fibrosis

Short Talk(s) Chosen from Abstracts

Energy Expenditure and Body Weight Regulation in Humans (J4)

Herman Pontzer, Hunter College, USA
Evolutionary Origins of Obesity

Michael Rosenbaum, Columbia University Medical College, USA
Regulation of Energy Balance Following Weight Reduction

Wouter D. van Marken Lichtenbelt, Maastricht University, Netherlands
Cold Exposure and Metabolic Health: Role Brown Adipose Tissue and Skeletal Muscle

Steven R. Smith, Florida Hospital, USA
Metabolic Flexibility and Energy Utilization

Short Talk(s) Chosen from Abstracts

The Many Scars of Obesity: Systemic Fibrosis and Hypothalamic Gliosis (J3)

Bart Staels, Institut Pasteur de Lille, Université Lille, France
Pathophysiology and Mechanisms of Nonalcoholic Fatty Liver Disease

Joshua Thaler, University of Washington, USA
Hypothalamic Gliosis

Ana Domingos, Fundação Calouste Gulbenkian, Portugal
Sympathetic Neuroimmunity for Obesity

Short Talk Chosen from Abstracts

Cellular Regulators of Bioenergetics (J4)

P. Darrell Neufer, East Carolina University, USA
Redox Circuit Flux and Energy Expenditure

Muthu Periasamy, Sanford Burnham Prebys Medical Discovery Institute at Lake Nona, USA
Skeletal Muscle-Based Thermogenic Mechanisms

Reuben J. Shaw, The Salk Institute for Biological Studies, USA
AMPK Control of Cellular Energetics

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, JANUARY 25

Feel Your Gut: The Gut-Brain-Food Connection (J3)

Zachary Knight, University of California, San Francisco, USA
Nutritional Regulation of Hunger Circuits

Kendra K. Bence, Pfizer Inc., USA
Targeting Fructose Metabolism for the Treatment of NAFLD/NASH

Daniel J. Drucker, Lunenfeld-Tanenbaum Research Institute, Canada
Gut Peptides Drive Metabolic Organs: Direct vs. Indirect Mechanisms

Mark D. Erion, Janssen Pharmaceutical, USA
Approaches Targeting Metabolic Control and Weight Management – From Mice to Man

Short Talk(s) Chosen from Abstracts

Skeletal Muscle: Use and Disuse (J4)

Deborah M. Muoio, Duke University Medical Center, USA
Adaptive Responses to Exercise Controlling Metabolism

Juleen R. Zierath, Karolinska Institutet, Sweden
Epigenetic Control and the Circadian Clock: Turning Back Time on Diabetes Pathogenesis

David E. James, University of Sydney, Australia
Probing the Exercise Regulated Phosphoproteome in Skeletal Muscle

David J. Glass, Novartis Institutes for Biomedical Research, USA
Molecular Mechanisms Regulating Muscle Mass and Mitochondria

Short Talk(s) Chosen from Abstracts

Workshop 2: Hot Topics in Obesity and Metabolism (Joint)

Short Talks Chosen from Abstracts

Fat on the Brain: Adipose-Brain Crosstalk (J3)

Gary J. Schwartz, Albert Einstein College of Medicine, USA
Metabolic Sensing in Adipose Tissue Nerves

Pierre Léopold, University Cote d'Azur, France
Humoral Communication between Fat and Brain in Drosophila

Suneil K. Koliwad, University of California, San Francisco, USA
Hypothalamic Microglia as Fat Sensors: Physiology vs. Pathology

Novel Effectors of Energy Metabolism (J4)

Shingo Kajimura, University of California, San Francisco, USA
BAT-Secreted Adipokines Regulate Energy Expenditure

Jiandie Lin, University of Michigan Medical School, USA
Endocrine Checkpoint for NASH Progression

Ajay Chawla, University of California, San Francisco, USA
Host Immunity and Energetics

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J3)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J4)

FRIDAY, JANUARY 26

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Departure