

Preliminary Program
3rd Helmholtz-Nature Medicine Diabetes Conference

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Date: September 19-21, 2015

Location: Lenbach Palais, Ottostraße 6, 80333, Munich, Germany

Saturday, September 19

11:30-13:15 Registration

13:15-13:30 **Welcome and Opening Remarks**
Matthias Tschöp, Research Director, Helmholtz Diabetes Center

13:30-15:00 **Session 1: Insulin and Adipose Tissue Biology**
Chair: Matthias Blüher, Jens Brüning

Michael Czech, University of Massachusetts
Adipocyte Lipogenesis in Control of Systemic Insulin Sensitivity

Ronald Kahn, Joslin Diabetes Center/Harvard Medical School
miRNAs in Adipose Tissue and Control of Systemic Metabolism

Melina Claussnitzer, Harvard Medical School/MIT
*Experimental and Computational Dissection of Non-Coding Variant Circuitry:
A Case Study for the FTO Obesity and Diabetes Risk Locus.*

Christian Wolfrum, Swiss Federal Institute of Technology (ETH) Zurich
TITLE

15:00-15:30 Break

15:30-17:00 **Session 2: Transcriptional Control**
Chair: Giles Yeo, Philip Larsen

Marc Montminy, The Salk Institute
TITLE

Karen Ryan, University of California at Davis
Nuclear Receptor Signaling in the CNS Regulation of Stress and Metabolism

Yazmín Macotela, University of Mexico
TITLE

Gregory Steinberg, McMaster University
AMPK Regulation of Lipid and Diet-Induced Obesity

17:00-17:30 Break

17:30-19:00 **Session 3: Immunometabolism**
Chair: Matthias von Herrath

Ruslan Medzhitov, Yale University
Inflammation, Homeostasis and Disease

Rana Gupta, University of Texas Southwestern
Transcriptional Control of White Adipocyte Development

Patrick Seale, University of Pennsylvania
TITLE

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Zach Gerhart-Hines, *University of Copenhagen*
Circadian Control of Brown Adipose Metabolism

19:30-23:00 Opening Party (for all conference attendees)

Sunday, September 20

08:30-09:00 Coffee

09:00-10:30 **Session 4: Gut Hormones**
Chair: Anette Ziegler, Steven Woods

Daniel Drucker, University of Toronto
Expanding the Spectrum of Actions for Enteroendocrine Peptides

Randy Seeley, University of Michigan
Mechanisms of Bariatric Surgeries on Obesity and Diabetes

Ana Domingos, *Gulbenkian Institute of Science*
Lean on Circuits or Lean for Sugar

Antonio Moschetta, *University of Texas Southwestern*
TITLE

10:30-11:15 Break / Oktoberfest Trachten and Riflemen's Parade viewing

11:15-12:45 **Session 5: Obesity and Body Weight Control**
Chair: Matthias Mann, Ruth Gimeno

Jeffrey Friedman, The Rockefeller University
Leptin and the Neural Circuit Controlling Food Intake and Metabolism

Michael Krashes, *National Institutes of Health*
A Neural Basis for Melanocortin-4 Receptor Regulated Appetite

Kevin Williams, *University of Texas Southwestern*
Acute Neuronal Activity in the Study of Metabolism

Serge Luquet, *University Paris-Diderot*
Palatability defines a feeding neurocircuitry independent from AgRP neurons

12:45-14:30 Lunch/Break

13:30-14:30 **Scientific Round Table Session** (Fellows selected from abstracts paired with senior speakers & chairs for project discussion)

14:30-16:30 **Session 6: Hypothalamus**
Chair: Ingo Bechmann, Andrea Nawrocki

Sabrina Diano, Yale University
Ventromedial Hypothalamus Mitochondrial Dynamics Control Glucose Metabolism

Bradford Lowell, Beth Israel Deaconess Medical Center/Harvard Medical School
Neural Circuitry Underlying MC4 Receptor Action

André Kleinriders, *German Institute for Human Nutrition*
Mitochondrial Function at the Crossroad of Central Insulin and Leptin Signaling

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Ruben Nogueiras Pozo, *University of Santiago de Compostela*
Hypothalamic Pathways Modulating the Metabolic Actions of MCH

Joshua Thaler, *University of Washington*
Hypothalamic Gliosis and Diet-Induced Obesity

16:30-17:00 Break

17:00-18:30 **Session 7: Energy Metabolism**

Chair: Mathias Treier, Michael Mark

Alexander Pfeifer, University of Bonn
TITLE

David Olson, *University of Michigan*
Functional Assessment of PVH Cell Types in Energy Balance

Diego Perez-Tilve, *University of Cincinnati*
Endogenous Action Versus Resistance: Redefining the Role of Leptin in Obesity

Matthew Rodeheffer, *Yale University*
TITLE

19:30-22:00 Speaker's Dinner
Munich city tours (optional event for conference attendees)

Monday, September 21

08:30-09:00 Coffee

09:00-10:30 **Session 8: Liver and Metabolism**

Chair: Alessandro Pocai, Annette Schürmann

David Mangelsdorf, University of Texas Southwestern
FGF21: Fasting to Feasting, Physiology to Pharmacology

Morris Birnbaum, University of Pennsylvania
The Complex Regulation of Hepatic Metabolism

Martin Myers, University of Michigan
The Control of Gene Transcription and Physiology by Leptin

10:30-11:00 Break

11:00-12:30 **Session 9: Islet Biology**

Chair: Heiko Lickert, Michael Roden

Klaus Kästner, University of Pennsylvania
Regulation and Function of the Imprinted MEG3 Locus in Human Beta-Cells

Lori Sussel, Columbia University
Regulation of Pancreatic Islet Cell Fate

David D'Alessio, Duke University
Proglucagon Peptides in the Regulation of Insulin Secretion in Health and Diabetes

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12:30 – 13:30 Lunch

13:30-15:30 **Session 10: Neurocircuits**

Chair: Magdalena Götz, Tamas Horvath

Joel Elmquist, UT Southwestern

Using Mouse Genetics to Unravel the CNS Pathways Regulating Glucose Homeostasis

Scott Sternson, Janelia Farms

Neuronal Dynamics in the Melanocortin Circuit

Michael Schwartz, University of Washington

CNS Control of Glucose Homeostasis: Implications for Diabetes Pathogenesis and Treatment

Lori Zeltser, Naomie Berrie Diabetes Center/Columbia University

Developmental Influence on Circuits Regulating Body Weight

15:30-16:00 Break

16:00-17:00 **The Helmholtz Diabetes Lecture**

Bruce Spiegelman, Harvard Medical School

Brown and Beige Fat: Basic Biology and a Novel Pathway of Thermogenesis
Introduced by Matthias Tschöp

17:00-17:15 **Novo Nordisk HelDi Award Presentation**

Short Speech Introduction and Presentation of the HelDi Award

17:15-17:30 **Closing Remarks**

Invited Speakers: **Morris Birnbaum**, University of Pennsylvania, **Michael Czech**, University of Massachusetts, **David D'Alessio**, Duke University, **Sabrina Diano**, Yale University, **Daniel Drucker**, University of Toronto, **Joel Elmquist**, University of Texas Southwestern, **Jeffrey Friedman**, The Rockefeller University, **Klaus Kästner**, University of Pennsylvania, **C. Ronald Kahn**, Joslin Diabetes Center, **Bradford Lowell**, Beth Israel Deaconess Medical Center, **David Mangelsdorf**, University of Texas Southwestern, **Ruslan Medzhitov**, Yale University, **Marc Montminy**, Salk Institute, **Martin Myers**, University of Michigan, **Alexander Pfeifer**, University of Bonn, **Michael Schwartz**, University of Washington, **Randy Seeley**, University of Michigan, **Bruce Spiegelman**, Dana Farber Cancer Institute, Harvard University, **Scott Sternson**, Janelia Farm, **Lori Sussel**, Columbia University, **Lori Zeltser**, Naomie Berrie Diabetes Center

HelDi nominees: **Melina Claussnitzer**, Harvard Medical School/MIT, **Ana Domingos**, Gulbenkian Science Institute, **Zach Gerhart-Hines**, University of Copenhagen/Novo Nordisk Foundation, **Rana Gupta**, University of Texas Southwestern, **André Kleinriders**, German Institute for Human Nutrition, **Michael Krashes**, NIH/NIDDK, **Serge Luquet**, University Paris-Diderot, **Yazmín Macotela**, National University of Mexico, **Antonio Moschetta**, University of Texas Southwestern/University of Bari, **Ruben Nogueiras**, University of Santiago de Compostela, **David Olson**, University of Michigan, **Diego Perez-Tilve**, University of Cincinnati, **Karen Ryan**, University of California at Davis, **Matthew Rodeheffer**, Yale University, **Patrick Seale**, University of Pennsylvania, **Gregory Steinberg**,

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