

Keystone Symposia: Adipose Tissue Biology

(Joint with meeting on: Neuronal Control of Appetite, Metabolism and Weight)

January 24–29, 2010 • Keystone Resort • Keystone, Colorado • USA

Scientific Organizers: Sheila Collins, Karsten Kristiansen and Silvia Corvera

PROGRAM FACULTY & TALKS

Rexford S. Ahima* \diamond , University of Pennsylvania, USA

Joseph Bass \diamond , Northwestern University, USA

Clock and Per: Gene Network Controls on Metabolism/Adiposity

Etienne Challet \diamond , Institute for Integrative and Cellular Neuroscience, France
Signals Entraining the SCN and Feeding: Multiple Clocks

Ajay Chawla \diamond , Stanford University Medical Center, USA

Macrophage Activation and Diet Induced Obesity

Saverio Cinti, University of Ancona, Italy

Morphological Features: Precursor Cell Origins

Sheila Collins*, Hamner Institutes for Health Sciences, USA

Roger D. Cone \diamond , Vanderbilt University, USA

Zebrafish: A Model System for Forward Genetic Analysis of Energy Homeostasis

Silvia Corvera, University of Massachusetts Medical School, USA

Depot-Specific Differences in Adipose Tissue Angiogenesis and the Development of Insulin Resistance in Humans

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

Michael Culler \diamond , Ipsen/Biomeasure, USA

Melanocortins and the Treatment of Obesity and Metabolic Disease

Eduardo Dunayevich \diamond , Orexigen Therapeutics, Inc., USA

The Combination of Bupropion and Naltrexone in the Treatment of Obesity: From Bench to Pivotal Trials

Jeffrey M. Friedman* \diamond , Rockefeller University, USA

Leptin and the Links Among Metabolism, Physiology and Behavior

Steven Grinspoon, MGH and Harvard Medical School, USA

HAART-Induced HIV Lipodystrophy and Treatment

Karsten Kristiansen* \diamond , University of Copenhagen, Denmark

Single Gene Mutations that Promote Brown Adipocyte Differentiation

Mitchell A. Lazar* \diamond , University of Pennsylvania School of Medicine, USA

Rev-erb α and NCoR: Transcriptional Rhythms and Metabolism

H. Roger Lijnen, University of Leuven, Belgium

Role of Proteolysis in Development of Adipose Tissue

Ormond A. MacDougald, University of Michigan, USA

Wnt Signaling and the Bone vs. Adipose Differentiation Process

Jocelyne Magré, INSERM, France

Genetics of Congenital Lipodystrophies

Daniel Lee Marks \diamond , Oregon Health & Science University, USA

Cachexia and Wasting—Cytokine Actions in the Brain

Donald J. Marsh \diamond , Merck Research Laboratories, USA

New Neuropeptide Target Systems

Julian Mercer \diamond , Rowett Research Institute, UK

Hypothalamic Gene Expression across Diurnal Rhythms and Feeding Patterns

Jan Nedergaard, Stockholm University, Sweden

State of the New Evidence for Active Adult Human Brown Adipose Tissue and its Possible Metabolic Significance

John W. Newcomer, Washington University School of Medicine, USA

Antipsychotic Medications: Metabolic and Cardiovascular Risk

Rei Ogawa, Nippon Medical School, Japan

Application of Adipose Stem Cells for Plastic Surgery—In Particular about Cartilage Regeneration

Sean M. Oldham* \diamond , Burnham Institute for Medical Research, USA

mTOR Pathway and Fat

Umüt Ozcan \diamond , Children's Hospital Boston, Harvard Medical School, USA

The ER Stress and Leptin Resistance

Randy J. Seeley* \diamond , University of Cincinnati, USA

Steven E. Shoelson \diamond , Harvard Medical School, Joslin Diabetes Center, USA

Obesity, Inflammation and Insulin Resistance (Basic and Clinical Issues)

Bruce M. Spiegelman, Harvard Medical School, USA

Lineage Tracing of White vs. Brown Adipocytes

Hei Sook Sul, University of California, Berkeley, USA

Pref-1 Controls Early Mesenchymal Cell Fate Decision to adipo-, chondro- and osteoblastogenesis

Heidi Tissenbaum \diamond , University of Massachusetts Medical School, USA

C. elegans: Tubby/Tub-1, daf-16/FOXO Function, Aging

Zofia Zukowska, Georgetown University, USA

Neurogenic Regulation of Angiogenesis: Discovered Role of Neuropeptide Y

*Keynote speaker. *Session chair. \diamond Joint speaker. \dagger Invited, not yet confirmed. Current as of Sep 15, 2009



The study of adipose tissue has evolved over the years from merely being a passing note in most physiology texts to now playing center stage in the etiology of most metabolic diseases. This shift was assisted by early studies exploring the molecular signals and gene expression changes that dictate the differentiated state of a cell, for which the adipocyte was a model. Such studies led to the discovery of PPAR γ as one of those key regulators of adipogenesis, and later the realization that it was the pharmacologic target of the glitazone class of anti-diabetic agents. Further seminal studies from The Jackson Laboratories on mouse genetics of obesity paved the way for the discovery of adipocyte-derived regulatory hormones (“adipokines”) such as leptin and its receptor. These in turn ushered in the current state of vigorous investigation dissecting the molecular pathways of satiety and other aspects of signaling cross-talk between adipose tissue and other organs. The updated view of adipose tissue as a bona fide endocrine organ has been further extended to include it as a potential reservoir of stem cells for tissue engineering and an integral player in inflammatory status and insulin resistance. This meeting will cover these and other topics of the adipose biology field, including the role of angiogenesis in adipose tissue expansion; the white fat-brown fat debate; the contribution of the circadian clock to the hormonal and neural signals that coordinate food intake and activity for metabolic balance; and the connections between central and peripheral signals involved in the unanticipated lipodystrophic disorders resulting from such therapeutic regimens as antipsychotics and antiretrovirals.

PROGRAM PLENARY SESSIONS & WORKSHOPS:

- Circadian Control of Adiposity & Metabolism (Joint)
- Angiogenesis & Adipose Mass: Factors & Regulation
- Fat (R)evolution – The Brown vs. White Fat Debate
- Workshop 1 (Joint)
- Insights from Model Organisms (Joint)
- Immune Signals & Energy Homeostasis/Body Composition (Joint)
- The Where & How of Lipodystrophies
- Adipose Stem Cells: Biology and Application (Bone Marrow vs. Adipose Tissue; Characteristics/Signaling that Promote their Differentiation; Plastics/Reconstructive, Tissue Engineering Aspects)
- Workshop 2: Sex Differences in Fat Metabolism: Roles in Brain Periphery (Joint)
- Drug Development: Treating the Brain & Beyond (Joint)

DEADLINES:

Abstract & Scholarship: September 23, 2009

Late-Breaking Abstract: October 23, 2009

Early Registration: November 24, 2009

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