SUNDAY, FEBRUARY 6
Arrival and Registration

MONDAY, FEBRUARY 7
Welcome and Keynote Session (Joint)
Robert V. Farese Jr., Harvard School of Public Health, USA
and
Tobias Walther, Harvard/HHMI, USA
Dissecting Lipid Droplets: From Mechanisms to New Therapies

Adipose Tissue Crosstalk in Metabolic Diseases (Joint)
Camilla Charlotte Schéele, University of Copenhagen, Denmark
Yu-Hua Tseng, Joslin Diabetes Center/Harvard Medical School, USA
Succinate Regulation of Metabolism
Andrew John Lutkewitte, Washington University School of Medicine, USA
Short Talk: Loss of Adipocyte Lipin 1 Leads to Hepatic Steatosis, Signatures of Liver Injury, and Insulin Resistance in mice
Rocio del Mar Saavedra Peña, Yale University, USA
Short Talk: Estrogen Promotes Obesity via Endothelial-Adipose Crosstalk

Workshop 1: Industry Clinical Trials in NASH (Q1)
*Saswata Talukdar, Merck, USA
Marisa Morrow, McMaster University, Canada
Inhibition of ATP-citrate Lyase Reduces NASH, Fibrosis and Serum Lipids
Suraj J. Patel†, Beth Israel Deaconess Medical Center, USA
Hepatic IRF3 Fuels Dysglycemia in Obesity through Direct Regulation of Pparg2
Hani Jouihan, Janssen/ J&J, USA
Exacerbated Inflammation and Fibrosis Following Hepatocyte Caspase6 Inhibition in 3D Liver Spheroids, Stellate Cells, and the GAN Mouse Model of NASH
Joanna Kalucka, Aarhus University, Denmark
Adaptation and Function of Liver Sinusoidal Endothelial Cells in Obesity
Ben Stocks, University of Copenhagen, Denmark
Integrated Liver and Plasma Proteomics Reveal Putative Liver-derived Proteins Dysregulated in the Plasma of ob/ob Mice, Reflecting Human NAFLD
Roi Isaac, University of California, San Diego, USA
The Role of TM7SF3 in Liver Fibrosis as a Regulator of the Hippo Pathway

Jaclyn E. Welles, University of Pennsylvania, USA
Using Single Nuclei Transcriptomics to Investigate the Role of Phosphatidylcholine on NASH-associated Inflammation and Fibrotic Gene Expression

Endocrine Factors as Therapeutic Targets in NASH (Q1)
Lotte Bjerre Knudsen, Novo Nordisk A/S, Denmark
GLP 1 Receptor Agonists: Mechanisms Relevant for the Treatment of NASH
Greg Steinberg, McMaster University, Canada
Novel Secreted Factors Regulating Metabolism
Katrin J. Svensson, Stanford University, USA
Hepatic IRF3 Fuels Dysglycemia in Obesity through Direct Regulation of Ppp2r1b
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Factors the Improve Fat Function, but not Mass (Q2)
Ruth J.F. Loos, University of Copenhagen, Denmark
Genetics Uncoupling Obesity from Metabolic Complications
Jacqueline M. Stephens, Louisiana State University, USA
Pathways that Modulate Adipocyte Function and Improve Systemic Metabolic Function
Speaker to be Announced
Jiekun Yang, MIT, USA
Short Talk: Single-cell Dissection of Obesity-exercise Axis in Adipose-muscle Tissues
Timothy M. Moore, University of California, Los Angeles, USA
Short Talk: Genetic Drivers of Adipose Tissue Weight Loss Following Exercise Training

TUESDAY, FEBRUARY 8
Inflammation, Fibrosis and the Gut Microbiome (Q1)
Ido Amit, Weizmann Institute, Israel
Lipid Associated Macrophages and TREM2
Scott L. Friedman, Icahn School of Medicine at Mount Sinai, USA
Hepatic Stellate Cell Behavior in NASH
Arun J. Sanyal, Virginia Commonwealth University Medical Center, USA
Role of the Gut Microbiome as a Biomarker and Therapeutic Target in NASH

* Session Chair † Invited but not yet accepted  Program current as of December 22, 2021. Meal formats are based on meeting venue. For the most up-to-date details, visit https://www.keystonesymposia.org.
Nuts and Bolts of Adipocyte Biology (Q2)
Ursula A. White, Pennington Biomedical Research Center, USA
Regulation of Adipocyte Turnover in vivo-Influence of Depot, Race, and Exercise
Kirsty L. Spalding, Karolinska Institute, Sweden
The Contribution of Human Adipocytes to Metabolic Health
Samuel Virtue, University of Cambridge Metabolic Research Laboratories, UK
Mouse Models with Altered Metabolic Flexibility
Alexander Bartelt, Ludwig-Maximilians-University, Germany
Oxidative Stress and Obesity
Erwei Li, Harvard medical school, USA
Short Talk: A Novel Population of Peripheral Oxytocinergic Sympathetic Neurons Mediates Adipose Lipolysis and Insulin Sensitivity
Eliwaza Naomi S. Msengi, Saint Louis University School of Medicine, USA
Short Talk: The E3 Ubiquitin Ligase Ube4A Maintains Metabolic Homeostasis and Regulates the Obesogenic Protein IP6K1

Emerging Technologies for the Study of Tissue Crosstalk (Q1)
Natalie Krahmer, Helmholtz Zentrum München, Germany
Unbiased Proteomics to Discover Biomarkers and Therapeutic Targets in NASH
Takanori Takebe, Cincinnati Children's Hospital Medical Center, Japan
Modeling Steatohepatitis in Humans with Liver Organoids
Francisco Verdeguer, Insphero, Switzerland
Short Talk: Ex-vivo Human Liver Microtissues Recapitulates Human 3D NAFLD/NASH as Disease Model for Discovery and Drug Screening
Lifeng Wang, Janssen Pharmaceutical Companies of Johnson & Johnson, USA
Short Talk: Primary Hepatic 3D Spheroids NASH-In-Dish Model for Drug Discovery

Muscle-Liver Cross-Talk (Q1)
Matthew Watt, University of Melbourne, Australia
Hepatokines Regulating Muscle Metabolism
Kitt F. Petersen, Yale University School of Medicine, USA
Muscle-Liver Crosstalk: Key Role for Glucose-Alanine Cycling in the Regulation of Hepatic Mitochondrial Oxidation During Starvation in Humans
Isabelle Leclercq, Université catholique de Louvain, Belgium
Sarcopenic Obesity and NASH
Theresa M. Schnurr, Stanford University, USA
Short Talk: Interactions of Physical Activity, Muscular Fitness, Adiposity, and Genetic Risk for Non-alcoholic Fatty Liver Disease
Justine Mucinski, University of Missouri, USA
Short Talk: Paradoxical Increases in Glucose Appearance and 24h FFA with NASH Treatment

Influences of Adipose Tissue Immune Cells (Q2)
Myriam Aouadi, Karolinska Institutet, Sweden
Macrophages Influence on Metabolism beyond Inflammation
Vishwa Deep Dixit, Yale University, USA
Aging and Adipose Tissue inflammation
Allysa H. Hasty, Vanderbilt University, USA
Adipose Immunity in Weight Loss and Cycling
Yun Sok Lee, University of California, San Diego, USA
Short Talk: ANT2 Drives Metaflammation by Stimulating Pro-Inflammatory Macrophage Activation

Poster Session 2

WEDNESDAY, FEBRUARY 9

NASH Therapeutics (Q1)
Mary E. Rinella, University of Chicago, USA
Recent Advances of Defining Endpoints in NASH Clinical Trials
Sophie Bozec, Poxel SA, France
PXL770 a Direct AMPK Activator for the Treatment of NASH
Saswata Talukdar, Merck, USA
New Advances in NASH Therapies
Erik J. Tillman, Akero Therapeutics, USA
Short Talk: Normalization of Liver Fat Content by Efruxifermin Treatment is Associated with Improved Liver, Adipose Tissue, and Whole-body Metabolic Health
Patrick C. N. Rensen, Leiden University Medical Center, Netherlands
Short Talk: Selective Inhibition of DHCR24 Ameliorates Hepatic Steatosis and Inflammation through LXRα without Inducing Hyperlipidemia

Alternate Models of Disease and Metabolism (Q2)
Speaker to be Announced
Jennifer Watts, Washington State University, USA
Using C. elegans to Study Lipid Synthesis and Function
Fiona Oakley, Newcastle University, UK
Biorreactor Technology for Modeling Fibrosis in Human and Rodent Liver
Marcel den Hoed, Uppsala University, Sweden
Using Zebrafish Larvae to Characterize Candidate Genes for Cardiometabolic Health
Margo Emont, Beth Israel Deaconess Medical Center/Harvard Medical School, USA
Short Talk: A Single Cell Atlas of Human and Mouse White Adipose Tissue

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Haopeng Xiao, Dana-Farber Cancer Institute/ Harvard Medical School, USA
Short Talk: Architecture of the Outbred Brown Fat Proteome Defines Regulators of Metabolic Physiology

Workshop 2: Inflammation, Immune Cells and the Gut Microbiome in NASH (Q1)
Wei Ying, University of California, San Diego, USA
Kupffer Cells Mediate Liver Lipogenesis and Fibrosis through Secretion of miR-690

Benjamin T. Enslow†, UT Health San Antonio, USA
Diet-induced Obesity Promotes CD11c+, T-bet+ B Cell Expansion in Liver and Adipose Tissue

Ebru Boslem, Monash Institute of Pharmaceutical Sciences, Australia
Therapeutic Blockade of ER Stress and Inflammation Regresses Diet-induced NASH, without Markedly Altering Lipids, in Mice

Jada C. Domingue, AstraZeneca, USA
Exploring Liver-associated Microbes: Who are they and How did they get there?

Xavier Revelo, University of Minnesota, USA
Adaptive Immunity in the Pathogenesis of NASH

Daniel Ferguson, Washington University in St Louis, USA
Loss of Macrophage Mitochondrial Pyruvate Carrier Attenuates Nonalcoholic Steatohepatitis

Meghan Mooring, Yale University, USA
Cyr61 Drives Fibrotic Development in NASH via Macrophage Activation and Monocyte Recruitment

Petra Hirsova, Mayo Clinic, USA
IL21 Receptor Deletion Attenuates Hepatic Inflammation in a Murine NASH Model

Genetics and Liver Derived Signaling Molecules (Q1)
Yaron Rotman, NIDDK, National Institutes of Health, USA
Genetic Regulation of Liver Lipid Metabolism

Anna Mae Diehl, Duke University, USA
Metabolic Reprogramming in Liver Cells and Fatty Liver Disease

Emilio Mottillo, Henry Ford Hospital, USA
Balancing the Fat: Dynamic Protein Interactions of ABHD5 with PNPLAs in the Regulation of NAFLD

Adipose Tissue Microenvironment: Fibrosis/Extracellular Matrix Remodeling (Q2)
Philipp E. Scherer, University of Texas Southwestern Medical Center, USA
Adipose Tissue, Macrophages and PAQRs

Antonio J. Vidal-Puig, University of Cambridge, UK
Uncoupling of Adipose Tissue Fibrosis from Inflammation

Silvia Corvera, University of Massachusetts Medical School, USA
Adipose Tissue Angiogenesis

David Estève, Université de Toulouse - CNRS, France
Short Talk: Abundant Periprostatic Adipose Tissues Exhibit Extensive Extracellular Matrix Remodeling that Explain Both their “Healthy” Expansion and their Role in Prostate Cancer Progression

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q1)
Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q2)

THURSDAY, FEBRUARY 10
Departure