SUNDAY, FEBRUARY 4
Arrival and Registration

MONDAY, FEBRUARY 5
Welcome and Keynote Session (Joint)
Stephen O’Rahilly, University of Cambridge, UK
Leveraging Genetics to Understand Metabolic Disease
Jose C. Florez, Massachusetts General Hospital, USA
Optimising Precision Medicine Across Diverse Ethnicities

Genetics of Obesity (Joint)
Kaja Wasik, Variant Bio, USA
Metabolic Disease in the Context of Genetic Diversity
Peter R. Shepherd, University of Auckland, New Zealand
Population Specific Precision Medicine for Metabolic Disease
Kathrin Landgraf, University of Leipzig, Germany
Short Talk: Ectopic ASIP Expression as a Monogenic cause of Childhood Obesity through Possible Interaction with the MC4R Pathway
Yana Hrytsenko, Harvard Medical School, Beth Israel Deaconess Medical Center, USA
Short Talk: Obstructive sleep apnea is associated with increased genetic risk of Incident Diabetes Mellitus: the Hispanic Community Health Study/Study of Latinos

Workshop 1 (X4)
Rifa T. Haque, Monash University, Australia
Activating Only the Intestinal Melanocortin-4 Receptor (MC4R) Promotes Weight Loss by Reducing Caloric Intake and Increasing Energy Expenditure
Warren T. Yacawych, University of Michigan, USA
Different Roles in Food Intake Regulation for Distinct Populations of Dorsal Vagal Complex Glp1r Neurons
Hannah Glover, Columbia University, USA
Functional Genomics of Human Metabolic Disease at Single Cell Resolution
Baijie Xu, UT Southwestern Medical Center, USA
Orthopedia Regulates Mc4r Transcription and Human Obesity Risk
Misbah Rashid, National Institutes of Health, USA
Presence of Beta-Arrestin-2 is Required for Melanocortin 4 Receptor-Mediated Metabolic Effects
Jeevotham Senthil Kumar, Oklahoma State University, USA
CTRP6-Mediated Suppression of Macrophage M2 Phenotype: Implications for Obesity-Associated Inflammation
Hannah Elaine Swick, McGill University, Canada
Glial Support of Neurovascular Function in Obesity

Workshop (X3)
Short Talks Chosen from Abstracts

Response to Environment (X4)
Kevin D. Hall, NIDDK, National Institutes of Health, USA
Ultra-Processed Foods and Obesity
Harriet Schellekens, University College Cork, Ireland
Microbiota and Stress
Simon Bredum, Novo Nordisk A/S, Denmark
Short Talk: Exploring Body Composition and Energy Expenditure Changes After Diet Restriction and Pharmacologically Induced Weight loss in a Göttingen Minipig Model of Obesity
Francois Briand, Physigenex, France
Short Talk: Semaglutide and Lanifibranor Differentially Alter MASH and Liver Fibrosis in Diet-induced Obese Hamsters With or Without Free Access to Alcohol

Environmental Diversity Within and Between Populations (X3)
John Chambers, Nanyang Technological University, Singapore
Epigenetic Drivers of CMD in South Asians
K.M. Venkat Narayan†, Emory University, USA
Talk Title to be Announced
Karin Conde-Knape, Novo Nordisk A/S, Denmark
How can we Ensure Precision Medicines are Efficacious and Safe Across Diverse Ethnicities?
Chirag J. Patel, Harvard Medical School, USA
Short Talk: Assessing the Genetic Contribution of Behaviors and Exposures Associated with Longitudinal Type 2 Diabetes Highlights the Adiposity and the Brain-metabolic Axis
Annalisa Terranea, Sidra Mecidine, Qatar
Short Talk: Exploring the Crosstalk Between Gut Microbiome, Lipid Metabolites, Apolipoproteins, and Inflammatory Markers in Obesity: A Multi-omics Approach in the Qatari Adult Population

Poster Session 1

TUESDAY, FEBRUARY 6
Hypothalamic Dysfunction (X4)
Giles S.H. Yeo, University of Cambridge, UK
Mapping the Feeding Circuitry of the Human Hypothalamus
Sabrina Diano, Columbia University, USA
Hypothalamic Nutrient Sensing
Lora K. Heisler, Rowett Institute, University of Aberdeen, UK
Hypothalamic Mechanisms of Obesity
Michael A. Cowley, Monash University, Australia
Targeting Hypothalamic Weight-Loss Circuits

* Session Chair † Invited but not yet accepted  Program current as of January 14, 2024. Meal formats are based on meeting venue.
For the most up-to-date details, visit https://www.keystonesymposia.org.
Allison Duensing, University of Michigan, USA
Short Talk: Glp1r-expressing LepRb Neurons of the Dorsomedial Hypothalamic Nucleus Inhibit AgRP Neurons and Suppress Body Weight

Addison Nicole Webster, University of Virginia, USA
Short Talk: Molecular Connectomics Reveals a Glucagon-Like Peptide 1 Sensitive Neural Circuit for Satiety

Diversity in Pathophysiological Drivers of CMD (X3)

Shivani Misra, Imperial College London, UK
Ethnic Diversity and Cardiometabolic Disease in Young People

Ewan Pearson, University of Dundee, UK
Ethnicity, Phenotype and Precision Diabetes Care

Ramesh Harirhan, Strand Life Sciences, India
India Mapping the South Asian Phenome for Precision Health

Alan James Davidson, University of Auckland, New Zealand
Short Talk: A gene variant in CALCRL, encoding a G-protein coupled receptor, is highly enriched in individuals with Māori and Pacific ancestry and associates with a higher risk of kidney failure in diabetes

Andreas L. Birkenfeld, University Hospital Tuebingen, Germany
Short Talk: Precision Remission of Prediabetes within High-Risk Prediabetes Clusters

Health Equity Forum (Joint)

Workshop 2 (X4)

Christelle Le Foll, University of Zurich, Switzerland
Astrocyte Lipid Metabolism: How it Shapes your Appetite and Energy Balance

Mary N. Teruel, Weill Cornell Medicine, USA
Disrupted Circadian Glucocorticoid Rhythms and High Fat Diet Drive Obesity through Distinct Mechanisms

John A. Tadross, University of Cambridge, UK
HYPOMAP: A Spatio-cellular Atlas of the Human Hypothalamus

Martijn van de Bunt, Cytoki Pharma, Denmark
Novel Lipidated Interleukin-22 Reduces Body Weight, Lowers Plasma Glucose, and Improves Cardiac-Metabolic Risk Factors in Mice

Maria Moreno López, University of Lille, France
Unlocking Metabolic Benefits Effects of Sodium-Glucose-Co-Transporter-4 (SGLT4) Inhibition: From Mouse Studies to Clinical Translation

Klara Piletic, Kennedy Institute of Rheumatology, UK
Adipocyte Autophagy in the Control of Obese Adipose Tissue Inflammation and Remodelling

Joon Ho Moon, Seoul National University, South Korea
Dissecting Adipose Tissue at Single-Cell Resolution During Metabolic Disease Development

Rea P. Anunciado-Koza, Maine Medical Center Research Institute, USA
Disruption of Mesoderm Specific Transcript (Mest) in Female Mice Alters Spontaneous Physical Activity and Protects Against Diet-induced Obesity

Obesity Co-Morbidities (X4)

Amalia Gastaldelli, Institute of Clinical Physiology, Italy
Cardiometabolic Risk, Insulin Resistance and Obesity

Philipp E. Scherer, University of Texas Southwestern Medical Center, USA
Why does Obesity Cause Diabetes?

Sam Lockhart, University of Cambridge, UK
Short Talk: Damaging Mutations in LXRalpha Uncouple Lipogenesis from Hepatotoxicity and Implicate Hepatic Cholesterol Sensing in Human Liver Health

Reiner Jumptenz von Schwartzenberg, Helmholtz Center Munich, Germany
Short Talk: Mechanisms of Prediabetes Remission in People without Weight Loss and with Weight Gain

Meenakshi Gupta, NIH, USA
Short Talk: G Proteins Gsa and Gq/11 in the Paraventricular Nucleus of the Hypothalamus (PVN) Mediate Distinct Cardiovascular and Metabolic Responses to Melanocortins

Chi Kin Wong, Lunenfeld-Tanenbaum Research Institute, Canada
Short Talk: Body Weight-independent Anti-inflammatory Effects of GLP-1R Agonists via the Neuronal GLP-1R

Delivering Precision Medicine in Low-Middle Income Settings (X3)

Moffat Nyirenda, London School of Hygiene and Tropical Medicine, Uganda
Optimising the Prevention and Treatment of CMD when Infectious Disease is Highly Prevalent

John Dennis, University of Exeter Medical School, UK
Parasitronous Strategies for Precision Medicine in Practice - Lessons from the TriMaster Trial

Viswanathan Mohan, Madras Diabetes Research Foundation & Dr. Mohan's Diabetes Specialities Centre, India
Barriers and Possibilities when Delivering Precision Medicine in Resource Constrained Settings: Indian Experience

Kristina M. Garske, Princeton University, USA
Detecting Decoherent Gene Co-expression Patterns Associated with a Rural-to-Urban Lifestyle Transition in Turkana

Magdalena Sevilla-Gonzalez, Massachusetts General Hospital, USA
Short Talk: Proteins associated with self-report race/ethnicity partially mediate the association with type 2 diabetes. A meta-analysis of 2,339 individuals from two multi-ethnic cohorts
**Poster Session 2**

**WEDNESDAY, FEBRUARY 7**

**Precision Obesity Management (Joint)**

**Karine Clément**, INSERM / Sorbonne Universite, France  
*Precision Obesity Medicine in Practice*

**Daniel J. Drucker**, Lunenfeld-Tanenbaum Research Institute, Canada  
*The GLP1/GIP System in Obesity Management*

**Moneeza Siddiqui**, Queen Mary University of London, UK  
*Insights From Genetic and Observational Studies in South Asian Populations*

**Patrick Swan**, Ulster University, UK  
*Short Talk: Dual Energy Expenditure and Appetite Control by Insulin-Sensitizing NK2R Agonism*

**Jordan B. Wean**, University of Michigan, USA  
*Short Talk: GABAergic GIPR-expressing Neurons are Required for the Body Weight Reduction caused by Dual Incretin Agonists*

**Career Roundtable (Joint)**

**Obesity Co Morbidities and New Therapeutic Avenues (X4)**

**Katherine R. Tuttle**, University of Washington, USA  
*Kidney Disease and Obesity*

**Murielle M. Véniant-Ellison**, Amgen Inc., USA  
*Early Obesity Drug Targets Towards Precision Management*

**Inderjeet Singh†**, Helmholtz Zentrum Munich, Germany  
*Short Talk: Nrac Regulates Fatty Acid Import in Adipocytes via Regulating CD36 Localization*

**Frederike Sass**, University of Copenhagen, Denmark  
*Short Talk: Dual Energy Expenditure and Appetite Control by insulin-Sensitizing NK2R Agonism*

**Patrick Swan**, Ulster University, UK  
*Short Talk: Alpha-melanocyte Stimulatory Hormone (α-MSH): A Novel Mediator of Skeletal Muscle Glucose Uptake in Humans*

**Genetic and Non-Genetic Biological Diversity Across Diverse Ethnicities (X3)**

**Kyle Kai-How Farh**, Illumina, USA  
*What Can We Learn from Pan-Omic Technologies Deployed Across Diverse Ethnicities?*

**Paul W. Franks**, Lund University and Novo Nordisk Foundation, Sweden  
*Next-Generation Epidemiology, Ethnic Diversity and Cardiometabolic Disease*

**Leslie J. Baier**, National Institutes of Health, USA  
*Understanding the heritable basis of obesity and type 2 diabetes among Indigenous people living in Southwestern United States*

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**William L. Holland**, University of Utah, USA  
*Short Talk: Identification and Characterization of a Novel Variant in Neutral Ceramidase Associated with Diabetes and Kidney Failure in Tongan and Samoan Patients*

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

**THURSDAY, FEBRUARY 8**

**Departure**