Symposia VI
Concurrent
Chair: John Thyfault
• Impact of Paternal Exercise on Offspring Health—Alex Murashov
• Exercise During Pregnancy and Long Term Impact on Offspring Health—Kevin Pearson
• Impact of Early-Life Exercise on Adult Physical Activity and Related Phenotypes—Ted Garland
• Placental and Offspring Adaptations to Maternal Exercise and Obesogenic Diets—Kartik Shankar

Symposia VII
Concurrent
Impact of Exercise on Adipose Tissue Metabolism—Beyond Browning
Chair: Matthias Hesselin
• Exercise and Adipose Tissue Fibrosis—Carly Lumeng
• Exercise Effects on Adipocyte Cell Size and Expandability—Jeff Horowitz
• Exercise and Regulation of Adipose Tissue Blood Flow & Metabolism—Fredrik Karpe
• Exercise Training, Adipocyte Precursors, and miRNA Regulation of Lipid Flux—Matt Watt

Meeting Program
MEETING PROGRAM
Symposia I
Toward Deciphering the Exercise Response
Chair: Darrell Neuler
• Connecting the Exercise Response to Health Benefits—Marc Tarnopolsky
• Influence of Exercise and Circadian Biomarkers on Multi-Omic Integrated Networks in Children—Eric Hoffman
• Gut Microbiota to Brain Signaling in Exercise-Induced Stress Robustness—Monika Fleshner
• Mapping the Human Exercise Signaling Knapsack Network—David James

Symposia II
Exercise Triggers Adaptive Brain Cell Stress Responses
Chair: Mark Mattson and Monika Fleshner
• Exercise Protects the Brain Against Chronic Stress—Karin Alkadhi
• Exercise and Brain Plasticity—Hemmette van Praag
• Exercise and Endocannabinoid Signaling in Humans—Dave Raichlen
• How Sedentary Lifestyles Impair Adaptive Neuroplasticity—Alex Stranahan

Symposia III
Substrate Control During Exercise: Novel Insights for Halting the Pathogenesis of Metabolic Diseases
Chair: Matt Watt
• Cellular Energy Sensing and the Regulation of Metabolism—Gregory Steinberg
• Exercise Training, Lipid Droplets, and Oxidative Phenotype—Matthijs Hesselink
• Phosphatidylcholine Synthesis in Regulating Skeletal Muscle Lipid Content and Mitochondrial Function: Implications for Insulin Action—Clinton Bruce
• Exercise and Adipose Tissue Remodeling: Pathways for Halting Diabetes—Laurie Goodyear

Symposia IV
The Physiology of Sedentary Behavior, How is it Distinguished from Physical Inactivity
Chair: Deborah Muoio
• Epidemiology of Sedentary Behavior—Peter Katzmarzyk
• Physiology of Sedentary Behavior and its Relationship to Health Outcomes—David Dunstan
• Genetics of Exercise Avoidance—Rod Dishman
• Novel Strategies and Approaches for Sedentary Behavior Physiology Research—William Kraus

Symposia V
Mitochondrial Signaling and Inter-Organellar Crosstalk
Chair: Deborah Muoio
• Mitochondrial-Derived Peptides Regulate Energy Homeostasis—Pinhas Cohen
• Role of the Acetylome in Mitochondrial Energy Sensing and Signaling—Michael Sack
• Mitochondrial Remodeling Relevant to Exercise and Disease—Dan Kelly
• Epigenetic Regulation of Mitochondrial Metabolism—Julleen Zierath

Symposia VI
Activity/Exercise During Pregnancy and Early Development: Implications for Long-Term Health
Chair: John Thyfault
• Impact of Paternal Exercise on Offspring Health—Alex Murashov
• Exercise During Pregnancy and Long Term Impact on Offspring Health—Kevin Pearson
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Plenary
Lecture
Mitochondria as Signal Sources: Fueling a Renaissance in Metabolism
Speaker: Johan Auwerx

Closing
Lecture
Sensorimotor Training of Spinal Networks to Restore Function in Spinal Cord Injured Patients
Speaker: Reggie Edgerton

Organizing Committee
Darrell Neuler (Chair) East Carolina University
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Roger Fielding Tufts University
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