SUNDAY, JANUARY 14
Arrival and Registration

MONDAY, JANUARY 15
Welcome and Keynote Address (Q1)
E. Dale Abel, David Geffen School of Medicine and UCLA Health, USA
Mitochondria as Signaling Hubs

Welcome and Keynote Address (Q2)
David D. Ginty, HHMI/Harvard Medical School, USA
Touch Sensory Neurons and their Central Circuits

Improving the Health of the Next Generation: Epigenetic Effects of Maternal and Paternal Exercise on Offspring (Q1)
Laurie J. Goodyear, Joslin Diabetes Center, Harvard Medical School, USA
Epigenetic Mechanisms Mediating the Beneficial Effects of Maternal Exercise on Offspring Metabolic Health
Romain Barrès, CBMR & CNRS, Denmark
Epigenetic Rewiring of Skeletal Muscle after Exercise Training
Kristin I. Stanford, Ohio State University, USA
Effects of Paternal Exercise on Offspring

Short Talks Chosen from Abstracts

Somatosensory Molecules and Cells I (Q2)
Theodore Price, University of Texas at Dallas, USA
Molecular Signatures of Human Nociceptors
Theanne N. Griffith, University of California, Davis, USA
Cellular and Molecular Mechanisms of Mammalian Proprioception
Elena O. Gracheva, Yale University School of Medicine, USA
Evolutionary Mechanisms of Thermosensation

Short Talks Chosen from Abstracts

Health Equity Forum (Joint)

Workshop 1 (Q1)
Short Talks Chosen from Abstracts

Workshop 1: How to Begin Building a Culture of Diversity, Equity, and Inclusion in your Research Group (Q2)
The Far-Reaching Effects of Exercise Training - Exercise-Induced Changes in Liver, Microbiome, and White Adipose Tissue (Q1)
Mark A. Febbraio, Monash Institute of Pharmaceutical Sciences, Australia
Why is Exercise Medicine? Role of Exercise Extracellular Vesicles in Prevention of Disease
R. Scott Rector, University of Missouri, USA
Effect of Exercise on Liver Metabolism and Hepatic Steatosis

Sara Campbell, Rutgers University, USA
Exercise and the Gut Microbiome
Jeffrey F. Horowitz, University of Michigan, USA
Direct Effects of Exercise on Adipose Tissue Structure and Function

Short Talks Chosen from Abstracts

Somatosensory Molecules and Cells II (Q2)
Ardem Patapoutian, The Scripps Research Institute, USA
Piezo Ion Channels in Touch and Itch
Ishmail John Abdus-Saboor, Columbia University, USA
Skin-Brain Pathway for Rewarding Social Touch
Patrik Ernfors, Karolinska Institutet, Sweden
A Landscape of Sensory Receptor Cells

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, JANUARY 16
Clocks, Sleep and Exercise: Working Together for Health and Performance (Q1)
Gad Asher, Weizmann Institute of Science, Israel
Clock Proteins and Exercise Capacity
Patrick Schrauwen, Maastricht University, Netherlands
Circadian Rhythms in Human Metabolic Disease
Karyn A. Esser, University of Florida, USA
Scheduled Exercise as a Therapeutic approach for Muscle Health

Short Talks Chosen from Abstracts

Interoception (Q2)
Speaker to be Announced
Yarimar Carrasquillo, National Institutes of Health, USA
Sex Differences in Colonic Pain
Diana Bautista, University of California, Berkeley, USA
Viral-Evoked Pain and Inflammation

Short Talks Chosen from Abstracts

Career Roundtable (Joint)

Workshop 2: Rising Stars in Neuroscience (Q2)
Short Talks Chosen from Abstracts

Health Benefits of Resistance Exercise: Hypertrophy and Beyond (Q1)
Troy Hornberger, University of Wisconsin, USA
Mechanisms of Muscle Growth
Abigail L. Mackey, Bispebjerg Hospital, Denmark
Muscle and Muscle Tendon Health with Exercise
KEYSTONE SYMPOSIA
on Molecular and Cellular Biology

Exercise Biology: Signaling, Mechanisms and Benefits (Q1)
Scientific Organizers: Jeffrey F. Horowitz, Laurie J. Goodyear and Karyn A. Esser
Supported by the Directors’ Fund

Mammalian Somatosensation: Mechanisms of Itch, Touch, Pain and Interoception in Health and Disease (Q2)
Scientific Organizers: Diana Bautista, Rebecca P. Seal and Ishmail John Abdus-Saboor
January 14-17, 2024 • Eldorado Hotel & Spa • Santa Fe, NM, USA
Supported by the Directors’ Fund

Scholarship Deadline: October 10, 2023 / Abstract Deadline: October 10, 2023 / Discounted Registration Deadline: November 14, 2023

Matthew P. Herring, University of Limerick, Ireland
Impact of Resistance Exercise Training in the Treatment of Anxiety and Depression

David J. Glass, Regeneron Pharmaceuticals, Inc., USA
Mechanisms that Effect Skeletal Muscle Function During Aging

Short Talks Chosen from Abstracts

Somatosensory Circuits (Q2)
Rebecca P. Seal, University of Pittsburgh, USA
Spinal Circuits as Targets for MA Therapies
Sarah Ross, University of Pittsburgh, USA
Inhibitory Circuits in Itch and Pain
Victoria Abraira, Rutgers University, USA
Molecules and Pathways of the Spinal Cord Affective Touch Circuit
Fan Wang, Massachusetts Institute of Technology, USA
Brain Circuits Underlying Somatosensory

Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, JANUARY 17

Exercise and Modulation of Inflammatory Response (Q1)

Jason L. Hellmann, University of Louisville, USA
Regulation of the Anti-Inflammatory Effects of Exercise and its Impact on Cardio-Metabolic Disease Prevention
Kim Huffman, Duke University, USA
Beneficial Effects of Exercise in Rheumatoid Arthritis
Audrey J. Stone, University of Texas at Austin, USA
Effects of Inflammatory Cytokines on Blood Flow Regulation during Exercise

Short Talks Chosen from Abstracts

Pain Mechanisms I: Neuroimmune (Q2)

Vivianne Tawfik, Stanford University, USA
Pro-Resolution or Pro-Inflammatory? Microglia in Chronic Pain
Ewan St. John Smith, University of Cambridge, UK
Mechanisms Underpinning Joint Pain
Veena Viswanath, Escient Pharmaceuticals, USA
Mrgrps in Immune Cells and Neurons Mediate Itch and Pain
Speaker to be Announced

Short Talks Chosen from Abstracts

Workshop 2 (Q1)

Short Talks Chosen from Abstracts

Workshop 3: Panel Discussion on Cutting Edge Approaches in Somatosensory Research (Q2)

Mind Games: The Powerful impact of Exercise on the Brain (Q1)

J. Carson Smith, University of Maryland, USA
Neuroimaging Evidence for Exercise-Induced Neuroplasticity in Humans
Constanza J. Cortes Rodriguez, University of Southern California, USA
Can Exercise Turn Back the Clock on the Aging Brain
Cindy Barha, University of Calgary, Canada
Sex Differences in the Beneficial Effects of Exercise on Brain Function

Short Talks Chosen from Abstracts

Pain Mechanisms II (Q2)

Allan I. Basbaum, University of California, San Francisco, USA
Spinal and Trigeminal Projection Neurons that Mediate Itch and Pain
India Morrison, Linköping University, Sweden
Brain-Hormone Comodulation during Human Social Touch
Wolfgang Liedtke, Regeneron Pharmaceuticals, USA
Role of TRPV4 in Pain and Itch – Is There a Connection to Th2-Immunopathies?

Short Talks Chosen from Abstracts

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

THURSDAY, JANUARY 18

Departure

* Session Chair † Invited but not yet accepted
Program current as of October 8, 2023. Meal formats are based on meeting venue.
For the most up-to-date details, visit https://www.keystonesymposia.org.