

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Charting a New Course for Heart Failure: From Discovery to Data (Q8)

Scientific Organizers: Mansoor Husain, Benoit G. Bruneau and Marc Pfeffer

Supported by the Directors' Fund

New Insights into the Biology of Exercise (Q7)

Scientific Organizers: Sue Bodine, Bret H. Goodpaster and John P. Thyfault

March 1-5, 2020 • Keystone Resort • Keystone, Colorado, USA

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Abstract & Scholarship Deadline: October 31, 2019 / Abstract Deadline: December 3, 2019 / Discounted Registration Deadline: January 7, 2020

SUNDAY, MARCH 1

Arrival and Registration

MONDAY, MARCH 2

Welcome and Keynote Address (Q8)

Deepak Srivastava, Gladstone Institute of Cardiovascular Disease and University of California, San Francisco, USA
State-of-the-Heart: Understanding Heart Failure in 2020

Welcome and Keynote Address (Q7)

Mark Hargreaves, University of Melbourne, Australia
Exercise and Health: Historical Perspectives and New Insights

Heart Failure and Fibrosis (Q8)

Jeffery D. Molkentin, Cincinnati Children's Hospital Medical Center, USA

New Molecular Mechanisms of Fibrosis in Heart Failure

Michelle D. Tallquist, University of Hawaii, USA
Cardiac Fibroblast Regulation of Matrix Assembly and Inflammation

Eva van Rooij, Hubrecht Institute, Netherlands
Important Regulators of Cardiac Fibrosis During Injury

Short Talks Chosen from Abstracts

Translating the Mechanisms Driving Human Exercise Adaptations (Q7)

Ruth J.F. Loos, Mount Sinai School of Medicine, USA
Gene-Environment Interaction to Study the Influence of Lifestyle on the Genetic Susceptibility to Obesity and Related Metabolic Traits

Bret H. Goodpaster, Translational Research Institute for Metabolism and Diabetes, USA

Exercise and Calorie Restriction in Humans: Different Means to the Same End?

Stephen Previs, Merck, USA

Integrative Metabolism in the Search for Drug Targets and Candidates

Short Talks Chosen from Abstracts

Cardiovascular Response to Exercise (Joint)

Daniel P. Kelly, University of Pennsylvania, USA
Feeding the Failing Heart

Julie R. McMullen, Baker Heart and Diabetes Institute, Australia
Molecular Mechanisms Responsible for the Induction of Physiological and Pathological Cardiac Hypertrophy: Drug Targets and Biomarkers

Douglas R. Seals, University of Colorado, USA

Exercise, Oxidative Stress, and Optimal Vascular Aging

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, MARCH 3

Learning from Past, Looking at Future (Q8)

Marc A. Pfeffer, Brigham and Women's Hospital, USA
Lessons Learned from Neutral Trials on the Road to Drug Therapy?

Bo Wang, University of Toronto, Canada

Artificial Intelligence: A New Approach to Prevent Heart Failure

Heather Ross, University Health Network, Canada

Preventing Heart Failure Hospitalization with Artificial Intelligence

Speaker to be Announced

Short Talks Chosen from Abstracts

Integrative Metabolic Response to Exercise (Q7)

David H. Wasserman, Vanderbilt University School of Medicine, USA
Exercise and Glucose Homeostasis: Push and Pull of Liver and Skeletal Muscle

Monika Fleshner, University of Colorado, USA

Exercise and Probiotics Optimizes the Gut Microbiota and Promotes Stress Robustness

John P. Thyfault, University of Kansas Medical Center, USA

Lost in Translation: Barriers in Translating Rodent Exercise Models to Human Health

Simon Schenk, University of California, San Diego, USA

Regulation of Exercise Adaptations via Acetylation

Short Talks Chosen from Abstracts

Workshop: In Vitro Models of Heart Failure (Q8)

Short Talks Chosen from Abstracts

Workshop 1 (Q7)

Short Talks Chosen from Abstracts

Regenerative Medicine in Heart Failure (Q8)

Li Qian, University of North Carolina at Chapel Hill, USA

Altering Cardiac Cell Destiny

Stephanie Iris Protze, University Health Network, Canada

Human Pluripotent Stem Cells as Source for Biological Pacemakers

Michael A. Laflamme, University Health Network, Canada

Pluripotent Stem Cells for Heart Failure

Short Talks Chosen from Abstracts

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Exercise and Adipose Tissue Metabolism and Adaptation (Q7)

Matthew Watt, University of Melbourne, Australia
Exercise, Hepatokines, and Metabolic Homeostasis

Kristin I. Stanford, Ohio State University, USA
Exercise and Adipose/Skeletal Muscle CrossTalk

Lauren M. Sparks, Translational Research Institute for Metabolism and Diabetes, USA
Exercise Treats Metabolic Dysfunction by Improving Adipose Metabolism

Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, MARCH 4

Special Session: Behind the Curtain on Industry Decisions (Q8)

***Martin Lefkowitz**, Novartis Pharmaceuticals Corporation, USA

Heart Repair and Immunity (Q8)

Hesham A. Sadek, University of Texas Southwestern Medical Center, USA
Hypoxia Regulated Heart Regeneration

Kory J. Lavine, Washington University School of Medicine, USA
Understanding Heart Failure through Macrophage Biology

Benoit G. Bruneau, Gladstone Institute of Cardiovascular Disease, USA
Molecular Networks of Cardiac Development and Repair

Short Talks Chosen from Abstracts

Exercise and the Brain (Q7)

Henriette van Praag, Florida Atlantic University, USA
Exercise-Induced Brain Plasticity

Michelle Voss, University of Iowa, USA
Exercise, Brain, and Cognitive Function Across the Lifespan

Julie A. Christianson, University of Kansas Medical Center, USA
Early Life Stress, Chronic Pain, and Modulation by Exercise

Jill N. Barnes, University of Wisconsin-Madison, USA
Exercise, Cerebral Blood Flow and Brain Function

Short Talks Chosen from Abstracts

Workshop 2: MoTrPAC (Q7)

***Bret H. Goodpaster**, Translational Research Institute for Metabolism and Diabetes, USA

Exercise as a Treatment for Heart Failure (Joint)

Anthony Rosenzweig, Massachusetts General Hospital, USA
Cardiac Remodeling in Heart Failure and Exercise

Craig A. Emter, University of Missouri, USA
Exercise and Heart Failure with Preserved Ejection Fraction

Jane EB Reusch, RMR VAMC/ University of Colorado, Denver, USA
Is Exercise Intolerance a Microvascular Complication of Diabetes?

Short Talks Chosen from Abstracts

Poster Session 3

THURSDAY, MARCH 5

Targeting Metabolism in Heart Failure (Q8)

J. Travis Hinson, The Jackson Laboratory, USA
Novel Genomic Approaches to Interrogate Heart Failure Mechanisms

Speaker to be Announced

Mansoor Husain, Ted Rogers Centre for Heart Research, Canada
Preventing Heart Failure through Metabolic Modulation of Vascular Cells

Ferhaan Ahmad, University of Iowa, USA
Sodium Glucose Co-Transporters as Novel Mediators of Heart Failure

Short Talks Chosen from Abstracts

Molecular Response of Skeletal Muscle to Exercise and Inactivity (Q7)

Marcas M. Bamman, University of Alabama at Birmingham, USA
Inter-Individual Response Heterogeneity: A Window into Molecular Transducers of Exercise Adaptation

Charlotte Suetta, University of Copenhagen, Denmark
Differential Anabolic Response to Loading in Young and Old Muscle following Disuse

Scott Trappe, Ball State University, USA
Molecular Transducer Response to Acute and Chronic Exercise Effects

Sue Bodine, University of Iowa, USA
Molecular Mechanisms Underlying the Response of Skeletal Muscle to Inactivity vs. Increased Loading

Short Talks Chosen from Abstracts

Emerging Concepts in Heart Failure (Q8)

Kenneth Walsh, University of Virginia School of Medicine, USA
Clonal Hematopoiesis and the Failing Heart

Javid Moslehi, Vanderbilt University Medical Center, USA
Cancer Immunotherapy and Heart Failure

Speaker to be Announced

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Mitochondrial Adaptations to Exercise (Q7)

Andrea L. Hevener, University of California, Los Angeles, USA

Exercise, Mitophagy and Control of Skeletal Muscle Mitochondrial Quality Control

Benjamin F. Miller, Oklahoma Medical Research Foundation, USA

Exercise and Calorie Restriction effects on Mitochondrial Biogenesis and Energetics

Makoto Kashiwa, Astellas Pharma, Inc, Japan

Potential Pharmacological Approach to Muscle in Patients who have Difficulty in Physical Exercise

Short Talk Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q8)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Q7)

FRIDAY, MARCH 6

Departure