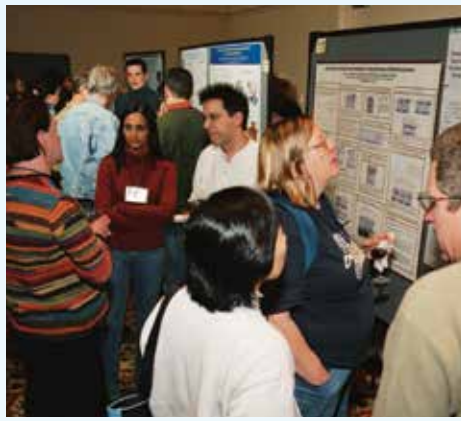




Join Keystone Symposia
for the 2016 conference on:

Heart Failure: Genetics, Genomics and Epigenetics

April 3–7, 2016

Snowbird Resort | Snowbird, Utah | USA

Scientific Organizers:

Stuart A. Cook, Christine E. Seidman and Yigal M. Pinto

*Joint with the conference on **Cardiac Development, Regeneration and Repair***

Despite an investment of tens of billions of dollars each year, heart failure (HF) therapies have limited efficacy in reducing disease progression. Recent insights in fundamental myocyte biology, HF etiologies and pathogenic mechanisms are propelling new strategies to treat and prevent HF. This meeting will explore biologic and technical advances that inform the genetic architecture, molecular pathogenesis and innovative approaches to treat HF. This comes at a time when very large human HF datasets are available and can be interrogated using advanced computational and bioinformatic approaches. Specific aims are to: 1) Consider genes, molecules, signaling pathways and biomarkers involved in systolic and diastolic HF in humans; 2) Explore disease mechanisms underlying HF in model systems; 3) Understand the role of epigenetics, miRNAs and lncRNAs in HF pathogenesis; and 4) Review translational programs in genomic, pharmacologic and cell-based therapeutics to treat HF. The outcomes of this meeting should be far-reaching for basic, translational and clinical communities.

Session Topics:

- Heart Failure 2016: Syndromes, Mechanisms and Treatments
- Cardiovascular Tissue Engineering and Organs on Chips (Joint)
- Sarcomere Genetics: So What's New?
- Systems Dissection of Cardiac Failure
- Aging Hearts
- Molecular Aspects of Muscle Cell Contractility and Relaxation
- Novel Therapeutic Approaches to Fix Broken Hearts (Joint)
- Single Cell and Liquid Biopsy Genomics of Cancer
- Workshop and Panel 1: Genetics of Heart Failure
- Workshop and Panel 2: Epigenetics and Genomics of Heart Failure



Submitting an abstract is a great way of participating in the conference through poster presentation and possible selection for a short talk.

Scholarship & Discounted Abstract Deadline: Dec 3, 2015

Abstract Deadline: Jan 7, 2016

Discounted Registration Deadline: Feb 4, 2016

For additional details, visit www.keystonesymposia.org/16Z1.

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KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Heart Failure: Genetics, Genomics and Epigenetics (Z1)

Scientific Organizers: Stuart A. Cook, Christine E. Seidman and Yigal M. Pinto

Sponsored by Bayer HealthCare Pharmaceuticals, Pfizer Inc. and Takeda Pharmaceutical Company Limited

Cardiac Development, Regeneration and Repair (Z2)

Scientific Organizers: Christine L. Mummery, Joseph C. Wu and Jonathan A. Epstein

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SUNDAY, APRIL 3

Arrival and Registration

MONDAY, APRIL 4

Welcome and Keynote Address (Z1)

James A. Spudich, Stanford University, USA
Mutations to Mechanisms to Therapies

Welcome and Keynote Address (Z2)

Peter W. Reddien[†], Whitehead Institute, USA
Talk Title to be Announced

Heart Failure 2016: Syndromes, Mechanisms and Treatments (Z1)

Burkert Pieske, Charité, Germany
What We Don't Know?

Denise Hilfiker-Kleiner, Medizinische Hochschule Hannover, Germany
Molecular Mechanisms Underlying Peripartum Cardiomyopathy

John Lepore, GlaxoSmithKline, USA
Novel Therapeutic Targets for Heart Failure: An Industry Perspective

Short Talk(s) Chosen from Abstracts

Cardiac Lineage Commitment and Specification (Z2)

Vincent M. Christoffels, Academic Medical Center, Netherlands
Tbx Transcription Factors in Lineage Determination

Benoit G. Bruneau, Gladstone Institute of Cardiovascular Disease, USA
Transcriptional Regulation of Cardiac Development and Differentiation

Katherine E. Yutzey, Cincinnati Children's Hospital Medical Center, USA
Epicardial and Myocardial Fate Specification

Short Talk(s) Chosen from Abstracts

Workshop and Panel 1: Genetics of Heart Failure (Z1)

Short Talks Chosen from Abstracts

Cardiovascular Tissue Engineering and Organs on Chips (Joint)

Thomas Eschenhagen, University Medical Center Hamburg-Eppendorf, Germany
Dissecting Gene Variant Effect Using Tissue Models

Kevin Kit Parker, Harvard University, USA
Engineered Cardiac Tissues

Speaker to be Announced

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, APRIL 5

Sarcomere Genetics: So What's New? (Z1)

Stuart A. Cook, Duke-NUS Graduate Medical School Singapore, Singapore
Human and Rat Studies of Titin

Christine E. Seidman, Harvard Medical School, USA
Genetic Antidotes for Cardiomyopathy

Richard L. Moss, University of Wisconsin, Madison, USA
Modulation of Sarcomeres via MYBPC3

Leslie A. Leinwand, University of Colorado, Boulder, USA
Myosin Myopathies: Mechanisms of Pathogenesis and Potential Therapeutics

Hugh Watkins, University of Oxford, UK
Sequencing Sarcomeric (and Other Genes) in Cardiomyopathy

Cardiac Morphogenesis and Regeneration (Z2)

Jonathan A. Epstein, Perelman School of Medicine at the University of Pennsylvania, USA
Patterning the Early Heart

Eldad Tzahor, Weizmann Institute of Science, Israel
Novel Signals for Cardiomyocyte Renewal

Kenneth D. Poss, Duke University Medical Center, USA
Zebrafish Heart Regeneration

Neil C. Chi, University of California, San Diego, USA
Cardiomyogenesis and Regeneration in Zebrafish

Short Talk(s) Chosen from Abstracts

Systems Dissection of Cardiac Failure (Z1)

Nicolas Smith, University of Auckland, New Zealand
Multi-Scale Computational Modeling of the Heart: From Protein to Organ, Mouse to Man

Norbert Hubner, Max-Delbrück-Center for Molecular Medicine, Germany
Ribosome Profiling of the Failing Heart

Roger Foo, University of Singapore, Singapore
What Single Cell Genomics Can Tell Us About Heart Failure

Short Talk Chosen from Abstracts

Differentiation and Characterization of Cardiomyocytes from Pluripotent Stem Cells (Z2)

David A. Elliott, Murdoch Childrens Research Institute, Australia
Generating Cellular Diversity during Human Cardiovascular Development

Bernd K. Fleischmann, Bonn University, Germany
Electrophysiology and Optogenetics for Heart Cells

Godfrey Smith, University of Glasgow, UK
Pharmacology of iPSC Derived Cardiomyocytes

Short Talk Chosen from Abstracts

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Poster Session 2

WEDNESDAY, APRIL 6

Aging Hearts (Z1)

Jeffrey Robbins, Cincinnati Children's Hospital Research Foundation, USA

Protein Quality Control in Heart Failure Syndromes

Richard T. Lee, Harvard University, USA

Systemic Factors and Cardiac Aging

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

Cardiac Fibroblasts: Foe or Transformative Friend

Joseph A. Hill, University of Texas Southwestern Medical Center, USA

Autophagy and Heart Disease

Short Talk(s) Chosen from Abstracts

Human Pluripotent Stem Cells as Models of Cardiovascular Disease (Z2)

Joseph C. Wu, Stanford University School of Medicine, USA

Cardiac iPSCs for Disease Modeling and Drug Discovery

Lior Gepstein, Technion-Israel Institute of Technology, Israel

Cardiac Disease: Arrhythmias and Heart Failure

Christine L. Mummery, Leiden University Medical Center, Netherlands

Phenotyping Cardiovascular Disease in Isogenic iPSC

Kiran Musunuru, Harvard University, USA

Genome Editing of Human Pluripotent Stem Cells to Generate Human Cellular Disease Models

Short Talk(s) Chosen from Abstracts

Molecular Aspects of Muscle Cell Contractility and Relaxation (Z1)

Wolfgang A. Linke, Ruhr University Bochum, Germany

Titin Elasticity and Diastolic Function

David Warshaw, University of Vermont, USA

Molecular Mechanics of MYBPC3

Gerald W. Dorn, II, Washington University School of Medicine, USA

Dysfunctional Energetics and Mitochondrial Senescence

Short Talk Chosen from Abstracts

Vascular Development and Disease (Z2)

Anne C. Eichmann, Yale University, USA

Signalling in Vascular Development and Function

Zoltan P. Arany, University of Pennsylvania, USA

Vascular Metabolism and Disease

Stefanie Dimmeler, University of Frankfurt, Germany

Noncoding RNAs in Cardiovascular Repair

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, APRIL 7

Novel Therapeutic Approaches to Fix Broken Hearts (Joint)

Paul R. Riley, University of Oxford, UK

Reactivation of a Developmental Programme towards Heart Repair

Eric N. Olson, University of Texas Southwestern Medical Center, USA

Genome Engineering to Fix Hearts

Charles E. Murry, University of Washington, USA

Repairing the Hearts of Non-Human Primates with Human Cardiomyocytes

Karl Tryggvason, Karolinska Institutet, Sweden

Using Laminins to Generate Therapeutic Cardiac Myocytes from hES Cells

Short Talk(s) Chosen from Abstracts

Workshop and Panel 2: Epigenetics and Genomics of Heart Failure (Z1)

Short Talks Chosen from Abstracts

Epigenetics and miRNAs: Muscle Failure and Arrhythmia Predisposition (Z1)

Stefan Engelhardt, Technische Universität München, Germany

MicroRNAs from Non-Muscle Cells

Andrew R. Marks, Columbia University College of Physicians and Surgeons, USA

Calcium and Mitochondria: New Understandings of Heart Failure

Yigal M. Pinto, Academic Medical Center, University of Amsterdam, Netherlands

Role of Cardiac Specific RNA Binding Proteins in Regulating miRNA Function

Cardiomyocyte Maturation, Proliferation and Cardiac Remodelling (Z2)

Anthony J. Muslin, Sanofi, USA

Signal Transduction Pathways Related to Cardiac Hypertrophy

Speaker to be Announced

Thomas Braun, Max Planck Institute for Heart and Lung Research, Germany

Molecular Control of Cardiac Regeneration and Remodeling

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Z1)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (Z2)

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FRIDAY, APRIL 8

Departure