MONDAY, JULY 18

10:00 AM
Registration Opens
Lafayette Ballroom

2:00 PM
Welcome and Introduction
Mark A. Sussman, PhD, FAHA, Chair, Council on Basic Cardiovascular Sciences
San Diego State University, San Diego, CA
Joshua Hare, MD, FAHA, Conference Co-Chair
University of Miami Miller School of Medicine, Miami, FL
Junichi Sadoshima, MD, PhD, FAHA, Conference Co-Chair
University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, NJ

2:15 – 5:30 PM
Grand Ballroom
Session 1
Translational Research

Moderators: Joshua Hare, MD, FAHA, University of Miami Miller School of Medicine, Miami, FL
Junichi Sadoshima, MD, PhD, FAHA, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, NJ

2:15 New Insights into the Mechanisms of Heart Regeneration and Repair
Eric N. Olson, PhD, FAHA, University of Texas Southwestern Medical School, Dallas, TX

2:40 Novel Signaling Mechanisms Mediating Death and Survival of Cardiomyocytes
Jeffrey D. Molkentin, PhD, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

3:05 Protein S-nitrosylation and Denitrosylation in the Cardiovascular System
Jonathan S. Stamler, MD, Case Western Reserve University, Cleveland, OH

3:30 Lessons from Yeast - Molecular Dissection of Autophagic Machinery
Yoshinori Ohsumi, PhD, Toyko Institute of Technology, Tokyo, Japan
This presentation is jointly sponsored by the AHA Council on Basic Cardiovascular Sciences and the Japanese Circulation Society.

3:55 Tissue Specific Adult Stem Cells
Piero Anversa, MD, FAHA, CCNS, Brigham and Women’s Hospital, Boston, MA

4:20 Refreshment Break
4:40  **Keynote Lecture: GPCR and Heart Disease**  
Robert J. Lefkowitz, Duke University Medical School, Durham, NC

5:45 PM – 7:15 PM  
Audubon/Esplanade/Algiers/Broadmoor/Carrollton Rooms

**Poster Session 1  P1 – P90**
- Cardiac regeneration, stem cells and tissue engineering
- Cell death mechanisms, apoptosis, necrosis and autophagy
- Contractility and calcium-handling

**TUESDAY, JULY 19**

7:00 AM  
**Continental Breakfast**

7:45 – 9:05 AM  
**Grand Ballroom**
**Session 2**  
**Longevity and Caloric Restriction**

**Moderator:**  
Junichi Sadoshima, MD, PhD, FAHA, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, NJ

7:45  **Diet and Heart Disease**  
Gary Lopaschuk, PhD, University of Alberta, Edmonton, Canada

8:05  **Mitochondria Oxidative Stress and Cardiac Aging**  
Peter S. Rabinovitch, MD, PhD, University of Washington, Seattle, WA

8:25  **Interaction between ER and Mitochondria**  
Gerald W. Dorn II, MD, FAHA, FACC, Washington University School of Medicine, St Louis, MO

8:45  **The Role of Protein Acetylation in Modulating Mitochondrial Function**  
Michael N. Sack, MD, PhD, National Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, MD

9:05 – 10:45 AM  
**Grand Ballroom**
**Session 3**  
**miR and Cardiovascular Therapeutics**

**Moderator:**  
Joseph A. Hill, MD, PhD, FAHA, University of Texas Southwestern Medical School, Dallas, TX

9:05  **Therapeutic Regulation of MicroRNAs in Cardiovascular Disease**  
Eva van Rooij, PhD, miRagen Therapeutics, Inc., Boulder, CO
9:25 **Circulating miRNA**  
Stefanie Dimmeler, PhD, Institute for Cardiovascular Regeneration, Goethe University Frankfurt, Frankfurt, Germany

9:45 **MicroRNA-199b Regulation of Cardiac Hypertrophy and Heart Failure**  
Leon J. De Windt, PhD, Maastricht University, Maastricht, The Netherlands  
*This presentation is jointly sponsored by the AHA Council on Basic Cardiovascular Sciences, the European Society of Cardiology and the Heart Failure Society of America.*

10:05 **Plasma MicroRNAs as Novel Biomarkers for Cardiovascular Risk**  
Manuel Mayr, MD, PhD, King's College, London, United Kingdom

10:25 **Translational Control of Cardiac Hypertrophy and Function**  
Gianluigi Condorelli, MD, PhD, National Research Council of Italy, Milan, Italy

10:45 **Refreshment Break**

11:15 AM – 12:55 PM  
*Grand Ballroom*  
**Session 4**  
**Nitroso-redox Modulation of Signaling Mechanisms**  
*Moderator:* Ajay Shah, MD, FAHA, FMedSci, King’s College, London

11:15 **S-nitrosylation and Cardioprotection**  
Elizabeth Murphy, PhD, FAHA, National Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, MD

11:35 **Redox Sensing by Cysteine Thiol in PKG 1alpha**  
Philip Eaton, PhD, King’s College, London, United Kingdom

11:55 **The Role of Nox4 in Stress-induced Cardiac Remodeling**  
Ajay Shah, MD, FAHA, FMedSci, King’s College, London, United Kingdom  
*This presentation is jointly sponsored by the AHA Council on Basic Cardiovascular Sciences, the European Society of Cardiology and the Heart Failure Society of America*

12:15 **Volume Overload and Cardiac Dysfunction**  
Louis Dell’Italia, MD, University of Alabama at Birmingham, Birmingham, AL

12:35 **The Dynamics of Mitochondrial Proteome: Mechanisms of Degradation and Turnover**  
Peipei Ping, PhD, University of California Los Angeles, Los Angeles, CA
12:55 – 2:05 PM
Lunch Break

1:05 – 1:55 PM
Grand Ballroom
Career Development Workshop
(Separate registration required)

**Moderators:** Burns C. Blaxall, PhD, FAHA, University of Rochester School of Medicine and Dentistry, Rochester, NY
Åsa B. Gustafsson, PhD, University of California San Diego, La Jolla, CA

1:05  **How to Write a Winning Manuscript**
Ushma Neill, PhD, Journal of Clinical Investigation, Ann Arbor, MI

1:30  **Grant Writing**
Mark A. Sussman, PhD, FAHA, San Diego State University, San Diego, CA

2:05 - 4:05 PM
Grand Ballroom
Session 5
Metabolism and Mitochondria

**Moderator:** Peipei Ping, PhD, University of California Los Angeles, Los Angeles, CA

2:05  **Mitochondria in the Human Failing Heart**
Rong Tian, MD, PhD, FAHA, University of Washington, Seattle, WA

2:25  **CaM KinaseII in Cardiac Stress**
Joan Heller Brown, PhD, FAHA, University of California, San Diego, La Jolla, CA

2:45  **Novel Mitochondrial Ion Transport Proteins**
Brian O’Rourke, PhD, BS, Johns Hopkins University, Baltimore, MD

3:05  **Local and Target Specific Signaling by Protein Phosphatases in Heart**
Yibin Wang, PhD, University of California, Los Angeles, CA

3:25  **Cardiac Fuel Switches as Therapeutic Targets in Heart Failure**
Daniel P. Kelly, MD, Sanford-Burnham Medical Research Institute, Orlando, FL

3:45  **Creating and Correcting Cardiolipotoxicity**
Ira J. Goldberg, MD, FAHA, Columbia University, New York, NY

4:05  **Refreshment Break**

4:35 – 6:25 PM
Grand Ballroom
Session 6
Novel Findings in the PI3K-Akt Signaling Pathway

Moderator: Joan Heller Brown, PhD, FAHA, University of California, San Diego, La Jolla, CA

4:35  Role of the PI3 Kinase Gamma Isoform in Heart Failure
Emilio Hirsch, PhD, University of Torino, Torino, Italy

4:55  Supercharged Stem Cells: Delivering Durable and Safe Myocardial Regeneration
Mark A. Sussman, PhD, FAHA, San Diego State University, San Diego, CA

5:15  A Novel Cardiac-specific Protein Kinase that Regulates Ischemic Injury and the Response to Pressure Overload
Thomas Force, MD, FAHA, Thomas Jefferson University, Jefferson Medical College, Philadelphia, PA

5:35  Mining the Cardiac Secretome for Therapeutic and Diagnostic Targets
Kenneth Walsh, PhD, Boston University School of Medicine, Boston, MA

5:55  Targeting G Beta Gamma with New Drugs for Heart Failure
Burns C. Blaxall, PhD, FAHA, University of Rochester School of Medicine and Dentistry, Rochester, NY

6:10  Michael Morrisette Memorial Lecture
Introduction: Joan Heller Brown, PhD, FAHA and Anthony Rosenzweig, MD, FAHA

PHLPP-1 is a Negative Regulator of Akt and Cardiac Survival
Shigeki Miyamoto, DVM, PhD, University of California, San Diego, La Jolla, CA

6:30 – 8:00 PM
Audubon/Esplanade/Algiers/Broadmoor/Carrolton Rooms

Poster Session 2  P91 – P179
- Cardiac reprogramming and iPS cells
- Genetics and genomics of cardiovascular disease
- Growth and development
- Heart failure biology
- Therapeutic approaches

WEDNESDAY, JULY 20

7:00 AM
Continental Breakfast

7:45 – 9:35 AM
Grand Ballroom
Session 7
Cell Death and Autophagy

Moderator: Lorrie Kirshenbaum, PhD, FAHA, University of Manitoba, Winnipeg, Canada
7:45  Programmed Necrosis in Myocardial Infarction  
Richard Kitsis, MD, FAHA, Albert Einstein College Medicine, Bronx, NY

8:05  SIRT3, a Negative Regulator of Cardiac Hypertrophy  
Mahesh P. Gupta, PhD, MS, FAHA, University of Chicago, Chicago, IL

8:25  Inflammation and Autophagy  
Kinya Otsu, MD, PhD, FAHA, Osaka University Graduate School of Medicine, Suita, Japan  
This presentation is jointly sponsored by the AHA Council on Basic Cardiovascular Sciences and the Japanese Circulation Society.

8:45  Amyloid Cardiomyopathy: New Insights into Disease Pathophysiology  
Ronglih Liao, PhD, Brigham and Women’s Hosp and Harvard Medical School, Boston, MA

9:05  Cardiac Cachexia  
H. Q. Han, MD, PhD, Amgen, Inc., Thousand Oaks, CA

9:20  Mitophagy  
Åsa B. Gustafsson, PhD, University of California San Diego, La Jolla, CA

9:35  Refreshment Break

10:05 AM– 12:00 PM  
Grand Ballroom  
Session 8  
Novel Cell Signaling Mechanisms

Moderator: Michael Kapiloff, MD, PhD, FAHA, University of Miami, Miami, FL

10:05  Nuclear Activity of GRK5 and Cardiac Injury  
Walter J. Koch, PhD, FAHA, Thomas Jefferson University, Philadelphia, PA

10:25  ER Stress and Cardiokine Secretion in the Heart  
Christopher Glembotski, PhD, San Diego State University, San Diego, CA

10:45  TGF-b  
David A. Kass, MD, FAHA, Johns Hopkins Hospital, Baltimore, MD

11:05  Titin Kinase: An Unusual Kinase or a New Paradigm?  
Mathias Gautel, PhD, Kings College, London, United Kingdom

11:25  Optogenetic Control of Cardiac Function  
Didier Stainier, PhD, University of California San Francisco, San Francisco, CA
A Novel Role for S100A1 in Cardiomyocyte Energy Homeostasis: Mitochondrial Function and AMPK Activity
Patrick Most, MD, University of Heidelberg, Heidelberg, Germany

11:45

12:00 N – 1:10 PM
Lunch Break

12:10 N – 1:00 PM
Grand Ballroom
Career Development Workshop
(Separate registration required)

Moderators: Burns C. Blaxall, PhD, FAHA, University of Rochester School of Medicine and Dentistry, Rochester, NY
Åsa B. Gustafsson, PhD, University of California San Diego, La Jolla, CA

12:10 PM
Transition from Mentee to Mentor
Steven R. Houser, PhD, FAHA, Temple University School of Medicine, Philadelphia, PA

12:35 PM
How to Look for a Faculty Position
Donald M. Bers, BS, PhD, FAHA, University of California, Davis, Davis, CA

1:10 – 1:55 PM
Grand Ballroom
Session 9
Outstanding Early Career Award Competition

Moderators: Donald M. Bers, BS, PhD, FAHA, University of California, Davis, Davis, CA
Burns C. Blaxall, PhD, FAHA, University of Rochester School of Medicine and Dentistry, Rochester, NY

1:10
Opposing Roles for Endoglin and Soluble Endoglin in Cardiac Remodeling and Heart Failure
Navin K Kapur, Szuhuei Wilson, Adil A Yunis, Corey Baker, Mark J Aronovitz, Qing Lu, Tufts Medical Ctr MCRI, Boston, MA; Ananth Karumanchi, Beth Israel Deaconess Medical Ctr, Boston, MA; Michelle Letarte, The Hosp for Sick Children, Toronto, ON; David A Kass, Johns Hopkins Hosp, Baltimore, MD; Michael E Mendelsohn, Richard H Karas, Tufts Medical Ctr MCRI, Boston, MA

1:25
IL-10 Modulates Mobilization of Bone Marrow Endothelial Progenitor Cells and Enhances Their Survival and Angiogenic Properties in Ischemic Myocardium
Prasanna Krishnamurthy, Melissa Thal, Suresh Verma, Eneda Hoxha, Erin Lambers, Veronica Ramirez, Gangjian Qin, Douglas Losordo, Raj Kishore, Northwestern Univ, Chicago, IL

1:40
Interaction Between NFκB and NFAT Coordinates Cardiac Hypertrophy and Pathological Remodeling
2:00 – 4:00 PM
Grand Ballroom
Session 10
Genetics/Cardiomyopathy/Translational

Moderator: Thomas Cappola, MD, ScM, University of Pennsylvania, Philadelphia, PA

2:00  Autophagy in Desmin-related Cardiomyopathy
Jeffrey Robbins, PhD, FAHA, Cincinnati Children's Hospital, Cincinnati, OH

2:20  Gene Deletion Screen for Cardiomyopathy in Drosophila
Howard Rockman, MD, Duke University, Durham, NC

2:40  Telomere Dysfunction Induces Metabolic and Mitochondrial Compromise
Ergun Sahin, MD, Dana-Farber Cancer Institute, Boston, MA

3:00  Clinical Trials on Stem Cell
Robert Bolli, MD, FAHA, University of Louisville, Louisville, KY

3:20  Genetic Reprogramming and Cardiogenesis
Deepak Srivastava, MD, Gladstone Institute of Cardiovascular Disease, University of California, San Francisco, CA

3:40  Modifier Genes for Heart and Muscle Disease
Elizabeth McNally, MD, PhD, University of Chicago, Chicago, IL

4:00  Refreshment Break

4:30 – 6:15 PM
Grand Ballroom
Session 11
Microdomains and Local Ca Signals in Cardiac Myocytes

Moderator: Steven R. Houser, PhD, FAHA, Temple University School of Medicine, Philadelphia, PA

4:30  Local Ca Signaling in CaMKII Signaling (ECC & ETC)
Donald M. Bers, BS, PhD, FAHA, University of California, Davis, CA

4:50  Beta-adrenergic Receptor Redistribution and Changes of cAMP Compartmentation in Heart Failure
Viacheslav Nikolaev, PhD, Imperial College of London, London, UK

5:10  mAKAP: A Scaffold that Coordinatates Stress-Related Cardiac Signal Transduction
Michael Kapiloff, MD, PhD, University of Miami, Miami, FL

5:25  **Which Ca Influx Pathway Mediates Cardiac Hypertrophy?**  
Steven R. Houser, PhD, FAHA, Temple University School of Medicine, Philadelphia, PA

5:45  **Localized Nitric Oxide Synthase Signaling Modulates Ca2+ Handling within Cardiac Myocytes**  
Mark T. Ziolo, PhD, Ohio State University, Columbus, OH

6:00  **Superoxide Flashes in Single Mitochondria**  
Heping Cheng, PhD, Peking University, Beijing, China

6:15 – 7:30 PM  
Audubon/Esplanade/Algiers/Broadmoor/Carrollton Rooms

**Poster Session 3  P180 – P267**
- Hypertrophic signaling pathways
- Mitochondria and metabolism
- Myofilament proteins
- Transcriptional and epigenetic regulation of gene expression

7:30 PM  
Grand Ballroom  
Dinner  
(Separate registration required)

THURSDAY, JULY 21

7:00 AM  
**Lafayette Ballroom**  
Continental Breakfast

7:45 – 9:20 AM  
**Grand Ballroom**  
Session 12  
**Stem Cells**

**Moderator:**  
Joshua Hare, MD, FAHA, University of Miami Miller School of Medicine, Miami, FL

7:45  **Stem Cells**  
Joshua Hare, MD, FAHA, University of Miami Miller School of Medicine, Miami, FL

8:05  **IPS Cell Modeling of Cardiovascular Disease**  
Sean Wu, PhD, MD, Massachusetts General Hospital, Boston, MA

8:25  **Cardiac Epigenetics: Prospects for Cardiac Myocyte Reprogramming**  
W. Robb MacLellan, MD, University of California, Los Angeles
8:45 **Stem Cells and Myocardial Regeneration**  
Annarosa Leri, MD, FAHA, Brigham and Women's Hospital, Boston, MA

9:05 **Imaging of Cardiac Stem Cell Therapy**  
Joseph C. Wu, MD, PhD, FACC, Stanford University School of Medicine, Stanford, CA

9:20 – 10:50 AM  
Audubon/Esplanade/Algiers/Broadmoor/Carrollton Rooms

**Poster Session 4**  
P268 – P352
- Myocardial ischemia and cardioprotection
- Oxidative stress, nitroso-redox imbalance, and aging
- Systems approach to cardiovascular biology
- Translational research

10:50 AM – 12:50 PM  
Grand Ballroom  
Session 13  
Myocyte Proliferation/Tissue Engineering

**Moderator:** Jianyi (Jay) Zhang, MD, PhD, University of Minnesota, Minneapolis, MN

10:50 **Stem Cells**  
Andreas Zeiher, University of Frankfurt, Frankfurt, Germany

11:10 **Can Exercise Teach Us How to Treat a Failing Heart?**  
Anthony Rosenzweig, MD, FAHA, Beth Israel Deaconess Medical Center, Boston, MA

11:30 **Cardiac MSC-like Stem Cells**  
Richard Harvey, PhD, FAA, Victor Chang Cardiac Research Institute, Darlinghurst, Australia

11:50 **Alpha Arrestins – New Regulators of Beta Receptors**  
Richard Lee, MD, FACC, Brigham and Women's Hospital, Boston, MA

12:10 **The Basics of Epithelial-Mesenchymal Transition**  
Raghu Kalluri, PhD, Beth Israel Deaconess Medical Center, Boston, MA

12:30 **Heart to Heart: Stem Cells for Cardiac Regeneration**  
Eduardo Marban, MD, PhD, FAHA, Cedars Sinai Medical Center, Los Angeles, CA

12:50 PM  
Adjourn