The BCVS Council strives to highlight the work of early career investigators. Over 20% of the talks in this program are presented by early career speakers.

Final Program

Monday, July 14

Continental Breakfast/Registration
Champagne 1 & 2
7:00 – 8:00 AM

Session 1: New Twists on Signaling Mechanisms in the Heart
Concorde AB
8:00 – 10:00 AM

MOTERATORS
Xiongwen Chen, PhD, Temple University, Philadelphia, PA
Robert Ross, MD, UC San Diego / VA San Diego Healthcare System, San Diego, CA

8:00 Drug Discovery Targeting Novel Necrotic Signaling Pathways
Richard Kitsis, MD, Albert Einstein College Medicine, New York, NY

8:20 New Mechanisms in Myocardial Autophagy
Junichi Sadoshima, MD, PhD, UMDNJ New Jersey Medical School, Newark, NJ

8:40 Focal Adhesion Kinases in Cardiac Hypertrophy
Kleber Franchini, MD, PhD, Campinas State University, Campinas, Brazil

9:00 Exploring CaMKII Signaling in Myocardial Digitalis Toxicity
Martin Vila Petroff, PhD, Centro de Investigaciones Cardiovasculares, La Plata, Argentina

9:20 The Role of Diabetes in Myocardial Ischemia-reperfusion Injury
Ling Tao, MD, PhD, The Fourth Military Medical University, Xi’an, Shaanxi, China

9:40 Non-canonical GRK2 Function Modulates Myocardial TNFalpha Signaling
Sathyamangla Naga Prasad, PhD, Cleveland Clinic-Lerner Research Institute, Cleveland, OH

Refreshment Break
Champagne 1 & 2
10:00 – 10:20 AM

Session 2: Cardiac Signaling, Conduction and Exercise
Concorde AB
10:20 AM – Noon

MOTERATORS
Joshua Hare, MD, University of Miami, Miami, FL
Joseph Libonati, PhD, University of Pennsylvania, Philadelphia, PA

10:20 Exercise-based Discovery of Novel Targets in Heart Disease
Anthony Rosenzweig, MD, Beth Israel Deaconess Medical Center, Boston, MA

10:40 **IGF1 Signaling and Exercise Induced Hypertrophy**  
Julie McMullen, PhD, Baker IDI Heart and Diabetes Institute, Melbourne, Australia

11:00 **Calcium, CaMKII and ROS Microdomains in Ischemic Cardiomyopathy**  
Karin Sipido, MD, PhD, Katholieke University Leuven, Leuven, Belgium

11:20 **Disease Modeling of Brugada Syndrome using iPS Cells**  
Keiichi Fukuda, MD, PhD, Keio University School of Medicine, Tokyo, Japan

11:40 **Catecholaminergic Polymorphic Ventricular Tachycardia - Paradigm for Calcium Triggered Arrhythmia**  
Bjorn Knollmann, MD, PhD, Vanderbilt University, Nashville, TN

**Welcome Remarks**  
Concorde AB

1:45 – 2:05 PM  
Elliott Antman, MD, President American Heart Association, Brigham and Women's Hospital, Associate Dean for Clinical/Translational Research, Harvard Medical School, Boston, MA

**Session 3: Signaling Pathways and Heart Failure Progression**  
Concorde AB

2:05 – 4:05 PM

**MODERATORS**  
John Calvert, Emory University School of Medicine, Atlanta, GA  
Susan Steinberg, MD, Columbia University, New York, NY

2:05 **Biased Signaling in Cardiovascular Therapeutics**  
Howard Rockman, MD, Duke University, Durham, NC

2:25 **Redox Modifications of Proteins Involved in Cardiac Arrhythmogenesis During Reperfusion**  
Cecilia Mundiña-Weilenmann, PhD, Centro de Investigaciones Cardiovasculares-Universidad Nacional de La Plata Medicina, La Plata, Argentina

2:45 **Targets of CaMKII – Mediated Cell Death and Heart Failure Progression**  
Joan Heller Brown, PhD, University of California San Diego, La Jolla, CA

3:05 **Something Old, Something New: L- and T-type Calcium Channels in Heart Failure Progression**  
Steven Houser, PhD, Temple University School of Medicine, Philadelphia, PA

3:25 **HDAC4 Controls Histone Response to Elevated Cardiac Load**  
Christopher Maack, MD, Saarland University Medical Center, Homburg, Germany

3:45 **Molecular Mechanisms of Anthracycline Cardiotoxicity**  
Richard Vander Heide, MD, PhD, LSU Health New Orleans, New Orleans, LA

**Session 4: Keynote Lecture**  
Concorde AB

4:05 – 4:50 PM

**MODERATOR**  
Kirk Knowlton, MD, University of California San Diego, La Jolla, CA

4:05 **Cancer Stem Cells: Lessons Learned From Glioblastomas**  
Inder M. Verma, PhD, Salk Institute for Biological Studies, La Jolla, CA

**Refreshment Break**  
Champagne 1 & 2
4:50 – 5:10 PM

Session 5: The Emerging Importance of Diastolic Dysfunction
Concorde AB
5:10 – 6:50 PM

Moderators
Joseph Woo, MD, Stanford University School of Medicine, Stanford, CA
Michael Kapiloff, MD, PhD, University of Miami, Miami, FL

5:10 Titin—the Giant Protein of Heart Failure
Henk Granzier, PhD, University of Arizona, Tucson, AZ

5:30 Role of Titin in Myocardial Diastolic Stiffness
Wolfgang Linke, PhD, DSc, Ruhr University Bochum, Bochum, Germany

5:50 Mechanisms of Diastolic Dysfunction in Metabolic Heart Disease
Wilson Colucci, MD, FACC, Boston University Medical Center, Boston, MA

6:10 Modeling Diastolic Dysfunction in Engineered Heart Muscle
Wolfram Zimmermann, MD, University Medical Center Göttingen, Göttingen, Germany

6:30 Mechanisms and Implications of Redox Regulation of the Na+K+ Pump in the Cardiovascular System
Gemma Figtree, MBBS, PhD, Royal North Shore Hospital, Sydney, Australia

Poster Session 1
Champagne 3 & 4
6:50 – 8:20 PM

Tuesday, July 15

Continental Breakfast/ Registration/ Exhibits
Champagne 1 & 2
7:00 – 8:00 AM

Session 6: Genetics and Genomics of Heart Failure
Concorde AB
8:00 – 9:40 AM

Moderators
Emiliano Medei, MD, PhD, Instituto de Biofisica Carlos Chagas Filho, Rio de Janeiro, Brazil
Elizabeth Murphy, PhD, NHLBI, NIH, Bethesda, MD

8:00 Inherited Cardiomyopathies and Heart Failure
Jonathan Seidman, PhD, Harvard Medical School, Boston, MA

8:20 Genotype-phenotype Interactions in Cardiomyopathy
Elizabeth McNally, MD, PhD, University of Chicago, Chicago, IL

8:40 Integrative Genomics of Heart Failure
Euan Ashley, MB, DPhil, MRCP, Stanford University, Stanford, CA

9:00 Knockout Rats to Investigate Cardiovascular Function and Disease
Hongliang Li, MD, PhD, Wuhan University, Wuhan, China

9:20 An Integrative Approach to Sarcomeric Cardiomyopathies: From Computation to Animal Models
Jil Tardiff, MD PhD, University of Arizona, Tucson, AZ,

Refreshment Break/Exhibits
Champagne 1 & 2
9:40 – 10:00 AM

Session 7: Cardiac Epigenetics and Regulatory RNA’s
Concorde AB
10:00 – 11:40 AM

MODERATORS
Gianluigi Condorelli, MD, PhD, Humanitas Clinical and Research Center, Milan, Italy
Lorrie Kirshenbaum, PhD, St. Boniface Hospital Research Center, Winnipeg, Canada

10:00  **HDACs in Cardiovascular Development, Physiology and Disease**
Jonathan Epstein, MD, University of Pennsylvania, Philadelphia, PA

10:20  **Targeting Epigenetic Reader Proteins in Heart Failure**
Saptarsi Halder, MD, Case Western Reserve University School of Medicine, Cleveland, OH

10:40  **Alternative Splicing in Heart Failure Pathogenesis**
Yibin Wang, PhD, David Geffen School of Medicine at UCLA, Los Angeles, CA

11:00  **miRNAs in Cardiomyocyte Proliferation and Cardiac Regeneration**
Da-Zhi Wang, PhD, Boston Children's Hospital, Boston, MA

11:20  **LncRNA Mechanism of Heart Failure**
Ching-Pin Chang, MD, PhD, Krannert Institute of Cardiology, Indiana University School of Medicine, Indianapolis, IN

**Early Career Workshop/Lunch**
Concorde C
Noon – 1:30 PM

MODERATORS
Maria Kontaridis, PhD, Beth Israel Deaconess Medical Center, Boston, MA
Loren Wold, Ohio State University, Columbus, OH

Noon  Balancing Professional and Personal Responsibilities: How to Achieve Career Success Without Missing Out on Life
Asa Gustafsson, PhD, University of California, La Jolla, CA

12:45  **The Key to Successfully Revising Your Fellowship or Grant Application: The Importance of Responding to the Reviewers’ Critiques**
Burns Blaxall, PhD, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH

**Session 8: Cardiovascular Omics**
Concorde AB
1:30 – 3:10 PM

MODERATORS
Joseph Hill, MD, PhD, UT Southwestern Medical Center, Dallas, TX
Xiaolei Xu, PhD, Mayo Clinic, Rochester, MN

1:30  **The Cardiosplenic Axis in Heart Failure**
Sumanth Prabhu, MD, University of Alabama-Birmingham, Birmingham, AL

1:50  **A Systems Approach to Decipher the Metabolic Origins of Heart Failure**
Daniel Kelly, MD, Sanford-Burnham Medical Research Institute, Orlando, FL

2:10  **Metabolic Signaling and Myocardial Dysfunction in Insulin Resistance and Obesity**
Dale Abel, MD, PhD, University of Iowa, Roy J. and Lucille A. Carver College of Medicine, Iowa City, IA
2:30  Cardiac Amyloidosis: Model Organisms Inform Human Disease  
       Ronglih Liao, PhD, Brigham and Women's Hospital, Boston, MA

2:50  Myocardial Reductive Stress  
       Ivor Benjamin, MD, FACC, Medical College of Wisconsin, Milwaukee, WI

Refreshment Break/Exhibits  
Champagne 1 & 2  
3:10 – 3:30 PM

Session 9: Keynote Lecture  
Concorde AB  
3:30 – 4:15 PM  
MODOERATOR  
Walter Koch, PhD, Temple University School of Medicine, Philadelphia, PA

3:30  Found in Translation: New Insights into the Pathogenesis and Treatment of Marfan Syndrome and Related Disorders  
       Hal Dietz, MD, Johns Hopkins University School of Medicine, Baltimore, MD

Session 10: Epicardium vs Endocardium in Myocardial Repair and Reprogramming  
Concorde AB  
4:15 – 5:55 PM  
MODOERATORS  
David Lefer, PhD, Louisiana State University Health Sciences Center, New Orleans, LA  
Weinian Shou, PhD, Indiana University School of Medicine, Indianapolis, IN

4:15  Role of the Epicardium in Mammalian Cardiac Development and Repair  
       William Pu, MD, Children's Hospital Boston, Boston, MA

4:35  Epicardium-derived Mesenchymal Stem-like Cells in Cardiac Homeostasis and Disease  
       Richard Harvey, PhD, University of New South Wales, Darlington, Australia

4:55  Hippo Signaling and Epicardial Cell Fates  
       James Martin, MD, PhD, Texas Heart Institute, Houston, TX

5:15  Aortic Valve Development and Disease  
       Katherine Yutzey, PhD, Cincinnati Children's Medical Center, Cincinnati, OH

5:35  Wnt1/βcatenin Signaling in Epicardial Activation  
       Arjun Deb, MD, University of California Los Angeles, Los Angeles, CA

Poster Session 2  
Champagne 3 & 4  
5:55 – 7:25 PM

Early Career Reception  
Versailles 4  
7:25 – 9:00 PM

Wednesday, July 16

Continental Breakfast/Registration/Exhibits  
Champagne 1 & 2  
7:00 – 8:00 AM

Session 11: Emerging Role of Cardiac Fibroblasts  
Concorde AB  
8:00 – 9:40 AM  
MODOERATORS
Nikolaos Frangogiannis, MD, Albert Einstein College of Medicine, Bronx, NY
Timothy McKinsey, PhD, University of Colorado Denver, Aurora, CO

8:00 **Epicardial Derived Cells in Fibrotic Remodeling**
Michelle Tallquist, PhD, University of Hawaii, Honolulu, HI

8:20 **miRNAs Modulate Cardiac Fibrosis**
Stefan Engelhardt, MD, PhD, Technische Universitaet Muenchen (TUM), Munich, Germany

8:40 **The Odd Couple: Myocyte-fibroblast Coupling in the Heart**
Peter Kohl, MD, PhD, Imperial College of London-National Heart and Lung Institute, London, United Kingdom

9:00 **The Interactive Roles of Inflammation and Fibrosis**
Douglas Mann, MD, Washington University School of Medicine, St Louis, MO

9:20 **Discovery, Progress, and Challenges of Direct Cardiac Reprogramming for Heart Repair**
Masaki Ieda, Keio University School of Medicine, Tokyo, Japan

**Refreshment Break/Exhibits**
Champagne 1 & 2
9:40 – 10:00 AM

Session 12: **Cell and Tissue Reprogramming**
Concorde AB
10:00 AM – Noon
**M**oderator
W. Robb MacLellan, MD, University of Washington, Seattle, WA
Litsa Kranias, PhD, University of Cincinnati College of Medicine, Cincinnati, OH

10:00 **Reprogramming of Human Fibroblasts Toward a Cardiac Fate**
Eric Olson, PhD, UT Southwestern Medical Center at Dallas, Dallas, TX

10:20 **Modified mRNA Directs the Fate of Heart Progenitor Cells**
Kenneth Chien, MD, PhD, Karolinska Institutet, Stockholm, Sweden

10:40 **Heart Regeneration and the Potential Role of Nerves**
Richard Lee, MD, Harvard Medical School, Cambridge, MA

11:00 **Incomplete Transdifferentiation with Cardiac Reprogramming Factors**
Sean Wu, MD, PhD, Stanford University School of Medicine, Stanford, CA

11:20 **Genetic Lineage Tracing for Ckit Progenitor Cell Contribution to the Heart**
Jeffery Molkentin, PhD, Children's Hospital Medical Center, Cincinnati, OH

11:40 **Where Are We With Cell-based Therapy Translational Research and Clinical Trials**
Joshua Hare, MD, University of Miami, Miami, FL

**Early Career Workshop/Lunch**
Concorde C
Noon – 1:30 PM
**M**oderators
Nicole Purcell, PhD, University of California San Diego, La Jolla, CA
Donald Menick, PhD, Gazes Cardiac Research Institute, Charleston, SC

**NOON** **How to Successfully Transition From Your SDG/BGIA Early Investigator Award to the Coveted R01**
Christopher Baines, PhD, Dalton Cardiovascular Research Center, University of Missouri Columbia, MO
12:45  Publish or Perish: How to Write a Manuscript for Publication in *Circulation Research*
Roberto Bolli, MD, University of Louisville, Louisville, KY

Session 13: Outstanding Early Career Investigator Award Finalists
Concorde AB
1:30 – 2:15 PM
MODERATORS
Kirk Knowlton, MD, University of California San Diego, La Jolla, CA
W. Robb MacLellan, MD, University of Washington, Seattle, WA

1:30  **Klf5 Regulates Cardiac Ppara and Med13 and affects Cardiac Fatty Acid Metabolism and Obesity**
Konstantinos Drosatos, MSc, PhD, Temple University School of Medicine, Philadelphia, PA

1:45  **The Role of Post-translational Modifications in SERCA2a-related Cardiac Dysfunction**
Changwon Kho, PhD, Icahn School of Medicine at Mount Sinai, New York, NY

2:00  **A β1-Adrenergic Receptor/β-Arrestin1-Regulatable MicroRNA, MiR-150 Protects the Mouse Heart from Ischemic Injury by Repressing Pro-apoptotic Egr2 and P2x7r**
Il-man Kim, PhD, Georgia Regents University, Augusta, GA

Session 14: Joint AHA/HFSA: Myocardial Repair and Regeneration
Concorde AB
2:15 – 4:15 PM
MODERATORS
Daniel Garry, MD, University of Minnesota, Minneapolis, MN
Annarosa Leri, MD, Brigham and Women's Hospital, Boston, MA

2:15  **PDGFRα Demarcates the Cardiogenic Clonogenic Sca-1+ Stem Cell in Adult Myocardium**
Michael Schneider, MD, National Heart and Lung Institute, London, United Kingdom

2:35  **Continuity of Heart Development and Regeneration: Molecules and Cells**
Henry Sucov, PhD, University of Southern California, Los Angeles, CA

2:55  **Myocardial Regeneration in Mouse Hearts**
Loren Field, PhD, Riley Hospital for Children, Indianapolis, IN

3:15  **Gene Therapy for Heart Failure**
Roger Hajjar, MD, Mount Sinai School of Medicine, New York, NY

3:35  **The Role of Prostaglandin E2 in Regulating Endogenous Cardiac Regeneration**
Patrick Hsieh, MD, PhD, National Cheng Kung University, Tainan City, Taiwan

3:55  **Teaching an Old Heart New Tricks: Lessons from the Neonate**
Hesham Sadek, MD, PhD, UT Southwestern Medical Center, Dallas, TX

Refreshment Break/Exhibits
Champagne 1 & 2
4:15 – 4:35 PM

Session 15: Engineered Heart Tissue for Modeling, Therapeutic Discovery and Repair
Concorde AB
4:35 – 5:55 PM
MODERATORS
Loren Field, PhD, Riley Hospital for Children, Indianapolis, IN
Thomas Vondriska, PhD, University of California Los Angeles, Los Angeles, CA
Human Engineered Heart Tissue
Thomas Eschenhagen, MD, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

Facility Design and Bioreactor System for Cell Production
Masahiro Kino-Oka, PhD, Osaka University, Osaka, Japan

Scalability for Stem Cell Bioprocessing and Engineered Tissue Modules
Todd McDevitt, PhD, Georgia Institute of Technology, Atlanta, GA

Optical Imaging of Cardiac Microtissues for Drug Discovery
Leslie Tung, PhD, John Hopkins University, Baltimore, MD

Poster Session 3
Champagne 3 & 4
6:00 – 7:30 PM

Council Dinner
Rivoli A/B
7:30 PM

Thursday, July 17

Continental Breakfast/Registration
Champagne 1 & 2
7:00 – 8:00 AM

Session 16: Impact of Non-myocytes on Myocardial Function
Concorde AB
8:00 – 10:00 AM
MODERATORS
David Dostal, PhD, Texas A&M University HSC, Temple, TX
Jianyi Zhang, MD, PhD, University of Minnesota Medical School, Minneapolis, MN

8:00 Cancer Drug Toxicity in the Heart
Thomas Force, MD, Vanderbilt University, Nashville, TN

8:20 T cells in the Heart: Their Role in the Pathogenesis of Heart Failure
Pilar Alcaide, PhD, Tufts Medical Center, Boston, MA

8:40 Inflammatory Cell Functions in the Injured Myocardium
Peter Libby, MD, Brigham and Women’s Hospital, Boston, MA

9:00 Advances and Lessons Learned From Clinical Trials with Cardiac Stem Cells
Roberto Bolli, MD, University of Louisville, Louisville, KY

9:20 Myocardial Regeneration: Uncommon Sense for Common Problems
Mark Sussman, PhD, San Diego State University, San Diego, CA

9:40 Genetic Basis of Isoproterenol-Induced Cardiac Fibrosis
Christoph D. Rau, University of California Los Angeles, Los Angeles, CA

Session 17: Mitochondrial Biology and Protein Misfolding and/or Proteotoxicity
Concorde AB
10:00 AM – Noon
MODERATORS
Roberta Gottlieb, MD, San Diego State University, San Diego, CA
Xuejun Wang, MD, PhD, University of South Dakota, Vermillion, SD

10:00 Mitochondrial Triage in the Heart
10:20  **Mitofusins in Heart**  
Kenneth Walsh, PhD, Boston University School of Medicine, Boston, MA

10:40  **Proteotoxicity and Cardiac Dysfunction**  
Jeffrey Robbins, PhD, Cincinnati Children's Hospital, Cincinnati, OH

11:00  **Regulation of Cardiac Metabolism in Single Mitochondria**  
Wang Wang, MD, PhD, University of Washington, Seattle, WA

11:20  **Understanding Molecular Signatures of Cardioprotection: A Data to Knowledge Strategy**  
Peipei Ping, PhD, David Geffen School of Medicine at UCLA, Los Angeles, CA

11:40  **Domain-Specific Roles for GRK2 in Cardiac Hypertrophy and Heart Failure**  
Sarah M. Schumacher-Bass, PhD, Temple University, Philadelphia, PA

Adjourn

Noon