American Heart Association | American Stroke Association

life is why®

BCVS 2017

Basic Cardiovascular Sciences

2017 Scientific Sessions:
Pathways to Cardiovascular Therapeutics

Final Program

July 10–13 | Hilton Portland & Executive Tower | Portland, Oregon

Abstracts are available online: http://professional.heart.org/bcvssessions

Sponsored and organized by the Council on Basic Cardiovascular Sciences.

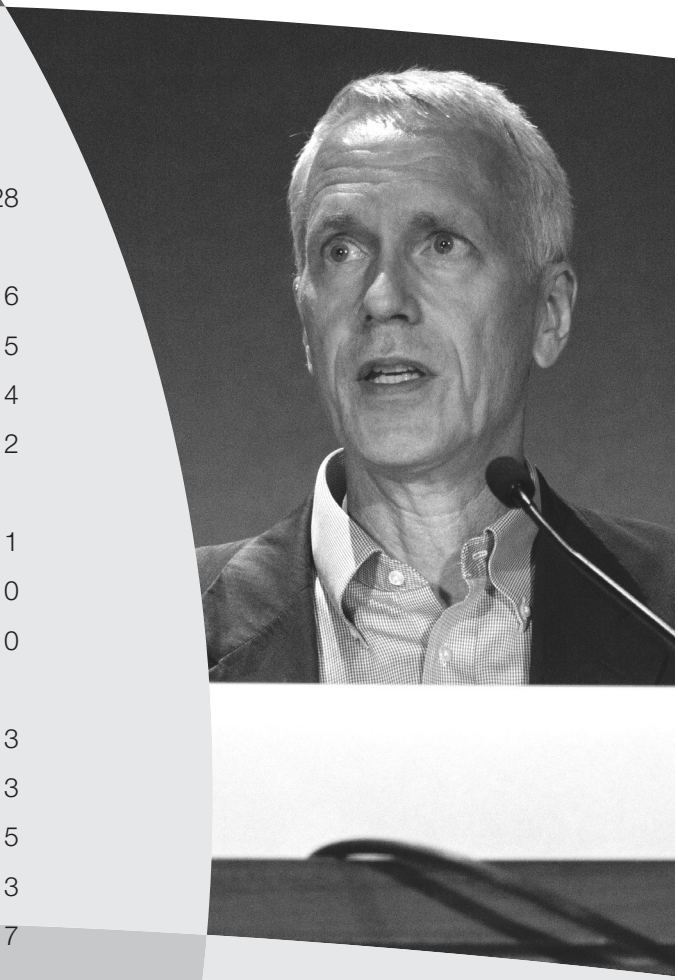
Program at a Glance

	Sunday July 9	Monday July 10	Tuesday July 11	Wednesday July 12	Thursday July 13
7:00 AM			7:00–8:00 AM **Women in Science Breakfast** *Ticket required to attend* 7:00–8:00 AM **Continental Breakfast/ Registration/Exhibits**	7:00–8:00 AM **Continental Breakfast/ Registration/Exhibits**	7:00–8:00 AM **Continental Breakfast/ Registration/ Exhibits**
8:00 AM		8:00 AM **Registration/Exhibits**	8:00–9:15 AM **Concurrent Sessions** 3A: Gene Therapy and Novel Cardiac Therapeutics 3B: Sarcomere Function and Cardiomyopathies	8:00–9:15 AM **Concurrent Sessions** 8A: Human Cellular Models for Cardiac Disease 8B: RNAs and the Heart	8:00–9:00 AM **General Session 13** Basic Science and Precision Medicine – The Interface
9:00 AM				9:15–10:00 AM **General Session 9** Outstanding Early Career Investigator Award Competition	9:00–9:30 AM **Break**
9:30 AM		9:45–10:00 AM **Early Career Pre-Conference Session Opening Welcome**	9:15–9:45 AM **Refreshment Break/Exhibits**		9:30–10:45 AM **General Session 14** Keynote Lecture
10:00 AM		10:00–11:15 AM **Early Career Pre-Conference**	9:45–11:00 AM **Concurrent Sessions**	10:00–10:30 AM **Refreshment Break/Exhibits**	
10:30 AM		Session 1: "Next Big Thing" in Cardiovascular Research	4A: Epigenetics 4B: Stem Cell Therapies	10:30–11:45 AM **Concurrent Sessions**	10:45–11:00 AM **Break**
11:00 AM		11:15–11:50 AM **Early Career Pre-Conference** Session 2: Featured Presentation	11:00 AM–Noon **Concurrent Sessions** 5A: Early Career Session – A "Peer" into NIH Grant Review 5B: Workshop – Emerging Omic Technologies: Bringing a New Edge to Your Science	10A: Early Career Session – Development of a Successful Academic Career 10B: Workshop – Integrating Omics and Bioinformatics into your Research	11:00 AM–Noon **General Session 15** Novel Cardiac Regulatory Mechanisms
NOON	Noon – 6:00 PM **ACRE Meeting** (Academy of Cardiovascular Research Excellence)	11:50 AM–12:40 PM **Break/Lunch on your own**	Noon–1:30 PM **Lunch on your own/ Poster viewing; Exhibits**	11:45 AM–1:30 PM **Lunch on your own/ Poster viewing; Exhibits**	Noon **Adjourn**
1:00 PM		12:40–1:00 PM **Opening Welcome**			
		1:00–1:30 PM **Break**			
1:30 PM		1:30–2:45 PM **Concurrent Sessions** 1A: Cardiac Fibrosis 1B: Cardioprotection, Aging, and Oxidative Stress	1:30–2:45 PM **Concurrent Sessions** 6A: Ion Channels and Arrhythmias 6B: Cardiac Metabolism	1:30–2:45 PM **Concurrent Sessions** 11A: Translationally Relevant Model Systems 11B: Autophagy, Cell Death, and Inflammation	
2:00 PM				**2:45–3:15 PM** **Refreshment Break/Exhibits**	
3:00 PM	3:00 – 5:00 PM **2017 US-Taiwan Bilateral Pre-Meeting**	2:45–3:15 PM **Refreshment Break/ Exhibits**	2:45–3:15 PM **Refreshment Break/Exhibits**		
3:30 PM		3:15–4:30 PM **Concurrent Sessions** 2A: Novel Approaches to the Study of Cardiac Signaling and Compartmentation 2B: Mitochondrion and Heart Failure	3:15–4:30 PM **Concurrent Sessions** 7A: Ethics, Open Science, Reproducibility, Unconscious Bias and All That Jazz 7B: Workshop – Interacting with Big Data: Its Impact on Our Science	3:15–4:30 PM **General Session 12** What Will be the "Next Best Thing" in Cardiovascular and Stroke Research Over the Next 20 Years?	
4:00 PM					
4:30 PM		4:30–7:00 PM **Poster Session 1**	4:30–7:00 PM **Poster Session 2**	4:30–7:00 PM **Poster Session 3**	
5:00 PM					
7:00 PM			7:00 PM **Early Career Investigator Event**	7:00–10:00 PM **Council Dinner** *Ticket required to attend*	

Legend

- Plenary Session
- Poster Session
- Meals/Breaks
- Other

Table of Contents:



Questions and Information

Questions

If you have questions after reading this program, contact the American Heart Association National Center, Dallas, Texas:

Telephone	888.242.2453 (inside the United States) 214.570.5935 (outside the United States)
Fax	214.373.3406
Email	*scientificconferences@heart.org*
Website	*professional.heart.org*

Professional Membership Customer Service

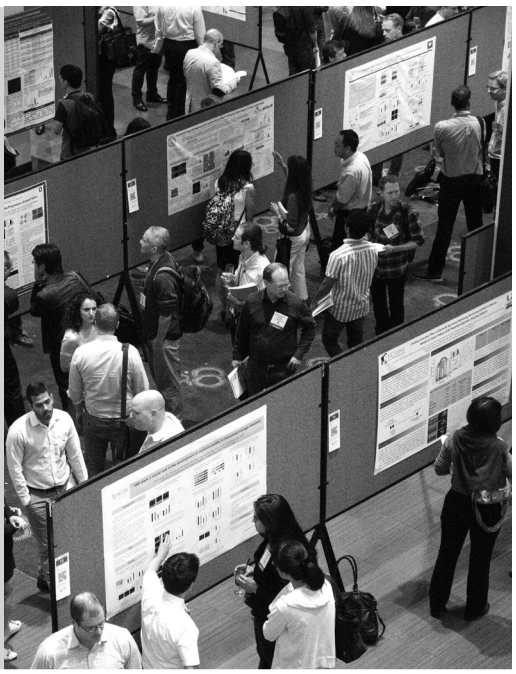
Lippincott Williams & Wilkins

Telephone	800.787.8984 (inside the United States) 301.223.2307 (ooutside the United States)
Fax	301.223.2327
Email	*ahaonline@lww.com*

For information on upcoming American Heart Association Scientific Conferences, visit professional.heart.org

To access a schedule of future conferences sponsored by AHA, follow these simple steps:

- From the home page, click on the "Education & Meetings" tab in the upper navigation bar.
- Select the conference you are interested in attending for more details, such as Registration & Housing, Programming, and Abstracts & Awards.
- If you have additional questions, please email us at scientificconferences@heart.org or call toll-free 888.242.2453



Letter From the Chairs

Dear Colleague,

On behalf of the American Heart Association and the Scientific Council on Basic Cardiovascular Sciences, welcome to the Basic Cardiovascular Sciences 2017 Scientific Sessions: Pathways to Cardiovascular Therapeutics.

The Basic Cardiovascular Sciences Conference has become the meeting of choice for both investigators and trainees. It is considered by many to be the premier basic and translational cardiovascular research meeting in the world, and attracts our field's best and brightest from across the globe.

The primary goal of this meeting is to provide a forum for timely discussion of the latest findings from leaders in the field of cardiovascular sciences. As a result, we hope the conference will foster new ideas and collaborations to accelerate translation.

We are pleased to announce some new programming this year, including the Early Career Pre-conference Session on Monday morning, concurrent sessions throughout the meeting to expand your educational experience, workshops and early career sessions. Attendees will hear state-of-the-art presentations on a broad array of topics, including cardiac fibrosis, cardioprotection and oxidative stress, cardiac signaling, mitochondrion and heart failure, gene therapy and novel cardiac therapeutics, sarcomere function and cardiomyopathies, epigenetics, stem cell therapies, ion channels and arrhythmias, cardiac metabolism, human cellular models for cardiac disease, RNAs and the heart, and may others. Workshop topics include emerging omic technologies, interacting with big data, and integrating omics and bioinformatics into your research. Invited speakers represent institutions from the United States, Australia, Asia, Canada and Europe as we further broaden our international scope and partnerships. In addition to the Outstanding Early Career Investigator Award competition, we will have oral presentations of selected abstracts and three lively poster sessions.

As your hosts, we hope you will find the conference an educational experience and a great opportunity to network with scientists from around the world who are dedicated to building healthier lives, free of cardiovascular diseases and stroke. Let us know if there is anything we can do to enrich your stay in Portland, and thank you for sharing your insight and expertise. We look forward to meeting you.

Sincerely,

Michael S. Kapiloff, MD, PhD, FAHA
Program Co-Chair, BCVS 2017

Jennifer Van Eyk, PhD, FAHA
Program Co-Chair, BCVS 2017

Rong Tian, MD, PhD, FAHA
Program Co-Chair, BCVS 2017

The American Heart Association is a national voluntary health organization whose mission is:
"Building healthier lives, free of cardiovascular diseases and stroke."

The American Heart Association gratefully acknowledges support from the following:

Novartis Pharmaceuticals Corporation **Pfizer** **SCIEX**

Additionally, we gratefully acknowledge support from the following:

The Academy of Cardiovascular Research Excellence (ACRE)

American Physiological Society

Department of Medicine, Brigham and Women's Hospital

Cincinnati Children's Hospital Medical Center

Circulation Research, An American Heart Association Journal

Department of Biomedical Engineering, School of Medicine, School of Engineering
UAB | The University of Alabama at Birmingham

Mitochondria and Metabolism Center/ University of Washington/UW Medicine

National Heart, Lung, and Blood Institute

Temple University Lewis Katz School of Medicine The Cardiovascular Research Center

The Center for Translational Medicine, Lewis Katz School of Medicine, Temple University

The Stanford Cardiovascular Institute

The UCLA Cardiovascular Theme is proud to sponsor the Early Career Program at BCVS 2017.
The UCLA Cardiovascular Theme is pursuing innovative research across the spectrum of basic, translational and clinical cardiovascular biology.

Special thanks to the individual BCVS Council Members who provided funding to support this meeting and to the following for their continued work in support of this meeting:

Junichi Sadoshima, MD, PhD, FAHA, Rutgers New Jersey Medical School

Mitsuru Ohishi, MD, PhD, Cardiovascular Medicine and Hypertension,
Graduate School of Medicine, Kagoshima University

Wataru Shimizu, MD, PhD, Department of Cardiovascular Medicine, Nippon Medical School

Yoshiyuki Ikeda MD, PhD, Cardiovascular Medicine and Hypertension,
Graduate School of Medicine, Kagoshima University

Akihiro Shirakabe MD, PhD, Department of Cardiovascular Medicine, Nippon Medical School

---

The American Heart Association is grateful to the members of the Program Committee for their dedication and leadership in planning the program.

Basic Cardiovascular Sciences 2017 Program Committee

Michael S. Kapiloff, MD, PhD, FAHA, Co-Chair, Stanford University, Stanford, California
Jennifer Van Eyk, PhD, FAHA, Co-Chair, Cedars Sinai Medical Center, Los Angeles, California
Rong Tian, MD, PhD, FAHA, Co-Chair, University of Washington, Seattle, Washington
Ju Chen, PhD, University of California San Diego School of Medicine, La Jolla, California
Raj Kishore, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania
Maria Kontaridis, PhD, FAHA, Beth Israel Deaconess Medical Center, Boston, Massachusetts
Xin Ma, MD, PhD, FAHA, Thomas Jefferson University, Philadelphia, Pennsylvania
Junichi Sadoshima, MD, PhD, FAHA, UMDNJ New Jersey Medical School, Newark, New Jersey
Sakthivel Sadayappan, PhD, MBA, Early Career Committee Liaison, University of Cincinnati College of Medicine, Cincinnati, Ohio
Jil C. Tardiff, MD, PhD, FAHA, University of Arizona, Tucson, Arizona
Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California
Jianyi "Jay" Zhang, MD, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama
Wolfram-Hubertus Zimmermann, PhD, FAHA, Georg-August-University Göttingen, Göttingen, Germany

Invited Presenters and Panelists

Maha Abdellatif, MD, PhD, Rutgers University, Newark, New Jersey
Jun-Ichi Abe, MD, PhD, FAHA, University of Texas MD Anderson Cancer Center, Houston, Texas
Giulio Agnetti, PhD, Johns Hopkins University, Baltimore, Maryland
Pilar Alcaide, PhD, Tufts University, Boston, Massachusetts
Peter Backx, PhD, FAHA, University of Toronto, Toronto, Ontario, Canada
Christopher P. Baines, PhD, University of Missouri-Columbia, Columbia, Missouri
Ivor J. Benjamin, MD, FAHA, FACC, Medical College of Wisconsin, Milwaukee, Wisconsin
Donald M. Bers, PhD, University of California, Davis, Davis, California
Burns C. Blaxall, PhD, FAHA, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
Silem Boudina, PhD, University of Utah, Salt Lake City, Utah
Michael R. Bristow, MD, PhD, FACC, FAHA, University of Colorado, Aurora, Colorado
James Bruce, PhD, University of Washington, Seattle, Washington
Thomas P. Cappola, MD, ScM, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania
Stephan Chan, MD, PhD, FAHA, Pittsburgh Heart, Lung, Blood, and Vascular Medicine Institute, Pittsburgh, Pennsylvania
Ching-Pin Chang, MD, PhD, Krannert Institute of Cardiology, Indiana University School of Medicine, Indianapolis, Indiana
Stuart Cordwell, PhD, University of Sydney, Sydney, Australia
Jennifer Davis, PhD, University of Washington, Seattle, Washington
Buddhadeb Dawn, MD, FAHA, University of Kansas Medical Center, Kansas City, Kansas
Sharlene M. Day, MD, University of Michigan, Ann Arbor, Michigan
Lea M. Delbridge, PhD, FCSANZ, University of Melbourne, Melbourne, Australia
Abhinav Diwan, MD, FAHA, Washington University School of Medicine, St. Louis, Missouri
Gerald W. Dorn, MD, FACC, FAHA, Washington University School of Medicine, St. Louis, Missouri
Igor Efimov, PhD, FAIMBE, FAHA, FHRS, George Washington University, Washington, D.C.
John W. Elrod, PhD, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania
Craig A. Emter, PhD, University of Missouri-Columbia, Columbia, Missouri
D. Brian Foster, PhD, Johns Hopkins School of Medicine, Baltimore, Maryland
Sara Franklin, PhD, University of Utah, Salt Lake City, Utah
Elena Gallo-MacFarlane, PhD, Johns Hopkins University, Baltimore, Maryland
Ira J. Goldberg, MD, FAHA, New York University, New York, New York
Roberta A. Gottlieb, MD, Cedars-Sinai Heart Institute, Los Angeles, California
Rebekah L. Gundry, PhD, Medical College of Wisconsin, Milwaukee, Wisconsin
Kimm Hamann, PhD, National Institutes of Health, Center for Scientific Review, Bethesda, Maryland
H. Kirk Hammond, MD, University of California-San Diego, San Diego, California
Saptarsi Haldar, MD, University of California San Francisco, San Francisco, California
David M. Herrington, MD, MHS, Wake Forest School of Medicine, Winston-Salem, North Carolina
Joseph A. Hill, MD, PhD, FAHA, UT Southwestern Medical Center, Dallas, Texas
Steven R. Houser, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania
Timothy J. Kamp, MD, PhD, University of Wisconsin, Madison, Wisconsin
Ruri Kaneda, MD, PhD, Keio University School of Medicine, Tokyo, Japan
Michael Kapiloff, MD, PhD, FAHA, Stanford University, Stanford, California
Kara Hansell Keehan, American Journal of Physiology/Heart and Circulatory Physiology, Baltimore, Maryland
Jonathan A. Kirk, PhD, Loyola University, Maywood, Illinois
Raj Kishore, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania
Richard N. Kitsis, MD, FAHA, Albert Einstein College of Medicine, Bronx, New York
Evangelia (Litsa) G. Kranias, PhD, FAHA, University of Cincinnati College of Medicine, Cincinnati, Ohio
Christian Kupatt, MD, Klinikum Grossahdern, Muenchen, Germany
W. Jonathan Lederer, MD, PhD, University of Maryland School of Medicine, Baltimore, Maryland
Leslie Leinwand, PhD, University of Colorado, Boulder, Colorado
Ji Li, PhD, FAHA, University of Mississippi Medical Center, Jackson, Mississippi
Merry L. Lindsey, PhD, University of Mississippi Medical Center, Jackson, Mississippi
Xin Ma, MD, Thomas Jefferson University, Philadelphia, Pennsylvania
Michael MacCoss, PhD, University of Washington, Seattle, Washington
Calum A. MacRae, MD, PhD, FAHA, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts
W. Robb MacLellan, MD, University of Washington, Seattle, Washington

(continued on next page)

Invited Presenters and Panelists (continued)

James F. Martin, MD, PhD, Baylor College of Medicine, Houston, Texas
Anne M. Murphy, MD, Johns Hopkins University, Baltimore, Maryland
Elizabeth (Tish) Murphy, PhD, FAHA, National Heart, Lung, and Blood Institute/National Institutes of Health, Bethesda, Maryland
Chris Murray, PhD, Cedars-Sinai Medical Center, Los Angeles, California
Charles E. Murry, MD, FAHA, University of Washington, Seattle, Washington
Viacheslav Nikolaev, PhD, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
Sarah J. Parker, PhD, Cedars Sinai Medical Center, Los Angeles, California
Peipei Ping, PhD, FAHA, David Geffen School of Medicine at UCLA, Los Angeles, California
Geoffrey S. Pitt, MD, PhD, Weill Cornell Medical College, New York, New York
Yibing Qyang, PhD, Yale University School of Medicine, New Haven, Connecticut
Michael Regnier, PhD, University of Washington, Seattle, Washington
Fabio Recchia, MD, PhD, FAHA, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania, and Institute of Life Sciences, Scuola Superiore Sant'Anna, Pisa, Italy
Karen E. Ross, PhD, Georgetown University, Washington, D.C.
Pilar Ruiz-Lozano, PhD, Stanford University, Palo Alto, California
Jonathan Schultz, American Heart Association, Baltimore, Maryland
Ajay Shah, MD, FMedSci, King's College Hospital, London, United Kingdom
Farah Sheikh, PhD, FCVS, FAHA, University of California-San Diego, La Jolla, California
Kunhua Song, PhD, University of Colorado, Gates Center for Regenerative Medicine and Stem Cell Biology, Aurora, Colorado
Deepak Srivastava, MD, University of California San Francisco, San Francisco, California
Susan F. Steinberg, MD, Columbia University, New York, New York
Heinrich Taegtmeyer, MD, D Phil, University of Texas Medical School, Houston, Texas
Olga Tjurmina, PhD, National Heart, Lung, and Blood Institute, Bethesda, Maryland
Eva van Rooij, PhD, Hubrecht Institute, Utrecht, Netherlands
Gregorie Vandecasteele, PhD, INSERM U769, Université Paris-Sud 11, Châtenay-Malabry, France
Vidya Venkatraman, MSc, Cedars Sinai, Los Angeles, California
Tom M. Vondriska, PhD, David Geffen School of Medicine at UCLA, Los Angeles, California
Lori Walker, PhD, University of Colorado, Denver, Colorado
Da-Zhi Wang, PhD, Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts
Wang Wang, MD, PhD, University of Washington, Seattle, Washington
Yibin Wang, PhD, FAHA, David Geffen School of Medicine at UCLA, Los Angeles, California
Thomas Weber, PhD, Icahn School of Medicine at Mount Sinai, New York, New York
Sean M. Wu, MD, PhD, Stanford University, Stanford, California
Rui-ping Xiao, MD, PhD, Peking University, Beijing, China
Xiaolei Xu, PhD, Mayo Clinic, Rochester, Minnesota
John R. Yates, PhD, The Scripps Research Institute, La Jolla, California
Martin Young, DPhil, University of Alabama at Birmingham, Birmingham, Alabama
Katherine E. Yutzey, PhD, Cincinnati Children's Medical Center, Cincinnati, Ohio
Natasha E. Zachara, PhD, Johns Hopkins School of Medicine, Baltimore, Maryland

Invited Moderators

Guilo Agnetti, PhD, Johns Hopkins University, Baltimore, Maryland
Kedryn Baskin, PhD, University of Texas Southwestern Medical Center, Dallas, Texas
Ivor J. Benjamin, MD, FAHA, FACC, Medical College of Wisconsin, Milwaukee, Wisconsin
Benoit Boivin, PhD, SUNY Polytechnic Institute/CNSE, Albany, New York
Robert M. Carey, MD, MACP, FAHA, FRCPI, University of Virginia, Charlottesville, Virginia
Ju Chen, PhD, University of California San Diego School of Medicine, La Jolla, California
L. Ashley Cowart, PhD, Medical University of South Carolina, Charleston, South Carolina
Dominic P. Del Re, PhD, Rutgers New Jersey Medical School, Newark, New Jersey
Sarah Franklin, PhD, University of Utah, Salt Lake City, Utah
Aldrin Gomes, PhD, University of California Davis, Davis, California
Asa Gustafsson, PhD, FAHA, University of California San Diego, La Jolla, California
Nirmala Hariharan, PhD, University of California at Davis, Davis, California
Joshua Hare, MD, FAHA, University of Miami, Miami, Florida
Samantha Harris, PhD, University of Arizona, Tucson, Arizona
Masaki Leda, MD, PhD, Keio University School of Medicine, Tokyo, Japan
Il-man Kim, PhD, Medical College of Georgia, Augusta, Georgia
Bjorn Knollmann, MD, PhD, Vanderbilt University, Nashville, Tennessee
Walter J. Koch, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania
Maria Kontaridis, PhD, FAHA, Beth Israel Deaconess Medical Center, Boston, Massachusetts
Pui Yu (Maggie) Lam, PhD, University of California-Los Angeles, Los Angeles, California
Chi Fung Lee, PhD, University of Washington, Seattle, Washington
Na Li, PhD, Baylor College of Medicine, Houston, Texas
E. Douglas Lewandowski, PhD, Sanford Burnham Presbys Medical Discovery Institute, Orlando, Florida
Ronglih Liao, PhD, FAHA, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts
Timothy A. McKinsey, PhD, University of Colorado, Aurora, Colorado
Donald R. Menick, PhD, Medical University of South Carolina, Charleston, South Carolina
Ulrike Mende, MD, FAHA, Rhode Island Hospital and Alpert Medical School of Brown University, Providence, Rhode Island
Jeffrey D. Molkentin, PhD, Children's Hospital Medical Center, Cincinnati, Ohio
Toyoaki Murohara, MD, PhD, Nagoya University Graduate School of Medicine, Nagoya, Japan
Elizabeth (Tish) Murphy, PhD, FAHA, National Heart, Lung, and Blood Institute/National Institutes of Health, Bethesda, Maryland
Nicole H. Purcell, PhD, University of California San Diego, San Diego, California
Jalees Rehman, MD, FAHA, University of Illinois at Chicago, Chicago, Illinois
Glenn C. Rowe, PhD, University of Alabama at Birmingham, Birmingham, Alabama
Sakthivel Sadayappan, PhD, MBA, University of Cincinnati College of Medicine, Cincinnati, Ohio
Junichi Sadoshima, MD, PhD, Rutgers New Jersey Medical School, Newark, New Jersey
Susmita Sahoo, PhD, Mount Sinai Icahn School of Medicine, New York, New York
Pothur R. Srinivas, PhD, MPH, NIH/NHLBI, Bethesda, Maryland
Mark A. Sussman, PhD, FAHA, San Diego State University, Heart Institute and Integrated Regenerative Research Institute, San Diego, California
Jill C. Tardiff, MD, PhD, FAHA, University of Arizona, Tucson, Arizona
Jop H. van Berlo, MD, PhD, University of Minnesota, Minneapolis, Minnesota
Héctor H. Valdivia, MD, PhD, FAHA, University of Michigan, Ann Arbor, Michigan
Tom M. Vondriska, PhD, David Geffen School of Medicine at UCLA, Los Angeles, California
Yibin Wang, PhD, FAHA, David Geffen School of Medicine at UCLA, Los Angeles, California
Loren E. Wold, PhD, The Ohio State University, Columbus, Ohio
Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California
Jianyi (Jay) Zhang, MD, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama

Abstract Reviewers

The conference organizers gratefully acknowledge the following individuals for their assistance with the abstract grading process:

Maha Abdellatif, MD, PhD
Giulio Agnetti, PhD
Pilar Alcaide, PhD
Hossein Ardehali, MD
Christopher Baines, PhD
Burns Blaxall, PhD, FAHA
Sihem Boudina, PhD
L. Ashley Cowart, PhD
Saumya Das, MD, PhD
Buddadeb Dawn, MD, FAHA
Dominic P. Del Re, PhD
Abhinav Diwan, MD, FAHA
Gerald W. Dorn, MD, FACC, FAHA
Konstantinos Drosatos, MSc, PhD
John Elrod, PhD
Craig A. Emter, PhD
Sarah Franklin, PhD
Aldrin Gomes, PhD
Rebekah L. Gundry, PhD
Åsa Gustafsson, PhD, FAHA
Saptarsi Haldar, MD
H. Kirk Hammond, MD
Joseph A. Hill, MD, PhD, FAHA
Steven R. Houser, PhD, FAHA
Masaki Ieda, MD, PhD
Timothy J. Kamp, MD, PhD
Il-man Kim, PhD
Raj Kishore, PhD, FAHA
Walter Koch, PhD, FAHA
Maria Kontaridis, PhD, FAHA
Evangelia (Litsa) G. Kranias, PhD, FAHA
Chi Fung Lee, PhD
David J. Lefer, PhD, FAHA
Merry L. Lindsey, PhD
Gary Lopaschuk, PhD
Xin Ma, MD
W. Robb MacLellan, MD
James F. Martin, MD, PhD
Timothy A. McKinsey, PhD
Donald R. Menick, PhD
Jeffery D. Molkentin, PhD
Toyoaki Murohara, MD, PhD
Anne M. Murphy, MD
Elizabeth (Tish) Murphy, PhD, FAHA
Viacheslav Nikolaev, PhD
Sarah J. Parker, PhD
Nichole H. Purcel, PhD
Yibin Qyang, PhD
Fabio Recchia, MD, PhD, FAHA
Michael Regnier, PhD
Glenn C. Rowe, PhD
Susmita Sahoo, PhD
Ajay Shah, MD
Farah Sheikh, PhD, FAHA
Kunhua Song, PhD
Pothur Srinivas, PhD, MPH
Susan F. Steinberg, MD
Mark A. Sussman, PhD, FAHA
Heinrich Taegtmeyer, MD, DPhil
Jil C. Tardiff, MD, PhD, FAHA
Thomas Thum, MD, PhD
Héctor H. Valdivia, MD, PhD, FAHA
Jop H. van Berlo, MD, PhD
Wang Wang, MD, PhD
Yibin Wang, PhD, FAHA
Xander Wehrens, MD, PhD, FAHA
Loren E. Wold, PhD
Joseph C. Wu, MD, PhD, FAHA
Sean M. Wu, MD, PhD
Xiaolei Xu, PhD
John R. Yates, PhD
Martin Young, DPhil
Katherine E. Yutzey, PhD, FAHA
Wolfram-Hubertus Zimmermann, PhD, FAHA

Room Locator

Activity	Hotel Location, Level/Floor
Sunday, July 9	
ACRE Meeting	Skyline I (23rd Floor)
US-Taiwan Bilateral Pre-Meeting	Skyline II (23rd Floor)
Monday, July 10	
Exhibits	Grand Ballroom Foyer
Concurrent Session A	Grand Ballroom I
Concurrent Session B	Grand Ballroom II
Early Career Pre-Conference Session	Grand Ballroom I
General Sessions	Grand Ballroom
Poster Session	Exhibit Hall
Refreshment Breaks	Grand Ballroom Foyer
Registration	Galleria I
Speaker Resource Room	Parlor C
Tuesday, July 11	
Continental Breakfast	Grand Ballroom Foyer
Concurrent Session A	Grand Ballroom I
Concurrent Session B	Grand Ballroom II
Early Career Investigator Event	Skyline I (23rd Floor)
Exhibits	Grand Ballroom Foyer
General Sessions	Grand Ballroom
Poster Session	Exhibit Hall
Refreshment Breaks	Grand Ballroom Foyer
Registration	Galleria I
Speaker Resource Room	Parlor C
Women in Science Breakfast	Skyline II (23rd Floor)
Wednesday, July 12	
Continental Breakfast	Grand Ballroom Foyer
Concurrent Session A	Grand Ballroom I
Concurrent Session B	Grand Ballroom II
Concurrent Session 10B	Skyline II (23rd Floor)
Exhibits	Grand Ballroom Foyer
General Sessions	Grand Ballroom
Poster Session	Exhibit Hall
Refreshment Breaks	Grand Ballroom Foyer
Registration	Galleria I
Speaker Resource Room	Parlor C
Council Dinner	Grand Ballroom
Thursday, July 13	
Continental Breakfast	Grand Ballroom Foyer
General Sessions	Grand Ballroom
Refreshment Break	Grand Ballroom Foyer
Registration	Galleria I
Speaker Resource Room	Parlor C

General Information

Program Description

The 13th annual BCVS 2017 Scientific Sessions: Pathways to Cardiovascular Therapeutics has become the "go to" conference for molecular cardiovascular biology and disease. Sponsored by the American Heart Association Basic Cardiovascular Sciences Council, the conference attracts leading researchers in fields such as microRNAs, cardiac gene and cell therapy, cardiac development and most recently tissue engineering and iPS cells.

The agenda includes early career pre-conference sessions on Monday morning, followed by 20 concurrent sessions and three general sessions over 3 ½ days, all set in a forum that promotes the relaxed exchange and discussion of cutting edge research in molecular and translational cardiovascular biology and disease. The program includes a diversity of speakers representing the best cardiovascular scientists from around the world.

The organizers continue to embrace early career cardiovascular scientists by including oral abstract presentations from up-and-coming investigators throughout the program, with one session dedicated for the Young Investigator Award presentations/competition. In addition to stimulating talks, posters from submitted abstracts will be presented in three sessions.

Conference Registration

Registration will be in Galleria I, located on the Ballroom Level, and will be open during the following hours:

Monday, July 10.....8:00 am–6:00 pm

Tuesday, July 11.....7:00 am–6:00 pm

Wednesday, July 12.....7:00 am–6:00 pm

Thursday, July 13.....7:00 am–NOON

Exhibits

Beginning Monday, at 8:00 am, visit our exhibitors in the Grand Ballroom Foyer. This year we welcome:

- ACRE-APS
- AHA Membership and Journals
- American Physiological Society
- Biocytogen LLC
- Fujifilm Visual Sonics, Inc.
- Indus Instruments
- IonOptix

You can also renew your AHA membership and bring your non-member colleagues to learn the latest information about the benefits of membership. The AHA membership booth will be in the Grand Ballroom Foyer.

Learning Objectives

At the conclusion of the conference, participants will be able to:

1. Discuss advances in the underlying mechanisms that contribute to pathological cardiac remodeling and development of targeted therapeutic strategies to improve outcomes for patients with CVD.
2. Evaluate the most recent evidence on the pathophysiological mechanisms underlying myocardial perfusion injury, supporting the use of cardioprotective strategies, including advances in oxidative stress-activated mechanisms in CVD pathophysiology.
3. Discuss recent advances in understanding the complex interplay between signal transduction cascades in modulating apoptotic and functional pathways (mitochondrial, ion channels, metabolism) to identify novel drug targets and preserve functional cardiac myocytes.
4. Describe current research exploring the integrated role of novel "omics" technologies and "big data" analytics that may allow for precision medicine and may improve patient outcomes by examining more holistically the pathophysiological mechanisms underlying cardiovascular function.
5. Discuss the importance of state-of-the-art clinically relevant reprogrammed human cellular and large animal model systems, including the challenges to bridge the gap between basic science and clinical application of these modalities for improving translational research and outcomes in patients with CVD.
6. Discuss challenges and issues arising regarding the pursuit of cardiovascular research, including future research directions, issues of responsibility in research and the move towards translation into clinical practice.
7. Describe recent and emerging advances into the genetic and molecular mechanisms driving cardiomyopathy and heart failure that are guiding the development of interventions such as targeted gene therapy and regenerative stem cell therapy.

General Information (continued)

Joint Accreditation Statements

The American Heart Association is accredited by the American Nurses Credentialing Center (ANCC), the Accreditation Council for Pharmacy Education (ACPE) and the Accreditation Council for Continuing Medical Education (ACCME), to provide continuing education for the healthcare team.

AMA Credit Designation Statement – Physicians

The American Heart Association designates this live activity for a maximum of 22.25 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

AAPA Credit Acceptance Statement – Physician Assistants

AAPA accepts certificates of participation for educational activities certified for *AMA PRA Category 1 Credit*™ from organizations accredited by ACCME or a recognized state medical society. Physician assistants may receive a maximum of 22.25 hours of Category 1 credit for completing this program.

AANP Credit Acceptance Statement – Nurse Practitioners

American Academy of Nurse Practitioners (AANP) accepts *AMA PRA Category 1 Credit*™ from organizations accredited by the ACCME.

****AMA Credit must be claimed within six months of attendance. Credit will no longer be available to claim after Jan. 13, 2018.*

Disclosure Policy

All persons who develop and/or control educational content in CME/CE activities provided by the American Heart Association will disclose to the audience all financial relationships with any commercial supporters of this activity as well as with other commercial interests whose lines of business are related to the CME/CE-certified content of this activity. In addition, presenters will disclose unlabeled/unapproved uses of drugs or devices discussed in their presentations. Such disclosures will be made in writing in course presentation materials.

Claiming CME/CE Credit

1. Access http://learn.heart.org.
2 Click Activities in Progress.
3. Enter your Username and Password, and click Sign In.
   a. If you do not remember your Username or Password, click the Forgot Password? link.
   b. If you are not a registered user, click Create an account to enter your account information and receive your Username and Password.
4. Select the activity.
5. Review the Activity Overview tab, scroll to bottom and click Continue.
   a. You may be required to check a confirmation box that you have read the information.
6. Click the Launch button to complete an evaluation on the course. This step is required to claim credit. Once complete, click Continue.
7. Claim your credit by clicking the Claim button for the appropriate accreditation.
   a. You may qualify for more than one credit type based on your user profile.
   b. ACCME, ANCC and CAPCE allow claiming of variable credit. You will have the option to claim all or part of the activity credit if applicable to your user profile.
8. Click Continue to generate your certificate.
9. Click the certificate link to print or save it.
10. Click Close. The activity is stored under Completed Activities.

You are strongly encouraged to claim your CME/CE credit within 30 days of the conference, and you must claim your credit by Jan. 13, 2018. For customer support, please contact our National Engagement Center at 1-888-242-2453 (between 8:00 AM–5:00 PM Central Standard Time) or email learn@heart.org.

International Attendance Verification forms will be available at registration.

General Information (continued)

Web Reources

***HealthJobsPLUS* for Professionals**

The American Heart Association, in partnership with Lippincott Williams & Wilkins (a Wolters Kluwer business), is proud to offer HealthJobsPlus.com. HealthJobsPlus.com provides a first-rate source for those seeking and posting jobs by connecting qualified healthcare professionals with top-notch employers.

Professional.heart.org

Professional Heart Daily is the American Heart Association/American Stroke Association's powerful Internet resource for healthcare professionals devoted to the fight against cardiovascular disease and stroke. Depending on the level of membership selected, AHA/ASA Professional Members may have free access to all 11 AHA scientific journals, biweekly clinical updates, core clinical textbooks, a continually updated drug database and much more. Also available from this site are links to the BCVS 2017 Scientific Sessions website, Science News and the AHA's Professional Online Network.

learn.heart.org

This website is where healthcare professionals can complete the conference evaluation and claim CME/CE credits after the meeting. Also available on learn.heart.org are podcasts, online courses, satellite broadcasts and webcasts.

Twitter

Use Twitter to tweet your questions/comments during the meeting or just talk about what is happening at BCVS 2017. Use hashtag: #BCVS17.

Information for Presenters

Speaker Resource Room

The Speaker Resource Room is in Parlor C on the Ballroom Level of the hotel. Speakers are asked to deliver their presentations on CD-ROM, DVD-ROM or a USB storage device to the Speaker Resource Room at least one hour before the beginning of the session in which they will speak. *It is imperative that you review your presentation in the Speaker Resource Room if it contains video files or was created on a Mac*. Speakers will be directed to a preloading station where a technician will be on hand to load the presentations. Speakers may also use this room to review and practice their presentations on both PC and Mac computers.

The Speaker Resource Room will be open during these hours:

Monday, July 10	8:00 AM–6:00 PM	Wednesday, July 12	7:00 AM–6:00 PM
Tuesday, July 11	7:00 AM–6:00 PM	Thursday, July 13	7:00 AM–Noon

Abstract Presentations

Abstract presentations for the Basic Cardiovascular Sciences 2017 Scientific Sessions are embargoed for release at the time of presentation or time of AHA news event. Information may not be released before the scheduled presentation time. Abstract content will be available on the BCVS 2017 conference website: professional.heart.org/bcvssessions.

Abstracts will be published in the October online edition of the AHA journal *Circulation Research*.

The following abstracts will be presented orally during the Early Career Pre-Conference Session 1 at 10:00–11:15 AM Monday, and as a poster during the regularly scheduled poster sessions:

464 Alexander Froese
470 Gregoire Ruffenach
471 Maradumane Mohan
211 Ravi Shah
308 Wenjun Yan

Abstracts 1-17 will be presented orally

Poster Abstracts

Poster Session 1	Monday, July 10	4:30–7:30 PM	Presentations 20–174
Poster Session 2	Tuesday, July 11	4:30–7:30 PM	Presentations 185–335
Poster Session 3	Wednesday, July 12	4:30–7:30 PM	Presentations 336–484

Poster Presenters, please note the schedule below:

Poster Session 1		
Set-up time:	Monday, July 10	NOON–4:00 PM
Attended time:	Monday, July 10	4:30-7:30 PM
Tear-down time:	Tuesday, July 11	before 9:00 AM
Poster Session 2		
Set-up time:	Tuesday, July 11	NOON–4:00 PM
Attended time:	Tuesday, July 11	4:30–7:30 PM
Tear-down time:	Wednesday, July 12	before 9:00 AM
Poster Session 3		
Set-up time:	Wednesday, July 12	NOON–4:00 PM
Attended time:	Wednesday, July 12	4:30–7:30 PM
Tear-down time:	Thursday, July 13	before 9:00 AM

ePosters

In addition to the traditional poster format, abstract presenters were invited to upload their posters electronically. During the meeting, each abstract will have a QR code displayed on their poster board that will enable attendees with smartphones to view the ePosters and, if applicable, the author's narration of the poster. ePosters are available only to attendees and may be viewed from the Communication Center, which is located in the registration area. Posters will be accessible to the general public after August 14.

Conference Highlights

Keynote Lecture

Calum A. MacRae, MD, PhD, FAHA, will present **Phenotype Discovery: The Missing Link?** at 9:30 AM Thursday, July 13. Dr. MacRae is the chief of cardiovascular medicine at Brigham and Women's Hospital and associate professor of medicine at Harvard Medical School. He is also an associate member at the Broad Institute and a principal faculty member at the Harvard Stem Cell Institute. A cardiologist, geneticist and developmental biologist, he has trained in Edinburgh, London and Boston. He came to Harvard Medical School for a fellowship in cardiovascular genetics in 1991, and continued his research training at Massachusetts General Hospital in 1996 with focus on developmental biology. He returned to Brigham and Women's in 2009 and rose to chief of cardiovascular medicine in 2014.

His research interest is in understanding the fundamental mechanisms of disease using human studies and complementary efforts combining systems level modeling with empiric high-throughput biology in the zebrafish. His lab uses automated screens in fish to define the genetic architecture of disease and to explore gene-drug (or environment) interactions through the interrogation of large-scale chemical libraries. His clinical interests include genomic medicine, innovation in phenotyping and the redesign of clinical care. Under his leadership, the Brigham cardiology team has successfully engaged in a number of innovative collaborations in cardiovascular care optimization with a wide range of industry partners.

In October 2016, Dr. MacRae became the recipient of One Brave Idea, a $75 million, five-year research award to study coronary heart disease and its consequences. This unique team-based program is funded by the American Heart Association, Verily and Astra Zeneca. His proposal was chosen among 349 applicants from 22 countries who sought the project to identify a new approach to eradicate the No. 1 killer of Americans. His visionary approach holds promise for addressing a broad set of diseases.

Conference Highlights – Early Career and Ticketed Events

Outstanding Early Career Investigator Award Finalists' Presentations

The three finalists will present their abstracts at 9:15 AM Wednesday, July 12. The winner will be announced Wednesday evening during the Basic Cardiovascular Sciences Council Dinner. Refer to page 16 for more information on award finalists

Early Career Pre-Conference Sessions

Join us on Monday in Grand Ballroom I for these sessions targeted for Early Career attendees:

9:45–10:00 AM
Early Career Pre-Conference Session: **Welcome Address**

10:00–11:15 AM
Early Career Pre-Conference Session 1: **"Next Best Thing" in Cardiovascular Research**
Oral Abstract Presentations

11:20–11:50 AM.
Early Career Pre-Conference Session 2 Featured Presentation: **Setting Goals and Scoring Goals: How to Balance a Career in Science and Soccer**, Pilar Alcaide, PhD, Tufts University, Boston, Massachusetts

Women in Science Breakfast

The second annual Women in Science Breakfast will begin at 7:00 AM Tuesday in Skyline II, located on the 23rd floor of the hotel. This is an informal networking breakfast for women in all phases of their careers. *Ticket required to attend*.

Council on Basic Cardiovascular Sciences Dinner

Please join us for food, drinks and entertainment at the BCVS Council Dinner on Wednesday, July 12, at 7:00 PM in the Grand Ballroom. *Tickets, if available, may be purchased at the AHA Registration Desk ($60/member; $85/non-member for conference registrants and their guests).*

Conference Highlights – Awards

The American Heart Association Council on Basic Cardiovascular Sciences provides educational programs, awards/scholarships, travel grants and mentoring opportunities that support the ongoing training and development of individuals in the early stages of their careers.

The council is pleased to announce the finalists and winners of the following awards:

Outstanding Early Career Investigator Award Finalists

The Outstanding Early Career Investigator Award finalists will present their abstracts during a special oral session scheduled at 1:15-2:00 PM Wednesday, July 20. The winner will be announced at the Council Dinner that evening.

Name/Institution	Abstract Number
Benjamin L. Prosser, University of Pennsylvania	13
Adam C. Straub, University of Pittsburgh	14
Adam R. Wende, University of Alabama	15

Cardiovascular Outreach Award Recipients

Name	Abstract/Poster Number
Ngonidzashe Madungwe	143
Oluwaseun Ogunbona	434
Edward Owusu-Ansah	4
Gobinath Shanmugam	458

New Investigator Travel Award Recipients

Name	Abstract/Poster Number
Tanya A. Baldwin	3
Angela M. Castellanos Rieger	8
Robert N. Correll	155
Claudio de Lucia Przemyslaw A. Gorski	396, 382
Anja Karlstaedt	476
Ashish S. Patel	214
Pearl J. Quijada	269
Gregoire Ruffenach	216
Takeshi Suetomi	160
Jian-Peng Teoh	161
Lillianne H. Wright	335
Haodi Wu	6
Abir Yamak	240
Hanming Zhang	222
Geoffrey W. Cho	357
Avash Das	414
Olan Jackson-Weaver	237
Courtney H. Premer	215
Shanmughapriya Santhanam	360

Policy Information

Disclaimer
The Basic Cardiovascular Sciences Scientific Sessions is a scientific and educational conference for exchanging and discussing research results and scientific developments in the field of cardiovascular disease. Accordingly, the American Heart Association cannot and does not offer any assurance or warranty of the accuracy, truthfulness or originality of the information presented at the conference.

Embargo Guidelines
Abstracts, lectures and presentations in BCVS 2017 are embargoed for release at the time of presentation. Information may not be released before the scheduled presentation time.

Photography/Recording Policy
No person may record any portion of the AHA Scientific Sessions, scientific conferences and the AHA/ASA International Stroke Conference, whether by video, still or digital photography; audio; or any other recording or reproduction mechanism. This includes recording of presentations and supporting A/V materials and of poster presentations and supporting poster materials.

Additionally, science information shared by investigators during a meeting is confidential and often unpublished data. Taking photos of or recording the content of meeting room slides is also prohibited and considered intellectual piracy and unethical. Attendees who ignore this policy will be asked to leave the educational session and are at risk of losing their badge credentials.

The American Heart Association will take photographs and video during its conferences and may display, reproduce and/or distribute them in AHA educational, news or promotional materials, whether in print, electronic or other media, including the AHA website. Your registration for an AHA conference is your grant to the AHA the right to use your name, image and biography for such purposes as well as any other purpose. All photographs and/or videos become the property of the AHA.

No Smoking Policy
AHA policy prohibits smoking in conference meeting rooms and exhibits/registration areas. Thank you for your cooperation.

Seating/Badge Requirement
Seating is on a first-come, first-served basis. According to fire code, a session must be closed if the room fills to capacity. You must wear your name badge at all times during the symposium. Nonregistered guests may not be permitted into the sessions or food and beverage events. Be sure to remove your badge when you leave the conference or your hotel room.

The American Heart Association reserves the right to revoke or deny attendance to any registered participant, speaker, exhibitor, news media reporter or photographer of presentations or activities at AHA/ASA scientific conferences and meetings

Americans with Disabilities Act (ADA)
We encourage participation by all individuals. If you have a disability, advance notification of any special needs will help us to serve you better. Please indicate what your needs are at the time of registration. We cannot ensure the availability of appropriate accommodations without prior notification.

Please note: The American Heart Association shall not be liable for cancellation of the BCVS 2017 Scientific Sessions caused by labor strikes, civil disorders, fires, weather conditions, or other acts of God for any damages or losses resulting from such cancellations.

Program Agenda

MONDAY, JULY 10

8:00 AM
Registration/Exhibits Open
Galleria I (Ballroom Level)

9:45 AM
Early Career Pre-Conference Session: Welcome Address
Grand Ballroom I (Ballroom Level)
Nicole H. Purcell, PhD, University of California San Diego, San Diego, California
Sakthivel Sadayappan, PhD, MBA, University of Cincinnati College of Medicine, Cincinnati, Ohio

10:00-11:15 AM
Grand Ballroom I (Ballroom Level)
Early Career Pre-Conference Session 1
"Next Best Thing" in Cardiovascular Research

Moderators:
Susmita Sahoo, PhD, Mount Sinai Icahn School of Medicine, New York, New York
Jop H. van Berlo, MD, PhD, University of Minnesota, Minneapolis, Minnesota

Oral Abstract Presentations

10:00 **Two Different Microdomains of β1-adrenoreceptor Signaling Revealed by Live Cell Imaging** — 464
Alexander Froese, Viacheslav O. Nikolaev, University Medical Center Hamburg, Hamburg, Germany

10:15 **Causal Role of Oxidized Lipids in Pulmonary Hypertension Development** — 470
Gregoire Ruffenach, Soban Umar, Mylene Vaillancourt, Victor Grijalva, Ellen I. O'Connor, Shayan Moazeni, Christine Cunningham, Abbas Ardehali, Aman Mahajan, Srininivasa T. Reddy, Mansoureh Eghbali, Univ of California, Los Angeles, CA

10:30 **Kinase-independent Function of PI3Kγ Enables ERK Activation** — 471
Maradumane L. Mohan, Arunachal Chatterjee, Swetha Ganapathy, Sromona Mukherjee, Sathyamangla V. Naga Prasad, Cleveland Clinic Foundation, Cleveland, Ohio

10:45 **Myocardial Hypertrophy and Circulating RNAs** — 211
Ravi V. Shah, Ravi Shah, Newburyport, Massachusetts; Olivia Ziegler, Massachusetts General Hospital, Boston, Massachusetts; Kahraman Tanriverdi, University of Mass-Worcester, Worcester, Massachusetts; Jian Rong, Martin Larson, Framingham Heart Study, Framingham, Massachusetts; Alexander Pico, UCSF, San Francisco, California; Daniel Levy, Framingham Heart Study, Framingham, Massachusetts; Ramachandran S. Vasan, Boston University, Boston, Massachusetts; Saumya V. Das, Massachusetts General Hospital, Boston, Massachusetts; Jane Freedman, University of Mass-Worcester, Worcester, Massachusetts

11:00 **CTRP9 Regulates the Fate of Implanted Mesenchymal Stem Cells and Mobilizes Their Protective Effects against Ischemic Heart Injury via Multiple Novel Signaling Pathways** — 308
Wenjun Yan, Wayne Lau, Theodore Christopher, Bernard Lopez, Thomas Jefferson Univ, Philadelphia, Pennsylvania; Erhe Gao, Walter Koch, Temple University, Philadelphia, Pennsylvania; Yajing Wang, Xinliang (Xin) Ma, Thomas Jefferson University, Philadelphia, Pennsylvania

11:15–11:50 AM
Grand Ballroom I (Ballroom Level)
Early Career Pre-Conference Session 2
Featured Presentation

Moderator:
Nicole H. Purcell, PhD, University of California San Diego, San Diego, California

11:15 **Setting Goals and Scoring Goals: How to Balance a Career in Science and Soccer**
Pilar Alcaide, PhD, Tufts University, Boston, Massachusetts

11:50 AM–12:40 PM
Break/Lunch on your own

12:40–1:00 PM
Grand Ballroom (Ballroom Level)
BCVS 2017 Scientific Sessions: Opening Welcome

John J. Warner, MD, MBA, UT Southwestern Medical Center University Hospitals, Dallas, Texas, and President, American Heart Association

Ronglih Liao, PhD, FAHA, Brigham and Women's Hospital and Harvard Me dical School, Boston, Massachusetts, and Chair, Basic Cardiovascular Sciences Council

1:00–1:30 PM
Grand Ballroom Foyer
Refreshment Break/Exhibits

1:30–2:45 PM
Grand Ballroom I (Ballroom Level)
Concurrent Session 1A
Cardiac Fibrosis

Moderators:
Donald R. Menick, PhD, Medical University of South Carolina, Charleston, South Carolina
Timothy A. McKinsey, PhD, University of Colorado, Aurora, Colorado

1:30 **Targeting Fibrosis Within and Beyond the Heart**
Burns C. Blaxall, PhD, FAHA, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

1:45 **Master Regulators of Cardiac Fibroblast Activation**
Jennifer Davis, PhD, University of Washington, Seattle, Washington

2:00 **MMP-12 is a Post-MI Inflammation Resolution Promoting Factor**
Merry L. Lindsey, PhD, University of Mississippi Medical Center, Jackson, Mississippi

2:15 **Developmental Underpinnings of Vascular Disease in Loeys-Dietz Syndrome**
Elena Gallo-MacFarlane, PhD, Johns Hopkins University, Baltimore, Maryland

Oral Abstract Presentation

2:30 ***Sprr2b* Drives Proliferation of Cardiac Fibroblasts by Relieving p53-mediated Cell Cycle Inhibition** 1
Ryan M. Burke, Janet K. Lighthouse, Pearl J. Quijada, Ronald Dirkx, Michael A. Trembley, Eric M. Small, University of Rochester, Rochester, New York

1:30–2:45 PM
Grand Ballroom II (Ballroom Level)
Concurrent Session 1B
Cardioprotection, Aging and Oxidative Stress

Moderators:
Chi Fung Lee, PhD, University of Washington, Seattle, Washington
Jalees Rehman, MD, FAHA, University of Illinois at Chicago, Chicago, Illinois

1:30 **Nox4-mediated Cardiac Stress Responses**
Ajay Shah, MD, FMedSci, King's College Hospital, London, United Kingdom

1:45 **Mapping the O-GlcNAc-mediated Cytoprotective Network**
Natasha E. Zachara, PhD, Johns Hopkins School of Medicine, Baltimore, Maryland

2:00 **Antioxidative Cardiokines and Their Role in Stem Cell Survival and Cardiac Repair**
Xin Ma, MD, Thomas Jefferson University, Philadelphia, Pennsylvania

2:15 **Cardiac Sestrin2 Signaling in Aging**
Ji Li, PhD, FAHA, University of Mississippi Medical Center, Jackson, Mississippi

Oral Abstract Presentation

2:30 **MANF, A Structurally Unique Redox-Sensitive Chaperone, Restores ER Protein Folding in the Ischemic Heart** 2
Adrian Arrieta, Erik A. Blackwood, Winston T. Stauffer, Michelle Santo Domingo, Amber N. Pentoney, Donna J. Thuerauf, San Di ego State University, San Diego, California; Shirin Doroudgar, Department of Cardiology, Angiology, and Pneumology, University Hospital Heidelberg, Germany, San Diego, California; Christopher C. Glembotski, San Diego State University, San Diego, California

2:45–3:15 PM
Grand Ballroom Foyer
Refreshment Break/Exhibits

3:15–4:30 PM
Grand Ballroom I (Ballroom Level)
Concurrent Session 2A
Novel Approaches to the Study of Cardiac Signaling and Compartmentation

Moderators:
Benoit Boivin, PhD, SUNY Polytechnic Institute/CNSE, Albany, New York
Maria Kontaridis, PhD, FAHA, Beth Israel Deaconess Medical Center, Boston, Massachusetts

3:15 **Local Calcium and Kinase Signaling in Cardiac Myocyte Nanodomains**
Donald M. Bers, PhD, University of California, Davis, Davis, California

3:30 **Compartmentation of Natriuretic Peptide Receptors and Their cGMP Signals Revealed by SICM and FRET**
Viacheslav Nikolaev, PhD, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

3:45 **PDE4 and mAKAPβ are Nodal Organizers of β2-ARs Nuclear PKA Signaling in Cardiac Myocytes**
Gregorie Vandecasteele, PhD, INSERM U769, Université Paris-Sud 11, Châtenay-Malabry, France

4:00 **The beta1-adrenergic Receptor N-terminus as a Molecular Determinant of Signaling Responses**
Susan F. Steinberg, MD, Columbia University, New York, New York

Oral Abstract Presentation

4:15 **Loss of Type 9 Adenylyl Cyclase Triggers Reduced Phosphorylation of Hsp20 and Diastolic Dysfunction** 3
Tanya A. Baldwin, Yong Li, Yan Wang, Cameron S. Brand, Carmen W Dessauer, McGovern Medical Sch at Univ of Texas Health Science Center at Houston (UTHealth), Houston, Texas

MONDAY

3:15–4:30 PM
Grand Ballroom II (Ballroom Level)
Concurrent Session 2B
Mitochondrion and Heart Failure

Moderators:
Jeffrey D. Molkentin, PhD, Children's Hospital Medical Center, Cincinnati, Ohio
Elizabeth (Tish) Murphy, PhD, National Heart, Lung, and Blood Institute/National Institutes of Health, Bethesda, Maryland

3:15 **Regulation of Metabolism in Individual Mitochondria During EC-Coupling**
W. Jonathan Lederer, MD, PhD, University of Maryland School of Medicine, Baltimore, Maryland

3:30 **Novel Roles of CaMKII in Regulating Mitochondrial Dynamics and Energetics**
Wang Wang, MD, PhD, University of Washington, Seattle, Washington

3:45 **The Cardiomyopathy of Defective Mitochondrial Fusion: Causes and Cures**
Gerald W. Dorn, MD, FACC, FAHA, Washington University School of Medicine, St. Louis, Missouri

4:00 **ATP Citrate Lyase Links Mitochondrial Function and Protein Turnover in the Heart**
Heinrich Taegtmeyer, MD, DPhil, University of Texas Medical School, Houston, Texas

Oral Abstract Presentation

4:15 **Regulation of Mitochondrial Complex I Assembly** 4
Edward Owusu-Ansah, Columbia Univ, New York, NY

4:30– 7:00 PM
Exhibit Hall (Access from Ballroom Level)
Poster Session 1

TUESDAY, JULY 11

7:00 AM
Registration
Galleria I (Ballroom Level)

7:00–8:00 AM
Continental Breakfast/Exhibits
Grand Ballroom Foyer

7:00–8:00 AM
Women in Science Breakfast
Skyline II (23rd Floor)
(Registration/Ticket Required to Attend.)

8:00–9:15 AM
Grand Ballroom I (Ballroom Level)
Concurrent Session 3A
Gene Therapy and Novel Cardiac Therapeutics

Moderators:
Walter J. Koch, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania
Toyoaki Murohara, MD, PhD, Nagoya University Graduate School of Medicine, Nagoya, Japan

8:00 **Cardiac Gene Therapy with AAV Vectors**
Thomas Weber, PhD, Icahn School of Medicine at Mount Sinai, New York, New York

8:15 **mAKAP-RSK3 Signalosome Targeted Gene Therapy for Heart Failure**
Michael Kapiloff, MD, PhD, FAHA, Stanford University, Stanford, California

8:30 **Microvascular Maturation – Disease Modifier and Therapeutic Target**
Christian Kupatt, MD, Klinikum Grossahdern, Muenchen, Germany

8:45 **Gene Transfer to Increase Glucose Disposal in Diabetes**
H. Kirk Hammond, MD, University of California-San Diego, San Diego, California

Oral Abstract Presentation

9:00 **Restoring Nitroso-Redox Balance as a Therapeutic Approach for Cardiovascular Disease** 5
Vikram Shettigar, Honglan Wang, Bo Zhang, Steve R. Roof, Paul M. Janssen, Jonathan P. Davis, Ohio State University, Columbus, Ohio; Richard J. Gumina, Vanderbilt University Medical Center, Nashville, Tennessee Brandon J. Biesiadecki, Frederick A. Villamena, **Mark T. Ziolo**, Ohio State University, Columbus, Ohio

8:00–9:15 AM
Grand Ballroom II (Ballroom Level)
Concurrent Session 3B
Sarcomere Function and Cardiomyopathies

Moderators:
Aldrin Gomes, PhD, University of California Davis, Davis, California
Samantha Harris, PhD, University of Arizona, Tucson, Arizona

8:00 **Decipher TTN-based Cardiomyopathy via Zebrafish Genetics**
Xiaolei Xu, PhD, Mayo Clinic, Rochester, Minnesota

8:15 **Phospho-proteomics in Heart Failure and Cardiomyopathy**
Anne M. Murphy, MD, Johns Hopkins University, Baltimore, Maryland

8:30 **Structure-Function Consequences of Disease Associated Mutations in Cardiac Troponin I**
Michael Regnier, PhD, University of Washington, Seattle, Washington

8:45 **Myosin Binding Protein C Mutations in Hypertrophic Cardiomyopathy**
Sharlene M. Day, MD, University of Michigan, Ann Arbor, Michigan

Oral Abstract Presentation

9:00 **Restoration of Impaired Diastolic Function in Hypertrophic Cardiomyopathy Induced Pluripotent Stem Cell-Derived Cardiomyocytes by Re-balancing the Calcium Homeostasis** 6
Haodi Wu, Huaxiao Yang, Joe Zhang, Chi Keung Lam, June-Wha Rhee, Timon Seeger, Karim Sallam, Ning Ma, Joseph Wu, Stanford University, Stanford, California

9:15–9:45 AM
Grand Ballroom Foyer
Refreshment Break/Exhibits

9:45–11:00 AM
Grand Ballroom I (Ballroom Level)
Concurrent Session 4A
Epigenetics

Moderators:
Sarah Franklin, PhD, University of Utah, Salt Lake City, Utah
Tom M. Vondriska, PhD, David Geffen School of Medicine at UCLA, Los Angeles, California

9:45 **Novel Epigenetic Targets in Heart Failure**
Saptarsi Haldar, MD, University of California San Francisco, San Francisco, California

10:00 **Epigenetic Analysis of Chronic Heart Failure and the Possibility of Novel Therapy**
Ruri Kaneda, MD, PhD, Keio University School of Medicine, Tokyo, Japan

10:15 **Transcriptional Phenotypes in Cardiac Hypertrophy**
Maha Abdellatif, MD, PhD, Rutgers University, Newark, New Jersey

10:30 **Role of Histone Methylation in Cardiac Myocyte Cell Cycle Exit**
W. Robb MacLellan, MD, University of Washington, Seattle, Washington

Oral Abstract Presentation

10:45 **Chromatin Organization in Diseased and Healthy Mouse Heart** 7
Chukwuemeka George Anene Nzelu, Dominic Lee, Wilson Tan, Zenia Tiang, Matias Autio Ilmaris, Peter Li, Melissa Fullwood, Roger Foo, National University of Singapore, Singapore, Singapore

9:45–11:00 AM
Grand Ballroom II (Ballroom Level)
Concurrent Session 4B
Stem Cell Therapies

Moderators:
Joshua Hare, MD, FAHA, University of Miami, Miami, Florida
Masaki Leda, MD, PhD, Keio University School of Medicine, Tokyo, Japan

9:45 **Inhibition of miR375 Enhances BM Stem Cell Mediated Cardiac Repair**
Raj Kishore, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania

10:00 **Cardiac Repair with Human Cardiomyocytes**
Charles E. Murry, MD, FAHA, University of Washington, Seattle, Washington

10:15 **Bone Marrow Cell Therapy: Emerging Clinical Evidence**
Buddhadeb Dawn, MD, FAHA, University of Kansas Medical Center, Kansas City, Kansas

10:30 **Mapping the Cardiomyocyte Surfaceome Reveals New Targets for Immunophenotyping Cell Type, Subtype, and Maturation State Specific Cells**
Rebekah L. Gundry, PhD, Medical College of Wisconsin, Milwaukee, Wisconsin

Oral Abstract Presentation

10:45 **Effectiveness of Combination Allogeneic Stem Cells in a Novel Large Animal Model of Chronic Kidney Disease-induced Heart Failure with Preserved Ejection Fraction (HFpEF)** 8
Angela Castellanos Rieger, Bryon A. Tompkins, Makoto Natsumeda, Victoria Florea, Kevin Collon, Jose Rodriguez, Marcus Rosado, Wayne Balkan, Joshua M. Hare 30136, Ivonne H. Schulman, University of Miami, Miami, Florida

11:00 AM–Noon
Grand Ballroom I (Ballroom Level)
Concurrent Session 5A
Early Career Session – A "Peer" into NIH Grant Review

Moderator:
Kedryn Baskin, PhD, University of Texas Southwestern Medical Center, Dallas, Texas
Dominic P. Del Re, PhD, Rutgers New Jersey Medical School, Newark, New Jersey

Mock Study Section:
Olga Tjurmina, PhD, National Heart, Lung, and Blood Institute, Bethesda, Maryland
Kimm Hamann, PhD, National Institutes of Health, Center for Scientific Review, Bethesda, Maryland

Panelists:
Katherine E. Yutzey, PhD, Cincinnati Children's Medical Center, Cincinnati, Ohio
Evangelia (Litsa) G. Kranias, PhD, FAHA, University of Cincinnati College of Medicine, Cincinnati, Ohio
Elizabeth (Tish) Murphy, PhD, FAHA, National Heart, Lung, and Blood Institute/National Institutes of Health, Bethesda, Maryland

11:00 AM–Noon
Grand Ballroom II (Ballroom Level)
Concurrent Session 5B
Workshop – Emerging Omic Technologies: Bringing a New Edge on Your Science

Moderators:
Guilo Agnetti, PhD, Johns Hopkins University, Baltimore, Maryland
Pothur R. Srinivas, PhD, MPH, NIH/NHLBI, Bethesda, Maryland

11:00 **Multi-PTM 'Omics for Understanding Modification Cross-talk in Myocardial Ischemia**
Stuart Cordwell, PhD, University of Sydney, Sydney, Australia

11:15 **High Content, High Throughput Intergradation of Aorta**
Sarah J. Parker, PhD, Cedars Sinai Medical Center, Los Angeles, California

11:30 **A Glimpse Inside the Mitochondrial Interactome**
James Bruce, PhD, University of Washington, Seattle, Washington

11:45 **Organs Conformal Bioelectronics**
Igor Efimov, PhD, FAIMBE, FAHA, FHRS, George Washington University, Washington, D.C.

Noon–1:30 PM
Lunch On Your Own/Poster Viewing/Exhibits

1:30–2:45 PM
Grand Ballroom I (Ballroom Level)
Concurrent Session 6A
Ion Channels and Arrhythmias

Moderators:
Na Li, PhD, Bayer College of Medicine, Houston, Texas
Héctor H. Valdivia, MD, PhD, FAHA, University of Michigan, Ann Arbor, Michigan

1:30 **Understanding Mechanisms of Atrial Remodeling Leading to Atrial Fibrillation**
Peter Backx, PhD, FAHA, University of Toronto, Toronto, Ontario, Canada

1:45 **The Phospholamban Regulations in Cardiac Arrhythmias**
Evangelia (Litsa) G. Kranias, PhD, FAHA, University of Cincinnati College of Medicine, Cincinnati, Ohio

2:00 **Calmodulin Regulation of Na^+ Channel Late Current and Long QT Syndrome**
Geoffrey S. Pitt, MD, PhD, Weill Cornell Medical College, New York, New York

2:15 **A Desmosomal Protein Interaction Screen Uncovers a Novel Mechanism Underlying Arrhythmogenic Heart Disease and Sudden Death**
Farah Sheikh, PhD, FCVS, FAHA, University of California-San Diego, La Jolla, California

Oral Abstract Presentation

2:30 **Cardiac BIN1 Improves Dyad Organization and Calcium Transient in Cardiomyocytes** 9
Ying Fu, Kang Zhou, Yan Liu, Sosse Agvanian, Bing Xu, Robin M. Shaw, TingTing Hong, Cedars-Sinai Medical Center, Los Angeles, California

1:30–2:45 PM
Grand Ballroom II (Ballroom Level)
Concurrent Session 6B
Cardiac Metabolisms

Moderators:
L. Ashley Cowart, PhD, Medical University of South Carolina, Charleston, South Carolina
E. Douglas Lewandowski, PhD, Sanford Burnham Presbys Medical Discovery Institute, Orlando, Florida

1:30 **Timing is Everything: Circadian Control of Cardiac Metabolism**
Martin Young, DPhil, University of Alabama at Birmingham, Birmingham, Alabama

1:45 **Insulin Resistance, Obesity and Cardiac Autophagy: The Role of Insulin/IGF-1 Receptor Signaling**
Silem Boudina, PhD, University of Utah, Salt Lake City, Utah

2:00 **Fatty Acid Uptake and Use by the Heart**
Ira J. Goldberg, MD, FAHA, New York University, New York, New York

2:15 **Emerging Nexus of Vascular Stiffness and Metabolism in Pulmonary Hypertension**
Stephen Chan, MD, PhD, FAHA, Pittsburgh Heart, Lung, Blood, and Vascular Medicine Institute, Pittsburgh, Pennsylvania

Oral Abstract Presentation

2:30 **Increasing Cardiac Fatty Acid Oxidation Protects Against High Fat Diet Induced Cardiomyopathy In Mice** 10
Dan Shao, Stephen C. Kolwicz Jr., Nathan Roe, Outi Villet, Loreta De Tomasi, Alyssa Noriko Braun, Rong Tian, University of Washington, Seattle, Washington

3:15–4:30 PM
Grand Ballroom I (Ballroom Level)
Concurrent Session 7A
Ethics, Open Science, Reproducibility, Unconscious Bias and all that Jazz

Moderators:
Ivor J. Benjamin, MD, FAHA, FACC, Medical College of Wisconsin, Milwaukee, Wisconsin
Robert M. Carey, MD, MACP, FAHA, FRCPI, University of Virginia, Charlottesville, Virginia

3:15 **Guidelines for R & R: The APS Perspective on Rigor and Reproducibility**
Kara Hansell Keehan, American Journal of Physiology/Heart and Circulatory Physiology, Baltimore, Maryland

3:20 **Improving Reproducibility & Methodological Rigor through Openness and Transparency**
Jonathan Schultz, American Heart Association, Baltimore, Maryland

3:25 **NIH's Rigor and Transparency Initiative and Review**
Kimm Hamann, PhD, National Institutes of Health, Center for Scientific Review, Bethesda, Maryland

3:30 **Medical Publishing Seen Through the Eyes of an Editor**
Joseph A. Hill, MD, PhD, FAHA, UT Southwestern Medical Center, Dallas, Texas

3:35 **Panel Discussion/Q&A**

3:15–4:30 PM
Grand Ballroom II (Ballroom Level)
Concurrent Session 7B
Workshop – Interacting with Big Data: Its Impact on Our Science

Moderators:
Pui Yu (Maggie) Lam, PhD, University of California Los Angeles, Los Angeles, California
TBD

3:15 **Do You Really Know Your Favorite Protein(s): Exploiting Knowledge Databases to Characterize Your Protein(s)**
Peipei Ping, PhD, FAHA, David Geffen School of Medicine at UCLA, Los Angeles, California

3:33 **Finding Novelty in Your Pathways: Multi-omic and Big Data Sets**
Karen E. Ross, PhD, Georgetown University, Washington, D.C.

3:52 **Connecting SNPs Data to Your Favorite Proteins and Networks**
Vidya Venkatraman, MSc, Cedars Sinai, Los Angeles, California

4:11 **Quantifying Those Hard to Study Proteins: Picking and Analyzing Targeted Proteins**
Michael MacCoss, PhD, University of Washington, Seattle, Washington

4:30– 7:00 PM
Exhibit Hall (Access from Ballroom Level)
Poster Session 2

7:00 PM
Skyline I (23rd Floor)
Early Career Investigator Event

WEDNESDAY, JULY 12

7:00 AM
Registration
Galleria I (Ballroom Level)

7:00–8:00 AM
Continental Breakfast/Exhibits
Grand Ballroom Foyer

8:00–9:15 AM
Grand Ballroom I (Ballroom Level)
Concurrent Session 8A
Human Cellular Models for Cardiac Disease

Moderators:
Ju Chen, PhD, University of California San Diego School of Medicine, La Jolla, California
Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California

8:00 **Single Cell Technologies for Exploring Human iPSC-based Cardiac Disease Models**
Sean M. Wu, MD, PhD, Stanford University, Stanford, California

8:15 **Mechanisms Underlying Human Cardiomyopathy**
Kunhua Song, PhD, University of Colorado, Gates Center for Regenerative Medicine and Stem Cell Biology, Aurora, Colorado

8:30 **Cellular Reprogramming Approaches to Heart Disease**
Deepak Srivastava, MD, University of California San Francisco, San Francisco, California

8:45 **Human Induced Pluripotent Stem Cells for Novel Cardiovascular Therapeutics**
Yibing Qyang, PhD, Yale University School of Medicine, New Haven, Connecticut

Oral Abstract Presentation

9:00 **Lamin A/C Mutations Epigenetically Dysregulate Scn5a Gene Expression, Perturbing Action Potential Properties in IPSC-derived Cardiomyocytes** 11
Silvia Crasto, Humanitas Res Hosp, Rozzano (Milan), Italy; Nicolò Salvarani, Inst of Genetic and Biomedical Res (IRGB), Natl Res Council of Italy, Milan, Italy; Michele Miragoli, Dept of Clinical and Experimental Med, Univ of Parma, Parma, Italy; Marianna Paulis, Inst of Genetic and Biomedical Res (IRGB), Natl Res Council of Italy, Milan, Italy; Paolo Kunderfranco, Humanitas Res Hosp, Rozzano (Milan), Italy; Pierluigi Carullo, Inst of Genetic and Biomedical Res (IRGB), Natl Res Council of Italy, Milan, Italy; Alberto Forni, Giuseppe Faggian, Div of Cardiac Surgery, Univ of Verona, Verona, Italy; Gianluigi Condorelli, Humanitas Univ, Rozzano, Milan), Italy; Elisa Di Pasquale, Inst of Genetic and Biomedical Res (IRGB), Natl Res Council of Italy, Milan, Italy

8:00–9:15 AM
Grand Ballroom II (Ballroom Level)
Session 8B
RNAs and the Heart

Moderators:
Il-man Kim, PhD, Medical College of Georgia, Augusta, Georgia
Sakthivel Sadayappan, PhD, MBA, University of Cincinnati College of Medicine, Cincinnati, Ohio

8:00 **Regulation of Cardiac Function by microRNAs**
Da-Zhi Wang, PhD, Boston Children's Hospital, Harvard Medical School, Boston, Massachusetts

8:15 **Non-coding RNA Mediated Regulation in Cardiac Hypertrophy**
Yibin Wang, PhD, David Geffen School of Medicine at UCLA, Los Angeles, California

8:30 **Title TBD**
Ching-Pin Chang, MD, PhD, Krannert Institute of Cardiology, Indiana University School of Medicine, Indianapolis, Indiana

8:45 **Identification of New Factors Involved in Repair and Remodeling**
Eva van Rooij, PhD, Hubrecht Institute, Utrecht, Netherlands

Oral Abstract Presentation

9:00 **M6A Modification in RNA Regulates Cardiomyocyte and Cardiac Function in Heart Failure** 12
Prabhu Mathiyalagan, Yaxuan Liang, Yassine Sassi, Erik Kohlbrenner, Jiqiu Chen, Djamel Lebeche, Maria Giovanna Trivieri, Kiyotake Ishikawa, Kenneth Fish, Roger J. Hajjar, Susmita Sahoo, Icahn School of Medicine at Mount Sinai, New York, New York

9:15–10:00 AM
Grand Ballroom (Ballroom Level)
General Session 9
Outstanding Early Career Investigator Award Competition

Moderators:
Nicole H. Purcell, PhD, University of California San Diego, San Diego, California
Yibin Wang, PhD, FAHA, David Geffen School of Medicine at UCLA, Los Angeles, California

Oral Abstract Presentations

9:15 **Suppressing Microtubule Detyrosination Reduces Stiffness and Improves Contractility in Human Cardiomyocytes** 13
Benjamin L Prosser, Univ of Pennsylvania School of Medicine, Philadelphia, PA; Kenneth Bedi, Hosp of the Univ of Pennsylvania, Philadelphia, PA; Matthew Caporizzo,

Christina Chen, Patrick Robison, Univ of Pennsylvania School of Medicine, Philadelphia, PA; Kenneth Margulies, Hosp of the Univ of Pennsylvania, Philadelphia, PA

9:30 **Identification of a Major Role for Cytochrome B5 Reductase 3 in Cardiomyocyte Metabolism and Function** 14
Adam C. Straub, Nolan T. Carew, Helene M. Altmann, Joesph C. Galley, Scott Hahn, Megan P. Miller, Sruti Shiva, Dennis McNamara, University of Pittsburgh, Pittsburgh, PA

9:45 **Glucose-Mediated Remodeling of Cardiac DNA Methylation** 15
Mark E. Pepin, David K. Crossman, Joseph P. Barchue, Salpy V. Pamboukian, Steven M. Pogwizd, **Adam R. Wende**, Univ of Alabama at Birmingham, Birmingham, AL

10:00–10:30 AM
Grand Ballroom Foyer
Refreshment Break/Exhibits

10:30–11:45 AM
Grand Ballroom I (Ballroom Level)
Concurrent Session 10A
Early Career Session – Development of a Successful Academic Career

Moderators:
Nirmala Hariharan, PhD, University of California at Davis, Davis, California
Glenn C. Rowe, PhD, University of Alabama at Birmingham, Birmingham, Alabama

10:30 **The Do's and Don't's of Interviewing for an Academic Position**
Leslie Leinwand, PhD, University of Colorado, Boulder, Colorado

10:55 **You Made It! Now What? Challenges to Starting a New Lab**
Jonathan A. Kirk, PhD, Loyola University, Maywood, Illinois

11:20 **It Takes a Village: How to Maintain Your Academic Career**
Ivor J. Benjamin, MD, FAHA, FACC, Medical College of Wisconsin, Milwaukee, Wisconsin

10:30–11:45 AM
Skyline II (23rd Level)
Session 10B
Workshop – Integrating Omics and Bioinformatics into your Research

Giulio Agnetti, PhD, Johns Hopkins University, Baltimore, Maryland
Stuart Cordwell, PhD, University of Sydney, Sydney, Australia
Igor Efimov, PhD, FAIMBE, FAHA, FHRS, George Washington University, Washington, D.C.
D. Brian Foster, PhD, Johns Hopkins School of Medicine, Baltimore, Maryland
Sara Franklin, PhD, University of Utah, Salt Lake City, Utah
Rebekah L. Gundry, PhD, Medical College of Wisconsin, Milwaukee, Wisconsin
Merry L. Lindsey, PhD, FAHA, University of Mississippi Medical Center, Jackson, Mississippi
Michael MacCoss, PhD, University of Washington, Seattle, Washington
Chris Murray, PhD, Cedars-Sinai Medical Center, Los Angeles, California
Sarah J. Parker, PhD, Cedars-Sinai Medical Center, Los Angeles, California
Peipei Ping, PhD, FAHA, David Geffen School of Medicine at UCLA, Los Angeles, California
Karen E. Ross, PhD, Georgetown University, Washington, D.C.
Vidya Venkatraman, MSc, Cedars-Sinai Medical Center, Los Angeles, California
Tom M. Vondriska, PhD, David Geffen School of Medicine at UCLA, Los Angeles, California
John R. Yates, PhD, The Scripps Research Institute, La Jolla, California

11:45 AM–1:30 PM
Lunch on Your Own/Poster Viewing/Exhibits

1:30–2:45 PM
Grand Ballroom I (Ballroom Level)
Concurrent Session 11A
Translationally Relevant Model Systems

Moderators:
Mark A. Sussman, PhD, FAHA, San Diego State University, Heart Institute and Integrated Regenerative Research Institute, San Diego, California
Jianyi (Jay) Zhang, MD, PhD, FAHA, University of Alabama at Birmingham, Birmingham, Alabama

1:30 **Chasing Unicorns: Tales of a New HFpEF Swine Model**
Craig A. Emter, PhD, University of Missouri-Columbia, Columbia, Missouri

1:45 **HFpEF – A New Animal Model and a New Way of Thinking About Cardiomyocyte Mechanisms**
Lea M. Delbridge, PhD, FCSANZ, University of Melbourne, Melbourne, Australia

2:00 **Models of RV Failure: Does Size Matter?**
Lori Walker, PhD, University of Colorado, Denver, Colorado

2:15 **Fibroblast Alterations in Right versus Left Failing Ventricles**
Fabio Recchia, MD, PhD, FAHA, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania, and Institute of Life Sciences, Scuola Superiore Sant'Anna, Pisa, Italy

Oral Abstract Presentation

2:30 **A Minipig Genetic Model of Hypertrophic Cardiomyopathy** 16
Eric M. Green, MYOKARDIA, South San Francisco, California; Robert M. Weiss, Abhay Divekar, University of Iowa, Iowa City, Iowa; Sadie R. Bartholomew Ingle, Marcus Henze, Raja Kawas, MYOKARDIA, South San Francisco, California; Lindsey Gifford, Melissa K. Davis, University of Iowa, Iowa City, Iowa; Frank Rohret, Exemplar Genetics, Sioux Center, Iowa; Daniel R. Thedens, University of Iowa, Iowa City, Iowa; Hector M. Rodriguez, Marc J. Evanchik, Robert L. Anderson, MYOKARDIA, South San Francisco, California; Jessica Sieren, University of Iowa, Iowa City, Iowa; Christopher S. Rogers, Exemplar Genetics, Sioux Center, Iowa; David K. Meyerholz, Ferhaan Ahmad, University of Iowa, Iowa City, Iowa

1:30–2:45 PM
Grand Ballroom II (Ballroom Level)
Concurrent Session 11B
Autophagy, Cell Death, and Inflammation

Moderators:
Asa Gustafsson, PhD, FAHA, University of California San Diego, La Jolla, California
Loren E. Wold, PhD, The Ohio State University, Columbus, Ohio

1:30 **Mitophagy and Biogenesis in the Heart**
Roberta A. Gottlieb, MD, Cedars-Sinai Heart Institute, Los Angeles, California

1:45 **Modulating Mitochondrial Permeability Transition-Dependent Cell Death**
Christopher P. Baines, PhD, University of Missouri-Columbia, Columbia, Missouri

2:00 **Harnassing the Autophagy-Lysosome Machinery in Cardiac Myocyte Organelle and Protein Quality Control**
Abhinav Diwan, MD, FAHA, Washington University School of Medicine, St. Louis, Missouri

2:15 **A Chemical Biology Approach to Doxorubicin-induced Cardiomyopathy**
Richard N. Kitsis, MD, FAHA, Albert Einstein College of Medicine, Bronx, New York

Oral Abstract Presentation

2:30 **A Critical Role of TRAF2 in Myocardial Survival and Homeostasis by Suppressing Necroptosis** 17
Xiaoyun Guo, Haifeng Yin, Lei Li, Yi Chen, Jing Li, Jessica Doan, Rachel Steinmetz, **Qinghang Liu**, University of Washington, Seattle, Washington

2:45–3:15 PM
Grand Ballroom Foyer
Refreshment Break/Exhibits

3:15–4:30 PM
Grand Ballroom II (Ballroom Level)
General Session 12
What Will be the "Next Best Thing" in Cardiovascular and Stroke Research over the Next 20 Years?

Panel Leaders:
Michael R. Bristow, MD, PhD, FACC, FAHA, University of Colorado, Aurora, Colorado
Joseph A. Hill, MD, PhD, FAHA, UT Southwestern

Additional Panelists:
Jennifer Davis, PhD, University of Washington, Seattle, Washington
John W. Elrod, PhD, Lewis Katz School of Medicine at Temple University, Philadelphia, Pennsylvania
Steven R. Houser, PhD, FAHA, Temple University School of Medicine, Philadelphia, Pennsylvania
Rui-ping Xiao, MD, PhD, Peking University, Beijing, China

Panel Discussion, Q&A

4:30–7:00 PM
Exhibit Hall (Access from Ballroom Level)
Poster Session 3

7:00–10:00 PM
Grand Ballroom (Ballroom Level)
BCVS Council Dinner
(Ticket required to attend.)

THURSDAY, JULY 13

7:00 AM
Registration
Galleria I (Ballroom Level)

7:00–8:00 AM
Continental Breakfast
Grand Ballroom Foyer

8:00–9:00 AM
Grand Ballroom (Ballroom Level)
General Session 13
Basic Science and Precision Medicine – The Interface

Moderators:
Bjorn Knollmann, MD, PhD, Vanderbilt University, Nashville, Tennessee
Jill C. Tardiff, MD, PhD, FAHA, University of Arizona, Tucson, Arizona

8:00 **Crossing the Translational Divide in Cardiovascular Medicine**
Thomas P. Cappola, MD, ScM, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania

8:15 **Convex Analysis of Tissue Proteomics to Identify Atherosclerosis Biomarkers and Therapeutic Targets**
David M. Herrington, MD, MHS, Wake Forest School of Medicine, Winston-Salem, North Carolina

8:30 **The Interactome of a Disease Protein**
John R. Yates, III, PhD, The Scripps Research Institute, La Jolla, California

8:45 **LRRC10, a Newly Identified Component of the Cardiac L-type Ca2+ Channel Macromolecular Complex, and Dilated Cardiomyopathy**
Timothy J. Kamp, MD, PhD, University of Wisconsin, Madison, Wisconsin

9:00–9:30 PM
Grand Ballroom Foyer
Refreshment Break

9:30–10:45 AM
Grand Ballroom (Ballroom Level)
General Session 14
Keynote Lecture

Moderators:
Ronglih Liao, PhD, FAHA, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts
Joseph C. Wu, MD, PhD, FAHA, Stanford University School of Medicine, Stanford, California

9:30 **Phenotype Discovery: The Missing Link?**
Calum A. MacRae, MD, PhD, FAHA, Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts

11:00 AM–Noon
Grand Ballroom (Ballroom Level)
General Session 15
Novel Cardiac Regulatory Mechanisms

Moderators:
Ulrike Mende, MD, FAHA, Rhode Island Hospital and Alpert Medical School of Brown University, Providence, Rhode Island
Junichi Sadoshima, MD, PhD, Rutgers New Jersey Medical School, Newark, New Jersey

11:00 **RIP_3 Teams Up with CaMKII Inducing Cardiomyocyte Death**
Rui-ping Xiao, MD, PhD, Peking University, Beijing, China

11:15 **The Mystery of ERK5**
Jun-Ichi Abe, MD, PhD, FAHA, University of Texas MD Anderson Cancer Center, Houston, Texas

11:30 **Hippo Signaling in Heart Regeneration**
James F. Martin, MD, PhD, Baylor College of Medicine, Houston, Texas

11:45 **Inductive Signals of Cardiac Regeneration**
Pilar Ruiz-Lozano, PhD, Stanford University, Palo Alto, California

Noon
Closing Remarks/Adjourn

Author Index

Author Index (continued)

AUTHOR INDEX

Author Index (continued)

Author Index (continued)

AUTHOR INDEX

Author Index (continued)

Author Index (continued)

AUTHOR INDEX

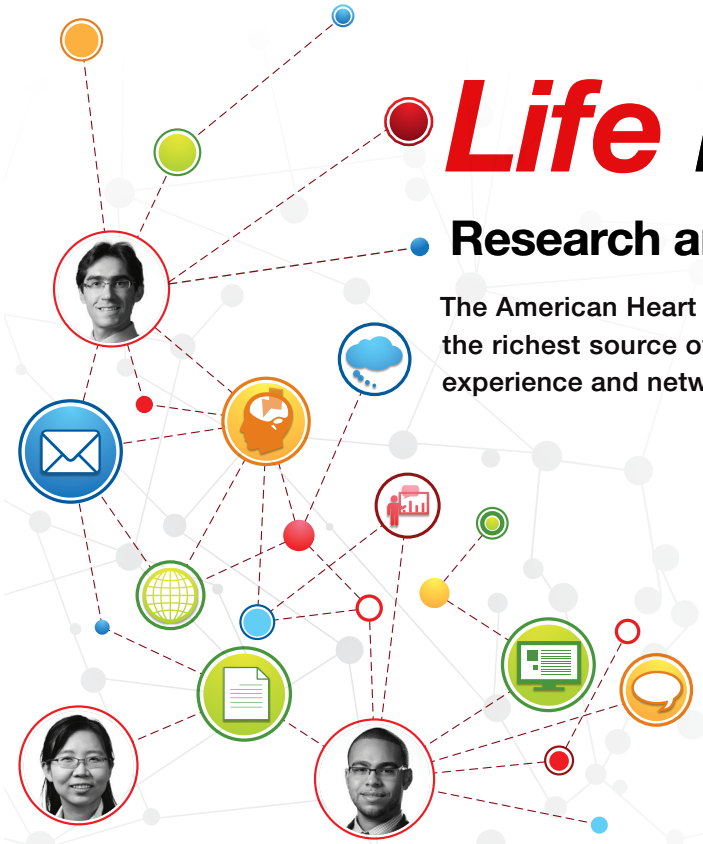
Author Index (continued)

AUTHOR INDEX

Notes

Author Index (continued)

AUTHOR INDEX



American Heart Association®
life is why®

Life is why.

Research and Patient Care are how.

The American Heart Association Professional Membership is where you'll find the richest source of cardiovascular science and news. Enhance your knowledge, experience and networking with a membership today!

*Professional Membership Benefits Include:**

- Up to $400 in savings on AHA's scientific conferences
- Unprecedented access to research and clinical information across multiple specialties
- Be a part of our AHA Professional Online Network — connect with peers and leaders in your specialty
- The research grant application fee is waived for members.
- Online access to all 11 AHA scientific journals of your choice*
- Complimentary access to Sessions OnDemand™*

*dependent on membership tier

Learn about the benefits of professional membership and join our network of more than 33,000 members today at professional.heart.org.

Members are where it happens
Join/Renew today!

American Heart Association | American Stroke Association®
life is why®

BCVS 2018

Basic Cardiovascular Sciences

Scientific Sessions 2018

July 30-August 2 | Grand Hyatt San Antonio | San Antonio, Texas

SAVE THE DATE!

*AHA MEMBERS **SAVE UP TO $300** OFF REGISTRATION!*
PROFESSIONAL.HEART.ORG/BCVSSESSIONS

Cardiovascular diseases and stroke afflict people of all races, ethnicities, genders, religions, ages, sexual orientations, national origins and disabilities. The American Heart Association is committed to ensuring that our workforce and volunteers reflect the world's diverse population. We know that such diversity will enrich us with the talent, energy, perspective and inspiration we need to achieve our mission: building healthier lives, free of cardiovascular diseases and stroke.

For information on upcoming American Heart Association Scientific Conferences, visit **professional.heart.org**

American Heart Association | American Stroke Association

life is why

BCVS 2017

National Center
7272 Greenville Avenue
Dallas, Texas 75231–4596