MONDAY, July 27

12:30 – 1:00 pm (CDT)
BCVS 2020 Scientific Sessions: Opening Welcome
12:30  Opening Remarks from the President of the American Heart Association
Mitchell S. V. Elkind, MD, AHA President, New York, New York

12:45  Welcome Remarks from the BCVS Council Chair
Elizabeth McNally, MD, PHD, BCVS Council Chair, Chicago, Illinois

1:00–2:00 pm
Concurrent Session 1A
Beyond the Heart: Systemic Effects of Pathogenic Cardiac Remodeling
Moderator: Gregory Aubert, MD, PhD, Chicago, Illinois

1:00  Manipulating Gene Regulation to Treat Heart Disease
Deepak Srivastava, MD, San Francisco, California

1:15  HIPK2, a Novel Regulator of Cardiac Function
Hind Lal, PhD, Birmingham, Alabama

1:30  Junctophilin-2 In the Heart: From Local E-C Coupling to Systemic Cardiac Protection
Long-sheng Song, MD, Iowa City, Iowa

1:45  Q&A

1:00 – 2:00 pm
Concurrent Session 1B
Cutting-edge Approaches to Targeting Complex Cardiomyopathies
Moderator: Jil Tardiff, MD, PhD, Tucson, Arizona
1:00 Drugs and HCM mutations modulating myosin-binding protein C binding to actin identified by a high-throughput fluorescence lifetime-based assay
   
   Brett Colson, PhD, Tucson, Arizona

1:15 Targeting Protein Degradation of Myosin Binding Protein C in the Context of Loss-of-Function Variants that Cause Hypertrophic Cardiomyopathy
   
   Sharlene Day, MD, Philadelphia, Pennsylvania

1:30 Visualizing metabolic flux remodeling in diseased hearts using stable isotope kinetics
   
   Andrew Carley, PhD, Columbus, Ohio

1:45 Q&A

2:00 – 3:00 pm

Moderated Poster Session 1A: Sarcomeric Function & Contractility
Poster Discussant: Danish Sayed, PhD, Newark, New Jersey

MP 100
Scalable Functional Classification Of Heart Failure-associated Genetic Variants In Cardiac Troponin T
   
   Anthony M PETTINATO, Feria A Ladha, Univ of Connecticut, Farmington, CT; David Mellert, Nicholas Legere, Rachel Cohn, The Jackson Lab, Farmington, CT; Robert Romano, Univ of Connecticut, Farmington, CT; Ketan Thakar, Yu-Sheng Chen, The Jackson Lab, Farmington, CT; John Travis Hinson, Univ of Connecticut, Farmington, CT

MP 101
Functional Maintenance Of The Sarcomere Requires Bag3-dependent Autophagy
   
   Thomas G Martin, Loyola Univ Chicago, Oak Park, IL; Arthur M Feldman, Temple Univ Sch of Medicine, Philadelphia, PA; Monte S Willis, Indiana Univ Sch of Medici, Indianapolis, IN; Jonathan A Kirk, Loyola Univ Chicago, Maywood, IL

MP 102
Skeletal Muscle Alpha Actin Acetylation Enhances Myosin Binding And Increases Calcium Sensitivity In Vitro
   
   Samantha S Romanick, Allison Matsumura, Travis Stewart, Kianna Boc, Univ of Nevada Reno, Reno, NV; Jonathan Baker, Bradley S Ferguson, UNIVERISITY OF NEVADA RENO, Reno, NV

MP 103
Methylglyoxal Modifications On Myofilament Proteins Caused By Diabetes Block Heart Failure Drug Targets Through Changing Tropomyosin Position
   
   Maria Papadaki, Theerachat Kampaengsri, LOYOLA UNIVERSITY CHICAGO, Maywood, IL; Samantha Barrick, Washington Univ, St Louis, MO; Stuart Campbell, Yale Univ, New Haven, CT; Michael Greenberg, Washington Univ, St Louis, MO; Jonathan A Kirk, Loyola Univ Chicago, Maywood, IL
MP 104
Phosphodiesterase 1 Modulates Sarcolemmal CAMP To Increase The L-type Calcium Channel Activity And Induce Cardiomyocyte Contraction
Grace K Muller, Johns Hopkins Sch of Med, Baltimore, MD; Joy Song, Johns Hopkins Univ, Baltimore, MD; Vivek Jani, Johns Hopkins Univ - MSTP, Baltimore, MD; Yuejin Wu, Johns Hopkins Univ - MSTP, Baltimore, MD, Baltimore, MD; Manuela Zaccolo, Univ of Oxford, Oxford; David Alan Kass, JOHNS HOPKINS MEDICAL INST, Baltimore, MD

MP 105
Python Post-prandial Cardiac Adaptation Is Supported By Enhanced Metabolism, Reduced Sarcomere Passive Tension, And Epigenetic Remodeling
Claudia Crocini, Univ of Colorado Boulder, Boulder, CO; Kc Woulfe, UNIVERSITY OF COLORADO, Aurora, CO; Cierra J Walker, Christopher D Ozeroff, Univ of Colorado Boulder, Boulder, CO; leslie A leinwand, Univ of Colorado, Boulder, CO

2:00 – 3:00 pm
Moderated Poster Session 1B: Ion Channels and Arrhythmias
Poster Discussant: Venkata Garikipati, PhD, Columbus, Ohio

MP110
Inhibition Of The Unfolded Protein Response Reduces Arrhythmic Risk After Myocardial Infarction
Man Liu, Univ of Minnesota, Minneapolis, MN; Hong Liu, UNIVERSITY OF MINNESOTA, Minneapolis, MN; Preethy Parthiban, Univ of Minnesota, Minneapolis, MN; Guangbin Shi, Rhode Island Hosp, Provicence, RI; Gyeoung-Jin Kang, Feng Feng, Univ of Minnesota, Minneapolis, MN; Anyu Zhou, Rhode Island Hosp, Providence, RI; Lianzhi Gu, Univ of Minnesota, Minneapolis, MN; Alena Talkachova, Univ of Minnesota, Minneapolis, MN, Minneapolis, MN; Samuel C Dudley Jr., Univ of Minnesota, Minneapolis, MN

MP111
Loss Of Myosin Binding Protein H-like Causes Cardiacconduction Abnormalities
David Y Barefield, Ibrahim Tahtah, Jordan Sell, Northwestern Univ, Chicago, IL; Michael Broman, Brigitte Laforest, Univ of Chicago, Chicago, IL; Sean Yamakawa, Megan Puckelwartz, Northwestern Univ, Chicago, IL; Andrew Wasserstrom, Northwestern univ, Chicago, IL; Elizabeth M McNally, NORTHWESTERN UNIVERSITY, Chicago, IL

MP 112
Optogenetic Manipulation Of Macrophage Electrical Excitability Modulates Cardiac Rhythm In Developing Zebrafish
Shannon E Martin, Jessica Plavicki, Brown Univ, Providence, RI

MP 113
Protein Hyperacetylation Mediates Bradyarrhythmia In Mice With Mitochondrial Disease
Dao-Fu Dai, Univ of Iowa, Iowa City, IA; Yi Chu, Jin-Young Yoon, UNIVERSITY IOWA, Iowa City, IA

MP 114
Cardiotropic Adenovirus Increases Arrhythmia Susceptibility During Acute Infection
Rachel L Padget, D. Ryan King, Virginia Tech, Blacksburg, VA; Michael D North, Mira N Tanenbaum, Virginia Tech Carilion Sch of Med, Roanoke, VA; Patrick J Calhoun, Virginia Tech, Blacksburg, VA; Gregory S Hoeker, Fralin Biomedical Res Inst at VTC, Roanoke, VA; Steven Poelzing, James W Smyth, Virginia Tech, Blacksburg, VA

MP 115
Transcriptional Patterning Of The Ventricular Cardiac Conduction System
Ozanna Burnicka-Turek, Michael Broman, Jeffrey D Steimle, UNIVERSITY OF CHICAGO, Chicago, IL; Bastiaan Boukens, Biomedical Engineering, St Louis, MO; Nataliya B Petrenko, Univ of Pennsylvania, Philadelphia, PA; Kohta Ikegami, Xinan H Yang, UNIVERSITY OF CHICAGO, Chicago, IL; Marcelo A Nobrega, Chicago, IL; Michael J Rust, UNIVERSITY OF CHICAGO, Chicago, IL; Vickas V Patel, GlaxoSmithKline, Collegeville, PA; Igor Efimov, GlaxoSmithKline, Collegeville, PA, Washington, DC; Ivan P Moskowitz, UNIVERSITY OF CHICAGO, Chicago, IL

3:00 – 4:00 pm
Concurrent Session 2A
Cardiovascular Risk Factors–Nicotine Use, Diet and Physical Activities as Modulators
Moderator: Loren Wold, PhD, Columbus Ohio

3:00 Cardiovascular Health Impact of Electronic Cigarettes
Aruni Bhatnagar, PhD, Louisville, Kentucky

3:15 Cardiovascular Health Impact of Electronic Cigarettes
Naomi Hamburg, MD, Boston, Massachusetts

3:30 Cardiac effects of chronically inhaled nicotine
Jason Gardner, PhD, New Orleans, Louisiana

3:45 Q&A

3:00– 4:00 pm
Concurrent Session 2B
Covid-19 and Cardiovascular Disease
Moderator: Mina Chung, MD, Cleveland, Ohio

3:00 Panelists:
Covid-19 and the Heart
Eduardo Marban, MD, Los Angeles, California
Sanjum Sethi, MD, New York, New York
Deep learning using chest radiographs to predict COVID-19 outcomes
Michael T. Lu, MD, Boston, Massachusetts

3:45 Q&A

4:00 – 5:00 PM
ACS Japanese: Inflammation and Cardiac Remodeling in Heart Failure
Moderator: Junichi Sadoshima, MD, Newark, New Jersey

4:00 CaMK-NRSF-GNAO1 transcriptional circuits participates in the pathological cardiac remodeling
Hideaki Inazumi, MD, Kyoto, Japan

4:15 Mechanosensation by Cardiac Macrophages Orchestrates Cardiac Homeostasis
Jun Matsuda, MD, PhD, Tokyo, Japan

4:30 Elimination of cells expressing Senescence associated glycoprotein (SAGP) attenuates atherosclerotic diseases
Masayoshi Suda, PhD, Nigata, Japan

4:45 Q&A

4:00 – 5:00 pm
ACS Korean: Cellular and Molecular Mechanisms of Heart Failure
Moderator: Young-sup Yoon, MD, Atlanta, Georgia

4:00 Adhesion GPCR, Latrophinlin-2, induces cardiac differentiation through CDK5, contributing to repair after myocardial infarction
Hyun-jai Cho, MD, Seoul, Korea

4:15 Nanovesicles derived from IONP-MSCs for cardiac repair
Hun-jun Park, MD, Seoul, Korea

4:30 Postnatal Maturation of PSC-Derived Cardiomyocytes
Chulan Kwon, PhD, Baltimore, Maryland

4:45 Q&A
TUESDAY, July 28

10:00 – 11:00 AM (CDT)
Concurrent Session 3A
Molecular Predictors & Markers of Heart Failure Progression
Moderator: Kristine Deleon-Pennell, PhD, Charleston, South Carolina

10:00 Single-cell analysis to dissect heart failure biology
Seitaro Nomura, MD, Tokyo, Japan

10:15 Top-down proteomics for understanding and diagnosis of heart diseases
Ying Ge, MD, Madison, Wisconsin

10:30 Pathology-dependent protein-protein interactions as new therapeutic Targets of Heart Failure
Motohiro Nishida, PhD, Fukuoka, Japan

10:45 Q&A

10:00 – 11:00 am
Concurrent Session 3B
Cardiac Effects of Oxidation and Inflammation
Moderator: Ameen Ismahil, PhD, Birmingham, Alabama

10:00 T Cell Response to Oxidative Stress in Cardiac Fibrosis
Pilar Alcaide, PhD, Boston, Massachusetts

10:15 Exosomes from ischemic myocardium signal bone marrow cells
Gangjian Qin, MD, Birmingham, Alabama

10:30 The Role of Cytosolic DNA Sensing in Ischemic Injury and Remodeling
Dian Cao, MD, Dallas, TX

10:45 Q&A

11:00 am – Noon
Concurrent Session 4A
Apoptosis, Necrosis and Autophagy in Heart Disease
Moderator: Asa Gustafsson, PhD, La Jolla, California

11:00 CaMKII-dependent ryanodine receptor phosphorylation mediates sepsis-induced cardiomyocyte apoptosis and contractile dysfunction
Martin Petroff, PhD, La Plata, Argentina
11:15  The role of mitochondrial calcium in activating the permeability transition pore
Elizabeth Murphy, PhD, Bethesda, Maryland

11:30  Inhibiting cardiac myeloperoxidase alleviates the relaxation defect in hypertrophic cardiomyocytes
Chrishan Ramachandra, PhD, Singapore

11:45  Q&A

11:00 am – Noon
Concurrent Session 4B
Novel Pathogenic Pathways in Cardiac Remodeling: Early vs. Late
Moderator:  John Calvert, PhD, Suwanee, Georgia

11:00  Molecular mechanisms of myocardial reverse remodeling after myocarditis
Yasushi Fujio, MD, Suita, Japan

11:15  A Tale of Two Stories - Impact of Tobacco Smoke
Ronglih Liao, PhD, Palo Alto, California

11:30  Tsg101 Regulates P62-Keap1-Nrf2 Pathway in Ischemic/Reperfused Hearts
Guo-chang Fan, PhD, Cincinnati, Ohio

11:45  Q&A

Noon – 1:00 PM
General Session 5: Keynote Lecture
Moderator:  Ivor Benjamin, MD, Milwaukee, Wisconsin

Noon  All is in Flux: Cardiac Metabolism in Transition
Heinrich Taegtmeyer, MD, Houston, Texas

12:45  Q&A

1:00 – 1:30 pm
Break

1:30 – 2:30 PM
Early Career Session
Amplify the Signal, Not the Noise
Moderators:
David Barefield, PhD, Chicago, Illinois
Priscila Sato, PhD, Philadelphia, Pennsylvania
1:30  Panelists
Gary Keller, Chicago, Illinois
Michael Kennedy, PhD, Chicago, Illinois

2:15  Q&A

1:30 – 2:30 PM
ACS SAHA: Research Advances to Treat Heart Failure
Moderator: Sathyamangla Naga Prasad, PhD, Cleveland, Ohio

1:30  Caveolin in cardiovascular disease
Hemal Patel, PhD, San Diego, California

1:45  Breaking Down Cell-Cell Connections To Unravel New Mechanisms In Heart Disease
Farah Sheikh, PhD, La Jolla, California

2:00  Extracellular vesicle-mediated signaling in ischemic heart failure
Saumya Das, MD, PhD, Boston, Massachusetts

2:15  Q&A

2:30-3:30 PM
Moderated Poster Session 2A: Myocardial Ischemia, Oxidative Stress, and Cardioprotection
Poster Discussant: Jean Bopassa, PhD, UTHealth, San Antonio, Texas

MP120
Ryanodine Receptor 2 Prevents Endoplasmic Reticulum Stress-induced Defects In Cardiomyocyte Maturation
Yuxuan Guo, Blake Jardin, Boston Children’s Hosp, Boston, MA; Silvia Guatimosim, UNIVERSIDADE FEDERAL DE MINAS GERAIS, Belo Horizonte, Brazil; William T Pu, Boston Children’s Hosp, Boston, MA

MP121
Deleting The 2-oxoglutarate- And Iron-dependent Prolyl Hydroxylase Ogfod1 Alters Purine Nucleotide Regulation And Is Cardioprotective
LESLIE KENNEDY, NIH: NHLBI, Bethesda, MD; Junhui Sun, NHLBI, NIH, Bethesda, MD; Michael Harris, NHLBI, Bethesda, MD; Matthew Cockman, Francis Crick Inst, London, United Kingdom; Peter Ratcliffe, Francis Crick Inst, Univ of Oxford, London, Oxford, United Kingdom; Elizabeth Murphy, NHLBI, Bethesda, MD

MP122
Effects Of Cardiac Beta3-Adrenoceptors On The Inhibition Of G Protein-coupled Receptor Kinase 2 Via S-nitrosylation
Gizem Kayki Mutlu, Ankara Univ Faculty of Pharmacy, Ankara, Turkey; Kimberly Ferrero, Rajika Roy, Anna Maria Lucchese, Erhe Gao, Walter J Koch, Temple Univ Lewis Katz Sch of Med, Philadelphia, PA

MP123
The Fate And Role Of Pericytes In Repair And Remodeling Of The Infarcted Heart
Linda Alex, Ya Su, Albert Einstein Coll of Med, NYC, NY; Nikolaos G Frangogiannis, ALBERT EINSTEIN COLLEGE OF MEDICINE, Bronx, NY

MP124
De-palmitoylation Of Cysteine 202 Of Cyclophilin-D By Calcium Is Important For The Activation Of The Permeability Transition Pore
Georgios Amanakis, Natl Insts of Health, Bethesda, MD; Junhui Sun, NHLBI, NIH, Bethesda, MD; Maria Fergusson, NIH, Bethesda, MD; Chengyu Liu, Natl Insts of Health, Bethesda, MD; Jeff D Molkentin, CHILDRENS HOSPITAL MED CTR, Cincinnati, OH; Elizabeth Murphy, NHLBI, Bethesda, MD

MP125
Branched-chain Keto Acids, Not Branched-chain Amino Acids, Impairs Cardiac Insulin Sensitivity By Disrupting Insulin Signaling In The Mitochondria
Qutuba Karwi, Golam Mezbah Uddin, Univ of Alberta, Edmonton, AB, Canada; Cory Shamus Wagg, Univ of Alberta, Edmonton Ab, AB, Canada; Gary D Lopaschuk, UNIVERSITY ALBERTA, Edmonton, AB, Canada

2:30-3:30 PM
Moderated Poster Session 2B: Signal Transduction Pathways
Poster Discussant: Joan Heller Brown, PhD, La Jolla, California

MP131
The CDK2-FOXO1 Axis Mediates Doxorubicin-induced Cardiomyocyte Apoptosis And Atrophy
Peng Xia, Jingrui Chen, Yuening Liu, Washington State Univ, Spokane, WA; Maya Fletcher, Gonzaga Univ, Spokane, WA; Brian C. Jensen, Univ of North Carolina, Chapel Hill, NC; Zhaokang Cheng, Washington State Univ, Spokane, WA

MP132
Mutation In Fbxo32 Causes Dilated Cardiomyopathy By Er-stress Mediated Upregulation Of Chop
Nadya Al-Yacoub, Dilek Colak, Salma M Awad, Mohammed Kunhi, Olfat Al-Harazi, Abdallah Assiri, Jehad Al-Buraiki, King Faisal Specialist Hosp & Res Ctr, Riyadh, Saudi Arabia; Waleed Al-Habib, King Saud Univ, Riyadh, Saudi Arabia; Coralie I Poizat, Masonic Medical Res Inst, Utica, NY

MP133
Development Of β-arrestin-biased Positive Allosteric Modulators For The β1 Adrenergic Receptor

MP135
Cardiac Sarcoplasmic Reticulum Calcium Cycling Is Regulated By Kinase Independent Function Of PI3kgamma
Maradumane L Mohan, Conner P Witherow, Robert S Papay, Sathyamangla V Naga Prasad, CLEVELAND CLINIC FOUNDATION, Cleveland, OH

3:30 – 4:30 PM
Concurrent Session 6A
Harnessing Precision Medicine to Treat Cardiovascular Disease
Moderator: Renzhi Han, PhD, Columbus, Ohio

3:30 Enhancement of Direct Cardiac Reprograming of Non-Cardiomyocytes Into Cardiomyocytes-like cells Using Combinatorial Modified mRNAs Approach Lior Zangi, PhD, New York, New York

3:45 Atrial Fibrillation: one or many diseases? Barbara Casadei, MD, Oxford, England

4:00 Master Regulators Of Fibroblast Fate & Fibrosis Jennifer Davis, PhD, Seattle, Washington

4:15 Q&A

3:30 – 4:30 PM
Concurrent Session 6B
Novel Animal Models and Translational Insights
Moderator: Maria Kontaridis, PhD, Utica, New York

3:30 Defining immune mechanisms of HFrEF using CITE-Seq Meena Madhur, MD, Nashville, Tennessee

3:45 Disparate roles for phagocytes in HFrEF vs HFpEF Edward Thorp, PhD, Chicago, Illinois

4:00 Translational aspects of cardiovascular risk factors for novel therapies Rabea Hinkel, DVM, Munich, Germany

4:15 Q&A

4:30 – 6:00 PM
Early Career Virtual Networking Social Event
WEDNESDAY, July 29

10:00 – 11:00 AM (CDT)
Concurrent Session 7A
HfpEF in Metabolic Diseases
Moderator: Jonathan Kirk, Maywood, Illinois

10:00 Role of iron in cardiovascular disease
Hossein Ardehali, MD, Chicago, Illinois

10:15 Adipocyte Dysfunction and Diabetic Cardiac Injury: Beyond Metabolic Dysregulation
Yajing Wang, MD, PhD, Philadelphia, Pennsylvania

10:30 Role of sarcolipin in dystrophic cardiomyopathy
Gopal Babu, PhD, Newark, New Jersey

10:45 Q&A

10:00 – 11:00 AM
Concurrent Session 7B
Cardiotoxicity of Cancer Therapeutics: Mechanisms and Potential Therapies
Moderator: Richard Becker, MD, Cincinnati, Ohio

10:00 Mechanistic Biologic and Imaging Markers of Cancer Therapy Cardiotoxicity
Bonnie Ky, MD, Philadelphia, Pennsylvania

10:15 Can cardiomyocyte proliferation impact anthracycline cardiotoxicity?
Loren Field, PhD, Indianapolis, Indiana

10:30 Clinical Spectrum of Cardio-Oncology – Mechanism Matters
Carrie Lenneman, MD, Birmingham, Alabama

10:45 Q&A

11:00 AM – Noon
General Session 8
Molecular Mechanisms of Cardiac Hypertrophy (BCVS-HFA Joint Session)
Moderator: Rebekah Gundry, PhD, Omaha, Nebraska

11:00 Leveraging pathogenic HCM mutations to uncover ‘normal’ physiology
John Ralphe, MD, Madison, Wisconsin

11:15 Developmental mechanisms of cardiac hypertrophic growth
Katherine Yutzey, PhD, Cincinnati, Ohio
11:30  Atrial cardiomyopathies  
Niels Voigt, MD, Gottingen, Germany  

11:45  Q&A  

11:00 AM – Noon  
Workshop 1  
Nailing Your Statistics: Rigorous Analysis for Grants & Papers  
(hosted by Circulation Research)  
Moderator: Jane Freedman, MD, Worchester, Massachusetts  

11:00  Panelists  
Jennifer Below, PhD, Nashville, Tennessee  
Heather Highland, PhD, M.S., Chapel Hill, North Carolina  
Eric Gamazon, PhD, Nashville, Tennessee  

11:45  Q&A  

Noon – 12:30 PM  
Break  

12:30 – 1:30 PM  
General Session 9A  
Outstanding Early Career Investigator Award Competition  
Moderator: Hesham Sadek, MD, PhD, Dallas, Texas  

12:30  Novel Inhibitors For Temporal Modulation Of T-lymphocytes During Chronic Heart Failure  
Shyam S Bansal, The Ohio State Univ, Columbus, OH; Rachel Rosenzweig, Ohio State Univ, Columbus, OH; SARITA NEHRA, Ohio State Univ, Columbus, OH; Oscar Bermeo Blanco, The Ohio State Univ, Columbus, OH; Matthew Stratton, Ohio State Univ, Columbus, OH; Richard J Gumina, Chad Bennett, Christopher Coss, The Ohio State Univ, Columbus, OH  

12:45  Sympathetic Innervation Negatively Regulates Postnatal Cardiomyocyte Proliferation Through Circadian Genes  
Emmanouil Tampakakis, Sean Murphy, Harshi Gangrade, JOHN HOPKINS UNIVERSITY HOSP, Baltimore, MD; William Kowalski, Yosuke Mukoyama, NIH, Bethesda, MD; Chulan Kwon, John Hopkins Univ, Baltimore, MD  

1:00  TBX20 Activates Cardiac Maturation Gene Programs Promoting Direct Human Cardiac Reprogramming  
Yang Zhou, Yawen Tang, Univ of Alabama at Birmingham, Birmingham, AL; Vladimir G. Fast, UNIVERSITY ALABAMA BIRMINGHAM, Birmingham, AL;
Lianzhong Zhao, Rui Lu, Univ of Alabama at Birmingham, Birmingham, AL; Jianyi Zhang, UNIVERSITY OF ALABAMA AT BIRMINGHAM, Birmingham, AL

1:15 Q&A

12:30 – 1:30 PM
General Session 9B
Metabolism and Redox Mechanisms in Heart Failure
Moderator: Mahesh Gupta, PHD, Chicago, Illinois

12:30 Chronic reductive stress promotes diastolic dysfunction
Rajasekaran Namakkal-Soorappan, PhD, Birmingham, Alabama

12:45 Myoglobin regulates cardiomyocyte differentiation
Sruti Shiva, PhD, Pittsburgh, Pennsylvania

1:00 The gut microbiota modulates cardiac repair and metabolism after infarction
Patrick Hsieh, MD, PhD, Taipei City, Taiwan

1:15 Q&A

1:30 – 2:30 PM
General Session 10
Women in Science: Go for It
Moderator: Rong Tian, MD, Seattle, Washington

1:30 Lee Ann Piano, Leadership and Empowerment Speaker, Chicago, Illinois

2:15 Q&A

1:30 – 2:30 PM
ACS ACRE
Critical Signaling Pathways in Heart Failure
Moderator: Faqian Li, MD, Minneapolis, Minnesota

1:30 Synchronizing Cardiac Metabolism With Nutrient Intake
Martin Young, DPhil, Birmingham, Alabama

1:45 Developmental signaling pathways in cardiac repair and regeneration
Sean Wu, PhD, Stanford, California

2:00 Exploring informatics approaches to better understand pathogenic pathways underlying COVID-19
John Harry Caufield, PhD, Los Angeles, California
2:30 – 3:30 PM
Moderated Poster Session 3A: Systems Approach to Cardiovascular Biology
Poster Discussant: Young-sup Yoon, MD, Atlanta, Georgia

MP140
Epigenetic Silencing Of SERCA2a By Long Noncoding RNA Lnc-SYNPO Contributes To Impaired Ca²⁺ Homeostasis And Contractility In The Failing Heart
Min-Yi You, Natl Taiwan Univeristy, Taipei, Taiwan; PEI-JIN HO, Natl Taiwan Univ, Taipei, Taiwan; Hui-Chun Ku, Fu Jen Catholic Univ, New Taipei city, Taiwan; Shu-Ping Wang, Academia Sinica, Taipei, Taiwan; Kai-chien YANG, Natl Taiwan Univ, Taipei, Taiwan

MP141
Role Of Cryptochrome In Angiogenesis
Kazuhito Tsuzuki, Nagoya Univ Graduate Sch of Med, Nagoya Aichi, Japan; Yuuki Shimizu, Nagoya Univ, Nagoya, Japan; Zhongyue Pu, Nagoya university, Nagoya, Japan; Jyunya Suzuki, Nagoya Univ Graduate Sch of Med, Nagoya Aichi, Japan; Toyoaki Murohara, Cardiology, NAGOYA UNIVERSITY, Nagoya, Japan

MP142
Genome-wide Studies Reveal The Essential And Opposite Roles Of Arid1a In Controlling Human Cardiogenesis And Neurogenesis From Pluripotent Stem Cells
Juli Liu, Sheng Liu, Hongyu Gao, Lei Han, Xiaona Chu, INDIANA UNIVERSITY, Indianapolis, IN; Yi Sheng, UNIVERSITY of Pittsburgh, Pittsburgh, PA; Yue Wang, Yunlong Liu, Jun Wan, Lei YANG, INDIANA UNIVERSITY, Indianapolis, IN

MP143
Harnessing Glycomics To Understand Cardiac Biology And Disease
Christopher Ashwood, Linda Berg Luecke, Rebekah L Gundry, Univ of Nebraska Medical Ctr, Omaha, NE

MP144
Identification Of Epigenetic Regulators Of Cardiac Hypertrophy By An Epigenome-wide Association Study In Mice
Christoph D Rau, Univ of North Carolina at Chapel Hill, Chapel Hill, NC; Milagros Romay, Uni. of California - Los Angeles, Los Angeles, CA; Eleanor Wong, Wilson Tan, Genome Inst of Singapore, Singapore, Singapore; Aldons J Lusis, UNIV OF CALI LOS ANGELES, Los Angeles, CA; Roger Foo, Cardiovascular Res Inst, Singapore; Yibin Wang, UCLA, Encino, CA

MP145
Potential Functions Of The Nuclear Basket Associated With Dilated Cardiomyopathy
Claudia C Preston, Ryan D Burdine, Emily C Storm, Claudia S Preston, Sanford Res, Sioux Falls, SD
2:30 – 3:30 PM
Moderated Poster Session 3B: Inflammation and the Cardiovascular System
Poster Discussant: Beata Wolska, PhD, Chicago, Illinois

MP150
**Inositol 1,4,5-trisphosphate Receptors Selectively Regulate Detrimental Cardiac Fibrosis By Modulating ER-phagy**

MP151
**Cardiomyocyte HIPK2 Is A Critical Regulator Of Purinergic Signaling Regulated Myocardial Inflammation**
Tousif Sultan, UAB, Birmingham, AL; Anand Prakash Singh, Univ of Alabama at Birmingham, Birmingham, AL; Prachi Umbarkar, UAB Sch of Med, Birmingham, AL; QinKun Zhang, Hind Lal, UAB, Birmingham, AL

MP152
**Smad1 Activation In Infarct Macrophages Restrains Angiogenesis And Accentuates Adverse Remodeling Of The Infarcted Myocardium**
Bijun Chen, Ya Su, Nikolaos G Frangogiannis, ALBERT EINSTEIN COLLEGE OF MEDICINE, Bronx, NY

MP153
**TET2 Regulates Type I Interferon Signaling In The Hematopoietic Response To Myocardial Infarction**
Claire Zhang, David M Calcagno, Avinash Toomu, Kenneth M Huang, Zhenxing Fu, Kevin R King, Univ of California San Diego, La Jolla, CA

MP154
**Deletion Of The Duffy Antigen Receptor For Chemokines (DARC) Confers Protection Against Abdominal Aortic Aneurysm (AAA) Formation**
Tyler W Benson, Augusta Univ, Augusta, GA; Tetsuo Horimatsu, Medical Coll of Gerogia, Augusta, GA; Mourad Ogbi, Augusta Univ, Augusta, GA; Ha Won W Kim, MEDICAL COLLEGE OF GEORGIA, Augusta, GA; Neal L Weintraub, AUGUSTA UNIVERSITY, Augusta, GA

MP155
**Oxidized Lipids Diet Causes Pulmonary Hypertension Through T-cell Dependent Endothelial Cell Apoptosis**
Gregoire Ruffenach, Ellen O’connor, UNIVERSITY OF CALIFORNIA, Los Angeles, CA; Mylene Vaillancourt, JASON HONG, Victor R. Grijalva Sr., Christine M Cunningham, UCLA, Los Angeles,
CA; shuchita tiwari, UNIVERSITY OF CALIFORNIA, davis, CA; Frederic Perros, INSERM U999, Le Plessis Robinson, France; Xia YANG, UCLA, Los Angeles, CA; Aldrin V Gomes, UNIVERSITY OF CALIFORNIA DAVIS, Davis, CA; Srinivasa T Reddy II, DAVID GEFFEN SCH OF MED AT UCLA, Los Angeles, CA; Mansoureh Eghbali, UCLA, Los Angeles, CA

3:30 – 4:30 PM
Concurrent Session 11A
Molecular & Cellular Therapy for Heart Failure
Moderator: Li Qian, PhD, Chapel Hill, North Carolina

3:30 Cardioprotection and Myocardial Regeneration in Ischemic Heart Disease
Wuqiang Zhu, MD, PhD, Phoenix, Arizona

3:45 Injectable biomaterials for treating myocardial infarction and heart failure
Karen Christman, PhD, La Jolla, California

4:00 Molecular control of heart regeneration: insights from platypus, armadillos, bats and whales
Guo Huang, PhD, San Francisco, California

4:15 Q&A

3:30 – 4:30 PM
Concurrent Session 11B
Diastolic & Contractile Dysfunction in Heart Failure
Moderator: John Ralphe, MD, Madison, Wisconsin

3:30 Stunning and Hibernating Myocardium: Where are we nearly 4 decades later?
Robert Kloner, MD, PhD, Pasadena, California

3:45 AAV9 Gene Transfer of MyBPC N-terminal Domains Ameliorates Cardiomyopathy in MyBPC Deficient Mice
Julian Stelzer, MSc, Cleveland, Ohio

4:00 Contribution of sarcomere phosphorylation to progressive cardiac dysfunction
Margaret Westfall, PhD, Ann Arbor, Michigan

4:15 Q&A

4:30 – 5:30 PM
General Session 12
Genomic, Genetic and Epigenetic Mechanism of Heart Failure
Moderator: Susan Cheng, MD, Los Angeles, California
4:30 Drug Delivery for Heart Repair
Ke Cheng, MD, Raleigh, North Carolina

4:45 Uncovering rare and common variation underlying heart failure
Megan Puckelwartz, PhD, Chicago, Illinois

5:00 Pathogenic role of senocules in age-related disorders
Ippei Shimizu, MD, Niigata, Japan

5:15 Q&A

4:30 – 5:30 PM
Workshop 2
The Practice of Biomedical Research: Honesty Transparency and Early Career Funding Opportunities
Moderator: Leslie Leinwand, PhD, Boulder, Colorado

4:30 The Practice of Biomedical Research: Honesty and Transparency: Basic Science Journal Editor's Viewpoint
Jane Freedman, MD, Worchester, Massachusetts

4:45 Handling Allegations of Research Misconduct: Federal Government and Institutional Perspective
Susan Garfinkel, PhD, Columbus, Ohio

5:00 Truth in Publishing
Joseph Hill, MD, PhD, Dallas, Texas

5:15 Q&A
THURSDAY, July 30

10:00 – 11:00 AM
Concurrent Session 13A
Extracellular Matrix; Fibroblasts & More
Moderator: Onur Kanisicak, PhD, Cincinnati, Ohio

10:00  Fibroblast–controlled contractile performance in (tissue engineered) heart muscle
Wolfram Zimmermann, MD, Göttingen, Germany

10:15  Fibroblasts in cardiac homeostasis and disease
Michelle Tallquist, PhD, Honolulu, Hawaii

10:30  ARNT/ HIF1 beta -Mediated Matrix Metalloproteinase in Heart Failure
Rongxue Wu, MD, PhD, Chicago, Illinois

10:45  Q&A

10:00 – 11:00 AM
Concurrent Session 13B
Regulation of Small RNAs in Heart Failure
Moderator: Jaunian Chen, PhD, Los Angeles, California

10:00  MyomiR-499 and endothelial dysfunction in diabetes
Raj Kishore, PhD, Philadelphia, Pennsylvania

10:15  Activation of endogenous cardiomyocyte proliferation for heart repair
Yi-gang Wang, MD, PhD, Cincinnati, Ohio

10:30  Q&A

11:00 – Noon
Concurrent Session 14A
Cardiac Arrhythmias: from Basic Mechanisms to Precision Medicine
Moderator: Steven Houser, PhD, Philadelphia, Pennsylvania

11:00  Insights into arrhythmia mechanisms and therapies from cardiac reprogramming
Stacey Rentschler, MD, St Louis, Missouri

11:15  Novel pathways for regulation of cardiac fibrosis and inflammation
Thomas Hund, PhD, Columbus, Ohio

11:30  Gene editing reverses arrhythmia susceptibility in humanized PLN-R14del mice
Francesca Stillitano, PhD, New York, New York

11:45  Q&A
11:00 – Noon
Concurrent Session 14B
Systems Approaches to Cardiac Disease: Novel Mechanisms
Moderator: Chengxue Qin, PhD, Melbourne, Australia

11:00  Apolipoprotein C3 in complications of diabetes
Jenny Kanter, PhD, Seattle, Washington

11:15  Beneficial Effect of MCU Overexpression in Heart Failure
Brian O’Rourke, Baltimore, Maryland

11:30  Developing Novel Microproteins as Heart Failure Therapeutics
Catherine Makarewich, PhD, Cincinnati, Ohio

11:45  Q&A

Noon – 1:00 pm
Moderated Poster Session 4A: Clinical/Translational Research
Poster Discussant: Glenn Rowe, PhD, Birmingham, Alabama

MP160
A Transgenic Approach Using Dual Orthologous DNA Recombinases To Quantify Subpopulations Of Cycling Cardiomyocytes In Vivo
Matthew J. Wolf, Leigh A. Bradley, Alexander Young, Hongbin Li, Helen O. Billcheck, Univ of Virgina, Charlottesville, VA

MP161
A Calcineurin-hoxb13 Axis Regulates Growth Mode Of Mammalian Cardiomyocytes
Ngoc Uyen Nhi Nguyen, Diana C Canseco, Feng Xiao, UT Southwestern Medical Ctr, Dallas, TX; Yuji Nakada, Univ of Alabama at Birmingham, Birmingham, AL; Shujuan Li, Nicholas T Lam, Shalini Muralidhar, Jainsy J Savla, UT Southwestern Medical Ctr, Dallas, TX; Joseph A Hill, UNIVERSITY TX SOUTHWESTERN MED, Dallas, TX; Zhaoning Wang, UT Southwestern Medical Ctr, Dallas, TX; Mahmoud Salama Ahmed, UT Southwestern Medical Ctr, Dallas, TX, Dallas, TX; Maimon Hubbi, Ivan Menendez-Montes, Jesung Moon, Shah R Ali, Elisa Villalobos, Waleed M Elhelaly, Suwannee Thet, UT Southwestern Medical Ctr, Dallas, TX; Wilson Lek Wen Tan, Chukwuemeka George Anene-Nzelu, Natl Univ of Singapore, Singapore, Singapore; Roger Foo, Cardiovascular Res Inst, Singapore; Roy Jagoree, Stanford Univ, Stanford, CA; Martha S Cyert, STANFORD UNIVERSITY, Stanford, CA; Beverly A Rothermel, UNIVERSITY OF SOUTHWESTERN MED, Dallas, TX; Hesham A Sadek, UTSOUTHWESTERN MEDICAL CENTER, Dallas, TX

MP166
PRKAR1A Deficiency Abrogates Cardiac Hypertrophy Through Inhibition Of Mitochondrial Fission
Yuening Liu, Peng Xia, Jingrui Chen, Washington State Univ, Spokane, WA; Patricia W. Bandettini, Natl Heart, Lung, and Blood Inst, Natl Insts of Health, Bethesda, MD; Lawrence S Kirschner, The Ohio State Univ, Columbus, OH; Constantine A Stratakis, Section on Endocrinology and Genetics, Eunice Kennedy
MP163
Renal Sympathetic Denervation (RDN) Improves Exercise Performance And Vascular Function In The Setting Of Cardiometabolic HFpEF
Hunter Hidalgo, LSU Health Science Ctr, New Orleans, LA; Juan Gao, LSU HEALTH SCIENCE CENTER, New Orleans, LA; Zhen Li, LSU Health Sciences Ctr - NO, New Orleans, LA; Thomas E Sharp III, LSU Health Science Ctr, New Orleans, LA; Huijing Xia, LOUISIANA STATE UNIVERSITY, New Orleans, LA; Daniel R Kapusta, LSU HEALTH SCIENCES CENTER, New Orleans, LA; Traci T Goodchild, LSUHSC - NEW ORLEANS, New Orleans, LA; David J Lefer, LSU HEALTH SCIENCES CENTER NO, New Orleans, LA

MP164
Electrophysiologic Conservation Of Epicardial Conduction Dynamics After Myocardial Infarction In Newborn Piglets
Hanjay Wang, Terrence Pong, Haley Lucian, Joy Aparicio-Valenzuela, Stanford Univ, Stanford, CA; Yuko Tada, STANFORD UNIVERSITY SCHOOL OF MEDIC, Stanford, CA; Sasank Sakhamuri, Sam W Baker, Nicholas A Tran, Stanford Univ, Stanford, CA; Michael J Paulsen, Stanford Univ, Los Altos, CA; Yuanjia Zhu, Stanford Univ, Stanford, CA; Anson M LEE, STANFORD UNIVERSITY, Stanford, CA; Y. Joseph Woo, Stanford Univ, Stanford, CA

MP165
Exosome-mediated Encapsulation Alters AAV Antigenicity And Infectivity: Implications For Gene Delivery In The Heart
Marta Adamiak, Yaxuan Liang, Cherrie Sherman, Shweta Lodha, Erik Kohlbrenner, Dongtak Jeong, Delaine K Ceholski, Cardiovascular Res Ctr, Icahn Sch of Med, Mount Sinai, New York, NY; Navneet Dogra, Dept of Genetics and Genomic Sciences, Dept of Pathology, Icahn Sch of Med, Mount Sinai, New York, NY; Nicole Dubois, Dept of Developmental and Regenerative Biology, Mindich Child Health and Development Inst, Black Family Stem Cell Inst, Icahn Sch of Med, Mount Sinai, New York, NY; Roger Joseph Hajjar, Susmita SAHOO, Cardiovascular Res Ctr, Icahn Sch of Med, Mount Sinai, New York, NY

12:00 pm – 1:00 pm
Moderated Poster Session 4B: Genetics and Genomics of Cardiovascular Disease
Poster Discussant: Sarah Schumacher, PhD, Cleveland, Ohio

MP170
Increased Gao Expression Regulated By NRSF Plays A Key Role In The Development Of Heart Failure Through The Impairment Of Ca2+ Homeostasis
Hideaki Inazumi, KYOTO UNIVERSITY, Kyoto, Japan; Yasuaki Nakagawa, KYOTO GRADUATE SCHOOL MEDICINE, Kyoto, Japan; Kenji Moriuchi, KYOTO UNIVERSITY HOSPITAL, Kyoto City, Japan; Koichiro Kuwahara, SHINSHU UNIVERSITY, Matsumoto Nagano, Japan

MP171
Transcription Start Site Profiling Defines Promoter And Enhancer Regions For Cardiomyopathy Genes
Anthony M Gacita, Lisa Dellefave-Castillo, Patrick GT Page, David Y Barefield, Andrew Wasserstrom, Megan Puckelwartz, Northwestern Univ Feinberg Sch of Med, Chicago, IL; Marcelo A Nobrega, The Univ of Chicago, Chicago, IL; Elizabeth M McNally, Northwestern Univ Feinberg Sch of Med, Chicago, IL

MP172
Y-chromosome Gene, Uty, Confers Male Protection Against Pulmonary Hypertension By Mediating Pro-inflammatory Chemokine Effects
Christine Marie Cunningham, Soban Umar, UCLA, Los Angeles, CA; Min Li, Mitali Doshi, Los Angeles, CA; Gregoire Ruffenach, JASON HONG, UNIVERSITY OF CALIFORNIA, Los Angeles, CA; Haley Hrnčír, Arthur Arnold, Mansoureh Eghbali, UCLA, Los Angeles, CA

MP173
Loss Of DCHS1 Promotes Mitral Valve Prolapse Through Cytoskeleton Destabilization
Reece Moore, Medical Univ of South Carolina, Charleston, SC; Kelsey Moore, Rebecca Stairley, Medical Univ of South Carolin, Charleston, SC; Diana Bridget Fulmer, Medical Univ of SC, Charleston, SC; Lilong Guo, Medical Univ of SC, Charleston, SC, Mt Pleasant, SC; Russell A Norris, MEDICAL UNIV OF SOUTH CAROLINA, Charleston, SC

MP174
Cardiomyocyte-specific Deletion Of Parathyroid Hormone Receptor 1 During Development Leads To Left Ventricular Hypoplasia
Desiree Leach, Ryan Jorgensen, Feinberg Sch of Med, Chicago, IL; Jayne Wolfe, Medical Coll of Wisconsin, Wauwatosa, WI; Lisa D Wilsbacher, NORTHWESTERN UNIVERSITY, Chicago, IL

MP175
Disruption Of The Genome Architecture At The PRRX1 Locus Is Associated With The Pathogenesis Of LMNA-related Dilated Cardiomyopathy
Yuan Zhang, Mohamed Ameen, Isaac Perea Gil, Jennifer Arthur, Alexandra A. Gavidia, Nike Bharucha, Kevin C. Wang, Ioannis Karakikes, Stanford Univ Sch of Med, Stanford, CA

1:00 Conference Adjourns