



Basic Cardiovascular Sciences

Innovations and Discovery in Cardiovascular Science
 July 31-August 3, 2023 | Westin Boston Seaport District | Boston, MA
 Final Program

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| Time (Eastern Daylight Time-EDT) | SUNDAY- July 30 |
| 3:00 – 7:00 pm | Registration Location: Grand Ballroom Foyer |
| Time (Eastern Daylight Time-EDT) | MONDAY- July 31 |
| 7:00 am – 6:00 pm | Registration Location: Grand Ballroom Foyer |
| 8:00 am – 8:45 am | Inside the AHA's Research Enterprise: Grant Funding and Other Opportunities Location: Grand Ballroom Glenn H Dillon, PhD, American Heart Association |
| 9:00 am – 9:15 am | Early Career Opening Remarks Location: Grand Ballroom |

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| | <p>Moderator: Sarah Schumacher-Bass, PhD, Cleveland Clinic</p> <p>BCVS Early Career Committee Chair Welcome Remarks: Susmita Sahoo, PhD, Icahn School of Medicine at Mount Sinai</p> |
| 9:15 am – 10:15 am | <p>Early Career Session 1: Next Best Thing in Cardiovascular Research Location: Grand Ballroom</p> <p>Moderators: Chi Fung Lee, PhD, Oklahoma Medical Research Foundation Priscila Y Sato, PhD, Drexel University College of Medicine</p> <p>9:15 Endocardial Hdac3 Promotes Myocardial Trabeculation Through a MicroRNA Pathway Jihyun Jang, PhD, Nationwide Children's Hospital</p> <p>9:27 Myosin Light Chain Dephosphorylation By Ppp1r12c Promotes Atria Hypocontractility In Atrial Fibrillation Francisco J Gonzalez-Gonzalez, MD, Univ of Illinois at Chicago</p> |

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| | <p>9:39 Distinct Molecular Signatures Of HCM- And DCM-causing Mutations at The Same Residue In The Transducer Of Cardiac Myosin Masataka Kawana, MD, Stanford University</p> <p>9:51 The Effects of Cardiac Troponin Activator CK-358 On Cardiac Contractility in A Mouse Model Of Genetic Dilated Cardiomyopathy Stephanie Neys, BS, University of Washington</p> <p>10:03 A Special Ribosome in The Heart and Heart Failure Xuebing Wu, PhD, Columbia University</p> |
| 10:15 am – 10:45 am | <p><i>Break/Exhibits</i> Location: Grand Ballroom Foyer</p> |
| 10:45 am – 11:45 am | <p>Early Career Session 2: Next Best Thing in Cardiovascular Research Location: Grand Ballroom</p> <p>Moderators: Jun Wang, PhD, UT Health McGovern Medical School Ioannis Karakikes, PhD, Stanford University</p> |

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| | <p>10:45 Skeletal Muscle Actin Mutation R256H Disrupts Actin Polymerization and Cardiomyocyte Contractility: A Multi-scale Study of Genetic Dilated Cardiomyopathy Ankit Garg, MD, PhD, Washington University in St. Louis</p> <p>10:57 Tbx5 Maintains Atrial Identity by Regulating an Atrial Enhancer Network Mason E Sweat, PhD, Boston Children’s Hospital</p> <p>11:09 Novel Candidate Variant In The Gene Coding For Receptor Tyrosine-protein Kinase ErbB-2 Is Associated With Left Ventricular Outflow Tract Obstruction Defects In Human Minna Ampuja, PhD, University of Helsinki</p> <p>11:21 Single Nuclei RNA Sequencing Analysis of <i>Mybpc-3</i>-Associated HCM To Identify Common Pathological Mechanisms In Human, Feline, And Murine Hearts Samia Ali, BS, Tufts University</p> <p>11:33 Transcriptional Heterogeneity of The Postnatal Cardiac Conduction System Yena Oh, MSc, University of Ottawa Heart Institute</p> |
| 11:45 am – 12:30 pm | Early Career Keynote Location: Grand Ballroom |

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| | <p>Moderators: Susmita Sahoo, PhD, Icahn School of Medicine at Mount Sinai Sarah Schumacher-Bass, PhD, Cleveland Clinic</p> <p>Developing Your Career and Leading with Conviction Maria Kontaridis, PhD, Masonic Medical Research Institute</p> |
| 12:30 – 1:00 pm | <p><i>Break/Exhibits</i> Location: Grand Ballroom Foyer</p> |
| 1:00 – 1:30 pm | <p>Opening Welcome Location: Grand Ballroom</p> <p>Moderator: Sumanth D Prabhu, MD, Washington University in St. Louis</p> <p>1:00 Welcome Remarks from AHA President Joseph Wu, MD, PhD, Stanford University</p> <p>1:15 Welcome Remarks from the BCVS Leadership Committee Chair Jiangyi Zhang, MD, PhD, University of Alabama at Birmingham</p> |
| 1:30 – 2:45 pm | <p>Session 1: Cardiac Sarcomeres and Cardiomyopathy – New Perspectives Location: Grand Ballroom</p> |

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| | <p>Moderators: Paola Rosas, PhD, University of Illinois Chicago Jil Tardiff, MD, PhD, University of Arizona</p> <p>1:30 Future of Genetic Medicine Elizabeth McNally, MD, PhD, Northwestern University</p> <p>1:50 Deciphering the Role of Obscurin Proteins in Diastolic Dysfunction Heart Failure Stephan Lange, PhD, Aarhus University/UC San Diego</p> <p>2:10 Myosin Binding Protein C Therapeutics Julian Stelzer, PhD, Case Western University</p> <p>2:30 Lem2 is Essential for Cardiac Development By Maintaining Nuclear Integrity Matthew Stroud, PhD, King's College London</p> |
| 2:45 – 3:10 pm | <p>Break/Exhibit Location: Grand Ballroom Foyer</p> |
| 3:10 – 4:30 pm | <p>Session 2: Cardiac Repair and Tissue Engineering Location: Grand Ballroom</p> |

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| | <p>Moderators: Nenad Bursac, PhD, Duke University Jun Wang, PhD, Texas A&M Health Science Center</p> <p>3:10 Cell Cycle Induction in Cardiomyocytes for Heart Repair Tamer M A Mohamed, PhD, The University of Louisville, School of Medicine</p> <p>3:30 Reconstructing Endocardium and Coronary Endothelium from iPSCs to Study Congenital Heart Disorders Mingxia Gu, MD, PhD, Cincinnati Children's Hospital Medical Center</p> <p>3:50 Transcriptional Regulation of Heart Regeneration Hesham Sadek, MD, PhD, UT Southwestern</p> <p>4:10 BDNF Cardioprotection and Heart Failure Therapy via beta3 Adrenergic Receptors Walter J Koch, PhD, Temple University</p> |
| 4:30 – 7:00 pm | <p>Poster Session 1 with Reception (includes Poster Competition) Sponsored by <i>Circulation Research</i> Location: Galleria Hall</p> |

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| | <p>Poster Categories: Genetics and Genomics of Cardiovascular Disease Sarcomeric Function and Contractility Human Cellular Models of Disease Clinical/Translational Research Cardiac Regeneration, Stem Cells and Tissue Engineering Transcriptional and Epigenetic Regulation of Gene Expression Cell Death Mechanisms, Apoptosis, Necrosis and Autophagy Signal Transduction Pathways Systems Approach to Cardiovascular Biology</p> |
| Time (EDT) | TUESDAY – August 1 |
| 7:00 am – 6:00 pm | Registration Location: Grand Ballroom Foyer |
| 7:00 – 8:00 am | Continental Breakfast Location: Grand Ballroom Foyer |
| 7:00 – 8:00 am | Women in Science Breakfast Next Gen Issues for Scientists: What are the Current Problems? Location: Pavilion Room Moderators: Nicole Purcell, PhD, Huntington Medical Research Institutes Priscila Sato, PhD, Drexel University Speakers: Jil Tardiff, MD, PhD, University of Arizona Sadia Mohsin, PhD, Temple University Carmen "Kika" Sucharov, PhD, University of Colorado Sean Wu, MD, PhD, Stanford University |

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| | <p>Pilar Alcaide, PhD, MS, Tufts University Aikaterini Kontrogianni-Konstantopoulos, PhD, University of Maryland</p> |
| 8:00 – 9:15 am | <p>Session 3: Regulators of Cardiac Hypertrophy and Function Location: Grand Ballroom</p> <p>Moderators: Sarah Schumacher-Bass, PhD, Cleveland Clinic Foundation Angela Clerk, PhD, University of Reading</p> <p>8:00 Exercise Pathways Regulating Cardiac Growth and Function Anthony Rosenzweig, MD, University of Michigan Medical Center</p> <p>8:20 BRAF (and its Inhibitors) and Cardiac Hypertrophy Angela Clerk, PhD, University of Reading</p> <p>8:40 Noncanonical ERAD as a Regulator of SGK1-driven Cardiac Hypertrophy Christopher Glembotski, PhD, The University of Arizona College of Medicine-Phoenix</p> <p>9:00 Functional Role of Placental Senescence in Peripartum Cardiomyopathy Claire Castro, PhD, Massachusetts General Hospital</p> |
| 9:15 – 9:45 am | <p>Refreshment Break/Exhibits Location: Grand Ballroom Foyer</p> |

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| 9:45 – 11:00 am | <p>Session 4: New Insights into Cardioprotection, Remodeling and Failure Location: Grand Ballroom</p> <p>Moderators: Merry Lindsey, PhD, Meharry Medical College Weijia Luo, PhD, Texas A&M University</p> <p>9:45 Clonal Hematopoiesis and Heart Failure Kenneth Walsh, PhD, University of Virginia School of Medicine</p> <p>10:05 Integrated Stress Response in Cardiac Remodeling Zhao Wang, PhD, City of Hope National Medical Center</p> <p>10:25 Distinct Transcriptomic and Proteomic Profiles in HF Patients with LVAD Sarah Franklin, PhD, University of Utah</p> <p>10:45 Myocardial Tricarboxylic Acid Cycle Suppression Disrupts the Epigenetic Landscape in Human Heart Failure with Preserved Ejection Fraction Edwin Yoo, MD, PhD, Johns Hopkins Hospital</p> |
| 11:00 am - Noon | <p>Session 5: Keynote Lecture Location: Grand Ballroom</p> |

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| | <p>Moderators: Sumanth Prabhu, MD, Washington University in St Louis Farah Sheikh, PhD, UC San Diego</p> <p>Thinking Big and Thinking Small About the Heart Eric Olson, PhD, UT Southwestern</p> |
| Noon – 1:30 pm | <p>Lunch on Your Own/Poster Viewing/Exhibits Or BCVS Early Career: Lunch with Legends Location: Pavilion <i>*Ticketed event for early career members to meet invited senior investigators.</i></p> <p>Asa Gustafsson, PhD, UC San Diego Joseph Hill, MD, PhD, UT Southwestern Steven Jones, PhD, University of Louisville Jonathan Kirk, PhD, Loyola University Chicago Maria Kontaridis, PhD, Masonic Medical Research Institute Aikaterini Kontrogianni-Konstantopoulos, PhD, University of Maryland Ronglih Liao, PhD, Stanford University Xin Ma, MD, PhD, Thomas Jefferson University Timothy McKinsey, PhD, University of Colorado Elizabeth McNally, MD, PhD, Northwestern University Sumanth Prabhu, MD, Washington University in St Louis Nicole Purcell, PhD, Huntington Medical Research Institutes Sakthi Sadayappan, PhD, MBA, University of Cincinnati Robin Shaw, MD, PhD, University of Utah Farah Sheikh, PhD, UC San Diego Carmen "Kika" Sucharov, PhD, University of Colorado</p> |

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| | <p>Jil Tardiff, MD, PhD, University of Arizona Sean Wu, MD, PhD, Stanford University Joseph Wu, MD, PhD, Stanford University Young-Sup Yoon, MD, PhD, Emory University Jay Zhang, MD, PhD, University of Alabama at Birmingham</p> |
| 1:30 – 2:45 pm | <p>Session 6: Mechanisms of Cardiac Fibrosis Location: Grand Ballroom Moderators: Sadia Mohsin, PhD, Temple University Nikolaos Frangogiannis, MD, PhD, Albert Einstein College of Medicine</p> <p>1:30 Fibroblast Functions after Heart Injury Michelle Tallquist, PhD, University of Hawai'i at Mānoa</p> <p>1:50 Targeting Cardiac Ischemic Injury with an Orally Administered Exosome-based Therapeutic Robert Gourdie, PhD, Virginia Tech</p> <p>2:10 Transcriptional Control of Fibroblast Proliferation and Cardiac Fibrosis Eric Small, PhD, University of Rochester</p> <p>2:30</p> |

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| | <p>The Fibrogenic Transcription Factor Sox9 Controls Mesenchymal Activation of Endothelial Cells and Drives Fibrotic Disease Felix A. Trogisch, PhD, European Center for Angioscience, Mannheim</p> |
| 2:45 – 3:15 pm | <p>Refreshment Break/Exhibits Location: Grand Ballroom Foyer</p> <p>BINGO Location: Commonwealth A</p> <p>Not yet an AHA Member? Know someone who should be? We will be hosting Membership BINGO on August 1st from 2:45 – 3:15 in Commonwealth A.</p> <p>Now is your chance to win prizes and listen to the great benefits offered to our Professional Members. Non-Members are welcome. Members who bring a non-member (or two) are welcome. This event is limited to the first 50 people through the door.</p> |
| 3:15 – 4:30 pm | <p>Session 7: Cardiovascular Technologies, Therapeutics and Bioinformatics Location: Grand Ballroom</p> <p>Moderators: Suresh Verma, PhD, University of Alabama at Birmingham Chunhui Xu, PhD, Emory University</p> <p>3:15 Single Cell Approach to Study Cardiac Cell Heterogeneity and Functionality Jiandong Liu, PhD, UNC School of Medicine</p> |

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| | <p>3:35 Thymosin β4 Increases the Reparative Potency of hiPSC-cardiomyocytes in Acute Myocardial Infarction Lei Ye, MD, PhD, University of Alabama at Birmingham</p> <p>3:55 Clonal Tracking Using Lentiviral Barcoding and High Throughput Sequencing Rong Lu, PhD, University of Southern California</p> <p>4:15 Cardiac Bridging Integrator 1 Gene Therapy Rescues Heart Failure In Swine Jing Li, University of Utah</p> |
| 4:30 – 7:00 pm | <p>Poster Session 2 (includes Poster Competition) Location: Galleria Hall</p> <p>Poster Categories: Mechanisms of Cardiac Remodeling and Failure Mechanisms of Heart Failure Preserved Ejection Fraction Mechanisms of Myocardial Fibrosis Myocardial Ischemia, Oxidative Stress and Cardioprotection Cardiovascular Therapeutics Cardio-Oncology COVID 19 in the Cardiovascular System</p> |
| 7:00 – 9:00 pm | <p>Early Career Social Location: Pavilion Room</p> |
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| Time (EDT) | Wednesday, August 2 |
| 7:00 am – 7:30 pm | Registration Location: Grand Ballroom Foyer |
| 7:00 – 8:00 am | Continental Breakfast/Registration/Exhibits Location: Grand Ballroom Foyer |
| 8:00 – 9:15 am | <p>Session 8: Lipid Mediators and Cardiovascular Disease Location: Grand Ballroom</p> <p>Moderators: Aaron K Olson, MD, Seattle Children's Research Institute Lina Shehadeh, PhD, University of Miami</p> <p>8:00 Alteration of Lipidome by Exercise Training Eric Ortlund, PhD, Emory University</p> <p>8:20 Resolving Lipid Mediators in Heart Failure Ganesh Halade, PhD, University of South Florida</p> <p>8:40 Role of Perm1 in Cardiac Energetics and Contractility Junco Warren, PhD, Virginia Tech</p> <p>9:00 Cardiolipin Is a Novel Target Of Therapy To Mitigate Myocardial Injury Due To Venous-arterial Extracorporeal Membrane Oxygenation (va-ecmo) Navin K Kapur, MD, Tufts Medical Center</p> |

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| 9:15 – 9:45 am | Refreshment Break/Exhibits Location: Grand Ballroom Foyer |
| 9:45 – 11:00 am | <p>Session 9: Cardio-immunology and Heart Disease Location: Grand Ballroom</p> <p>Moderators: Annet Kirabo, PhD, Vanderbilt University Luigi Adamo, MD, PhD, Johns Hopkins University</p> <p>9:45 Regulation of Cardiac Inflammation by Macrophages Edward Thorp, PhD, Northwestern University</p> <p>10:05 T cell Immune Responses at the Heart of Remodeling Pilar Alcaide, PhD, Tufts University</p> <p>10:25 Dendritic Cells and Myocardial Injury Susanne Sattler, MSc, PhD, Imperial College London/ Medical University of Graz</p> <p>10:45 Interleukin 13 Signaling to Macrophages Promotes Recovery After Myocardial Infarction in Mice Santiago Alvarez-Argote, MD The Medical College of Wisconsin</p> |
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| 11:00 – 11:45 am | <p>Session 10: Outstanding Early Career Investigator Award Competition Location: Grand Ballroom</p> <p>Moderators: Aikaterini Kontrogianni-Konstantopoulos, PhD, University of Maryland Nicole Purcell, PhD, Huntington Medical Research Institutes</p> <p>11:00 Cardiomyocyte DCHS2 Inhibition Protects Against Heart Failure Haobo Li, PhD, Massachusetts General Hospital</p> <p>11:15 Cd206+Il-4α+ Macrophages Are Drivers of Adverse Cardiac Remodeling In Ischemic Cardiomyopathy Qiongxin Wang, PhD, Washington University in St. Louis</p> <p>11:30 Human Cardiomyopathy Disease Variant in Formin Homology 2 Domain Containing 3 (FHOD3) Protein Revealed Novel Early Autophagy Dysregulation And Mitochondrial Dysfunction Asma Boukhalifa, PhD, Tufts Medical Center</p> |
| 11:45 am – 1:30 pm | <p>Industry Presentation from 12:00 – 12:30pm (<i>Boxed lunch available for first 100 attendees</i>) Location: Commonwealth BC</p> |

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| | <p>Redefining the Treatment Landscape of Symptomatic NYHA Class II-III Obstructive HCM With CAMZYOS[®], the First and Only FDA-Approved Cardiac Myosin Inhibitor Lyudmila Kuchma, ACNP-C, Hypertrophic Cardiomyopathy Center (COE), Sands Constellation Heart Institute, Rochester Regional Health</p> <p>-or-</p> <p>Lunch on Your Own</p> |
| 1:30 – 2:45 pm | <p>Session 11: Taking Sex Differences to Heart—From Basic to Clinical Location: Grand Ballroom</p> <p>Moderators: Susan E. Howlett, PhD, Dalhousie University Jonathan Kirk, PhD, Loyola University Chicago</p> <p>1:30 Sex-biased Mechanisms of Stress-induced Cardiac Remodeling George Kararigas, PhD, University of Iceland</p> <p>1:50 Sex Differences in the Role of the Mineralocorticoid receptors in Atherosclerosis: Does Plaque Size Matter? Iris Jaffe, MD, PhD, Tufts University School of Medicine</p> |

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| | <p>2:10 Unraveling Cardiovascular Disease in Women Through Molecular Profiling Emily Lau, MD, MPH, Harvard Medical School</p> <p>2:30 Exercise Therapy During Doxorubicin Treatment Provides Sex-specific Cardioprotection Sharon Ann George, PhD, Northwestern University</p> |
| 2:45 – 3:15 pm | <p>Refreshment Break/Exhibits Location: Grand Ballroom Foyer</p> |
| 3:15 – 4:30 pm | <p>Session 12: Arrhythmogenic Basis for Cardiac Disease Location: Grand Ballroom</p> <p>Moderators: Irene Turnbull, PhD, Mount Sinai James Smyth, PhD, Fralin Biomedical Research Institute Virginia Tech</p> <p>3:15 A New Mouse Model to Investigate The Early Steps Of Arrhythmogenic Cardiomyopathy Camilla Schinner, PhD, University of Basel</p> <p>3:30 Comprehensive Mapping of Cardiac Enhancers in the Developing Heart Sean Wu, MD, PhD, Stanford University</p> |

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| | <p>3:50 Illuminating Autonomic Control of Heart Rhythm Crystal M Ripplinger, PhD, UC Davis</p> <p>4:10 RyR2 Dysfunction in Cardiomyopathy Francisco Alvarado, PhD, University of Wisconsin-Madison</p> |
| 4:30 – 7:00 pm | <p>Poster Session 3 (includes Poster Competition) Location: Galleria Hall</p> <p>Poster Categories: Inflammation, Thrombosis and Vascular Biology RNA and Cellular Regulation Cardio-Immunology and Inflammation Sex Based Differences in Heart Disease Excitation-Contraction Coupling and Ion Channels and Arrhythmias Extracellular Vesicles and Exosome Biology Mitochondria and Metabolism</p> |
| 7:00 – 9:00 pm | <p>Council Dinner Location: Grand Ballroom</p> |
| Time (EDT) | Thursday, August 3 |
| 7:00 – 11:00 am | <p>Registration Location: Grand Ballroom Foyer</p> |
| 7:00 – 8:00 am | <p>Continental Breakfast Location: Grand Ballroom Foyer</p> |

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| 8:00 – 9:15 am | <p>Session 13: Metabolic Alterations in Heart Disease Location: Grand Ballroom</p> <p>Moderators: Martin Young, PhD, University of Alabama at Birmingham Anja Karlstaedt, MD, PhD, Cedars-Sinai</p> <p>8:00 Mediating Metabolic Remodeling in the Heart E. Douglas Lewandowski, PhD, The Ohio State University College of Medicine</p> <p>8:20 Metabolome in Hypertrophic Cardiomyopathy Sharlene Day, MD, University of Pennsylvania</p> <p>8:40 Impaired Energy Metabolism, Pathologic Remodeling and Life-threatening Arrhythmias Robert Weiss, MD, Johns Hopkins University</p> <p>9:00 Dwarf Overexpression in The Heart Results In Enhanced Mitochondrial Function Omar Brito-Estrada, Cincinnati Children's Hospital</p> |
| 9:15 – 9:45 am | <p>Refreshment Break Location: Grand Ballroom Foyer</p> |

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| 9:45 – 11:00 am | <p>Session 14: Extracellular Vesicles and Intercellular Communication</p> <p>Moderators: Raj Kishore, PhD, Temple University Liya Yin, MD, PhD, Northeast Ohio Medical University</p> <p>9:45 Therapeutic Application of Extracellular Vesicles Raghu Kalluri, MD, PhD, University of Texas MD Anderson Cancer Center</p> <p>10:05 Extracellular Vesicles and Vascular Pathology Elena Aikawa, MD, PhD, Harvard Medical School</p> <p>10:25 Extracellular Vesicles as Potential Cardioprotective Agents Sean M Davidson, PhD, The Hatter Cardiovascular Institute, University College London</p> <p>10:45 Multi-Omics of Tissue-Entrapped Extracellular Vesicles Identifies Unique Drivers Of Atherosclerosis And Aortic Valve Stenosis Mark C Blaser, PhD, Brigham and Women’s Hospital</p> |
| 11:00 am | <p>BCVS Program Chair Closing Remarks Sumanth D Prabhu, MD, Washington University in St. Louis</p> |