Final Program

Organizing Committee:
Chair: Masanori Aikawa
Co-Chairs: Issei Komuro, Toshiharu Shinoka
Members: Elena Aikawa, Luke Brewster, Nicolas L’Heureux, Ryuichi Morishita, Julie Philippi,
Masataka Sata, Cynthia St. Hilaire, Michael Wolf, Masayuki Yoshida

Day 1: Friday, March 12

Opening Session & Keynote Lecture (50 min)
9:00-9:50 am (7:00-7:50 pm EST, March 11)

Session Chair:
Masanori Aikawa
Brigham and Women’s Hospital, Harvard Medical School, USA

Welcome:
Elena Aikawa
ISACB President
Brigham and Women’s Hospital, Harvard Medical School, USA

Keynote Lecture:
My Research: From Vascular Biology to Disease Biology to Translational Research
Ryozo Nagai
President, Jichi Medical University; Professor Emeritus, Former Chairman, Department of Cardiovascular Medicine, University of Tokyo Faculty of Medicine, Japan
(40 min)

Edwards Symposium: Heart Valves and Calcification (90 min)
10:00-11:30 am (8:00-9:30 pm EST, March 11; 2:00-3:30 am in the Netherlands and Belgium,
March 12; 3:00-4:30 am South Africa, March 12)

Session Co-Chairs:
Bauer Sumpio, Yale School of Medicine, USA
Joshua Hutcheson, Florida International University, USA

Alexander Clowes MD Memorial Lecture
Cardiac Valve Replacement Technology in 2021: Challenges, Innovation, Trends and Opportunities
Frederick J. Schoen
Brigham and Women’s Hospital, Harvard Medical School, USA
(22 min)
Invited Speakers:
Will in-situ tissue engineered heart valves calcify?
Carlijn Bouten
Eindhoven University of Technology, The Netherlands
(22 min)

Novel disease driver population of human aortic valves identified via single-cell and proteomic profiling
Elena Aikawa
Brigham and Women’s Hospital, Harvard Medical School, USA
(22 min)

New anti-calcification strategies in tissue valves
Bart Meuris
University Hospitals Leuven, Belgium
(22 min)

Tissue Engineering (80 min)
11:40 am-1:00 pm (9:40-11:00 pm EST, March 11; 3:40-5:00 am Germany/FRANCE. March 12)

Session Co-Chairs:
David Vorp, University of Pittsburgh, USA
James Chow, W. L. Gore, USA

Robert Nerem Memorial Lecture
Engineering bioresorbable vascular conduits to promote transmural angiogenesis, neo-intima formation
Gary Bowlin
University of Memphis, USA
(20 min)

Invited Speakers:

Title: Exploring tissue engineered vascular grafts through appropriate preclinical animal models
Timothy Pennel
University of Cape Town, South Africa
(20 min)

Whole heart reconstruction and regeneration: from dream to reality
Dan Simionescu
Clemson University, USA
(20 min)

Biological textiles for vascular tissue engineering
Nicolas L’Heureux (20; 16 + 4)
Inserm/Université de Bordeaux, France
Vascular Diseases (80 min)
1:10-2:35 pm (11:10 pm-12:35 am EST, March 11/12)

Session Co-Chairs:
   Elena DiMartino, University of Calgary, Canada
   Masayuki Yoshida, Tokyo Medical and Dental University, Japan

Invited Speakers:

Vascular remodeling in mice and men: We are still a few miles south of Soledad
Luke Brewster
Emory University School of Medicine, USA
(20 min)

Oxidative stress and copper transport proteins in vascular inflammatory disease
Tohru Fukai
Medical College of Georgia at Augusta University, USA
(20 min)

Mechanisms of microvascular dysfunction in thoracic aortic disease
Julie Philippi
University of Pittsburgh School of Medicine, USA
(20 min)

Searching for novel biomarkers of thoracic aortic aneurysms using Raman microspectroscopy
Hiromi Yanagisawa
University of Tsukuba, Japan
(20 min)

Young Investigator Award Competition (90 min)
2:45-4:15 pm (12:45-2:15 am EST)*

Session Co-Chairs:
   Giovanni Ferrari, Columbia University, USA
   Craig Goergen, Purdue University, USA

7 Finalists:
Takehito Okui, Brigham and Women’s Hospital, Harvard Medical School, USA
Juline Deppen, Emory University, USA
Hooi Hooi Ng, Florida International University, USA
Yingfei Xue, Columbia University, USA
Farwah Iqbal, Brigham and Women’s Hospital, Harvard Medical School, USA
Bilal Mir, RWTH Aachen University, Germany
Ariana Forneris, University of Calgary, USA

(Total 12 min each; 9 min presentation + 3 min Q&A)

Joint Symposium of Four Societies (100 min, pre-recorded session, available on demand from March 22-April 5)
4:10-5:50 pm

CVEM
(25 min)

JVBMO
(25 min)

ISHR
TBA
(25 min)

ISACB
Toward Next Generation of Tissue Engineered Vascular Grafts for Pediatric Heart Surgery
Toshiharu Shinoka
Nationwide Children's Hospital, USA
(25 min)

Day 2: Saturday, March 13

Stem and Progenitor Cells (60 min)
8:00-9:00 am (6:00-7:00 pm EST, March 12)

Session Co-Chairs: Rebecca Levit, Emory University, USA
Marie Billaud, Brigham and Women’s Hospital, Harvard Medical School, USA

Invited Speakers:

Current update of endothelial progenitor cell biology and medicine
Takayuki Asahara
Tokai University, Japan
(20 min)

Therapeutic vascularization for stem cell-based tissue regeneration
Sara Vasconcelos
Toronto General Hospital Research Institute, Canada
(20 min)

Bioengineering exosomes from cardiac progenitor cells by miRNA programing as new therapeutic strategy to enhance angiogenesis in ischemic heart
Masuko Ushio-Fukai
Medical College of Georgia at Augusta University, USA
Kowa Symposium: Cardiovascular Inflammation and Therapeutics (90 min)
9:10-10:40 am (7:10-8:40 pm EST, March 12)

Session Co-Chairs:
Shun Ishibashi, Jichi Medical University
Raul Santos, University of Sao Paulo, Brazil

Invited Speakers:

Targeting senescent cells for the treatment of cardiovascular aging
Tohru Minamino
Juntendo University, Japan
(22 min)

Systems approach to target discovery for inflammatory vascular disease
Masanori Aikawa
Brigham and Women’s Hospital, Harvard Medical School, USA
(22 min)

Adaptive immunity in atherosclerosis
Klaus Ley
La Jolla Institute for Allergy and Immunology, USA
(22 min)

Triglycerides on the rise
Peter Libby
Brigham and Women’s Hospital, Harvard Medical School, USA
(22 min)

New Trends in Cardiovascular Research (60 min)
10:50-11:50 am (8:50-9:50 pm EST, March 12)

Session Co-Chairs:
Masataka Sata, Tokushima University, Japan
Alexey Kamenskiy, University of Nebraska Omaha, USA

Invited Speakers:

Macrophages in the cardiovascular organ crosstalk and multimorbidity
Ichiro Manabe
Chiba University, Japan
(20 min)

Cardio-oncology: Where do we come from? Who are we? Where are we going?
Jun-ichi Abe
University of Texas MD Anderson Cancer Center, USA
(20 min)
Innovative therapeutics: gene therapies and vaccines for cardiovascular diseases and COVID-19
Ryuichi Morishita
Osaka University, Japan
(20 min)

Women Leaders in Science (75 min)
12:00 pm-1:15 pm (10:00 pm-11:15 am EST, March 12; 3:00-4:15 am, March 13 UK; 4:00-5:15 am March 13 Germany)

Session Co-Chairs:
   Agneta Simionescu, Clemson University, USA
   Julie Campbell, University of Queensland, Australia

Invited Speakers:

Mass spectrometry-enabled cardiovascular biology research: Bridging the gaps across a multidisciplinary endeavor
Sasha Singh
Brigham and Women’s Hospital, Harvard Medical School, USA
(15 min)

CD73-dependent mechanisms regulating PAD homeostasis
Cynthia St. Hilaire
University of Pittsburgh, USA
(15 min)

Understanding the phenotypic switch of smooth muscle cells in vascular calcification
C. LaShan Simpson
Mississippi State University, USA
(15 min)

Advancing revascularization with extracellular matrix cues
Ngan Huang
Stanford University, USA
(15 min)

Comorbidity as a driver for cardiovascular calcification
Claudia Goettsch
RWTH Aachen University, Germany
(15 min)

Industry Research Session (100 min)
1:25-3:05 pm (tentative) (11:25 pm-1:05 am EST, March 12/13)

Session Co-Chairs:
   Michael Wolf, Medtronic, USA
   Art Coury, Northeastern University, USA
Invited Speakers:

*HDL contains a wide range of subparticles influencing metabolism, risk of CHD, and therapy*
Frank Sacks
Harvard T.H. Chan School of Public Health, USA
(15 min)

*Catering for the many: Polymeric TAVR for rheumatic heart disease*
Peter Zilla
University of Cape Town, South Africa
(15 min)

*The Foldax Tria™ heart valve made with the revolutionary polymer LifePolymer™*
David Grainger
University of Utah, USA
and
Ajit Yoganathan
Georgia Institute of Technology, USA
(15 min)

The PolyNova Polymeric Heart Valve System: An Advanced Polymeric System for TAVR
Marvin J. Slepian
University of Arizona, USA
(15 min)

Clinical experience of a pulmonary valved ePTFE conduit
Masaaki Yamagishi
Kyoto Prefectural University of Medicine, Japan
(15 min)

Panel Q&A with all speakers (20 min)

Oral Abstract Presentations:
On Demand (9 min, prerecorded, available through the entire meeting)