

19TH INTERNATIONAL VASCULAR BIOLOGY MEETING
OCTOBER 30—NOVEMBER 3, 2016
SHERATON BOSTON HOTEL, BOSTON, MA USA
MEETING PROGRAM

Sunday, October 30 – 6:30pm

WELCOME AND OPENING PLENARY SESSION

6:30 – 8:30pm — Grand Ballroom

Chairs: **William C. Aird**, Beth Israel Deaconess Medical Center, Harvard Medical School
IVBM Organizing Committee Chair
Michael Gimbrone, Jr., Brigham and Women's Hospital, Harvard Medical School
NAVBO Co-Founder

6:30 *Welcome*
William C. Aird

6:35 *NAVBO and the IVBM - Background*
Michael A. Gimbrone, Jr.

6:40 *Targeting Endothelial Cell Metabolism: Principles and Therapeutic Potential*
Peter Carmeliet, VIB - Vesalius Research Center, University of Leuven

7:25 *Inflammation and Atherothrombosis: A Clinical Investigator's Perspective*
Paul Ridker, Brigham and Women's Hospital, Harvard Medical School

8:10 *Recognition of Collaborating Societies*
William C. Aird

8:12 *Presentation of Travel Awards*
Nobuyuki Takakura, Osaka University for the
Japanese Vascular Biology and Medicine Organization
Jan Kitajewski, University of Illinois Chicago for the
North American Vascular Biology Organization
Jozef Dulak, Jagiellonian University and Anna Randi, Imperial College London for the
European Vascular Biology Organization
Christopher Hughes, University of California, Irvine for
Edwards Lifesciences Center for Advanced Cardiovascular Technology at UC Irvine
William C. Aird will present the Nature Communications Travel Award

8:22 *Invitation to Reception Hosted by Kowa*
Craig A. Sponseller, Chief Medical Officer
Kowa Pharmaceuticals America, Inc.

WELCOME RECEPTION HOSTED BY KOWA

8:30 – 10:00pm — Grand Ballroom Foyer

Light Refreshments



Monday, October 31 – 8:30-10:00am

EYE OPENER SESSIONS FOR TRAINEES:

MEET THE PROFESSOR

OPPORTUNITIES IN CARDIOVASCULAR RESEARCH:

AN NIH PERSPECTIVE WITH ZORINA GALIS

AN INDUSTRY PERSPECTIVE WITH JEREMY DUFFIELD

7:30 – 8:15am — Third Floor

Tickets required - See page xvii

ATHEROSCLEROSIS I

Co-sponsored by the Canadian Society of Atherosclerosis, Thrombosis and Vascular Biology

8:30 – 10:00am — Independence Ballroom

Chairs: *Katie Rayner, University of Ottawa Heart Institute and
Francis W. Lusinskas, Brigham and Women's Hospital, Harvard Medical School*

8:30 *Inflammatory networks in cardiovascular disease*
Matthias Nahrendorf, Massachusetts General Hospital, Harvard Medical School

9:00 *001 - Exploiting macrophage autophagy-lysosomal biogenesis as a therapy
for atherosclerosis*
Babak Razani, Washington University School of Medicine

9:15 *Targeting the immune response in ischemic cardiovascular disease*
Ziad Mallat, University of Cambridge

9:45 *002 - Macrophage necroptosis is activated in vulnerable atherosclerotic plaques in hu-
mans and drives lesion development in mice*
Katey Rayner, University of Ottawa Heart Institute

ENDOTHELIAL CELLS

8:30 – 10:00am — Republic Ballroom

Chairs: *Kayla Bayless, Texas A&M Health Science Center and
Marsha Moses, Boston Children's Hospital, Harvard Medical School*

8:30 *Organ-specific and functional specialization of blood vessels*
Ralf Adams, Max-Planck Institute for Molecular Biomedicine

9:00 *003 - Haploinsufficiency of Klippel-Trenaunay syndrome gene Aggf1 inhibits
developmental and pathological angiogenesis by inactivating PI3K and AKT
and disrupts vascular integrity by activating VE-cadherin*
Qing Wang, Huazhong University of Science and Technology

9:15 *Autophagic and metabolic regulation of vascular function*
Toren Finkel, NIH/NHLBI

9:45 *004 - Mechanisms of arterial lining regeneration in vivo*
Austin McDonald, UCLA-Caltech Medical Scientist Training Program

DEVELOPMENT

Co-sponsored by Cure HHT

8:30 – 10:00am — Back Bay Ballroom C

Chairs: *Courtney Griffin, Oklahoma Medical Research Foundation and
Rosemary Akhurst, University of California, San Francisco*

8:30 *Functional plasticity in vascular networks - a developmental perspective*
Holger Gerhardt, Max-Delbrueck-Center for Molecular Medicine

- 9:00 *005 - Determination of developmental phosphate transport mechanisms.*
Mary Wallingford, University of Washington
- 9:15 *How blood vessels form in space and time*
Victoria Bautch, University of North Carolina at Chapel Hill
- 9:45 *006 - Androgen Dependent TFPI-Regulating Protein (ADTRP) plays an important role in vascular development by regulating Wnt signaling*
Maulin Patel, Oklahoma Medical Research Foundation

NEW ROLES OF LYMPHATICS IN DISEASE

Co-sponsored by Lymphatic Education and Research Network
8:30 – 10:00am — Back Bay Ballroom D

Chairs: **Stanley Rockson**, *Stanford University School of Medicine and*
Kari Alitalo, *Biomedicum Helsinki/Univ Helsinki*

- 8:30 *Transcriptional profiling of lymphatic endothelial cells*
Guillermo Oliver, Northwestern University
- 9:00 *007 - Vegfc acts through ERK to induce sprouting and differentiation of trunk lymphatic progenitors*
Masahiro Shin, University of Massachusetts Medical School
- 9:15 *Immune implications of lymphangiogenesis in inflammation*
Melody Swartz, University of Chicago
- 9:45 *008 - VEGF-C modulates post-myocardial infarction lymphangiogenesis and inflammation*
Sophie Norman, University of Oxford

Coffee Break—Ballroom Foyer

Monday, October 31 — 10:30am-12:00pm

THROMBOSIS

10:30am – 12:00pm — Back Bay Ballroom C

Chairs: **Nigel Mackman**, *University of North Carolina, Chapel Hill and*
Xiaoping Du, *University of Illinois at Chicago*

- 10:30 *Pathological impact of Neutrophil Extracellular Traps (NETs)*
Denisa Wagner, Boston Children's Hospital, Harvard Medical School
- 11:00 *009 - Differential contribution of platelet derived HMGB1 redox forms to venous thrombosis*
Konstantin Stark, Ludwig Maximilians Universität
- 11:15 *Regulation of von Willebrand factor adhesive function*
Jose Lopez, Puget Sound Blood Center
- 11:45 *010 - Tuning the endothelial response: Differential release of exocytic cargoes from Weibel Palade Bodies.*
Thomas Nightingale, Queen Mary University of London

SMOOTH MUSCLE CELLS

Co-sponsored by Canadian Society of Arteriosclerosis, Thrombosis and Vascular Biology

10:30am – 12:00pm — Independence Ballroom

Chairs: **Michelle Bendeck**, *University of Toronto and*
Mark Majesky, *University of Washington School of Medicine*

- 10:30 *Pericytes in health and disease*
 Christer Betsholtz, Uppsala University
- 11:00 *011 - Molecular regulation of vascular smooth muscle cell recruitment to arteries during development*
 Amber Stratman, NICHD/NIH
- 11:15 *SMC phenotypic transitions play a key role in the pathogenesis of advanced atherosclerotic lesions*
 Gary Owens, University of Virginia Health System
- 11:45 *012 - Loss of YY1API alters smooth muscle cell phenotype and leads to fibromuscular dysplasia in Grange syndrome*
 Callie Kwartler, University of Texas Health Science Center at Houston

ANGIOGENESIS AND ARTERIOGENESIS I

Co-sponsored by European Vascular Biology Organization

10:30am – 12:00pm — Republic Ballroom

Chairs: **Rong Wang**, *University of California, San Francisco and*
Anna Randi, *Imperial College London/National Heart and Lung Institute*

- 10:30 *Common and distinct operative mechanisms during vascular growth and sprouting angiogenesis*
 Luisa Iruela-Arispe, University of California, Los Angeles
- 11:00 *013 - Endothelial expression of slug regulates angiogenesis by modulating notch signaling and EndoMT*
 Nan Hultgren, University of California Irvine
- 11:15 *New regulators of vascular sprouting and remodeling*
 Young-Guen Kwon, Yonsei University
- 11:45 *014 - Adult endothelial Akt1 expression is critical for in vivo PI3K/Akt1-eNOS functionality*
 Monica Lee, Yale University

DRUG DISCOVERY/GENE THERAPY

Co-sponsored by Japanese Vascular Biology and Medicine Organization

10:30am – 12:00pm — Back Bay Ballroom D

Chairs: **Ken Walsh**, *Boston University School of Medicine and*
Kensuke Egashira, *Kyushu University*

- 10:30 *Systems biology of macrophage activation: Target discovery for cardiometabolic inflammation*
 Masanori Aikawa, Brigham and Women's Hospital, Harvard Medical School

- 11:00 *015 - Development and pre-clinical testing of Magacizumab, a fully humanized anti-angiogenic monoclonal antibody against LRG1*
Stephen Moss, UCL Institute of Ophthalmology
- 11:15 *New technology to unravel microvascular behavior in the in vivo niche*
Grietje Molema, Univ. Medical Ctr. Groningen
- 11:45 *016 - Spatial inhibition of atherogenic miR-92a by targeted polyelectrolyte complex micelles in ApoE^{-/-} mice*
Myung-Jin Oh, University of Chicago

Lunch—Grand Ballroom
12:00 to 2:00pm

POSTER SESSION I AND EXHIBITS

12:00—2:00 pm

Constitution Ballroom:

THROMBOSIS - Boards 1 through 10

ANGIOGENESIS AND ARTERIOGENESIS - Boards 11 through 47

DRUG DISCOVERY/GENE THERAPY - Boards 48 through 54

PULMONARY HYPERTENSION - Boards 55 through 59

LARGE VESSEL DISEASE OUTSIDE THE HEART - Boards 60 through 78

MICROCIRCULATION - Boards 79 through 86

SMOOTH MUSCLE CELLS - Boards 87 through 98

Ballroom Foyer:

SMOOTH MUSCLE CELLS - Boards 99 through 106

ENDOTHELIAL CELLS I - Boards 107 through 136

DEVELOPMENT - Boards 137 through 148

Liberty Ballroom:

DEVELOPMENT - Boards 149 through 150

LYMPHATICS - Boards 151 through 162

Presenters will alternate times as follows:

Presenters at odd numbered boards will present from 12:00 pm to 1:00 pm;

Presenters at even numbered boards will present from 1:00 pm to 2:00 pm

Visit the Exhibits - see guide on pages xii & xiii

PULMONARY HYPERTENSION

2:00 – 3:30pm — Back Bay Ballroom C

Chairs: **Troy Stevens**, University of South Alabama and
Paul Yu, Brigham and Women's Hospital, Harvard Medical School

2:00 *Metabolic reprogramming and inflammation act in concert to control vascular remodeling in hypoxic pulmonary hypertension*
Kurt Stenmark, University of Colorado Denver

2:30 *017 - Supra-physiological shear stress unveils endothelial heterogeneity in the lungs of patients with Pulmonary Arterial Hypertension*
Robert Szulcek, VU University Medical Center

2:45 *The metabolic basic of vascular disease and pulmonary arterial hypertension*
Evangelos Michelakis, University of Alberta

3:15 *018 - Nuclear receptor Nur77 is a novel regulator in pulmonary arterial hypertension*
Konda Babu Kurakula, Leiden University Medical Center

MICROCIRCULATION

2:00 – 3:30pm — Independence Ballroom

Chairs: **David Zawieja**, Texas A&M Health Science Center and
W. Lee Murfee, Tulane University

2:00 *Redox regulation of microvascular function in humans*
David Gutterman, Medical College of Wisconsin

2:30 *019 - Regenerative angiogenesis in ischemic muscle produces a flawed microcirculation that poorly controls blood flow*
John-Michael Arpino, Robart's Research Institute, Western University

2:45 *Is it time to think big about coronary microvessels?*
William Chilian, Northeastern Ohio Medical University

3:15 *020 - Calreticulin at myoendothelial junctions selectively regulates calcium events and negative feedback to vasoconstriction*
Lauren Biwer, University of Virginia

EXTRACELLULAR MATRIX

2:00 – 3:30pm — Republic Ballroom

Chairs: **Thomas Wight**, Benaroya Research Institute and
Robert Mecham, Washington University Medical School

2:00 *Integrin-dependent crosstalk between microglia and vasculature*
Tatiana Byzova, Lerner Research Institute, Cleveland Clinic

2:30 *021 - Role of Alu RNA editing in HuR-mediated gene expression of extracellular matrix degradation enzymes in atherosclerotic heart disease*
Marco Sachse, Goethe University Frankfurt

2:45 *Fluid shear stress mechanotransduction in vascular health and disease*
Martin Schwartz, Yale School of Medicine

- 3:15 *022 - Loss of COL15A1 in SMC unveils a novel role for the collagen in atherosclerosis pathogenesis*
Brittany Durgin, University of Virginia

IMAGING

2:00 – 3:30pm — Back Bay Ballroom D

Chairs: **Christopher Carman and Roberta Martinelli**, Beth Israel Deaconess Medical Center, Harvard Medical School

- 2:00 *Imaging leukocyte recruitment dynamics and blood brain barrier function during viral encephalitis*
Mark Miller, Washington University School of Medicine
- 2:30 *023 - Combined in vivo photoacoustic and confocal imaging of angiogenesis reveals hemodynamics and heterogenous fluorescent reporter expression in endothelial cells*
Molly Kelly-Goss, University of Virginia
- 2:45 *Coronary artery molecular imaging: Translational insights*
Eric A. Osborn, Beth Israel Deaconess Medical Center, Harvard Medical School
- 3:15 *024 - Tissue clearing and unbiased image analysis shows the role of VEGFA in defining the vascular niche of tissue resident skeletal muscle stem cells (MuSCs)*
Mayank Verma, University of Minnesota

Monday, October 31 – 4:00pm-6:15pm (check session time)

LARGE VESSEL DISEASE

Co-sponsored by Japanese Vascular Biology and Medicine Organization

4:00 – 5:30pm — Independence Ballroom

Chairs: **Philip Tsao**, Stanford University School of Medicine and
Hironori Nakagami, Graduate School of Medicine, Osaka University

- 4:00 *Micro-RNA's in Peripheral Arterial Disease*
Brian Annex, University of Virginia
- 4:30 *025 - mTORC1 hyperactivation due to Tsc1 disruption impairs postnatal smooth muscle cell differentiation and induces aortic pathology*
Guangxin Li, Yale School of Medicine
- 4:45 *Recent progress in molecular medicine on critical limb ischemia; from regenerative medicine to vaccine*
Ryuichi Morishita, Osaka University School of Medicine
- 5:15 *026 - Microvesicle analysis in large vessel vasculitis reveals a distinct phenotype of endothelial origin*
Allan Kiprianos, Imperial College London

ANGIOGENESIS AND REGENERATION

Sponsored by Japanese Vascular Biology and Medicine Organization

4:00 – 6:00pm — Republic Ballroom

- Chairs:* **Issei Komuro**, University of Tokyo and
Ralf Adams, Max-Planck Institute for Molecular Biomedicine
- 4:00 *Neuro-vascular crosstalk in the developing retina*
Yoshiaki Kubota, Keio University
- 4:25 *Reassessing ERK in vascular development: a major role for sprouting, but not artery differentiation*
Nathan Lawson, University of Massachusetts Medical School
- 4:50 *Role of miRNAs in embryonic hematopoiesis*
Akiko Hata, University of California, San Francisco
- 5:15 *Generation of blood-brain barrier model derived from human iPS cells for analyzing drug kinetics and neuro-vascular unit*
Kohei Yamamizu, Kyoto University (a JVBMO Young Scientist)
- 5:30 *027 - Mitofusin 2 couples metabolic activity to the unfolded protein response during pro-angiogenic transitions in endothelial cells*
Gladys A. Ngoh, Boston University School of Medicine
- 5:45 *028 - Non-HIF-regulated hypoxic responses control nerve-mediated arterial branching in the developing skin*
Wenling Li, NIH

Monday, October 31 – Exhibitor Showcases**THERMO FISHER SCIENTIFIC**

4:00 – 5:00pm — Back Bay Ballroom C

Targeted proteomics performed on the Q Exactive permits to study the metabolism of circulating apolipoproteins

Sasha A. Singh

Center for Interdisciplinary Cardiovascular Sciences

Brigham and Women's Hospital

Translational Proteomics Workflows for Extending the Profiling Range of Plasma/Serum

Scott Peterman and David Sarracino

Thermo Fisher Scientific BRIMS

APPLIED BIOPHYSICS

5:15 – 6:15pm — Back Bay Ballroom D

Protocols for Measuring Endothelial Barrier Function with ECIS from TEER across transwell filters to large scale screens on 96 well plates

Christian Renken

Applied BioPhysics

E PLURIBUS UNUM: THE “VASCULOME?”

6:15 – 8:00pm — Republic Ballroom

Chairs/Organizers: Marc Charette, Zorina Galis and Pothur Srinivas, NHLBI/NIH

The National Heart Lung and Blood Institute (NHLBI) is organizing a workshop and discussion forum open to the entire audience of IVBM 2016 to explore the timeliness of creating “The Vasculome,” an integrated, multi-dimensional, multi-scale map of the human vasculature. This session consists of short presentations in each aspect of this new concept: Biology and Technology, followed by open discussions.

BIOLOGY

- 6:15 *Overview*
Zorina Galis
Division of Cardiovascular Sciences
National Heart, Lung, and Blood Institute
- 6:25 Renata Pasqualini
Division of Molecular Medicine
University of New Mexico Cancer Center
- 6:35 Anthony Paul Barnes
Knight Cardiovascular Institute
Oregon Health & Science University
- 6:45 Mark Majesky
University of Washington School of Medicine
- 6:55 *Open Discussion - Biology*

TECHNOLOGY

- 7:05 Ravi Iyengar
Systems Biology Center New York (SBCNY)
Mount Sinai School of Medicine
- 7:15 Orit Rozenblatt-Rosen
Klarman Cell Observatory
Broad Institute
- 7:25 Alex Shalek
Institute for Medical Engineering and Science
Massachusetts Institute of Technology
- 7:35 *Open Discussion - Technology*
- 7:45 *Open Discussion - Overall Program*

EYE OPENER SESSIONS FOR TRAINEES:

MEET THE PROFESSOR

OPPORTUNITIES IN CARDIOVASCULAR RESEARCH:

AN EDITOR'S PERSPECTIVE WITH ALAN DOUGHERTY

WOMEN IN SCIENCE: A PANEL DISCUSSION

Tickets required

7:30 – 8:15am — Third Floor

See page xvii

ATHEROSCLEROSIS II

Co-sponsored by Korean Vascular Science and Medicine Organization

8:30 – 10:00am — Independence Ballroom

Chairs: *Jun-ichi Abe*, University of Texas MD Anderson Cancer Center and
Michael A. Gimbrone, Jr., Brigham and Women's Hospital, Harvard Medical School

8:30 *Mechanism of calcification in atherosclerosis: Role of bone-marrow-derived calcifying progenitors*

Hyo-Soo Kim, Seoul National University

9:00 *029 - Role of adenosine-to-inosine RNA editing in human atherosclerosis*

Konstantinos Stellos, Goethe University Frankfurt

9:15 *Defective inflammation resolution in atherosclerosis: Mechanisms and therapeutic implications*

Ira Tabas, Columbia University Medical Center

9:45 *030 - Calpain-6 potentiates pro-atherogenic pinocytosis in macrophages*

Takuro Miyazaki, Showa University School of Medicine

HEART

8:30 – 10:00am — Back Bay Ballroom D

Chairs: *S. Abdelliah-Seyfried*, Universität Potsdam Abteilung and
Stefan Chlopicki, Jagiellonian University

8:30 *Hemodynamic control of heart valve development*

Mark Kahn, University of Pennsylvania

9:00 *031 - Endothelial Notch signaling controls the flux of nutrients to muscle cells*

Andreas Fischer, German Cancer Research Center

9:15 *Reactivation of endothelial-to-mesenchymal transition as mechanism for mitral valve adaptation*

Joyce Bischoff, Boston Children's Hospital, Harvard Medical School

9:45 *032 - VEGFR2 signaling mediates endothelial cell to cardiomyocyte crosstalk in cardiac hypertrophy*

Riikka Kivelä, University of Helsinki and Wihuri Research Institute

VASCULAR REMODELING

8:30 – 10:00am — Republic Ballroom

Chairs: *C. Keith Ozaki*, Brigham and Women's Hospital, Harvard Medical School and
Mark Feinberg, Brigham and Women's Hospital, Harvard Medical School

8:30 *Immune mechanisms in cardiovascular disease*

David G. Harrison, Vanderbilt University School of Medicine

- 9:00 *033 - Erk5 inhibits expression of Angiopoietin 2 in the neonatal lung and orchestrates vascular stabilization in the perinatal period*
Irinna Papangeli, Yale School of Medicine
- 9:15 *The influence of non-coding RNA on vascular pathophysiology*
Andrew Baker, University of Edinburgh
- 9:45 *034 - The microtubule binding protein Rudhira regulates vascular remodeling by modulating transforming growth factor β signaling*
Maneesha Inamdar, Jawaharlal Nehru Centre for Advanced Scientific Research

TRANSCRIPTION AND EPIGENETICS I

8:30 – 10:00am — Back Bay Ballroom C

- Chairs:* **Marianne Grant**, Beth Israel Deaconess Medical Center and
Rama Natarajan, Beckman Research Institute of City of Hope
- 8:30 *Epigenetic regulation of endothelial phenotype: The role of the non coding genome*
Philip Marsden, University of Toronto
- 9:00 *035 - Downregulation of novel anti-inflammatory lncRNA DRAIR by Type 2 Diabetes enhances inflammatory responses in human monocytes*
Marpadga A. Reddy, Beckman Research Institute of City of Hope
- 9:15 *Transcriptional and epigenetic regulation in vascular smooth muscle cells*
Kathleen Martin, Yale School of Medicine
- 9:45 *036 - ETS1 promotes angiogenesis by stimulating RNA Polymerase II pausing release*
Bing Zhang, Shanghai Jiao Tong University

Coffee Break—Ballroom Foyer**Tuesday, November 1 – 10:30am-12:00pm****NEUROVASCULAR DISEASE**

10:30am – 12:00pm — Independence Ballroom

- Chairs:* **Elisabetta Dejana**, Uppsala University and University of Milan and
Chenghua Gu, Harvard Medical School
- 10:30 *Novel insight into the pathogenesis of CADASIL*
Anne Joutel, Inserm U1161, Genetics and Pathogenesis of Cerebrovascular Diseases
- 11:00 *037 - Sphingosine- 1- phosphate receptor 1 activation in brain endothelial cells after subarachnoid hemorrhage in mice*
Josephin Wagner, University Hospital Zurich
- 11:15 *Neurovascular dysfunction and cognitive impairment*
Costantino Iadecola, Weill Cornell Medical College
- 11:45 *038 - Size-selective blood-brain barrier opening by targeting endothelial sphingosine 1 -phosphate receptor 1*
Keisuke Yanagida, Weill Cornell Medical College

LIVER

10:30am – 12:00pm — Back Bay Ballroom D

Chairs: **Tatsuhiko Kodama**, *University of Tokyo and*
Sergij Goerdts, *Heidelberg University*

10:30 *From angiocrine signaling to vascular maturation: Epigenetic control of vascular maturation*

Hellmut Augustin, German Cancer Research Center and Heidelberg University

11:00 *039 - Molecular regulation of hepatic microvascular differentiation and function determines liver development, fetal hematopoiesis, and angiocrine control of iron homeostasis*

Cyrill Géraud, Heidelberg University

11:15 *Biology of the hepatic sinusoids*

Vijay Shah, Mayo Clinic

11:45 *040 - Ablation of Beta and Gamma -catenin contributes to loss of blood bile barrier*

Tirthadipa Pradhan, University of Pittsburgh

IMMUNITY I

Co-sponsored by American Society for Nephrology

10:30am – 12:00pm — Republic Ballroom

Chairs: **William Muller**, *Feinberg School of Medicine, Northwestern University and*
Ananth Karumanchi, *Beth Israel Deaconess Medical Center, Harvard Medical School*

10:30 *Leukocyte trafficking in renal autoimmune disease*

Tanya N. Mayadas, Brigham and Women's Hospital, Harvard Medical School

11:00 *041 - A genomic regulatory element controls segmental differentiation and regional immunity*

Thanh Theresa Dinh, Stanford University

11:15 *Harnessing protective autoimmunity to vaccinate against cardiovascular diseases*

Klaus Ley, La Jolla Institute for Allergy & Immunology

11:45 *042 - GDF-15 inhibits integrin activation and mouse neutrophil recruitment through the ALK-5/TGF β RII heterodimer*

Annette Artz, Max-Planck Institute Münster

TRANSCRIPTION AND EPIGENETICS II

10:30am – 12:00pm — Back Bay Ballroom C

Chairs: **Yoshiaki Okada**, *Osaka University and*
Jason Fish, *University Health Network, University of Toronto*

10:30 *Transcriptional control of vascular stability*

Anna Randi, Imperial College London

11:00 *043 - Smooth muscle cell plasticity is dependent on TET2-HDAC4 regulation of stemness genes*

Renjing Liu, University of Sydney

11:15 *KLFs and the cardiovascular system*

Mukesh Jain, Case Western Reserve University

11:45 *044 - Identification and characterization of endothelial cell type-specific transcriptional enhancers using lineage-specific p300 ChIP-seq*
Pingzhu Zhou, Boston Children's Hospital

Lunch—Grand Ballroom
12:00 to 2:00pm

POSTER SESSION II AND EXHIBITS

12:00 – 2:00pm

Constitution Ballroom:

NEUROVASCULAR DISEASE - Boards 1 through 6
VASCULAR MALFORMATIONS - Boards 7 through 18
HHT - Boards 19 and 20
DISEASES - Boards 21 through 26
HEART - Boards 27 through 31
ORGAN SPECIFIC VASCULAR BEDS - Boards 32 through 39
BRAIN - Boards 40 through 43
TRANSCRIPTION AND EPIGENETICS - Boards 44 through 54
TISSUE ENGINEERING - Boards 55 through 67
IMMUNITY - Boards 68 through 82
STEM CELLS - Boards 83 through 93
HYPERTENSION/ENDOTHELIAL-DEPENDENT RESPONSES - Boards 94 through 97
ANIMAL MODELS OF VASCULAR DISEASE - Board 98

Ballroom Foyer:

ANIMAL MODELS OF VASCULAR DISEASE - Boards 99 through 107
VASCULAR BIOLOGY - Boards 108 through 124
ATHEROSCLEROSIS I - Boards 125 through 144
ENDOTHELIAL CELLS II - Boards 145 through 148

Liberty Ballroom:

ENDOTHELIAL CELLS II - Boards 149 through 162

Presenters will alternate times as follows:

Presenters at odd numbered boards will present from 12:00 pm to 1:00 pm;

Presenters at even numbered boards will present from 1:00 pm to 2:00 pm

Visit the Exhibits - see guide on pages xii & xiii

VASCULAR MALFORMATIONS

Co-sponsored by Cure HHT

2:00 – 3:30pm — Independence Ballroom

Chairs: **Joyce Bischoff**, Boston Children's Hospital, Harvard Medical School and
Ondine Cleaver, UT Southwestern Medical Center

2:00 *Deciphering the heterogeneity of vascular malformations by next generation sequencing*
Miikka Vikkula, de Duve Institute, Université catholique de Louvain

2:30 *045 - Endoglin controls blood vessel diameters via endothelial cell shape changes*
Arndt Siekmann, Max-Planck Institute for Molecular Biomedicine

2:45 *Cerebral cavernous malformations: From gene discovery to potential therapy*
Douglas Marchuk, Duke University Medical Center

3:15 *046 - Overexpression of VEGF-C in bone causes a phenotype that resembles Gorham-Stout disease*
Michael Dellinger, UT Southwestern Medical Center

KIDNEY

Co-sponsored by American Society for Nephrology

2:00 – 3:30pm — Back Bay Ballroom D

Chairs: **Samir Parikh** and **Ananth Karumanchi**, Beth Israel Deaconess Medical Center,
Harvard Medical School

2:00 *New mechanism of renal vascular and glomerular remodeling*
Janos Peti-Peterdi, University of Southern California

2:30 *047 - Efficacious targeting of NF κ B-p65 siRNA to different microvascular beds in diseased kidney*
Jan Kamps, University Medical Center Groningen

2:45 *High "Tek" solutions for vascular complications of diabetes*
Susan Quaggin, Northwestern University

3:15 *048 - Transcriptional network regulating re-vascularization of the kidney following injury*
Lan Dang, Biogen

IMMUNITY II

2:00 – 3:30pm — Republic Ballroom

Chairs: **Masayuki Yoshida**, Tokyo Medical and Dental University and
Francois Mach, University Hospital, Geneva Medical School

2:00 PM *Neutrophil transmigration in vivo: Mode, mechanisms and novel concepts*
Sussan Nourshargh, Barts and The London School of Medicine

2:30 *049 - The role of IQGAP1 in LBRC trafficking and transendothelial migration: from in vitro identification to in vivo validation*
William Muller, Feinberg School of Medicine, Northwestern University

- 2:45 *Monocyte/macrophage recruitment to sites of inflammation*
Paul Kubes, University of Calgary
- 3:15 *050 - The Origin and Maintenance of Resident Arterial Macrophages*
Angela Li, University of Toronto

TISSUE ENGINEERING

2:00 – 3:30pm — Back Bay Ballroom C

*Chairs: Anjelica Gonzalez, Yale University and
Elena Aikawa, Brigham and Women's Hospital, Harvard Medical School*

- 2:00 *Vascularized and perfused micro-tissues in culture and their use in drug screening*
Christopher Hughes, University of California, Irvine
- 2:30 *051 - High-density lipoproteins reduce amyloid-beta-deposition in a novel in vitro model of the human brain vasculature*
Jerome Robert, University of British Columbia
- 2:45 *Engineering organ-specific microvasculature*
Ying Zheng, University of Washington
- 3:15 *052 - The role of myeloid cell-derived PDGF in tissue- engineered vascular graft neotissue formation*
Ekene Onwuka, The Research Institute at Nationwide Children's Hospital

Tuesday, November 1 — 4:00pm-6:15pm (check each session time)

STEM CELLS I

4:00 – 5:30pm — Republic Ballroom

*Chairs: Guillermo Garcia-Cardena, Brigham and Women's Hospital, Harvard Medical School
and Karen Hirschi, Yale School of Medicine*

- 4:00 *Tissue-specific endothelial-derived angiocrine signals in organ regeneration*
Shahin Rafii, Weill Cornell Medical College
- 4:30 *053 - KLF4-dependent reprogramming of differentiated smooth muscle cells generates a subpopulation of resident vascular progenitor cells in the adventitia*
Mary Weiser-Evans, Univ. of Colorado Denver Anschutz Medical Campus
- 4:45 *Origin and patterning of coronary arteries*
Kristy Red-Horse, Stanford University
- 5:15 *054 - Bone Morphogenetic Protein 9 (BMP9) regulates lymphatic endothelial lineage specification during in vitro mouse embryonic stem cell differentiation*
Sabine Bailly, INSERM

**DEFECTIVE TGF β FAMILY SIGNALING IN
HEREDITARY HEMORRHAGIC TELANGIECTASIA (HHT)**

Sponsored by Cure HHT
Supported by the Jeffrey A Blevins Fund
4:00 – 5:00pm - Independence Ballroom

Chair: S. Paul Oh, University of Florida

- 4:00 *Overview*
S. Paul Oh, University of Florida
- 4:10 *Notch and HHT mutations share mechanisms in AVM formation*
Rong Wang, University of California, San Francisco
- 4:35 *HHT animal models and their use in mechanistic studies*
Hua Su, University of California, San Francisco

VASCULAR REGENERATION USING HGF GENE THERAPY

Sponsored and Supported by AnGes MG, Inc.
4:00 – 5:00pm — Back Bay Ballroom C

Chair: Lars Norgren, Uppsala University

- 4:00 *Basic research of HGF*
Ryuichi Morishita, Osaka University
- 4:30 *Clinical research of HGF*
Richard Powell, Dartmouth-Hitchcock Medical Center

LYMPHATICS: AT THE CROSSROAD OF THE CIRCULATION AND IMMUNE SYSTEM

Sponsored by the Lymphatic Education and Research Network
Supported in part by Texas A&M University College of Medicine, Department of Medical Physiology
5:15 – 6:15pm — Independence Ballroom

Chair: David Zawieja, Texas A&M University

- 5:15 *Lymph nodal circulation and antigens filtration rate*
Stanley Rockson, Stanford University
- 5:45 *Lymphatic disease, edema, and inflammation: From bench to bedside*
Laura Santambrogio, Albert Einstein College of Medicine

ANG-TIE SYSTEM FOR VASCULAR STABILIZATION

Sponsored by the Korean Vascular Science and Medicine Organization
5:15 – 6:15pm — Back Bay Ballroom C

Chair: Gou Young Koh, Korea Advanced Institute of Science and Technology

- 5:15 *Non-endothelial functions of Tie2*
Hellmut Augustin, Heidelberg University and German Cancer Research Center
- 5:35 *The reciprocal relationship of Tie2 and infections*
Samir Parikh, Beth Israel Deaconess Medical Center and Harvard Medical School
- 5:55 *Therapeutic roles of Tie2 activation in diverse vascular disease models*
Gou Young Koh, Korea Advanced Institute of Science and Technology

Tuesday, November 1 – Exhibitor Showcase

VISUALSONICS

4:00 – 5:00pm — Back Bay Ballroom D

*Unlocking Translational Biomarkers in Vascular Biology with
Ultra High Frequency Ultrasound*

Julius Decano, Brigham and Women's Hospital, Harvard Medical School

Gala at the Isabella Stewart Gardner Museum

DINNER AT THE MUSEUM

6:30 – 9:30pm — Isabella Stewart Gardner Museum
25 Evans Way

- 6:30 Beer and wine will be served
- 6:45 Hors d' oeuvres will be passed
- 7:30 Buffet dinner will be served
- 8:30 Desserts and coffee will be available

Two coach buses will take Gala attendees over to the museum from the Sheraton Boston Hotel. Passengers can begin boarding buses at 6:15pm. The buses will continue to loop until all attendees have arrived at the museum. Buses will be available for return to the Sheraton, beginning at 9:00pm.

If you choose to drive, the Isabella Stewart Gardner Museum is located at 25 Evans Way. Parking is available at the Museum of Fine Arts parking lot at 20 Museum Road off Huntington Avenue. Parking is \$17 per car.

If you are walking to the museum, a map can be found in the meeting mobile app or check with the hotel concierge or the NAVBO staff.

There is complimentary coat check at the Museum entrance - coat check is just adjacent to the Living Room. Guests carrying personal bags larger than 10 in x 10 in may be asked to leave their bags at the coat check if entering the Historic Palace.

Museum docents are available to answer any questions. Please take advantage of their knowledge and expertise.

We are pleased to offer our attendees a special treat! Visit the exhibit, Beyond Words, which features illuminated manuscripts from 15th Century Italy (new wing, second floor).

No flash photography or additional lighting is allowed in the Historic Building. Flash photography is allowed on the first floor of the New Wing only.

ATHEROSCLEROSIS III

Co-sponsored by Japanese Vascular Biology and Medicine Organization
8:30 – 10:00am — Independence Ballroom

Chairs: **Yasufumi Sato**, *Institute of Development, Aging and Cancer, Tohoku University and Myron Cybulsky*, *University Health Network, University of Toronto*

8:30 *Innate immune memory in atherosclerosis*
Eicke Latz, University Hospital, University of Bonn

9:00 *055 - IL1 β promotes atheroprotective changes in late stage atherosclerotic lesions*
Delphine Gomez, University of Virginia

9:15 *Role of innate immunity in chronic inflammation in arterial wall and adipose tissue*
Masataka Sata, University of Tokushima Graduate School

9:45 *056 - Identification of ALK1 as a novel mechanism of LDL uptake into and transcytosis through the endothelium*
Jan Kraehling, Yale School of Medicine

EYE

8:30 – 10:00am — Back Bay Ballroom D

Chairs: **Patricia D'Amore**, *Schepens Eye Research Institute/Harvard Med School and Holger Gerhardt*, *Max-Delbrueck-Center for Molecular Medicine*

8:30 *Light response pathways in vascular development*
Richard Lang, Cincinnati Children's Hospital Medical Center

9:00 *057 - Role of Vascular Stiffness in Retinal Endothelial Activation Associated with Diabetic Retinopathy*
Kaustabh Ghosh, University of California, Riverside

9:15 *Novel functions of VEGF-B in angiogenesis*
Xuri Li, Sun Yet-Sen University

9:45 *058 - Hippo signaling effector Yap regulates hyaloid vasculature regression in the developing eye*
Masahide Sakabe, Cincinnati Children's Hospital Medical Center

PERMEABILITY

8:30 – 10:00am — Back Bay Ballroom C

Chairs: **Radu Stan**, *Geisel School of Medicine at Dartmouth and Peter Hordijk*, *Free University Medical Center*

8:30 *Therapeutic targeting of VEGF-regulated vascular permeability*
Lena Claesson-Welsh, Uppsala University

9:00 *059 - Abl2/Arg facilitates endothelial barrier disruption via β 1 integrin endocytosis and distribution in inflammatory edema*
Jurjan Aman, VU University Medical Centre

9:15 *Regulation of endothelial junction integrity*
Samir Parikh, Beth Israel Deaconess Medical Center

- 9:45 *060 - The diaphragms of fenestrated endothelia – gatekeepers of vascular permeability, blood homeostasis and survival in mice and humans*
Radu Stan, Geisel School of Medicine at Dartmouth

STEM CELLS II

Co-sponsored by European Vascular Biology Organization
8:30 – 10:00am — Republic Ballroom

Chairs: Jozef Dulak, Jagiellonian University and Shahin Rafii, Weill Cornell Medical College

- 8:30 *Role of vascular endothelial cells in stem cell generation and maintenance*
Karen Hirschi, Yale School of Medicine
- 9:00 *061 - Rejuvenation of aged vascular niches to enhance hematopoietic stem cell function*
Jason Butler, Weill Cornell Medical College
- 9:15 *Cell fate decisions in hemogenic endothelium*
Ann Zovein, University of California, San Francisco
- 9:45 *062 - Endothelial side population cells contribute to tumor angiogenesis*
Hisamichi Naito, Osaka University

Coffee Break—Ballroom Foyer

Wednesday, November 2 – 10:30am-12:00pm

CANCER

Co-sponsored by Koran Vascular Science and Medicine Organization
10:30am – 12:00pm — Republic Ballroom

- Chairs: Gabriele Bergers, VIB - Vesalius Research Center, University of Leuven and
Diane Bielenberg, Boston Children's Hospital, Harvard Medical*
- 10:30 *Vascular abnormalization in glioblastoma*
Anna Dimberg, Uppsala University
- 11:00 *063 - Targeting metabolic symbiosis to overcome resistance to anti-angiogenic therapy*
Laura Pisarsky, Fred Hutchinson Cancer Research Center
- 11:15 *Molecular targeting of tumor vasculatures*
Gou Young Koh, KAIST
- 11:45 *064 - Cancer-associated kidney injury can be prevented by targeting of intravascular neutrophil extracellular traps*
Anna-Karin Olsson, Uppsala University

LUNG

10:30am – 12:00pm — Back Bay Ballroom D

- Chairs: Dolly Mehta, University of Illinois at Chicago and
Kurt Stenmark, University of Colorado Denver*
- 10:30 AM *The Pulmonary Endothelial Glycocalyx: A determinant of lung injury onset and resolution*
Eric Schmidt, University of Colorado School of Medicine

- 11:00 *065 - Adenosine Deaminase Acting on RNA-1 is Indispensable for Vascular Development and Homeostasis in vivo*
Federica Francesca Lunella, Institute of Cardiovascular Regeneration
- 11:15 *Lineage tracing analysis of lung microvessel repair*
Asrar Malik, University of Illinois Chicago College of Medicine
- 11:45 *066 - Epigenetic repression of KLF2 secondary to loss of FAK expression impairs SIPR1 transcription and vascular barrier formation*
Pascal Yazbeck, University of Illinois Chicago College of Medicine

CALCIFICATION

10:30am – 12:00pm — Independence Ballroom

Chairs: **Linda Demer**, University of California, Los Angeles School of Medicine and
Catherine Shanahan, Kings College London

- 10:30 *Cellular regulation of vascular calcification*
Cecilia Giachelli, University of Washington
- 11:00 *067 - Rac2 Regulates IL-1 β -dependent Atherosclerotic Calcification*
Abigail Healy, Providence VA Medical Center
- 11:15 *The role of microvesicles in cardiovascular calcification*
Elena Aikawa, Brigham and Women's Hospital, Harvard Medical School
- 11:45 *068 - Epigenetic Regulation in Vascular Calcification*
Chin Yee Ho, Kings College London

COMPLEXITY AND COMPUTATIONAL MODELING

10:30am – 12:00pm — Back Bay Ballroom C

Chairs: **Victoria Bautch**, University of North Carolina at Chapel Hill
Masanori Aikawa, Brigham and Women's Hospital, Harvard Medical School

- 10:30 *Systems genetics of the KLF14 locus associated with obesity and diabetes*
Mete Civelek, University of Virginia
- 11:00 *069 - Controllability in human islets regulatory network identifies the dysregulated pathways associated with Type 2 Diabetes*
Amitabh Sharma, Brigham and Women's Hospital
- 11:15 *Do capillary vessels blink?*
Erzsébet Ravasz Regan, The College of Wooster
- 11:45 *070 - A Computer Simulation of Individualized Laser Therapy to Prevent Progression of Capillary Occlusions in a Virtual Diabetic Retina*
Xiao Fu, Indiana University Bloomington

***Lunch—Grand Ballroom
12:00 to 2:00pm***

POSTER SESSION III AND EXHIBITS

12:00 – 2:00pm

Constitution Ballroom:

CANCER - Boards 1 through 22

OBESITY/DIABETES - Boards 23 through 40

PERMEABILITY - Boards 41 and 57

CALCIFICATION - Boards 58 through 65

LIPID MEDIATORS - Boards 66 through 72

COMPLEXITY AND COMPUTATIONAL MODELING - Boards 73 through 79

VASCULAR REMODELING - Boards 80 through 98

Ballroom Foyer:

VASCULAR REMODELING - Boards 99 through 102

NEW TECHNOLOGIES - Boards 103 through 109

IMAGING - Boards 110 and 111

INFLAMMATION - Boards 112 through 119

EXTRACELLULAR MATRIX - Boards 120 through 124

ENDOTHELIAL CELLS III - Boards 125 through 142

ATHEROSCLEROSIS II - Boards 143 through 148

Liberty Ballroom:

ATHEROSCLEROSIS II - Boards 149 through 162

Presenters will alternate times as follows:

Presenters at odd numbered boards will present from 12:00 pm to 1:00 pm;

Presenters at even numbered boards will present from 1:00 pm to 2:00 pm

Visit the Exhibits - see guide on pages xii & xiii

OBESITY/DIABETES

2:00 – 3:30pm — Republic Ballroom

Chairs: **Zoltan Arany**, University of Pennsylvania and
Cynthia Meininger, Texas A&M Health Science Center

2:00 *Role of adipokines in obesity-linked vascular disease*
Kenneth Walsh, Boston University School of Medicine

2:30 *071 - Sex differences in the role of endothelial mineralocorticoid receptor in resistance vessel endothelial dysfunction in obese and atherosclerotic-prone mice*
Ana Davel, Tufts Medical Center

2:45 *RAGE & the Formin DIAPH1 & mechanisms of diabetic complications*
Ann Marie Schmidt, NYU School of Medicine

3:15 *072 - Suppression of epsin expression limits VEGFR3 degradation and rescues diabetes triggered impairment of lymphatic function*
Hao Wu, Boston Children's Hospital

BRAIN

2:00 – 3:30pm — Back Bay Ballroom D

Chairs: **John Greenwood**, UCL Institute of Ophthalmology and
Anne Joutel, Inserm U1161, Genetics and Pathogenesis of Cerebrovascular Diseases

2:00 *Microvascular mural cell physiology and pathology investigations in the live mouse brain*
Jaime Grutzendler, Yale School of Medicine

2:30 *073 - Myeloid progenitors differentiate into pericytes through TGF- β signaling in developing skin and brain vasculature*
Tomoko Yamazaki, National Institutes of Health

2:45 *Potassium sensing by capillary KIR channels initiates retrograde electrical signaling to regulate cerebral blood flow*
Mark Nelson, University of Vermont

3:15 *074 - FoxF2 is required for establishment and maintenance of cerebral vascular stability*
Sarah J. Childs, University of Calgary

LIPID MEDIATORS

2:00 – 3:30pm — Independence Ballroom

Chairs: **Dipak Panigrahy**, Beth Israel Deaconess Medical Center and
Hong Chen, Boston Children's Hospital, Harvard Medical School

2:00 *The identification of novel biologically active PUFA epoxides and diols in angiogenesis and vascular disease*
Ingrid Fleming, Johann Wolfgang Goethe University

2:30 *075 - Derlin-2-, Derlin-1 and caveolin-1-mediated cyclooxygenase-2 degradation through a glycosylation dependent ER-associated degradation pathway*
Song-Kun Shyue, Academia Sinica

2:45 *Sphingosine 1-phosphate biology at the nexus of vascular and hematopoietic systems*
Tim Hla, Boston Children's Hospital

- 3:15 *076 - Dynamic lipid droplets in endothelium: Role of Adipose Triglyceride Lipase in endothelial homeostasis*
Andrew Kuo, Yale University

NEW TECHNOLOGIES

2:00 – 3:30pm — Back Bay Ballroom C

- Chairs:** *Mary Dickinson, Baylor College of Medicine and
J. Geoffrey Pickering, Western University*
- 2:00 *Vascular mechanobiology*
Donald Ingber, Wyss Institute for Biologically Inspired Engineering at Harvard University
- 2:30 *077 - Endothelial whole-genome CRISPR screening to identify regulators of shear stress mechanotransduction*
Brian Coon, Yale School of Medicine
- 2:45 *Assay development for in vivo drug discovery in the zebrafish*
Calum MacRae, Brigham and Women's Hospital
- 3:15 *078 - RhoGTPases and RNAi: a large scale screen using ECIS[®] to identify new regulators of the endothelial barrier*
Joana Amado-Azevedo, VU University Medical Center Amsterdam

Wednesday, November 2 — 4:00-5:30pm

ANGIOGENESIS AND ARTERIOGENESIS II

Co-sponsored by Japanese Vascular Biology and Medicine Organization

4:00 – 5:30pm — Republic Ballroom

- Chairs:** *Takashi Minami, Kumamoto University and Brant Weinstein, NICHD, NIH*
- 4:00 *The role of endocytic adaptor proteins, epsins in vascular biology*
Hong Chen, Boston Children's Hospital/Harvard Medical School
- 4:30 *079 - The shear stress-induced human long non-coding RNA Lassic regulates endothelial cell function*
Laura Stanicek, University Hospital Frankfurt
- 4:45 *Apelin/APJ system for the vascular maturation*
Nobuyuki Takakura, Osaka University
- 5:15 *080 - Von Willebrand Factor modulates blood vessel formation and function via Angiopoietin 2*
Koval Smith, Imperial College London

BLOOD VESSELS AND KIDNEY DISEASES

Sponsored by the American Society of Nephrology

4:00 – 5:00pm — Back Bay Ballroom C

- Chair:** *Susan Quaggin, Northwestern University*
- 4:00 *Haemodynamic regulation of endothelial phenotype: nuances of the kidney vasculature*
Phil Marsden, University of Toronto
- 4:30 *Mechanisms of diabetic kidney and vascular complications*
George King, Joslin Diabetes Center, Boston

Wednesday, November 2 – Exhibitor Showcase

FLUIDIGM EXHIBITOR SHOWCASE

4:00 – 5:00pm — Back Bay Ballroom D

Cellular Heterogeneity in Cardiovascular Disease: Exploring Mechanisms through Single Cell Analysis

Julius L. Decano, Brigham and Women's Hospital, Harvard Medical School

- Human macrophage heterogeneity through single cell gene expression analysis using C1 and BioMark
- Macrophage heterogeneity remains even after polarization by interferon gamma stimulation
- CyTOF of human aortic valvular interstitial cells in calcific valvular disease show deep heterogeneity
- Putative aortic valve progenitor cell population identified by mass cytometry may promote aortic valve calcification

NAVBO Membership Meeting

NAVBO MEMBERSHIP BUSINESS MEETING

5:30 – 6:00pm — Independence Ballroom

Chair: Jan Kitajewski, University of Illinois Chicago

Agenda

- Approval of the 2015 Minutes
- Acknowledgements and Recognitions
- Treasurer's Report by Dr. Muller, Secretary-Treasurer
- Membership Report by Dr. Muller, Secretary-Treasurer
- Future Meetings
- New Initiatives
- Open Discussion

CLOSING PLENARY SESSION

8:00am – 12:30pm — Grand Ballroom

Chair: Joyce Bischoff, Boston Children's Hospital, Harvard Medical School

8:00 *Rethinking the Thrombotic Complications of Atherosclerosis*
Peter Libby, Brigham and Women's Hospital, Harvard Medical School

8:45 ***Benditt Award Lecture -***
Transcriptional Regulation of Endothelial Cell Plasticity in Health and Disease
Elisabetta Dejana, Uppsala University and the University of Milan

9:30 *Coffee Break*

10:00 ***Folkman Award Lecture -***
Reciprocal Regulation of the Vascular and Immune State in Distinct Tumor Niches
Gabriele Bergers, VIB - Vesalius Research Center, University of Leuven

10:45 ***Springer Award Lecture -***
Mutagenesis of microRNA genes uncovers trait variance as a unique vascular phenotype that confers stress sensitization
Stefania Nicoli, Yale University School of Medicine

11:15 *IVBM 2018 Presentation*
Kari Alitalo, University of Helsinki

11:30 *Mechanisms of Vessel Maturation: Closing the Loop*
Jan Kitajewski, University of Illinois Chicago

12:15 *Concluding Remarks*

12:30 *Program Concludes*