Monday, September 10, 2018 8 am

1.1 Microvessels and Lymphatics in Inflamed Tissues: New Insights from Models of Inflammation
Chair: Jerome Breslin

Lymphatic-Adipose Crosstalk in Alcohol Immunomodulation
Flavia Souza-Smith, Louisiana State University HSC

Traditional medicine extracts to treat inflammatory edema
Michiko Jo, University of Toyama

From Abstracts

Lymphatic adaptations in models of intestinal inflammation
Pierre-Yves Von Der Weid, University of Calgary

1.2 Linking Ion Channel Dynamics to Functional Hyperemia
Chair: William Jackson

KIR channels and functional hyperemia in skeletal muscle of humans
Frank Dinenno, Colorado State University

The ability of astrocytes to work under pressure: a TRPV4-mediated event
Jessica Filosa, Augusta University

From Abstracts

Cerebral capillary TRPA1 channels mediate upstream arteriolar dilation via propagating intercellular Ca^{2+} waves
Paulo Pires, University of Nevada Reno

1.3 Lessons from the mouse microcirculation
Chair: Naveed Akbar

Recapitulation of developmental mechanisms to revascularise the ischemic heart
Nicola Smart, University of Oxford

From Abstracts

From Abstracts

Signalling pathway investigations of microvascular endothelial function: From bench to bedside
Faisel Khan, University of Dundee

1.4 Gaseous Transmitters: Carbon monoxide as modulator of inflammation
Chair: Gediminas Cepinskas

Design and therapeutic applicability of CO-releasing molecules
Roberto Motterlini, INSERM; University Paris-Est

Therapeutic Benefits of Carbon Monoxide in Vascular- Proliferative Disease
Leo E. Otterbein, Harvard Medical School

From Abstracts

Carbon Monoxide Releasing Molecules (CORMs) and inflammatory vascular perfusion in Compartment Syndrome
Abdel R. Lawendy, University of Western Ontario

Monday, September 10, 2018 10:30 am

2.1 Novel mechanisms of Kv channel regulation
Chairs: Manuel Navedo Matthew Nystoriak

Kv channels and the regulation of arteriolar tone
William Jackson, Michigan State University

Metabolic regulation of coronary microvascular Kv1 channels
Matthew Nystoriak, University of Louisville

From Abstracts

Pathogenic mechanisms of small vessel diseases of the brain: insights from genetic diseases
Anne Joutel, INSERM

*2.2 Recovery of Skeletal Muscle Microcirculation and its Regulation following Injury
Chairs: Steve Segal Geoffrey Pickering

(Re)Making a muscle: Activity and interactions of muscle stem cells and other cell types during regeneration
Dawn D Cornelison, Missouri University

Transplanted endothelial cells contribute to de novo microcirculation in bioengineered stem cell-based treatments
Marco Quarta, Stanford University

From Abstracts

Guiding network patterning: Crosstalk between vessels and nerves
Anne Eichmann, Yale Cardiovascular Research Center

2.3 Emerging technologies in microvascular imaging
Chairs: Bojana Stefanovic John Sled

Quantitative Imaging of Cerebral Microvasculature
Bojana Stefanovic, University of Toronto

High field Magnetic Resonance Spectroscopy of Neurometabolism
Wei Chen, University of Minnesota

From Abstracts

Imaging of Fetal Vascular Development
Mary Dickinson, Baylor College of Medicine

2.4 Mechanisms of Arteriolar Dysfunction in Cardiovascular Disease
Chair Karen Stokes

Oxidative stress in human adipose tissue arterioles
Shane Phllips, University of Illinois at Chicago

Uridine adenosine tetraphosphate in coronary arterioles in swine
Daphne Merkus, Erasmus MC Netherlands

From Abstracts

Novel mechanisms of microvascular dysfunction in human obesity
Noyan Gokce, Boston University School of Medicine

Tuesday September 11, 2018 8 am

3.1 A universe beyond ROS and ATP: Novel mechanisms of mitochondria as secondary messengers Chair: Andreas Beyer

Mitochondrial Genetics and Physiology and contribution to regulation of Vascular tone
Jessica Fetterman, Boston University School of Medicine

Crosstalk between Mitochondria and Nitric Oxide Synthases in Brain Microvascular Endothelial Cells
Prasad Katakam, Tulane University School of Medicine

From Abstracts

The mitochondrial genome in endothelial injury and its propogation
Mark Gillespie, University of South Alabama

3.2 Novel actions of immune cells in the microvasculature
Chair: Michael Hickey

New insights into the biology of skin transendothelial macrophages
Olga Barreiro, Harvard University

Functional biology of hepatic CD8+ T cells
Matteo Iannacone, San Raffaele Scientific Institute

From Abstracts

Anti-bacterial actions of neutrophils within the lung microvasculature
Bryan Yipp, University of Calgary

3.3 Perivascular Cells: Contributions to microvascular patterning and regeneration
Chair: Tara Haas

Pericyte Regulated Basement Membranes in Health and Disease
Anjelica Gonzalez, Yale University

Pericyte Contribution towards Tumor Progression and Metastasis
Hellmut Augustin, Heidelberg University

Microvascular Remodelling in Stroke Pathobiology and Therapy
Ayman ElAli, Laval University

Novel brain perivascular cells
Brant Weinstein, National Institute of Child Health and Human Development

3.4 Local perfusion control in renal circulation
Chairs: NH Holstein-Rathlou Charlotte Sorensen

Autoregulation and vascular conducted responses -- a distributed process
Will Cupples, Simon Fraser University

Synchronization in renal microcirculation quantified by high-resolution optical imaging
Dmitry Postnov, University of Copenhagen

Communication in the renal medullary circulation
Thomas Pallone, University of Maryland

Kidney tissue oxygenation in acute kidney injury
Connie Ow, Monash University

Tuesday, September 11, 2018 10:30 am

4.1 Cytoskeleton dynamics in microvascular tone generation
Chairs: Ahmed El-Yazbi Rudolf Schubert

Molecular regulation of actin polymerization and force generation in smooth muscle
Susan Gunst, Indiana University School of Medicine

Contribution of actin polymerization to microvascular tone production: Roles of ROCK and PKC
Ahmed El-Yazbi, American University of Beirut

From Abstracts

Actin Polymerization from Vasoconstriction to Inward Remodeling
Luis Martinez-Lemus, Missouri University

4.2 Extracellular vesicles and microvascular pathology
Chairs: Georges Grau Maryam Mousssavi

Microvesicles and microcirculation in immunopathology
Georges Grau, The University of Sydney

Exosomes and cancer microcirculation
Elham Hosseini-Beheshti, University of Sydney

From Abstracts

To Be Determined

4.3 Micro-to-Macro Scale Imaging of the Microcirculation
Chairs: Sara Nunes Vasconcelos Will Cupples

Visualizing signaling in the inside of blood vessels
John McCarron, Strathclyde University

A close look to cerebral blood flow: Super-resolution imaging of ion channels in brain vessels
Claudia Moreno, UC Davis

Optical Coherence Tomography Angiography (OCT-A) for depth resolved imaging of microcirculation
Marinko Sarunic, Simon Fraser University

Non-invasive imaging of microcirculation function in humans
Hai-Ling (Margaret) Cheng, University of Toronto

4.4 The collateral circulation in ischemic disease
Chairs: James Faber Shayn Peirce-Cottler

Genetic polymorphisms and variation in abundance of the collateral circulation
James Faber, University of North Carolina

Targeting collaterals for stroke treatment: influence of hypertension
Marilyn Cipolla, University of Vermont

From Abstracts

Neutrophils in the regulation of arteriogenesis
Petra Rocic, New York Medical College

Tuesday, September 11, 2018 5 pm

5.1 Oxygen on Demand: inequality and consequences
Chairs: Scott Earley Fabrice Dabertrand

Neuronal excitation and inhibition balancing O2 supply and demand in cerebral cortex
Anna Devor, University of California San Diego

In vivo optogenetic control of brain mural cells
Andy Shih, Medical University of South Carolina

From Abstracts

Contractile Pericytes Determine the Direction of Blood Flow at Capillary Junctions
Albert Gonzales, University of Vermont

5.2 Microvascular remodelling – pericytes have got it wrapped up!
Chairs: Stuart Egginton Ylva Hellsten

Discovering pericyte dynamics during angiogenesis
Walter Lee Murfee, Tulane University

Pericytes are a key player in skeletal muscle remodelling
Birgitte Høier, University of Copenhagen

From Abstracts

Pericyte therapy of ischaemia: the mechanistic pathway toward clinical translation
Paolo Madeddu, University of Bristol

5.3 The role of lymphatic vessels in cancer - emerging therapeutic opportunities
Chair: Marc Achen

Lymphatic development in the postpartum mammary gland drives metastasis of postpartum breast cancers
Traci Lyons, University of Colorado

Understanding the regulators of lymphatic endothelial cell migration and remodelling through a genome-wide functional analysis
Steven Stacker, University of Melbourne

From Abstracts

Role of lymphatic vessels in immunosuppression in cancer
Melody Swartz, University of Chicago

5.4 Exercise and shear stress; linking the benefits to the macro and microvasculature
Chair: Karen Birch

Exercise training: vascular adaptations in function-structure and the role of shear
Dick Thijssen, Radboud University, Nijmegan, NL

Flow dynamics and endothelial cell behavior
Peter Galie, Rowan University

From Abstracts

TBD

Wednesday, September 12, 2018 8 am

6.1 Ebb & Flow of Brain Capillaries
Chairs: Andy Shih Iain Lamb

Erythrocyte trajectories in cerebral microvascular systems n health and disease
Franca Schmid, ETH Zurich

Capillary-to-arteriole electrical signaling is disrupted in small vessel disease.
Fabrice Dabertrand, University of Vermont

From Abstracts

Mapping and manipulating the fate of clogged capillaries.
Craig Brown, University of Victoria

6.2 Angiogenesis and Remodeling: Emerging Topics
Chairs: Phoebe Stapleton Joshua Butcher

Directing angiogenesis and vessel function with mechanical cues
Jonathan Song, Ohio State University

Pericyte migration and investment during developmental blood vessel remodeling
John Chappell, Virginia Tech Carilion School of Medicine

From Abstracts

Using intravital microscopy for acute and chronic assessment of blood flow
Maria Machado, University of Western Ontario

6.3 The Confluence of Basic & Clinical Science in the Discovery of INOCA
Chairs: William Chilian Vahagn Ohanyan

Role of Atherosclerosis and Endothelial Dysfunction in INOCA
Janet Wei, Cedars Sinai Medical Center

What a Mouse Model of INOCA Reveals in Mechanisms of Cardiac Dysfunction
William Chilian, Northeast Ohio Medical University

From Abstracts

Cardiac autonomic dysfunction in women with coronary microvascular dysfunction
Puja Kiran Mehta, Emory University Medical School

6.4 Molecular Mechanisms Regulating Lymphatic Function
Chair: Pierre-Yves von der Weid

Molecular and ionic mechanisms involved in the propulsion of lymph
Michael Davis, University of Missouri

Novel regulatory mechanisms of lymphatic muscle contraction
Mariappan Muthuchamy, Texas A&M University

From Abstracts

Calcium regulation in lymphatic endothelial cells in response to shear stress
Shenyuan Zhang, Texas A&M University

Wednesday, September 12, 2018 10:30 am

7.1 Integrative modeling of blood flow control and tissue oxygenation
Chair: Nikolaos Tsoukias

A dynamic model of blood flow, oxygen transport and flow regulation in skeletal muscle
Dan Goldman, University of Western Ontario

Neurovascular coupling and distribution of blood flow in the cortex during sensory stimulation in awake behaving mice
Cam Ha Tran, University of Calgary

From Abstracts

Local versus long range signaling in the ongoing network adaptation necessary for adequate perfusion
Jens Jacobsen, University of Copenhagen

7.2 Understanding vascular-bed electrical remodeling: Novel mechanisms and targets
Chair: Teresa Pérez García

Orai-channel mediated calcium signals in vascular remodeling
Mohamed Trebak, Penn State University

Piezo1 mechanical force sensing in vascular biology
David Beech, University of Leeds

From Abstracts

Kv Channels in Vascular Remodeling
Pilar Cidad, Universidad de Valladolid

7.3 Targeting the pathophysiological responses of ischemia-reperfusion injury in different organs Chair: Felicity Gavins

Developing new therapeutic strategies to reduce the risk of developing chronic kidney disease after acute kidney injury
Neeraj Dhaun, University of Edinburgh

Microvessel alterations in the acute period following focal cerebral ischemia
Gregory J del Zoppo, University of Washington

From Abstracts

Imaging the complex events in the resolution of I/RI
Paul Kubes, University of Calgary

7.4 Advanced Imaging technology for dissecting tumor microcirculation and metabolism Chairs: Makoto Suematsu Dai Fukumura

Dissecting tumor microenvironment using advanced optical imaging techniques
Dai Fukumura, Harvard University

Next generation intravital imaging in the short-wave infrared (SWIR)
Oliver Thomas Bruns, MIT Chemistry

Dissection of glutathione and polysulfur metabolism in cancer tissues
Makoto Suematsu, Keio University School of Medicine

Gold-nanofève substrate-enhanced Raman spectroscopy visualizes hypotaurine as a robust anti-oxidant consumed for cancer survival
Megumi Shiota, FUJIFILM Corporation

Thursday, September 13, 2018 8 am

8.1 Dynamic Calcium Control in the Vessel Wall
Chairs: Pooneh Bagher Avril Somlyo

Endothelial Cell Calcium: Location, Location, Location
Pooneh Bagher, Texas A&M University Health Science Centre

Calcium dynamics in the lymphatic wall: Uncovering mechanisms of lymphatic contractile dysfunction
Jorge A. Castorena-Gonzalez, University of Missouri

From Abstracts

Novel TRPV4-Dependent Calcium Signaling in Pulmonary Endothelium
Swapnil Sonkusare, University of Virginia

8.2 Neurovascular dysfunction in Aging and Alzheimer's Disease
Chairs: Grant Gordon Zoltan Ungvari

Cellular deconstruction of neurovascular coupling
Adam Institoris, University of Calgary

Age-related impairment of neurovascular coupling: new targets for prevention of cognitive decline
Stefano Tarantini, University of Oklahoma Health Sciences Center

From Abstracts

Brain microvascular mechanisms linking aging to Alzheimer's disease
Veronica Galvan, University of Texas Health Science Center

8.3 Molecular modulation of microvascular barrier function
Chairs: Jing-Yan Han Qiaobing Huang

Role of NRF2 signaling in diabetes-associated microvascular dysfunction
Ping-Nian He, Pennsylvania University

Preserving microvascular barrier integrity following traumatic injury
Jerome Breslin, University of South Florida

QiShenYiQi, a compound Chines Medicine, improved albumin leakage from cardiac venules induced by ischemia-reperfusion in rats.
Jing-Yan Han, Peking University

Interaction of p-moesin and CD44 in endothelia and pericytes attenuated the maturation of neovessels in AGE-induced angiogenesis
Qiaobing Huang, Southern Medical University, China

8.4 Late Breaking Abstract Session

Thursday, September 13, 2018 10:30 am	Thursday, September 13, 2018 10:30 am
9.1 Unique vasculatures in health and disease Chair: Erika Boerman	9.3 Late Breaking Abstract Session
Flow with the Go: the bladder vasculature as a regulator of bladder function *Nathan Tykocki, University of Vermont* How the eye views inflammation and diabetes: microvessel adaptations in the retina and cornea *Shayn Peirce-Cottler, University of Virginia* From Abstracts Unique mechanisms regulating the pulmonary circulation *Nikki Jernigan, University of New Mexico*	
9.2 Mechanotransduction in Angiogenesis and Remodeling Chairs: Charles Thodeti Liya Yin	9.4 Late Breaking Abstract Session
Microengineered physiological biomimicry: human organs-on-hips *Dan Huh, University of Pennsylvania* Mechanosensitive mechanism of angiogenesis in lung regeneration and pathology *Akiko Mammoto, Medical School of Wisconsin* From Abstracts Mechanical Control of Vascular Growth and Integrity *Charles Thodeti, Northeast Ohio Medical University (NEOMED)*	
	End of meeting

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11th World Congress for Microcirculation September 9 – 13, 2018 Program

Sunday **September 9 2018**			**Registration** **12 noon to 6 pm**			**Welcome Reception** **6 pm – 10 pm**	**Keynote Speaker** **Sussan Nourshargh, PhD** **7:30 pm-8:30 pm**
Monday **September 10 2018**	**Concurrent Symposia 1** (Sessions 1.1-1.4) 8 am to 10 am	Nutrition Break 10 am to 10:30 am	**Concurrent Symposia 2** (Sessions 2.1-2.4) 10:30 am to 12:30 pm	**Catalyst Forums 1 & 2** 1:30 pm to 2:30 pm	Trade Show **Poster Exhibit & Judging** 2:30 to 4:30 pm	**Society Award Presentations** **5:00 to 7 pm**	Trainee Social
Tuesday **September 11 2018**	**Concurrent Symposia 3** (Sessions 3.1-3.4) 8 am to 10 am	Nutrition Break 10 am to 10:30 am	**Concurrent Symposia 4** (Sessions 4.1-4.4) 10:30 am to 12:30 pm	**Lunch & Learn ~ Women in Science** 12:30 to 1:30 pm **Catalyst Forum 3** 1:30 pm to 2:30 pm	Trade Show **Poster Exhibit & Judging** 2:30 to 4:30 pm	**Concurrent Symposia 5** (Sessions 5.1-5.4) 5:00 to 7 pm	
Wednesday **September 12 2018**	**Concurrent Symposia 6** (Sessions 6.1-6.4) 8 am to 10 am	Nutrition Break 10 am to 10:30 am	**Concurrent Symposia 7** (Sessions 7.1-7.4) 10:30 am to 12:30 pm	**Trainee Career Development Workshops 1 & 2** 1:30 pm to 2:30 pm	Trade Show **Poster Exhibit & Judging** 2:30 to 4:30 pm	**Gala Dinner** **6 pm to 10 pm**	**Keynote Speaker** **David Kleinfeld, PhD** **7:30 pm-8:30 pm**
Thursday **September 13 2018**	**Concurrent Symposia 8** (Sessions 8.1-8.4) 8 am to 10 am	Nutrition Break 10 am to 10:30 am	**Concurrent Symposia 9** (Sessions 9.1-9.4) 10:30 am to 12:30 pm	End of Congress			
There are 33 concurrent symposia scheduled over 3.5 days. There are an additional 3 late breaking symposia scheduled for Concurrent 8 and Concurrent 9.							

11TH WORLD CONGRESS FOR MICROCIRCULATION

Microcirculation in health and disease.
Emerging research and technologies.

September 9th – 13th, 2018
Sheraton Wall Centre, Vancouver, BC, Canada