

# The Microcirculatory Society, Inc.

## Newsletter

Volume 40, Number 4 – Spring 2013



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### *A Note from the President*

Almost time to head to Experimental Biology 2013, in Boston, and to our annual meeting of the MCS. Within this Newsletter you will find the latest program for the meeting including outlines of the President's Symposium and sessions highlighting our young investigators. Our keynote lecture, the Landis Award, will be given by Dr William (Bill) Chilian, Northeast Ohio Medical University. This is guaranteed to be an entertaining and thought provoking address. We would like to encourage everyone to attend these sessions as well as the posters where we hope there will be stimulating and lively discussions. The poster sessions of the MCS have always been a great place to formulate new ideas and directions as well as making new contacts. Finally, don't forget the Society Banquet Luncheon where a number of our annual awards will be presented (details 'inside').

In addition to the scientific sessions, MCS Council meets on the preceding Friday evening while the Annual Business Meeting will be held on Sunday April 21<sup>st</sup> immediately following the Landis Award lecture. All members are encouraged to attend the business meeting and participate in discussions (voting rights, however, are limited to Regular and Emeritus members).

Also outlined in this Newsletter are the results of our recent elections for MCS Council members and office bearers. On behalf of the current Council I would like to extend our congratulations to those elected. Further, we would like to thank all who participated in the elections and members for voting.

Other important items in the Newsletter include details of the very exciting program for the joint meeting of MCS and NAVBO to be held in October at Cape Cod, MA. Also included is an important announcement from the International Liaison Committee regarding a change of venue for the 10<sup>th</sup> World Congress of Microcirculation.

Hope to see you in Boston at the various MCS events. Don't forget that our association with the American Physiological Society gives our members access to all the sessions and events at Experimental Biology. For those attending the Smooth Muscle Underground Group (SMUG) meeting on Friday April 19<sup>th</sup> this is another opportunity to

### Officers

#### President

Michael A. Hill, Ph.D.  
[HillMi@missouri.edu](mailto:HillMi@missouri.edu)

#### President-Elect

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#### Past-President

Matthew A. Boegehold, Ph.D.  
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#### Secretary

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#### Treasurer

Alan Stephenson, Ph.D.  
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hear some cutting edge science.

Finally I would like to give my personal thanks and acknowledgement to the MCS Council members for their support and assistance through this past year. And of course, a warm welcome to our new members who represent the future of the MCS.

A handwritten signature in cursive script that reads "Mike". The signature is written in black ink and is underlined with a single horizontal stroke.

### **Microcirculatory Society Awards Banquet 2013**

**Saturday April 20, 12- 1:30 pm**

Boston Convention Center, Room 252A

\$28 per ticket

Tickets **MUST** be purchased in advance (***Deadline to buy tickets: April 11<sup>th</sup>***)  
Don't delay! Encourage your colleagues to attend.

You can purchase tickets online - <http://www.microcirc.org/registration.html>

Pre-paid tickets will be available for pick up at the MCS Saturday morning session (Rm. 205C) on April 20<sup>th</sup>, or immediately prior to the luncheon at the entrance to Room 252A.

## *Update on the MCS/NAVBO joint meeting*

We are excited and honored to announce that the Fall Meeting of the MCS will be held in conjunction with the North American Vascular Biology Organization (NAVBO) in beautiful Cape Cod, Massachusetts from **October 20-24, 2013**. The meeting offers an excellent opportunity to share our unique perspective on the microcirculatory system with highly engaged members of NAVBO. There will be one scientific track from MCS and two scientific tracks from NAVBO (Vascular Matrix Biology/Bioengineering and Biology of Signaling in the Cardiovascular System) all running in parallel. The URL for the MCS track can be found here: <http://www.navbo.org/events/vb2013/microcirc2013>. The meeting is especially geared towards young investigators with several slots reserved for oral presentations of abstracts submitted to each session. The registration for this spectacular meeting is already open and **abstracts are due by August 15**. Please make sure to register as a member of MCS when you do so and please don't hesitate to contact Brant Isakson with any questions: [brant@virginia.edu](mailto:brant@virginia.edu).

Brant Isakson  
Chair, Programs and Meetings Committee

## *Change of Venue and Scheduling:* *10<sup>th</sup> World Congress for Microcirculation*

Due to numerous unforeseen difficulties, the 10<sup>th</sup> World Congress for Microcirculation scheduled for Beijing in 2014 has been cancelled. Instead, the Congress will be postponed until 2015 and it will be organized in Japan to maintain the Austral-Asian rotation of the Congress. Professor Makoto Suematsu and the Japanese Society for Microcirculation have graciously accepted the responsibility for its organization. They will work together with the International Liaison Committee for Microcirculation to ensure that the scientific standards of the conference meet the needs of the international microcirculation community and that it is scientifically attractive to all. Professor Suematsu will be presenting preliminary plans for the Congress at the International Liaison Committee for Microcirculation meeting at the Experimental Biology Meeting in Boston. More information will be forthcoming as it is available.

Sincerely,  
Axel Pries and Gerald Meininger  
International Liaison Committee for Microcirculation

## Highlights of MCS Sessions and Events at EB 2013

<u>Date</u>	<u>Session</u>	<u>Time</u>	<u>Location</u>
Saturday April 20	President's Symposium I	9:00-11:30 AM	205C
Saturday April 20	MCS Awards Luncheon	12:00-1:45 PM	252A
Saturday April 20	President's Symposium II	2:00-4:30 PM	205C
Sunday April 21	MCS Poster Session	12:30-3:30 PM	
Sunday April 21	MCS Landis Award	3:30-4:30 PM	205C
Sunday April 21	MCS Business Meeting	4:45-5:45 PM	205C
Monday April 22	Young Investigators Symposium	10:30-12:30PM	205C
Monday April 22	MCS Poster Session	12:30-3:30 PM	

### Saturday, April 20, 2013

**9:00-11:30 am :**     **President's Symposium I. " Cellular and Non-Cellular Modes of Communication Across the Blood Vessel Wall "**

**Chair:**       Michael A. Hill, Associate Director, Dalton Cardiovascular Research Center; Professor, Department of Medical Pharmacology and Physiology, University of Missouri USA

**Endothelial – vascular smooth muscle cell communication: integrating signals across the vascular wall**

Kim A. Dora, Department of Pharmacology, University of Oxford, UK

**Bidirectional communication between extracellular matrix proteins and vascular smooth muscle cells**

Gerald A. Meininger, Director, Dalton Cardiovascular Research Center, University of Missouri, USA

**Immune cells in the artery wall**

Klaus Ley, Division of Inflammation Biology, La Jolla Institute for Allergy & Immunology USA

**Impact of hemorrhagic stroke on neurovascular communication**

George Wellman, Department of Pharmacology, University of Vermont, USA.

**The pannexin1 / alpha-adrenergic axis can directly regulate blood pressure**

Brant E. Isakson, Robert M Berne Cardiovascular Research Center, University of Virginia, USA

**12 – 1:45 pm:**       **Awards Luncheon   Tickets required - purchase in advance, by April 11**

**2:00-4:30 pm:**       **President's Symposium II: "Rapid Fire Discussion of Novel Trends"**

**Chairs:**       Pooneh Bagher, Department of Pharmacology, University of Oxford, Oxford, UK  
                   Andreas M. Beyer, Department of Medicine, Medical College of Wisconsin, Milwaukee USA

**Association of two polymorphisms in the Cx40 promoter with hypertension and leftventricular hypertrophy.** Kjestine Schmidt, Frank J Kaiser, Heribert Schunkert, Jeanette Erdmann, Cor de Wit.

Institut für Physiologie, Universität zu Lübeck, Lübeck, Germany

**Altered electrical reactivity of endothelial tubes with aging: Role of mitochondria and Ca<sup>2+</sup>-activated K<sup>+</sup>channels.** Erik J Behringer, Steven S Segal. Medical Pharmacology and Physiology, University of Missouri, USA

**VEGF-C induces lymphangiogenesis in the rat mesentery culture model.** Richard Shelton Sweat, Walter Lee Murfee. Biomedical Engineering, Tulane University, New Orleans, USA

**Histamine is novel endothelium-derived relaxing factor in rat mesenteric lymphatic vessels.** Anatoliy Gashev, Irina Tsoy Nizamutdinova, Takashi Nagai, Daisuke Maejima, Eric Bridenbaugh, Sangeetha Thangaswamy, Victor Chatterjee. Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center, College of Medicine, Temple, USA

**Basal nitric oxide production in mouse collecting lymphatics does not enhance contractile activity.** Joshua P. Scallan, Michael J. Davis. Medical Pharmacology and Physiology, University of Missouri at Columbia, USA

**Dynamics of Nitric Oxide Activity are Sufficient and Optimal to Drive Lymphatic Pumping.** Christian Kunert, Timothy P Padera, Lance L Munn. Mass General Hospital/Harvard Medical School, Boston, USA

**LPS mediated decreases in immune cells recruitment on or near lymphatics impairs lymphatic contractility.** Sanjukta Chakraborty, David C Zawieja, Mariappan Muthuchamy. Texas A&M Health Science Center, College of Medicine, Temple, USA

**Flow modulation and recruitment in a theoretical model for blood flow regulation in heterogeneous microvascular networks.** Brendan C. Fry, Timothy W. Secomb. Department of Physiology, University of Arizona, Tucson, USA

**Multiscale computational models of microvascular reactivity from ion channels to intercellular signaling.** Adam Kapela, Jaimit Parikh, Nikolaos M. Tsoukias. Department of Biomedical Engineering, Florida International University, Miami, USA

**Impact of redox signaling inhibition on collateral growth in young, healthy rats.** Steven J Miller, Mary Jo Wenning, Randall G Bills, Petra Sliva, Carlos A Labarrere, Mark R Kelley, Melissa L Fishel, Joseph L Unthank. Dept of Surgery, Indiana University, Indianapolis, IN, USA

**Monocyte Recruitment during Microvascular Arteriogenesis is Induced by Altered Flow and Influenced by Proximity of Venules to Collateral Arterioles.** Anthony Bruce, Joshua K. Meisner, Richard J. Price, Shayn M. Peirce. Department of Biomedical Engineering, University of Virginia, Charlottesville, VA

**Sensory nerve-dependent prolonged opening of pannexin-1-based channels controls eNOS phosphorylation in mesenteric arteries.** Pablo Simon Gaete, Mauricio Lillo, Xavier Figueroa. Pontificia Universidad Católica de Chile, Santiago, Chile

**Helium ion microscopy of the rodent kidney and male reproductive tract.** Teodor G. Paunescu, Chuong Huynh, Lorenz Lechner, Bernhard Goetze, Lewis Stern, Sylvie Breton, Dennis Brown. Center for Systems Biology, Massachusetts General Hospital and Harvard Medical School, Boston, MA USA

**Sunday, April 21, 2013**

**12:30-3:30 pm**

**MCS Poster Session**

**3:30-4:30 pm: MCS Landis Award Lecture**

**William Chilian, Ph.D.**, Northeast Ohio Medical University

**"Regulation of the coronary microcirculation. An evolution of concepts and importance"**

**4:45- 5:45 pm: MCS Business Meeting**

**Monday, April 22, 2013**

**10:30 am-12:30 pm: Microcirculatory Society Young Investigator Symposium**

**Chairs:** Walter Lee Murfee, Department of Biomedical Engineering, Tulane University, New Orleans, LA USA  
Trevor Cardinal, Department of Biomedical Engineering, Cal – Poly, San Luis Obispo, CA USA

**Aging attenuates spontaneous endothelial Ca<sup>2+</sup> events with altered perivascular nerve function in mouse mesenteric arteries *in vivo*.** Erika Boerman Westcott, Steven S Segal. Medical Pharmacology and Physiology, University of Missouri, USA

**Mechanisms of endothelial dysfunction in penetrating cerebral arterioles of DOCA-salt hypertensive rats.** Paulo W. Pires, Nusrat Matin, Hannah Garver, William F. Jackson and Anne M. Dorrance. Department of Pharmacology and Toxicology, Michigan State University, USA

**Functional Vasodilation is Impaired in Arterialized Capillaries Following Ischemia.** Joshua Patrick Cutts, Feilim MacGabhann, Trevor Cardinal. Biomedical Engineering, Cal Poly - San Luis Obispo, USA

**Glucagon-like Peptide-1 (GLP-1) Attenuates Agoniststimulated Cytosolic Free Calcium ([Ca<sup>2+</sup>]<sub>i</sub>) Signaling and the Production of F<sub>2</sub>α-isoprostane in Endothelial Cells.** Vanitra A Richardson, Craig S Weber, Ronald M Lynch, Betsy B Dokken. Department of Physiology, University of Arizona, USA

**Platelets of humans with type 2 diabetes (DM2) exhibit fewer prostacyclin receptor (IPR) binding sites as well as decreased iloprost (ILO)-mediated cAMP accumulation.** Stephanie M. Knebel, Randy S. Sprague, Mary L. Ellsworth, Alan H. Stephenson. Department of Pharmacological and Physiological Science, Saint Louis University School of Medicine, USA

**12:30-3:30 pm MCS Poster Session**

## **Welcome to New MCS Members**

### **Regular Members:**

Francesca Ingegnoli, University of Milano, Italy

Spyros Stamatelos, Johns Hopkins University

### **Associate Members:**

Istavan Czikora, Medical College of Georgia

### **Student Members:**

Himakarnika Alluri, Texas A&M Health Science Center

Jason Reynolds, University of South Florida

Richard Sweat, Tulane University

## **2013-2014 MCS Election Results**

### ***Congratulations to our new officers:***

#### **President-Elect**

Mary (Molly) Frame

#### **Secretary**

Trevor Cardinal

#### **Councilors**

Dwayne Jackson

Shayn Peirce-Cottler

## **Upcoming Meetings**

### **Experimental Biology and MCS Annual Meeting**

Boston, MA

April 20-24, 2013

<http://experimentalbiology.org/EB/pages/default.aspx?splashpage=1>

The **Smooth Muscle Underground Group Meeting** will be held at the Omni Parker House Hotel in Boston on the Friday April 19<sup>th</sup>.

[www.SMUG2013.com](http://www.SMUG2013.com)

### **IUPS 2013**

Birmingham, UK

July 21-26, 2013

<http://www.iups2013.org/>

### **Vascular Biology 2013 -Joint meeting of NAVBO with the Microcirculatory Society**

Resort and Conference Center at Hyannis, Cape Cod, MA

October 20-24, 2013

<http://www.navbo.org/events/vb2013>