

The Microcirculatory Society, Inc.

Newsletter

Volume 39, Number 4 – Spring 2012



A Note from the President

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Greetings from the rapidly blooming hills of West Virginia!

As you know, our annual meeting will be held in San Diego next month, and I'm looking forward to what should be a great program. I hope to see all of you at the MCS-sponsored events. Just a few friendly reminders:

Don't forget to purchase your tickets for the MCS awards luncheon, which will be held on Saturday, April 21 from 12:00 to 1:45 pm, in Sapphire Ballroom D of the San Diego Hilton Bayfront. Tickets must be purchased in advance (deadline is April 13), and this can be done through the MCS website at <http://microcirc.org/>.

Officers

President
Matthew Boegehold, Ph.D.
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Michael Hill, Ph.D.
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Secretary
Tara Haas, Ph.D.
thaas@yorku.ca

Treasurer
Rolando Rumbaut, M.D., Ph.D.
rrumbaut@bcm.tmc.edu

In preparation for our annual business meeting, which will be held on Sunday, April 22, from 4:45 - 5:45 pm in Room 26 of the San Diego Convention Center, please review the proposed changes in the MCS Bylaws that were sent out to the membership last month. This document may also be found on the MCS website at: <http://microcirc.org/MCS%20proposed%20bylaws%20amendments%202012.pdf>

Also, I hope you will consider attending the joint meeting of the MCS with the British Microcirculation Society on July 4-6, in Oxford. Please visit the meeting website at <http://www.microcirc2012.com>. Abstract submission will run through March 31. The MCS is offering travel awards for trainees who would like to present their work at this meeting. Please see the website for details.

Finally, as my term as President of the MCS nears its end, I would like to thank the membership for their continued support of and involvement in the Society. I am especially grateful to the Society's officers, Councilors and Committee Members for their service to the MCS. Our Society could not exist without all of your efforts. Finally, I would like to thank our Membership Director, Johanna B. Derda, for all of her work on behalf of the Society. It has been an honor and a pleasure for me to serve the Society, and I look forward to seeing you all in San in San Diego.

Warm Regards,

A handwritten signature in black ink, appearing to read 'Matt', written in a cursive style.

Matthew A. Boegehold, Ph.D.
President

MCS Election Results

Thanks to all members who participated in the election process.

Congratulations to our newly elected officers:

PRESIDENT-ELECT – Jefferson Frisbee
TREASURER – Alan Stephenson
COUNCILLOR – Mary (Molly) Frame
COUNCILLOR – Brant Isakson

Welcome to New MCS Members

Regular Members:

Mohammad Uddin, Texas A&M Health Science Center College of Medicine
Jean-Luc Cracowski, Unité de Pharmacologie Clinique, CHU de Grenoble, France
Gayathri Krishnamoorthy, Kansas State University
Jianbo Wu, Dalton Cardiovascular Research Center, Missouri
Yan Yang, Dalton Cardiovascular Research Center, Missouri
George Hunter, Massachusetts General Hospital
Christopher Triggler, Weill Cornell Medical College in Qatar
Richard Beard, University of South Florida
Irina Nizamutdinova, Texas A&M Health Science Center College of Medicine

Associate Members:

Ping Yi, Louisiana State University Health Science Center-Shreveport
Sarah Jones, St. Mary's Hospital, Manchester, UK
Zsuzsanna Tucsek, Oklahoma University Health Science Center
Jessica Osmond, University of New Mexico
Ivana Moraes-Silva, Instituto do Coração, Universidade de São Paulo, Brazil

Student Members:

Nathaniel Hayward, University of Western Ontario, Canada
Brendan Fry, University of Arizona

The Microcirculatory Society Awardees for 2012

I. The Eugene M. Landis Research Award

Dr. Roland Pittman, Professor, Virginia Commonwealth University

II. MCS award for Excellence in Lymphatic Research:

Dr. Ranjeet M. Donganokar, Associate Research Scientist, Texas A&M University

III. MCS Travel Award for Outstanding Young Investigator:

Dr. Jerome Breslin, Assistant Professor, LSU Health Science Center, New Orleans

IV. The August Krogh Young Investigator Award:

Dr. Matthew Socha, Postdoctoral Scientist at the University of Missouri, Columbia

V. The John R. Pappenheimer Postdoctoral Travel Awards:

1. Silu Lu, University of Mississippi Medical Center
2. Matthew Durand, Medical College of Wisconsin
3. Walter Cromer, Texas A&M Health Science Center
4. Ramesh Mishra, University of Calgary
5. Maria Galan, Tulane University
6. Christian Stork, West Virginia University
7. Barry Kyle, University of Calgary
8. Kathivel Kandasamy, University of Tennessee HSC

VI. The Benjamin Zweifach Graduate Student Travel Awards:

1. Alexander Lohman, University of Virginia
2. Scott Zawieja, Texas A&M Health Science Center
3. Patricio Mujica, UMDNJ-New Jersey Medical School
4. Peter Stapor, Tulane University
5. Jessica Priestley, Medical College of Wisconsin
6. Ming Yang, Tulane University
7. Jerry Brunson, Louisiana State University HSC
8. John Clemmer, University of Mississippi Medical Center
9. Robert Davis, University of Florida
10. Jacqueline Niu, University of Virginia

VII. The Gerritsen Award (most highly cited review over the previous 5 years):

“Inflammatory responses underlying the microvascular dysfunction associated with obesity and insulin resistance” Singer, G; Granger, DN *Microcirculation*, 14(4), 2007

VIII. The Wiederhelm Award (most highly cited original article over the past 5 years):

“Inflammation and breakdown of the blood-retinal barrier during "physiological aging" in the rat retina: A model for CNS aging” Chan-Ling, T; Hughes, S; Baxter, L; Rosinova, E; McGregor, I; Morcos, Y; Van Nieuwenhuyzen, P; Hu, P *Microcirculation*, 14(1), 2007

MCS Sessions and Events at EB 2012

Overview of MCS Events:

Saturday April 21	President's Symposium I	9:00-11:30	Convention Center 26
Saturday April 21	MCS Awards Luncheon	12:00-1:45	Hilton Sapphire Ballroom D
Saturday April 21	President's Symposium II	2:00-4:30	Convention Center 26
Sunday April 22	MCS Poster Session	12:30-3:30	Exhibit Hall
Sunday April 22	MCS Landis Award	3:30-4:30	Convention Center 26
Sunday April 22	MCS Business Meeting	4:45-5:45	Convention Center 26
Monday April 23	Young Investigators Symposium	10:30-12:30	Convention Center 26
Monday April 23	MCS Poster Session	12:30-3:30	Exhibit Hall

Detailed Program:

Saturday, April 21, 2012

9:00-11:30 am : President's Symposium I. "Cation Channels and Vascular Control: ASIC and TRPV Proteins".

Chair: Matthew Boegehold, West Virginia University, Morgantown, WV.

"TRPV Channels in Cerebral Arteries". Scott Earley, PhD, Associate Professor of Biomedical Sciences, Vascular Physiology Research Group, Colorado State University.

"Molecular Sensors for Hypertension, Inflammation, and Tissue Injury: Role of TRPV Channels." Donna Wang, M.D., Professor of Medicine and Chief, Division of Nanomedicine and Molecular Intervention, Michigan State University College of Human Medicine.

"ASIC1 in Pulmonary Vascular Smooth Muscle Function". Nikki Jernigan, PhD, Assistant Professor of Cell Biology and Physiology, University of New Mexico School of Medicine.

"Mechanisms of Regulation of Intraparenchymal Cerebral Arterioles". Joseph Brayden, PhD, Professor of Pharmacology, University of Vermont College of Medicine.

12:00 pm-1:45 pm: MCS Awards Luncheon

Hilton Bayfront Sapphire Ballroom D **Ticket Required**

2:00-4:45 pm: President's Symposium II: "Young Investigator Novel Trends"

Chairs: Kathleen Lukaszweicz, Medical College of Wisconsin, Milwaukee WI and Adam Goodwill, Indiana University School of Medicine, Indianapolis IN.

A novel approach for imaging calcium events simultaneously in arteriolar vascular smooth muscle and endothelial cells. Pooneh Bagher, Christopher J. Garland and Kim A. Dora. Department of Pharmacology, University of Oxford, Oxford, UK

The effects of circulating angiotensin II levels on vascular gene expression in normotensive rats. Jessica Priestley, Katherine Fredrich, Andreas Beyer, Julian Lombard. Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, USA.

Accelerated Arteriogenesis In Collateral Arterial Segments Exposed To Flow Reversal After Femoral Arterial Ligation. Joshua K Meisner¹, Suna Sumer¹, Jacqueline Niu¹ Ji Song¹, Richard J Price.^{1,2} ¹Biomedical Engineering, ²Radiology and Radiation Oncology, University of Virginia, Charlottesville, VA, USA.

NG2 inhibition decreases endothelial cell sprouting along venules: A novel in situ angiogenesis assay to investigate multicellular interactions. Peter Conrad Stapor, Taby Ahsan, Walter Lee Murfee. Biomedical Engineering, Tulane University, New Orleans, LA, USA.

The effect of network pattern alterations on microvascular resistance in hypertension. Ming Yang, Walter Lee Murfee. Biomedical Engineering, Tulane University, New Orleans, LA, USA.

Simulation of metabolic blood flow regulation in heterogeneous microvascular networks: Effects of hematocrit variations. Brendan C. Fry¹ and Timothy W. Secomb^{1,2}. ¹Program in Applied Mathematics, ²Department of Physiology, Univ. of Arizona, Tucson, AZ, USA.

Long-term effects of indocyanine green on lymphatic pump function in vivo. Michael Weiler¹ and J. Brandon Dixon². ¹Department of Biomedical Engineering and ²Department of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA, USA.

Ankle position modifies tibialis anterior muscle perfusion and oxygenation in the human leg. Ronald B. Crater, Bing Zhang, Alan R. Hargens: Department of Orthopaedic Surgery, University of California, San Diego, CA, USA.

The ratio of C-peptide to insulin is critical for low pO₂-induced ATP release from human erythrocytes (RBCs). Jennifer P. Richards, Alan H. Stephenson, Mary L. Ellsworth, and Randy S. Sprague. Department of Pharmacological and Physiological Science Saint Louis University, Saint Louis, MO, USA.

Simvastatin and GGTI-2133, a geranylgeranyl transferase inhibitor, increase erythrocyte (RBC) deformability, but inhibit low O₂-induced ATP release. Kelly M Clapp, Mary L Ellsworth, Randy S Sprague, Alan H Stephenson. Department of Pharmacological and Physiological Science, Saint Louis University School of Medicine, St. Louis, MO, USA.

Cilostazol, a PDE3 (phosphodiesterase 3) inhibitor, enhances prostacyclin receptor-mediated cAMP accumulation and ATP release in erythrocytes (RBCs) of healthy humans (HH) and humans with type 2 diabetes (DM2). Stephanie M. Knebel, Elizabeth A. Bowles, Randy S.

Sprague, Alan H. Stephenson. Saint Louis University Department of Pharmacological and Physiological Science, 1402 South Grand Blvd, St. Louis, MO, USA.

Reduced RhoA activity mediates the acute alcohol intoxication-induced reduction of lymphatic myogenic constriction independently of cytosolic $[Ca^{2+}]$. Flavia M. Souza-Smith, Kristine M. Kurtz and Jerome W. Breslin. Department of Physiology, School of Medicine, Louisiana State University Health Sciences Center, New Orleans LA.

Sunday, April 22, 2012

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

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

Dr. Roland Pittman, Medical College of Virginia.

"Tales from the Microcirculation: Oxygen Transport and Its Regulation."

4:45- 5:45 pm: **MCS Business Meeting** (This will include a tribute to Dr. Gabor Kaley)

Monday, April 23, 2012

10:30 am-12:30 pm: **Microcirculatory Society Young Investigator Symposium:**
"Oxidant Stress and Inflammation in the Microcirculation"

Chair: Johnathan Tune, Indiana University School of Medicine, Indianapolis IN.

Apocynin Improves Exercise Performance and Functional Vasodilation by Improving K_{ATP} Function in Obese Zucker rats. Silu Lu, Lusha Xiang, John Clemmer, Lynn Lee, Mohamad Sebai, and Robert Hester. Department of Physiology, University of Mississippi Medical Center, Jackson, MS, USA.

Role of CYP4A/20-HETE Pathway in Vascular Oxidative Stress in the Dahl Salt-Sensitive Rat. Kathleen Lukaszweicz,¹ John R. Falck², and Julian H. Lombard¹. ¹Department of Physiology, Medical College of Wisconsin; ²Department of Biochemistry, University of Texas Southwestern Medical School, Dallas TX, USA.

Syndecan-1 Modulates Leukocyte Adhesion in the Murine Parietal Peritoneum Microcirculation in Response to *Staphylococcus aureus* Lipoteichoic Acid. Paulina Kowalewska¹ and Alison E. Fox-Robichaud.² ¹Medical Sciences, ²Medicine, McMaster University, Hamilton, ON, Canada

Distinct Roles for Talin-1 and Kindlin-3 in LFA-1-dependent Neutrophil Rolling and Arrest. Craig T. Lefort, Jan Rossaint, Markus Moser, Brian G. Petrich, Alexander Zarbock, Susan J. Monkley, David R. Critchley, Mark H. Ginsberg, Reinhard Fässler, and Klaus Ley. Division of Inflammation Biology La Jolla Institute for Allergy & Immunology. La Jolla, CA, USA

Mast Cells in Proximity of Adult and Aged Mesenteric Lymphatic Vessels. Victor Chatterjee, Anatoliy A Gashev. Department of Systems Biology and Translational Medicine, Texas A&M Health Science Center, Temple, TX, USA.

12:30-3:30 pm MCS Poster Session

Upcoming Meetings

Experimental Biology and MCS Annual Meeting

San Diego, CA - April 21-25, 2012

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

Joint Meeting of the British Microcirculation Society and The Microcirculatory Society

Abstract Submission Deadline: March 31, 2012

Keble College, Oxford, UK—July 4-6, 2012

<http://www.microcirc2012.com>

10th World Congress for Microcirculation, 2014

Beijing, China