



# The Microcirculatory Society

## NEWSLETTER

### MESSAGE FROM THE PRESIDENT

*The achievements of an organization are the results of the combined effort of each individual.*

*Vince Lombardi*

Greetings!

**MCS has many new and exciting changes!** First, you will notice the new look for our Newsletter. Expect the Newsletters in the future to be more frequent, and contain articles from Early Stage Investigators (with approval of their PI) that will highlight their work. Our first **ESI Update** will be in the next Newsletter, highlighting the early stage investigators in the lab of Professor William Mayhan. In the next few weeks, we will put out a call for applications for future featured articles.

**The Microcirculatory Society webpage has a number of new features.** You may have noticed that to access the MCS Directory, you must now use your Journal ID – yes, the same 6 digit number that you use to access the journal itself. If you need a reminder for that number, you may contact either Executive Director Bernadette Englert (ExecutiveDirector@microcirc.org) or WebMaster Extraordinaire Robert Hester (RHester@umc.edu). The security measure is part of the security transition for members to more readily access other members, while spam-artists will be thwarted. Other

features and upgrades for the website are underway, behind the veil, in Jackson, Miss.

#### **MCS supported 6 Travel Awards for the NIH Workshop on Small Blood Vessels.**

Our Treasurer Shayn Peirce-Cottler has written a summary of the workshop (see page 2). Two awards were given in each of three categories. **Graduate Student Category:** Margaret Kelly-Goss, University of Virginia and Mekala Raman, Mayo Clinic. **Post-doctoral Category:** Phoebe Stapleton, University of West Virginia and Amy Smith, University of Arizona. **Early-stage Faculty Category:** Andy Shih, Medical University of South Carolina and Rupal Mehta, University of Maryland. Congratulations!



Lastly, Bernadette led us in the creation of a new MCS recruitment brochure that made its debut at this workshop meeting. She has copies and they will appear at all meetings. You can download the brochure by following the link on page 10.

**Vascular Biology 2014 is just around the corner, October 19-23.** (<http://www.navbo.org/events/vb2014>). I'm flying directly into Monterey, CA, and plan to enjoy the fall scenery and great science! MCS is hosting three symposia: Inflammatory Oxidative/Nitrosative Stress on Microvascular Responses in Vascular Disease, New Perspectives on the Roles of Lymphatics in Inflammation and Molecular and Cellular Dynamics of Angiogenesis. Each of these symposia is a hybrid with Established and Early Stage Investigators being both invited and chosen from the abstract pool. A combination of people from Roland Pittman's Awards Committee and Brant Isakson's Program Committee selected four (4) Travel Awardees to attend this meeting. They are Xun Zhang, Kenneth Goiun, Joshua Heuslein and Jamie Mayo. Congratulations to all of you! At the meeting, two poster awards will be chosen. I look forward to seeing many of you at the Asilomar Conference Center!

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**Experimental Biology 2015 in Boston.** Keep in mind the deadlines for EB 2015. <http://experimentalbiology.org/2015/Home.aspx> The MCS sessions to note are on page 5 of this newsletter. A list of the topic categories is on page 6. The Landis Award Lecture will be given by Professor Dai Fukumura, MD, PhD. The Kaley Lecture will be given by Professor Mark Nelson, PhD.

**Nominations for Council, Secretary and President-Elect are now being accepted.** Please see the application form on page 15. You may nominate yourself, or another. If you are shy about nominating yourself, ask me to nominate you.

**The World Congress Symposia are selected for Kyoto, Japan, September 25-27, 2015.** At the MCS General Business Meeting in San Diego, we voted to sponsor 10 Early Stage Investigator Travel Awards at \$1,500 (USD) each. The call for applications will appear early in 2015. 'Early Stage Investigators' are 'MCS members in good standing ranging from graduate students to six years post terminal doctoral degree by the time of application'. Additionally, in early 2015 we will issue the call for Zweifach Award nominations for the Zweifach Lecturer who will speak in Kyoto. Lastly, we agreed to sponsor two MCS led symposia for the WC meeting. That request for applications has been issued and the deadline is October 1. Join us in Kyoto in September 2015!

Respectfully,

Molly Frame  
MCS President

## IN REVIEW: THE NIH "SMALL BLOOD VESSELS: BIG HEALTH PROBLEMS?" WORKSHOP

*by Shayn Peirce-Cottler*

A diverse group of over 200 researchers, clinicians, and trainees convened at the "Small Blood Vessels: Big Health Problems?" meeting at the John Edward Porter Neuroscience Research Center September 18-19 on the main NIH campus. The meeting was co-sponsored by the National Institute of Neurological Disorders and Stroke, the National Heart, Lung, and Blood Institute, the National Eye Institute, the Office of Disease Prevention, and the Office of Research on Women's Health. An exciting and interdisciplinary line-up of speakers communicated their latest discoveries, identified common challenges and current "gaps" in understanding, and engaged with participants in panel discussions about opportunities for new investigations relating to small blood vessels in a wide range of different diseases. The meeting opened with a comprehensive and educational keynote talk by Dr. William Aird, entitled: "Seeing the Endothelium," which focused on the extensive heterogeneity of the endothelium and its role as a systemically distributed "organ" involved in numerous diseases. Subsequent talks extended the



theme of cell heterogeneity to include other cell types within (and surrounding) the vessel wall, vascular cell interactions with immune cells, organ-specific differences in vascular function, and sex-specific differences. Speakers and attendees acknowledged the important role for computational modeling in integrating and studying the complexity of small vessel structure, function, and adaptation during disease. The use of new imaging approaches combined with cutting-edge in vitro and in vivo experimental models to research the dynamics of small vessels was also extensively discussed.

The Microcirculatory Society sponsored six travel awards for this meeting, and the recipients included: graduate students (Margaret Kelly-Goss and Mekala Raman), post doctoral trainees (Phoebe Stapleton and Amy Smith), and early-stage faculty (Andy Shih and Rupal Mehta). Videocasts of both days are available at <http://videocast.nih.gov/PastEvents.asp>



## VASCULAR BIOLOGY 2014

Join us at Asilomar  
October 19-23



### PROGRAM IN MICROCIRCULATION

MONDAY, OCTOBER 20

#### **Inflammatory Oxidative/Nitrosative Stress on Microvascular Responses in Vascular Disease**

Chairs: Zoltán Ungvári, Oklahoma University and Molly Frame, Stony Brook University

*Cytomegalovirus: Altering microvascular responses to high cholesterol*  
Karen Stokes, Louisiana State University

*Endothelial Dysfunction with nano-metal oxide exposure in old mice\**  
Molly Frame, Stony Brook University

*Oxidant stress and inflammation: Contributors to the '1-2 Punch' of vascular disease in the metabolic syndrome*  
Jefferson Frisbee, West Virginia University

*Acute alcohol intoxication exacerbates hemorrhagic-shock/resuscitation-induced microvascular hyperpermeability in the rat mesentery\**  
Travis Doggett, University of South Florida

*Increased muscle mass improves microvascular function in obesity*  
David Stepp, Georgia Regents University

*Endothelial Ephrin-B2, essential for arterial vasodilation, is also required for reducing acute ischemic injury in mice following experimental arterial occlusions\**  
Rong Wang, University of California, San Francisco

*Caveolin-1 is a negative regulator of ADAM17 in the pericardial adipose tissue of elderly patients\**  
Zsolt Bagi, Medical College of Georgia

*Recruitment of the Nck adaptor protein to PECAM-1 couples oxidant stress to canonical NF-kappaB signaling and inflammation\**  
A. Wayne Orr, LSU Health Sciences Center

*Pannexin 1-dependent ATP release from venous endothelium promotes acute vascular inflammation\**  
Brant Isakson, University of Virginia

\* denotes a talk selected from abstracts

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## New Perspectives on the Roles of Lymphatics in Inflammation

Chairs: Jerome Breslin, University of South Florida and Mariappan Muthuchamy, Texas A&M Health Science Center

*Causes and consequences of collecting lymphatic vessel dysfunction during inflammation*

Pierre-Yves von der Weid, University of Calgary

*Characterization of the kinetics of lymphatic transport of exosomes to the lymph node\**

Brandon J. Dixon, Georgia Institute of Technology

*Efficient lymphatic drainage attenuates pulmonary inflammation and fibrosis\**

Jung S. Huang, St. Louis University School of Medicine

*Lymphatic vessel patterning and plasticity in the microcirculation*

Walter Lee Murfee, Tulane University

*LPS induced changes in immune cell recruitment and impairment of lymphatic contractility during inflammation\**

Sanjukta Chakraborty, Texas A&M University Health Science Ctr

*Effect of axial stretch on lymphatic vessel contractility\**

Zhanna Nepiyushchikh, Georgia Institute of Technology

## TUESDAY, OCTOBER 21

## Molecular and Cellular Dynamics of Angiogenesis

Chairs: Shayn Peirce-Cottler, University of Virginia and W. Lee Murfee, Tulane University

*Temporal responses of angiogenic stimulators and inhibitors to microvessel expansion and regression*

Mark Olfert, West Virginia University

*Microvascular network maturation but not vasculogenesis is decreased in adipose-derived stromal vascular fraction with advanced donor age\**

Amanda LeBlanc, University of Louisville

*Blood flow dynamics in the bone marrow microvasculature of the murine skull\**

Gabriele Bixel, Max-Planck Institute for Molecular Biomedicine

*NG2-dependent contributions of pericytes and macrophages to tumor vascularization and progression*

William Stallcup, Sanford-Burnham Medical Research Institute

*The identification of mTORC2 as a target for inhibition of SDF-1-induced angiogenesis\**

Mary E. Ziegler, University of California-Irvine

*The novel role of Slug (Snai2) in angiogenesis in vivo\**

Nan Wu, University of California-Irvine

*Spatiotemporal regulation of Flt-1 isoforms during sprouting angiogenesis\**

Joshua Boucher, University of North Carolina-Chapel Hill

*An autocrine bFGF/TGF $\beta$  feedback loop controls EC fate and specification*

Lin Xiao, University of North Carolina-Chapel Hill

*Role and regulation of VEGF in the adult*

Patricia D'Amore, Harvard Medical School

*Mechanotransductive mechanisms of amplified arteriogenesis in collateral artery segments exposed to a reversal in hemodynamic flow direction\**

Richard Price, University of Virginia

October 19-23, 2014  
Asilomar Conference Grounds  
Pacific Grove, CA  
[www.navbo.org/microcirc](http://www.navbo.org/microcirc)

# MEETINGS

## EXPERIMENTAL BIOLOGY 2015

MARCH 28 - APRIL 1, 2015

BOSTON CONVENTION AND EXHIBITOR CENTER

### SESSIONS - MARCH 28

#### Oxygen/Blood Flow

9:30 - 11:30am

*Chair:* Molly Frame, Stony Brook University

*Speakers:* Roland Pitman,  
Virginia Commonwealth University and  
Congwu Du, Stony Brook University

#### Inflammation

1:30 - 3:00pm

*Speakers:* Eric Schmidt,  
University of Colorado and  
Shayn Peirce-Cottler, University of Virginia

#### Signaling/Channels

3:30 - 5:00pm

*Chair:* Joshua Butcher, University of Virginia

*Speakers:* Jonathan LeDeaux, University of  
Montreal and Andreas Beyer,  
Medical College Wisconsin

### SPECIAL EVENTS

#### SOCIETY BANQUET

Saturday, March 28, 11:45am-1:15pm

#### LANDIS AWARD DR. DAI FUKUMURA

Targeting tumor microvasculature  
and microenvironment

Sunday, March 29, 3:30 - 4:30pm

#### MICROCIRCULATORY SOCIETY MEMBERSHIP BUSINESS MEETING

Sunday, March 29, 4:30pm-5:30pm

#### MICROCIRCULATORY SOCIETY RECEPTION, AWARDS & POSTER PRESENTATIONS

Sunday, March 29, 5:30pm-7:00pm

**Abstract Submission Deadline: Thursday, November 6, 2014**  
**Early Registration Deadline: Monday, February 2, 2015**





## EXPERIMENTAL BIOLOGY 2015

### ABSTRACT TOPIC CATEGORIES FOR INCLUSION IN THE MICROCIRCULATORY SOCIETY'S PROGRAM

#### Posters:

I035-APS	Angiogenesis/microvascular remodeling/injury & repair
I036-APS	Atherosclerosis/thrombosis/platelets
I037-APS	Inflammation/leukocyte-endothelium interactions
I038-APS	Instrumentation, methodology, and experimental models
I039-APS	Ischemia-reperfusion/free radical biology
I040-APS	Lymphatic and venular function
I041-APS	Microvascular cell signaling pathways
I042-APS	Microvascular development and aging
I043-APS	Microvascular flow regulation/oxygen delivery/networks
I044-APS	Microvascular mechanics/hemodynamics/rheology
I045-APS	Microvascular pathophysiology-pharmacology, therapeutics and translational aspects
I046-APS	Pericytes and Stem Cells
I047-APS	Permeability/fluid & solute exchange/glycocalyx
I048-APS	Tissue-microvessel interactions/extracellular matrix
I049-APS	Vasomotor control: endothelium/smooth muscle/nerves

Eight abstracts will be chosen for short talks (ten minutes with five minutes for Q&A) in the following sessions, which will be held on Saturday, March 28: Oxygen/Blood Flow, Inflammation and Signaling/Channels.

Check the MCS web site for travel award opportunities  
for young investigators

<http://microcirc.org>



See you in Boston  
at Experimental Biology 2015

**November 6 is the deadline  
for abstract submission!**

For more information about the meeting, housing,  
abstract submission, etc.

Go to [experimentalbiology.org](http://experimentalbiology.org)



# 10<sup>th</sup> World Congress for Microcirculation

In conjunction with the 40th Japanese Society for Microcirculation

Date: **Sep. 25-27, 2015** Venue: **Kyoto International Conference Center**

President:

**Makoto Suematsu M.D. Ph.D.**

Keio University School of Medicine

President for 40th JSM:

**Toyotaka Yada M.D. Ph.D.**

Kawasaki University of Medical Welfare  
Kawasaki Medical school

Executive Advisers:

- **Toshikazu Yoshikawa**  
Kyoto Prefectural University of Medicine
- **Fumihiko Kajiya**  
Kawasaki University of Medical Welfare

Plenary Lectures:

- **Vascular metabolism: principles and strategies**  
Prof. **Peter Carmeliet**  
Katholieke Universiteit, Leuven, Belgium
- **Catching pathogens in the microcirculation**  
Prof. **Paul Kubes**  
University of Calgary, Alberta, Canada.
- **Imaging brain activity from capillaries**  
Prof. **Serge Charpak**  
Institut National de la Santé et de la  
Recherche Médicale, Paris, France

## Congress Secretariat

c/o Congress Corporation  
Kōsai-kaikan Bldg., 5-1 Kojimachi,  
Chiyoda-ku, Tokyo, Japan 102-8481  
Phone: +81-3-5216-5318 Fax: +81-3-5216-5552  
E-mail: wcmic2015@congre.co.jp

**KYOTO, JAPAN** <http://www.congre.co.jp/wcmic2015>



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ACCESS MICROCIRCULATION AT:

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1549-8719](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1549-8719)



## MEET SOME OF OUR NEWEST MEMBERS

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**Karima Ait Aissa's** research interest is to understand the signaling pathways that contribute to vascular dysfunction of resistant arteries particularly in hypertension and diabetes. Specifically she is studying the role and mechanisms of endoplasmic reticulum stress (ER-stress) pathway and Three prime repair exonuclease I (TREX1) in endothelial dysfunction during

hypertension and diabetes. Her lab uses pharmacology and physiology approaches, mice genetics and molecular biology, in vitro and in vivo siRNA mediated delivery, real time PCR, western blotting analysis, immunostaining and cell culture techniques to successfully carry out the proposed work.

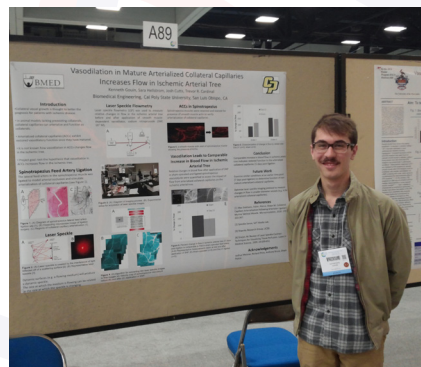


**Anthony Bruce's** research interests include investigating the roles and origins of macrophage subsets during microvascular growth and remodeling events, as well as developing therapeutic strategies to stabilize the microvasculature and modulate angiogenesis and arteriogenesis in disease settings.

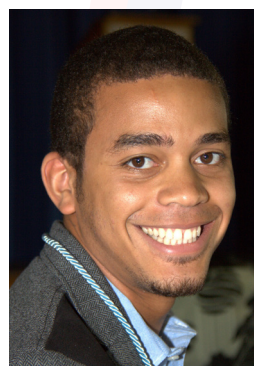
**Anjelica Gonzalez** The leukocyte adhesion cascade, defining the mechanisms by which neutrophils are recruited into the extravascular space by endothelial



cells in response to pro-inflammatory cues, was updated in 2007 to include the pericyte. However, practical in vitro models of composite microvascular structures, inclusive of pericytes and pericyte-derived basement membranes did not exist. The Gonzalez lab developed a tissue matched endothelial cell/pericyte composite model of the microvascular structure. Both the composite and modular structure of a human microvessels are used by the Gonzalez lab and others to evaluate the role of complex microvascular structures in signaling leukocyte recruitment that contributes to acute inflammation, and progression of wound healing and chronic inflammatory disease, including pulmonary fibrosis, dermal psoriasis, and systemic scleroderma. The goal of this work is to advance the leukocyte adhesion cascade, defining mechanisms by which microvascular cells control leukocyte recruitment and leukocyte function in the extravascular space.



**Kenneth Gouin's** research interests are in the collateral circulation, specifically the response of animals that lack a native collateral circulation to arterial occlusion. He currently conducts research under the direction of Dr. Trevor Cardinal at California Polytechnic State University - San Luis Obispo. He is working on a laser speckle flowmetry protocol to measure the changes in blood flow following vasodilation of arterIALIZED collateral capillaries.



**Joshua Hooks'** research interests are in cellular mechanics and biology. Specifically, he is looking at how the smooth muscle cells that provide contractile function to lymphatic vessels actively adapt to their changing mechanical environment. Through in-vitro studies, he is quantifying the sensitivity of lymphatic smooth muscle remodeling to substrate stiffness and uni-axial stretching.

# MEMBERSHIP NEWS

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**Adam H. Korayem**

Limb revascularization and salvage after ischemia-reperfusion (I-R) injury remains an important surgical problem. Development of approaches to control excessive edema due to increased microvascular permeability (hyperpermeability) should contribute

to decrease the potential for muscle compartment syndrome. Based on knowledge of biology of cell adhesion, they tested the hypothesis that stimulation of the cAMP-Epac-Rap1 pathway deactivates the hyperpermeability induced by the inflammatory phase of I-R and restores barrier integrity. They carried out in vivo and in vitro experiments. They induced ischemia in the hamster cremaster muscle by cross-clamping the infrarenal aorta for 30-min and reperfusion by releasing the clamp. Topical administration of forskolin or glucagon-like peptide 1 (adenyl cyclase activators used to increase cAMP) to the cremaster, at the time of reperfusion, blocked I-R induced hyperpermeability. To gain mechanistic insights, they used hypoxia-reoxygenation (H-R) as a mimic of I-R in cultured human microvascular endothelial cells (HMVEC) for several H-R times. H-R caused oscillatory increases in total cAMP concentration in HMVEC, consistent with biological responses to reduced cell adhesion (hyperpermeability). Forskolin elevated cAMP and blocked H-R induced changes in organization of junctional vascular endothelial cadherin. Through siRNA depletion of Epac and Rap1, in separate experiments, we demonstrated that cAMP acts through activation of Epac and Rap1 as depletion of these molecules prevented the restoration of barrier integrity achieved by increasing endothelial cAMP concentration. Their results indicate that management of endothelial cAMP levels may serve as adjuvant therapy in I-R injury.



**Nicole Madfis** is currently deriving endothelial sub-phenotypes from embryonic stem cells in chemically defined conditions. She uses this as a model to sub-phenotypic gene/receptor expression, molecular angiogenesis and single cell behaviors in response

to VEGF and TGF beta-1. She would like to look at single cell behaviors in the perivascular niche during angiogenesis and homeostasis in different tissues.

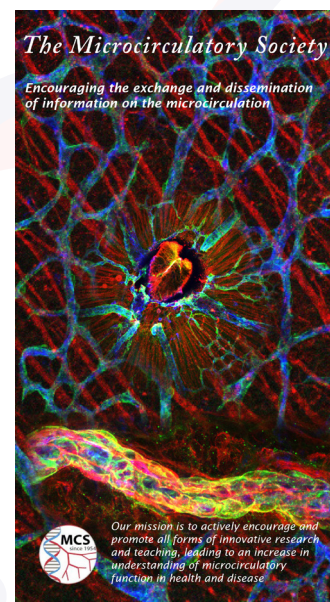


**Ashkon Nehzati's** research interests involve the development of mouse models for intravascular device testing, including the evaluation of medial thickening and neointimal hyperplasia. Specifically, he is interested in the vascular wall response to bioresorbable stents.

**Andrea Trujillo** is a cell biologist with a background in wound healing and tissue regeneration. She is currently involved in microcirculation research and her focus is primarily on juvenile lymphatic function and physiology as it relates to primary lymphedema. She is also the lab manager for the laboratory in the Department of Molecular Pharmacology and Physiology, University of South Florida.



## Download the new MCS Brochure





## SCHOLARSHIPS TO THE NIH MEETING

MCS sponsored several travel scholarships to the NIH symposium, Small Blood Vessels: Big Health Problems?, which took place September 18-19 on the NIH Campus. Two awards were given in each of these categories: postdoctoral fellow, graduate student and early stage investigator. The recipients are:

### Graduate Student Category



**Margaret Kelly-Goss**, University of Virginia. Her primary research interests include angiogenic and arteriogenic mechanisms across different ocular microvascular networks to better understand the pathology behind diabetic retinopathy. Generally, her work is aimed at observing cell recruitment and differentiation with real-time, in vivo observation of blood vessel networks in both the

healthy and diabetic eye. She specifically investigates how defective pericyte-macrophage communication during diabetes leads to dysfunctional microvascular networks.

**Mekala Raman**, of the Mayo Clinic, is investigating the contribution of microinfarcts to macroscopic changes seen on antemortem MRI in older adults. Through these neuroimaging-neuropathology correlation studies, she also aims to better understand the relationship between microinfarct pathology and Alzheimer's disease pathology.



### Postdoctoral Category

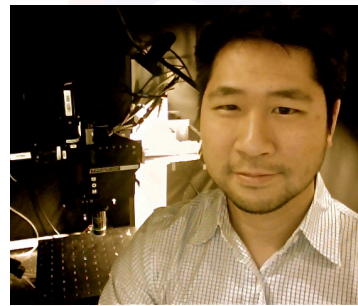


**Amy Smith**, of the University of Arizona, focuses on the development of mathematical models to investigate microcirculatory hemodynamics and oxygen transport, exploiting high-resolution ex vivo data on the complex structure of microvascular networks to derive physiologically-relevant predictions of microvascular function.

**Phoebe Stapleton Ph.D.**, at West Virginia University, focuses on microvascular adaptation to environmental exposures and/or in combination with a variety of physiological conditions, including pregnancy, CVD, and metabolic disease. Recent studies have focused on the maternal, fetal, and long-term adult progeny microvascular outcomes after gestational engineered nanomaterial exposure.



### Early-stage Faculty Category



**Andy Shih, Ph.D.** is at the Medical College of South Carolina. His laboratory uses high-resolution, in vivo imaging methods to understand how small vessel disease impacts cerebral blood flow, hemodynamic regulation, and neural processing in the aging brain. In recent work, they have been using a

novel rodent model to track the growth and pathogenesis of cerebral microinfarcts, which are ultra-small lesions known to be involved in cognitive decline, but largely invisible in routine clinical brain scans.



**Rupal I. Mehta, M.D.** of the University of Maryland at Baltimore. Dr. Mehta's research interests include characterization of iatrogenic vascular disorders and analysis of blood-brain barrier integrity and mechanisms of post-ischemic cell death in stroke. Her prior work includes an original description of hydrophilic polymer embolism (HPE) as an under-recognized cause for post-procedural ischemia and infarct.

*Congratulations to them all!*

## TRAVEL AWARDS TO VASCULAR BIOLOGY 2014

The Microcirculatory Society prides itself on supporting the career of young investigators. Enabling these young investigators to attend meetings where they are able to network, learn and possibly meet their next mentor or collaborators, embodies this spirit. MCS is very proud to announce the recipients of Travel Awards to Vascular Biology 2014, where MCS is a guest society of the North American Vascular Biology Organization (NAVBO) and is sponsoring three symposia, see page 4 of this newsletter for the full program of these sessions.

Congratulations to:

**Kenneth Goiun** of California Polytechnic State University - San Luis Obispo. Kenneth will present his poster, *Vasodilation in mature arterIALIZED collateral capillaries increases flow in ischemic arterial tree*, in the Microcirculation Session on Monday evening.

**Joshua Heuslein** of the Colorado State University will also present a poster, *Mechanotransductive mechanisms of amplified arteriogenesis in collateral artery segments exposed to a reversal in hemodynamic flow direction*, on Monday evening, October 20.

**Jamie Mayo** of the Idaho State University, will present a poster, *Stimulating pericytes: An exosome driven promotion of angiogenesis*, on October 20.

**Xun Zhang** of the University of South Florida, will present a poster titled, *Sphingosine-1-Phosphate (SIP) induces localized RhoA activation in association with endothelial barrier enhancement*, in the poster session on Monday evening.

The Travel Awards consist of a certificate and \$500. In addition to these four awards, two additional awardees will be selected based on the outcome of a poster competition. The above award winners are not eligible.



## CALL FOR NOMINATIONS OF OFFICERS AND COUNCILORS

**The MCS Nominating Committee is now seeking nominees for:**  
**PRESIDENT-ELECT, SECRETARY, AND TWO COUNCILORS**

2014-2015 Microcirculatory Society Nomination Ballot  
 is available on the MCS Web site -

Go to [http://microcirc.org/MCS\\_Nomination\\_Ballot\\_2014-2015.pdf](http://microcirc.org/MCS_Nomination_Ballot_2014-2015.pdf)  
 or print and complete the form at the end of this newsletter

You will need to provide the names and email addresses of nominees to Travis Hein, Chair of the Nominating Committee.

### From the MCS By-laws:

Nominations for all Officers, including Council members, of the Society will be obtained by mail, fax, e-mail or other approved forms of communication on or before December 1 by requesting the membership to propose nominees. The request for nominations will be made in the Society Newsletter preceding the December 1 deadline and by a direct e-mail to the membership. Nominations will be sent to the Chair of the Nominating Committee. For each office, the two persons (who agree to stand for election) with the highest number of nominations will be included on the ballot. If two persons cannot be identified, then a single name can be placed on the ballot. If two members of Council are to be elected, a total of not more than four nominees for that office will be included on the ballot.

### The deadline for receipt of nominations is: December 1, 2014

Please complete the form and email it by December 1st to:

Travis Hein, PhD  
 Chair, MCS Nominating Committee  
 Department of Surgery  
 Texas A&M Health Science Center  
 Email: [thein@tamu.edu](mailto:thein@tamu.edu)

### MCS OFFICERS & EXECUTIVE COUNCIL, 2014-2015

TITLE	NAME	TERM	EMAIL
President	Mary (Molly) D. Frame	2015	<a href="mailto:President@microcirc.org">President@microcirc.org</a>
President-elect	Rolando Rumbaut	2015	<a href="mailto:PresidentElect@microcirc.org">PresidentElect@microcirc.org</a>
Past-President	Jefferson C. Frisbee	2015	<a href="mailto:PastPresident@microcirc.org">PastPresident@microcirc.org</a>
Secretary	Trevor R. Cardinal	2015	<a href="mailto:Secretary@microcirc.org">Secretary@microcirc.org</a>
Treasurer	Shayn Peirce-Cottler	2015	<a href="mailto:Treasurer@microcirc.org">Treasurer@microcirc.org</a>
Councilor	Brant E. Isakson	2015	<a href="mailto:bei6n@virginia.edu">bei6n@virginia.edu</a>
Councilor	Anatoliy A. Gashev	2015	<a href="mailto:gashev@tamu.edu">gashev@tamu.edu</a>
Councilor	Dwayne N. Jackson	2016	<a href="mailto:dwayne.jackson@schulich.uwo.ca">dwayne.jackson@schulich.uwo.ca</a>
Councilor	Jerry Breslin	2017	<a href="mailto:jbreslin@health.usf.edu">jbreslin@health.usf.edu</a>
Councilor	Walter Lee Murfee	2017	<a href="mailto:wmurfee@tulane.edu">wmurfee@tulane.edu</a>
Councilor	Kim Dora	2017	<a href="mailto:kim.dora@pharm.ox.ac.uk">kim.dora@pharm.ox.ac.uk</a>

The Rosters of all Committees can be found on our web site at:  
[http://www.microcirc.org/ABOUT/MCS\\_Committees1a.htm](http://www.microcirc.org/ABOUT/MCS_Committees1a.htm)

# CALENDAR

## UPCOMING MEETINGS

Sept/Oct 2014

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MCS Newsletter

President's Message Meetings Journal Members Awards Nominations Calendar

### **Vascular Biology 2014 - Joint meeting of NAVBO and the MCS**

Monterey (Pacific Grove), CA – October 19-23, 2014

<http://www.navbo.org/events/vb2014/microcirculation>

American Heart Association Scientific Sessions

Chicago, IL – November 15-19, 2014

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

International Stroke Conference

Nashville, TN – February 11-13, 2015

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

Arteriosclerosis, Thrombosis and Vascular Biology/Peripheral Vascular Disease 2015

San Francisco, CA – May 7-9, 2015

[http://my.americanheart.org/professional/Sessions/ATVB/ATVB\\_UCM\\_316902\\_SubHomePage.jsp](http://my.americanheart.org/professional/Sessions/ATVB/ATVB_UCM_316902_SubHomePage.jsp)

Basic Cardiovascular Sciences Scientific Sessions 2015

New Orleans, LA – July 13-16, 2015

[http://my.americanheart.org/professional/Sessions/BCVS/BCVS\\_UCM\\_316903\\_SubHomePage.jsp](http://my.americanheart.org/professional/Sessions/BCVS/BCVS_UCM_316903_SubHomePage.jsp)

The Fourteenth International Conference on Endothelin

Savannah, GA – September 2-5, 2015

<http://www.endothelins.com/Conferences/ET-14/>

Hypertension Scientific Sessions 2015

San Francisco, CA – September 9-12, 2015

[http://my.americanheart.org/professional/Sessions/HBPR/HBPR\\_UCM\\_316905\\_SubHomePage.jsp](http://my.americanheart.org/professional/Sessions/HBPR/HBPR_UCM_316905_SubHomePage.jsp)

### **10th World Congress for Microcirculation**

Kyoto, Japan – September 25-27, 2015

<http://www.congre.co.jp/wcmic2015>