

The Microcirculatory Society, Inc. Newsletter

Volume 33, Number 4

Spring, 2006

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Officers

President:	Robert Hester rhester@physiology.umsmed.edu
President elect:	Tim Secomb secomb@u.arizona.edu
Secretary:	Deborah H. Damon Deborah.Damon@uvm.edu
Treasurer:	Mary (Molly) Frame mframe@notes.cc.sunysb.edu

President's Message

Hopefully I will be seeing you soon at the Experimental Biology Annual Meeting in San Francisco. The President's symposium will be on Saturday afternoon from 3:00-5:00 in the Convention Center. The Business meeting will be Saturday afternoon following the President's symposium. All materials and reports are supplied in the current newsletter. The Microcirculatory Society Social will follow the EB business meeting. The Zweifach and Krogh Travel Award winners will present posters during this MCS gathering.

The Landis Award lecture for 2006 will be given by William Rosenblum, M.D. entitled "Lessons from Observations of Brain Microcirculation with Emphasis on Consequences of Damaged Endothelium". This presentation will be Sunday Morning at 10:30. The Young Investigator Symposium will be presented on Sunday afternoon at 3:15.

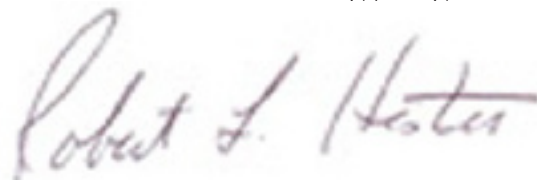
Please make sure you attend all of the MCS oral and poster presentations. This is important in supporting our members and for the exchange of ideas.

It has been an honor to serve as President of the Microcirculatory Society for the last year. I hope the new leadership and members will find that the organization is in sound financial shape for the upcoming

year. Although we are a small society we represent a very unique and important area of research.

The most rewarding aspect of serving as president is to have worked closely with colleagues to direct and oversee MCS. I cannot completely express my gratitude for working with a wonderful group of friends over the last year. Molly Frame, who will be stepping down as Treasurer, has done a magnificent job insuring that we are diligent stewards of the Societies' money. Debbie Damon with whom I have had many "brain storming sessions" has also handled the job as Secretary. The Executive Council has been open to new ideas in program planning and membership policy. I appreciate their ability to provide constructive criticism and to work to improve the Society.

As Tim Secomb takes on leadership as President of the MCS, I pledge my continued commitment and interest in the success of our organization. The MCS will continue to play an important role in providing excellent scientific research and in the training young investigators.



Welcome New Members

Regular Members

Johan Brekke
Department of Cellular and Molecular Physiology
The John B. Pierce Laboratory
Yale University College of Medicine
New Haven, CT

Student Members:

John Chappell
Department of Biomedical Engineering
University of Virginia
Charlottesville, VA

Patrick Dougherty
Department of Systems Biology and Translational
Medicine
Texas A&M University
College Station, TX

Jasna Junuzovic
Department of Health and Nutritional Sciences
University of Guelph
Guelph, Ontario, Canada

Congratulations to our New Society Officers

The votes have been tallied and the new officers are...

President-Elect: Cynthia Meininger

Treasurer Elect: Terry Sweeney

Councilors Elect: Richard Rivers

Dave Zawieja

The Society would like to thank Steve Segal and the members of the Nominations Committee for their efforts. Special thanks to Bob Gore for making the online voting possible.

Congratulations to our 2005 MCS Award Recipients

Eugene M. Landis Research Award

William Rosenblum, M.D.

Department of Pathology, Medical College of Virginia

Young Investigator Travel Award

Ryon Bateman, Ph.D.

Department of Medicine, University of British Columbia

August Krogh Postdoctoral Fellow Travel Awards

“Activation of TRPV4 increases endothelial permeability in lung septal capillaries.” **D.F. Alvarez**, J.A. King, W. Liedtke and M.I. Townsley. University of South Alabama and Duke University

“Arteriolar smooth muscle calcium dynamics in hamster cheek pouch in vivo” **J.F. Brekke**, W.F. Jackson, and S.S. Segal. Yale University School of Medicine and Michigan State University

“NFAT plays a role in chronic hypoxia-induced pulmonary arterial hypertension.” **S. de Frutos Garcia**, R. Spangler and L. Gonzalez Bosc. University of New Mexico.

“Suppression of endogenous β and γ EnaC abolishes myogenic vasoconstriction in mouse interlobar arteries.” **N.L. Jernigan** and H.A. Drummond. University of Mississippi Medical Center

“The microvascular effects of sphingosine kinase 1 are regulated by its subcellular localization.” **D. Lidington**, B.F. Peter, S. Pitson, U. Pohl and S.-S. Bolz. Ludwig Maximilians University, Munich and Hansom Institute of Medical and Veterinary Science, Adelaide, Australia

“Resolution of Ca^{2+} dynamics underlying conducted vasodilation: the Ca^{2+} wave.” **T.R. Uehnholt**, T.L. Domeier and S.S. Segal. Yale University School of Medicine

“Decreased functional vasodilation and increased thromboxane receptor-mediated vasoconstriction in diabetic rats”. **L. Xiang**, S.R. Abram and R.L. Hester. University of Mississippi Medical Center.

Benjamin Zweifach Graduate Student Travel Award

“Lipopolysaccharide reduces electrical coupling between microvascular endothelial cells of wild type but not connexin40 null mice in tyrosine-, PKA- and ERK1/2-dependent manner.” **M.L. Bolon**, G.M. Kidder and K. Tyml. Lawson Health Research Institute, London, Canada

“A novel signaling pathway for conducted vasodilation in hamster feed arteries”. **T.L. Domeier** and S.S. Segal. Yale University School of Medicine

“c-Jun regulates MMP-2 and MT1-MMP mRNA expression in endothelium.” **E. Ispanovic** and T.L. Haas. York University, Canada

“Coronary wave intensity in humans; effect of changes in microvascular resistance by vasodilation and stent placement and changes in heart rate”. **C. Kolyva**, B.-J. Verhoeff, J.J. Piek, J.A.E. Spaan and M. Siebes. Academic Medical Center. Amsterdam

“Radiation impairs endothelium-dependent dilation of murine intestinal arterioles via reduction of nitric oxide by reactive oxygen species.” **B.T. Larsen**, M.F. Otterson, H. Miura, S.A. Phillips, R.M. Selle, D.D. Gutterman and O.A. Hatoum. Medical College of Wisconsin

“Development of a novel in situ model for visualizing murine endometrial vasculature using fluorescence intravital microscopy”. **S. Leonard** and C. Murrant. University of Guelph, Canada

“Microvascular diameter responses to the controlled release of platelet-derived growth factor-BB and transforming growth factor- β 1”. **M.M. Nickerson**, C.W. Burke, C.J. Holliday, M.G. Hull, J. Song, T.C. Skalak and R.J. Price. University of Virginia

“Impaired endothelin-1-induced receptor-operated calcium entry in pulmonary vascular smooth muscle following chronic hypoxia”. **J.B. Snow**, B.R.S. Broughton, B.R. Walker and T.C. Resta. University of New Mexico

“Different mechanisms induce remote responses: acetylcholine versus adenosine.” **S.E. Wölflé** and C. de Wit. University of Lübeck, Germany

“Micro-PIV measurement of flow fields around adherent leukocytes. **J.E. Pickard**, A.R. Pries and K.

Ley. University of Virginia and Free University of Berlin

“Ascorbate prevents sepsis-induced reduction in arteriolar conducted vasoconstriction in the mouse cremaster muscle.” **R.L. MacKinnon**, D. Lidington and K. Tyml. University of Western Ontario

“Insulin inhibits ATP release from human erythrocytes.” **M. Stumpf**, A. Stephenson, E. Bowles, G. Ricketts, A. Lonigro and R. Sprague. Saint Louis University

“Growth dependent changes in the endothelial factors regulating arteriolar tone”. **J. Balch Samora**, J.C. Frisbee and M.A. Boegehold. West Virginia University School of Medicine

Krogh and Zweifach travel awardees will present their posters at the MCS Reception that follows the general business meeting.

The Society would like to thank Russ Prewitt and the members of the Awards Committee for their efforts.

Congratulations to Microcirculation Journal Award Recipients

Wiederhelm Award

Amaral, SL, Linderman, JR, Morse, MM and Greene, AS. Angiogenesis induced by electrical stimulation is mediated by angiotensin II and VEGF. *Microcirculation* 8(1): 57-67, 2001

Times cited: 34

Gerritsen Award (Review Article)

Helisch, A, Schaper, W. Arteriogenesis - The development and growth of collateral arteries. *Microcirculation* 10(1):83-97, 2003

Committee Reports

Awards Committee

Members of the awards committee and the year their term ends are:

Robert Brock	2008
Mike Eppihimer	2008
Mary Pat Kunert	2008
Roland Pittman	2007
Terrence Sweeney	2006
Russell Prewitt (Chair)	2006

Two replacements and the designation of a new chair will be necessary for next term.

This was a banner year for the Awards Committee.

First there was an extra meeting held in conjunction with the British Microcirculatory Society in New Hampshire, September 11-13, 2005. There were 12 applicants for travel awards to the New Hampshire meeting and the committee scored their abstracts for scientific merit. 5 awards were given.

Secondly, additional calls for applicants produced a much larger number of applicants for the Krogh post-doc and Zweifach graduate student travel awards. Fortunately, the number of awards was also increased.

Dr. William Rosenblum was selected as the recipient of our society's highest honor, the Eugene M. Landis Award for 2006.

Dr. Ryon Bateman received the travel award for Outstanding Young Investigator and plans to visit laboratories in Japan. We are looking forward to the report of his trip next year.

There were 14 applications for the August Krogh Young Investigator Travel Awards and 7 were awarded.

There were 28 applications for the Benjamin Zweifach Graduate Student Travel Awards and 13 were awarded.

The society has been encouraging electronic submission of all application material and this was the first year that this goal was achieved. I thank the applicants for their cooperation and ask that this practice be continued in the future.

This was a most successful year for the Awards Committee and I thank the members for their diligent efforts and prompt communications.

Submitted by Russell L. Prewitt
Chair, MCS Awards Committee
March 16, 2006

Finance Committee

Submitted by Mary D Frame, Treasurer

Summary 2005-2006

Total Holdings \$187,157.75

Total Income \$161,734.91 (includes \$50,000 transferred from Vanguard)

Total Expenses \$124,770.10

Summary of Holdings

Vanguard Account \$48,990.70

M&I Bank CD \$92,334.39

TFCU checking \$45,822.66
(Teachers Federal Credit Union)

\$187,157.75

Itemized Holdings

Vanguard Account

Balance 12/31/2004	\$95,163.15
7/22/05 check redemption*	-\$50,000.00
profit	\$ 3,130.22
Balance 12/31/2005	\$48,990.70

**pre-payment for Joint Meeting, New Hampshire, 2005*

Marshall & Ilsley Bank CD

Balance 12/31/2004	\$90,884.70
2004 interest income	\$ 2,885.26
Balance 12/31/2005	\$92,344.39

Teachers Federal Credit Union

Savings	\$ 1.00
Checking (3/20/06)	\$45,822.66

Summary of Income

\$ 161,734.75

Dues received 12%
Taylor&Francis 4%
Meeting Revenue 46%
Donations 4%
Other 31%

Itemized Income

Dues (as of 3/20/2006)

\$19,375

Student	\$ 370
Associate	\$ 630
Regular	\$17,745
Emeritus	\$ 630
Online	\$ 14,030
By Check	\$ 5,345

Taylor&Francis

\$ 6,000

Journal Honoraria(as of 3/20/2006)

7/21/05	\$ 2,000
10/5/05	\$ 2,000
1/10/06	\$ 2,000

Meeting Revenue (as of 3/20/06)

\$74,489.52

USUK meeting	\$69,509.72
Hawaii – refund on deposit	\$ 1,559.80
Banquet 2006	\$ 3,420.00

Donations

\$ 5,460

The APSa \$ --
Dr. AP Shepard \$ 1,500
Taylor&Francis \$ 1,000
Texas A&M Ud \$ 1,000
Dr. RW Gore \$ 1,000
Donations for DVD \$ 960

a Not received for 2005.

b Unrestricted gift

c Gift that will continue

d For 2005 Gerritsen Award.

e For 2 student travel awards, USUK meeting

Note: \$1000 received from Dr. HG Bohlen for travel awards credited during FY ending 2005.

Other

TFCU interest income \$ 65.39
Vanguard check redemption \$50,000.00

Summary of Expenses **\$124,770.15**

Journal 8%
MCS WebSite 2%
LinkPoint Secure Payment <1%
Meeting Costs 75%
Awards 14%
Other <1%

Journal Expenses **\$10,221**

Taylor&Francis \$9,000
per issue\$2,250

Editorial Office \$1,221

MCS WebSite **\$ 2,198.44**

Honoraria and travel expenses for RW Gore

LinkPoint **\$ 542**

Online Secure Payment Service, direct cost

Meeting Costs **\$93,430.50**

Banquet 2006 \$11,848.56
Executive Breakfast \$520.80
Joint Meeting with BMS \$81,061.14

Awards **\$17,000**

Other **\$1,186.11**

Not-for-profit filing \$ 35
((\$35/year)
Accountants/taxes \$1,096
(FY ending 2005)
Postage, Supplies (Treasurer Office) \$ 55.11

Joint Meeting of the BMS and MCS, Durham, NH September 2005

Final reporting of meeting finances submitted by M Frame, MCS Treasurer

Summary of Expenses (paid by the MCS)

Contract with the New England Center			
hotel charges paid up front		\$34,762.08	
program fee		\$27,500.00	
av services		\$555.00	
catering, sat BBQ, water, boxed lunches		\$2,996.00	
additional facilities for BBQ sat		\$475.00	
special serv, shuttle, rooms, wine 3nights, etc		\$2,890.73	\$69,178.81
Speakers for the meeting			
Registration	9 @ \$220.00	\$1,980.00	
Hotel *		\$2,552.04	
Travel		\$4,737.31	\$9,269.35
Event Insurance			\$2,125.68
Abstract booklet printing			\$487.30
Total of Expenses			\$81,061.14

*Hotel for G Mann was paid by MCS on-site. It appears in the final ledger as a hotel charge.

Summary of Revenue (received by the MCS, excepting the BHF check)

Registration			
Regular		\$20,150.00	
Students		\$3,850.00	
Guests		\$4,150.00	
Accompanying persons meals only		\$922.00	\$29,072.00
Hotel Reimbursement			
Collected from registrants by the NEC, and paid to MCS			\$34,311.72
Cash collected for 18 box lunches (\$7 each)			\$126.00
Donations from industry/foundations			
Perimed		\$1,000.00	
WPI		\$1,000.00	
British Heart Foundation **		\$4,000.00	\$6,000.00
Total of Revenue			\$69,509.72

**BHF check is retained by BMS

Profit/Loss Summary

	Meeting Loss reported	-\$11,551.42
Equal shares of loss by MCS and BMS		
Loss to BMS	-\$5,775.71	
Loss to MCS	-\$5,775.71	
Payments to MCS by BMS		
Share of total loss	\$5,775.71	
BHF check	\$4,000.00	\$9,775.71
currency conversion factor of 1.74 (1/16/2006)		£5,618.23
Incoming Wire from BMS 1/31/2006	\$9,750.00	00.00

Nominating Committee

There were a total of 11 nominees for President, 6 for Treasurer, and 14 for council. Those with the highest number of nominations were contacted first with respect to their willingness to run. If an invitation was declined, I moved on down the list.

For the elections, a total of 117 votes were cast; 5 of these were duplicates but only the first vote was counted. Thus, a total of 112 members of the MCS participated in the election. Of these, 2 were faxed, 4 were sent through US Mail, and the rest were submitted electronically.

Program Committee

Robert Hester attended the APS programming meeting for EB 2006 last June. He has organized some informal sessions to encourage interaction among society members at the beginning of the meetings.

We had 199 abstracts submitted to the microcirculation categories.

We are still looking for symposia topics (hopefully with some financial support) for the 8th World Congress to be held in Milwaukee, August 15-19, 2007. We still have a lot of flexibility with regard to symposia and are especially looking for “hot topics”. I have a current list of suggested programming if anyone would like to see it.

Publications Committee

Committee members: Matthew Boegehold (Chairman), Fitz-Roy Curry, Neil Granger, Samina Kanwar, Richard Price

This past year (2005-2006), the Publications Committee addressed the following major issues:

1. The NIH “Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research”, also known as the “Public Access Policy”, took effect on May 2, 2005. This initiative strongly encourages all investigators to make their NIH-funded, peer-reviewed final manuscripts freely available on line through the National Library of Medicine’s “PubMed Central” *immediately after the date of publication.*

The American Physiological Society has come out against this plan, concluding that “it will do little to enhance public access to biomedical research while causing disproportionate harm to not-for-profit societies that publish high-quality journals containing a significant amount of NIH-funded research”. Many publishers already provide some form of free public access. Among other issues, the plan would “infringe on the copyright interests of (a) federal grantees who author copyrighted articles based upon NIH-sponsored research, and (b) publishers of professional journals that have accepted those articles for publication and to whom copyright interests have been conveyed”.

The MCS Publications Committee will formulate a recommendation for the MCS Executive Council on what, if any, policies should be formulated for our society’s journal in response to this NIH initiative.

2. In January, 2006, Matt Boegehold asked the other committee members to start thinking about who would be well suited to take over for Bill Jackson as the next Editor-in-Chief of “Microcirculation”. This request was made in preparation for some preliminary discussion on this issue at the 2006 MCS meeting in San Francisco. Dr. Jackson’s term actually runs through the end of 2008, but the search process could take a relatively long time, and it would be ideal if the Society could elect the next Editor at our annual meeting in 2007. Dr. Jackson feels that this would provide for a smooth transition, allowing ample time for that person to identify a new set of associate editors, recommend new members for the editorial board, and start recruiting special topics issues and manuscripts for his or her first year as Editor.

3. The Publications Committee also voted to approve the proposed recipients of this year’s Publication Awards: The Wiederhelm Award (most cited article, 2001-2005) should go to: Amaral, SL, Linderman, JR, Morse, MM and Greene, AS. Angiogenesis induced by electrical stimulation is mediated by angiotensin II and VEGF. *Microcirculation* 8(1): 57-67, 2001. This article had 34 citations. The Gerritsen Award (most cited review article, 2001-2005) should go to: Helisch, A, and Schaper, W. Arteriogenesis - The development and growth of collateral arteries. *Microcirculation* 10(1): 83-97, 2003. This review article had 45 citations.

Respectfully Submitted,
Matt Boegehold
Center for Interdisciplinary Research in Cardiovascular Sciences
West Virginia University School of Medicine
Phone: (304) 293-5240
Email: mboegehold@hsc.wvu.edu

**MCS Web Site Summary Report
(March 28, 2005 to March 22, 2006)
Dr. Robert W. Gore**

I. Major Projects for this year, 2005-2006:

- A. Help Dr. Damon with the transfer from Dr. Meininger to Dr. Damon of Web Site related Secretarial duties (The Newsletter, on-line email, etc.).**
- B. Set up the mirror site at the University of Mississippi with the help of Dr. Hester.**
- C. Complete the web site for the fall, Joint Meeting of the US and UK Societies. Manage the electronic registration, abstract submission, and electronic communication in support of Drs. Baldwin and Bates, and Dr. Frame, to facilitate communication within and among the organizers of the conference.**

II. Summary of Web Server Statistics for March, 2005 – March, 2006:

See the complete data set for server statistics for 2005-2006 on the MCS web site at:
<http://microcirc.org/ABOUT/about.html>

General Summary: March 28, 2005-March 22, 2006:

Successful requests: 217,676

Average successful requests per day: 606

Logfile lines without status code: 2,691

Successful requests for pages: 140,617

Failed requests: 29,138

Distinct files served: 1,072

Distinct hosts served: 14,269

Corrupt logfile lines: 8

Data transferred: 7.366 Gigabytes

Average data transferred per day: 21,036 Mbytes

III. Plans for Next Year (2006-2007):

- A. Request permission to use up to \$4,000 for operation and maintenance of the society web site for the coming year (2006-2007). This request is unchanged from previous years.**

B. Complete the mirror site with the help of Dr. Hester. This is very close to completion.

C. Work closely with Drs. Sweeney and Frame during the transfer of the duties of Treasurer from Dr. Frame to Dr. Sweeney. This will also require coordination with the people at the University of Mississippi who are preparing the mirror site.

D. A new society person (possibly the Treasurer) must be identified who will take on the duties of “The Web Guy” no later than the annual meeting next year, 2007, when Dr. Gore will step down from that role after a decade of service.

Submitted to Dr. Deborah Damon, MCS Secretary

By Dr. Robert W. Gore, March 22, 2006

CC: Dr. Robert Hester, MCS President

Meeting Information

The 53rd annual meeting of the Microcirculatory Society will be held Saturday, April 1st through Tuesday, April 4th, 2006, in San Francisco, California.

Please note that there are several differences in the format of this year's program compared to earlier years. As approved by the Microcirculatory Society Council and by the general membership, the Society will meet as a guest society of the American Physiological Society, within the structure of the Experimental Biology, 2006. As a result, poster sessions for the MCS meeting will be held Sunday, Monday and Tuesday.

The following are the highlights of the program.

Saturday, April 1st:

8:00 AM - Noon: MCS Executive Council Meeting
Pacific B Marriott Hotel

3:00 - 5:00 PM: President's Symposium
(Moscone Convention Center, Room 131)

Microcirculation, Unanswered Questions.

Chair: Robert Hester, MCS President

University of Mississippi, Jackson, MS

Speakers: Drs. Eric Feigl, Dolly Mehta
Jayson Cyster, and Napoleone Ferrara.

5:15 - 6:00 PM: Microcirculatory Society General Business Meeting
(Moscone Convention Center, Room 131)

6:00 - 9:00 PM: Society Awards Reception and Banquet
(Moscone Convention Center, Room 131)

Sunday, April 2nd:

8:00 AM - 4:30 PM: MCS Poster Session I
(Moscone Convention Center)

10:30 - 11:30 AM: Landis Award Lecture
(Moscone Convention Center, Room 131)

**10:30 - 11:30 AM: Landis Award Lecture
(Moscone Convention Center, Room 131)**

Lessons for Observations of Brain Microcirculation
with Emphasis on Consequences of Damaged Endothelium.
William Rosenblum, M.D.
Professor Emeritus
Virginia Commonwealth University
Richmond, VA

**3:15 PM - 5:15 PM: Young Investigators Symposium
(Moscone Convention Center, Room 252)**

Regulation of Cerebrovascular Function in Health and Disease.
Speakers: Drs Jon Andresen, Rayna Gonzales, Holly Bauser,
Scott McEwen, Mary E. McCarty, and Benedek Erdős.

Monday, April 3rd

**8:00 AM - 4:30 PM: MCS Poster Session II
(Moscone Convention Center)**

Tuesday, April 4th:

**8:00 AM - 4:30 PM: MCS Poster Session III
(Moscone Convention Center)**



**8th World Congress
for Microcirculation**

August 15-19, 2007

Midwest Airlines Center, Milwaukee

Wisconsin, USA

**This site is under construction. More details are coming soon.
If you would like to sign up for email updates, please send an email to: microcirc@mcw.edu**

THEMES:

**Systems Biology
Computational Biology
Emerging Technologies (Instrumentation, Imaging, and Experimental Models)
Vascular Biology of the Microcirculation
Physiological Genomics of the Microcirculation
Vascular Structure and Remodeling
Inflammation
Endothelial Cell Biology of the Microcirculation
Oxidant Stress and Cardiovascular Disease
Translational Physiology of the Microcirculation: From Lab to Clinic**

SCIENTIFIC TOPICS:

**Angiogenesis and Neovascularization
Blood Flow Regulation in the Microcirculation
Cancer/Tumor Angiogenesis
Capillary Permeability
Control of the Microcirculation by Arachidonic Acid Metabolites
Coronary Circulation
Development and Adaptation of the Vascular System (Angioadaptation)
Diabetes and Metabolic Syndrome
Endothelial Cell Function
Hypertension
Inflammation and Leukocyte Trafficking
Integrins and Microvascular Function
Ischemia-Reperfusion
Leukocyte and Platelet Interactions with the Vascular Endothelium.
Lymphatic Function
Lymphatic Smooth Muscle Physiology
Microcirculatory Physiome
Neutrophil Dynamics
Proteomics
Renal Microcirculation
Stroke
Vascular Communication
Vascular Permeability**

For information on the city of Milwaukee, please visit www.visitmilwaukee.org.

Please pay your dues. Your dues are needed to support the activities of the society. As of March 21, 2006, only 182 out of 472 members (39%) have paid their dues.