The Microcirculatory Society, Inc.

Newsletter

Volume 37, Number 3 – Winter 2010

Contents

Officers

A Note from the President

Greetings from the snowy North and Happy New Year!

I am really looking forward to seeing everyone in Anaheim for our annual meeting (see page 2 – 5, below for details of the program). We have an excellent program organized beginning on Saturday, April 24, 2010 with the President's Symposium followed by the Landis Award Lecture on Sunday, the Young Investigator Symposium on Monday, and finishing with the last of our poster sessions on Tuesday. Many thanks to Leslie Ritter and the other members of the programming committee for their efforts on our behalf. Heartfelt thanks also to Robert Hester for his work on the APS joint programming committee and the Society's website.

I am pleased to announce that our negotiations with Wiley-Blackwell are complete (see note from Neil Granger, page 5, below, for more information) and we have a new 5-year contract with an outstanding publisher. Many thanks to Neil Granger, Terry Sweeney, Jeff Frisbee and Dave Zawieja for their tireless efforts on behalf of the MCS in this regard.

I am delighted to pass the baton as Editor-in-Chief of Microcirculation to Jeff Frisbee at West Virginia University. Please help Jeff by submitting your best manuscripts to the Society's Journal! Reviews and ideas for Special Topics Issues are also welcome.

We have an excellent slate of candidates for our annual election (see page 7 below for specifics). Please take time to vote your choice for President, Treasurer and Councilors!

Plans for the 9th World Congress for Microcirculation are in full swing. This should be a great meeting and I hope that many members of the MCS will support the World's microcirculation community and attend this important even in Paris, September 24-28, 2010. More information will be forthcoming as it arrives from Paris.

See you in Anaheim!

Bill

William F. Jackson, Ph.D.
President

MCS Awardees for 2010

The Eugene M. Landis Research Award

Ulrich H. von Andrian, M.D., Ph.D., Dept. of Pathology, Harvard Medical School

The MCS Travel Award for Outstanding Young Investigators

Pedro Cabrales, Ph.D., Dept. of Bioengineering, University of California, San Diego

The August Krogh Young Investigator Award

Feilim Mac Gabhann, Ph.D., Institute of Computational Medicine and the Department of Biomedical Engineering, Johns Hopkins University

Zweifach Student Travel Awards – to be announced

Pappenheimer Postdoctoral Travel Awards – to be announced

Overview of MCS Symposia at EB 2010

MCS President's Symposia - Saturday, April 24, 2010, Marriott Platinum 3/4

President's Symposium I: Ion Channels and Microvascular Function:

9:00 AM Ion channels and calcium signaling in skeletal muscle arterioles – William F. Jackson, Michigan State University.

9:35 AM Distinct contribution of Ca^{2+}-dependent K^+-channels (IK1, SK3) in endothelium - dependent dilation in the microcirculation. Cor de Wit, University of Lübeck

10:10 AM Vasoregulation by smooth muscle cell IP_3 receptors – Jonathan Jaggar, University of Tennessee.

10:45 AM Calcium Sparklets in Cardiac and Arterial Smooth Muscle – Luis Fernando Santana, University of Washington.

11:20 AM Concluding questions and comments

11:30 – 2:00 **Awards Banquet** (Location to be announced)

President's Symposium II: Hot Topics in Renal Microvascular Control:

2:00 PM Introduction – William F. Jackson, Michigan State University.

2:05 PM Autoregulation and reactivity of afferent and efferent arterioles - Edward Inscho, Medical College of Georgia.

2:40 PM Vascular smooth muscle signaling mechanisms in the renal microcirculation - William Arendshorst, University of North Carolina.

3:15 PM Role of vasa recta in medullary perfusion and countercurrent exchange - Thomas Pallone, University of Maryland.

3:50 PM Multiphoton imaging of the (juxta) glomerular Microcirculation and functions - Janos Peti-Peterdi, University of Southern California.

4:20 PM Concluding questions and comments.

The Eugene M. Landis Research Award Lecture – Sunday, April 25, 2010, Marriott Platinum 3/4

3:15-4:30 PM Imaging the Immune Response – Ulrich H. von Andrian, Dept. of Pathology, Harvard Medical School.

MCS Young Investigator Symposium – Monday, April 26, 2010, Marriott Platinum 7/8, Chair: Julian Lombard

10:30-10:45 AM Substance P activates both inflammatory and contractile signaling pathways in lymphatics through neurokinin receptors – Sanjukta Chakraborty, Texas A&M Health Sciences Center.

10:45-11:00 AM A fibronectin fragment elicits vasodilation and alters myogenic responsiveness of skeletal muscle arterioles - J-T Sherry Chao, University of Missouri, Columbia.

11:00-11:15 AM Arteriolar rarefaction in murine skeletal muscle linked to shear rate and plasma cytokine dysregulation – MKB Georgil, Stony Brook University

11:15-11:30 AM A potential for localized translation and induction of plasminogen activator inhibitor-1 at the myoendothelial junction in response to TNF-alpha - Katherine Heberlein, University of Virginia.

11:30-11:45 AM Gut wall compromise in the presence of pancreatic enzymes causes circulatory shock - Erik B.Kistler, University of California, San Diego.

11:45AM-12:00 PM PAR4 defciency inhibits microvascular inflammation after cerebral ischemia/reperfusion injury – Yingying Mao, Temple University School of Medicine.

12:00-12:15 PM TNFalpha compromises the inner ear microcirculation in a sphingosine kinase1/sphingosine-1 phosphate dependent manner--a novel mechanism for sudden hearing loss - Elias Q. Scherer, Technical University of Munich.

12:15-12:30 PM Stressed microvilli and long tethers in rolling, tight adhesion zones and aft trunks in arresting neutrophils revealed using TIRFM - Prithu Sundd, University of California, San Diego.

MCS Program for Experimental Biology 2010, Anaheim, CA

April 24-29, 2010

Saturday April 24, 2010

Session	Title	Time	Location
President's Symposium I	Ion Channels and Microvascular Function	9:00-11:30 AM	Marriott Platinum 3/4
MCS Luncheon	Awards Luncheon	12:00-1:45 PM	Marriott (TBA)
President's Symposium II	Hot Topics in Renal Microvascular Control	2:00-4:30 PM	Marriott Platinum 3/4

Sunday April 25, 2010

Session	Title	Time	Location
Poster	Atheroclerosis/thrombosis/platelets	8:00AM-4:00 PM	Poster Hall
Poster	Inflammation/leukocyte-endothelium interactions	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular pharmacology/therapeutics	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular pathophysiology/tumor microcirculation	8:00AM-4:00 PM	Poster Hall
Poster	Ischemia-reperfusion/free radical biology	8:00AM-4:00 PM	Poster Hall
Landis Award Lecture	Imaging the Immune Response	3:15-4:30 PM	Marriott Platinum 3/4
Meeting	MCS General Business Meeting	4:30-5:30 PM	Marriott Platinum 3/4

Monday April 26, 2010

Session	Title	Time	Location
Poster	Angiogenesis/microvascular remodeling/injury & repair	8:00AM-4:00 PM	Poster Hall
Poster	Tissue-microvessel interactions/extracellular matrix	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular development and aging	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular cell signaling pathways	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular molecular biology/genetic approaches	8:00AM-4:00 PM	Poster Hall
MCS Young Investigator Symposium	New Perspectives in Microvascular Inflammation	10:30 AM-12:30 PM	Marriott Platinum 7/8

Tuesday April 27, 2010

Session	Title	Time	Location
Poster	Lymphatic and venular function	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular flow regulation/oxygen delivery/networks	8:00AM-4:00 PM	Poster Hall
Poster	Microvascular mechanics/hemodynamics/rheology	8:00AM-4:00 PM	Poster Hall
Poster	Permeability/fluid & solute exchange/glycocalyx	8:00AM-4:00 PM	Poster Hall
Poster	Vasomotor control: endothelium/smooth muscle/nerves	8:00AM-4:00 PM	Poster Hall

Welcome to New MCS Members

Regular Members:

Joseph Rutkowski, UT Southwestern

Lance Munn, Harvard

Gabriel Gruionu, Indiana University

Adam Straub, University of Virginia

Kris Dahl, Carnegie Mellon University

Associate Members:

Lori Kang, West Virginia University

Student Members:

Erica Lange, Michigan State University
Stephanie Knebel, St. Louis University
Olan Jackson-Weaver, University of New Mexico
Zhen Wang, University of Arkansas
Alexander Lohman, University of Missouri
Joseph Holthoff, University of Arkansas
Joshua Meisner, University of Virginia
Qiang Shen, University of California, Davis

New Publisher for Microcirculation

The MCS Publications Committee is pleased to announce the new publisher of Microcirculation. Wiley-Blackwell, a leading publisher of society journals, has developed a comprehensive plan to grow and modernize our journal and to increase its impact factor. Manuscripts published in Microcirculation will be more rapidly (within a few days after acceptance) and widely accessible to the scientific community. The publisher will produce color figures from MCS members without charge and enable members and subscribers to gain access to archival journal content. We believe that the changes in access, appearance, and content offered by our new publisher, coupled to a renewed commitment of MCS members to submit their best work to the journal, will enable Microcirculation to flourish and realize its full potential.

D. Neil Granger, Ph.D.
Chair, MCS Publications Committee

MCS Fall Meeting Summary

Our fall meeting was held on October 16–17 at the University of Missouri – Columbia. The theme "Frontiers in Microcirculation: Control Processes and Clinical Applications" encompassed 4 topics: Plasticity, Inflammation, Cell Signaling and Intercellular Communication. With 154 attendees, the scientific content of the meeting is represented in 78 published abstracts (see: *Microcirculation* 16: 749–780, 2009). Each of the 4 respective symposia included 2 Keynote Lectures + 4 Oral Communications selected from the abstracts to emphasize work from outstanding young investigators. Nearly 70 posters were displayed for the entire meeting, along with representatives and instruments from our sponsors. Symposia were followed by long breaks to discuss posters while enjoying catered snacks and meals (only to cover napkins with new ideas!). The strong presence of young investigators in microcirculation was reflected further in 9 travel awards presented to students and postdoctoral trainees. These $500 (USD) awards facilitated the ability of trainees across the United States and abroad, particularly Canada and the UK, to share and discuss their work with others.

Highlights of the meeting included a live band during the opening reception with the opportunity to share good spirits (2 free drink tickets were included!) while watching the crowd arrive and settle in. The Awards Banquet was held at the Les Bourgeois Blufftop Bistro overlooking the Missouri River after sunset. It is noteworthy that, to host our Banquet, the Bistro closed for the first time ever on a weekend evening. A special thanks to Amanda, Curtis and the rest of the folks at Les Bourgeois for the special consideration and an outstanding memorable evening! It was said repeatedly that this was the best food folks had ever eaten at a banquet! And it was complemented by a fine sampling of our local wine, good conversation and warm cheer. And all in the midst of exciting new work in microcirculation! With lymphatic biology so strongly represented, this was indeed (as heard stated during the Banquet) the 'breakout' meeting for lymphatic research in microcirculation!

A few other special thanks are in order. To members of the Organizing Committee: Mike Davis, Molly Frame, Tolya Gashev, Mike Hill, Ginger Huxley, Bill Jackson, Ron Korthuis, Gerry Meininger, Tim Secomb and Cuihua Zhang. I had the good fortune of working with these folks in arranging the agenda, identifying speakers, preparing the R13 application, and bringing it all together. Terry Sweeney (MCS Treasurer) provided constant support for contractual agreements and financial arrangements.

To our invited Keynote Speakers: Kris Dahl, Mary Dickinson, Dia Fukumura, Neil Granger, Luisa Iruela-Arispe, Bill Sessa, Mihaela Skobe and Don Welsh – many thanks for your outstanding presentations and willingness to engage attendees throughout the meeting. Young investigators interested in research careers especially enjoyed the opportunity to meet you and see such fine examples of scientific accomplishment and insight. And thanks for contributing state-of-the art review articles to be published in an upcoming edition of Microcirculation.

To the University of Missouri Conference Center: Angela Freemyer and her staff did an outstanding job of organizing the infrastructure of the meeting, including selection of the conference site, handling the registration and abstract submissions, setting up the poster presentations and providing IT support. Particular thanks to Sharon Rodes for creating and maintaining the meeting's website.

Our meeting was a financial success, with the MCS Treasury strongly in the black. In light of modest registration fees, this good news is attributable to our being awarded Conference Grant 1R13HL097542 from the National Heart Lung and Blood Institute and to generous support from the sponsors of this scientific conference: Danish Myo Technology; Hitschfel Instruments, IonOptix, Living Systems Instrumentation, Siskiyou Corporation, Solamere Technology Group, Stanford Photonics, Sutter Instrument Company, Warner Instruments and World Precision Instruments.

In closing, many new attendees remarked how great it was to actually meet and speak with scientists that they had heard of and whose work they had read. More established members of the MCS spoke of

how satisfying it was to have our Society meeting as a group unto itself again, with plenty of time to interact at a location dedicated to our event. The meeting strengthened the identity of the MCS by helping diverse researchers who study the microcirculation meet each another, by building new bridges between laboratories, and by helping individual attendees interconnect. Our success indicates that such small meetings are feasible and rewarding, rekindling fond memories while opening doors for great new experiences. It was clear to all who attended that our field is alive and well with many new opportunities for growth and interaction across disciplines.

With best wishes for the New Year,

Steven S. Segal, Ph.D.
Chairman of the Organizing Committee
Past President

2010-2011 MCS Election Ballot

President - Please select 1

Matthew Boegehold
Michael Hill

Treasurer - Please select 1

Daniel Goldman
Rolando Rumbaut
Hans Dietrich

Council Members - Please select 2

David Rubenstein
Coral Murrant
Trevor Cardinal
Pedro Cabrales
Robert W. Brock
Dwayne Jackson
Shawn Bearden
Norman Harris
Mary Pat Kunert
Brant Isakson
Cuihua Zhang
Donald Welsh

Please cast your vote for MCS officers at the following URL:
http://microcirc.org/voting.html

Matthew Boegehold, Ph.D.

Present position: Professor and Vice-Chair, Department of Physiology and Pharmacology, and Director, Center for Cardiovascular and Respiratory Sciences, West Virginia University School of Medicine, Morgantown, WV

Education: BS: University of Michigan (Biology, 1980); Ph.D.: University of Arizona (Physiology, 1986); Postdoctoral Training: Indiana University (Microvascular Physiology, 1988)

Professional Societies: Microcirculatory Society; American Physiological Society; European Society for Microcirculation; AHA Council for High Blood Pressure Research (Fellow, 1991); AHA Council on Basic Cardiovascular Sciences; APS Cardiovascular Section (Fellow, 2001); Society for Free Radical Biology and Medicine

Honors and Awards: NIH predoctoral traineeship (1980 –85); Fellow, AHA Council for High Blood Pressure Research (1991); Young Investigator Award, Second Int. Symposium on Endothelium-Derived Vasoactive Factors (1992); IUPS Travel Awards (1993, 1997); Microcirculatory Society Outstanding Young Investigator Travel Award (1994); Dean's Award for Excellence in Research, WVU School of Medicine (2000); Fellow, APS Cardiovascular Section (2001)

National Funding (as PI): AHA 0755264B, "Dietary Salt and Microvascular Superoxide Production". AHA #09GRNT2250298, "Effect of Juvenile Growth on Endothelium-Dependent Control of Microvascular Tone". NIH/NIEHS 1RC1ES018274, "Microvascular Health and Nanoparticle Exposure" (Co-PI). NIH R01 HL092203, "Dietary Salt and Microvascular Function" (pending). NIH RO1 HL103984, "Juvenile Growth and Microvascular Nitric Oxide Production" (pending).

Editorial Board: "Microcirculation" (2002- present).

Grant Review: AHA National, "Brain and Cardiovascular Regulation" Study Group (1995-1997); NIH/NHLBI Program Project review panel (1997); AHA "Cellular Cardiovascular Physiology & Pharmacology" Study Group (2000). Medical Research Grant Program, Jewish Hospital, Louisville, KY, (Ad hoc, 2000); NIH "Cardiovascular and Renal (CVB)" Study Section (Ad hoc; 2002); Ohio University Research Committee (Ad hoc, 2002). AHA, "Vascular Biology and Blood Pressure/ Regulation 2" Study Group (2008-present).

Peer Review: Microcirculation; Microvascular Research; Am. J. Physiol., Heart and Circulatory Physiology; Am. J. Physiol., Regulatory, Integrative and Comparative Physiology; Cardiovascular Research; FASEB Journal; Experimental Physiology; Gut; Hypertension; Journal of Pharmacology and Experimental Therapeutics; Journal of Physiology; Journal of Vascular Research; Life Sciences

Professional Activities: MCS Awards Committee (1995-98; Chair: 1998); MCS Finance Committee (2000-2003); MCS Executive Council (2001-2004); MCS Development Committee (2002-2004); MCS Publications Committee (Chair: 2005-2008). APS, Cardiovascular Section Nominating Committee (2009-present). Symposium organizer and chair: (1) "Hypertension" , 20th European Conf. on Microcirculation, 1998, (2)"Hypertension and Microvascular Control", IWCBS, 1998, (3)"Apoptosis and Organ Injury Mechanisms in Hypertension", EB, 2002, (4) "Evolution of Vascular Regulation from the Neonate to the Aging Adult: Mechanisms and Functional Consequences", EB, 2003, (5)"Inflammatory Aspects of Hypertension: Insights from the Microcirculation", XXXV International Congress of Physiological Sciences, 2005.

Current Research Interests: Mechanisms of tissue blood flow regulation; effect of microvascular network growth on endothelial function, microvascular oxidant stress and inflammation associated with dietary salt and salt-induced hypertension.

Personal Statement: Since joining the Microcirculatory Society as a young investigator 20 years ago, I have experienced firsthand the rich personal and professional rewards that come from active participation in the Society. Since its inception, an important guiding principal of the Society has been to foster the career development of young investigators, and in these challenging times we need to maintain this focus more than ever. As President, I would support opportunities for young investigators to become even more involved in society meetings, activities and governance, while at the same time working to maintain the collegial and supportive atmosphere that has been our hallmark. Modern scientific tools have revealed the complexity of mammalian biology and it's clear that meaningful advances in biomedical research will increasingly depend on the combined talents of investigators from diverse backgrounds. The continued relevance and growth of our society rests on our ability to attract and retain these individuals, and as President I would strongly support initiatives that would continue to raise awareness among the larger scientific community of the superb science and exciting collaborative opportunities that our society has to offer. As we meet these challenges, it is also critical that our society continues to maintain its independence and unique identity through additional freestanding meetings organized around cutting-edge themes, as well as small joint meetings with other societies.

Michael Hill, Ph.D.

Present Position: Associate Director, Dalton Cardiovascular Research Center; Professor, Department of Medical Pharmacology and Physiology; Adjunct Professor, Department of Biological Engineering, University of Missouri.

Education: M.Sc., University of Melbourne, Ph.D., University of Melbourne, Australia.

Professional Societies: Microcirculatory Society; American Physiological Society; Australia and New Zealand Microcirculation Society; Australian Physiological Society; Fulbright Alumni; American Association for the Advancement of Science

Honors and Awards: Fellow of the American Physiological Society (Cardiovascular Section), 2007; Australia and New Zealand Microcirculation Society John Casley-Smith Excellence in Science Award, 1999; NIH F.I.R.S.T. Award, 1992; Juvenile Diabetes Foundation International, Postdoctoral Fellowship, 1989; Fulbright Scholar (Postdoctoral Research Fellowship), 1988 – 89; National Heart Foundation of Australia Postdoctoral Travel Grant, 1988 (declined). Servier Travel Grant Travel to the 13th International Diabetes Federation Congress, 1988.

Current Funding: NIH RO1 'Signaling Mechanisms Underlying Myogenic Tone in Arterioles of Skeletal Muscle: Role of BKCa'

Editorial Boards: American Journal of Physiology: Heart and Circulatory Physiology (1/96 – 12/98); Microcirculation (1/2002 – present); Journal of Vascular Research (2007 – present)

Grant Review: American Heart Association (Virginia) Peer Review Committee (1992 – 1995), (Chairman, 1995); Member of the Medical Review Board for the Sir Edward Dunlop Medical Research fund (2002 – present); American Heart Association (National; Vascular Wall 1, 2006 – present); American Medical Association, 2007; NIH Special Emphasis Panel on Lymphatic Biology, 2009. ***Ad Hoc Reviews***: American Heart Association (Alaska); American Heart Association (Texas); Jeffress Foundation; Diabetes Australia Research Trust; National Health and Medical Research Council (Australia); Cardiovascular Lipid Grants (Pfizer); Clive and Vera Ramaciotti Foundation; Canadian Heart and Stroke Foundation; Australian Research Foundation; Wellcome Foundation; Louisiana Board of Regents; Qatar National Research Foundation; National Science Engineering Research Council, Canada

Peer Review: American Journal of Physiology (Heart and Circulation; Endocrinology; Cell; Gastrointestinal Physiology); Journal of Biological Chemistry; Hypertension; Microvascular Research; Journal of Applied Physiology; Diabetes; Journal of Vascular Research; Journal of Pharmacology and Experimental Therapeutics; Diabetologia; Journal of Laboratory and Clinical Medicine; Australian and New Zealand Journal of Medicine; Biochemica Biophysica Acta; British Journal of Pharmacology; Clinical and Experimental Physiology and Pharmacology; Diabetes Care; Journal of Physiology; Microcirculation; Pflugers Archives; Cardiovascular Research; FASEB Journal; Circulation; Expert Opinion on Therapeutic Targets; Journal of Vascular Pharmacology; Journal of Cellular Physiology; Lipids; Cell Calcium; Circulation Research; Canadian Journal of Physiology and Pharmacology; Arteriosclerosis, Thrombosis and Vascular Biology; Journal of Pharmacy and Pharmacology; Journal of Hypertension

Professional Activities: Nominating Committee, American Physiological Society (CV Section), 2009 – 2012 (Chair 4/2010); Council Member, Microcirculatory Society, 2007 – 2009; Secretary, Australian and New Zealand Microcirculatory Society, 2004 – 2005; Awards Committee, Cardiovascular Section,

American Physiological Society, 2003 – 2006; Australian Research Council Representative for the NHMRC Code Liaison Group (for revision of the Code of Practice for animal experimentation), 2001 – 2004; State Representative for Australia and New Zealand Microcirculation Society Committee, 1999 – 2002; Council Member Australian Physiological and Pharmacological Society, 1999 – 2002**;** Microcirculatory Society Program Committee, 1995 – 1996; Microcirculatory Society Membership Committee, 1991 – 1994.

Current Research Interests: Cellular mechanisms underlying myogenic, or pressure-induced, vasoconstriction; arteriolar smooth muscle Ca^{2+} signaling and ion channels; role of the extracellular matrix in arteriolar function; and contribution of protein modification to the vascular complications of diabetes.

Personal Statement: I joined the MCS around 1988 during my postdoctoral studies at Texas A&M University. The Society has provided me friendships, collaborations and scientific contacts which have lasted to this day despite moves between hemispheres. These interactions have proved vital to my career and provided me with professional and personal interactions that I could never have imagined. The future of our Society lies in providing similar opportunities to new generations Thus while the interests of the Society have diversified over the years we must not loose sight of the importance of fostering and encouraging the younger members of our group. We must also continue to strengthen our interactions with microcirculatory societies, worldwide. Sharing of strengths through collaboration and discussions provides insights beyond those that any of us have as individuals. Key upcoming international meetings such as the World Congress in Paris and the proposed joint meeting with the British Microcirculation Society can provide these opportunities. It is also vital that we highlight our identity through our own scientific meetings – a key step having been taken with the recent Fall conferences. Within larger meetings, including Experimental Biology, we must aim to increase our profile through, for example, regularly co-sponsoring symposia with APS sections and other vascular-related societies. In addition, the visibility of the Society can be strengthened by our own journal and electronic communications. Through these media we need to highlight both established investigators and rising stars.

Daniel Goldman, Ph.D.

Present Position: Associate Professor and Graduate Chair, Department of Medical Biophysics, University of Western Ontario, London, Ontario, Canada.

Education: B.S. in Applied and Engineering Physics, Cornell University (1983-1987); Ph.D. in Applied Mathematics, Brown University (1987-1993); Postdoctoral Fellow in Applied Mathematics, Brown University (1993-1994); Postdoctoral Fellow in Aerospace and Mechanical Engineering, Boston University (1994-1996); Postdoctoral Fellow in Biomedical Engineering, Johns Hopkins University (1996-2000).

Professional Societies: Microcirculatory Society (2004-Present); Society for Industrial and Applied Mathematics (1996-Present).

Honors and Awards: Postdoctoral Fellowship, College of Engineering, Boston University (1994-1995); NRSA Individual Postdoctoral Fellowship, Heart Lung and Blood Institute, National Institutes of Health (1996-1999).

Funding: Whitaker Foundation – An Experiment-Based Computational Study of Microvascular Blood Flow and Transport during Sepsis (PI, 2001-2004); Canadian Institutes of Health Research (CIHR) – Optical Imaging of Microvascular Oxygen Transport in Skeletal Muscle (co-PI, 2005-2008); NSF – Experiments and Modules for a Capstone Course in Applied Mathematics (PI, 2005-2006); CIHR – Oxygen Supply Dependency: Mechanisms and Modulation (co-PI, 2006-2009); NIH – Microvascular O_2 Delivery: Impact of Erythrocyte-Released ATP (co-PI, 2007-2010).

Grant Review: National Science Foundation, Division of Mathematical Sciences, External Reviewer.

Peer Review: American Journal of Physiology (Heart and Circulatory Physiology); Annals of Biomedical Engineering; Biomechanics and Modeling in Mechanobiology; Bulletin for Mathematical Biology; Intensive Care Medicine; Journal of Biomechanical Engineering; Journal of Biomechanics; Journal of Neuroscience Methods; Journal of Theoretical Biology; Mathematical Biosciences; Mathematical Medicine and Biology; Microcirculation; Microvascular Research; Multiscale Modeling and Simulation; Royal Society Journal Interface; SIAM Journal of Applied Mathematics; SIAM Journal of Numerical Analysis.

Current Research Interests: Fundamental properties of microvascular blood flow and oxygen delivery; Integrative modeling of microvascular flow regulation; Tissue oxygenation and microvascular dysfunction in sepsis and type 2 diabetes.

Personal Statement: The Microcirculatory Society has been extremely important to the development of my scientific career, and I would appreciate the opportunity to support the MCS by serving as Treasurer. I have not previously been involved with the finances of a professional society, but have experience managing research grants as well as the funding of a sizable graduate program (approximately 90 M.Sc. and Ph.D. candidates). As Treasurer I will work to maintain the financial health of the MCS and see that all relevant policies and rules are followed.

Rolando E. Rumbaut, M.D., Ph.D.

Present Positions: Associate Professor of Medicine and Pediatrics, Baylor College of Medicine; Staff Physician, Michael E DeBakey VA Medical Center, Houston, TX.

Education: M.D., Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico (1988); Internal Medicine Residency, Pulmonary/Critical Care subspecialty: Baylor College of Medicine & University of Missouri-Columbia (1989-1995); Ph.D. in Physiology, University of Missouri-Columbia (1998).

Professional Societies: Microcirculatory Society (Program Committee 2001-2004; Finance Committee 2008-2011), American Physiological Society (Career Opportunities in Physiology Committee 2006-2008; Chair, Careers Symposium, 2008), American College of Chest Physicians (Fellow, 1997-)

Honors and Awards: Fellow, Cardiovascular Section, APS (2006) Microcirculatory Society Travel Award for Outstanding Young Investigators (2004); Superior Graduate Achievement Award, University of Missouri-Columbia (1997); Chief Medical Resident, Baylor College of Medicine (1991).

National Funding: NHLBI-R01 HL079368 "Mechanisms of microvascular thrombosis in endotoxemia" (2006-2010);VA Merit Award "The complement system links platelet activation to inflammation" (2009-2013).

Editorial Boards: Microcirculation (1998-2003); American Journal of Physiology: Heart and Circulatory Physiology (2007-).

Grant Review: NIH Hypertension and Microcirculation Study Section (2008-2011); AHA Western Review Consortium (2003-2009); NIH Cardiovascular and Renal Study Section (2002: Ad hoc); NIH Clinical Cardiovascular Sciences (2002: Ad-hoc).

Peer Review: Am J Physiol; J Appl Physiol; FASEB J; Arterioscler Thromb Vasc Biol; J Physiol; J Vasc Res; J Pharmacol Exp Ther; Circulation; Microcirculation; J Leuk Biol; Gastroenterology; Diabetologia; J Thromb Haemostasis; Ann Biomed Eng; Blood

Current Research Interests: Platelet-microvessel interactions, thrombosis, microvascular permeability

Personal Statement: The Microcirculatory Society has been tremendously helpful to my career development; I would be privileged to serve the society as its next treasurer. My membership in the Finance Committee has offered a glimpse into some of the financial aspects of the MCS and important insight into the key role of the treasurer in these transactions. I am not an accountant, but by necessity have become familiar with accounting practices required for medical billing, collections, as well as preparation of financial and tax reports for a physician's professional association. If elected treasurer, I intend to adapt this knowledge to the financial aspects of the MCS, with helpful insight from our able current treasurer, Dr. Sweeney. I look forward to serving the MCS as treasurer in a fiscally sound manner, in accordance with its bylaws.

Hans Dietrich

Present Position: Assistant Professor of Neurological Surgery, Washington University, St. Louis, MO.

Education: PhD (1986) Physiology, Max-Planck-Institute, Dortmund and Ruhr-University Bochum, Germany. Postdoctoral Fellowship at Department of Medical Biophysics, University of Western Ontario, London, ON, Canada.

Professional Societies: Microcirculatory Society, European Microcirculatory Society, American Physiological Society, Society for Neuroscience.

National Funding: Current: NIH RO1 NS30555 (Hypoxia-Reoxygenation and Regulatory Mechanisms), RO1 HL041250 (Lipid Mediators of Signal Transduction in Smooth Muscle), PO1 P01 NS32636 (Pathogenesis of CAA-Induced Neurovascular Dysfunction) Role Co-Investigator. Completed: NIH FIRST AWARD HL 57540, ADRC (NIA P50 AG05681) Pilot Study, PI.

Grant Review: Alzheimer's Association 2005 – now, Ad hoc reviewer: The Wellcome Trust; American Association of Neurological Surgeons (AANS).

Peer Review: American Journal of Physiology; Brain Research; Glia; Journal of Applied Physiology; Journal of Cerebral Blood Flow & Metabolism; Journal of Comparative Neurology; Journal of the American Society of Hypertension; Journal of Vascular Research; Journal of Neurosurgery; Microvascular Research, Neurosurgery; Stroke

Current Research Interests: Purinergic regulatory mechanisms in cerebral microcirculation, mechanisms of hypoxia/reoxygenation induced cerebro-microvascular injury, mechanism of amyloid beta induced cerebro-vascular dysfunction, cerebral amyloid angiopathy and vascular function in Alzheimer's Disease, cerebral microvessel and astrocyte communication, calcium independent phospholipase A2β (iPLA2β) and vascular regulation, Regulator of G-protein signaling 2 (RGS2) and arteriolar vascular reactivity.

Personal Statement: If elected as treasure, my main goals would be to continue to maintain and further improve our Society's financial basis by assuring that the Society's moneys are received and spent according to our bylaws and Society goals. I have no background as an accountant except for my personal finances, but applying all the available tools such as accounting software to maintain a proper and complete ledger will help me in accomplishing this task. Meeting and interacting with the wealth of scientific minds presented in our society had a great impact on me and undoubtedly aided me in my career. Maintaining and improving our Society's financial basis will ensure that young scientist will have the continued opportunity to attend our Society meetings through our Society awards.

David A. Rubenstein, Ph.D.

Current Position: Assistant Professor, School of Mechanical and Aerospace Engineering, Oklahoma State University, Stillwater, Oklahoma

Education: B.E. in Biomedical Engineering, Stony Brook University (2000-2004); M.S. in Biomedical Engineering, Stony Brook University (2004-2005); Ph.D. in Biomedical Engineering, Stony Brook University (2005-2007).

Professional Societies: Biomedical Engineering Society (2001-); Microcirculatory Society (2005- ; Communications Committee Member 2008-)

Funding: Oklahoma Center for the Advancement of Science and Technology – "Platelets & endothelial cells induce diabetic pathologies"; AHA – "Platelets and endothelial cell responses to coronary blood flow"; NSF – "Surfactant-templated polyurea-nanoencapsulated macroporous silica aerogel, a potential new biomaterial for artificial heart valves"

Honors and Awards: MAE Outstanding Faculty Member in Teaching and Research (AY 2008-09, Awarded by Pi Tau Sigma); Travel Award for Research Excellence to A Special Transatlantic Meeting of The Microcirculatory Society, Inc. and The British Microcirculation Society; Travel Award to the Annual Biomedical Engineering Fall Conference (2004 & 2005); Award for Academic Excellence in Biomedical Engineering – Class of 2004 (5/21/2004); Provosts Award for Academic Excellence - Stony Brook University (5/20/2004); Barry M. Goldwater Scholar (2003)

Grant Review: NSF – BME Panel (2008-); AHA – Vascular Wall Biology Panel (2008-)

Peer Review: Microcirculation; Annals of Biomedical Engineering; Nicotine and Tobacco Research; Journal of Heat Transfer; Journal of Thrombosis and Haemostasis; Thrombosis Research; International Journal of Computational Fluid Dynamics; BBA - Proteins and Proteomics

Current Research Interests: Microvascular Tissue Engineering, Cardiovascular Disease Development through Platelet and Endothelial Cell Communications, Biomaterial Scaffold Fabrication, Coagulation Kinetics

Personal Statement: I was introduced to the Microcirculatory Society in 2004 as a graduate student. I immediately felt that this was a unique society that fostered career development, at many levels, in a very friendly atmosphere. I have had a small impact on the redesign of the MCS webpage and would like to take this opportunity to continue to serve the society as a councilor. If elected, I would encourage new members, from non-MCS traditional disciplines, to join our society. The aim would be to bring new ideas and new collaborations to our society while retaining our core fundamentals in microcirculatory research.

Coral L. Murrant, PhD

Present Position: Associate Professor, Department of Human Health and Nutritional Sciences, University of Guelph, Guelph, Ontario, Canada, (2000-present).

Education: B.SC. in Human Kinetics, University of Guelph (1987-1991); Ph.D. in Biophysics, University of Guelph (1991-1994): Postdoctoral Fellow, University of Guelph (1994-1995); Postdoctoral Fellow, Baylor College of Medicine (1995-1997); Postdoctoral Fellow, University of Rochester (1997-2000).

Professional Societies: Microcirculation Society (Program Committee member 2001-2002, nominating committee 2008-2009), American Physiological Society.

Funding: NSERC – Regulation of peripheral vascular function.

Honors and Awards – University of Guelph Faculty Association Distinguished Professor Award (2003); Premier's Research Excellence Award (2002), Gelin Travel Award, European Society for Microcirculation (2000), Young Investigator Travel Award, American Physiological Society – Cardiovascular Section (2000).

Grant Review – NSERC (2000-2009), Ontario Graduate Studies Scholarship Panel Chair (2004 and 2006).

Editorial Boards: Associate Editor for Journal of Applied Nutrition, Exercise and Metabolism.

Peer Review – Microcirculation, Journal of Physiology (Lond.), American Journal of Physiology, Journal of Applied Physiology, Medicine and Science in Sports and Exercise.

Current Research Interests: 1) The communication between skeletal muscle cells and cells of the microvasculature necessary to coordinate blood flow. 2) The role of endometrial and placenta microvessels in healthy pregnancy and pre-eclampsia.

Personal Statement: In my experience the Microcirculatory Society is a unique society, a scientifically rigorous yet very open, friendly society that treats young investigators as peers, one that fosters collaboration, information sharing, and a strong sense a scientific collegiality not found in other societies. When I was introduced to this group I found it a breath of fresh air in a very competitive, sometimes closed scientific world. It is the type of environment in which I like to conduct science and the type of environment that I like to bring up graduate students. This is an environment I wish to help maintain and I feel it is now time for me to start giving back to the society that has served me so well.

Donald G. Welsh, PhD

Present Position: Associate Professor, Department of Physiology & Pharmacology, Hotchkiss Brain Institute, Libin Cardiovascular Institute, Faculty of Medicine, University of Calgary, Alberta, Canada.

Education: PhD (1994) in Biophysics, University of Guelph, Ontario; MPE (1988), University of British Columbia; BPE (1986) University of Calgary.

Professional Societies: Microcirculatory Society (1995-present); American Physiological Society (1995-present); Biophysical Society (1999-present); Canadian Hypertension Society (2004-present); Canadian Physiological Society (2009-present).

Funding: Canadian Institutes for Health Research (CIHR; 2001-2013) Operating Grants; National Science & Engineering Research Council (NSERC; 2006-2011) Discovery Grant; Hearth and Stroke Foundation of Canada (HSFC Alberta/NWT/NT; 2001-2011) Grant-in-aid of Research; Alberta Heritage Foundation for Medical Research (Equipment; 2008); Alberta Heritage Foundation for Medical Research - Equipment & Establishment (2001-2003); Alberta Heritage Foundation for Medical Research - Salary and Research Supplement (2001-2011); University of Calgary (Establishment; 2002-2003).

Grant Review: Member, Canadian Institutes for Health Research (CIHR; 2009-2012); Member and Chair, Natural Sciences and Engineering Research Council (NSERC; 2005-2009); Member, Heart and Stroke Foundation of Canada (HSFC; 2002-2005); Ad Hoc External, Kidney Foundation of Canada(AFC; 2007-2008); Ad Hoc External, Michael Smith Foundation (2006-present); Ad Hoc External, Canada Research Chair (2006); Ad Hoc External, Manitoba Health Research Foundation (2005); Ad Hoc External, Wellcome Trust (2005-present); Ad Hoc External, Canadian Diabetes Association (2004); Ad Hoc External, Heart and Stroke Foundation of Canada (2002-present); Ad Hoc External, Canadian Institute of Health Research (2002-present); Ad Hoc External, Canadian Foundation for Innovation (2005-present).

Peer Review: Microcirculation Editorial Board Member (2004-present); Canadian Journal of Physiology & Pharmacology (2005-present); Journal of Cellular Physiology (2004-present); Journal of Applied Physiology (2004-present); British Journal of Pharmacology (2003-present); Microcirculation (2002-present); Circulation Research (2001-present); Journal of Physiology (2001-present); American Journal of Physiology (1998-present).

Current Research Interest: I have a strong interest in how ion channels, gap junctions and cellular structure control the spread of electrical information in micro-vessels.

Personal Statement: I have been a member of the Microcirculatory Society since 1995. I have served on the Microcirculatory Society Program Committee from 2001-2004 and 2008-present. I have also served on the editorial board of "Microcirculation" since 2002 and in 2009 advanced to the position of associate editor. As an elected councillor, I would like to invigorate the Microcirculatory Society by increasing the number of senior level trainees and early career faculty that populate our service committees.

Trevor Cardinal

Present Position: Assistant Professor, Biomedical Engineering Department, California Polytechnic State University, San Luis Obispo, California.

Education: B.S. in Kinesiology, California Polytechnic State University (1999-2003); PhD in Physiological Sciences, University of Arizona (2003-2007).

Professional Societies: The Microcirculatory Society (Communications Committee member 2008-present), American Physiological Society, Biomedical Engineering Society, American Heart Association.

Funding: ONR – The genomics of injury repair.

Honors and Awards –Travel support to the Mathematical Biosciences Institute workshop on Microcirculation Modeling (2007), Herbert E. Carter travel award for Interdisciplinary Programs (2005), Participant in the California State University Chancellor's Doctoral Incentive Program (2005).

Grant Review – none

Peer Review – none

Previous Administrative Experience –Department of Kinesiology Student Fee Allocation Committee (2002-2003), College of Science and Math Student Fee Allocation Committee (2002-2003), Vice Chair of Big West Conference Student Athlete Advisory Committee (SAAC) (2002-2003), President of Cal Poly SAAC (2002-2003), Big West Conference SAAC representative (2001-2003), Chairperson of Cal Poly SAAC (2000-2002), Cal Poly SAAC- Men's Swimming (1999-2003).

Current Research Interests: 1) The impact of chronic ischemia on collateral artery vascular reactivity and blood flow control. 2) Remodeling of microvascular network architecture following chronic ischemia.

Personal Statement: The Microcirculatory Society is by-far my favorite academic society- the science & medicine performed by its members is of substantial impact and the group is of sufficient size and cohesion to allow for intimate and productive meetings. Further, I eagerly support the manner in which our society has involved trainees and promoted interaction/collaboration with non-members. Given my strong identification with the society and its mission, I am eager to help bolster its benefits and rectify its short-comings through service, as evidenced by my regular contribution to the web-site redevelopment. As a member of the council, I could provide a fairly unique perspective on the society's goals and operations, as I am a young faculty member who maintains an active research program at a primarily undergraduate institution. If elected to council, I would use my organizational skills and experience in student-based councils to promote continued society meetings outside of EB and improve the visibility and reach of our society.

Pedro Cabrales

Present Position: **Assistant Professor, Department of Bioengineering, University of California San Diego, La Jolla, California, United States.**

Education: B.S. in Mechanical Engineering, University of Los Andes; Bogotá, Colombia (1997); M.S. in Mechanical Engineering. University of Los Andes; Bogotá, Colombia (1999); Ph.D. in Engineering. University of Los Andes; Bogotá, Colombia (2004); Postdoctoral Fellow, Department of Bioengineering, University of California San Diego, La Jolla, California (2004-2006); Research Scientist, La Jolla Bioengineering Institute, La Jolla, California (2006-2009).

Professional Societies: Microcirculation Society, American Physiological Society, Biomedical Engineering Society, Society for Free Radical Biology and Medicine, American Society for Artificial Internal Organs, International Society on Blood Substitutes, Shock Society.

Funding: NIH/BRP: Bioengineering Design of Artificial Blood (2000-2010), R24 HL64395 to Marcos Intaglietta. Role: Scientist. NIH: Nitric Oxide Protects Against Microcirculatory Complications of Malaria (2007-2011), R01 HL087290 to Leonardo Carvalho. Role: Scientist. NIH: Transfusion Trigger Extension by Plasma Expanders (2006 - 2011), R01 162354 to Marcos Intaglietta. Role: Subcontract PI.

Honors and Awards: Outstanding Presentation Award, 52nd annual conference American Society for Artificial Internal Organs, Chicago, IL (2006). Young Investigator Award, 11th International Symposium on Blood Substitutes. Beijing, China (2007). Young Investigator Award, 6th Current Issues on Blood Substitute Research. Tokyo, Japan (2008). Young Innovators Fellowship. American Society for Artificial Internal Organs (2009).

Grant Review: Swiss National Science Foundation (2005). Swiss National Science Foundation (2008). US Army Medical Research (2009).

Peer Review: American Journal of Physiology - Heart and Circulatory Physiology; Analytical Biochemistry; Artificial Organs; Biotechnology Progress; Comparative Biochemistry and Physiology; Experimental Physiology; Expert Opinion on Drug Delivery; Intensive Care Medicine; Journal of American Society for Artificial Internal; Journal of Applied Physiology; Journal of Clinical Anesthesia; Life Sciences Journal; Neuroscience Letters; Scandinavian Journal of Clinical & Laboratory Investigation

Current Research Interests: 1) Analysis of the biological action of the simplest molecular gas species crucial for the living process, to determine how this integration results in the regulation of local metabolism; 2) Translation of biological signals into quantitative measurement; 3) mechanical and biochemical regulation of central and peripheral circulation.

Personal Statement: It is a great honor to be nominated to serve the Microcirculatory Society as Councilor, and I am excited at the prospect of participating in this capacity. The Microcirculatory Society has long played a special role championing research and education, and providing a community-based group to enhance the research capabilities of its members. In my view, there are several characteristics that differentiate the Microcirculatory Society from other scientific societies; from the broad backgrounds of its members, to the specificity of the topics they study. Much more needs to be done before many of mechanisms studied at the microcirculation level are adequately understood, and the Microcirculatory Society provides the best scenario for the synergistic interaction of currently relevant knowledge in the field. I believe that the Microcirculatory Society can be truly successful with the intent of connecting all members and individuals involved, directly and/indirectly, on microcirculation studies, thus creating a space to develop consensus, where all points of view are welcome. Building a stronger Microcirculatory Society community both in the classroom and on the campus; nationally and worldwide is where the future of the society lies. Thank you for the opportunity to be of service.

Robert W. Brock, Ph.D.

Present Position: Associate Professor and Wyeth Research Scholar - Department of Physiology and Pharmacology; Graduate Director - Cellular and Integrative Physiology; Center for Cardiovascular and Respiratory Sciences, West Virginia University School of Medicine, Morgantown, West Virginia.

Education: B.Sc. (Honors Kinesiology 1995) University of Waterloo, Canada; M.Sc. (Work Physiology, 1997), University of Waterloo, Canada; Ph.D. (Medical Biophysics, 2000), University of Western Ontario, Canada; Postdoctoral Fellow (2000-2002), Lawson Health Research Institute, Centre for Critical Illness Research.

Professional Societies: Microcirculatory Society (Awards Committee), American Heart Association (Great Rivers Affiliate - Research Committee), American Physiological Society (Education Committee), American Society of Pharmacology and Experimental Therapeutics (Competition Committee-CV Section), Sigma Xi, American Association for the Study of Liver Diseases, International Association for the Study of the Liver.

National Funding: NIH Grant R01 DK067582 (2007-2012), PI - "C-peptide: protection against diabetic complications."; AHA Beginning Grant-in-Aid 0660073Z (2006-2008), PI - "Protection from type 1 diabetic microvascular dysfunction: role of C-peptide and NADPH."

Honors and Awards: 2000-2002 Natural Sciences & Engineering Research Council of Canada Postdoctoral Fellowship; 2003 APS-GI and Liver Section Young Investigator Award; 2007-present Wyeth Research Scholar for Research Excellence, West Virginia University; 2008-present Fellow of the Basic Cardiovascular Sciences Council-AHA.

Editorial Boards: Microcirculation; Journal of Pharmacology & Experimental Therapeutics; Liver International; Reports in Medical Imaging; Advances in Physiology Education (Associate Editor).

Grant Review: American Heart Association-National Center, 2007-present (Chair); North Carolina Biotechnology Center, 2007; Italian Ministry of Health/NIH, Directorate for Health and Technologies Research, 2009.

Peer Review: Microcirculation; Microvascular Research; Journal of Pharmacology & Experimental Therapeutics; Hepatology; Journal of Physiology-London; AJP-Regulatory, Integrative and Comparative Physiology; AJP-Gastrointestinal and Liver Physiology; Antioxidants & Redox Signaling; Free Radical Biology & Medicine; Liver International; Advances in Physiology Education.

Current Research Interests: Regulation of the hepatic and renal microcirculation in pathological states (diabetes, obesity and transplant), the role of inflammation and oxidant stress, the role of the endothelial cell and mitochondria.

Personal Statement: The Microcirculatory Society (MCS) has helped to forge my career for the past 12 years, from the early beginnings as a graduate student to my current position as an established investigator and mentor. I was attracted to the Society by its diverse membership and its embrace of the history and traditions of microcirculation research. Over the past couple of years, the relentless work of our Society's leadership has helped to further cultivate these treasured elements while striving to enhance our independence. I believe we can continue to promote this growth and strengthen our Society with active participation in all MCS activities and full support of our official journal, *Microcirculation*. If elected as Councilor, I hope to further develop the independence of the Society while preserving its unique diversity and traditions.

Dwayne N. Jackson

Present Position: Assistant Professor, Department of Medical Biophysics, Schulich School of Medicine & Dentistry, The University of Western Ontario, London, Ontario, Canada.

Education: B.Sc. (hon.) in Human Kinetics, University of Ottawa (1993-1997); M.A. Human Kinetics (Thermoregulatory Physiology), University of Ottawa (1998-2000); Ph.D. Kinesiology (Neurovascular Physiology), The University of Western Ontario (2001-2005); Postdoctoral Fellow (Microvascular Physiology), Yale University School of Medicine/John B. Pierce Laboratory (2005-2006); Postdoctoral Fellow (Microvascular Physiology), Schulich School of Medicine & Dentistry, The University of Western Ontario (2006-2007).

Professional Societies: Microcirculatory Society (Nominations Committee 2008-2009), American Physiological Society, New York Academy of Sciences, Canadian Breast Cancer Research Alliance

Funding: NSERC- A comprehensive and integrated approach to the study of vascular control; CIHR- Physical activity, estrogen and peptidase control of neurovascular function in skeletal muscle; CIHR- Steps in Metastasis: Identifying Therapeutic Targets; CBCRA- Metastasis team award; The University of Western Ontario Academic Development Fund- The impact of sympathetic nerves and associated receptor activation on the progression of breast cancer: a link between nerves, vessels, and cell proliferation?

Honors and Awards: National Cancer Institute of Canada (NCIC) Young Investigator Award (2009)**,** Schulich Teaching Award Nominee (2009), UWO USC Teaching Honor Roll (2007-Present)**,** International Union of Physiological Sciences (IUPS) Travel Award (2005)

Grant Review: NSERC (2007-present), CIHR (2006-Present)

Peer Review: American Journal of Physiology, Journal of Physiology (London), Journal of Applied Physiology, Nutrition, and Metabolism

Current Research Interests: 1) How the sympathetic nervous system modulates skeletal muscle blood flow under healthy resting conditions. 2) How sex and aging impact skeletal muscle microvascular regulation under resting and stimulated conditions. 3) How pre-diabetes and metabolic syndrome impacts sympathetic nervous system microvascular control. 4) The role of the sympathetic nervous system in breast cancer progression (angiogenesis, neovascularization, neurogenesis, and chemotaxis).

Personal Statement: In the years that I have been associated the MCS I have formed valuable relationships and collaborations and benefited greatly. I feel that the "open door" atmosphere in our society fosters these important interactions and encourages meaningful scientific discussions among members of all age and status.

This type of environment facilitates the progression of our discipline and interest in the science we carry out. Being a councilor I would like to bolster these attributes and build on the interaction between senior and junior researchers and graduate students. I feel this is a worthwhile investment in the future successes of our society and its members.

SHAWN E. BEARDEN

Current Position - Associate Professor Of Physiology, Department of Biological Sciences and Idaho Biomedical Research Institute, Idaho State University, Pocatello, ID

Education - BS, Sports Medicine, University Of Virginia (1990-1994), MS, Exercise Science and Health Promotion, George Mason University (1995-1996), PhD, Exercise Physiology, Florida State University (1996-2000), Postdoctoral Fellow/Associate, Yale University School of Medicine and JB Pierce Laboratory (2000-2003)

Professional Societies - Microcirculatory Society, American Physiological Society, American Heart Association

Peer Review - Editorial Board Member, *Microcirculation* (2009-present); ad hoc for: Circulation Research, American Journal of Physiology: Heart and Circulatory Physiology, Hypertension, Journal of Physiology, Journal of Applied Physiology, Medicine and Science in Sports and Exercise, Microcirculation, Journal of Sport Sciences, Journal of Anatomy

Grant Review and Professional Service – Research Programs Committee, Pacific Mt Affiliate, American Heart Association, (2009-present); American Heart Association Study Section, Vascular Biology & Blood Pressure Reg 1 (2008-2012); Awards Committee, American Physiological Society(2006-2008); Awards Committee, Cardiovascular Section, American Physiological Society (2006-2008)

Funding, Awards, Honors: American Heart Association Scientist Development Grant, NASA pilot grant, APS Research Career Enhancement Award, Fellow American Heart Association

Current Research Interests – Endothelial heterocellular and homocellular junctions (adherens, tight, gap): 1) Role of the transsulfuration pathway (metabolism of homocysteine to cysteine and hydrogen sulfide) in cell-cell communication, 2) Role of homocysteine and hydrogen sulfide in microvascular junctional integrity and regulation.

Personal Statement - I joined the faculty of biology at Idaho State University in August of 2004 following postdoctoral training in skeletal muscle blood flow control and microvascular structure/function relationships within a network. My interest in physiology began while growing up in a family of health-care professionals. Coupling this with my experience as an athlete, I became interested in the demands for oxygen and blood flow by metabolically active tissue, especially skeletal muscle. The overwhelming collegiality and collaborative strengths of the microcirculatory community are what allow me to maintain a vigorous research program while my wife and I live in an outdoor wonderland, Idaho. As microcirculation is one of the few common threads across all physiologic disciplines, we have a unique opportunity to strengthen ties and build new bridges with many other fields as we look to grow the Society in the coming years. Ensuring that the next generation of microvascular scientists have a strong community in which to thrive (and on which to rely) is a duty we all share, and I feel that I am now in a position to take on a larger role in the process.

Norman R. Harris, PhD

Present position: Professor, Department of Molecular & Cellular Physiology, LSU Health Sciences Center in Shreveport.

Education: BS (1987) in Chemical Engineering from Tennessee Tech University; MS (1989) and PhD (1991) in Biomedical Engineering from Vanderbilt University.

Professional Societies: American Physiological Society (1995-present); American Diabetes Association (2003-2004; 2006-present); Biomedical Engineering Society (1998-2004); Microcirculatory Society (1995-present).

National Funding: NIH R29 FIRST Award (1996-2000) "Ischemia-reperfusion-induced capillary filtration"; NIH Pilot Research R03 Award (1999-2000) "Control of capillary perfusion in aging"; Whitaker Foundation Research Grant; (2000-2003) "Modeling of arterio-venous control of capillary filtration", AHA (2001-2004) "Age-dependent ischemia-reperfusion injury", NASA Research Award (2002-2006) "Microgravity effects on transvascular transport and vascular control" (NR Harris co-PI); JDRF Research Award (2003-2006) "Venular control of capillary flow in diabetes"; Crohn's and Colitis Foundation of America (2006-2007) "Microvascular flow in inflammatory bowel disease"; NIH Program Project Grant (Project 2; 2007-2012) "Role of the microcirculation in intestinal inflammation"; NIH R01(2007-2011) "Venular control of retinal blood flow".

Grant Review: American Institute of Biological Sciences (Kansas UMC), 2004, 2006, 2007; Oklahoma Center for the Advancement of Science and Technology, 2006-present; NIH Atherosclerosis and Inflammation of the Cardiovascular System Study Section, February 2007; NIH Hypertension and Microcirculation Study Section, March 2008; AHA, April 2008; NIH NHLBI Mentored Scientist Awards, March 2009; NIH Special Emphasis Panel: Immunomodulatory, Inflammatory, and Vasoregulatory Properties of Transfused Red Blood Cell Units as a Function of Preparation and Storage (R01), June 2009; Medical Research Council, United Kingdom, September 2009; NIH Hypertension and Microcirculation Study Section, September 2009.

Peer Review: AJP Heart and Circulatory Physiology; AJP Gastrointestinal and Liver Physiology; Clinical and Experimental Metastasis; Clinical and Experimental Pharmacology and Physiology; Clinical Science; Experimental Eye Research; Free Radical Biology & Medicine; Gastroenterology; General Pharmacology; Inflammation Research; Inflammatory Bowel Diseases; Investigative Ophthalmology and Visual Sciences; Journal of Biomechanical Engineering; Journal of Vascular Research; Life Sciences; Microcirculation; Microvascular Research; Pathophysiology.

Current Research Interests: The effect on, and/or the role of, the microcirculation in inflammatory diseases, specifically in diabetic retinopathy and inflammatory bowel disease.

Personal Statement: I have been a member of the Microcirculatory Society since 1995, and have been the beneficiary of years of MCS interactions at the annual society conferences. I have served the MCS on its Nominating Committee (2001-2004) and Awards Committee (2006-2009), with the role of Awards Committee Chair in 2008-2009. I am willing to continue to serve the MCS, with my hope that the MCS will continue to influence young investigators as it did me.

Mary Pat Kunert RN PhD

Present position: Associate Professor, UW-Milwaukee, College of Nursing

Education: BSN, 1977, PhD (physiology) Medical College of Wisconsin, 1994

Professional Societies: Microcirculatory Society, American Physiological Society, American Heart Association

Funding: K01 award "20-*HETE and Oxygen Response in Goldblatt and Grollman Hypertension*" 04-01-98 to 3-31-02", Internal Research Growth Initiative Award "*The Influence of Estrogen on the Structure and Function of Skeletal Muscle Microcirculation in the Dahl S Female Rat" 2008-2010*

Peer Review: Microvascular Research, Journal of Gerontological Nursing, Collegium Antropologicum (Zagreb, Croatia)

Current Research Interests: I am currently working on the influence of the combination of estrogen and high salt diet on the microcirculation in skeletal muscle.

Personal Statement: I have been a member of the Microcirculatory Society for several years and I am willing to serve the society in any capacity. My most recent contribution has been as a member of the Awards Committee and also served on the local organizing committee for the World Congress in Milwaukee WI.

Brant Isakson, Ph.D.

Present Position: Assistant Professor of Molecular Physiology and Biological Physics and Resident Faculty of Robert M. Berne Cardiovascular Research Center, University of Virginia School of Medicine.

Education: Post-doctoral Fellowship, University of Virginia School of Medicine; PhD, University of Wyoming (Zoology and Physiology; 2003), BA, Gustavus Adolphus College (Biology/History; 1998)

Professional Societies: Microcirculatory Society (Communications (Chair) and Publication Committees); APS (Fellowship Committee); NAVBO; American Society for Cell Biology

Honors and Awards: APS CV Section Young Investigator Award (2009); Bristol Myers Squibb Young Investigator Award (APS CV Section, 2007); Microcirculatory Society Travel Award for Outstanding Young Investigators (2005); Norton B Gilula Fellowship, International Gap Junction Conference (2005); George Menkins Outstanding Graduate Thesis (University of Wyoming, 2002); Paul Magnason Leadership Award (Gustavus Adolphus College, 1998)

National Funding: NHLBI-HL088554 (PI-Active); AHA Scientist Development Grant (PI-Active); AHA Beginning Grant-in-Aid (PI-Completed)

Editorial Boards: Microcirculatory Society (2010-2015)

Grant Review: American Heart Association: Cardiac Cell Function and Regulation (2008-present); British Diabetes Association (2008)

Peer Review: *Microcirculation; Circulation Research; Arteriosclerosis, Thrombosis, Vascular Biology; American Journal of Physiology; Cell Calcium; Journal of Biological Chemistry; Journal of Cell Science; Journal of Applied Physiology*

Current Research Interests: Heterocellular communication in the microcirculation, post-translational modification of proteins

Personal Statement: I am honored to have been nominated for a Councilor position in the Microcirculatory Society. I am indebted to the Society for it's work in progressing my career, and would like to see the Society expand this opportunity to others with an expanded program for new investigators while at the same time reaching down to the undergraduate level. I would also like to see an intensive focus on recruiting and retaining a broad range of scientists (molecular to whole animal, physician to basic scientist) who work in the microcirculation that I believe would further enrich our scientific diversity.

Cuihua Zhang, MD, PhD

Present position: Associate Professor, Departments of Internal Medicine, Medical Pharmacology & Physiology, and Nutritional Sciences, University of Missouri, Columbia MO

Education: MD (1985) in Medicine from Jin Zhou Medical College from PR China; PhD (1995) in Physiology from Chinese Academy of Medical Science and Peking Union Medical College, Beijing, China.

Professional Societies: American Heart Association, American Physiological Society and Microcirculatory Society

National Funding: 1) American Heart Association (AHA), Grant-in-Aid (PI, 2004-2006): "Mechanisms of Reperfusion-Induced Endothelial Injury "; 2) Pfizer Atorvastatin Research Award (ARA: a focus on the science. 2004-2007): "Mechanisms of Reperfusion-Induced Endothelial Injury"; 3) National Institutes of Health (NIH) COBRE grant (2004-2006): "Role of Inflammation on Endothelial Reperfusion Injury"; 4) AHA Emergency Grant (2006-2007): "Role of TNF alpha in Endothelial Dysfunction in the Metabolic Syndrome and in Diabetes"; 5) American Heart Association, Scientist Development Grant (2006-2010): "Role of TNF alpha in Endothelial Dysfunction in the Metabolic Syndrome and in Diabetes"; 6) NIH RO1 (HL077566-01, 2006-2011): "Mechanisms of Reperfusion-induced Endothelial Injury". 7) NIH RO1 (HL085119-01, 2007-2012): Role of Cytokine-Induced Inflammation in Endothelial Dysfunction in Diabetes.

Committee Participation: Program Committee (ATVB Spring meetings and 2009 Fall Meetings of MCS); Award and fellowship committee for APS; Membership Committee for MCS

Grant Review: AHA Peer Review Committee (Southeast, 2006; Western, 2007-2008; and national center-Vascular Wall since 2009) and ad hoc for NIH HM and MIM study section since 2007.

Peer Review: Circulation; Circulation Research; American Journal of Physiology; Basic Research in Cardiology; Journal of the American College of Cardiology; Arteriosclerosis Thrombosis and Vascular Biology; Proceedings of National Academy of Sciences, U.S.A.; Science; Trends in Pharmacological Sciences; Diabetic Medicine; Journal of Cellular and Molecular Medicine; Journal of Molecular and Cellular Cardiology; World Journal of Cardiology; and Microcirculation

Chaired Sessions for National Conference: Coronary Microcirculation for AHA meeting (November 2004, 2006 and 2007); Region Circulation for AHA meeting in Dallas, (November 2005); ATVB Annual meetings (April 2008-2009); Gulf Coast APS meeting in New Orleans (April 2005); Experimental Biology meeting in San Francisco, Co-Chair with Dr. Paul Vanhoutte in Wiggers Award Featured Topic: Pivotal Role of Endothelium in Deranged Vascular Control (2006).

Honors and Awards: Conselho Nacional de Desenvolvimento Cientifico and Tecnologico (CNPq) Fellowship, Brazilian (1996-1997); The Microcirculatory Society (MCS) Travel Award for Outstanding Young Investigators (2003); American Physiology Society (APS) CV Section Young Investigator Award (2003); AHA Peer Review Committees (Regional: Southeast: 2005-2006, Western: 2007-2008; and National Center: Vascular Wall); Visiting Professor of Chinese Academy of Medical Science, Beijing, China (2006-); Werner Risau New Investigator Award in Vascular Biology, ATVB (2007); NIH Peer Review Committees, ad hoc for HM and MIM (2007); and Fellow of APS CVS and Fellow of AHA (2007).

Current Research Interests: To understand the underlying mechanisms responsible for the pathophysiological manifestations of ischemic heart disease in coronary microcirculation. We study genetically modified mice to understand the role of specific genes in the pathophysiological sequelae of cardiovascular diseases, e.g., hypertension, atherosclerosis, diabetes at the molecular, cellular, and intact tissue levels.

Personal Statement: My membership began in the Microcirculatory Society (MCS) in 1998 and I have been actively interacting with the MCS at the annual society conferences and other activities during this period. A major goal in my career has been to do outstanding science and to serve the societies I belong by conducting an independent research program that interfaces my research ideas in collaboration with a strong team of independent investigators. My service on the MCS Membership Committee began this year (2009-). I am willing to continue to serve the MCS and expect to emphasize aiding young investigators in their career development.

Donald G. Welsh, PhD

Present Position: Associate Professor, Department of Physiology & Pharmacology, Hotchkiss Brain Institute, Libin Cardiovascular Institute, Faculty of Medicine, University of Calgary, Alberta, Canada.

Education: PhD (1994) in Biophysics, University of Guelph, Ontario; MPE (1988), University of British Columbia; BPE (1986) University of Calgary.

Professional Societies: Microcirculatory Society (1995-present); American Physiological Society (1995-present); Biophysical Society (1999-present); Canadian Hypertension Society (2004-present); Canadian Physiological Society (2009-present).

Funding: Canadian Institutes for Health Research (CIHR; 2001-2013) Operating Grants; National Science & Engineering Research Council (NSERC; 2006-2011) Discovery Grant; Hearth and Stroke Foundation of Canada (HSFC Alberta/NWT/NT; 2001-2011) Grant-in-aid of Research; Alberta Heritage Foundation for Medical Research (Equipment; 2008); Alberta Heritage Foundation for Medical Research - Equipment & Establishment (2001-2003); Alberta Heritage Foundation for Medical Research - Salary and Research Supplement (2001-2011); University of Calgary (Establishment; 2002-2003).

Grant Review: Member, Canadian Institutes for Health Research (CIHR; 2009-2012); Member and Chair, Natural Sciences and Engineering Research Council (NSERC; 2005-2009); Member, Heart and Stroke Foundation of Canada (HSFC; 2002-2005); Ad Hoc External, Kidney Foundation of Canada(AFC; 2007-2008); Ad Hoc External, Michael Smith Foundation (2006-present); Ad Hoc External, Canada Research Chair (2006); Ad Hoc External, Manitoba Health Research Foundation (2005); Ad Hoc External, Wellcome Trust (2005-present); Ad Hoc External, Canadian Diabetes Association (2004); Ad Hoc External, Heart and Stroke Foundation of Canada (2002-present); Ad Hoc External, Canadian Institute of Health Research (2002-present); Ad Hoc External, Canadian Foundation for Innovation (2005-present).

Peer Review: Microcirculation Editorial Board Member (2004-present); Canadian Journal of Physiology & Pharmacology (2005-present); Journal of Cellular Physiology (2004-present); Journal of Applied Physiology (2004-present); British Journal of Pharmacology (2003-present); Microcirculation (2002-present); Circulation Research (2001-present); Journal of Physiology (2001-present); American Journal of Physiology (1998-present).

Current Research Interest: I have a strong interest in how ion channels, gap junctions and cellular structure control the spread of electrical information in micro-vessels.

Personal Statement: I have been a member of the Microcirculatory Society since 1995. I have served on the Microcirculatory Society Program Committee from 2001-2004 and 2008-present. I have also served on the editorial board of "Microcirculation" since 2002 and in 2009 advanced to the position of associate editor. As an elected councillor, I would like to invigorate the Microcirculatory Society by increasing the number of senior level trainees and early career faculty that populate our service committees.

Upcoming Meetings

9th World Congress for Microcirculation

The 9th World Congress will be held September 25-28, 2010 in Paris, France. More information can be found at http://www.worldmicrocirc.org/