

The Microcirculatory Society, Inc.

Newsletter

Volume 30, Number 4

Spring 2003

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Officers

President:	Paul F. McDonagh pmcdonag@u.arizona.edu
President-elect:	G.W. Schmid-Schönbein gwss@bioeng.ucsd.edu
Secretary:	Cynthia J. Meininger cjm@tamu.edu
Treasurer:	Ann Baldwin abaldwin@u.arizona.edu
Web Site:	http://microcirc.org

President's Message

Paul F. McDonagh

Thanks. As the daffodils begin to pop through the snow and ice around my home in Tucson, I am reminded that its time for the spring installment of the President's Message. This message is the last that I will subject you to, so I'd like to take this opportunity to thank our society's officers, committee chairs and committee members for their many contributions during the year. I would also like to thank several of you (and you know who you are) for the counsel and advice that you gave me throughout the year. At this time, our society has several 'irons in the fire' and its important to make considered decisions that are in the best interests of our society. It is through your thoughtful efforts that our society thrives. I encourage our membership to continue to take an active role in MCS governance and activities.

Congratulations. Thanks to Steve Segal (and some urging to vote from our renowned WebGuy, Bob Gore) the votes are in and we have a new President-Elect, Glenn Bohlen. Congrats Glenn. The MCS is in very good hands with Geert and Glenn driving the boat for the next two years.

Congrats to Cindy Meininger on her re-election to MCS Secretary. Cindy is doing a super job and we're very fortunate to have her continue in this important role. Kudos to Kubes and Frame as our new Councilors. I look forward to working with you all in San Diego.

Recruiting. We have a fine group of active members in MCS, but we truly need more. I ask that each member make an active effort to recruit one new member into the Microcirculatory Society. Molly Frame and Bill Jackson have prepared a most excellent brochure describing our society that

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will be utilized at the meeting in San Diego. Thanks to Molly and Bill for the brochure and the small recruiting posters that you'll see. We also plan to 'point out' our society at the MCS symposia. Also, please note that there will be several presenters at our poster sessions that are not members of MCS. Let's make some lemonade out of this interesting turn of events. I encourage you all to make a special effort to get to know your neighbors at the poster sessions this year. Ask if the presenters are members and, if they are not, please take a moment to tell them about MCS. Clearly, these folks have a genuine interest in the microcirculation and may very well join us, if someone asks them!

Meeting Notes. Thanks again to Bill Jackson for continuing to do a fine job interacting with EB to schedule our scientific sessions. Please check the schedule of Symposia and times to man the Posters carefully. We've scheduled our events to minimize conflicts with other committee meetings and APS events. Please plan to attend the General Business meeting. It should be a lively one. There will be several important issues presented, including the disposition of our journal, a likely increase in annual dues, future meeting venues and other fun-filled items that will have a real impact on the future health and well-being of MCS.

Also thanks to Cindy for arranging our Society Dinner. You can now purchase your dinner tickets on line, so please buy them early. Cindy and Ann have discounted dinner tickets for students. It's a great idea to help get the younger students to the dinner to schmooze with the membership. I encourage all the established members to shell out some of that big fat raise that you got this year to bring a student or two or three to the dinner.

Update on World Congress. The beat goes on with regard to choosing a location for the upcoming World Congress. I believe that Ingrid and I have now gathered all the info that we can stand and will present it to MCS Council. As I mentioned earlier, we plan to make an announcement

of the site at the Annual Meeting in San Diego.

Final words. Please pay your dues and thanks for the opportunity to serve you. Take care.

Do You Have Materials for the MCS Archives???

The MCS collection is now being housed at the Mandeville Special Collections Library at the University of California San Diego. Paul Johnson will coordinate collection of items to be deposited in this collection.

Please don't let valuable documents and/or films and videos, etc. be lost! Contact Paul to coordinate transfer.

We especially request that Past Presidents and Past Secretaries look for items in their possession that might be donated to this collection.

Contact Information:

Paul C. Johnson
Dept. of Bioengineering
Room 287
Powell Focht Bioengineering Hall
Univ of California San Diego
La Jolla, CA 92093

Phone: 858-534-5686
email: pjohnson@bioeng.ucsd.edu



Urgent call for program proposals for IUPS/EB meetings, 2005

This is a message from Bill Jackson, Chair of the MCS Program Committee, and Ingrid Sarelius, Chair of the Microcirculation Section of the IUPS Commission on Circulation

As you may be aware, a call for programming proposals for the above meetings has recently gone out, with a deadline for receipt of proposals that is very close - MAY 15, 2003. The Microcirculatory Society will be participating in this meeting - we hope very actively, as not only is our society one of the hosts for the IUPS Congress, but also, it is an opportunity for us to showcase the science that we do! Obviously, programming decisions for this event will be complex. A huge effort has, and is, being made to ensure that all constituencies are properly represented in all programming decisions. Two things are needed urgently from MCS members:

1. The program committee wants to identify "hot topics" so that these will be included in the program. These are needed NOW. Please email either Bill or Ingrid with suggested topics. Please do it today!
2. Proposals for symposia, etc. PLEASE actively consider developing a symposium or featured topic proposal - not all will wind up being accepted, but volume and overlap in proposals will help identify programming priorities for the program committee. Remember the international nature of the meeting, and try to be inclusive in your suggested speakers. These can be sent directly to The APS (see below) or you can send them to Bill or Ingrid.

We append below the full text of a recent letter from Drs. Walter Boron and Marty Frank, which outlines the goals of the Congress, expands on theme issues, and gives the web address at which you can find information on submitting proposals.

We look forward to great programming at this meeting, but its up to us to make it happen!

To the Representatives of the IUPS Commissions:

This message is being sent to you to inform you that the International Scientific Program Committee for the IUPS 2005 Congress scheduled for March 31-April 5, 2005 in San Diego, California, USA, has issued an invitation to the international physiological community to suggest ideas for symposia, workshops, featured topics, and satellite meetings to be held at the Congress.

The theme of the Congress is "From Genomes to Functions" and the ISPC is seeking program suggestions that compliment the theme. Your suggestions might be for symposia, workshops, featured topics, for individuals to present a distinguished lectureship in some area of physiology, or for novel programming ideas (e.g., the "Controversies" symposium held in New Zealand in 2001). However, in making your suggestions, I urge you to include representation from around the world.

The ISPC would also like to solicit suggestions for Satellite meetings. The ISPC expects to designate approximately 20 satellite meetings of the IUPS 2005 Congress. To be so designated, the satellite meeting must be held in the greater San Diego area (e.g., within a 150-mile radius of San Diego), be no more than two days in length, and be held either March 29-30 or April 6-7.

The ISPC would like to receive all program suggestions by May 15, 2003. Please help make the IUPS 2005 Congress a scientific success!

Please visit the IUPS web site to review instructions related to the submission of proposals at <http://www.iups2005.org/announce/programcall.htm>

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In addition, please distribute information about this call for proposals broadly to the membership of your Commissions.

Sincerely yours,

Walter F. Boron, M.D., Ph.D.
Chair, International Scientific Program Committee, IUPS 2005 Congress

Martin Frank, Ph.D.
IUPS 2005 Congress Executive Secretary
APS Executive Director

Aspiring Author?

Budding Historian?

The Microcirculatory Society Wants You!



The MCS will be celebrating its 50th anniversary in 2004 and is in need of a volunteer to write a history of the last 25 years.

Interested?

Contact Paul Johnson
pjohnson@bioeng.ucsd.edu

New Officers

President-Elect: Glenn Bohlen
Secretary: Cindy Meininger
Councillors: Molly Frame
Paul Kubes

The Society thanks Steve Segal and members of the Nominations Committee for their efforts. Welcome to the new leaders of the Society.

Annual Society Awards

August Krogh Young Investigator Award

Jena J. Steinle, Ph.D.

The Texas A&M University System Health Science Center

MCS Travel Award

Cuihua Zhang, Ph.D.

The Texas A&M University System Health Science Center

Excellence in Lymphatic Research

Charles S. Cox, M.D.

University of Texas Health Science Center - Houston

Zweifach Student Awards

Krystina Berg
Eastern Virginia Medical School

Tasmia Duza
University of Rochester

Kavitha Nellore
Pennsylvania State University

Jeffrey Scott
University of Western Ontario

David Wu
University of Michigan

Support for Society Awards

The Society extends our sincere thanks to Fine Science Tools for their extended commitment in support of the August Krogh Young Investigator Award, and to an Anonymous Donor for his/her support of the Christian Crone Travel Award.

Their generous support is greatly appreciated and graciously accepted.

The Society also sincerely thanks the following members for their generous donations to support the Zweifach Student Awards:

Dr. Ann Baldwin
Dr. John Bevan
Dr. Shu Chien
Dr. Bob Gore
Dr. Donald McDonald
Dr. Timothy Secomb

Get your MCS Membership Cards!

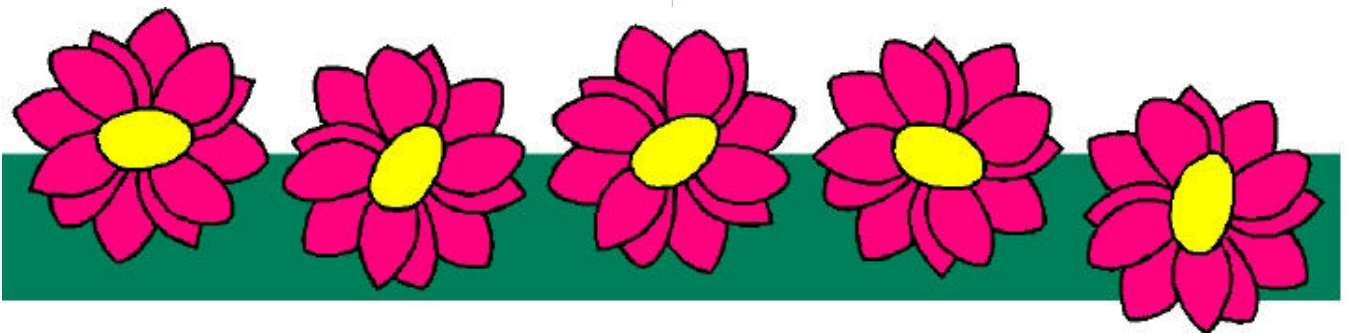
To all MCS members:

The MCS Annual Meeting is quickly approaching. This year we have a new idea to help bring us together and also to give us a higher profile at the meeting. At the President's Symposium, I will be present along with Holly Lopez, Treasurer Assistant, to give you a MCS membership card (if you have paid your 2003 dues). If you have not yet paid your dues you may pay them directly to Holly. Holly will also be happy to accept additional donations for the MCS student awards (see letter from Dr. Falcone, Chair of Development Committee, on the website: microcirc.org). In addition, there will be fliers and brochures available at the meeting to advertise the Society to other EB participants.

I hope you find this arrangement a useful addition.

Yours sincerely,

Ann Baldwin
MCS Treasurer



S P R I N G

Microcirculatory Society Banquet

Sunday April 13th at 7 pm

Mail-In Ticket Order Form

Price: \$57 (\$42 for students)

MAIL THIS FORM WITH CHECK FOR PAYMENT TO:

Dr. Ann Baldwin
Department of Physiology
College of Medicine
University of Arizona
Tucson, AZ 85724-5051

Please indicate choice of main course (choose **ONE**):

CHICKEN WELLINGTON

Boneless Breast of Chicken

Wrapped in Puff Pastry, Mushroom Duxelles

Offered with Madeira Sauce

HORSERADISH CRUSTED SALMON

With Herb Roasted New Potatoes

Olives, Tomato and Minted Snap Peas

GRILLED NEW YORK STEAK

With Roasted Shallot and Merlot Reduction

Checks MUST be received by April 7th (No Check, No Ticket!)

****REMEMBER:** You may now purchase your tickets for the banquet ON-LINE**

Go to the following URL:

<http://microcirc.org/BanquetTickets/BanTicketsOnLine.A.html>

Meeting Information

MICROCIRCULATORY SOCIETY 2003 ANNUAL MEETING

The 2003 Microcirculatory Society Annual Meeting will be held in San Diego, California, from Friday April 11th to Sunday April 13th. As approved by the MCS Council and by the general membership at the Business Meeting, the MCS will meet as a guest society of APS, within the structure of Experimental Biology 2003.

FRIDAY APRIL 11th

- 8:00-12:00 Microcirculatory Society Executive Council Meeting (San Diego Marriott Desert Springs Room)
- 3:15-5:15 Microcirculatory Society President's Symposium (San Diego Convention Ctr. Room 8)

SATURDAY, APRIL 12th

- 8:00-4:30 Microcirculatory Society Poster Session I (posters manned by authors from 12:00 - 1:45 p.m.)
- 2:00-3:00 Microcirculatory Society Landis Award Lecture (San Diego Convention Ctr. Room 8)
- 3:15-5:15 Microcirculatory Society Young Investigators Symposium (Convention Ctr. Room 10)
- 5:30 p.m. Microcirculatory Society General Business Meeting (San Diego Convention Center Room 10)

SUNDAY, APRIL 13th

- 8:00-4:30 MCS Poster Session II (posters manned by authors from 12:45 - 3:00 p.m.)
- 7:00-10:00 Microcirculatory Society Banquet (San Diego Marriott Marina G Room)

MCS President's Symposium
Friday, April 11, 2003
3:15 – 5:15 PM
San Diego Convention Center, Room 8

“Mechanisms of Microvascular Dysfunction in Diabetes”

Chairs: Paul F. McDonagh, University of Arizona
Leslie S. Ritter, University of Arizona

Speakers:

Leslie S. Ritter, University of Arizona
“Reperfusion Injury in the Diabetic Microcirculation”

H. Glenn Bohlen, Indiana University School of Medicine
“Obesity Predisposes Hyperglycemic Injury of In-Vivo Endothelial Cells”

George L. King, Joslin Diabetes Center, Harvard Medical School
“Protein Kinase C and Other Kinases: Their Roles in Causing Microvascular Dysfunctions and Pathologies of Diabetes”

John E. Tooke, Peninsula Medical School, Plymouth, England
“Microvascular Function in Human Diabetes and Pre-Diabetes”

Congratulations!!!!
Landis Award 2003

Walter N. Durán, Ph.D.
Professor of Physiology and of Surgery
(Department of Pharmacology and Physiology)
UMDNJ - New Jersey Medical School

MCS Landis Award Lecture
Saturday, April 12, 2003
2:00 – 3:00 PM
San Diego Convention Center, Room 8

*“Biology of Microvascular Permeability: Physical Coefficients and
Chemical Signals”*

Dr. Walter N. Durán



MCS Young Investigators Symposium
Saturday, April 12, 2003
3:15 – 5:15 PM
San Diego Convention Center, Room 10

Chairs: Jefferson C. Frisbee
Medical College of Wisconsin

David W. Stepp
Medical College of Georgia

Speakers:

Donald G. Welsh, Ph.D., University of Calgary
“Defining the nature of gap junctional communication in the resistance vasculature”

Daniel A. Beard, Ph.D., University of Washington
“Myocardial oxygenation in isolated hearts predicted by an anatomically reasonable microvascular transport model”

Johnathan D. Tune, Ph.D., University of North Texas
“Mechanisms of coronary blood flow control in experimental diabetes mellitus”

Cristine Heaps, Ph.D., University of Missouri
“Adenosine activation of voltage-dependent K⁺ channels in coronary arterioles”

Richard J. Price, Ph.D., University of Virginia
“Microvascular remodeling: network patterning and stimulation by contrast ultrasound”

POSTER SESSION DETAILS:

Poster Session I Saturday April 12th

PLEASE NOTE: Authors are asked to man their posters earlier than indicated in the program ON THIS DAY ONLY in order to allow MCS members (and authors) to attend the Landis Award Lecture.

Poster Topics:

Microvascular Mechanics and Hemodynamics
Microvascular Permeability/Exchange
Microvascular Pharmacology/Vascular Control

Poster Session II Sunday April 13th

Poster Topics:

Microvascular Pathophysiology
Microvascular Cell and Molecular Biology
Flow Regulation; Oxygen Delivery
Angiogenesis/Microvascular Remodeling

Other Programs of Potential Interest to MCS Members:

FRONTIERS OF INTRAVITAL MICROSCOPY: CROSSROADS OF PHYSIOLOGY AND PATHOLOGY (WORKSHOP)

FRIDAY 1:00-3:00 San Diego Convention Center Room 5

Chair: M.S. Goligorsky

GENOMICS OF ANGIOGENESIS AND THE MICROCIRCULATION (PG SYMPOSIUM)

SATURDAY 8:00-10:00 AM San Diego Convention Center Room 6C

Chair: James B. Hoying

LA JOLLA BIOENGINEERING INSTITUTE OPEN HOUSE

Date: April 12, 2003
Time: 6:00 P.M.

Transportation Provided from the
San Diego Convention Center

Food, Drinks and Entertainment

La Jolla Bioengineering Institute
505 Coast Boulevard South, La Jolla, CA 92037
www.ljbi.org

Our Mission

The heart of the Institute's research is to determine how mechanical forces play a role in the normal physiology and pathology of blood vessels, bone, and muscle.

The Institute uses an interdisciplinary approach that involves fluid and solid mechanics and molecular and cell biology to answer this fundamental question. The work on mechanochemical signal transduction in endothelial and bone cells has provided insight of direct clinical relevance.

Most of our current research efforts are supported by multi-year grants awarded through the National Institutes of Health [NIH] and the National Aeronautics and Space Administration [NASA].



Please RSVP to (858)456-7500 X 100
or e-mail: mkomashko@ljbi.org

Proposed Changes to Society By-Laws

The by-laws were updated and amended last year. The proposed changes to Section 11 of Article VI were not included in that revision, and reflect experience gained over the last several months as we undertook the search for, and appointment of, our next journal editor.

ARTICLE I. Microcirculatory Society

Section 1. The name of this organization is The Microcirculatory Society, Inc. (hereinafter known as the Society). The official abbreviation for the name is MCS.

ARTICLE II. Purposes

Section 1. The purposes of the Society are to actively encourage and promote all forms of innovative research and teaching leading to an increase in understanding of microcirculatory function in health and disease.

ARTICLE III. Membership

Section 1. The Society shall consist of regular members, student members, associate members, emeritus members, honorary members, supporting members, and sustaining members.

Section 2. Regular Members.

Any person who has contributed to the increase in knowledge of the microcirculation, and is presently engaged in such work, shall be eligible for election to regular membership in the Society. Except in unusual circumstances, a regular member shall hold a doctoral degree. A regular member may attend and participate in the business meetings of the Society and is entitled to one vote.

Section 3. Student Members.

Any person who is engaged as a full-time graduate student in a recognized University program, and is actively involved in research on the microcirculation or associated phenomena shall be eligible for election to student membership in the Society. Except in unusual circumstances, a student member shall not hold a doctoral degree. A student member may attend and participate in the business meetings of the Society, but shall not have the right to vote.

Section 4. Associate members.

Individuals who are interested in and engaged in work related to the microcirculation, but who do not meet the requirements for regular or student membership, shall be eligible for election to associate membership. Associate members may attend and participate in the business meetings of the Society but shall not have the right to vote.

Section 5. Emeritus Members.

On approval by the Council, a regular member, after 20 years of regular membership or on retirement from regular employment, may, upon his or her written request, become an emeritus member. Emeritus members may attend and participate in business meetings of the Society and shall have the right to vote.

Section 6. Honorary members.

Individuals who have distinguished themselves by outstanding contributions in the study of micro-circulatory phenomena may be elected honorary members by a special act of commendation. Honorary members may attend and participate in the business meetings of the Society, but shall not have the right to vote.

Section 7. Supporting members.

Any regular member who voluntarily contributes \$250 or more annually over and above the dues of regular members shall be denoted a supporting member.

Section 8. Sustaining members.

Individuals and organizations that have an interest in the purposes of the Society and wish to contribute to its support may be invited by the President, with the approval of the Council, to become sustaining members. Any such membership may be terminated by the President with the approval of the Council. Sustaining members may not attend or participate in business meetings of the Society and shall not have the right to vote.

Section 9. Nomination and election of members.

Two regular members of the Society shall join in the proposal of the person for regular, student, or associate or honorary membership on appropriate forms provided by the Secretary through the Society's web site or other available means of communication. The Membership Committee shall receive these proposals and refer them with its recommendations to the President for approval. Those persons whose proposals are approved by the President shall be nominated for election to membership by a mail (including e-mail, fax) ballot of the Council. A two-thirds (2/3) majority positive vote by Council shall be required for election. Receipt of nominations and election to membership shall be carried out on a rolling basis throughout the year.

ARTICLE IV. Officers

Section 1. Council.

The management of the Society shall be vested in its Council (all of whom must be regular members of the Society), with powers of direction, consisting of the President, President-Elect, immediate Past-President, Secretary, Treasurer, and six additional regular members elected by the members by vote of the membership (through available means of communication). The President and President-Elect shall not succeed themselves after having served a full term. The terms of President and President-Elect shall be for one year. The Secretary and Treasurer shall be elected to two-year terms and these officers may succeed themselves for one term. The Secretary and Treasurer shall be elected on an alternating year basis, and the terms of the six additional elected Councilors shall be three years, so elected that only two Councilors are elected each year. Councilors may not succeed themselves to serve consecutive terms. All terms of office shall begin at the close of the annual regular meeting of the Society. The Council, by majority vote of its remaining qualified members, shall fill any interim vacancy in the office of the President-Elect, the Secretary, the Treasurer, and the Clerk, and may fill a vacancy of a Councilor. The term of office of a person elected to fill an interim vacancy shall expire following the tally of a valid [regular](#) ballot to elect his/her successor.

Section 2. Executive Committee.

The Executive Committee of the Society shall be defined as the principal officers, namely the President, the President-Elect, the Past-President, the Secretary and the Treasurer. They shall attend to the ordinary running of the Society, making the decisions required for its smooth functioning. All major

Section 3. President.

The President shall preside at all meetings of the Council and business meetings of the Society, and shall be an ex-officio member of all standing committees, and shall have other duties as prescribed in the appendix of these bylaws. The President, after consultation with the Council, shall appoint members of the standing committees where called for in these bylaws.

Section 4. President-Elect.

The President-Elect shall undertake duties as may be delegated by the President. The President-Elect shall become the next regular President of the Society after completion of the regular term as the President-Elect. In the absence or during the disability of the President, the President-Elect shall have all of the powers and perform all of the duties of the President. Any service as an interim president of the Society shall not reduce the term of the President-Elect as the next regular President of the Society.

Section 5. Past President.

The immediate Past President shall chair the Long-range Planning Committee and shall review, and where needed, recommend revisions of the Society's Bylaws, as described in Article X, Section 2.

Section 6. Secretary.

The Secretary shall give bond to the Society, if required by the Council, for the faithful performance of his/her duties. The Secretary shall have custody of all documents and papers belonging to the Society (except his/her own bond which shall be kept by the President) and shall safely keep the same, and disburse the orders and rules of the Council. The Secretary shall have co-custody of a bank account to meet the day-to-day operational expenses of the Society. The Secretary shall give notice of all meetings as required by the bylaws, send out the various customary mailings to the membership, and shall inform the membership whatever the President or Council desires. The Secretary shall use the available means of communication to perform these duties. The Secretary shall also keep a directory with the complete list of the name, title and address of each member of the Society. The Secretary shall keep the minutes of the Council and of Business Meetings of the Society and shall have other duties as prescribed in the Operations Manual. In the absence of the Secretary, the President shall appoint a temporary secretary to record the minutes.

Section 7. Treasurer.

The Treasurer shall give bond to the Society, if required by the Council, for the faithful performance of his/her duties. The Treasurer shall have custody of all monies, debts, obligations, contracts, and other property belonging to the Society (except his/her own bond which shall be kept by the President) and shall safely keep the same, and shall collect all properties and all monies from time to time due and owing to the Society. The Treasurer shall also keep a directory with the complete list of the name, title and address of each member of the Society and will verify at least annually the status of each member. The Treasurer shall be chair of the Finance Committee to disburse the provision of Article VI, Section 4 of these bylaws.

Section 8. Clerk.

The Clerk shall be a resident of the Commonwealth of Massachusetts, and need not be a member of the Society. (The office is required as a condition of incorporation by the Commonwealth of Massachusetts.) The duties of the Clerk of this Society shall be those required by the statutes of the Commonwealth of Massachusetts. Such duties, to the extent permitted by law, may be assigned to others by the Council. The Clerk shall be appointed annually by the President of the Society, and may serve

in the Council and Business Meetings, without vote except as a member of the Society.

Section 9. Nomination and election of Officers and Councilors.

Nomination for all Officers and Council members of the Society will be obtained by mail, fax, or e-mail on or before December 1 by requesting the membership to propose nominees. The request for nominations will be made in the Society Newsletter preceding the December 1 deadline. Nominations will be sent to the Chair of the Nominating Committee. For each office, the two persons (who agree to stand for election) with the highest number of nominations will be included on the ballot. In years in which two members of the Council are to be elected, a total of not more than four nominees will be included on the ballot. Once the nominations are complete, each member will receive and return by mail, fax, or e-mail, the ballot of officers and Council members. The ballots will be returned to the Chair of the Nominating Committee for tabulation and determination of outcome. In the event that a majority vote for a given office is not obtained by regular vote, the Chair of the Nominating Committee will call immediately for a run-off election between the two candidates with the highest votes. The election will be conducted promptly by mail, fax, or e-mail.

ARTICLE V. Council

Section 1. Management of the Society.

The property and affairs of the Society shall be managed and conducted by the Council with powers of directors. The members of the Council shall serve without compensation and shall be called Councilors.

Section 2. Qualifications, Elections and Vacancies.

Specified in Article IV, Section 1 and Section 9.

Section 3. Meetings.

At least one regular meeting of the Council shall be held during each annual meeting of the Society members, and for this regular meeting no notices shall be required. Other meetings of the Council shall be held as often as the needs of the Society may require. They may be held at regular intervals determined by the Council, or they may be called by the President or any three members of the Council. The Secretary shall notify each Councilor of each meeting of the Council. Notice of any meeting may be dispensed with if each member of the Council, by writing filed with the records of the meeting, waives such notice. No notices shall be required to be given of any adjourned meeting of the Council.

Section 4. Quorum.

A majority of the Council shall constitute a quorum for the transaction of business, but a lesser number may adjourn any meeting from time to time, and a meeting may be held as adjourned without further notice. A majority vote of Councilors in attendance (unless otherwise specified elsewhere), with each entitled to one vote, shall decide any question brought before the Council, except that a majority of the qualified Councilors shall be required for temporarily filling a vacancy of an office. In the event of a tie vote, the President shall then be entitled to two votes.

ARTICLE VI. Standing Committees

Section 1. Standing Committees.

Standing committees and their Chairs shall be appointed by the President in consultation with the Council. The term of all standing committee members, except as otherwise provided elsewhere, shall be for three years. However, on adoption of these bylaws, the term shall be one, two, or three years

for various committee members, as determined by the Council, so as to provide continuity of committee operation. Emeritus, Honorary, and Sustaining members may be appointed from time to time for terms up to one year. Sustaining members so appointed shall not have the right to vote. The President shall be an ex-officio member of all committees. Guidelines for committee operation shall be approved by Council. The President, in consultation with Council and upon recommendation and evidence submitted by the Committee Chair or committee members, will be empowered to terminate at any time the term of committee members failing to discharge their duties.

Section 2. Membership Committee.

A Membership Committee, composed of three or more regular members of the Society, shall receive and review proposals for nomination to membership, and shall recommend regular, associate, and student nominees for membership to the Society according to Article III, Section 9.

Section 3. Finance Committee.

A Finance Committee consisting of the Treasurer (who shall Chair the Committee) and two or more regular members appointed by the President shall receive and evaluate the impact of the various proposed budgets, shall determine the budgets and make recommendations and shall recommend a budget to the Council. This Committee shall supervise the capital investments of the Society, subject to the full authority of direction by the Council.

Section 4. Nominating Committee.

A Nominating Committee shall consist of three or more-regular members, none of whom shall simultaneously be an officer of the Society or the immediate Past-President. This Committee shall obtain nominations and conduct elections for officers and councilors as prescribed in Article IV, Section 9.

Section 5. Liaison Committee.

The Liaison Committee shall consist of the President (who shall serve as Committee Chair), the MCS representative to the US National Committee for the International Union of Physiological Sciences (USNC for IUPS), the MCS member appointed liaison to the European Societies of Microcirculation, the MCS members appointed to the International Liaison committee, and the Secretary of the Society, and may include any other members at the pleasure of the President. This Committee shall maintain communication with scientific organizations that have interests in common with the Society, and shall officially represent the Society in the international community.

Section 6. Long-range Planning Committee. The Long-range Planning Committee shall consist of the ten (10) most recent Past-Presidents and shall be chaired by the immediate Past-President of the Society. This committee shall consider all aspects of society affairs to identify major issues of importance to the Society and to recommend future strategies, plan meetings for the Society for a minimum of 5 years in advance of the next annual meeting, and new policy directions for society function.

Section 7. Development Committee.

The Development Committee shall consist of three or more regular members of the Society. This committee shall seek new supporting and sustaining members of the Society, and shall consider and recommend fund-raising activities for Council consideration. Upon request of the President, this committee shall implement Council-approved fund-raising activities on behalf of the Society.

Section 8. Historical Committee.

The Historical Committee shall consist of three or more regular members of the Society. This committee shall seek, identify, and obtain information, documents, films, and other items which have historical significance to the Society. This committee shall maintain updated lists of past officers and recipients of Society Awards.

Section 9. Awards Committee.

An Awards Committee, composed of six regular members, shall solicit from the voting membership the names of candidates for any awards that the Council has authorized. After selection of the candidates is made by the Awards Committee, the names of the candidates shall be approved by the President and the Council prior to any announcement of the awardees. Announcements of the winners of awardees should be made known to voting members of the Society prior to the Annual Society scientific meeting.

Section 10. Programs and Meetings Committee.

The Program Committee shall be chaired by an officer appointed by the President of the Society, and will serve a three year term. Members of the Committee shall be appointed for 3 years, by the President. The Committee shall: a) follow up on the recommendations to Council and the membership from the Long Range Planning Committee for the meeting(s) proposed for at least three years in advance. b) Serve as the liaison to the program committees of other societies or associations with whom the MCS may meet, with the Program Committee Chair as the official representative. c) Make recommendations, to be approved by the Executive Committee of the MCS, with respect to: program style and format, commitments to other societies, local arrangements, appointments to the program committees of umbrella associations.

Section 11. Publications Committee.

The Publications Committee shall consist of a Chair and at least two other members of the Society, appointed by the President and responsible to the Council of the Society. The Chair of the Committee is an ex-officio member of Council, without vote. The President, Treasurer, and Secretary of the Society are ex-officio members of the Committee, without vote. The duties are to oversee the journals and other publications of the Society, particularly with respect to the scientific quality of the journals and the fiscal interests of the Society. They shall appoint Editors and editorial boards, prepare an annual summary report and an annual financial report, and in general, manage the publications of the Society under the policies determined by Council. The ownership of the title "Microcirculation" and the copyright of material published in the journal shall be held by MCS. The term of the Publications Chair will be set to provide continuity during the time that contracts with publishers are negotiated or Editors of the Journal are chosen. When these decisions are being made, the term will likely be for two consecutive years.

The Editor of the journal will be appointed by Council for a five year term and no individual will serve more than two consecutive five year terms.

The appointment of Editor will be at the recommendation to Council by a committee which will consist of the Publications Committee plus the President of the Society. The Chair of the Publications Committee will chair this committee.

The Publications Committee, plus the President of the Society and the Editor of the journal, is responsible for oversight of contractual agreements between the publisher of the journal and MCS.

The Editor will nominate the Associate Editors and the Editorial Board. These appointments will be submitted to Council for approval. The Editorial Board members will be appointed for a two year term with one-third of the Editorial Board being ineligible for reappointment to a consecutive term. All members of the Editorial Board must be members of MCS.

Section 12. Representative of the MCS to the US National Committee of the International Union of Physiological Sciences.

This position is to be filled by an appointee of the President of the MCS. The appointment is for three years, or four, designed to fit with the time interval between IUPS Congresses. The appointee should be a senior member of the Society, suitable to represent the Society's interests in international planning not only of scientific meetings but in providing international leadership in science and education. Reappointment for a second term is allowable, in accord with IUPS committee rules.

Section 13. Representative of the MCS to the European Societies for Microcirculation (ESM).

This position is to be filled by an appointee of the President of the MCS. The appointment is for three years, or four, designed to fit with the requirement of ESM. The appointee should be a senior member of the Society, who participates in the European Microcirculatory Society meeting, suitable to represent the MCS's interests in international planning not only of scientific meetings but in providing international leadership in science and education. Reappointment for a second term is allowable, in accord with ESM rules.

Section 14. Representatives of the MCS to the International Liaison Committee.

These three positions are to be filled by appointees of the President of the MCS. The appointment is for three years, or four, designed to fit with the time interval between World Congresses. The appointees should be senior members of the Society, suitable to represent the Society's interests in international planning not only of scientific meetings but in providing international leadership in science and education.

Section 15. Communications Committee.

The Communications Committee shall consist of a Chair and at least three other members of the Society, appointed by the President of the Society for up to three year terms. This committee shall be responsible for the oversight of the Society's web page. The Society website address, microcirc.org, is the property of MCS. The committee's other primary function is to coordinate with the Program and Meetings committee, the Liaison Committee, the Publications Committee, as well as the parties who collect directory, dues, and newsletter information, to keep the membership informed of MCS activities. The Communications committee will develop an annual report and budget for review by Council.

Section 16. Other Committees.

The President may appoint temporary (ad hoc) committees as desired. The term of office of these temporary committees shall end with the next annual business meeting of the Society following such appointment, or earlier as the President desires.

ARTICLE VII. Dues

Section 1. Annual Dues.

Dues for members, in accordance with Article III, shall be proposed by the Council but shall be determined by majority vote of those voting at the annual business meeting of the Society. Dues shall be paid January 1 for the current fiscal year and shall be in arrears on April 1. Special assess-

ments may be proposed by the Council but shall be determined by majority vote of those voting at the annual business meeting of the Society.

Section 2. Nonpayment of Dues.

Any member whose dues are one year in arrears shall become an inactive member of the Society, and will be notified by the Treasurer. An inactive member will not receive the journal, will be ineligible to vote, and may not serve on committees. If an inactive member is in arrears for an additional year, he/she may reactivate membership in the Society by payment of all outstanding dues. The Treasurer shall notify the delinquent of the right to request reinstatement of membership at least one time after dues are two years in arrears before they cease to be a member of the Society.

Section 3. Emeritus Members.

A regular member who has been granted emeritus membership will be relieved from dues payment for the current and subsequent fiscal years.

ARTICLE VIII. Meetings of Society Members

Section 1. Annual Meeting of Members.

The Society shall hold an annual meeting of members, for the transaction of business, and for presentation of scientific communications and related activities. Such annual meetings shall be held each year at a time and place designated by the Council and approved by the membership. The time and place for the annual meeting shall be chosen at least eleven months in advance at an annual business meeting. The place, day, and hour shall be specified in the notice of any meeting of the Society.

Section 2. Special Meetings of Members.

Special meetings of members shall be called by the Secretary or any other officer upon the request of the President or the Council or on the written request of one-quarter of the members entitled to vote. The current list of members with their addresses shall promptly be made available to any member entitled to vote, on request, but shall not be utilized by anyone for purposes not directly pertaining to the business of the Society without the written permission of the President.

Section 3. Notice to Members.

Notice of all a meetings of the members shall be made known to each member not less than 30 nor more than 180 days before the meeting, but no notice shall be required if every member entitled thereto, or his/her attorney thereunto, authorizes, by a writing which is filed with the records of such a meeting, a waiver of such notice.

Section 4. Quorum for Annual and Special Meetings.

At all meetings of members of the Society, 40 regular members, present in person and entitled to vote, shall constitute a quorum, but less than a quorum shall have power to adjourn from time to time until a quorum be present. No member shall cast a ballot by proxy at any meeting of the Society.

Section 5. Parliamentary Authority.

The rules contained in Robert's Rules of Order, Revised, shall govern the conduct of the business meetings of the Society in all cases to which they are applicable and in which they are not inconsistent with the bylaws or special rules of order of the Society.

ARTICLE IX. Miscellaneous

Section 1. Prohibitions.

Notwithstanding any provision of these by laws which might be susceptible to contrary interpretation:

- a. The Society is organized and operated exclusively for scientific and educational purposes.
- b. No part of the net earnings of the Society shall accrue to the personal benefit of any member except as provided by the Society awards (Article VI, section 9).
- c. No substantial part of the activities of the Society shall consist of carrying on propaganda, or otherwise attempting to influence local, state, or national legislation, except with respect to science policy or to other special issues such as the obligations to perform biological experimental studies. The Society shall not participate in or intervene in any campaign of any candidate for government public office.
- d. No substantial part of the activities of the Society shall consist of carrying on propaganda, or otherwise attempting to influence local, state or national legislation. The Society shall not participate in or intervene (including publishing or distribution of statements) in any campaign of any candidate for governmental public office.
- e. The Society is not organized for, nor is it to be operated for profit.
- f. The membership list of the Society shall not be supplied to anyone for any purpose except as provided under Article VIII, Section 2, or except as specifically provided by Council.

Section 2. Fiscal Year.

The fiscal year of the Society shall end with the 31st day of March of each year.

Section 3. Audit.

All statements of net assets and related statements of income, expenditures, fund capital, and liabilities shall be audited annually in accord with the statutes of the Commonwealth of Massachusetts. The audit will be made annually by the Finance Committee and every third year by an independent auditing firm.

Section 4. Term of Office.

Where a term of office is stated in years, a year is to be considered as extending from the end of one annual business meeting to the end of the following one.

Section 5. Operations Manual.

The Secretary of the Society shall maintain an operations manual providing outlines of procedures found useful by the Executive Council and Committees of the Society.

ARTICLE X. Amendments

Section 1. Amendments.

These bylaws may be amended, altered or repealed at any business meeting of the Society members by a vote of two-thirds (2/3) of the regular members in attendance or by mail (e-mail, fax) ballot of the Society members by a vote of three-quarters (3/4) of the regular members and entitled to vote, provided notice of the proposed repeal, alteration or amendment, with a statement of the substance

thereof and of the Articles to be affected thereby, is given in the call for the meeting. Approved bylaw changes will be added to the published bylaws by the immediate Past-President as stipulated in Article IV, Section 5.

Section 2. The Past-President shall review the Society Bylaws, incorporate approved changes following the annual business meeting of the Society, and submit a complete copy of the Bylaws to the President at least 3 months prior to the next annual meeting. Any proposed changes that require Council and membership approval shall be presented in a complete copy of the Bylaws, labeled with proposed revisions. All words and phrases deleted from existing approved Bylaws shall be indicated by a horizontal line through them. Continuous underlining, italics or a different color shall indicate all new words and phrases.

