AMERICAN PHYSIOLOGICAL SOCIETY

CELL & MOLECULAR SECTION NEWSLETTER

FALL, 2002

CHAIR'S MESSAGE

The theme for the upcoming Experimental Biology Meeting, to be held April 11-15, 2003, in San Diego is "Translating the Genome". This theme is especially relevant to the Cell and Molecular Section, and as Chair of the Section, I urge all members to attend. Each of the constituent societies of FASEB and many guest societies will participate, which will add to the number of people at the meeting studying biological function at the cell and molecular level.

Sometimes people complain that the EB meeting is too large, but I hope you will realize that the size of the meeting actually represents an advantage. The multidisciplinary nature of the meeting will give you an opportunity to see how your research relates to other disciplines and to learn new approaches to the study of cell physiology, including genomics, proteomics, and other aspects of computational biology. (The name "Experimental Biology" is too good to change, but there will be a lot of in silico biology at the meeting as well.) Yes, you will need to study the program to decide on the most relevant sessions for your own work. But the rewards are great, and I hope the membership of our Section takes full advantage of them.

Within the larger EB meeting, events sponsored by the Cell and Molecular Section offer not only outstanding science but also a chance to maintain associations with colleagues within the community of cell physiologists. Symposia and Special Topics sessions sponsored by our Section are described in this Newsletter. The Hugh Davson Distinguished Lecture will be given by Roger Tsien Monday morning, April 14. Our Cell and Molecular Section dinner will be held that evening. We hope to see as many of you as possible at all these events.

The terms of two elected members of the Cell and Molecular Section Steering Committee ended after the 2002 Experimental Biology Meeting. **Carole Liedtke**, of Case Western Reserve University, was elected to replace **Martha O'Donnell** as Vice Chair of the Section. **John Payne**, of the University of California, Davis, was elected to replace **Peter Cala** as Program Advisor. The other Program Advisor for the Section is continuing member **Ron Lynch**. The final new member of the Steering Committee is **Dennis Brown**, who succeeds **Kim Barrett** as Editor of AJP Cell; a message from Dennis about AJP Cell appears later in the Newsletter. We look forward to working with Carole, John, and Dennis, and we are grateful to Martha, Pete, and Kim for their years of outstanding service to the Section and to APS.

Mike Jennings
Chair, APS Cell and Molecular Section

EXPERIMENTAL BIOLOGY 2003

Deadline for Abstracts: November 13, 2002

Please remind junior faculty, postdoctoral fellows and students to apply for abstract-based awards. These awards may have specific requirements, so check the APS website or preliminary program for details. These include the Cell and Molecular Physiology Young Investigator Awards (2), Cell and Molecular Physiology Student Awards (2), Carolein tub Suden/Frances A. Hellebrandt Professional Opportunity Award, and the Procter & Gamble Professional Opportunity Award.

SESSIONS SPONSORED BY THE CELL AND MOLECULAR SECTION

Cell Section Distinguished Lecture: Rodger Tsein, UC- San Diego

Symposia:

Caveolar Domains in Cell Signaling
Organizer: Paul A. Insel; UCSD
Speaker's: M. Lisanti, J. Schnitzer, S. Steinberg, R.S. Ostrom.

Gap-Junctional Hemichannels: Physiology and Pathophysiology
Organizer: Luis Reuss UTMB, Galveston.
Speakers: L. Ebihara, J.C. Saez **,** J. Weiss, L. Vergara.

Feature Topics:

4-6 additional speakers are chosen by the organizer from submitted Abstracts. *Remember: Select this category in the Call for Abstracts if you want your abstract to be considered for both a talk and poster*.

Integrated Cell Systems
Organizer. James. B. Bassingthwaighte
Speakers: D.A. Beard, A.D. McCulloch.

The molecular physiology of HCO_3^- transport
Organizers: M.F. Romero, M.O. Bevensee.
Speakers: W.F. Boron, R. Reithmeier.

Regulation of ion transporter trafficking
Organizer: Wenhui Wang , Valhalla;
Speakers: N. Hernando, B. Stanton.

X-sectional Symposia Supported by Cell Section:

Identities of Estrogen Receptors Mediating Non-genomic effects – Watson
Role of the Transcription Factor TonEBP/NFAT5 – Burg and Kwon

Other Sessions of Interest to Cell Section Members:

Physiology in Focus: Physiological Implications of Oxidative and Nitrosative Stress

Distinguished Lecture: Endocrinology and Metabolism C. Newgard

Symposia and Featured Topics:

Genomics of Angiogenesis and the Microcirculation J. Hoying
Functional Proteomics: Applications to the CV system Ping
Caveolin Regulation of Endothelial Function Minshall and Malik
Subcellular Organization of Second Messenger Signaling in the CV system
Lynch and Paul
Novel Calcium Signaling Mechanisms in Vascular Myocytes: Cyclic ADP-Ribose, Ryanodine Receptors and Ca^{2+} -Induced Ca^{2+} Release van Breeman and Li
Regulation of Vascular Smooth Muscle Phenotype: Contractile vs. Proliferative. – Raj

Lineage Specific Programming of Stem Cells into Tissues Al-Aqwati
Life and Death Decisions: Fate of Apototic Cells Cidlowski

Neuron-Glia Interactions in the Nervous System Erlichman
Glial/Neuronal Bidirectional Signaling Hatton

Regulation of Ion Channel Structure and Function by Reactive Oxygen Intermediates Eaton and Matalon
Molecular Regulation of Nitric Oxide Synthase Garvin and Pollack
Function and Regulation of Mitochondrial Produced NO in Cardiomyocytes
Kanai and Peterson
Mitochondrial Regulation of Cell Function Battacharya
Redox Signaling of Angiogenic Response in the Heart Das and Maulik
Functional Genomics and Proteomics of Hypoxia Prabhakar and Klein

Trafficking of Membrane Transporters in the GI System Okamoto
Understanding Protein Unfolded States: Implications for Folding, Function, Evolution and Disease States Pappu

Peroxisome Proliferator-Activated Receptor (PPARS) Guan and Sigmond
AT-1 and AT-2 Receptors: Cellular Actions? Sumners and Hay

Epithelial Anion Channels: Structure, Form, Function	Kirk and Fuller
Recent Advances in the Study of Hexose Transport Studies	Ferraris
Flow/Stretch Regulated Membrane and Ion Transport in Epithelia	Satlin and Apodaca
Structure and Regulation of Epithelial Na and K Channels	Eaton and Kleyman

Workshops and Special Symposia:

Science and the Media, sponsored by Public Affairs Committee
NIHBI Program for Genomic Applications: Background for Physiologists
Presentation Skills, sponsored by Women in Physiology Committee

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CELL SECTION MEMBERS: EB2004 IS YOUR MEETING SO GET INVOLVED.

NEEDED: The Cell and Molecular Physiology Section is soliciting ideas for **Symposia** and **Featured Topics** for EB2004 (Washington, DC). Submission forms can be obtained at http://www.the-aps.org/meetings.htm

Symposia: *The Cell Section has **2 symposium** slots for EB04.* Symposia last 2 hours and should feature 4 – 5 speakers. APS provides $4,000 to cover speaker costs.

What is a Featured Topic? *The Cell Section has **3 Featured Topics** slots at EB04* Featured topics are similar to *minisymposia* in that they are pre-formed (prior to the mailing of the Call for Papers) oral sessions including a session title, chairperson and **not more than two *featured presenters***. Featured presenters, or invited speakers, may present work not represented by a submitted abstract. All other presentations are selected by the organizers from the submitted abstracts. APS provides $1,000 for each featured topic to support travel or activities related to the featured topic session.

SEND: Send completed submission forms of proposed topics with proposed speakers to:

Ron Lynch rlynch@u.arizona.edu or John Payne japayne@ucdavis.edu

WHEN: By March 1, 2003
There is no need to contact speakers at this time.

MESSAGE FROM THE EDITOR OF AJP:CELL

The molecular and genetic revolutions of the past decade or so have provided, and continue to provide a wealth of new information, much of which remains to be assembled into a meaningful picture of cellular, organ and animal physiology. Thus, the new Editorial team of AJP Cell Physiology takes over the reins of the journal at an exciting time in research. The expertise and techniques of cell physiologists are once again much in demand, and cutting edge research now invariably includes the integration of physiology and sophisticated cellular, molecular, and genetic approaches. We hope to attract this frontline research in our pages, and to raise AJP Cell Physiology to a leadership position in this new era of scientific endeavor. With the help of the new team of Associate Editors (Seth Alper, Bill Gerthoffer, Kathy Griendling, Paul Insel, Kevin Strange, Jennifer Stow and Kathy Sweadner), our highly-qualified editorial board, and all cell physiologists, it can be done. After a lag period seen by most APS journals since the horrific events of September 11, our submissions have picked up considerably and we are now back to previous levels. But we can and must do better. We need your best work. We need to increase our visibility and, while its merits can be debated, we need to increase our impact factor. This is especially important for contributors outside the USA, whose academic positions and funding often depend on the impact factors of the journals in which they publish. So, what are we, as an Editorial team doing to achieve these goals?

First, beginning with the January 2003 issue, we will define the focus of the journal by using category headings to separate papers in the Table of Contents. Authors will be asked to choose a category for their manuscript as part of the submission process. The categories are as follows:

1) Membrane transporters, ion channels and pumps
2) Muscle cell biology and cell motility
3) Receptors and signal transduction
4) Vascular biology
5) Growth, differentiation and apoptosis
6) Protein and vesicle trafficking, cytoskeleton
7) Extracellular matrix, cell interactions
8) Cellular metabolism
9) Nervous system cell biology
10) Methods in cell physiology

This will allow easier reading of the contents page, and a better appreciation of the types of papers that we are looking for in our pages. We are providing rapid editorial reviews in cases where the subject matter may not fit into the scope of the journal, and we are working with other AJP editors to offer alternative venues for submitted articles when appropriate. As stated in my initial editorial that appeared in the July issue, the global interest of the journal revolves around all aspects of signal transduction, the intracellular consequences of signaling, and the ultimate physiological response of the cell.

Second, we are actively soliciting reviews and original articles from leaders in the field, including editorial board members. In the past two months we have received more than 20 manuscripts from board members, and we expect this to increase. Anyone is free to suggest a review topic that fits the aims of the journal and, better still, anyone should feel free to contact members of the editorial team if they wish to propose a review from their own laboratory.

Third, we have introduced a new category of manuscript, "Methods in Cell Physiology" recognizing that many labs have developed and are using new techniques that might be useful to others, but that are difficult to publish as stand alone articles without introducing new biological data. Papers submitted in this category will be judged on the merits and potential utility of the technique, and not on their content of new biological information. Since the special call for papers in this area was posted on the AJP website in August, we have received 6

submissions, confirming our feeling that this category fulfills an important need among the research population.

Fourth, we are continuing to improve our speed to first decision - the average time from submission to response as of September 2002 was just 24 days. The instant posting of accepted manuscripts on the APSCentral website also makes important work available to others weeks and months faster than waiting for the article to appear in print. A new category of manuscript "Reports", which replaces the "Rapid Communications" category, provides an expedited review process and an even more rapid time to final decision.

Fifth, we continue to offer free color figures (if scientifically justified) to APS members, and a heavily subsidized rate of $250 per figure for non-APS members.

We now ask for the support of all readers of this Newsletter - as advocates for the journal, as reviewers and most importantly as authors. We believe that AJP Cell Physiology can build on its excellent record of achievement and become THE number one venue in which to publish studies on the cellular mechanisms of function and dysfunction in a variety of different cell and organ systems. Send your submissions to us via the APSCentral website (apscentral.org). Visit the AJP Cell Physiology website for the latest announcements, news updates and links to other APS journals (http://www.the-aps.org/publications/journals/ajpcell/index.htm). We look forward to hearing from you.

Dennis Brown
Editor-in Chief
AJP Cell Physiology

35th INTERNATIONAL CONGRESS OF PHYSIOLOGICAL SCIENCES

The United States will host the 35th International Congress of Physiological Sciences in April, 2004 in San Diego. The 2005 Congress is being organized by the US National Committee of the IUPS, comprised of the American Physiological Society, Society for Neuroscience, Biomedical Engineering Society, Microcirculatory Society, Society of General Physiologists, and the Society for Integrative and Comparative Biology. The theme of the Congress is "From Genomes to Function." The organizing committee is organizing and raising corporate and member donations for the meeting. If section members have corporate contacts for companies that might be interested in supporting specific seminars, colloquia, satellite, travel fellowships or the meeting in general, please contact Bob Gunn (rbgunn@emory.edu), Section member and member of the National Organizing Committee.

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TRAINEE REPRESENTATION AT APS AND IN THE CELL SECTION.

Did you know the Cell Section now has a Postdoctoral representative to the Steering Committee? We are doing this as part of an effort to increase trainee representation in the APS as has been recommended by an APS Task Force on Trainees consisting of APS member Graduate School Deans, Faculty, and Postdocs. At the summer APS Council meeting it was agreed that each Section and several additional Committees should have a Trainee Representative. You can be proud of your section for helping lead the way. Our first Postdoctoral Representative was elected in 2001 and has already participated in the last two annual meetings of the Steering Committee. We are at the forefront, but we are not alone. Other Committees with Trainee Representatives include Women in Physiology, and the CNS Section and Neural Control and Autonomic Regulation Section Steering Committees.

The goals of increasing trainee representation are to allow APS to better serve the needs of trainees, both Graduate Students and Postdocs, and provide opportunities for APS to benefit from the input of the next generation of scientists. An additional bonus is that it provides invaluable networking opportunities for young scientists. Each Section's Trainee Representative would also serve on a separate APS Trainee Steering Committee charged with promoting the interests of member Students and Postdocs. Activities might include organizing a symposium and providing information on issues such as grant, award, and career opportunities through a newsletter or web site. The Trainee Steering Committee would also be involved with the mentoring program currently run by the Women in Physiology Committee.

These are lofty goals, but the fact is currently there is very little trainee representation on APS Committees and we in the Cell Section want action now. What are the unmet needs of scientists struggling to establish themselves? How can APS help? How can APS benefit from the greater involvement of those scientists? What other relevant issues are on your mind? We have assembled a Cell Section Task Force on Trainees, and we want your input, whatever your current status. Please email Caroline Sussman, our current Postdoctoral Representative and Chair of the CAMPS Task Force on Trainees at crs13@po.cwru.edu with your thoughts or if you are interested in participating on the Task Force.