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MESSAGE FROM THE CHAIR

This latest issue of the ETG newsletter should reach you just prior to the abstract deadline for EB06 in San Francisco. Full details of the sessions of interest to ETG members are given later in this newsletter. However, I would like to draw your special attention to the ETG trainee awards which we have made for the past three years. Each year we make two awards, one each in the post-doctoral and post-graduate categories. The awards consist of a certificate and a cash prize of \$250, and are made on the basis of the best abstract submitted to any ETG sponsored session at EB. The quality of the abstracts has always been high and therefore I would encourage you to inform your trainees of this award; full details of the submission process and deadline are given in the newsletter. Similarly, if you have any ideas for symposia or featured topic sessions that you would like to see included at future EB meetings please submit them to me or to any other member of the steering committee (contact information is given at the end of the newsletter).

EB05 also witnessed a turnover of officers of the ETG steering committee. First and foremost, our Vice-Chair and Newsletter Editor, Matthias Hediger has left for a new position in Switzerland. We wish him the best of luck and many thanks for the excellent job he has done over the past two years. This task has now been taken over by Neil Bradbury (Chicago Medical School, Chicago). Matthias' position as Vice-Chair is now filled by Moshe Levi (Dept. of Medicine, University of Colorado Health Sciences Center, Denver). Moshe will rotate into the position of Chair at EB06. There are currently three slots available on the committee; if you are interested in standing for election or if you wish to nominate an individual, please contact me (fuller@physiology.uab.edu).

I look forward to seeing you in San Diego,

Happy holidays!

Yours,

Cathy

EXPERIMENTAL BIOLOGY 2006

Experimental Biology 2006 will take place April 1-5 at the Moscone Convention Center in San Francisco CA.

ABSTRACT SUBMISSION

Please be advised that the abstract submission deadline is November 2, 2005. The rules and guidelines for submitting an abstract, as well as an alphabetical list of the topic categories can be found at the meeting website: www.faseb.org/meetings/eb2006

The feature topic session category for the Epithelial Transport Group is:

1103-APS Epithelial Ion Channels
(K.R. Hallows and H.A. Drummond)

The poster session categories are:

1103-APS Epithelial ion channels
1106-APS Epithelial acid/base regulation
1107-APS Epithelial cell polarity traffic and junctions
1108-APS Epithelial genomics and proteomics
1117-APS Epithelial microbial interactions
1037-APS Epithelial transport and epithelial cell polarity
1109-APS Epithelial transporters, exchangers and pumps

Poster sessions are held Saturday, April 2 through Tuesday April 5. Those abstracts selected for incorporation in a featured topic will be presented **twice**, once in the oral, featured topic session and also as a poster presentation



ETG STUDENT AND YOUNG INVESTIGATOR AWARDS

The Epithelial Transport Group Student and Young Investigator Awards (\$250) will be given to one pre-doctoral and one post-doctoral candidate for outstanding research in a topic related to epithelial physiology. To be eligible for the award, the candidate must be the first author on an abstract submitted under one of the headings outlined under the Epithelial Transport Group topic categories () at the Experimental Biology meeting. For the post-doctoral awards, the

candidate must hold either a Ph.D., M.D., D.V.M., or other comparable higher degree. Applicants should submit a copy of their abstract, a completed APS Certification form and a one-page CV to:

Cathy Fuller, Dept. of Physiology and Biophysics, University of Alabama at Birmingham, 1918 University Blvd, Birmingham AL 35294-0005 (fuller@physiology.uab.edu)

for review by the ETG Steering Committee.

Deadline for applications is November 2, 2005. Please note that a candidate can submit no more than **one** abstract for award consideration.

Categories are # 103, 106-109, 1117 and 1137

Forms and further details can be obtained at:

www.the-aps.org/meetings/eb06/awards



ETG SYMPOSIUM

This years ETG sponsored symposium is “**Protein-protein interactions in Epithelial Physiology**” to be held on Sunday April 2 at 8:00-10:00 am.

The concept of proteins operating in isolation within a cell is one that has been rapidly being eroded in the past few years. Indeed, it is becoming increasingly apparent that membrane proteins exist in functional networks, not only for trafficking through the cell, but also for function at their final cellular destination. Much of the work in elucidating these networks has come from studies in polarized epithelia, where it has been shown that both membrane localization and internalization of transporters and channels are highly dependent on specific protein:protein interactions. As information concerning these interactions in regulating epithelial physiology accumulates, it becomes more important to provide a forum where ideas and insights gained from different aspects of epithelial membrane physi-

ology can be shared. The focus of this symposium therefore is to examine four distinct areas where protein:protein interactions are of critical importance in the regulation of epithelial function. The first speaker is Dr. Michael Caplan, who has performed seminal work concerning the sorting and trafficking of ion ATPase pumps, and has recently shown that CD63 is involved in internalization of the H⁺/K⁺ATPase b subunit. Dr. Daniela Rotin defined the interaction of Nedd4-2 in the internalization of ENaC, and characterized the role of this protein in maintaining the sodium channel at the cell membrane, and thus its influence on epithelial sodium transport. Dr. Mark Donowitz is a pioneer in the field of PDZ domain biology as applied to epithelial tissues, particularly as it applies to the interaction of NHERF1/2 to the Na⁺/H⁺ antiporter and cytoskeleton in the gut. Dr. Neil Bradbury was one of the first to demonstrate that the cytoskeletal protein ezrin is involved in the PKA -dependent regulation of CFTR as a result of PDZ domain interactions. Thus, the

proposed speakers cover a broad spectrum of topics of interest to the epithelial community. While sessions on several similar topics have been presented at previous meetings, the unique epithelial focus and functional emphasis of this symposium, at a point when the field is becoming increasingly complex, is both timely and required. Furthermore, this symposium intends to bring together some of the leaders in their respective fields, providing an opportunity for a comprehensive assessment of the role of protein:protein interactions in epithelial physiology

Protein-Protein Interactions in Epithelial Physiology

Sun April 2nd
8:00-10:00 am



Experimental Biology 2005
San Francisco, CA
April 1-5 Moscone Convention Center

Protein-Protein Interactions In Epithelial Physiology

Sponsored by the APS Epithelial Transport Group

Sun April 2— 8:00-10:00 AM

Chaired **Neil Bradbury**, Chicago Medical School **Cathy Fuller**, Univ. Alabama at Birmingham

- | | |
|---------|---|
| 8:00 AM | Ion Pump interacting Proteins— Michael Caplan , Yale Univ. |
| 8:30 AM | Protein:protein interactions in ENaC regulation and function— Daniela Rotin , Hosp. for Sick Children, Toronto |
| 9:00 AM | PDZ interactions in kidney function— Mark Donowitz , Johns Hopkins Univ. Sch. Of Med. |
| 9:30 AM | Protein:protein interactions in epithelial chloride secretion— Neil Bradbury , Chicago Medical School |

SYMPOSIA OF INTEREST TO ETG MEMBERS

Integrating Cellular Functions the role of the primary cilium in cell proliferation and polycystic kidney disease

Mon Apr 3 10:30-12:30

10:30 Introduction: Primary cilium & ADPKD
Winfield Sale, Emory Univ. Med. Sch,

10:35 The Primary cilium and cell signaling
Gregory Pazour, Univ. Mass

10:55 The 'two-hit' hypothesis for ADPKD
Jing Zhou, Brigham & Women's Hosp

11:15 The role of the primary cilium in regulating intracellular Ca in ADPKD
P. Darwin Bell, UAB

11:35 Polycystic-2 as an intracellular Ca release channel
Stefano Somlo, Yale Univ. Sch. Med.

11:55 A new model for ADPKD
Gregory Germino, Johns Hopkins.

Development and Maintenance of Epithelial polarity Sun Apr 2: 10:30-12:30

10:30 Cellular mechanisms involved in development and maintenance of epithelial cells
Charles Yeaman, Univ Iowa

10:55 Protein complexes and signal transduction mechanisms that control cell polarity
Ben Margolis Univ. Michigan

11:20 The role of Par-1 in epithelial lumen formation
Anne Muesch Weill Med Col. Cornell Univ.

Lipid Mediated Regulation of Membrane

Transport Tues Apr 4 10:30-12:30

10:30 Regulation of epithelial Na channel by membrane order and lipid rafts

Mouhamed S. Awayda, Suny Buffalo

11:00 Direct regulation of the epithelial Na channel by membrane phospholipids

James D. Stockand, Univ Texas San Antonio

11:30 Regulation of ion channel function by lipid bilayer elasticity

Olaf S. Andersen, Weill Med. Col. Cornell Univ.

12:00 How lipids interact with pumps and ion channels

Anthony G. Lee Univ. Southampton

ADDITIONAL FEATURED TOPICS OF INTEREST

APS FEATURED TOPICS

Lipid signaling, Lipid rafts and Epithelial Transport

Moshe Levi

Epithelial Ion Channels

Kenneth R. Hallows and Heather A. Drummond

Primary Cilia AAA featured Topic

Epithelial-Mesenchymal Transition ASIP

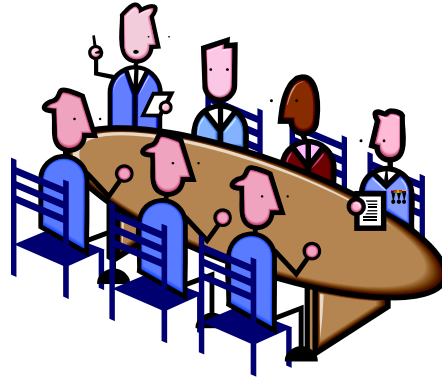
CALL FOR NOMINATIONS

Interested in deciding where the ETG is going? Do you have ideas to improve the ETG? The ETG is currently soliciting nominations for new members to serve on the committee. You may nominate yourself or others to stand for election in the summer of 2006. The steering committee is primarily responsible for programming sessions focused on epithelial physiology at the annual Experimental Biology meeting.

Please send nominations to

Cathy Fuller Ph.D. Dept. Physiology and Biophysics,
1918 University Blvd, Birmingham AL 35294-0005

fuller@physiology.uab.edu



POSITIONS OPEN

The Department of Physiology and Biophysics at Rosalind Franklin University of Medicine and Science is seeking applications to fill two tenure-track faculty positions at the Assistant/Associate Professor level. The successful candidates will be expected to develop meritorious, extramurally funded research programs and have a strong commitment to medical and graduate student education. We are particularly interested in individuals who will complement existing departmental and institutional strengths, including: membrane transport, protein trafficking, protein structure, cell biology, virology, and respiratory physiology. The University has begun an expansion campaign to fill 25 new faculty slots, all with nationally competitive salaries and start-up packages. Rosalind Franklin University of Medicine and Science is located in North Chicago, IL, a suburb approximately 40 miles north of the city of Chicago.

Please submit a CV along with a one-page summary of research and teaching interests and future plans. The review of applicants will begin November 1, 2005, and continue until the positions are filled. Applications and nominations should be submitted by mail or email to:

Robert J. Bridges, Ph.D. Chairman, Department of Physiology and Biophysics
Rosalind Franklin University of Medicine and Science, 3333 Green Bay Road, North Chicago, IL 60064
bob.bridges@rosalindfranklin.edu

Rosalind Franklin University of Medicine and Science is an affirmative action/equal opportunity employer. Women, minorities, disabled persons, and Vietnam Era and disabled veterans are encouraged to apply



<http://www.the-aps.org/groups/epithelial/index.htm>

MEETINGS OF INTEREST TO ETG MEMBERS

Membrane Transport Proteins

Aug 13-18 University of New England. (www.grc.uri.edu/06sched/htm)

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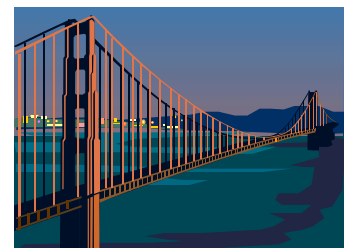
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