



American Physiological Society Gastrointestinal/Liver Section Newsletter Fall 2005



Greetings to everyone from the Great White North. First, I want to thank Matt Grisham for his excellent leadership of our section for the last three years. It was his idea to change the name of our section adding Liver to better reflect the membership and attendance at EB. This has resulted, despite our continual clash with AGA, in a much improved attendance at EB by our section members and my challenge will be to build upon his work. This year started off with the combined IUPS and EB meeting in San Diego which was a great success. Attendance from all over the world was excellent and our own section mounted a symposium on 'Epithelial Cells and their Neighbors' organized by Hanna Carey and Helen Raybould. In addition, Ron Ferraris organized a featured topic on 'The

Nature of Intestinal Adaptation: Cellular Diversity and Versatility' and Pat Brubaker from the University of Toronto also organized a featured topic on 'Gut interactions with Pancreas and Liver'. All were well attended and promoted a lot of discussion. By my count we had at least 70 posters within our sponsored sessions.

Our program committee is now chaired by Ron Ferraris and he has assembled a great team around him to plan our future contributions to EB. At the San Francisco meeting in 2006 we will return to our standard EB format with a symposium and three featured topics, an advertisement for which will be appearing in *Am J Physiology* starting in the October issue. Our **symposium** will be on Molecular Mechanisms of Intestinal Iron Transport with a linked poster session: Metal Ion transport. The **featured topics** will be: The Role of Epithelial Cells in Initiation and Propagation of Intestinal Inflammation, Gastric Inflammation and Oncogenesis, and Lipid Metabolism and Liver Inflammation. I encourage you to submit abstracts using the descriptors that match these featured topics, as this gives you an opportunity to be selected to talk in the featured topic session and partake in the poster session linked to each topic. This year you will also find revised abstract descriptors to better reflect our current areas of research interest. I am happy to announce that Kim Barrett has been selected as our 2006 Davenport lecturer, a well deserved award recognizing her outstanding history of scientific discovery. We are also proposing to organize a combined section dinner and business meeting at which we will present our award winners and take time to mix and relax. So make sure that you have **April 1-6, 2006** blocked off on your calendars for San Francisco and I look forward to seeing you all there.

Finally, I want to thank our new secretary Chip Montrose for organizing all of us and ensuring that your section leadership is going to continue to make this a vibrant section to which all of you will contribute. In that vein, we welcome and encourage input from section members on ideas for future symposia, improvements to our section activities, and individuals who would like to join in section governance.

Chris Cheeseman, Section Chair

WHAT IS NEW AND URGENT?

- **THE APS-SPONSORED NEW INVESTIGATOR AWARD HAS AN OCT 31 DEADLINE, WHICH IS BEFORE THE ABSTRACT DEADLINE!!!**
- **MOST AWARD DEADLINES ARE NOW REQUIRED BY APS TO BE THE SAME DAY AS THE ABSTRACT DEADLINE (NOV 2, 2005)**
- **AWARDS APPLICATIONS MUST BE SUBMITTED VIA A NEW WEB SITE AT APS**
- **NIH NEEDS PROMPT HELP TO FIND NEW STUDY SECTION MEMBERS**

NEWSLETTER CONTENT OVERVIEW

1. Revised GI Section Awards
2. Major Events At EB2006
3. Getting Ready To Submit Your Abstracts
4. Plan Now for EB2007
5. NIH Needs Reviewers
6. Join An APS Committee
7. GI Section Governance group

1. REVISED GI SECTION AWARDS FOR EB 2006

The Gastrointestinal & Liver Physiology Section New Investigator Award (\$1,000) recognizes an outstanding investigator in the early stages of their career. Candidates should be investigators who have made meritorious contributions to the scientific areas represented by the APS Gastrointestinal & Liver Physiology Section. They should not be above the rank of Assistant Professor or a comparable position in a research Track at an academic institution or in industry (e.g. Scientist, Sr. Scientist, Research Investigator, etc.). They should receive nominations from at least two regular members of the APS. Candidates will be judged on their publications, how the publications relate to the APS section to which they have applied, and evidence for independence and promise (grant funding, peer review activities, etc.). Although this is not an abstract-based award, awardees are expected to attend the Spring EB meeting and make an oral or poster presentation. The candidate must be an APS member in good standing. Candidates should submit a curriculum vitae, 2 nomination letters from APS members, and 3 reprints to the **NEW APS award site (<http://www.the-aps.org/Eforms/AWARDS>) by October 31, 2005.**

The Gastrointestinal & Liver Physiology Section Research Recognition Awards (four awards of \$500 each) are designed to provide support and recognition to trainees and junior level faculty who are engaged in gastrointestinal and liver research. The award is given based on competitive appraisal of abstracts submitted to the Spring EB meeting. Separate awards will recognize work done while enrolled as a doctoral or medical student, work done during the first five years of postdoctoral or medical residency training, and work done as a junior level faculty who is within 10 years of having received a higher degree (Ph.D., M.D., or D.V.M). The

final distribution of awards among these categories will depend on the quality and number of applicants. To qualify for these awards, the applicant must be first author on an abstract submitted for the Experimental Biology meeting, and either the applicant or sponsor (in the case of trainee awards) must be a member of APS. All applicants must submit their abstract for consideration, and junior faculty applicants should additionally include a half-page statement of research accomplishments. All applications must be **submitted at the NEW APS award site (<http://www.the-aps.org/Eforms/AWARDS>) by November 2, 2005** (the abstract deadline)

The Novel Disease Model Award is not a sectional award, but will be granted to a graduate student and a postdoctoral fellow who submit the best abstracts at EB2006 that describe a novel disease model. The model can be in vitro or in vivo but should clearly emphasize the potential utility of the system for future research related to a disease. The award is \$500 for the graduate student and \$800 for the postdoctoral fellow and is sponsored by the Liason with Industry Committee (LWIC). See the call for abstracts this Fall for application details.

2. MAJOR EVENTS AT EB2006

SPONSORED BY GASTROINTESTINAL AND LIVER SECTION OF APS



**Davenport Distinguished Lecturer of the
Gastrointestinal and Liver Section
Sunday, 4/2/06, 2 - 3 pm**

Kim Barrett, PhD
University of California San Diego

"Friends and foes: the physiology of gut epithelial interactions with luminal bacteria"

SYMPOSIUM

Molecular Mechanisms of Intestinal Iron Transport

Wednesday, 4/5/06, 10:30 am - 12:30 pm

Organizers:

James F Collins, *University of Arizona, Tucson, AZ*
Bryan Mackenzie, *University of Cincinnati, Cincinnati, OH*

Speakers:

Kris V Kowdley, *University of Washington, Seattle, WA*
Expression of iron transporters in human duodenum: findings in iron deficiency and hemochromatosis

Bryan Mackenzie, *University of Cincinnati, Cincinnati, OH*
Molecular mechanisms of the divalent metal-ion transporter DMT1

Michael D Garrick, *University at Buffalo-SUNY, Buffalo, NY*
Intestinal iron uptake by the divalent metal-ion transporter DMT1: lessons from the Belgrade rat model of anemia

Marianne Wessling-Resnick, *Harvard Sch. Pu. Health, Boston, MA*
IREG1-mediated iron efflux and its regulation by hepcidin

Linked Poster Session: **Metal Ion Transport**

SYMPOSIUM

Physiological Genomics and the Gastrointestinal Tract (Phys Genomics joint with GI/Liver)

Wednesday, 4/5/06, 8:00 - 10:00 am

Organizers:

Ronaldo P Ferraris *UMDNJ - New Jersey Med.l School, Newark, NJ*
Anne E. Kwitek *Medical College of Wisconsin, Milwaukee, WI*

Speakers:

Linda C Samuelson *University of Michigan, Ann Arbor, MI*
Acid Secretion and Gene Expression: Gastrin-Regulated Gene Profiling in the Stomach

Craig D Logsdon *UT MD Anderson Cancer Center, Houston, TX*
Gene Profiling Reveals the Complex Response of the Exocrine Pancreas to Injury

Cisca Wijmenga *University of Utrecht, Netherlands*
A genetic approach to celiac disease: a focus on the intestinal barrier

James C Fleet *Purdue University, West Lafayette, IN*
Using genomics to understand the development of a functionally mature absorptive intestinal epithelium

Linked Poster Session: **Genomics and proteomics of GI systems**

FEATURED TOPICS

Role of Epithelial Cells in Initiation and Propagation of Intestinal Inflammation

Monday, 4/3/06, 3:15 - 5:15 pm

Organizer: **Didier Merlin**, *Emory University, Atlanta, GA*

Speakers: **Gail Hecht**, *University of Illinois, Chicago, IL*
Regulation of intestinal inflammation by non-invasive pathogens:
enteropathogenic and enterohemorrhagic E.Coli

Jerrold Turner, *University of Chicago, Chicago, IL*
Eliminating the static: Tight junction dynamics exposed

4 Posters selected for 10 min oral presentation

Linked Poster Session: **Role of epithelial cells in initiation and propagation of intestinal inflammation**

Gastric Inflammation and Oncogenesis

Monday, 4/3/06, 10:30 am - 12:30 pm

Organizers: **Eric Sibley**, *Stanford University, Palo Alto, CA*
Linda Samuelson, *University of Michigan, Ann Arbor, MI*

Speaker: **Juanita Merchant**, *University of Michigan, Ann Arbor, MI*
Cancer development in the hypochlorhydric stomach

4 Posters selected for 10 min oral presentation

Linked Poster Session: **Gastric Inflammation and Oncogenesis**

Lipid Metabolism and Liver Inflammation

Sunday, 4/2/06, 8:00 - 10:00 am

Organizer: **Jian Zhang**, *University of North Carolina at Charlotte, Charlotte, NC*

Speakers: **Janardan Reddy**, *Northwestern University, Chicago, IL*
Fatty Acid Oxidation and Steatohepatitis

Michael Bradbury, *Lake Erie College of Osteopathic Med., Erie, PA*
Hepatic Fatty Acid Transport and Steatosis

4 Posters selected for 10 min oral presentation

Linked Poster Session: **Lipid metabolism and liver Inflammation**

Partial list of Other Symposia, Featured Topics, & events of interest at EB2006

- Lipid mediated regulation of membrane transport
- Development and maintenance of epithelial polarity
- Pancreas development and insulin secretion
- Protein-protein interactions in epithelial physiology
- Epithelial ion channels
- Lipid signaling, lipid rafts and epithelial transport
- Advances in ion channel physiology
- Junctional regulation in barrier cells

A symposium entitled "**Advances in Ion Channel Physiology**" will occur at EB2006 on Monday, April 2nd from 10:30 - 12:30. This symposium will describe novel approaches to understanding ion channel function and how this understanding is transforming the treatment of a variety of disease states, including pain, cardiac arrhythmia, cystic fibrosis and neuropsychiatric disorders. This is being sponsored by the Liaison with Industry Committee (LWIC) Look for the full program in the Spring.

You're invited! Come meet, greet, and eat with your fellow physiologists who are working in the corporate sector. The 6th Annual LIWC Mixer is on at EB2006. Look for more details in the spring newsletter.

3. GET READY TO SUBMIT YOUR ABSTRACTS TO EB 2006 !

Descriptors for abstract submission to our section were updated. Please note that the first five descriptors are linked to the topics of our upcoming symposia and featured topics at the meeting. Select any of these descriptors and support your section! Select one of the first 5 and get increased exposure thru a chance to give an oral presentation or be part of a focused poster session related to the symposium.

1. Role of epithelial cells in initiation and propagation of intestinal inflammation
 2. Metal ion transport
 3. Gastric inflammation and oncogenesis
 4. Lipid metabolism and liver inflammation
 5. Genomics and proteomics of GI systems
-
1. Growth factors and stem cells
 2. Neuroregulation and motility
 3. GI receptors and signal transduction
 4. Tissue remodeling and wound healing
 5. Epithelial microbial interactions
 6. Nutrient and electrolyte absorption: mechanisms and regulation
 7. Cellular differentiation, adaptation and tissue development
 8. Secretory mechanisms
 9. Gastrointestinal pathophysiology
 10. Pancreatic physiology and pathophysiology
 11. Liver physiology and pathophysiology
 12. Mechanisms of liver disease

4. IT'S NEVER TOO EARLY TO PLAN FOR EB 2007: HELP NEEDED WITH SYMPOSIA TOPICS

The GI and Liver Section is starting the process of organizing symposium topics for the Spring 2007 Experimental Biology meeting. A prospective set of topics is available for your consideration, representing our efforts to cover a broad set of components in the Gastrointestinal System. We welcome suggestions for other topics as well! For 2007, targeted topics are:

1. Pancreatic Physiology;
2. Enteric Neurobiology;
3. Non-alcoholic Steatohepatitis (NASH),
4. Cell development and lineages;
5. Microcirculation in intestinal inflammation (organized by P. Kviety).

With the exception of the final topic, organizers are needed for these Symposia. This is an excellent opportunity to become involved in the GI and Liver section of the APS and to have a hand in determining the content of the meeting. If you are interested in organizing one of these symposia, would like to nominate a colleague to do so, or if you would like to propose another topic, please contact Ron Ferraris, our program coordinator (ferraris@umdnj.edu).

5. HELP THE NIH GET GOOD REVIEWERS FOR YOUR GRANTS

I am seeking suggestions for potential reviewers to populate the study sections within the Digestive Sciences Integrated Review Group (DIG) consisting of the following Scientific Review Groups (Study Sections):

- Clinical and Integrative Gastrointestinal Pathobiology Study Section (CIGP)
- Gastrointestinal Cell and Molecular Biology Study Section (GCMB)
- Gastrointestinal Mucosal Pathobiology Study Section (GMPB)
- Hepatobiliary Pathophysiology Study Section (HBPP)
- Xenobiotic and Nutrient Disposition and Action Study Section (XNDA)

Please consult the website (<http://www.csr.nih.gov/review/DIGIRG.HTM>) that describes the scientific areas to be reviewed by each of these study sections. We are especially looking to recruit minorities and women in order to have their adequate representation on NIH committees and I would be particularly grateful if you can identify such individuals from any institution. I would appreciate your reply by **October 15, 2005**. I thank you in advance for your input.

Mushtaq A. Khan, D.V.M., Ph.D.
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6. JOIN AN APS COMMITTEE AND HELP STEER OUR SECTION AND SOCIETY!

Gastrointestinal and Liver Section Members are encouraged to serve the APS through participation on one of the various committees that run the society. The APS is committed to broad representation from the different sections, including women and younger (<45 yr) members. The process for nomination is simple. Members fill out the Candidate Information Form for a particular committee and arrange for someone to submit an Endorsement Form. Candidates without endorsements are not considered. The Committee on Committees reviews the nominations and makes recommendations to Council. Committee information and nomination forms can be found on the APS web site: <http://www.the-aps.org/committees>.

The deadline for applying will be near the end of 2006, but no date has been set yet. Please contact our section representative for the Committee on Committees, Linda Samuelson (lcsam@umich.edu), if you are interested in serving or if you would like more information.

The following openings can be applied for now, to start in 2007:

Animal Care and Experimentation-3 slots
Awards Committee-1 slot
Career Opportunities in Physiology-3 slots
Communications Committee-1 slot
Ray G. Dags Award Committee-1 slot
Education Committee-3 slots
Finance Committee-2 slots
International Physiology Committee-1 slot
Long Range Planning Committee-1 slot
Membership Committee-1 slot
Porter Physiology Development Committee-3 slots
Public Affairs Committee-2 slots
Publications Committee-1 slot
Senior Physiologists Committee-3 slots
Women in Physiology Committee-1 slot

7. SECTION GOVERNANCE

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