

Points of Interest

in Biomedical Sciences

Newsletter Date May 2008

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Awards

Ms. Alison Leaf, a junior undergraduate in Mark Roberson's lab, received a summer funding award from the Hughes Scholar's Program. Alison is investigating the regulation of 2,3 bisphosphoglycerate mutase gene expression by DLX3 in placental trophoblasts.

Dr. Susan Suarez recently received notification of a funding award from the USDA National Research Initiative Competitive Grants Program in Animal Reproduction for her grant proposal entitled "Sperm storage proteins and their relationship to bull fertility".

Dr. Susan Suarez was also recently appointed Associate Editor for the journal *Biology of Reproduction*.

Peter Piermarini was recently awarded a NIH K01 Career Development Award from the NIDDK to fund his research in Dr. Beyenbach's lab. It is titled, "An epithelial model for V-type H⁺-ATPase-driven acid-base transport".

Elizabeth Cherry (visiting scientist) and **Flavio Fenton** (research associate), both of Dr. Gilmour's lab, were fortunate to win first prize in the Adobe Acrobat 3D PDF contest in the Technical Publishing category.

It is not widely known yet, but it is possible now to include 3D objects in PDF files and to interact with them by rotation, for example. Their winning submission provides a creative introduction to cardiac structure, function, and arrhythmias that allows users not only to read about or to view examples of these concepts, but also to experience the complexity of the heart for themselves. Separate sections demonstrate the heart's anatomical components, blood flow through the heart, and complex reentrant spiral waves that correspond to cardiac arrhythmias. Users can utilize the tools available in Acrobat 3D to interact with objects through various means, including rotation and frame sequencing to show three-dimensional movies.

The submission is being featured in this link:

http://www.acrobatusers.com/tech_corners/3d/



Quotables:

Trying to determine the structure of a protein by UV spectroscopy was like trying to determine the structure of a piano by listening to the sound it made while being dropped down a flight of stairs.

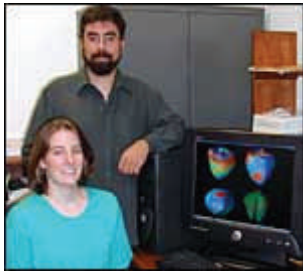
-- **Francis Crick**

[British Molecular Biologist, 1916-]

Publications

Avdievich, E., Reiss, C., Scherer, S. J., Zhang, Y., Maier, S. M., Jin, B., Hou, H., Jr., Rosenwald, A., Riedmiller, H., Kucherlapati, R., **Cohen, P. E.**, Edelmann, W., Kneitz, B. (2008). "Distinct effects of the recurrent Mlh1G67R mutation on MMR functions, cancer, and meiosis." *Proc Natl Acad Sci U S A* **105**(11): 4247-52.

Kan, R., Sun, X., Kolas, N. K., Avdievich, E., Kneitz, B., Edelmann, W., **Cohen, P. E.** (2008). "Comparative analysis of meiotic progression in female mice bearing mutations in genes of the DNA mismatch repair pathway." *Biol Reprod* **78**(3): 462-71.



Cherry, E. M., Ehrlich, J. R., Nattel, S., **Fenton, F. H.** (2007). "Pulmonary vein reentry--properties and size matter: insights from a computational analysis." *Heart Rhythm* **4**(12): 1553-62.

Rajasekaran, S. A., **Beyenbach, K. W.**, Rajasekaran, A. K. (2008). "Interactions of tight junctions with membrane channels and transporters." *Biochim Biophys Acta* **1778**(3): 757-69.



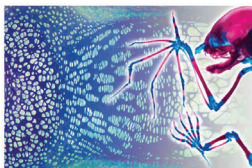
Cells Tissues Organs

Bat Skeletal Growth: Molecular and Environmental Perspectives

Guest Editors

John W. Hermanson
(Ithaca, N.Y.)

Cornelia E. Farnum
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John Hermanson and Nelly Farnum were guest editors for a special edition of *Cells, Tissues and Organs* in January, focusing on bat skeletal biology. How the hand of a primitive mammal might have evolved into a hand-wing remains an elusive yet challenging question. This special issue was designed to bring together ideas about the growth and development of bats, specifically looking to integrate ideas on how the bat wing emerges as a unique structure from the embryonic hand and continues its rapid growth postnatally. Contributions from seven authors included analysis of the molecular determinants of bone growth in bats, kinetics of elongation of the manus in juvenile bats, and concluded with a study of the biomechanical demands placed upon the bones of the adult wing.

Biological Sciences Graduation Information

Biology Honors Program

- **Biology Honors Reception & Ceremony** (For Honors Graduates, their Guests and Faculty) Saturday, May 24th Ramin Room, Bartels Hall 1:00-3:00 PM Honors Graduates are asked to RSVP to Pam Davis (pd43) by May 6th.

Biological Sciences - All

- **Biology Recognition Ceremony** Saturday, May 24th Lynah Rink 4:00-5:00 PM The recognition ceremony will begin promptly at 4:00 PM. Please arrive at Lynah no later than 3:30 PM. *Wear your cap and gown to the Biology Recognition Ceremony!* This ceremony is the **ONLY** time that your name will be announced and that you will be recognized as you walk across the stage area. Don't miss it!!
- **Biology Recognition Reception following Ceremony** Saturday, May 24th Ramin Room, Bartels Hall 5:00–6:00 PM Light refreshments and appetizers will be served.



Events

Climate Change Conference: Making the Connections

The Cornell Center for a Sustainable Future and the College of Agriculture and Life Sciences are organizing a half-day mini-conference on climate change for **May 6th from 8:30-noon** in Kennedy Hall Auditorium for faculty and staff.

Dr. Missaka Wijayagunawardane, DVM, PhD, is visiting Dr. Suarez's laboratory until June 30. Dr. Missaka is chair of the Department of Animal Science at the University of Peradeniya in Sri Lanka and is here as a Fulbright Scholar.

Effective Communication Seminar, May 1st, 2pm
sign up required!



Seminar Series - Spring 2008

Department of Biomedical Sciences

Seminar Series are held every Tuesday in Lecture Hall III VRT (Veterinary Research Tower) from 4:00 PM - 5:00 PM unless otherwise noted.

May 6

DR. PRADIP ROY-BURMAN

(jointly sponsored by [The Cornell Stem Cell Program](http://www.usc.edu/programs/pibbs/site/faculty/royburman_p.htm),
http://www.usc.edu/programs/pibbs/site/faculty/royburman_p.htm)

"New Mouse Models for Elucidating Mechanisms of Prostate Cancer Progression"

Hosted by Dr. Alexander Nikitin, 253-4347,
an58@cornell.edu

May 13

DR. M. KERRY O'BANION

<http://www.urmc.rochester.edu/gebs/faculty/obanion.htm>

"Neuroinflammation in Alzheimer's Disease: Friend or Foe?"

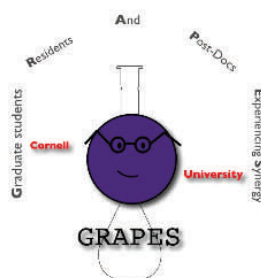
Hosted by Dr. Teresa Gunn, 253-4359,
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Questions or Suggestions regarding this Newsletter?

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GRAPES

- GRAPES Sponsored Speaker: Kathleen Mulligan, Assistant professor of voice and speech at Ithaca College, "Finding your voice: An introduction to breath connection and vocal power." Thursday May 1, 2-4pm, Schurman Hall, Lecture Theater I. Register with Casey Isham (ki26@cornell.edu).
- Departmental Collaborative hour: May 6th, 5pm, 2nd floor VRT conference room.

GRAPES has a new website!!!!

<http://www.vet.cornell.edu/biosci/grapes>



David Infanger
Ashley Woods
Edward Strong
Alyson Spealman
Patricia Clark
Krystal Allen
Michael Craven
Danielle Turner
Amy Navartil
Erin Daugherty
Kim Holloway
Markeya Williams (not pictured)

Undergrads Making Their Mark

Linell Bigelow and Barbara Linnehan, two undergraduates in Nelly Farnum's lab, will be doing a joint research project this summer entitled Incidence of Primary Cilia on Heart Valve Cells: Visualization using Multiphoton Microscopy. The project will be funded by a Summer 2008 Research Award to Linell through the Engineering Learning Initiatives, and support for Barbara by a current NIH R21 for studying the incidence and 3-dimensional orientation of primary cilia in connective tissues. Results will be presented at a poster session at the Engineering College

