



Scoop

March 4, 2005

THE UNIVERSITY OF TEXAS MEDICAL SCHOOL AT HOUSTON

Events to Know

March

4,5 Research Retreat for Faculty, 8:30 a.m. - 7:30 p.m., Friday, and 8 a.m. - noon, Saturday, *The Houstonian*.

11 Neurology Grand Rounds, Tjalf Ziemssen, M.D., Ph.D., University of Dresden, "Neuroprotection and Disease Modifying Agents in MS," noon, MSB 2.135.

31 Microbiology & Molecular Genetics Series, Richard Losick, Ph.D., "Commitment and Cannibalism in a Bacterium," 4 p.m., MSB 2.103.

May

19 ANNUAL FACULTY MEETING, 11:30 a.m.-1 p.m., MSB 2.006.

RESEARCHER FURTHERS SOY-BASED WORK

What happens when you pop an aspirin or an ibuprofen for a headache, or some other form of pain or inflammation? According to **Dr. Lenard Lichtenberger**, Integrative Biology and Pharmacology, you've just created some gastrointestinal stress.



Dr. Lenard Lichtenberger

"If you take an electron microscope picture of your stomach before and after you've taken that pill, you'll notice a rather marked injury to the surface of the stomach tissue," said the researcher.

What Lichtenberger and his colleagues have done, after 20 some years of research, is to produce a soy-based NSAID (non-steroidal anti-inflammatory drug) they're calling ibuprofen-PC (phosphatidylcholine or lecithin) that has attracted positive interest from the FDA, and funding by way of four grants.

The final packaging, launch, and marketing of the product will initially be by prescription, Lichtenberger reported, and then it will eventually be an over-the-counter medicine.

Protective Soy

Lichtenberger said the funding he and his associates have received will help show that conventional NSAIDs, like aspirin and ibuprofen, as a class, have the capability of removing the protective water-repellent lining in the stomach. Acid can then get in and injure the tissue. His soy-based NSAID can both protect the stomach from injury and allow the NSAID component of the pill to reduce pain and inflammation.

The four awards are: a two-year \$750,000 NIH small business grant, "GI Safety and Therapeutics of Oil-based PC-NSAIDs;" a one-year \$100,000 NIH pilot clinical grant, "Clinical Studies with Phospholipids-Associated NSAIDs;" a four-year \$1.8 million U.S. Army grant, "Use of PC-NSAIDs in Chronic Pain;" and a one-year \$250,000 State of Texas ATP grant, "Molecular Interactions between Phosphatidylcholine and NSAIDs; from Bench to Bedside."

"We feel that in a very important way the standard and contemporary NSAIDs in the marketplace today typically injure the stomach," Lichtenberger said.

What Lichtenberger and his colleagues have done, starting about 10 years ago, is to simulate the lipid that is naturally produced in the stomach. "Interestingly enough, you can find the same protective property in soy lecithin. So, we're in the process of preassociating the NSAIDs with soy lecithin in a pill form. We've shown these formulations to be very protective against NSAID-induced injuries in animals."

(Cont'd. on back)

UTMost Interest

Charles Edmonds is the new DMO in Diagnostic and Interventional Imaging...**Dr. Sudha**



Veeraraghavan recently spoke on "How Structure and Stability Influence the Function of TEA Domain Transcription Factors" in India.

MAKE WAY FOR THE NEW REPLACEMENT RESEARCH FACILITY



A photo enhancement of the Replacement Research Facility, view facing the northeast, at the corner of Fannin and John Freeman Blvd., courtesy of WHR Architects, Inc.

MEMBRANE BIOLOGY CONFERENCE AT RICE MARCH 7-9

Dean **Stanley Schultz**, nobel laureate **Dr. Ferid Murad**, health science center President **Dr. James T. Willerson**, **Dr. John Spudich**, and **Dr. William Dowhan** will be among the participants during the Fifth Annual DeLange Conference "Frontiers of Medicine: Society, Pharmacology and Membrane Biology in the Genomic Era," **March 7-9**, at Rice University. For more information, visit <<http://cohesion.rice.edu/centersandinst/gcc/delange/conferenceVspeakers.cfm>>. A Web cast will be available after the conference.



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LICHTENBERGER'S NSAIDS-SOY LINK, CONT'D.

COX-2 Inhibitors & Blood Pressure Elevation

The warning signs regarding the newest class of NSAIDs, the COX-2 inhibitors (selective cyclooxygenase-2 inhibitors) like Celebrex and Vioxx, have been around since 2000-2001, Lichtenberger said.

In a recent study involving 45,451 participants, (see article at <<http://www.sciencedaily.com/releases/2005/02/050218132538.htm>>), analysts found that COX-2 inhibitors are linked with elevated blood pressure, which raises increased cardiovascular risk concern. The FDA is currently evaluating the status of this class of drugs.

Clinical Trials Begin

Lichtenberger says that when he and his colleagues first started developing their product, it was criticized primarily because it wasn't a COX-2 inhibitor. "It seemed like every major pharmaceutical house was developing a member of the family of these drugs," Lichtenberger said. "What we're doing is quite different. We prevent the topical injurious actions of these drugs from happening in the first place."

Lichtenberger says his product doesn't interfere with the same vascular functions that are affected by the COX-2 inhibitors and is able to protect the patient at the same time.

"Right now, we're in the middle of human clinical trials that began at five different sites, starting in January of 2005," Lichtenberger said. "Our osteoarthritic patients will be taking our drug or Motrin and then will be studied over the next six weeks."

Lichtenberger related that patients will be endoscoped both at the beginning and at the end of the study, to look at the possibility of GI ulcers, and that their arthritic level will be scored.

"This is to find out if our drug is better, or worse, than the other medication. We are also doing bioequivalent trials to show that the drug we're developing – ibuprofen-PC – has the same bioavailability, or blood levels, to Motrin or ibuprofen, when taken orally by healthy human subjects."

Lichtenberger also indicated that patients' blood samples will be taken, liver enzymes tested, and kidney functions evaluated.

Working Partnerships

Lichtenberger is proud of the evolution of Grassroots Pharmaceuticals, now called PLx Pharma.

"This whole work is being done in a kind of cooperative relationship between the University, my lab, and PLx Pharma. I'm one of the partners and founders of the company and the health science center has equity in the company," he said.

"The whole point of PLx Pharma is to develop phospholipid-based drugs that will lessen the toxicity of other medications out there," Lichtenberger said. A phospholipid, found in all cell membranes, is a lipid composed of glycerol, bonded to two fatty acids and a phosphate group.

"In the future, we plan to look at other combination products besides the NSAIDs. We have a contract with at least one other pharmaceutical house right now," he said.

Also, the U.S. Army is interested in Lichtenberger's product in relation to lessening the pain associated with spinal cord injuries. "Our drugs seem to be very effective in that regard in pre-clinical studies. We hope to ultimately bring the results of this particular effort to the patients at TIRR (The Institute for Rehabilitation and Research)." - C. O'Brien

LOOKING FOR A FEW GOOD BOOKS

Dr. Henry Strobel, Biochemistry and Molecular Biology, appreciates any donations of textbooks, new or old, and especially those that have been written or edited by UT faculty, as he and a group of fourth-year medical students make plans to travel in April to Beijing, China, for a month of international medicine.

The drop-off point is a donation box in Student Affairs, MSB G.400. Or call **Mary Theresa Vu**, 713-383-9301, for a pickup.

"IS AUTONOMY POSSIBLE?" RESEARCH ETHICS LECTURE MARCH 30

The Office of Research Support Committees is presenting the third in a series of "Distinguished Lectures in Research Ethics," noon, **March 30**, MSB 3.001.

Carl Schneider, J.D. is the lecturer. He is the Chauncey Stillman Professor for Ethics, Morality, and the Practice of Law at the University of Michigan.

For more information, contact **Claudette Ocampo** at 713-500-5855.

ERC-SPONSORED GO TEXAN DAY A SUCCESS

The Medical School's Employee Relations Committee dished out both frito pies and awards in the Best Dressed Cowboy and Cowgirl contest Fri., Feb. 25.



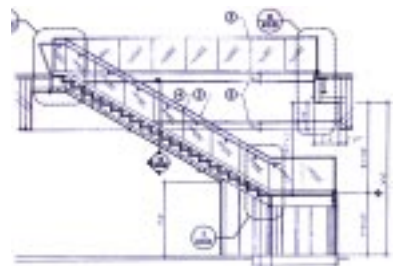
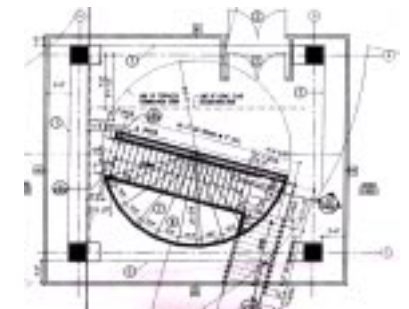
ERC President Sheila Donnell, center, congratulates the winners of the best-dressed cowboy and cowgirl contest, Dr. Anthony Wright and Estella Alvarez.

TEMPORARY PLYWOOD WALL SURROUNDS STAIRWELL CUT

The temporary plywood wall ("containment room") seen in the Medical School's ground floor Leather Lounge is part of a project to build a new grand staircase leading to the basement.

The stairwell is projected to be ready for use by the end of May and will access new classrooms and other offices being built out in the basement.

Access to MSB G.100, and the UT Bookstore will not be affected. The Webber Plaza entrance will remain open during this construction.



The architectural drawings above indicate the "containment room" around the stairwell, and the stairwell itself.