

# ACLEINS

The newsletter of the School of Pharmacy's Office of Research

Volume 3, Issue 4

October 2007

From Good to **Great:** TTUSHC consultation pg 2

Names in the News: pg 2, 3, 4

**Faculty Receives** Recognition: Dr. Lyte pg 3

Research Dav's Gets Rave Reviews pg 3

**Faculty Chairs** Session at National Meeting: Dr Moridani pg 3

**Graduate Pro**gram Welcomes **New Students:** pg

Seminars: pg 4

New Research **Building:** Groundbreaking ceremony pg 4

**CATALYST** Seminar Series to Being: pg 5

**Publication:** pg 5, 6

Research Day's Collage: pg 7

## **Sixth Annual Research Days**

The Sixth Annual Research Days, sponsored by the Office of Research, was held August 2-3 in Amarillo. All four campuses were represented by students and faculty, which made this year a huge success. With more than 150 attendees, 49 shown posters, a world renowned keynote speaker, and faculty podium presentations collaboration. friendship and fun were abound. The event opened with a luncheon and a warm welcome from Associate Dean for Research. Dr. Thomas Thekkumkara. After lunch, Group One poster presentations began with Drs. Thomas Abbruscato, David Fike, Krystal Haase, and US Rao serving as the 2007 poster judging panel.

Keynote speaker, Dr. Ken Miller, Senior Vice President of the American Association of Colleges of Pharmacy, lectured on the possibilities of the SOP's educational and research programs. He also spoke of what paths would be better to get there successfully. That evening, attendees then met at the Party Barn for a social hour, dinner, and discussion.



From Left: Dr. Ken Miller, Dr. Cynthia Raehl, Dean Arthur Nelson, Dr. Thomas Thekkumkara

The highlight of the second day was the four faculty presentations. Podium Presentations began with Ming-Hai Wang, Ph.D. presentation "Potential Therapeutical Antibodies for Targeted Therapy of Cancers Overexpressing Human RON Receptor Tyrosine Kinase." After Dr. Wang, Richard Leff, Pharm.D. presented "Inositol for the Prevention of Retinopathy of Prematurity: Analyses of Inositol and Isomers," followed by Eugene Shek, Ph.D. "Alteration of Leptin Receptor Expression and Signal

(continues on page 2)

## **President Baldwin Visits TTUHSC-SOP**



TTUHSC President Dr. Amarillo campus Thursday, September 6, 2007. Although it was a short visit, the Department Chairs. Associate/ dent representatives got a chance to talk to President Baldwin. During

his tour of the facilities, he supported the

research efforts put forth by the School of John Baldwin visited the Pharmacy and his hopes to continue to expand and improve the program. Dr. Baldwin joins the TTUHSC family as the seventh President after serving at Harvard University as a Professor of Surgery and President of the Immune Disease Institute. The Office of Assistant Deans, and stu-Research would like to extended our gratitude to Dr. Baldwin for his dedication to research and we are excited to have his support. ■

#### NAMES IN THE **NEWS**



Dr. Paul Lockman. Assistant Professor, was awarded the 2007 AACP Innovations and Teaching award during the 2007 American Association of Colleges of Pharmacy Annual Meeting and Seminars. The event took place July 13-18 in Orlando, Florida (continued from page 1)

ing in Overweight Aged Rat Kidneys: New Paradigm of Age-related Hypertension" And Eric MacLaughlin, Pharm.D. "Tips from the Trenches: Performing Research in a Clinical Practice Environment." Group Two poster presentations took place that afternoon followed by a demonstration of the new VCS system.

At the closing ceremony, the Office of Research recognized the participants in the Amarillo Biomedical Research Internship as well as the Research Advisory Committee and the poster judges. The GSBS also took the opportunity to acknowledged their two graduating students Chaitanya Chimalakonda and Jennifer Paulson. Also revealed at the closing ceremony were the poster winners which included: 3rd Place Poster: Bhakti Naik "The biochemical metabolism and toxicity of CAPE (caffeic acid phenethyl ester) in SK-MEL-28 melanoma cells" (mentored by Majid Moridani. Ph.D.) 2nd Place Poster:



From left: Dr. James Stoll, Dr. Ulrich Bickel, and Dr. Karen Borges at the Reception Dinner.

Katie Bennett "Expression and peptide purification of two novel transporters, BOCT1 and BOCT2" (mentored by James Stoll, Ph.D.), 1st Place Poster: Nikhil Vad "The Biochemical Mechanism of Acetaminophen Induced Toxicity in Human SK-MEL-28 Melanoma Cell Line" (mentored by Majid Moridani, Ph.D.).

The Office of Research would like to thank everyone for all their hard work and efforts to make the Sixth Annual Research Days such a enjoyable experience.

For more pictures of the event, see page 7.

## From Good to Great

Several Pharmacy Practice and Pharmaceutical Sciences faculty met in Dallas July 31 to discuss future plans for the SOP research. The objectives for the meeting included of defining a future institutional relationship between University of Texas Southwestern Medical Center in Dallas and TTUHSC School of Pharmacy, recommendations to



Dr Barry Carter, Dr. Ken Miller, Dean Arthur Nelson, Dr. Bob Blouin

increase recruiting and retaining basic and clinical/translational scientists and building steps for a successful Pharm.D./Ph.D. program.

Faculty had the opportunity to met with consultants Ken Miller, Ph.D., Robert Blouin, Pharm.D., and Barry Carter, Pharm.D. Dr. Blouin is currently Dean at the University of North Carolina and has chaired the AACP Task Force on educating clinical scientists. Dr. Carter, who's research is focused in clinical pharmacist physician collaborative studies, is a Professor of Pharmacy and Family Medicine at the University of Iowa and is one of the nation's foremost ambulatory care clinical pharmacists. Dr. Miller is Senior Vice President of the American Association of Colleges of Pharmacy and academic pharmacy liaison to the NIH.

(continues on page 5)

## **Faculty Receives Recognition**



been invited to the Institute for Food Research and the Jon Innes Center in Norwich, England this October to lecture on Microbial Endocrinology in

the Gut: Where Bacteria, Nerves and Food Interact in Disease and Homeostasis

Dr. Lyte recently co-convened the 107th Annual Meeting of the American Society of Microbiology's session on "Microbioal Endocrinology: Neuroendocrine-Bacterial In-

Dr. Mark Lyte, Professor teractions in the Pathogenesis of Infectious of Pharmacy Practice, has Disease." The meeting was held in Toronto, making it the first time in the history of the ASM that the annual meeting was not held in the United States.

> Dr. Lyte also obtained a book contract for his interdisciplinary research titled "Microbial Endocrinology: Inter-kingdom Signaling in Health and Disease." In addition, he has been appointed as an adjunct Full Professor to the departments of Biology, Animal & Food Sciences, and the graduate school at Texas Tech University.

#### NAMES IN THE **NEWS**



Dr. Eugene Shek. Assistant Professor, will be presenting "Impaired Leptin-induced Diuresis and Natriuresis with Age is Mediated by the Attenuated Expression of Renal Leptin Receptor and P13-K Signaling" at the American Heart Association's '61st Annual Council for High **Blood Pressure** Research Conference, 2007. The event will be held September 26-29, 2007 in Tucson, Arizona. Dr. Shek's research is funded by the SOP Research Initiative Award.

## **Research Days Receives Rave Reviews!**

The Office of Research recently sent out a survey to all Research Days' attendees to evaluate their satisfaction and obtain suggestions for next year's event. Attendees were ninety-one percent satisfied with the overall event. In addition, 100 percent of the faculty and students who traveled to Amarillo were very pleased with their travel accommodations. Those who took the survey expressed approval for the schedule and the set-up of the events. The only areas of

concern were the poster competition and the time of the year Research Days is held. Several people were concern about the amount of time allotted to each poster.

The Office of Research will revisit these issues to make sure that next year's event will be at a convenient time for most of our faculty and ensure enough time for all poster presenters. We would like to thank all participants for their input and time.

## **Faculty Chairs Session at National Meeting**

Dr. Majid Moridani, Assistant Professor, organized, chaired and presented at the American Association of Clinical Chemistry's "Application of Pharmacogenetics in Clinical Medicine." The



event took placeon July 15-19 in San Diego, California. The objectives of the session included concepts and practical aspects of

developing personalized treatment using pharmacogenetics information to diminish toxicity and increase therapeutic outcome in drug therapy.

The event accommodated nearly 19,000 clinical laboratory professionals, physicians, making it the world's largest laboratory conference and research scientists. Each of the attendees were involved with clinical chemistry and related disciplines.

#### NAMES IN THE NEWS



Dr. Quentin Smith was an invited speaker to the 10th Annual Symposium on Signal Transduction in the Blood-Brain Barriers. The conference was held September 13-16 at the Postdam-Sanssouci near Berlin, Germany. Dr. Smith presented "Blood-Brain barrier drug transport and regulation."

## **Graduate Program Welcomes New Students**

The Graduate Program in Pharmaceutical Sciences (GPPS) recently admitted seven new Ph.D. students for the fall semester, which increases the programs to total of 36 graduate students. I would like to extend a warm welcome to all the new students; Joseph Bass, Prabodh Kandala, Siva Koganti, Sashi Kudugunti, Kaushik Shah, Samata Tiwara, and Sarah Willis.

Fall is also the time when many of our GPPS graduate students will be presenting their research at two of the major national meetings. This year both the Society for Neuroscience and the American Association of Pharmaceutical Scientists meetings will be held in San Diego and the School of Pharmacy will have 16 GPPS graduate students presenting their research work at these national meetings.

I would also like to encourage everyone to attend the weekly Pharmaceutical Sciences Research Seminars (Mondays from 11:30-12:30 PM in Room 107) where our graduate students will present the latest findings from their research projects done here at the School of Pharmacy.

We are very proud of all the hard work and productivity from our graduate students, who contribute immensely to the strong research environment at the School of Phar-



macy. They are an integral component to the research mission of our school.

Tom Abbruscato, Ph.D. Associate Professor and Graduate Program Advisor Pharmaceutical Sciences

### **Seminars**

Satya Goda Graduate Student/Research Assistant. Monday, August 27, 2007. SOP Room 107. "Blood-Brain Barrier Permeability And Transport Of Bumetanide."

Vamshi Manda, Graduate Student/Research Assistant. Monday, September 17, 2007. SOP Room 107. "Nicotine and Cotinine In-

creases BBB Permeability of Saquinavir."

Rajendar Mittapalli, Graduate Student/ Research Assistant. Monday, September 24, 2007. SOP Room 107. "Permeability Measurements at the Blood-Brain and Blood-Tumor Barrier Using Different Molecular Weight Fluorescent Markers."

## **New Research Building**

After years of planning, the TTUHSC Amarillo campus celebrated the new Research Building with a ground breaking ceremony. The ceremony was held August 23 at the cite of the new building.

TTUHSC faculty and staff welcomed the general public to the celebration. Attendees had the chance to hear future plans for School of Pharmacy and School of Medi-

cine research and what kind of role the new building will have for it.

The Research Building will be located southeast of the School of Medicine and will house several new laboratories and offices. The new 48,000 square-foot structure is scheduled to be completed by October 2008.

## **CATALYST Seminar Series to Being**

new seminar series titled, CATALYST. The series will employ a forum in which the tend. presentations will be discussed openly and informally and question and answer sessions will be encouraged.

SOP faculty will prepare an overview of ongoing research in their laboratory. The goal of this series is for the presenter to obtain input from peers on the ongoing research and new grant proposals, as well as to develop inter-laboratory collaborations

The Office of Research will be sponsoring a All faculty, residents, graduate students and post-doctorial researchers are invited to at-

> The CATALYST seminars will begin at 5:30p.m. and be followed by dinner starting 6:30p.m. Attendance will be voluntary. If you are interested in participating, please contact Ms. Logan LaRue (356-4000 x 326 OR logan.larue@ttuhsc.edu). An e-mail will be sent out with the date of the first presentation soon.

#### (continued from page 2)

During the full day of open discussion, both departments and each of the research centers shared their progress and plans. Each of the consultants also shared informative ideas to better connect the two departments.

On the following day, all the attendees convened at the University of Texas Southwestern Medical Center (UTSWMC) to met with Dr. Milton Packer, Director of Clinical Research to discuss long-term scientific collaboration between TTUSHC SOP and UTSWMC. Dr. Packer gave an overview of

his institutions portfolio and Clinical and Translational Science Award; he then covered areas that he thought would be ideal for TTUHSC-SOP and UTSWMC to collaborate. Consultants offered advice on how to make a smooth transaction. We are currently waiting for the consultants report.

With the input from our faculty, the consultants, and Dr. Packer, the School of Pharmacy hopes to developed a vision for future research and use the tools obtained to have a successful follow through.

### **Publications**

Brosche T, Brueckmann M, Haase KK, Sieber C, Bertsch T. Decreased plasmalogen concentration as a surrogate marker of oxidative stress in patients presenting with acute coronary syndromes or supraventricular tachycardias. Clin Chem Lab Med. 2007;45(5):689-91.

Arumugam TV, Tang SC, Lathia JD, Cheng A, Mughal MR, Chigurupati S, Magnus T, Chan SL, Jo DG, Ouyang X, Vortmeyer A, Fairlie DP, Granger DN, Basta M, Mattson MP. High-Dose Intravenous Immunoglubin (IVIG) Ameliorates Middle Cerebral Artery Occlusion and Reperfusion- Induced Brain Injury. Proc Natl Acad Sci U S A. 2007 Aug 28;104(35):14104-9.

Tang SC, **Arumugam TV**, Xu X, Cheng A, Mughal MR, Jo DG, Lathia JD, Siler DS, Chi-

gurupati S, Ouyang X, Magnus T, Camandola S, Mattson MP. Pivotal Role for Neuronal Toll-Like Receptors in Ischemic Brain Injury and Functional Deficits. Proc Natl Acad Sci U S A. 2007 Aug 21;104(34):13798-803.

Freestone, P.P., Haigh, R.D. and Lyte, M. Blockade of catecholamine-induced growth by adrenergic and dopaminergic antagonists in Escherichia coli O157:H7, Salmonella enterica, and Yersinia enterocolitica. BMC Microbiology, 7:8, 2007.

Treadway AK, Craddock D, Leff R. Practices of pharmacies that compound extemporaneous formulations. Am J Health Syst Pharm. 2007 Jul 1;64(13):1403-9.

#### **ABRI Students**

The Amarillo Biomedical Research Interns finished their 10 week program at the Sixth Annual Research Days. At the closing ceremony, all of the interns were recognized for their participation. Jennifer Markley. who was mentored by Dr. Margaret Weis, received first place for her poster presentation. Afterwards, each of the students stated how much they enjoyed this opportunity to work in a research setting and all were grateful for chance to see what a career in Biomedical Research is really like. The Office of Research would like to thank participating faculty for all of their hard work and dedication.

#### **Publications**

Bai S, Yang T, **Abbruscato TJ**, **Ahsan F**. Evaluation of human nasal RPMI 2650 cells grown at an air-liquid interface as a model for nasal drug transport studies. J Pharm Sci. 2007 Jul 12.

Gaasch JA, **Lockman PR**, Geldenhuys WJ, Allen DD, Van der Schyf CJ. Brain iron toxicity: differential responses of astrocytes, neurons, and endothelial cells. Neurochem Res. 2007 Jul;32(7):1196-208.

**Mehvar R**, Elliott K, Parasrampuria R, Eradiri O. Stereospecific high-performance liquid chromatographic analysis of tramadol and its O-demethylated (M1) and N,O-demethylated (M5) metabolites in human plasma. J Chromatogr B Analyt Technol Biomed Life Sci. 2007 Jun 1;852 (1-2):152-9.

Velu CS, Niture SK, Doneanu CE, Pattabiraman N, **Srivenugopal KS**. Human p53 is inhibited by glutathionylation of cysteines present in the proximal DNA-binding domain during oxidative stress. Biochemistry. 2007 Jul 3;46(26):7765-80.

Okun E\*, **Arumugam TV\***, Tang SC, Gleichmann M, Albeck M, Sredni B, Mattson MP. The organotellurium compound ammonium trichloro(dioxoethylene-0,0') tellurate enhances neuronal survival and improves functional outcome in an ischemic stroke model in mice. J Neurochem. 2007 Aug; 102(4):1232-41.

Magnus T, Coksaygan T, Korn T, Xue H, **Arumugam TV**, Mughal MR, Eckley DM, Tang SC, DeTolla L, Rao MS, Cassiani-Ingoni R, Mattson MP. Evidence that nucleo-

cytoplasmic Olig2 translocation mediates brain injury-induced differentiation of glial precursors to astrocytes. J Neurosci Res. 2007 Aug 1;85(10):2126-37.

Burgess DS, **Hall RG**. Simulated comparison of ciprofloxacin and levofloxacin pharmacodynamics against *Pseudomonas aeruginosa* using healthy volunteer pharmacokinetic and 2002 minimum inhibitory concentration (MIC) data. Clin Ther 2007;29(7):1421-7.

**Edwards KL**, **Hall RG**, Ceja ME. Gatifloxacin-induced hyperglycemia: Report of four cases and a review of the literature. J Pharm Practice 2007;20(1):93-102.

Maclayton DO & **Hall RG**. Pharmacologic options for the treatment of methicillin-resistant *Staphylococcus aureus* (MRSA) nosocomial pneumonia. Ann Pharmacother 2007;41:235-44.

Goehler, L.E., **Lyte, M.,** and Gaykema, R.P. Infection-induced viscerosensory signals from the gut enhance anxiety: Implications for psychoneuroimmunology. Brain, Behavior and Immunity, 21:721-6, 2007.

Freestone, P.P., Haigh, R.D., and **Lyte, M**. Specificity of catecholamine-induced growth in *Escherichia coli* O157:H7, *Salmonella enterica*, and *Yersinia enterocolitica*. FEMS Microbiology Letters, 269:221-228, 2007.

Schmidt, L.D., Xie, Y., **Lyte, M**., Vulchanova, L. and Brown, D.R. Autonomic neurotransmitters modulate immunoglobulin A secretion in porcine colonic mucosa. Journal of Neuroimmunology, 185:20-28, 2007.

#### October 2007

#### Nucleus

A quarterly newsletter is published by the School of Pharmacy's Office of Research

To include information in the next edition of this newsletter, please submit materials to the Office of Research OR fax 806.356.4643 by 5 p.m. on Friday, December 14, 2007. Nucleus The newsletter of the School of Pharmacy's Office of Research

ASSOCIATE DEAN FOR RESEARCH Thomas Thekkumkara, Ph.D. 806-356-4028 Thomas.Thekkumkara@ttuhsc.edu

ADMINISTRATOR Logan LaRue, BBA 806-356-4000, ext. 326 Logan.LaRue@ttuhsc.edu

COORDINATOR Marty Stephens 806-356-4000, ext. 284 Marty.Stephens@ttuhsc.edu

#### Nucleus

Office of Research 1300 S. Coulter Amarillo, Texas 79106



For an electronic version of this newsletter, visit: http://www.ttuhsc.edu/sop/research/news.aspx

The Sixth Annual Research Days







## Keynote Speaker, Ken Miller, Ph..D. Senior Vice President of the American Association of Colleges of Pharmacy









## The Awards Ceremony





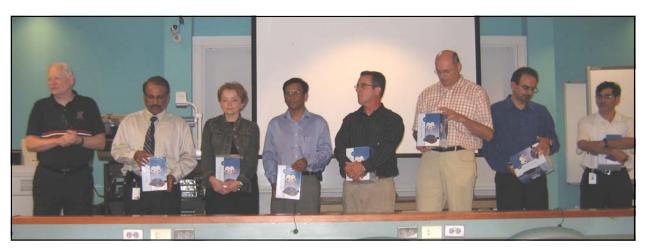
This years first place poster award went to Nikhil Vad and his mentor, Majid Moridani, Ph.D.



This year's ABRI poster award winner, Jennifer Markley receives her certificate from Dr. Thekkumkara.



The GSAA recognized it's two graduating student. Jennifer Paulson received her Ph.D. and is entering the Pharm.D. program. Chaitanya Chimalakonda received his Masters.



Dean Nelson hands out awards to those faculties that made this years AACP ranking possible: Thomas Thekkumkara, Ph.D., Margaret Weis, Ph.D., Fakhrul Ahsan, Ph.D., Thomas Abbruscato, Ph.D., Ulrich Bickel, M.D., Reza Mehvar, Ph.D., US Rao, Ph.D.