Nucleus

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SPECIAL POINTS OF INTEREST:

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Dr. Bond Keynote Speaker in Scotland

Dr. C.A. (CAB) Bond, Pharm.D, F.A.S.H.P., F.C.C.P. presented a widely-praised keynote address to the GHP/UKCPA Joint Conference in Glasgow, Scotland in April.

The GHP, Guild of Healthcare Pharmacists, is a national organization for pharmacists in Great Britain. This year, the GHP joined with another professional association serving healthcare professionals in the United Kingdom, the UKCPA, to host their first annual conference, Pharmacy Fusion. The UKCPA (United Kingdom Clinical Pharmacy Association), encourages the emergence of clinical pharmacy. Dr. Bond's extensive publications in this area attracted the attention of the conference planners, and he was invited as their keynote speaker. And their interest in clinical pharmacy is significant. With a national healthcare system in the UK, clinical pharmacy is evolving in exciting, different ways. While pharmacists in the UK do serve their clients clinically in some small community pharmacy settings, the applications of clinical expertise on the part of pharmacists in the UK's institutionalized healthcare system have likely lagged behind our practices in the US. As a result, Dr. Bond's audience was extremely receptive and especially interested in his topic: "Which clinical pharmacy services should be provided and who should provide them?"

As part of his presentation, Dr. Bond examined the value of pharmacists and the impact they can have on the healthcare system. He identified specific pharmacy services that are likely to have the greatest impact on healthcare outcomes. He also discussed how pharmacists can be ideal resources to patients for drug management of certain, specific drugs, in particular. Dr. Bond presented the findings of a survey of pharmacies. He's currently working on a new publication, which goes into greater detail with specific drug information.

The members of the GHP and UKCPA will eagerly be awaiting Dr. Bond's future work. His presentation at the joint conference was the highest-ranked talk of the event. Reviewers provided comments like: "inspirational work," "great insight and ideas for research," "has given me excellent evidence of pharmacists' value to present to my trust," "we need this done in the UK," and "very encouraging to show our worth." His

speech-making skills were commended, as he "presented a difficult topic well" and provided "informative, great data."

Clearly, Dr. Bond's address was a big hit. Perhaps even outshining the other hit he used to begin his presentation: the #1 song in the UK, for the 7th week in a row: "Amarillo," written by Neil Sedaka and recorded by Tony Christie. "Amarillo" is the longest-running #1 single of the millennium in the UK, tied with the Black Eyed Peas' "Where is the Love" and Cher's 1998 hit "Believe." All of the other #1 songs for 2005 have only spent one week at the top, but 'Amarillo" is around to stay.

And thanks to Amarillo's own Dr. Bond, the UK enjoyed yet another enduring hit, with his clinical pharmacy keynote speech.

Dr. Youan Receives Grant

"Dr. Youan and his team will test the hypothesis that intracerebral injection of phenytoin containing biocompatible microparticles is safe and effective for long-term treatment of epilepsy."

Celestin Youan, Ph.D.

Celestin Youan, Ph.D., recently received a grant from The Epilepsy Project for $130,000 for 2 years. Dr. Youan will serve as the PI, Karin Borges (starting at TTUHSC September 1; *please see page 3 of this newsletter for a feature on Dr. Borges*) will serve as the co-investigator, and Dr. Klein will act as a consultant on the microdialysis technique they plan to use.

At least 50 million people worldwide suffer from epilepsy. Despite the development of many different drugs, about 30% of epileptic patients suffer from uncontrolled seizures or pharmacoresistant epilepsy. Only about 60% of the pharmacoresistant epilepsies respond to surgical removal of the seizure focus, a radical procedure, which can lead to language and memory problems. Anticonvulsant or antiepileptic drugs (AED) are typically administered multiple times daily; the dosage and frequency of administration are determined by the pharmacokinetic characteristics of the drugs and their systemic side effects. Taking these facts together, better and improved epilepsy treatments, which are effective in pharmacoresistant epilepsy and represent an alternative or an addition to surgery, are urgently needed.

A microparticulate AED delivery system directly targeting the epileptic region in the brain would offer enormous advantages including: (i) controlled drug release for long-term therapeutic effect, based on the versatile properties of the drug carrier polymer to be selected, (ii) bypassing the multidrug resistant drug transporters of brain endothelial cells, which limit the therapeutic drug concentrations in the brain, (iii) implantation after surgery to increase surgical success, (iv) production of higher AED concentrations, compared with oral and systemic delivery, without reaching "toxic" plasma levels leading to side effects and minimizing drug interactions (related to CYP2 liver metabolism and protein binding), (v) relatively higher adaptability of the treatment to the surgical act (area covered by drug) compared with monolithic implants. Moreover, the biocompatible and biodegradable nature of the carrier polymer would not necessitate the surgical removal of the drug delivery system after complete drug release and would not alter the normal brain physiology.

In this study, Dr. Youan and his team will test the hypothesis that intracerebral injection of phenytoin containing biocompatible microparticles is safe and effective for long-term treatment of epilepsy. To demonstrate this, they will encapsulate phenytoin as a model AED. Phenytoin is good model drug because it i) is an effective anticonvulsant, ii) is used for monotherapy of partial seizures, and iii) can have serious side effects that necessitate very close pharmacological monitoring during administration.

Congratulations, Dr. Youan!

Dr. Van der Schyf: FARMOVS Prize-Winner

This year, **Neels Van der Schyf, B.Pharm., D.Sc.** received the South African Academy of Sciences and Arts' FARMOVS Prize in Pharmacology and Drug Development.

The FARMOVS Prize is South Africa's highest award for pharmacology and drug development research. Dr. Van der Schyf was presented with the award on June 24 in Pretoria, South Africa.

The TTUHSC SOP is proud that Dr. Van der Schyf well represented our School when he was recognized with this prestigious award.

Dr. Busti Receives Award

Anthony Busti, Pharm.D., BCPS, was selected to receive the 2005 Outstanding Pharmacist HIV Leadership Award from *The Body,* a service of Body Health Resources Corporation in New York City. In addition to his responsibilities at the TTUHSC SOP in Dallas, Dr. Busti is a clinical pharmacist specialist in Internal Medicine at the Dallas VA Medical Center. He was selected for this leadership award because of his research efforts and the direct patient care he provides to patients with HIV.

Our kudos go out to Dr. Busti for his achievements in research and patient care.

Other Names in the News: Students Recognized

Before leaving TTUHSC for his new job in Connecticut, **Prasad Chimalakonda, Ph.D.**, served the University in one last role: as the TTUHSC Graduate School of Biomedical Sciences (GSBS) Seal Standard Bearer at the Convocation and Graduation ceremonies May 20-21.

Prasad was recognized and honored this year as the 2005 Student of the Year by the GSBS. He was selected from among the nominees from the other ten graduate programs at TTUHSC, a huge honor for the SOP.

Katie Bennett, first year Ph.D. candidate, has been awarded a 2005 ARCS Scholarship for $5,000.

The ARCS (Achievement Rewards for College Scientists) Foundation is a national volunteer women's organization that provides scholarships in natural sciences, medicine and engineering to outstanding United States citizens. Recipients of the ARCS Scholarships are recommended by their departments and have demonstrated excellence in their scientific studies. Congratulations, Katie!

New Faculty Researchers

Karin Borges, Ph.D. has joined the Department of Pharmaceutical Sciences in Amarillo. Dr. Borges comes to us from Emory University in Atlanta, Georgia.

Dr. Borges' primary research focus is on understanding the pathological mechanisms that play a role in the development of epilepsy, including seizure generation, brain inflammation and neuronal cell death.

Epilepsy is a chronic and debilitating disorder that affects 50 million people worldwide. Although many epilepsy patients can be successfully treated with drugs or surgery, no treatments are known that prevent development of epilepsy (epileptogenesis) in those at risk. For example, up to 50% of people suffering severe head injuries develop epilepsy, and 25% of these epilepsies do not respond to anti-epileptic drugs. Thus, if one could interfere with epileptogenesis, treatments with anti-epileptic drugs would become unnecessary for some people.

Dr. Borges' main goal is to identify pathological processes and specific genes that are involved in epileptogenesis, which later might become drug targets. Currently, she is working on 2 main projects: 1) the role of astrocytes in the hippocampal circuitry and 2) the role of astrocytic CD44 expression in brain inflammatory processes. If astrocytes and/or CD44 are critical for inflammation and/or epileptogenesis, there is potential that they may be used as drug targets to prevent epilepsy or neurodegeneration in the future.

A third goal of Dr. Borges' is to provide better and improved epilepsy treatments, which represent alternatives to surgery. In collaboration with Dr. Youan (also in the Department of Pharmaceutical Sciences in Amarillo), she is developing microparticles containing anti-epileptic drugs. The goal is to inject these particles into the part of the brain involved in seizure generation in patients who do not respond to drugs. The particles are supposed to release anti-epileptic drugs for several months to years and will locally suppress seizure generation, thereby making surgery obsolete. *NOTE: Drs. Borges and Youan just received a grant for this 3rd project. Dr. Youan will serve as the PI.*

Paul Lockman, RN, Ph.D. joins the Pharmaceutical Sciences faculty in the Fall of 2005. He earned his B.S. in Nursing from West Texas A&M University in 1994. He practiced in intensive care, clinical toxicology and emergency medicine, then went on to earn his Ph.D. (Pharmaceutical Sciences) at TTUHSC SOP (Amarillo; 2003). Dr. Lockman completed his post-doctoral training through an extramurally-funded fellowship from the Philip Morris External Research Program.

Dr. Lockman's research interests include drug and nutrient transfer at the blood-brain barrier, as well as blood-brain barrier pathophysiology after chronic nicotine exposure and subarachnoid hemorrhage.

Mark Lyte, Ph.D., MS, MT (ASCP) began with the Pharmacy Practice Department on May 2. Based in Lubbock, Dr. Lyte is already at work, continuing his interdisciplinary, clinically-focused research program.

Dr. Lyte got his start in a clinical laboratory setting on the East Coast. In a 900-bed hospital, he worked in the clinical laboratory for 2 1/2 years in charge of both the evening and night shifts. This clinical experience gave him an appreciation for clinical applications that is not always the focus of many straightline Ph.D.s.

Dr. Lyte obtained his Clinical Lab Sciences degree and clinical board certification and then pursued graduate studies, first his Masters and then a Ph.D., from the Weizmann Institute of Science in Israel. During that time, he also

New Faculty Researchers (continued from page 3)

worked at NIH and at the Pathology Institute in Austria. He completed his first post doctoral project in immunotoxicology at the Medical College of Virginia before completing a second post doctoral experience in immunopathology at the University of Pittsburgh School of Medicine. During this second post doctorate, he began to focus on the effects of stress on health. Dr. Lyte is one of the founding members of the PsychoNeuroImmunology Research Society, an international organization for researchers, from a number of medical disciplines, who are interested in interactions between the nervous system and the immune system and the relationship between behavior and health.

Dr. Lyte began his career in academia at the University of Wisconsin, Milwaukee, in clinical lab sciences. Of significant influence were his 8 years working at the Minneapolis Medical Research Foundation, where he conducted clinical translational research in his position with the Department of Surgery and where he served as the director of surgical research. At a joint meeting in Madrid, he received the European and North American Surgical Infectious Society's award for the most outstanding surgical research. His work illuminated that the drugs administered to support heart functioning actually signal to naturally-occurring bacteria on skin to colonize and attach to catheters, central lines, synthetic hips, etc., causing infection and disease, a problem that has long been recognized but not adequately explained. This discovery was published a couple of years ago in *Lancet.*

Dr. Lyte's primary research focus is on understanding the interface between the microbial world and human health with a special emphasis on such interactions that affect the aging population. His work has led to hypotheses positing that stress hormones are present not only in mammals but also in foods and bacteria. One of Dr. Lyte's NIH grants supports his investigation of how stress affects infectious disease. The link may not be the immune system but rather the interaction between stress hormones and bacteria. Stress hormones may function as

ghost signals, prompting bacteria to begin infections. Another of Dr. Lyte's NIH grants is funding his exploration of whether or not simply changing the bacteria present in the gut affects behavior. This work has led to the first demonstration that bacteria in the gut can actually induce anxiety-like symptoms even when there is no obvious indication that the animal is sick.

Dr. Lyte's research approach is very interdisciplinary, combining microbiology, neurobiology and immunology to look at infection and behavior. This type of research has always required successful collaborations with investigators with expertise in fields outside of traditional microbiology. Dr. Lyte hopes to establish collaborations with other investigators in other departments at TTUHSC and TTU such as those already established with the Texas Tech Institute for Healthy Aging. Dr. Lyte's application of his research findings to the clinical setting is something which sets his research program apart.

Amarillo Biomedical Research Internships Begin

The ABRI program began on May 23, welcoming 9 interns to the TTUHSC SOP (8 in Amarillo, and 1 in Dallas). The interns completed all required safety training within the first few days and quickly began their lab work. Brief summaries of their projects follow.

Josh Evans & **Erika Wisdom,** Dr. Wang's lab: Josh and Erika are using RT-PCR techniques to clone complete cDNA encoding human serine/thereonine kinase EMK1 (Josh) and encoding human adaptor protein beta-arrestin1 (Erika). Projects they will be working on include: cell cultures, finding the EMK1 cDNA sequence, designing primers for RT-PCR, isolating RNA, restriction enzyme digestion, transformation, DNA subcloning into expression vectors, and transfection into cells for protein expression.

Kevin Green and **Amber Opdenhoff,** Dr. Stoll's lab: Dr. Stoll's lab is currently experimenting with low-affinity choline uptake to determine the role of the BOCT1 and BOCT2 transporters and also with high-affinity choline uptake to see the effects that estrogen has on the basal forebrain cholinergic neurons. With the help of Dr. Stoll and Katie Bennett, Kevin and Amber have conducted various experiments: such as western blots, mini-prepping, digesting, DNA gels, TEA uptakes, cell staining, and transformations.

Karl Kashfi, Dr. Putnam's lab (Dallas): Karl is developing new bioanalytical methodology for plasma analysis of 3,3-Diindoylmethane, based on high-performance liquid chromatography - tandem mass spectrometry.

Katrina Laursen, Dr. Smith's lab: Using high performance liquid chromatography, Katrina is testing a new kind of NSAID called TBN to determine how well the drug goes to the brain.

Bonnie Morrison, Dr. Weidanz' lab: Bonnie is using a europium/ligand kit to determine how many cells are killed by a process. The ligand exits a cell that has been killed and complexes with the europium. It involves TRF (time resolved fluoremtry).

Misty Rueda, Dr. Klein's lab: Misty is working on the characterization of two plant constituents with central actions: bilobalide from Ginkgo and hyperforin from St. John´s wort. Both compounds have recently been found in Dr. Klein's lab to have neuroprotective activities. Misty will conduct ligand-binding experiments with bilobalide to analyze its interaction with chloride channels. Time permitting, she will also perform ion flux experiments to investigate hyperforin´s

ABRI Internships Begin (continued from page 4)

effect on cellular calcium levels. Her results will help define the molecular mechanism of action of two promising drug candidates.

Andrew Stephens, Dr. Shek's lab: Leptin is a protein synthesized by the adipocytes. In Dr. Shek's lab, Andrew's main objective is to examine the effects of chronic leptin infusion on the regulation of food intake, body weight, blood pressure, and renal function in F344/BN rats. He will also help examine the possible role of the renal sympathetic nerve in mediating leptin-induced hypertension.

The interns will all present posters summarizing their work/findings during Research Days, so please look for them there!

Josh Erika Kevin Amber Karl Katrina Bonnie Misty Andrew

Residencies Completed

The TTUHSC SOP has a very active residency program and benefited greatly from the excellent work of the residents over the last year. The following individuals have now completed their residency programs with us and have moved on. What follows are brief descriptions of their history, accomplishments while here and future plans.

Jack Armstrong, Pharm.D. Before coming to TTUHSC, Jack received his BS in Biology from the University of Texas at Arlington. Once here, he devoted his time to the resident project "Drug Utilization Evaluation of Pegfilgrastim Use in a Large Academic Medial Center." He presented this work at ALCALDE in Austin, and he also plans to submit it to TSHP for publication. At the end of his residency at TTUHSC, he will be moving to Dallas. His new job will be in the ER at Children's Medical Center.

Morkisha Danielle Dobard, Pharm.D. Morkisha graduated with a Pharm.D. from Xavier University College of Pharmacy in 2003. She worked for Walgreens for 1 year and decided to pursue a residency program. She came to the VANTHCS to complete a one-year pharmacy practice residency, completed July 1, 2005. The program was general, so this offered Morkisha the opportunity to learn about a broad range of topics. She also was an assistant instructor for TTUHSC, which offered her the opportunity to precept pharmacy students. She enjoyed her rotations in primary care the most, especially the interactions with the patients, physicians and nurses in the clinic. Her research project focused on secondary prevention in patients with coronary heart disease, and she will continue her work on the manuscript for publication. Morkisha is currently searching for her new job. She is pursuing employment in Louisiana, where she will be closer to her family and friends. Morkisha will miss the preceptors who helped her obtain the valuable experience that will benefit her in her future career.

Justin Hooper, Pharm.D. Justin is a 2000 graduate of the UT College of Pharmacy. He is also a proud husband and new dad - his son, Brantley Jon, was born on September 2, 2004. Justin left his job as a hospital pharmacist in 2003 to pursue more training in clinical pharmacy and began a Pharmacy Practice Residency at the Dallas VA Medical Center, in conjunction with TTUHSC. After his first six months as a Pharmacy Practice resident, Justin applied for and became the first Pharmacotherapy Specialty Resident at the Dallas campus. During his residency, Justin had the opportunity to rotate through the internal medicine wards, intensive care units, and ambulatory care clinics at the Dallas VA. He also completed specialty rotations in nephrology, rheumatology, mental health, and hematology/oncology. He was able to complete specialty rotations in pediatrics and nutrition support at neighboring institutions as well. Throughout his residency, he staffed at Wal-Mart pharmacy, taught chemotherapy administration in-services for nursing staff at North Hills Hospital, and led psychotropic medication training classes for a foster care and adoption agency in Arlington. In addition, he performed and presented a quality improvement analysis of preoperative antibiotic administration for the Infection Control Committee at the Dallas VA. His residency research has been focused on the possible link between obesity and postoperative surgical site infection. Justin has also enjoyed working with pharmacy students as a preceptor and mentor in Case Studies II and III. With the help of TTUHSC faculty, he was fortunate to have letters published in two separate issues of *The Journal of the American Medical Association*. In addition, he is anticipating the publication of a review article entitled, "Effects of perioperative anti-inflammatory and immunomodulating therapy on surgical wound healing: A review" in the near future. Justin is happy to report that after taking a month off for vacation this summer, he will be staying on as faculty with Texas Tech SOP at the Dallas/Fort Worth campus. He will practice ambulatory care clinical pharmacy at the Fort Worth Outpatient Clinic, which is tied to the Dallas VA Medical Center.

Darego O. MacLayton, Pharm.D. Darego was the premier Infectious Diseases Pharmacy Resident at the TTUHSC SOP and at the Veterans Affairs North Texas Health Care System. He received his Doctor of Pharmacy degree in 2003 from Texas South-

Residencies Completed (continued from page 5)

ern University, Houston, Texas. Upon graduation, he completed his Pharmacy Practice Residency at Baptist Memorial Hospital, Memphis, Tennessee, where he conducted a case-control study on Hemodialysis patients with Methicillin Resistant *Staphylococcus aureus* bacteremia. The results of the study were presented at the 44th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), Washington, D.C in October 2004. Darego taught in a number of different settings, including didactic teaching in Drug Review, small group facilitation in Case Studies, and experiential teaching of both third and fourth year Pharm.D. candidates. He also had the opportunity to write a case that was utilized in the Case Studies course. The results of his research project entitled "Evaluating the effects of obesity on the clinical outcome of patients with Methicillin-sensitive *Staphylococcus aureus* Bacteremia" were presented as a poster at the 44th annual Texas Society of Health-System Pharmacist (TSHP) meeting in April 2005. Darego is a member of several professional organizations, including the American College of Clinical Pharmacy, American Society for Microbiology, Society of Infectious Disease Pharmacists and Kappa Psi Pharmaceutical Fraternity Inc. His interests include antimicrobial resistance, HIV/AIDS and Epidemiology. In August, he joins the College of Pharmacy & Health Sciences at his alma mater as an assistant professor of pharmacy practice, where he will engage in didactic teaching,, collaborative research/scholarship and service in the area of Infectious Diseases. He will also develop an experiential practice site in one of the College's affiliated institutions in the world-renowned Texas Medical Center.

Erik Maki, Pharm.D. Erik graduated with a Pharm.D. from the University of Iowa in 2003. He came to TTUHSC to complete a two-year pharmacotherapy residency under Krystal Haase, Pharm.D., which he finished July 1. His residency here was generalized, so he had the opportunity to learn about a broad range of topics. His research focused primarily on the prevention of thromboembolic events in hospitalized patients, and he recently published his first article on acute respiratory distress syndrome. In addition to his research, Erik also worked as a pharmacist for NWTHS and Walgreens, served as Chief Resident 2004-2005 for the Amarillo and Lubbock campuses, participated in case studies and Grand Rounds, precepted students for adult medicine and basic medical skills clerkships (including 3rd- and 4th-year students), lectured in pharmacotherapy/nutrition and to nurse practitioner students at WT, and served on the Pharmacy Therapeutics and Infection Control Committee at NWTHS. Erik also taught a half hour class at the Diabetes Center each month on diabetic medications, participated in the traveling conference "Taking Care of Your Diabetes," and served on the Diabetes Advisory Committee at NWTHS. Now that he's completed his residency, Erik is bound for his new job. In August, he will begin as an Assistant Professor in Pharmacy Practice at Drake University in Des Moines, Iowa. As part of his responsibilities to Drake, he'll also be providing clinical services at a county hospital, which primarily serves indigent patients. He'll be working in adult internal medicine at Broadlawns Medical Center. This move to Iowa takes him closer to his family, but he'll miss being at TTUHSC, where he enjoyed his work and received additional good experience to benefit his future career.

Michael Peeters, Pharm.D., BCPS. Mike graduated with his B.Sc.Pharm from University of Alberta (Canada) in 2000 and with a PharmD from the University of Washington in 2003. He attained BCPS certification during his residency in 2004. He worked at TTUHSC from 2003-2005, based in Lubbock as a Pharmacotherapy resident. While here, he enjoyed a variety of research experiences. Mike presented posters of his research at the 2004 and 2005 ALCALDE and TSHP conferences, our annual Research Days, and also presented a platform presentation at the 2004 ACCP annual meeting. His current and future publications include: "QT-analysis of three fluoroquinolones" (Tsikouris, Peeters, Cox, Meyerrose, Seifert) submitted to *Ann Noninvasive Electrocardiol*; "Antibiotic use in pseudomonal ventilator-associated pneumonia" (Peeters, Seifert) submitted to *Pharmacotherapy*; "Dosing of ACEi & ARBs" (Peeters, Tsikouris) *Ann Intern Med* 2005; 142:388. [letter]; "The clinical characteristics of Linezolid-resistant Staphylococcus aureus" (Peeters, Sarria) manuscript accepted by *Amer J Med Sci*; and "The effects of atazanavir by QT-analysis" (Busti, Tsikouris, Peeters, Das, Canham, Abdullah, Margolis) manuscript submitted to *AIDS*. Mike's teaching has included student clerkship precepting (P3's, P4's; Internal Medicine, Ambulatory Care (Oncology), Critical Care (SICU)), and various didactic lectures during the pharmacotherapy sequence. He also participated in multiple case studies courses throughout his time at TTUHSC. Mike's clinical rotations have been varied, with a predominance of acute/critical care areas. He will be beginning a position as an assistant professor of Pharmacy Practice (Internal Medicine) with the University of Toledo in Toledo, Ohio. He has very much enjoyed his experiences with TTUHSC and the fine faculty he has come to know. Mike looks forward to future interactions with TTUHSC faculty.

Chris Amaya, Luvy Amaya, Grace Chon, Tangela Johnson, Sunghyun Kim, Kari McCracken, Molly Mullin, and **Leticia Villela** also completed their residencies and have moved on to the next stages of their lives.

We wish all of the residents who contributed to the TTUHSC SOP the best of luck as they pursue their future careers and goals!

Faculty Publications (April-June 2005)

Ahsan F, Klein J. Microarray analysis and response of the lungs to inhaled insulin. *Diabetes Technol Ther*. 2005 Jun;7(3):525-7.

Geldenhuys WJ, Lockman PR, Nguyen TH, Van der Schyf CJ, Crooks PA, Dwoskin LP, **Allen DD.** 3D-QSAR study of bis-azaaromatic quaternary ammonium analogs at the blood-brain barrier choline transporter. *Bioorg. Med. Chem. 13, 4253-4261.*

Faculty Publications (continued from page 6)

Hussain A, Ahsan F. State of insulin self-association does not affect its absorption from the pulmonary route. *Eur J Pharm Sci.* 2005 Jun;25(2-3):289-98. Epub 2005 Apr 11.

Lockman PR, McAfee G, Geldenhuys WJ, Van der Schyf CJ, Abbruscato TJ, Allen DD. Brain Uptake Kinetics of Nicotine and Cotinine after Chronic Nicotine Exposure. *J Pharmacol Exp Ther*. 2005 Apr 21; [Epub ahead of print]

MacLaughlin EJ, Raehl CL, Treadway AK, Sterling TL, Zoller DP, **Bond CA**. Assessing medication adherence in the elderly: which tools to use in clinical practice? *Drugs Aging*. 2005;22:231-255.

Massicotte C, Knight K, **Van der Schyf CJ**, Jortner BS, Ehrich M. Effects of organophosphorus compounds on ATP production and mitochondrial integrity in cultured cells. *Neurotox. Res.* 7, 203-217.

Mdzinarishvili A, Geldenhuys WJ, Abbruscato TJ, Bickel U, Klein J, Van der Schyf CJ. NGP1-01, a lipophilic polycyclic cage amine, is neuroprotective in focal ischemia. Neurosci Lett. 2005 Jul 8;383(1-2):49-53. Epub 2005 Apr 13.

Moridani M. The significance of Pharmacogenomics in Pharmacy Education and Practice, *J Am Pharmac Edu*, 2005; 69(2): 249-250.

Seifert CF, Johnston BA. A nationwide survey of long-term care facilities to determine the characteristics of medication administration through enteral feeding catheters. *Nutrition in Clinical Practice* 2005;20:354-62.

Shah S, Vervan M. Use of i.v. immune globulin and occurrence of associated acute renal failure and thrombosis. *Am J Health Syst Pharm.* 2005;62:720-5.

Veronin MA. Medication Access Through the Internet: Legal and Safety Considerations for Pharmacists. *Hosp Pharm.* 2005 Apr; 40 (4): 331-335.

Vuppugalla R, Mehvar R. Enzyme-selective effects of nitric oxide on affinity and maximum velocity of various rat cytochromes P450. *Drug Metab Dispos.* 2005 Jun;33(6):829-36. Epub 2005 Mar 18.

Weidanz JA, Jacobson LM, Muehrer RJ, Djamali A, Hullett DA, Sprague J, Chiriva-Internati M, **Wittman V, Thekkumkara TJ**, Becker BN. ATR blockade reduces IFN-gamma production in lymphocytes in vivo and in vitro. *Kidney Int.* 2005 Jun;67(6):2134-42.

Weis MT, Brady M, Moore M, **Crumley J,** Stallone JN. Inhibiting Long-Chain Fatty Acyl CoA Synthetase Does Not Increase Agonist-Induced Release of Arachidonate Metabolites from Human Endothelial Cells. *J Vasc Res.* 2005 May 19;42(4):275-283 [Epub ahead of print]

Xu XM, Zhou YQ, Wang MH. Mechanisms of cytoplasmic beta-catenin accumulation and its involvement in tumorigenic activities-mediated by oncogenic splicing variant of the RON receptor tyrosine kinase. J *Biol Chem.* 2005 May 6; [Epub ahead of print]

Research Seminars

Every Monday during the school year, faculty and graduate students present research seminars. The Office of Research sponsors one of these monthly presentations, which is health-netted, and the other seminars are provided by the Pharmaceutical Sciences Department. Below is a summary of the seminars that took place in the last few months.

4/4/05-Lisa Popp, PhD, Professor & Chair, Department of Pharmacology & Neurosciences, TTUHSC, Lubbock. "PKC and Ethanol Modulation of Native NMDA Receptors: Similar Mechanisms of Action?"

4/11/05-Reid Norman, Ph.D., Professor & Chair, Department of Pharmacology & Neurosciences, TTUHSC, Lubbock. "Nutritional Signals to the Neural Circuits that Control Endocrine Function in Primates."

4/18/05-Haritha Mandula, Graduate Student, Department of Pharmaceutical Sciences. "Role of Specific Binding Sites on Drug Availability to Brain."

5/2/05-Katie Bennett, Graduate Student, Department of Pharmaceutical Sciences. "Estrogen Treatment and Immunoselection of Basal Forebrain Cholinergic Neurons."

5/2/05-Shuhua Bai, Graduate Student, Department of Pharmaceutical Sciences. "Dendrimer-LMWH Complex Enhances Pulmonary Absorption of Low Molecular Heparin (LMWH) and Prevents Deep Vein Thrombosis."

5/9/05-Jennifer Paulson, Graduate Student, Department of Pharmaceutical Sciences. "Ion Cotransporter Characteristics of the Blood-Brain Barrier during Stroke Conditions is Altered by Nicotine."

5/9/05-Jiukuan Hao, Graduate Student, Department of Pharmaceutical Sciences. "Simultaneous Measurement by Quantitative Autoradiography of Blood Flow and Receptor-mediated Brain Uptake in the Mouse MCAO Stroke Model."

Open Forum

The Office of Research and ad hoc Research Advisory Committee would like to seek opinions from all faculty on the issues that affect the overall research program at the School and/or individual faculty researchers. This new "Open Forum" column will be regularly featured in this quarterly newsletter. Please share your opinions with Melissa Lockman, Research Administrator, via email (melissa.lockman@ttuhsc.edu) or by phone (806-356-4000, 326).

- **Faculty Bridge Funding.** As our School matures, the need to provide funding to those researchers who are either in between extramural grants or who have not received continued fund-

Open Forum (continued from page 7)

ing becomes more essential. It's clear that for the School's research program to remain vital, faculty research programs cannot be suspended. Identifying where these sustaining bridge funds will come from, however, is not as clear. The ad hoc Research Advisory Committee has been charged with developing a bridge fund policy. They will be considering a re-formulation of the indirects and/or tapping into salary savings. They will be developing a formally-drafted bridge fund policy by August 1. Prior to that date, please share with Ms. Lockman your opinion and any other ideas you may have regarding the development of a new bridge fund program.

- **Upkeep of Equipment Maintenance Contracts.** The School has acquired expensive, valuable equipment that must be properly maintained. The maintenance contracts with equipment such as the LC-MS/MS are high-dollar. Ensuring that the costs of these contracts are covered from year to year is also a priority of the ad hoc Research Advisory Committee. Funding sources are difficult to identify. Again, if you have any feedback on this issue, please share with Ms. Lockman.
- **Research Infrastructure.** The faculty survey conducted by the Faculty Development Committee identified a perceived weakness among the faculty of the School's and the University's research infrastructure. As the Office of Research and ad hoc Research Advisory Committee attempt to address this concern and to strengthen the research programming, more specific information from the faculty regarding the individual elements that are weak/need improvement would be helpful. Please provide Ms. Lockman with additional information and ideas for improvement.

Upcoming Events/Deadlines

4th Annual Research Days, Thursday, July 28-Friday, July 29.

- Thursday, 7/28, 10-11:30. Optional iRIS training, for investigators who conduct research with human subjects and must submit projects to the IRB for approval. iRIS has changed; a new version was rolled out in May. If you plan to use the iRIS system in coming months, please plan on attending this training session.
- Thursday, 7/28, 11:30-12:30. Research Days officially begins with lunch, provided by the Office of Research.
- Thursday 7/28, 1-2:00. Keynote address by Milton Packer, MD, Professor, Southwestern Medical School, Dallas.
- Thursday 7/28, 2:15-4:45. Poster Session 1.
- Thursday 7/28, at Desperado's. 5-6:00 Social hour. 6:15-7:30 Dinner, provided by the Office of Research.
- Friday 7/29, 8-9:-00. Breakfast, provided by the Office of Research.
- Friday 7/29, 9-11:30. Podium presentations.
- Friday 7/29, 11:30-12:30. Lunch, provided by the Office of Research.
- Friday 7/29, 12:30-3. Poster Session 2.
- Friday 7/29, 3:30-4:30. Closing Ceremonies & Announcement of Awards.

Research Days Abstracts Due — July 8, 2005, by 5:00 p.m. Please email abstracts to: melissa.lockman@ttuhsc.edu and posters to Computer Services at: amarillo.poster@ttuhsc.edu

Seed Grant Submission Deadline — July 15, 2005, by 5:00 p.m. Please contact the Office of Research for additional information.

Seed Grant Award Announcements — September 1, 2005. Seed Grant funds will be awarded September 1.

Upcoming NIH Deadlines

Institutional National Research Service Awards—Cycle III September 10.

New Research Grant, Conferences, FIRST, and Research Career Awards. ALL Program Project and Center Grants— Cycle III October 1.

Competing Continuation, Supplemental, and Revised Grants—Cycle III November 1.

All AIDS-Related Grants—Cycle II September 1; Cycle III January 2.

Scientific Merit Review—Cycle II October-November; Cycle III February-March

Advisory Council Review—Cycle I September-October; Cycle II January-February; Cycle III May-June.

Earliest Project Starting Date—Cycle I December; Cycle II April; Cycle III July.

OFFICE OF RESEARCH

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To include information in the October edition of this newsletter, please submit materials to:
Melissa Lockman, melissa.lockman@ttuhsc.edu OR fax 806-356-4643 by 5 p.m. on Friday, September 16, 2005.