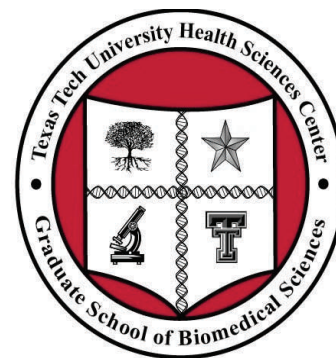




Agonist

The GPPS newsletter

Spring 2008 Issue 1



A word from Dr. Abbruscato



This is the first issue of the **Graduate Program in Pharmaceutical Sciences (GPPS) Newsletter**, "The Agonist", which will function to highlight the major activities of our graduate program on the beginning of the Fall and Spring semesters. It is designed to give information about past and upcoming events, news updates, Graduate Student Association of Amarillo activities and the latest contacts and updates from our graduates, and much more. We would like to first welcome two of our newest Graduate Students, John Thundiyil (Dr. Arumugam's Lab) and Snehai Padhye (Dr. Wang's Lab), please see their bios in this issue. Also, we would like to welcome Merlin Morris, who has joined our graduate program office as the graduate student advisor. Merlin will be organizing this newsletter so please contact him (merlin.morris@ttuhsc.edu) for any news items or suggestions for this publication. I would also like to wish everyone a Happy New Year and best of luck in the upcoming Spring Semester.

Upcoming Events

TTUHSC Student Research Week

The 20th annual TTUHSC Student Research week will occur in Lubbock from March 11th through Friday the 14th. Student's are encouraged to present their research. Any student with original research is invited to participate. Fertilization is the theme for the week, and GSA will present speakers from the field of reproductive technology.

Student research week gives students an opportunity to hone their presentation skills as well as meet other students in the Texas Tech community. There will be prizes of up to \$1000 in the various categories (basic science, health careers, and allied health). [This is a link to the schedule.](#)

Scholarships

The CH Foundation of Lubbock has provided scholarships to GSBS for the next 3 years. The deadline to apply this year for these scholarships is February 1st. The awards will be distributed to students of all levels. The foundation gets its name from the first initial of the donor, Christine and her brother Harold. Please submit the applications to Teresa Carlisle or Merlin Morris.

Amarillo Research Days and The Marsh Lecture

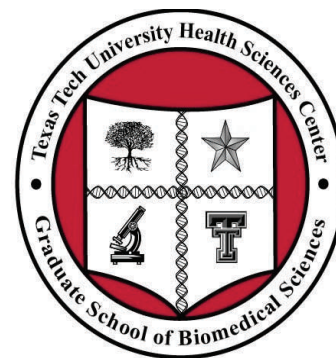
The 7th annual Research Days will take place June 4th -6th. It will be combined with the Marsh lecture. As in previous years; there will be podium presentations made by Pharmacy Science and Pharmacy Practice faculty, poster presentations, the annual dinner, and the awards ceremony. The Keynote speaker will be John Crabbe, Ph.D., Professor of Pharmacology & Behavioral Neuroscience at Oregon Health and Sciences University. The Marsh Lecture will be held Wednesday June 4th at 4p.m. in the Harrington Lecture hall. Another seminar is scheduled for Thursday, June 5th at noon.



Agonist

The GPPS newsletter

Spring 2008 Issue 1



2007 Achievements

West Texas Chapter of the Society for Neuroscience

On December 7th, 60 scientists attended the West Texas Regional Society for Neuroscience meeting in Amarillo. This day-long meeting, which was externally funded by two grants obtained by the Amarillo organizers, brought together undergraduate and graduate students, post docs, and faculty from TTUHSC, TTU, University of Texas at El Paso, the Garrison Institute on Aging, and the South Plains Alcohol and Addiction Research Consortium. The meeting provided the opportunity to attend talks by internationally renowned researchers and to discuss research interests through informal conversations and poster presentations. Poster sessions were on the Blood Brain Barrier; Nicotine, Alcohol & Drugs of Abuse; Ischemia/Stroke and Epilepsy; and Alzheimer's Disease, Amyotrophic Lateral Sclerosis, and Learning. The guest speakers were:

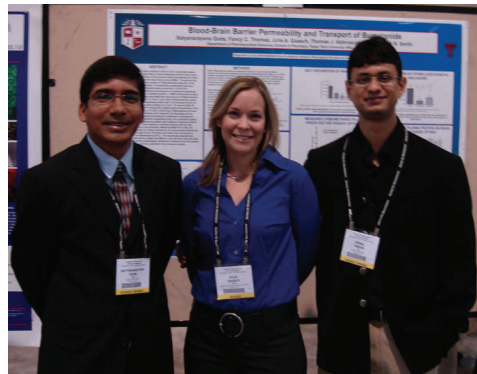
David S. Miller, Ph.D., Invited Grass Speaker, Head - Intracellular Regulation Group, Laboratory of Pharmacology and Chemistry, National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC "Controlling p-Glycoprotein, the 800-Pound Gorilla that Regulates Drug and Toxin access to Brain"

Ingolf Balsig, Ph.D., Head, Molecular Cell Physiology, Leibniz-Institut für Molekulare Pharmakologie (FMP), Berlin, Germany "Structure and Function of Claudins and the Blood-Brain Barrier"

Paula Grammas, Ph.D., Executive Director, Garrison Institute on Aging, Texas Tech University Health Sciences Center "A role for blood vessels in the pathogenesis of Alzheimer's disease"

Neuroscience and AAPS

GPPS students participated in the 2007 Neuroscience and American Association of Pharmaceutical Scientist (AAPS) conferences, both in San Diego. Nikhil Vad and Sharanya Vemula were given scholarships to cover travels expenses to AAPS. Others who attended were Vivek Gupta, Imam Shaik, Shuhua Bai, Rajendar Mittapalli, Vamshi Manda, Lloyd Alfonso, Kunal Taskar, Ramakrishna Samala, Fancy Thomas, Satya Goda, James Egbert, Ridhi Parasrampur and Jiakuan Hao.



From left to right graduate student Satya Goda, Dr. Julie Gaasch (GPPS Alumnus), and graduate students Kunal Taskar at Neuroscience

Neuroscience 2007 Posters

Improved Left Ventricle Intracardiac Injection Method For Developing A Metastatic Tumor Model

K. Taskar, R. Mittapalli, V. Rudraraju, J. Egbert, K. Bohn, J. Gaasch, F. Thomas, P. Lockman, Q. Smith

Slide Show: Neuroprotective effects of NGP1-01 after transient brain ischemia in mice
J. Hao, A. Mdzinarishvili, T. Abbruscato, J. Klein, C. J. Van Der Schyf, U. Bickel

Permeability of D-[3H] glucose is decreased at the blood-brain barrier after chronic nicotine exposure
P. Lockman, S. Vemula, T. Abbruscato, Q. Smith, D. Allen, V. Manda

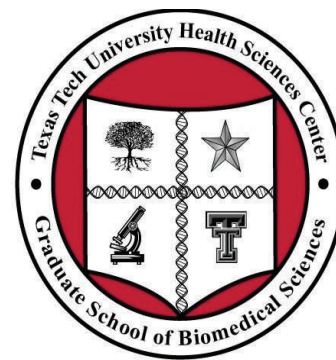
Nicotine alters the blood-brain barrier permeability of the HIV-protease inhibitor saquinavir
V. Manda, R. Mittapalli, W. Geldenhuys, Q. Smith, P. Lockman



Agonist

The GPPS newsletter

Spring 2008 Issue 1



Neuroscience 2007 Posters

Characterization of the Ketogenic Diet in mice
K. Borges, **S. Seth-Willis, R. Samala**

Effects of phorbol ester on adenosinergic synaptic inhibition and recovery from energy deprivation in rat hippocampal slice
J. Fowler, **R. Sumbria**, G. Martinez

Metabolic adaptation of the blood brain barrier after oxygen deprivation
S. Vemula, K.E. Roder, P. Lockman, T. Abbruscato

Blood Brain Barrier Permeability and Transport of Bumetanide
S. Goda, F. Thomas, J. Gaasch T. Abbruscato, Q. Smith

Nicotine alters NKCC expression in isolated brain microvessel endothelial cells after MCAO and increases edema in hippocampal brain slices subjected to OGD
J. Paulson, T. Yang, K. Roder, T. Abbruscato

AAPS 2007 Posters

Aspirin Acetylates Multiple Cellular Proteins: Potential Novel Targets
L. Alfonso, J. Gunaje

Development and characterization of RGD anchored liposomes for targeting of low molecular weight heparin to venous thromboemboli
S. Bai, F. Ahsan

Pegylated dendrimeric micelles enhance pulmonary absorption and circulation time of low molecular weight heparin.
S. Bai, F. Ahsan

Chronic Nicotine Exposer Diminishes the Blood to Brain Transport of 3H -D-Glucose
T. Abbruscato D. Allen **J. Egbert** P. Lockman Q. Smith **S. Vemula**

A Computational Approach to Predict Blood Brain Barrier Permeability of Florescent Dyes
R. Mittapalli, A. Fitzgerald, **V. Manda**, P. Lockman,

Permeability of the Fluorophore Texas Red is not Subject to MRP-2 Medicated Efflux at the Blood Brain Barrier
R. Mittapalli, V. Manda, Q. Smith, P. Lockman

Formulation and Evaluation of Domperidone Rapidly Disintegrating Tablets
R. Mittapalli, M. Yamsani, P. Lockman,

Effects of Diallyl Sulfide, a Garlic Constituent, on Warm Ischemia-Reperfusion Injury in Rat Livers
R. Mehvar, **I Shaik**



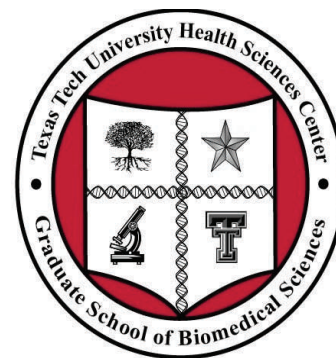
From left to right graduate student Ridhi Parasrampur, Post Doc Amit Rawat, and graduate students Vivek Gupta and Llyod Alfonso at AAPS.



Agonist

The GPPS newsletter

Spring 2008 Issue 1



AAPS 2007 Posters

The Biochemical Mechanism of Aspirin Induced Toxicity in Human SK-28 Melanoma Cell Line
M. Moridani, **N. Vad**

The Biochemical Mechanism of Acetaminophen Induced Toxicity in Human SK-28 Melanoma Cell Line
M. Moridani, **N. Vad**

Chronic Nicotine Exposer Diminishes the Blood to Brain Transport of 3H -D-Glucose
P. Lockman, **J. Egbert**, **S. Vemula**, T. Abbruscato, Q. Smith, D. Allen

Effects of Phlorizin on Glucose Transport at the Blood Brain Barrier during Oxygen Glucose Deprivation
T. Abbruscato, **S Vemula**

Blood Brain Barrier Permeability and Transport of Bumetanide
S. Goda, **F. Thomas**, **J. Gaasch** T. Abbruscato, Q. Smith

Polyethylenimine based Formulations for Increasing Bioavailability and Half-Life of Prostaglandin E1 (PGE1) via the Pulmonary Route
F. Ashan, **V. Gupta**

Hepatobiliary Disposition of Rhodamine 123 in Isolated Perfused Rat Livers
R. Mehvar, **R. Parasrampur**

Blood-Brain Barrier Permeability and Transport of Temozolomide
F. Thomas , **V. Rudraraju**, P. Lockman, Q. Smith

Student Publications 2007

S. Krishna, **L. Alfonso**, T. Thekkumkara, T. Abbruscato, G. Bhat
Angiotensin II induces phosphorylation of glucose-regulated protein-75 in WB rat liver cells.
Archives of biochemistry and biophysics
2007 Jan 1;457(1):16-28. Epub 2006 Nov 2

FC. Thomas, A. Rawat, **S. Bai**, F. Ahsan
feasibility study of inhaled hepatitis B vaccine formulated with tetradecylmaltoside.
J Pharm Sci. 2007 Sep 7; [Epub ahead of print]

S. Bai, T. Yang, T. Abbruscato, F. Ahsan
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; [Epub ahead of print]

S. Bai, **C. Thomas**, F. Ahsan.
Dendrimers as a carrier for pulmonary delivery of enoxaparin, a low-molecular weight heparin.
J Pharm Sci. 2007 Aug;96(8):2090-106.

C. Chimalakonda, H. Agarwal, A. Kumar, K. Parang, R. Mehvar
Synthesis, analysis, in vitro characterization, and in vivo disposition of a lamivudine-dextran conjugate for selective antiviral delivery to the liver.
Bioconjug Chem. 2007 Nov-Dec;18(6):2097-108. Epub 2007 Oct 9



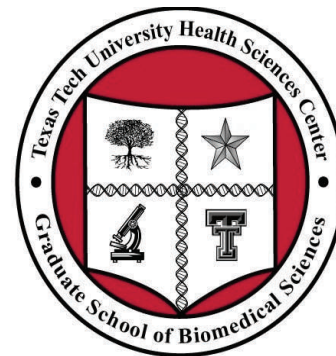
Graduate Student Shuhua Bai started with GPPS in the summer of 2004.



Agonist

The GPPS newsletter

Spring 2008 Issue 1



Student Publications 2007

P. Lockman, **V. Manda**, W. Geldenhuys, **R. Mittapalli**, **F. Thomas**, Z. Albayati, P. Crooks, L. Dwoskin, D. Allen
Carrier-mediated transport of the quaternary ammonium neuronal nicotinic receptor antagonist, N, N'-dodecyl-bis-picolinium dibromide (bPiDDB) at the blood-brain barrier.
J Pharmacol Exp Ther. 2007 Oct 5; [Epub ahead of print]

L. Dwoskin, B. Joyce, G. Zheng, N. Neugebauer, **V. Manda**, P. Lockman, R. Papke, M. Bardo, P. Crooks
Discovery of a novel nicotinic receptor antagonist for the treatment of nicotine addiction: 1-(3-Picolinium)-12-triethylammonium-dodecane dibromide (TMPD).
Biochem Pharmacol. 2007 Oct 15;74(8):1271-82. Epub 2007 July 21.

R. Mehvar, K. Elliott, **R. Parasrampur**, O. Eradri
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. Epub 2007 Jan 13.

N. Vad, **I. Shaik**, R. Mehvar, M. Moridani
Metabolic bioactivation and toxicity of ethyl 4-hydroxybenzoate in human SK-MEL-28 melanoma cells.
J Pharm Sci. 2007 Sep 10; [Epub ahead of print]

H. Schugar, D. Green, M. Bowen, L. Scott, T. Storr, K. Bohmerle, **F. Thomas**, D. Allen, P. Lockman, M. Merkel, K. Thompson, C. Orvig
Combating Alzheimer's disease with multifunctional molecules designed for metal passivation.
Angew Chem Int Ed Engl. 2007;46(10):1716-8

J. Gaasch, P. Lockman, W. Geldenhuys, D. Allen, C. Van der Schyf
Brain iron toxicity: differential responses of astrocytes, neurons, and endothelial cells.
Neurochem Res. 2007 Jul;32(7):1196-208.

J. Gaasch, J. Geldenhuys, P. Lockman, D. Allen, C. Van der Schyf
Voltage-gated calcium channels provide an alternate route for iron uptake in neuronal cell cultures.
Neurochem Res. 2007 Oct;32(10):1686-93. Epub 2007 Apr 3

A. Satelli, P. Rao, P. Gupta, P. Lockman, S. Srivenugopal, U. Rao
Varied expression and localization of multiple galectins in different cancer cell lines
(Oncology Reports 2007, Accepted)

R. Parasrampur, R. Vuppugalla, K. Elliot, R. Mehvar
Route-dependent stereoselective pharmacokinetics of tramadol and its active O-demethylated metabolite in rats.
Chirality. 2007 Mar;19(3):190-6.



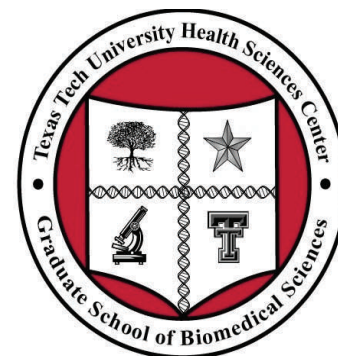
GPPS students January 2007



Agonist

The GPPS newsletter

Spring 2008 Issue 1



Graduate Student Association in Amarillo

Officers:

Kaci Bohn-President, Imam Shaik-Vice President, Vivek Gupta-Secretary, Rachita Sumbria-Treasurer, Arun Sattelli-Historian, Vamshi Manda & Vinay Rudraraju-International Officers

As told by Kaci Bohn:

Our menu began with quiche as an appetizer, tomato bisque soup, sorbet to cleanse the palate, salad, and lastly two types of lasagna for the main course. The boys had to get up each time one of the girls left the table and had to be reminded to pull out the girl's chairs. Everyone learned the correct direction to scoop your soup with your spoon and the Indian students tried very hard to adapt to the American style of holding silverware. There were lots of laughs as we learned the do's and don'ts of proper eating!

New Students

John Thundyil and Snehal Padhye are GPPS's newest students. John's undergraduate degree is in Medicine and Surgery is from [Maharashtra University of Health Sciences](#). Snehal's Pharmacology degree is from [MGV's Pharmacy College](#) also in [the state of Maharashtra](#) India. John is interested in Cerebrovascular research and works in Dr Arumugam's lab, while Snehal will be studying cancer therapies with Dr Wang.



The GSAA etiquette dinner



John Thundyil stopping for a picture in Dr Arumugam's lab



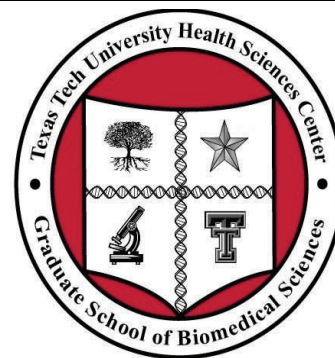
Snehal is enthusiastic about her work in Dr. Wang's lab



Agonist

The GPPS newsletter

Spring 2008 Issue 1



Alumni

Twenty Three students have graduated from GPPS since Spring 2001. This is their most recent contact information.

Vikas Agarwal Ph.D.
Group Leader, Formulations Development
CIMA LABS INC
7325 Aspen Lane
Brooklyn Park, MN 55428
Vikas.Agarwal@cimalabs.com
Graduated Spring 2001

Sivakumar Vaithiyalingam, Ph.D.
Review Chemist / Staff Fellow
Division of Chemistry III
Office of Generic Drugs /OPS/CDER/
FDA
HFD-630, Room # E142
Phone: 301-827-5740
Fax: 301-827-9274
sivakumar.vaithiyalingam@fda.hhs.gov
Graduated Summer 2001

Sami Nazzal, Ph.D.
Assistant Professor of Pharmaceutics
Department of Basic Pharmaceutical
Sciences
College of Pharmacy
The University of Louisiana at Monroe
700 University Ave.
Monroe, LA 71209-0497
Tel: 318-342-1726
Fax: 318-342-1737
<http://rxweb.ulm.edu/pharmacy/Nazzal/default.html>
nazzal@ulm.edu
Graduated Summer 2002

Paul Lockman Ph.D.
Assistant Professor
Texas Tech HSC
Pharmaceutical Science
1300 S Coulter
Amarillo, Tx 79106
356-4015 ext 265
Paul.Lockman@ttuhsc.edu
Graduated Summer 2003

Anitha Palamakula, Ph.D., R.Ph
Pharmacologist/Visiting Scientist
Division of Bioequivalence
Office of Generic Drugs
CDER/FDA
7520 Standish place,
Rockville, MD 20855
anitha_100@yahoo.com
Graduated Spring 2004

Rakhi Shah Ph.D.
FDA, Pharmacologist
10903 New Hampshire Ave
Silver spring, MD 20993
Rakhi.Shah@fda.hhs.gov
Graduated Spring 2004

Fatima Khan M.S.
Pharmacist (Rite Aid pharmacy)
321 Tofrees Ave, Apt 130, State College,
PA 16803
fkhan810@gmail.com
Graduated Spring 2004

Mohammad Nutan Ph.D.
Assistant Professor
Department of Pharmaceutical Sciences
Irma Lerma Rangel College of Pharmacy
Texas A&M University Health Science Center
1010 West Ave B, MSC 131
Kingsville, Texas 78363
mnutan@pharmacy.tamhsc.edu
Graduated Summer 2004

Anjaneya Chimalakonda, Ph.D.
Discovery Metabolism and Pharmacokinetics,
Bristol-Myers Squibb Co.
311 Pennington-Rocky Hill Road, Mail stop:
17-2.12
Pennington, NJ 08534
anjaneya.chimalakonda@bms.com
Graduated Spring 2005

Ragini Vuppugalla Ph.D.
Rm F1.3809A
Bristol-Myers Squibb
Rt. 206 Province Line Road
Princeton NJ 08540-4000
ragini.vuppugalla@bms.com
Graduated Spring 2005

Alamdar Hussain Ph.D.
Univ. of Louisiana at Monroe
Asst. Professor of Pharmaceutics
Dept. of Basic Pharmaceutical Sciences
College of Pharmacy
700 University Ave.
Monroe, LA 71209-0497
ahussain@ulm.edu
Graduated Fall 2005

Haritha Mandula Ph.D.
Visiting Scientist
Food and Drug Administration
7520 Standish Place, MD 20855
Haritha.Mandula@gmail.com
Graduated Fall 2005



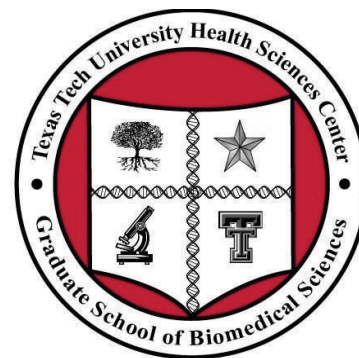
GSBS Student of the year 2005
Anjaneya Chimalakonda



Agonist

The GPPS newsletter

Spring 2008 Issue 1



Alumni

Jagan Mohan Parepally Ph.D.
Staff Fellow
Food and Drug Administration
7520 Standish Place, MD 20855
Jagan.Parepally@fda.hhs.gov
Graduated Fall 2005

Young Tag Ko Ph.D.
Postdoctoral Research Associate
Northeastern University
Center for Pharmaceutical Biotechnology
& Nanomedicine
312 MU
360 Huntington Avenue
Boston, MA 02115-5000
y.ko@neu.edu
Graduated Spring 2006

Nusrat Motlekar Ph.D.
Asst Professor - Pharmaceutics
Butler University
Department: Pharmaceutical Science
Location: Pharmacy Building - 303D
nmotleka@butler.edu
Graduated Spring 2006

Joachim Hartman Ph.D.
In Der Goldgrube
56073 Koblenz
GMP Coordinator
LST Lohmann Therapie Systeme AG
Joachim.hartmann@ltslohmann.de
Graduated summer 2006

Celle Spidel Ph.D.
Assistant Professor
Sports and Exercise Science
West Texas A&M
7807 Bent Tree, Amarillo
spidel@suddenlink.net
Graduated Summer 2006

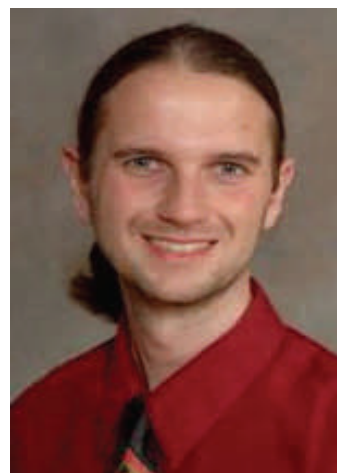
Julie Gaasch Ph.D.
Post Doctoral Research Associate
Texas Tech HSC
Pharmaceutical Science
1300 S Coulter
Amarillo, Tx 79106
356-4015 ext 236
Julie.Gaasch@ttuhsc.edu
Graduated Fall 2006

Cornelia Kiewert Ph.D.
In Der Goldgrube
56073 Koblenz
Hospital Pharmacist
Stiftsclinikum Mittelrhein gGmbH
Graduated Fall 2006

Chaitanya Chimalakonda M.S.
Ph.D. Candidate
University of Arkansas
Dept. of Pharmacology and Toxicology
Rm# 6/123
4301 West Markham St
Little Rock, AR 72205
kChimalakonda@uams.edu
Graduated summer 2007

Jennifer Paulson Ph.D.
Student in Pharmacy Doctorate
Texas Tech HSC
School of Pharmacy
1300 S Coulter
Amarillo, Tx 79106
Jenifer.Paulson@ttuhsc.edu
Graduated Summer 2007

Vaughan Wittman Ph.D.
Scientist
VaxDesign
Graduated Spring 2006



Joachim Hartmann received his Ph.D. in the Summer of 2006.



Alumnus Chaitanya Chimalakonda (left) and graduate students Sharanya Vemula, Vivek Gupta, Amit Rawat (post doc) and Lloyd Alfonso visiting the San Diego Zoo after Neuroscience 2007

Agonist is published every fall and spring semester by the Graduate Program of Pharmaceutical Sciences (GPPS). To include information in the next Agonist please contact Merlin Morris at 356-4000 ext 227 or email Merlin.Morris@ttuhsc.edu.