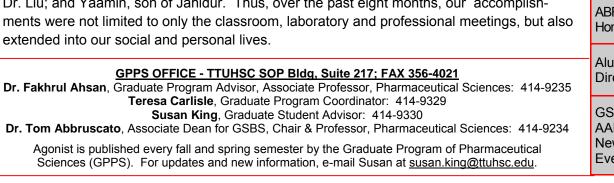


Official Newsletter for the Graduate Program in Pharmaceutical Sciences Texas Tech University Health Sciences Center Amarillo, Texas

# **UPDATE FROM DR. AHSAN**

The last two semesters of our graduate program turned out to be semesters of celebration, productivity, saying goodbyes and bidding welcomes. Seven students celebrated their doctoral graduation with their friends, family and mentors last May in Lubbock. Let's congratulate Nilesh, Manoj, Pooja, Shumi, Rajiv, Sharad, Raktima, Jun and their mentors! Good luck on your new job or finding a new job! Like in the past academic year, one of our graduates, Dr. Nilesh Gupta of

the Ahsan Lab, was selected as the Outstanding GSBS Student of the Year 2015. As the GSBS Outstanding Graduate Student, Dr. Gupta spoke at the convocation and led the Graduation Parade. We are proud of Nilesh's recognition by the Graduate School; let's wish Nilesh the best of luck with his new challenge as the Chief Scientific Officer of his company, Neofluidics Inc.! Vindhya and Kowser defended their doctoral dissertations in the summer; we look forward to congratulating them at their graduation next May. We welcomed Sujit and Ekram, who joined the program in the summer. We also celebrated accomplishments of our Graduate faculty; Drs. Stoll and Srivastava received Graduate Teacher and Mentor of the Year Awards, respectively; the Physiology-Based Pharmacology course, team-led by Dr. Bickel, received the Graduate Teaching Team of the Year Award. Last summer, we hosted 12 interns under our Amarillo Biomedical Research Internship Program. One intern, Taylor, will soon join the program as a graduate student. Our current students continued to publish manuscripts in peer-reviewed journals, present their works at School of Pharmacy Research Days in Amarillo, Graduate Research Week in Lubbock, and many national and international scientific meetings, including ACS, AACR and AAPS National Biotechnology Conference. Ben, Kaiser, Nihar and Verma were perhaps the busiest students over the past two semesters; they are the second group of students who took the qualifying exam under the new policy, and all became doctoral candidates this fall. Kudos for their hard work in spring and summer! On top of their academic activities, our students have participated in various social events, including skiing and bowling. We also greeted three new babies and a new bride into our program family: Best wishes to Cynthia, Rashedul's new wife! Congratulations to the parents of Fatima, daughter of Ismail; Sophia, daughter of Dr. Liu; and Yaamin, son of Jahidur. Thus, over the past eight months, our accomplishments were not limited to only the classroom, laboratory and professional meetings, but also





# Fall 2015 Issue 16

What's Inside Spring/ Summer Graduates 2 •Fall Dissertations Convocation 3 New Students Graduate 4 Student Seminars •Publications 5, •Upcoming 6 Conferences Conference 7 Presentations Student Research 8 Week SOP 9, Research 10 Davs Celebration of Achievement 11 Awards & Scholarships ABRI/TTU 12 Honors Alumni 13. Directory 14 GSAA & 14, AAPS 15, News & 16 **Events** 



## Spring 2015 Graduates

9



# Raktima Bhattacharya, Ph.D.

Lab of Dr. Ulrich Bickel

**Dissertation Presented** March 11, 2015

"Attenuation of cerebral ischemia/reperfusion injury by targeted delivery of an antiinflammatory oligodeoxynucleotide drug to the endothelium of the blood-brain barrier"

Rajiv Balyan, Ph.D. Lab of Dr. Quentin Smith

**Dissertation Presented** March 13, 2015

"Capecitabine in the Treatment of Brain Metastases of Breast Cancer: Critical Role of Enzymatic Targeting of Key Metabolic Species"





Pooja Naik, Ph.D. Lab of Dr. Luca Cucullo

**Dissertation Presented** March 18, 2015

"Toxicological Impact of Tobacco Smoke Exposure on Blood Brain Barrier Endothelium: Pathophysiological Implications and Cytoprotective Mechanisms "

# Summer 2015 Graduates



### Vindhya Edpuganti,

Ph.D. Lab of Dr. Reza Mehvar

**Dissertation Presented** June 22, 2015

"Disposition and Actions of Cytochrome P450 metabolites of Arachidonic Acid in Hepatic Ischemia Reperfusion Injury"

# Md. Kowser Miah, Ph.D.

Lab of Dr. Reza Mehvar

**Dissertation Presented** June 23, 2015

"Effects of normothermic hepatic ischemiareperfusion injury on the systemic pharmacokinetics and brain disposition of model drugs in rats"



# Fall 2015 DISSERTATIONS

Sukesh Voruganti, Lab of Dr. Ruiwen Zhang Wednesday, August 19, 2015 at 9:00am AMA SOP 210 / LUB HSC 2C101

Neel Fofaria, Lab of Dr. Sanjay K. Srivastava Friday, August 28, 2015 at 2:00pm AMA PAC 1110 / LUB HSC 2C101
Raghavender Chivukula, Lab of Dr. Jon Weidanz Monday, September 21, 2015 at 1:30pm
ABI SOP 1130 / AMA SOP 210 / LUB HSC 1C111

Md. Rashedul Islam, Lab of Dr. Thomas Abbruscato Wednesday, October 14, 2015 at 9:00am AMA SOP 210 / DAL SW 433 / LUB HSC 1C111







# **NEW STUDENTS for SUMMER and FALL 2015**

9













# **Summer 2015**

Sujit Biswas and Ekram Chowdhury

Faisal Alamri, B.Pharm. King Saud University Saudi Arabia Lab: Dr. Vardan Karamyan

Ahmed Alobaida, B.Pharm. King Saud University Saudi Arabia Lab: Dr. Fakhrul Ahsan

Nohd Nazmul Hasan Apu, B.Pharm., M.Pharm. University of Dhaka Bangladesh Lab: Dr. Constantinos Mikelis

Md. Ashraf-Uz-Zaman, B.Pharm., M.Pharm. University of Dhaka Bangladesh Lab: Dr. Nadezhda German

Sujit Biswas, B.Pharm., M.Pharm. Jahangirnagar University Bangladesh Lab: Dr. Xinli Liu

**Ekram Chowdhury**, B.Pharm., M.Pharm. University of Asia Pacific Bangladesh Lab: Dr. Ulrich Bickel



# Fall 2016

(back row, L-R): Faisal Alamri, Ivan Marsic, Yoon Jung Lee, Md. Sanaullah Sajib, Sharavan Ramachandran;

(front row, L-R): Md. Ashraf-Uz-Zaman, Mohd Nazmul Hasan Apu, Abdullah Al Shoyaib, Ali Keshavarz, Ahmed Alobaida

Ali Keshavarz, B.Pharm., M.Pharm. Tehran University of Medical Sciences and Health Services Iran Lab: Dr. Fakhrul Ahsan

Yoon Jung Lee, Pharm.D. Harding University Searcy, Arkansas Lab: Dr. James Stoll

Ivan Marsic, B.S. Texas Tech University Lubbock, Texas Lab: Dr. Ruiwen Zhang Sharavan Ramachandran, B.S., M.S. Kalasalingam University India Lab: Dr. Sanjay Srivastava

Md. Sanaullah Sajib, B.Pharm. University of Dhaka Bangladesh Lab: Dr. Constantinos Mikelis

Abdullah Al Shoyaib, B.Pharm. University of Dhaka Bangladesh Lab: Dr. Vardan Karamyan



Scenic photos of TTUHSC SOP Amarillo campus in winter ice, submitted by Hanumantha Rao Madala





# **GRADUATE STUDENT SEMINAR PROGRAM - SPRING 2015**

1/14/15—**Guest Speaker: W. David Nes, Ph.D.,** Paul Whitfield Horn Professor, Director, Center for Chemical Biology, TTU Lubbock — "Therapeutics for ergosterol-dependent infectious diseases" 1/21/15—**Benard Ogola** — "Functional Role of 2-Methoxyestradiol in Angiotensin Type 1 Receptor Expression"

01/28/15—**Faculty Speaker: Junxuan (Johnny) Lu, Ph.D.**, Professor, Biomedical Sciences, TTUHSC SOP Amarillo — "Writing a Fundable Grant Application"

2/04/15—**Neel Fofaria** — "Gli2 drives melanoma tumor growth and progression"

2/11/15—**Speaker: Kartick Pramanik, Ph.D.**— "Ligand Activation of Peroxisome Proliferator-Activated Receptor- $\beta/\delta$  Inhibit TGF $\beta$ 1 Induced Epithelial-Mesenchymal Transition in Human Lung Cancer Cells"

2/20/15—Guest Speaker: Jaehoon (Jason) Lee, Ph.D., Research Associate Professor, College of Education: Associate Director, IMMAP: TTU Lubbock — "Propensity Score Methods" 2/25/15—Md. Jahidur Rashid — "Repositioning of Oral Sildenafil (Revatio®) to a Respirable Product"

3/04/15—**Debasish Basak** — "Increased Anticancer Efficacy by Nontoxic Redox-Perturbing Agents Occurs Through Reactivation of Mutant p53 and Inhibition of DNA Repair"

3/04/15—**Tanvirul Hye** — "Self-Emulsified Nanoemulsion Targeting Glioblastoma" 3/11/15—**Raktima Bhattacharya**, *Doctoral Dissertation Defense* — "Attenuation of cerebral

> Night view of Tri-State Fair in Amarillo, TX, submitted by Md. Rashedul 'Rashed' Islam

ischemia/reperfusion injury by targeted delivery of an anti-inflammatory oligodeoxynucleotide drug to the endothelium of the blood-brain barrier" 3/13/2015—**Rajiv Balyan**, *Doctoral Dissertation Defense*— "Capecitabine in the Treatment of Brain Metastases of Breast Cancer: Critical Role of Enzymatic Targeting of Key Metabolic Species" 3/18/15—**Pooja Naik**, *Doctoral Dissertation Defense*— "Toxicological Impact of Tobacco Smoke Exposure on Blood Brain Barrier Endothelium: Pathophysiological Implications and Cytoprotective Mechanisms"

4/1/15—**Md. Kowser Miah** — "Measurement of Blood-Brain Barrier Permeability in Hepatic Diseases Using Sucrose"

4/1/15—**Md. Abul Kaisar** — "Countermeasure of Tobacco Smoke Toxicity at the BBB Endothelium using OTC Antioxidant Products: Popular Myth or Fact?"

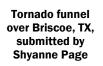
4/8/15—**Laxmi lyer** — "Hyperglycemia Induced Cell Injury in Renal Proximal Tubule Cells" 4/15/15—**Kito Barrow** — "Taxanes and Methylseleninic Acid for the Combinational Therapy of Castration Resistant Prostate Cancer - Animal Models"

4/29/15—**Amer Alali** — "BPR0L075 Loaded Nanoparticle Targeting Bone Metastasis"

4/29/15—**Maria (Heidi) Villalba** — "Expanding Behavioral Tests for Ischemic Stroke Mouse Models"

5/6/15—**Faleh Alqahtani** — "Isolation of Human Tumor Xenografts from Mouse Brain"







# PUBLICATIONS

**≈Barrow, K.**, Jiang, C., Lu, J. Mono-methyl selenium and cancer therapy: current status and future translational research needs. *Biochemistry and Pharmacology (Los Angel).* 2015 Jun 22; 4:173.

≈Morikawa A, Peereboom DM, Thorsheim HR, Samala R, Balyan R, Murphy CG, Lockman PR, Simmons A, Weil RJ, Tabar V, Steeg PS, Smith QR, Seidman AD. Capecitabine and lapatinib uptake in surgically resected brain metastases from metastatic breast cancer patients: a prospective study. Neuro Oncol. 2015 Feb; 17 (2):289-95. Epub 2014 Jul 11

**≈Fofaria NM**, Srivastava SK. STAT3 induces anoikis resistance, promotes cell invasion and metastatic potential in pancreatic cancer cells. *Carcinogenesis.* 2015 Jan; 36(1):142-50.

≈Pramanik KC, **Fofaria NM**, Gupta P, **Ranjan A**, Kim SH, Srivastava SK. Inhibition of β-catenin signaling suppresses pancreatic tumor growth by disrupting nuclear β-catenin/TCF-1 complex: critical role of STAT-3. *Oncotarget.* 2015 May 10; 6(13):11561-74.

**≈Fofaria NM**, **Ranjan A**, Kim SH, Srivastava SK. Mechanisms of the Anticancer Effects of Isothiocyanates. *Enzymes.* 2015; 37:111-37. Epub 2015 Jul 7.

≈Patel B, Gupta N, Ahsan F. Particle engineering to enhance or lessen particle uptake by alveolar macrophages and to influence the therapeutic outcome. *Eur J Pharm Biopharm.* 2015 Jan; 89:163-74. Epub 2014 Dec 10.

≈Absar S, Gupta N, Nahar K, Ahsan F. Engineering of Plasminogen Activators for Targeting to Thrombus and Heightening Thrombolytic Efficacy. *J Thromb Haemost.* 2015 Jun 15. [Epub ahead of print]

**≈Gupta N**, Al-Saikhan FI, Patel B, **Rashid J**, Ahsan F. Fasudil and SOD packaged in peptidestudded-liposomes: Properties, pharmacokinetics and ex-vivo targeting to isolated perfused rat lungs. *Int J Pharm.* 2015 Jul 5;488(1-2):33-43. Epub 2015 Apr 15.

**≈MA Kaisar**, L Cucullo. OTC Antioxidant Products for the Treatment of Cardiovascular and Other Disorders: Popular Myth or Fact? *J Pharmacovigilance.* 2015 Apr; 3(2). pii: e136.

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≈Srivenugopal KS, Rawat A, Niture SK, Paranjpe A, Velu C, Venugopal SN, Madala HR, Basak D, Punganuru SR. Posttranslational Regulation of O6 -Methylguanine-DNA Methyltransferase (MGMT) and new opportunities for treatment of brain

cancers. *Rev Med Chem.* 2015 Jul 21. [Epub ahead of print]

≈Miah MK, Shaik IH, Bickel U, Mehvar R. Effects of Pringle maneuver and partial hepatectomy on the pharmacokinetics and blood-brain barrier permeability of sodium fluorescein in rats. *Brain Res.* 2015 Aug 27; 1618:249-60. Epub 2015 Jun 5.

≈Wang W, Nag S, Zhang X, Wang MH, Wang H, Zhou J, Zhang R. Ribosomal Proteins and Human Diseases: Pathogenesis, Molecular Mechanisms, and Therapeutic Implications. *Med Res Rev.* 2015 Mar;35(2):225-85. Epub 2014 Aug 28.

≈Nag S, Qin JJ, Patil S, Deokar H, Buolamwini JK, Wang W, Zhang R. A quantitative LC-MS/MS method for determination of SP-141, a novel pyrido [b]indole anticancer agent, and its application to a mouse PK study. J Chromatogr B Analyt Technol Biomed Life Sci. 2014 Oct 15; 969:235-40. Epub 2014 Aug 28.

≈Nag S, Qin JJ, Voruganti S, Wang MH, Sharma H, Patil S, Buolamwini JK, Wang W, Zhang R. Development and validation of a rapid HPLC method for quantitation of SP-141, a novel pyrido [b]indole anticancer agent, and an initial pharmacokinetic study in mice. *Biomed Chromatogr.* 2015 May; 29(5):654-63. Epub 2014 Oct 8.

≈Wang W, Nag S, Zhang X, Wang MH, Wang H, Zhou J, Zhang R. Ribosomal proteins and human diseases: pathogenesis, molecular mechanisms, and therapeutic implications. *Med Res Rev.* 2015 Mar; 35(2):225-85. Epub 2014 Aug 28.

**≈**Wang W, **Nag S**, Zhang R. Targeting the NFκB signaling pathways for breast cancer prevention and therapy. *Curr Med Chem.* 2015; 22(2):264-89.

≈Wang W, Qin JJ, Voruganti S, Nag S, Zhou J, Zhang R. Polycomb Group (PcG) Proteins and Human Cancers: Multifaceted Functions and Therapeutic Implications. *Med Res Rev.* 2015 Jul 30. [Epub ahead of print]

≈Sajja RK, Naik P, Cucullo L. Differential Cerebrovascular Toxicity of Various Tobacco Products: A Regulatory Perspective. J Pharmacovigil. 2015 Feb 19; 3(1). pii: 1000e130.

≈Naik P, Sajja RK, Prasad S, Cucullo L. Effect of full flavor and denicotinized cigarettes exposure on the brain microvascular endothelium: a microarraybased gene expression study using a human immortalized BBB endothelial cell line. BMC Neurosci. 2015 Jun 23; 16:38. doi: 10.1186/s12868 -015-0173-3.

(Continued on page 6)

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**≈Rashid J**, Absar S, Nahar K, **Gupta N**, Ahsan F. Newer devices and improved formulations of inhaled insulin. *Expert Opin Drug Deliv.* 2015 Jun;12(6):917-28. Epub 2014 Dec 8.

**≈Shikha Prasad**, Ravi K Sajja, **Jee Hyun Park**, **Pooja Naik**, **Mohammad Abul Kaisar** and Luca Cucullo. Impact of cigarette smoke extract and hyperglycemic conditions on blood-brain barrier endothelial cells. *Fluids Barriers CNS*. 2015 Jul 24;12(1):18.

**≈**P.Zang T, **Verma K**, Chen M, Jin Y, Trippier PC, Penning TM. Screening baccharin analogs as selective inhibitors against type 5 17βhydroxysteroid dehydrogenase (AKR1C3). *Chem Biol Interact.* 2015 Jun 5;234:339-48. Epub 2014 Dec 31

≈\*Yu JX, \*Voruganti S, Li DD, Qin JJ, Nag S, Xu S, Velu SE, Wang W, Zhang R. Development and validation of an HPLC-MS/MS analytical method for quantitative analysis of TCBA-TPQ, a novel anticancer makaluvamine analog, and application in a pharmacokinetic study in rats. *Chin J Nat Med.* 2015 Jul; 13(7):554-60. [\*co-first author]

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≈Wang W, Qin JJ, Voruganti S, Nag S, Zhou J, Zhang R. Polycomb Group (PcG) Proteins and Human Cancers: Multifaceted Functions and Therapeutic Implications. *Med Res Rev.* 2015 Jul 30. [Epub ahead of print]

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≈\*Yu JX, \*Voruganti S, Li DD, Qin JJ, Nag S, Xu S, Velu SE, Wang W, Zhang R. Development and validation of an HPLC-MS/MS analytical method for quantitative analysis of TCBA-TPQ, a novel anticancer makaluvamine analog, and application in a pharmacokinetic study in rats. *Chin J Nat Med.* 2015 Jul; 13(7):554-60. [\*co-first author]





# **CONFERENCE PRESENTATIONS**

# Dig Isl 54<sup>th</sup> Annual Meeting and ToxExpo March-22-26, 2015

#### Society of Toxicology March 22-26, 2015 \* San Diego, CA

R. Balyan, H. R. Thorsheim, R. Samala, Q. R. Smith. "Pharmacokinetics and Pharmacodynamics of Capecitabine in Preclinical Mouse Model of Brain Metastases of Breast Cancer".

•Neel M Fofaria and Sanjay K Srivastava. "Gli2 mediated induction of c-Myc induces melanoma tumor growth". •Pooja Naik and Luca Cucullo. "Differential Impact of Tobacco Smoke Exposure at the Blood-Brain Barrier Endothelium: A Special Focus on the Nrf2-Dependent Antioxidant Mechanisms".

•Alok Ranjan and Sanjay Srivastave. "Penfluridol induces autophagy mediated cell death in pancreatic cancer". •Alok Ranjan, Parul Gupta and Sanjay Srivastava. "Penfluridol suppresses triple negative breast cancer metastasis to brain by inhibiting integrin signaling"

#### American Chemical Society March 22-26, 2015 \* Denver, CO

 Nihar Kinarivala, Joelle Makoukii, Fadi Saadeh, Rose-Marv Boustany, and Paul C. Trippier. "Design, Synthesis, and Structure-Activity Relationships of Flupirtine Derivatives for the Treatment of Neuronal Ceroid Lipofuscinosis".



•Kshitij Verma, Tianzhu Zhang, Trevor Penning, and Paul C. Trippier. "Synthesis and Antineoplastic Evaluation of Potent and Selective Inhibitors of AKR1C3".





American Association for Cancer Research April 18-22, 2015 \* Philadelphia, PA

PENNSYLVANIA •Debasish Basak and Kalkunte Srivenugopal. "Thiol-CONVENTION modification induced reactivation of mutant p53 protein in human cancers using a nontoxic stabilized homoglutathione disulfide".

•Neel M. Fofaria, Dennie T. Frederick, Rvan J. Sullivan, Keith T. Flaherty and Saniay K. Srivastava, "Overexpression of McI-1 confers resistance to BRAFV600E inhibitors alone and in combination with MEK1/2 inhibitors in melanoma". •Neel M. Fofaria and Sanjay K. Srivastava. "Gli2 induces melanoma tumor growth and progression – A critical role of c-Myc".

Surendra Reddy Punganuru, Hanumantha Rao Madala, and Kalkunte Srivenugopal. "Hybrid cancer drugs: Synthesis of Combretastatin- Piperlongumine fused analogs with mutant p53 reactivation and antimicrotubule properties". [Presented by Madala.]

 Alok Ranjan, Parul Gupta and Sanjay K. Srivastava. "Penfluridol suppresses triple negative breast cancer metastasis to brain by inhibiting α6β4 integrins".

•Sukesh Voruganti, Jiang-Jiang Qin, Wei Wang, Ruiwen Zhang. "The anticancer activity of Japonicone A is mediated by inhibiting NFAT1-MDM2 pathway".

#### American Association of Pharmaceutical Scientists, National Biotechnology Conference June 8-10, 2015 \* San Francisco, CA



•M. R. Islam, L. Yang, Y. Lee, V. Hruby, T. J. Abbruscato. "Biphalin-Fentanyl Multivalent Opioid Agonists as Potential Neuroprotectant for Ischemic Stroke". Alok Ranjan and Sanjay K. Srivastava. "Penfluridol



June 8-10, 2015 San Francisco Marriott Marquis San Francisco

Suppresses In Vivo Pancreatic Tumor Growth by Autophagy Mediated Apoptosis".



**Blood-Brain Barrier** New Understanding, Strategies and Tools for Delivering Therapy to the Brain June 10-11, 2015 dge Healthtech Institute

Cambridge Healthtech Institute's World Preclinical Congress, Blood-Brain Barrier Conference June 10-11, 2015 \* Boston, MA

•Shyanne Page, Taylor Liles, Ronak Patel, Luca Cucullo, and Abraham Al-Ahmad. "Canonical WNT pathway modulation impacts brain endothelial cell response to hypoxic stress". [Podium Presentation]

•Ronak Patel, Shyanne Page, Abraham Al-Ahmad. "Hypoxia/ischemia induces barrier breakdown in stem-cell derived human brain microvascular cell monolayers".

# Page 8



# HOST-MICROBE INTERACTIONS

Exploring Worlds Within

Student Research Week March 10-13, 2015



Steven Reed, PhD Founder, President & Chief Scientific Officer of Infectious Disease Research Institute



Eugene Chang, MD Martin Boyer Professor, Department of Medicine, University of Chicago

**The 27th Annual Student Research Week,** sponsored by the Graduate School of Biomedical Sciences of TTUHSC in Lubbock, had nineteen (19) poster entries from junior and senior basic science researchers. Eight (8) of these were presented by GPPS students. Keynote Speakers included: Steven Reed, Ph.D., Founder, President & Chief Scientific Officer of the Infectious Disease Research Institute; and Eugene Chang, M.D., Martin Boyer Professor, Department of Medicine, University of Chicago.

# GPPS PRESENTERS:

**<u>Select Student Presentation</u>: Raktima Bhattacharya,** Mohammad Rashedul Islam, Li Yang, Thomas Abbruscato, Ulrich Bickel. "Antibody Targeted Delivery of NFkB Decoys Protects Brain Endothelial Cells from Ischemia/Reperfusion Injury"

•Alejandra Fernandez and James Stoll. "Effects of voluntary running and a selective PPAR delta agonist on two acute seizure models"



 Anwar Hossain, Hardik Parikh, Nadezhda German. "Inactivation of P.aeruginosa virulence through PqsR pathway"

•Mohammad R Islam, Li Yang, Heidi Villalba, Victor Hruby, and Thomas J Abbruscato. "Biphalin-Fentanyl Multivalent Opioid Agonists as Potential Neuroprotectant for Ischemic Stroke"

•Nihar Kinarivala, Fadi Saadeh, Joelle Makoukji, Rose-Mary Boustany, and Paul C. Trippier. "Investigation of Flupirtine Structure-Activity Relationship for the Treatment of Batten Disease"



**-Shyanne Page**, Taylor Liles, Ronak Patel, Luca Cucillo, Abraham Al-Ahmad. "Effect of WNT/β-catenin and hypoxia inducible factor-1 on blood-brain barrier following hypoxic injury"

•Ronak Patel, Shyanne Page, Luca Cucullo, Abraham Al-Ahmad. "Hypoxia/ischemia induces barrier breakdown in human induced pluripotent stem cell-derived brain microvascular endothelial cells"

•Heidi Villalba, Kaushik Shah, and Thomas J. Abbruscato. "Expanding behavioral tests for ischemic stroke mouse models"

# Fourteenth Annual School of Pharmacy Research Days June 11-12, 2015

This year, a total of 169 faculty members, graduate students, post-doc's and residents converged to showcase their research at the Amarillo Civic Center Heritage Room in Amarillo, TX during the Fourteenth Annual SOP Research Days, held on Thursday, June 11th and Friday, June 12th.



The Keynote Speaker Thursday morning was Edward A. Neuwelt, M.D., from Oregon Health and Science University, and that afternoon was Barry W. Festoff, M.D., from the University of Kansas Medical Center. The Distinguished Speaker Thursday morning was Christopher R. Frei, **Pharm.D.**, from the University of Texas Health Science Center at San Antonio, TX. The Keynote Speaker for Friday morning was Kenneth Tew, Ph.D., D.Sc., from the Medical University of South Carolina. The Distinguished Speakers on Friday morning were: John Tallarico, Ph.D., from Novartis, and P. David Rogers, Pharm.D., Ph.D., from the University of Tennessee Health Science Center.



#### Podium presentations were given Thursday afternoon and Friday morning by selected individuals, and the annual dinner and social were held Thursday evening at the Amarillo Country Club. Posters were judged Thursday afternoon, and awards were presented Friday afternoon to complete the event. Six of our GPPS graduate students gained recognition and were awarded during the final ceremony. The TTUHSC Office of Sciences staff and the Research Advisory Committee hosted this event, which is a wonderful opportunity for researchers from all four campuses of the School of Pharmacy to come together and talk about research, building toward future collaborations and friendships.

# **Outstanding Poster Presentation Awards:**

# --> Junior Graduate Student Category:

•Md. Abul Kaisar, Shikha Prasad, Pooja Naik and Luca Cucullo. "Popular Antioxidant Supplements as a Preventive Measure of Cigarette Smoke-Induced BBB Damage: Myth or Fact?" Benard Ogola, Yong Zang, Laxmi Iver, and Thomas Thekkumkara. "Matrix Metallo-Proteinase 9 is Critical for 2-Methoxyestradiol Mediated Angiotensin Type 1 Receptor Down-Regulation"

# --> Senior Graduate Student Category:

•Neel Fofaria, Dennie T. Frederick, Ryan J. Sullivan, Keith T. Flaherty and Sanjay K. Srivastava. "Overexpression of Mcl-1 Confers Resistance to BRAFV600E Inhibitors Alone and in Combination with MEK1/2 Inhibitors in Melanoma"

•Neel Fofaria and Sanjay K. Srivastava. "Gli2 Induces Melanoma Tumor Growth and Progression" Sukesh Voruganti, Jiang-Jiang Qin, Sushanta Sarkar, Subhasree Nag, Ismail A Walbi, Shu Wang, Yuging Zhao, Wei Wang, Ruiwen Zhang. "Oral Nano-Delivery of Natural Anticancer Ginsenosides" •Sukesh Voruganti, Jiang-Jiang Qin, Wei Wang, Ruiwen Zhang. "Combination Therapy with Adv-RYBP and Chemotherapy in Lung Cancer"



•Amer S Alali, Xiaolei Wang, Xinli Liu. "Formulation of PLGA-PEG Nanoparticles and in vitro Characterization"

•Faleh Algahtani, Jee Hyun Park, Raktima Bhattacharya, Ulrich Bickel. "Isolation of Human Tumor Xenografts from Mouse Brain"

•Kito Barrow, Suni Tang, Yong Zhang, Cheng Jiang, Junxuan Lu. "Developing a Xenograft Model of Castration-Resistant Prostate Cancer"

•Debasish Basak, Kalkunte Srivenugopal. "Reactivation Of Mutant P53 Protein (R273H) in Human Cancers through Redox Perturbation and Thiol-Modification Using a Nontoxic Stabilized Homoglutathione Disulfide"

•Debasish Basak, Kalkunte Srivenugopal. "Piperlongumine Promotes the Conversion of Non-Functional P53 into its DNA-Bindable Functional Form through Thiol Modification" •Ahasanul Hasan, Wei Li and Fakhrul Ahsan. "PAH-Inflicted Pulmonary Arteries on-a-Chip to Screen Drugs and Model PAH Pathophysiology"



#### (SOP Research Days, continued from page 9)

•Anwar Hossain, Narsimha Sattenapally, Hardik I. Parikh, Nadezhda German. "Inactivation of P.Aeruginosa Virulence through PqsR Pathway"

 Tanvirul Hye, Hussaini Syed Sha Qhattal, Xinli Liu. "PEG and PS-80 Coated Lapatinib Nanoemulsion Prolong Overall Survival in Preclinical HER2-Positive Breast Cancer Brain Metastases Model"
 Laxmi Iyer, Benard Ogola and Thomas Thekkumkara. "Hyperglycemia Induced Cell Injury in Renal Proximal Tubule Cells"



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Nihar Kinarivala, Joelle Makoukji, Fadi Saadeh, Rose-Mary Boustany, Paul Trippier. "Design, Synthesis, and Structure-Activity Relationships of Flupirtine Derivatives for the Treatment of Neuronal Ceroid Lipofuscinosis"

•Nihar Kinarivala and Paul C. Trippier. "Chemoselective Hydrodechlorination of 2-Chloropyridines Derivatives"

•Hanumantha Rao Madala, K.S. Srivenugopal. "Functional Inactivation MGMT DNA Repair Protein Accompanies IDH1 Mutations in Human Cancer Cells"

•A.G.M. Mostofa, Hang-Ping Yao, and Ming-Hai Wang. "Natural Resistance to BMS-777607-Induced Polyploidy by Colorectal Cancer Cells with Retained Chemosensitivity in MET/RON Targeted Cancer Therapy"

•Jee Hyun Park, Faleh Alqahtani, Li Yang, Raktima Bhattacharya, Ulrich Bickel. "Development of a Preclinical Brain Metastases Model to Study the Therapeutic Effect of a T-Cell Receptor Mimic Monoclonal Antibody"

•Ronak Patel, Shyanne Page, Abraham Al-Ahmad. "Hypoxia/ischemia induces barrier breakdown in stem-cell derived human brain microvascular cell monolayers"

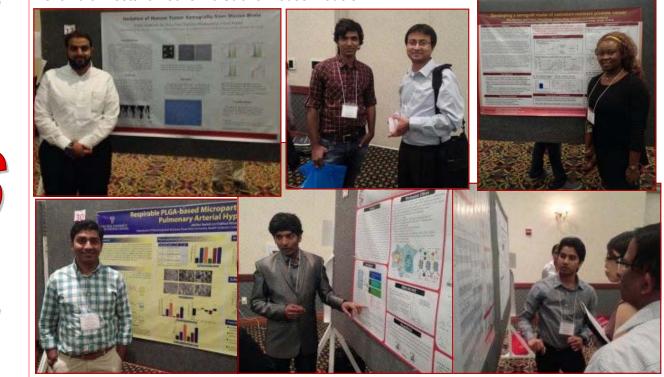
•Alok Ranjan and Sanjay K. Srivastava. "Penfluridol Induces Autophagy Mediated Cell Death in Pancreatic Cancer"

•Alok Ranjan, Parul Gupta and Sanjay K. Srivastava. "Penfluridol Suppresses Triple Negative Breast Cancer Metastasis to Brain by Inhibiting Integrin Signaling"

•Jahidur Rashid and Fakhrul Ahsan. "Respirable PLGA-Based Microparticles of Sildenafil for Pulmonary Arterial Hypertension"

•Kshitij Verma, Tianzhu Zhang, Trevor Penning, and Paul C. Trippier. "Synthesis and Antineoplastic Evaluation of Potent and Selective Inhibitors of AKR1C3"

•Heidi Villalba, Kaushik Shah and Thomas J. Abbruscato. "Cylinder Test and Wire-Hanging Test, Behavioral Tests for Ischemic Stroke Mouse Models"



#### SCHOOL OF PHARMACY **CELEBRATION OF ACHIEVEMENT** Honors for Students, Faculty & Staff



Nihar Kinarivala, GSAA Historian, presented Dr. Sanjay Srivastava with the "Graduate Mentor of the Year" award.



Kowser Miah was presented with the "Outstanding GSAA Student of the Year" award by Neel Fofaria.



Dr. Ulrich Bickel, Dr. Luca Cucullo, and Dr. Vardan Karamyan, were presented with the "Graduate Teaching Team of the Year (Physiology-Based Pharmacology)" award by GSAA President, Neel Fofaria. (Dr. Kalkunte Srivenugopal and Dr. Margaret Weis were also on the team.)

Special Recognition was given for First Author Publications to:

> Neel Fofaria Nihar Kinarivala Pooja Naik **Jahidur Rashid** Kshitij Verma



Graduate Student Association at Amarillo

Dr. James Stoll was presented with the "Graduate Teacher of the Year (Biochemistry)" award by Neel Fofaria.

# **AWARDS & SCHOLARSHIPS**

Neel Fofaria: Second Place Graduate Student Award, Carcinogenesis Specialty Section, Society of Toxicology; March 2015.

Neel Fofaria: Phonathon Scholarship, TTUHSC SGA Phonathon Committee, awarded Jan.2015. (to be applied graduating term).

Neel Fofaria: June C. Biedler (Bristol-Myers Squibb Oncology) Scholar-in-Training Award, American Association for Cancer Research (AACR); April 2015.

Neel Fofaria: Outstanding Poster Award, Senior Graduate Student Category, Fourteenth Annual SOP Research Days, TTUHSC, Amarillo, TX; June 2015.

**Neel Fofaria:** Mary Lou Clements-Mann Endowed Scholarship: August 2014.

Md. Rashedul Islam: Travel Award/Stipend from Amgen for AAPS-NBC, San Francisco, CA; June 2015. Md. Abul Kaisar: Outstanding Poster Award, Junior Graduate Student Category, Fourteenth Annual SOP Research Days 2015, TTUHSC Amarillo, TX; June 2015.

Pooja Naik: Graduate Student Best Abstract Award, Society of Toxicology, Association of Scientists of Indian Origin (SOT, ASIO), San Diego, CA; March 2015.

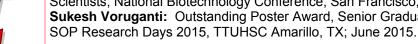
Benard Ogola: Outstanding Poster Award, Junior Graduate Student Category, Fourteenth Annual SOP Research Days 2015, TTUHSC Amarillo, TX; June 2015.

Alok Ranjan: Graduate Student Travel Support Award, Society of Toxicology, San Diego, CA; March 2015.

Alok Ranjan: 2015 Syngenta Fellowship Award in Human Health Application of New Technologies, Society of Toxicology, San Diego, CA; March 2015.

Alok Ranjan: Young Investigator Award, American Association of Indian Scientists in Cancer Research, American Association for Cancer Research Annual Meeting, Philadelphia, PA, April 2015.

Alok Ranjan: Travel Award/Stipend from Amgen for American Association of Pharmaceutical Scientists, National Biotechnology Conference, San Francisco, CA; June 2015. Sukesh Voruganti: Outstanding Poster Award, Senior Graduate Student Category, Fourteenth Annual



# Page 11

April 24, 2015

Award Ceremony

# **Page 12**



This year, the ten-week **2015 Amarillo Biomedical Research Internship** Included a new TTU Honors College program. Twelve ABRI interns and two TTU Honors students were working in various SOP labs in Amarillo, Abilene and Dallas. Significant presentations were given to both groups throughout the summer by SOP faculty and staff. The TTU Honors College program concluded with presentations

on Thursday, July 2nd. The ABRI program concluded a few weeks later on Friday, July 31st with podium presentations from each of the interns. The interns were presented awards after they enjoyed a luncheon with parents, faculty, graduate students and staff.

#### **ABRI interns:**

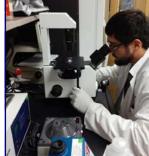
»Esther Bae ~ Dr. Margaret Weis, Biomedical Sciences
»Ben Cobb ~ Dr. Irene La-Beck, Immunotherapeutics and Biotechnology (Abilene)
»Christopher Cobos ~ Dr. Constantinos Mikelis, Biomedical Sciences
»Juan Guerrero ~ Dr. Paul Trippier, Pharmaceutical Sciences
»Jihye Hoe ~ Dr. Richard Leff, Pharmacy Practice (Dallas)
»Taylor Liles ~ Dr. Luca Cucullo, Pharmaceutical Sciences
»Ivan Marsic ~ Dr. Ruiwen Zhang, Pharmaceutical Sciences
»Alli Munsell ~ Dr. Abraham Al-Ahmad, Pharmaceutical Sciences
»Blake Schwettmann ~ Dr. Sanjay Srivastava, Biomedical

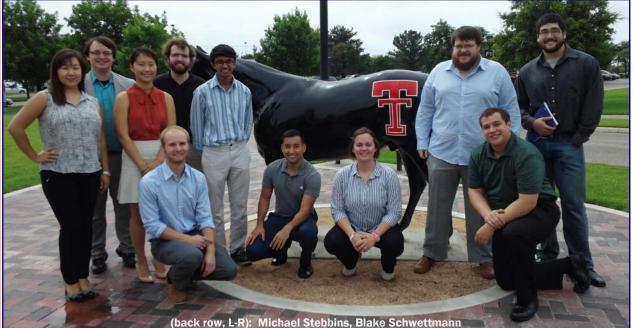
Sciences »Otis Scrivner ~ Dr. James Stoll, Biomedical Sciences »Michael Stebbins ~ Dr. Nadezhda German, Pharmaceutical Sciences

»Sanjay Venugopal ~ Dr. Ahsan, Pharmaceutical Sciences TTU Honors College interns:

»Kaeli Faires ~ Dr. Paul Trippier, Pharmaceutical Sciences
 »Kori Nau ~ Dr. Xinli Liu, Pharmaceutical Sciences







(back row, L-R): Michael Stebbins, Blake Schwettmann (2nd row, L-R): Jihye Hoe, Esther Bae, Sanjay Venugopal, Ottis Srivner, Christopher Cobos; (front row, L-R): Ivan Marsic, Juan Guerrero, Alli Munsell, Taylor Liles

2001 Vikas Agarwal, Ph.D. Director, New Product Development Taris Biomedical vagarwal@tarisbio.com

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2003 Paul Lockman, Ph.D. Professor and the Douglas D. Glover Endowed Chair Dept. Basic Pharm. Sci., SOP and the Assoc. Dir. for Translational Res. West Virginia University HSC Morgantown, WV prlockman@hsc.wvu.edu

#### 2004

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(Continued on page 14)









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\*For more detailed information on an alumni OR for any changes/ additions, please contact Teresa at Teresa.Carlisle@ttuhsc.edu.

# **GSAA BULLETIN BOARD**

#### GSAA Officers for 2015-2016:

President, **Jee Hyun Park**; Vice-President, **Heidi Villalba**; Treasurer, **Alok Ranjan**; Secretary, **Benard Ogola**; Student Senate Representative, **Laxmi Iyer**; Historian, **Nehal Gupta**; International Student Representative, **Hanumantha Rao Madala**.

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#### Social & Community Events Planned for F'15:

\*September — Picnic; Habitat for Humanity (Volunteer) \*October — Fall Pumpkin Carving; AHA Heart Walk \*November — Bowling; JDRF Walk \*December — Holiday Party

#### GPPS students participated Sp'15 in:

\*March of Dimes, March for Babies \*The Color Run, Shine Tour 2015



2015-2016 Officers of the Amarillo AAPS Chapter Chair - Jahidur Rashid Chair-Elect - Alok Ranjan Vice-Chair - Md. Abul Kaisar Treas./Sec. - Sushanta Sarkar





