# A COMISTON Official Newsletter for the

Graduate Program in Pharmaceutical Sciences
Texas Tech University Health Sciences Center
Amarillo, Texas



# Spring 2020 Issue 25

#### **UPDATE FROM DR. ABBRUSCATO**

This past fall, Thamer Albekairi, Anwar Hossain, Ali Sifat, and Sreedhar Reddy Suthe each defended their Ph.D. doctoral dissertation. We anticipate great success for each of our fall graduates as they begin their new careers in pharmaceutical sciences!

Two new GPPS students, Prapanna Bhattarai and Sejal Sharma, joined us on our Amarillo campus this spring. Prapanna is currently on rotation in Dr. Ulrich Bickel's lab,

and Sejal has joined the Abbruscato research group. We trust that both of our new students will have a solid academic and research experience in the GPPS.

Other things to note, during our GPPS Seminar Series this fall, Elizabeth "Beth" Daugherity, a Ph.D. student and research assistant from the Abilene campus, gave an extra "Guest Student Speaker" talk on, "Lymphangioleiomyomatosis (LAM): The Mystery Uncovered". Beth shared about her personal, firsthand experiences with LAM. She shared how new breakthroughs in research science and successful medical treatments saved her life, and eventually inspired her to study and prepare for pharmaceutical research herself. I know that everyone agrees that Beth's talk was encouraging and a testament to the impact of her science.

Kudos, also, to Ali Keshavarz for winning a "Best Poster Award" at this year's American Association of Pharmaceutical Scientists "PharmSci360" meeting in November. He was one of only three recipients this year, out of more than 6,000 attendees, and he was the first of our GPPS students to receive this award.

We are also very proud that Dr. Constantinos Mikelis was recognized as the "GSBS Outstanding Teacher of the Year" and as the "Graduate Faculty Mentor of the Year". His dedication to graduate student mentoring and education is highly valued by graduate students and faculty alike.

#### GPPS OFFICE - TTUHSC School of Pharmacy, Suite 217; FAX 356-4021

Dr. Tom Abbruscato, Associate Dean, GSBS; Chair/Professor, Pharmaceutical Sciences; Interim Graduate Program Advisor: 414-9234 Teresa Carlisle, Graduate Program Coordinator: 414-9329 Susan King, Graduate Student Advisor: 414-9330

The Agonist is published every fall and spring semester by the Graduate Program in Pharmaceutical Sciences (GPPS). For updates and new information, e-mail Susan at <a href="mailto:susan.king@ttuhsc.edu">susan.king@ttuhsc.edu</a>.

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## **FALL 2019 GRADUATES**



Ali Ehsan Sifat, Ph.D. Lab of Dr. Thomas Abbruscato

**Dissertation Presented** September 30, 2019

"Effects of nicotine and electronic cigarette exposure on brain glucose utilization and injury outcome in adult and neonatal cerebral ischemia"



Md. Anwar Hossain, Ph.D. Lab of Dr. Nadezhda German

**Dissertation Presented** October 7, 2019

"Design, synthesis, and invitro evaluation of molecular probes to inhibit quorum sensing of P. aeruginosa"

-/ANDI~

"Discovery of small-molecule ligands for kappa-opioid receptor"



**Dissertation Presented** October 11, 2019

"Antibody-Drug-Conjugate Targeting RON Receptor Tyrosine Kinase as a Novel Therapeutic Approach for Eradication of Triple-Negative Breast Cancer Cells and Associated Cancer Stem-Like Cells"



Thamer Albekairi, Ph.D. Lab of Dr. Thomas Abbruscato

**Dissertation Presented** October 18, 2019

"Contrasting Effects of Tannic Acid on Angiotensin Type 1 Receptor and Low-Density Lipoprotein Receptor: A Mechanistic Insight into French Paradox"



# SPRING 2020 DISSERTATION DEFENSES

#### Md. Yousuf Ali

Doctoral Dissertation Defense Lab of Dr. Margaret Weis Friday, January 24, 2020, 12:30pm AMA SOP 335 / ABSOP 1130

#### Ali Keshavarz

Doctoral Dissertation Defense Lab of Dr. Fakhrul Ahsan Friday, March 2, 2020, 12:00pm AMA SOP 107 / ABSOP 1200

#### Ekram Chowdhury

Doctoral Dissertation Defense Lab of Dr. Ulrich Bickel Friday, March 6, 2020, 12:30pm AMA SOP 107 / ABSOP 1130

#### Faisal Alamri

Doctoral Dissertation Defense Lab of Dr. Vardan Karamyan Friday, March 9, 2020, 12:00pm AMA PAC 1110 / ABSOP 1130

#### **Ahmed Alobaida**

Doctoral Dissertation Defense Lab of Dr. Fakhrul Ahsan Friday, March 27, 2020, 12:30pm ZOOM

### **NEW STUDENTS — SPRING 2020**





#### Prapanna Bhattarai, MS

Southern Illinois University Edwardsville, Illinois Lab: Dr. Ulrich Bickel

#### Sejal Sharma, PharmD

Rajiv Gandhi University of Health Sciences Karnataka, India Lab: Dr. Thomas Abbruscato









**Graduate Program in Pharmaceutical Sciences Class of 2019-2020** 

# •

### WiSE — Women in Science Endeavors by Yoon Jung Lee

Women in Science Endeavors (WiSE) is a yearly conference in the fields of science, technology, engineering, and mathematics (STEM) for middle-school girls (6th-8th grades) in the Amarillo area. Girls participate in hands-on experiments and demonstrations led by women who work in these disciplines. The goal of the conference is to encourage girls to consider and pursue careers in STEM fields. This year's conference, titled "STEM Always in style," was held on November 9th, 2019, on the campus of Amarillo College. TTUHSC graduate student Yoon Jung Lee joined pharmacy students Tabitha Thompson and Danielle Callaway to lead a workshop entitled 'Lip Balm Activity' in which the girls made personalized lip balm with different flavors and glitters to apply compounding techniques to everyday applications. Moreover, graduate students Sarah Anderson and Fatema Zahra led a workshop entitled "Strawberry DNA Activity," an activity about molecular biology, in which girls extracted DNA from strawberries.













Yoon gives instructions for 6th-8th graders.











#### **GRADUATE STUDENT SEMINAR PROGRAM - FALL 2019**

**08/16/19** — Yoon Jung Lee—"Physical Activity Affects Seizure Threshold in a Corneal Kindling"

**08/23/19 — Md. Ashraf-Uz-Zaman** — "Studies on novel urea-based anticancer agents"

**08/30/19** — Ali Keshavarz — "Circulating Endothelial Cells (CEC's) as Diagnostic and Prognostic Markers for Pulmonary Arterial Hypertension (PAH): a Proof of Concept Study in PAH Patients"

**08/30/19 — Md. Sanaullah Sajib** — "Mechanistic insights into endothelial RhoA signaling during cancer metastasis"

**09/06/19** — **Ahmed Alobaida** — "Repurposing of artesunate, an anti-malarial drug, as an inhaled formulation for the treatment of PAH"

**09/06/19** — Ekram Chowdhury — "The brain uptake kinetics of markers with low passive permeability: Novel insights from studies with [ $^{13}C_{12}$ ] Sucrose"

**09/13/19** — Kumari "Iti" Kaushik, *Oral Qualifying Exam* — "Moxidectin, a novel therapeutic candidate for pediatric medulloblastoma"

**09/20/19 — Sarah Anderson**, *Oral Qualifying Exam* — "Mechanisms of Dysbiosis Relief by Stem Cells in DSS-Induced Colitis"

**09/20/19** — Saeideh Nozohouri, Oral Qualifying Exam — "Evaluating the effect of Neurolysis activators on cerebral edema formation in ischemic stroke"

**09/27/19** — GPPS Student Guest Speaker: Elizabeth "Beth" Daugherity, B.S. Chemistry, Graduate Student/Research Assistant, Dept. of Immunology & Biotechnology, TTUHSC GSBS/GPPS, Abilene — "Lymphangioleiomyomatosis: The Mystery Uncovered"

**09/30/19** — **Ali Sifat**, *Doctoral Dissertation Defense* — "Effects of nicotine and electronic cigarette exposure on brain glucose utilization and injury outcome in adult and neonatal cerebral ischemia"

**10/07/19** — Md. Anwar Hossain, *Doctoral Dissertation Defense* — "Design, synthesis, and in-vitro evaluation of molecular probes to inhibit quorum sensing of P.aeruginosa" ....*AND*...

— "Discovery of small-molecule ligands for kappaopioid receptor"

10/11/19 — Sreedhar Reddy Suthe, Doctoral Dissertaton Defense — "Antibody-Drug-Conjugate Targeting RON Receptor Tyrosine Kinase as a Novel Therapeutic Approach for Eradication of Triple-Negative Breast Cancer Cells and Associated Cancer Stem-Like Cells"

**10/18/19 — Thamer Albekairi**, *Doctoral Dissertation Defense* — "Ischemic Brain Transport and Cerebrovascular Protective Properties of a Potent Opioid Receptor Agonist, Biphalin"

**10/25/19** — Behnaz Lahooti, *Oral Qualifying Exam* — "Investigating the role of OLT1177 as a neuroprotecting agent against HIV-1 and drugabuse associated neuroinflammation"

**10/25/19** — Fatema Zahra — "Targeting endothelial RhoA in angiogenesis: overcoming current antiangiogenic pitfalls"

**11/01/19** — Hossam Abdelrahman, *Oral Qualifying Exam* — "Three-dimensional (3D)-printed dosage forms for pediatric patients with pulmonary hypertension"

11/01/19 — Derek Barthels, Oral Qualifying Exam — "Determination of hypoxia-primed dental-pulp stem cells for the treatment of spinal cord injury"

**11/08/19 — Carl "Joey" Greene**, *Oral Qualifying Exam* — "Mesenchymal stem cells (MSC)/Dental-pulp stem cells (DPSC) secretory products for treating chronic wounds in a preclinical model"

**11/15/19** — Behnam Noorani, *Oral Qualifying Exam* — "Evaluation of barrier function and transport study of a 3D bio-printed in-vitro model of human iPSC-derived blood-brain barrier microvessels"

**11/22/19 — Farzane Sivandzade** — "Anti-Diabetic Countermeasures against Tobacco-Smoke-Dependent Cerebrovascular Toxicity: In-Vivo Use and Effect of Rosiglitazone"

**11/30/18 - Ekram Chowdhury** - "Isoflurane anesthesia may increase the permeability of the bloodbrain barrier by acting on membrane lipids"

**12/06/19** — Faisal Alamri — "Dose-Dependent Atomoxetine or Fluoxetine Treatment with Low-Duration Voluntary Running Facilitates Recovery of the Motor Function after Photothrombotic Stroke in Mice"

**12/06/19** — Snehal Raut — "Assessing the impact of Alzheimer's disease at the blood-brain barrier (BBB) in vitro using induced pluripotent stem cells (iPSCs)"

"Kindness is a language which the deaf can hear and the blind can see." ~ Samuel L. Clemens ~ (aka Mark Twain)















#### **PUBLICATIONS**

deficit in the mouse f middle cerebral arter Behav Brain Res. 20 2019 Dec 5. ≈Albekairi TH, Vaid Villalba H, Zhang Y,

≈Syeara N, Alamri FF, Jayaraman S, Lee P, Karamyan ST, Arumugam TV, Karamyan VT. Motor deficit in the mouse ferric chloride-induced distal middle cerebral artery occlusion model of stroke. Behav Brain Res. 2020 Feb 17; 380:112418. Epub 2019 Dec 5.

≈Albekairi TH, Vaidya B, Patel R, Nozohouri S, Villalba H, Zhang Y, Lee YS, Al-Ahmad A, Abbruscato TJ. Brain Delivery of a Potent Opioid Receptor Agonist, Biphalin during Ischemic Stroke: Role of Organic Anion Transporting Polypeptide (OATP). Pharmaceutics. 2019 Sep 10;11(9). pii: E467.

**≈Archie SR, Cucullo L**. Harmful Effects of Smoking Cannabis: A Cerebrovascular and Neurological Perspective. *Front. Pharmacol.* 2019 Dec 06;10:1481. [Review Article]

**≈Bagchi S, Chhibber T, Lahooti B,** Verma A, Borse V, Jayant RD. In-vitro blood-brain barrier models for drug screening and permeation studies: An overview. *Drug Des Devel Ther.* 2019 Oct 18;13:3591-3605.

**≈Bhalerao A**, **Sivandzade F**, **Archie SR**, Cucullo L. Public Health Policies on E-Cigarettes. *Int J Mol Sci.* 2019 Aug 29;20(17). pii: E4225.

**≈Chhibber T, Bagchi S, Lahooti B**, Verma A, Al-Ahmad A, Paul MK, Pendyala G, Jayant RD. CNS organoids: An innovative tool for neurological disease modeling and drug neurotoxicity screening. *Drug Discov Today.* 2019 Nov 26. pii: S1359-6446(19)30452-0. [Epub ahead of print]

**≈Chhibber T**, Gondil VS, Sinha VR. Development of Chitosan-Based Hydrogel Containing Antibiofilm Agents for the Treatment of Staphylococcus Aureus-Infected Burn Wound in Mice. *AAPS PharmSciTech*. 2020 Jan 2;21(2):43.

≈Patel J, Chowdhury EA, Noorani B, Bickel U, Huang J. Isoflurane increases cell membrane fluidity significantly at clinical concentrations. *Biochim Biophys Acta Biomembr.* 2020 Feb 1;1862 (2):183140. Epub 2019 Nov 29.

≈PS.Krishnamoorthy, S Wadnap, **B Noorani**, H Xu, C Xu. Investigation of gelatin methacrylate working curves in dynamic optical projection stereolithography of vascular-like construct. *European Polymer Journal*. 2020 Feb 5;124(109487):1-9. Epub 2020 Jan 7.

≈Krishnamoorthy S, **Noorani B**, Xu C. Effects of Encapsulated Cells on the Physical-Mechanical Properties and Microstructure of Gelatin Methacrylate Hydrogels. *Int J Mol Sci.* 2019 Oct 12;20(20). pii: E5061.

**≈Saeideh Nozohouri**, **Ali Ehsan Sifat**, Bhuvaneshwar Vaidya, Thomas J. Abbruscato. Novel approaches for the delivery of therapeutics in ischemic stroke. *Drug Discov Today*. 2020 Jan 21. pii: S1359-6446(20)30033-7. [Epub ahead of print] Review.

≈Ranjan A, Ramachandran S, Gupta N, Kaushik I, Wright S, Srivastava S, Das H, Srivastava S, Prasad S, Srivastava SK. Role of Phytochemicals in Cancer Prevention. *Int J Mol Sci.* 2019 Oct 9;20 (20). pii: E4981. Review.

≈Jayaraman S, Al Shoyaib A, Kocot J, Villalba H, Alamri FF, Rashid M, Wangler NJ, Chowdhury EA, German N, Arumugam TV, Abbruscato TJ, Karamyan VT. Peptidase neurolysin functions to preserve the brain after ischemic stroke in male mice. *J Neurochem*. 2019 Sep 5. [Epub ahead of print]

≈Al Shoyaib A, Archie SR, Karamyan VT.
Intraperitoneal Route of Drug Administration:
Should It Be Used in Experimental Animal Studies?
Pharm Res. 2019 Dec 23;37(1):12.

**≈**Sifat AE, Nozohouri S, Villalba H, Al Shoyaib A, Vaidya B, Karamyan VT, Abbruscato T. Prenatal electronic cigarette exposure decreases brain glucose utilization and worsens outcome in offspring hypoxic-ischemic brain injury. *J Neurochem.* 2019 Dec 28:e14947. [Epub ahead of print]

**≈Sivandzade F**, Cucullo L. Anti-Diabetic Countermeasures Against Tobacco Smoke-Dependent Cerebrovascular Toxicity: Use and Effect of Rosiglitazone. *Int J Mol Sci.* 2019 Aug 29;20(17). pii: E4225.

**≈Zahra FT, Sajib MS**, Ichiyama Y, **Akwii RG**, Tullar PE, Cobos C, Minchew SA, Doçi CL, Zheng Y, Kubota Y, Gutkind JS, Mikelis CM. Endothelial RhoA GTPase is essential for in-vitro endothelial functions but dispensable for physiological in vivo angiogenesis. *Sci Rep.* 2019 Aug 12;9 (1):11666.



Einstein was once asked how it felt to be the smartest man alive. Einstein's reply was, "I don't know, you'll have to ask Nikola Tesla."





# **AWARDS & SCHOLARSHIPS**

#### Sounak Bagchi:

Milton "Buff" Morris Scholarship, Opportunity Plan Educational Loans and Scholarships, Fall 2019.

#### **Ekram Chowdhurv:**

- Mary Lou Clements-Mann Scholarship, TTUHSC Graduate School of Biomedical Sciences (GSBS), Fall 2019.
- Best Abstract Award f[titled "In Vitro Characterization and Targeted Delivery of Hydroxyethyl Starch-Polyethyleneimine Based Polyplexes Using a Transferrin Receptor Antibody (8D3)"1, American Association of Pharmaceutical Scientists, PharmSci360, San Antonio, TX; November 2019.
- Best Abstract Award [titled "In-Vitro and In-Vivo Interpretations of Effect of Isoflurane Anesthesia on Membrane Lipids of Blood-Brain Barrier: Potential Clinical Implications", American Association of Pharmaceutical Scientists, PharmSci360, San Antonio, TX; November 2019.
- Graduate Student Association in Amarillo (GSAA) Best Seminar Award for Fall 2019.

#### Md. Anwar Hossain:

 Mary Lou Clements-Mann Scholarship, TTUHSC Graduate School of Biomedical Sciences (GSBS), Fall 2019.

#### Kumari Itishree "Iti" Kaushik:

 Mary Lou Clements-Mann Scholarship, TTUHSC Graduate School of Biomedical Sciences (GSBS). Fall 2019.

#### Ali Keshavarz:

- American Association of Pharmaceutical Scientists Travelship (sponsored by Pfizer), AAPS PharmSci360, San Antonio, TX; November 2019.
- Best Poster Award [titled "Circulating Endothelial Cells (CECs) as a Diagnostic and Prognostic Marker for Pulmonary Arterial Hypertension (PAH): A Proof of Concept Study in PAH Patients", American Association of Pharmaceutical Scientists, PharmSci360, San Antonio, TX; November 2019.

#### **Behnaz Lahooti:**

- American Association of Pharmaceutical Scientists (AAPS) Best Abstract Award, AAPS PharmSci360. San Antonio. TX: November 2019.
- American Association of Pharmaceutical Scientists (AAPS) / AstraZeneca Travel Reimbursement, AAPS PharmSci360, San Antonio, TX; November 2019.

#### Yoon Jung Lee:

 Phonathon Scholarship, TTUHSC Student Government Association (SGA), selected February 2019, to be applied graduating term {Sp/Sum'20}...

#### **Snehal Raut:**

- American Association of Pharmaceutical Scientists (AAPS) Best Poster Award, AAPS PharmSci360, San Antonio, November 2019.
- Cayman Chemical Travel Award. American Association of Pharmaceutical Scientists (AAPS) PharmSci360, San Antonio, TX; November 2019.
- Agilent Technologies, Seahorse Travel Award, American Association of Pharmaceutical Scientists (AAPS) PharmSci360, San Antonio, TX; November 2019.

#### Md. Sanaullah Sajib:

Graduate Student Association in Amarillo (GSAA) Best Seminar Award for Fall 2019.

#### Ali Ehsan Sifat:

- Dean's Scholars Award 2019, TTUHSC Graduate School of Biomedical Scientists (applied every year until graduation).
- Best Abstract Award, American Association of Pharmaceutical Scientists (AAPS) PharmSci 360, San Antonio, TX; November 2019.

#### Fatema Tuz Zahra:

- Mary Lou Clements-Mann Scholarship, TTUHSC Graduate School of Biomedical Sciences, Fall 2019.
- Poster Award [titled "Role of small GTPase RhoA in basic fibroblast growth factor (bFGF)-induced angiogenesis"], Gordon Research Seminar, Angiogenesis, Newport, RI; August 2019.













#### **CONFERENCE PRESENTATIONS**



Novartis Quantitative Sciences ~ Academia-to-Industry Hackathon Cambridge, MA ~ Aug. 12-23, 2019

**Ekram Ahmed Chowdhury**, Faleh Alqahtani, Behnam Noorani, Md Sanaullah Sajib, Constantinos M Mikelis, Reza Mehvar, Ulrich Bickel. "Blood-brain barrier permeability of [<sup>13</sup>C]sucrose in young adult and aged mice"

Abilene Research Symposium
TTUHSC School of Public Health, Abilene, TX ~ Oct. 11, 2019

Philadelphia



**YoonJung Lee**, Alejandra Fernandez, James Stoll. "The anticonvulsant effect of physical activity differs between sexes in the mouse corneal kindling model"



Biomedical Engineering Society Philadelphia, PA ~ Oct. 16-19, 2019

**Ali Keshavarz**, Wei Li, Fakhrul Ahsan. "A Two-Compartment Tissue-Chip to Recapitulate the Right Ventricle and Pulmonary Artery as a Single Functional Unit for Studying PAH-Induced RVH and to Optimize PAH Therapy" [**Podium Presentation**]

#### Society for Neuroscience Chicago, IL ~ Oct. 19-23, 2019



**Yousuf Ali**, Margaret Teresa Weis. "Inhibition of Long-Chain Fatty Acyl CoA Synthetase Modulates Inducible Nitric Oxide Synthase Expression"

**Mohammad Anwar Hossain**, Guangchen Ji, Thomas J. Abbruscato, Volker Neugebauer, Nadezhda A. German. "Development of selective kappa opioid receptor antagonists for the treatment of chronic neuropathic pain"

**Ali Ehsan Sifat**, Saeideh Nozohouri, Heidi Villalba, Bhuvaneshwar Vaidya, Thomas Abbruscato. "Maternal Electronic Cigarette Use Can Cause Cognitive Dysfunction Offspring & Increased Sensitivity to Hypoxic-Ischemic Brain Injury"



National Institutes of Health (NIH)
Tobacco Regulatory Science (TRS) Meeting
Bethesda, MD ~ Oct. 21-23, 2019

**Aditya Bhalerao**, Luca Cucullo. "Tobacco Smoke and HIV-1 gp120-Induced Toxicity – Implications for Blood-Brain Barrier Integrity"



#### Society for Immunotherapy of Cancer [SITC] Gaylord, MD ~ Nov. 6-10, 2019

Sreedhar Reddy Suthe, Hang-Ping Yao, Xiang-Ming Tong, and Ming-Hai Wang, "RON Receptor Tyrosine Kinase as a Critical Contributor in Canada Stampage and a Target of Antib



Critical Contributor in Cancer Stemness and a Target of Antibody-Drug Conjugates for Eradication of Triple-Negative Breast Cancer (TNBC)"





Lone Star Regional Chapter of the Society of Toxicology Galveston, TX ~ Nov. 14-15, 2019

**Md Ashraf-Uz-Zaman**, Md Sanaullah Sajib, Karina Alvina, Mirla Avila, Guangchen Ji, Volker Neugebauer, Constantinos M. Mikelis, Nadezhda A. German. "Discovery, structure-activity relationship study, and in vivo evaluation of novel series of mono-amine transporter inhibitors" [**Oral Presentation**]



#### CONFERENCE PRESENTATIONS



#### American Association of Pharmaceutical Scientists, PharmSci360 San Antonio, TX ~ Nov. 3-6, 2019

**Albekairi T**, Vaidya B, Nozohouri S, Villalba H, Zhang Y, Abbruscato T. "Blood-Brain Barrier Protective Properties of a Potent Opioid Receptor Agonist, Biphalin, During Stroke"

**Md. Yousuf Ali**, Margaret Teresa Weis. "Inhibition of Long-Chain Fatty Acyl CoA Synthetase Modulates Inducible Nitric Oxide Synthase Expression"

**Ahmed Alobaida**, Fakhrul Ahsan. "Repurposing artesunate, an anti-malarial drug, as an inhaled formulation for the treatment of pulmonary arterial hypertension"

**Md Ashraf-Uz-Zaman**, Md Sanaullah Sajib, Wei Wang, Ruiwen Zhang, Constantinos M. Mikelis, Nadezhda A. German. "Discovery of novel compounds to treat metastatic triple-negative breast cancer"

**A. Bhalerao** and L. Cucullo. "Tobacco Smoke and HIV-1 gp120 Induced Toxicity – Implications for Blood Brain Barrier Integrity"

**Ekram Ahmed Chowdhury**, Faleh Alqahtani, Behnam Noorani, Jigesh Patel, Juyang Huang, Ulrich Bickel. "In-Vitro and In-Vivo Interpretations of Effect of Isoflurane Anesthesia on Membrane Lipids of Blood-Brain Barrier: Potential Clinical Implications"

**Ekram Ahmed Chowdhury**, Franz Hack, Behnam Noorani, Dagmar Fischer, Ulrich Bickel. "Targeted Delivery of Hydroxyethyl Starch-Polyethyleneimine-Based Polyplexes Using 8D3 Antibody" ["Rapid Fire" Oral Presentation]

**Mohammad Anwar Hossain**, Wei Li, Kendra Rumbaugh, Nadezhda A. German. "Design and Synthesis of Dual-Acting Quorum Sensing Inhibitors to Suppress the Virulence Program of Pseudomonas Aeruginosa"

**Ali Keshavarz**, Wei Li, Fakhrul Ahsan. "Circulating endothelial cells (CECs) as a diagnostic and prognostic marker for pulmonary arterial hypertension (PAH): A proof of concept study in PAH patients" ["Rapid Fire" Oral Presentation]

**Lahooti Behnaz** and Rahul Dev Jayant. "High Throughput Technique for Developing Non-Viral Nanoparticles for Gene Delivery"

**Yoon Jung Lee**, Alejandra Fernandez, James Stoll. "The Anticonvulsant Effect of Physical Activity Differs Between Sexes in the Mouse Corneal Kindling Model"

**Behnam Noorani**, Ekram Ahmed Chowdhury, Faleh Alqahtani, Dhavalkumar Patel, Reza Mehvar, Ulrich Bickel. "Development of a LC-MS/MS-based method for the simultaneous use of mannitol and sucrose as markers of blood-brain barrier integrity"

**Snehal Raut**, Ronak Patel, Abraham Al-Ahmad. "Effect of Presenillin (PS) Mutations on the Blood-Brain Barrier Function In Vitro Using Patient-Derived Induced Pluripotent Stem Cells"

**Md Sanaullah Sajib**, Fatema Tuz Zahra, Jee Hyun Park, Paul E. Tullar, Sanjay K. Srivastava, Ulrich Bickel, Constantinos M. Mikelis. "Inhibition of Endothelial RhoA-ROCK pathway blocks cancer Metastasis"

**Abdullah Al Shoyaib**, Faisal F. Alamri, Nausheen Syeara, Srinidhi Jayaraman, Serob Karamyan, Thiruma V. Arumugam, Vardan T. Karamyan. "Repurposing Panobinostat and Entinostat in Combination with Exercise for Motor Function Recovery after Ischemic Stroke in Mice"

**Ali Ehsan Sifat**, Saeideh Nozohouri, Heidi Villalba, Bhuvaneshwar Vaidya, Thomas Abbruscato. "Evaluating the Neurotoxic Effects of Prenatal Electronic Cigarette Exposure on Offspring Using In-Vitro & In-Vivo Models"

**Farzane Sivandzade**, Luca Cucullo. "Anti-Diabetic Countermeasures Against Tobacco Smoke-Dependent Cerebrovascular Toxicity: Use and Effect of Rosiglitazone"

**Sreedhar Reddy Suthe**, Hang-Ping Yao, Xiang-Ming Tong, and Ming-Hai Wang, "RON Receptor Tyrosine Kinase as a Critical Contributor in Cancer Stemness and a Target of Antibody-Drug Conjugates for Eradication of Triple-Negative Breast Cancer (TNBC)"















2019 AAPS ANNUAL TTUHSC JERRY H. HODGE SCHOOL OF PHARMACY ALUMNI & FRIENDS RECEPTION November 5 ~ 5:30-7:30 PM ~ Grand Hyatt, San Antonio, TX

















L-R: Drs. Quentin Smith and David Allen



L-R: Drs. David Allen, Thomas Abbruscato, Vamshi Manda, Quentin Smith, and Mohammad Nutan



L-R: Drs. Rajareddy Kallem, Rahul Dev Jayant, Bhuvaneshwar Vaidya, Fakhrul Ahsan, Amit Rawat, and Vivek Gupta



L-R: Dr. David Smith and his wife (from the University of Michigan) with Dr. Thomas Abbruscato



L-R: Md. Yousuf Ali, Yoon Jung Lee, Md. Ashra-Uz-Zaman, Sreedhar Reddy Suthe, Guanyu Tao, Md. Sanaullah Sajib, Teresa Carlisle, Ali Ehsan Sifat













## **Student Research Week**

Now in its 32nd year, Student Research Week (SRW) is the annual celebration of our outstanding TTUHSC student research. SRW is organized by the Graduate Student Association (GSA) of the Graduate School of Biomedical Sciences, and consists of keynote addresses, student presentations, poster competition for students, a fundraising banquet, and a vendor show. This provides an opportunity for students from the GSBS, the School of Medicine, the School of Nursing, the TTU campus, the Abilene and Amarillo campus, and colleges from New Mexico and the local area to present and explore new research, and to foster interactions between students and faculty. SRW is one of the largest events at TTUHSC, and includes over 300 participants. Although the event has a biomedical theme, the poster sessions are open to all biological research areas. Judges evaluate a given hypothesis and the methods used to research that hypothesis, as well as the ability to clearly present original ideas. The theme for this year's SRW was "20/20 Visions of Biochemistry", scheduled for March 10-13, 2020.

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#### **Keynote Speakers:**

- \* Ernest M. Wright, D.Sc., Professor of Physiology, Brain Research Institute, UCLA
- \* Vadivel Ganapathy, Ph.D., Professor/Chair, Dept. of Cell Biology & Biochemistry, TTUHSC School of Medicine, Lubbock

Meeting

## SPRING CONFERENCES





Check websites for updates on virtual or rescheduled meetings.



















#### 2001

**Vikas Agarwal, Ph.D.** CIMA Labs Brooklyn Park, MN

# Sivakumar Vaithiyalingam, Ph.D.

Review Chemist/Staff Fellow Division of Chemistry OPS/CDER/FDA Rockville, MD

#### 2002

Sami Nazzal, Ph.D. Professor TTUHSC SOP Dept. of Pharm. Sci. Dallas, TX

#### 2003

Paul Lockman, Ph.D.

Professor, Benedum Fellow and the Mylan Endowed Chair Asst. Vice President of Experimental Therapeutics Senior Associate Dean of Research and Strategic Initiatives, School of Pharmacy West Virginia University HSC Morgantown, WV

#### 2004

**Fatima Mustafa, M.S., R.Ph.** Rite Aid State College, PA

# Anitha Palamakula, Ph.D., R.Ph.

CDER/FDA Rockville, MD

#### Rakhi Shah, Ph.D.

Silver Springs, MD

#### Mohammad Nutan, Ph.D.

Associate Professor Dept. of Pharm. Sci. Rangel College of Pharmacy Texas A&M HSC Kingsville, Texas

#### 2005

# Anjaneya Chimalakonda, Ph.D.

Bristol-Myers Squibb Co. Pennington, NJ

## Ragini Vuppugalla, Ph.D.

Bristol-Myers Squibb Princeton , NJ

#### Alamdar Hussain, Ph.D.

Dept. of Basic Pharm. Sci. College of Pharmacy University of Oklahoma Oklahoma City, OK

# Haritha Mandula, Ph.D.

Derwood, MD

#### ALUMNIDIRECTORY

# Jagan Mohan Parepally, Ph.D.

FDA Derwood, MD

#### 2006

Young Tag Ko, Ph.D.

Gwangju Inst. of Science & Tech. Gwangju, South Korea

## Nusrat Motlekar, Ph.D.

FDA Silver Springs, MD

#### Vaughan Wittman, Ph.D.

Director, Immunoassay Dev. Sanofi Pasteur VaxDesign Corp. Orlando, FL

#### Joachim Hartman, Ph.D.

Senior Manager CMC Dossier Leadership Biopharma Business of Merck Darmstadt, Hessen, Germany

#### Celee Spidel, Ph.D.

Clinical Liaison Executive Clearvyuh Amarillo, TX

#### Julie Gaasch Lockman, Ph.D.

Associate Professor, West Virginia University School of Medicine, Director of Faculty Affairs and Academic Initiatives, WVUHSC, Director of Scientific Dev., West Virginia Clinical & Translational Science Institute Morgantown, WV

#### Cornelia Kiewert, Ph.D

Stiftslinikum Mittelrhein gGmbH Klobenz, Germany

#### 2007

# Chaitanya Chimalakonda, M.S.

CDER/FDA Maryland

# Jennifer Paulson, Ph.D., Pharm.D.

Target Pharmacy Amarillo, Texas

#### 2008

#### James Egbert, M.S. Sequencing Specialist

Roche Sequencing Philadelphia, PA

#### Jiukuan Hao, Ph.D.

Dept. of Pharm. Sci. Winkle College of Pharmacy Cincinnati, OH

#### Shuhua Bai, Ph.D.

Associate Professor Dept. of Basic Pharm. Sci. School of Pharmacy Husson University Bangor, ME

#### Fancy Thomas, Ph.D.

Prescient Life Sciences Bengaluru, Karnataka, India

#### Sharanya Vemula, Ph.D.

Clinical Research/Med. Dept. Fresenius Medical Care North America Boston, MA

#### 2009

#### Katie Bennett, Ph.D.

Associate Professor TTUHSC, Mol. Pathology and Clinical Lab. Sciences Prog. Lubbock, TX

#### Chandan Thomas, Ph.D.

Chemist FDA Silver Spring, MD

#### Lloyd Alfonso, Ph.D.

Associate Professor D'Youville College School of Pharmacy Pharmaceutical Sciences Buffalo, NY

#### Nikhil Vad. Ph.D.

Scienitist II Atreca, Inc. San Francisco Bay Area

#### Imam Shaik, Ph.D.

Postdoctoral Associate Dept. of Pharm. Sci. University of Pittsburgh SOP Pittsburgh, PA

#### 2010

#### Erika Wisdom, M.S.

Deputy Assistant Manager for Nuclear Safety, Eng., & Readiness Department of Energy National Nuclear Sec. Admin. Los Álamos Field Office

# Los Alamos, NM Sunny Guin, Ph.D.

Principal Scientist Translational Medicine Sema4 Stamford, CT

#### Vamshi Manda, Ph.D.

Lead Scientist Covance Salt Lake City, UT

#### Ridhi Parasrampuria, Ph.D.

Sen, Sci., Pharmacokinetics, Pharmacodynamics Allergan Philadelphia, PA

## Sarah Willis, M.S.

Veteran's Administration Amarillo, TX

#### Vivek Gupta, Ph.D.

Assistant Professor Industrial Pharmacy St. John's University Queens, NY

#### Rajendar Mittapalli, Ph.D.

Associate Director Clinical Pharmacology Pfizer

San Diego, CA

#### Arun Satelli, Ph.D.

Associate Director Immatics Biotechnologies Houston, TX

#### Rachita Sumbria, Ph.D.

Associate Professor Keck Graduate Institute Anaheim, CA

#### Kunal Taskar, Ph.D.

GSK Fellow and Global PBPK Team Leader DMPK Modelling at Glaxo SmithKline Pharma GmbH Stevenage, Hertfordshire, UK

#### 2011

#### Venkateswaran Chithambaram Pillai, Ph.D.

Senior Staff Fellow FDA Clinical Pharmacology

#### Satyanarayana Goda, Ph.D.

Research Scientist Formurex, Inc. Stockton, CA

Silver Spring, MD

#### Vinay Rudraraju, Ph.D.

Sr. Principal Scientist Takeda Oncology Cambridge, MA

#### Li Yang, Ph.D.

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#### Kaci Bohn, Ph.D.

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**Shashi Kudugunti, Ph.D.** Sr. Scientist Repligen Corporation Boston, MA

Ramakrishna Samala, Ph.D. Assistant Professor South University SOP Columbia, SC

#### 2012

Prabodh Kandala, Ph.D. Senior Scientist Roivant Sciences Drug Product Development

Siva Koganti, Ph.D. Assistant Professor TTUHSC SOP Dept. of Pharm. Sci. Abilene, TX

Morrisville, NC

Snehal Padhye, Ph.D. Sen. Technical Sales Specialist Charles River Laboratories Boston, MA

#### 2013 Hussaini Syed Sha Qhattal, Ph.D.

Drug Product Dev. Spec. Novan, Inc.

**Shuangling Zhang, Ph.D.**Business Dev
Salubris
Chengdu, Sichuan, China

Chris Adkins, Ph.D. Assistant Professor School of Pharmacy South University Savannah, GA

Mamoon Rashid, Ph.D. Assistant Professor Appalachian College of Pharm. Dept. of Pharm. Sci. Oakwood, VA

Kaushik Shah, Ph.D. Pharmacy Manager Walmart Amarillo, TX

Ameya Paranjpe, Ph.D. Cary, NC

#### 2014

Shahriar (Abir) Absar, Ph.D.
Senior Clinical Pharmacology
Rev.
Office of Clinical Pharmacology
Office of Translational Science
CDER/FDA
Silver Spring, MD

Nina Blakeman, Ph.D. College of Nursing and Health Care Professions (On-line)

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Parul Gupta, Ph.D. Principal Scientist Pfizer Inc. San Diego, CA

Brijesh Patel, Ph.D. Director R & D DS Laboratories Tampa, FL

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Naomi Wangler, Ph.D.
Cell & Molecular Biologist,
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Manoj Banjara, Ph.D. Healthcare Analytics Data Science Biostatistical Prog. Business Intelligence Pittsburgh, PA

Nilesh Gupta, Ph.D. Chief Scientific Officer / Co-Founder Neofluidics LLC San Diego, CA

Jun Liu, Ph.D. Research Scientist WuXi App Tec Plainsboro, NJ

Subhasree Nag, Ph.D. Sr. Consultant Life Sciences Scientific R & D Translational Science Bengaluru Area, India

Kamrun (Shumi) Nahar, Ph.D. Pharmacologist Office of New Drug Products (ONDP), Office of Pharmaceutical Quality (OPQ), US CDER/ FDA Silver Spring, MD

#### 2015

Rajiv Balyan, Ph.D. Clinical Pharmacology Fellow Cincinnati Children's Hospital Medical Center Cincinnati, OH Raktima Bhattacharya, Ph.D. Post-Doc Res Associate Texas A&M University SOP College Station, TX

Pooja Naik, Ph.D. Scientist John Hopkins University Division of Rheumatology Baltimore, MD

Vindhya Edpuganti, Ph.D. Senior Research Associate TTUHSC Dallas, TX

Md. Kowser Miah, Ph.D. Clinical Pharmacologist AstraZeneca Waltham, MA

Raghavender Chivukula, Ph.D. Cancer Immunotherapy Scien-

tist Kite Pharma San Francisco, CA

Neel Fofaria, Ph.D. Partner MP Advisors (Mehta Partners, LLC) Vadodara, Gujarat, India

Md. Rashedul Islam, Ph.D. Post-Doctoral Research Fellow Neuroprotection Research Lab MGH/Harvard Medical School Boston, MA

**Sukesh Voruganti, Ph.D.**Sr. Principal Investigator Covance Indianapolis, IN

#### 2016

**Kito Barrow, Ph.D.** Teaching Faculty Dallas Nursing Institute Dallas, TX

Alejandra Fernandez, Ph.D. Post-Doctoral Fellow Emory University Atlanta, GA

Md. Jahidur Rashid, Ph.D. Senior Scientist Pharmacometrics, Clinical Pharmacology Halozyme Therapeutics, Inc. San Diego, CA

**Debasish Basak, Ph.D.** Post-Doctoral Fellow MD Anderson Houston, TX

Tanvirul Hye, Ph.D. Assistant Professor TTUHSC SOP Dept. of Pharm. Sci. Abilene, TX

#### 2017

A.G.M. Mostofa, Ph.D. Research Fellow FDA (ORISE) Silver Spring, MD

Benard Ogola, Ph.D.
Post-Doctoral Fellow
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Dept. of Pharmacology
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Jee Hyun Park, Ph.D. Post-Doctoral Scientist Eli Lilly and Company Washington, DC

Alok Ranjan, PhD. Research Scientist Massey Cancer Center, VCU Richmond, VA

Shikha, Ph.D. Post-Doctoral Scientist Biogen Cambridge, MA

#### 2018

Nihar Kinarivala, Ph.D. Drug Discovery Scientist Memorial Sloan Kettering Cancer Center New York City, NY

Hanumantha Rao Madala, Ph.D. Research Fellow Massachusetts Gen. Hospital

Boston, MA

Kshitij Verma, Ph.D. Post-Doctoral Research Assoc. Genentech San Francisco, CA

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(Continued on page 13)



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#### ALUMNIDIRECTORY

# Ronak Patel, Ph.D. Post-Doctoral Res. Sci. Alzheimer's Disease and Aging Brain at Columbia University Medical Center New York, NY

#### 2019 Nehal Gupta, Ph.D.

Postdoctoral Scholar University of California SF Department of Medicine San Francisco, CA

**Srinidhi Jayaraman, Ph.D.**Postdoctoral Research Sci.
Columbia University
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Shyanne Page, Ph.D.
Post-Doctoral Research Sci.
TTUHSC
Department of Pediatrics
Nephrology Section
Amarillo, TX

Kinzie Sherrill, M.S. Quality Control Analyst Alcon Department of Microbiology Fort Worth, TX

Racheal Akwii, M.S. PhD Student/RA TTUHSC SOP Grad Prog in Pharm Sci, GSBS Amarillo, TX Nausheen Syeara, M.S. Technician TTUHSC SOP Dept. of Pharm. Sciences Amarillo, TX

Juan Valdez, M.S. Scientist/Chemist 1 Entegris Burnet, TX

Thamer Albekairi, Ph.D.
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and Toxicology
King Saud University
College of Pharmacy
Saudi Arabia

Md. Anwar Hossain, Ph.D. Postdoctoral Research Assoc. The University of North Carolina at Chapel Hill Chapel Hill, NC

Ali Ehsan Sifat, Ph.D. Post-Doctoral Research Assoc. TTUHSC SOP Dept. of Pharm. Sciences Amarillo, TX

**Sreedhar Reddy Suthe, Ph.D.**Postdoctoral Research Fellow
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North Chicago, IL

\*For changes to the Alumni Directory, please email: Teresa.Carlisle@ttuhsc.edu

# Alumni Photo Album



Yoon Jung Lee and Angelica Carmona were able to arrange a visit when their holiday trips coincided.





"Best Poster Award Winners" at this year's American Association of Pharmaceutical Scientists—PharmSci360 meeting at the Henry B. Gonzalez Convention Center in San Antonio, TX. He was one of three, out of more than 6,000 attendees, and the first from our program to receive this honor.



Yoon Jung Lee (center) was the TRIG candidate in the zany "Mr. Pharmacy" fundraiser.
Fellow graduate students lending support were: (L-R) Behnaz Lahooti, Angelica Carmona, Nausheen Syeara, Sounak Bagchi, Fatema Tuz Zahra, Md. Sanaullah Sajib, and Tanya Chhibber.



Taking a break during AAPS: Md. Sanaullah Sajib, Md. Ashraf-Uz-Zaman, Ekram Chowdhury, Ali Sifat, Sujit Biswas, Md. Jahidur Rashid, Abdullah Al Shoyaib.

















Sreedhar Reddy Suthe (eighth from left) and his wife, Greeshma (right from Sreedhar), celebrate his Ph.D. dissertation defense. Fellow graduate students celebrating with them: Rachel, Pooja, Tanya, Faisal, Ekram, Sounak, Shoyaib (left from Sreedhar), Behnam, Shiva, Saeideh, Snehal, Aditya, Iqra, Sifat, Behnaz, Fatema (right from Greeshma).



Behnaz Lahooti, Sounak Bagchi, Tanya Chhibber and Nausheen Syeara (left) enjoyed the SOP Holiday Gathering for faculty, staff, postdocs and students.

> Also enjoying the event (right) were Dhaval Patel and Drs. Rahul Jayant and

Bhuvaneshwar "Bob" Vaidya



#### GSAA BULLETIN BOARD

#### **GSAA Student Officers** (updated)

President: Daniela Rolph Historian: Saeideh Nozohouri

Vice-President: Shiva Hadi Esfahani International Representative: Tanya Chhibber

Treasurer: **Yoon Jung Lee**Student Senate Representative: **Behnam Noorani**Secretary: **Sarah Anderson** 

#### Fall 2019 GSAA Event Participation:

#### September

- \* Back to School Picnic at John Stiff Park
- \* Medication Cleanout

#### October

- \* Halloween Party
- \* 11th Annual PCCF SOS 5K & 1 Mile Fun Run

#### November

- \* Roller Skating
- \* Eveline Rivers Christmas Project (wrapping gifts)
- \* Journal Club

#### December

- \* Amarillo Zoo Trip
- \* Dr. Weis's holiday party

# Spring 2020 Social & Community Events:

#### January

\* Movie Night

#### February

- \* Journal Club
- \* Game Night

#### March

\* Blankets and Beans Agape Ministry (making blankets)

















John Stiff Park







Medication Cleanout





















11th Annual Panhandle Cancer Cure Foundation Support Our Survivors 5K & 1Mile Fun Run



Eveline Rivers Christmas Project



# **More GSAA Events**







Amarillo Zoo Trip









