

Praneetha Panthagani

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EDUCATION

PhD in Translational Neuroscience and Pharmacology

Texas Tech University Health Sciences Center, Lubbock, USA
May 2019 – Present (anticipated graduation in Dec 2025)

MS in Toxicology

St. John's University, New York, USA
August 2016 – May 2019

M. Pharmacy in Pharmaceutical Chemistry

Sri Padmawathi Mahila University, Tirupati, India
August 2007 – August 2009

B. Pharmacy

Osmania University, Hyderabad, India
August 2003 – April 2007

CERSI Immersion Course Certification

UCSF-Stanford Center of Excellence in Regulatory Science and Innovation (CERSI)
2024

Completed an 11-week certification course covering scientific and regulatory aspects of drug discovery, development, and approval across multiple therapeutic modalities, including small molecules, biologics, and gene therapies

PROFESSIONAL EXPERIENCE

SIPRA Labs Limited, India

Analyst, June 2010 – July 2013

Quality Control & Method Validation: Conducted comprehensive quality control analyses of pharmaceutical formulations and active ingredients using wet chemical methods, UV-Visible spectroscopy, FTIR, Gas Chromatography (GC), and High-Performance Liquid Chromatography (HPLC).

SOP Development: Developed, maintained, and updated Standard Operating Procedures (SOPs) and Standard Testing Procedures (STPs) to ensure consistent laboratory practices and regulatory compliance.
Instrumentation & Troubleshooting: Calibrated and maintained analytical instruments; troubleshoot issues to optimize performance, compiling and analyzing test data to assess process efficiency and diagnose equipment malfunctions.

Dr. Reddy's Laboratory, India

Trainee, Quality Assurance, May 2006 – June 2006

Assisted in quality assurance activities, gaining hands-on experience in method troubleshooting, documentation, and adherence to industrial standards and best laboratory practices.

RESEARCH EXPERIENCE

Texas Tech University Health Sciences Center, Lubbock, USA

Research Assistant- Graduate student, May 2019 – Present

- Used RNA sequencing (RNA-seq), ELISA, and immunoblotting to study mechanisms action and gene expression changes of a novel tetracycline analog (BEM) in *in vitro* models and in alcohol use disorder models
- Designed and executed pharmacokinetic studies and actively contributing to IND-enabling documentation.
- Collaborated with interdisciplinary teams including chemists, toxicologists, and biologists to drive drug development
- Contributing to additional projects involving ATAC-seq analysis of alcohol-dependent mice, behavioral and bioaccumulation studies of organic arsenic species (e.g., dimethyl arsenate, arsenobetaine), and targeted delivery strategies to prevent toxic effects of in utero alcohol exposure.
- Assisted in developing a DSM-V based Alcohol use disorder model in mini-pigs

St. John's University, New York, USA

Graduate student, September 2016 – May 2019

- Epigenetic Studies: Investigated the impact of continuous morphine sulfate exposure on DNA methylation in mouse embryonic stem cells using ELISA.

Indian Institute of Chemical Technology, Hyderabad, India

Research intern, November 2008 – July 2009

- Synthesis & Biological Evaluation: Synthesized and evaluated novel 1,4-disubstituted 1,2,3-triazoles and to assess antimicrobial activity.

TEACHING & MENTORING EXPERIENCE

Sri Venkateshwara University, Tirupati, India

Lecturer, (Dec 2014-July 2016)

Responsibilities included teaching lectures and supervising laboratory sessions for undergraduate B.Pharmacy students, demonstrating experimental techniques, developing assessments, evaluating performance, and providing academic guidance to support student learning and development.

St. John's University, New York, USA

Teaching Fellow (August 2018 – May 2019)

- Conducted anatomy and physiology laboratory sessions for undergraduate pharmacy students.
- Assessed student progress through quizzes and exams while mentoring students on laboratory techniques and safety protocols.
- Utilized Anatomage to enrich students understanding of human anatomy.

Graduate Assistant (September 2016 – July 2018)

Supported laboratory course management, maintained safety protocols.

TECHNICAL SKILLS

- Analytical Techniques:
 - Wet chemical analysis including viscosity measurements, potentiometry, etc
 - Chromatography: HPLC, GC (including headspace)
 - Spectroscopy: UV-Visible, FTIR
- Method Development & Quality Control:
 - SOP writing and method validation
 - Instrument calibration, troubleshooting, and maintenance
 - Data compilation and analysis using Microsoft Excel and specialized software (GraphPad Prism, Origin Pro)
- Software & Tools:
 - Microsoft Office Suite (Word, Excel, PowerPoint)
 - Familiarity with R and python
- Laboratory Practices:
 - Regulatory compliance and quality assurance
 - Training and documentation for laboratory personnel

PUBLICATIONS

- Rajitha Galla, Saideepa Nagaraju, and Praneetha Panthagani; Synthesis and Evaluation of N-(α -Benzamido Cinnamoyl) Aryl Hydrazone Derivatives for Anti-Inflammatory and Antioxidant Activities, Indian J. Chem., 2011, 5.
- Abdul A Shaik, Umal Khair Shaik, and Praneetha Panthagani; Preparation and in vitro evaluation of Chitosan-Carrageenan, Chitosan-Alginate beads for controlled release of Nateglinide. Der Pharm. Sin., 2011, 2.
- Robert Hitzemann, Susan E Bergeson, Ari E Berman, Jason A Bubier, Elissa J Chesler, Deborah A Finn, Lutz Hein, Paula Hoffman, Andrew Holmes, Brent R Kisby, Denesa Lockwood, Kerrie H Lodowski, Michelle McManus, Julie A Owen, Angela R Ozburn, Praneetha Panthagani, Igor

Ponomarev, Laura Saba, Boris Tabakoff, Aashlesha Walchale, Robert W Williams, Tamara J Phillips. Sex Differences in the Brain Transcriptome Related to Alcohol Effects and Alcohol Use Disorder. *Biological Psychiatry*, 2021.

- Willms O Josh, Mitchell Kelly, Shashtri Mayank, Sundin Olof, Liu Xiaobo, Praneetha Panthagani, Tran Phat, Navarro Stephanie, Sniegowski Colton, Shaik A Abdul, Chaudhury Tristin, Reid W Ted, Bergeson E Susan; Minocycline and Diacetyl Minocycline Eye Drops Reduce Ocular Neovascularization in Mice. *Transl Vis Sci Technol*, 2023.
- Liu, Ana G. Gutierrez, Arlette Vega, Joshua O. Willms, Jackson Driskill, Praneetha Panthagani, Jordan Sanchez, Monica Aguilera, Brittany Backus, Jeremy D. Bailoo, Susan E. Bergeson; The horizontal ladder test (HLT) protocol: a novel, optimized, and reliable means of assessing motor coordination in *Sus scrofa domesticus*. *Front. Behav. Neurosci.*, 2024.
- Liu, Praneetha Panthagani, Ana G Gutierrez, Arlette Vega, Abdul A Shaik, Monica G Aguilera, Jordan N Sanchez, Joshua O Willms, Brittany Backus, Bruce Blough, Elliott Pauli, Ted W Reid, Thomas Benton, Jeremy D Bailoo, Susan E Bergeson; A Pilot Study: Treatment of High Alcohol Consumption in a Novel Minipig Model of Alcohol Use Disorder. *Alcohol. Treat. Q.*, 2024.
- Praneetha Panthagani, Abdul A Shaik, Liu, Sambantham Shanmugam, Bruce Blough, Ted W. Reid, Elliot Pauli, Thomas Benton, George I Henderson, Jeremy D Bailoo, Susan E Bergeson; 10-butyl ether minocycline reduced high alcohol consumption in a dependence mouse model *Alcohol. Treat. Q.*, 2024.
- Bailoo, J. D., Bergeson, S. E., Ponomarev, I., Willms, J. O., Kisby, B. R., Cornwall, G. A., MacDonald, C. C., Lawrence, J. J., Ganapathy, V., Sivaprakasam, S., Panthagani, P., Trasti, S., Varholick, J. A., Findlater, M., Deonarine, A; A bespoke water T-maze apparatus and protocol: An optimized, reliable, and repeatable method for screening learning, memory, and executive functioning in laboratory mice. *Frontiers in Behavioral Neuroscience, Learning and Memory*, 18 (2024). DOI: 10.3389/fnbeh.2024.1492327
- Abdul A. Shaik*, Praneetha Panthagani*, Liu, Stephany Navarro-Turk, Jeremy Garza, Monica Aguilera, Abdul Hamood, Ted W. Reid, Bruce Blough, Elliott Pauli, Jeremy D. Bailoo, Susan E. Bergeson; Molecular mechanisms of 10-Butyl Ether Minocycline (BEM), a novel non-antibiotic tetracycline, as a potential treatment for inflammatory and neuroimmune-related disorders. (manuscript accepted in *J. Pharmacol. Exp. Ther.*; in press; [https://jpet.aspetjournals.org/article/S0022-3565\(25\)40261-4/fulltext](https://jpet.aspetjournals.org/article/S0022-3565(25)40261-4/fulltext); * indicates equal authorship)
- Praneetha Panthagani*, Abdul Shaik*, Liu, Jordan Sanchez, Monica Aguilera, Benjamin Jackson, Josh Willms, Ana Gutierrez, Arlette Vega, Ted W Reid, Bruce Blough, Elliott Pauli, Igor Ponomarev, Jeremy Bailoo and Susan E Bergeson; 10-Butyl Ether Minocycline (BEM) reduced ethanol consumption and preference in binge drinking mice. (manuscript submitted to *Alcohol. Treat. Q.*; * indicates equal authorship,)

POSTERS & PRESENTATIONS

- Preeti Saravanan., Praneetha Panthagani., Mary, Saral., Physicochemical, Pharmacognostic and phytochemical analysis of Polysaccharides in *Pithecellobium dulce*. CARBO-XXVII, 2013.
- Praneetha Panthagani., Ragitha, Galla., Azides and its importance as a synthetic intermediate and biologically active molecule, AP Science Congress, 2009.

- Praneetha Panthagani., Anirudh J Chintalapati., Frank A Barile., Continuous exposure to morphine sulphate alters genomic DNA methylation in mouse embryonic stem cells., Annual meeting of Society of Toxicology 2019.
- Aashlesha Walchale, Praneetha Panthagani, Xiaobo Liu, Sambantham Shanmugam, Brent Kisby, Susan E. Bergeson, Srivatsan Kidambi, Lenin Mahimainathan, George Henderson, Madhusudhanan Narasimhan., Sodium Valproate Targets EAAC1/Redox Circuit in the Immediate Neuronal Precursors, Sigma Xi, 2020.
- Praneetha Panthagani, Joshua Willms, Ted W. Reid and Susan E. Bergeson; Pharmacological characterization of a new Alcohol Use Disorder medication, 34th Student research week, TTUHSC, 2022.
- Xiaobo Liu, Joshua O Willms, Jeremy D Bailoo, Brittany Backus, Ana G Gutierrez, Jackson Driskill, Jordan Sanchez, Praneetha Panthagani, and Susan E Bergeson; Development of DSM-V Porcine model of Alcohol Use Disorder, 34th Student research week, TTUHSC, 2022.
- Xiaobo Liu, Ana G Gutierrez, Joshua O Willms, Brittany Backus, Jackson Driskill, Jordan Sanchez, Praneetha Panthagani, Angelica Rodriguez, Jeremy D Bailoo and Susan E Bergeson; Development of DSM V porcine model of Alcohol Use Disorder, 2022 LWIWH Symposium, 2022.
- Praneetha Panthagani, Abdul A Shaik, Josh Willms, Xiaobo Liu, Sambatham Shanmugam, Bruce Blough, Elliot Pauli, Thomas Benton, Mayank Shastri, Ted W Reid, George E Henderson, and Susan E Bergeson; Pharmacological evaluation of a modified minocycline analog as an alcohol use disorder medication, Student research week, TTUHSC, 2023.
- Xiaobo Liu, Ana G Gutierrez, Joshua O Willms, Monica Aguilera, Abdul A Shaik, Praneetha Panthagani, Arlette Vega, Brittany Backus, Jackson Driskill, Jordan Sanchez, Jeremy D Bailoo and Susan E Bergeson; A novel DSM-V cased model of Alcohol Use Disorder in mini pigs-an update, 35th Student Research Week, TTUHSC, 2023
- Praneetha Panthagani, Abdul A Shaik, Xiaobo Liu, Sambatham Shanmugam, Bruce Blough, Elliot Pauli, Thomas Benton, Mayank Shastri, Ted W Reid, George E Henderson, and Susan E Bergeson; Medication Development for Alcohol Use Disorder: Evaluation of a Minocycline Analog, Behavior, Biology, and Chemistry Translational Research in Addiction, 2023
- Xiaobo Liu, Ana G Gutierrez, Joshua O Willms, Monica Aguilera, Abdul A Shaik, Praneetha Panthagani, Arlette Vega, Brittany Backus, Jackson Driskill, Jordan Sanchez, Jeremy D Bailoo and Susan E Bergeson; A novel DSM-V based model of Alcohol Use Disorder in mini-pigs, 15th Annual Behavior, Biology and Chemistry: translational research in substance use disorders, 2023
- Ana Gutierrez, Monica Aguilera, Xiaobo Liu, Joshua O Willms, Abdul A Shaik, Praneetha Panthagani, Arlette Vega, Brittany Backus, Jackson Driskill, Jordan Sanchez, Jeremy D Bailoo and Susan E Bergeson; Evaluation of a miniature pig model of Alcohol Use Disorder using DSM-V criteria, Undergraduate research conference 2023
- Praneetha Panthagani, Abdul A Shaik, Xiaobo Liu, Sambatham Shanmugam, Bruce Blough, Elliot Pauli, Thomas Benton, Mayank Shastri, Ted W Reid, George E Henderson, and Susan E Bergeson, Medication Development for Alcohol Use Disorder: Evaluation of a Minocycline Analog, Center of excellence for Translational Neuroscience and Therapeutics 2023
- Xiaobo Liu, Ana G Gutierrez, Joshua O Willms, Monica Aguilera, Abdul A Shaik, Praneetha Panthagani, Arlette Vega, Brittany Backus, Jackson Driskill, Jordan Sanchez, Jeremy D Bailoo and Susan E Bergeson. A novel DSM-V based model of Alcohol Use Disorder in mini-pigs. Center of excellence for Translational Neuroscience and Therapeutics 2023

- Praneetha Panthagani, Abdul A Shaik, Xiaobo Liu, Sambatham Shanmugam, Bruce Blough, Elliot Pauli, Thomas Benton, Mayank Shastri, Ted W Reid, George E Henderson, and Susan E Bergeson, Medication Development for Alcohol Use Disorder: Evaluation of a Minocycline Analog, 46th Annual Research society on alcoholism, 2023
- Xiaobo Liu, Ana G Gutierrez, Joshua O Willms, Monica Aguilera, Abdul A Shaik, Praneetha Panthagani, Arlette Vega, Brittany Backus, Jackson Driskill, Jordan Sanchez, Jeremy D Bailoo and Susan E Bergeson. Development of a Porcine Model of Alcohol Use Disorder using Behavior Tests developed corresponding to DSM-V. 46th Annual Research society on alcoholism, 2023
- Praneetha Panthagani, Abdul A Shaik, Xiaobo Liu, Monica G Aguilera, Jordan N Sanchez, Arlette Vega, Sambantham Shanmugam, Isabel Castro-Piedras, Brent R Kisby, Daxx Medina, Philip Antwi-Adjei, Bruce Blough, Elliot Pauli, George E Henderson, Igor Ponomarev, Jeremy D Bailoo, Ted W. Reid and Susan E Bergeson; Exploring the Potential of 10-Butylether Minocycline (BEM) in Alleviating Alcohol Use Disorder: Insights from Varied Models, 36th Student Research Week, 2024
- Jordan Sanchez, Praneetha Panthagani, Abdul Shaik, and Susan E. Bergeson; BCS Classification of Butyl Ether Minocycline for Oral Drug Products, 36th Student Research Week, 2024
- Jordan Sanchez, Praneetha Panthagani, Abdul Shaik, and Susan E. Bergeson; BCS Classification of Butyl Ether Minocycline for Oral Drug Products, Undergraduate research and creative activities, 2024
- Aguilera, Monica G, Shaik, Abdul A, Panthagani, Praneetha, Liu, Xiaobo, Sanchez, Jordan N, Blough, Bruce E, Bergeson, Susan E; pleiotropic effects of 10-Butyl Ether Minocycline (BEM) as a potential medication for Alcohol Use Disorder (AUD); Biology Behaviour and Chemistry, 2024
- Shaik, Abdul A, Panthagani, Praneetha, Liu Xiaobo, Blough, Bruce, and Reid, Ted W and Bergeson, Susan E; Pharmacokinetics [PK] and Pharmacodynamics [PD] of 10- Butyl Ether Minocycline; Biology Behaviour and Chemistry, 2024
- Praneetha Panthagani, Abdul A Shaik, Xiaobo Liu, Monica G Aguilera, Jordan N Sanchez, Arlette Vega, Sambantham Shanmugam, Isabel Castro-Piedras, Brent R Kisby, Daxx Medina, Philip Antwi-Adjei, Thomas Benton, Bruce Blough, Elliot Pauli, George E Henderson, Igor Ponomarev, Jeremy D Bailoo, Ted W. Reid and Susan E Bergeson; A multifaceted approach to evaluate efficacy of BEM as a treatment for Alcohol Use Disorder; Biology Behaviour and Chemistry, 2024
- Praneetha Panthagani, Abdul A Shaik, Xiaobo Liu, Jordan N Sanchez, Monica G Aguilera, Sambantham Shanmugam, Bruce Blough, Elliot Pauli, George I Henderson, Igor Ponomarev, and Susan E Bergeson; Pharmacokinetic and Toxicological Profiling of 10-Butyl Ether Minocycline (BEM) for use in Alcohol Use Disorder, 37th Student Research Week, 2025

ACHIEVEMENTS & ADDITIONAL INFORMATION

- Travel Award: 16th Annual Behavior, Biology and Chemistry: Translational Research in Substance Use Disorders, 2024.
- Leadership: Co-directed planning and execution of Student Research Week at TTUHSC, fostering collaboration and academic excellence.
- CERSI Certification: Expanded expertise in regulatory science and innovation related to drug development.