Curriculum Vitae

Thomas John Abbruscato, Ph.D.

Grover Murray University Distinguished Professor
Douglas M. Stocco Endowed Research Chair
Director of Brain Drug Discovery Research Center
Chair of Pharmaceutical Sciences, School of Pharmacy, TTUHSC
Senior Associate Dean, Graduate School of Biomedical Sciences

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Area of Specialization: Blood-brain barrier and drug transport, neurovascular protection in brain ischemia / stroke, neurovascular effects of nicotine and tobacco chemicals.

Education:

Undergraduate Education

1988-1992 B.S. Molecular and Cellular Biology, University of Arizona, Tucson, Arizona

Graduate Education

1992-1997 Ph.D., Pharmacology and Toxicology, University of Arizona, College of Medicine, Tucson, Arizona
Dissertation Title: Opioid peptide permeation across the blood-brain and blood-cerebrospinal fluid barriers. (PI: Dr. Thomas P. Davis)

Postgraduate Education

1997-1998 NIH National Institute of Drug Abuse (NIDA) Institutional T32 NRSA Postdoctoral Fellow, University of Arizona, College of Medicine, Tucson, Arizona

1998-2000 NIH National Institute of Neurological Disorders and Stroke (NINDS) Individual F32 NRSA Postdoctoral Fellow, University of Arizona, College of Medicine, Tucson, Arizona (Sponsor: Dr. Thomas P. Davis)

Professional Experience:

1991-1992 Undergraduate Biology Research Program, University of Arizona (Mentor: Thomas Davis, Ph.D.)

1993-1997 Ph.D. student, Department of Pharmacology and Toxicology, University of Arizona

1997-2000 Post-doctoral Research Fellow, Pharmacology, University of Arizona
2000-2006 Assistant Professor, Pharmaceutical Sciences, Texas Tech University HSC
2006-2012 Associate Professor with Tenure and Graduate Program Advisor, Pharmaceutical Sciences, Texas Tech University HSC
2008-2021 Associate Dean, Graduate School of Biomedical Sciences, Texas Tech University HSC
2009 Interim Co-Chair of Pharmaceutical Sciences
2012-Present Chair and Professor of Pharmaceutical Sciences
2015- TTUSHC Distinguished Professor
2021-Present Senior Associate Dean GSBS
2023-Present TTUSHC Grover E. Murray Professor
2024-Present Douglas M. Stocco Endowed Research Chair
2024-Present Director of the Brain Drug Discovery Research Center

Awards and Honors:

1991-1993	HHMI and NSF supported, Undergraduate Biological Research Program Fellowship, University of Arizona
1996	Grand Award Judge, 47th Annual Science and Engineering Fair, Medicine and Health
1997	Student travel award for Pharmacology meeting in San Diego, CA. American Society for Pharmacology and Experimental Therapeutics (ASPET)
1997	Graduate and Professional Student Travel Grant, University of Arizona Pharm/Tox Program
1997	NIH NIDA T32 NRSA Fellow
1998	ASPET "John Jacob Abel" Travel Award for IUPHAR meeting in Munchen, Germany
1998-2000	NIH NINDS F32 NRSA Fellow
2001	American Foundation for Pharmaceutical Education "Pharmacy Faculty New Investigator" recognition.
2002	Invited Speaker; Gordon Research Conference; Barriers of the CNS, Tilton School New Hampshire, USA
2002	Poster Presentation Award, Texas Tech University HSC, Research Day
2003	Local Organizing Committee Member for Cerebral Vascular Biology 2003 Meeting in Amarillo, Texas (132 attendees)
2003	President's Young Investigator Award for TTUHSC
2004	Master of Ceremony TTUHSC School of Pharmacy Awards Convocation
2005	Top Unit Safety Officer Award, TTUHSC
2008	Invited Speaker and Session Chair; Gordon Research Conference; Barriers of the CNS, Tilton School New Hampshire, USA
2010	Invited Speaker; Gordon Research Conference; Barriers of the CNS, Colby-Sawyer College New Hampshire, USA
2010	Invited Speaker, International Stroke Conference, San Antonio, Texas, USA
2011	Invited Speaker; American Society for Neurochemistry; Molecular Mechanisms of Cell Death and Plasticity After Stroke, St. Louis, Missouri, USA
2012	Session Chair, Gordon Research Conference; Barriers of the CNS, Colby-Sawyer College New Hampshire, USA
2013	Chancellor's Research Award for Texas Tech University Health Sciences Center
2014	Keynote Speaker for GSBS Graduate Student and Faculty Retreat
2015	TTUHSC University Distinguished Professor

2016	Invited Speaker AAPS AAPS/ITC Joint Workshop on Drug Transporters in ADME: From the Bench to the Bedside, Baltimore, MD.
2017	Invited Speaker for the Cerebrovascular Biology Meeting, Melbourne, AU
2020	Invited Speaker for International Symposium on Neuroprotection and Neurorepair (ISN&N), , Berlin, Germany
2020	Chancellor's Research Award for Texas Tech University Health Sciences Center
2020	Invited Speaker TTUSHC GSBS Core Seminar
2023	TTUSHC Grover E. Murray Professorship
2024	Tech X Seminar for GSBS, "Time Management for Scientists"
2024	Chair, Basic Translational Stroke Session, International Stroke Conference
2024	Inaugural Douglas M. Stocco Endowed Research Chair
2024	Director of Brain Drug Discovery Research Center

Active Research Support

R01NS106879-01A1(Karamyan PI/PD, Trippier MPI, **Abbruscato MPI**) 09/15/2018-06/30/2030
NIH/NINDS **Abbruscato 20% effort**
"Development and characterization of peptidomimetic small molecule activators of peptidase neurolysin for stroke therapy." The goal of this project is to develop and evaluate activators to the brain neurolysin as potential stroke therapeutics. Our contribution is to lead the efforts related basic PK analysis, blood-brain barrier permeability and in vivo efficacy using a model of stroke. ****Recent Competitive Renewal *Received a 7% Priority Score** (NINDS Interim Conservative Payline is 8%)

R01NS117906 (**Abbruscato PI/PD**) 07/01/2020-06/30/2026
NIH/NINDS **Abbruscato 15% effort**
"Repurposing Metformin to Offset Stroke Risk and Injury in Comorbid Populations of Smokers" The goal of this project is to test repurposing metformin as a suitable prophylactic and/or post stroke therapeutic agent to be utilized for high risk, stroke-prone populations of smokers and/or e-Cig users. Our contributions will investigate the efficacy of metformin in standardized research E-cigarette (SREC) and tobacco smoke exposed populations of mice subjected to stroke injury.

DOD/Leidos (**Abbruscato PI/PD, McMahon MPI, Ponomarev MPI**) 07/01/2025-06/30/2029
DEVCOM Army Research Labs **Abbruscato 25% effort**
"Cognitive Effects of Directed Electromagnetic Energy" Investigations will focus on changes in physiology, genomics, proteomics, toxicology and behavioral endpoints. Focused efforts will also address biomarker identification and blood brain barrier effects.

Pending Research Support

NIH R41 (**Abbruscato Sub Award PI, Esperanza Theapeutics**) 07/01/2025-06/30/2026
NIH/NIDA **Abbruscato 10% effort**
"Developing a Treatment for Symptoms of Non-Fatal Opioid Overdose" There is a strong need to create robust in vivo models of NFOO that would allow an understanding of mechanisms associated with these events and that can serve as a versatile platform for developing NFOO-focused therapeutic agents. As hypoxia-induced changes in the brain of OUD patients, along with the development of cognitive deficits, had the most robust correlation with reoccurring NFOO events, we hypothesize that the development of dual-acting compounds that can affect both of these symptomatic clusters will effectively protect the brain from the opioid-induced injuries.

NASA (Bickel PI, **Abbruscato Co-I**) 02/02/2026-02/01/2029
NASA Science Missions **Abbruscato 5% effort**
"Analysis of Changes to the Neurovascular Unit and Blood-Brain Barrier Permeability in Mice During Simulated Space Flight" We will Analyze damage across different brain regions (cerebral cortex and

hippocampus) the expression of endothelial markers involved in glucose transport and tight junctional integrity (GLUT1, Z0-1, Occludin, Claudin-5), neuronal markers of glucose transport and axonal injury (GLUT3 and neurofilament light (NfL)) and markers of astrocyte activation (GFAP and S100β) by immunofluorescence and Western blotting. Cytokine profiling (TNF-, IL-1, and IL-6) from plasma samples will be utilized to determine the inflammatory response.

TTUHSC (**Abbruscato PI**, Das PI). 09/01/2025-8/31/2026
Comprehensive Cancer Center Initiative Grants
"Stroke risk in glioblastoma and use of stem cell secretome for treatment" An interdisciplinary research team, comprising Dr. Hiranmoy Das (cancer and stem cell biology) and Dr. Abbruscato (stroke neuroprotection and blood-brain barrier), is investigating the potential of developing a DPSC-based therapy in cancer-associated ischemic stroke and GBM pathogenesis. Supported by recent peer-reviewed publications from the Das and Abbruscato Labs, our collaboration aims to develop an innovative, cell-free therapeutic strategy that will bridge oncology and neuro-regeneration using DPSC-derived factors.

Past Funded Grant Support

R01DA049737 FDA TRSP (**Abbruscato PI/PD, Cuculo MPI**) 09/01/2019-08/31/2024
NIH/NIDA/FDA (Center for Tobacco Products)
"Blood and brain-based biomarkers of injury to assess cerebrovascular impact of emerging alternatives to classic cigarette products."

R01DA029121-12 (**Abbruscato PI/PD,** Cucullo MPI) 03/01/2011-04/30/2023 NIH/NIDA
"Testing tobacco smoke and e-cigarette toxicity at the blood-brain barrier." (12-year grant)

R01DA029121-09S1 (**Abbruscato PI/PD, Villalba recipient**) 05/01/2019 – 04/30/2022 NIH/NIDA
"Investigations into the effects of sex and age on tobacco smoke and e-Cigarette toxicity at the blood-brain barrier and stroke outcome." (3-year NIDA diversity supplement)

R41AG057242 (Das PI, **Abbruscato PI-Sub-Award**), 7/1/2018-6/3/2022
"Nanofiber expanded CD34+ stem cells for osteoporosis therapy".

R01NS076012 (**Abbruscato PI/PD**) 09/01/2011 – 06/30/2018 NIH/NINDS
"Increased Sodium Dependent Glucose Transport in the Ischemic Brain."

RO1NS046526 (**Abbruscato PI/PD**) 07/01/2004 -03/31/2012
"Tobacco Smoke Chemicals and Stroke Alter Brain K+ Efflux."

Texas Tech University HSC, Research Center of Excellence, "Novel Inroads for the Pathology and Treatment of Stroke" **(Abbruscato, Co-I)** 2003-2006

(#0265220Y) Texas American Heart Association Beginning Grant-In-Aid, "Nicotine Effects on Blood-Brain Barrier Potassium Transport" **(Abbruscato, PI)** 2002-2005

Lonza Industrial Grant, "Evaluation of b-MVEC Barrier Properties" **(Abbruscato, PI)** 2002-2005

TTUHSC, Research Center of Excellence, "Vascular Biology Research Center" **(Abbruscato, Co-PI)** 2001-2003

Merck Research Scholar Program for Professional Degree Pharmacy Students, "Effects of Endomorphin-1 on Blood-Brain Barrier Permeability" Merck Research Scholar Program for Professional Degree Pharmacy Students. **(Abbruscato, Sponsor for Aaron Bird)** 2001

American Association of Colleges of Pharmacy New Investigators Program, "Drug Delivery across the Blood-Brain Barrier in Pathological States" **(Abbruscato, PI)** 2000-2002

F32NS0010580 Individual NIH NINDS NRSA Training Fellowship, "Non-Neuronal Mechanisms That Contribute to Stroke Pathology." **(Abbruscato, PI)** 1998-2000

T32DA007295 Institutional NIH NIDA NRSA Training Fellowship, "Training in Pharmacology of Drugs Abuse" Postdoctoral salary, benefit and travel support for one year **(Abbruscato, Trainee)** 1997-1998

Past and Present Industrial Collaborations:

1994-2000 Biomeasure Inc. Milford, MA (Radiolabeling and purifying peptide drugs and ADME studies)

1999-2001 Neurex / Elan, (Dr. Richard Newcomb, Ph.D., Blood-CNS pharmacokinetics of Ziconotide Conotoxin)

1999-2001 G.D. Searle / Pharmacia (Steve Weber, Ph.D., Director of ADME)

2002-2005 Biowhittaker/Cambrex (Alexis Bossi, Ph.D., In vitro barrier models)

2009-2016 Lonza Walkersville (Anatoliy Koval, Ph.D., Project Director of Research and Development)

2022-Present Pure Green Pharmaceuticals (Debra Kimless, M.D., CMO), Repurposing CBD for stroke patients.

Scientific Techniques Used:

In vitro

cell culture, BBMEC and rat astrocyte isolation, side-by-side diffusion, transwell co-culture (astrocytes and brain endothelial cells), monolayer resistance measurements, metabolism studies, receptor binding assays, in vitro cigarette smoke extract exposure, primary isolation and culture of mouse cortical astrocytes and neurons

In vivo

in situ rat brain perfusion, CSF sampling, pharmacokinetic ADME studies, small animal surgery, chronic (IT and osmotic pump implantation) and acute (IP and IV) dosing methods, behavioral analgesia, 4 vessel occlusion, middle cerebral artery occlusion, in vivo nicotine and cigarette smoke extract exposure

Analytical

UPLC analysis, LCMSMS radiolabeling peptides, colorimetric and fluorometric enzyme assays

Molecular

protein/DNA/RNA isolation, Western Blotting, ribonuclease protection assay, fluorescent microscopy, immunocytochemistry, ICC, IHC.

Society Memberships:

1991-2007, 2022-present

Society for Neuroscience (SFN)

1996

College on Problems of Drug Dependence (CPDD)

1996-2005, 2022-present
American Society for Pharmacology and Experimental Therapeutics (ASPET)
2007-present
American Association of Pharmaceutical Scientists
2010-2012
American Society of Neurochemistry

Current Journal Editorial Board Appointments:

2001-Present
Editorial Board for JPET

2003-Present
Editorial Board for Life Sciences

Journal Ad Hoc Reviewing:

Stroke
Journal of Neurochemistry
Brain Research
Journal of Cerebral Blood Flow and Metabolism
Fluids and Barriers of the CNS
Pharmaceutical Research
Journal of Pharmaceutical Sciences
Journal of Cell Science
International Journal of Pharmaceutics
Current Pharmaceutical Design
Drug Discovery Today

Grant Reviewing:

2005 Kentucky Science and Engineering Foundation Reviewer

2005-2007 ***Ad hoc Member*** *of NIH Drug Development (Recurring Special Emphasis Panel) SRA; Mary Custer, PhD*

NIH ZRGI MDCN-C 95 S
"Drug Development"
April 22, 2005
Phone Review

NIH ZRGI MDCN-C 95 S
"Drug Development"
November 21, 2005
Washington DC

NIH ZRGI MDCN-C 95 S
"Drug Development"
July 31, 2006

Washington DC

NIH ZRGI MDCN-C 95 S
"Drug Development"
November 20, 2006
Washington DC

NIH ZRGI MDCN-C 95 S
"Drug Development"
January 3, 2007
Phone Review

2006-2010 ***Chartered Member*** *of NIH Brain Injury and Neuropathology Study Section SRAs; Seetha Bhagavan, PhD, 2005-2006, Alexander Yakovlev, PhD, 2006-2010*

Traveled to 3 study section meetings/year in Washington DC and reviewed ~10 R01 grants/meeting

2007-2013, *National American Heart Association, Brain III Panel*

2013 NIEHS Reviewer, Division of Intramural Research

2012-2017 Selected as a Chartered Member of the NIH Drug Development for the Nervous System (DDNS) SRA; Mary Custer, PhD

2015-2017 Chair of NIH DDNS Study Section

2015-2019 Grant reviewer, Florida Department of Health

2017 Member of the NIH R13 "Scientific Meeting Grants" (ZNS1 SRB K08) Panel

2018-2019 Member of the NINDS Loan Repayment Program (ZNS1 SRB K12) Panel

2018 Member of the NIH Center for Scientific Review Anonymization Study Panel

2020-2021 Ad hoc member of NIH BINP Study Section

2022-2024 Member of the NINDS Loan Repayment Program ZNS1-SRB-O (24) Panel

2024 Member of the Tobacco-Related Disease Research Program Study Section (Neuroscience of Nicotine Addiction)

Past and Current Graduate Students Mentored:

<u>Past Trainees</u>

Karen Roder, B.S. (2000-2007) Technician

Jennifer Paulson, Ph.D. (Graduated as GSBS Outstanding Graduate Student August 2007)

Current Position: Pharmacist, Odessa, TX (2010-present)

Sharanya Vemula, M.S., Ph.D. (Graduated in August 2006 with MS and December 2008 with Ph.D.)
Current Position: Clinical Research Professional, Boston Area.

Li Yang, M.D., Ph.D. (Graduated July 2011)
Current Position: FDA reviewer for new drug applications

Kaushik Shah, M.S., Ph.D. (Graduated December 2013)
Current Position: Pharmacist in Amarillo, Texas.

Mohammad Rashedul Islam, M.S., Ph.D. Graduated in 2016 from the Abbruscato Lab
Current Position Postdoctoral Fellow at Harvard Mass General Hospital with Dr. Josephine Lok and Dr. Christiane Wrann

Pradeep Selvaraj, M.D., Ph.D. Was a postdoctoral fellow in the Abbruscato Lab from (2007-2008)
Current Position: Doctor of Internal Medicine in Woodville, MS

Tianzhi Yang, Ph.D. Was a postdoctoral fellow in the Abbruscato lab from 2004-2007
Current Position: Chair and Professor, Husson University School of Pharmacy, Bangor, Maine

Ali Sifat, Ph.D., Graduate in 2020 (GSBS Outstanding Graduate Student)
Current Position: FDA ORISE Fellow at Center for Tobacco Products

Thamer Albekairi Ph.D.. Graduated from the Abbruscato Lab in 2020 (funded by the Saudi Arabian Cultural Mission). Now is a tenure track assistant professor at King Saud University.

Bhuvan Vaidya, Ph.D., worked as a Research Assistant Professor in the Abbruscato Lab from 2016-2021 and currently is a Formulation Scientist at Exelead, Carmel, Indiana

Hossam Abdelrahman, MS, graduated with Ph.D. from Ahsan and Abbruscato Lab in 2019, now works at Pfizer as a Pharmacometrician.

Heidi Villalba, Ph.D. graduated in 2019 from Abbruscato Lab and continued in my lab supported on a NIDA Diversity Supplement for her Postdoctoral fellowship, now is a tenure-track Assistant Professor at TTUSHC School of Veterinary Medicine.

Dawson Miller, BS worked in the Abbruscato Lab as an ABRI intern in the summer of 2019, currently is a Medical Student at Baylor College of Medicine.

Yash Ghanwatkar, Graduated in 2020 with MS from Abbruscato Lab and is currently a Ph.D. student at UNMC in Pharmaceutical Sciences.

Saideh Nozohouri, MS, Graduated from Abbruscato Lab in 2021 with Ph.D., now working at Eli Lilly as a research scientist

Asharafur Rahman, Ph.D. Postdoctoral Fellow Abbruscato Lab 2020-2022, now a tenure-track Assistant Professor at Wilkes University School of Pharmacy in Pennsylvania.

Sabrina Archie, MS, Ph.D. Graduated from Abbruscato Lab in 2023 with Ph.D., now working at FDA as an ORISE Fellow

Sejal Sharma, Ph.D. Graduated from Abbruscato Lab in May 2024 with Ph.D., now working as a Postdoc with Dr. Unadkat in the Department of Pharmaceutics, University of Washington, Seattle

Current Trainees in the Abbruscato Lab (5)

Ayesha Atker, Ph.D. Current Postdoctoral Fellow

Yong Zhang, M.D. Current Research Instructor

Sejal Jadhav, Current Ph.D. Student (Started 2022)

David Mara, MS, Current Pharm.D. / Ph.D. Student (Started 2022)

Jace Tyson, ABRI Summer Intern and Sophomore at University of Texas (Neuroscience Major)

Ph.D. and M.S. Committee Mentor/Member at TTUHSC (60)

Sejal Sharma Graduated 2024 (**Mentor**)
Harrison Benson (Ph.D. student)
Sariful Holander (Ph.D. student)
Apoorva Kasetti (Ph.D. student)
Shadan Modaresahmadi (Ph.D. student)
Ehsan Nozohouri (Ph.D. student)
Sadisna Shahi (Ph.D. student)
Kirti Shetty (Ph.D. student)
Nausheen Syeara (Ph.D. student)
Sumiah Zoubi (Ph.D. student)
Dhaval Patel (Ph.D. student)
Siavash Shahbazi Ph.D., Graduated 2023
Sabrina Archie, Ph.D., Graduated 2023 (**Mentor**)
Saideh Nozohouri, Ph.D. Graduated 2021 (**Mentor**)
Thamer Albekairi, Ph.D. (Graduated 2020) (**Mentor)**
Yash Ghanwatkar, M.S., Graduated in 2020 (**Mentor**)
Ali Sifat, Ph.D. Graduated 2020) (**Mentor**)
Maria Villalba, Ph.D. (Graduated 2019) (**Mentor**)
Hossam Abdelraham, Ph.D. (Graduated 2019) (**Mentor**)
Srinidhi Jayaraman, Ph.D. (Graduated 2019)
Md. Abdul Kaisar, Ph.D. (Graduated 2018)
Laxmi Iyer, Ph.D. (Graduated 2018)
Nihar Kinarivala, Ph.D. (Graduated 2017)
Benard Ogola, Ph.D. (Graduted 2017)
Prasad Shikha, Ph.D. (Graduated 2017)
Jee Hyun Park, Ph.D. (Graduated 2016)
Pooja Naik, Ph.D. (Graduated 2015)

Md. Mamunur Rashid, Ph.D. (Graduated 2013) (**Mentor**)
Naomi Wangler, Ph.D. (Graduated 2014)
Rajiv Boylan, Ph.D. (Graduated 2015)
Kamrun Nahar, Ph.D. (Graduated 2014)
Md. Shahriar Absar, Ph.D. (Graduated 2014)
Shuangling Zhang, Ph.D. (Graduated 2013)
Kaushik Shah, Ph.D. (Graduated 2013) **(Mentor**)
Raghavender Chivukula, Ph.D. (Graduated 2014)
Sivaramakrishishna Koganti, Ph.D. (Graduated 2012)
Jason Crumley, M.S. Student (2004 start, transferred to Pharm.D. program)
Bhavna Verma, Ph.D. Student (Graduated August 2011)
Russell Snyder, Ph.D. Student (Graduated August 2011)
Li Yang, M.D., Ph.D. (Graduted 2011) (**Mentor**)
Satyanarayana Goda, Ph.D. Student (Graduated August 2011)
Erika Wisdom, M.S. Student (Graduated August 2010)
Vamshi Manda, Ph.D. Student (Graduated August 2010)
Rajendar Mittapalli, Ph.D. Student (Graduated 2010)
Ridhi Parasrampuria, Ph.D. Student (Graduated August 2010)
Rachita Sumbria, Ph.D. Student (Graduated December 2010)
Lloyd Alfonso, Ph.D. Student (Graduated August 2009)
Sharanya Vemula M.S., Ph.D. (Graduated 2008) (**Mentor**)
Fancy Thomas, Ph.D. Student (Graduated December 2008)
Shuhua Bai, Ph.D. Student (Graduated August 2008)
James Egbert, M.S. Student (Graduated May 2008)
Jennifer Paulson, Pharm.D., Ph.D. (Graduated 2007) (**Mentor)**
Celee Spidel, Ph.D. Student (Graduated August 2006)
Julie Gaasch, Ph.D. Student (Graduated December 2006)
Cornelia Kiewart, Ph.D. Student (Graduated December2006)
Sharanya Vemula M.S. (Graduated with MS in 2008) (**Mentor**)
Jagan Parepally, Ph.D. Student (Graduated December, 2005)
Fatima Mustafa, M.S. Student (Graduated May, 2004)
Paul Lockman, Ph.D. Student (Graduated August, 2003)

External Examiner (2)

Izel Fourie Sorensen, Doctor of Philosophy at the School of Pharmacy, North-West University, South Africa, *Influence of Tobacco Smoke Constituents on Monamine Oxidase Activity In Vitro and on Human Placental Monamine Oxidase A Activity In Vivo*, Major Advisor is Prof. N. Castagnoli, Jr., (2004)

Gia McAfee, Doctor of Philosophy at the School of Pharmacy, North-West University, South Africa, *Smoking and Brain Dopaminergic Neurochemistry*, Major Advisor is Prof. C.J. Van der Schyf. (2005)

Lab Research Assistants/Technicians:

Karen Roder, B.S. (2000-2007)
Jennifer Paulson, B.S. (2002-2003)
Justin Thomas, B.S. (summer 2003 Summer Accelerated Biomedical Research Program (SABR) student, summer 2004 SABR student)
Ashlee Henson, (2005 WHRI intern)

Dawson Miller, (2019 ABRI intern)
Elizabeth Burks, BS (2021 ABRI intern)

Pharm. D. Student Researchers:
Aaron Bird, Pharm.D. (2000-2002)
Steve Lopez, Pharm.D. (2001-2004)
Rachel Dunseth, Pharm.D. (2005)
David Mara, MS (2022)

Publications
Google Scholar H-Index=46
https://scholar.google.com/citations?user=Ae9uWr0AAAAJ&hl=en

1. Weber, S.J., Abbruscato, T.J., Lipkowski, A.W., Polt, R., Misicka, A., Haaseth, R.C., Bartosz, H., Hruby, V.J., Davis, T.P. Assessment of an *in vitro* blood-brain barrier using several [Met5] Enkephalin opioid analogs. *J. Pharmacol. Exp. Ther.* 266: 1649-1655, 1993.

2. Brownson, E.A., Abbruscato, T.J., Gillespie, T.J., Hruby, V.J. and Davis, T.P. Effect of peptidases at the blood-brain barrier on the permeability of enkephalin. *J. Pharmacol. Exp. Ther.* 270: 675-680, 1994.

3. Polt, R., Porreca, F., Szabo, L.Z., Bilsky, E.J., Davis, P., Abbruscato, T.J., Davis, T.P., Horvath, R., Yamamura, H.I. And Hruby, V.J. Glycopeptide enkephalin analogues produce analgesia in mice: Evidence for penetration of the blood-brain barrier. *Proc. Natl. Acad. Sci. USA.* 91: 7114-7118, 1994.

4. Davis, T.P., Abbruscato, T.J., Brownson, E.A. and Hruby, V.J. Conformationally constrained peptide drugs targeted at the blood-brain barrier. *NIDA Research Monograph* 154: 47-59, 1994.

5. Abbruscato, T.J., Williams, S.A., Hruby, V.J. and Davis, T.P. Blood-brain permeability of novel opioid peptides using brain microvessel endothelial cells. *NIDA Research Monograph, CPDD.* 176: P256, 1995.

6. Williams, S.A. Abbruscato, T.J., Szabo, L., Polt, R., Hruby, V.J. and Davis, T.P. The effect of glycosylation on the uptake of an enkephalin analogue into the central nervous system. *Adv. Exp. Med. Biol.* 69-77, 1995.

7. Williams, S.A. Abbruscato, T.J., , Hruby, V.J. and Davis, T.P. Effect of halogenation on the CNS entry of DPDPE. *NIDA Research Monograph, CPDD* 176: P257, 1995.

8. Abbruscato, T.J., Williams, S.A., Misicka, A., Lipkowski, A.W., Hruby, V.J. and Davis, T.P. Blood-to-central nervous system entry and stability of biphalin, a unique double-enkephalin analog, and its halogenated derivatives. *J. Pharmacol. Exp. Ther.* 276: 1049-1057, 1996.

9. Williams, S.A. Abbruscato, T.J., Hruby, V.J. and Davis, T.P. The passage of a δ-opioid selective enkephalin, DPDPE, across the blood-brain and blood-cerebrospinal fluid barriers. *J. Neurochem.* 66: 1289-1299, 1996.

10. Greene, D.G., Hau, V., Abbruscato, T.J., Hom, S.J., Gillespie, T.J., Bartosz, H., Hruby, V.J. and Davis, T.P. Enkephalin analog prodrugs: assessment of *in vitro* conversion, enzyme cleavage characterization and blood-brain barrier permeability. *J. Pharmacol. Exp. Ther.* 277: 1366-1375, 1996.

11. Williams, S.A., Abbruscato, T.J., Szabo, L. Polt, R., Hruby, V.J., and Davis, T.P. The effect of glycosylation on the uptake of an enkephalin analogue into the CNS. In: Biology and Physiology of the BBB. Couraud and Scherman, Eds. Plenum Press, New York, 69-77, 1996.

12. Abbruscato, T.J., Williams, S.A., Hruby, V.J. and Davis, T.P. Blood-brain barrier permeability and bioavailability of a highly potent and mu-selective opioid receptor antagonist, CTAP: Comparison with morphine. *J. Pharmacol. Exp. Ther.* 280: 402-409, 1997.

13. Thomas, S.A., Abbruscato, T.J., Hruby, V.J. and Davis, T.P. The entry of DPDPE into the central nervous system: saturation kinetics and specificity. *J. Pharmacol. Exp. Ther.* 280: 1235-1240, 1997.

14. Abbruscato, T.J., Williams, S.A. , Hruby, V.J. and Davis, T.P. Brain and spinal cord distribution of Biphalin, correlation with opioid receptor density and mechanism of CNS entry. *J. Neurochem.* 69: 1236-1245, 1997.

15. Thomas, S.A., Abbruscato, T.J., Hruby, V.J. and Davis, T.P. *In vitro* blood-brain barrier permeability and stability of a series of [D-Ala2]deltorphin I and II analogues. *J. Pharmacol. Exp. Ther.* 281: 817-825, 1997.

16. Egleton D.R., Abbruscato, T.J., Thomas, S.A. and Davis, T.P. Transport of opioid peptides into the central nervous system. *J. Pharm. Sci.* 18: 1433-1439, 1998.

17. Abbruscato, T.J. and Davis, T.P. Rapid hypoxia / aglycemia compromises in vitro blood-brain barrier integrity. *J. Pharmacol. Exp. Ther.* 289: 668-675, 1999.

18. Gentry, C.L., Egleton, R.D., Gillespie, T.J., Abbruscato, T.J. Bechowski, H.B., Hruby, V.J. and Davis, T.P. The effect of halogenation on blood-brain barrier permeability of a novel peptide drug. *Peptides* 20: 1229-1238, 1999.

19. Abbruscato. T.J. and Davis, T.P. Hypoxia / aglycemia causes rapid decrease in protein expression of E-cadherin. *Brain Research* 842: 277-286, 1999.

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7. Williams, S.A., Abbruscato, T.J., Szabo, L., Polt, R., Hruby, V.J. and Davis, T.P. Does glycosylated DCDC-enkephalin use the GLUT1 carrier to enter the CNS? Cerebral Vascular Biology Conference, Paris, France, July 1995.

8. Abbruscato, T.J., Williams, S.A. , Hruby, V.J. and Davis, T.P. BBB permeability and bioavailability of a potent and selective mu opioid receptor antagonist, CTAP. 25th Annual Meeting of the SFN, San Diego, CA, 331.7, 1995.

9. Abbruscato, T.J., Williams, S.A. , Hruby, V.J. and Davis, T.P. Brain and spinal cord distribution of biphalin correlation with opioid receptor density and mechanism of CNS entry. 26th Annual Meeting of the SFN, Washington D.C., 1996.

10. Abbruscato, T.J., Williams, S.A. , Hruby, V.J. and Davis, T.P. The potent opioid analgesic, biphalin, distributes to CNS sites by a saturable mechanism. ASPET, San Diego, CA, 1997.

11. Abbruscato, T.J. and Davis, T.P. Protection of brain endothelial cell integrity by nifedipine during hypoxia. 27th Annual Meeting of the Soc. for Neuroscience, New Oleans, LA, 1997.

12. Abbruscato, T.J. and Davis, T.P. Rapid hypoxia / aglycemia compromises in vitro blood-brain barrier integrity. XIIIth International Congress of Pharmacology, Munchen, Germany, 1998.

13. Abbruscato, T.J, Rounseville, M.P. and Davis, T.P. Alterations in endothelial cell / blood-brain barrier phenotype after hypoxia / aglycemia. 28th Annual Meeting of the Soc. for Neuroscience, Los Angeles, CA, 1998. *selected slide presentation

14. Abbruscato, T.J., Gentry, C.L. and Davis, T.P. Acute and chronic nicotine effects on BBB permeability and expression of tight junctional proteins. Experimental Biology (FASEB), Washington D.C., 1999.

15. Abbruscato, T.J. and Davis, T.P. Hypoxia / aglycemia alterations in cytoskeletal and tight junctional proteins at the blood-brain barrier. 29th Annual Meeting of the Soc. for Neuroscience, Miami, FL, 1999.

16. Hom, S., Egleton, R.D., Abbruscato, T.J., St. John, P.A. and Davis, T.P. Increased cerebrovascular permeability in an in situ model of hypoxia / aglycemia. 29th Annual Meeting of the SFN, Miami, FL, 1999.

17. Gentry, C.L., Abbruscato, T.J. and Davis, T.P. Nicotine and cotinine increase *in vitro* blood-brain barrier permeability. 29th Annual Meeting of the Soc. for Neuroscience, Miami, FL, 1999.

18. Abbruscato, T.J., Venisnik, K.M. and Davis, T.P. Hypoxia / aglycemia alterations in junctional proteins at the BBB. 43rd Annual Meeting of the Western Pharmacology Society, Tucson, AZ, 2000.

19. Venisnik, K.M., Abbruscato, T.J. and Davis, T.P. Blood-brain barrier permeability of DPDPE is increased after hypoxia / aglycemia. 11th Annual Undergraduate Biology Research Exposition, Tucson, AZ, 2000.

20. Abbruscato, T.J., Roder, K. Combined nicotine and cotinine modulates function of BBB Na,K-ATPase and Na,K,2Cl-cotransporter. 30th Annual Meeting of the Society For Neuroscience, New Orleans, LA, 2000

21. Hom, S., Egleton, R.D., Abbruscato, T.J., Huber, J.D. and Davis, T.P. Effects of reduced flow on BBB transport systems. 30th Annual Meeting of the Society For Neuroscience, New Orleans, LA, 2000.

22. Abbruscato, T.J., Lopez, S.J., and Roder, K. Regulation of brain K+ transport during hypoxia/aglycemia and/or nicotine/cotinine exposure: Role of the BBB Na,K,-ATPase and Na,K,2Cl-cotransporter. IVth International Conference Cerebral Vascular Biology, King's College Cambridge, UK, 2001.

23. Abbruscato, T.J., Thekkumkara, T.J., Roder, K., Bird, A., Lopez, S.J. Modified NKCC localization and function at the BBB after stroke and/or nicotine exposure. 31th Annual Meeting of the SFN, San Diego, CA, 2001.

24. Abbruscato, T.J. Ion transporters at the BBB: Altered Function after nicotine exposure and stroke conditions. Gordon Research Conference (Barriers of the CNS), Invited speaker, Tilton, NH, 2002.

25. Abbruscato, T.J., Mustafa, F., Lopez, S. Roder, K. Nicotine effects on BBB adaption to stroke conditions. 32nd Annual Meeting of the Society for Neuroscience, Orlando, FL, 2002.

26. Allen, D.D., Mumper, R.J., Koziara, J., Abbruscato, T.J., Roder, K.E., Lockman, P.R. Evaluation of novel nanoparticle effects on baseline BBB kinetic parameters. 32nd Annual Meeting of the SFN, Orlando, FL, 2002.

27. Mustafa, F., Roder, K., Abbruscato, T.J. Nicotine and cotinine effects on brain microvascular permeability and tight junctional protein expression. American Association of Pharmaceutical Scientists, Toronto, Ontario, Canada 2002.

28. Lockman, P.R., Koziara, J., Mumper, R.J., Abbruscato, T.J., Roder, K.E., Allen, D.D. In vitro evaluation of two nanoparticle effects on BBB integrity, permeation and transport. American Association of Pharmaceutical Scientists, Toronto, Ontario, Canada 2002.

29. Abbruscato, T.J., Roder, K., Paulson, J., Lopez, S. Thomas, J. Activation of brain endothelial nAChR alters blood-to-brain mediated K+ transport during stroke conditions. Cerebrovascular Biology A1, Amarillo, TX, 2003.

30. Paulson, J., Roder, K., Lopez, S. Thomas, J., Allen, D., Abbruscato, T.J. Nicotine effects on BBB mediated potassium transport during combined hypoxia-reoxygenation. Society for Neuroscience, 33rd Annual Meeting, New Orleans, LA, 2003

31. Paulson, J. Mdzinarishvilli, A., Roder, K. Thomas, KJ, Robbertse, G. Van der Schyf, C., and Abbruscato, T.J. Nicotine exposure alters blood-brain barrier potassium transport and stroke outcome in a murine MCAO stroke model. Society for Neuroscience, 34rd Annual Meeting, San Diego, CA, 2004.

32. Mdzinarishvili, A., Geldenhuys, W., Bickel, U., Klein, J., Abbruscato T.J., and Van der Schyf, C. Neuroprotection by NGP1-01 in the MCAO murine stroke model. Society for Neuroscience, 34rd Annual Meeting, San Diego, CA, 2004.

33. Pai, A., Lockman, P.R., Van der Schyf, C.J., Roder, K.E., Abbruscato, T.J. and Allen, D.D. Nicotine-induced alterations in brain uptake of D-glucose. Third Annual Research Days, TTUHSC, Amarillo, TX, 2004.

34. Paulson, J., Mdzinarishvilli, A., Roder, K., Thomas, J., Lopez, S., Robbertse, G., Van der Schyf, C., Abbruscato, T.J. Nicotine effects on potassium transport of the blood- brain barrier during stroke. Third Annual Research Days, TTUHSC, Amarillo, TX, 2004 (Voted "Best Graduate Student Poster").

35. Lockman, P.R., Van der Schyf, C.J., Roder, K.E., Paulson, J.R., Abbruscato, T.J., and Allen, D.D. Chronic nicotine exposure diminishes brain uptake of methyllycaconitine. Third Annual Research Days, TTUHSC, Amarillo, TX, 2004.

38. Abbruscato, T.J., Bickel, U., Klein, J., and Van der Schyf, C.J. Research Center Pathophysiology and teatment of stroke – PATOS. Lighting the Path to Preeminence, TTUHSC, Lubbock, TX, 2004.

39. Kiewert, C., Mdzinarishvili, A., Hartmann, J., Kumar, V., Abbruscato, T.J., Bickel, U., Van der Schyf, C.J., and Klein, J. Monitoring extracellular metabolites during experimental stroke by microdialysis. Society for Neuroscience, 35th Annual Meeting, Washington DC, 2005.

40. Paulson, J.R., Roder, K.E., Mdzinarishvili, A., Van der Schyf, C.J., Bickel, U., Klein, J., Abbruscato T.J. Nicotine worsens edema associated with focal ischemia and oxygen glucose deprivation in hippocampal brain slices. Society for Neuroscience, 35th Annual Meeting, Washington DC, 2005. *selected slide presentation

41. Vemula S, Yang T, Roder K, Abbruscato TJ Stroke Conditions Combined with Nicotine and cotinine alter blood-brain barrier glucose transporter protein expression and activity. Society for Neuroscience, 35th Annual Meeting, Washington DC, 2005. *selected slide presentation

42. Bickel, U., Paulson, J.R., Abbruscato, T.J., Bhattacharya, R. Targeted delivery of NFk-κB decoy to brain endothelial cells inhibit the expression of cell adhesion molecules during hypoxia and re-oxygenation in vitro. Society for Neuroscience, 35th Annual Meeting, Washington DC, 2005.

43. Lockman, P.R., Gaasch, J., Geldenhuys, W., Abbruscato, T.J., Van der Schyf, C.J., and Allen, D.D. Blood-brain barrier choline transport is not altered after chronic nicotine exposure. Society for Neuroscience, 35th Annual Meeting, Washington DC, 2005.

44. Yang, T., Roder, K., and Abbruscato, T.J. Protein kinase c family members in the regulation of blood-brain barrier N,K,2Cl-cotransporter during in vitro stroke conditions and nicotine exposure. Society for Neuroscience, 35th Annual Meeting, Washington DC, 2005. *selected slide presentation

45. Vemula, S. Yang, T., Roder, KE, Abbruscato, T.J. An in vitro study of glucose transport at the blood-brain barrier during both hypoxia/aglycemia and nicotine exposure. 4th Annual Research Days, Amarillo, TX, July 2005.

46. Yang, T., Roder, K.E., Bhat, G.J., Thekkumkara, T.J., Abbruscato, T.J. PKC family members in the regulation of BBB NKCC during *in vitro* stroke conditions and nicotine exposure. 4th Annual Research Days, Amarillo, TX, July 2005.

47. Paulson, J.R., Roder, K.E., Wilhelm A., Mdzinarishvili, A., Van der Schyf, C.J., Bickel, U., Klein, J., Abbruscato, T.J. Nicotine exacerbates edema of hippocampal brain slices in

an oxygen glucose deprivation model. 4th Annual Research Days, Amarillo, TX, July 2005.

48. Vemula, S., Roder, K.E., Abbruscato, T.J. Role of Gulut1 and SGLT1 on blood-to-brain transport of glucose during stroke. 5th Annual SOP Research Days, TTUHSC, Amarillo, TX 2006.

49. Paulson, J., Mdzinarishvilli, A. Abbruscato, T.J. Effects of chronic exposure to nicotine in two models of stroke. 5th Annual SOP Research Days, TTUHSC, Amarillo, TX 2006 (Voted "Second Best Graduate Student Poster")

50. Yang, T., Roder, K.E., Abbruscato, T.J. A comparison of two blood-brain barrier models for brain drug delivery studies and predicting neurovascular pathophysiology associated with oxygen glucose deprivation. 5th Annual SOP Research Days, TTUHSC, Amarillo, TX 2006.

51. Paulson, J.R., Roder, K.E., Abbruscato, T.J. Nicotinic acetylcholine receptor involvement in brain edema during oxygen glucose deprivation in rat hippocampal slices. Society for Neuroscience, 36th Annual Meeting, Atlanta, GA, 2006.

52. Vemula, S., Roder, K.E., Abbruscato, T.J. Role of GLUT1 and SGLT1 on blood--brain barrier glucose transport during stroke. Society for Neuroscience, 36th Annual Meeting, Atlanta, GA, 2006.

53. Abbruscato, T.J., Yang, T., and Roder, K.E., Evaluation of bEnd5 cell line as an in vitro model for investigations of blood-brain barrier oxygen glucose deprivation and drug transport. Society for Neuroscience, 36th Annual Meeting, Atlanta, GA, 2006.

54. Paulson, J, Yang, T, Roder, KE, Abbruscato, TJ, Nicotine alters NKCC expression in isolated brain microvessel endothelial cells after MCAO and increases edema in hippocampal brain slices subjected to OGD, Society for Neuroscience, San Diego, CA 2007.

55. Yang, T, Gunaje, J. Thekkumkara, T, Abbruscato, TJ, Phosphorylation in the regulation of blood-brain barrier Na,K,2Cl-cotransporter during in vitro hypoxic/aglycemic conditions, Society for Neuroscience, San Diego, CA 2007

56. Vemula, S, Roder, KE, Lockman, PR, Abbruscato, TJ, Metabolic adaptation of the blood-brain barrier after oxygen glucose deprivation, Society for Neuroscience, San Diego, CA 2007

57. Lockman, PR, Vemula, S, Abbruscato, TJ, Smith, QR, Allen, DD, Manda, V, Permeability of D-[3H] glucose is decreased at the blood-brain barrier after chronic nicotine exposure, Society for Neuroscience, CA 2007.

58. Goda, S, Thomas, FC, Gaasch, JA, Abbruscato, TJ, Smith, QR, Blood-brain barrier permeability and transport of bumetanide, Society for Neuroscience, San Diego, CA 2007.

59. Lockman, P, Egbert, J, Vemula, S, Abbruscato, TJ Smith, QR, Allen, DD, Chronic

Nicotine Exposure Diminishes the Blood to Brain Transport of 3H -D-Glucose, American Association of Pharmaceutical Scientists, San Diego, CA 2007.

60. Lockman, P Egbert, J, Vemula, S, Abbruscato, TJ, Smith, QR, Allen, DD, Chronic Nicotine Exposer Diminishes the Blood to Brain Transport of 3H -D-Glucose, American Association of Pharmaceutical Scientists, San Diego, CA 2007.

61. Abbruscato, T, Vemula, S. Effects of Phlorizin on Glucose Transport at the Blood Brain Barrier during Oxygen Glucose Deprivation, American Association of Pharmaceutical Scientists, San Diego, CA 2007.

62. Goda, S, Thomas, F, Gaasch, J, Abbruscato, TJ, Smith QR, Blood Brain Barrier Permeability and Transport of Bumetanide, American Association of Pharmaceutical Scientists, San Diego, CA 2007.

63. Yesudas, R, Abbruscato, TJ, Thekkumkara, TJ, Role of Sodium Glucose Transporter in High Glucose Mediated Angiotensin Type I Receptor Down Regulation in Human Proximal Tubule Cells FASEB, Washington DC, 2007.

64. Yang, L, Yang, T, Vemula, S, Arumugam, TV, Abbruscato, TJ, Na+, K+, 2Cl- Cotransporter as a Neuroprotective Target for Stroke, American Association of Pharmaceutical Scientists, Atlanta, GA, 2008.

65. Yang, T, Vemula, S, Yang, L, Paulson, J, Abbruscato, TJ, Nicotine Worsens Behavioral Performance and Alters NKCC Expression and Activity in Mouse Cerebral Artery Occlusion Model, American Association of Pharmaceutical Scientists, Atlanta, GA, 2008.

66. Vemula, S, Yang, T, Yang, L, Abbruscato, TJ, Characterization of the Blood Brain Barrier Sodium Glucose Cotransporter in a Mouse Model of Focal Ischemia American Association of Pharmaceutical Scientists, Atlanta, GA, 2008.

******Selected for Eli Lilly / AAPS Graduate Student Symposium**

67. Shah, K, Yang, L, Abbruscato, TJ, Effect of High Glucose on Sodium Dependent Glucose Cotransporter (SGLT1) at the Blood Brain Barrier (BBB) in Stroke. American Association of Pharmaceutical Scientists, Los Angeles, CA, 2009.

68. Yang, L, Shah, K, Abbruscato, TJ, Dimeric Mu and Delta Opioid Receptor Agonist, Biphalin, Reduces Brain Edema and Infarct Size in a Model of Focal Brain Ischemia. American Association of Pharmaceutical Scientists, Los Angeles, CA 2009.

******Selected for AAPS travel fellowship**

69. Rashid, M, Yang, L, Arumugam, TV, Abbruscato, TJ, Karamyan, VT, "Ischemia-reperfusion injury causes upregulation of the novel non-AT1, non-AT2 angiotensin binding site in the mouse brain" Society for Neuroscience, San Diego, CA 2010.

70. Yang, L, Shah, K, Abbruscato, TJ, "Neuroprotective Role of Biphalin, an Opioid Receptor Agonist, in the Treatment of Stroke" American Association of Pharmaceutical Scientists, New Orleans, LA, 2010.

71. Goda, S, Thorsheim, HR, Taskar, KS, Abbruscato, TJ, Smith, QR, "Restricted Brain Distribution of Bumetanide is Mediated by Active Efflux Transporters" American Association of Pharmaceutical Scientists, New Orleans, LA, 2010.

72. Koval Anatoliy, Shah Kaushik; Abbruscato Thomas J. Generation of new, highly restrictive, conditionally immortalized human brain microvascular endothelial cell line. Society for Biomedical Sciences, 16th Annual Conference & Exhibition, Advancing the Science of Drug Discovery, Phoenix, AZ, 2010.

73. Shah K, Goda S, Yang L, Koval A, Smith QR, Abbruscato TJ, Increase sodium/glucose co-transporter (SGLT1) function across blood-brain barrier (BBB) in diabetes. American Society for Neurochemistry, St. Louis, MO, 2011.

74. Islam, MR, Shah, K, Koval, A, Abbruscato, TJ The effects of basolateral astrocyte components on mouse and human blood brain barrier characteristics. American Association of Pharmaceutical Scientists, Los Angeles, CA 2011.

75. Islam MR, Abbruscato, TJ Neuroprotective function of biphalin and pegylated analog against ischemia induce neurotoxicity. Society for Neuroscience, New Orleans, LA, 2012.

76. Yang, L, Islam, MR, Abbruscato, TJ Comparison of the Neuroprotective Effects of a Nonselective Opioid Receptor Agonist, Biphalin, to Selective Opioid Agonist for the Treatment of Stroke Induced Brain Injury. American Association of Pharmaceutical Scientists, San Antonio, TX, 2013

77. Islam, MR, Mollica, A., Lee, Y., Hruby, VJ, Abbruscato, TJ Screening biphalin peptide analogs for their neuroprotective potential in models of ischemia. American Association of Pharmaceutical Scientists, San Antonio, TX, 2013
    ******Selected for Graduate Student Symposium DDI**

78. Islam, MR, Yang, L., Mollica, A., Lee, Y., Hruby, V.J., Abbruscato, TJ Neuroprotective effects of biphalin-fentanyl multivalent opioid agonists in ischemic stroke models American Association of Pharmaceutical Scientists, San Diego, CA, 2014

79. Islam, MR, Yang, L., Abbruscato, TJ Pre-clinical Therapeutic Time Profiling of Neuroprotectant Biphalin Using Ischemic Stroke Models American Association of Pharmaceutical Scientists, Orland, FL, 2015

80. Islam, MR, Yang, L., Lee, Y., Hruby, V.J., Abbruscato, TJ Biphalin-Fentanyl Multivalent Opioid Agonists as Potential Neuroprotectant for Ischemic Stroke Treatment American Association of Pharmaceutical Scientists, NBC San Francisco, CA, 2015

81. Shah, Kaushik., Naik, Pooja., ali sifat., prasad, Shikha., kaisar Md A., Sajja, Ravi., Cucullo Luca., Abbruscato, Thomas Impact of Tobacco Smoke and E-Cigarettes on Stroke Neurovascular Injury in Diabetes. Gordon Researcher Conference, Barriers of the CNS, New London, NH, 2016.

82. Abbruscato, TJ Targeting Sodium-Glucose Transporters at the BBB for Treatment of Ischemic Stroke, AAPS Drug Transporter Workshop, Baltimore, MD, 2016

83. M.A. Kaisar, A.E. Sifat, T.J Abbruscato, L. Cucullo. To Vape or not to Vape: Addressing some e-cigarette Safety Concerns at the Cerebrovascular Level. Society of Toxicology, Baltimore Convention Center, Baltimore, MD. March 12-16, 2017
    *******Received a travel award**

84. Ali E. Sifat , Bhuvanashwar Vaida, Heidi Villalba, Mohammad A. Kaisar, , Luca Cucullo, & Thomas J. Abbruscato, E-cigarette Exposure Alters Brain Glucose Utilization and Stroke Outcome. International Stroke Conference, Houston, TX, 2017
    *******selected for a late-breaking oral presentation**

85. Ali E. Sifat, Bhuvaneshwar Vaidya, Heidi Villalba, Mohammad A. Kaisar, Luca Cucullo, Thomas J. Abbruscato Neurovascular effects of smoking and nicotine influence stroke outcome. Cerebrovascular Biology, Melbourne, AU, 2017

86. Heidi Villalba, Bhuvaneshwar Vaidya, Thomas J. Abbruscato. Role of myo-inositol in ischemic stroke outcome in a Type 2 Diabetic mouse model. Experimental Biology, San Diego, CA; April 2018

87. Ali E. Sifat, Bhuvaneshwar Vaidya, Mohammad A. Kaisar, Luca Cucullo, Thomas J. Abbruscato, Nicotine & e-Cig exposure alters brain glucose utilization in ischemic stroke. Society for Neuroscience, San Diego, CA, 2018

88. 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, Society for Neuroscience, Chicago, IL, 2019.

89. Ali Ehsan Sifat, Saeideh Nozohouri, Heidi Villalba, Bhuvaneshwar Vaidya, Thomas Abbruscato Evaluating the neurotoxic effects of prenatal electronic cigarette exposure in offspring: a scope for therapeutic intervention: AAPS, San Antonio, TX 2019

90. Sejal Sharma, Saeideh Nozohouri, Ali Ehsan Sifat, Sabrina Rahman Archie, Yong Zhang, Heidi Villalba, Thomas Abbruscato. "In vitro evaluation of metformin across the blood-brain barrier". American Association of Pharmaceutical Scientists (AAPS) PharmSci 360, Philadelphia, PA; October 2021.

91. Sabrina Rahman Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Thomas J Abbruscato. “E-Cigarette Exposure During Pregnancy Disrupts Postnatal Blood-Brain Barrier Integrity and Deteriorates Aspects of Learning, Memory and Motor Function." Society for Neuroscience (SFN), Chicago, IL (virtual only); November 2021.

92. Sabrina Rahman Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Thomas J Abbruscato. "Effects of Maternal E-Cigarette Use During Pregnancy on Postnatal Blood-Brain Barrier (BBB) Properties- Implications on Brain Drug Delivery". American Association of Pharmaceutical Sciences (AAPS) PharmSci 360, Philadelphia, PA, October 2021.

93. Sabrina Rahman Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Thomas J Abbruscato. “Prenatal E-Cigarette Use Disrupts Postnatal Blood-Brain Barrier (BBB) Properties and Alters Behavioral and Learning". National Institutes of Health (NIH) Tobacco Regulatory Science (TRS) Meeting, Maryland (virtual); October 2021.

94. Sabrina Rahman Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Thomas J Abbruscato. "Effects of Maternal E-Cigarette Use During Pregnancy on Postnatal Blood-Brain Barrier (BBB) Properties- Implications on Brain Drug Delivery". American Association of Pharmaceutical Sciences (AAPS) PharmSci 360, Philadelphia, PA, October 2021.

95. Sabrina Rahman Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Yong Zhang, Thomas J Abbruscato. "Long-Term Neonatal Neurotoxic Impact of Maternal E Cigarette Use: Alteration of Blood Brain Barrier (BBB) Integrity, Neuro Inflammation, and Behavioral Outcomes". American Society for Pharmacology and Experimental Therapeutics (ASPET) Annual Meeting at Experimental Biology (EB), Philadelphia, PA; April 2022.

96. Sabrina Rahman Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Yong Zhang, Thomas J Abbruscato. "Prenatal E-Cigarette Use Disrupts Blood-Brain Barrier (BBB) Integrity and Induces Pro-inflammatory Cytokines in Postnatal Brain". Society of Toxicology (SOT), 61st Annual Meeting & Tox Expo, San Diego, CA; March 2022.
    ******selected for STEP Supplemental Training Award by SOT**

97. Sabrina Archie, David Mara, Thomas J Abbruscato. "Alteration of Drug Metabolizing Enzyme and Transporter Expression Mediated by Electronic Cigarette Exposure: Implication in Drug Interaction". American Association of Pharmaceutical Scientists (AAPS) PharmSci 360 meeting, Boston, October 2022
    ******selected for a “Rapid Fire” oral presentation by AAPS**

98. Sabrina Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Yong Zhang, Thomas J Abbruscato. “Prenatal E-Cigarette Use Disrupts Postnatal Blood-Brain Barrier (BBB) Integrity and Worsens Ischemic Stroke Outcomes- Implications on Brain Drug Delivery”. American Association of Pharmaceutical Scientists (AAPS) PharmSci 360 meeting, Boston. October 2022.

99. Rahman MA, Yong Zhang, Sabrina Archie, Sejal Sharma, Thomas J. Abbruscato. Metformin protects primary mouse astrocytes and neurons from oxidative injury by regulating the activity of the pyruvate dehydrogenase complex. Society for Neuroscience, San Diego, November 2022.

100. Sabrina Archie, Ali Ehsan Sifat, Heidi Villalba, Sejal Sharma, Saeideh Nozohouri, Yong Zhang, Thomas J Abbruscato. “Potential Postnatal Neurotoxicity Mediated by Maternal E-Cigarette Exposure”. 43rd American College of Toxicology Meeting, Denver, Colorado; November-2022

******Selected for the Student Award for Innovation by AstraZeneca for best poster presentation**

101. Zhang, Y, Sharma, S, Esfahani, SH, Jonnalagadda, S, Queen, A, Nozohouri, S, Dhavalkuma, P, Trippier, PC, Karamyan, VT, Abbruscato, TJ, High brain-blood barrier permeability highlights a new class of neurolysin activators as promising candidates for stroke treatment: a pilot pharmacokinetic study in mice. ASPET Meeting, St. Louis, MO, May 2023.

102. Sharma, S, Zhang, Y, Sifat AE, Atker, K, Archie, S, Nozohouri, S, Abbruscato, TJ, Evaluation of Influx and Efflux Transporters of Metformin in an In Vitro Blood-Brain Barrier Model During Normoxic and Ischemic Conditions. ASPET Meeting, St. Louis, MO, May 2023.

103. Archie, S. Sifat, A, Mara, D, Zhang, Y, Abbruscato, TJ, Maternal Electronic Cigarette Exposure Induces Inflammation, Oxidative Stress and Alters Mitochondrial Function in Postnatal Brain. ASPET Meeting, St. Louis, MO, May 2023.

******Sabrina Archie was selected into the ASPET Washington Fellows Program.**

104. Villalba H, Archie SR, Nozohouri S, Sifat AE, Sharma S, Vaidya B, Abbruscato TJ, Sex differences in C57BL/6J mice ischemic stroke outcomes after short exposure to tobacco smoke. Advancing the Study of Stroke in Women Through the Integration of Basic, Clinical and Socioeconomic Perspectives, NINDS Workshop, Arlington, VA, April 2024.

105. Khondker Ayesha Akter, Sejal Sharma, Sejal Rajesh Jadhav, Thomas J Abbruscato, Evaluation of the blood-brain barrier protective effects of metformin after mixed exposures to cigarette smoke, e-cigarette vapor, and stroke conditions. AAPS PharmSci 360 meeting, Salt Lake City, UT. October 2024

106. Yong Zhang, Sejal Rajesh Jadhav, Sejal Sharma, Khondker Ayesha Akter, Paul C Trippier, Vardan T Karamyan, Thomas J Abbruscato A new neurolysin activator ameliorates brain injury in ischemic stroke mice AAPS PharmSci 360 meeting, Salt Lake City, UT. October 2024

107. Yong Zhang, Khondker Ayesha Akter, Sejal Sharma, Sejal Rahesh Jadhav, David Mara, Nisat Sarmin, Luca Cucullo, Thomas Abbruscato, Metformin transports across the ischemic blood-brain barrier and offsets oxidative and inflammatory injury from stroke and nicotine product exposure. Invited talk for Cerebrovascular Biology Meeting at University of Michigan, Ann Arbor, MI, July, 2025.

108. Helen Thorsheim, Ulrich Bickel, Thomas Abbruscato, Richard Keep, Abraham Al-Ahmad, Per, Ask, Peter Robinson, and Quentin Smith The In Vivo Blood-Brain Barrier Is Far "Tighter" Than Previously Documented. Invited talk for Cerebrovascular Biology Meeting at University of Michigan, Ann Arbor, MI, July, 2025.

109. Khondker Ayesha Akter, Sejal Rajesh Jadhav, David Mara, Thomas Abbruscato, Impact of short-term e-cigarette exposure on cerebrovascular damage and evaluating the protective role of Metformin: in vitro and in vivo. Society for Neuroscience, San Diego, CA, November 2025

110. Sejal Rajesh Jadhav, Khondker Ayesha Akter, David Mara, and Thomas J. Abbruscato, Investigating the effect of dual use of smoking and vaping products on the blood-brain barrier using in-vitro and in-vivo models. Society for Neuroscience, San Diego, CA, November 2025.

111. David D. Mara, Khondker Ayesha Akter, Sejal Rajesh Jadhav, and Thomas J Abbruscato Prolonged exposure to zero-nicotine e-cigarette vapor disrupts neurovascular integrity and alters metabolism in-vitro, American College of Toxicology Annual Meeting, Phoenix, AZ, November 2025.

Research Seminar Presentations:

1998

Society for Neuroscience Platform Presentation, Los Angeles, CA

"Alterations in Endothelial Cell / Blood-Brain Barrier Phenotype after Hypoxia / Aglycemia"

1999

TTUHSC Interview Seminar, Amarillo, TX

"Cerebrovascular Changes Associated With Brain Ischemia"

2000

TTUHSC Department of Pharmaceutical Sciences Seminar, Amarillo, TX

"Altered Blood-Brain Barrier Properties after Stroke and Nicotine Exposure."

2002

Gordon Research Conference, Tilton, NH

"Ion Transporters at the BBB: Altered Function after Nicotine Exposure and Stroke Conditions."

2002

TTUHSC School Wide Seminar, Amarillo, TX

"Brain-To-Blood K+ Transport during Stroke"

2005

TTUHSC School Wide Seminar, Amarillo, TX

"Nicotine alters brain endothelial response to stroke conditions"

2006

Texas A&M College of Medicine, Department of Pathology, College Station, TX

"Brain Aspects of Ischemia and Nicotine"

Invited by Gegg Wells, MD, Ph.D.

2008

Gordon Research Conference, Tilton, NH

"Early Changes in ion and Glucose Transport in Stroke"

2009

University of Arizona, Dept. of Pharmacology, College of Medicine, Tucson, AZ

"Inhibition of SGLT at the Neurovascular Unit Reduces Ischemic-Reperfusion Brain Injury"

-Selected and invited by Daniel Stamer, Ph.D. Professor of Pharmacology to present my research for the annual *"Homecoming Seminar"* for the Medical Pharmacology Graduate Program of the Arizona Health Sciences Center.

2010

International Stroke Conference, San Antonio, TX

"SGLT as a Pharmacologic Target in the Ischemic Brain"

2010
Gordon Research Conference, New London, NH
"BBB Sodium Dependent Glucose Cotransport: A Role in Ischemic Brain Injury"
2011
American Society for Neurochemistry, St. Louis, MO
"Molecular Mechanisms of Cell Death and Plasticity after Stroke"
2012
University of Tennessee Pharmaceutical Sciences, COP, Memphis, TN
"Drug Targets in the Ischemic Brain"
2012
University of Louisville, Department of Pharm. & Toxic., SOM, Louisville, KY
"Nicotine effects on the BBB and Stroke Outcome"
2012
West Virginia University, Department of Basic Pharm. Sci., COP, Morgantown, WV
"Targeting the Neurovascular Unit During Stroke"
2013
Texas Tech University HSC School of Pharmacy
"Opportunities for Pharmaceutical Sciences"
2014
Texas Tech University HSC Graduate School of Biomedical Sciences
"Targeting the Blood-Brain Barrier to Treat Stroke"
Keynote Speaker
2015, 2016
American Heart Association (Amarillo Local Organization)
"AHA-SOP Partnership in for Cardiovascular Disease and Stroke Research"
2016
AAPS Drug Transporters Workshop (Baltimore,MD)
"Targeting sodium-glucose transporters at the neurovascular unit for treatment of ischemic stroke"
2017
Cerebrovascular Biology (Melbourne, AU)
"Neurovascular effects of smoking and nicotine influence stroke outcome"
2020
TTUHSC Graduate School of Biomedical Sciences Core Seminar
"Nicotine effects from Tobacco Smoke and E-Cigarette Exposure on Brain Ischemia"
2024
TTUHSC School of Pharmacy and Graduate School of Biomedical Sciences, TechRx Seminars. "Time management for scientists"
2025
University of Arizona, Department of Pharmacology, College of Medicine, Tucson, AZ
"Repurposing Metformin to Treat an Oxidative and Inflammatory Brain Environment Induced by Stroke and Nicotine Product Exposure."
2025
TTUHSC Executive Retreat for Deans and Department Chairs
"Using Emotional Intelligence in Your Leadership" Panel Discussion with Murray Professors.
2025

"Metformin transports across the ischemic blood-brain barrier and offsets oxidative and inflammatory injury from stroke and nicotine product exposure" Invited talk for Cerebrovascular Biology Meeting at University of Michigan, Ann Arbor, MI

2025

"Becoming and Academic Scientist" Invited talk for the ABRI internship program, Amarillo, TX

Teaching Experience:

University of Arizona, College of Medicine, Arizona Health Sciences Center

1996

Molecular Pharmacology, Teaching Assistant

1997

Graduate Substances of Abuse (2 contact hours)

1998-2000

Medical Pharmacology 501/801 (patient oriented problem solving) (2 contact hours)

Integrated Medical Physiology, Biochemistry and Molecular Genetics 800 (problem based learning) (8 contact hours)

Texas Tech University Health Sciences Center, School of Pharmacy

School of Pharmacy Courses:

Physiology 1513 (**Team Member**) (12-18 lecture equivalents/year) Spring, 2000-2009

Renal Pharmacotherapy 2254 (**Team Leader/Member**) (12 lecture equivalents/year) Spring, 2001-2007 (**Team Leader**), 2008-2010 (**Team Member**), 2011 (**Team Leader**) 2012-Present (**Team Member**)

Respiratory Pharmacotherapy 2256 (**Team Member**) (12 lecture equivalents/year) Spring, 2000-2009

Case Studies I 2361 (**Team Member**) (16 lecture equivalents/year) Spring, 2000, 2001, 2011 (with graduate TA)

Community Action Project 1100 (**Team Member**) (3 lecture equivalents/year) Fall and Spring, 2000 and 2005

Drugs of Abuse 4207 (**Team Leader**) (11 lecture equivalents/year) Spring, 2002-2018

Cardiovascular Pharmacotherapy 3252 (**Guest Lecturer**)
Presented a 70 minute, didactic lecture on the topic of "Thrombosis", Fall 2003 and 2004

Clinical Toxicology and Drug Safety and Abuse 3420 (**Team Member**) (10 Lecture Equivalents/year) 2019-Present

Graduate School of Biomedical Sciences Courses:

Pharmaceutical Sciences Seminar 7101 (**Team Leader**) (16 lecture equivalents/year) Fall and Spring, 2001-2007

Graduate Drug Discovery and Design (**Team Member**) presented a 2-hour lecture on "Modulating Ion Channels" Spring 2001

Graduate Biochemistry 5601 (**Team Member**)

Presented a 2-hour lecture on "Biochemistry of Cell Death, ROS and Lipid Metabolism", Fall, 2001

Presented a 2-hour lecture on "Membrane Transport and Ion Channels", Spring, 2003 and 2004

Drugs of Abuse 5221, (**Team Leader**) (2008, 2009, 2011, 2012, 2013)

Same lectures as the Pharm.D., course but includes a presentation/paper component on drug abuse topics.

Topics in Pharmaceutical Sciences Independent Study 5102, (**Team Leader**) (2010)

"Cellular Interactions at the Brain Vasculature" This course consisted of the presentation and discussion of 8 recent journal articles on topics related to the cellular components of the neurovascular unit. We held 8 x two hour class discussion sessions. Towards the end of the course I worked with both of my Ph.D. students to submit book chapters that contributed two chapters to a new series in Methods in Molecular Biology which were published in 2011.

Institutional Service:

2001

School-Wide Faculty Committees

Student Affairs Faculty Committee (**Member)**

Credentialing Subcommittee (**Chair**)

Departmental Committees

Departmental Seminar Program (**Coordinator**)

Amarillo IACUC member

2002

School-Wide Faculty Committees

Student Affairs Faculty Committee (**Member**)

Credentialing Subcommittee (**Chair**)

Faculty Affairs (**Member**)

Departmental Committees

Departmental Seminar Program (**Coordinator**)

Amarillo ACUC (**Member**)

2003

School-Wide Faculty Committees

Faculty Affairs (**Member**)

Ad hoc Technology Advisory Committee (**Chair**)

Departmental Committees

Departmental Seminar Program (**Coordinator**)

Unit Safety Officer for Pharmaceutical Sciences.

Graduate Program Committee (**Member**)

2004

School-Wide Faculty Committees

Ad hoc Technology Advisory Committee (**Chair**)

Departmental Committees

Departmental Seminar Program (**Coordinator**)

Unit Safety Officer for Pharmaceutical Sciences.

Graduate Program Committee (**Member**)

2005

School-Wide Faculty Committees

Ad hoc Research Advisory Committee (**Member**)

Departmental Committees

Departmental Seminar Program (**Coordinator**)

Unit Safety Officer for Pharmaceutical Sciences.

Graduate Program Committee (**Member**)

2006

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

School-Wide Faculty Committees

Ad hoc Research Advisory Committee (**Member**)

Faculty Affairs Committee (**Member**)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Departmental Seminar Program (**Coordinator**)

Unit Safety Officer for Pharmaceutical Sciences.

Graduate Program Committee (**Member**)

Course review committee for GSBS (**Member**)

2007

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

School-Wide Faculty Committees

Faculty Affairs Committee (**Member**)

Strategic Planning Committee (**Member**)

Executive Committee (**Pharm. Sci. Rep**)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member, fall and spring)**

Pharmacology Search Committee (**Member**)

Pharmaceutics Search Committee (**Member**)

2008

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

School-Wide Faculty Committees

Education Technology Evaluation Group (**Member**)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

Pharmacology Search Committee (**Member**)

Pharmaceutics Search Committee (**Member**)

2009

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

Interim Co-Chair, Department of Pharmaceutical Sciences

School-Wide Faculty Committees

Ad hoc Pharm.D./Ph.D. Committee (**Chair**)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

2010

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

Interim Co-Chair, Department of Pharmaceutical Sciences

School-Wide Faculty Committees

Research Advisory Committee (**Member**, Chair Elect)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

Departmental Mentoring Committee (**Member**)

2011

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

School-Wide Faculty Committees

Research Advisory Committee (**Member**, Chair Elect)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

Departmental Mentoring Committee (**Member**)

2012

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

Interim Chair of Pharmaceutical Sciences

School-Wide Faculty Committees

Research Advisory Committee (**Chair**)

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

Departmental Mentoring Committee (**Member**)

2013

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

Chair of Pharmaceutical Sciences

School-Wide Faculty Committees

TTUHSC Research Council (**Member)**

Departmental Committees

Graduate Program Advisor (**Chair** of Graduate Program Committee)

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

Departmental Mentoring Committee (**Member**)

2014-Present

Administrative Duties

Graduate Program Advisor, Graduate Program in Pharmaceutical Sciences

Associate Dean, Graduate School of Biomedical Sciences

Chair of Pharmaceutical Sciences

School-Wide Faculty Committees

TTUHSC Research Council (**Member)**

Search Committee for Senior Vice President of Research and Innovation **(Chair, 2019-2021)**

-Chaired a 15-member, multi-campus-school search team to hire Dr. Lance McMahon. after interviewing five finalists for onsite interviews.
-Prepared and presented search team recommendations to Dr. Lori Rice-Spearman.

TTUSHC Radiation Safety Committee **(Chair, 2019-Present)**

TTUHSC Intellectual Property Review Committee **(Member, 2024-Present)**

Departmental Committees

Graduate Council Member (**GSBS**)

Course review committee for GSBS (**Member**, fall and spring)

Departmental Mentoring Committee (**Member**)

School-Wide Service:

2004, 2005, 2006, 2007
Participated in a panel discussion on "Obtaining Academic Success" for New Faculty Orientation at the School of Pharmacy.

2005
Poster Judge for the Third Annual School of Pharmacy Research Days.

2005

Poster Judge for the Fourth Annual School of Pharmacy Research Days.

2006
Poster Judge for the Fifth Annual School of Pharmacy Research Days.

2007
Quality Enhancement Plan Committee (**Member**)

2008
Quality Enhancement Plan Committee (**Member**)

2009
Ad Hoc Space Evaluation Committee (**Member**)

2010
Poster Judge for the GSBS Graduate Student Research Week

2011
Poster Judge for the Tenth Annual School of Pharmacy Research Days

2012
Research Session Chair for Eleventh Annual School of Pharmacy Research Days

2013
Research Session Chair for 12th Annual School of Pharmacy Research Days

Expert Consulting:

2003
Hermes Sargent Bates L.L.P. (Dallas, TX) Provided an expert opinion on the pharmacology and toxicology of an opiate after review of medical records.

2010/2011
Abel Law Firm (Oklahoma City, OK) Provided an expert opinion on the pharmacology and toxicology of a medication that was given in error to a patient.