



VANDERBILT UNIVERSITY

MATTHEW J. ROBSON

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EDUCATION

West Virginia University 2008 - 2013
Doctor of Philosophy – Pharmaceutical and Pharmacological Sciences
Graduate Advisor: Rae R. Matsumoto, Ph.D.
Canisius College 2003 - 2007
Bachelor of Science – Biochemistry

WORK EXPERIENCE

Vanderbilt University 2013 - Present
Research Fellow
Postdoctoral Advisor: Randy D. Blakely, Ph.D.
West Virginia University 2008 - 2013
Graduate Research Assistant
Sub-Investigator Glaxo-Smith Kline Clinical Trial 2008- 2009
Dent Neurologic Institute Study Site- Buffalo, NY
Dent Neurologic Institute – Buffalo, NY 2005 - 2008
Research Associate
Eckerd's Pharmacy – Waterloo, NY 2005
Drug Associate

PEER REVIEWED PUBLICATIONS

Gengo FM, Rubin L, **Robson M**, Gengo MF, Mager DE, Rainka MR, Bates VE. Effects of ibuprofen on the magnitude and duration of aspirin's inhibition of platelet aggregation: clinical consequences in stroke prophylaxis. **Journal of Clinical Pharmacology**. 2008. **48**(1): 117-122. PubMed ID: 18094224

Gengo FM, Rainka MR, **Robson M**, Gengo MF, Forrest A, Hourihane M, Bates VE. Prevalence of platelet nonresponsiveness to aspirin in patients treated for secondary stroke prophylaxis and in patients with recurrent ischemic events. **Journal of Clinical Pharmacology**. 2008. **48**(3): 335-343.
PubMed ID: 18223144

Fishback JA, **Robson MJ**, Xu Y, Matsumoto RR. Sigma receptors: potential targets for a new class of antidepressant drug. **Pharmacology and Therapeutics**. 2010. **127**(3): 271-282. PubMed ID: 20438757

Kaushal N, **Robson MJ**, Vinnakota H, Narayanan S, Avery BA, McCurdy CR, Matsumoto RR. Synthesis and pharmacological evaluation of 6-acetyl-3-(4-(4-(4-fluorophenyl)piperazin-1-yl)butyl)benzo[d]oxazol-2(3H)-one (SN79), a cocaine antagonist, in rodents. **AAPS Journal**. 2011. **13**(3): 336-346. PubMed ID: 21494909

Mesangeau C, Amata E, Alsharif W, Seminerio MJ, **Robson MJ**, Matsumoto RR, Poupaert JH, McCurdy CR. Synthesis and pharmacological evaluation of indole-based sigma receptor ligands. **European Journal of Medicinal Chemistry**. 2011. **46**(10): 5154-5161. PubMed ID: 21899931

Robson MJ, Elliott M, Seminerio MJ, Matsumoto RR. Evaluation of sigma (σ) receptors in the antidepressant-like effects of ketamine in vitro and in vivo. **European Neuropsychopharmacology**. 2012. **22**(4): 308-317. PubMed ID: 21911285

Kaushal N, Elliott M, **Robson MJ**, Iyer AKV, Rojanasakul Y, Coop A, Matsumoto RR. AC927, a sigma ligand, blocks methamphetamine-induced release of dopamine and generation of reactive oxygen species in NG108-15 cells. **Molecular Pharmacology**. 2012. **81**(3): 299-308. PubMed ID: 22101517

Seminerio MJ, **Robson MJ**, Abdelazeem AH, Mesangeau C, Jamalapuram S, Avery BA, McCurdy CR, Matsumoto RR. Synthesis and pharmacological characterization of a novel sigma receptor ligand with improved metabolic stability and antagonistic effects against methamphetamine. **AAPS Journal**. 2012. **14**(1): 43-51. PubMed ID: 22183188

Xu YT, **Robson MJ**, Szeszel-Fedorowicz W, Patel D, Rooney R, McCurdy CR, Matsumoto RR. CM156, a sigma receptor ligand, reverses cocaine-induced place conditioning and transcriptional responses in the brain. **Pharmacology Biochemistry & Behavior**. 2012. **101**(1): 174-180. PubMed ID: 22234290

Robson MJ, Noorbakhsh B, Seminerio MJ, Matsumoto RR. Sigma-1 receptors: potential targets for the treatment of substance abuse. **Current Pharmaceutical Design**. 2012. **18**: 902-919. PubMed ID: 22288407

Seminerio MJ, **Robson MJ**, McCurdy CR, Matsumoto RR. Sigma receptor ligands attenuate methamphetamine-induced hyperthermia by a mechanism independent of IL-1 β mRNA expression in the hypothalamus. **European Journal of Pharmacology**. 2012. **691**(1-3): 103-109. PubMed ID: 22820108

Kaushal N, Seminerio MJ, **Robson MJ**, McCurdy CR, Matsumoto RR. Pharmacological evaluation of SN79, a sigma receptor ligand against methamphetamine-induced neurotoxicity in vivo. **European Neuropsychopharmacology**. 2012. **23**: 960-971. PubMed ID: 22921523

Turner RC, Lucke-Wold B, **Robson MJ**, Omalu BI, Petraglia AL, Bales JE. Repetitive traumatic brain injury and development of chronic traumatic encephalopathy: a potential role for biomarkers in diagnosis, prognosis and treatment? **Frontiers in Neurotrauma**. 2012. **3**: 186. PubMed ID: 23335911

Robson MJ, Seminerio MJ, McCurdy CR, Coop A, Matsumoto RR. Sigma receptor antagonist attenuation of methamphetamine-induced neurotoxicity is correlated to body temperature modulation. **Pharmacological Reports**. 2013. **65**(2): 343-349. PubMed ID: 23744418

Robson MJ, Turner RC, Naser ZJ, McCurdy CR, Huber JD, Matsumoto RR. SN79, a sigma receptor ligand, blocks methamphetamine-induced microglial activation and cytokine upregulation. **Experimental Neurology**. 2013. **247**: 134-142. PubMed ID: 23631864

Turner RC, Naser ZJ, Logsdon AF, DiPasquale K, Jackson GJ, **Robson MJ**, Gettens RTT, Matsumoto RR, Rosen CL, Huber JD. Modeling clinically relevant blast parameters based on scaling principles produces functional and histological deficits in rats. **Experimental Neurology**. 2013. **248**: 520-529. PubMed ID: 23876514

Matsumoto RR, Nguyen L, Kaushal N, **Robson MJ**. Sigma (σ) receptors as potential therapeutic targets to mitigate psychostimulant effects. **Advances in Pharmacology**. 2014. **69**(9): 323-386. PubMed ID: 24484982

Kaushal N, **Robson MJ**, Rosen A, McCurdy CR, Matsumoto RR. Neuroprotective targets through which 6-acetyl-3-(4-(4-(4-fluorophenyl)piperazin-1-yl)butyl)benzo[d]oxazol-2(3H)-one (SN79), a sigma receptor ligand, mitigates the effects of methamphetamine in vitro. **European Journal of Pharmacology**. 2014. **724**: 193-203. PubMed ID: 24380829

Robson MJ, Turner RC, Naser ZJ, Huber JD, McCurdy CR, Matsumoto RR. SN79, a sigma receptor ligand, attenuates methamphetamine-induced astrogliosis through a blockade of OSMR/gp130 signaling and STAT3 phosphorylation. **Experimental Neurology**. 2014. **254**: 180-189. PubMed ID: 24508558

Nguyen L, **Robson MJ**, Healy JR, Scandinaro AL, Matsumoto RR. Involvement of sigma-1 receptors in the antidepressant-like effects of dextromethorphan. **PLOS One**. 2014. **9**(2): e89985. PubMedID: 24587167

Matsumoto RR, Seminerio MJ, Turner RC, **Robson MJ**, O'Callaghan JP, Miller DB. Methamphetamine-induced hyperthermia: a comprehensive review. **Pharmacology and Therapeutics**. 2014. **144**(1): 28-40. PubMedID: 24836729

Nguyen L, Kaushal N, **Robson MJ**, Matsumoto RR. Sigma receptors as potential therapeutic targets for neuroprotection. **European Journal of Pharmacology**. 2014. **743**: 42-47. PubMed ID: 25261035

Logsdon AF, Turner RC, Lucke-Wold BP, **Robson MJ**, Naser ZJ, Smith KE, Matsumoto RR, Huber JD, Rosen CE. Altering endoplasmic reticulum stress in a model of blast-induced traumatic brain injury controls cellular fate and ameliorates neuropsychiatric symptoms. **Frontiers in Cellular Neuroscience**. 2014. **8**: 421. PubMed ID: 25540611

Nguyen L, Lucke-Wold BP, Mookerjee SA, Cavendish JZ, **Robson MJ**, Scandinaro AL, Matsumoto RR. Role of sigma-1 receptors in neurodegenerative diseases. **Journal of Pharmacological Sciences**. 2015. **127**(1): 17-29. PubMed ID: 25704014

Lucke-Wold BP, Turner RC, Logsdon AF, Nguyen L, Bailes JE, Lee JM, **Robson MJ**, Omalu BI, Huber JD, Rosen CL. Endoplasmic reticulum stress implicated in chronic traumatic encephalopathy. **Journal of Neurosurgery**. 2015. Accepted.

Gengo FM, Rainka M, Westphal E, Janda M, **Robson MJ**, Hourihane M, Bates V. Platelet response to increased aspirin dose in patients with persistent platelet aggregation while treated with aspirin 81 mg. **Journal of Clinical Pharmacology**. 2015. Accepted.

Turner RC, Lucke-Wold BP, Logsdon AF, **Robson MJ**, Lee J, Bailes J, Dashnaw M, Huber J, Petraglia A, Rosen C. Modeling chronic traumatic encephalopathy part 1: the way forward for future discovery. **Frontiers in Neurology**. 2015. *Submitted*.

Turner RC, Lucke-Wold BP, Logsdon AF, **Robson MJ**, Dashnaw M, Huang JH, Smith KE, Huber J, Rosen C, Petraglia A. Modeling chronic traumatic encephalopathy part 2: a multiple model and injury paradigm experience. **Frontiers in Neurology**. 2015. *Submitted*.

Baganz NL, Lindler KM, Zhu CB, Smith JT, **Robson MJ**, Iwamoto H, Deneris ES, Hewlett WA, Blakely RD. A requirement of serotonergic p38 α mitogen activated protein kinase for peripheral immune system activation of serotonin uptake and serotonin linked behaviors. **Molecular Psychiatry**. 2015. *Submitted*.

Robson MJ, Zhu CB, Quinlan MA, Botschner DA, Baganz NL, Lindler KM, Hewlett WA, Blakely RD. Generation and characterization of mice expressing a conditional allele of the interleukin-1 receptor gene. **PLOS One**. 2015. *Submitted*.

ABSTRACTS

Gengo FM, Rainka M, Rubin L, Gengo M, **Robson MJ**, Bates V. Effects on the magnitude and time course of aspirin-induced inhibition of platelet aggregation by ibuprofen and the clinical consequences in secondary stroke prophylaxis. **Journal of Clinical Pharmacology**. 2006. **46**(9): 1073.

Gengo FM, **Robson MJ**, Gengo MF, Rainka MR, Hourihane M, Bates VE. The prevalence of platelet non-responsiveness to aspirin in patients treated for secondary stroke prophylaxis and in patients with recurrent ischemic events. **Stroke**. 2006. **37**(2): 715.

Gengo FM, Liana D, **Robson MJ**, Gengo M, Rainka M, Bates V. Effect of ascorbic acid on platelet responsiveness to clopidogrel in patients treated for secondary stroke prophylaxis. **Stroke**. 2008. **39**: 624.

Gengo FM, Rainka M, Westphal E, **Robson MJ**, Gengo M, Hourihane M, Bates V. Platelet response to increased aspirin dose in patients whose platelets were non-responsive to lower aspirin doses. **Stroke**. 2009. **40**(4): 22-23.

Gengo FM, Iyer V, **Robson MJ**, Gengo M, Rainka M, Forrest A. Effects of naproxen on the time course of aspirin-induced inhibition of platelet aggregation. **Clinical Pharmacology and Therapeutics**. 2009. **85**(Suppl. 1): S40.

Robson MJ, Shaikh J, Elliott M, Xu YT, Healy JR, Matsumoto RR. The antidepressant-like actions of ketamine in vivo and in vitro: role of sigma receptors. **Journal of Clinical Pharmacology**. 2010. **50**(9): 1084.

Gengo FM, Rainka M, Westphal E, Radecki L, **Robson MJ**, Hourihane M, Bates V. An assay to assess antiplatelet effects of dipyridamole at therapeutic concentrations. **Journal of Clinical Pharmacology**. 2010. **50**(9): 1069.

Gengo FM, **Robson MJ**, Rainka M, Westphal E, Gengo M, Hourihane M, Bates V. The prevalence of platelet non-responsiveness to clopidogrel and the effect of cytochrome P450 1A2 inducing medications. **Journal of Clinical Pharmacology**. 2010. **50**(9): 1069.

Robson MJ, Chen D, Szeszel-Fedorowicz W, Matsumoto RR. Sigma receptor antagonists attenuate methamphetamine-induced genetic alterations in the striatum. Program No. 896.03. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011. Online.

Seminario MJ, **Robson MJ**, Abdelazeem AH, Mesangeau C, McCurdy CR, Matsumoto RR. The evaluation of an optimized sigma receptor ligand on methamphetamine-induced dopaminergic neurotoxicity and hyperthermia. Program No. 896.01. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011. Online.

Wollenberg L, Iyer V, **Robson MJ**, Gengo M, Gengo FM, Rainka M, Forrest A, Mager D. Application of a mechanism-based, population pharmacodynamic model of the time-course of platelet aggregation when naproxen and aspirin are administered alone and in combination. **Pharmacotherapy**. 2012. **32**(5): e115.

Seminario MJ, **Robson MJ**, Mesangeau C, Narayanan S, McCurdy CR, Matsumoto RR. Sigma receptor ligands attenuate methamphetamine-induced hyperthermia but do not modulate IL-1 β mRNA expression in select brain regions. **FASEB J**. 2012. **26**(Meeting Abstract Supplement): 1043.2

Robson MJ, McCurdy CR, Matsumoto RR. Methamphetamine elicits PERK-mediated endoplasmic reticulum stress transcriptional responses in NG108-15 cells. Program No. 360.12. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online.

Robson MJ, Turner RC, Naser ZJ, Huber JD, McCurdy CR, Matsumoto RR. SN79, a sigma receptor ligand, mitigates methamphetamine-induced astrocyte and microglial activation. **FASEB J**. 2013. **27**(Meeting Abstract Supplement): 1175.2

Matsumoto RR, Kaushal N, **Robson MJ**, McCurdy CR, Coop A. Attenuation of methamphetamine-induced neurotoxicity by selective sigma receptor ligands: in vivo and in vitro studies. **FASEB J**. 2013. **27**(Meeting Abstract Supplement): 659.13

Matsumoto RR, **Robson MJ**, McCurdy CR, Coop A, Kaushal N. Attenuation of methamphetamine-induced neurotoxicity by selective sigma receptor ligands: Involvement of neuronal and glial mechanisms. Program No. 213.07. 2013 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2013. Online.

Nguyen L, **Robson MJ**, Matsumoto RR. Dextromethorphan produces antidepressant-like effects in mice. Program No. 503.10. 2013 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2013. Online.

Robson MJ, Zhu CB, Lindler KM, Baganz N, Wright J, Hewlett W, Blakely RD. Conditional elimination of the interleukin-1 receptor for the study of the impact of inflammatory cytokines on brain and behavior. **Neuropsychopharmacology**. 2013. **38**(Meeting Abstract Supplement): S115-S116

Robson MJ, Zhu CB, Lindler KM, Baganz N, Wright J, Hewlett W, Blakely RD. Conditional elimination of the interleukin-1 receptor: connecting CNS immune signaling, serotonin transporter modulation and depressive behavior. **Basic and Clinical Pharmacology and Toxicology**. 2014. 115(Supplement 1): 288.

Westphal E, Gengo F, Rainka M, **Robson M**, Hourihane M, Bates V. Platelet response to increased aspirin dose in patients whose platelets were non-responsive to lower aspirin doses. **Neurology**. 2014. **82**. P1. 108

Matsumoto RR, **Robson MJ**, Kaushal N, Coop A. Selective sigma receptor ligands attenuate methamphetamine-induced neurotoxicity and genetic alterations in the striatum: microarray study and validation of select targets. Program No. 227.20. 2014 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014. Online.

Robson MJ, Watterson DM, Veenstra-Vanderweele J, Poch AM, Blakely RD. Pharmacological reversal of autism spectrum disorder social deficits in the SERT Ala56 mouse via p38 MAPK α blockade. Program No. 519.17. 2014 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014. Online.

Baganz NL, Smith JT, Harbom LJ, **Robson MJ**, Blakely RD. Contributions of interleukin-1 β signaling to the enduring effects of early-life stress: A serotonin connection? Program No. 503.12. 2014 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2014. Online.

Baganz NL, Smith JT, Harbom LJ, **Robson MJ**, Hewlett W, Blakely RD. Contributions of inflammatory cytokine signaling to the enduring effects of early-life stress: A serotonin connection? **Neuropsychopharmacology**. 2014. **39**(Meeting Abstract Supplement): S326-S327

Robson MJ, Watterson DM, Veenstra-Vanderweele J, Blakely RD. Antagonism of p38 α MAPK signaling corrects receptor hypersensitivity and altered social behavior in the SERT Ala56 genetic mouse model of autism spectrum disorder. **Neuropsychopharmacology**. 2014. **39**(Meeting Abstract Supplement): S611-S612

Matsumoto RR, **Robson MJ**, Turner R, Naser Z, Kaushal N, McCurdy CM, Huber J, O'Callaghan J. Attenuation of methamphetamine-induced striatal neurotoxicity involves both neuronal and glial mechanisms. **Drug and Alcohol Dependence**. 2015. **146**: e197

Lucke-Wold B, **Robson MJ**, Logsdon AF, Turner RC, Rosen C. Reducing NADPH oxidative stress following acute neurotrauma. **FASEB J**. 2015. **29**(Meeting Abstract Supplement): LB497

Lucke-Wold BP, Turner RC, Rosen C, Naser Z, Logsdon A, Smith K, Huber J, **Robson M**, Bailes J, Lee J. Amelioration of NADPH-mediated stress reduces cell death following blast-induced traumatic brain injury. **Journal of Investigative Medicine**. 2015. **63**(4): 659-660

Baganz NL, Lindler KL, Zhu CB, Smith JT, **Robson MJ**, Iwamoto H, Deneris E, Hewlett W, Blakely RD. Role for p38 α Mitogen Activated Kinase in Serotonin Transporter Regulation and Serotonin Linked Behaviors Following Immune System Activation. 2015 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2015. Online.

Vargas CDM, Mavity-Hudson JA, **Robson MJ**, Veenstra-Vander Weele J, Wallace MT, Blakely RD, Casagrande VA. Changes in cortical wiring in a mouse model of autism. 2015 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2015. Online.

Robson MJ, Quinlan MA, Veenstra Vander-Weele J, Watterson DM, Blakely RD. Chronic antagonism of p38 α MAPK mitigates serotonin receptor hypersensitivity and social behavior deficits in the SERT Ala56 genetic mouse model of autism spectrum disorder. 2015 International Society for Tryptophan Research. Grand Rapids, MI. *Accepted*.

PATENTS

Blakely RD, Veenstra-Vanderweele J, **Robson MJ**, Watterson DM. Compositions and Methods for Treating Autism Spectrum Disorders. Provisional Patent 62081002. Filed November 17th, 2014.

FINANCIAL SUPPORT

Training Program in Ion Channel and Transporter Biology

Postdoctoral Fellow

NIH Grant: 5T32NS007491-13

PI: Bjorn C. Knollman, Ph.D.

Appointment Effective – July 1st, 2013 – June 30th, 2015

p38 α MAPK Signaling: Novel Therapeutic Target for the Treatment of Autism Spectrum Disorder

Postdoctoral Fellowship

PhRMA Foundation Pharmacology/Toxicology Fellowship

PI: Matthew J. Robson

Appointment Effective – July 1st, 2015 - Present

AWARDS/FELLOWSHIPS

Vanderbilt University Kennedy Center Postdoctoral Travel Award 2014

Vanderbilt University ASPIRE Federal STEM Policy Externship 2014

Funded by NIH Grant: OD018423 PI: Roger G. Chalkley

James A. Bain Young Scientist Travel Award 2014

American Society for Pharmacology and Experimental Therapeutics

17th World Congress of Basic and Clinical Pharmacology – Cape Town, South Africa

Early Career Science Policy Fellowship 2014

Society for Neuroscience Graduate Student Research Award West Virginia University- School of Pharmacy	2013
ASPET Graduate Student Best Abstract Competition Finalist Neuropharmacology Section Experiment Biology – Boston, MA	2013
ASPET Washington Fellows Fellowship Recipient American Society for Pharmacology and Experimental Therapeutics	2012 - 2013
Outstanding Achievement Award West Virginia University - School of Pharmacy	2012
3rd Annual AAPS Regional Symposium 1 st Place- Poster Competition	2011
STaR Symposium Student Abstract (1 of 10 selected from 560 submissions)	2010
Student/Trainee Award - American College of Clinical Pharmacology 39 th Annual Meeting - Baltimore, MD	2010
Valuable Contributions to the School of Pharmacy - West Virginia University	2009 - 2011
BBS Training Scholarship - West Virginia University	2009 - 2010

PUBLISHED MEDIA ARTICLES

- Robson MJ.** 2013. ‘Sustain investment in biomedical research’ The Dominion Post, Morgantown, WV. 16 June. p. 2D
- Robson MJ.** 2013. ‘Sustain the investment: America’s biomedical research needs to go on for the sake of everyone.’ Finger Lakes Times, Geneva, NY. 7 July. p. 1-2D
- Robson MJ.** 2014. ‘Invest in NIH research.’ The Tennessean, Nashville, TN. 5 July.
<http://www.tennessean.com/story/opinion/2014/07/05/invest-nih-research/12223207/>

PROFESSIONAL SERVICE

Ad Hoc Manuscript Reviewer – Journal of Neuropharmacology	2015
“Hot Topic” Abstract Reviewer – Experimental Biology 2015 American Society for Pharmacology and Experimental Therapeutics	2015
Graduate Student Organization - Vice President West Virginia University	2012 - 2013
Drug Discovery Seminar Series Coordinator West Virginia University School of Pharmacy	2011 - 2013
Graduate Student Organization - Member West Virginia University	2011 - 2013
Student Representative - Laboratory Manager Search Committee West Virginia University	2011 - 2012
Chair - American Association of Pharmaceutical Scientists West Virginia University Student Chapter	2011 - 2012
Undergraduate Honors Thesis Committee Member Colleen Beatty – West Virginia University	2010 - 2011
Event Coordinator - Annual School of Pharmacy Research Day West Virginia University School of Pharmacy	2010 - 2011

Chair-Elect - American Association of Pharmaceutical Scientists West Virginia University Student Chapter	2010 - 2011
Community Outreach Program - Student Volunteer West Virginia University School of Pharmacy	2009 - 2010

INVITED PRESENTATIONS

Sigma Receptors: Potential Targets for the Treatment of Psychostimulant Abuse Chestnut Ridge Drug Abuse Grand Rounds, November 1 st	2011
Sigma Receptors as Targets for the Treatment of METH-Induced Neurotoxicity Introduction to Research (PHAR704) – West Virginia University School of Pharmacy	2012
Antagonism of p38α MAPK Reverses ASD-like Phenotypes in the SERT Ala56 Mouse - Vanderbilt NPISA Seminar Series – January 5 th	2015
p38α MAPK Signaling: Novel Therapeutic Target for the Treatment of Autism Spectrum Disorder? – Vanderbilt Pharmacology Seminar Series – March 4 th	2015

TEACHING EXPERIENCE

Pharmaceutical Care Lab I (PHAR701) – West Virginia University School of Pharmacy	2012
Pharmaceutical Care Lab II (PHAR712) – West Virginia University School of Pharmacy	2013
Immunology/Biotechnology (PHAR709) – West Virginia University School of Pharmacy	2013

SCIENTIFIC SOCIETY MEMBERSHIPS

Phi Lambda Sigma Pharmacy Leadership Society - Alpha Eta Chapter	2013 - Present
Rho Chi Pharmacy Honor Society - Alpha Mu Chapter	2012 - Present
Society for Neuroscience (SfN)	2011 - Present
American Society for Pharmacology and Experimental Therapeutics (ASPET)	2010 - Present
International Drug Abuse Research Society (IDARS)	2010 - Present
American Association of Pharmaceutical Scientists (AAPS)	2009 – Present
American Chemical Society (ACS)	2004 - 2007

VOLUNTEER/COMMUNITY SERVICE ACTIVITIES

Science Lecture Invitee – Methamphetamine, Cocaine and Your Brain Room in the Inn – Nashville, TN	2015
Intensive Outpatient Program - Drug Abuse Research Expert Chestnut Ridge Psychiatric Center, Morgantown, WV	2011
Alternative Spring Break Leader (Canisius College) Habitat for Humanity Volunteer Trip to Appalachia	2007
Alternative Spring Break Volunteer (Canisius College) Habitat for Humanity Volunteer Trip to Appalachia	2006