

Miranda N. Reed, Ph.D.

## CURRICULUM VITAE:

### CONTACT INFORMATION

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### EDUCATION

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2002 B.A. in Psychology, Auburn University, Summa Cum Laude

2005 Masters in Experimental Psychology, Auburn University  
Mentor: M. Christopher Newland

2007 Ph.D. in Experimental Psychology, Auburn University  
Major Emphasis: Behavioral Toxicology, Pharmacology  
Minor Emphasis: Biochemistry, Statistics\*  
Mentor: M. Christopher Newland  
\*Graduate minor degree in statistics conferred by the Department of Mathematics and Statistics

2007-2010 Postdoctoral Fellowship, University of Minnesota  
Major Emphasis: Alzheimer's Disease  
Departments: Neuroscience, Neurology  
Mentors: Karen Hsiao Ashe & James P. Cleary

### EMPLOYMENT

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2010 - 2015 Assistant Professor, Department of Psychology, Behavioral Neuroscience  
Member, Center for Neuroscience  
Member, Center Basic and Translational Stroke Research  
West Virginia University

2015 - present Associate Professor, Drug Discovery & Development  
Harrison School of Pharmacy  
Auburn University

### AWARDS and HONORS

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1999 Undergraduate academic scholarship to University of North Alabama 2000 Phi Beta Kappa

2005 Student presenter award. International Neurotoxicology Conference, Research Triangle Park, NC.

2005 SABA student presenter award, Association for Behavior Analysis Convention, Chicago,

	IL.
2006	Teaching Fellows (Department of Psychology, Auburn University)
2006	Society for the Advancement of Behavior Analysis (SABA) student presenter award. Association for Behavior Analysis Convention, Atlanta, GA.
2016	Faculty Research Excellence Award, Auburn University
2016	Curriculum Star Award, Harrison School of Pharmacy, Auburn University
2018	Faculty Research Excellence Award, Auburn University
2019	Jack Clift Fellow in Research
2019	Faculty Research Excellence Award, Auburn University
2020	Faculty Research Excellence Award, Auburn University

## RESEARCH

### DESCRIPTION OF SCHOLARY PROGRAM

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The *overall goal* of my research program is to understand the underlying neurochemical and synaptic alterations associated with learning and memory deficits to identify therapeutic targets. In particular, I am interested in how alterations in synapses and glutamatergic signaling can result in learning and memory deficits, in both neurodevelopmental and neurodegenerative contexts. My laboratory is currently pursuing 5 distinct, but overlapping research projects and actively collaborates with other investigators. In addition, I have a strong interest in enhancing diversity, equity, and inclusion at Auburn University, particularly by increasing research opportunities for underrepresented minorities.

***Long-term consequences of prenatal exposure to drugs and toxicants.*** My early research was focused on how prenatal exposure to low, environmentally relevant, levels of an environmental contaminant produce subtle but important effects on behavior in adulthood and aging, a fetal basis of adult disease. We were especially interested in the role of dopamine neurotransmitter systems in mediating MeHg's developmental neurotoxicity. In addition, we examined potential neuroprotection provided by selenium and docosahexaenoic acid (DHA) against MeHg's effects. Thus, drawing from basic principles of psychopharmacology, environmental neurotoxicology, and behavior analysis, we were able to gain an understanding of abnormal development and aging resulting from MeHg exposure. This line of research resulted in 9 publications (PMID: 25795099; PMID: 20079371; PMID: 19331463; PMID: 18652843; PMID: 18096364; PMID: 17466489; PMID: 16824603; PMID: 16759706; PMID: 16024222). I have recently re-established a collaboration with Dr. Newland of the Psychology department to examine the effect of MeHg on dopamine transporters (PMID: 36055519).

More recently, I have parlayed my previous experiences in prenatal research into a new area, in collaboration with Dr. Vishnu Suppiramaniam at Auburn University, and have begun studying the long-term consequences of prenatal exposure to cannabinoids. This line of work has received national and international attention as the use of cannabis has increased dramatically, even among pregnant women, with increased legalization, yet there is a relative paucity of research on the long-term consequences of prenatal exposure. We use a multidisciplinary approach including behavioral, electrochemical, electrophysiological, cellular and molecular methodologies to test our hypotheses that prenatal exposure to cannabinoids alters the signaling balance of GluN2A- and GluN2B-containing NMDA receptors, resulting in synaptic plasticity and cognitive deficits. This work has resulted in 2 published manuscripts (PMID: 30771373; corresponding author; PMID: 33912711), 1 manuscript under review (corresponding author), and an MPI NIH/NIDA R01 (Score – 14; Percentile – 3) award in 2020 that was recently renewed for year 3.

***Synaptic and network alterations associated with cognitive dysfunction in aging and Alzheimer's disease.*** I have also focused on identifying the molecular basis of memory loss and cognitive dysfunction in aging and Alzheimer's disease. Alzheimer's disease is a neurodegenerative disorder that targets synapses within connected neuronal networks. Using transgenic mouse models of Alzheimer's disease, my lab examines how early

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alterations in amyloid- $\beta$  ( $A\beta$ ) and tau proteins, e.g., mislocalization, oligomerization, truncation, and phosphorylation, can impair memory and cognition through their effects on the synapse and glutamatergic functioning. My work has focused primarily on alterations in glutamatergic signaling, including the role of NMDA receptors & the imbalance between synaptic and extrasynaptic GluN2B-containing receptor activity, in mediating the cognitive deficits observed in AD and identification of treatments to address these alterations. Highlights of this work include that we were the first to demonstrate that early tau-related deficits develop not from the loss of synapses or neurons, but rather because of synaptic abnormalities caused by the accumulation of hyperphosphorylated tau within intact dendritic spines. This accumulation of dendritic tau disrupts synaptic function by impairing glutamate receptor trafficking and synaptic anchoring, an effect dependent upon tau hyperphosphorylation (PMID: 21172610; co-first author). Moreover, we demonstrated that certain forms of  $A\beta$  oligomers can disrupt cognition, which can be precluded by blocking NMDA receptors (PMID: 19446369), whereas other forms of  $A\beta$  oligomers do not induce cognitive deficits (PMID: 20031278), suggesting the need for a new classification system of  $A\beta$  oligomers. We proposed a classification of (1) Type 1 oligomers that are unrelated to amyloid fibrils and may have greater potential to cause global neural dysfunction in AD because they are dispersed, and (2) Type 2 oligomers that are related to amyloid fibrils and represent the majority of oligomers generated *in vivo*, but remain confined to the vicinity of amyloid plaques and do not impair cognition at levels relevant to AD (PMID: 26051935). We also examined how an “aged brain” may differentially impact AD-related pathology through an NIH/NIA R15 award (PI) that resulted in two manuscripts as corresponding author (PMID: 34769068; PMID 34591222).

Most recently, in collaboration with Doug Martin from CVM and Darren Beck from VCOM at Auburn University, we have begun examining whether dysregulation of luteinizing hormone (LH) during reproductive senescence contributes to the cognitive decline of aging and other AD-related pathology, and if normalization of LH by anti-LH antibodies expressed via gene therapy mitigates cognitive dysfunction of AD. This collaboration resulted in a Center for One Health Research Seed Grant award in both 2020 (Co-I) and 2021 (MPI).

In total, this line of work has resulted in 7 publications (PMID: 25821641; PMID: 21172610; PMID: 26051935; PMID: 20031278; PMID: 19446369; PMID: 34769068; PMID 34591222), an NIH/NIA R15 award, an Alzheimer’s Association New Investigator award, and a One Health Seed Grant.

***Role of hyperexcitability in mediating neurodegeneration.*** Effective regulation of activity in neural networks is essential; over- or under- stimulation can erode synaptic regulation, leading to alterations in learning and memory, and more concerning, neurodegeneration throughout vulnerable networks. Using *in vivo* microelectrode array (MEA) technology and optogenetics, my lab examines alterations in glutamatergic signaling as a mediator of hyperexcitability and the trans-synaptic spread of tau pathology in neurodegeneration. Notably, we were among the first to demonstrate *in vivo* that P301L mutant human tau causes early dysregulation of glutamatergic signaling, including robustly increasing glutamate release and decreasing glutamate uptake, leading to toxic levels of glutamate in the synapse, the levels of which are inversely correlated with cognitive deficits (PMID: 25319522; corresponding author).

This work became more significant in light of recent findings that the trans-synaptic spread of tau along connected neuronal circuitry is mediated, at least in part, by increases in neuronal activity and glutamate release. This is a line of research we are actively pursuing using optogenetic techniques to increase or decrease neuronal activity in relevant circuitry, including the lateral entorhinal cortex (first loci of tau deposition) and the hippocampus. This work was funded in part by an American Foundation for Pharmaceutical Education (AFPE) award to my graduate mentee, Sharay Setti, and has led to one published manuscript (PMID: 34591222; corresponding author) and another manuscript in preparation (corresponding author).

Moreover, in collaboration with Dr. Michael Gramlich at Auburn University, we received an Auburn University Intramural Grants Program (AU-IGP) award in 2020 that continues today and is used to collect preliminary data examining the role of P301L human tau in modulating presynaptic vesicle mobility and the resultant

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consequences on presynaptic glutamate and tau release into the extracellular space. This has resulted in a publication (PMID: 35989711) and a submitted MPI NIH R21 in Fall 2023 (pending review).

In addition, we have demonstrated that viral infections, a known risk factor for Alzheimer's disease, exacerbate neurodegenerative conditions by increasing hyperexcitability in the brain. This is part of a long-standing research collaboration with Dr. Gregory Konat from West Virginia University born from two NIH/NIGMS U54 CCTI awards. Notably, we have demonstrated that peripherally restricted viral challenge elevates extracellular glutamate *in vivo* and enhances synaptic transmission in the hippocampus (PMID: 27168075; corresponding author). In freely-moving animals, we demonstrated that this increase in extracellular hippocampal glutamate lasts 72 hours and correlates with increased seizure hypersusceptibility (PMID: 28244106; corresponding author). We have most recently extended this line of work and published a manuscript demonstrating that the neuronal CXCL10/CXCR3 axis mediates the induction of hippocampal hyperexcitability by peripheral viral challenge (PMID 32265633; corresponding author). We anticipate a Fall 2023 NIH R01 submission in response to NIH NOT-AG-19-012: "Infectious Etiology of Alzheimer's Disease".

**Identification of drug therapies for use in neurodegenerative disease.** Over the course of Alzheimer's disease and other tauopathies, multiple biochemical pathways are perturbed, and a multiple-target approach is likely to be more effective than a single-target approach. My lab is currently working to identify compounds that may be neuroprotective against neurodegenerative diseases and improve cognition, particularly those compounds working through a multi-target approach. Several of these studies were performed with my international Chinese collaborator, Dr. Hao Hong. This collaboration was established after a 6-month visit from Dr. Hong to my laboratory and continued visits thereafter (e.g., I traveled for 2 weeks to China in November 2019). This collaboration has resulted in 13 joint publications, including the first 2 studies showing that activation of takeda G- protein coupled receptor 5 (TGR5) can improve learning and memory impairment in animals induced by various factors related to Alzheimer's disease (PMID: 30144494; PMID: 29935310). We submitted an NIH/NIA R01 (MPI) in March 2021 to examine the role of TGR5 in mediating AD-related pathology. This grant was scored but not funding and a resubmission is planned for Fall 2023 to a new funding mechanism.

In addition, because our previous work suggested hippocampal extracellular glutamate levels were increased in mice expressing P301L mutant human tau, we also examined the consequences of reducing extracellular glutamate levels using an already FDA-approved drug, riluzole. We found that riluzole rescues glutamate alterations, cognitive deficits, and tau pathology associated with P301L tau expression (PMID: 26744018; PMID: 26146790; corresponding author on both). This line of work resulted in an editorial highlight in the Journal of Neurochemistry (PMID: 26744018), and a collaborative NIH U01 proposal submission with Biohaven Pharmaceuticals & Laboratory of Fox Chase Chemical Diversity Center to identify new riluzole prodrugs. We have established an ongoing collaboration with Biohaven Pharmaceuticals (\$60,000 gift), and one manuscript has been published in 2022 (PMID: 35073787; corresponding author).

**Identification of sensitive behavioral tasks for assessment of cognitive impairment.** An appropriate effect size is critical to guarantee that the dynamic range for a particular cognitive task is wide enough such that subtle treatment effects can be detected. My lab specializes in the identification and creation of behavioral tasks with large dynamic ranges for particular uses, e.g. longitudinal assessment vs. high-throughput, rapid assessment of memory. Implementing both commonly used, as well as novel learning and memory tasks, we identify ways to optimize tasks depending upon the strain and testing environment used, examine the effect and sample sizes needed, and utilize advanced statistical measures to evaluate performance. These studies provided essential information, including the effect and sample sizes needed for each task and for establishing experimental designs at a time point when memory deficits are likely to go undetected if inadequate sample sizes are used. While most all my publications have made use of these tasks to some extent, 3 publications are notable in their focus on the importance of dynamic range in cognitive testing and discussion of how to increase the dynamic range to allow for more sensitive testing (PMID: 20381538; PMID: 25004446, corresponding author; PMID: 26132096, corresponding author). This line of work has also resulted in an MPI NIH/NINDS R21 award, and as part of a

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funded and ongoing internal award (PAIR for *Establishing a Center for Neuroscience at Auburn University*), a behavioral core (Director) is being established to aid researchers across campus with their behavioral phenotyping needs.

***Increasing research opportunities & collaborations, particularly for underrepresented minorities.*** One of my passions is facilitating research collaborations. As Co-Director of the Center for Neuroscience Initiative, which brings together more than 30 neuroscience researchers from Auburn, the University of Birmingham at Alabama, and Emory University, I have organized work in Progress (WIP) meetings and provided critiques on NIH-R01, K99 and K01 grant proposals. I have also coordinated the pre-review of NIH Grant proposals (R01, K99/R00 & K08) by former and current NIH study section members and conducted one-to-one meetings with various colleges and helped develop NIH-grant proposals. In 2018, we coordinated an NIH regional peer review workshop on the development of successful grant applications. Speakers included Dr. Mary Schueler (NIH Scientific Review Officer), Dr. Shahrooz Vahedi (Training Officer at National Institute on Aging), and Stephanie Fertig (Director, NINDS Small Business Programs). Two hundred & sixty-eight participants representing sixteen institutions, including Tuskegee University, UAB, Alabama State University, and local businesses, participated in person or via zoom. We also established a monthly seminar series, with notably speakers such as Drs. Jing Peng, Suhail Rasool, James Simpkins, Jeremy Day, Nicholas Seyfried, Helen Kamens, Joan Han, Olave Krigolson, Eric Hoffman, Pieter Dorrestein, Amala Soumyanath, and Erik Roberson. In 2020, we held our first Center for Neuroscience Initiative Symposium and Retreat. Speakers included Karen Hsiao Ashe, Ben Bahr, Raymond Dingledine, Matthew Johnson, Gary Lynch, Michael Salter, Stephen Traynelis, & Shahrooz Vahedi. There were 241 participants and 69 poster presentations. These efforts have facilitated awarding of \$3.4M in NIH funding.

Another of my passions is the recruitment and mentoring of underrepresented minorities. I have mentored more than 60 undergraduates since starting my lab. Of these 60, more than 90% have gone to professional (PharmD or MD) or graduate programs. I also serve as a faculty mentor in the McNair Scholars Program designed to serve first-generation and income-eligible students, or students from an underrepresented group (African American, Hispanic, Native American, Native Hawaiian/Pacific Islanders) to assist them in achieving success at the undergraduate level to prepare them for doctoral studies. I serve as a mentor in the American Heart Association HBCU Scholars Program, designed to increase the number of Black students who can compete successfully for acceptance and matriculation into graduate programs leading to professional degrees in the biomedical and health sciences. I also serve as a founding member of Auburn University's Commission for Gender Equity, as well as a founding member of Auburn's Diversity, Equity, and Inclusion Committee. My efforts have resulted in 3 years of funding for a prior graduate student from the AFPE for Underrepresented Minorities, an NIH administrative supplement for a current graduate student, an NIH G-Rise fellowship for a current graduate student, and a recently awarded NIH R25 (Co-I).

## GRANTS

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[MPIs are listed in alphabetical order. \* indicates the contact MPI]

### Grants Received:

#### **i. Active Extramural:**

(Reed/ Smith\*/Suppiramaniam)

8/31/19-7/31/22

AFPE

\$30,000 (total AU)

*Novel Intranasal Pramlintide Administration for the Dissection of Metabolic and Cognitive Outcomes of Amylin-based Therapies in a Transgenic Mouse Model of Alzheimer's Disease*

American Foundation for Pharmaceutical Education Fellowship

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Competitive fellowship awarded by the American Foundation for Pharmaceutical Education for pre-doctoral students. The goal of this project is to determine whether intranasal pramlintide administration can alleviate cognitive and plasticity deficits in a mouse model of Alzheimer's disease.

Role: Co-Faculty Mentor (Research Supplies; AU)

R01 DA046723-01A1 (Reed/Suppiramaniam\*)

04/15/2020 - 02/28/2025

NIH/NIDA

\$1,762,367 (total AU)

Elucidation of molecular mechanisms of prenatal cannabinoid exposure: Identification of targets and therapies  
The major goal of this project is to dissect the molecular mechanisms by which prenatal cannabinoid exposure induces synaptic plasticity and cognitive deficits. My role is to "oversee the prenatal cannabinoid exposure regimen (Aims 1-3), cognitive testing (Aims 1 & 3), in vivo microelectrode array experiments to examine changes in extracellular glutamate (Aim 1), in vivo treatment with the synthetic PSA mimetic (Aim 3), and examination of protein alterations (Aims 1-3). Dr. Reed's duties include all aspects of experimental design, troubleshooting, training of team members, data analysis, and manuscript preparation, in addition to conducting and supervising aspects of the project, as it relates to the areas described."

Role: MPI (AU)

Impact Score: 14

Percentile: 3

(Beck\*/Martin/Reed)

07/01/19-06/30/21

Center for One Health Research Seed Grant Program

\$100,000 (direct AU)

*Regulation of Luteinizing Hormone to Prevent Cognitive Decline of Reproductive Senescence and Alzheimer's Disease*

The overall goal of this proposal is to collect the necessary preliminary data for an NIH R01 application.

Role: Co-I (Year 1) & MPI (Year 2) (AU)

R01 DA046723-02S1 (Reed/Suppiramaniam\*)

08/2021 - 07/2024

NIH/NIDA

\$ 143, 637 (total AU)

*Elucidation of Molecular Mechanisms of Prenatal Cannabinoid Exposure: Identification of Targets and Therapies – Administrative diversity supplement*

The purpose of this supplement is to provide funding for an underrepresented graduate student.

Role: MPI

T32 GM141739-01 (Clayton/Russell/Smith)

06/2021 - 05/2024

NIH/NIGMS

\$ 1,500,484 (total AU)

*Graduate Research Training Initiatives for Student Enhancement (G-RISE) at Auburn University*

The goal of this grant is to develop a diverse pool of scientists earning a doctorate who have the skills to successfully transition into careers in the biomedical research workforce.

Role: Collaborator & Co-Faculty Mentor for Miles Wiley (\$75,000)

R25 AG070244-01A1 (Mishra\*/Suppiramaniam)

08/01/2022-07/31/2027

NIH

\$1,475,800 (\$495,000 AU)

*Alabama State University-Auburn University Partnership to Promote Diversity in Aging Research*

The goal of this project is to provide opportunities for underrepresented minorities to participate in aging research.

My duties include mentoring and overseeing the research of undergraduates admitted into the program.

Role: Co-I (AU)

## ii. Active Intramural:

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(Moore/**Reed**/Suppiramaniam\*)

Auburn University

Presidential Award for Innovative Research (PAIR)

*Establishment of a Center for Neuroscience*

The major goals of this project are to establish a collaborative team of experts in the areas of chemistry, physiology, development, degeneration, and imaging of the brain to develop a neuroscience center to increase fundamental knowledge about the brain and nervous system and to use that knowledge to reduce the burden of neurological disease. [These funds are allocated to enhance AU research and competitiveness for NIH Program Project Grants and NIH T32 awards by providing funds for (1) graduate student trainee stipend supplementation, (2) equipment costs allocated to purchase or upgrade equipment required for projects that include multiple CNS investigators from various colleges, (3) travel funds to bring nationally recognized neuroscientists to speak at the yearly retreat and seminar series, (4) funds to support 4-5 CNSi members per year who have submitted a favorably-reviewed grant application that missed the funding payline, (5) funds to pay external reviewers to review the grants of CNSi members prior to federal agency submission, & (6) part time administrative support to help establish the Neuroscience Curriculum (MS/PhD).]

Role: MPI & Co-Director (AU)

7/1/18- ongoing

\$637,500 (direct AU)

(Gramlich\*)

Auburn University Internal Grants Program (AU IGP)

*Role of Pre-synaptic vesicle mobility in Alzheimer's disease.*

The overall goal of this proposal is to collect the necessary preliminary data for an NIH R01 application that was not funded.

Role: Co-I (AU)

04/1/20-04/30/22 [NCE]

\$50,000 (direct AU)

### iii. Completed Grants & Funding - Extramural:

NIRG-12-242187 (**Reed**)

Alzheimer's Association New Investigator Award

*Effects of Risk Factors on Tau-Mediated Memory Deficits*

The goal of this proposal was to determine the importance of age the development of Alzheimer's pathology using regulatable transgenic mouse models of human P301L and wild-type tau.

Role: PI (WVU)

11/01/2012 – 04/30/2015

\$100,000 (total WVU)

T32GM081741 (Berrebi/Simpkins)

NIH/NIGMS

*Research Training Program in the Behavioral and Biomedical Sciences (BBS)*

Role: Steering Committee, BBS Scholarship, Curriculum Development & Preceptor

06/01/2014 – 05/30/2019

\$1,224,463 (total WVU)

(Hunsberger)

ADDF Young Investigator scholarship

Competitive travel award to attend the Alzheimer's Drug Discovery Foundation (ADDF) Jersey City conference, present a poster, and receive name recognition in the program and on the conference website.

Role: Faculty Mentor (Student Travel, WVU)

09/08/14-09/09/14

\$375

(Hunsberger)

ADDF Young Investigator scholarship

Competitive travel award to attend the Alzheimer's Drug Discovery Foundation (ADDF) San Diego conference, present a poster, and receive name recognition in the program and on the conference website.

Role: Faculty Mentor (Student Travel, WVU)

03/01/15-03/03/15

\$375

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1R15AG045812-0 (Reed)  
NIH/NIA

7/01/2015-6/30/2018  
\$355,179 (total AU)

*The Effects of Aging and Tau on Extrasynaptic NMDA Receptors and Memory*

The major goal of this project is to of this proposal, in the context of a R15 grant mechanism, is to investigate the role of extrasynaptic NMDA receptors (NMDARs) in tau- and age- related memory deficits. My role is to provide training and supervision of undergraduate and graduate research assistants on transgenic mouse breeding and maintenance, memory testing, immunohistochemistry, fractionation procedures, and western blot analyses.

Role: PI (AU)

(Hunsberger)

03/06/16-03/08/16

ADDF Young Investigator scholarship

\$375

Competitive travel award to attend the Alzheimer's Drug Discovery Foundation (ADDF) Miami conference, present a poster, and receive name recognition in the program and on the conference website.

Role: Faculty Mentor (Student Travel, AU)

(Pinky)

January 2019

ASPET Young Scientist Travel Award

\$800

American Society for Pharmacology and Experimental Therapeutics (ASPET) funds to support travel to Experimental Biology Conference 2019, Orlando, FL in April to give a poster presentation and a rapid oral presentation.

Role: Co-Faculty Mentor (Student Travel, AU)

(Pinky)

May 2019

AACP Top 16 abstracts

\$500

Received funds to support travel to American Association of Clinical Pharmacology (AACP) conference 2019, Chicago, IL in September to give a poster presentation.

Role: Co-Faculty Mentor (Student Travel, AU)

R21 NS101506-02 (Kaddoumi\*, Panizzi, Reed)  
NIH/NINDS

9/25/2017 – 7/31/2020  
\$401,236 (total AU)

*Olive-derived oleocanthal as a novel natural product molecule to restore cerebrovascular function and integrity in a CAA mouse model.*

The major goals of this project are to tie findings obtained from our pre-clinical in vivo studies and from our novel in vitro blood brain barrier (BBB) model with cutting edge in vivo imaging tools and with behavioral studies to determine if oleocanthal is a promising therapeutic for vascular A $\beta$  pathogenesis disorders like cerebral amyloid angiopathy (CAA) and Alzheimer's disease (AD). Upon award, my role was defined as, "responsible for the breeding and maintenance of the Auburn mouse colonies, dietary treatment, and behavioral testing described in this project. Dr. Reed's duties include all aspects of experimental design, troubleshooting, training of team members, data analysis, and manuscript preparation, in addition to conducting and supervising all aspects of the project".

Role: MPI

Received a 1 year no cost extension

(Setti/Reed)

8/31/17-8/31/20

AFPE for Underrepresented Minorities

\$30,000 (total AU)

*Investigating the role of the lateral entorhinal cortex in Alzheimer's disease.*

American Foundation for Pharmaceutical Education Fellowship for Underrepresented Minorities

Competitive fellowship awarded by the American Foundation for Pharmaceutical Education for pre-doctoral students. The goal of this project is to determine the whether hyperexcitability via optogenetic stimulation can increase the spread of tau pathology and cognitive deficits via connected neural networks.

Role: Faculty Mentor (Research Supplies; AU)

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(Smith/Reed) 8/31/19-7/31/20  
AFPE \$10,000 (total AU)  
*Novel Intranasal Pramlintide Administration for the Dissection of Metabolic and Cognitive Outcomes of Amylin-based Therapies in a Transgenic Mouse Model of Alzheimer's Disease*  
American Foundation for Pharmaceutical Education Fellowship  
Competitive fellowship awarded by the American Foundation for Pharmaceutical Education for pre-doctoral students. The goal of this project is to determine whether intranasal pramlintide administration can alleviate cognitive and plasticity deficits in a mouse model of Alzheimer's disease.  
Role: Co-Faculty Mentor (Research Supplies; AU)

(Priyanka/Suppiramaniam/Reed) 1/1/2020-12/1/2020  
PhRMA Foundation Predoctoral fellowship 2020 \$25,000  
*Identifying therapeutic target to rescue learning and memory deficits following prenatal cannabinoid exposure.* Competitive fellowship awarded by Pharmaceutical Research and Manufacturers of America (PhRMA) Foundation to support career development activities of scientists embarking on research that examines molecular or cellular mechanisms of drugs in experimental animals or clinical studies. Pinky's project utilizes a rodent model to examine the effects of cannabinoid exposure during pregnancy on the learning and memory of the offspring mediated through the glutamatergic system of the hippocampus and identifying drug targets for the amelioration of the memory deficits.  
Role: Faculty mentor/co-advisor (Research Supplies/Stipend; AU)

(Pinky) April 2020  
ADDF Young Investigator scholarship \$300  
Competitive travel award to attend the Alzheimer's Drug Discovery Foundation (ADDF) Philadelphia conference, present a poster, and receive name recognition in the program and on the conference website.  
Role: Faculty Mentor (Student Travel, AU)

#### iv. Completed Grants & Funding - Intramural:

(Hunsberger) 2013  
Academic Affairs Travel Award \$300  
West Virginia University sponsored travel award to attend a conference relevant to my research.  
Role: Faculty Mentor (Travel, WVU)

(Hunsberger) 2013  
Eberly College of Arts and Sciences Travel Award \$150  
West Virginia University sponsored travel award to attend a conference relevant to my research.  
Role: Faculty Mentor (Travel, WVU)

U54GM104942 (Sundaram) 11/01/2014 – 10/30/16  
NIH/NIGMS - Clinical and Translational Science Institute (\$100,000; WVU)  
*Intermittent Infection/Inflammation and Cognitive Aging*  
The goal of this subproject was to determine whether infections could exacerbate cognitive aging.  
Role: PI of subproject (\$100,000; WVU)

(Hunsberger) 2013  
Department of Psychology Student Research Fund \$800  
Travel award through the psychology department at West Virginia University  
Role: Faculty Mentor (Travel, WVU)

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U54GM104942 (Sundaram) 06/01/2013 – 12/30/2014  
NIH/NIGMS - Clinical and Translational Science Institute (\$49,138; WVU)

*Increased Clearance of Extracellular Glutamate as a Treatment for Alzheimer's Disease*

The goal of this subproject was to determine whether reducing extracellular glutamate levels would restore cognitive functioning and prevent pathophysiology in an Alzheimer's mouse model.

Role: PI of subproject (\$49,138; WVU)

(Hunsberger) 2014

Behavioral and Biomedical Training Scholarship (T32) \$700

The BBS at West Virginia University provides advanced research training at the interface of behavioral and biomedical sciences. This competitive scholarship was awarded to help defray research costs.

Role: Faculty Mentor (Research Supplies & Travel, WVU)

(Hunsberger) 2015

Eberly College of Arts and Sciences Dissertation Proposal \$1500

Scholarship awarded to the top dissertation projects at West Virginia University.

Role: Faculty Mentor (Research Supplies & Travel, WVU)

(Hunsberger) 2015

STEM Mountains of Excellence Scholarship \$500

Competitive scholarship awarded to doctoral students at West Virginia University for their research in STEM to fund supplies or travel.

Role: Faculty Mentor (Student Travel, WVU)

(Hunsberger) 2015

Behavioral and Biomedical Training Scholarship (T32) \$1500

The BBS at West Virginia University provides advanced research training at the interface of behavioral and biomedical sciences. This competitive scholarship was awarded to help defray research costs.

Role: Faculty Mentor (Research Supplies, WVU)

(Hunsberger) 2016

Doctoral Student Travel Program \$300

West Virginia University sponsored travel award for PhD candidates to attend a conference relevant to their research.

Role: Faculty Mentor (Student Travel, WVU)

(Setti) 7/30/16

Dean's Travel Grant, Harrison School of Pharmacy \$1000 (total)

Harrison School of Pharmacy sponsored a travel award to present at Society for Neuroscience Role: Faculty Mentor (Student Travel, AU)

(Hunsberger) 2016

Eberly College of Arts and Sciences Travel Award \$300

West Virginia University sponsored travel award to attend a conference relevant to my research.

Role: Faculty Mentor (Student Travel, WVU)

(Hunsberger) 2016

Academic Affairs Travel Award \$300

West Virginia University sponsored travel award to attend a conference relevant to my research.

Role: Faculty Mentor (Student Travel, WVU)

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- (Setti) 8/31/17  
Dean's Travel Grant, Harrison School of Pharmacy \$500 (total)  
Harrison School of Pharmacy sponsored a travel award to present at Society for Neuroscience.  
Role: Co-Faculty Mentor (Student Travel, AU)
- (Pinky) August 2018  
Dean's Travel Grant, Harrison School of Pharmacy \$500  
Received funds to support travel to Society for Neuroscience Conference 2018, San Diego, CA in November to give a poster presentation and an oral presentation at an invited press conference.  
Role: Co-Faculty Mentor (Student Travel, AU)
- (Pinky) September 2018  
Auburn University Graduate Travel Fellowship \$400  
Received funds to support travel to Society for Neuroscience Conference 2018, San Diego, CA in November to give a poster presentation and an oral presentation at an invited press conference.  
Role: Co-Faculty Mentor (Student Travel, AU)
- (Reed)** 05/01/2017 – 05/1/2019 A  
Auburn University Internal Grants Program (AU IGP) \$44,194 (direct AU)  
*The role of complement in the exacerbation of Alzheimer's pathology induced by peripheral viral challenge.*  
The overall goal of this proposal was to establish a mouse model to study the effects of peripheral viral infections on Alzheimer's disease.  
Role: PI (AU)
- (Du/Reed) 8/1/2018-7/30/2019  
NSF EPSCoR T2 1736150 (Subaward number: 18-3423) \$14,800 (direct AU)  
Identify the stress threshold from adaption to apoptosis of ER stress-unfolded protein response induced by oxidative stress in embryonic fibroblasts from North American deer mice (*Peromyscus maniculatus*).  
Role: Faculty Mentor (Research Supplies; AU)
- (Pinky) September 2019  
Auburn University Graduate Travel Fellowship \$400  
Received funds to support travel to Society for Neuroscience Conference 2019, Chicago, IL in October to give a poster presentation.  
Role: Co-Faculty Mentor (Student Travel, AU)
- (Setti/Reed) 01/09/19-8/31/19  
CNSi Graduate Research Supplement Program \$5000 (direct AU)  
Competitive Supplement awarded by Auburn University's Center for Neuroscience Initiative to fund research supplies.  
Role: Faculty Mentor (Research Supplies; AU)
- (Reed\*/Suppiramaniam)** 3/1/2019-4/30/2021  
Auburn University Internal Grants Program (AU IGP) \$44,747 (direct AU)  
*Elucidation of molecular mechanisms of prenatal cannabinoid exposure: Identification of targets and therapies.*  
The overall goal of this proposal is to collect the necessary preliminary data for an NIH R01 application that was scored but not funded.  
Role: MPI (AU)
- (Beverly/Reed) 5/15/19-8/15/19  
AU Undergraduate Research Fellowship \$2,625 (direct AU)

Miranda N. Reed, Ph.D.

This competitive research fellowship provides funding to study the effects of viral infections on Alzheimer's disease progression.

Role: Faculty Mentor/Undergraduate Research Advisor (Student Stipend; AU)

(Dogan/**Reed**)

5/15/19-8/15/19

AU Undergraduate Research Fellowship

\$2,625 (direct AU)

This competitive research fellowship provides funding to study the effects of neural hyperexcitability on the transsynaptic spread of tau pathology in Alzheimer's disease.

Role: Faculty Mentor/Undergraduate Research Advisor (Student Stipend; AU)

(Setti/**Reed**)

09/01/19-5/31/20

CNSi Graduate Research Supplement Program

\$5000 (direct AU)

Competitive Supplement awarded by Auburn University's Center for Neuroscience Initiative to fund research supplies.

Role: Faculty Mentor (Research Supplies; AU)

(**Reed**\*/Suppiramaniam)

3/1/2019-4/30/2021

Auburn University Internal Grants Program (AU IGP)

\$44,747 (direct AU)

*Elucidation of molecular mechanisms of prenatal cannabinoid exposure: Identification of targets and therapies.*

The overall goal of this proposal is to collect the necessary preliminary data for an NIH R01 application that was scored but not funded.

Role: MPI (AU)

**v. Pending, Scored, in Revision Grants & Funding: Limited to Extramural Applications:**

1 R15 AG081844-01 (Gramlich/Bhattacharya/Ramapuram)

4/1/2023 - 3/1/2026

NIH/NINDS

\$465,003 (Total)

*Regulating tau mediated glutamate release in rTg(4510)P301L hippocampal neurons.*

The goal of this proposal is to determine if increased extracellular glutamate release mediated by tau in Alzheimer's Disease is a regulatable process that can slow or arrest neurodegeneration. My duties are to advise on experimental design, troubleshooting, training researchers, in addition to conducting and supervising aspects of the project, as it relates to the areas described. Dr. Reed will oversee breeding and maintenance of the transgenic colony (Aims 1 & 2), creation of the transfection constructions and the transfections (Aim 3), and measurements of tau release and posttranslational alterations (Aims 1-3)." and advising on multi-channel electrode analysis of cell cultures.

Role: Co-I

Status: Not funded.

1 R01 AG082130-01 (Engler-Chiurazzi)

4/1/2023 – 03/31/2028

NIH/NIA

\$2,354,209 (Total)

*Leveraging inducible animal models to explore the role of microRNA-34a insusceptibility to and reversibility of an Alzheimer's disease neurodegenerative phenotype*

The goal of this proposal is to the central hypothesis that miR34a-induced cognitive deficits result from dysregulated glutamate signaling, particularly via NMDAR-2B. My duties are to oversee assessments of presynaptic alterations and post-synaptic glutamatergic receptor levels and signaling.

Role: Co-I

Status: Scored but not funded.

1 R21 AG083547-01 (Gramlich\*/**Reed**)

04/01/2023 - 03/31/2025

NIH/NIA

\$ 414,676 (Total)

*Astrocytes Mediate Extracellular Spread of P301L Tau to Neurons*

Miranda N. Reed, Ph.D.

The goal of this proposal is to determine the role that astrocytes play in mediating presynaptic glutamate release in the context of tau pathology. My duties are to oversee breeding and maintenance of the transgenic colony, the creation of the transfection constructions and the transfections, and measurements of tau release and posttranslational alterations.

Status: Pending review.

## **PUBLICATIONS**

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*Note: My percent effort is identified after my name for book chapters and peer-reviewed publications. Undergraduate students under my direction are noted with “ \*\* ”, graduate students under my direction or co-direction are noted with “ \* ”, and students that I have served on their dissertation committee or mentored are noted with “ @ ”. Co-corresponding or corresponding author(s) are noted with “ \$ ”.*

### **Book Chapters:**

1. **Reed, M.N.**<sup>\$</sup> (50% effort), Doll, D., Simpkins, J.W., & Barr, T. (2014). Aging & stroke: The human condition. In: Proceedings Nestle Purina Companion Animal Nutrition Summit: Nutrition for Life, pp. 39- 51, March 27-29, 2014, Austin, Texas.
2. @Petrone, A.B., \*Rudy, C.C., Barr, T.L., Simpkins, J.W., & **Reed, M.N.**<sup>\$</sup> (50% effort) (2015). Neuroprotective effects of estrogen following neural injury. In: Estrogen effects on TBI: Mechanisms of neuroprotection and repair. Ed: K.A. Duncan. Elsevier Inc. Pgs. 91-111.

### ***Book Chapters since joining Auburn University:***

3. Suppiramaniam, V<sup>\$</sup>, @Bloemer, J., **Reed, M.N.** (25% effort) & Bhattacharya, S. (2016). Neurotransmitter Receptors. In: Charlene A. McQueen, Comprehensive Toxicology, Jan 2016, Oxford Academic Press. Pgs. 176-201.
4. Suppiramaniam, V<sup>\$</sup>, @Bloemer, J., **Reed, M.N.** (25% effort) & Bhattacharya, S. (2016). Ion Channels. In: Charlene A. McQueen, Comprehensive Toxicology, Jan 2016, Oxford Academic Press. Pgs. 205 - 240.
5. @Albright, C. @Friend, A., Peters, B., **Reed, M.N.** (10% effort), Suppiramaniam, V. Bhattacharya, S. (2022). Role of the gut microbiome in Rett syndrome. In: Microbiome, Immunity, Digestive Health and Nutrition., Academic Press, Pgs. 273-293.

### **b. Journal Articles:**

1. Day, J.D., **Reed, M.N.** (25% effort), & Newland, M.C.<sup>\$</sup> (2005). Neuromotor deficits and mercury concentrations in rats exposed to methyl mercury and fish oil. *Neurotoxicology & Teratology*, 27, 629-641. doi: 10.1016/j.ntt.2005.03.011
2. Newland, M.C.<sup>\$</sup>, **Reed, M.N.** (25% effort), LeBlanc, A., & Donlin, W.D. (2006). Brain and blood mercury and selenium after chronic and developmental exposure to methylmercury. *Neurotoxicology*, 27, 710-720. doi: 10.1016/j.neuro.2006.05.007
3. **Reed, M.N.** (60% effort), Paletz, E.M., & Newland, M.C.<sup>\$</sup> (2006). Gestational exposure to methylmercury and selenium: Effects of a spatial discrimination procedure in adulthood. *Neurotoxicology*, 27, 721- 732. doi: 10.1016/j.neuro.2006.03.022
4. **Reed, M.N.** (80% effort) & Newland, M.C.<sup>\$</sup> (2007). Prenatal methylmercury exposure increases responding under clogged and unclogged fixed interval schedules of reinforcement. *Neurotoxicology & Teratology*, 29, 492-502. doi: 10.1016/j.ntt.2007.03.002

5. **Reed, M.N.** (50% effort), Banna, K.M., Donlin, W.D., & Newland, M.C.<sup>§</sup> (2008). Effects of gestational exposure to methylmercury and dietary selenium on reinforcement efficacy in adulthood. *Neurotoxicology & Teratology*, *30*, 29-37. doi: 10.1016/j.ntt.2007.10.003
6. Newland, M.C.<sup>§</sup>, Paletz, E.M, & **Reed, M.N.** (25% effort) (2008). Methylmercury and nutrition: Adult effects of fetal exposure in experimental models. *Neurotoxicology*, *29*, 783-801. doi: 10.1016/j.neuro.2008.06.007
7. **Reed, M.N.** (80% effort) & Newland, M.C.<sup>§</sup> (2009). Gestational methylmercury exposure selectively increases the sensitivity of operant behavior to cocaine. *Behavioral Neuroscience*, *123*, 408-417. doi: 10.1037/a0014595
8. Newland, M.C.<sup>§</sup>, Paletz, E.M, & **Reed, M.N.** (25% effort) (2009). Lactational exposure to mercury in experimental models. *Neurotoxicology*, *30*, 161-163. doi: 10.1016/j.neuro.2008.10.005
9. Heath, J.C., **Reed, M.N.** (25% effort), Banna, K.M., Pesek, E.F., Cole, N., Li, J., & Newland, M.C.<sup>§</sup> (2010). Dietary selenium protects against selected signs of methylmercury exposure and aging. *Neurotoxicology*, *31*, 169-179. doi: 10.1016/j.neuro.2010.01.003
10. **Reed, M.N.** (75% effort), Kotilinek, L.A., & Ashe, K.H.<sup>§</sup> (2010). Effect size of Morris water maze deficits in Tg2576 mice. *Behavioural Brain Research*, *212*, 115-120. DOI: 10.1016/j.bbr.2010.03.037
11. Hoover, B.R.<sup>1</sup>, **Reed, M.N.**<sup>1</sup> (40% effort), Su, J., Kotilinek, K., Penrod, R.D., Pitstick, R., Carlson, G.A., Lanier, L.M., Yuan, L., Ashe, K.H.<sup>§</sup>, & Liao, D.<sup>§</sup> (2010). Tau mislocalization to dendritic spines mediates synaptic dysfunction independently of neurodegeneration. *Neuron*, *68*, 1-15. <sup>1</sup>Authors contributed equally. doi: 10.1016/j.neuron.2010.11.030
12. **Reed, M.N.** (40% effort), Hofmeister, J.J., Jungbauer, L., Welzel, A.T., Yu, C., Lesne, S., LaDu, M.J., Walsh, D.M., Ashe, K.H.<sup>§</sup>, & Cleary, J.P.<sup>§</sup> (2011). Cognitive effects of cell-derived and synthetically-derived A $\beta$  oligomers. *Neurobiology of Aging*, *32*, 1784-94. doi: 10.1016/j.neurobiolaging.2009.11.007
13. Klyubin, I., Wang, Q., **Reed, M.N.** (20% effort), Irving, E.A., Upton, N., Hofmeister, J., Cleary, J.P., Anwyl, R., & Rowan, M.J.<sup>§</sup> (2011). Protection against A $\beta$ -mediated rapid disruption of synaptic plasticity and memory by Memantine. *Neurobiology of Aging*, *32*, 614-23. doi: 10.1016/j.neurobiolaging.2009.04.005
14. \*\*Povroznik, J.M., \*Rudy, C.C., \*Hunsberger, H.C., @Tosto, D.E., & **Reed, M.N.**<sup>§</sup> (35% effort) (2014). Effects of an "5GABAA inverse agonist on MK-801-induced learning deficits in an incremental repeated acquisition task. *Behavioural Pharmacology*, *25*, 331-335. doi: 10.1097/FBP.0000000000000053
15. \*Hunsberger, H.C., \*Rudy, C.C., \*Weitzner, D.S., Zhang, C., @Tosto, D.E., \*\*Knowlan, K., Xu, Y., & **Reed, M.N.**<sup>§</sup> (35% effort) (2014). Effect size of memory deficits in mice with adult-onset P301L tau expression. *Behavioural Brain Research*, *6(272C)*, 181-195. doi: 10.1016/j.bbr.2014.06.057
16. @Petronne, A.B., Gatson, J.W., Simpkins, J.W.<sup>§</sup>, & **Reed, M.N.**<sup>§</sup> (35% effort) (2014). Non-feminizing estrogens: a novel neuroprotective therapy. *Molecular & Cellular Endocrinology*, *389*, 40-47. doi: 10.1016/j.exger.2016.10.013
17. Newland, M.C.<sup>§</sup>, **Reed, M.N.** (30% effort), & Rasmussen, E. (2015). A hypothesis about how early developmental methylmercury exposure disrupts behavior in adulthood. *Behavioural Processes*, *114*, 41-51. doi: 10.1016/j.beproc.2015.03.007
18. Pan, J., Sun, J., Ding, L., Ruan, L., **Reed, M.N.** (10% effort), Yu, X., Klabni, J., Lin, D., Li, J., Chen, L., Zhang, C., Zhang, H., O'Donnell, J.M., & Xu, Y.<sup>§</sup> (2015). Inhibition of phosphodiesterase 2 reverses

- impaired cognition and neuronal remodeling caused by chronic stress. *Neurobiology of Aging*, 36(2), 955-970. doi: 10.1016/j.neurobiolaging.2014.08.028
19. \*Rudy, C.C., \*Hunsberger, H.C., \*Weitzner, D.S., & **Reed, M.N.**<sup>§</sup> (50% effort) (2015). The role of the tripartite glutamatergic synapse in the pathophysiology of Alzheimer's disease. *Aging & Disease*, 6(2), 131-148. doi: 10.14336/AD.2014.0423
  20. \*Hunsberger, H.C., \*Rudy, C.C., Batten, S.R., Gerhardt, G.A., & **Reed, M.N.**<sup>§</sup> (50% effort) (2015). P301L tau expression affects glutamate release and clearance in the hippocampal trisynaptic pathway. *Journal of Neurochemistry*, 132(2), 169-182. doi: 10.1111/jnc.12967
  21. Liu, P., **Reed, M.N.** (25% effort), Kotilinek, L.A., Grant, M.K.O., Forster, C., Qiang, W., Shapiro, S.L., Reichl, J.H., Chiang, A.C.A., Jankowsky, J.L., Wilmot, C.M., Cleary, J.P., Zahs, K.R., & Ashe, K.H.<sup>§</sup> (2015). Quaternary structure defines a large class of amyloid-beta oligomers neutralized by sequestration. *Cell Reports*, 11(11), 1760-1771. doi: 10.1016/j.celrep.2015.05.021
  22. \*Weitzner, D.S., @Engler-Chiurazzi, E.B., Kotilinek, L.A., Ashe, K.H., & **Reed, M.N.**<sup>§</sup> (50% effort) (2015). Morris water maze test: Optimization for strain and testing environment. *The Journal of Visualized Experiments (JoVE)*, doi: 10.3791/52706.
  23. Li, G., Ruan, L., Chen, R., Wang, R., Xie, X., Zhang, M., Chen, L., Yan, Q., **Reed, M.N.** (10% effort), Chen, J., Xu, Y., Pan, J., Huang, W.<sup>§</sup> (2015). Synergistic antidepressant-like effect of ferulic acid in combination with piperine: involvement of monoaminergic system. *Metabolic Brain Disease*, 30(6), 1505-1514. doi: 10.1007/s11011-015-9704-y
  24. \*Hunsberger, HC, \*Weitzner, DS, \*Rudy, CC, \*\*Hickman, JE, \*\*Libell, EM, \*\*Speer, RR, Gerhardt, GA, & **Reed, MN**<sup>§</sup> (50% effort). (2015). Riluzole rescues glutamate alterations, cognitive deficits, and tau pathology associated with P301L tau expression. *Journal of Neurochemistry*, 135(2), 381-394. doi: 10.1111/jnc.13230
    - a. Featured in *Journal of Neurochemistry* Editorial Highlight: Whitcomb, D.J. & Molnar, E. (2015). Is riluzole a new drug for Alzheimer's disease? *Journal of Neurochemistry*, 135(2), 207-209.
  25. \*Hunsberger, HC, \*\*Hickman, JE, & **Reed, MN**<sup>§</sup> (60% effort). (2016). Riluzole rescues alterations in rapid glutamate transients in the hippocampus of rTg4510 mice. *Metabolic Brain Disease*, 31(2), 711-715. doi: 10.1007/s11011-015-9783-9
  26. \*Hunsberger, HC, Wang, D, Petrisko, TJ, Alhowail, A, \*Setti, SE, Suppiramaniam, V, Konat, GW, & **Reed, MN**<sup>§</sup> (50% effort). (2016). Peripherally restricted viral challenge elevates extracellular glutamate and enhances synaptic transmission in the hippocampus. *Journal of Neurochemistry*, 138(2), 307-16. doi: 10.1111/jnc.13665
  27. @Bhattacharya, S, Kimble, W, Buabeid, M, Bhattacharya, D, Bloemer, J, Alhowail, A, **Reed, MN** (10% effort), Dhanasekaran, M, Escobar, & M, Suppiramaniam, V. <sup>§</sup> (2017). Altered AMPA receptor expression plays an important role in inducing bidirectional synaptic plasticity during contextual fear memory reconsolidation. *Neurobiology of Learning and Memory*, 139, 98-108. doi: 10.1016/j.nlm.2016.12.013
  28. \*Hunsberger, HC, \*Setti, SE, \*Heslin, RT, Quintero, JE, Gerhardt, GA, & **Reed, MN**<sup>§</sup> (60% effort). (2017.) Using enzyme-based biosensors to measure tonic and phasic glutamate in Alzheimer's mouse models. *The Journal of Visualized Experiments (JoVE)*, 3(123), doi: 10.3791/55418.

29. \*Hunsberger, HC, Konat, GW, & **Reed, MN**<sup>§</sup> (60% effort). (2017). Peripheral viral challenge elevates extracellular glutamate in the hippocampus leading to seizure hypersusceptibility. *Journal of Neurochemistry*, 141(3), 341-346. doi: 10.1111/jnc.13999
30. \*Setti, SE, \*Hunsberger, HC, & **Reed, MN**<sup>§</sup> (60% effort). (2017). Alterations in hippocampal activity and Alzheimer's disease. *Translational Issues in Psychological Science, Special Issue on Aging*, 3(4), 348-356. doi: 10.1037/tps0000124
31. @Boomhower SR, \*Hunsberger HC, & **Reed MN**<sup>§</sup> (50% effort) (2017). Geropsychology: Mindfulness, Stereotypes, and Cognition in the Aging Population. *Translational Issues in Psychological Science, Special Issue on Aging*, 3(4), 325-327. [Editorial] doi.org/10.1037/tps0000146
32. Li DD, Xie H, Du YF, Long Y, **Reed MN** (10% effort), Hu M, Suppiramaniam V, Hong H, Tang SS.<sup>§</sup> (2018). Antidepressant-like effect of zileuton is accompanied by hippocampal neuroinflammation reduction and CREB/BDNF upregulation in lipopolysaccharide-challenged mice. *Journal of Affective Disorders*, 227, 672-680. doi: 10.1016/j.jad.2017.11.047
33. Wang H, Chen F, Du YF, Long Y, **Reed MN** (10% effort), Hu M, Suppiramaniam V, Hong H, Tang SS.<sup>§</sup> (2018). Targeted inhibition of RAGE reduces amyloid- $\beta$  influx across the blood-brain barrier and improves cognitive deficits in db/db mice. *Neuropharmacology*, 15, 143-153. doi: 10.1016/j.neuropharm.2017.12.026
34. @Bloemer J, \*Pinky PD, Govindarajulu M, Judd R, Amin RH, Moore T, Dhanasekaran M., **Reed MN**<sup>§</sup> (30% effort), & Suppiramaniam V.<sup>§</sup> (2018). Role of adiponectin in central nervous systems disorders. *Neural Plasticity*, epub ahead of print. doi: 10.1155/2018/4593530
35. Wu X, Lv YG, Du YF, Chen F, **Reed MN** (10% effort), Hu M, Suppiramaniam V, Tang SS, Hong H.<sup>§</sup> (2018). Neuroprotective effects of INT-777 against A $\beta$ 1-42-induced cognitive impairment, neuroinflammation, apoptosis, and synaptic dysfunction in mice. *Brain, Behavior, and Immunity*, 73, 533-545. doi: 10.1016/j.bbi.2018.06.018
36. \*Hunsberger H, \*Pinky PD, @Smith W, Suppiramaniam V, **Reed MN**<sup>§</sup> (40% effort). (2019). The role of APOE4 in Alzheimer's disease: strategies for future therapeutic interventions. *Neuronal Signaling*, 3(2), doi: 10.1042/NS20180203
37. Wu X, Lv YG, Du YF, Hu M, **Reed MN** (10% effort), Long Y, Suppiramaniam V, Hong H, Tang SS.<sup>§</sup> (2019). Inhibitory effect of INT-777 on lipopolysaccharide-induced cognitive impairment, neuroinflammation, apoptosis, and synaptic dysfunction in mice. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 88(10), 360-374. doi: 10.1016/j.pnpbp.2018.08.016
38. \*Pinky PD, @Bloemer J, @Smith WD, Moore T, Hong H, Suppiramaniam V<sup>§</sup>, **Reed MN**<sup>§</sup> (30% effort) (2019). Prenatal cannabinoid exposure and altered neurotransmission. *Neuropharmacology*, 149, 181-194. doi: 10.1016/j.neuropharm.2019.02.018
39. Wu X, Liu C, Chen L, Du YF, Hu M, **Reed MN** (10% effort), Long Y, Suppiramaniam V, Hong H, Tang SS.<sup>§</sup> (2019). Protective effects of tauroursodeoxycholic acid on lipopolysaccharide-induced cognitive impairment and neurotoxicity in mice. *International Immunopharmacology*, 72, 166-175. doi: 10.1016/j.intimp.2019.03.065
40. Chen F, Yu X, Meng G, Mei Z, Du Y, Sun H, **Reed MN** (10% effort), Kong L, Suppiramaniam V, Hong H, Tang S.<sup>§</sup> (2019). Hippocampal genetic knockdown of PPAR $\delta$  causes depression-like behaviors and neurogenesis suppression. *International Journal of Neuropsychopharmacology*, 22, 372-382. doi.org/10.1093/ijnp/pyz008

41. @Bloemer J, \*Pinky PD, @Smith WD, Bhattacharya D, Chauhan A, Govindarajulu M, Hong H, Dhanasekaran M, Judd R, Amin RH, **Reed MN**<sup>§</sup> (30% effort), Suppiramaniam V<sup>§</sup>. (2019). Adiponectin knockout mice display cognitive and synaptic deficits. *Frontiers in Neuroendocrinology*, 22(10), doi: 10.3389/fendo.2019.00819
42. @Petrisko TJ, @Bloemer J, \*Srinivasa S, \*Pinky PD, \*Heslin RT, Du Y, \*Setti SE, Hong H, Suppiramaniam V, Konat GW<sup>§</sup>, **Reed MN**<sup>§</sup> (40% effort) (2020). Neuronal CXCL10/CXCR3 axis mediates the induction of cerebral hyperexcitability by peripheral viral challenge. *Frontiers in Neuroscience*, 24(14), doi: 10.3389/fnins.2020.00220.
43. @Woodie LN, Johnson RM, Ahmed B, Fowler S, Haynes W, Carmona B, **Reed M** (10% effort), Suppiramaniam V, Greene MW. (2020). Western diet-induced obesity disrupts the diurnal rhythmicity of hippocampal core clock gene expression in a mouse model. *Brain Behav Immun*. 88, doi: 10.1016/j.bbi.2020.05.053.
44. Chen, F, Fang, S, Du, Y, Ghosh, A, **Reed MN** (20% effort), Long Y, Suppiramaniam V, Tang S., Hong H. (2021). CRISPR/Cas9-mediated CysLT1R deletion reverses synaptic failure, amyloidosis and cognitive impairment in APP/PS1 mice. *Aging*, 13(5), doi: 10.18632/aging.202501.
45. Darakjian LI, Rigakou A, Brannen A, Qusa MH, Tasiakou N, Diamantakos P, **Reed MN** (5% effort), Panizzi P, Boersma MD, Melliou E, El Sayed KA, Magiatis P, Kaddoumi. (2021). Spontaneous In Vitro and In Vivo Interaction of (-)-Oleocanthal with Glycine in Biological Fluids: Novel Pharmacokinetic Markers. *ACS Pharmacol Transl Sci*, 4(1), doi: 10.1021/acspsci.0c00166.
46. \*Hunsberger, HC, \*Setti, SE, \*Rudy, CC, \*Weitzner, DS, \*Pfizer, JC, \*McDonald, KL, Hong, H, Bhattacharya S, Suppiramaniam V, & **Reed MN**<sup>§</sup> (40% effort) (2021). Differential effects of human P301L tau expression in young versus aged mice. *Int J Mol Sci*, 28, doi: 10.3390/ijms222111637.
47. \*Pinky PD, Majrashi M, Fujihashi A, @Bloemer J, Govindarajulu M, Ramesh S, **Reed MN** (10% effort), Moore T, Suppiramaniam V, Dhanasekaran M<sup>§</sup> (2021). Effects of prenatal synthetic cannabinoid exposure on the cerebellum of adolescent rat offspring. *Heliyon*, 7(4), doi: 10.1016/j.heliyon.2021.e06730.
48. Majrashi M, Altukri M, Ramesh S, Govindarajulu M, Schwartz J, Almaghrabi M, Smith F, Thomas T, Suppiramaniam V, Moore T, **Reed M** (10%), Dhanasekaran M. (2021).  $\beta$ -hydroxybutyric acid attenuates oxidative stress and improves markers of mitochondrial function in the HT-22 hippocampal cell line. *J Integr Neurosci* 20(2):321-329, doi: 10.31083/j.jin2002031.
49. \*Setti SE, **Reed MN**<sup>§</sup> (40% effort) (2022). Network activity changes in the pathophysiology of Alzheimer's disease: the role of aging and early entorhinal cortex dysfunction. *Metab Brain Dis*, 37(2), doi: 10.1007/s11011-021-00848-8.
50. \*Pinky PD, \*Pfizer JC, Senfeld J, Hong H, Bhattacharya S, Suppiramaniam V, Qureshi I, & **Reed MN**<sup>§</sup> (20% effort). (2022). Recent Insights on Glutamatergic Dysfunction in Alzheimer's Disease and Therapeutic Implications. *Neuroscientist*, 25, doi: 10.1177/10738584211069897.
51. \*\*Taipaia, E., \*Pfizer, JC, Hellums, M, **Reed MN**<sup>§</sup> (30% effort) & Gramlich MW<sup>§</sup> (2022). rTg(TauP301L)4510 mice exhibit increased VGLUT1 in hippocampal presynaptic glutamatergic vesicles and increased extracellular glutamate release. *Frontiers in Synaptic Neuroscience*, 14, doi: 10.3389/fnsyn.2022.925546.
52. \*Kendricks D, Bhattacharya S, **Reed MN** (20% effort), & Newland MC. Impacts of neonatal methylmercury on behavioral flexibility and learning in spatial discrimination reversal and visual signal detection tasks. *Neurotoxicology*, 93, 9-21. doi: 10.1016/j.neuro.2022.08.013.

Publications Submitted or in Revision:

1. \*Pinky PD, @Bloemer J, \*Smith WD, Du Y, \*Heslin R, \*Setti, SE, \*Pfitzer JC, Hong H, Bhattacharya S, **Reed MN**<sup>S</sup> & Suppiramiam, V<sup>S</sup>. Prenatal cannabinoid exposure elicits synaptic plasticity and memory deficits in offspring concomitant with reduced PSA-NCAM expression and altered glutamatergic signaling. Revision under review at *Scientific Reports*
2. @Maurer M, \*Rudy C, \*Hunsberger H, **Reed MN**<sup>S</sup> (40% effort), & Valentine S<sup>S</sup>. Proteomic analyses of brain tissue following intracerebroventricular administration of streptozocin in mouse models of tauopathies by LC-MS/MS. Submitted to *EuPA Open Proteomics*
3. Alhowail AH, Eggert M, Bloemer J, Pinky PD, Woodie L, Bhattacharya S, Bhattacharya D, Buabeid MA, Smith B, Dhanasekaran M, **Reed MN** (10%), Escobar M, Arnold RD, & Suppiramian V. Phenyl-2-aminoethyl Selenide Ameliorates Hippocampal Long-term Potentiation and Cognitive Deficits Following Doxorubicin Treatment. Submitted to *Frontiers in Pharmacology, section Experimental Pharmacology and Drug Discovery*

d. Publications Other:

1. Writeup in *Science Daily* & *Alzforum* related to publication Brian R. Hoover, Miranda N. Reed, Jianjun Su, Rachel D. Penrod, Linda A. Kotilinek, Marianne K. Grant, Rose Pitstick, George A. Carlson, Lorene M. Lanier, Li-Lian Yuan, Karen H. Ashe, Dezhi Liao. Tau Mislocalization to Dendritic Spines Mediates Synaptic Dysfunction Independently of Neurodegeneration. *Neuron*, Volume 68, Issue 6, 1067-1081, 22 December 2010 DOI: 10.1016/j.neuron.2010.11.030
2. Invited Commentary in *Alzforum* related to publication, Yanamandra K, Kfoury N, Jiang H, Mahan TE, Ma S, Maloney SE, Wozniak DF, Diamond MI, Holtzman DM. Anti-Tau Antibodies that Block Tau Aggregate Seeding In Vitro Markedly Decrease Pathology and Improve Cognition In Vivo. *Neuron*. 2013 Oct 16;80(2):402-14. PubMed.
3. Invited Commentary in *Alzforum* related to publication, Decker JM, Krüger L, Sydow A, Zhao S, Frotscher M, Mandelkow E, Mandelkow EM. Pro-aggregant Tau impairs mossy fiber plasticity due to structural changes and Ca<sup>++</sup> dysregulation. *Acta Neuropathol Commun*. 2015 Apr 3;3(1):23. PubMed.
4. Editorial highlight related to publication Hunsberger, HC, Weitzner, DS, Rudy, CC, Hickman, JE, Libell, EM, Speer, RR, Gerhardt, GA, & Reed, MN. (2015). Riluzole rescues glutamate alterations, cognitive deficits, and tau pathology associated with P301L tau expression. *Journal of Neurochemistry*, 135(2), 381-394.
5. Invited Commentary in *Newsweek* related to publication to “Self-reported Daily, Weekly, and Monthly Cannabis Use Among Women Before and During Pregnancy” doi:10.1001/jamanetworkopen.2019.6471
6. Writeup in *Earth.com*, *Science Daily*, *Metro*, *Newsweek*, & *MSN.com* related to presentation \*Pinky, P.D., @Bloemer, J. \*Setti, S. E., \*Heslin, R.T., @Smith, W.D., Du, Y., Dityatev, A., Reed, M.N.<sup>S</sup>, Suppiramian, V.<sup>S</sup> *Mechanism of Prenatal Cannabinoid Exposure Mediated Memory Loss in Adolescent Offspring: Opportunities for Identifying Therapeutic Target*. Experimental Biology, Orlando, FL, April 2019.

**PRESENTATIONS**

*Note: Undergraduate students under my direction are noted with “ \*\* ”, graduate students under my direction or co-direction are noted with “ \* ”, and students that I have served on their dissertation committee or mentored are noted with “ @ ”.*

a. Poster Abstracts Meeting Proceedings:

1. **Reed, M.N.** & Newland, M.C. "Selective sensitivity to cocaine in rats exposed to DHA and prenatally to methylmercury." Auburn University Psychology Research Festival, November 2002.
2. **Reed, M.N.** & Newland, M.C. "Effects of monoamine agonists on behavior under a fixed interval schedule in rats exposed to methylmercury and n-3 fatty acids during gestation." Auburn University Graduate Student Research Festival, March 2003.
3. **Reed, M.N.** & Newland, M.C. "The effects of cocaine on behavior controlled by internal and external stimuli for methylmercury exposed animals." Auburn University Psychology Research Festival, November 2004.
4. **Rairigh, J.R., Kline, E.M., Ryan, L.L., & Reed, M.N.** "An assessment of response acquisition by FVB and 129S6 mice using an autoshaping training procedure." Summer Undergraduate Research Symposium, July 2011.
5. **Kline, E.M., Rairigh, J.R., Ryan, L.L., & Reed, M.N.** "Testing learning and memory in mice: Comparing background strains." Summer Undergraduate Research Symposium, July 2011.
6. **Tosto, D.E., Glover, T.L., Deweese, S.L., Knowlan, K.M., Grizzanti, J.M. & Reed, M.N.** "Early hippocampal learning and memory deficits in a transgenic mouse model of Alzheimer's disease." Van Liere and Health Science Center Research Day, March 2012. **\*Awarded 1st place in the Basic Science 2011-2012 category.**
7. **Knowlan, K.M., Grizzanti, J.M., @Tosto, D.E., & Reed, M.N.** "Hippocampal deficits on retention of contextual learning in fear conditioning of tauP301L mice." West Virginia University Capstone Poster Session, April 2012.
8. **LeNguyen, K.D., Hunsberger, H.C., Kelly, C., Hotz, E., Povroznik, J.M. & Reed, M.N.** "Memory deficits in a novel location recognition task for TauP301L mice?" Summer Undergraduate Research Symposium, July 2012. **\*Awarded 1st place in the Summer Undergraduate Research Symposium Poster Session for Biological & Health Sciences.**
9. **Hunsberger, H.C., Knowlan, K., Rudy, C.C., & Reed, M.N.** "TauP301L mice exhibit contextual but not trace fear conditioning deficits." Van Liere Research Day, March 2013.
10. **Rudy, C.C., Povroznik, J.M., Hunsberger, H.C., & Reed, M.N.** "Rescue of MK-801 induced learning deficits in an incremental repeated acquisition task using an "5GABAA inverse agonist." Van Liere Research Day, March 2013.
11. **Hunsberger, H.C., Knowlan, K., Rudy, C.C., & Reed, M.N.** "Tau P301L mice exhibit contextual but not trace fear conditioning deficits." Horizon's Research Day, March 2013.
12. **Hotz, E., Hunsberger, H.C., Rudy, C.C., & Reed, M.N.** "Do TauP301L mice exhibit memory deficits in a Barnes maze task?" West Virginia University Capstone Poster Session April 2013.
13. **Rudy, C.C., Povroznik, J.M., Hunsberger, H.C., & Reed, M.N.** "Rescue of MK-801 induced learning deficits in an incremental repeated acquisition task using an "5GABAA inverse agonist." Center for Neuroscience Retreat, June 2013. **\*Awarded 1st place poster presenter.**
14. **Hunsberger, H.C., Rudy, C.C., & Reed, M.N.** "Glutamate dysregulation in a mouse model of Alzheimer's disease." Center for Neuroscience Retreat, June 2013.

15. \*\*Schoonover, K., \*Hunsberger, H.C., \*Rudy, C.C., & **Reed, M.N.** “The Effects of Type 2 diabetes on neural pathways: The relationship of fyn, leptin, and Alzheimer’s disease.” Summer Undergraduate Research Symposium, July 2013.
16. \*\*Rejonis, A., \*Hunsberger, H.C., \*Rudy, C.C., & **Reed, M.N.** “Neurodegeneration effects of obesity and the link to Alzheimer’s disease.” Summer Undergraduate Research Symposium, July 2013.
17. \*\*Schoonover, K.E., \*Hunsberger, H.C., \*Rudy, C.C., & **Reed, M.N.** (2013). “Type II diabetes and leptin resistance: Implications for Alzheimer’s disease.” Undergraduate Research Day at the Capital, West Virginia State Capital, January, 2014.
18. \*\*Gogniat, M., \*Rudy, C.C., \*Hunsberger, H.C., & **Reed, M.N.** “The role of a high fat diet as a risk factor in Alzheimer’s disease.” Summer Undergraduate Research Symposium, July 2013.
19. \*\*Rejonis, A.G., \*Rudy, C.C., & Reed, M.N. “Introduction of spatial memory deficits in TauWT mice.” West Virginia University Capstone Poster Session, December 2013.
20. \*Hunsberger, H. C., \*Rudy, C. C., \*Weitzner, D. & **Reed, M. N.** “In vivo microelectrode recordings reveal glutamate dysregulation in an Alzheimer’s mouse model.” Poster presented at West Virginia University Van Liere Research Day, Morgantown, WV, February 2014.
21. \*\*Schoonover, K.E., \*Rudy, C.C., & **Reed, M.N.** “ICV-STZ induced hypometabolism in a tau mouse model of Alzheimer’s disease.” West Virginia University Van Liere Research Day, February, 2014. **\*Awarded 1st poster award in the Basic Science undergraduate category.**
22. \*Weitzner, D.S. & **Reed, M.N.** “Increased glutamatergic and decreased GABAergic synaptic terminals are associated with memory deficits in TauP301L mice.” Poster presented at West Virginia University Van Liere Research Day, Morgantown, WV, February 2014. **\*Awarded 1st place in the Basic Science 2013-2014 category.**
23. \*\*Terlecki, S., \*Hunsberger, H. C. & **Reed, M. N.** “In vivo microelectrode recordings: Glutamate transients in a mouse model of Alzheimer’s disease.” Poster presented at West Virginia University Undergraduate Capstone Session, Morgantown, WV, April 2014.
24. \*\*Buser, C.M., \*Crowe, M.S. & **Reed, M.N.** “Student attendance and its affect on exam scores.” Poster presented at West Virginia University Undergraduate Capstone Session, Morgantown, WV, April 2014.
25. \*Hunsberger, H.C. & **Reed, M.N.** “Glutamate dysregulation in a mouse model of Alzheimer’s disease.” Presented at the West Virginia University Department of Psychology Advanced Professional Development Colloquium, Morgantown, WV, April 2014.
26. \*Rudy, C. C. & **Reed, M.N.** “Stroke & Alzheimer’s disease.” Presented at the West Virginia University Department of Psychology Advanced Professional Development Colloquium, Morgantown, WV, April 2014.
27. \*\*Schoonover, K.E., \*Rudy, C.C., & **Reed, M.N.** “ICV-STZ induced hypometabolism in a tau mouse model of Alzheimer’s disease.” Tristate Psychology Conference, West Virginia University, April 2014.
28. \*Weitzner, D.S. & **Reed, M.N.** “Attenuating memory deficits in a mouse model of Alzheimer’s disease.” West Virginia University Department of Psychology Advanced Professional Development Colloquium, April 2014.
29. \*Hunsberger, H.C., \*Rudy, C.C., \*Weitzner, D.S., & **Reed, M.N.** “Glutamate dysregulation correlates with memory deficits in a mouse model of Alzheimer’s disease.” West Virginia University Center for Neuroscience Retreat, July 2014. **\*Awarded 1st place in graduate poster competition.**

30. \*\*Zacharias, R.A., \*Rudy, C.C., & **Reed, M.N.** “Tau pathology in mice with STZ-induced diabetes.” West Virginia University Center for Neuroscience Retreat, July 2014. **\*Awarded 1st place in Summer Undergraduate Research Symposium Poster Session.**
31. \*\*Mosmiller, L., \*Weitzner, D.S., \*Hunsberger, H.C., \*Rudy, C.C., & **Reed, M.N.** “Effects of riluzole on an Alzheimer's mouse model.” Summer Undergraduate Research Symposium, July 2014. **\*Awarded 1st runner-up in Summer Undergraduate Research Symposium Poster Session.**
32. \*\*Zacharias, R.A., \*Rudy, C.C., & **Reed, M.N.** “Tau pathology in mice with STZ-induced diabetes.” Summer Undergraduate Research Symposium, July 2014.
33. \*\*Speer, R.R., \*Rudy, C.C., & **Reed, M.N.** “Synaptic alterations in an STZ-induced diabetic mouse model.” Summer Undergraduate Research Symposium, July 2014.
34. \*Hunsberger, H.C., \*Rudy, C.C., \*Weitzner, D.S., & **Reed, M.N.** Age-related Changes in Glutamate Regulation in a Mouse Model of Alzheimer’s Disease. Invited talk Van Liere Research Day at West Virginia University, Morgantown, WV, February, 2015. **\*Oral competition top 10**
35. \*Hunsberger, H. C., \*Rudy, C. C., \*Weitzner, D., & **Reed, M.N.** “Riluzole Rescues Alzheimer’s Pathology in an Alzheimer’s Mouse Model.” Poster presented at the Neuroscience Research Symposium: West Virginia University, Morgantown, WV, March 2015.
36. Hunsberger, H.C. & **Reed, M.N.** Glutamate’s role in Alzheimer’s disease. West Virginia University 3-Minute Thesis competition, April, 2015. **\*Finalist and People’s Choice winner**
37. \*Hunsberger, H. C., \*Weitzner, D., \*Rudy, C. C., & **Reed, M.N.** “Riluzole Rescues Glutamate Alterations Associated with Alzheimer’s Disease.” Poster presented at the Regional Pharmacy Research Forum: West Virginia University, Morgantown, WV, June 2015. **1st Place Presenter - Neurodegeneration Category**
38. \*Hunsberger, H.C. & **Reed, M.N.** Auburn seminar series talk: Glutamate’s role in Alzheimer’s disease and the immune response, October 2015.
39. \*Hunsberger, H.C. & **Reed, M.N.** Targeting glutamate to treat Alzheimer’s disease. Auburn University 3-Minute Thesis Competition, November 2015. **\*Top Visiting Scholar finalist.**
40. \*Hunsberger, HC, Wang, D, Konat, G, & **Reed, MN.** Peripherally restricted viral challenge elevates extracellular glutamate and enhances synaptic transmission in the hippocampus. Poster presented at Harrison School of Pharmacy Research Day: Auburn University, Auburn, AL, April 2016. **\*1st Place Presenter - Neuroscience Category**
41. \*Setti, S., \*Hunsberger, H.C., \*Weitzner, D.S., \*Rudy, C.C., & **Reed, M.N.** Effect of P301L tau expression on learning and Alzheimer's disease pathology in the aged brain. Poster presented at Harrison School of Pharmacy (HSOP) research symposium, Auburn, AL, April 2016.
42. \*Setti, S., \*Hunsberger, H.C., \*Weitzner, D.S., \*Rudy, C.C., & **Reed, M.N.** P301L tau expression exacerbates memory deficits and tau phosphorylation in the aged brain. Poster Presented at This Is Research symposium, Auburn, AL, April 2016.
43. \*Setti, S. & **Reed, M.N.** Optogenetic Deactivation of the lateral entorhinal cortex and novel object recognition. Seminar presented in Department of Drug Discovery and Development Seminar series Auburn, AL, November 2016.

44. \*Setti, S., \*Heslin, R., \*Jeminiwa, B., Stahl, B., McGraw, E., Anderson, F., **Reed, M.N.** Effects of P301L Tau Expression on Spatial Memory in a Rodent Model of Alzheimer's Disease. Poster presented at This is Research Student Symposium at Auburn University, Auburn, AL, April 2017.
45. \*Govindarajulu M, \*Bloemer J, Adamek D, **Reed MN**, Acevado O, Arnold R, Dhanasekaran M, Amin R, Suppiramaniam V. "Novel PPAR-gamma agonist improves pathology and memory deficits in a 3xTg-AD mouse model of Alzheimer's disease." Poster presented at the Boschell Diabetes Research Symposium, Auburn, AL, 2017.
46. Govindarajulu M, @Bloemer J, Adamek D, **Reed MN**, Acevado O, Arnold R, Dhanasekaran M, Amin R, Suppiramaniam V. "Novel PPAR-gamma agonist improves pathology and memory deficits in a 3xTg-AD mouse model of Alzheimer's disease." Poster presented at the Auburn University Research Symposium, Auburn, AL, 2017.
47. \*Pinky, P.D., @Bloemer, J., \*Heslin, R.T., \*Setti, S.E., Du, Y., **Reed, M.N.**, Suppiramaniam, V. "Elucidation of mechanism of learning and memory deficits in prenatal cannabinoid exposure in adolescent offspring." DDD Seminar Series, Auburn, AL. November 2017.
48. \*Setti, S., \*Heslin, R., **Reed, M.N.** "Investigating the role of the lateral entorhinal cortex in Alzheimer's disease." Poster presented at This is Research Student Symposium at Auburn University, Auburn, AL, April 2018.
49. \*Pinky, P.D., @Bloemer, J., \*Heslin, R.T., \*Setti, S.E., Du, Y., **Reed, M.N.**, Suppiramaniam, V. "Elucidation of mechanism of learning and memory deficits in prenatal cannabinoid exposure." Oral presentation at 'This is Research Symposium', Auburn, AL, April 2018.
50. \*Pinky, P.D., @Bloemer, J., Du, Y., \*Setti, S. E., \*Heslin, R.T., Smith, W. D., Govindarajulu, M., Amin, R.H., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. "Prenatal cannabinoid exposure mediated learning and memory deficits in adolescent offspring: Opportunities for identifying therapeutic target." Poster presented at UAB Neuroscience Retreat, Birmingham, AL, October 2018.
51. \*Pinky, P.D.\*, **Reed, M.N.**, Suppiramaniam V. "Mary Jane and your baby's brain". Auburn University 3-Minute Thesis Competition, November, 2018. **\*Top 10 finalist.**
52. \*Srinivasa S, @Bloemer, J, \*Pinky P, Du Y, \*Setti S, \*Heslin R, Konat G, Suppiramaniam V, **Reed MN.** A CXCR3 antagonist ameliorates the hippocampal hyperexcitability and impaired synaptic transmission induced by viral challenge. 'This is Research: Student Symposium', Auburn, AL. March 2019, Auburn University.
53. \*Setti S, @Bloemer, J., \*Pinky, P., Du, Y., \*\*James, M., \*\*Dogan, M., Suppiramaniam, V., **Reed, M.N.** (2019, April). Oral presentation given at This is Research Student Symposium at Auburn University, Auburn, AL. **1<sup>st</sup> place in oral STEM presentations**
54. \*Pinky, P.D. \*, **Reed, M.N.**, Suppiramaniam V. "Marijuana: To do or not to do." Auburn University 3-Minute Thesis Competition, November, 2019. **\*Top 3 finalist**
55. \*Setti, S.E., Reed, M.N. "Investigating Mechanisms Underlying Tau Propagation." Auburn University 3-Minute Thesis Competition, November, 2019. **\*Top 10 finalist.**
56. \*Pinky, P.D., @Bloemer, J., Du, Y., \*Setti, S. E., \*Heslin, R.T., Smith, W. D., Amin, R.H., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. "Polysialylated neural cell adhesion molecule mimetics are a potential therapeutic target for prenatal cannabinoid exposure-mediated learning and memory deficits" Poster presented at VCOM Research Day at Auburn University, Auburn, AL, January 2020.. **2<sup>nd</sup> place in poster presentations**

57. \*Setti, S.E., @Bloemer, J., \*Pinky, P.D., \*Pfitzer, J.C., \*Dogan, M.H., Suppiramaniam, V., **Reed, M.N.** "LEC-specific P301L tau results in synaptic alterations and learning and memory deficits" Poster presented at Center for Neuroscience Initiative Retreat at Auburn University, Auburn, AL, February 2020. **3<sup>rd</sup> place in poster presentations.**
  58. \*Pfitzer J.C., \*Pinky P.D., Qureshi I.A., Berman R.M., Suppiramaniam V.S., **Reed M.N.** "*Modifying Glutamatergic neurotransmission rectifies synaptic plasticity and memory deficits in a 3xTg Alzheimer's disease model.*" Center for Neuroscience Initiative, Auburn, AL, February 2020.
  59. \*Pinky PD, @Bloemer J, \*Smith, WD, \*Setti S, \*Heslin RT, Du, Y, Dityatev A, Dhanasekaran M, Bhattacharya S, **Reed MN**, Suppiramaniam V. "Elucidating mechanisms of prenatal cannabinoid exposure mediated learning and memory deficits in offspring: identifying therapeutic targets" Poster presented at 2021 Auburn University Student Research Symposium, Auburn, AL March 2021.
  60. Majrashi M, Altukri M, Rames S, Govindarajulu M, \*\*Schwartz J, Almaghrabi M, Smith F, Thomas T, Suppiramaniam V, Moore T, **Reed MN**, Dhanasekaran M. " $\beta$ -hydroxybutyric acid attenuates oxidative stress and improves markers of mitochondrial function in the HT-22 hippocampal cell line". Poster presented at 2021d Auburn University Student Research Symposium, Auburn, AL March 2021.
  61. Pfitzer JC, Pinky P.D., Qureshi I.A., Berman R.M., Suppiramaniam V.S., **Reed M.N.** Modifying Glutamatergic neurotransmission rectifies synaptic plasticity and memory deficits in a 3xTg Alzheimer's disease model. Hcarrison School of Pharmacy Seminar Series, Auburn AL, April 2021.
  62. Pfitzer JC, Pinky P.D., Qureshi I.A., Berman R.M., Suppiramaniam V.S., **Reed M.N.** Modifying Glutamatergic neurotransmission rectifies synaptic plasticity and memory deficits in a 3xTg Alzheimer's disease model. Boshell Research Day, Auburn AL, September 2021
- b. Peer Reviewed Meeting Abstracts:
1. **Reed, M.N.**, Donlin, W., Paletz, E., Reile, P., Stallings, M.E., & Newland, M.C. "Behavior under a fixed interval schedule in rats exposed to methylmercury and n-3 fatty acid during gestation." Southeastern Association for Behavior Analysis, November 2002.
  2. **Reed, M.N.**, Donlin, W., Paletz, E., & Newland, M.C. "Effects of Desipramine on behavior under a fixed interval schedule in rats exposed to methylmercury and n-3 fatty acids during gestation." Southeastern Association for Behavior Analysis, October 2003.
  3. **Reed, M.N.** & Newland, M.C. "Effects of gestational methylmercury exposure on behavior under external stimulus control following drug challenges." Association for Behavior Analysis, March 2004.
  4. **Reed, M.N.** & Newland, M.C. "Effects of gestational methylmercury and continued selenium exposure on lever-pressing under a Mult FI 120 FIClock 120 following acute cocaine administration." Southeastern Association for Behavior Analysis, October 2004.
  5. **Reed, M.N.** & Newland, M.C. "Behavioral effects of cocaine & desipramine for rats gestationally exposed to methylmercury and selenium." International Neurotoxicology Conference, September 2005.
  6. **Reed, M.N.** & Newland, M.C. "Motor function and tissue levels in dams chronically exposed to methylmercury and selenium." International Neurotoxicology Conference, September 2005.
  7. **Reed, M.N.**, Pesek, E.F., & Newland, M.C. "Gestational exposure to methylmercury and selenium: Effects on a spatial discrimination procedure in adulthood." Southeastern Association for Behavior Analysis, October 2005.

8. **Reed, M.N.** & Newland, M.C. “Effects of gestational methylmercury and selenium exposure on behavioral tasks.” Association for Behavior Analysis, May 2007.
9. **Reed, M.N.** & Newland, M.C. “Clocks and dopamine: Drug effects on behavior under clocked and unclocked FI schedules.” Association for Behavior Analysis, May 2007.
10. **Reed, M.N.**, Cleary, J.P., LaDu, M., Walsh, D., Lesne, W., Welzel, A., Jungbauer, L., Hofmeister, J., & Ashe, K.H. “Cognitive effects of synthetic and neuron-derived soluble A $\beta$  oligomers.” Society for Neuroscience, November 2007.
11. **Reed, M.N.**, Kotilinek, L.A, Ramsden, M.& Ashe, K.H. “The role of the postsynaptic density in tau pathology.” Society for Neuroscience, October 2009.
12. **Reed, M.N.**, Ashe, K.H., & Cleary, J.P. “Mouse models with short-term memory deficits: The use of a titrating delayed matching-to-position procedure.” Association for Behavior Analysis International, May 2010.
13. **Reed, M.N.**, Hoover, B.R., Kotilinek, L., & Ashe, K.H. “The role of the dendritic spine in Alzheimer’s disease.” Winter Conference on Brain Research, January, 2011.
14. @Tosto, D.E, \*\*Glover, T.L., \*\*Deweese, S.L., \*\*Knowlan, K.M., & **Reed, M.N.** “Can Inhibition of GABA reverse an NMDA-induced Deficit in Acquisition of Response Chains in FVB Mice?” Southeastern Association for Behavior Analysis, October 2011.
15. @Tosto, D.E., \*\*Glover, T.L., \*\*Deweese, S.L., \*\*Knowlan, K.M., \*\*Grizzanti, J.M. & **Reed, M.N.** “Identifying a behavioral task sensitive to early spatial learning and memory deficits in a TauP301L transgenic mouse model.” Association for Behavior Analysis International, May 2012.
16. \*Winser, M., @Tosto, D.E., \*\*Glover, T.L., \*\*Deweese, S.L., \*\*Knowlan, K.M., \*\*Grizzanti, J.M. & **Reed, M.N.** “Memory deficits in a transgenic model of comorbid Alzheimer’s disease and diabetes.” Association for Behavior Analysis International, May 2012.
17. **Reed, M.N.**, @Tosto, D.E., \*\*Knowlan, K.M., & \*\*Grizzanti, J.M. “Comparing Memory Deficits in Conventional and Novel Memory Tasks in rTg4510 Mice.” Alzheimer’s Association International Conference (AAIC), July 2012.
18. **Reed, M.N.**, @Tosto, D.E., \*\*Knowlan, K.M., & \*\*Grizzanti, J.M. “Memory Deficits in TauP301L Mice.” Society for Neuroscience (SFN), October 2012.
19. **Reed, M.N.** “Fear conditioning as method of memory detect in mouse models of Alzheimer’s disease.” Society for Neuroscience, October 2012.
20. \*Rudy, C.C., \*\*Povroznik, J.M., \*Hunsberger, H.C., & **Reed, M.N.** “Rescue of MK-801 induced learning deficits in an incremental repeated acquisition task using an <sup>5</sup>GABAA inverse agonist.” Alzheimer’s Association International Conference (AAIC), July 2013.
21. \*Hunsberger, H.C., \*Rudy, C.C., & **Reed, M.N.** “Glutamate dysregulation in TauP301L mice.” Alzheimer’s Association International Conference (AAIC), July 2013.
22. \*Rudy, C.R., \*Hunsberger, H.C., & **Reed, M.N.** “Attenuation of incremental repeated acquisition learning deficits.” Southeastern Association for Behavioral Analysis Conference (SEABA), October, 2013.

23. \*Hunsberger, H.C., \*Rudy, C.C., \*Weitzner, D. & **Reed, M.N.** (2013, October). "Increased glutamate release and memory deficits in a mouse model of Alzheimer's disease." Southeastern Association for Behavioral Analysis Conference (SEABA), October, 2013.
24. \*Hunsberger, H. C., \*Rudy, C. C., \*Weitzner, D. & **Reed, M. N.** "In vivo microelectrode recordings: Increased glutamate release in a TauP301L mouse model of Alzheimer's disease." University of Kentucky CCTS Conference: Addressing Health Disparities in Appalachia, Lexington, KY, March 2014.
25. \*Hunsberger, H.C., \*Weitzner, D.S., \*Rudy, C.C., & Reed, M.N. "Riluzole reduces cognitive deficits and glutamate dysregulation in a mouse model of frontotemporal dementia and Alzheimer's disease." Alzheimer's Drug Discovery Foundation (ADDF), Jersey City, September 2014. **Hunsberger won the Alzheimer's Drug Discovery Foundation (ADDF) Young Investigator Scholarship**
26. \*Weitzner, D.S., \*Hunsberger, H.C. & \*Rudy, C.C. & **Reed, M.N.** "Riluzole attenuates spatial memory deficits in a TauP301L mouse model of Alzheimer's disease." Society for Neuroscience, Washington, DC., November 2014.
27. \*Rudy, C. C., \*Hunsberger, H. C., \*Weitzner, D. S., & **Reed, M. N.** "Effects of streptozotocin- induced diabetes on synaptic proteins and tau phosphorylation in mice expressing P301L human tau." Society for Neuroscience, Washington, D.C., November 2014.
28. \*Hunsberger, H. C., \*Rudy, C. C., \*Weitzner, D., & **Reed, M.N.** "Increased glutamate release in the CA3 correlates with memory deficits in mice expressing P301L tau." Society for Neuroscience, Washington, DC., November 2014.
29. **Reed, M.N.** "The role of the tripartite glutamatergic synapse in the pathophysiology of Alzheimer's disease." Society for Neuroscience, Washington, DC., November 2014.
30. \*Hunsberger, H. C., \*Rudy, C. C., \*Weitzner, D., & **Reed, M.N.** Riluzole attenuates glutamate dysregulation and cognitive impairment associated with P301L tau expression. Alzheimer's Drug Discovery Foundation (ADDF), San Diego, CA, March 2015. **Hunsberger won the Alzheimer's Drug Discovery Foundation (ADDF) Young Investigator Scholarship.**

*Abstracts since joining Auburn University:*

31. \*Setti, S., \*Hunsberger, H.C., \*Weitzner, D.S., \*Rudy, C.C., **Reed, M.N.** "Age and mutant P301L tau expression interact to increase memory deficits and tau phosphorylation." Poster presented at South Eastern Association for Behavior Analysis (SEABA), Roanoke, VA, October 2015.
32. \*Hunsberger, H. C., \*Weitzner, D. S., \*Rudy, C. C., & **Reed, M.N.** Riluzole rescues glutamate dysregulation, cognitive impairment, and protein alterations in a mouse model of Alzheimer's disease. Panel talk given at Winter Brain Conference, Breckenridge, CO, January 2016.
33. \*Hunsberger, H. C., Wang, D., Konat, G. W., & **Reed, M. N.** Elevated extracellular glutamate and enhanced synaptic transmission resulting from peripheral viral challenge. Poster presented at the Alzheimer's drug discovery foundation conference, Miami, FL, March, 2016. \* **Hunsberger won the Alzheimer's Drug Discovery Foundation (ADDF) Young Investigator Scholarship.**
34. \*Heslin, R.T., \*Hunsberger, H.C., \*Setti S.E., \*Jeminiwa, B.O., **Reed, M.N.** "Peripherally restricted viral mimetic impairs hippocampal dependent memory." Southeastern Association for Behavior Analysis (SEABA), Winston-Salem, NC, October 2016.

35. \*Setti, S., \*Jeminiwa, B., \*Heslin, R., **Reed, M.N.** Effects of P301L Tau Expression on Learning and Memory in Aged Mice. Poster presented at South Eastern Association for Behavior Analysis (SEABA), Savannah, GA, October 2017.
36. Du, Y., **Reed, M.N.**, Kiaris, H., Hood, W. Identify the stress threshold from adaptation to apoptosis of ER-UPR in *peromyscus*. Poster presented at the *Peromyscus* symposium at University of South Carolina, May 2018.
37. \*Pinky P, @Bloemer J, \*Heslin R, \*Setti S, Alhowail A, Govindarajulu M, **Reed MN**, Suppiramaniam V. Prenatally cannabinoid exposed offspring display impaired synaptic plasticity and cognitive deficits. Poster presented at the Society for Neuroscience meeting, Washington D.C., November 2017.
38. Govindarajulu M, @Bloemer J, Adamek D, **Reed MN**, Acevado O, Arnold R, Dhanasekaran M, Amin R, Suppiramaniam V. (2017) "Novel PPAR-gamma agonist improves pathology and memory deficits in a 3xTg-AD mouse model of Alzheimer's disease." Poster presented at the Society for Neuroscience meeting, Washington D.C., November 2017.
39. Qureshi I, Berman R, **Reed MN**, & Feldman H. "Efficacy and safety of trigriluzole (BHV-4157) in patients with mild to moderate Alzheimer's dementia: T2 PROTECT AD phase 2 study design." Clinical Trials on Alzheimer's Disease (CtaD2018), Barcelona, Spain, October 2018.
40. \*Setti, S., \*Heslin, R., Du, Y., **Reed, M.N.** "Effects of LEC-specific P301L tau on object recognition memory." Poster presented at Society for Neuroscience (SfN) in San Diego, CA, November 2018.
41. \*Pinky, P.D., @Bloemer, J. \*Setti, S. E., \*Heslin, R.T., Du, Y., Dhanasekaran, M., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. "Prenatal cannabinoid exposure results in learning and memory deficits in rodent adolescent offspring: Elucidation of the mechanism and identification of a therapeutic target." Poster presented at 'Society of Neuroscience' (SfN) conference. San Diego, CA, November 2018.
42. \*Pinky, P.D., @Bloemer, J. \*Setti, S. E., \*Heslin, R.T., Du, Y., Dhanasekaran, M., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. "Prenatal cannabinoid exposure results in learning and memory deficits in rodent adolescent offspring: Elucidation of the mechanism and identification of a therapeutic target." Oral presentation at press conference at 'Society of Neuroscience' (SfN) conference. San Diego, CA, November 2018. **Selected out of 13,884 abstracts for press conference presentation.**
43. **Reed MN**, Suppiramaniam V, Konat G, \*Heslin R, \*Srinivas S, @\*Bloemer J, \*Pinky PD, Yifeng Du, \*Setti S. "CXCR3 mediates hippocampal hyperexcitability and synaptic plasticity alterations induced by peripheral viral challenge." Oral presentation at International Conference on Alzheimer's & Parkinson's Diseases (AD/PD) in Lisbon, Portugal, March 2019.
44. \***Setti S**, @Bloemer J, \*Pinky P, Du Y, James M, Dogan M, Suppiramaniam V, **Reed MN**. "Effect of LEC-specific P301L Tau on Synaptic Transmission and Learning and Memory." Oral presentation given at This is Research Student Symposium at Auburn University, Auburn, AL, April 2019. **\*\*1<sup>st</sup> place in oral STEM presentations.**
45. \*Pinky, P.D., @Bloemer, J. \*Setti, S. E., \*Heslin, R.T., Du, Y., Dhanasekaran, M., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. "Mechanism of Prenatal Cannabinoid Exposure Mediated Memory Loss in Adolescent Offspring: Opportunities for Identifying Therapeutic Target". Poster and oral presentation at Experimental Biology in Orlando, FL, April 2019. **\*\* Received ASPET Young Scientist Travel Award**
46. **Reed MN**, Suppiramaniam V, Konat G, \*Heslin R, \*Srinivas S, @\*Bloemer J, \*Pinky PD, Yifeng Du, \*Setti S. "CXCR3 mediates hippocampal hyperexcitability and synaptic plasticity alterations induced by peripheral viral challenge." Oral presentation at International Society for Neurochemistry in Montreal, Canada, August 2019.

47. \*Pinky, P.D., @Bloemer, J. \*Setti, S. E., \*Heslin, R.T., Du, Y., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. “Identifying Drug Targets for Prenatal Cannabinoid Exposure Mediated Learning and Memory Deficits”. Poster presentation at American College of Clinical Pharmacology Conference, Chicago, IL, September 2019\*\* **Received Top16 Abstracts Award**
48. \*Pinky, P.D., @Bloemer, J., Du, Y., \*Setti, S. E., \*Heslin, R.T., Smith, W. D., Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. Elucidation of the mechanism of learning and memory deficits in adolescent offspring due to prenatal cannabinoid exposure. Experimental Biology, San Diego, CA, April 2020
49. **\*Pinky, P.D.**, \*Pfitzer, C. J., Qureshi, A.I., Berman, M. R., Suppiramaniam, V., Reed, M.N. ‘Troriluzole restores synaptic plasticity deficits in a 3xTg Alzheimer’s disease model by modifying glutamatergic synaptic transmission’ Webinar presentation at ‘Alzheimer’s Disease Drug Foundation Conference on Neurodegeneration’. Philadelphia, PA, April 2020 **ADDF Young Investigator Scholarship Award**
50. \*Pinky, P.D., @Bloemer, J., Du, Y., \*Setti, S. E., \*Heslin, R.T., Smith, W. D., Dhanasekaran M, Dityatev, A., **Reed, M.N.**, Suppiramaniam, V. Elucidation of molecular mechanisms of prenatal cannabinoid exposure mediated learning and memory deficits in adolescent offspring. Technological advances in Science, Medicine, and Engineering conference (TASME). Toronto, Canada, August 2020
51. \*Chowdhury, KU, \*Smith, WD, \*McDonald, K, \*Pinky, PD, Bhattacharya, S, **Reed MN**, & Suppiramaniam, V. Prenatal cannabinoid exposure affects memory through altered glutamatergic and GABAergic receptor expression and function. Poster presentation, Society for Neuroscience conference, November 2021.

c. Invited Lecture, Presentations, & Professional Meetings (National and International):

1. **Reed, M.N.** “Cognitive effects of cell-derived and synthetically-derived A $\beta$  oligomers.” Symposium on Aging and Neurobiology of Disease, September 2009.
- 2.
3. **Reed, M.N.** “Altered Reinforcer Efficacy: One Explanation for Perseverative Behavior?” Virginia Association for Behavior Analysis, April, 2011.
4. **Reed, M.N.** “Current trends in the neuropathology of Alzheimer disease: Investing the role of alterations in synaptic activity.” Millersville University: Psychology Seminar Series, November, 2013.
5. **Reed, M.N.** “Neural network alterations in Alzheimer’s disease.” Southeastern Association for Behavioral Analysis, October 2014.
6. **Reed, M.N.** “Mechanisms of cerebral hyperexcitability induction by antiviral acute phase response.” Neurology and Brain Disorders, Spain, June 2017.
7. **Reed, M.N.** “Current state of research and therapeutic development for Tauopathies: bottlenecks for bringing a therapeutic to the market.” Tau Consortium & Milken Institute Tauopathy Retreat, Washington D.C., November 2017
8. **Reed, M.N.** “Risk factors for Alzheimer’s disease – Points for intervention?” College of Pharmacy, China Pharmaceutical University - Jiangning Campus, Nanjing China, November 2019.
9. **Reed, M.N.** “Hyperexcitability in Alzheimer’s disease – Early mediator of synapse loss?” College of Life Sciences & Technology, China Pharmaceutical University - Xuanwumen Campus, Nanjing China, November 2019.

10. **Reed, M.N.** “The Role of Hyperexcitability in Tauopathy.” University of Alabama at Birmingham, January 2020.
  11. \*Pfitzer JC, \*Pinky PD, \*Setti SE, McDonal K, Granberry E, Allman MK, Qureshi IA, Berman RM, Bhattacharya S, Suppiramaniam V & **Reed MN**. Modifying glutamatergic neurotransmission with a novel riluzole prodrug rectifies synaptic plasticity and memory deficits in a 3xTg Alzheimer’s disease model. Technological Advances in Science, Medicine and Engineering conference, Zoom, July 2021. *\*\*graduate student presented due to my maternity leave*
  12. **Reed MN**, Suppiramaniam V, Konat GW, @Petrisk TJ, \*Bloemer J, \*Pinky PD, \*Du Y, & \*Setti S. “Viral infections as a risk factor for Alzheimer’s disease.” Technological Advances in Science, Medicine and Engineering conference, Toronto, October 2022. *\*\*graduate student presented due to my medical leave*
  13. **Reed MN**, Suppiramaniam V, Konat GK, @Petrisk TJ, \*Bloemer J, \*Pinky PD, \*Du Y, \*Setti SE. “Viral infections as a risk factor for neurodegenerative conditions.” Invited plenary speaker Global Conference on Neuroscience and Psychiatry, November 2022. *\*\*graduate student presented due to my medical leave*
- d. Invited Lectures & Professional Meetings (Regional):
14. **Reed, M.N.** “Use of analytical chemistry in Alzheimer’s research.” West Virginia University: Department of Chemistry Seminar Series, December 2013.
  15. **Reed, M.N.** “Neural network alterations in Alzheimer’s disease.” Southeastern Association for Behavioral Analysis, October 2014.
  16. **Reed, M.N.** “The Role of Hyperexcitability in Tauopathy.” University of Alabama at Birmingham, January 2020.
- e. Invited Lectures & Presentations (Local):
17. **Reed, M.N.** “Gestational methylmercury exposure selectively increases the sensitivity of operant behavior to cocaine.” University of Minnesota, October 2007.
  18. **Reed, M.N.** “Tau: The importance of timing.” The N. Bud Grossman Center for Memory Research and Care, University of Minnesota, November 2008.
  19. **Reed, M.N.** “Alzheimer’s disease research at the University of Minnesota.” Health Education Program for the Minneapolis Chapter of Hadassah, March 2009.
  20. **Reed, M.N.** “The toxicological underpinnings of Alzheimer’s disease: A biochemical and behavioral assessment.” West Virginia University, November 2009.
  21. **Reed, M.N.** “Alzheimer’s disease research at the University of Minnesota.” Minneapolis College of Art and Design, March 2010.
  22. **Reed, M.N.** “The molecular basis of memory and cognitive dysfunction in Alzheimer’s disease.” West Virginia University: Seminars in Neuroscience, September 2010.
  23. **Reed, M.N.** “The role of tau in Alzheimer’s disease.” West Virginia University: Center for Neuroscience Retreat, June 2011.

24. **Reed, M.N.** “Tau-mediated impairments independent of neurodegeneration.” West Virginia University: Department of Biochemistry Seminar Series, February 2013.
25. **Reed, M.N.** “Mouse models of Alzheimer’s disease: what they can and cannot tell us.” West Virginia University: Grand Rounds meeting for the Department of Behavioral Medicine & Psychiatry, August, 2013.
26. **Reed, M.N.** “Increased clearance of extracellular glutamate as a treatment for Alzheimer’s disease.” West Virginia Clinical and Translational Science Institute Retreat, September, 2013.
27. **Reed, M.N.** “Neural network alterations in Alzheimer’s disease.” Auburn University College of Veterinary Medicine Seminar Series, September 2015.
28. **Reed, M.N.** “Alterations in glutamatergic signaling & memory in neurodevelopment and neurodegenerative conditions.” Auburn University College of Veterinary Medicine Seminar Series, October 2019.
29. **Reed, M.N.** “Neural network alterations in Alzheimer’s disease.” Auburn University College of Veterinary Medicine Seminar Series, September 2015.
30. **Reed, M.N.** “Neural network alterations in Alzheimer’s disease.” Auburn University HCOP College of Psychiatric and Neurologic Pharmacists, September 2021.
31. **Reed, M.N.** “Learning and memory across the lifespan.” Auburn University Biomedical Engineering Society, September 2021.
32. **Reed, M.N.** “How to obtain F-series funding.” Auburn University Graduate Women in Science, October 2021.
33. **Reed, M.N.** “Neuroscience & Engineering.” Auburn University Biomedical Engineering Society, September 2022.

#### **TRAINING WORKSHOPS ATTENDED**

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1. “Writing Winning Grants”. One-day workshop at the University of Minnesota, April, 2008.
2. “Proteomics Workshop”. Three-day workshop at the University of Minnesota Center for Mass Spectrometry and Proteomics, March, 2009.
3. “Seminar for Academic Job Searches”. Two-day workshop at the University of Minnesota, September 2009.
4. “eCampus Boot Camp”. One-day workshop at West Virginia University, August, 2010.
5. “NSF Regional Grants Conference”. Two-day workshop at Vanderbilt University, March, 2011.
6. “NIH Regional Seminars on Program Funding”. Three-day seminar in Scottsdale, AZ, April, 2011.
7. “Writing Winning Grants”. Two-day workshop at West Virginia University, August, 2013.
8. “NIH Peer Review Workshop: Overview, Tips and Resources for Development of Grant Proposals”. One-day workshop at Auburn University, November 2018.

TEACHING

**UNDERGRADUATE COURSES**

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- 2002, 2003     **Introduction to Psychology: Undergraduate Level; 1 section**  
Graduate Teaching Assistant  
Supervisor: Dr. William Buskist  
*Auburn University*
- 2003           **Introduction to Psychology: Undergraduate Level; 1 section**  
Graduate Teaching Assistant  
Supervisor: Dr. William Buskist  
*Auburn University*
- 2004           **Introduction to Psychology: Undergraduate Level; 2 sections**  
Graduate Teaching Assistant  
Supervisor: Dr. Rebecca Peterson  
*Auburn University*
- 2004           **Statistics in Social and Behavioral Science: Undergraduate Level**  
Graduate Teaching Assistant  
Supervisor: Dr. Steven Shapiro  
*Auburn University*
- 2006, 2007     **Drugs & Behavior: Undergraduate level**  
Teacher of Record (Developed the course & syllabus; taught all lectures)  
*Auburn University*
- 2010 - 2015    **Biological Foundations in Behavior: Undergraduate Level (every semester)**  
Teacher of Record (Developed the course & syllabus; taught all lectures & labs)  
*West Virginia University*
- 2011           **Physiological Psychology: Undergraduate Level**  
Teacher of Record (taught all lectures)  
*West Virginia University*

**GRADUATE COURSES**

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- 2003, 2004     **Behavioral Pharmacology: Graduate & Undergraduate Level**  
Graduate Teaching Assistant  
Supervisor: Dr. M. Christopher Newland  
*Auburn University*
- 2006, 2007     **Experimental Statistics: Graduate Level**  
Graduate Teaching Assistant  
Supervisor: Dr. Alejandro Lazarte  
*Auburn University*
- 2011           **Nonparametric Statistics: Graduate Level**  
Teacher of Record (Developed the course & syllabus; taught all lectures & labs)

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*West Virginia University*

- 2011      **Survival Analysis Statistics: Graduate Level**  
Teacher of Record (Developed the course & syllabus; taught all lectures & labs)  
*West Virginia University*
- 2011      **Mixed Models Statistics: Graduate Level**  
Teacher of Record (Developed the course & syllabus; taught all lectures & labs)  
*West Virginia University*
- 2012, 2015      **Neurobiology of Disease: Graduate Level**  
Teacher of Record (Developed the course & syllabus; taught all lectures & labs)  
*West Virginia University*
- 2013      **Advanced Statistical Methods: Graduate Level**  
Teacher of Record (Developed the course & syllabus; taught all lectures & labs)  
*West Virginia University*
- 2013-2015      **Neuroscience Methods: Graduate Level**  
Teacher of Record (Developed the course & syllabus; taught all lectures)  
*West Virginia University*

-----Auburn University-----

- 2016      **PYPS 8960 Directed Readings in Pharmacal Sciences**  
*Auburn University*
- 2016      **PYPS-7310 Psychopharmacology: Graduate Level**  
Teacher of Record (Developed the syllabus; taught all lectures except 2)  
*Auburn University*
- 2017-2020      **PYPS 8930 Directed Studies in Pharmacal Sciences**  
*Auburn University*
- 2017-2020      **PYPS 7950/8950 Drug Discovery & Development Seminar Series: Graduate Level**  
Course Coordinator  
*Auburn University*
- 2018-2023      **DRDD 7340 Organ Systems Pharmacology I: Graduate Level**  
Lecturer: Alzheimer & Parkinson's sections  
*Auburn University*
- 2019      **DRDD 7300: Neuropharmacology: Graduate Level**  
Teacher of Record (Developed the syllabus; taught all lectures except 2)  
*Auburn University*
- 2022-2023      **DRDD 7000: Introduction to Grant Writing: Graduate Level**  
Teacher of Record  
*Auburn University*

## PHARMACY COURSES

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- 2015 – 2018 **PYPD 5090/5190/5290/5390/5490/5590/9090/9190 Pharmacy Practice Experience I – VI**  
*Auburn University*
- 2016, 2017 **PYDI 5100 Drugs and Diseases II**  
Lecturer: Schizophrenia & Parkinson's sections  
*Auburn University*
- 2017 **PYPD 9200/9206 Integrated Learning Experience I**  
Liaison: Fluids & Electrolytes sections  
*Auburn University*
- 2017-2023 **PYPD 9210/9216 Integrated Learning Experience II**  
Lecturer: Alzheimer's Disease & Depression section  
*Auburn University*
- 2018-2023 **PYPD 9220/9226 Integrated Learning Experience III**  
Lecturer: Seizure sections  
*Auburn University*
- 2018-2023 **PYPD 9240/9246 Integrated Learning Experience V**  
Lecturer: Dementia & Schizophrenia sections  
*Auburn University*

## CURRICULUM DEVELOPMENT

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- 2010-2015 Behavioral Neuroscience PhD Program, West Virginia University
- 2013-2015 NIH - T32GM081741, Research Training Program in the Behavioral and Biomedical Sciences (BBS), West Virginia University
- 2016 - 2018 Learning Community I, PharmD Program, Auburn University

## COMMITTEES CHAIRED (\* indicates completion)

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- 2011 – 2014 Carolyn Rudy (Master's Thesis\*) - Science Teacher, Elyria High School
- 2011 – 2013 Shrinidhi Subramaniam (Master's Thesis\*; Co-Chair) - Assistant Professor, California State University
- 2013 – 2015 Daniel Weitzner (Master's Thesis\*) – LSU, PhD Program
- 2013 – 2014 Kirsten Schoonover (Undergraduate Honor's Thesis\*) - UAB, PhD Program
- 2015 – 2016 Holly Hunsberger (Doctoral Dissertation\*) – Columbia University, Postdoc
- 2015 – 2021 Sharay Setti (Doctoral Dissertation\*) - Research Scientist III at Athira Pharma
- 2019 – present Jeremiah Pfitzer (Master's Thesis)
- 2022 – present Emma Redmon (Master's Thesis)
- 2022 – present Iva Durdanovic (Doctoral Dissertation)
- 2022 – present Adrian Courville (Doctoral Dissertation) – recent transfer from Dr. Vishnu to me

## COMMITTEES CO-CHAIRLED (\* indicates completion)

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- 2015 – 2019 Jenna Bloemer (Doctoral Dissertation\*)
- 2016 – 2020 Priyanka Pinky (Doctoral Dissertation\*)
- 2017 – present Warren Smith (Doctoral Dissertation)
- 2020 – present Kawsar Chowdhury (Doctoral Dissertation)

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2021 – present Miles Wiley (Doctoral Dissertation)

## **SUPERVISED RESEARCH**

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**Note:** AU: Auburn University; WVU: West Virginia University

a. Doctor of Pharmacy (Pharm.D.) Research Elective Students:

1. Katherine Bricco, AU, Fall 2018
2. Jackson Spradlin, AU, Fall 2018
3. Marouf Gakou, AU, Fall 2018
4. Samantha Wood, AU, Fall 2018
5. Alexis Young, AU, Fall 2020
6. Rebecca Poarch, AU, Fall 2020
7. Maggie Goode, AU Fall 2021
8. Jessi Canaday, AU, Spring 2022
9. Savannah Perman, AU, Spring & Fall 2022

b. Undergraduate Students Directed at WVU: These students completed “PSYC 495 – Independent Study” for course credit for 1-4 credit hours from 2010-2015.

1. Amanda Wilson
2. Claire Wilkison
3. Monica Urich
4. Jaclynn Stankus
5. Tiffany Lynn Salamone
6. Alan Rejonis
7. Jessica Povroznik
8. Dieuhuong Nguyen
9. John Hall
10. Stephen Deweese
11. Sylvia Terlecki
12. Kirsten Schoonover
13. Lindsey Mosmiller
14. Rebecca Speer
15. Eric Libell
16. James Hickman
17. Erica Haught

c. Undergraduate Research Fellowships at WVU: These were paid internships via NIH funded mechanisms for students usually from other Universities to work in the lab for 40 hours per week under the Summer Undergraduate Research Experience (SURE) or Summer Undergraduate Research Internships (SURI) programs.

1. Elizabeth Kline, SURI, 2011
2. Khoa NeNguyen, SURI, 2012
3. Marissa Gogniat, SURI, 2013
4. Kirsten Schoonover, SURE, 2013
5. Alan Rejonis, SURE, 2013
6. Lindsey Mosmiller, SURE, 2014
7. Rebecca Speer, SURE, 2014
8. Rachel Zacharias, SURI, 2014
9. James Hickman, SURE, 2015
10. Wenyi Zhang, SURI, 2015

- d. Undergraduate Students Directed at AU: These students completed “BIOL 4980” or “PYDI 4980” for course credit for 1-4 credit hours.
1. Emily Knowling, BIOL 4980, Spring 2016
  2. Brian Stahl, BIOL 4980, Spring 2016
  3. Hayden Long, BIOL 4980, Spring 2016
  4. Brandon Honeywell, BIOL 4980, Spring 2016
  5. Lauren Wade, BIOL 4980, Fall 2016
  6. Brandon Honeywell, PYDI 4980, Fall 2016
  7. Emily Knowling, PYDI 4980, Fall 2016
  8. Brian Stahl, PYDI 4980, Fall 2016- Spring 2017
  9. Faith Anderson, PYDI 4980, Spring 2017
  10. Jacob Lynn, PYDI 4980, Spring 2017
  11. Brannan Martens, PYDI 4980, Spring 2017
  12. Erin McGraw, Spring 2017
  13. John Pruett, PYDI 4980, Spring 2017
  14. Lauren Wade, PYDI 4980, Spring 2017
  15. Brannan Martens, PYDI 4980, Fall 2017
  16. Caroline Milligan, PYDI 4980, Fall 2017 - Spring 2018
  17. Lydia Yang, PYDI 4980, Fall 2017 – Spring 2019
  18. Clay (John) Pruett, PYDI 4980, Fall 2017
  19. Brenda Tram, PYDI 4980, Fall 2017
  20. Danielle Stephens, PYDI 4980, Fall 2017
  21. Rayna Burkard, PYDI 4980, Spring 2018 – Spring 2018
  22. Brannan Martens, PYDI 4980, Spring 2018
  23. Jack Schwartz, PYDI 4980, Spring 2018
  24. Allison Beverly, PYDI 4980, Fall 2018, Spring 2019, Summer 2019
  25. Lydia Yang, PYDI 4980, Fall 2019
  26. Marissa Dogan, PYDI 4980, Fall 2018 – Fall 2019
  27. Clayton Casletter, PYDI 4980, Fall 2018 Spring 2019, Summer 2019, Fall 2019, Spring 2020
  28. Landon McNellage, PYDI 4980, Fall 2018 – Spring 2019, Fall 2020
  29. Chloe Svezia, PYDI 4980, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020
  30. Mary Allman, PYDI 4980, Fall 2019, Spring 2020, Fall 2020
  31. Lucienea Jones, PYDI 4980, Fall 2019, Spring 2020, Fall 2020 (**research inspired transition to PharmD**)
  32. Emma Granberry, PYDI 4980, Spring 2020, Fall 2020
  33. Ethan Hancock, PYDI 4980, Spring 2020, Fall 2020
  34. Victoria Zona, PYDI 4980, Spring 2020 (**joined lab as a graduate student in Fall 2022**)
  35. Haley Bobbitt, PYDI 4980, Fall 2020, Spring 2021, Fall 2021
  36. Erika Taipla, PYPD 4980, Spring 2021-Fall 2021 (**joined lab as a laboratory technician**)
  37. Emma Redmon, PYDI 4980, Spring 2022 (**joined lab as a master’s student in Fall 2022**)
  38. Kennedy Gill, PYDI 4980, Spring 2021 – Spring 2022
  39. Georganna Hamby, PYDI 4980, Fall 2021 – Spring 2022 (**research inspired to transition to PharmD**)
  40. Lexi Leonard, PYDI 4980, Spring 2022, Fall 2022
  41. Madison Holden, PYDI 4980, Fall 2022
  42. Hayden Northcutt, PYDI 4980, Spring 2022, Fall 2022
  43. Laura Pride, PYDI 4980, Spring 2022, Fall 2022
- e. Undergraduate Research Fellowship Program at AU: These were paid internships for students to work in the lab for up to 40 hours per week via the Office of Undergraduate Research - Undergraduate Research Fellowship Program.
1. Ryan Heslin, 2016

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2. Brannan Martens, 2017 – 2018
  3. Jack Schwartz, 2018 – 2019 [Co-sponsor – Dr. Murali Dhanasekaran]
  4. Alison Beverly, 2019
  5. Marissa Dogan, 2019
- f. HBCU Scholars Program - American Heart Association: These were paid internships designed to increase the number of Black students who can compete successfully for acceptance and matriculation into graduate programs leading to professional degrees in the biomedical and health sciences.
1. Janelle Meadows, AU/Tuskegee, 2021-2022
  2. Tia Daniels, AU/ Tuskegee, 2022-2023
  3. Jannah Adams, AU/Tuskegee, 2023-2024

## SERVICE

### DEPARTMENT & SCHOOL SERVICE

#### West Virginia University

2010 – 2015	Full Faculty Committee, Member
2010 – 2015	Behavioral Neuroscience Training Committee, Chair
2010 – 2011	Behavioral Neuroscience Faculty Search Committee, Member
2010 – 2011	Behavior Analysis Training Committee, Associate Member
2010 – 2011	Behavior Analysis Faculty Search Committee, Member
2011	Faculty Evaluation Committee, Elected Member
2011 – 2012	Behavioral Neuroscience Faculty Search Committee, Member
2011 – 2014	Lifespan Developmental Training Committee, Associate Member
2013	Lifespan Developmental Faculty Search Committee, Member
2014	Faculty Evaluation Committee, Elected Member
2015	Behavior Analysis Training Committee, Associate Member

#### Auburn University

2015 – present	HSOP Faculty Committee, Member
2015 – present	DDD Faculty Committee, Member
2016 – present	Integrated Learning Team 1, Member
2016	Student Services Coordinator, DDD Search Committee Member
2017	Student Honors, Awards, & Scholarship Committee, Member
2017 – present	PRB Internal Vivarium Usage Body, Chair
2017 – 2020	Drug Discovery & Development Seminar Series, Coordinator
2018 – 2019	HSOP Admission Committee, Member
2021 – present	HSOP Risk Management Team

### UNIVERSITY SERVICE

#### West Virginia University

2013 – 2015	National Institutes of Health T32GM081741 – “Research Training Program in the Behavioral and Biomedical Sciences” 2014-2019. Director: Albert Berrebi, PhD. Roles: Chair of Curriculum Development, Steering Committee, Preceptor and BBS Scholarship
2013 – 2014	E.J. Van Liere Memorial Convocation & Heath Science Research Day Poster Judge
2010 – 2015	Center for Neuroscience - Behavioral Neuroscience Meeting Organizer
2012 – 2015	Institutional Animal Care and Use Committee (IACUC) Member
2011 – 2015	Summer Undergraduate Research Internships (SURI) Mentor
2011 – 2015	Summer Undergraduate Research Experience (SURE) Mentor
2014 – 2015	Radiation Safety Committee
2014 – 2015	Grant Reviewer, West Virginia Clinical & Translational Science Institute (WVCTSI)

#### Auburn University

2015 – present	Auburn University Research Week Poster & Presentation, Judge
2017 – 2021	Graduate School’s Distinguished Dissertation Awards Committee, Member
2018	AU Internal Grant Program, Reviewer

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2018 - present	Center for Neuroscience Initiative, Co-Director
2019 – present	Commission on Gender Equity, Founding Member
2021 – present	Faculty Senate Diversity, Equity, and Inclusion (DEI) Committee, Founding Member
2021 – present	Institutional Biosafety Committee, Member
2022 – present	Faculty Grievance Committee, Member

Postdoctoral Fellows, Research Associates, Visiting Scholars, & Mentored Faculty

1. Yi-feng Du, Ph.D., Assistant Research Professor, Harrison College of Pharmacy, Auburn University, 2017-2019
2. Hao Hong, Department of Pharmacology, China Pharmaceutical University, Visiting Scholar, December 1, 2016 to May 31, 2017
3. Subhrajit Bhattacharya, Research Assistant Professor, Harrison College of Pharmacy, Auburn University, 2019-2022
4. Michael Gramlich, Ph.D., Assistant Professor, Physics, COSAM, Auburn University, 2018-present
5. Maria Naskou, DVM, PhD, Dipl. ACVP, Assistant Professor of Clinical Pathology, CVM, Auburn University, 2022-present
6. Christine Charvet, PhD, Assiant Profesor, CVM, Auburn University, 2022-present

**NATIONAL SERVICE**

**Grant Reviewer:**

2012	NSF – Division of Integrative Organismal Systems (IOS) – Neural Systems, Preliminary Proposal Review, March Panel
2012	NSF – Division of Integrative Organismal Systems (IOS) – Neural Systems, Full Proposal Review, October Panel
2012 - 2021	Alzheimer’s Association, Ad hoc reviewer
2012	NIH – Cellular and Molecular Neurodegeneration, Early Career Reviewer, October panel
2013	NIH – Cellular and Molecular Neurodegeneration, Early Career Reviewer, May panel
2014	NSF – Division of Integrative Organismal Systems (IOS) – Neural Systems, Preliminary Proposal Review, April Panel
2014	United Kingdom Medical Research Council (MRC), Ad hoc reviewer
2014	NSF – Division of Integrative Organismal Systems (IOS) – Neural Systems, Ad hoc reviewer for CAREER Award
2014	Neurological Foundation of New Zealand, Ad hoc reviewer
2014	William Harvey Research Institute (WHRI) Academy of UK, Ad hoc reviewer
2014	Ed and Ethel Moore Alzheimer’s Disease Research Program
2015	NIH - Summer Research Training in Aging for Medical Students (T35), March Panel
2015	NIH – Learning & Memory (LAM) Study Section, October Panel
2016 - 2021	NIH - F01A Fellowship Study Section, Reviewer
2018	NIH - ZRG1 MDCN-E (56) Special Emphasis Panel, Reviewer, June panel
2018	NIH - ZRG1 MDCN-E (52) Special Emphasis Panel, Reviewer, June panel
2019	Research Grants Council (RGC) of Hong Kong
2019	NIH - ZRG1 BDCN-N (56) Special Emphasis Panel, Reviewer, June panel
2019	United Kingdom Medical Research Council (MRC), Ad hoc reviewer
2019	National Science Centre, Poland, Ad hoc reviewer, October panel
2020	Ed and Ethel Moore Alzheimer’s Disease Research Program
2020	NIH - ZRG1 MDCN-V (50) Special Emphasis Panel, Reviewer, June panel
2021	NIH - ZRG1 BDCN-K (02) Special Emphasis Panel, Reviewer

Miranda N. Reed, Ph.D.

2022 NIH – Chronic Dysfunction and Integrative Neurodegeneration (CDIN), Standing Member

**Editor:**

2018 Editor, *Translational Issues in Psychological Science (TPS)*, Special issue on Aging

2019 – 2023 Deputy Chief Editor, *Metabolic Brain Disease*

2021 – 2023 Associate Editor, *Frontiers in Molecular Neuroscience- Neuroplasticity and Development*

**Ad Hoc Reviewer:**

- *Journal of Neurochemistry*
- *Learning & Memory*
- *Food and Chemical Toxicology*
- *Toxicology Letters*
- *Neurotoxicology*
- *Psychopharmacology*
- *Behavioural Brain Research*
- *Alzforum*
- *Metabolic Brain Disease*
- *Neurobiology of Aging*
- *Pharmacology, Biochemistry and Behavior*
- *Neural Regeneration Research*
- *Neuroscience Letters*
- *Journal of Visualized Experiments (JoVE)*
- *Rejuvenation Research*
- *Journal of Negative Results in BioMedicine*
- *Learning & Memory*
- *Neurobiology of Disease*
- *Experimental and Clinical Psychopharmacology*
- *Hippocampus*
- *Journal of Aging and Human Development*
- *Neuropharmacology*
- *Physiology & Behavior*
- *PLOS One*
- *Translational Issues in Psychological Science (TPS)*
- *Antioxidants*
- *Cells*
- *Learning & Motivation*
- *Molecular Medicine*
- *Neuron*
- *Molecular Psychology*

**Society Boards & Committees:**

- 2012 – 2013 Program Chair, Southeastern Association for Behavior Analysis (elected)
- 2013 – Membership Committee, International Society for Aging & Disease (elected)
- 2014 – 2015 President Elect, Southeastern Association for Behavior Analysis (elected)
- 2015 – 2016 President, Southeastern Association for Behavior Analysis (elected)
- 2017 Group Leader, Tau Consortium & Milken Institute Tauopathy Retreat

**Pharmaceutical Consulting & Collaborations:**

1. Collaboration, Laboratory of Fox Chase Chemical Diversity Center, Inc., 2017-2019
2. Collaboration, Biohaven Pharmaceuticals, New Haven, CT, 2017-present
3. Collaboration, Myriel Cures, St. Paul, MN, 2022-present

**External Reviewer, I-40 Immigration Petition for Alien Worker:**

1. Scientific review of Chen Yin, PhD, University of California, San Francisco, to support an I-140 petition for Outstanding Researcher, 2019
2. Scientific review of Daniel Fil, Ph.D., University of Alabama at Birmingham, to support an I-140 petition for Outstanding Researcher, 2018

Miranda N. Reed, Ph.D.

**External Review, Promotion & Tenure:**

1. Faculty Evaluation for Promotion to Associate Professor w/Tenure, School of Pharmacy, University of Wyoming, 2017
2. Faculty Evaluation for Promotion to Associate Professor w/Tenure, Psychology, Arizona State University, 2019
3. Faculty Evaluation for Promotion to Associate Professor w/Tenure, Pharmaceutical Sciences, School of Pharmacy, Mercer University, 2022

**REFERENCES**

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