CURRICULUM VITAE

LORI L. McMAHON, Ph.D.

DATE:
September 2022

PERSONAL INFORMATION:
Name: Lori L. McMahon, Ph.D.
Citizenship: USA
Foreign Language(s): None
Home Address: 10 Westedge Street
Charleston, SC 29403

RANK/ TITLE:
Vice President for Research, MUSC
Business Address: 173 Ashley Avenue
Suite 105
Charleston, SC 29425
Phone: (843)792-9378
Alt Phone: (843)792-4333
Email: MCMAHONL@MUSC.EDU

Professor of Neuroscience
Department: Neuroscience
Business Address: 173 Ashley Avenue
Suite 408
Charleston, SC 29425
Phone: (843)792-9378
Alt Phone: (843)792-4333
Email: MCMAHONL@MUSC.EDU

PROFESSIONAL CONSULTANTSHIPS:
2002-2004 Tranzyme Inc. Birmingham Alabama

EDUCATION:

1987	B.A., Biology/Chemistry Highest Honors (Summa Cum Laude), Southern Illinois University, Edwardsville, Illinois
1993	PhD, Neuropharmacology, Department of Pharmacological and Physiological Science Saint Louis University Health Sciences Center, St. Louis, Missouri

POSTDOCTORAL TRAINING:

1993-1998	Department of Neurobiology; Julie Kauer, Mentor Duke University Medical Center, Durham, NC

ACADEMIC APPOINTMENTS:

2021-pres	Vice President for Research	Research	MUSC
2021-pres	Professor, tenured	Department of Neuroscience	MUSC
2015-2021	Dean	Graduate School	UAB
2015-2021	Secondary Appointment	Department of Neurology	UAB
2012-2021	Director	Comprehensive Neuroscience Center	UAB
2012-2016	Assoc. Director	Comprehensive Center for Healthy Aging	UAB
2012-2016	Assoc. Director	Evelyn F. McKnight Brain Research Institute	UAB
2012-pres	Professor	Department of Cell, Developmental, and Integrative Biology (merger of Cell Biology and Physiology and Biophysics)	UAB

2010-2012	Professor	Department of Physiology and Biophysics	UAB
2008-pres	Scientist	Comprehensive Center for Healthy Aging	UAB
2006-2010	Associate Professor (tenured)	Department of Physiology and Biophysics	UAB
2006-2012	Director	Neuroscience Theme Graduate Program	UAB
2006-2014	Co-Director	Synaptic Transmission and Plasticity Core	UAB
2006-pres	Assoc. Scientist	Civitan International Research Center	UAB
2002-pres	Assoc. Scientist	Alzheimer's Disease Research Center	UAB
1998-pres	Secondary Appointment	Department of Neurobiology	UAB
1998-2006	Assistant Professor	Department of Physiology and Biophysics	UAB

AWARDS/HONORS:

a. Presidential Scholarship, Southern Illinois University

1986-present Member, Phi Kappa Phi National Honor Society
1987 Ella Ott Weisman Award in Biological Sciences
1987-1988 Saint Louis University Predoctoral Fellowship
1988-1992 NIH Institutional Neuropharmacology Training Grant, Saint Louis University
1992-1993 Saint Louis University Predoctoral Fellowship
1999 Glaxo-Welcome Junior Investigator Travel Award, Annual Epilepsy Society

a. Junior Investigator Award, Epilepsy Foundation

2000 Argas Medical Education Teaching Award (Medical Physiology), nominee
2000 Junior Investigator Travel Award, NIH sponsored conference, "Curing Epilepsy: Focus on the Future"
2001 Argas Medical Education Teaching Award (Medical Physiology), nominee
2002 Invited Faculty, Neurobiology Course, Marine Biological Laboratories, Woods Hole MA
2003 Invited Faculty, Neurobiology Course, Marine Biological Laboratories, Woods Hole MA
2003 Invited Interview for an article, "The Adaptive Brain", published in UAB Magazine, Spring/Summer issue
2004 Invited Speaker, 1st Annual Neurological and Cardiac Electrophysiology Research Symposium, Chiang Mai Thailand
2005 Argas Medical Education Teaching Award (Medical Physiology), nominee
2006 Argas Medical Education Teaching Award (Medical Physiology), nominee
2007 Keynote speaker, Department of Physiology Annual Retreat, University of San Antonio
2008 NARSAD Independent Investigator Award
2008 President's Award for Excellence in Teaching, UAB School of Medicine
2010 Argas Medical Education Teaching Award (Fundamentals I), nominee
2011 Outstanding Mentor Award, UAB Graduate School
2012-pres President, Birmingham Chapter of the Society for Neuroscience
2012-pres Jarman F. Lowder Professor in Neuroscience
2012 Civitan Distinguished Investigator Award
2014 Keynote Speaker, Hooding Ceremony, UAB Graduate School
2016 Keynote Speaker, Phi Kappa Phi National Honors Society
2018 Keynote Speaker, Southeastern Association of Advocates for Women in Science and Medicine
2018 Birmingham Business Journal's 2018 Women to Watch
2019 Birmingham Business Journal's Mentoring Monday Mentor
2019 Recipient, The Richard Marchase UWIRC Endowed Award

PROFESSIONAL SOCIETIES:

Phi Kappa Phi National Honors Society
Society for Neuroscience
American Physiological Society
International Society to Advance Alzheimer's Research and Treatment

COUNCILS and COMMITTEES:

2002-2004 American Physiological Society Awards Committee
2002 NIH Study Section MDCN3, Ad Hoc Member
2003 NIH Study Section MDCN3, ad hoc reviewer invitation, declined due to conflict with Neurobiology Course at the MBL, Woods Hole, MA
2003 NIH Study Section IFCN, ad hoc reviewer invitation, declined due to conflict with Neurobiology Course at the MBL, Woods Hole, MA
2004-2005 NIH Study Section MNPS, ad hoc member
2005-2008 NIH Study Section MNPS (Molecular Neuropharmacology and Signaling), Permanent member
2007 NIH Study Section Special Emphasis Panel ZMH1 ERB-Z, ad hoc reviewer
2007-2008 American Physiological Society Postdoctoral Fellowship Awards Committee
2007 Chair, Excitatory Amino Acids Social, Society for Neuroscience Annual Meeting
2008 Invited Advisor: CHDI workshop: "Synaptic Network Alterations in Huntington's Disease"
2008 NIH Study Section CNNT (Clinical Neuroplasticity and Neurotransmitters), ad hoc reviewer
2009 Invited Panelist, Society for Neuroscience Workshop: "How to survive as a junior faculty member"
2009 NIH Study Section Special Emphasis panel ZRG1 MDCN-P (Trafficking and Signaling), ad hoc reviewer
2009 NIH Study Section ZMH1 ERB-L-07 (K99 awards) ad hoc reviewer
2009-2012 NIH Study Section LAM (Learning and Memory), Permanent member
2010-2012 NIH College of CSR Reviewers
2010 NIH Study Section MNPS ad hoc reviewer June 2010
2011 NIH Special Emphasis Study Section ad hoc reviewer, April 2011
2011 NIH Special Emphasis Study Section ad hoc reviewer, June 2011
2011 NICHD site visit panel for intramural review
2011-2014 Society for Neuroscience Program Committee member
2012 NIH Study Section Special Emphasis Panel Ad hoc reviewer
2012-present External Advisory Board, R25 undergraduate neuroscience program, UTHSC-San Antonio
2012-2014 Chair, Theme G, Novel Methods and Technology Development, Society for Neuroscience
2013 Molecular and Cellular Substrates of Complex Brain Disorders Special Emphasis Panel ZRG1 MDCN-P(57)
2013 Brain Canada, Neurodevelopmental Research Program grant reviewer
2013 Neurological Disorders: Autism, Stroke, Brain Tumors, and Traumatic Brain Injury NIH Special Emphasis Panel ZRG1 BDCN-W
2013 NIH R25 Review November 2013
2014 Molecular and Cellular Substrates of Complex Brain Disorders Special Emphasis Panel ZRG1 MDCN-P(57) March 2014
2014 Molecular and Cellular Substrates of Complex Brain Disorders Special Emphasis Panel ZRG1 MDCN-P(57) July 2014
2014 ZRG1 BDCN A(02), Ad hoc reviewer October 2014
2014 NINDS R25 ENDURE study section Ad hoc reviewer November 2014
2014 NINDS T32 training SEP ZNS1 SRB-N (07) Ad hoc reviewer December 2014
2014 Invited Panelist for special session "Making the Most Out of the SfN Annual meeting"
2015 reviewer, Memorabel, Italian grant funding agency, March 2015
2015 Molecular and Cellular Substrates of Complex Brain Disorders Special Emphasis Panel ZRG1 MDCN-P(57) March 2015
2015 NIH Study Section MDCN N03 April 2015
2015 NIH Study Section NNRS June 2015
2015 NIH Special Emphasis Panel ZRG1-IFCN-T-02 July 2015
2015 NIH Special Emphasis Panel ZRG1-BDCN-W-02 Sept 2015
2015 NIH Special Emphasis Panel ZNS1-SRB-B-48 Nov 2015
2016 NIH Special Emphasis Panel R35 ZNS1-SRB-E-07 March 2016
2016 NIH Special Emphasis Panel ZRG1-MDCN-N-03 March 2016, co-chair
2016 NIH NINDS R25 study section ZNS1-SRB-E-09, June 2016, chair

2016 NIH NIMH Special Emphasis Panel ZMH1-ERB-X-02, Sept 2016
2016 NIH CSR Special Emphasis Panel, ZRG1-MDCN-P-57 Nov 2016
2016 NIH NINDS Special Emphasis Panel, ZNS1-SRB-E-12, Dec 2016
2017 NIH CSR Special Emphasis Panel, ZRG1-IFCN-T-02, March 2017, chair
2017 NIH NINDS Special Emphasis Panel, ZRG1-BDCN-N-07 and ZRG1-BDCN-K-55, Sept, 2017
2017 NIH NIMH T32 Panel, Sept., 2017
2017-pres Member, Program committee, Society of Biological Psychiatry
2017-2020 Member, Government and Public Affairs Committee, Society for Neuroscience
2018 NIH NINDS Special Emphasis Panel: ZNS1 SRB-E (11), Jan 2018, chair
2018 Chair, Program Committee Society for Biological Psychiatry Annual Meeting 2018
2018 NIH NIMH 2018/10 ZMH1-ERB-M-07, June 2018
2018 NIH Study Section CDIN, October 2018
2018 Chair, Council of Southern Graduate Schools, Audit Committee
2018-2019 Chair, Alabama Council of Graduate Deans (ACGD)
2019 NSF NRT Study Section, May 2019
2019 NIH Study Section, LAM February 2019
2019 NIH NINDS Study Section ZNS1-SRB-D-08, November 2019
2019 NIH NIMH ZMH1-ERB-M-01, November 2019
2020 NIH JSPTPN T32 SEP ZNS1 SRB-X, January 2020
2020 NIH T32 (AR069516) Advisory Committee, April 2020
2020 Co-Chair, Transition Back Task Force
2020 Chair, Re-entry Implementation Committee
2022-pres Chair, SfN GPA Committee
2022-pres Member, SC EPSCoR Executive Committee
2022-pres Member, SCRA Executive Board Committee

UNIVERSITY ACTIVITIES:

1998-2000 Graduate Student Committee, Department of Physiology and Biophysics, UAB
1998-2021 Participating Faculty, Physiology Graduate Program, UAB
1998-2021 Participating Faculty, Neuroscience Graduate Program, UAB
1998 Executive Committee on Graduate Study in Neuroscience, UAB
2000 Medical Education Subcommittee, Integrated Problem Solving Committee, UAB
2002-2006 Admissions Committee, Neuroscience Graduate Program, UAB
2002-2006 Steering Committee, Neuroscience Graduate Program, UAB
2002-2006 Curriculum Committee, Neuroscience Graduate Program, UAB
2002-2006 Participating Faculty, Vision Science Graduate Program, UAB
2003-2008 Steering Committee, IBS Graduate Program, UAB
2005-2008 Curriculum Committee, IBS Graduate Program, UAB
2005 Neurobiology Chair Search Committee Member, UAB
2005 Neuroscience Strategic Planning Committee, UAB, Co-Chair of Neuroregeneration and Plasticity Thematic Group, UAB
2005 Participant in recruitment of chair of the Department of Psychiatry, UAB
2005-2009 Graduate Committee, Molecular Physiology Program, UAB
2006 Neurobiology Faculty Search Committee, UAB
2006-pres Steering Committee, Comprehensive Neuroscience Research Center, UAB
2006-2012 Co-Director, Synaptic Plasticity Core Facility, Alabama Neuroscience Blueprint Core Grant
2006-2012 Steering Committee, Neuroscience Blueprint Core Center, UAB
2006-2008 Subcommittee on Graduate Education, UAB
2006 Steering Committee, GAANN Program, UAB
2006-2012 Director, Neuroscience Theme Graduate Program, UAB
2006-2012 Chair, Neuroscience Theme Graduate Program Curriculum Committee, UAB
2006-2012 Chair, Neuroscience Theme Graduate Program Admissions Committee, UAB
2007-2008 Pharmacology Chair Search Committee, UAB
2008-2009 Chair, Neuroscience Theme Graduate Program Qualifying Exam Committee, UAB

2008-2009 Member, Development Committee for a PhD Program in Rehabilitation Science, UAB
2008-2021 Steering Committee, Undergraduate Neuroscience Major, UAB
2008-2010 Member, Department of Physiology Faculty Search Committee, UAB
2009-2010 Selection Committee, Ireland Award for Distinguished Visiting Scholar, UAB
2009-2012 Member, Graduate Faculty Review Committee for Thematic Biomedical Sciences Graduate Programs, UAB
2009-2012 Member, Graduate Biomedical Sciences Theme Directors Committee, UAB
2009-2012 Member, Graduate Biomedical Sciences Admissions Committee, UAB
2009-2012 Selection Committee, President's Award for Excellence in Teaching, UAB
2009-2012 Elected Member of Faculty Council, UAB Joint Health Sciences Promotions and Tenure Committee, UAB
2010-2012 Member, Geropsychiatry Endowed Chair Search Committee, UAB Department of Psychiatry and Behavioral Neurobiology, UAB
2010-2012 Member, Shook Chair in Psychiatry search committee, UAB Department of Psychiatry and Behavioral Neurobiology, UAB
2010-2012 Member, Department of Physiology and Biophysics Promotions and Tenure Committee
2010-2011 Member, Department of Psychiatry and Behavioral Neurobiology Promotions and Tenure Committee, UAB
2011 Member, Neurology Chair Search Committee, UAB
2011-2021 Executive Committee, NIH R25 award (D. Standaert, PI), UAB
2011-2014 Co-Chair, Faculty Council, UAB Joint Health Sciences Promotions and Tenure Committee
2012-2021 Member, Neuroscience Theme Steering Committee, UAB
2012-2021 Member, Neuroscience Theme Curriculum Committee, UAB
2013 Member, SOM Dean search committee, UAB
2012-2013 Member, LCME faculty review committee, UAB
2013 Internal Reviewer for Searle Scholar's program, UAB
2013 Internal Reviewer for Pew Scholar's program, UAB
2013 Comprehensive Center of Healthy Aging Strategic Planning Committee, UAB
2014 Search Committee member, Strain Endowed Chair, Dept. of Neurology, UAB
2014 reviewer, CAS collaborative research application reviews, UAB
2014 Searle Scholars Program internal reviewer August 2014, UAB
2014 Pew Scholars Program internal reviewer July 2014, UAB
2014-2021 Executive Committee, BEAM project, UAB
2014-2015 Executive Leadership Program, UAB
2015 Searle Scholars Program internal reviewer August 2015, UAB
2015 Pew Scholars Program internal reviewer July 2015, UAB
2015 reviewer, UAB SOM Blue Skye Awards, UAB
2015 reviewer, UAB P30 ADRC application Oct 2015, UAB
2015 reviewer, UAB SOM Biochemistry Nov 2015, UAB
2015 CAS Interdisciplinary Team Grant Program reviewer Dec 2015, UAB
2016 reviewer, UAB SOM 1 R01 application reviews March 2016, UAB
2016-2021 Executive Committee, UAB Science and Technology programs, UAB
2016 reviewer, UAB SOM, multi-PI grant application reviews June 2016, UAB
2016 Member, Vice-President for Research Search Committee, UAB
2016-2021 Diversity, Equity, and Inclusion Council, UAB
2017 UAB Strategic Planning Subcommittee- Education, UAB
2017 UAB Strategic Planning Subcommittee-Research, Innovation, and Economic Development
2017 Co-Chair, Neurobiology Chair Search Committee, UAB
2017-2020 Committee Member, Society for Neuroscience Government and Public Affairs, UAB
2018 Chair, Policy on Joint Programs Committee, UAB
2018 Chair, Task Force for Interdisciplinary Education, UAB
2018-2021 Member, Task Force for Suicide Prevention, UAB
2018-2021 Chair, Task Force for UAB Withdrawal Policy, UAB
2019-2021 Chair, Dean of Engineering Search, UAB

McMahon, Lori L.

2019-2021	co-Chair, UAB EPIC for Interdisciplinary Education, UAB
2019	reviewer, UAB SOM 2nd R01 grant applications, UAB
2020	Co-Chair, Transition Back Task Force, UAB
2021-pres	Member, AD Working Group, MUSC
2021-pres	Member, In Our DNA Community Advisory Board, MUSC
2021-pres	Member, CDLD COBRE, MUSC
2021-pres	Member, Data and Analytics Group, MUSC
2021-pres	Member, DEI Search Committee for Inaugural Executive Director, Integrated Center for Health Equity, MUSC
2021-pres	Member, Future Investment Group (FIG), MUSC
2021-pres	Member, ICCE Executive Committee, MUSC
2021-pres	Member, Innovation and Commercialization Advisory Committee, MUSC
2021-pres	Member, Neuroscience P&T, MUSC
2021-pres	Chair, SCTR Internal Advisory Committee, MUSC
2021-pres	Member, Strategic Partnership Internal Oversight Committee, MUSC
2021-pres	Director, Zucker Institute for Applied Neurosciences, MUSC

EDITORIAL BOARD MEMBERSHIPS:

2002-2010	Journal of Neurophysiology
2008- 2016	Neuropsychopharmacology
2009-pres	Reviewing Editor, Frontiers in Aging Neuroscience
2010-pres	Reviewing Editor, Frontiers in Neurodegenerative Diseases
2014	Journal of Alzheimer's Disease
2015-pres	Journal of Neuroscience

Ad Hoc Reviewer:

Brain
Brain Research
Cerebral Cortex
eNeuro
eLife
Experimental Biology and Medicine
Frontiers in Synaptic Transmission
Frontiers in Aging
Hippocampus
Journal of Biological Chemistry
Journal of Clinical Investigation
Journal of Neurochemistry
Journal of Neurophysiology
Journal of Neuroscience
Journal of Pharmacology and Experimental Therapeutics
Life Sciences
Learning and Memory
Molecular Pharmacology
Molecular Psychiatry
Neural plasticity
Neuron
Neuropharmacology
Neuroscience
Neuroscience Letters
Psychoneuroendocrinology
PNAS
Synapse

MAJOR RESEARCH INTERESTS:

Currently my laboratory has several major research programs.

1. Muscarinic receptor induced LTD in rat hippocampus

We are investigating the mechanisms by which muscarinic and adrenergic receptors modulate synaptic function and plasticity in hippocampus and visual cortex. Specifically, we are examining the molecular mechanisms that underlie a form of long-term depression (LTD) at glutamate synapses that is induced by activation of M1 muscarinic or □1 adrenergic receptors and how this synaptic mechanism interacts with other well-characterized forms of long-term plasticity. In addition, we are pursuing the consequences of lesion of the cholinergic and adrenergic inputs to hippocampus and visual cortex on the ability of synapses to express plasticity. Degeneration of cholinergic and adrenergic innervation that occurs in neurodegenerative diseases and aging is known to cause cognitive deficits, thus determining how synaptic function is altered following loss of these inputs could have significant clinical benefit. These studies employ electrophysiology in brain slices, and cellular techniques including immunohistochemistry and western blot analysis. We have recently expanded our studies to include hippocampal learning and memory behavioral assays and immunohistochemical analysis of sympathetic sprouting in postmortem hippocampus and cortex patients with Alzheimer's disease compared to aged matched controls. Understanding the benefits of sympathetic sprouting on hippocampal and cortical function could lead to new therapeutic strategies for the treatment of cognitive decline in neurodegenerative diseases involving the cholinergic system as in Alzheimer's disease.

2. Estrogen and Hippocampal Plasticity

We are pursuing the effects of estradiol on hippocampal synapse density and synaptic transmission and plasticity. Elevated circulating levels of estradiol enhance memory performance and alterations in hippocampal function are likely to be causally related. We are particularly interested in determining how loss of estradiol during aging impacts hippocampal function and whether hormone replacement therapy can activate estradiol-dependent mechanisms to restore normal hippocampal function and thus learning and memory. Ovariectomized female rats treated with estradiol at various intervals following ovariectomy are used as a model system. Experiments involve electrophysiological measurements of AMPA and NMDA currents, synaptic transmission, and long-term plasticity in acute brain slices. Determining how estradiol and hormone replacement affects hippocampal function could lead to development of therapies to alleviate hormone-dependent memory loss in aging.

3. Learned Helplessness, Estrogen, and Hippocampal Synaptic Function

We are currently testing the hypothesize that proestrus levels of estradiol in ovariectomized rats will protect against the development of depression-like symptoms in the Learned Helplessness model of depression. Women are twice as likely as men to be diagnosed with major depressive disorder (MDD), which is characterized by feelings of helplessness and despair, along with learning deficits and memory dysfunction. The increased incidence of MDD in women this leads to the prediction that out-of-balance or misregulated reproductive hormones could be the causal factor. Unfortunately, there is a lack of understanding at the cellular level how ovarian hormones are related to the development and expression of depression. Based upon our own work and that of other laboratories, it is clear that estrogen has protective effects in hippocampus, and causes increased synapse density, enhanced LTP, and improved memory. These cellular effects stimulated by estrogen are in opposition to the detrimental effects of glucocorticoids on hippocampal structure and function. Therefore, we are using behavior, biochemistry, and synaptic physiology to investigate whether misregulated estrogen renders hippocampal circuits vulnerable to the harmful effects of chronically elevated glucocortiocids that occur in depression. Thus, estrogen therapy may provide effective protection against the development of depression or serve to reverse the depressive behavior in animal models, and potentially in women with MDD. Furthermore, estrogen replacement may be particularly helpful in treating depression during menopause, when estrogen levels decline.

4. O-GlcNAcylation and Synaptic Function in Hippocampus

We are also actively pursuing the impact of O-GlcNAcylation on synaptic function and plasticity in hippocampus. Protein O-GlcNAcylation is a metabolically modulated post-translational modification whereby the monosaccharide ß-N-acetyl-glucosamine (O-GlcNAc) is attached in an o-linked fashion to serine or

threonine residues of cytoplasmic or nuclear proteins. This modification is under the control of two enzymes that are highly expressed in hippocampus. O-GlcNAcylation of serine/Threonine residues is a tightly regulated process that can be thought of as analogous to phosphorylation. In Alzheimer's disease, O-GlcNAcylation is decreased, contributing to a pathological increase in phosphorylation of Tau, which may be a contributing factor to the development of neurofibrillary tangles. In diabetes, O-GlcNAcylation is pathologically increased, which could be causal to the deficits in LTP and learning in animal models of diabetes. Thus, we are testing the hypothesis that O-GlcNAcylation of nuclear and cytoplasmic synaptic proteins is a novel, powerful regulator of acquisition and consolidation of new memories dependent upon hippocampal synaptic modification**.** We are employing several rodent models of disease, and using hippocampal learning tasks, biochemistry, electrophysiology, and proteomics to address these hypotheses.

TEACHING EXPERIENCE:

1999 ***Professional:***
Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Dental and Optometry Physiology, Lecturer

Graduate:
Integrative Biomedical Science 700, Lecturer
Co-course master, Special Topics in Physiology (Molecular and Cellular Endocrinology)
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor

2000 ***Professional:***
Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Dental and Optometry Physiology, Lecturer

Graduate:
Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Section Head for Neuroscience and Pharmacology
Integrative Biomedical Science 701, Lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor
Department of Physiology and Biophysics Seminar Series, Coordinator

2001 ***Professional:***
Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Dental and Optometry Physiology, Lecturer

Graduate:
Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Section Head for Neuroscience and Pharmacology
Integrative Biomedical Science 701, Lecturer
Co-Course Master, Special Topics in Physiology (Molecular and Cellular Endocrinology)
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor
Department of Physiology and Biophysics Seminar Series, Coordinator

2002 ***Professional:***

Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Dental and Optometry Physiology, Lecturer

Graduate:

Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Section Head for Neuroscience and

Pharmacology
Integrative Biomedical Science 701, Lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor
Department of Physiology and Biophysics Seminar Series, Coordinator
Co-Course Master, Physiology Graduate Student Summer Research Seminar Series
Course Master, Physiology Graduate Student Seminar Journal Club
Neurobiology Course, Marine Biological Laboratory, Woods Hole MA, Lecturer and Laboratory Instructor

2003 ***Professional:***

Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Dental and Optometry Physiology, Lecturer

Graduate:

Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Section Head for Neuroscience and Pharmacology
Integrative Biomedical Science 701, Lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor
Department of Physiology and Biophysics Seminar Series, Coordinator
Co-Course Master, Physiology Graduate Student Summer Research Seminar Series
Course Master, Physiology Graduate Student Seminar Journal Club
Co-Course Master, Special Topics in Physiology (Molecular and Cellular Endocrinology)
Developmental Neuroscience, Lecturer
Integrative Neuroscience Course, Lecturer
Neurobiology Course, Marine Biological Laboratory, Woods Hole MA, Lecturer and Laboratory Instructor

2004 ***Professional:***

Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Dental and Optometry Physiology, Lecturer

***Graduate*:**

Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor
Department of Physiology and Biophysics Seminar Series, Coordinator
Co-Course Master, Physiology Graduate Student Summer Research Seminar Series
Course Master, Physiology Graduate Student Seminar Journal Club
Developmental Neuroscience, Lecturer
Integrative Neuroscience Course, Lecturer
Judge, Graduate Student Research Day
Judge, Postdoctoral Fellow Research Day

McMahon, Lori L.

Undergraduate:

Judge, McNair Summer Intern Poster session

2005 ***Professional:***

Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Mentor, Medical Physiology Student Research Presentations
Dental and Optometry Physiology, Lecturer

Graduate:

Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Lecturer
Co-Course Master, Physiology Graduate Student Summer Research Seminar Series
Course Master, Physiology Graduate Student Seminar Journal Club
Developmental Neuroscience, Lecturer
Integrative Neuroscience Course, Lecturer
Neurobiology of Disease, Lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor
Judge, Postdoctoral Fellow Research Day

Undergraduate:

Judge, McNair Summer Intern Poster session
Mentor, intern in the UAB CORD summer research program

Workshops:

Manuscript Writing Course for Postdoctoral Fellows and Junior Faculty, UAB

2006 ***Professional:***

Medical Physiology, Lecturer
Medical Physiology Small Group facilitator
Mentor, Medical Physiology Student Research Presentations
Dental and Optometry Physiology, Lecturer

Graduate:

Integrative Biomedical Science 700, Lecturer
Integrative Biomedical Science 701, Lecturer
Co-Course Master, Physiology Graduate Student Summer Research Seminar Series
Course Master, Physiology Graduate Student Seminar Journal Club
Developmental Neuroscience, Lecturer
Integrative Neuroscience Course, Lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor

Workshops:

American Physiological Society Manuscript Writing and Reviewing Course,
Orlando FL
"Frontiers in Physiology" Teachers Training Workshop; course instructor

2007 ***Professional:***

Medical Neuroscience Small Group Facilitator
Fundamentals I (first year medical student introductory course), Lecturer
Dental and Optometry Physiology, Lecturer

Graduate:

Integrative Biomedical Science 701, Lecturer

Developmental Neuroscience, Lecturer
Integrative Neuroscience Course, Lecturer
Course Master, Principles of Cellular Neuroscience Module IV
Course Master, Neuroscience Student Summer Seminar Series
Principals of Cellular Neuroscience Module III, lecturer
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor

Undergraduate:
Science and Technology Undergraduate Learning and Memory course, Lecturer
Mentor, Summer Program in Neuroscience (JaRita Booker)

2008 ***Professional:***
Medical Neuroscience Small Group Facilitator
Fundamentals I (first year medical student course), Lecturer

Graduate*:*
Integrative Biomedical Science 701, Lecturer
Developmental Neuroscience, Lecturer
Course Master, Principles of Cellular Neuroscience Module IV
Course Master, Neuroscience Student Summer Seminar Series
Co-Course Master, Electronics for Physiologists
Principals of Cellular Neuroscience Module III, lecturer
Cellular and Molecular Neuroscience Course, lecturer
Co-Course Master, Cognitive Neuroscience Journal Club
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor

Undergraduate:
Science and Technology Undergraduate Learning and Memory course, Lecturer

2009 ***Professional:***
Medical Neuroscience Small Group Facilitator
Fundamentals I (first year medical student course), Lecturer

Graduate:
Integrative Biomedical Science 701, Lecturer
Developmental Neuroscience, Lecturer
Course Master, Principles of Cellular Neuroscience Module IV
Course Master, Neuroscience Student Summer Seminar Series
Principals of Cellular Neuroscience Module III, lecturer
Cellular and Molecular Neuroscience Course, lecturer
Co-Course Master, Cognitive Neuroscience Journal Club
Neuroscience Graduate and Undergraduate Neuroscience Major Colloquium, presenter
Introduction to Neurobiology Course-Dauphin Island Sea lab, Lecturer and Laboratory Instructor

Undergraduate:
Science and Technology Undergraduate Learning and Memory course, Lecturer

2010 ***Professional:***
Medical Neuroscience Small Group Facilitator
Fundamentals I (first year medical student course), Lecturer

Graduate:
Integrative Biomedical Science 701, Lecturer
Developmental Neuroscience, Lecturer

Course Master, Neuroscience Student Summer Seminar Series
Cellular and Molecular Neuroscience Course, lecturer
Principles of Cellular Neuroscience, lecturer
Co-Course Master Introduction to Neurobiology Course-Dauphin Island Sea lab

2011

Graduate:
GBS 750 Muscles, Bones and Nerves Course, lecturer
GBS 731, Principles of Cellular Neuroscience Course, lecturer
Co-Course Master Introduction to Neurobiology Course-Dauphin Island Sea lab

Undergraduate:
Advanced Neuroscience, lecturer

2012

Professional:
Medical Neuroscience Small Group Facilitator
Fundamentals I, Lecturer

Graduate:
GBS 750 Muscles, Bones and Nerves Course, lecturer
GBS 731, Principles of Cellular Neuroscience Course, lecturer
Co-Course Master Introduction to Neurobiology Course-Dauphin Island Sea lab
Poster Judge: Department of Behavioral Neuroscience and Psychiatry Research Day
Poster Judge: Center for Aging Annual Symposium

Undergraduate:
Advanced Neuroscience, lecturer
Mentor, CORD summer program

Other:
UAB Promotions and Tenure Presentation-Department of Neurology
UAB Promotions and Tenure Presentation-Department of Emergency Medicine
Postdoctoral Education-promotions and tenure

2013 ***Professional:***
Medical Neuroscience Small Group Facilitator

Graduate:
GBS 750 Muscles, Bones and Nerves Course, lecturer
GBS 731, Principles of Cellular Neuroscience Course, lecturer
Co-Course Master Introduction to Neurobiology Course-Dauphin Island Sea lab
Poster Judge: Department of Behavioral Neuroscience and Psychiatry Research Day

Undergraduate:
Advanced Neuroscience, lecturer

2014 ***Professional:***
Medical Neuroscience Small Group Facilitator

Graduate:
GBS 750 Muscles, Bones and Nerves Course, lecturer

2015 ***Graduate:***

McMahon, Lori L.
GBS 750 Muscles, Bones and Nerves Course, lecturer
Introduction to Neurobiology, Dauphin Island Sea Lab
Co-course Master, Neuro Lab Bench workshop for Roadmap Scholars
BHS 550, Integrative Systems I, 4 lecture hours

Professional:
PA 602 Medical Physiology, 10 lecture hours

2016 ***Graduate:***
GRD 719 Introduction to Mentoring and Leadership, co-course master
GRD 719 Mentoring & Leadership

High School Research Mentees*:*

5. 2011 Drew Haselden
6. 2012 Kevin Wang
7. 2012 Ramsha Farrukh
8. 2016 Armeen Barghi

Undergraduate Research Mentees:

1. 2002-2004 Justin Daigre (graduated from South Alabama School of Medicine, 2008)
2. 2004-2005 John Sahawneh (research technician at Cornell University)
3. 2007 Jin Joo Shim (graduate school in public health at UAB)

2007-2009 Umair Khan (matriculated to Nova Southeastern College of Osteopathic Medicine, 2010)

4. 2007-2008 Katie Dyer, (graduated with master's degree, Department of Biology UAB, 2009)
5. 2008 Thameoty Peters (matriculated to UAB School of Medicine, 2009)
6. 2008-2009 Marjan Islam (matriculated to SUNY School of Medicine, 2010)
7. 2010- 2012 Gregory Gabbert (Neuroscience Undergraduate Major, UAB)
8. 2010-2011 Alaina Flannigan (Psychology Major, UAB)
9. 2012-2014 Quincy Jones, MERK Scholars Winner
10. 2012-2016 Amy Stewart (matriculated to UNC PhD program in Cell Biology)
11. 2013-2017 Anas Khan (matriculated to UAB SOM, 2017)
12. 2013-2017 Ramsha Farrukh (matriculated to UAB SOM, 2017)
13. 2015-2016 Harsh Patel
14. 2017-present Capri Alex
15. 2017-present Chartur Shivananda
16. 2018 -present Micah Bagley (CORD student)
17. 2019-present. Jadarius (JD) Lesi (CORD student)
18. 2019-present Jacob Sawyer

PhD Thesis Mentor for the following graduate students:
Past students:

1.1 Cary Scheiderer, BS (Neurobiology Graduate Program; graduated Oct. 2004)
1.2 Mary Eve McCutchen, BS (Physiology Graduate Program; graduated May 2006)
1.3 Caroline Smith, BS (Physiology Graduate Program; graduated March, 2006)
1.4 Portia McCoy, BS (Neurobiology Graduate Program; graduated April 2008)
1.5 Teruko Bredemann (Behavioral Neuroscience Program; graduated July 2011)
1.6 Robert Mans (co-mentored with Dr. Ling Li, Neurobiology Graduate Program; graduated July 2011)
1.7 Lindsey Vedder (Neuroscience Graduate Program, graduated October 2011)
1.8 Erica Taylor (Molecular Physiology Graduate Program, graduated July 2013)
1.9 Amy Nelson (Neuroscience Graduate Program, graduated October 2013)
1.10 Aimee Franklin (Neuroscience Graduate Program, graduated March, 2014)
1.11 Luke Stewart (Neuroscience Theme Graduate Program, graduated March 2018)
1.12 Allie Widman (Neuroscience Theme Graduate Program, graduated June 2018)
1.13 Lindsey Smith (Neuroscience Theme Graduate Program, graduated July 2018)

McMahon, Lori L.

1.14 Kavitha Abiriman (Neuroscience Theme Graduate Program, graduated Oct 2019)
1.15 Rose Creed (Neuroscience Theme Graduate Program, co-mentored with Dr. Matt Goldberg, graduated July 2020)
1.16 Anthoni Goodman (Behavioral Neuroscience Program, graduated Dec 2020)

Current Students:

1.17 Adeel Memon (ARISE-MD, Neuroscience Theme Graduate Program)
1.18 Shekinah Phillips (Neuroscience Theme Graduate Program)
1.19 Melissa Garcia (Neuroscience Theme Graduate Program)
1.20 Rosaria Rae (Neuroscience Theme Graduate Program)

Master's Thesis Mentor for the following graduate students:

1.21 Katie Dyer (Biology 5th Year Master's Program; graduated June 2009)
1.22 Carol Harden (Biology Masters student; graduated August 2013)
1.23 Rosemary Puckett (Neuroscience Graduate Program; graduated May 2015)
1.24 Bethany Langer (MS Multi-disciplinary biomedical science, graduated Aug., 2020)

Thesis Committee Member for the following graduate students:
Doctoral Programs:
Neuroscience Thematic Graduate Program:

1. Yuliya Voskobiynyk (mentor:Dr. Erik Roberson)
2. Allison Manuel (mentor: Dr. Karen Gamble)
3. Marianna Cortez (mentor: Lynn Dobrunz)
4. Ashley Irwin (mentor: Farah Lubin)
5. Patric Perez (mentor: Lynn Dobrunz)
6. Natalie Davis (mentor: Erik Roberson)

Behavioral Neuroscience Program:

7. Joshua Marcus (mentor: Shaida Andrabe)
8. Taylor Davis (mentor: Lynn Dobrunz)

Co-mentor on Grant Awards (previous and current):

9. Dr. Li Li, Assistant Professor, Dept of Psychiatry and Behavioral Neurobiology; 2013 NARSAD Young Investigator Grant
10. Brian Warmus, MSTP student, F30 (mentor: Dr. Erik Roberson)
11. Lauren Hablitz, Graduate Student, F31 (mentor: Dr. Karen Gamble)
12. Svitlana V. Bach, Postdoctoral Fellow, F32 (mentor: Jeremy Day)
13. Rose Creed, Neuroscience Theme Graduate students, F99/K00 (mentor: Matthew Goldberg)
14. Stephanie Fox, Neuroscience Theme Graduate student, F99/K00 (mentor: Rita Cowell)

Thesis committee member of past students who have completed PhD training:
At UAB:

15. Gavin Braunstein, PhD (mentor: Dr. Erik Schwiebert)
16. Xiaogin Lui, PhD (mentor: Dr. Harry Sontheimer)
17. Xiaochun Guo (mentor: Dr. Robin Lester),
18. Diana Niculescu (mentor: Dr. Timothy Kraft)
19. Brian Reed (mentor: Dr. Kent Keyser)
20. Chang-Hoon Cho (mentors: Drs. Robin Lester and Michael Quick)
21. Julie Parker (mentor: Drs. Robin Lester and Michael Quick)
22. Sotirios Keros (mentor: Dr. John Hablitz)
23. Juan Torres-Reveron (mentor: Dr. Michael Friedlander)
24. Susan Campbell (mentor: Dr. John Hablitz)
25. Susanta Bandyopadhyay (mentor: Dr. John Hablitz)

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26. Seena Matthew (mentor: Dr. John Hablitz)
27. Chris Chapleau (mentor: Dr. Lucas Pozzo-Miller)
28. Haley Speed (mentor: Dr. Lynn Dobrunz)
29. Ryan Splittgerber (mentor: Dr. Kent Keyser)
30. Jordan Renna (mentor: Dr. Kent Keyser)
31. Clintoria Richards (mentor: Dr. Erik Schwiebert)
32. Rachel Penton (mentor Dr. Robin Lester)
33. Reno Ryes (mentor: Dr. Vladamir Parpura)
34. Debeshi Majumdar (mentor : Dr. Mark Bevensee)
35. Niren Kapoor (mentor: Dr. Dale Benos)
36. Terry Lewis (mentor: Dr. Ling Li)
37. Brandon Walters (mentor: Dr. Lynn Dobrunz)
38. David Durgan (mentor: Dr. Martin Young)
39. Maria Rubio (mentor: Dr. Gavin Rumbaugh)
40. Sean Markwaldt (mentor: Dr. Linda Wadiche)
41. James Gladden (mentor: Dr. Louis Dell'Italia)
42. Asher Albertson (mentor:Dr. John Hablitz)
43. Ming Chi Tsai (mentor: Dr. Jacques Wadiche)
44. Guyla Johnson (mentor: Dr. Marizio Grimaldi)
45. Christopher Cunningham (mentor: Dr. Qin Wang)
46. Ye Long (mentor: Dr. Kent Keyser)
47. Cristin Gavin (mentor: Gavin Rumbaugh)
48. Marci Smith (mentor:Dr. Kent Keyser)
49. Nicholas Reish (mentor: Dr. Alecia Gross)
50. Andrea Marshall (mentor: Dr. Scott Wilson)
51. Reed Peavy (mentor: Dr. Helen Kim)
52. Sharday Ewell (mentor: Dr. Anne Theibert)
53. William Lee (mentor: Dr. Vladamir Parpura)
54. Zhiyong Li (mentor: Dr. Erik Roberson)
55. Vladimir Grubišić (mentor: Dr. Vlad Parpura)
56. Brian Warmus (mentor: Dr. Erik Roberson, co-mentor on NRSA)
57. Toni Mueller (mentor: Dr. James Meador-Woodruff)
58. Alex McKweon (mentor: Dr. Tim Kraft)
59. Nicole Day (mentor: Dr. Candace Floyd)
60. Jada Hallengren (mentor: Scott Wilson)
61. Elena Adlaf (mentor: dr. Linda Wadiche)
62. Lesley Bryant (mentor: Dr. Rosalinda Roberts)
63. Rachel Besing (mentor:Dr. Karen Gamble)
64. Manoj Gottipati (mentor: Dr. Vlad Parpura)
65. Francis Crittenden (mentor: Dr. Charles Falany)
66. Hyungwoo Nam (mentor: Dr. Ilan Kermin)
67. Samir Rana (mentor: Dr. Ilan Kermin)
68. Jarrod Meadows (mentor: John Hablitz)
69. Ian Kimbrough (mentor: Dr. Harald Sontheimer)
70. Neil Kelly (mentor: Marcas Bamman)
71. Chelsea Thompson (mentor: Dr. David Standaert)
72. Lillian Brady (mentor: Dr. Lynn Dobrunz)
73. Fred Souza (mentors: Mark Bolding, Christianne Strang)
74. Mary Gannon (mentor: Dr. Qin Wang)
75. Katelynn Corder (mentor: Dr. Lynn Dobrunz)
76. Emily Hugo (mentor: Dr. Beth Gardner; Forensic Science)
77. Emily Thompson (Mentor: Dr. Harald Sontheimer/Michelle Olsen)
78. Maddie Scott (Mentor: Dr. James Meador-Woodruff)
79. LeeAnn Holt (Mentor: Dr. Michelle Olsen)

McMahon, Lori L.

80. Paige Souder (Mentor: Dr. Daniel Gorelick)
81. Anderson Bulter (Mentor:Dr. Farah Lubin)
82. Jennifer Davis (Mentor: Karen Gamble)

Outside UAB:

1. Thiru Vaithianathan, PhD, 2006, Auburn University (mentor: Dr. Vishnu Suppiramaniam)
2. Carlos Penatti, PhD, 2009, Dartmouth Medical School (mentor: Leslie Henderson)
3. Wasanawa Pratchayasakul, PhD, 2011, Chiang Mai University (mentor: Dr. Siriporn Chattipakorn)
4. Mohamed Ghilan, PhD 2015 University of Victoria, British Columbia (mentor: Dr. Brian Christie)

Thesis committee member of past students who have completed masters training:

83. John Hicks, MS (mentor: Dr. Robin Lester)
84. Claudia Campo (mentor: Dr. Lucas Pozzo-Miller)
85. Christopher Calderon (mentor: Dr. John Chatham)
86. Donna Mills (master's thesis, mentor: Dr. Anne Theibert)
87. Jordyn Kippe (mentor: Dr. James Meador-Woodruff)

MAJOR LECTURES AND VISITING PROFESSORSHIPS:

1996 National Institute of Environmental Health Sciences, Research Triangle Park, NC
1997 Department of Anatomy, East Carolina University
1997 Department of Pharmacological and Physiological Science, Saint Louis University Health Science Center
1997 Department of Physiology and Biophysics, University of Alabama, Birmingham
1997 Department of Physiology, University of California, Davis
1998 Department of Neurobiology and Physiology, University of Connecticut, Storrs
1998 Department of Pharmacology, George Washington University
2. Department of Neurobiology, UAB
1. Department of Molecular Pharmacology, Brown University
2002 Department of Neurobiology, Albert Einstein College of Medicine
2002 Marine Biological Laboratory, Woods Hole MA
2002 Career Day, Women in Science Round Table Discussion, UAB
2003 Department of Pharmacology, Uniformed Services University Health Sciences Center
2003 Department of Physiology and Biophysics, UAB
2003 Department of Neurobiology UAB, Annual Department Retreat
2004 Behavioral Neuroscience Graduate Program, UAB
2004 Department of Biomechanical Engineering, UAB
2004 Summer FASEB Conference, Neural Mechanisms in Cardiovascular Regulation
2004 Postdoctoral Fellow Town Hall Meeting, Career choice seminar, UAB
2005 Spring Brain Conference, Sedona, AZ.
2005 Meharry Medical College Departments of Pharmacology, Physiology and Neuroscience
2005 Center for Hypertension Research, UAB
2005 Department of Biomechanical Engineering, UAB
2006 Behavioral Neuroscience Graduate Program, UAB
2006 Department of Physiology, UNC Chapel Hill
2006 Department of Psychiatry, UT Southwestern School of Medicine
2006 Department of Physiology, University of Rochester
2006 Gordon Research Conference, Synaptic Transmission and Plasticity (July, 2006 Colby-Sawyer College, NH)
2007 Gordon Research Conference, Inhibition in the CNS (July 2007. Colby College, Maine)
2007 Department of Pharmacology, University of Tennessee, Memphis
2007 Department of Physiology, Dartmouth Medical College
2007 Department of Physiology, University of North Dakota
2007 Keynote Speaker, Department of Physiology Retreat, UT San Antonio
2008 Department of Physiology and Biophysics, University of Louisville

McMahon, Lori L.

2008 Joint Seminars in Neuroscience, UCLA
2008 Department of Physiology, Dartmouth Medical College
2009 Department of Pharmacology, Vanderbilt University
2009 Evelyn F. McKnight Inter-Institutional Meeting, Birmingham AL
2009 Department of Neurobiology, Evelyn F. McKnight Site Visit, UAB
2009 UAB Alzheimer's Disease Working Group, seminar speaker
2009 5th International Meeting "Steroids and Nervous System" (Torino, Italy)
2010 Outstand Alumni Speaker Department of Pharmacological and Physiological Sciences, Saint Louis University Health Sciences Center
2010 Department of Biology Southern Illinois University at Edwardsville
2011 Department of Comparative Sciences, University of Wisconsin, Madison
2013 Department of Psychiatry, University of Illinois, Chicago
2013 Comprehensive Center for Healthy Aging, UAB
2013 Inter-institutional Evelyn F. McKnight annual meeting, Birmingham AL
2013 VB&H Grand Rounds, UAB
2014 Mood Disorder and Suicide Symposium, UAB
2014 Department of Biology, UAB
2014 Vision Science Research Center, UAB
2014 Department of Psychology, UAB
2014 Department of Psychiatry, Vanderbilt, Nashville TN
2014 Kennedy Center, Vanderbilt, Nashville, TN
2015 Indiana University Stark Neuroscience Research Institute, Indianapolis, IN
2016 Auburn University, School of Pharmacy, Auburn, AL
2016 Samford University, Department of Biology, Birmingham, AL
2018 George Washington University, Neuroscience Institute, Washington DC
2019 UT Southwestern, Department of Neuroscience, Dallas, TX

INVITED PRESENTATIONS at INTERNATIONAL MEETINGS:

1996 Spring Hippocampal Research Conference, Grand Cayman
Session: Physiology and Pharmacology of Hippocampal Interneurons
1. Neuronal Networks and Synaptic Plasticity Conference, Berlin Germany
Session: Synaptic Plasticity
2002 Hippocampal Research Conference, Grand Cayman
2003 Winter Conference on Brain Research, Snowbird Utah
2004 First International Neurology and Cardiac Electrophysiology Research Symposium, Chiang Mai, Thailand
2004 FASEB meeting, Aspen CO
2005 Spring Brain Conference, Sedona AZ
2006 Hippocampal Research Conference, Grand Cayman (April 2006, cancelled due to hurricane damage)
2006 Gordon Conference, Excitatory Amino Acids (July 2006, Colby-Sawyer College NH)
2007 Gordon Research Conference, Inhibition in the CNS (July 2007, Colby College, ME)
2009 5th International Meeting "Steroids and Nervous System" (Torino, Italy)
2011 Winter Conference on the Neurobiology of Learning and Memory (Park City, Utah)
2013 Biological Psychiatry, (San Francisco CA)
2014 Anxiety and Depression Association of America, annual meeting (Chicago, IL)
2014 Pavlovian Society (Seattle, WA)
2014 American College of Psychopharmacology (Phoenix, AZ)
2016 Society of Biological Psychiatry (Atlanta, GA)
2018 Gordon Research Conference, Synaptic Transmission, (Waterville Valley, NH)
2018 American College of Neurospychopharmacology (ACNP) (San Diego, CA)
2020 NIH O-GlcNAc Workshop, (Bethesda, March, 2020)

GRANT SUPPORT:

CURRENT:

2020-2025 **NIH NIA 1R01AG066489-01A1**
PI: Lori L. McMahon, PhD **TDC $2,964,347**
Consequences of nonadrenergic degeneration in the novel TgF344-AD rat model

2021-pres **MUSC Research Acceleration Award** **annual DC $175,000**

PAST:

2015-2021 **UAB Research Acceleration Award** **annual DC $175,000**

2016-2020 **NSF Track 2 FEC OIA-1632881 (Clemson)**
Subaward PI Lori L. McMahon, PhD **TDC $2,020,926**
The Creation of Next-Generation Tools for Neuroscience- Noninvasive Radioluminescence Approaches to Optogenetics

2018-2023 **NIH NIA R01AG059405. ADC: $348,729**
PI: Erik Roberson, MD, PhD
PI: McMahon LL, PhD
BIN1, Interneuron Activity, and Network Dysfunction in Alzheimer Disease

2018-2023 **NIH NINDS 1R01NS082413** **ADC:$239.892**
PI: Karen Gamble, PhD
Co-PI Lori McMahon, PhD (0.6 cm)
Circadian dysfunction and GSK3 in neurodegenerative disease

2019-2021 NIH NINDS R21NS111945
MPI: Lori L. McMahon (contact)l John Chatham **TDC $275,000**
Rapid modulation of hippocampal GABAergic Inhibition by O-GlcNAcylation

2019-2020 **NIH NIA 3R01AG054538-03S1**
MPI Thomas Buford (contact) Christy Carter
Co-PI Lori L. McMahon, PhD

2020-2025 **NIH NINDS 2R01NS089750-06**
MPI: Michelle Gray
Co-PI: Lori L. McMahon, PhD **TDC $2,884,585**
Exploring the contribution of Astrocytes to Huntington Disease

2015-2020 **P01 NS087997** **TDC:$ 1,527,513**
Multi PIs Xandra Breakfield and Laurie Ozelius
Project 3 PI David Standaert; Co-PI Lori L McMahon
Molecular etiology of early onset dystonia

2016-2017 **NIH NIMH R56 MH107190-01A1**
Interactions of 17beta estradiol and ketamine on depression-like behavior, hippocampal synaptic function, and cognition in ovariectomized rats

2016-2018 **NIH NIA R21 AG053067**
PI Lori L McMahon, PhD
Impact of estrogen loss and replacement on GluN2B containing NMDARs, synaptic plasticity, and learning and memory in females using a novel transgenic rat model of Alzheimer's Disease

2017-2019 **Ruth R. Kirshstein Individual Predoctoral NRSA Award 1F31MH110096-01A1 (terminated early due to graduation)**
PI: Lindsey Smith
Sponsor: Lori L McMahon, PhD
17-beta-estradiol protects critical hippocampal synaptic circuits during asymptomatic disease in the novel TgF344-AD rat

2016-2018 **Ruth R. Kirshstein Individual Predoctoral NRSA Award - 1F31MH110096-01A1 Annual DC:$36,906**
PI Allie Widman

McMahon, Lori L.
Sponsor: Lori L McMahon, PhD
Effects of NMDA Receptor Antagonists on Hippocampal Circuits

2015-2017 **Ruth R. Kirshstein Individual Predoctoral NRSA Award F31 NS095568-**
PI Luke T Stewart
Sponsor: Lori L McMahon, PhD
O-GlcNAcylation dampens hyper-excitability in hippocampus during acute epileptiform activity

2011-2016 **NIH NINDS R01 NS076312**
Multi-PI: Lori L McMahon, John C Chatham
O-GlcNAcylation and Hippocampal Synaptic Plasticity

2011-2016 **NIA R01 AG2161201-06**
PI: Lori L. McMahon, PhD
Muscarinic receptor induced LTD in rat hippocampus

2012-2014 **Ruth L. Kirschstein Individual Predoctoral NRSA Award**
1F31MH097362
PI: Aimee Franklin
Mentor: Lori L. McMahon, PhD
Elucidating the role of GSK3 in synaptic and cognitive deficits in Fragile X Syndrome

a. NIMH R01 MH082304
PI: Lori L. McMahon, PhD
Estrogen and Hippocampal Plasticity

a. NIA R01 AG031846
PI: Ling Li
Co-PI: Lori L. McMahon, PhD
Protective Mechanisms of Statins in AD

2011-2012 **Pilot Project Center of Clinical and Translational Science UAB**
PI: Lori L. McMahon, PhD
Title: Sympathetic Sprouting and Alzheimer's Disease in Human Hippocampus in Aging and in Alzheimer's Disease

2010-2012 **Ruth L. Kirschstein Individual Predoctoral NRSA Award**
PI: Erica Taylor
Mentor: Lori L. McMahon, PhD
Title: The role of O-GlcNAcylation in synaptic function"

2011-2012 **Alzheimer's of Central Alabama**
PI: Amy Nelson, graduate student
Mentor: Lori L. McMahon, PhD
Title: Sympathetic Sprouting in Human Hippocampus

2008-2010 **NARSAD**
PI: Lori L. McMahon, PhD
Learned Helplessness, Estrogen, and Hippocampal Synaptic Function

a. NIH NINDS R21 NS063359-01A1
PI: Lori L. McMahon, PhD
John Chatham, PhD
O-linked glycosylation and synaptic function in hippocampus

a. **Ruth L. Kirschstein Individual Predoctoral NRSA Award 1 F31 NS056835**
PI: Portia McCoy
Sponsor: Lori L. McMahon, PhD
Cholinergic Dependent Plasticity in Visual Cortex

a. Evelyn F. McKnight Research Award
PI: Lori L. McMahon, PhD
Estrogen and Hippocampal Plasticity in Young Adult and Aged Rats

2001-2006 **NIH NINDS R01 NS41382**
PI: Lori L. McMahon, PhD 50% effort (score: 3.5%)
Glycine-gated chloride channels and hippocampal excitability

a. Ruth L. Kirschstein Individual Predoctoral NRSA Award 1 F32 MH071085

McMahon, Lori L.
PI: Caroline Smith (score: 10.6%)
Sponsor: Lori L. McMahon, PhD
Estrogen modulates hippocampal morphology and plasticity

a. **NIH NRSA Individual Graduate Student Award** 1F31 NS45469
PI: Cary Scheiderer (score: 10.2%)
Sponsor: Lori L. McMahon, PhD
Muscarinic LTD Modulation by Cholinergic Denervation

a. **American Heart Association** Postdoctoral Fellowship
PI: Siriporn C. Chattipakorn, PhD
Sponsor: Lori L. McMahon, PhD
Acute ethanol administration and its protective effect on neuroexcitotoxicity via taurine

2001-2002 **American Epilepsy Foundation**, Postdoctoral Fellowship
PI: Siriporn C. Chattipakorn, DDS, PhD
Sponsor: Lori L. McMahon, PhD
The Inhibitory Effect on Neuronal Excitability in Dentate Gyrus Following the Activation of Strychnine-Sensitive Glycine Receptors

a. **American Heart Association**, Beginning-Grant –In-Aid
PI: Lori L. McMahon, PhD 10% effort
$50.000.00/ year
Activation of glycine-gated chloride channels by taurine is a potential neuroprotective mechanism against cell death"

2001 **NIH RO1 AG16582-03 Pilot Project** #5
P.I. of Pilot Project Lori L. McMahon, PhD
Cholinergic modulation of hippocampal synaptic plasticity: potential therapeutic targets in Alzheimer's Disease."

1999-2000 **American Epilepsy Foundation**, New Investigator Award
PI: Lori L. McMahon, PhD
"Glycine: An important inhibitory neurotransmitter controlling hippocampal excitability."

a. **NIH NRSA Individual Postdoctoral Training Grant**, Duke University

1994-1995 **NIH Institutional Postdoctoral Fellowship**, Duke University

OTHER:

2000 Gift Award, Arena Pharmaceuticals
2002-2003 Gift Award, Tranzyme Inc.

BIBLIOGRAPHY:
MANUSCRIPTS:
PUBLISHED:

1. Howlett AC, Champion-Dorrow TM, **McMahon LL**, Westlake TM. (1991) The cannabinoid receptor: biochemical and cellular properties in neuroblastoma cells. Pharm. Biochem. and Behav. 40: 565-569.
2. Chiappinelli VA, Wolf KM, Feng C, Yum L, **McMahon LL**. (1993) Different responses to opioids measured in terminals and somas of Edinger-Westphal neurons. Neurosci. 57:425-432.
3. **McMahon LL**, Yoon K.-W., Chiappinelli VA. (1994) Electrophysiological evidence for presynaptic nicotinic receptors in the avian ventral lateral geniculate nucleus. J. Neurophys. 71:826-829.
4. **McMahon LL**, Yoon K.-W., Chiappinelli VA. (1994) Nicotinic receptor activation facilitates GABAergic neurotransmission in the avian lateral spiriform nucleus. Neurosci. 59:689-698.
5. **McMahon LL**, Kauer JA. (1997) Hippocampal interneurons express a novel form of synaptic plasticity. Neuron, 18:295-305.
6. **McMahon LL**, Kauer JA. (1997) Hippocampal interneurons are excited by serotonin-gated ion channels. J. Neurophys., 78:2493-2502.
7. **McMahon LL**, Williams JH, Kauer JA. (1998) Functionally distinct groups of interneurons identified during rhythmic oscillations in hippocampus. J. Neurosci. 18:5640-5651.
8. Chattipakorn SC, **McMahon LL**. (2002) Pharmacological characterization of glycine-gated chloride currents recorded in rat hippocampal slices. J. Neurophys. 87:1515-1525.

9. Chattipakorn SC, **McMahon LL** (2003) Strychnine-sensitive glycine receptors depress hyperexcitability in rat dentate gyrus. J. Neurophys. J. Neurophys. 89:1339-1342.
10. Jovov, B., A. Tousson, **McMahon LL**, and D.J. Benos. (2003) Immunolocalization of the acid-sensing ion channel 2a in the rat cerebellum. Histochem. Cell Biol., 119:437-446.
11. Scheiderer CL, Dobrunz LE, **McMahon LL**. (2004) A novel form of long-term synaptic depression in rat hippocampus induced by activation of alpha 1 adrenergic receptors. J. Neurophys. 91:1071-1077
12. Shaughnessy L, Chamblin B, **McMahon L**, Nair A, Thomas MB, Wakefield J, Koentgen F, Ramabhadran R. (2004) Novel approaches to models of Alzheimer's disease pathology for drug screening and development. J Mol Neurosci 24:23-32.
13. Vaithianathan T, Bedi D, Patrick K, Parameshwaran K, McMahon LL, Judd RL, Suppiramaniam VD (2004) P3-315 Synaptic AMPA receptor dysfunction: a mechanism for cognitive decline in type-1-diabetic rats Neurobiology of Aging, 25, Suppl2 S444-S445
14. Smith CC, and **McMahon, LL** (2005) Estrogen-induced increase in the magnitude of long-term potentiation occurs only when the ratio of NMDA transmission to AMPA transmission is increased. J. Neurosci., 25:7780-7791.
15. Song W, Chattipakorn SC, **McMahon LL** (2006) Glycine-gated chloride channels depress synaptic transmission in rat hippocampus. J. Neurophys., 95, 2366-2379.
16. Scheiderer CL, McCutchen E, Thacker E, Kolasa K, Ward M, Parsons D, Harrell LE , Dobrunz LE, and **McMahon LL** (2006) Sympathetic Sprouting Drives Hippocampal Cholinergic Reinnervation That Prevents Loss of a Muscarinic Receptor-Induced LTD at CA3-CA1 synapses. J. Neurosci., 26, 3745-56.
17. Smith CC and **McMahon LL** (2006) Estrogen Induced Increase in the Magnitude of Long-Term Potentiation is Prevented by Blocking NR2B-Containing Receptors. J. Neurosci., 26, 8517-8522.
18. McCutchen E., Scheiderer CL., Dobrunz, LE and **McMahon, LL** (2006) Coexistence of muscarinic long term depression with electrically induced long-term potentiation and depression at CA3-CA1 synapses. J. Neurophys. 96, 3114-21.
19. McCoy PA and **McMahon LL** (2007) Muscarinic Receptor Dependent Long Term Depression in Rat Visual Cortex is PKC Independent but Requires ERK 1/2 Activation and Protein Synthesis J. Neurophys., 98:1862-70 2007
20. Scheiderer CL, Smith, CC, McCutchen E, McCoy PA, Thacker EE, Dobrunz LE, **McMahon LL** (2008) Coactivation of M1 muscarinic and α1 adrenergic receptors stimulates ERK and induces long-term depression at CA3-CA1 synapses in rat hippocampus. J. Neurosci., 28, 5350-5358.
21. McCoy PA, Norton TT, and **McMahon LL** (2008) Layer 2/3 synapses in the monocular and binocular regions of tree shrew visual cortex express muscarinic receptor dependent long-term depression and long-term potentiation. J. Neurophys. 100(1):336-45.
22. Smith CC, Vedder LC, **McMahon LL** (2009) Estradiol and the Relationship between Dendritic Spines, NR2B Containing NMDA Receptors, and the Magnitude of Long-Term Potentiation at Hippocampal CA3-CA1 synapses Psychoneuroendocrinology 2009 Jul 9. Suppl 1:S130-42. Review
23. Mans RA, Chowdry N, **McMahon LL**, and Li L. (2010) Acute simvastatin exposure enhances long-term potentiation in the hippocampus of normal mice, Neuroscience, 166, 435-44. Epub 2009 Dec 28. PMCID: PMC2824052
24. Polter A, Beurel E, Garner R, Song L, Miller CA, Sweatt JD, **McMahon LL**, Bartolucci AA, Li X, and Jope RS (2010) Manic-Depressive behavioral disturbances are directly related to serine-phosphorylation of GSK3 Neuropsychopharmacology. 2010 Jul;35(8):1761-74. Epub 2010 Mar 31 PMCID: PMC2891528
25. McCoy PA and **McMahon LL** (2010) Sympathetic sprouting in visual cortex stimulated by cholinergic denervation rescues expression of two forms of long-term depression at layer 2/3 synapses Neuroscience 14;168(3):591-604. Epub 2010 Apr 20 PMCID: PMC2892789
26. Smith CC*, Vedder LC*, Nelson AR, Bredemann TM, and **McMahon LL** (2010) Duration of Estrogen Deprivation, Not Chronological Age, Prevents Estrogen's Ability to Enhance Hippocampal Synaptic Physiology, Proc Natl Acad Sci USA Nov 9;107(45):19543-8. Epub 2010 Oct 25. PMCID: PMC2984203
27. Mans RA, **McMahon LL**, Li L (2012) Simvastatin-Mediated Enhancement Of Long-Term Potentiation Is Driven By Farnesyl-Pyrophosphate Depletion and Inhibition of Farnesylation (Neuroscience, 2012 Jan 27;202:1-9. Epub Dec 13 2011 Dec 13. [Epub ahead of print] PMID:22192838

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IN REVISION:

IN PREPARATION:

1. Franklin AV and **McMahon LL** Deficit in Long-term Potentiation at temporammonic-CA1 synapses is not rescued by pharmacological inhibition of GSK3.

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1. Bredemann TM, **McMahon LL**. (2009) Remodeling synapses in learned helplessness. Frontiers in Neuroscience, 3:280.

ABSTRACTS:

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54. Taylor EW, Wang K, Marchase R, Chatham JC**, McMahon LL** Increased O-GlcNAcylation Induces Synaptic Depression and Prevents LTP at Hippocampal CA3-CA1 Synapses, Experimental Biology Annual Meeting, Washington DC, 2011.
55. Vedder LC, Bredemann TM, and **McMahon LL** Chronic replacement of 17β-estradiol protects against the loss of estrogen-enhanced hippocampal function in aged ovariectomized rats Program No. 282.08/PP12 Neuroscience Meeting Planner. Washington DC Society for Neuroscience, 2011. Online
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57. Bredemann TM and **McMahon LL** Estrogen Increases Stress Resilience And Hippocampal Synaptic Physiology In The Learned Helplessness Rodent Model Of Major Depression American College of Neuropharmacology Annual Meeting 2011 Abstract #1979
58. Wang Q, Chen Y, Cottingham C, **McMahon L**, P. Greengard P, and Jiao K Neural selective regulation of anti-seizure effects elicited by endogenous adenosine. Program No.10.11 . 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online
59. Franklin AV, Jope RS[2], and **McMahon LL** Inhibition of GSK3 reverses deficits in LTP at medial perforant path dentate granule cell synapses in fmr1-/- mice. Program No. 158.02. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online
60. Mans RA, Sheffler DJ, Conn PJ, Lindsley CL[2], **McMahon LL** Long-term synaptic depression at hippocampal CA3-CA1 synapses is induced by pharmacological blockade of acetylcholinesterase or allosteric potentiation of M1 muscarinic acetylcholine receptors Program No. 218.05. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online
61. Nelson AR, **McMahon LL** A double staining strategy to identify noradrenergic sympathetic sprouting in Alzheimer's disease postmortem human hippocampus Program No. 747.03, 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online
62. Taylor EW**,** Wang K,Marchase RB, Chatham JC. **McMahon LL** Increased protein O-GlcNAcylation induces a novel form of LTD at hippocampal CA3-CA1 synapses and modifies AMPA receptor subunit GluA2. Program No. 218.04, 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online
63. Chen Y,Liu Y, Cottingham C, **McMahon L**, Jiao K, Greengard P, Wang Q Neurabin scaffolding of adenosine receptor and RGS4 regulates anti-seizure effect of endogenous adenosine Experimental Biology annual meeting 2012
64. Wang, K, Taylor EW, Marchase RB, Chatham JC, **McMahon LL** O-GlcNAcylation of the AMPA receptor GluA2 Subunit May Contribute to LTD at Hippocampal CA3-CA1 Synapses Experimental Biology annual meeting 2013
65. Stewart L, Wang J, and **McMahon LL** Increasing O-GlcNAcylation dampens hyperexcitability in hippocampus during acute epileptiform activity Society for Neuroscience, 2014. Online
66. Smith LA, Town T, and McMahon LL Impact of 17-beta estradiol (E2) loss on hippocampal synaptic function in an Alzheimer's disease rat model and the role of GluN2B-NMDARs Society for Neuroscience, 2015. Online
67. Widman AJ and **McMahon LL** Low-Dose NMDAR Antagonists Increase the Excitation/Inhibition Balance onto CA1 Pyramidal Cells Causing Disinhibition Society for Neuroscience, 2016. Online
68. Stewart LT, Khan AU, M Scarduzio M, JC Chatham JC, and **McMahon LL** Increasing O-GlcNAcylation induces AMPAR Internalization at CA3-CA1 Synapses Society for Neuroscience, 2016. Online
69. Smith LA, Town T and **McMahon LL** Longitudinal alterations in presymptomatic hippocampal synaptic function in the novel TgF344-Alzheimer's disease rat model ICMN, 2016
70. Widman AJ and **McMahon LL** GluN2B Subunit Selective NMDAR Antagonist Enhances the Excitation/Inhibition Balance and Disinhibits CA1 Pyramidal Cells Only When Estrogen is Present in Female Rats Society for Neuroscience, 2017. Online
71. Stewart LT, Chatham JC and **McMahon LL** Elevated O-GlcNAcylation modulates inhibitory neurotransmission hippocampal area CA1 Society for Neuroscience, 2017. Online
72. Goodman AM, Strang CE, Smith LA, and **McMahon LL** Early hippocampal denervation in the TgF344-AD rat Society for Neuroscience, 2017. Online
73. Smith LA and **McMahon LL** Early Synapse Vulnerability Targets Dentate Gyrus In The Novel TgF344-Alzheimer's Disease Rat Model Society for Neuroscience, 2017. Online
74. Jaunarajs KLE, Scarduzio M, Ehrlich ME, **McMahon L**, and Standaert DG Common physiological and neurochemical alterations of striatal cholinergic function in DYT-TOR1A and DYT-THAP1 knock-in mouse models of dystonia Society for Neuroscience, 2017. Online
75. Chakraborty A, Scarduzio M, Graham C, Hernandez A, Chen A, Telange R, Epstein D, Nukaya M, Mukhtar S, van Groen T, Gray M, Watts S, Kennedy G, Bibb J, **McMahon LL** Intestinal Inflammation Induces Neurobehavioral Changes Are Associated with Altered Ventral Striatal Function in Mice. Program No. 783.06, 2018 San Diego, CA: Society for Neuroscience, 2018.

76. Goodman A, **McMahon L. L.** Noradrenergic Denervation-supersensitivity in the TgF344-AD Rat Driven by β-adrenergic Receptors 293.09 Cell Developmental and Integrative Biol., Univ. of Alabama At Birmingham, Birmingham, AL, 2019
77. Voskobiynyk Y, Roth J, Cochran J, Rush T, Greathouse KM, Carullo N, **McMahon LL**, Herskowitz JH, Day JJ, Roberson ED The Alzheimer's Disease Risk Gene BIN1 Regulates Neuronal Hyperexcitability 559.23 Univ. of Alabama at Birmingham, Birmingham, AL, 2019
78. Bartley AF, Barnes JA, French DN, Totsch TR, Gray GM, **McMahon LL**, Dobrunz LE Effects of X-irradiation on Neuronal and Circuit Function 253.11 1Neurobio., 2Cell, Developmental, and Integrative Biol., 3Chem., Univ. of Alabama at Birmingham, Birmingham, AL, 2019
79. Scarduzio M, Eskow Jaunarajs K, Ehrlich ME, **McMahon LL**, Standaert D Diverse Mechanisms Lead to Common Dysfunction of Striatal Cholinergic Interneurons in Distinct Genetic Mouse Models of Dystonia 580.07 1Neurol., 2Cell, Developmental, and Integrative Biol., UAB, Birmingham, AL; 3Neurology/Pediatrics, Mt. Sinai Sch. Med., New York, NY, 2019
80. Memon AA, Creed RB, Amara AW, Goldberg MS, Bamman M, **McMahon LL** Analysis of Hippocampal Synapses in the PINK1-Deficient Rats 653.22 1Neurol., 2Ctr. for Neurodegeration and Exptl. Therapeutics, Neurol., Univ. of Alabama at Birmingham, Birmingham, AL; 3Neurol., 4Cell Develop. and Integrative Biology; Med. and Neurol., 5Cell, Developmental and Integrative Biol., Univ. of Alabama at Birmingham, Birmingham, AL, 2019
81. Creed RB, Farmer CB, Roberts RC, **McMahon LL**, Goldberg MS Increased Glutamatergic Transmission at the Corticostriatal Synapse of PINK1 KO Rats 653.24 1Neurol., 2Psychiatry and Behavioral Neurobio., 3Dept Cell, Developmental, and Integrative Biol., Univ. of Alabama at Birmingham, Birmingham, AL, 2019

ORAL PRESENTATIONS:

1996	Spring Hippocampal Research Conference, Grand Cayman Session: Physiology and Pharmacology of Hippocampal Interneurons
1998	Neuronal Networks and Synaptic Plasticity Conference, Berlin Germany Session: Synaptic Plasticity
2002	Hippocampal Research Conference, Grand Cayman
2003	Winter Conference on Brain Research, Snowbird Utah
2004	1st Annual Neurology and Cardiac Electrophysiology Research Symposium Chiang Mai Thailand
2006	Hippocampal Research Conference, Grand Cayman (April 2006, cancelled due to hurricane damage)
2006	Gordon Research Conference, Synaptic Transmission and Plasticity (July, 2006 Colby-Sawyer College, NH)
2007	Gordon Research Conference, Inhibition in the CNS (July 2007, Colby College, Maine)
2009	5th INTERNATIONAL MEETING "STEROIDS AND NERVOUS SYSTEM" (Torino, Italy)
2010	Distinguished Alumni Speaker, Southern Illinois University at Edwardsville
2010	Distinguished Alumni Speaker, Saint Louis University School of Medicine
2011	Winter Conference on the Neurobiology of Learning and Memory (Park city Utah)
2013	Keynote Speaker, Birmingham Brain Bee, UAB
2014	Keynote Speaker, UAB Graduate School Hooding Ceremony, Spring 2014
2014	Pavlovian Society (Seattle, WA)
2014	American College of Psychopharmacology (Phoenix, AZ)
2016	Society of Biological Psychiatry (Atlanta, GA)
2018	Gordon Research Conference, Synaptic Transmission (Waterville Valley, NH)
2018	American College of Neurospychopharmacology (San Diego, CA)
2019	UT Southwestern, Department of Neuroscience (Dallas, TX)

INVITED LECTURE AT INTERNATIONAL COURSE:

2002	Neurobiology Course, Marine Biological Laboratory, Woods Hole MA (3 weeks, lecture and laboratory instruction)

2003 Neurobiology Course, Marine Biological Laboratory, Woods Hole MA (3 weeks, lecture and laboratory instruction)

COMMUNITY SERVICE:

2013-present member of the Civitan Research Club

2014-2020 "**Neuroscience Café"** developed this outreach program to educate the local community about neurological and neuropsychiatric illness and basic neuroscience research. Events are hosted at Hoover and Homewood libraries. A UAB clinician discusses diagnosis and treatment of specific neurological/neuropsychiatric illnesses and a scientist presents the latest research going on at UAB in specific areas of neuroscience. We are now expending this series at Mountain Brook, Avondale, and Trussville libraries.

2016-2020 **"Discoveries in the Making"** developed this outreach program based upon the success of Neuroscience Café; it is hosted at Hoover and Homewood libraries with planned expansion to other libraries as well as to local high schools. At these events, UAB graduate students present their ongoing research, or "discoveries in the making" in all areas of STEM disciplines as well as the social sciences and humanities.