

Sarah E. Ewin

PERSONAL INFORMATION

Office Address

Wake Forest School of Medicine
Department of Physiology and Pharmacology
Medical Center Boulevard,
Winston Salem, NC 27157

Contact Details

E-mail: sewin@wakehealth.edu
Phone: 336-716-8693

EDUCATION

2014 – 2019

Anticipated

Ph.D. in Biomedical Sciences

Graduate School of Biomedical Sciences
Wake Forest School of Medicine, Winston-Salem, NC
Department of Physiology and Pharmacology
Doctoral Thesis Advisor: Jeffery L. Weiner, Ph.D.

2010 – 2014

B.A. in Psychology

Creighton University, Omaha NE
Department of Psychology
Undergraduate Research Advisor: Dustin Stairs, Ph.D.
Research Topic: Effects of environmental enrichment on nicotine reward in male rats.

EXTERNAL RESEARCH SUPPORT

Current

F31 AA025819 (PI: Ewin) 08/01/2017 – Present

National Institute on Alcohol Abuse and Alcoholism

Mentor: Jeffery L. Weiner, Ph.D.

The goal of this proposed project is to examine the effects of chronic early life stress on excitability in the basolateral amygdala – nucleus accumbens circuit using electrophysiological, behavioral and chemo- and opto-genetic approaches.

Role: PI

Previous

T32 AA007565 (PI: McCool) 07/01/2015 – 07/30/2017

National Institute on Alcohol Abuse and Alcoholism

Mentor: Jeffery L. Weiner, Ph.D.

The goal of this award was to receive predoctoral training in electrophysiology, chemo- and opto-genetic techniques. This project was aimed at studying chronic early-life stress induced neurobiological alterations that increase the vulnerability to alcoholism.

Role: Pre-doctoral Fellow

HONORS AND AWARDS

2017	Trainee Professional Development Award, Society for Neuroscience Scientific Conference, Washington, DC
2017	Student Merit Award, Research Society on Alcoholism 40 th Annual Meeting, Denver, CO
2016	Student Merit Award, Research Society on Alcoholism 39 th Annual Meeting, New Orleans, LA
2015 – 2018	Alumni Student Travel Award, Wake Forest School of Medicine, Winston-Salem, NC
2014	Senior Award in Psychology for outstanding performance in psychology research, Creighton University, Omaha, NE
2014	Thomas A. Grennan Award for outstanding performance in World History, Creighton University, Omaha, NE
2012 - 2014	National Dean's List and Honor Roll, Creighton University, Omaha, NE.
2010	National Dean's List and Honors Roll, University of Nebraska at Omaha, Omaha, NE

PEER REVIEWED PUBLICATIONS

1. Almonte, A.G., **Ewin, S.E.**, Mauterer, M.I., Morgan, J.W., Carter, E.S., Weiner, J.L. (2017) Enhanced synaptic transmission and impaired hippocampal synaptic plasticity in a rodent model of alcohol addiction. *Scientific Reports*, 7(1). PMID: 28951619.
<https://www.ncbi.nlm.nih.gov/pubmed/28951619>
2. Day, S., Yang, W., **Ewin, S.**, Zhou, X., Ma, T. (2017) Glucagon-like peptide 1 cleavage product GLP-1 (9-36) amide enhances hippocampal long-term synaptic plasticity in correlation with suppression of Kv4.2 expression and eEF2 phosphorylation. *Hippocampus*. PMID:28833775.
<https://www.ncbi.nlm.nih.gov/pubmed/28833775>
3. Stairs, D.J., **Ewin, S.E.**, Kangiser, M.M., Pfaff, M.N. (2017) Effects of environmental enrichment on d-amphetamine self-administration following nicotine exposure. *Clinical and Experimental Psychopharmacology*, 25(5). PMID: 29048188.
<https://www.ncbi.nlm.nih.gov/pubmed/29048188>
4. **Ewin, S.E.** Kangiser, M.M., Stairs, D.J. (2015). Effects of environmental enrichment on nicotine reward in male rats. *Clinical and Experimental Psychopharmacology*, 23(5). PMID: 26167715.
<https://www.ncbi.nlm.nih.gov/pubmed/26167715>

In preparation

1. **Ewin, S.E.**, Morgan, J.W., McMullen, N.P., Weiner, J.L. (in preparation) Chronic intermittent ethanol exposure increases anxiety-like behavior and hippocampal synaptic excitability.
2. Almonte, A.G.*, **Ewin, S.E.*** Chappell, A.M., Ariwodola, O.J., Weiner, J.L. (in preparation) DREADD inactivation of the basolateral amygdala-ventral hippocampus circuit decreases anxiety-like behavior and ethanol drinking (* = co-first authors).
3. Butler, T.R., Karkhanis, A.N., Almonte, A.G., **Ewin, S.E.**, Weiner, J.L. (in preparation) Behavioral and neurobiological adaptations in rodent models of ethanol vulnerability and dependence.

INVITED ORAL PRESENTATIONS

- 12/2017 The role of the basolateral amygdala-nucleus accumbens circuitry in alcohol addiction vulnerability, Physiology and Pharmacology Seminar Series, Wake Forest School of Medicine, Winston-Salem, NC.
- 04/2017 Paternal preconception exposure enhances the effect of adolescent social isolation on ethanol drinking in female rats, Women's Health and Sex Differences Research Day, Wake Forest School of Medicine, Winston-Salem, NC.
- 12/2016 Dissecting the contributions of the BLA-NAc circuit in the addiction-vulnerable phenotype engendered by chronic early life stress, Physiology and Pharmacology Seminar Series, Wake Forest School of Medicine, Winston-Salem, NC.
- 08/2016 Dissecting the contributions of the BLA-vHC circuit in an addiction-vulnerable phenotype engendered by chronic early life stress, 17th Annual Lab Exchange, Wake Forest School of Medicine, Winston-Salem, NC.
- 03/2016 Dissecting the contributions of the BLA-NAc circuit in an addiction-vulnerable phenotype engendered by chronic early life stress, Physiology and Pharmacology Seminar Series, Wake Forest School of Medicine, Winston-Salem, NC.

CONFERENCE ABSTRACTS

1. McMullen, N.P., Chappell, A., **Ewin, S.E.**, Morgan, J.W., Almonte, A.G., Carter, E.S., Weiner, J.L. (2017) Chronic intermittent ethanol exposure increases anxiety-like behavior, Annual Neuroscience Research Day at Wake Forest School of Medicine, Winston-Salem, NC.
2. Morgan, J., Sizer, S., **Ewin, S.**, Chappell, A., Weiner, J. (2017) Sex differences in chronic intermittent ethanol exposure: effects on hippocampal synaptic excitability and anxiety-like behavior. Annual Neuroscience Research Day at Wake Forest School of Medicine, Winston-Salem, NC.
3. **Ewin, S.E.**, Almonte, A.G., Carter, E.S., Weiner, J.L. (2017) Adolescent social isolation increases excitatory synaptic activity in the rat nucleus accumbens core. Society for Neuroscience Scientific Meeting, Washington, DC.
4. Beckelman, B.C., **Ewin, S.**, Deal, A., Bean, N., Williams, D.E., Mauterer, M., Godwin, D.W. (2017) Wake Forest University's brain awareness council: Growing science outreach in the NC Piedmont Triad community. Society for Neuroscience Annual Meeting, Washington, DC.
5. **Ewin, S.E.**, Morgan, J.W., McMullen, N.P., Almonte, A.G., Carter, E.S., Weiner, J.L. (2017) Chronic intermittent ethanol exposure increases anxiety-like behavior and hippocampal synaptic excitability. Research Society on Alcoholism Scientific Meeting, Denver, CO.
6. **Ewin, S.E.**, Almonte, A.A., Carter, E.S., Weiner, J.L. (2017) Adolescent social isolation increases excitatory synaptic activity and impairs long term depression in the rat nucleus accumbens core. Alcoholism and Stress: A Framework for Future Treatment Strategies, Volterra, Italy.
7. Almonte, A.G., **Ewin, S.E.**, Chappell, A.M., Carter, E.S., Weiner, J.L. (2017) Increased hippocampal circuit excitability following adolescent social isolation. Research Society on Alcoholism Scientific Meeting, Denver, CO.
8. Almonte, A.G., **Ewin, S.E.**, Carter, E.S., Weiner, J.L. (2017) Adolescent social isolation differentially affects synaptic function and plasticity along the dorsoventral axis of the hippocampus. Alcoholism and Stress: A Framework for Future Treatment Strategies, Volterra, Italy.

9. **Ewin, S.E.**, Rompala, G.R., Carter, E.S., Homanics, G.E., Weiner, J.L. (2016) Paternal preconception ethanol exposure enhances the effect of adolescent social isolation on ethanol drinking in female rats. Research Society on Alcoholism Scientific Meeting, New Orleans, LA.
10. Almonte, A.G., **Ewin, S.E.**, Ariwodola, O.J., Carter, E.S., Weiner, J.L. (2016) Adolescent social isolation enhances excitatory synaptic activity and reduces long term potentiation in the rat hippocampus. Research Society on Alcoholism Scientific Meeting, New Orleans, LA.
11. Day, S.M., Wenzhong, Y., **Ewin, S.**, Ma, T. (2016) Glucagon-like peptide-1 cleavage product enhances hippocampal long-term potentiation in mice. Society for Neuroscience Research Conference, San Diego, CA.
12. Day, S.M., **Ewin, S.E.**, Ma, T (2016) Molecular mechanisms of GLP-1(9-36) in the mouse hippocampus. Research Day Wake Forest School of Medicine, Winston-Salem, NC.
13. Beckelman, B., Alberto, G., Severino, A., Shing, E., Carr, A., **Ewin, S.**, Wagoner, A., Godwin, D. (2015) Wake Forest University's Brain Awareness Council: Evolution of Outreach to the Piedmont Triad Community. Society for Neuroscience Annual Meeting. Chicago, IL.
14. Kangiser, M.M., Pfaff, M.N., **Ewin, S.E.**, Dwoskin, L.P., Stairs, D.J. (2015) Effects of Varenicline and GZ-793A on methamphetamine and food self-administration under a multiple schedule of reinforcement in rats. Midwestern Psychological Association Scientific Meeting, Chicago, IL.
15. **Ewin, S.E.**, Kangiser, M.M., Salvatore, C.A., Daugherty, K.A., Pfaff, M.N., Schroeder, M.K., Stairs, D.J. (2014) Effects of environmental enrichment on d-amphetamine self-administration following nicotine exposure. Midwestern Psychological Association Scientific Meeting, Chicago, IL.
16. Angsten, K., Bragdon, A.K., Kangiser, M.M., Salvatore, C.A., Giordano, D.A., **Ewin, S.E.**, Lange, R.C., Stairs, D.J. (2013) Effects of environmental enrichment on nicotine conditioned place preference. Midwestern Psychological Association Scientific Meeting, Chicago, IL.
17. Cherny, I., Vigen, A., **Ewin, S.** (2013) Is beauty really in the eye of the beholder? Great Plains Student Psychology Convention, Omaha, NE.
18. Norton, M.N., **Ewin, S.E.**, Pojar, N.J. (2013) You be the critic. Great Plains Student Psychology Convention, Omaha, NE.

PROFESSIONAL AFFILIATIONS

2016 – Present	<i>Member</i> , Research Society on Alcoholism
2016 – Present	<i>Member</i> , Society for Neuroscience

TEACHING EXPERIENCE

Teaching Assistantships

2017	Teaching Assistant in Physiology and Pharmacology Department for Pharmacology graduate level course, Wake Forest School of Medicine, Winston-Salem, NC
2017 - Present	Athletic Department Tutor , Wake Forest University, Winston-Salem, NC.
2017 – Present	Private Tutor , Wake Forest University, Winston-Salem, NC.
2015	Pharmacology Course Tutor , Graduate students, Wake Forest School of Medicine, Winston-Salem, NC.

- 2015 **Physiology Course Tutor**, Doctorate of Physical Therapy students, Winston-Salem State University, Winston-Salem, NC.
- 2015 **Physiology Lab Assistant** (Spring Semester), Winston-Salem State University, Winston-Salem, NC.
- 2010-11 **Athletic Department Tutor**, Undergraduate students, University of Nebraska at Omaha, Omaha, NE.

Workshops/ Ethics Courses Attended

- 2017 **Professional Development Workshop: Teaching students how to learn**, Teaching and Learning Center Wake Forest University, Winston-Salem, NC
- 2017 **Professional Development Workshop: Writing learning objectives**, Teaching and Learning Center Wake Forest University, Winston-Salem, NC.
- 2016 **Professional Development Workshop: How to prepare now for an academic teaching career later**, Teaching and Learning Center Wake Forest University, Winston-Salem, NC.
- 2016 **Professional Development Workshop: Writing a teaching philosophy**, Teaching and Learning Center Wake Forest University, Winston-Salem, NC.
- 2016 **Introduction to the Responsible Conduct of Research**, Wake Forest School of Medicine, Winston-Salem, NC.
- 2015 **Professional Development Workshop: Service learning**, Teaching and Learning Center Wake Forest University, Winston-Salem, NC.
- 2014 – 2015 **Scientific Professionalism: Scientific Integrity**, Wake Forest School of Medicine, Winston-Salem, NC.

MENTORING AND VOLUNTEER EXPERIENCE

Student Mentoring

- 2017 – Present Mentor, James W. Morgan, Graduate student in laboratory of Jeff L. Weiner, Ph.D., Wake Forest School of Medicine, Winston-Salem, NC.
- 2017 – Present Mentor, Nathan McMullen, Graduate student in laboratory of Jeff L. Weiner, Ph.D., Wake Forest School of Medicine, Winston-Salem, NC.

Outreach Event Coordinator

- 2017 Organizer, coordinated a day full of neuroscience related activities for preschool and kindergarten students, Primrose School at Eastfield Village, Concord, NC.
- 2017 Coordinator, “Road Safety Event,” organized volunteers and stations for 500 students attending the event, West Forsyth High School, Winston-Salem, NC.
- 2017 Coordinator, “Rescue to Recovery,” set-up event and coordinated volunteers focusing on teaching 7th and 8th graders about drugs of abuse and their effects on the brain, Kaleideum North, Winston-Salem, NC.

- 2017 Coordinator, "Program in Community Engagement STEM Program", coordinated volunteers to give presentations on their professional expertise and career paths to 5th graders, Wake Forest School of Medicine, Winston-Salem, NC.
- 2017 Coordinator, "Present your thesis to a middle school student," coordinated volunteers to give presentations about their dissertation work to 8th graders, Wake Forest School of Medicine, Winston-Salem, NC.
- 2015 – Present Coordinator, Brain Awareness Week at two local venues geared towards teaching young kids and middle schoolers about neuroscience, Kaleideum North and Kaleideum Downtown, Winston-Salem, NC.
- 2015 – Present Steering Committee Member, Brain Awareness Council, coordinate various events in the community, Wake Forest School of Medicine, Winston-Salem, NC.
- 2012- 2014 Event Coordinator and Volunteer, ALS in the Heartland, Helped obtain donations for a large fundraiser, visited ALS patients, and assisted with office duties, Omaha, NE.

Outreach Event Volunteer

- 2017 Volunteer, Ethics workshop, participated in answering questions about ethics in a laboratory setting to first year graduate students, Wake Forest School of Medicine, Winston-Salem, NC.
- 2017 Volunteer, Assisted the Center for Research on Substance Use and Addiction during the invited symposium of Dr. Nora Volkow (Director of the National Institute on Drug Abuse) titled "The Opioid Epidemic in America," Wake Forest School of Medicine, Winston-Salem, NC.
- 2015 – 2016 Volunteer, Kernersville Cares for Kids Outreach Program in collaboration with Brain awareness council, Focused on drug addiction education for middle school and high school students, Wake Forest School of Medicine, Winston-Salem, NC.
- 2015 Volunteer, National Youth Leadership Forum, Focused on teaching advanced high school students about science topics and careers in science, Wake Forest School of Medicine, Winston-Salem, NC.