

Andrew L. Eagle, Ph.D.

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EDUCATION & EMPLOYMENT

- 2023- **Assistant Professor**, Department of Neuroscience, The University of Texas at Dallas, Richardson, TX
- 2020-2023 **Research Assistant Professor**, Department of Physiology, Michigan State University, East Lansing, MI
- 2013-2019 **Research Associate**, Department of Physiology, Michigan State University, East Lansing, MI, Mentor: Alfred J. Robison
- 2010-2013 **Postdoctoral Fellow**, Department of Psychiatry and Behavioral Neuroscience, Wayne State University School of Medicine, Detroit, MI, Mentor: Shane A. Perrine
- 2008-2010 **Ph.D.**, Applied Experimental Psychology, Department of Psychology, Central Michigan University, Mount Pleasant, MI, Mentor: Justin D. Oh-Lee
- 2005-2007 **M.S.**, Experimental Psychology, Department of Psychology, Central Michigan University, Mount Pleasant, MI, Mentor: Justin D. Oh-Lee
- 2003-2004 **B.A.**, Psychology, Department of Psychology, Central Michigan University, Mount Pleasant, MI
- 1998-2002 **A.A.**, Psychology, Delta College, Saginaw, MI

CURRENT SUPPORT

MSU Neuroscience Program
NIMH R01 (PI: Brian Trainor, MH121829)
NINDS R01 (PI: Jeannie Chin, NS085171)

PREVIOUS SUPPORT

- 2015-2017 2014 NARSAD Young Investigator Grant, Role: PI
Hippocampal molecular mechanisms of depression and antidepressant function
- 2014-2016 NIEHS Training Grant (PI: Roth, T32 ES7255-25) Role: Postdoc trainee
Multidisciplinary Training in Environmental Toxicology
- 2010-2012 Faculty Competition for Postdoctoral Fellows (PI: Perrine), Wayne State University School of Medicine, Role: Postdoc trainee
What is the neurobiological basis for the comorbidity of posttraumatic stress disorder and substance abuse?

SELECTED HONORS AND AWARDS

- 2017 Postdoctoral Excellence in Research Award, Michigan State University Postdoctoral Association, Office of Vice President for Research and Graduate Studies
- 2016 Postdoctoral Fellow Poster Award, 47th Annual Meeting of the Michigan Chapter of the Society for Neuroscience
- 2015 Outstanding Abstract Award, Cross Campus Research Day, Neuroscience Program, Michigan State University
- 2015 Postdoctoral Fellow Poster Award, 46th Annual Meeting of the Michigan Chapter of the Society for Neuroscience
- 2014 Outstanding Abstract Award, Cross Campus Research Day, Neuroscience Program, Michigan State University

2009 Psychology Student Presentation Award, Department of Psychology, Central Michigan University

2004 Recognition of Excellence Award, Department of Psychology, Central Michigan University

MEMBERSHIPS & PEER REVIEW

2005- Member, **Society for Neuroscience**

2010- Regular Member, **Michigan Chapter of the Society for Neuroscience**

2013- Member, **Motivated Behaviors Research Group**, Michigan State University

2011-2012 Member, **American Psychological Association**

2010-2013 Member, **Drug Abuse Research Network**, Wayne State University

2005-2010 Graduate Student Affiliate, **Association for Psychological Science Student Caucus**, Central Michigan University

Reviewed for: *Nature Communications; Pharmacology, Biochemistry, and Behavior; Physiology & Behavior; Neuroscience Research; Scientific Reports; Behavioral Brain Research, Bio-protocol, Journal of Neuroscience Methods; Frontiers in Behavioral Neuroscience; Neuroscience Letters; International Journal of Molecular Sciences; Progress in Neuro-Psychopharmacology & Biological Psychiatry; Brain Research Bulletin; The American Journal on Addictions; Journal of Affective Disorders*

TEACHING EXPERIENCE

<u>Course Name</u>	<u>Institution</u>	<u>Role</u>	<u>Years</u>	<u>Semesters</u>
Introductory Psychology	CMU	Teaching Assistant	2006-2007	3
Learning and Memory	CMU	Instructor, Graduate Assistant	2008	2
Application of Research Methods	CMU	Instructor, Graduate Assistant	2009-2010	3
Psychology of Learning	SVSU	Adjunct Faculty	2009	1
General Psychology	SVSU	Adjunct Faculty	2009-2010	3
Child Psychology	SVSU	Adjunct Faculty	2010	1
Introduction to Drugs, Behavior, and Society	Wayne	Guest Lecturer	2011-2012	2
Behavioral Neuroscience	CMU Global Campus	Adjunct Faculty	2012-2015	5
Learning and Memory	CMU Global Campus	Adjunct Faculty	2012	2
Research Methods	CMU Global Campus	Adjunct Faculty	2012-2013	2
Neurobiology of Disease	MSU	Guest Lecturer	2014-2018	5
Motivated Behaviors Graduate Seminar	MSU	Course Coordinator	2018-2022	4
Cellular and Molecular Biology Laboratory	MSU	Instructor/Course Coordinator	2019	2
Synaptic Transmission	MSU	Instructor	2020-2022	3

Abbreviations: CMU = Central Michigan University, SVSU = Saginaw Valley State University, Wayne = Wayne State University, MSU = Michigan State University

SELECTED MENTORING EXPERIENCE

<u>Trainee:</u>	<u>Dates:</u>	<u>Role:</u>	<u>Current:</u>
Chad Frasier, Ph.D.	2008-2009	Undergraduate Research Assistant, Oh-Lee Lab	Assistant Professor, East Tennessee State University COM
Oluyemi Olumolade	2009-2010	Undergraduate Research Assistant, Oh-Lee Lab	Medical Student, University of Michigan

Christopher Fitzpatrick, Ph.D.	2011-2012	MS Candidate, Biomedical Sciences Program, Perrine Lab,	Medical Science Liaison, Impel Pharmaceuticals, Nashville, TN
Kostika Mulo, D.O.	2011-2013	Undergraduate Research Assistant, Perrine Lab	Resident Physician, Spectrum Health, Grand Rapids, MI
Emily Potter, D.O.	2014-2015	Undergraduate Research Assistant, Robison Lab	Resident Physician, Beaumont Health, Plymouth, MI
Basma Al Masraf	2015-2016	Undergraduate Research Assistant, Robison Lab	Dual degree DO/PhD student, MSU College of Osteopathic Medicine
Lauren Gron	2016-2017	Undergraduate Research Assistant, Robison Lab	Clinical Data Management Programmer, PPD, Austin, TX
Alexis Wirtz	2017-2018	Undergraduate Research Assistant, Robison Lab	Medical Student, Oklahoma State College of Osteopathic Medicine
Katie Brandel-Ankrapp	2018-2020	Undergraduate Research Assistant, Robison Lab	PhD Student, Neuroscience Program, Baylor College of Medicine
Serena Simpson	2019	Undergraduate Research Assistant, Robison Lab	Medical Student, Wayne State University School of Medicine
Megan Dysktra	2019-2020	Undergraduate Research Assistant, Robison Lab	PhD Student, Neuroscience Program, University of Michigan
Daniela Bermudez	2021	Visiting Undergraduate Summer ENDURE Program Student	Undergraduate Student, University of Arizona
Hayley Kuhn	2019-2022	Undergraduate Research Assistant, Eagle Lab	PhD Student, Neuroscience Program, Oregon Health & Science University
Luis Colon-Serrano	2022-2023	Visiting Undergraduate Summer/Fall ENDURE Program Student	Undergraduate Student, University of Puerto Rico - Cayey

PUBLICATIONS

<https://www.ncbi.nlm.nih.gov/myncbi/andrew.eagle.1/bibliography/public/>

Mongredien R, Anesio A, Fernandes GJD, **Eagle AL**, Maldera S, Pham C, Vilette A, Bianchi PC, Franco C, Franck L, Gruszczynski C, Betancur C, Erdozain AM, Robison AJ, Boucard AA, Dondong JL, Cruz FC, Gautron S, Neck N, Vialou V (2023). Astrocytes control cocaine-induced synaptic plasticity and reward through the matricellular protein hevin. *bioRxiv*, 2023.03. 19.533284.

Fulton SL, Wenderski W, Lepack AE, **Eagle AL**, Fanutza T, Bastle RM, Ramakrishnan A, Hays EC, Neal A, Bendl J, Farrelly LA, Al-Kachak A, Lyu Y, Cetin B, Chan JC, Tran TN, Neve RL, Roper RJ, Brennand KJ, Roussos P, Schimenti JC, Friedman AK, Shen L, Blitzer RD, Robison AJ, Crabtree GR, Maze I (2022). Rescue of deficits by Brwd1 copy number restoration in the Ts65Dn mouse model of Down syndrome. *Nature Communications*, 13, 6384.

Kurt G, Kodur N, Rivera Quiles C, Reynolds C, **Eagle A**, Mayer T, Brown J, Makela A, Bugescu R, Delgado Seo H, Carroll QE, Daniels D, Robison AJ, Mazeir-Robison M, Leininger G (2022). Time to drink: Activating lateral hypothalamic area neurotensin neurons promotes intake of fluid over food in a time-dependent manner. *Physiology & Behavior*, 247; 113707.

Kwiatkowski CM, Akaeze H, Ndlebe I, Goodwin N, **Eagle AL**, Moon K, Bender AR, Golden SA, Robison AJ (2021). Quantitative standardization of resident mouse behavior for studies of aggression and social defeat. *Neuropsychopharmacology*, 46(9):1584-1593.

Doyle MA, Bali V, **Eagle AL**, Stark AR, Fallon B, Neve RL, Robison AJ, Mazei-Robison MS (2021). Serum- and glucocorticoid-inducible kinase 1 activity in ventral tegmental area dopamine neurons regulates cocaine conditioned place preference but not cocaine self-administration. *Neuropsychopharmacology*, 46(9):1574-1583.

Siemian JN, Arenivar MA, Sarsfield S, Borja CB, Erbaugh LJ, **Eagle AL**, Robison AJ, Leininger G, Aponte Y (2021). An excitatory lateral hypothalamic circuit orchestrating pain behaviors in mice. *eLife*, 2021;10: e66446.

Vanderplow AM, **Eagle AL**, Kermath BA, Bjornson KJ, Robison AJ, Cahill ME (2021). Akt-mTOR hypoactivity in bipolar disorder gives rise to cognitive impairments associated with altered neuronal structure and function. *Neuron*, 109(9):1479-96.e6.

Eagle AL, Manning CE, Williams ES, Bastle RM, Gajewski PA, Garrison A, Wirtz AJ, Akguen S, Brandel-Ankrapp K, Endege W, Boyce FM, Ohnishi YN, Mazei-Robison M, Maze I, Neve RL, Robison AJ (2020). Circuit-specific hippocampal Δ FosB underlies resilience to stress-induced social avoidance. *Nature Communications*, 11, 4484.

Kwiatkowski CM, Manning CE, **Eagle AL**, Robison AJ (2020). "The Neurobiology of Police Health, Resilience, and Wellness." POWER: Police Officer Wellness, Ethics, and Resilience. Ed. Papazoglou K and Blumberg DM. London: Academic Press; Chapter 6; p.77-96.

Williams ES, Manning CE, **Eagle AL**, Swift-Gallant A, Duque-Wilckens N, Chinnusamy S, Moeser A, Jordan C, Leininger G, Robison AJ (2019). Androgen-dependent excitability of mouse ventral hippocampal afferents to nucleus accumbens underlies sex-specific susceptibility to stress. *Biological Psychiatry*, 87(6): P492-501.

Gajewski PA, **Eagle AL**, Williams ES, Manning CE, Lynch H, McCornack C, Maze I, Heller EA, Robison AJ (2019). Epigenetic regulation of hippocampal *FosB* expression controls behavioral responses to cocaine. *The Journal of Neuroscience*, 39(42): 8305-14.

Manning CE, **Eagle AL**, Kwiatkowski CM, Achargui R, Woodworth H, Potter E, Ohnishi Y, Leininger GM, Robison AJ (2019). Hippocampal subgranular zone FosB expression is critical for neurogenesis and learning. *Neuroscience*, 406: 225-233.

Eagle AL, Al Masraf B, Robison AJ (2019). "Transcriptional and Epigenetic Regulation of Reward Circuitry in Drug Addiction." *Neural Mechanisms of Addiction*. Ed. Torregrossa M. Cambridge, MA: Academic Press; Chapter 3; p.23-34.

Eagle AL, Robison AJ (2018). GSK3 β in the prefrontal cortex: a molecular handle specific to addiction pathology? *Neuropsychopharmacology*, 43(13):2497-2498.

Eagle AL, Williams ES, Beatty JA, Cox CL, Robison AJ (2018). Δ FosB decrease excitability of dorsal hippocampal CA1 neurons. *eNeuro*, 5(4).

Pooley AE, Benjamin RC, Sreedhar S, **Eagle AL**, Robison AJ, Mazei-Robison MS, Breedlove SM, Jordan CL (2018). Sex differences in the traumatic stress response: the role of adult gonadal hormones. *Biology of Sex Differences*, 9(1):32.

Pooley AE, Benjamin RC, Sreedhar S, **Eagle AL**, Robison AJ, Mazei-Robison MS, Breedlove SM, Jordan CL (2018). Sex differences in the traumatic stress response: PTSD symptoms in women recapitulated in female rats. *Biology of Sex Differences*, 9(1):31.

Lisieski MJ, **Eagle AL**, Conti AC, Liberzon I, Perrine SA (2018). Single-prolonged stress: a review of two decades of progress in a rodent model of post-traumatic stress disorder. *Frontiers in Psychiatry*, 9:196.

Gajewski PA, **Eagle AL**, Robison AJ. "The Role of the Hippocampus in Cocaine Responses". The Neuroscience of Cocaine: Mechanisms and Treatment. Ed. Preedy VR. London: Academic Press; 2017.

Ohnishi YN, **Eagle AL**, Ohnishi YH, Cahill ME, Wirtz AJ, Robison AJ, Nestler EJ (2017). Generation and validation of a floxed FosB mouse line. *bioRxiv*, 8/22/2017.

Eagle AL, Gajewski PA, Robison AJ (2016). Role of hippocampal activity-induced transcription in memory consolidation. *Reviews in the Neurosciences*, 27(6):559-573.

Eagle AL, Mazei-Robison M, Robison AJ (2016). Sucrose preference test to measure stress-induced anhedonia. *Bio-protocol*, 6(11): e1822. <http://www.bio-protocol.org/e1822>

Eagle AL, Wang H, Robison AJ (2016). Sensitive assessment of hippocampal learning using temporally dissociated passive avoidance task. *Bio-protocol*, 6(11): e1821. <http://www.bio-protocol.org/e1821>

Perrine SA, **Eagle AL**, George SA, Mulo K, Kohler RJ, Gerard J, Harutyunyan A, Hool SM, Susick LL, Schneider BL, Ghoddoussi F, Galloway MP, Liberzon I, Conti AC (2016). Severe, multimodal stress exposure induces PTSD-like characteristics in a mouse model of single prolonged stress. *Behavioural Brain Research*, 303:228-237.

Eagle AL, Gajewski PA, Yang M, Al Masraf BS, Kechner ME, Kennedy PJ, Wang H, Mazei-Robison MS, Robison AJ (2015). Experience-dependent induction of hippocampal Δ FosB controls learning. *The Journal of Neuroscience*, 35:13773-13783.

Bosse KE, Charlton JL, Susick LL, Newman B, **Eagle AL**, Mathews TA, Perrine SA, Conti AC (2015). Deficits in behavioral sensitization and dopaminergic responses to methamphetamine in adenylyl cyclase 1/8-deficient mice. *Journal of Neurochemistry*, 135:1218-1231.

Vialou V, Thibault M, Kaska S, Gajewski P, **Eagle A**, Mazei-Robison M, Nestler EJ, Robison AJ (2015). Differential induction of FosB isoforms throughout the brain by fluoxetine and chronic stress. *Neuropharmacology*, 99:28-37.

Eagle AL, Singh R, Kohler RJ, Friedman AL, Liebowitz CP, Galloway MP, Enman NM, Jutkiewicz EM, Perrine SA (2015). Single prolonged stress effects on sensitization to cocaine and cocaine self-administration in rats. *Behavioural Brain Research*, 284:218-224.

Eagle AL, Olumolade OO, Otani H (2015). Partial dopaminergic denervation-induced impairment in stimulus discrimination acquisition in parkinsonian rats: A model for early Parkinson's disease. *Neuroscience Research*, 92:71-79.

Cates HM, Thibault M, Pfau M, Heller E, **Eagle A**, Gajewski P, Bagot R, Colangelo C, Abbott T, Rudenko G, Neve R, Nestler EJ, Robison AJ (2014). Threonine 149 Phosphorylation Enhances Δ FosB Transcriptional Activity to Control Psychomotor Responses to Cocaine. *The Journal of Neuroscience*, 34:11461-11469.

Eagle AL, Fitzpatrick CJ, Perrine SA (2013). Single prolonged stress impairs social and object novelty recognition in rats. *Behavioural Brain Research*, 256:591-597.

Eagle AL, Perrine SA (2013). Methamphetamine-induced behavioral sensitization in a rodent model of posttraumatic stress disorder. *Drug and Alcohol Dependence*, 131:36-43.

Eagle AL, Knox D, Roberts MM, Mulo K, Liberzon I, Galloway MP, Perrine SA (2013). Single prolonged stress enhances hippocampal glucocorticoid receptor and phosphorylated protein kinase B levels. *Neuroscience Research*, 75:130-137.

SELECTED TALKS

Department of Neuroscience, "Hippocampus and entorhinal neuronal circuits in cocaine reward and seeking." The University of Texas at Dallas; Feb 9, 2023.

Department of Biological Sciences, "Hippocampus and entorhinal neuronal circuits in cocaine reward and seeking." University of Toledo; Jan 26, 2023.

Department of Neuroscience, Developmental and Regenerative Biology, "Hippocampus and entorhinal neuronal circuits in cocaine reward and seeking." The University of Texas at San Antonio; Jan 17, 2023.

- Department of Anatomy & Neurobiology, "Hippocampus and entorhinal neuronal circuits in cocaine reward and seeking." University of Puerto Rico School of Medicine; Nov 23, 2022.
- Department of Psychology, "Cocaine remodels gene expression and physiology in hippocampal neurocircuits underlying drug seeking." University of Alabama-Birmingham; Mar 31, 2022.
- Department of Biomedical Sciences, "Cocaine remodels gene expression and physiology in hippocampal neurocircuits underlying drug seeking." Colorado State University; Mar 7, 2022.
- Department of Pharmacology and Experimental Therapeutics, "Cocaine reshapes the physiology of hippocampal neurocircuitry to drive drug reward." Uniformed Services University School of Medicine; Jan 19, 2022.
- Neuroscience Program Seminar, "Cocaine reshapes the excitability of a hippocampal-accumbens circuit." Michigan State University; Nov 1, 2021
- Department of Psychology, "Reshaping the activity of hippocampal circuits in neuropsychiatric disease." University of Wisconsin-Milwaukee; May 14, 2018.
- Department of Biological Sciences Seminar, "Circuit-specific hippocampal gene expression in psychiatric disease." Wayne State University; Apr 26, 2017.
- Department of Physiology Seminar, "Circuit-specific hippocampal gene expression in psychiatric disease." Michigan State University; Nov 3, 2016.