

Curriculum Vitae

Derick H. Lindquist, Ph.D.

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EDUCATION

- 2004 M.S., M.Phil., Ph.D., Behavioral Neuroscience, Yale University
Thesis: *Cortical-subcortical innervation of the amygdala: Dual input synaptic plasticity and auditory fear conditioning*
- 1995 B.A., Psychology, Weber State University

PROFESSIONAL EXPERIENCE

- 2010- Assistant Professor, Dept. of Psychology, The Ohio State University
- 2012- Assistant Professor, Dept. of Neuroscience, The Ohio State University
- 2009-2010 Senior Research Scientist, Dept. of Psychology, The Ohio State University
- 2006-2009 Research Associate, Dept. of Molecular Biosciences, University of Kansas
- 2004-2006 Postdoctoral Fellow, Dept. of Psychology, Indiana University

RESEARCH SUPPORT

- 2014-2015 **PI.** Dr. Derick H. Lindquist
SBS Small Research Grant, The Ohio State University
- 2012-2014 **PI.** Dr. Derick H. Lindquist
ABMRF, the Foundation for Alcohol Research, grant 60034780
- *An investigation into the neurodevelopmental consequences of neonatal ethanol exposure on forebrain NMDA receptor composition and function in classically conditioned adult rats.*
- 2009-2011 **Co-PIs.** Drs. William Hetrick and Joseph Steinmetz
Co-I. Dr. Derick H. Lindquist
National Institute of Health, R01 MH074983
- *Cerebellar timing dysfunction in schizophrenia.*
- 2004-2006 NRSA T32 Institutional research training grant award
- 2001-2004 NRSA F31 Predoctoral training grant award

PUBLICATIONS

Peer-Reviewed Research:

Lindquist, D.H. (In preparation) Emotion in motion: A three stage model of aversive Pavlovian conditioning.

- Pochiro, J.M., Goodfellow, M.J., Lee, M., and **Lindquist D.H.** (In preparation) Altered hippocampal-dependent GluN2B-mediated synaptic plasticity contributes to impaired trace fear conditioning in adult rats exposed to ethanol during early development.
- Goodfellow, M.J., Pochiro, J.M., Shin, Y., and **Lindquist, D.H.** (Submitted) Ibuprofen mitigates postnatal ethanol-induced neuroinflammation and ameliorates trace fear memory deficits in juvenile rats.
- MacIvane, N.M., Pochiro, J.M., Hurwitz, N.R., Goodfellow, M.J., and **Lindquist D.H.** (In press) Recognition memory is selectively impaired in adult rats exposed to binge-like doses of ethanol during early postnatal life. *Alcohol*.
- Pershing, M.L., Phenis, D., Valentini, V., Pocivavsek, A., **Lindquist, D.H.**, Schwarcz, R., Bruno, J.P. (In press) Prenatal kynurenine exposure results in age-dependent changes in NMDA receptor expression and conditioned fear response. *Psychopharmacology*.
- Pochiro, J. and **Lindquist, D.H.** (2016) Central amygdala lesions inhibit pontine nuclei acoustic reactivity and retard delay eyeblink conditioning acquisition in adult rats. *Learning and Behavior*, 40(2): 309-18.
- Goodfellow, M.J., Abdulla, K.A., and **Lindquist, D.H.** (2016) Neonatal ethanol exposure impairs trace fear conditioning and alters NMDA receptor subunit expression in adult male and female rats. *Alcoholism, Clinical and Experimental Research*, 40(2): 309-18.
- Goodfellow, M.J. and **Lindquist, D.H.** (2014) Significant long-term, but not short-term, hippocampal-dependent memory impairment in adult rats exposed to alcohol in early postnatal life. *Developmental Psychobiology*, 56(6): 1316-26.
- Dupont, C.M., Coppola, J.J., Kaercher, R.M., and **Lindquist, D.H.** (2014) Impaired trace fear conditioning and diminished ERK1/2 phosphorylation in the dorsal hippocampus of adult rats administered alcohol as neonates. *Behavioral Neuroscience*, 128(2): 187-198.
- Lindquist, D.H.** (2013) Hippocampal-dependent Pavlovian conditioning in adult rats exposed to binge-like doses of ethanol as neonates. *Behavioural Brain Research*, 242: 191-99.
- Lindquist, D.H.**, Sokoloff, G., Milner, E.E., and Steinmetz, J.E. (2013) Neonatal ethanol exposure results in dose-dependent impairments in the acquisition and timing of the conditioned eyeblink response and altered cerebellar interpositus nucleus and hippocampal CA1 unit activity in adult rats. *Alcohol*, 47(6): 447-57.
- Lindquist, D.H.**, Mahoney, L.P., and Steinmetz, J.E. (2010) Conditioned fear in adult rats is facilitated by the prior acquisition of a classically conditioned motor response. *Neurobiology of Learning and Memory*, 94(2): 167-75.
- Lindquist, D.H.**, Vogel, R.W., and Steinmetz, J.E. (2009) Associative and non-associative blinking in classically conditioned adult rats. *Physiology & Behavior*, 96 (3): 399-411.
- Vogel, R.W., Amundson, J.C., **Lindquist, D.H.**, and Steinmetz J.E. (2009) Eyeblink conditioning under an interstimulus interval switch in rabbits with a pharmacologically-disengaged cerebellar cortex. *Behavioral Neuroscience*, 123(1): 62-74.
- Lindquist, D.H.**, Sokoloff, G., and Steinmetz, J.E. (2007) Ethanol-exposed neonatal rats are impaired as adults in classical eyeblink conditioning at multiple unconditioned stimulus intensities. *Brain Research*, 1150: 155-166.
- Sokoloff, G., **Lindquist, D.H.**, and Steinmetz, J.E. (2006) The effect of context and CS preexposure on acquisition of the classically conditioned eyeblink response in rats. *International Journal of Comparative Psychology*, 19: 398-416.
- Lindquist, D.H.** and Brown, T.H. (2004) Temporal encoding in fear conditioning revealed through associative reflex facilitation. *Behavioral Neuroscience*, 118(2): 395-402.

- Lindquist, D.H.**, Jarrard, L.E. and Brown, T.H. (2004) Perirhinal cortex supports delay fear conditioning to rat ultrasonic social signals. *The Journal of Neuroscience*, 24(14): 3610-17.
- Lindquist, D.H.** and Brown, T.H. (2004) Amygdalar NMDA receptors control the expression of associative reflex facilitation and three other conditional responses. *Behavioral Neuroscience*, 118(1): 36-52.
- Choi, J.S., **Lindquist, D.H.**, and Brown, T.H. (2001) Amygdala lesions prevent conditioned enhancement of the rat eyeblink reflex. *Behavioral Neuroscience*, 115(4): 764-75.

Articles & Chapters:

- Lindquist, D.H.**, Steinmetz, J.E., Thompson, R.F. (2012) The cerebellum and classical eyeblink conditioning. In Manto, M., Gruol, D., Schmahmann, J., Koibuchi, N., Rossi, F. (Eds.) *Handbook of the Cerebellum and Cerebellar Disorders* (pp. 1175-1190), New York: Springer Science.
- Steinmetz, J.E. and **Lindquist, D.H.** (2009) Neuronal basis of learning. In Berntson, G.G., Cacioppo, J.T. (Eds.) *Handbook of Neuroscience for the Behavioral Sciences*, (pp. 507-527). Hoboken, NJ: John Wiley & Sons.
- Lindquist, D.H.** and Steinmetz, J.E. (2008) Classical conditioning. In Darity, W.A. (Ed.) *International Encyclopedia of Social Sciences, 2nd Ed., 9 vols.* (pp. 572-75). Farmington Hills, MI: Macmillan Reference USA.
- Brown, T.H., Furtak, S. and **Lindquist, D.H.** (2004) Hebbian synapses. In Adelman, G. and Smith, B.H. (Eds.) *Encyclopedia of Neuroscience, 3rd edition, (CD-ROM)*. New York, NY: Elsevier Science.
- Brown, T.H., Byrne, J.H., Labar, K., LeDoux, J., **Lindquist, D.H.**, Thompson, R.F., and Teyler, T.J. (2003) Learning and memory: Basic mechanisms. In Byrne, J.H. and Roberts, J.L. (Eds.) *Cellular and Molecular Neuroscience*, (pp. 499-574). San Diego, CA: Academic Press.
- Brown, T.H., and **Lindquist, D.H.** (2003) Long-term potentiation: Amygdala. In Byrne, J.H. (Ed.) *Learning and Memory, 2nd Ed.* (pp. 342-46). Farmington Hills, MI: Macmillan Reference.

INVITED TALKS AND COLLOQUIA

- Addiction: Brain and Behavior*. The Knox County Addiction Conference: Recovery Matters. Kenyon College, Gambier, OH, July 29, 2016.
- FASD: Rodent models and anti-inflammatory medications*. Department of Psychology and Neuroscience, Denison University, Granville, OH, November 19, 2015
- Teaching undergraduate neuroscience*. Midwest/Great Lakes Undergraduate Research Symposium in Neuroscience (mGluR) annual conference. The Ohio State University, Columbus, OH, October 3, 2015.
- Pathway to a neuroscience career*. Nu Rho Psi Honor Society Monthly Mojo. The Ohio State University, Columbus, OH, October 1, 2015.
- Depression: Behavior and the Brain*. No Place for Hate Week. The Ohio State University, Columbus, OH, April 13, 2015.
- Impaired synaptic plasticity and cognitive function in a rat model of Fetal Alcohol Spectrum Disorder*. Department of Neuroscience, Cell Biology, and Physiology Fall Seminar Series, Wright State University, Dayton, OH, September 5, 2014.
- Early life ethanol exposure induces long-lasting deficits in forebrain-dependent Pavlovian conditioning*. Dept. of Psychology, Miami University, Oxford, OH, May 9, 2014.
- A rodent model of Fetal Alcohol Syndrome: Impaired classical conditioning in adult animals*, Center for Cognitive Science Colloquium, The Ohio State University, Columbus, OH, March 2, 2012.
- Learning, with feeling*. Dept. of Psychology, The Ohio State University, Columbus, OH, Oct. 5, 2010.

Classical eyeblink conditioning: Behavior, Neurobiology, and the Neurodevelopmental consequences of alcohol. Dept. of Psychology, The Ohio State University, Columbus, OH, Dec. 2, 2009.

Fetal Alcohol Syndrome. Dept. of Molecular Biosciences, University of Kansas, Lawrence, KS, April 10, 2008; April 15, 2009.

Pavlovian conditioning: Motion and Emotion. Dept. of Molecular Biosciences, University of Kansas, Lawrence, KS, Nov. 11, 2008.

The effects of neonatal ethanol exposure on the developing cerebellum: Functional consequences in the adult rat. Merrill Conference: Neurobehavioral Approaches to the Study of Clinical Disorders, Tempe, AZ, March 13, 2008.

An animal model of fetal alcohol syndrome: Functional and structural consequences of neonatal ethanol exposure in the adult rat. Dept. of Molecular Biosciences, University of Kansas, Lawrence, KS, March 4, 2008.

Cortical-subcortical innervation of the amygdala: Dual input synaptic plasticity and auditory fear conditioning. Center for the Integrative Study of Animal Behavior (CISAB), Indiana University, Bloomington, IN, Dec. 4, 2004.

Perirhinal cortex-amygdala interactions in acquiring, encoding, and expressing complex S-R associations. Dept. of Psychology, Yale University, New Haven, CT, Oct. 17, 2003.

Perirhinal cortex required for delay fear conditioning to a complex auditory conditional stimulus. Pavlovian Society Annual Meeting, Indiana University, Bloomington, IN, Sept. 25-27, 2003.

Temporal encoding in fear conditioning revealed through modulation of the unconditioned eyeblink reflex. Neurobiology of Learning & Memory Annual Conference, Park City, UT, Jan. 11, 2003.

Antagonizing NMDA receptors in the rat amygdalar basolateral complex blocks expression of conditioned eyeblink enhancement. Neurobiology of Learning & Memory Annual Conference, Park City, UT, Jan. 12, 2002.

Fear-produced R1 enhancement is blocked by amygdala lesions. N.E.U.R.O.N. Conference. Wellsley, MA, April 8, 2001.

TEACHING EXPERIENCE

The Ohio State University

NGSP 7002, Foundations in Neuroscience, Spring 2013, Spring 2014

Psych 305, Drugs & Behavior, Spring 2012

Psych 313, Behavioral Neuroscience, Fall 2011

Psych 600, Psychology of Learning, Fall 2010, Winter 2011, Fall 2011, Winter 2012

Psych 726, Seminar in Behavioral Neuroscience, Spring 2011

Psych 3313, Introduction to Behavioral Neuroscience, Fall 2012, Spring 2014, Fall 2015

Psych 4501, Advanced Behavioral Neuroscience, Spring 2015

Psych 5600, Psychobiology of Learning and Memory: Spring 2013, Fall 2013, Fall 2014, Spring 2016

Psych 5898, Seminar in Behavioral Neuroscience, Spring 2013, Spring 2015

Psych 6806, Neurobiology of Learning and Memory, Spring 2014

Psych 7898, Advanced Seminar in Behavioral Neuroscience, Fall 2014

NGP 7887, Seminar Topics in Neuroscience, Fall 2013

The University of Kansas

Bio 435, Introduction to Neurobiology, Fall 2008

THESIS COMMITTEES

Senior Thesis

Connor Nealer, July 2015 (Committee Member)
Nicole MacIlvane, April 2015 (Research Advisor)
Ryan O'Neil, April 2015 (Committee Member)
Steven Platko, April 2015 (Committee Member)
Kathleen Kisserberth, April 2015 (Committee Member)
Khalid Abdulla, December 2014 (Research Advisor)
Joseph Pochiro, May 2013 (Research Advisor)
Alexis Wagner, April 2013 (Committee Member)
Caitlin Dupont, May 2012 (Research Advisor)
James Speildenner, May 2012 (Committee Member)
Aarthi Gobinath, April 2012 (Committee Member)

Masters

Molly Goodfellow, M.S., December 2013 (Research Advisor)
Sara Sabihi, M.S., August 2013 (Committee Member)
David Bortz, M.S., November 2012 (Committee Member)

Candidacy

Joseph Pochiro, August 2016 (Research Advisor)
Molly Goodfellow, November 2015 (Research Advisor)
Daniel Kochli, Miami University, August 2015 (Committee Member)
Michelle Pershing, December 2013 (Committee Member)
Jamie Pierson, Miami University, September 2013 (Committee Member)
Achik Haim, July 2013 (Committee Member)
Kristin Supe, September 2012 (Committee Member)
Katelin Hansen, April 2012 (Committee Member)

Ph.D.

Katelin Hansen, Ph.D., April 2015 (Committee Member)
Michelle Pershing, Ph.D., November 2014 (Committee Member)
Sarah Hopp, Ph.D., September 2014 (Committee Member)
Marissa Rodenburg, Ph.D., August 2014 (Grad Representative)
Kristin Supe, Ph.D., June 2014 (Committee Member)
John Morris, Ph.D., March 2013 (Committee Member)
Robert Mitchell, Ph.D., June 2013 (Grad Representative)
Katie Alexander, Ph.D., April 2011 (Committee Member)
Kelly Telu, Ph.D., March 2011 (Grad Representative)
Tom Scaife, Ph.D., August 2010 (Grad Representative)

ACADEMIC/SCIENTIFIC SERVICE

2008-2009 Co-organizer, Systems-level Neuroscience Symposium, University of Kansas

Ad-hoc Peer Review: *Acta Neurobiologiae Experimentalis*, *Alcohol*, *Alcoholism: Clinical and Experimental Research*, *Behavioral and Cognitive Neuroscience Reviews*, *Behavioral Neuroscience*, *Behavioral Sciences*, *Cerebellum*, *Frontiers in Psychiatry*, *Integrative Physiology*, *International Journal of Developmental Neurobiology*, *Journal of Neuroscience Research*, *Metabolic Brain Disease*, *Neurobiology of Aging*, *Neuropharmacology*, *Plos One*

Funding Agency Reviewer: Israeli Science Foundation, Biotechnology and Biological Sciences Research Agency (UK)

ACADEMIC/SCIENTIFIC AWARDS

2015-16 Psychology Department Distinguished Teaching Award, The Ohio State University

PROFESSIONAL SERVICE

The Ohio State University

Denman Undergraduate Research Forum Judge: 2010-

Neuroscience Undergraduate Major Steering Committee: 2012-

Neuroscience Undergraduate Research Symposium Judge: 2012-

Interdisciplinary Graduate Programs Symposium Judge: 2013-

Eminence Fellows Program, University Honors & Scholars Center: 2012-2013

CIC SROP (summer research opportunities program) Moderator: 2011

Honors Scheduling Bonanza: 2011

Neuroscience Graduate Program Poster Day Judge: 2010-2013

Hayes Forum Judge: 2010-2012

Institutional Animal Care and Use (IACUC) Member: 2010-2012

Department of Psychology

Diversity Committee, 2015-

Awards Committee: 2013-2015

BN Area Coordinator: 2013-2014

Business Continuity Planning Commission: 2011-2012

Developmental Neuroscience Search Committee: 2011-2012

Speakers Committee: 2010-2012

Equipment Committee (Chair): 2010-2012

PROFESSIONAL SOCIETIES

2013- Research Society on Alcoholism

2001- The Pavlovian Society

1999- Society for Neuroscience

1999-2001 American Association for the Advancement of Science (AAAS)