Andrew M. Poulos, Ph.D.
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Curriculum Vitae

Research Interests Neurobiological systems underlying Learning and Memory:

- Neuroanatomical circuits underlying amygdala, cerebellar and hippocampal based learning and memory.
- Circuit Compensation in Fear Conditioning
- Developmental Stress Related Alterations in Behavior and Neuroendocrine Function
- Ontogeny of Learning and Memory Systems

Education

Ph.D., Behavioral Neuroscience (Psychology),
UNIVERSITY OF SOUTHERN CALIFORNIA 2004
Thesis: *A Context for Timing, Conditioning, and Modification of Cerebellar Function*
Advisor: Professor Richard F. Thompson

B.A., Psychology
CALIFORNIA STATE UNIVERSITY, LONG BEACH 1999
Advisor: Professor John Jung
National Institute of Mental Health COR Scholar

Academic Positions

UNIVERSITY AT ALBANY, THE STATE UNIVERSITY OF NEW YORK
Assistant Professor
Department of Psychology 2013 – Present

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Research Assistant Professor II
Behavioral Testing Core Manager 2012 – 2013

UNIVERSITY OF CALIFORNIA, LOS ANGELES 2010 – 2013
Research Assistant Professor I
Department of Psychology and Brain Research Institute

UNIVERSITY OF CALIFORNIA, LOS ANGELES 2009 – 2013
Instructor

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Post-Doctoral Fellow with Michael S. Fanselow
Department of Psychology and Brain Research Institute 2005 - 2009

UNIVERSITY OF SOUTHERN CALIFORNIA
Graduate Research Assistant with Richard F. Thompson 1999 - 2004
Department of Psychology and Program in Neuroscience

UNIVERSITY OF SOUTHERN CALIFORNIA
Research Assistant with Richard F. Thompson 1998 – 1999
Program in Neurosciences

Teaching Experience

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Instructor:

Behavioral Neuroscience Methods	Psychology 116	2009 (summer)
Introduction to Psychobiology	Psychology 15	2011 (fall)
UCLA Extension Introduction to Psychobiology	Psychology x15	2011 (spring)

UNIVERSITY OF SOUTHERN CALIFORNIA
Teaching Assistant: 1999 – 2003
Animal Behavior
Psychophysiology of Emotions
Learning and Memory
Introduction to Psychology
Behavioral Neuroscience

Research Support

NIMH-COR	T34	1998-1999
NIMH-NRSA	T32	2005-2007
NIMH	RO1 supp (Co PI Poulos)	2010-2011
NIMH	RO3 (PI Poulos)	2012-2014

Mentoring

CURRENT ASSISTANTS & MENTEES:

Post Baccalaureate:	Irina Zhuravka (coauthor, submitted)
Post Baccalaureate:	Dorsa Amir (coauthor, submitted)
Undergraduate:	Nehali Mehta (coauthor, submitted)

SOCIETY FOR NEUROSCIENCE

Diversity in Neuroscience, Neuroscience Scholars Program 2008

Mentee:
Lucas Pinto, PhD (candidate)

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Graduate Students:
Maxine Reger, PhD (coauthor)
Vanessa Rodriguez
Virginia Long, PhD (coauthor, submitted)
Undergraduate Students:
Camille Gannam, DMD (candidate; coauthor, submitted)
Briana Livingston, MD (co-author, submitted)
Fonda Tokushige, MSW (co-author)
Veronica Li, MD (co-author)
Sarah Sterlace, PhD (candidate; co-author)

UNIVERSITY OF SOUTHERN CALIFORNIA
Graduate Students:
Karla Robleto, PhD (coauthor)
Narawut Pakaprot, PhD (coauthor)

Undergraduate Students:
Hiroko Nobuta, PhD (coauthor)
Benjamin Mahdi, MPF, MD (coauthor)

Academic Honors

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Brain Research Institute/ Semel Institute Neuroscience
Postdoctoral Fellow Award (Fine Science Tools) 2007

UNIVERSITY OF CALIFORNIA, LOS ANGELES
NIH-NRSA 2005-2007

CALIFORNIA STATE UNIVERSITY, LONG BEACH
NIH-COR Scholarship 1998-1999
President's Scholar 1997-1998
Undergraduate Psychology Research Proposal 1st Place 1999

Publications

Journal and Review Articles

1. **Poulos AM**, Reger ML, Giza CC, Hovda DA, Fanselow MS. Amnesia of Early Life Stress Does Not Preclude the Adult Development of PTSD Symptoms in Rats. *In Press*

2. **Poulos AM,** Mehta N, Amir D, Zhuravka I, Reger ML, Fanselow MS. The Impact of Fear Intensity and Time on Incubation, Generalization and Sensitization *Submitted*

3. **Poulos AM**, Zhuravka I, Long V, Gannam C, Fanselow MS. Fear Sensitization in Male and Female Rats. Submitted

4. Ponnusamy R, **Poulos AM,** Fanselow MS. Opiate Receptors Mediate the Recruitment of BLA-independent Fear Conditioning. *Submitted*

5. Reger ML, **Poulos AM**, Hovda DA, Giza CC, Fanselow M.S. Concussive brain injury enhances fear learning and excitatory processes in the amygdala. *Biological Psychiatry, 2012*

6. **Poulos AM**, Ponnusamy R, Dong HW, Fanselow MS. Compensation in the Neural Circuitry of Fear Conditioning: Awakening Learning Circuits in the Bed Nuclei of the Stria Terminalis. *Proceedings of the National Academy of Sciences,* 2010

7. **Poulos AM**, Li V, Sterlace S, Tokushige F, Ponnusamy R & Fanselow MS. Persistence of Fear Memory Across Time Requires the Basolateral Amygdala Complex. *Proceedings of the National Academy of Sciences,* 2009 106(28): 11737-41

8. **Poulos AM**, Nobuta H & Thompson RF. Disruption of the Cerebellar Cortical Inhibition in the Absence of Learning Promotes the Expression of Sensory-Evoked Eyeblink Responses. *Behavioral Neuroscience,* 2009 123(3): 694-700

9. Ponnusamy R, **Poulos AM** & Fanselow MS. Amygdala-Dependent and Amygdala-Independent Pathways for Contextual Fear Conditioning. *Neuroscience,* 2007 147(4): 919-27

10. **Poulos AM**, Pakaprot N, Mahdi B, Kehoe EJ & Thompson RF. Decremental Effects of *Context Exposure Following Eyeblink Conditioning in Rabbits. Behavioral Neuroscience,* 2006 120(3): 730-4

11. Fanselow MS & **Poulos AM**. The Neuroscience of Mammalian Associative Learning. *Annual Review of Psychology*, 2005 56: 207-34

12. Christian KM, **Poulos AM**, Lavond DG & Thompson RF, Comment on " Cerebellar LTD and Learning-Dependent Timing of Conditioned Eyeblink Responses". *Science* 2004 304(5668): 211

13. Robleto K, **Poulos AM**, Thompson RF. Brain Mechanisms of Extinction of the Classically Conditioned Eyeblink Response. *Learning and Memory*, 2004 11(5): 517-24

14. **Poulos AM** & Thompson RF. Timing of Conditioned Responses Utilizing Electrical Stimulation in the Region of the Interpositus Nucleus as CS *Integrative Physiological Behavioral Sciences* 2004 39(2): 83-84

15. Robleto K, **Poulos AM**, Thompson RF. Effects of a Corneal Anesthetic on Extinction of the Classically Conditioned Nictitating Membrane Response. *Behavioral Neuroscience* 2004 118(6): 1433

In Preparation

1. **Poulos AM** & Thompson RF. Evidence of Learning Related Modification of Cerebellar Stimulation Evoked Behaviors and Thresholds. *In Prep*

2. **Poulos AM**, Gou L, Hintiryan H, Dong HW. A Connectome and Behavioral Approach Towards Understanding a Genetic Model of Alzheimer's Disease. *In Prep*

3. **Poulos AM,** Reger ML, Giza CC, Hovda DA, Fanselow M.S. Differential Development of Long-Term Aversions and Preferences following Post-natal Fear Conditioning. *In Prep*

Book Chapters

1. Poulos AM & Thompson RF. Learning & Memory, Neural Mechanisms. (2004) *Encyclopedia of Neuroscience*

2. Christian KM, Poulos AM, Thompson RF. *Learning & Memory: Basic Principles as They Apply to Recovery from Neural Injury.* (2005) 1st edition

3. Poulos AM, Christian KM & Thompson RF. *Learning and Memory: A Comprehensive Reference*. (2008)

4. Christian KM, Poulos AM, Thompson RF. *Learning & Memory: Basic Principles as They Apply to Recovery from Neural Injury.* (2012) 2nd edition

Ph.D. Dissertation

A Context for Timing, Conditioning, and Modification of Cerebellar Function.
UNIVERSITY OF SOUTERN CALIFORNIA, 2004 (December)
Committee: Richard F. Thompson (chair), Larry Swanson, Ernest Greene & Stephen Madigan

Presentations & Abstracts

1. Poulos A.M. & Thompson R.F. (2001). Extracellular stimulation of the Interpositus Nucleus as a Conditioned Stimulus during Interstimulus Interval Shifts in Delay in Eye-blink conditioning. Soc. Neurosci. Abs. # 640.9

2. Robleto K., Poulos A.M. & Thompson R.F. (2001). Effects of a Corneal Anesthetic on the Extinction of the Classically Conditioned Nictitating Membrane Response in the Rabbit. Soc. Neurosci. Abs. # 640.20

3. Poulos A.M., Robleto K. & Thompson R.F. (2002). Effects of Sensory Stimulation and Learning on Excitability of the Interpositus Nucleus. Soc. Neurosci. Abs. # 79.1

4. Christian K.M., Poulos A.M., & Thompson R.F. (2002). Purkinje Cell Activity During Classical Conditioning of the Eyeblink Reflex in Rabbits. Soc. Neurosci. Abs. # 79.9

5. Poulos A.M., Nobuta H., & Thompson R.F. (2003). Effects of Intracerebellar Infusions of Picrotoxin on Sensory Stimulation. Soc. Neurosci. Abs. #87.19

6. Poulos A.M., Pakaprot N., Mahdi B., Kehoe E. & Thompson R.F. (2004). The Effects of Post-Training Exposure to the Conditioning Apparatus in Delay Eyeblink Conditioning. Soc. Neurosci. Abs. # 325.6

7. Poulos A.M. & Fanselow M.S. (2005). Lesions of the Bed Nucleus of the Stria Terminalis Disrupt Expression of Contextual Fear in Intact or Basolateral Nucleus of the Amygdala Lesioned Rats. Soc. Neurosci. Abs. # 414.24

8. Poulos A.M., Sterlace S. & Fanselow M.S. (2006). Deficits in remote but not recent long-term memory in the absence of the FTA: a retrieval or storage failure.
Soc. Neurosci. Abs. # 575.23

9. Poulos A.M., & Fanselow M.S. (2007a). The Bed Nuclei of the Stria Terminalis as a Compensatory Site of Fear Memory Consolidation Following Lesions of the Basolateral Amygdala Complex Lesions.
Soc. Neurosci. Abs. # 529.5

10. Poulos A.M., & Fanselow M.S. (2007b). Evidence that Fear is Forgotten in the Absence of the Basolateral Amygdala Complex.
Gordon Research Conference.

11. Poulos A.M., Reger M.L., Giza C.C., Hovda D.A., Fanselow M.S. A Single Stressful Event Prior to Weaning Enhances Adult Fear Learning in Rats. UCLA, CA: Center for Neurobiology of Stress: Annual Basic & Translational Symposium, 2008.

12. Reger M.L., Poulos A.M., Hovda D.A., Giza C.C., Fanselow M.S. Contextual Fear Enhancement Following Concussive Injury in Rats. National Neurotrauma Meeting, 2008

13. Reger M.L., Poulos A.M., Hovda D.A., Giza C.C., Fanselow M.S. Enhanced Context Fear After Traumatic Brain Injury: Support for a Rat Model of PTSD. Society for Neuroscience, 2008 Abs. # 519.9

14. Poulos A.M., Reger M.L., Giza C.C., Hovda D.A., Fanselow M.S. A Single Stressful Event Prior to Weaning Enhance Fear learning in Adult Rats. Society for Neuroscience, 2008 Abs. # 477.19

15. Reger M.L., Poulos A.M., Santa Maria N.S., Cai Y., Hovda D.A., Fanselow M.S., Giza C.C. Increased NR2A Subunit Expression within Amygdalar NMDA Receptors in Rats Exhibiting Enhanced Fear Conditioning Following Diffuse Brain Injury. International Neurotrauma Meeting, 2009

16. Poulos A.M., Livingston B., Fanselow M.S. Severity of Initial Fear Experience and Time Interact to Intensify and Generalize Fear Expression. Soc. Neurosci Abs. # 915.2

17. Reger M.L., Buen F., Poulos A., Hovda D., Fanselow M.S., Giza C. Concussive Brain Injury Results in Chances in Inhibitory and Excitatory Neurotransmission within Fear Conditioning Neural Circuits: A link between TBI and PTSD? Soc. Neurosci Abs. #915.6

18. Poulos A.M., Reger M.L., Dong H.W., Hovda D., Giza C., Fanselow M.S. Long-term Mnemonic and Non-mnemonic Effects of Early Life Fear Conditioning in Rodents. Gordon Conferences: Amygdala Health and Disease

19. Poulos A.M., Reger M.L., Dong H.W., Hovda D., Giza C., Fanselow M.S. Long-term Mnemonic and Non-mnemonic Effects of Early Life Fear Conditioning in Rodents. Federation of European Neurosciences: Barcelona, Spain

20. Poulos A.M., Reger M.L., Mehta N., Hovda D., Giza C., Fanselow M.S. Memory of an early post-natal traumatic event is not required for life-long PTSD related symptomology. Society for Neuroscience

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Invited Talks

1. *A Road to Fear Less Traveled: Alternate Neural Pathways in Fear Conditioning*
   Gordon Research Conference: The Amygdala in Health and Disease

Lewiston, Maine: July 31, 2007

2. *A Road to Fear Less Traveled: Roadblocks, Detours and Compensatory Neural Circuits in Fear Conditioning.*
   American Psychological Association: Division 6 Early Career Series
   Toronto, Canada: August 6, 2009

3. *A Memory within A Memory: A Mnemonic Role of the Amygdala in Cerebellar Eyeblink Conditioning*
   University of Southern California
   RF Thompson: A bridge between 20th and 21st century neuroscience
   Los Angeles, CA: May 20-21, 2010

4. *Pathways to Fear, Memory and Trauma:*

   Champalimaud Neuroscience Programme
   Instituto Gulbenkian de Ciencia
   Neuroscience Seminar
   Oeiras, Portugal: April 7, 2010

   New Jersey Medical School
   Newark, New Jersey: January 25, 2010

   Kent State University
   Kent, Ohio: February 16, 2010

5. *Towards a Neuro-Anatomical and Behavioral Characterization of Fear, Memory and Trauma:*

   The University of Michigan
   Ann Arbor, Michigan: January 12, 2012

   Loyola University Chicago
   Chicago, Illinois: January 25, 2012

   University at Buffalo, State University of New York
   Buffalo, New York; February 16, 2012

Service

Behavioral Neuroscience Search Committee 2013 (Fall)
General Education Committee 2013 (Fall)

National Science Foundation *Competitive Edge Program*
Scientific Presentations and Journal Reviews 2011-2012

- Journal Reviewer

1. Behavioural Processes
2. Neurobiology of Learning and Memory (Ad hoc)
3. Brain Research Reviews (Ad hoc)
4. Developmental Neuroscience

- Human Subject Pool Coordinator (University of Southern California) 2002 & 2004
- Brain Awareness Week (University of Southern California) 2003
- Neuroscience Graduate Forum (University of Southern California) 2003
- Careers in Psychology Forum (Pasadena City College, CA) 1999

Professional Memberships

Society for Neuroscience
American Psychological Association (Division 6)
Pavlovian Society

References

Michael S. Fanselow Ph.D.
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University of California, Los Angeles
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Richard F. Thompson Ph.D.
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Neuroscience Program
University of Southern California
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(213) 740-3406

David Hovda Ph.D.
Brain Injury Research Center, Director
Department of Neurosurgery
University of California, Los Angeles
Dhovda@mednet.ucla.edu
(310) 206-3480

Hongwei Dong M.D., Ph.D.
Assistant Professor
Laboratory of Neuro Imaging
Department of Neurology
University of California, Los Angeles
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Christopher C. Giza M.D.
Assistant Professor
Division of Neurosurgery, Pediatric Neurology
University of California, Los Angeles
CGiza@mednet.ucla.edu
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