

CURRICULUM VITAE
Apryl E. Pooley

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EDUCATION

PhD in Neuroscience

Michigan State University, East Lansing, MI

2011-present

MS in Biological Sciences

Eastern Illinois University, Charleston, IL

Thesis Title: *Estrogen Promotes Neurite Outgrowth in Olfactory Epithelial
Explant Cultures Through the Estrogen Receptor*

2009-2011

BS in Biological Sciences (University Honors)

Eastern Illinois University, Charleston, IL

Area of Concentration: Pre-Medicine/biology
Honors College program

2004-2008

PRIMARY RESEARCH INTERESTS

- Posttraumatic stress disorder pathology
- Posttraumatic stress disorder resilience and biomarkers
- Psychiatric disorder sex differences
- Neurodegenerative disease pathology

RESEARCH EXPERIENCE

Michigan State University, East Lansing, MI

Aug 2011-present

Graduate Student, Cynthia Jordan, PhD and Marc Breedlove, PhD

Jul 2013-present

- **Project:** *Sex differences in brain Mechanisms of Posttraumatic stress disorder (PTSD)*
- **Skills:** Single prolonged stress rat model of PTSD, acoustic startle test, light-dark box behavioral evaluation, elevated plus maze, rat tail vein blood collection, cFos immunohistochemistry

Graduate Student, Kathy Steece-Collier, PhD

Jul 2012-May 2013

- **Project:** *Immune suppression of graft-induced dyskinesias in Parkinsonian rats*
 - Determined the effect of immunosuppression with cyclosporine A in the development of graft-induced dyskinesias in rats that received embryonic dopamine neuron grafts.
 - **Skills:** Stereotaxic lesion surgery with 6-OHDA, embryonic microdissection, levodopa- and graft-induced dyskinesia behavioral rating, forepaw use cylinder testing, intraperitoneal and subcutaneous injections
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Graduate Student Rotation Jan 2012-Jul 2012

- Colleen Hegg, PhD
- **Skills:** Activated caspase-3 and TUNEL assays for measuring apoptosis, olfactory receptor neuron cell culture, BrdU labeling for cell proliferation, cryostat tissue sectioning, and fluorescent microscopy

Graduate Student Rotation Aug 2011-Dec 2012

- Kathy Steece-Collier, PhD
- **Skills:** Parkinson's disease behavioral evaluations in rats, intracardiac perfusions, vibratome and microtome sectioning, Golgi impregnation, confocal microscopy, and 3-D neuron reconstruction

Eastern Illinois University, Charleston, IL

Jan 2009-Jun 2011

Graduate Student, Britto Nathan, PhD

- **Project:** *Neurite Outgrowth in Olfactory Epithelial Explant Cultures*
- Characterized the distribution of estrogen receptors in mouse olfactory neuronal cultures and analyzed the effect of estradiol treatment on the cellular localization of the receptors and on cellular outgrowth
- **Skills:** Post-natal and adult brain tissue dissection, neuronal cell culture, immunocytochemical staining, fluorescent microscopy, polymerase chain reaction

TEACHING EXPERIENCE

Michigan State University, East Lansing MI

Undergraduate research mentor

- Beckman Scholar Program student: Rebecca Benjamin June 2014-present
- Neuroscience Program student: Grace Kamau Jan-May 2014

Graduate Teaching Assistant

- Introduction to Neuroscience II (NEU 302) Spring 2014

Invited Presentation

- MSU Biomolecular Sciences recruiting event Feb 2013

Eastern Illinois University, Charleston IL

Graduate Teaching Assistant

- Animal Physiology (BIO 3520) Spring 2011
- General Biology (BIO 1100) Fall 2010
- Plant Physiology (BIO 3510) Fall 2010
- Endocrinology (BIO 5406) Spring 2010
- Human Physiology (BIO 2091) Fall 2009, Spring 2011
- Genetics (BIO 3200) Fall 2009, Spring 2010

Undergraduate Teaching Assistant

- Human Anatomy (BIO 2200) Spring 2008

HONORS AND AWARDS

MSU College of Natural Sciences Dissertation Continuation Fellowship (\$6000)	2014
Eastern Illinois University Honors Program	2004-2008
Eastern Illinois University Dean's List	2007
National Science and Mathematics Access to Retain Talent Grant (\$4,000)	2006
Illinois State Scholar	2004

LEADERSHIP EXPERIENCE AND SERVICE

• Contributor, The Firecracker Foundation's "Why I Told" storytelling series --Awareness campaign for survivors of childhood sexual trauma	Oct 2014
• MSU 4H Exploration Days volunteer instructor	Jun 2014
• MSU Neuroscience Fair Booth Leader	Spring 2014
• River House, Inc. Domestic Violence and Homeless Shelter volunteer, Grayling, MI	Apr 2013
• Brain Awareness Week neuroscience fair volunteer, Grand Rapids, MI	Mar 2013
• WZZM "Healthy You" news segment feature, Grand Rapids, MI	Mar 2013
• MSU Brain Bee workshop assistant, East Lansing, MI	Nov 2012
• Brain Awareness Week elementary school demonstration, East Lansing, MI	Mar 2012
• Douglas-Hart Nature Center Volunteer, Mattoon, IL	Summer 2006

PROFESSIONAL MEMBERSHIPS

• Society for Neuroscience	2012-present
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PUBLICATIONS AND POSTERS

Publications

Hussain A, Luong M, **Pooley A**, and Nathan BP (2013). Isoform-Specific Effects of ApoE on Neurite Outgrowth in Olfactory Epithelium Culture. *Journal of Biomedical Science* 20:49.

O'Malley J, **Pooley AE**, Sortwell CE, Rademacher DJ, Gebre-Egziabher K, Collier TJ, Steece-Collier K. Enhancing the number of dopamine neurons grafted into the aged parkinsonian host does not allow for enhanced graft efficacy (in preparation 2013).

Jia C, Hayoz S, Hutch CR, Iqbal TR, **Pooley AE**, and Hegg C (2013). An IP3R3- and NPY-Expressing Microvillous Cell Mediates Tissue Homeostasis and Regeneration in the Mouse Olfactory Epithelium. *PLoS ONE* 8(3):e58668

Pooley, AE (2011). Estrogen Promotes Neurite Outgrowth in Olfactory Epithelial Explant Cultures Through the Estrogen Receptor. Master's thesis. Eastern Illinois University: Charleston, IL.

Posters

Pooley A. Robison, A.J., Mazei-Robison, M.S., Eagle, A.L., Breedlove, S.M., and Jordan, C.L. The Single Prolonged Stress (SPS) Model of Posttraumatic Stress Disorder (PTSD) Induces a PTSD-like Phenotype in Male Rats but a Depressive-Like Phenotype in Female Rats. Annual Society for Neuroscience Conference. Washington, D.C. November 2014. (Presented Poster)

Pooley A., Breedlove S.M., and Jordan, C.L. Sex-specific phenotypes in a rat model of post-traumatic stress disorder (PTSD). 3rd Annual MSU Conference on Women's Health Research. East Lansing, MI. Oct. 2014. (Presented Poster)

Pooley A., Breedlove S.M., and Jordan, C.L. Sex Differences in the Single Prolonged Stress Model of Posttraumatic Stress Disorder. Uniformed Services University Center for the Study of Traumatic Stress Annual Amygdala, Stress, and PTSD Conference. Bethesda, MA. April 2014. (Presented Poster)
