

## ERIC WILLIAM LUMSDEN

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### EDUCATION

University of Maryland, Baltimore, Baltimore, MD (2013-2019)

#### **Ph.D. in Toxicology**

Studying effects of in utero pesticide exposure on neurodevelopment and anti-depressant pharmacokinetics

GPA: 3.7

Syracuse University, Syracuse, NY (2011-2012)

#### **M.S. in Forensic Science**

GPA: 3.7

Boston College, Chestnut Hill, MA (2007-2011)

#### **B.S. in Chemistry**

Transferred from Western New England College

Minor: Music

GPA: 3.0

### CERTIFIED EXTERNAL COURSEWORK

#### **Using Databases with Python**

University of Michigan via Coursera | Certificate Received, March 2018

#### **Using Python to Access Web Data**

University of Michigan via Coursera | Certificate Received, February 2018

#### **Python Data Structures**

University of Michigan via Coursera | Certificate Received, January 2018

#### **Programming for Everybody (Getting Started with Python)**

University of Michigan via Coursera | Certificate Received, January 2018

#### **Computational Neuroscience**

University of Washington via Coursera | Certificate Received, January 2018

### WORK AND INTERNSHIP EXPERIENCE

#### **Dr. David J Perkel's Laboratory, University of Washington, Seattle WA**

##### **Post-Doctoral Scholar** (October 2019 – Present)

Studying the mechanisms and biophysics underlying seasonally-generated adult neurogenesis in the nuclei responsible for song production in songbirds.

#### **Drs. Edson Albuquerque and Edna Pereira-Albuquerque's Laboratory, University of Maryland, Baltimore, Baltimore, MD**

##### **Graduate Research Assistant** (May 2014 – October 2019)

Studying the effects of *in utero* pesticide exposure on brain development and synaptic activity of the CA1 region of the hippocampus

**WORK AND INTERNSHIP EXPERIENCE CONT'D****Dr. Rao Gullapalli's Laboratory, University of Maryland, Baltimore, Baltimore, MD****Graduate Research Assistant** (January 2014 – May 2014)

Imaged and analyzed data of different brain regions for a number of subjects from different projects using Magnetic Resonance Imaging techniques.

**Dr. Lee Blaney's Laboratory, University of Maryland Baltimore County,****Baltimore, MD | Graduate Research Assistant** (Summer 2013)

Developed a bacterial assay to measure pharmaceutical compounds in wastewater using *Escherichia coli* bacteria and ultraviolet-visible spectroscopy.

**Vermont Soy, Hardwick, VT****Quality Control Manager** (January 2013 – June 2013)

Completed biological testing on a variety of soy products, including tofu, soy milk and soy pudding to ensure product safety. Additionally, monitored equipment and product temperatures and cleanliness.

**Toxicology Department, Onondaga County Crime Labs, Syracuse, NY****Intern** (May 2012 – August 2012)

Developed protocol for extracting and measuring a primary component of a synthetic cannabinoid using liquid-liquid extraction and gas chromatography-mass spectrometry methodologies.

**STUDENT ORGANIZATIONS****Co-Founder & Co-President: Student Organization for Advocacy and Policy****University of Maryland, Baltimore, Baltimore, MD** (Winter 2016 – Spring 2019)

Responsible for the organization of meetings, selection of papers for discussion and aiding in recruitment of speakers for student education in Science Policy and Advocacy. Participated in the National Science Policy Group's Annual Hill Day [2017] and organized the Writing for Advocacy Workshop in coordination with the UMB Writing Center and Community Engagement Center as well as other student groups.

**Student Representative: Career Advisory Board****University of Maryland, Baltimore, Baltimore, MD** (2017 – 2019)

Advise and consult on speakers to present their post-graduation experiences to current students.

**Member: Students United for Policy, Education and Research****University of Maryland, Baltimore, Baltimore, MD** (Fall 2016 – Fall 2018)

Attend guest lectures and paper discussions on many different science policy topics.

**Operations Officer on the founding board: Scientists for Non-Academic Careers****University of Maryland, Baltimore, Baltimore, MD** (2015-2016)

Organized guest lecturers, ordered food and reserved rooms for meetings for the student-run organization, a group aimed at educating and exposing students to alternative career options of those with PhDs in the life sciences.

**Member: Neuroscience Outreach and Volunteer Association****University of Maryland, Baltimore, Baltimore, MD** (2014 – Summer 2018)

Participate in carrying out BINGO nights at Spring Grove Psychiatric Hospital in Catonsville, MD as well as hands-on educational displays at the Port Discovery Children's Museum in Baltimore, MD.

**Member and Student Teacher: The Committee for Creative Enactments****Boston College, Chestnut Hill, MA** (2008 – 2011)

Taught and performed improvisational and scripted comedy to/for peers at Boston College and competed in the Comedy Bean Pot, a comedy competition in Cambridge, MA.

## PROFESSIONAL SERVICE

*In vitro modeling of the disruptive effects of the organophosphorus insecticide chlorpyrifos on synaptic transmission in the developing hippocampus*

Poster Presentation, first and presenting author, Society for Neuroscience's Annual Meeting (October 2019)

*Effects of the organophosphorus insecticide chlorpyrifos on neuronal differentiation of the SH-SY5Y cell line: Involvement of cannabinoid type 1 receptors*

Poster Presentation, second and presenting author, Society for Neuroscience's Annual Meeting (October 2019)

*NMDA receptor function and the antidepressant effects of the ketamine metabolite (2R,6R)-hydroxynorketamine*

Poster Presentation, first and presenting author, Society for Neuroscience's Annual Meeting (November 2018)

*Systematic characterization of the ketamine metabolite (2R,6R)-hydroxynorketamine activity on NMDAR function: antidepressant relevance*

Poster Presentation, first and presenting author, University of Maryland's Department of Psychiatry Research Day and Program in Neuroscience's Annual Retreat (June 2018)

*The organophosphorus pesticide chlorpyrifos induces neuronal differentiation of SH-SY5Y Neuroblastoma Cells*

Poster Presentation, second and presenting author, Society of Toxicology's Annual Meeting (March 2018)

Official Blogger for Society for Neuroscience's Annual Meeting

Society for Neuroscience's "Neuroonline" platform (see below) (November 2017)

"Running Journal from an SfN Meeting First-Timer: Day-1," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/running-journal-from-an-sfn-meeting-first-timer-day-1/8347>.

"The wide applicability of stem cells," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/wide-applicability-of-stem-cells/8360>.

"Running Journal from an SfN Meeting First-Timer: Day 2," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/running-journal-from-an-sfn-meeting-first-timer-day-2/8365>.

"Gephyrin: A prime example of the importance of scaffolding proteins," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/gephyrin-a-prime-example-of-the-importance-of-scaffolding-proteins/8369>.

"Running Journal from an SfN Meeting First-Timer: Day 3," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/running-journal-from-an-sfn-meeting-first-timer-day-3/8370>.

"Running Journal from an SfN Meeting First-Timer: Day 4," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/running-journal-from-an-sfn-meeting-first-timer-day-4/8383>.

"Metabotropic mechanisms of NMDARs, the classically defined ionotropic receptors," Lumsden, E. Neuroonline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/metabotropic-mechanisms-of-nmdars-the-classically-defined-ionotropic-receptors/8384>.

## PROFESSIONAL SERVICE CONT'D

"Running Journal from an SfN Meeting First-Timer: Final thoughts and takeaways," Lumsden, E. Neuronline, Society for Neuroscience, November, 2017, <https://community.sfn.org/t/running-journal-from-an-sfn-meeting-first-timer-final-thoughts-and-takeaways/8396>.

*Sub-acute prenatal exposure to the organophosphorus pesticide malathion causes sex-specific spatial memory deficits*  
Poster Presentation, first and presenting author, Society of Toxicology's Annual Meeting (March 2017)

Contributing author to student run blog and a personal blog  
[benchtoomore.com/soap](http://benchtoomore.com/soap) | [medium.com/@eric.lumsden](https://medium.com/@eric.lumsden) (2016-Present)

## INSTITUTIONAL SERVICE

**Student Speaker**

University of Maryland, Baltimore Advancement to Candidacy Ceremony  
Provided personal guidance and encouragement to my peers that had recently advanced to candidacy based on my experiences as a PhD Candidate (March 2017)

**Graduate Student Tutor**

The Tutoring and Study Center, Syracuse University, Syracuse, NY (2011-2012)  
Tutored undergraduate students in both Organic and General Chemistry.

**Resident Advisor**

Boston College, Chestnut Hill, MA (2009-2011)  
Responsible for holding events for students as well as monitoring their safety and activities in my residential building at Boston College. In my Junior Year (2009-2010) I served on the substance free floor of Edmond's Hall which housed sophomores, juniors and seniors. In my Senior Year (2010-2011) I served as a Resident Advisor for freshman living in the Hardey-Cushing Building.

## PUBLICATIONS

"Learning and memory retention deficits in prepubertal guinea pigs prenatally exposed to low levels of the organophosphorus insecticide malathion." **Lumsden EW**, McCowan L, Pescrille JD, Fawcett WP, Hegang C, Albuquerque EX, Mamczarz J, Pereira EFR. *In review, Neurotoxicology and Teratology*

"Organophosphorus insecticides as developmental neurotoxicants: Potential mechanisms contributing to disruption of synaptic transmission and cognition." **Lumsden, EW**. PhD Dissertation, University of Maryland, Baltimore. ProQuest Publication Number 27545090. Oct 28, 2019.

"Antidepressant-relevant concentrations of the ketamine metabolite (2R,6R)-hydroxynorketamine do not block NMDA receptor function." **Lumsden EW.**, Troppoli, T.A., Myers, S.J., Zanos, P., Aracava, Y., Kehr, J., Moaddel, R., Kim, S., Wang, F., Schmidt, S., Jenne, C.E., Yuan, P., Morris, J.P., Zarate, C.A., Thomas, C.J., Traynelis, S.F., Pereira, E.F.R., Thompson, S.M., Albuquerque, E.X., Gould, T.D. *Proc Natl Acad Sci USA*, Vol 116(11), Mar 12, 2019, pp 5160-5169. doi: 10.1073/pnas.1816071116

"Developmental neurotoxicity of the organophosphorus insecticide chlorpyrifos: from clinical findings to preclinical models and potential mechanisms." Burke RD, Todd SW, **Lumsden E.**, Mullins RJ, Mamczarz J, Fawcett WP, Gullapalli RP, Randall WR, Pereira EFR, Albuquerque EX. *Journal of Neurochemistry*, Vol. 142, Special Issue on Cholinergic Mechanisms, Aug 8, 2017, pp 162 – 177.