

# ASHLEY OTERO

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## EDUCATION

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### Ph.D. in Neuroscience

Expected Spring 2025

University of Illinois Urbana-Champaign, Urbana, IL  
Laboratory of Dr. Adrienne Antonson, Ph.D.

### B.S. in Biological Engineering

Conferred May 2020

Purdue University, West Lafayette, IN  
Minor in Bioinformatics

## RESEARCH EXPERIENCE

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### Graduate Research Assistant of Antonson Lab

Spring 2021 – present

*University of Illinois Urbana-Champaign, Urbana, IL*

Investigating the implications of maternal inflammation during pregnancy on neurodevelopmental disorders in offspring using a mouse model of gestational influenza A virus

### Graduate Research Assistant of Inoue Lab

Fall 2020 – Spring 2021

*University of Illinois Urbana-Champaign, Urbana, IL*

Analyzed sex differences in aromatase expression in the brain and spinal cord using a mouse model of multiple sclerosis

### Undergraduate Research Assistant

Spring 2018 – Spring 2020

*USDA-ARS, West Lafayette, IN*

Employed molecular analysis of soybeans to select desirable genes for large-scale breeding

### Nonclinical Trials Intern

Summer 2019

*Cook Research Inc., West Lafayette, IN*

Assisted in survival and non-survival surgeries in porcine models as a trained surgical operator and created standard operating procedures

## TEACHING EXPERIENCE

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### MCB 245 & 247: Anatomy and Physiology Lab I & II

Fall 2021 – Spring 2022

*University of Illinois Urbana-Champaign, Urbana, IL*

Primary lab instructor to multiple 30-student classes. Organized and taught lectures, administered practical examinations with cadavers and models and provided support and mentorship to students during office hours

## PUBLICATIONS

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1. **Otero A.M.**, Antonson A.M. (2022). At the crux of maternal immune activation: Viruses, microglia, microbes, and IL-17A. *Immunological Reviews*. 311(1), 205-223. doi: 10.1111/imr.13125
2. Khaw Y.M., Anwar S., Zhou J., Kawano T., Lin P., **Otero A.**, ... Inoue, M. (2023). Estrogen receptor alpha signaling in dendritic cells modulates autoimmune disease phenotype in mice. *EMBO Reports*. 24:e54228. doi: 10.15252/embr.202154228

## CONFERENCE ABSTRACTS

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1. **Otero A.M.**, Connolly M.G., Gonzalez-Ricon R.J., Wang S.S., Antonson A.M. (2022). Murine influenza A virus disrupts immune profiles in the maternal gut and placenta during acute phase

infection in a dose-dependent manner. PsychoNeuroImmunology Research Society Annual Meeting, Zurich, Switzerland

2. **Otero A.M.**, Connolly M.G., Gonzalez-Ricon R.J., Wang S.S., Antonson A.M. (2022). Murine influenza A virus disrupts immune profiles in the maternal gut and placenta during acute phase infection in a dose-dependent manner. Brain, Glia, Immunology Symposium at Washington University, St. Louis, MO
3. **Otero A.M.**, Antonson A.M. (2021). Murine influenza A virus disrupts immune profiles in the maternal gut and placenta but not the fetal brain. Society for Neuroscience Annual Meeting, Virtual due to COVID-19
4. Gonzalez-Ricon R.J., **Otero A.M.**, Wang S.S., Connolly M.G., Brewster P.C., McKim D.B., Antonson A.M. (2022). Maternally derived molecules accumulate in the fetal brain during gestational viral infection. PsychoNeuroImmunology Research Society Annual Meeting, Zurich, Switzerland
5. Connolly M.G., Wang S.S., **Otero A.M.**, Gonzalez-Ricon R.J., Antonson A.M. (2022). Assessing the impact of live influenza A virus infection during pregnancy on glial transcripts in the fetal brain. PsychoNeuroImmunology Research Society Annual Meeting, Zurich, Switzerland
6. Wang S.S., Connolly M.G., **Otero A.M.**, Gonzalez-Ricon R.J., Brewster P.C., Doherty N.J., Antonson A.M. (2022). The effect of IL-17A on fetal neurodevelopment in germ-free mice. PsychoNeuroImmunology Research Society Annual Meeting, Zurich, Switzerland
7. Gonzalez-Ricon R.J., **Otero A.M.**, Wang S.S., Connolly M.G., Brewster P.C., McKim D.B., Antonson A.M. (2022). Tracing maternally derived molecules across the maternal-fetal interface. Brain, Glia, Immunology Symposium at Washington University, St. Louis, MO
8. Connolly M.G., Wang S.S., **Otero A.M.**, Gonzalez-Ricon R.J., Antonson A.M. (2022). Assessing the impact of live influenza A virus infection during pregnancy on glial transcripts in the fetal brain. Brain, Glia, Immunology Symposium at Washington University, St. Louis, MO
9. Wang S.S., Connolly M.G., **Otero A.M.**, Gonzalez-Ricon R.J., Brewster P.C., Doherty N.J., Antonson A.M. (2022). The effect of IL-17A on fetal neurodevelopment in germ-free mice. Brain, Glia, Immunology Symposium at Washington University, St. Louis, MO

## ORAL PRESENTATIONS

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1. **Otero A.M.** (2023) "Murine influenza A virus disrupts immune profiles in the maternal gut and placenta in a dose-dependent manner". PsychoNeuroImmunology Research Society Trainee Event, Virtual
2. **Otero A.M.** (2022) "Does gestational viral infection alter downstream inflammatory pathways in a way that disrupts fetal brain development?". Lightning Talk, University of Illinois Neuroscience Program Annual Retreat, Urbana, IL
3. **Otero A.M.** (2022) "Murine influenza A virus disrupts immune profiles in the maternal gut and placenta during acute infection in a dose-dependent manner". University of Illinois Neuroscience Program First Year Project Seminar, Urbana, IL
4. **Otero A.M.** (2021) "Murine influenza A virus disrupts immune profiles in the maternal gut and placenta but not the fetal brain". University of Illinois Neuroscience Program Society for Neuroscience Preview Night, Urbana, IL

## HONORS & AWARDS

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1 <sup>st</sup> place at AbbVie Hackathon (HackVie)	Summer 2023
Graduate College Travel Award	Spring 2023
Neuroscience Program Fellowship	Summer 2021 & Fall 2022
Oral Presentation Selection in Purdue Undergraduate Research Symposium	Spring 2018
Project Design Excellence in First Year Engineering	Spring 2017

## **CERTIFICATIONS**

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### **Certificate in Computational Genomics**

**Summer 2023**

*Mayo Clinic & Illinois Alliance, Urbana, IL*

## **LEADERSHIP & SERVICE**

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### **Social Chair**

**Fall 2021-Spring 2022**

*Neuroscience Student Organization, Urbana, IL*

Facilitated social events for students in the Neuroscience Program and acted as a liaison between students and administration

### **Student Ambassador**

**Fall 2018 – Fall 2019**

*ABE Ambassadors, West Lafayette, IN*

Served as a resource and role model for prospective and admitted students in agricultural and biological engineering