

# Erin Harris, PhD

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## EDUCATION

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- PhD** Neuroscience, August 2017  
University of Virginia, Neuroscience Graduate Program  
Charlottesville, Virginia  
Dissertation title: "The effects of bisphenol A exposure and calbindin knockout on behavior, gene expression, and sexual differentiation of the brain"
- BS** Neuroscience, May 2012, *magna cum laude*  
Tulane University, Department of Science and Engineering  
New Orleans, Louisiana  
Honors thesis title: "The role of corticosterone in acute stress-mediated molecular changes in the hippocampus"

## RESEARCH EXPERIENCE

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- Postdoctoral IRTA Fellow** 2022 – Present  
Serena Dudek, PhD  
National Institute of Environmental Health Sciences (NIEHS); Durham, NC  
Neurobiology Laboratory, Synaptic & Developmental Plasticity Group
- Examining the molecular role of mineralocorticoid receptors in regulating gene expression in hippocampal area CA2 using novel spatial transcriptomic analyses.
- Postdoctoral Researcher** 2018 – 2021  
Olivia O'Leary, PhD  
University College Cork; Cork, Ireland  
Department of Anatomy and Neuroscience
- Conducted preclinical research investigating the sex-specific effects of stress during puberty on depressive-like behaviors, hippocampal gene expression, and adult hippocampal neurogenesis in rats.
- Graduate Researcher** 2012 – 2017  
Emilie Rissman, PhD  
University of Virginia; Charlottesville, VA  
Neuroscience Graduate Program
- Determined the neurobehavioral impact of gestational and transgenerational exposure to the environmental endocrine disrupting chemicals bisphenol A (BPA) and di-(2-ethylhexyl) phthalate (DEHP) exposure in mice.
  - *The Rissman lab moved to North Carolina State University in 2015*
- Undergraduate Researcher** 2009 – 2012  
Laura Schrader, PhD  
Tulane University; New Orleans, LA  
Cell & Molecular Biology Department, Neuroscience Program

## PUBLICATIONS

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- Harris EP, Villalobos-Manriquez F, Clarke G, O'Leary OF.** (2022) Stress during puberty exerts sex-specific effects on antidepressant-like behavior and monoamine neurotransmitters in adolescence and adulthood. *Neurobiology of Stress*. Accepted.
- Harris EP, McGovern AJ, Melo TG, Barron A, Nolan YM, O'Leary OF.** (2022) Juvenile stress exerts sex-independent effects on anxiety and antidepressant-like behaviours and and

dopaminergic innervation of the prelimbic cortex in adulthood and does not alter hippocampal neurogenesis. *Behavioural Brain Research*. 421: 113725 doi: [10.1016/j.bbr.2021.113725](https://doi.org/10.1016/j.bbr.2021.113725)

Henriksen AD, Andrade A, **Harris EP**, Rissman EF, Wolstenholme JT. (2020) Bisphenol A exposure in utero disrupts hypothalamic gene expression particularly genes suspected in autism spectrum disorders and neuron and hormone signaling. *International Journal of Molecular Sciences*. 21(9), 3129. doi: [10.3390/ijms21093129](https://doi.org/10.3390/ijms21093129).

Drobná Z, Henriksen AD, Wolstenholme JT, Shang S, Lambeth P, **Harris EP**, Zhou C, Flaws JA, Adli M, Rissman EF. (2018) Transgenerational effects of Bisphenol A on gene expression and DNA methylation of imprinted genes in brain. *Endocrinology* 159(1): 123-144. doi: [10.1210/en.2017-00730](https://doi.org/10.1210/en.2017-00730).

**Harris EP**, Allardice HA, Schenk AK, Rissman EF. (2018) Effects of maternal or paternal bisphenol A on offspring behavior. *Hormones and Behavior* 101, 68-76. doi: [10.1016/j.yhbeh.2017.09.017](https://doi.org/10.1016/j.yhbeh.2017.09.017).

Quinnies KM\*, **Harris EP\***, Snyder RW, Sumner SS, Rissman EF. (2017) Direct and Transgenerational Effects of Low Doses of Perinatal Di-(2-Ethylhexyl) Phthalate (DEHP) on Social Behaviors in Mice. *PLOS ONE* 12(2): e0171977. doi: [10.1371/journal.pone.0171977](https://doi.org/10.1371/journal.pone.0171977).

**Harris EP\***, Abel JM\*, Tejada LD, Rissman EF. (2016) Calbindin Knockout Alters Sex-Specific Regulation of Behavior and Gene Expression in Amygdala and Prefrontal Cortex. *Endocrinology* 157:1967–1979. doi: [10.1210/en.2016-1055](https://doi.org/10.1210/en.2016-1055).

Quinnies KM, Bonthuis PJ, **Harris EP**, Shetty SR, Rissman EF. (2015) Neural growth hormone: regional regulation by estradiol and/or sex chromosome complement in male and female mice. *Biology of Sex Differences* 6:8. doi: [10.1186/s13293-015-0026-x](https://doi.org/10.1186/s13293-015-0026-x).

Ferland CL, **Harris EP**, Lam M, Schrader LA. (2014) Facilitation of the HPA axis to a novel acute stress following chronic stress exposure modulates histone acetylation and the ERK/MAPK pathway in the dentate gyrus of male rats. *Endocrinology* 155:2942–52. doi: [10.1210/en.2013-1918](https://doi.org/10.1210/en.2013-1918).

[\* co-first author]

## ORAL PRESENTATIONS

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**Harris EP**, Wang T, Proaño S, Singh P, Xu X, Catalan Gallegos V, Dudek SM. (2022) Mineralocorticoid receptors are required for the molecular profile of neurons in hippocampal area CA2: a spatial transcriptomic analysis

- Society for Behavioral Neuroendocrinology (SBN) 2022 Annual Meeting; Atlanta, GA

**Harris EP**, O’Leary OF. (2021) Stress, Sex, and Adolescence

- *NeuroConnect Forum*, organized by Neuroscience Ireland Early Career Researchers Network (NSI-ECRN) [Virtual]

**Harris EP**, Villalobos-Manriquez F, Clarke G, O’Leary OF. (2020) Sex-specific effects of stress during puberty on antidepressant-like behaviour and monoamine neurotransmitters in adolescence and adulthood

- Neuroscience Ireland Young Investigator Symposium 2020 [Virtual]

## SELECTED POSTER PRESENTATIONS

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**Harris EP**, Wang T, Proaño S, Singh P, Xu X, Catalan Gallegos V, Dudek SM. (2022) Mineralocorticoid receptors are required for the molecular profile of neurons in hippocampal area CA2: a spatial transcriptomic analysis

- Society for Behavioral Neuroendocrinology (SBN) 2022 Annual Meeting; Atlanta, GA
- Triangle Chapter Society for Neuroscience Annual Meeting. Durham, NC

**Harris EP, Villalobos-Manriquez F, Clarke G, O’Leary OF. (2020)** Stress during puberty exerts sexually dimorphic effects on antidepressant-like behaviour and monoamine neurotransmitters in adolescence and adulthood

- 59<sup>th</sup> Annual Meeting of the American College of Neuropsychopharmacology (ACNP) [Virtual] *Neuropsychopharmacology* 45, 278–382; Poster W89. doi: [10.1038/s41386-020-00892-5](https://doi.org/10.1038/s41386-020-00892-5)

**Harris EP, Villalobos-Manriquez F, Clarke G, O’Leary OF. (2020)** Stress during puberty exerts sexually dimorphic effects on antidepressant-like behaviour and monoamine neurotransmitters in adolescence and adulthood

- Federation of European Neuroscience Societies (FENS) 2020 [Virtual]
- International Behavioral Neuroscience Society (IBNS) 2020 Poster Session [Virtual]

**Harris EP, O’Leary OF. (2019)** Behavioural Effects of Juvenile Stress in Adult Male and Female Rats

- Organization for the Study of Sex Differences (OSSD) Annual Meeting. Washington, DC

**Harris EP, Codagnone MG, Kavanagh LN, Nolan YN, O’Leary OF. (2019)** Sex Differences in Sensitivity of Hippocampal Neurogenesis to the Stress Hormone Corticosterone

- OSSD Annual Meeting. Washington, DC

**Harris EP, Codagnone MG, O’Leary OF. (2018)** Intrinsic sex differences in hippocampal neurogenesis and its regulation by the stress hormone corticosterone

- Young Neuroscience Ireland Symposium 2018. Dublin, Ireland
- UCC New Horizons Research Conference. Cork, Ireland

**Harris EP, Schenk AK, Rissman EF. (2017)** Effects of gestational bisphenol A exposure on behavior and ultrasonic vocalizations in offspring

- Triangle Chapter Society for Neuroscience Spring Conference. Durham, NC

## **AWARDS & HONORS**

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### **Data Blitz Presentation Award Winner**

- Neuroscience Ireland Young Investigator Symposium 2020

### **IBANGS Outstanding Junior Scientist Travel Award**

- FENS Forum 2020

### **Neuroscience Ireland Travel Award Recipient**

- FENS Forum 2020

### **Tulane University “Senior Scholar Award” in Neuroscience; 2012**

- Awarded to the most outstanding neuroscience major in the Honors Program

## **TEACHING AND MENTORING**

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### **UCC Dept. of Anatomy & Neuroscience – Ad hoc lecturer**

- AN4013: Advanced Topics in Neuroscience 2018
- AN2060/2061/2006: Neuroanatomy & Embryology for Occupational Therapy/Speech and Language Therapy/Dental Students 2019

### **Research supervisor**

- Final year project supervisor for 5 BSc students, UCC 2018-2021
- MSc Erasmus internship supervisor, UCC 2020

- Final year medical student project supervisor, UCC 2020
- Irish Health Research Board (HRB) Summer Research Student Scholar 2019
- Undergraduate project supervisor, NC State University 2017

### **SCIENCE EDUCATION & OUTREACH**

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- SfN/BrainFacts.org Brain Awareness, Top 10 “People’s Choice”** 2022
  - [“I Can See Clearly Now, The Brain is Gone: Tissue Clearing as a Tool to Visualize Neuronal Projections”](#) by Preston Siegler, Erin Harris, Sarah Jo Sleiman, Stephanie Jones
- I’m a Scientist, Get me out of here*** 2021
  - I’m a Scientist is an online, student-led STEM enrichment activity connecting students with scientists through energetic, real-time text-based chats.
- Pint of Science Ireland, Invited Speaker** 2018
  - Title: “The Future is (50%) Female”
- Brain Awareness Night, Invited Speaker** 2016  
North Carolina Museum of Natural Sciences
  - Title: “BPA, Behavior, and the Brain”

### **LEADERSHIP**

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- NIEHS 25<sup>th</sup> Annual Biomedical Career Symposium** 2022
  - Arts, Photography and Booklet Committee member
- Neuroscience Ireland Early Career Research Network (NSI-ECRN)** 2021
  - Founding committee member, Communications chair
- Pint of Science Ireland** 2019-2021
  - Cork Team Event Manager
- Neuroscience Ireland Young Investigator Symposium** 2020
  - Organizing committee, social media chair

### **PEER REVIEW**

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- Behavioural Pharmacology* 2021
- Nutrients* 2020
- Neuropharmacology* 2019
- Scientific Reports* 2019
- Physiology & Behavior* 2019
- Behavioural Brain Research* 2018

### **ADDITIONAL TRAINING**

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- Bioinformatics for Analysis of Data Generated by Next-Generation Sequencing Jun-Aug 2022
  - (NIEHS) Foundation for Advanced Education in the Sciences (FAES@NIH), 8-week course
- Translational Science Training Program (TSTP) April 2022

- (NIEHS) National Center for Advancing Translational Sciences (NCATS) workshop for NIH intramural trainees to learn more about the bench-to-bedside process, 2-day intensive workshop

Introduction to Project Management – Management Concepts March 2022

- (NIEHS) 3-day workshop

VidAcademy Video Production Bootcamp April 2021

- (UCC) Video production, Adobe Premiere Rush video editing software workshop

The Odyssey Programme, University College Cork Nov 2019

- (UCC) 2-day workshop to inform researchers how to pursue careers beyond academia