

Erin E. McNell

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EDUCATION

University of North Carolina at Chapel Hill, Chapel Hill, NC

Ph.D., Toxicology and Environmental Medicine, In Progress

St. Bonaventure University, St. Bonaventure, NY

B.S., Biochemistry with Honors, May 2020

Overall GPA: 3.82 Major GPA: 3.65

RESEARCH EXPERIENCE

National Institute of Environmental Health Sciences, Durham, NC

Graduate Research Assistant, Drs. Suzanne Fenton and Kelly Ferguson, February 2021-Present

Investigate the relationship between personal care product-derived phthalate exposure and the onset of preeclampsia in pregnancy

- Assess changes in expression of urinary biomarkers of preeclampsia throughout pregnancy using samples from a cohort of preeclamptic and normotensive women
- Identify effects of phthalate exposure versus control exposure in a preeclamptic rat model
- Examine cellular effects of phthalate exposure on kidney and placental cell lines *in vitro*

University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, NC

Graduate Research Assistant, August 2020-February 2021

Completed two 10-week laboratory rotations in varying fields of toxicology

- Dr. Ilona Jaspers & Dr. Meghan Rebuli, Sex differences in effect of ozone on inflammatory response within nasal epithelium
- Dr. Folami Ideraabdullah, Epigenetic changes in development of gestational diabetes

St. Bonaventure University, Department of Biology, St. Bonaventure, NY

Animal Development Researcher under Dr. Sean Ryan, January 2019-Present

Study the effect of disinfectant byproducts (DBPs) on the development and lifecycle of zebrafish

- Treated zebrafish embryos with DBPs and observing their development over time
- Photographed treated embryos to document their development as compared to control
- Performed statistical analysis to quantify effects of DBPs on jaw development

University at Buffalo, CLIMB UP for Summer Research, Buffalo, NY

Summer Research Fellow under Dr. Caroline Bass, Summer 2018

Traced GABAergic projection neurons from ventral tegmental area to prefrontal cortex

- Sectioned brain tissue from rats that had been injected with AAV constructs
- Performed immunohistochemistry to report mCherry expression
- Analyzed signal patterns in GPNs originating along the anterior-posterior axis of VTA

RESEARCH SKILLS

Wet Lab Skills: Microscopy, dechoriation, tissue fixation, tissue pulverization, Alcian blue staining, PCR, qPCR, DNA extraction, DNA gel electrophoresis, immunohistochemistry, tissue sectioning, ELISA, pyrosequencing assay design, necropsy (mouse)

Data Processing: Microsoft Excel, GraphPad Prism, JMP Pro

AWARDS AND HONORS

Top Biology Student, St. Bonaventure University, Spring 2020

Borer Research Fellow, St. Bonaventure University, Summer 2019

Worden Research Award Recipient, St. Bonaventure University, Fall 2019

Dean's List, St. Bonaventure University, All Academic Semesters 2016-2020

PUBLICATIONS

Barrett M. Welch, Erin E. McNell, Matthew L. Edin, Kelly K. Ferguson. (2022). **Inflammation and oxidative stress as mediators of the impacts of environmental exposures on human pregnancy: Evidence from oxylipins.** *Pharmacology & Therapeutics*.

ABSTRACTS AND PRESENTATIONS

Erin E. McNell, Alexia N. Perryman, Yael N. Escobar, Hye-Young H. Kim, Ned A. Porter, Ilona Jaspers, and Meghan E. Rebuli. Ozone exposure differentially affects inflammatory response in primary human nasal epithelial cells from males and females. Society of Toxicology Annual Meeting and ToxExpo, March 25th, 2021. (Presentation).

Erin McNell. An investigation of the effects of disinfection byproducts on embryonic craniofacial development in zebrafish. St. Bonaventure Biochemistry Student Seminar, St. Bonaventure, New York. May 1st, 2020. (Presentation).

Erin McNell, Kyra Yanusas, Shannon Keller, Sean Ryan. The effects of three disinfection byproducts on zebrafish embryogenesis. 78th Annual Society for Developmental Biology Meeting. Boston, Massachusetts. July 26th, 2019. (Poster).

Erin McNell, Kyra Yanusas, Shannon Keller, Sean Ryan. Comparing the effects of DBPs on the development of zebrafish embryos with or without chorions. St. Bonaventure Arts & Sciences Exposition, St. Bonaventure, New York. May 2nd, 2019. (Poster).

Erin McNell, Jordan Howard, Malte Feja, Caroline Bass. A combinatorial viral vector approach for targeting GABAergic projection neurons from the ventral tegmental area to the prefrontal cortex (to gain insight on substance abuse). University of Buffalo Summer Research Day, Buffalo, New York. August 4th, 2018. (Poster).

PROFESSIONAL ASSOCIATIONS

American Chemical Society (ACS)

American Society for Biochemistry and Molecular Biology (ASBMB)

American Society for Pharmacology and Experimental Toxicology (ASPET)

LEADERSHIP EXPERIENCE

Student Chapter, ASBMB, St. Bonaventure University, Spring 2018-Spring 2020

President (Spring 2019-Spring 2020), *Secretary* (Spring 2018-Spring 2019)

- Organize and participate STEM Outreach events in local K-12 schools
- Develop STEAM activities to help local teachers bring STEAM into the classroom

Campus Activities Board, St. Bonaventure University, August 2018-Spring 2020

Vice President (Spring 2019-Spring 2020), *Executive Board Member* (Spring 2017-Fall 2018)

- Planned, advertised, and execute on- and off-campus events for St. Bonaventure students

Student Success Center, St. Bonaventure University, Fall 2017-Spring 2020

Peer Tutor

- Tutor students in Biology, Microbiology, Chemistry, Calculus, and Spanish courses

Biochemistry Department, St. Bonaventure University, Spring 2019-Spring 2020

Peer Mentor

- Mentor fellow Biochemistry majors to improve their study skills and academic standing

Office of Admissions, St. Bonaventure University, Spring 2017-Spring 2020

Student Ambassador

- Market the university to perspective students and their families via tours and open houses