

Stanford



Kelly Vanden

Research Assistant, Neurology

SUPERVISORS

- Elizabeth Mayne

Bio

BIO

Kelly's independent research experiences began prior to her collegiate career, where she worked as a research assistant in several research laboratories at Penn State University. Under the supervision and mentorship of Dr. Meg Small, Kelly conducted her own research as Primary Investigator, published in the Journal of Emerging Investigators in September 2019. Kelly then moved on to work as a research assistant in Dr. Sonia Cavigellis's Behavioral Neuroendocrinology Lab, in the BioBehavioral Health Department at Penn State University. In this lab Kelly explored the connection between asthma and anxiety levels, using elevated plus maze statistics and other behavioral assays. Kelly was tasked with injecting mice with doses of saline/HDM to simulate asthma, and generated elevated plus maze data to test the effect of asthma on anxiety levels. Here, Kelly learned several fundamental laboratory skills, including the conduction of sacrificial dissection and heart perfusion of treated mice, to measure effects on the spleen, lungs, brain, and heart. She presented her research findings at several undergraduate poster sessions at Penn State University. Kelly presented these research findings in the Undergraduate Research Exhibition at Penn State. Her presentation earned her First Place, Health & Life Sciences and Third Place at the Penn State BioBehavioral Health Research Forum, in 2019. Kelly continued this independent research style and scientific career as an Honors Student at UNC Chapel Hill. Throughout her career as a student at UNC Chapel Hill, she worked in several laboratory positions, but most recently as a research assistant in Dr. Zylka's research laboratory, in the UNC School of Medicine. Her senior year, Kelly was accepted into the Honors Thesis research program at the University. Kelly independently conducted her own research study titled, "Evaluating Combination Frequency and Cross Correlation of Facial Action Units within Grimace Scores of Mouse Models". She presented her findings at the Undergraduate Biology Honors Thesis Research Symposium. Her research is listed as one of the top authorship roles in Dr. Zylka's research paper, submitted for publication in Nature Communications, in January 2023. Kelly also gained international laboratory experience during her work at the Institute of Molecular Biology in Barcelona, Spain. Here, she worked under Dr. Mariona Arbones, researching proliferation and differentiation of the nervous system, specifically focusing on the role of kinase DYRK1A in cortical development.

CURRENT ROLE AT STANFORD

As a Laboratory Research Technician in Dr. Marion Buckwalter's Laboratory, Kelly conducts research that explores inflammatory responses after brain injury affect neurological recovery. Kelly works directly with Dr. Elizabeth Mayne in her exploration of long term adolescent recovery after stroke.

HONORS AND AWARDS

- Honors Thesis, University of North Carolina at Chapel Hill - Honors College (November, 2022)