

I have had the pleasure and privilege to have been exposed to research throughout my undergraduate study. Since the summer of 2015, I have studied the relationship between structure and potency of small-molecule inhibitors of amyloid- β aggregation using UV-visible, fluorescence, and circular dichroism spectroscopy at Winthrop University. I took a break from this project in the summer of 2017 to study phytoremediation potential of three native grasses using ICP-MS at Wake Forest University. I have presented my research at department seminars, campus symposia, and at extramural conferences (SERMACS 2016 and SC-INBRE 2016). I have also written about my research, consulted relevant literature, organized committee meetings, and performed research without the constant supervision of my mentor. I am currently very interested in instrument development, which I was first exposed to while at Wake Forest, when I was allowed to tinker with a tungsten coil atomic emission spectrometer. I built my own and my mother-in-law's personal computers, and I will assist one of my professors in the assembly and setup of a computer cluster for modeling during the Spring 2018 semester.

The faculty at Winthrop have inspired me to use these experiences to earn my Ph.D. and join the world of academia to then inspire the next generation of chemists. My dream job is to be a professor at an institution where I can foster the love and respect for chemistry that my professors have instilled in me. I already have experience in helping others succeed in chemistry. For two semesters, I was a tutor in the Academic Success Center on campus, where I tutored almost twenty-five peers in General Chemistry I & II and Organic Chemistry I. I earned a CRLA Level 2 tutoring certification and was nominated for Outstanding Tutor. A Ph.D. in Chemistry is not just an obstacle to pass on the way to achieving my career goals. To me, it is an opportunity to push past the boundaries I have set for myself. I never want to stop learning about chemistry, so a Ph.D. is an extremely exciting venture for me. If I don't pursue an academic job, I would like to use my skills in instrumental analysis after graduate school to work in forensics. Using chemistry to help solve crime is an enticing career option. I think I could realistically be of significant use to law enforcement, as I enjoy the lab work and problem-solving required to be a forensic chemist.

I am also interested in applications of analytical chemistry to nanotech. I am very excited by the work in Dr. Wirth's lab. I have some experience with bioseparation from my biochemistry lab course, and while I lack experience with nanotech, I am fascinated by it and would love the opportunity to work with it.

