

Pharmacological Intervention to Prevent Muscle Contractures

This past semester, I was given the opportunity to work as a RaMP Student Researcher in the Cornwall Laboratory at Cincinnati Children's Hospital Medical Center. Here, we study cerebral palsy and neonatal brachial plexus injury, which are the two most common causes of paralysis in children. Specifically, our laboratory is focused on identifying effective treatments for the debilitating muscle contractures that ensue. These contractures severely impair function and mobility in the affected limbs, and are currently incurable. To address this, one of our major projects is to determine the efficacy of the FDA-approved drug, bortezomib, for preventing contractures in a mouse model of neonatal brachial plexus injury. Besides assisting with drug preparations and injections, my main responsibility in this project was to investigate the long-term effects of this drug on skeletal muscle growth and development.

This enriching experience has benefited me both professionally and personally. As a Pre-Medical student, the RaMP program offered me my first hands-on experience working in a biomedical research laboratory. Furthermore, this experience has opened many doors for me as I have been presented with opportunities to contribute to a scientific manuscript and to present my findings at a Developmental Biology conference. Personally, RaMP has been one of the my most impactful experiences at the University of Cincinnati. This experience showed me that my scientific contributions as a student have the potential to directly impact another person's life.

This summer, I hope to continue my muscle analysis project. Overall, my RaMP experience has sparked in me a new interest to incorporate biomedical research into my long-term goal of becoming a physician. Now more than ever, scientific advances are at the forefront of medicine, and I am eager to improve patient outcomes through my efforts and contributions in this avenue.