The research project that I will be focusing on is looking at the difference in abundance of R-Loops between males and females. I’ll also be looking at the molecular base differences between the two genders. This is to help us better understand the amyotrophic lateral sclerosis disease type 4, abbreviated as ALS. This type of ALS is unique in a way where the individuals that get the disease are able to live longer than most other types of the ALS. There are many factors that could cause ALS, but the one factor that relates to the R-Loop formation is the mutation of the SETX gene. This gene encodes for a protein known as senataxin, which is responsible for the unwinding of DNA and regulating R-loop stability. Other than looking at the R-loop differences between males and females, I’ll also be looking at different senataxins between different organisms. This is to help better understand how the gene and the protein changed throughout evolution.

My goal in the future is to pursue a degree in veterinary medicine, with the concentration in research.