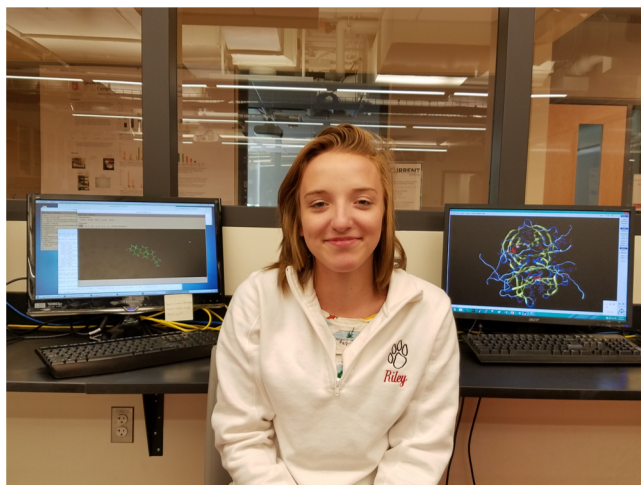
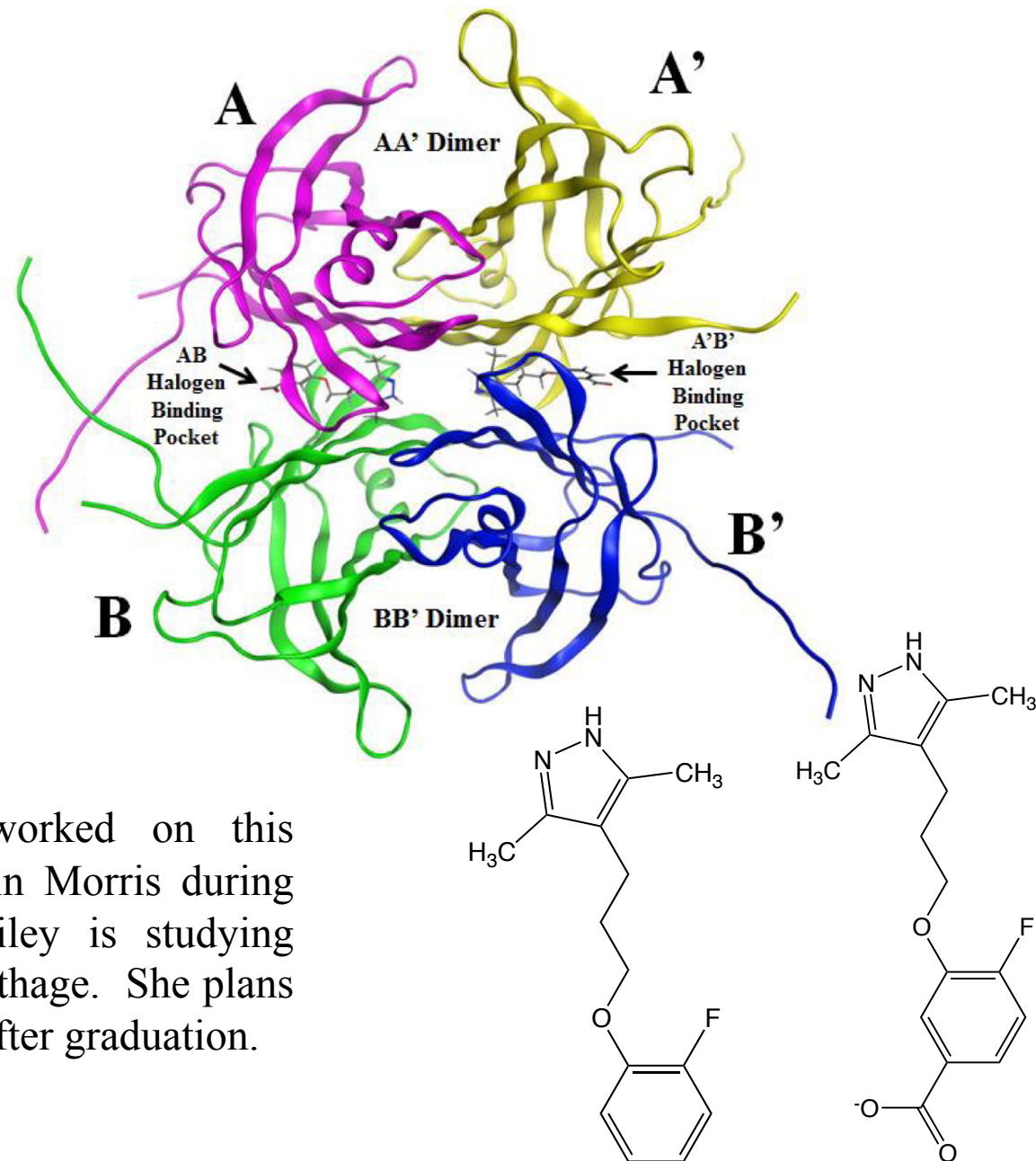


Molecular Dynamics Investigation of Drug Therapies for Familial Amyloidal Cardiomyopathy

Researchers: Riley Geoghagan and Kevin Morris

Familial Amyloidal Cardiomyopathy, FAC, is a rare disease in which plaques form in the heart. It is caused by the mutation and misfolding of the transport serum Transthyretin (TTR). The TTR mutation studied here was the substitution of Valine-122 with an Isoleucine. This mutation is present in approximately 3% of the African American population. Our research used molecular dynamics simulations to study how drug molecules interact with the mutated TTR protein. The TTR protein and two of the drugs we studied are pictured below.



Riley Geoghagan ('20) worked on this project with Professor Kevin Morris during the summer of 2018. Riley is studying Chemistry and Dance at Carthage. She plans to attend Pharmacy School after graduation.