

Raymond Faloona- Fall 2021 Research Description

This Fall term marks my second consecutive semester working in the Borum Lab on Precision Ketogenic Therapy (PKT). I started in the lab this past summer, but my experience with PKT really began in Spring 2021 when I took Dr. Borum's CURE class on the Foodomics Database. Through this class, I learned of the importance of updated nutritional data to this precise form of therapy. However, I would not observe its true significance until I could see the everyday impact it has on patients. When I started over the summer, my focus was the Foodomics Database, which I had grown to appreciate over the Spring semester. However, I also completed HIPAA training which allowed me to deal with real patient information, which had not been possible in the CURE class. This has led to me being a Ketobuddy for four patients that are currently on PKT. Being a Ketobuddy is a sort of case manager role, where we are expected to know the history and needs of the patients we are assigned to. I am very grateful for this position, because I can see the positive effects that our work is having on real people. The Ketobuddy role includes numerous materials affiliated with a patient clinic visit. Specifically, I fill out a Comprehensive Epilepsy Form (CEF) before and after each visit, which is then sent to their provider. I also maintain a thorough progress notes document that contain notes from visits, emails, patient records, and more. Perhaps the most important part is actually being present at the patient visit, and showing the family that we are doing everything we can for the patient. Aside from being a Ketobuddy, I have continued my work on the Foodomics Database that I had started over the summer. This is truly an ongoing process, because we are constantly having to collect updated nutrient data to account for possible manufacturing changes. This requires frequent communication with the members of the Borum Lab clinical team, so food runs can be completed in an effective and efficient manner. I also served as a clinical consultant for two data science senior projects this semester, which revolved around transferring all our data over to a relational database. This will allow us to provide a more precise form of the therapy with fewer technological roadblocks. Overall, I have really enjoyed contributing to PKT in many ways this semester, and learning more about this fascinating field of study.