Remember the first time you rode a bike or went on an airplane? Have you ever thought about how crazy it is that you can remember that far back in your life? We have! The Stratton lab is focused on understanding the molecular components that allow you to maintain and recall your memories. One protein, called CaMKII, is the center of our focus at the moment. This dodecameric kinase complex has several fascinating biochemical and biophysical properties and is known to play a hallmark role in long-term memory. We’ve found that CaMKII can exchange subunits between complexes, but only as a result of activation. Subunit exchange may play a role in extending the lifetime of active CaMKII, which could be necessary for memory potentiation. We are also investigating the role of the variable linker which connects the kinase domain to the hub domain. Come find out why we love CaMKII so much and how we’re trying to figure out which molecules are responsible for memory.