Tracy Lab

Our brains store and retrieve information about our experiences by encoding memories. The formation of new memories is linked to synaptic plasticity in the brain, which occurs when neurons modify their synaptic connectivity in response to patterns of neuronal activity. Local protein synthesis in dendrites play an important role in synaptic plasticity and long-term memory. Nonetheless, how local translation in dendrites is triggered by neuronal activity is still not fully understood. For our project, we plan to investigate the mechanisms that regulate protein synthesis during synaptic plasticity in human induced pluripotent stem cells (iPSC) derived neurons. Our project will allow us to further understand the mechanisms that regulate memory formation in our brains, while also shedding light on how dementia-related diseases interfere with long-term memory.

Desired skills: Immunocytochemistry (ICC) staining experience

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