Induced pluripotent stem cells (iPSCs), are skin or blood cells that have been reprogrammed back into an embryonic-like pluripotent state. These cells can then be differentiated into most types of cells in the human body.

A brain organoid is a three dimensional tissue derived from iPSCs that is able to simulate the architecture and functionality of a human brain. Brain organoids could serve as a model to study brain development, understand cell-cell interactions inside of the brain, and explore the potential neurodevelopmental origins of neurodegenerative disorders.

In this project I hoped to learn how to:
1. Culture iPSCs
2. Generate brain organoids
3. Section fixed tissue
4. Perform immunofluorescence staining
5. Capture and analyze images with microscopy