Centennial Honors College
Thomas E. Helm Undergraduate Research Day 2024

ABSTRACT

Major: Biochemistry Poster

Faculty Mentor(s): Mette Soendergaard

Passing, feeding, freezing, platting, treating, and MTT on MiaPaca-2 ovarian cancer cells

Aina Cortina Pou

Pancreatic cancer is one of the leading causes of death cancer-related in the world, that is why more research about its treatment is needed. Mia Paca-2 are a human pancreatic adenocarcinoma cell line that is used to study its treatment efficiency in the lab. An commonly used approach used in pancreatic cancer treatment, is a nanoparticle-based drug delivery system.The goal of this research is to attach the MCA1 peptide to a silica nanoparticle so we can be able to specifically deliver the drug where it is precisely needed. To test the drug delivery system it is necessary to know how to feed, pass, freeze, plate, and treat Mia Paca-2 cells. Training is necessary to do it in the proper way with confidence so the results are significant when completing an MTT assay. This type of assays are commonly used to evaluate cell resistance to treatment by reading the absorbance of the plates. This experiment was successful in learning the necessary skill set to work with Mia Paca-2 cells independently in the lab, this was reflected in significant results when doing an MTT assay with a positive and negative control.