The Effects of Fibroblast-Co-culture on HeLa Tumor Cells

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Toward a Better Understanding of...

THE EFFECTS OF FIBROBLAST CO-CULTURE ON HE-La TUMOR CELLS

Alex Benton

Mentor: Gary Patti

Tumors in vivo interact with the surrounding tissue, which are often cancer-associated fibroblasts. In vitro co-culture experiments of tumor cells with these fibroblasts provide a better understanding of these cells’ interactions in a physiological system. It is suspected that fibroblasts can have a significant effect on the growth of tumor cells. My studies quantified the effect of 3T3 fibroblasts on the proliferation of HeLa, a human tumor cell line, and qualitatively observed these effects. Proliferation was measured using a Cytation® imaging machine and compared in different co-culture conditions, while time-lapse video of these conditions was recorded with an EtaLuma Lumiscope® prototype. Different co-culture conditions had dramatically different effects on the HeLa cells that either increased or decreased proliferation. These results aim to generally establish trends in co-culture for other investigations that will be conducted in the Patti Lab.