

Liposome Synthesis and Evaluation in the HEK-293 Cell Line

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Liposomes were synthesized using the thin film method. A lyophilized powder of egg-derived phosphatidylcholine, stearylamine, and cholesterol were added to ethanol and dried under argon to form a lipid cake. The lipid cake was rehydrated with dPBS and sonicated at 60°C forming a heterogeneous batch of liposomes. Our results revealed the average size of the liposomes, determined by Dynamic Light Scattering, was approximately 223.1nm, while demonstrating a weakly positive zeta-potential of 1.9 ± 8.07 mv. Next, we tested the antitumor action of the liposomes in the HEK-293 cell line via an MTT assay. We observed that the liposomes were able to inhibit cell proliferation in the HEK-293 cell line in comparison to controls. Future studies will focus on encapsulating hydrophobic and hydrophilic molecules within the liposome formulation to improve delivery to cancer cells.

Keywords: Liposomes, Cancer, Cell Culture, Biotechnology, Nanoparticles, Drug Delivery Systems, Research, Laboratory, Class Project, Cell Lines