

The Effect of Different Concentrations of Fructose and Lactose on Lung Cancer Cells

Mahdi Abusaloom and Noural Alsharif.

The Jubilee School

The aim of this research was to investigate the effect of different masses of the sugars fructose and lactose on the growth of existing lung cancer cells. Our research process included four phases. Firstly, we tested the solubility of the sugars fructose and lactose in cell media that contained the essential nutrients needed for the growth of cells and we concluded that both sugars were soluble. Secondly, we prepared and filtered different solutions with different concentrations of the sugars lactose and fructose with cell media under sterile conditions. Afterwards, we tissue-cultured lung cancer cells for a week and then added the finalized media containing the different concentrations of sucrose and lactose. Finally, we viewed the lung cancer cells using microscopes and took images as evidence for the resultant of the lung cancer cells with the finalized media containing various lactose and fructose concentrations as we also made sure to keep images of what the state of the lung cancer cells looked like before adding that finalized new media for comparison. The results showed that as the concentration of fructose and lactose increases, the growth of lung cancer cells did not only slow down but the number of lung cancer cells present in the same area decreased, implying the idea that some were in fact killed and showing that the sugars, fructose and lactose, influence the growth and presence of lung cancer cells negatively; proving that there is an inverse proportion between the concentration of fructose and lactose and the number of cancer cells.