The Extract of the Moringa oleifera Tree Leaves as an Inhibitor of Colorectal Cancer Cells

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Colorectal cancer annually kills 694,000 people. Being one of the cancers of greatest concern, a natural method with no side effects to cure it could be a great contribution. The problem was: What is the effect of the extract of Moringa oleifera tree leaf, obtained with organic solvents, in colorectal cancer cell lines? The hypothesis under study was that the extract of Moringa oleifera tree leaf, obtained with methanol/chloroform reagent, will inhibit cancer cells. To do the investigation, four different reagents were chosen: ethyl acetate, acetone, chloroform, and methanol/chloroform. To obtain the extract, 100mL of each separate reagent was mixed with 25mg of completely dried Moringa oleifera tree leaf dust, and was kept during 48 hours on an orbital mixer, at 150rpm. After the 48 hours, the substance was filtered, and the liquid part was put in an oven at 40ºC, until dryness of the reagent. Serial dilutions of 1/10, 1/100 and 1/1000 µL were done with the white paste that was left from each disappeared reagent. Then, each dilution was aggregated to the micro-plates, where the cells were cultivated. Three different micro-plates were used to determine the parameter of effect between 24, 48 and 72 hours. After that, the data was collected by reading the cell's absorbance at 630nm. It was found that the extract that inhibited most cells was the one obtained with methanol/chloroform reagent, in 1:10 serial dilution. This was because of the reagent's capacity of extracting flavonoids (anti-cancer agents) off the leaf. The hypothesis was accepted.

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