



Investigation of Cytotoxic Effects of the Cucurbitacin D on HT-29 Colon Cancer Cell line

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Abstract

Introduction & Aim: Colorectal cancer is the development of cancer from the colon or rectum that have the ability to invade or spread to other parts of the body. Colorectal cancer is a major worldwide health problem owing to its high prevalence and mortality rates. The cucurbitacins are a group of tetracyclic triterpenoids derived from the cucurbitane skeleton and found primarily in the Cucurbitaceae family. A fact which has given rise to several studies concerning their potential use as anti-inflammatory and anticancer agents.

Methods: HT-29 cells were cultured in RPMI with L-glutamine and sodium bicarbonate medium supplemented with 10 % FBS. Cells were seeded into 96-well culture. Different cell wells were treated with 1 to 50 μM of the cucurbitacin for 24 h. Cell viability was studied by using MTT assay.

Results: The cucurbitacin D inhibits the cell proliferation of HT-29 and LC50 value is 5 $\mu\text{M}/\mu\text{l}$.

Conclusion: As previous have been shown cucurbitacins are cytotoxic agents against cancer cell lines. cucurbitacins treated cells showed cell death in human clorectal cancer cell line and Our results show that the cucurbitacin D in beyond of LC50 did not show any effect in cell viability.

Keywords: HT-29, Cucurbitacin, MTT assay, Colorectal cancer