

عنوان مقاله:

In Vitro Cytotoxic Activity of Total Flavonoid from Equisetum Arvense Extract

محل انتشار:

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خلاصه مقاله:

Background: Normally happening substances like flavonoids are regarded as active candidates for the treatment and prevention of cancer. The purpose of this study was to see how Iraqi E. arvense total flavonoid affected cell lines biologically and human lung fibroblast normal cell line (WISH). Methods: Plant powder was extracted by reflex apparatus, then thin-layer chromatography (TLC) was used to determine total flavonoids. Cytotoxicity assay (MTT) was used to determine the cytotoxic activity of the prepared plant against human breast cancer (MCF-7), human cervix cancer (HELA), human colon cancer (Caco-2) and human lung fibroblast normal cell line (WISH). Results: The flavonoids Rutin, Quercetin, Kaempferol, and luteolin were detected using the Thin Layer Chromatography (TLC) technique. In contrast to the negative control, the extract inhibited cell growth to a highest of 82.15% for MCF-7 and 61.36% for Caco-2 at the concentration (100 µg/ml), and (54.88%) for Hela cell line at the concentration (100 µg/ml). In addition, the concentration (6.25 µg/ml) of total flavonoid extract produced a decrease in the growth of the normal WISH cell line to reach (1.94%). Conclusions: Equisetum arvense contain high amounts of flavonoids, the qualification of some flavonoids compounds was detected using TLC. The total flavonoids showed significant cytotoxic activity against various types of cancer cell lines and normal cell line in vitro, the antitumor activity was highly efficient in a dose and cell type dependent manner.

کلمات کلیدی:

.Keywords: Equisetum arvense L, Caco2, Hela, Total flavonoid, MCF-7, WISH

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