

عنوان مقاله:

Anti-tumor Effects of Essential Oils of Red Clover and Ragweed on MCF-7 Breast Cancer Cell Line

محل انتشار:

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خلاصه مقاله:

Introduction: Breast cancer is one of the most common malignancies among Iranian women. Nowadays, the use of traditional medicinal plants has emerged as a tempting complementary to the treatment of breast cancer due to minimal side effects and less documented drug resistance. The aim of this study was to examine the anticancer effects of the essential oils of red clover and mature fruit of *Bassia scoparia* on MCF-7 cells. Methods: Essential oils were extracted from *Bassia scoparia* and red clover plants, by a Clevenger condenser and mass spectrometry was performed for qualitative analysis, then MCF-7 and HU02 cells were treated with different concentrations of these essential oils at different time intervals. The viability of cells was measured by the MTT assay. The results were analyzed using the one-way ANOVA and Tukey's test. Results: Essential oils of *Kochia scoparia* and red clover have cytotoxic effects on MCF7 cells. The MTT analysis showed decreased cell viability percentage in treated cells ($P < 0.05$). In addition, the microscopic examination of cells treated with essential oils revealed morphological changes of apoptotic cells in MCF-7 cells. Conclusions: The findings of this study show that essential oils of *Bassia scoparia* and red clover have toxic and anticancer effects on MCF-7 cells.

کلمات کلیدی:

.*Bassia Scoparia*, Red Clover, Cell Viability

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