

## عنوان مقاله:

Down-regulation of ODC1 and ADA gene expression and growth inhibition of human breast cancer cells by  
*Glycerrizha glabra*

## محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

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## خلاصه مقاله:

*Glycerrizha glabra* is a medicinal plant endemic to Iran. So far, many studies on the chemical constituents and antibacterial effects of *G. glabra* have been conducted but a few reports have been provided about its cytotoxic and anticancer activities. In this study we have evaluated the effects of aqueous extract of *G. glabra* on the cell proliferation and the expression of ADA and ODC genes (Key enzymes are increased in breast cancer cells in contrast with normal cells) in breast cancer cell lines (MCF-7, MDA-MB-231) with respect to non-cancer lines (MCF-10A). The cell lines were subjected to increasing doses of the aqueous extract ranging from 10 to 200  $\mu\text{gml}^{-1}$ . Cell viability was quantified by MTT assay. Expression of ADA and ODC genes were analyzed by real time PCR. Significant dose-dependent inhibition of cancerous cell growth was observed. The calculated IC50 values for MBA-MD-231 and MCF-7 cells were 49.03 and 66.9  $\mu\text{gml}^{-1}$ , respectively. Results showed a marked decrease in the expression of ODC1 and ADA genes in cancer cell lines. At 50  $\mu\text{gml}^{-1}$  concentration of *G. glabra* extract ODC1 mRNA expression were reduced 3.3 fold in MCF-7 cell line and 2.3 fold in MDA-MB-231 cell line compared to control. The result of our study highlights the potential influences of *G. glabra* extract on ODC1 and ADA genes expression in breast cancer cells and its relation to inhibition of cancer cell growth.

## کلمات کلیدی:

*Glycerrizha glabra* extract, Adenosine Deaminase, Anticancer, Cytotoxicity, Ornithine Decarboxylase

## لینک ثابت مقاله در پایگاه سیویلیکا:

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