

عنوان مقاله:

(Caffeic Acid and over expression of P21 in breast cancer cells (MCF-7

محل انتشار:

چهاردهمین کنگره بین المللی سرطان پستان (سال: 1397)

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خلاصه مقاله:

Introduction & Aim: The natural phenolic compounds including caffeic acid (CA) have been considered as inhibitors of several cancers such as breast cancer. In the present study, caffeic acid (3,4-dihydroxycinnamic acid) was appraised for its possible cytotoxic activity via investigation of its effect on expression changes of the most important apoptotic genes, P21, in breast cancer cell line (MCF-7). **Methods:** MCF-7 cells were cultured for 48h in DMEM media and caffeic acid was appraised for their possible cytotoxic effects this cell line. To determine half maximal inhibitory concentration, we treated MCF-7 cells different concentrations of this compound by 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide assay. Furthermore, morphological changes in MCF-7 cells were examined and the expression level of P21 was measured using real-time reverse-transcription polymerase chain reaction (RT-PCR). **Results:** The decreased cell proliferation was coincident with a significant increase in the expression of P21. These results demonstrate that CA inhibits MCF-7 cell proliferation by inducing an arrest of cell cycle dependent on an increased expression of P21. Too, this alteration in gene expression probably occurs along the intrinsic apoptotic signaling pathway. **Conclusion:** Caffeic acid showed toxic and morphological effects on breast cancer cells, and induced its effects via apoptosis induction, suggesting possible future application as antitumor agents

کلمات کلیدی:

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