

عنوان مقاله:

Posibility of gene silencing by siRNA in brest cancer cell lines by lipid nanoparticles

محل انتشار:

نهمین کنگره بین المللی سرطان پستان (سال: 1392)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Breast cancer is the most common malignancy excluding basal and squamous cell skin cancers and the first and second-leading cause of cancer-related deaths among women in Iran and United States, respectively. Breast cancer occurs in both men and women, although male breast cancer is rare. Apoptosis (programmed cell death type I) and autophagy (type II) are crucial mechanisms regulating cell death and homeostasis. Autophagy is a type of cellular catabolic degradation response to nutrient starvation or metabolic stress. Bcl-2 is an anti-apoptotic protein that is over expressed in half of human malignancies and more than 60% of breast cancer patients which potentially leads to resistance to chemotherapy, radiation and hormone therapy-induced apoptosi. Methods: For this reason MCF-7 Cell lines were treated by home made Bcl -2 siRNA for the first time and control siRNA that was transfected with . The cells harvested at 24, 48 and 72 hours. Total RNA was extracted, and transcription level of Bcl-2 was determined by Real Time -PCR analysis. The growth curve and drug sensitivity were detected by using LDH assay test. Then this result was confirmed with immunohistochemistry. Results: According to gene expression an unknown reason caused reduction in cell number until 24 hours after transfection, then we observed up regulation of Bcl-2 mRNA level after 48hours in cell, Finally we could observe down regulation of Bcl2 transcription level in 72h compared to 48h. Conclusion: These results provided the first evidence that targeted Silencing of Bcl-2 induces autophagic cell death in MCF-7 breas cancer cells and that Bcl-2 siRNA may be used as a therapeutic strategy alone or in combination with chemotherapy in breast cancer cels that overexpress Bcl-2

کلمات کلیدی:

Bcl-2 siRNA ,apoptosis, autophagy ,liposome

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