

عنوان مقاله:

Using MoS2 nanoparticles in breast cancer treatment

محل انتشار:

بیستمین کنگره ملی و هشتمین کنگره بین‌المللی زیست‌شناسی ایران (سال: 1397)

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نویسنده:

Nahid Askari - *Department of Biotechnology, Institute of Science and High Technology and Environmental Sciences, Graduate University of Advanced Technology, Kerman, Iran*

خلاصه مقاله:

It is possible to target the hormone receptors and disrupt the growth of breast cancer cells. Although negative-triple breast cancer lacking three types of estrogen, progesterone and epidermal growth factor receptors, they express both androgenic and vitamin D receptors. Targeting these receptors simultaneously can be an effective therapeutic strategy for this cancer. In this regard, the effect of MoS2 nanoparticle and its toxicity was evaluated on human breast cancer cell lines (MCF7), (MDA-MB-468) and normal cell (PBD2-fib). The toxicity effect of MoS2 was determined on cancerous and normal cells at concentrations of 5, 10, 20, 35 and 50 ($\mu\text{g/ml}$) for 24 and 48 hours using the MTT test. The obtained IC50 at 35 ($\mu\text{g/ml}$) concentration for MCF7 cell line in 24 and 48 hours was 96.9 ± 1.09 and 87.03 ± 1.25 , respectively and for the MDA-MB-468 cell line, it was 73.61 ± 1.21 and 64.6 ± 1.48 respectively. It was found that MoS2 at different concentrations does not have a toxic effect on normal cells, but it can be considered as an anticancer agent on breast cancer cells. Therefore, the combination of this synthetic MoS2 and chemotherapy treatment can be effective in eliminating breast cancer cells.

کلمات کلیدی:

Breast cancer, Estrogen receptor, Androgen receptors, MoS2

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