

عنوان مقاله:

The Effect of Carboplatin Loaded on the Liposome Nanoparticle on Cancer Maligancies Cell Lines

محل انتشار:

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خلاصه مقاله:

Carboplatin is chemotherapy drug which is used against some forms of cancer such as ovarian and lung carcinoma. This research was investigated to optimize and assess the Cytotoxicity of carboplatin Nano liposomes on ovarian and lung cancer cell lines. Nanoparticles were prepared using reverse phase evaporation technique and characterized for spectrophotometry and drug-release properties. In the next step, A2780S and A2780CP (ovarian) and TC1 (lung) cell lines were used to determine the rate of nano liposomal carboplatin cytotoxicity. In this research, size and zeta potential are 244.3 ± 16.7 nm and -22.9 ± 1.7 mV, respectively. High encapsulation capacity ($78.6 \pm 3.7\%$) confirmed the efficiency of reverse phase evaporation technique. The cytotoxic effect of this Nano liposome on all cell lines was significantly increased when compared with free drug ($P < 0.05$). Our findings suggest that carboplatin liposomal Nano carriers could serve as alternative chemotherapy modality for ovarian and lung cancer therapy.

کلمات کلیدی:

Carboplatin, Liposome nanoparticle, Nano drug delivery

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