

عنوان مقاله:

Evaluation Of Anti-Proliferative Effects Of Two Hydrazone Derivatives On Breast, -olon And Hepatic -ancer -ells

محل انتشار:

دومین سمپوزیوم بین المللی سرطان نسترن (سال: 1395)

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خلاصه مقاله:

Cancer is an increasing health issue whose worldwide incidence is about 6 million cases per year and characterized by unregulated cell proliferation. Despite the advancing researches about cancer, there were not efficient strategies for cancer treatment. Therefore, scientists are still trying to find new compounds for treatment of this disease. A number of compounds including hydrazone and ureido derivatives have been increasingly investigated as targets for different pharmacological activities containing analgesic, anti-inflammation and anticancer. To the best of our knowledge, there are no study about anti-proliferative as well as apoptotic effects of compounds A (1-(4-(3-nitrobenzylidene aminocarbamoyl)phenyl)-3-(4-chlorophenyl)urea) and B (1-(4-(3-chlorobenzylidene aminocarbamoyl)phenyl)-3-(4-chlorophenyl)urea). The anti-proliferative activity was measured by MTT assay at 24, 48 and 72 h on MDA-MB-231 (human breast adenocarcinoma), HT-29 (human colon adenocarcinoma) and HepG2 (liver hepatocellular carcinoma) cells. Apoptotic experiments were performed using Annexin V/PI (Roche Applied Science, USA) and flow cytometry. Our obtained I-50 values (concentration at which 50% inhibition occurred) indicated that MDA-MB-231 cell revealed the most sensitivity and 72 h was the most effective incubation time for both compounds. In this regard, compound A showed a considerable potency in inhibition of breast cancer cells growth compared with compound B ($I-50 = 1.95 \pm 1.09$ vs $3.48 \pm 1.11 \mu M$) after 72 h treatment. Our flow cytometric results confirmed the cytotoxicity data and exhibited apoptotic effect of both compounds at early and late stages; however, compound A was the most potent one. -onclusion: The results presented here could be used as a starting point for the development of powerful chemotherapeutic agents to treat breast cancer.

کلمات کلیدی:

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