

14th World Cancer & Anti-Cancer Therapy Convention

November 21-23, 2016 Dubai, UAE

Antiproliferative effects of aspirin and diclofenac against the growth of cancer and fibroblast cells: *In vitro* comparative study

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Non steroidal anti inflammatory drugs (NSAIDs) inhibit the growth of several cancer cell lines. The aim of this study is to compare the cytotoxic effect of aspirin with diclofenac on the growth of HeLa cell, mammary cell carcinoma, rhabdomyosarcoma and fibroblast cell lines in the culture media. The cells are cultured in RPMI-1640 culture media supplemented with 5% fetal calf serum and antibiotics. Aspirin (5 mg per well) and diclofenac (0.625 mg per well) significantly inhibit the growth of HeLa, rhabdomyosarcoma and fibroblast cells. The cytotoxic effect of aspirin against rhabdomyosarcoma is significantly ($p < 0.001$) higher than that of diclofenac with a potency approximated 2.6. It concludes that aspirin and diclofenac inhibit the growth of fibroblast and cancer cell by inhibiting the up regulation of cyclooxygenases enzymes in cancer cells. Aspirin is more effective than diclofenac against the growth of rhabdomyosarcoma cell line.

Biography

Huda G Hameed has completed her MSc from Al-Mustansiriyah University, College of Medicine, Iraq. She has published one paper in Saudi Pharmaceutical Journal.

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