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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/well) and diclofenac (0.625 mg/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 at the age of 29 years from Al Mustansiriya University College Of Medicine, Iraq. She has published one paper in *Saudi Pharmaceutical Journal*.

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