

ANTIPROLIFERATIC EFFECT OF AQUEOUS EXTRACTS OF *ALOE VERA* LEAVES ON VERO CELL LINE

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ABSTRACT

Aloe vera is one of the most popular and widely studied plants for its medicinal properties. In the present study, the cytotoxic effect of aqueous extract of *Aloe vera* was investigated by incubation of different doses of aqueous extract for 24, 48 and 72 hours in vitro using *vero* cells. The present study resulted in cytotoxicity in time- and dose-dependent manner as indicated by MTT assay, fluorescent microscopy, flow cytometric analysis and DNA fragmentation assay. Fluorescent microscopy revealed typical morphological changes i.e. cell pyknosis, chromatin condensation. Nuclear fragmentation was not observed between treated and untreated cells. Flow cytometric profiles of PI-stained cells indicating amount of DNA degradation after treating cells with aqueous extracts at doses 5mg/ml and 10mg/ml for 48hr. DNA fragmentation revealed no detectable typical ladder pattern in *vero* cells treated with aqueous extracts. From the current study it can be concluded that the aloe extracts, even though showed significant cytotoxicity particularly at higher doses needs to be further investigated regarding its effect on normal cells in conjunction with tumor cells.

KEY WORDS: Aloe Vera, Aqueous Extract, Antiproliferatic, Vero Cell Line