

Cytotoxic activity of *Ailanthus excelsa* (Roxb.) leaves extracts on myelogenous leukemia (K562) cell lines In vitro

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Abstract

Objective: Evaluation of the cytotoxic activity of *Ailanthus excelsa* (Roxb.) leaves extracts on human chronic myelogenous leukemia cell lines (K562 cells).

Material and Methods: The leaves of *Ailanthus excelsa* (Roxb.) extracted with methanol (70%), fractionated with petroleum ether, chloroform, ethyl acetate and *n*-butanol, tested for their cytotoxicity by MTT assay using K562 cells (human chronic myelogenous leukemia cell line).

Results: Petroleum ether extract was found to be cytotoxic at the dose of 0.175 mg/ml (52% cell death), similarly, chloroform extract was found to be cytotoxic at the dose of 0.25 mg/ml (57% cell death), ethyl acetate fraction was found to be cytotoxic at the highest dose (0.65 mg/ml) whereas, the total extract and *n*-butanol were not cytotoxic for tumor cells.

Conclusion: the results suggest that, any constituent(s) which may be inactive in the total extract due to the presence of other compound(s) may exert cytotoxic (antitumoral) effect in the isolated fractions.

Key words: *Ailanthus excelsa* leaves extract; cytotoxicity; leukaemia cell line.