

UNIVERSITI TEKNOLOGI MARA

**CYTOTOXIC ACTIVITY OF MYRICETIN AND
MAHANIMBINE AGAINST HUMAN
GLIOBLASTOMA CELL LINE (SF268) AND
NORMAL CELL LINE (WRL 68)**

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ABSTRACT

Nature has been a source of medicinal agents for thousands of years, particularly plants have a long history of use in the treatment of cancer. The study aims to evaluate cytotoxicity of compounds from plants which are mahanimbine from *Murraya koenigii* and myricetin as a flavonoid against glioblastoma cell line SF268 and also identified their selectivity towards normal cell line WRL68. Both cells were cultured in MEM supplemented with 10% (v/v) deactivated fetal bovine serum and 1% penicillin/streptomycin at 37°C with 5% CO₂. The compounds (50µg/mL to 0.005µg/mL) were screened for their cytotoxicity activity against both cell lines, SF268 and WRL68. After 72hours incubation, the inhibitory concentration to afford 50% cell viability (IC₅₀) for these compounds was determined by MTT assays and the data generated from ELISA plate reader were used to plot the dose response curve. The myricetin exhibited an IC₅₀ of 3µg/mL and mahanimbine has an IC₅₀ of 9.5µg/mL against SF268 cell lines. Nevertheless, these compounds also showed cytotoxic towards normal cell line WRL68. From this study showed both compounds have potential as anticancer agent but need further research to improve the selectivity of the compounds towards cancerous cells rather than damaging the normal cells.