

UNIVERSITI TEKNOLOGI MARA

**DETERMINATION CYTOTOXICITY OF
MYRICETIN AND MAHANIMBINE ON HUMAN
TUMOR GLIOMA CELL LINES, SNB-19 AND
SNB-75**

HOSNI BIN AZHAR

BACHELOR OF PHARMACY

Faculty of Pharmacy

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ABSTRACT

Myricetin and mahanimbine widely used as anti-oxidant. Both compounds have been found potential as an anti-cancer properties against cancer cell such as Human Colon Carcinoma and Human Leukemic cell lines. However the effect of compounds against human glioma cells (SNB-19 and SNB-75) have not been reported. In this study, the cytotoxic activity of myricetin and mahanimbine was investigate. MTT assay was used to measure the cytotoxic activity. Human tumor glioma cell line SNB-19 and SNB-75 was cultured in the optimum environment which is using Minimal Essential Medium (MEM) with Earle's Salts media and the conditions of culture were 37°C and 5% CO₂. Cell were plated into 96-flat bottom well plate with a density of 5000 cells/well and incubated for 24 hours. After incubation, the plated cell were treated with 20uL of test compounds at various concentrations then incubated for 72 hours. MTT solution was added and read using the ELISA® micro plate reader. IC₅₀ (value of cytotoxic activity) were derived from dose-response curve of which the concentration of extracts required to kill 50% of cell population. Result showed that mahanimbine had IC₅₀ values of 16.56ug/ml on SNB-19 and 7.07ug/ml on SNB-75 while myricetin exhibited cytotoxic activity with IC₅₀ values of 22.11 ug/ml on SNB-19 and 28.44ug/ml on SNB-75. Both compounds had an inhibitory effect on cancer cells and normal cells indicating that test compounds did not show selectivity. Further investigation to improve the selectivity should established for effective and safe therapy.