

**UNIVERSITI TEKNOLOGI MARA**

***IN VITRO* ANTIPROLIFERATIVE ACTIVITY OF  
THE METHANOL EXTRACT OF *BAUHINIA*  
*PURPUREA* LEAVES**

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## ABSTRACT

*Background:* Nowadays, there is an increasing burden of cancer in developed countries. The most common cancers in the world are liver cancer, breast cancer and colon cancer. Previous finding and latest studies show that *Bauhinia purpurea* or in Malay known as 'pokok tapak kerbau' have potential inhibition property to human cancer cells lines due to the new compounds which are named Bauhiniastatin 1, 2, 3, and pacharin. The purpose of this study is to evaluate antiproliferative activities of *Bauhinia purpurea* leaves methanolic extract on cancer cells lines and not affect normal cells lines. This study used four types of cell lines consists of Hep G2 (human hepatocarcinoma cells lines) MCF-7 (human breast adenocarcinoma cell line), HCT 116 (colorectal carcinoma cells lines) and WRL 68 (normal cells lines). *Methods:* Cells were plated in 96-well plate and incubated in conditions of 95% O<sub>2</sub>, 5% CO<sub>2</sub> at 37°C. Five different concentrations of *Bauhinia purpurea* leaves methanolic extract were tested on cells lines; 0.1, 1, 10, 100, 1000 ug/mL and 3-[4,5-dimethylthioazol-2-yl]-2-5-diphenyltetrazolium bromide (MTT) assay was used to measure cell viability. The effects of different concentrations on percentage of cell viability and calculation of median inhibitory concentration (IC<sub>50</sub>) were determined by plotting graph percentage of cell viability versus log concentration of *Bauhinia purpurea* leaves methanolic extract. *Results:* *Bauhinia purpurea* leaves methanolic extract has potential antiproliferative activity against Hep G2 cancer cells lines, MCF-7 cancer cells lines, HCT 116 cancer cells lines by producing median inhibitory concentration IC<sub>50</sub> of 143.3 ug/mL, 167.7 ug/mL, 104.2 ug/mL respectively. *Conclusion:* Methanolic extract of *Bauhinia purpurea* leaves exhibit potential anticancer activity and can be used as preliminary study to do further research on antiproliferative activity of *Bauhinia purpurea* leaves.

**Keyword:** *Bauhinia purpurea* leaves, cancer, methanolic extract, antiproliferative