THE EFFECT OF JAMAICAN CHERRY (Muntingia calabura L.)LEAVES METHANOLIC EXTRACT ON APOPTOSIS INDUCTION OF WIDR CANCER CELLS

ABSTRACT

***Background**: Colorectal cancer is a malignancy of colon and rectum and the third most common cancer in the world. Current therapy is costly and has negative side effect so required alternatively treatment such as herbs. Muntingia calabura methanolic leaf extracts contain flavonoid and phenolic which have anti-cancer potential.*

***Objective**: to explore the effect of Muntingia calabura methanolic leaf extracts on apoptosis induction of WiDr colonic cancer cells.*

***Method**: WiDr cells was incubated for 24 hours with plant extracts. 5-FU is used as positive control. Cytotoxic testing of WiDr cells was performed using MTT assay. Absorbance value was used to calculate the percentage of cancer cells death, further probit analysis was done to get IC_{50} value. Apoptotic activity was observed using double stainning method with EB-AO.*

***Result**: IC_{50} values of Muntingia calabura methanolic leaf extracts is 54,509 µg/ml, while IC_{50} values of 5-FU is 29,309 µg/ml. Double stainning testing show apoptotic cells in extract group.*

***Conclusion**: Muntingia calabura methanolic leaf extracts has potential to induce apoptosis on WiDr cancer cells.*

***Keywords**: Muntingia calabura L., colorectal cancer, WiDr cells, cytotoxicity, apoptotic observation, EB-AO.*