

## ABSTRACT

### IN VITRO POTENTIAL ANTICANCER ACTIVITY OF COMBINATION OF EXTRACT SAMBILOTO (*Andrographis paniculata* Nees.) HERB 5-FLUOROURACIL AGAINST HELA CANCER CELL, WIDR CANCER CELL, AND T47D CANCER CELL

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*Andrographis paniculata* Nees research and the chemotherapy drug 5 - Fluorouracil is reported to have cytotoxic and anticancer activity. Extract of *Andrographis paniculata* Nees has cytotoxic effects against cancer cells WidR , HeLa , and T47D with IC50 respectively 68,924 ug / mL ; 37.939 ug / mL ; 62.615 ug / mL , whereas the chemotherapy drug 5 - Fluorouracil showed cytotoxic effects against cancer cells with IC50 WidR , HeLa , and T47D respectively 38.050 mg / mL ; 71.493 mg / mL ; 2.975 mg / mL. In this research, a combination test, using four concentrations of 1/2 IC50 , 3/8 IC50 , 1/4 IC50 , and 1/8 IC50 of sambiloto herbal extracts and chemotherapeutic agent 5-Fluorouracil. WiDr cancer cells, HeLa, and T47D were incubated with test material in 4 different concentrations for 24 hours. Cytotoxic effects were evaluated by IC50 using the MTT assay. The results showed that the extract of *Andrographis paniculata* Nees mixture and the chemotherapy drug 5-Fluorouracil has a strong synergistic effect on T47D cells at all concentrations.

Keyword: *Andrographis paniculata* Nees., combination index, cytotoxic, anticancer, IC50, 5 – Fluorouracil.