

## **ABSTRACT**

**Background:** chemotherapy has been combined with natural remedies like herbs to minimize side effect and maximize the therapeutic benefit. Myrmecodia pendans contains flavonoid has been shown to have an anticancer activity. This study was aimed to determine the effect of myrmecodia pendans and methotrexate in combination on apoptotic index in mice with breast cancer.

**Methods:** in vivo randomized post test only control group design. Twenty four C3H mice were randomly divided into 4 groups. Group I served as control, group II, III, IV were treated with methotrexate (0.13 mg/7days) and 4 mg/day, 8 mg/day, 16 mg/day, of myrmecodia pendans extract respectively for 21 days. Data were analyzed by one way anova followed by LSD post hoc test.

**Results:** mean apoptotic index for the 4 groups were  $0,35\pm0,10$ ;  $1,23\pm0,12$ ;  $2,83\pm0,07$  and  $2,50\pm0,09$  respectively. There was a difference in number of apoptotic index between control and test group ( $P<0.05$ ).

**Conclusion:** Myrmecodia pendans and methotrexate in combination has an effect on apoptotic index in mice with breast cancer.

**Keywords:** mammary adenocarcinoma, the apoptotic index, methotrexate, Myrmecodia pendans