

ABSTRACT

Setiawan, Andri. 2015. **Effect of Ethanol Extracts Widuri Roots (*Calotropis gigantea* L.) Against Levels of IFN- γ and Expression of Caspase 3 In Fibrosarcoma Mice (*Mus musculus* L.).** Thesis. Biology Department, Science and Technology Faculty, Maulana Malik Ibrahim State Islamic University of Malang.
Supervisor: Dr. drh. Hj Bayyinatul Muchtaromah, M.Si and Umaiatus Syarifah, M.A

Keywords: Widuri roots (*Calotropis gigantea* L.), IFN- γ , Caspase 3, Fibrosarcoma.

One type of plant that is thought to have anti-cancer properties as is the Widuri root (*Calotropis gigantea* L.) The purpose of this research. to determine the potential of ethanol extract of the Widuri roots (*Calotropis gigantea* L.) on levels of IFN- γ , expression Caspase 3 and the weight average in fibrosarcoma mice (*Mus musculus* L.) induced 7.12-Dimetilbenz (α) anthracene (DMBA).

This study was an experimental study that used a completely randomized design (RAL) with 6 treatments 5 replications, there are control group (K- and K +) and P1 treatment group (dose of 50 mg / kg bb), P2 (dose of 100 mg / kg bb), P3 (a dose of 150 mg / kg bb), and P4 (methotrexate). All treatment groups in this study induced by DMBA 0.025 mg / g BB in the subcutaneous area. After 6 weeks of induction further therapy ethanol extract Widuri roots (*Calotropis gigantea* L.) for 2 weeks. The parameters observed in this study is the average weight of mice during the study, the levels of IFN- γ by ELISA, and Caspase 3 expression analysis using Immunohistochemistry. Data were analyzed using one-way ANOVA with Tukey-HSD post hoc $\alpha = 0.05$.

The results showed that at a dose of 150 mg / kg bb levels of IFN- γ highest (178.6 ± 79.2), compared with P4 (146.3 ± 86.6), and K ($48.7 \pm 25, 7$). The results showed that the expression of Caspase 3 at a dose of 150 mg / kg bb is also the most effective in increasing the expression of Caspase 3 is (79.05 ± 12.05) weight loss during DMBA induction, after DMBA induction over and continued therapy with ethanol extract of the Widuri roots (*Calotropis gigantea* L.) an increase in the average weight on all treatments.