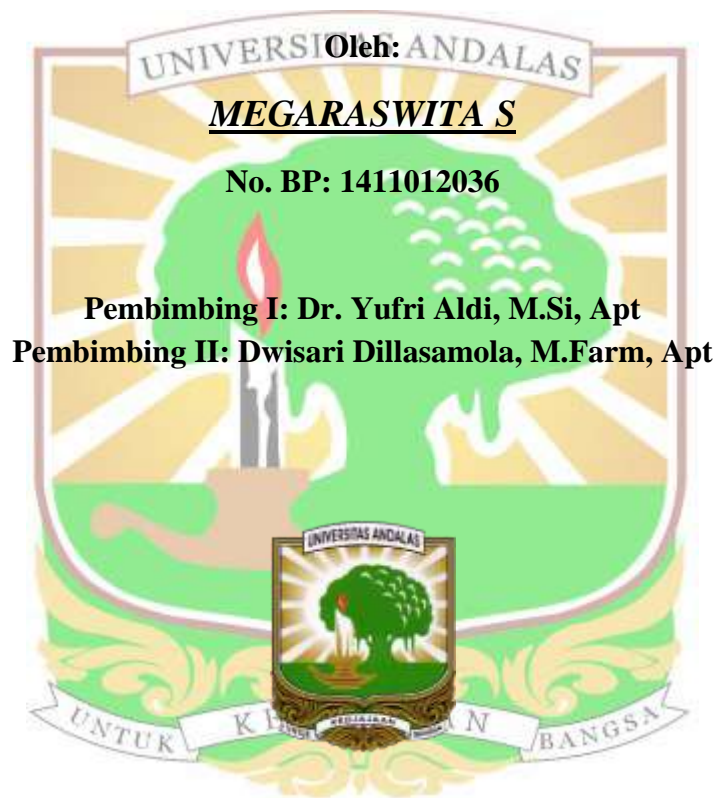


**UJI EFEK EKSTRAK ETANOL DAUN TAPAK LIMAN
(*Elephantopus scaber* L.) TERHADAP AKTIVITAS DAN
KAPASITAS FAGOSITOSIS SEL MAKROFAG DAN
PERSENTASE SEL LEUKOSIT MENCIT PUTIH
JANTAN**

SKRIPSI SARJANA FARMASI

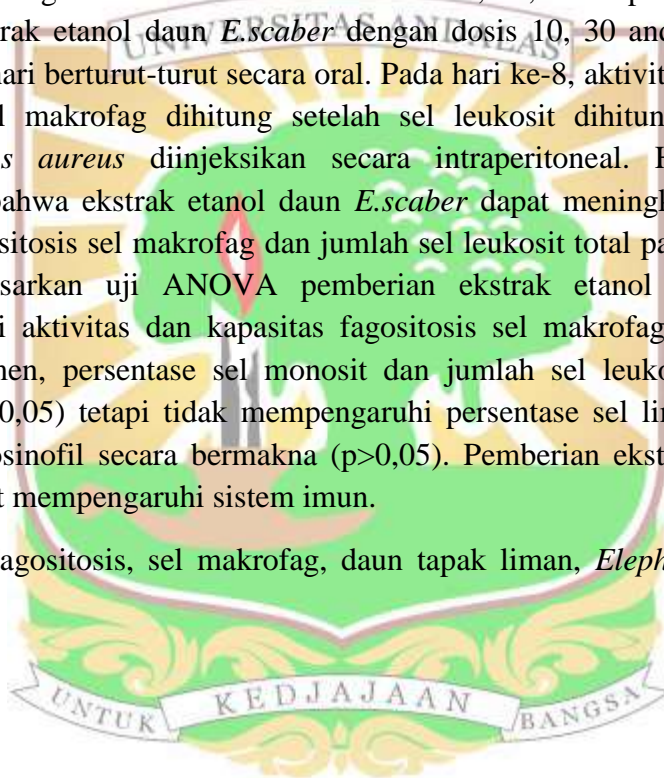


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ABSTRAK

Sistem imun memiliki peran penting dalam melindungi tubuh dari benda-benda yang berasal dari lingkungan, seperti mikroba dan senyawa kimia. Sistem imun dalam melakukan fungsinya melibatkan berbagai macam sel seperti makrofag, leukosit, limfosit dan sel fagosit lainnya. Penelitian ini dilakukan untuk menentukan pengaruh pemberian ekstrak etanol daun *Elephantopus scaber* Linn terhadap sistem imun berdasarkan pengaruhnya terhadap aktivitas, kapasitas fagositosis sel makrofag, persentase sel leukosit dan jumlah sel leukosit total. Pada penelitian ini digunakan 20 ekor mencit yang dibagi kedalam empat kelompok. Kelompok I sebagai kontrol diberikan Na-CMC 0,5%, kelompok II, III, dan IV diberikan ekstrak etanol daun *E.scaber* dengan dosis 10, 30 and 100 mg/kgBB selama tujuh hari berturut-turut secara oral. Pada hari ke-8, aktivitas dan kapasitas fagositosis sel makrofag dihitung setelah sel leukosit dihitung dan suspensi *Staphylococcus aureus* diinjeksikan secara intraperitoneal. Hasil penelitian menunjukkan bahwa ekstrak etanol daun *E.scaber* dapat meningkatkan aktivitas, kapasitas fagositosis sel makrofag dan jumlah sel leukosit total pada mencit putih jantan. Berdasarkan uji ANOVA pemberian ekstrak etanol daun *E.scaber* mempengaruhi aktivitas dan kapasitas fagositosis sel makrofag, persentase sel neutrofil segmen, persentase sel monosit dan jumlah sel leukosit total secara bermakna ($p < 0,05$) tetapi tidak mempengaruhi persentase sel limfosit, neutrofil batang dan eosinofil secara bermakna ($p > 0,05$). Pemberian ekstrak etanol daun *E.scaber* dapat mempengaruhi sistem imun.

Kata kunci: Fagositosis, sel makrofag, daun tapak liman, *Elephantopus Scaber* Linn.



ABSTRACT

The major function of the immune system is to protect the host from environmental agents such as microbes or chemicals. The immune system can involve the wide variety cells and protein such as macrophages, leukocytes, lymphocytes, complement and other phagocytic cells. In this research, the effect of *Elephantopus scaber* Linn leaf ethanolic extract on the immune system investigated based on its macrophages phagocytosis activity and capacity, the percentage of leukocyte cells, and total leukocyte cells. Twenty male mice divided into four groups. Group one received Na-CMC 0.5% as control. Group II, III, IV were treated with the ethanolic extract of *E.scaber* leaf at the various dose of 10, 30, 100 mg/kg BW for consecutive 7 days orally. On the 8th day, the activity and capacity macrophages were counted after the leukocyte cells counted and suspension of *Staphylococcus aureus* injected intraperitoneally. Results showed that the ethanolic extract of *E.scaber* leaf has potential to increase the activity and capacity of macrophages phagocytosis and total leukocyte cells of male mice. Based on ANOVA test result, the ethanolic extract of *E.scaber* leaf significantly affects the activity and capacity of macrophages phagocytosis, percentage of neutrophil segment, percentage of monocytes and total leukocytes cells ($p < 0.05$). In contrast, it did not significantly affect the percentage of lymphocytes, neutrophils rod, and eosinophils ($p > 0.05$). In conclusion, ethanolic extract of *E.scaber* can influence the immune system.

Keywords: Phagocytosis, machrophage cell, tapak liman leaf, *Elephantopus Scaber* Linn.

