

ABSTRAK

Titi Puspa, NIM.4161220023 (2021). Pengaruh Ekstrak Etanol Daun Bangunbangun (*Plectranthus amboinicus* L.Spreng) Terhadap Sistem Imun Non-spesifik dan Profil Darah Tikus Putih (*Rattus novergicus.L*) yang Diinduksi Kanker Kulit dengan DMBA

Penelitian ini bertujuan untuk mengetahui pengaruh ekstrak etanol daun bangunbangun terhadap sistem imun non-spesifik dan profil darah tikus putih yang diinduksi kanker kulit dengan DMBA. Penelitian ini bersifat eksperimental dengan menggunakan Rancangan Acak Lengkap non faktorial. Sebanyak 24 ekor tikus digunakan dalam penelitian ini. Tikus dibagi ke dalam 4 kelompok yaitu kelompok kontrol diberikan aquades (K-), DMBA 175 µg (K+), DMBA 175 µg+ Ekstrak etanol bangunbangun 250 mg/kgBB (P1) dan DMBA 175 µg+ ekstrak etanol bangunbangun 500 mg/kgBB. DMBA diberikan 175 µg/ekor tikus dilarutkan dalam 1 ml acetone lalu dioleskan pada permukaan kulit yang telah dibersihkan dari bulunya. DMBA diberikan tiga hari sekali selama delapan minggu, sedangkan EEP diberikan secara oral setiap hari selama empat minggu setelah pemberian DMBA. Selama penelitian tikus diberi pakan dan minum secara *ad libitum*. Pada minggu ke-13 darah tikus diambil dengan cara dislokasi leher dan ditampung dalam tabung *ependorf* lalu dianalisis menggunakan *hematology analyzer*. Parameter yang diamati adalah sistem imun non-spesifik meliputi jumlah leukosit total, limfosit, neutrofil, monosit, eosinofil basofil, dan profil darah meliputi jumlah eritrosit, nilai MCV, RDW, kadar hemoglobin, MCH, MCHC, Hematokrit, jumlah trombosit, nilai MPV, PDW dan PCT. Data yang diperoleh ditabulasi dan kemudian dianalisis dengan ANAVA dan dilanjutkan dengan uji Tukey. Hasil penelitian menunjukkan bahwa pemberian ekstrak etanol bangunbangun memberikan pengaruh yang sangat nyata ($\alpha:0,01$) terhadap penurunan jumlah leukosit, limfosit, basofil, RDW, MPV, PDW peningkatan jumlah neutrofil, eosinofil, jumlah eritrosit, kadar hemoglobin. Akan tetapi tidak berpengaruh terhadap penurunan monosit, nilai RDW, MPV dan peningkatan MCH, MCHC, Hematokrit, jumlah trombosit pada darah tikus yang diinduksi kanker kulit dengan DMBA.

Kata Kunci: Ekstrak Etanol Bangunbangun, Tikus Putih, Sistem Imun Non-spesifik, Profil Darah, DMBA.

ABSTRACT

Titi Puspa, NIM.4161220023 (2020). The Effect of Ethanol Extract of Bangunbangun (*Plectranthus amboinicus* L.Spreng) Leaves on Non-specific Immune System and Blood Profile of White Rat (*Rattus norvegicus*.L) Induced by Skin Cancer with DMBA

This study aims to determine the effect of the ethanol extract of the bangunbangun leaves on non-specific immune system and blood profile of white rats induced by skin cancer with DMBA. This research is an experimental study using a non-factorial completely randomized design. A total of 24 rats were used in this study. Rats were divided into 4 groups, namely the control group was given distilled water (K-), DMBA 175 μ g (K +), DMBA 175 μ g + 250 mg / kgBB of build-up ethanol extract (P1) and DMBA 175 μ g + 500 mg / kgB of build up ethanol extract. DMBA was given 175 μ g / rat tail dissolved in 1 ml of acetone then rubbed on the surface of the skin which had been cleaned of fur. DMBA is given three days for eight weeks, while EEP is given orally every day for four weeks after DMBA administration. During the study the rats were fed and drank libitum. At week 13, the blood of the rats was taken by means of neck dislocation and collected in an eppendorf tube then analyzed using a hematology analyzer. Parameters observed were non-specific immune system including total leukocyte count, lymphocyte, neutrophil, monocyte, basophil eosinophil, and blood profile including erythrocyte count, MCV value, RDW, hemoglobin level, MCH, MCHC, hematocrit, platelet count, MPV value, PDW and PCT. The data obtained were tabulated and then analyzed by ANOVA and followed by Tukey's test. The results showed that the giving of bangunbangun ethanol extract had a very significant effect (α : 0.01) on decreasing the number of leucocytes, lymphocytes, basophils, RDW, MPV, PDW to increase the number of neutrophils, eosinophils, the number of erythrocytes, and hemoglobin levels. However, it did not affect the decrease in monocytes, the value of RDW, MPV and increase in MCH, MCHC, Hematocrit, and platelet counts in the blood of mice induced by skin cancer with DMBA.

Keywords: Bangunbangun Ethanol Extract, White Rat, Non-specific Immune System, Blood Profile, DMBA.