ABSTRACT

DIAN MAYASAFIRA. Effect of Blackseed (Nigella sativa) Oil Extract on Leukocyte Differentiation and Bone Marrow of Mice (Mus musculus). Under direction of SRI ESTUNINGSIH and MAWAR SUBANGKIT

This study was aimed to get information about blackseed (Nigella sativa) supplementation effect on leukocyte differentiation and bone marrow of mice. Seventy two mice (36 male and 36 female) of 4 weeks old were divided into four group, each group consists of nine mice. Group I was negative control (received aquadest 0.1 ml), group II (received 0.1 ml blackseed oil), group III (received 0.2 ml blackseed oil), and group IV (received 0.3 ml combination of blackseed oil and honey). This treatment were done for two months. Afterward, the mice were euthanized and then necropsied followed by blood and os femur collection as the sample. The blood samples were processed to prepare blood smear and os femur samples were processed to prepare histopathology slides with Hematoxilyn-Eosin stain. The parameters observed include to count and differentiate of the leukocyte cells and bone marrow volume using Image J® software for Microsoft® Windows®. Quantitative data were analyzed with SAS® 9.1.3 software for Microsoft® Windows®, ANOVA test and followed by Duncan test. The result showed that blackseed oil caused increasing of lymphocyte and bone marrow volume, and decreasing of neutrophyl on group II, III, and IV which were significant (p<0.05) with the control group.

Keywords: blackseed, bone marrow, leukocyte differentiation