THE EFFECT OF ADMINISTRATION OF DRAGON FRUIT SKIN EXTRACT (HYLOCEREUS POLYRHIZUS), CARDAMOM (AMOMUM COMPACTUM), AND LAWANG FLOWER (ILLICIUM VERUM) ON THE NUMBER OF LEUKOCYTES IN MALE MICE (MUS MUSCULUS)

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BACKGROUND :
The human body is vulnerable to exposure to foreign antigens which are protected by physical barriers. If the physical barrier is not capable, cellular immunity will be activated in the form of leukocytes. Many Indonesian people tend to consume herbs. Of the various herbal ingredients consumed, most are believed to affect the immune system. Several studies report that dragon fruit peel, cardamom, and star anise extracts are believed to have benefits for the immune system, in the form of the ability to regulate pro-inflammatory cytokines and the proliferation of inflammatory cells (lymphocytes). Compounds that have this ability are lupeol, borneol, camphor, caryophyllene, and trans-anethol, each of which is contained in the extract in sequence. However, the effect of this extract on increasing the number of leukocytes has not been studied much.
METHOD : This research was carried out on 25 male mice (*Mus musculus*) which were divided into 5 groups. Herbal extracts are obtained through a maceration process. The dose of extract administered follows previous research literature. The extract is administered orally once a day for 7 days. The leukocyte count was calculated on the 8th day using a counting chamber. The number of leukocytes is counted using a counting chamber. All data obtained were analyzed using SPSS 28.0.1.0. using the paired T-test and one-way ANOVA, the p-value <0.05 is considered significant.
RESULTS & DISCUSSION: Administration of 7 mg/20grBB star anise (Illicium verum) flower extract increased the number of leukocytes in male mice by 105%, an increase of more than 50% higher than the positive control. The increase in the number of leukocytes in mice given 2mg/20grBB extract of dragon fruit peel *(Hylocereus polyrhizus)* and 0.68 mg/20grBB cardamom *(Amomum compactum)* was lower (17.58% and 37.45%)
CONCLUSION : The effect of administering 2mg/20grBB of dragon fruit peel extract *(Hylocereus polyrhizus),* 0.68 mg/20grBB of cardamom *(Amomum compactum),* 7 mg/20grBB of star anise *(Illicium verum)* on male mice *(Mus musculus)* for 7 days gives almost the same as the positive control.

KEYWORDS : Dragon Fruit Peels, Cardamom, Star Anise, Leukocyte Count, Mice