EFFECT OF GUAVA LEAVES (*Psidium guajava* L.) EXTRACT ON TOTAL AND DIFFERENTIAL COUNT OF LEUKOCYTES IN MICE (*Mus musculus*) EXPOSED TO HEAT STRESS

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ABSTRACT

The aim of this study was to find out the effect of guava leaves (*Psidium guajava* L.) extract to maintaining total and differential count of leukocytes as innate immunity in mice (*Mus musculus*) exposed to heat stress. This study was using thirty mice divided into five groups of experiment, that were K(-), P0, P1, P2, and P3. All group of experiments, except K(-), received heat stress exposure twice daily for 30 minute at temperature 39-40º C with 15 minute interval. P1, P2, and P3 were treated with oral administration of different dose of guava leaves extract. P1 received 4.028 mg/20 g BW/day guava leaves extract, P2 received 7.28 mg/20 g BW/day guava leaves extract, and P3 received 8.445 mg/20 g BW/day guava leaves extract respectively. The extract given for 10 days and heat stress exposure given for the last three days. Total and differential count of leukocytes were measure on the last day of experiments after blood sample collected intra cardiac with inhalation anesthesia. Statistical analyses was done by one way ANOVA followed by Tukey Test. The result of the research showed there were significant difference (p<0.05) on total leukocytes, neutrophils, and lymphocytes and there were no significant difference (p>0.05) on eosinophiles, basophiles, and monocytes. The conclusion of the treatment showed that P3 was the best group experiments that maintaining total leukocytes, neutrophiles, and lymphocytes in mice exposed to heat stress.

Keywords: Guava leaf (*Psidium guajava* L.), mice (*Mus musculus*), heat stress, total and differential count of leukocytes.