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Immunomodulatory Activity of Pacar Air (*Impatiens balsamina* Linn.) Herb Ethyl Acetate Fraction in Mice

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Abstract: The aim of this study is to evaluate immunomodulatory effect of ethyl acetate fraction of pacar air (*Impatiens balsamina* Linn.) in Balb/C mice. The assessment of immunomodulatory activity on specific and nonspecific immunity were studied by titer antibody, Delayed Type Hypersensitivity (DTH), carbon clearance test and organ index. Ethyl Acetate Fraction of Pacar Air (EAFPA) was administered orally at the dosage levels of 125 mg/kg bw and 250 mg/kg bw in Balb/C mice. In order to induce immunosuppression in mice, methylprednisolone is used (15 mg/kg bw, i.p), and levamisole (50 mg/kg bw, p.o) as immunostimulating agents, and carboxymethylcellulose (1%) as normal control. Results of present study clearly indicate that EAFPA 125 mg/kg bw and 250 mg/kg bw shows potentiation of immunosuppressant effect on specific and nonspecific immunity. On specific immunity, highest decrease of footpad thickness was due to 125 mg/kg bw of EAFPA (7.0026 ± 2.3496) in DTH response ($p < 0.05$) after 24 hrs challenge. Primary and secondary titer antibody value were (5.0939 ± 0.5037) and (5.9368 ± 0.5037) respectively. Nonspecific immunity had its carbon elimination rate lower than the normal control group with phagocytic index values ($k < 1$), were 0.86 and 0.74 respectively and organ index, shows a decrease in spleen index compared to normal control group which is significant ($p < 0.05$). EAFPA at doses of 125 and 250 mg/kg bw has immunosuppressant effect with an effective dose of 125 mg/kg bw.

Keywords : *Impatiens balsamina* Linn., immunomodulator, Delayed Type Hypersensitivity, titer antibody, carbon clearance test, organ index.