



The Potency of *Crocus sativus* (Saffron) and its Constituent Crocin as an Immunomodulator in Animals

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SUMMARY. The present study was undertaken to evaluate immunomodulatory activity of *Crocus sativus* and its active constituent crocin. *Crocus sativus* and crocin were administered orally at doses of 50 mg/kg and 9.69 mg/kg, respectively. The dose of crocin was selected based on the amount present in 50 mg of saffron. The effect on cellular immunity was evaluated using the neutrophil adhesion test, cyclophosphamide-induced neutropenia and carbon clearance assay, while the effect on humoral immunity was studied using the mice lethality test, serum immunoglobulins estimation and the indirect haemagglutination assay. The results revealed that *Crocus sativus* and crocin stimulate both cellular and humoral immune responses. Both these agents produced a significant increase in adhesion of neutrophils, attenuation of cyclophosphamide-induced neutropenia and an increase in phagocytic index in carbon clearance assay indicating their effect on cellular immunity. The effect on humoral immune response was demonstrated by reduction in mortality in the mice lethality assay, a rise in serum immunoglobulin levels and an increase in thymus gland weight and haemagglutination titre value.

KEY WORDS: Cellular immunity, *Crocus sativus*, Crocin, Humoral immunity, Immunomodulation.

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