Interleukin levels in the zingiber cassumunar treated mice

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Abstrak

The cytokine is one of the proteins responsible for the immune system. Several types of cytokines acting as key regulators of infection include IL-10, IL-12, and IL-14. The chemical content of Zingiber cassumunar shows potential immunomodulatory effects. This study aimed to determine the effect of the ethanol extract of Zingiber cassumunar (EEZC) on the expressions of IL-10, IL-12, and IL-14. The test animals were BALB/c mice, which were divided into five groups, i.e., normal group (untreated), negative control group (treated with 10% of tween 80), and three treatment groups that respectively received 1.25 mg, 2.5mg, and 5mg/20g BW of EEZC. The treatment was carried out for 21 days. On the 22ndday, the mice were induced with LPS intraperitoneally (except for the normal group). The interleukin expression was observed by immunohistochemistry using specific antibodies, and the expressed cells were counted under a microscope. The administration of EEZC at the doses of 1.25 mg, 2.5mg, and 5mg/20g BW for 21 days increased the expression of IL-10, IL-12, and IL-14 significantly and proportionally to the dose. and suggested the potency of extract to induce both innate and adaptive immunity. This activity may be attributable to curcumin as an active compound in this extract.