Decreased interleukin-4 (IL-4), IL-10 and IgE level of type I hypersensitive mice using scopoloetin isolated from noni fruit (Morinda citrifolia L)

Yufri Aldi, Elliza Nasrul, Yanwirasti, Dian Handayani and Dachriyanus
Fakultas Farmasi, Indonesia

An in vivo study of the activity of scopoloetin isolated from noni fruit (Morinda citrifolia L.) on the level of interleukin-4 (IL-4), IL-10 and IgE in type I hypersensitive male Swiss-Webster mice has been carried out. Scopoletin was isolated from dried noni powder by soxhletation method using dichloromethane, separated by column chromatography using silica gel as stationary phase and n-hexane-ethyl acetate (1:4) as mobile phase, then purified by column chromatography using Sephadex LH20 as stationary phase and methanol as mobile phase. Type I hypersensitive male mice were obtained by ovalbumin sensitization. Animal model were divided into 5 groups: negative control group, positive control group, and scopoloetin-treated group (1; 3; and 10 mg/kg). The results showed that scopoloetin at doses of 1, 3 and 10 mg/kg decreased the level of IL-4 of type I hypersensitive mice significantly (p<0.01). The scopoloetin at the dose of 10 mg/kg decreased the serum level of IL-4, IL-10, and IgE (P<0.01) to the normal level. The ability of scopoloetin to decrease IL-4 and IgE concentration of type I hypersensitive mice to its normal state was shown by dose of 10 mg/kg BW (p>0.05), while for IL-10 concentration, the decrease until its normal level was shown by dose of 3 mg/kg BW (p<0.05).

Biography
Yufri Aldi is a Lecturer at the Faculty of Pharmacy, University of Andalas. He completed his PhD in 2013 at Andalas University. His research is in the field of Farmaco-Immunology.

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