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Immunomodulation by Dok Din Daeng (*Aeginetia indica* Roxb.) extracts in female B6C3F1 mice

II. Humoral immunity, innate immunity and hematology

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Abstract

In the previous report, we have provided evidence that *Aeginetia indica* Roxbert (DDD) extracts enhance T cell-mediated immune responses. The study reported here was focused on the hematological and immunological effects, including B cells, natural killer (NK) cells, macrophages and neutrophils, of the whole plant extract using water (WDDD) or ethanol (EDDD) as the solvent. The extracts were administered to female B6C3F1 mice by gavage for WDDD (10–100%) and intraperitoneally for EDDD (0.25–250 mg/kg) for 28 days. In addition to hematological evaluation, several quantitative measures and functional assays (e.g., the splenic phenotypic analysis, IgM antibody-forming cell responses, natural killer cell activity, mononuclear phagocyte system [MPS] and neutrophil activity) were employed to examine the effects of DDD extracts on the innate and humoral immunities. The results from this study demonstrated that exposure to WDDD and EDDD produced minimal changes in the activities of B cells and natural killer cells, macrophages and neutrophils. Overall, hematological parameters were not affected by exposure to WDDD or EDDD. Taken together, the enhancing effect of DDD extracts on T cells may be primarily responsible for the successful and long-time use of this traditional herbal medicine in Thailand.

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Keywords: *Aeginetia indica* Roxbert; Hematology; Humoral immunity; Natural killer cells; Macrophages; Neutrophils