

Immunomodulatory effect of *Rhaphidophora korthalsii* on natural killer cell cytotoxicity.

Abstract

The in vivo immunomodulatory effect of ethanolic extracts from leaves of *Rhaphidophora korthalsii* was determined via immune cell proliferation, T/NK cell phenotyping, and splenocyte cytotoxicity of BALB/c mice after 5 consecutive days of i.p. administration at various concentrations. Splenocyte proliferation index, cytotoxicity, peripheral blood T/NK cell population, and plasma cytokine (IL-2 and IFN- γ) in mice were assessed on day 5 and day 15. High concentration of extract (350 μ g/mice/day for 5 consecutive days) was able to stimulate immune cell proliferation, peripheral blood NK cell population, IL-2, and IFN- γ cytokines, as well as splenocyte cytotoxicity against Yac-1 cell line. Unlike rIL-2 which degraded rapidly, the stimulatory effect from the extract managed to last until day 15. These results suggested the potential of this extract as an alternative immunostimulator, and they encourage further study on guided fractionation and purification to identify the active ingredients that contribute to this in vitro and in vivo immunomodulatory activity.

Keyword: Immunomodulatory; Natural killer cells; *Rhaphidophora korthalsii*.