

In vitro immunomodulatory effects of cuphiin D1 on human mononuclear cells

王靜瓊;楊玲玲

Wang CC;Chen LG;Yang LL

Abstract

Cuphiin D1 (CD1), a macrocyclic hydrolyzable tannin isolated from *Cuphea hyssopifolia*, has been shown to exert antitumor activity both in vitro and in vivo. Moreover, the antitumor effects of CD1 are not only related to its cytotoxicity to carcinoma cell lines, but also depend on host-mediated mechanisms. In the present study, CD1 was investigated for its effects on the proliferation and cytokine secretion of human peripheral blood mononuclear cells (PBMCs). At concentrations of from 6.25 to 50 micrograms/ml, it enhanced the 3H-thymidine incorporation of concanavalin A (Con A)-stimulated PBMCs in a dose-dependent manner. Excretion of IL-1 beta, IL-2 and TNF-alpha by CD1-stimulated PBMCs was markedly increased in a dose-dependent manner. The results show that CD1 could stimulate PBMCs release of IL-1 beta, IL-2 and TNF-alpha and then activate T cells. Therefore, CD1-activated T cells via IL-1 beta in vitro might account for the host-mediated CD1 mechanism of action.