

PubMed Results

Item 1 of 1

1. J Ethnopharmacol. 2008 Dec 8;120(3):366-71. Epub 2008 Sep 23.

Cordyceps militaris induces the IL-18 expression via its promoter activation for IFN-gamma production.

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Abstract

ETHNOPHARMACOLOGICAL RELEVANCE: Cordyceps militaris, one of traditional herbal ingredient in oriental medicine, has been known to promote anticancer and immunomodulatory activities in vitro and in vivo. However, the biological mechanism of anticancer activity has been unknown.

OBJECTIVE: To investigate the effect of Cordyceps militaris extract on expression of interferon gamma (IFN-gamma) through interleukin-18 (IL-18) induction and its biological mechanism in vitro and in vivo.

MATERIALS AND METHODS: Mice were administrated orally with solution extracted from Cordyceps militaris. The transcription level of IL-18 and IFN-gamma production were measured by reverse transcriptase polymerase chain reaction (RT-PCR) and immunohistochemistry. RAW 264.7 cells were transiently transfected with pCATp1 and pCATp2 for IL-18 promoter functional analysis.

RESULTS: Cordyceps militaris extracts treatment significantly induced level of IL-18 transcription in mouse brain and liver and enhanced IL-18 transcription level and activated the IFN-gamma production in RAW 264.7 cells. Furthermore, Cordyceps militaris extract led to increase the activity of pCATp1 construct containing the 5' flanking region of IL-18 promoter in RAW 264.7 cells.

CONCLUSION: Cordyceps militaris extract induced IL-18 mRNA level via enhancing of P1 promoter region result in activation of IFN-gamma production, indicating its potential as an immune activator or anticancer drug.

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