URN etd-0407109-183726-2188
Author Yu-Chen Tsai
Author's Email Address No Public.
Statistics This thesis had been viewed 33 times. Download 0 times.
Department
Year 2004
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title The Immunomodulation and Antitumor Activities of Solid-State Fermentation Product of Antrodia camphorate Mycelia
Date of Defense 0000-00-00
Page Count 74

Keyword
Antrodia camphorata
immunomodulation
antitumor

Abstract
Antrodia camphorata (A. camphorata) is a medicinal fungus merely found in Taiwan. In this study, solid-state fermentation product of A. camphorata (SAC) from Wei-de biotechnology company was employed to examine the immunomodulatory and antitumor effects on mice.

Treatment of BALB/c male mice with a variety of concentration of SAC (50, 100, and 200 mg/Kg) resulted in a significant proliferation of splenocytes at day 4 as compared with saline treated group. The numbers of splenocytes in mice treated with 200 mg/Kg SAC increase and have significant difference from three other treatments after 11 days. The increased splenocytes are mainly T cells; B cells were not significantly changed. When the splenocytes were stimulated by concanavaliv A in vitro, there was a significant difference between saline treated group and SAC treated group in stimulation index.

BALB/c male mice were injected with 5-FU and fed simultaneously with 50 mg/Kg SAC or saline then compared with naïve. The results are as the following: at day 4 and 7, the number of splenocytes in 5-FU treated mice was significantly less than those of naive and the amount of splenocytes in SAC treated group was much greater than those of saline treated group; at day 15, splenocytes in saline treated group increased significantly as compared to those in non-treated group along with SAC treated group while the number of splenocytes in SAC fed mice was not significantly different from those in non-treated mice. It could be inferred from the above that SAC seems to have the capability to protect the spleen from damage exerted by 5-FU. The increased splenocytes were mainly T cells and the ratio of CD4＋ to CD8＋ in the 50 mg/Kg SAC fed mice was higher than those in saline fed and non-treated mice. The B cell level remains unaltered.

The result of cytotoxicity activity in vitro showed that the survival of Hep 3B, A549 and LL/2 decreased with the increase of treated concentration of ethyl extracted SAC as well as time of treatment. In vivo, SAC could reduce the size of tumor in mice and prolong the survival time as well.

Based on the experiments we have conducted, SAC appears to have the effect of immunomodulatory and antitumor activities against tumors bore in BALB/c male mice.
Advisory Committee shun-lai Li - advisor

memg-bor Hsu - advisor

Files No Any Full Text File.
Date of Submission 2005-02-04