URN etd-0407109-183713-1021
Author Kai chen Tu
Author's Email Address No Public.
Statistics This thesis had been viewed 41 times. Download 0 times.
Department
Year 2007
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title Antioxidant properties and effects on tumor cell viabilities of mentation products of Hericium erinaceus
Date of Defense 0000-00-00
Page Count 64

Keyword
Hericium erinaceus
fermentation

Abstract
Hericium erinaceus is a well known edible and medicinal mushroom in Oriental countries. It, classified as basidiomycetous, polyporales, hynaceas, hericum in fungal taxonomy, has been used widely in traditional Chinese medicine for the treatment of gastric cancer, colon cancer , and duodenal cancer. Active constituents contained in the fruit body of Hericium erinaceus such as peptide and polysaccharide have been demonstrated to have potentialities to inhibit the growth of tumor cells and improve the immune function.(Hsu,1997).
In this study, Hericium erinaceus is co-fermented separately with 3 different substances: black beans, chick peas, and oats as basic substrate and added individually with three different Chinese medicine ： Ginseng, Fuling and Gastrodia ； The co-fermenting products were analyzed for antioxidant properties and antitumor activities.To investigate antioxidant properties, the products before fermenting and after fermenting were examined. The DPPH test showed that the DPPH scavenging activities of water and EtOH extracts of chick peas co-fermenting products (6.67 mg/ml) increased by 58.4 % and 51.5%, separately, compared with the products before fermenting. The total polyphenols test showed that the amount of total polyphenols of water and EtOH extracts of oats co-fermenting products (20 mg/ml) were 84.9 ppm and 54.4 ppm ,respectively. In MTS assay, the cell viability of MDA MB231、SW480、AGS、HCT-8 were, respectively, 43.6 %、24.4 %、33.8 %、88.9 % after treating with EtOH extracts of chick peas co-fermenting products(10 mg/ml), and were 34.3 %、23.6 %、19 %、58 % after treating with EtOH extracts of black beans co-fermenting products(10 mg/ml), and were 28.3 %、17.8 %、15.4 %、35.1 %after treating with water extracts of oat co-fermenting products(10 mg/ml). As for the fermentation groups with Chinese medicine,it showed no further improvement on antioxidant properties and antitumor activities, compared with fermentation gropus without Chinese medicine. These results showed that Hericium erinaceus can increase antioxidant properties and antitumor activities when co-fermenting with sutible basic substrates, and the Chinese medicum used in this study showed no furthure improvement on antiodidant propertiesd and antitumor activities
Advisory Committee Shun Lai Li - advisor

Files No Any Full Text File.
Date of Submission 2008-01-27