URN etd-0407109-183702-88
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Statistics This thesis had been viewed 50 times. Download 83 times.
Department
Year 2005
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title Analytic Study of Polysaccharides and the Hypocholesterolemic Effect from fruit bodies of Black Wood Ear,Auricularia polytricha
Date of Defense 0000-00-00
Page Count 113

Keyword
Auricularia polytricha
Hypocholesterolemic
Polysaccharides

Abstract
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The black wood ear (Auricularia polytricha), one of Taiwan universal edible fungi, is a low calorie, amount of edible fiber, as well as rich vitamins food. Its glucuronoxylomannon has effectively inhibited Sarcoma180, decreased the blood platelet agglutination, reduced the blood cholesterol, lowered the density of lipoprotein (LDL) and blood sugar. Therefore, this goal of our study was focus on analysing polysaccharides and influence of cholesterol metabolism by treatment of Syrian Hamster in vivo with black wood ear diet.
The polysaccharides of black wood ear were extracted by five methods and obtained respectively 60.4mg/g,47.4mg/g,3.1mg/g,551.5mg/g and 18.2mg/g, and five fractions were derived from four of molecular weight larger than 1.40 x 106 D and the other around 1.83 x 105 D. And it also found that xylose was that major component of polysaccharide extracts from black wood ear.
The Syrian Hamster was used male and age 32 eight week and induced to high cholesterol model by feeding 2% cholesterol feed, and then separated into four groups. They were 2% cholesterol feed (2% CD), plus 1.5% black wood ear (1.5% AP), plus 7.5% black wood ear (7.5 %AP), and solid feed without extra cholesterol added (PN). The result showed that the total cholesterol, triglyceride (TG), and LDL of 1.5% AP and 7.5% AP groups were conspicuously lower than that of 2% CD group ($p<0.001$), while high density lipoprotein (HDL) were no significant difference. Meanwhile, the body weight of 1.5%AP and 7.5%AP groups reduced 17.1% and 32.1% compared to the 2%CD group. Our study indicates that the black wood ear might be helpful of reducing TG, LDL, and body weight, and increase HDL to avoid the cardiovascular diseases of human being.
Advisory Committee - advisor

Files etd-0407109-183702-88-001.pdf

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Date of Submission 2006-07-21