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Extract of *Cantharellus cibarius* can decrease liver injury in iron overloaded mice

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Cantharellus cibarius, an edible mushroom with a worldwide distribution, has been reported to show various biological activities, especially for its strong iron chelating activity both *in vivo* and *in vitro* conditions. In the current study, the effects of ethyl acetate and methanolic extracts of *C. cibarius* on iron- overloaded mice (100 mg/kg/24h; 4 times a week for 4 weeks) at two doses (400 and 800 mg/kg/24; 5 times a week for 4 weeks) were studied. The Fe³⁺ content of plasma was determined by kit. Liver sections were stained by Perls' stain. iron-overloaded animals treated with the extracts showed a dramatic decrease in plasma Fe³⁺ content when compared to the control group ($p < 0.05$). Although both types of extracts exhibited satisfactory potency in chelating excessive iron in iron- overloaded mice, the methanolic extract was found to be more effective than ethyl acetate. Perls' stain significantly improved the sensitivity of the test in detecting low amount of iron deposited in the liver of iron- overloaded mice treated with the extract. A high-performance liquid chromatography method was developed to simultaneously separate 5 phenolic acids and 2 flavonoids in the two types of extracts. *p*-Coumaric acid was found to be the major phenolic acid in the ethyl acetate extract and ferulic acid was found to be the major phenolic acid in the methanol extract. The pharmacological effects of *C. cibarius* extracts may be attributed to the presence of polyphenols.

Biography

Masoumeh Khalili is a PhD student from Mazandaran University (Sari, Mazandaran province, Iran). Up to now, she has published more than 9 papers with ISI value in reputed journals throughout the world.

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