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Evaluation of Food Safety and Physiological Effect of Cultured Mycelium of *Cordyceps sinensis*

Key Words

Cordyceps sinensis cultured mycelium
Food safety
Physiological effect

ABSTRACT

Cordyceps sinensis, a major parasitic fungus, grows on the larvae of Lepidoptera. It is one of the best-known fungi used in traditional medicine in China. This study investigates the food safety and physiological effect of cultured mycelium of *Cordyceps sinensis* (*C. sinensis my*). Weaning (3-week) and larger (8-week) ICR mice were administered 50, 100, 200, and 400 mg·mouse⁻¹·day⁻¹ by intragastric route for 3 days to evaluate food safety. After a 5-day observation, very few mice died. In addition, 5 females and 15 males were evaluated for physiological effect in humans. Each subject took 5 capsules (400 mg *C. sinensis my*/capsule) every day. After 2-week supplementation, serum HDL-cholesterol and total antioxidant status (TAS) increased significantly ($P < 0.05$), by 25% and 18%, respectively. However, no significant changes of serum triglyceride, total cholesterol, or LDL-cholesterol levels were observed. Serum glutamate oxaloacetic transaminase (GOT) activity decreased significantly ($P < 0.05$) by 17.5%. This study confirms the food safety of cultured mycelium of *Cordyceps sinensis* and the effect of *C. sinensis my* in enhancing total antioxidant ability and improving lipid metabolism and liver function in humans after a 2-week supplementation. However, the specific mechanism remains to be further investigated.

INTRODUCTION

Cordyceps sinensis (*C. sinensis*), a major parasitic

fungus, grows on the larvae of Lepidoptera. It has been used as a traditional Chinese medicine for many centuries. More than 350 kinds of *C. sinensis* has been re-

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