研究業績　英文表記

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Title	Dietary *Sparassis crispa* Reduces Body Fat Mass and Hepatic Lipid Levels by Enhancing Energy Expenditure and Suppressing Lipogenesis in Rats
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Abstract	Accumulation of abdominal fat triggers metabolic syndrome, which is a cluster of metabolic abnormalities, such as dyslipidemia, glucose intolerance, insulin resistance or hyperinsulinemia, and hypertension, that leads to the development of diabetes and cardiovascular disease. Mushrooms have been used as a foodstuff and folk medicine worldwide. Among these mushrooms, *Sparassis crispa* (SC) is a relatively newly cultivated edible and medicinal mushroom, which has been reported to have anti-diabetic and anti-hypertensive properties. However, little is known about the anti-obesity and anti-hyperlipidemic properties of SC. In the present study, we investigated the effects of dietary SC on lipid metabolism and energy expenditure in Sprague-Dawley rats with diet-induced obesity and diabetes, and conducted respiratory gas analysis to determine how energy metabolism is altered by SC. After feeding periods of 3 and 7 weeks, dietary SC had significantly reduced hepatic triacylglycerol and cholesterol contents in a dose-dependent manner. These changes were attributable to suppression of fatty acid and cholesterol synthesis in the liver and increased insulin sensitivity in the body. In addition, after a feeding period of 6 weeks, dietary SC significantly increased energy expenditure through carbohydrate oxidation, reducing abdominal fat mass after 7 weeks. In conclusion, our results indicate that in addition to the previously reported anti-diabetic and anti-hypertensive activities, dietary SC exhibits anti-obesity and anti-hyperlipidemic activities that help protect against metabolic syndrome.
keyword	*Sparassis crispa*, body fat mass, hepatic lipid accumulation, energy expenditure

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