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## **Coleus forskohlii extract induces hepatic cytochrome P450 enzymes in mice.**

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### **Source**

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### **Abstract**

Coleus forskohlii root extract (CFE) is popular for use as a weight loss dietary supplement. In this study, the influence of standardized CFE containing 10% active component forskolin on the hepatic drug metabolizing system was investigated to evaluate the safety through its drug interaction potential. Male ICR mice were fed AIN93G-based diets containing 0-5% CFE or 0.05% pure forskolin for 2-3 weeks. Intake of two different sources of 0.5% CFE significantly increased the relative liver weight, total content of hepatic cytochrome P450 (CYP) and induced CYPs (especially 2B, 2C, 3A types) and glutathione S-transferase (GST) activities. CFE significantly increased mRNA expression of CYPs and GST with dose related responses. However, unlike the CFE, intake of 0.05% pure forskolin was found to be associated with only weak induction in CYP3A and GST activities with no significant increases in relative liver weight, total hepatic content or other CYPs activities. The inductions of CYPs and GST by CFE were observed at 1 week of feeding and rapidly recovered by discontinuation of CFE. These results indicated the induction potential of CFE on CYPs, and that this effect was predominantly due to other, as yet unidentified constituents, and not forskolin contained in CFE.

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