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**EFFECT OF FERMENTATION ON THE HEPATIC CYTOCHROME p450 EXPRESSION  
OF HERBAL MEDICINE, *GAL-GEUN-TANG* IN RATS**

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**ABSTRACT**

The purpose of this study is to assess the expression of hepatic cytochrome P450 (CYP) on bio-converted (fermented) herbal medicine, Gal-geun-tang (GGT), using S9 fractions of 1-week treated normal control (DW), GGT-con (non-fermented), GGT-LP144 (fermented by *Lactobacillus plantarum*, strain No. 144) and GGT-LP402 (fermented by *Lactobacillus plantarum*, strain No. 402) in SD male rat. Hepatic S9 fractions of CYP isoforms (CYP1A2, 1B1, 2B1, 2C11, 2E1, 3A1, 3A2 and 4A1) were studied by immunoblot analysis. Treatment of rat with 1 g/kg per day GGT-con and GGT-LP144 for 7 days caused 2.5-fold and 2.8-fold significant increases of CYP4A1 expression, and 1.5-fold and 1.5-fold significant increases of CYP1B1 expression than normal control treated rat, respectively. However, expression of GGT-LP402 didn't increase significantly than that of normal control treated rat. Meanwhile, there are no significant differences in expression of hepatic CYP isoforms including immunoblots of CYP1A2, 2B1, 2C11, 2E1, 3A1 and 3A2. Further studies are needed to identify the changes of CYP1B1 and 4A1 expression on components of GGTS.

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