**Archives of Pharmacy Practice**
**Abstract Conference Proceedings**
**2nd Asia Pacific Pharmacy Education (PharmED) Workshop**
**ISSN 2045-080X Vol. 3, Issue 1, 2012**

DP-001

# EVALUATION OF THE INHIBITION OF HEPATIC CYTOCHORME P450 BY FERMENTED HERBAL EXTRACTS, *SSANG-HWA-TANG*

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## ABSTRACT

Most of herbal medicines contain isoflavonoid contents. It is known that aglycone forms of isoflavonoid are absorbed faster than glucoside forms in intestine by intestinal microflora. In addition to absorption, bioavailability of aglycone is higher than that of glucoside form. Meanwhile, these aglycone contents are able to elevate after the fermentation. Ssang-hwa-tang (SHT) is a blended herbal Chinese remedy for the treatment of cold-sweat after an illness or a fatigue and analgesic, antipyretic and anti-inflammatory effects of SHT was reported. However, there is not done SHT related-CYP metabolism study, especially CYP inhibition, and is not known CYP inhibitory potential changes in bio-converted crude herbal extract. In the present study, we evaluated the CYP inhibitory potential differences between fermented and non-converted crude herbal extract, SHT. Additionally, CYP1A2 inhibition mechanisms, which show weak inhibitory potential at non-converted extract, SHT-con, are investigated. The results show that SHT-con showed a weak CYP1A2 inhibitory activity, while SHT-con didn't inhibited in CYP2A6, 2B6, 2C9, 2C19, 2D6, 2E1, and 3A4. SHT-LF and SHT-LG didn't show any inhibitory effects for CYP1A2, 2A6, 2B6, 2C9, 2C19, 2D6, 2E1, and 3A4. These results suggest that combination ingestion with SHT-con, non-fermented SHT, is likely to interact with drugs that are mainly metabolized by CYP1A2 including theophylline.