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Prediction of Potential Herb-Drug Interaction Based on the Inhibition of Specific Intestinal Drug-Metabolizing Enzyme (DME) by Wogonin

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***SUMMARY*. Inhibition of specific drug-metabolizing enzymes (DMEs) located in intestine by xenobiotics might induce potential drug (herb)-drug interaction. The present study aims to evaluate the inhibition potential of wogonin towards one specific DMEs in intestine UDP-glucuronotransferase (UGT) 1A8. Recombinant UGT1A8-catalyzed 4-methylumbelliferone (4-MU) glucuronidation reaction was used as the probe reaction. Dose-dependent inhibition behaviour was detected for wogonin's inhibition towards UGT1A8-catalyzed 4-methylumbelliferone (4-MU) glucuronidation. The results obtained from Dixon plot and Lineweaver-Burk plot showed that wogonin competitively inhibited the activity of UGT1A8, and the inhibition parameter (K_i) was calculated to be 8.1 μM. Using the *in vivo* concentration of wogonin, the exposure of drugs undergoing UGT1A8-catalyzed glucuronidation elimination was predicted to increase by 20%. All these results indicated the risk of drug (herb)-drug interaction due to the inhibition of wogonin towards the activity of UGT1A8.**

KEY WORDS: Herb-drug interaction, Intestine, Wogonin.

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