



Possibility of Bakuchiol-Induced Diseases Through Inhibition of Specific Drug-Metabolizing Enzymes (DMEs)

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SUMMARY. The homeostasis of endogenous substances is very important for maintaining the health of body. Besides the influence of diseases towards this kind of homeostasis, the administration of xenobiotics might also disrupt the balance of endogenous substances through affecting the activity of drug-metabolizing enzymes (DMEs) involved in the metabolism of endogenous substances. The present study aims to investigate the inhibition of bakuchiol towards UDP-glucuronosyltransferase (UGT) 2B4 which is an important DME involved in the metabolism of endogenous substances, including bile acids. The results indicated that the inhibition capability of bakuchiol towards UGT2B4 increased with the increased concentrations of bakuchiol. Noncompetitive inhibition type was observed, and the inhibition parameter (K_i) was calculated to be 20.7 μ M. In combination with the *in vivo* exposure of bakuchiol, the high *in vivo* possibility was demonstrated. All these results provide *in vitro* data supporting for bakuchiol-induced disruption of homeostasis of endogenous substances.

KEY WORDS: Bakuchiol, Endogenous substances, Homeostasis.

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