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Diabetes Treatment Herbs Showed Influence towards the Activity of Drug-Metabolizing Enzymes (DMEs)

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***SUMMARY*. Hypericin is a herbal component exert its potential therapeutic role towards diabetes. This study aims to investigate the inhibition of hypericin on the activity of important phase II drug-metabolizing enzymes (DMEs) UDP-glucuronosyltransferases (UGTs). *In vitro* incubation mixture of recombinant UGTs-catalyzed glucuronidation of 4-MU was used to determine the inhibition of hypericin on various isoforms of UGTs. Hypericin 100 μM significantly inhibited the activity of UGT1A1 ($p < 0.05$). In the contrast, the activity of UGT1A3, -1A6, and -1A9 was negligibly inhibited by 100 μM of hypericin. In conclusion, potential drug-drug interaction might occur between hypericin and drugs mainly undergoing UGT1A1-catalyzed metabolism.**

RESUMEN. La hipericina es un componente herbario con potencial función terapéutica para la diabetes. Este estudio tiene como objetivo investigar la inhibición de la hipericina sobre la actividad de i UDP-glucuronosiltransferasas (UGT), importantes enzimas metabolizadoras de fármacos (DME) de la fase II. La mezcla de incubación *in vitro* de glucuronidación de 4-MU catalizada por UGT recombinante se usó para determinar la inhibición de la hipericina sobre diversas isoformas de UGT. La hipericina 100 μM inhibió significativamente la actividad de UGT1A1 ($p < 0,05$). Por el contrario, la actividad de UGT1A3, -1A6 y -1A9 se inhibió de forma insignificante por 100 μM de hipericina. En conclusión, la posible interacción fármaco-fármaco podría ocurrir entre la hipericina y los fármacos que se someten principalmente al metabolismo catalizado por UGT1A1.

KEY WORDS: diabetes, drug-drug interaction, hypericin, UDP-glucuronosyltransferase (UGT) 1A1.

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