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Corylin Exhibits Strong Inhibition Towards *In Vitro* Glucuronidation Metabolism of Propofol

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SUMMARY. **The present study aims to evaluate the inhibition potential of corylin towards the glucuronidation of propofol, trying to indicate the potential herb-drug interaction between propofol and corylin-containing herbs. *In vitro* human liver microsomes (HLMs) incubation system was used to generate the glucuronide of propofol, and multiple concentrations of corylin were added to evaluate the inhibition of corylin towards propofol glucuronidation. Inhibition kinetic type and parameters were determined: 100 μM of corylin inhibited 94.1% activity of propofol glucuronidation. Both Dixon plot and Lineweaver-Burk plot demonstrated the noncompetitive inhibition of corylin towards the metabolism of propofol, and the inhibition parameter (K_i) was calculated to be 3.1 μM. All these data remind the researchers the potential risk of herb-drug interaction between propofol and corylin-containing herbs. Given the complex herbal factors affecting the final results, the translation of these *in vitro* data to *in vivo* situation should be paid caution.**

RESUMEN. El presente estudio tiene como objetivo evaluar el potencial de inhibición de corylina sobre la glucuronidación del propofol, tratando de establecer el potencial de interacción con hierbas de drogas entre propofol y hierbas que contienen corylina. Un sistema de incubación *in vitro* de microsomas de hígado humano (HLMs) se utilizó para generar el glucurónido de propofol y se usaron diferentes concentraciones de corylina para evaluar la inhibición de la glucuronidación del propofol . El tipo de inhibición cinética y sus parámetros fueron determinados: corylina 100 μM inhibió un 94,1 % de la glucuronidación de propofol. Tanto la representación de Dixon como la de Lineweaver- Burk demostraron la inhibición no competitiva de corylina en relación al metabolismo del propofol y se calculó que el parámetro de inhibición (K_i) es 3,1 μM. Estos datos deben recordar a los investigadores el riesgo potencial de interacción entre propofol y hierbas que contienen corylina. Teniendo en cuenta los factores complejos que afectan a los resultados finales, la traducción de estos datos *in vitro* a la situación *in vivo* debe tomarse con precaución.

KEY WORDS: Corylin, Herb-drug interaction, Propofol.

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