

## Alogliptin Showed Influence towards the Activity of Drug-Metabolizing Enzymes (DMEs)

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**SUMMARY.** Alogliptin is an anti-diabetic drug clinically utilized under the trade name Nesina in the USA and Vipidia in Europe, and this study aims to determine the inhibition of alogliptin on the activity of one of the important drug-metabolizing enzymes (DMEs) UDP-glucuronosyltransferases (UGTs). *In vitro* incubation mixture was used to evaluate the inhibition of alogliptin on UGT1A1, -1A3, and -1A9. 100  $\mu$ M of alogliptin was used as the initial screening concentration. Alogliptin showed significant inhibition towards UGT1A1 ( $p < 0.05$ ). Alogliptin 100  $\mu$ M did not exert influence towards the activity of UGT1A3 and UGT1A9. In conclusion, potential drug-drug interaction (DDI) existed between alogliptin and drugs undergoing UGT1A1-catalyzed metabolism.

**RESUMEN.** Alogliptina es un fármaco antidiabético utilizado clínicamente con el nombre comercial de Nesina en EE. UU. Y Vipidia en Europa; este estudio tiene como objetivo determinar la inhibición de alogliptina en la actividad de una de las enzimas metabolizadoras de fármacos (DMEs) UDP-glucuronosiltransferasas (UGT) La mezcla de incubación *in vitro* se usó para evaluar la inhibición de alogliptina en UGT1A1, -1A3 y -1A9. Se usaron 100  $\mu$ M de alogliptina como concentración de selección inicial. Alogliptina mostró inhibición significativa hacia UGT1A1 ( $p < 0.05$ ), pero alogliptin 100  $\mu$ M no ejerció influencia sobre la actividad de UGT1A3 y UGT1A9. En conclusión, existiría una posible interacción fármaco-fármaco (DDI) entre la alogliptina y los fármacos sometidos al metabolismo catalizado por UGT1A1.

**KEY WORDS:** Alogliptin, UDP-glucuronosyltransferases (UGTs), drug-drug interaction (DDI), *in vitro* incubation.

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