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The Metabolism Behaviour Alteration of Trifluoperazine (TFP) in Dyslipidemia Condition

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***SUMMARY*. The metabolic behavior can be affected in various diseases. The present study aims to determine the inhibition potential of phosphatidylcholine (PC) component PC 16:0, 2:0 towards the glucuronidation behavior of trifluoperazine (TFP). The residual activity of TFP glucuronidation was 75.5, 58.7, 47.2, and 40.7% at 20, 40, 60, and 100 μM of PC 16:0, 2:0, respectively. Furthermore, Dixon plot (1/reaction velocity versus the concentration of PC 16:0, 2:0) was drawn to determine the inhibition kinetic type. The intersection point was located in the second quadrant in Dixon plot, indicating the competitive inhibition of PC 16:0, 2:0 towards the glucuronidation of TFP. Through data fitting using competitive inhibition fitting equation, the inhibition kinetic parameter (Ki) was calculated to be 11 μM. All these data indicated the metabolic alteration of TFP glucuronidation in dyslipidemia condition due to the disturbance of lipid components.**

RESUMEN. El comportamiento metabólico puede verse afectado en diversas enfermedades. El presente estudio tiene como objetivo determinar el potencial de inhibición del componente de la fosfatidilcolina (PC) PC 16:00, 02:00 en relación con el comportamiento de la glucuronidación de trifluoperazina (TFP). La actividad residual de glucuronidación de TPF fue 75.5, 58.7, 47.2 y 40.7% a los 20, 40, 60, y 100 mM de PC 16:0, 2:00, respectivamente. Por otra parte, el esquema de Dixon (1/velocidad de reacción frente a la concentración de PC 16:0, 2:0) se utilizó para determinar el tipo de cinética de inhibición. El punto de intersección se encuentra en el segundo cuadrante en Dixon, indicando la inhibición competitiva de la PC 16:0, 2:0 sobre la glucuronidación de TFP. Usando la ecuación de ajuste de la inhibición competitiva, se calculó que el parámetro cinético de inhibición Ki era 11 μM. Todos los datos indicaron quela alteración metabólica de la glucuronidación de TFP en condiciones de dislipidemia es debida a la perturbación de componentes lipídicos.

KEY WORDS: Dyslipidemia condition, Phospholipids, Trifluoperazine (TFP).

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