Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **32** (1): 146-8 (2013)

Short communication
Received: December 3, 2012
Revised version: December 9, 2012
Accepted: December 11, 2012

In vitro Evaluation of Rg_3's Inhibition towards Glucuronidation Elimination of Zidovudine (AZT)

Wei-Ping LI [1], Yu-Feng WANG [2] & Wei ZHAO [3]*

[1] *Department of Gynecology and Obstetrics, Chinese PLA General Hospital, China*
[2] *Outpatient Department, Chinese PLA General Hospital, China*
[3] *Surgery Clinical Division, Chinese PLA General Hospital, China*

***SUMMARY*. Rg_3, an important ingredient isolated from ginseng, has shown multiple biochemical and pharmacological activities. Rg_3 is an efficient nucleoside reverse transcriptase inhibitor (NRTI) widely used in clinic. The aim of the present study is to evaluate the Rg_3-AZT interaction potential using *in vitro* human liver microsomes (HLMs) incubation system. The results showed the inhibition of Rg_3 towards HLMs-catalyzed AZT glucuronidation in a concentration-dependent behaviour. Both Dixon plot and Lineweaver-Burk plot were used to determine the inhibition kinetic type, and the second plot fitting the slopes from Lineweaver-Burk plot versus the concentrations of Rg_3 was utilized to calculate the inhibition kinetic parameter (K_i). The intersection points located in the second .quadrant of Dixon plot and verticle axis of Lineweaver-Burk plot showed the competitive inhibition of Rg_3 towards HLMs-catalyzed AZT glucuronidation. The inhibition parameter (K_i) was calculated to be 172.1 μM. All these results remind us the possible Rg_3-AZT interaction.**

KEY WORDS: Ginsenosides, Glucuronidation, Zidovudine (AZT).

* Author to whom correspondence should be addressed. *E. mail:* zhaowei301yiyuan@163.com

ISSN 0326-2383