Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **36** (5): 955-8 (2017)

Received: November 29, 2016
Revised version: February 5 2017
Accepted: February 6, 2017

Synthesis and Anticancer Activity Evaluation of some Curcumol Derivatives

Ju LIU [1], Jinghua ZHAO [1], Jinfeng ZHANG [1], Qingguo CUI [1], Xin WANG [1], Xiao LIANG [1], Hongsheng LIU [2] & Li Jiang CHEN [1,2,3] *

[1] *Department of Pharmaceutics, School of Pharmaceutical Sciences, Liaoning University, Shenyang 110036, P.R. China*
[2] *Research Center for Computer Simulating and Information Processing of Bio-macromolecules of Liaoning Province, Shenyang 110036, P.R. China*
[3] *Liaoning Pharmaceutical Engineering Research Center for Natural Medicine, Shenyang 110036, P.R. China*

***SUMMARY*. Using curcumol as the starting material, a series of its derivatives containing an N-heterocyclic moiety were synthesized and purified. The structures of these compounds were confirmed by ^{1}H NMR, IR and mass spectral data. The novel compounds were evaluated for their *in vitro* anticancer activity against hepatocarcinoma cell lines HepG2, lung carcinoma cell lines A549, and cervical cancer cell lines HeLa by methyl thiazolyl tetrazolium chromatometry. Some of the tested compounds exhibited higher inhibition efficiency than curcumol, suggesting that structural modifications could enhance effectively its anti-cancer activity.**

RESUMEN. Usando curcumol como material de partida, se sintetizaron y purificaron una serie de derivados que contenían un resto N-heterocíclico. Las estructuras de estos compuestos se confirmaron por ^{1}H NMR, IR y espectrometría de masas. Los nuevos compuestos se evaluaron en cuanto a su actividad anticancerígena *in vitro* contra las líneas celulares de hepatocarcinoma HepG2, de carcinoma de pulmón A549 y de cáncer cervical HeLa, mediante cromatometría de metil tiazolil tetrazolio. Algunos de los compuestos probados exhibieron mayor eficacia de inhibición que el curcumol, lo que sugiere que las modificaciones estructurales podrían mejorar eficazmente su actividad anticancerígena.

KEY WORDS: anticancer activity, curcumol, derivatives, synthesis.

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

ISSN 0326 2383 (printed ed.)
ISSN 2362-3853 (on line ed.)