Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **36** (3): 609-12 (2017)

Short communication
Received: July 2, 2016
Revised version: November 24, 2016
Accepted: November 26, 2016

In Vitro Activity of Synthesized Pyran Derivatives-Inhibitor Against Prostate Cancer

Yuan-Song XIAO § *, Lei ZHANG §, Wei-Lie HU, Yong-Bin ZHAO, & Hui HU

Departments of Urology, Guangzhou General Hospital of Guangzhou Military Command (Guangzhou Liuhuaqiao Hospital), Guangzhou 510010, Guangdong, China

SUMMARY. In this study, four novel pyran derivatives (**1-4**) were synthesized and their structures were clarified by IR, ^{1}H NMR, HRMS, and single crystal X-ray crystallography. Their *in vitro* proliferation inhibitory activities against four human prostate cancer cell lines (LNCap, PC3, DU145 and PC-3M-2B4) were then evaluated. The experimental results showed that compared with compounds **1** and **2**, compounds **3** and **4** with two strong electron-withdrawing groups in the phenyl ring exhibited better anti-cancer activity.

RESUMEN. En este estudio se sintetizaron cuatro nuevos derivados de pirano (**1**-**4**) y se clarificaron sus estructuras por IR, ^{1}H RMN, HRMS y cristalografía de rayos X de cristal único. A continuación se evaluaron sus actividades inhibidoras de la proliferación *in vitro* contra cuatro líneas celulares de cáncer de endometrio humano (RL-95-2, HEC-1A, HEC-1B y AN3CN). Los resultados experimentales mostraron que en comparación con los compuestos **1** y **2**, los compuestos **3** y **4** con dos grupos electrógenos fuertes en el anillo de fenilo mostraron una mejor actividad anticancerígena.

KEY WORDS: endometrial cancer, pyran, X-ray.

§ These authors contributed equally to this paper.
* Author to whom correspondence should be addressed. *E-mail:* yuansong_xiao666@163.com

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