Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **36** (4): 816-9 (2017)

Short communication
Received: November 13, 2016
Revised version: December 6, 2016
Accepted: December 9, 2016

New 4-Arylpolyhydroquinoline Derivatives: Inhibiting Growth of Oral Tumor Cells

Wang-Xi WU [1], Qi ZHANG [1], Xiao HU [1], Zhu-Su CHEN [2], Shu-Lan XU [1] & Lei ZHOU [1] *

[1] *Department of Implantology, Guangdong Provincial Stomatological Hospital, Southern Medical University, Guangzhou, Guangdong, China*
[2] *Department of Endodontics, Guangdong Provincial Stomatological Hospital, Southern Medical University, Guangzhou, Guangdong, China*

SUMMARY. Four novel 4-arylpolyhydroquinoline derivatives (**1-4**) were synthesized via a one-pot three-component reaction by condensing aromatic aldehydes, 3,5-cyclohexanedione and 3-amino-2-butenoicacimethylester in the presence of 4-(dimethylamino)pyridine (DMAP) as a highly efficient homogenous catalyst. The structures of the synthesized compounds have been deduced from IR, ^{1}H NMR, HRMS, and single crystal X-ray crystallography. The experimental results of antitumor activity showed that compared with compounds **1-3**, compound **4** with two strong electron-withdrawing groups in the phenyl ring exhibited better antitumor activity.

RESUMEN. Se sintetizaron cuatro nuevos derivados de 4-aril-polihidroquinolina (**1-4**) mediante una reacción de tres componentes en un solo recipiente por condensación de aldehídos aromáticos, 3,5-ciclohexanodiona y éster de ácido 3-amino-2-butenoico en presencia de 4-(dimetilamino) piridina (DMAP) como un catalizador homogéneo altamente eficiente. Las estructuras de los compuestos sintetizados se han deducido de IR, RMN de ^{1}H, HRMS y cristalografía de cristal único. Los resultados experimentales de la actividad antitumoral mostraron que, comparado con los compuestos **1-3**, el compuesto **4** con dos grupos electrógenos fuertes en el anillo de fenilo presentaba una mejor actividad antitumoral.

KEY WORDS: antitumor, 4-arylpolyhydroquinoline, X-ray,

* Author to whom correspondence should be addressed. *E-mail:* lei_zhou666@163.com

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