Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **35** (6): 1446-9 (2016)

Short communication
Received: November 17, 2015
Revised version: March 23, 2016
Accepted: March 25, 2016

Synthesis and Anti-Myocarditis Activity of Biscoumarins and Epoxydicoumarins

Fengquan DONG [1], Weijian HUANG [1], Laite CHEN [1], Yuepiao CAI [2] & Chenglv HONG [1] *

[1] *Department of Cardiology, The First Affliated Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China*
[2] *School of Pharmaceutical Sciences, Wenzhou Medical University, Wenzhou, Zhejiang, China*

SUMMARY. Two novel biscoumarins **1** and **3** and their corresponding epoxydicoumarins **2** and **4** were synthesized and characterized via IR, ^{1}H NMR, and HRMS. The structure of compound 4 was verified by single-crystal X-ray crystallography. Anti-inflammatory properties of the synthesized compounds were evaluated *in vivo* utilizing a standard acute carrageenan-induced paw oedema method in rats. The results showed that compared with compounds **2** and **4**, compounds **1** and **3** with two intramolecular O–H···O HBs in their structures exhibited better anti-inflammatory activity.

RESUMEN. Dos nuevas biscoumarinas **1** y **3** y sus correspondientes epoxidIcumarinas **2** y **4** se sintetizaron y caracterizaron por IR, ^{1}H RMN y HRMS. La estructura del compuesto 4 se verificó por cristalografía monocristalina de rayos X. Las propiedades antiinflamatorias de los compuestos sintetizados se evaluaron *in vivo* utilizando el método estándar de edema agudo de pata de rata inducido por carragenina. Los resultados mostraron que en comparación con los compuestos **2** y **4**, los compuestos **1** y **3** con dos O–H···O HBs intramoleculares en sus estructuras exhiben mejor actividad anti-inflamatoria.

KEY WORDS: anti-inflammatory, coumarin, X-ray.

* Author to whom correspondence should be addressed. *E-mail:* hong_chenglv666@163.com

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