Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense*)
Lat. Am. J. Pharm. **40** (12): 2883-8 (2021)

Received: October 4, 2021
Revised: October 20, 2021
Accepted: October 22, 2021

Two Cu(II)-Based Coordination Polymers: Prevention Activity against Hypotension after Orthopedic Anesthesia

Ying KONG [1] & Lei WU [2] *

[1] *Department of Anesthesiology, Shanxi Bethune Hospital, Taiyuan, Shanxi, China*

[2] *Department of Anesthesiology, Shangluo Hospital of Traditional Chinese Medicine, Shangluo, Shaanxi, China*

***SUMMARY*. Two new multinuclear complexes with the chemical compositions of [{CuL(MeOH)(μ-OAc)}$_2$Co]·6CH_3OH (1) and [{Cu_2L_2(μ-OH)}$_2$]·2NH(CH_2CH_3)$_3$·4CH_3OH·H_2O (2), based on a flexible salamo-based ligand H_2L containing coumarin functional groups have been synthesized and characterized structurally. Furthermore, the biological activity of compounds 1 and 2 on preventing hypotension after orthopedic anesthesia was assessed, followed by the mechanism exploration. Firstly, the expression of peripheral vascular α receptors was measured with real time RT-PCR. Then, the non-invasive blood pressure monitor was performed to detect the blood pressure of the hypotension animal model after orthopedic anesthesia and compound treatment.**

RESUMEN. Dos nuevos complejos multinucleares con las composiciones químicas de [{CuL (MeOH) (μ-OAc)}-$_2$Co] 6CH_3OH (**1**) y [{Cu_2L_2 (μ-OH)}$_2$] 2NH(CH_2CH_3)$_3$ 4CH_3OH H_2O (**2**), basado en un ligando flexible basado en salamo H_2L qe contiene grupos funcionales cumarina, se han sintetizado y caracterizado estructuralmente. Además, se evaluó la actividad biológica de los compuestos **1** y **2** para prevenir la hipotensión después de la anestesia ortopédica, seguida de la exploración del mecanismo. En primer lugar, se midió la expresión de los receptores α vasculares periféricos con RT-PCR en tiempo real. Luego, se realizó el monitor de presión arterial no invasivo para detectar la presión arterial del modelo animal con hipotensión después de la anestesia ortopédica y el tratamiento con compuesto.

KEY WORDS: Cu(II) complexes, hypotension, orthopedic anesthesia

* Author to whom correspondence should be addressed. *E-mail:* wulei197407@163.com

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