



A Novel Mn(II) Coordination Polymer: Anti-Cardiovascular Tumor Activity

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SUMMARY. A new Mn(II) coordination polymer, namely $\{[\text{Mn}(\text{bpydbH})_2(\text{H}_2\text{O})_2](\text{DMF})_2\}_n$ (**1**), has been successfully synthesized by assembling transition metal Mn^{2+} ion with trigonal heterofunctional ligand 4,4'-(4,4'-bipyridine-2,6-diyl) dibenzoic acid (bpydbH_2) under solvothermal conditions. Compound **1** consists of 2D (4,4) networks, which are further assembled into the new topological framework through O–H...O interactions. In addition, the antitumor effects of the title compound **1** and its corresponding organic ligand bpydbH_2 were studied on three human cardiovascular tumor cells (ECV304, Eahy926 and HMEC-1). The results showed that compared with organic ligand bpydbH_2 , compound **1** displayed efficient antitumor activity.

RESUMEN. Un nuevo polímero de coordinación de Mn (II), $\{[\text{Mn}(\text{bpydbH})_2(\text{H}_2\text{O})_2](\text{DMF})_2\}_n$ (**1**), se ha sintetizado con éxito por unión del metal de transición ion Mn^{2+} con el ligando trigonal heterofuncional 4,4'-(4,4'-bipiridina-2,6-diilo) dibenzoico (bpydbH_2) en condiciones solvotérmicas. El compuesto **1** consiste en redes 2D (4,4), las que se ensamblan luego en el nuevo marco topológica a través de interacciones O-H...O. Además, los efectos antitumorales del compuesto **1** y su correspondiente ligando orgánico bpydbH_2 se estudiaron en tres líneas celulares tumorales cardiovasculares humanas (ECV304, Eahy926 y HMEC-1). Los resultados mostraron que en comparación con el ligando orgánico bpydbH_2 , el compuesto **1** muestra actividad antitumoral eficiente.

KEY WORDS: antitumor, coordination, X-ray.

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