



The Antitumor Effects in Arteriosclerosis of a New Nonanuclear Cu(II) Coordination Compound

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SUMMARY. A new nonanuclear coordination compound, namely $[\text{Cu}_9(\text{bta})_{12}(\text{NO}_3)_6(\text{DMA})_6] \cdot 12\text{DMA}$ (**1**) (btaH = 1,2,3-benzotriazole; DMA = *N,N'*-dimethylacetamide) has been solvothermally synthesized by the reactions of $\text{Cu}(\text{NO}_3)_2$ and 1,2,3-benzotriazole. Single crystal X-ray structural analysis reveals that compound **1** features a $\{\text{Cu}_9\text{bta}_{12}\}^{6+}$ cores in which the metal centers are bridged by μ_3 -benzotriazolates. The antitumor activities in arteriosclerosis of the title compound **1** and its organic ligand (btaH) was investigated against four human hemangioma cell lines (SW1463, NCI-H526, DMS53 and C2C12) by MTT assay. It was found that compared with the organic ligand, compound **1** exerted rather potent activities against all of these cell lines.

RESUMEN. Un nuevo compuesto de coordinación nonanuclear, a saber $[\text{Cu}_9(\text{bta})_{12}(\text{NO}_3)_6(\text{DMA})_6] \cdot 12\text{DMA}$ (**1**) (btaH = 1,2,3-benzotriazol; DMA = *N,N'*-dimetilacetamida) ha sido sintetizado solvotérmicamente por las reacciones de $\text{Cu}(\text{NO}_3)_2$ y 1,2,3-benzotriazol. El análisis estructural de rayos X de cristal individual revela que el compuesto **1** cuenta con $\text{Cu}_9\text{bta}_{12}^{6+}$ núcleos en los que los centros metálicos son puenteados por μ_3 -benzotriazolatos. Las actividades antitumorales en arteriosclerosis del compuesto **1** y su ligando orgánico (btaH) se investigaron frente a cuatro líneas celulares humanas (hemangioma SW1463, NCI-H526, DMS53 y C2C12) por ensayo de MTT. Se encontró que, en comparación con el ligando orgánico, el compuesto **1** ejerce potente actividad frente a todas estas líneas celulares.

KEY WORDS: benzotriazole, coordination, X-ray.

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