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Two New La(III) and Mg(II) Coordination Polymers: Inhibiting Growth of Human Ventricular Aneurysms

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SUMMARY. Two new coordination polymers with the formulas of $[La_3(NTB)_3(H_2O)_3](H_2O)_3$ (**1**) and $[Mg_3(BTB)_2(DMA)_2(MeOH)_2](DMA)_2$ (**2**) have been synthesized using two similar tritopic carboxylate ligands 4,4',4''-nitrilotribenzoic acid (H3NTB) and 1,3,5-benzenetribenzoic acid (H3BTB) as the organic linkers. The structure of the two complexes have been fully determined by the single crystal X-ray diffraction and their compositions have been studied by the elemental analysis. Furthermore, the *in vitro* cytotoxicity of the both complexes was also evaluated using MTT assays against oral epidermal cell lines (normal cells) and HeLa cells, and their anticancer activities have been comparably studied with the reference drug doxorubicin (DOX).

RESUMEN. Se han sintetizado dos nuevos polímeros de coordinación con las fórmulas $[La_3(NTB)_3(H_2O)_3](H_2O)_3$ (**1**) y $[Mg_3(BTB)_2(DMA)_2(MeOH)_2](DMA)_2$ (**2**) usando dos ligandos de carboxilato tritópico similares 4,4',4''-ácido nitrilotribenzoico (H3NTB) y ácido 1,3,5-bencenotribenzoico (H3BTB) como los enlazadores orgánicos. La estructura de los dos complejos ha sido completamente determinada por difracción de rayos X de cristal único y sus composiciones han sido estudiadas por análisis elemental. Además, la citotoxicidad *in vitro* de ambos complejos también se evaluó usando ensayos de MTT contra líneas celulares epidérmicas orales (células normales) y células HeLa, y sus actividades contra el cáncer se han estudiado de manera comparable con el fármaco de referencia doxorrubicina (DOX).

KEY WORDS: coordination polymer, doxorubicin, X-ray diffraction.

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