



Two Novel La(III) and Zn(II) Complexes Based on aromatic Tricarboxylic Acid Ligands for Inhibiting Growth of Human Skin Cancer Cells

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SUMMARY. The reactions of two aromatic tricarboxylic acid ligands 4,4',4''-tricarboxytriphenylamine (H₃TCA) and 4',4'',4'''-nitrilotris-[(1,1'-biphenyl)-4-carboxylic acid] (H₃NBC) with La(NO₃)₃·6H₂O and Zn(NO₃)₂·4H₂O afford two novel coordination polymers, respectively, [La₃(TCA)₃(H₂O)₃].4H₂O (**1**) and [Zn(H₂O)(HNBC)](DMA) (**2**) (DMA = N,N-dimethylacetamide), in which **1** could be simplified as a 5,5,6,6,6,6-connected net with a Schläfli symbol of {4¹⁰.6⁵}{4⁷.6³}₂{4⁸.6⁷}₂{4⁹.6⁶} based on the La clusters and TCA ligands as building nodes, and **2** exhibits 2D layered structure with large rhombus channels which consists of partly deprotonated HNBC ligand and Zn²⁺ paddle-wheel clusters. In addition, *in vitro* anticancer activities of compounds **1** and **2** on four human skin cancer cells (A432, HS-4, SCL-1 and Colo-16) was further determined.

RESUMEN. Las reacciones de dos ligandos del ácido tricarbóxico aromático 4,4',4''- tricarbóxitrifetilamina (H₃TCA) y ácido 4',4'',4'''-nitrilotris-[(1,1'-bifenil)-4- carboxílico] (H₃NBC) con La(NO₃)₃·6H₂O y Zn(NO₃)₂·4H₂O proporcionan dos nuevos polímeros de coordinación, respectivamente, [La₃(TCA)₃(H₂O)₃].4H₂O (**1**) y [Zn(H₂O)(HNBC)](DMA) (**2**) (DMA = N,N-dimetilacetamida), en la que **1** podría simplificarse como una red conectada con 5,5,6,6,6,6 con un símbolo de Schläfli de {4¹⁰.6⁵}{4⁷.6³}₂{4⁸.6⁷}₂{4⁹.6⁶} basado en los clusters de La y los ligandos de TCA como nodos de construcción, y **2** exhibe una estructura en capas 2D con grandes canales de los rombos que consiste en ligandos de HNBC parcialmente desprotonados y clavos de rueda de Zn²⁺. Además, se determinaron adicionalmente las actividades anticancerosas *in vitro* de los compuestos **1** y **2** en cuatro células de cáncer de piel humana (A432, HS-4, SCL-1 y Colo-16).

KEY WORDS: anticancer, coordination polymers, ligand

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