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Two Novel Zn(II) and Ag(I) Metal Complexes: Inhibiting Growth of Human Lung Cancer Cells

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SUMMARY. Two new Zn(II)-based and Ag(I)-based coordination polymers, $[Zn(1,3\text{-pda})(bmib)\cdot(H_2O)]_n$ [**1**, $H_2$1,3-pda = 1,3-phenylenediacetate, bmib = 1,3-bis(2-methylimidazolyl)butane] and $[Ag(bmib)(ClO_4)]_n$ (**2**), have been successfully synthesized and structurally characterized by single crystal X-ray analysis. In addition, *in vitro* cytotoxicity and anticancer activities of compounds **1** and **2** have been studied against 293 cells (Human Embryonic Kidney cells) and four human lung cancer cell lines (H1299, MSTO-211H, PC9 and A549) by MTT assay.

RESUMEN. Dos nuevos polímeros de coordinación basados en Zn(II) y Ag(I), $[Zn(1,3\text{-pda})(bmib)\ (H_2O)]_n$ [**1**, $H_2$1,3-pda = 1,3-fenilendiacetato, bmib = 1,3-bis (2-metilimidazolil) butano] y $[Ag\ (bmib)(ClO_4)]_n$ (**2**), se han sintetizado con éxito y caracterizado estructuralmente por análisis de rayos X de cristal único. Además, se han estudiado la citotoxicidad *in vitro* y las actividades anticancerígenas de los compuestos **1** y **2** frente a 293 células (células de riñón embrionario humano) y cuatro líneas celulares de cáncer de pulmón humano (H1299, MSTO-211H, PC9 y A549) mediante ensayo de MTT.

KEY WORDS: coordination polymer, lung cancer, X-ray.

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