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# Anti-Pancreatic Cancer Activity of A Novel Cocrystal Organic Compound and its Related Metal Complex

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***SUMMARY.*** Two new crystalline compounds $H_2$tbtpa/bmib/$H_2O$ (**1**) and $[Cd_2(bmib)(H_2O)_2(tbtpa)_2 \cdot H_2O]_n$ (**2**) have been successfully prepared by reaction of tetrabromoterephthalic acid ($H_2$tbtpa) and 1,4-bis(2-methyl-1-H -imidazol-1-yl)butane (bmib) ligands without or with $Cd(NO_3)_2.4H_2O$ under different reaction conditions. The X-ray study analysis reveals that compound **1** locates in the triclinic space group P-1 with H-bonding interaction formed by the 2,3,5,6-Tetrabromoterephthalic acid ligand and water molecules, while compound **2** features a pillar-layered 3D framework structure based on a binuclear Cd secondary building unit. In addition, *in vitro* anticancer activity of compounds **1** and **2** on three human pancreatic cancer cell lines (SW1990, BxPC3 and PaTu8988) was further determined.

*RESUMEN*. Dos nuevos compuestos cristalinos $H_2$tbtpa/bmib/$H_2O$ (**1**) y $[Cd_2(bmib)(H_2O)_2(tbtpa)_2\ H_2O]_n$ (**2**) se han preparado con éxito por reacción del ácido tetrabromotereftálico ($H_2$tbtpa) y 1,4- ligandos de bis (2-metil-1-H-imidazol-1-il) butano (bmib) sin o con Cd $(NO_3)_2.4H_2O$ en diferentes condiciones de reacción. El análisis del estudio de rayos X revela que el compuesto **1** se localiza en el grupo espacial triclínico P-1 con interacción de unión H formada por el ligando de ácido 2,3,5,6-Tetrabromotereftálico y las moléculas de agua, mientras que el compuesto **2** presenta una estructura 3D tipo capa pilar basada en una unidad de construcción secundaria de Cd binuclear. Además, se determinó adicionalmente la actividad anticancerígena *in vitro* de los compuestos **1** y **2** en tres líneas celulares de cáncer de páncreas humano (SW1990, BxPC3 y PaTu8988).

*KEY WORDS:* anti-pancreatic cancer, pillar-layered, X-ray,

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