



## Application and Clinical Nursing Value of a Co(II)-coordination Polymer in the Treatment of Children Pneumonia by Reducing Excessive Inflammation

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**SUMMARY.** By employment of the flexible triazine ligand 1,1',1''-(1,3,5-triazine-2,4,6-triyl) tripiperidine-4-carboxylic acid (H<sub>3</sub>TTPCA), a new Co(II)-based coordination polymer with the chemical formula of [Co(HTTPCA)]·H<sub>2</sub>O (**1**) has been successfully prepared via reaction of Co(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O with the H<sub>3</sub>TTPCA ligand under the solvothermal reaction conditions. Its application and nursing value in the treatment of children pneumonia was evaluated and the related mechanism was explored as the same time. The ELISA assay was firstly conducted to measure the content of the inflammatory cytokines released into the alveolar lavage fluid. Then, the activation of the NF- $\kappa$ B signaling pathway was measured with real time RT-PCR.

**RESUMEN.** Mediante el empleo del ligando de triazina flexible 1,1',1''-(1,3,5-triazina-2,4,6-triil) ácido tripiperidina-4-carboxílico (H<sub>3</sub>TTPCA), un nuevo compuesto basado en Co(II) El polímero de coordinación con la fórmula química de [Co(HTTPCA)] H<sub>2</sub>O (**1**) se ha preparado con éxito mediante la reacción de Co(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O con el ligando H<sub>3</sub>TTPCA en las condiciones de reacción solvotérmicas. Se evaluó su aplicación y valor de enfermería en el tratamiento de la neumonía infantil y, al mismo tiempo, se exploró el mecanismo relacionado. El ensayo ELISA se realizó en primer lugar para medir el contenido de citocinas inflamatorias liberadas en el líquido de lavado alveolar. Luego, la activación de la vía de señalización de NF- $\kappa$ B se midió con RT-PCR en tiempo real.

**KEY WORDS:** coordination complex, children pneumonia, ELISA, RT-PCR

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