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Prevention Activity of Co(II) Coordination Polymer on Adverse Reactions During Heart Valve Replacement Surgery

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SUMMARY. **In this paper, with the mixed-ligand synthesis approach, a coordination polymer (CP) based on Co(II), namely, $[Co(HL)(H_2O)_2]\cdot(bpe)_{0.5}$ (1) was synthesized, which includes semi-rigid tricarboxylate 4-(2´,3´-dicarboxylphenoxy) benzoic acid (H_3L) and 1,2-bis(4-pyridyl) ethylene (bpe) acts as the organic bridges. To prevent the adverse reactions during heart valve replacement surgery, ELISA was exploited to identify the inflammatory cytokines secreted with vascular endothelial cells into the plasma. In addition, the activation for the signaling pathway of NF-ϰB was tested with RT-PCR.**

RESUMEN. En este artículo, con el enfoque de síntesis de ligandos mixtos, se sintetizó un polímero de coordinación (CP) basado en Co(II), concretamente, $[Co(HL)(H_2O)_2]\bullet(bpe)_{0.5}$ (**1**), que incluye El tricarboxilato semirrígido del ácido 4-(2´,3´-dicarboxilfenoxi)benzoico (H3L) y el 1,2-bis(4-piridil)etileno (bpe) actúan como puentes orgánicos. Para prevenir las reacciones adversas durante la cirugía de reemplazo de válvula cardíaca, se aprovechó ELISA para identificar las citocinas inflamatorias secretadas por las células endoteliales vasculares en el plasma. Además, se probó la activación de la vía de señalización de NF-ϰB con RT-PCR.

KEY WORDS: adverse reactions, coordination polymer, heart valve replacement

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