

## Therapeutic Effects of La(III) Coordination Polymer in Regulating Immune Cell Response To Rejection After Liver Cancer Transplantation

Lihong HAN

Department of Neurosurgery, WuHan University,  
WuHan, HuBei, China

**SUMMARY.** In the current study, a new three-dimensional (3D) coordination polymer,  $[La_2(pbbp)(pbsd)_3]$  (**1**) ( $H_2pbsd = 2,2'-((1,4\text{-phenylenebis(methylene))bis(sulfanediyl))dinicotinic acid}$ ,  $H_2pbbp \cdot 2Cl = 1,1'-((1,4\text{-phenylene-bis(methylene))bis(3-carboxy pyridinium) dichloride}$ ), was prepared by the solvothermal reaction of  $La(NO_3)_3 \cdot 6H_2O$ ,  $H_2pbbp \cdot 2Cl$  and  $H_2pbsd$  in mixed solvent of DMF and  $H_2O$ , which was characterized by single-crystal X-ray diffraction, powder X-ray diffraction, infrared spectroscopy, and thermogravimetric analyses. For the prevention of rejection after liver cancer transplantation, the real time RT-PCR was used to measure the expression of Fas antigen ligand (Fas-L) on T lymphocytes. The content of pigment epithelium-derived factor (PEDF) released into the serum was measured with ELISA assay.

**RESUMEN.** En el estudio actual, se ha desarrollado un nuevo polímero de coordinación tridimensional (3D),  $[La_2(pbbp)(pbsd)_3]$  (**1**) ( $H_2pbsd = 2,2'-((1,4\text{-fenilenbis(metileno))bis(ácido sulfanodiil))dnicotínico}$ ,  $H_2pbbp \cdot 2Cl =$  dicloruro de  $1,1'-((1,4\text{-fenilen-bis(metilen))bis(3-carboxipiridinio)}$ ), se preparó mediante la reacción solvotérmica de  $La(NO_3)_3 \cdot 6H_2O$ ,  $H_2pbbp \cdot 2Cl$  y  $H_2pbsd$  en un disolvente mixto de DMF y  $H_2O$ , que se caracterizó mediante difracción de rayos X de monocristal, difracción de rayos X en polvo, espectroscopía infrarroja y análisis termogravimétricos. Para la prevención del rechazo después del trasplante de cáncer de hígado, se utilizó RT-PCR en tiempo real para medir la expresión del ligando del antígeno Fas (Fas-L) en los linfocitos T. El contenido de factor derivado del epitelio pigmentario (PEDF) liberado en el suero se midió con un ensayo ELISA.

**KEY WORDS:** coordination polymer, liver cancer transplantation, PEDF.

\* Author to whom correspondence should be addressed. *E-mail:* lihong\_han66@126.com