



Therapeutic Effect and Mechanism of Lanthanide Coordination Polymer on Gestational Diabetes Mellitus through Regulating Insulin Receptor Expression

Hui-Fen ZANG*, Qing-Qing WU, Lei SHI, Qiu-Li YU

Department of Obstetrics, The No.8 People's Hospital of Qingdao,
Qingdao, Shandong, China

SUMMARY. When $\text{La}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$ reacted with 1,4-benzenedicarboxylate (BDC), a novel La(III)-containing coordination polymer, namely, $[\text{La}(\text{BDC})_{1.5}(\text{IP})(\text{H}_2\text{O})] \cdot n\text{H}_2\text{O}$ (**1**) has been created by employment of N-donor co-ligand 1H-imidazo[4,5-f][1,10]-phenanthroline (IP). Its therapeutic effect and mechanism on gestational diabetes mellitus was evaluated. Firstly, the insulin receptor expression level was determined with real time RT-PCR. Then, the levels of C-reactive protein and interleukin 6 (IL-6) was measured with ELISA assay as well.

RESUMEN. Cuando $\text{La}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}$ reaccionó con 1,4-benzenedicarboxilato (BDC), un nuevo polímero de coordinación que contiene La(III), a saber, $[\text{La}(\text{BDC})_{1.5}(\text{IP})(\text{H}_2\text{O})] \cdot n\text{H}_2\text{O}$ (**1**) ha sido creado mediante el empleo de N-co-ligando donador 1H-imidazo[4,5-f][1,10]-fenantrolina (IP). Se evaluó su efecto terapéutico y mecanismo sobre la diabetes mellitus gestacional. En primer lugar, se determinó el nivel de expresión del receptor de insulina con RT-PCR en tiempo real. Luego, los niveles de proteína C reactiva e interleucina 6 (IL-6) también se midieron con el ensayo ELISA.

KEY WORDS: coordination polymer, gestational diabetes mellitus, ELISA

* Author to whom correspondence should be addressed. E-mail: zanghuifen1967@163.com