



## A New Ni(II)-Containing Coordination Complex: Structural Insights and Treatment Effect on Type 2 Diabetes by Reducing Inflammatory Response in Liver Cells

Hui ZHU & Yancheng XU\*

Department of Endocrinology, Zhongnan Hospital of Wuhan University,  
Wuhan 430071, China

**SUMMARY.** A novel coordination complex  $[\text{Ni}_2(\text{L}_1)_2(\text{L}_2)_2](\text{H}_2\text{O})_2(\text{DMF})_2$  (**1**) as well as its nano samples has been prepared via reaction of 6,6'-bis(1H-benzo[d]imidazol-2-yl)-2,2'-bipyridine ( $\text{L}_2$ ) with  $\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$  and 5,5'-((1,4-phenylenebis(methylene))bis(azanediyl))diisophthalic acid ( $\text{H}_2\text{L}_1$ ). Furthermore, the treatment effect of nano **1** on the diabetes of type 2 was assessed. After nano **1** treatment, *MAPK* and *PKC* relative expression was determined via RT-PCR.

**RESUMEN.** Se ha preparado un nuevo complejo de coordinación  $[\text{Ni}_2(\text{L}_1)_2(\text{L}_2)_2](\text{H}_2\text{O})_2(\text{DMF})_2$  (**1**), así como sus nano muestras por reacción de 6,6'-bis (1H-benzo[d]imidazol-2-il)-2,2'-bipiridina ( $\text{L}_2$ ) con  $\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$  y ácido 5,5'-((1,4-fenilenbis (metileno)) bis(azanediil))diisoftálico ( $\text{H}_2\text{L}_1$ ). Además se evaluó el efecto del tratamiento de nano **1** sobre la diabetes de tipo 2. Después del tratamiento con nano **1**, se determinó la expresión relativa de *MAPK* y *PKC* mediante RT-PCR.

**KEY WORDS:** Ni(II)-containing, type 2 diabetes, X-ray diffraction,

\* Author to whom correspondence should be addressed. *E-mail:* yancheng\_xu11@126.com