

Therapeutic Effect of a New Heterocycles Compound in Bacterial Prostatitis by Inhibition of 5- α Reductase Activity

Shan-Long WANG & Li-Ming HE *

Department of Urology, Yulin Hospital of Traditional Chinese Medicine,
Yulin, Shaanxi, China

SUMMARY. The new heterocycles compound (S)-2-(oxiran-2-ylmethyl)isoindoline-1,3-dione (**1**), designed using (S)-3-chloropropane-1,2-diol (**2**) as start material, was successfully obtained via multiple synthesis route and finally characterized by IR, ¹H NMR, and single crystal X-ray crystallography. Its application value on the bacterial prostatitis was assessed and the related mechanism of the new compound was discussed as well. The ELISA was performed and the levels of inflammatory cytokines released into the plasma was measured. The real time RT-PCR was conducted and the expression of the 5- α reductase was measured.

RESUMEN. El nuevo compuesto de heterociclos (S)-2-(oxirano-2-ilmetil) isoindolina-1,3-diona (**1**), diseñado utilizando (S)-3-cloropropano-1,2-diol (**2**) como material de partida, se obtuvo con éxito a través de múltiples rutas de síntesis y finalmente se caracterizó por IR, ¹H RMN y cristalografía de rayos X de cristal único. Se evaluó su valor de aplicación en la prostatitis bacteriana y también se discutió el mecanismo relacionado del nuevo compuesto. Se realizó el ELISA y se midieron los niveles de citocinas inflamatorias liberadas en el plasma. Se realizó la RT-PCR en tiempo real y se midió la expresión de la 5- α reductasa.

KEY WORDS: bacterial prostatitis, ELISA, heterocycles compound, RT-PCR.

* Author to whom correspondence should be addressed. E-mail: baiyitianshi3435@163.com