



A Pyrrole Dicarboxylic Acid from *Portulaca oleracea* L. and its Anti-Inflammatory Effect

Xinyu CUI¹, Shengnan GUO¹, Yang DUAN¹, Wenjie LI^{2*} & Xixiang YING^{1*}

¹ School of Pharmacy, Liaoning University of Traditional Chinese Medicine,
Dalian, the People's Republic of China

² Department of Cardiology, The Affiliated Hospital of Liaoning University
of Traditional Chinese Medicine, Shenyang, the People's Republic of China

SUMMARY. A new pyrrole dicarboxylic acid compound belonged to an alkaloid and named olerapyrrole was discovered in *Portulaca oleracea* L. for the first time. Its structure was determined by using spectroscopic methods, including 1D and 2D NMR, high-resolution electrospray ionization time-of-flight mass spectrometry. Olerapyrrole can inhibit the release of NO, an inflammatory factor, and has a significant anti-inflammatory activity.

RESUMEN. Se describe por primera vez un nuevo compuesto de ácido pirrol dicarboxílico perteneciente a un alcaloide y denominado olerapirrol en *Portulaca oleracea* L. Su estructura se determinó mediante el uso de métodos espectroscópicos, incluyendo 1D y 2D RMN y espectrometría de masas de tiempo de vuelo de ionización por electropulverización de alta resolución. Olerapirrol puede inhibir la liberación de NO, un factor inflamatorio, y tiene una actividad antiinflamatoria significativa.

KEY WORDS: alkaloid, anti-inflammatory effect, *Portulaca oleracea* L.

* Authors to whom correspondence should be addressed. E-mails: yingxixiang@163.com (X. Ying); lwzhwh@163.com (W. Li)