

## Coumarin Derivatives from Ash Bark with Promising Antimicrobial Activities

Zhuo-Xu HU

*Nanjing University of Traditional Chinese Medicine, Nanjing, China*

**SUMMARY.** Four novel coumarin derivatives (**1-4**) were synthesized and characterized via IR, <sup>1</sup>H NMR, HRMS, and single crystal X-ray crystallography. The antibacterial activities of the four compounds were investigated against four liver bacterial cells (*B. subtilis*, *K. pneumoniae*, *S. Epidermidis* and *S. Pneumoniae*) by MIC assay. It was found that compared with compounds **3** and **4**, compounds **1** and **2** exerted rather potent activities against these cell lines.

**RESUMEN.** Cuatro nuevos derivados de cumarina (1-4) se sintetizaron y caracterizaron mediante IR, <sup>1</sup>H RMN, HRMS y cristalografía de rayos X monocristal. Las actividades antibacterianas de los cuatro compuestos se investigaron contra cuatro células bacterianas hepáticas (*B. subtilis*, *K. pneumoniae*, *S. epidermidis* y *S. pneumoniae*) por ensayo de MIC. Se encontró que, en comparación con los compuestos **3** y **4**, los compuestos **1** y **2** ejercen en cambio actividades potentes contra estas líneas celulares.

**KEY WORDS:** antibacterial, coumarin, X-rays.

\* Author to whom correspondence should be addressed. *E-mail:* hu\_zhuoxu66@163.com