

## Ácido betulínico

### **Punto de fusión, características físicas, UV, IR, RMN<sup>1</sup>H y EM-FAB**

Khan Z, Ali M, Bagri P. 2010. A new steroidal glycoside and fatty acid esters from the stem bark of *Tectona grandis* Linn Nat Prod Res 24(11): 1059-1068.

### **Rotación específica**

Zheng MS, Lee YK, Li Y, Hwangbo K, Lee CS, Kim JR, Lee SKS, Chang HW, Son JK. 2010. Inhibition of DNA topoisomerases I and II and cytotoxicity of compounds from *Ulmus davidiana* var. japonica. Archives of Pharmacal Research 33(9): 1307-1315.

### **COSY, HMBC**

Molodtsov SG, Elyashberg ME, Blinov KA, Williams AJ, Martirosian EE, Martin GE, Lefebvre B. 2004. Structure Elucidation from 2D NMR Spectra Using the StrucEluc Expert System: Detection and Removal of Contradictions in the Data. J Chem Inf Comput Sci 44(5): 1737-1751.

### **RMN<sup>13</sup>C, NOESY**

Siddiqui S, Hafeez F, Begum S, Siddiqui BS. 1998. Oleanderol, a new pentacyclic triterpene from the leaves of *Nerium oleander*. J Nat Prod 51(2):229-233.

### **Actividad citotóxica contra las líneas celulares PC-3 (IC<sub>50</sub> = 2.3 μM) y HCT-116 (IC<sub>50</sub> = 7.5 μM).**

Dar AA, Dangroo NA, Raina A, Qayum A, Singh S, Kumar A, Sangwan PL. 2016. Biologically active xanthenes from *Codonopsis ovata*. Phytochemistry 132: 102-108.

### **Actividad anti-viral**

Peyrat LA, Eparvier V, Eydoux C, Guillemot JC, Litaudon M, Stien D. 2016. Betulinic acid, the first lupane-type triterpenoid isolated from both a *Phomopsis* sp. and its host plant *Diospyros carbonaria* Benoist. Chem Biodiver. Ahead of Print.

### **Actividad hepatoprotectora**

Tlili N, Feriani A, Allagui MS, Saadou E, Khaldi A, Nasri N. 2016. Effects of *Rhus tripartitum* fruit extract on CCl<sub>4</sub>-induced hepatotoxicity and cisplatin-induced nephrotoxicity in rats. Can J Physiol Pharmacol 94(8): 801-807.

### **Actividad antiinflamatoria**

Lin AS, Lin CR, Du YC, Lubken T, Chiang MY, Chen IH, Wu CC, Hwang TL, Chen SL, Yen MH, Chang FR, Wu YC. 2009. Acasiane A and B and farnesirane A and B, diterpene derivatives from the roots of *Acacia farnesiana*. Planta Med 75(3): 256-261.