

## A New Anti-Inflammatory Triterpenoid Saponin from *Penthorum chinense* Pursh

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**SUMMARY.** To study the chemical constituents of *Penthorum chinense* Pursh, the chemical constituents were isolated and purified by various chromatographic techniques, and the chemical structures were elucidated based on chemical analysis and spectral methods. As a result, a new triterpenoid saponin, named penthorin (**13**), together with sixteen known compounds: daucosterol (**1**), quercetin (**2**), kaempferol (**3**), lupeol (**4**), ursolic acid (**5**), palmitinic acid (**6**),  $\beta$ -sitosterol (**7**), apigenin (**8**), luteolin (**9**), betulinic acid (**10**), scopoletin (**11**), pinocembrin (**12**), gallic acid (**14**), quercetin-3-*O*- $\beta$ -D-glucoside (**15**), mangiferin (**16**) and quercetin-3-*O*-L-rhamnoside (**17**) were obtained. Meanwhile, the anti-inflammatory activity of the new compound 13 was evaluated in the nitrite assay using LPS-induced RAW 264.7 cells, which exhibited anti-inflammatory activity with IC<sub>50</sub> value of 82.65  $\mu$ g/mL.

**RESUMEN.** Para estudiar los componentes químicos de *Penthorum chinense* Pursh, se aislaron los constituyentes químicos, se purificaron mediante diversas técnicas cromatográficas y las estructuras químicas fueron aclaradas sobre la base de análisis químico y métodos espectrales. Como resultado, una nueva saponina triterpenoide, llamada penthorina (**13**), junto con dieciséis compuestos conocidos: daucosterol (**1**), quercetina (**2**), kaempferol (**3**), lupeol (**4**), ácido ursólico (**5**), ácido palmítico (**6**),  $\beta$ -sitosterol (**7**), apigenina (**8**), luteolina (**9**), ácido betulico (**10**), escopoletina (**11**), pinocembrina (**12**), ácido gálico (**14**), quercetina-3-*O*- $\beta$ -D-glucósido (**15**), manguiferina (**16**) y quercetina-3-*O*-L-ramnósido (**17**). Mientras tanto, la actividad anti-inflamatoria del nuevo compuesto 13 se evaluó en el ensayo del nitrito usando células RAW 264.7 inducidas con LPS, que exhibe actividad anti-inflamatoria con un valor de IC<sub>50</sub> de 82,65 mg/mL.

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**KEY WORDS:** anti-inflammatory, *Penthorum chinense* Pursh, Saxifragaceae, triterpenoid saponin.

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