SUPPLEMENTARY MATERIAL

Araliachinoside A, a New Triterpene Glycoside from *Aralia chinensis* Leaves

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ABSTRACT
From the leaves of *Aralia chinensis*, three oleanane-type triterpene glycosides were isolated, including one new one, 3β,23-dihydroxyolean-12-ene-28-oic acid 3-O-β-D-glucopyranosyl-(1→3)-α-L-arabinopyranosyl-(1→3)-β-D-glucuronopyranoside 28-O-β-D-glucopyranosyl ester (named as araliachinoside A, 1), and two known ones, 3β,23-dihydroxyolean-12-ene-28-oic acid 3-O-α-L-arabinopyranosyl-(1→3)-β-D-glucuronopyranoside 28-O-β-D-glucopyranosyl ester (2) and 3β-hydroxyolean-12-ene-28-oic acid 3-O-β-D-glucuronopyranoside 28-O-β-D-glucopyranosyl ester (3). Their chemical structures were elucidated by using a combination of HR-ESI-MS, 1D and 2D NMR spectral data as well as by comparison with the previous literature. Compounds 1-3 displayed cytotoxic activity toward KB and HepG2 cell lines with IC₅₀ values ranging from 8.1 ± 0.1 to 15.7 ± 0.3 µM in *in vitro* assay.

Keywords: Araliaceae, *Aralia chinensis*, araliachinoside A, triterpene glycoside, cytotoxic activity.

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Acid hydrolysis and confirmation of monosaccharide

Compound 1 (2 mg) was dissolved in 1.0 mL of a solution of 1.0 M HCl in dioxane/H2O (1/1, v/v) and then heated to 80°C in a water bath for 3 h. The solution was extracted two times with chloroform (1.0 mL each). The water layer was neutralized with Amberlite IRA400 resin (OH form) and then dried in vacuo to give the sugar residue. This was dissolved in 100 µL of L-cysteine methyl ester hydrochloride (2.0 mg) solution in pyridine and heated at 60 °C for 1 h. After that, 100 µl of o-tolyl isothiocyanate (2.0 mg) solution in pyridine was added to the reaction mixture and heated at 60 °C for an additional 1 h. The thiazolidine product was analyzed by an Agilent infinity II 1290 HPLC system using a Zorbax extend C18 rapid resolution column (2.1 × 50 mm, 1.8 micron), flow rate 300 µL/min of ACN/water (20% ACN in volume), and DAD detector at 250 nm. Peaks at retention times of 14.6, 15.1, and 16.9 minutes were confirmed to be D-glucose, D-glucuronic acid, and L-arabinose derivatives, respectively, by comparison of these retention times with those of authentic D-glucose, D-glucuronic acid, and L-arabinose derivatives prepared in the same manner.
Figure S1. HR-ESI-MS of compound 1
Figure S2. $^1$H-NMR spectrum of compound 1 in CD$_3$OD
Figure S3. $^{13}$C-NMR spectrum of compound 1 in CD$_3$OD

Figure S4. DEPT spectrum of compound 1
Figure S5. HSQC spectrum of compound 1
Figure S6. HMBC spectrum of compound 1
Figure S7. H-H COSY spectrum of compound 1
Figure S8. NOESY spectrum of compound 1
Figure S9. HR-ESI-MS of compound 2

Figure S10. $^1$H-NMR spectrum of compound 2 in CD$_3$OD
Figure S11. $^{13}$C-NMR spectrum of compound 2 in CD$_3$OD

Figure S12. DEPT spectrum of compound 2
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Figure S17. $^{13}$C-NMR spectrum of compound 3
Figure S18. HSQC spectrum of compound 3
Figure S19. HMBC spectrum of compound 3