SUPPLEMENTARY MATERIAL

A new cycloartane triterpene glycoside from *Souliea vaginata*

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A new cycloartane-type triterpene glycoside, namely soulieoside M (**1**), and one known compound, beesioside I (**2**), were isolated from the ethanolic extract of the rhizomes of *Souliea vaginata*. Their structures were determined spectroscopically and compared with previously reported spectral data. Compounds **1** and **2** were evaluated for their cytotoxic activities against three human cancer cell lines.

Keywords: Ranunculaceae; *Souliea vaginata*; cycloartane triterpene; cytotoxicity

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Table S1. ^1H and ^{13}C NMR spectroscopic data of **1** and **2** (600 and 150 MHz, pyridine- d_5).

1			2	
Position	Δ_{H} (J in Hz)	Δ_{C}	Δ_{H} (J in Hz)	Δ_{C}
1	1.20 m, 1.57 m	32.5	1.16 m, 1.58 m	32.7
2	1.92 m, 2.37 m	30.4	2.06 m, 2.75 m	31.2
3	3.50 dd (4.2, 11.4)	88.4	3.50 dd (4.2, 12.0)	88.6
4		41.4		41.7
5	1.57 m	46.4	1.28 m	47.5
6	1.20 m, 1.99 m	30.7	0.57 dd, 1.36 m	20.8
7	3.71 m	69.6	1.05, 1.26	26.4
8	1.77 d (9.6)	56.1	1.60 dd (12.0, 4.8)	47.6
9		19.1		19.5
10		28.7		28.0
11	1.20 m, 1.99 m	27.3	1.16 m, 2.00 m	26.6
12	1.54 m, 2.94 m	28.4	1.54 m, 2.94 m	28.4
13		47.6		46.2
14		52.5		51.9
15	4.43 d (9.0)	80.4	5.65 d (3.6)	82.4
16	6.00 dd (11.4, 9.0)	77.9	5.90 dd (10.2, 8.4)	75.5
17	2.69 d (11.4)	57.4	2.69 d (11.4)	56.6
18	4.48 d (13.2), 4.65 d (13.2)	66.9	4.45 d (13.2), 4.56 d (13.2)	66.8
19	0.24 d (4.0), 0.69 d (4.0)	31.5	0.15 d (4.0), 0.48 d (4.0)	31.8
20		87.3		87.2
21	1.31 s	32.9	1.31 s	32.8
22	2.94 m, 1.92 m	38.3	3.65 d (10.5)	38.6
23	2.81 m, 2.09 m	31.3	2.40 m, 1.90 m	30.4

24		114.6		114.6
25		73.1		73.1
26	1.55 s	26.2	1.53 s	26.0
27	1.67 s	26.0	1.64 s	26.1
28	1.32 s	26.0	1.25 s	26.1
29	1.03 s	15.7	1.17 s	15.8
30	1.24 s	14.7	1.00 s	15.7
1□	4.85 d (7.2)	108.0	4.86 d (7.8)	108.0
2□	4.02 t (8.4)	76.0	4.02 t (9.0)	76.0
3□	4.15 t (9.0)	79.1	4.15 t (8.4)	79.0
4□	4.22 m	71.6	4.22 m	71.6
5□	3.74 t (10.8), 4.34 dd (11.4, 5.4)	67.6	3.70 t (10.8), 4.34 dd (11.4, 5.4)	67.5
<u>CO</u> CH ₃	2.04	21.9	2.12	21.6
<u>C</u> OCH ₃		171.1		171.3
CO <u>C</u> H ₃			2.09	21.6
<u>C</u> OCH ₃				171.0

Table S2*In-vitro* cytotoxic activity of compounds **1** and **2**.

Compounds	IC ₅₀ (μM)		
	HT-29	A549	MDA-MB231
1	20.4 ± 3.4	42.7 ± 8.8	17.3 ± 4.3
2	31.5 ± 6.2	64.7 ± 11.3	27.5 ± 4.3
5-FU ^a	58.7 ± 6.3	89.4 ± 6.3	39.8 ± 7.5

Values present mean ± SD of triplicate experiments.

^a Positive control substance

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Figure S6. The HMBC spectrum of the new compound **1**

Figure S7. The NOESY spectrum of the new compound **1**

SQ-4-1208_151202142103 #73 RT: 1.18 AV: 1 NL: 5.76E5
T: FTMS + p ESI Full ms [100.00-2000.00]

Figure S8. The HRESI-MS spectrum of the new compound **1**