SUPPLEMENTARY MATERIAL

Cycloartane-type triterpenoids from *Astragalus hoantchy* French.

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Abstract

A new cycloartane-type triterpenoid, 3 β -acetoxy-9 β ,19-cyclolanost-24*E*-ene-1 α ,16 β -diol-27-*O*- β -D-glucopyranoside (**1**), together with three known ones (**2–4**) were isolated from the aerial parts of *Astragalus hoantchy*. The structure of compound **1** was elucidated by detailed spectroscopic analyses including 1D and 2D NMR, HRESIMS, and IR experiments. All of the four compounds were isolated from *A. hoantchy* for the first time. The antifungal activities of compounds **1–4** against a phytopathogenic fungus (*Alternaria solani*) were evaluated with the result that compound **3** exhibited a moderate activity with an IC₅₀ value of 284 μ g/mL.

Keywords: *Astragalus hoantchy*; Leguminosae; cycloartane triterpenoid; antifungal activity

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Table S1. ^1H NMR and ^{13}C NMR spectroscopic data of compound **1** in CD_3OD

No.	^1H NMR	^{13}C NMR	Key HMBC
1	3.48 m	73.44 d	C-3, 5, 9, 10
2	1.74-1.86 m	35.02 t	C-3, 4, 5, 10
3	4.99 dd (10.0, 6.0)	78.08 d	C-1'', 1, 2, 4, 5, 28, 29
4		40.59 s	
5	1.92-1.98 m	40.85 d	C-4, 10, 19, 29
6	1.65-1.74 m	21.16 t	
7	1.18-1.27 m	26.38 t	
8	1.52 dd (12.4, 3.6)	49.85 d	C-6, 7, 10, 14, 19, 30
9		22.18 s	
10		31.00 s	
11a	2.30-2.41 m	26.38 t	C-9,10, 12, 19
11b	1.14-1.22 m		C-9,10, 12, 19
12	1.57-1.65 m	34.02 t	
13		46.43 s	
14		47.68 s	
15a	1.92-1.98 m	49.73 t	C-8, 13, 14, 16, 17, 30
15b	1.23-1.32 m		C-8, 13, 14, 16, 17, 30
16	4.31 dd (12.8, 7.2)	72.92 d	C-13, 14, 15, 17, 20
17	1.58-1.70 m	57.69 d	C-12, 13, 15, 16, 18, 20,
18	1.12 s	19.77 q	C-12, 13, 14, 17
19a	0.66 d (4.0)	31.23 t	C-1, 5, 8, 9, 10, 11
19b	0.43 d (4.0)		C-1, 5, 8, 9, 10, 11
20	1.74-1.86 m	31.23 d	C-16, 17, 23
21	0.92 d (6.8)	18.36 q	C-17, 20, 22
22	1.01-1.09 m	37.04 t	
23	2.07-2.20 m	25.94 t	C-20, 22, 24, 25
24	5.49 d (6.0)	131.03 d	C-22, 23, 25, 26, 27
25		132.24 s	
26	1.65 s	14.17 q	C-24, 25, 27
27a	4.16 d (11.2)	76.06 t	C-1', 24, 25, 26
27b	3.99 d (11.2)		C-1', 24, 25, 26
28	0.84 s	25.93 q	C-3, 4, 5, 29
29	0.85 s	14.83 q	C-3, 4, 5, 28
30	0.92 s	20.54 q	C-8, 13, 14, 15
1'	4.21 d (7.6)	102.50 d	C-27, 3', 5'
2'	3.12-3.18 m	75.03 d	
3'	3.27-3.33 m	78.08 d	
4'	3.23-3.28 m	71.70 d	
5'	3.20-3.22 m	77.79 d	
6'a	3.81 dd (11.6, 1.6)	62.79 t	
6'b	3.61 dd (11.6, 5.2)		
1''		172.67 s	
2''	1.98 s	21.16 q	C-1''

Figure S1. Key HMBC corrections of compound **1**

Figure S2. HRESIMS of compound 1

Figure S3. IR spectrum of compound **1**

Figure S4. ^1H NMR spectrum of compound **1** in CD_3OD (400 MHz)

Figure S5. ^{13}C NMR spectrum of compound **1** in CD_3OD (100 MHz)

Figure S6. ^1H - ^1H COSY spectrum of compound **1** in CD_3OD

Figure S7. HMQC spectrum of compound **1** in CD₃OD

Figure S8. HMBC spectrum of compound **1** in CD₃OD

Figure S9. NOESY spectrum of compound **1** in CD₃OD