



## Phytochemical communication

## A novel acylated flavonol glycoside from *Morina nepalensis* var. *alba*

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**Abstract**

A novel acylated flavonol glycoside, quercetin 3-O-[2''-O-(E)-caffeooyl]- $\alpha$ -L-arabinopyranosyl-(1 → 6)- $\beta$ -D-galactopyranoside (**1**), was isolated from whole plant of *Morina nepalensis* var. *alba*. Its structure was determined on the basis of chemical and spectroscopic methods. © 2002 Elsevier Science B.V. All rights reserved.

**Keywords:** *Morina nepalensis* var. *alba*; Flavonols

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**Plant.** *Morina nepalensis* var. *alba* Hand.-Mazz. (Dipsacaceae) whole plant was collected in north-west Yunnan province, PR China, in July 1999. An authenticated voucher specimen is deposited in the Department of Ethnobotany, Kunming Institute of Botany, Chinese Academy of Sciences.

**Uses in traditional medicine.** In the treatment of arthritis and stomach problems [1,2].

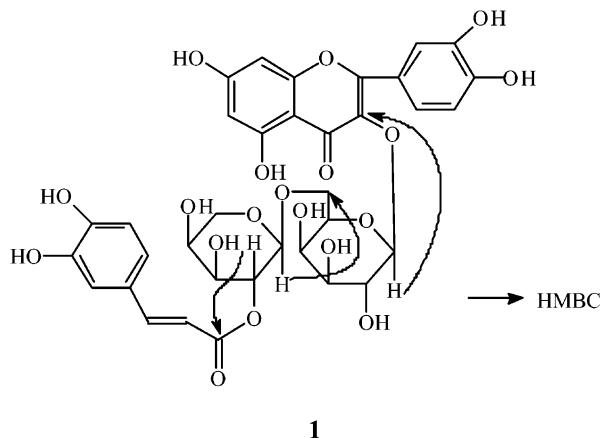
**Previously isolated constituents.** No report.

**New-isolated constituents.** 3-O-[2''-O-(E)-Caffeoyl]- $\alpha$ -L-arabinopyranosyl-(1 → 6)- $\beta$ -D-galactopyranoside (**1**), 40 mg from 3.4 kg of dried plant.

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*3-O-[2'''-O-(E)-Caffeoyl]- $\alpha$ -L-arabinopyranosyl-(1 → 6)- $\beta$ -D-galactopyranoside* (**1**). Yellow powder, mp 197–199°C; UV max (MeOH): 208.5, 257, 344.5 nm; IR bands (KBr): 3434 (br), 2918, 1696, 1654, 1605, 1510, 1445, 1359, 1263, 1166, 1067, 812 and 595 cm<sup>-1</sup>; <sup>1</sup>H-NMR (500 MHz, DMSO): δ 6.22 (1H, br s, H-6), 6.42 (1H, br s, H-8), 7.60 (1H, br s, H-2'), 6.83 (1H, d, J 8.0 Hz, H-5'), 7.73 (1H, d, J 8.0 Hz, H-6'), 5.53 (1H, d, J 7.2 Hz, H-1''), 3.60 (1H, m, H-2''), 3.31 (1H, dd, J 2.3, 8.7 Hz, H-3''), 3.57 (1H, m, H-4''), 3.41 (1H, t, J 5.0 Hz, H-5''), 3.58, 3.46 (2H, m, H-6''), 4.22 (1H, d, J 7.2 Hz, H-1''), 4.71 (1H, t, J 8.3 Hz, H-2''), 2.98 (1H, dd, J 2.9, 9.0 Hz, H-3''), 3.47 (1H, m, H-4''), 3.57 (1H, m, H-5a''), 2.86 (1H, br d, H-5b''), 7.06 (1H, br s, H-2'''), 6.82 (1H, d, J 7.6 Hz, H-5'''), 6.97 (1H, d, J 7.6 Hz, H-6'''), 7.42 (1H, d, J 15.8 Hz, H-7'''), 6.04 (1H, d, J 15.8 Hz, H-8'''); <sup>13</sup>C-NMR (125 MHz, DMSO): 156.28 (C-2), 133.39 (C-3), 177.49 (C-4), 161.28 (C-5), 98.93 (C-6), 164.42 (C-7), 93.57 (C-8), 156.36 (C-9), 103.91 (C-10), 120.99 (C-1'), 115.36 (C-2'), 144.98 (C-3'), 148.32 (C-4'), 115.59 (C-5'), 121.97 (C-6'), 101.70 (C-1''), 70.89 (C-2''), 72.89 (C-3''), 68.64 (C-4''), 76.00 (C-5''), 66.22 (C-6''), 100.07 (C-1''), 72.03 (C-2''), 70.52 (C-3''), 67.90 (C-4''), 65.50 (C-5''), 125.65 (C-1'''), 115.30 (C-2'''), 145.07 (C-3'''), 148.60 (C-4'''), 115.89 (C-5'''), 120.84 (C-6'''), 145.58 (C-7'''), 114.11 (C-8'''), 165.87 (C-9'''); neg. FABMS *m/z*: 757 [M (C<sub>35</sub>H<sub>34</sub>O<sub>19</sub>)-H]<sup>-</sup>, 735, 603, 463, 339, 300, 276, 183, 91; neg. HR-FABMS *m/z*: 757.1639 [M (C<sub>35</sub>H<sub>34</sub>O<sub>19</sub>)-H]<sup>-</sup>, *calcd.* for C<sub>35</sub>H<sub>33</sub>O<sub>19</sub>: 757.1616.

## References

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