SUPPLEMENTARY MATERIAL

New Hepatoprotective Isoflavone Glucosides from Pueraria lobata (Willd.) Ohwi

Yingjie Sun^{a, b}, Hongmin Zhang^{a, b}, Ming Cheng^{a, b}, Shijie Cao^a, Miao Qiao, Boli Zhang^a, Liqin Ding^a * and Feng Qiu^{a, b} *

^a Tianjin State Key Laboratory of Modern Chinese Medicine, Institute of Traditional Chinese Medicine, Tianjin University of Traditional Chinese Medicine, Tianjin 300193, P.R. China; ^b School of Chinese Materia Medica, Tianjin University of Traditional Chinese Medicine, Tianjin 300193, P.R. China

Corresponding author. E-mail address: fengqiu20070118@163.com (F. Qiu), ruby70303@163.com (LQ. Ding).

Abstract

Two new isoflavone glucosides, 3'-methoxyneopuerarin A (1) and 3'-methoxyneopuerarin B (2), together with nine known isoflavone including puerarin (3), neopuerarin A (4), neopuerarin B (5), daidzin (6), daidzein (7), 3'-methoxypuerarin (8), puerarin xyloside (9), mirificin (10), 3'-hydroxypuerarin (11) were isolated from the water extraction of the dried roots of *Pueraria lobata* (Willd.) Ohwi. Their structures were elucidated by the means of spectroscopic and chromatographic analysis methods. All compounds were evaluated for their hepatoprotective activity on HepG2 cells. All of them showed statistically significant hepatoprotective effect.

Keywords: Pueraria lobata (Willd.) Ohwi, isoflavone, hepatoprotective effect

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Figure S1 Key 2D NMR correlations of compounds 1-2

Figure S2. Cell viability (S2a) and hepatoprotective effects (S2b) of compounds **1-11**.

Figure S2



Figure S2 Hepatoprotective effects of compounds 1-11 (10 μ M) against D-GalN-induced toxicity in HepG2 cells (S2b) and the toxicity in HepG2 cells (S2a). Results are expressed as the mean ± SD (n = 4). Bicyclol was used as positive control (10 μ M). Compared with D-GalN group, ***p < 0.001,*p < 0.05; Compared with control,### p < 0.001.

Figure S3 HPLC chromatogram of 3'-methoxyneopuerarin B (a) and acid-hydrolyzed 3'-methoxyneopuerarin B (b).



Figure. S3

Figure S4 HR-ESIMS of 1

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Single Mass Analysis	A
Tolerance = 10.0 PPM / DBE: min = 0.0, max = 50.0	
Element prediction: Ult Number of isotope peaks used for LEIT = 3	=
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98 formula(e) evaluated with 1 results within limits (up to 50 closest results for each mass)	
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445.112 100.00 445.1135 0.7 1.6 12.5 C22 H21 O10 900.7 n/a n/a 22 21 10	
20180125FYneg1 924 (3.452) Cm (899:941)	
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100 445 1142	1.240+006
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0-1	1150 1200
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241.8990 447.1201 508.1097 561.0237 624.0119 673.0054 758.9581 891.2372 954.2351,976.2123.1056.1252 1087.0 325.0716 444.1106 700 500 550 600 650 700 750 800 850 900 950 1000 1050 1100	280 <u>1189.1068</u> 1150 1200
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Figure S6 IR of 1





















Figure S12 HR-ESIMS of 2











Figure S15 ¹H-NMR Spectrum of 2 inDMSO (600MHz)















