SUPPLEMENTARY MATERIAL

A Novel Cytotoxic Flavonoid *C*-Glycoside from *Premna fulva*

Kui-Wu Wang [*, a], Sheng-Nan Yan [a], Ting-Ting Zhang [a], Hai-Jiang Zhang [b], Bin Wu [c], and Hong Wang [d]

[a]*School of Food Science and Biotechnology, Zhejiang Gongshang University, Hangzhou 310018, P. R. China*

[b]*Jiangsu Key Laboratory of Regional Resource Exploitation and Medicinal Research, Huaiyin Institute of Technology, Huaian 223003, P. R. China*

[c]*Ocean College, Zhejiang University, Hangzhou 310058, P. R. China*

[d]*School of Pharmaceutical Science, Zhejiang University of Technology, Hangzhou 310014, P. R. China*

Abstract: *Premna fulva Craib*, locally known as "Zhangu" in China, is a kind of traditional medicinal plant. A phytochemical investigation on this plant led to the isolation of a novel flavonoid glycoside along with three known analogues. The chemical structure of the new compound was determined by spectral and chemical analysis as apigenin 8-C-*β*-D-xylopyranoside (**1**). Compound **1** showed weak inhibitory activities *in vitro* against to four tumor cell lines (HL-60, Bcap37, SMMC7721, and P388) with IC_{50} values of 12.58, 19.31, 31.02, and 48.19 μg/mL, respectively. The result might be helpful to explain the application of *P. fulva* in Traditional Chinese Medicine.

* Corresponding authors: Kui-Wu Wang

Fax: 0086-571-28008900

E-mail: wkwnpc@zjgsu.edu.cn (K.-W. Wang)

Figure S1. The ^{1}H NMR (500 MHz, DMSO-d_6) of the new compound **1**

Figure S2. The ^{13}C NMR (125 MHz, DMSO-d_6) of the new compound **1**

Figure S3. The DEPT 135 spectrum of the new compound **1**

Figure S4. The ^{1}H-^{1}H COSY spectrum of the new compound **1**

Figure S5. The HSQC spectrum of the new compound **1**

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

Figure S7. The HRESI-MS spectrum of compound **1**

Figure S8. The ESI-MS spectrum of compound **1**

Figure S9. Key ^{1}H-^{1}H COSY and HMBC correlations of compound **1**

Table S1. NMR data of compound **1** (DMSO-d_6)

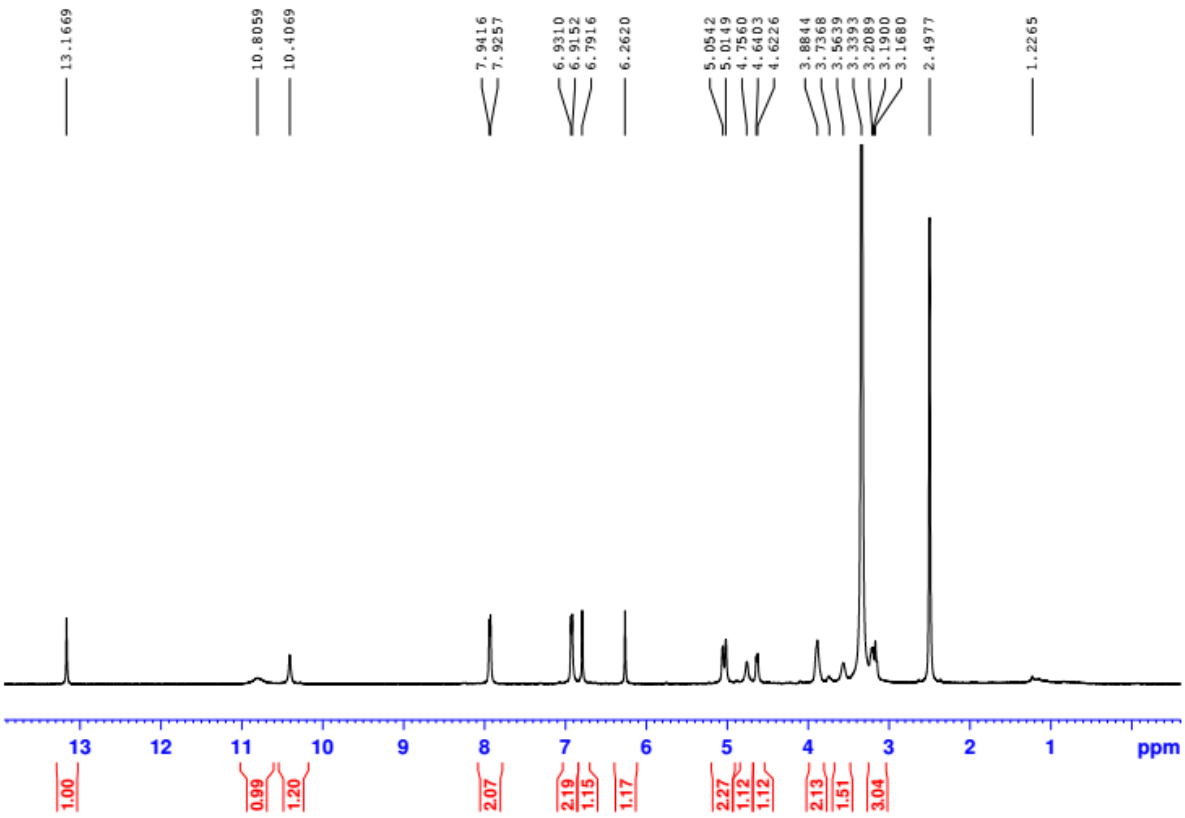


Figure S1. The ^{1}H NMR (500 MHz, DMSO-d_6) of the new compound **1**

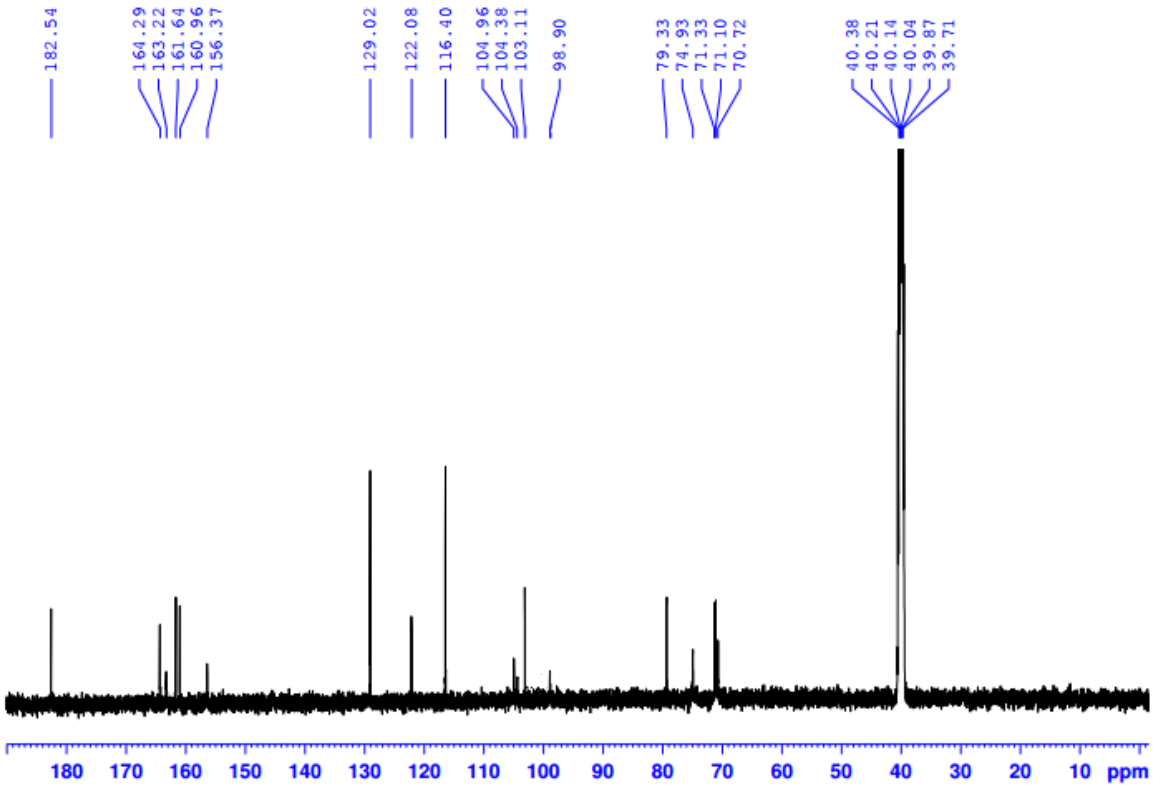


Figure S2. The ^{13}C NMR (125 MHz, DMSO-d_6) of the new compound **1**

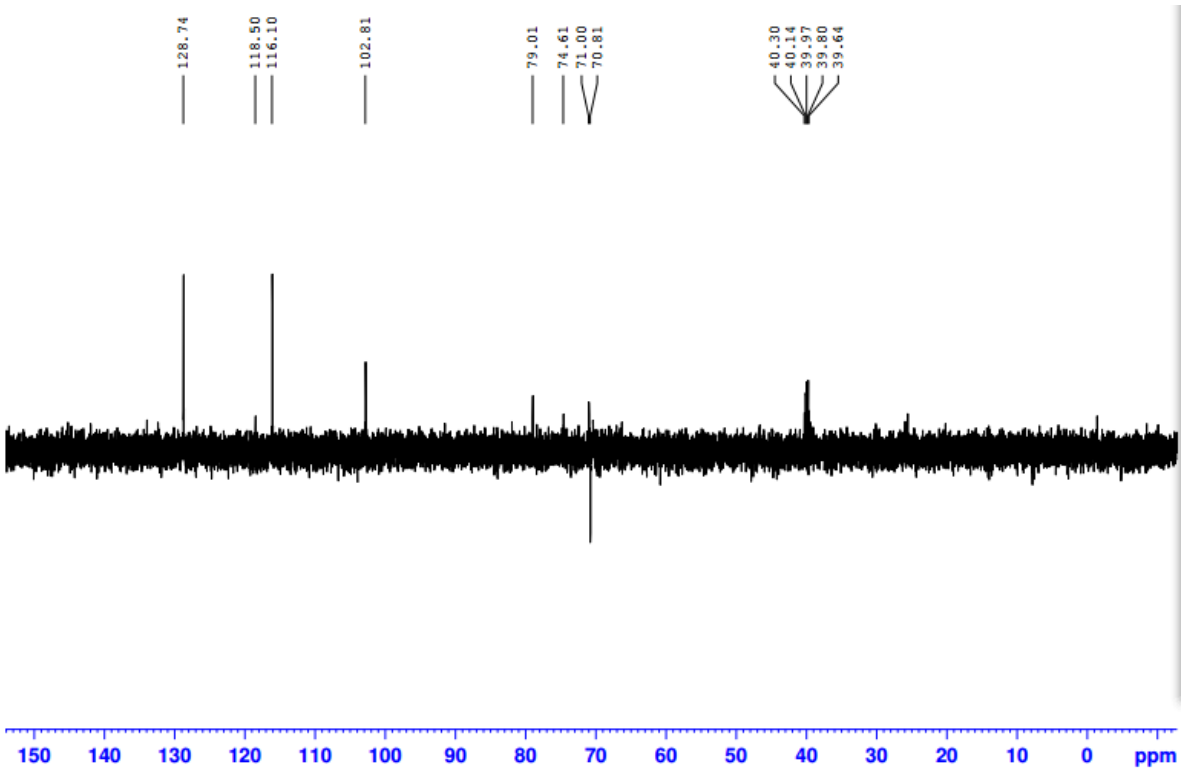


Figure S3. The DEPT 135 spectrum of the new compound **1**

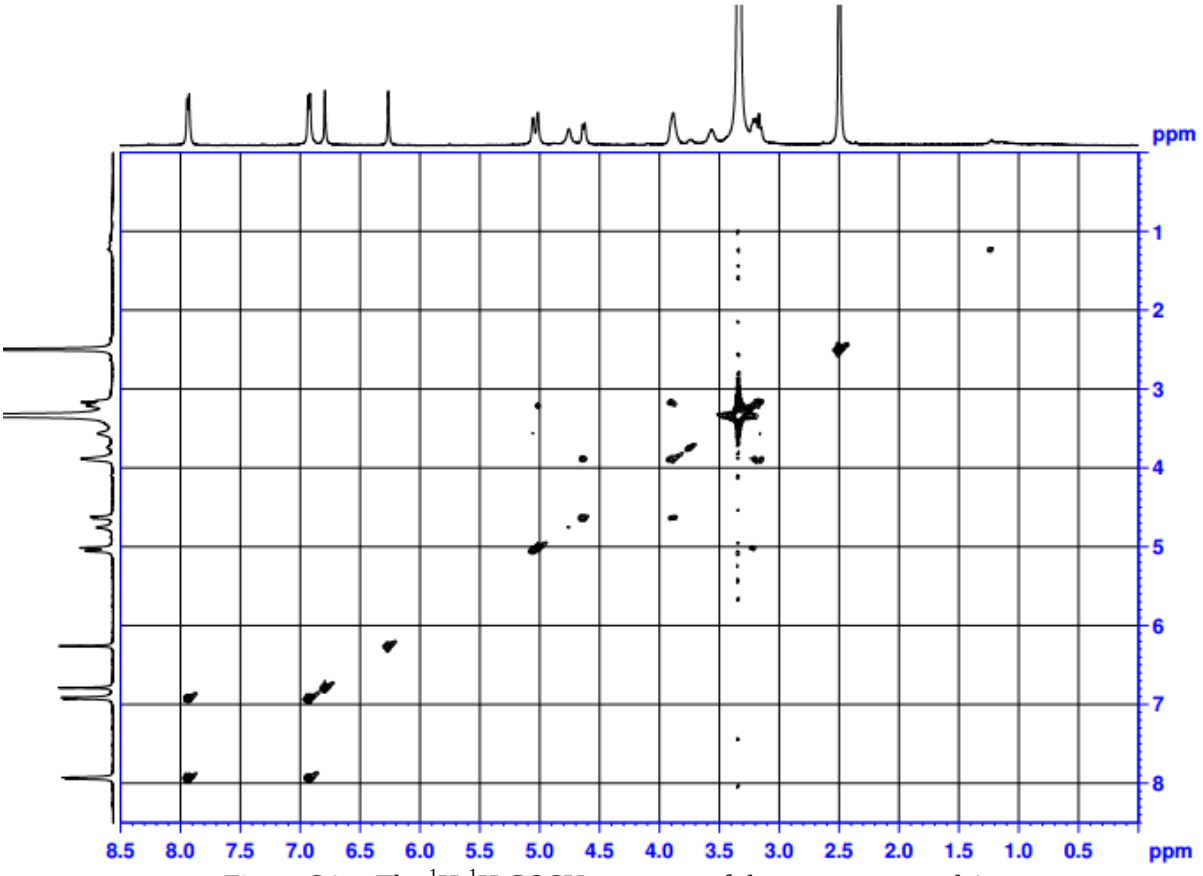


Figure S4. The ^{1}H-^{1}H COSY spectrum of the new compound **1**

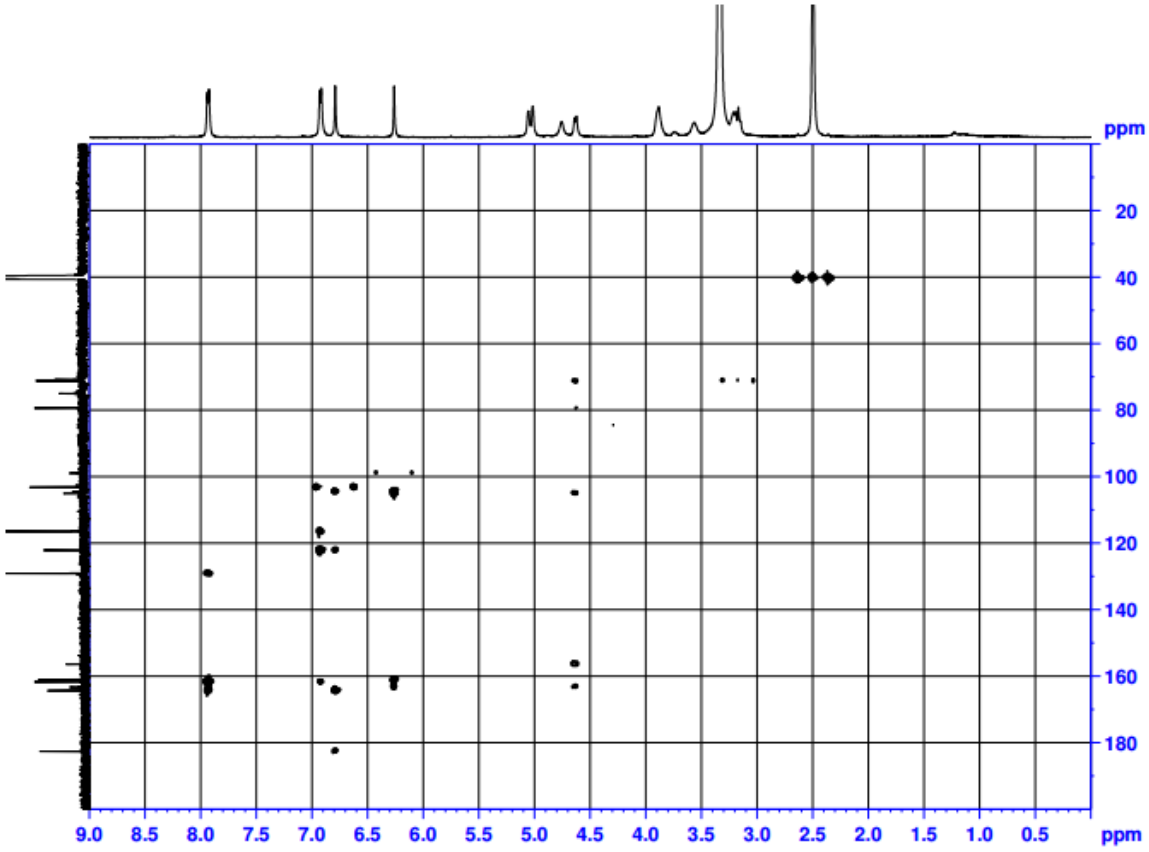


Figure S5. The HSQC spectrum of the new compound **1**

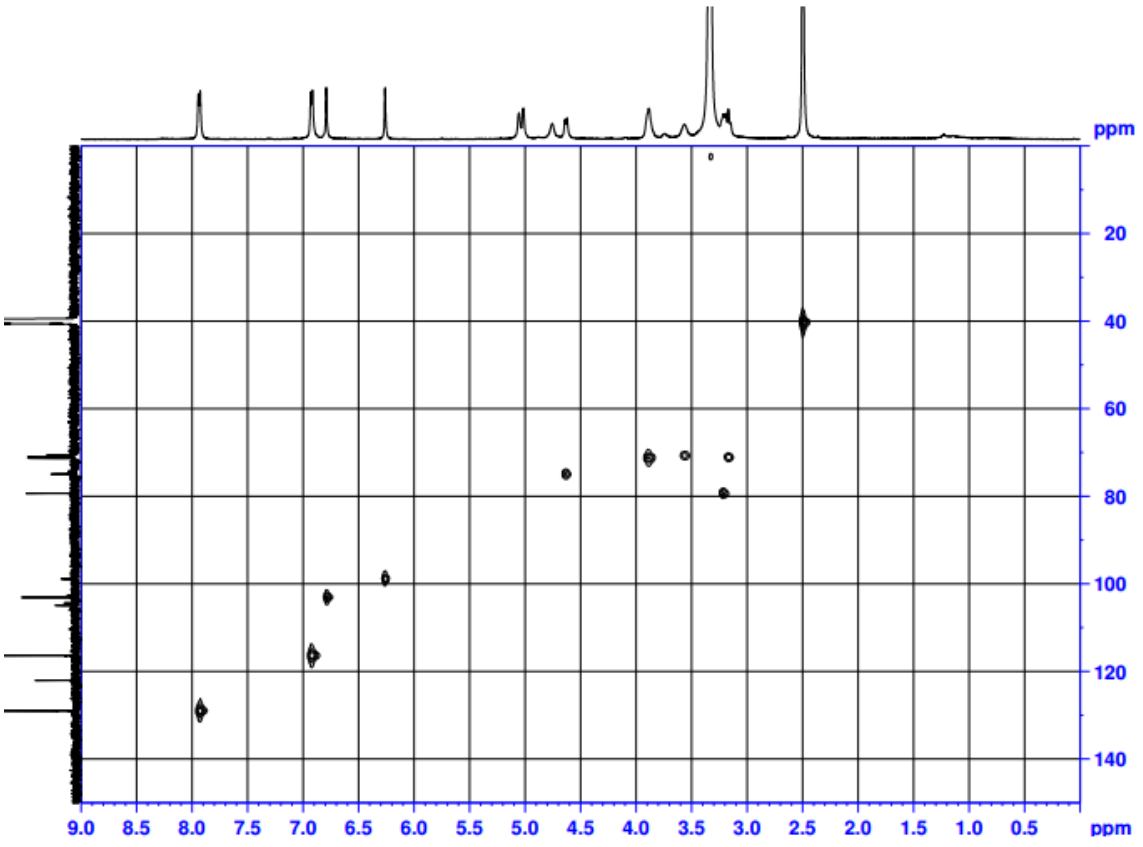


Figure S6. The HMBC spectrum of the new compound **1**

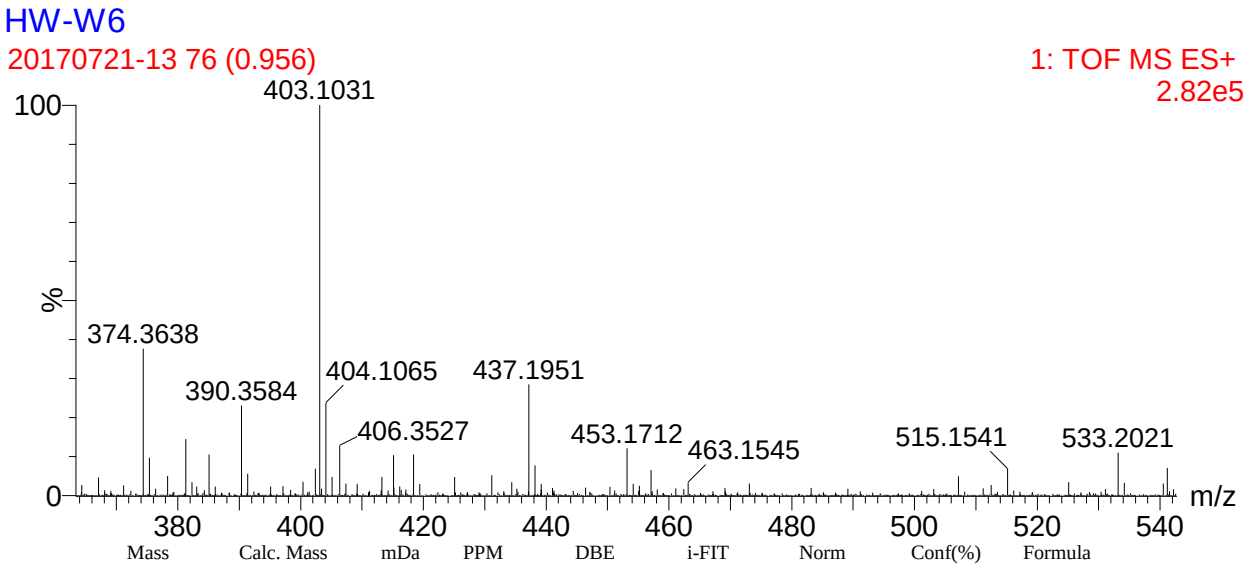


Figure S7. The HRESI-MS spectrum of compound **1**

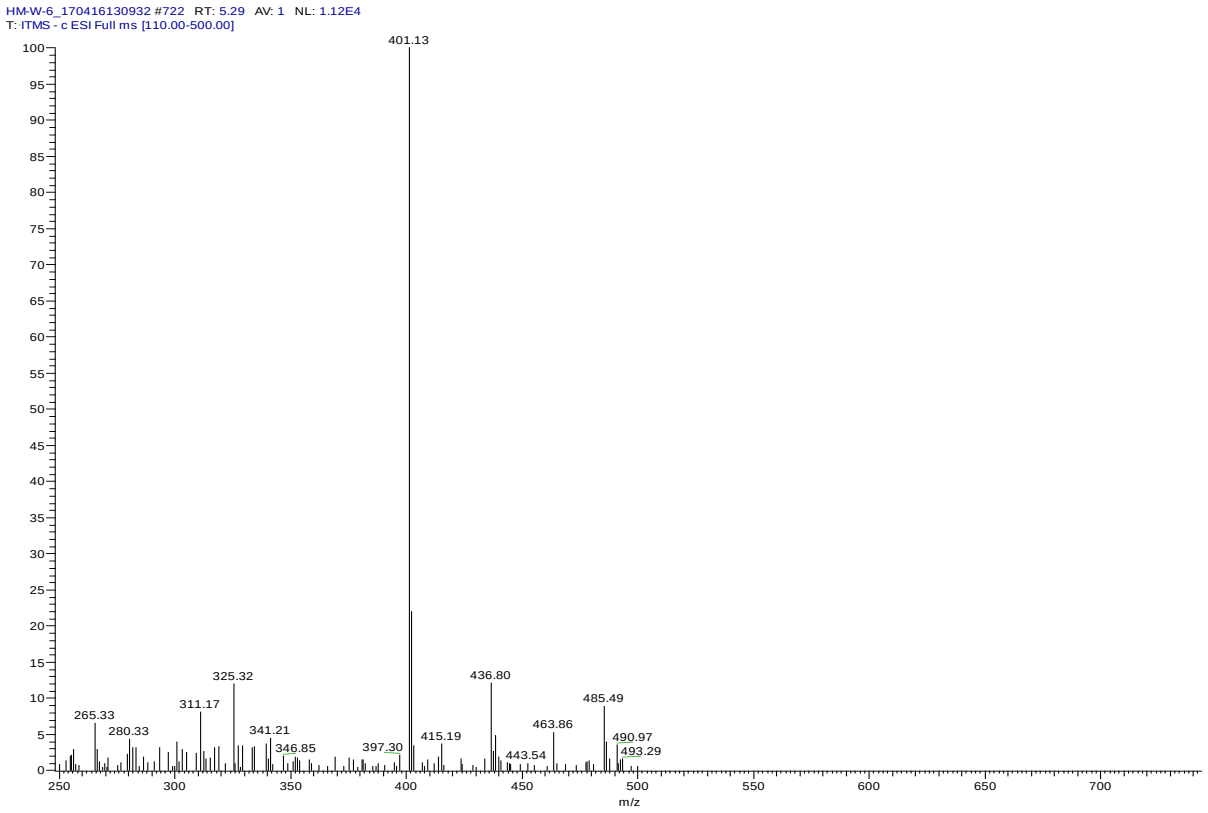
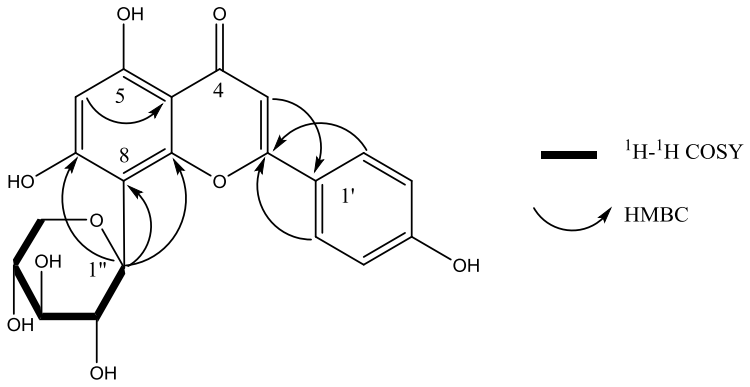


Figure S8. The ESI-MS spectrum of compound **1**



1

Figure S9. Key ^{1}H-^{1}H COSY and HMBC correlations of compound **1**.

Table S1. NMR data of compound **1** (DMSO-d_6)

No.	δ_H (ppm)	δ_C (ppm)	^{1}H-^{1}H COSY	HMBC (H→C)
2	-	164.3		
3	6.80 (1H, s)	103.1		C-1′, 4′, 10
4	-	182.5		
5	-	161.0		
6	6.26 (1H, s)	98.9		C-5, 8, 10
7	-	163.2		
8	-	104.7		
9	-	156.4		
10	-	104.4		
1′	-	122.1		
2′, 6′	7.94 (2H, d, *J*=8.0 Hz)	129.0	H-3′, 5′	C-2, 4′
3′, 5′	6.93 (2H, d, *J*=8.0 Hz)	116.4	H-2′, 6′	C-1′
4′	-	161.6		
D-Xyl				
1″	4.64 (1H, d, *J*=9.8 Hz)	74.9	H-2″	C-7, 8, 9, 3″
2″	3.88 (1H, s)	71.3	H-1″, 3″	
3″	3.19 (1H, m)	79.3	H-2″, 4″	
4″	3.60 (1H, s)	70.7	H-3″, 5″	
5″	3.17 (1H, m) 3.88 (1H, s)	71.1	H-4″	
5-O**H**	13.17 (1H, s)	-	-	
7-O**H**	10.81 (1H, s)	-	-	
4′-O**H**	10.41 (1H, s)	-	-	

^{1}H-NMR and ^{13}C-NMR were measured at 500 MHz and 125 MHz, respectively.