Supporting Information

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Secondary Metabolites Isolated from the Marine Fungal Strain *Aspergillus* sp. AF119

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General Experimental Procedures. Column chromatography (CC): silica gel (SiO_2; 200-300 and 80-100 mesh; Qingdao Marine Chemical Factory), silica gel GF_{254} (Merck), RP-18 gel (40-63 μm Merck), or Sephadex LH-20 gel (Amersham Biosciences). TLC: precoated silica-gel GF_{254} plates(0.20-0.25 mm, Qingdao Marine Chemical Factory, Qingdao, P.R.China). UV Spectra: Genesys^{TM} 2Thermospectronic, λ_{max} (ε); in nm. IR Spectra: Thermo Nicolet 380 FT-IR spectrophotometer, with KBr cells; in cm^{-1}. NMR Spectra: BrukerArx 600 spectrometer operating, at 600/150 MHz, δ in in ppm rel. to Me_4Si; *J* in Hz. HR-Q-TOF-MS: Bio TOF^{TM}-Q mass spectrometer (Bruker); in m/z. Optical rotations: AUTOPOL$^{@}$IV automatic polarimeter.

Fermentation & Isolation. The fermentation was cultured in *petri dishes* laid with ca. 20 ml half sea water PDA medium for 15 d at 28^{o}C. The culture material (total 7 L) was extracted with EtOAc thrice. The solvent was evaporated under reduced pressure to afford 7.2 g of crude extract. The crude extract was subjected to MPLC over RP-18 (170 g) using a stepwise gradient of 30, 50, 70, and 100% (v/v) acetone in H_2O to afford Fr.1 (750 mg), Fr.2 (1.08 g), Fr.3 (320 mg) and Fr.4 (220 mg), obtained from 30% acetone, and Fr.5 (490 mg) and Fr.6 (65 mg), from 50% acetone. Fr.1 was subjected to *Sephadex LH-20* column twice, and eluted with MeOH and acetone, respectively, and then it was fractionated on silica gel CC ($CHCl_3$/MeOH) to yield **1** (5 mg). Fr.3 was dissolved in MeOH and filtered. Filtrate was subjected to *Sephadex LH-20* eluted with MeOH to afford Fr.3.1 (26 mg) and Fr.3.2 (56 mg). Fr.3.1 was subjected to *Sephadex LH-20* eluted with acetone, then purified by CC (silica gel, $CHCl_3$/MeOH) to yield **2** (10 mg). Fr.5 was subjected to *Sephadex LH-20* eluted with MeOH to afford Fr.5.1 (50 mg) and Fr.5.2 (53 mg). Fr.5.1 was subjected to *Sephadex LH-20* eluted with acetone, then purified by CC (silica gel, petroleum ether/EtOAc) to yield **4** (3 mg). Fr.6 was subjected to *Sephadex LH-20* column twice, and eluted with MeOH and acetone, respectively, and then it was fractionated on silica gel CC (petroleum ether /AcOEt) to yield **3** (3 mg).

Barceloneic lactone B (1). White amorphous powder; $[\alpha]_D^{20} = 0$ (c = 0.5, MeOH); UV (MeOH): 230.0 nm (ε = 3.52), 281.0 nm (ε = 3.34); IR (KBr): 3341, 2923, 1731, 1602, 1582, 1478cm^{-1}; ^{1}H- and ^{13}C-NMR: Table S4. HR-ESI-Q-TOF MS: 325.0704 $[M + Na]^+$.

Barceloneic acids C (2). White amorphous powder; $[\alpha]_D^{20} = 0$ (c = 0.5, MeOH); UV (MeOH): 230.0 nm (ε = 3.71), 281.0 nm (ε = 3.14); IR (KBr): 3341, 2925, 1692, 1604, 1467, 1082cm^{-1}; ^{1}H- and ^{13}C-NMR: Table S5. HR-ESI-Q-TOF MS: 325.0780 $[M + Na]^+$.

5'-hydroxychlorflavonin (3). Yellow amorphous powder; $[\alpha]_D^{20} = 0$ (c = 0.2, MeOH); UV (MeOH): 230.0 nm (ε = 2.91), 280.0 nm (ε = 2.02); IR (KBr): 3340, 2929, 1693, 1600, 1452, 1205cm^{-1}; ^{1}H- and ^{13}C-NMR: Table S6. HR-ESI-Q-TOF MS: 395.0948 $[M + H]^+$.

Table S1. NMR Spectral Data for barceloneic lactone B (1) and barceloneic acids C (2)[a]

Position	9				10			
	^{1}H (mult. *J* in Hz)	^{13}C (mult)	HMBC (H→C)	COSY (H→H)	^{1}H (mult. *J* in Hz)	^{13}C (mult)	HMBC (H→C)	COSY (H→H)
1		166.8 (s)				166.3 (s)		
2		115.6 (s)				114.1 (s)		
3		157.2 (s)				156.5 (s)		
4	7.09 (d, 8.3)	110.0 (d)	C-6, C-2, C-3	H-5	6.77 (d, 8.4)	105.4 (d)	C-6, C-2	H-5
5	7.57 (t, 8.3)	134.3 (d)	C-7, C-3	H-6, H-4	7.22 (t, 8.4)	130.4 (d)	C-7, C-3	H-6, H-4
6	6.79 (d, 8.3)	114.7 (d)	C-4, C-2, C-7	H-5	6.09 (d, 8.4)	106.5 (d)	C-4, C-2	H-5
7		152.8 (s)				155.3 (s)		
8		142.8 (s)				141.9 (s)		
9		149.1 (s)				150.5 (s)		
10	6.92 (s)	116.2 (d)	C-15, C-12, C-8, C-9		7.12 (s)	123.8 (d)	C-15, C-12, C-10	
11		139.7 (s)				136.2 (s)		
12	6.56 (s)	117.8 (d)	C-15, C-14, C-10, C-8		7.09 (s)	117.8 (d)	C-15, C-10, C-8, C-14	
13		127.7 (s)				129.4 (s)		
14	5.05 (s, 2H)	68.9 (t)	C-12, C-13, C-8, C-1		10.11 (s)	189.4 (d)	C-12, C-13	
15	4.35 (d, 5.7, 2H)	62.6 (t)	C-10, C-12, C-11	HO-15	2.31 (s, 3H)	20.5 (q)	C-12, C-10, C-11	
3a	3.86 (s, 3H)	56.7 (q)	C-3		3.81 (s, 3H)	56.0 (q)	C-3	
HO-9	9.71 (br s)		C-10, C-8, C-9					
HO-15	5.15 (t, 5.7)		C-15, C-11	H-15				

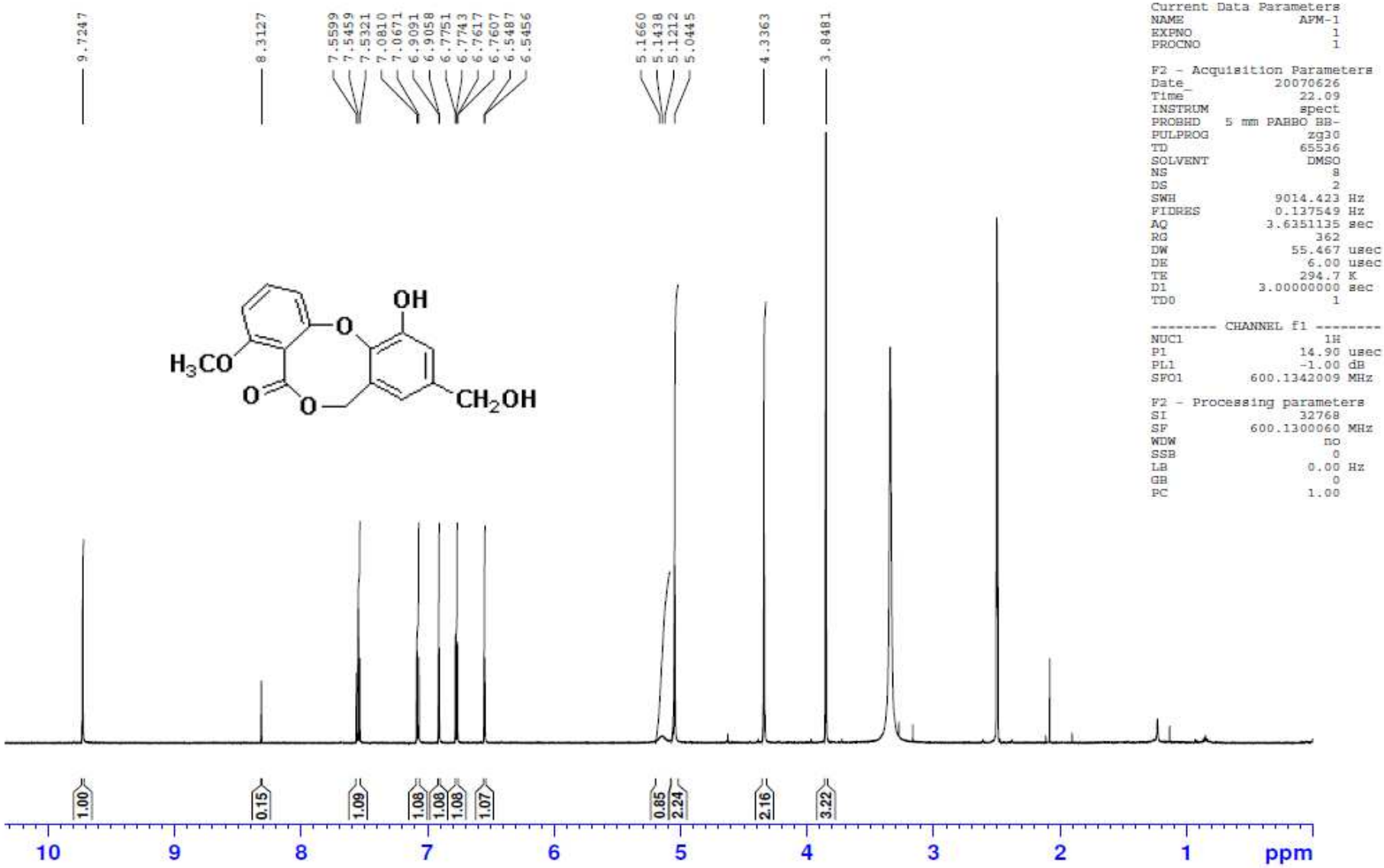
[a] Spectra were acquired at 600 MHz (^{1}H) or 150MHz (^{13}C) at 25 ℃ in DMSO. Chemical shifts (δ) were referenced to TMS in ppm.

Table S2. NMR Spectral Data for 5'-hydroxychlorflavonin (3)[a] and chlorflavonin (4)

Position	**4**				**3**			
	^{1}H (mult. *J* in Hz)	^{13}C (mult)	HMBC (H→C)	COSY (H→H)	^{1}H (mult. *J* in Hz)	^{13}C (mult)	HMBC (H→C)	COSY (H→H)
2		156.1 (s)				155.4 (s)		
3		139.9 (s)				139.3 (s)		
4		179.1 (s)				178.9 (s)		
5		157.0 (s)				157.4 (s)		
6	6.64 (s)	96.3 (d)	C-10, C-8, C-5, C-7		6.54 (s)	95.6 (d)	C-10, C-8, C-5, C-7	
7		158.7 (s)				158.9 (s)		
8		128.9 (s)				129.0 (s)		
9		149.2 (s)				149.2 (s)		
10		105.7 (s)				105.4 (s)		
1'		120.3 (s)				122.4 (s)		
2'		151.4 (s)				144.1 (s)		
3'		122.1 (s)				120.4 (s)		
4'	7.59 (d, 8.0)	119.2 (d)	C-3', C-6', C-2'	H-5'	7.11 (d,2.8)	119.2 (d)	C-6', C-3', C-2', C-5'	H-6'
5'	7.02 (t, 8.0)	120.7 (d)	C-1', C-3'	H-6', H-4'		150.5 (s)		
6'	7.42 (d, 8.0)	130.0 (d)	C-4', C-2, C-2'	H-5'	7.05 (d,2.8)	115.6 (d)	C-4', C-2, C-2'	H-4'
3a	3.71 (s, 3H)	57.1 (q)	C-3		3.84 (s, 3H)	60.3 (q)	C-3	
7a	3.92 (s, 3H)	60.6 (q)	C-7		3.98 (s, 3H)	56.0 (q)	C-7	
8a	3.70 (s, 3H)	61.4 (q)	C-8		3.78 (s, 3H)	60.7 (q)	C-8	
HO-5	12.42 (br s)		C-6, C-10, C-5		12.43 (br s)		C-6, C-10, C-5	
HO-2'	10.08 (br s)		C-3', C-1', C-2'		8.19 (br s)		C-3', C-1', C-2'	
HO-5'					8.63 (br s)		C-5', C-4', C-5'	

[a] Spectra were acquired at 600 MHz (^{1}H) or 150MHz (^{13}C) at 25 ℃ in DMSO (**11**) and in $(CD_3)_2CO$ (**12**). Chemical shifts (δ) were referenced to TMS in ppm.

Figure S1 ^{1}H NMR(600 MHz,DMSO)spectrum for barceloneic lactone B (**1**)



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PROCNO	1

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D1	3.00000000 sec
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-------- CHANNEL f1 --------

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P1	14.90 usec
PL1	-1.00 dB
SFO1	600.1342009 MHz

F2 - Processing parameters

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SF	600.1300060 MHz
WDW	no
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Figure S2 ^{13}C NMR(150 MHz,DMSO)spectrum for barceloneic lactone B (1)

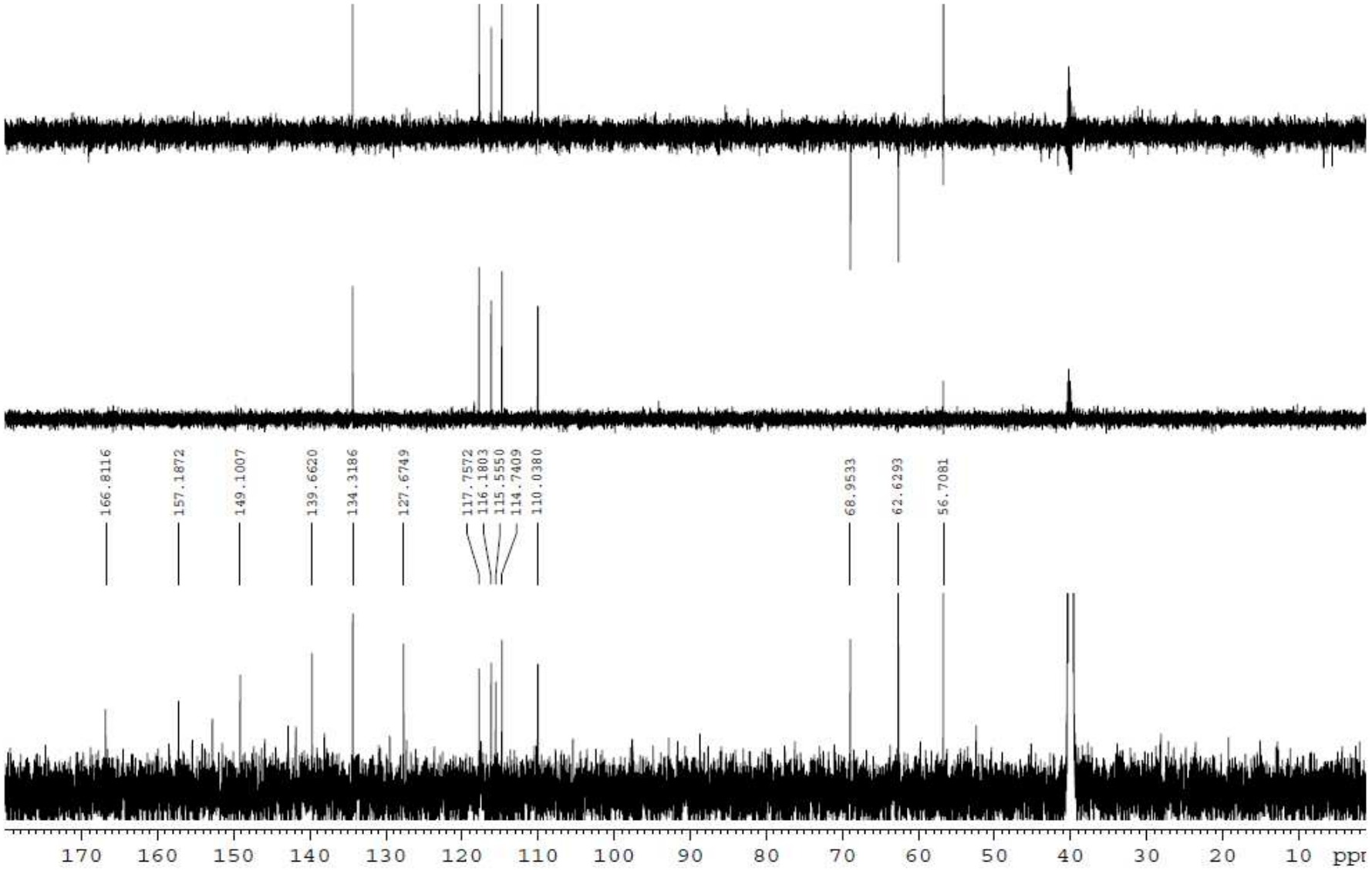


Figure S3 ^{1}H NMR(600 MHz,DMSO)spectrum for barceloneic acids C (**2**)

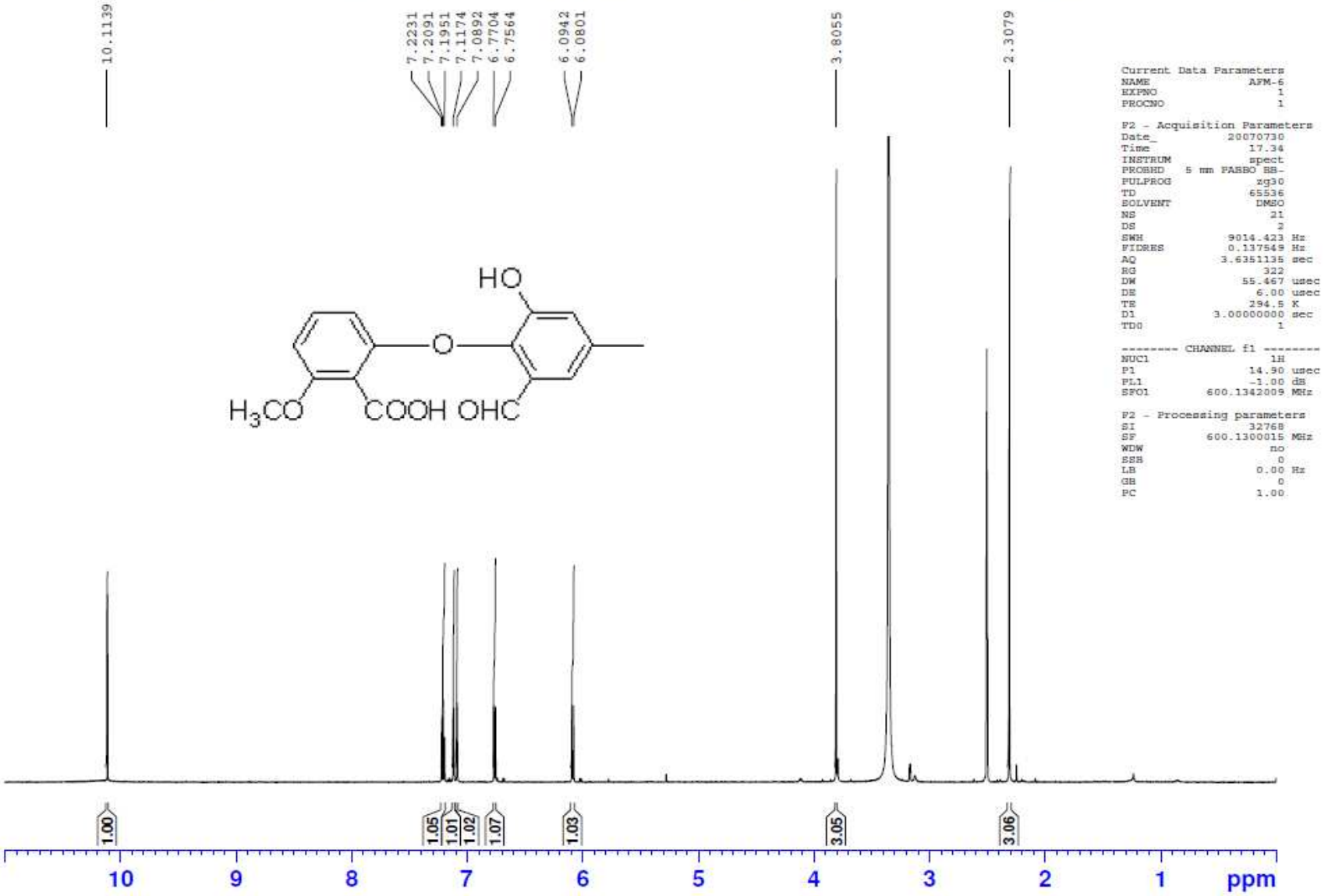


Figure S4 ^{13}C NMR(150 MHz,DMSO)spectrum for barceloneic acids C (**2**)

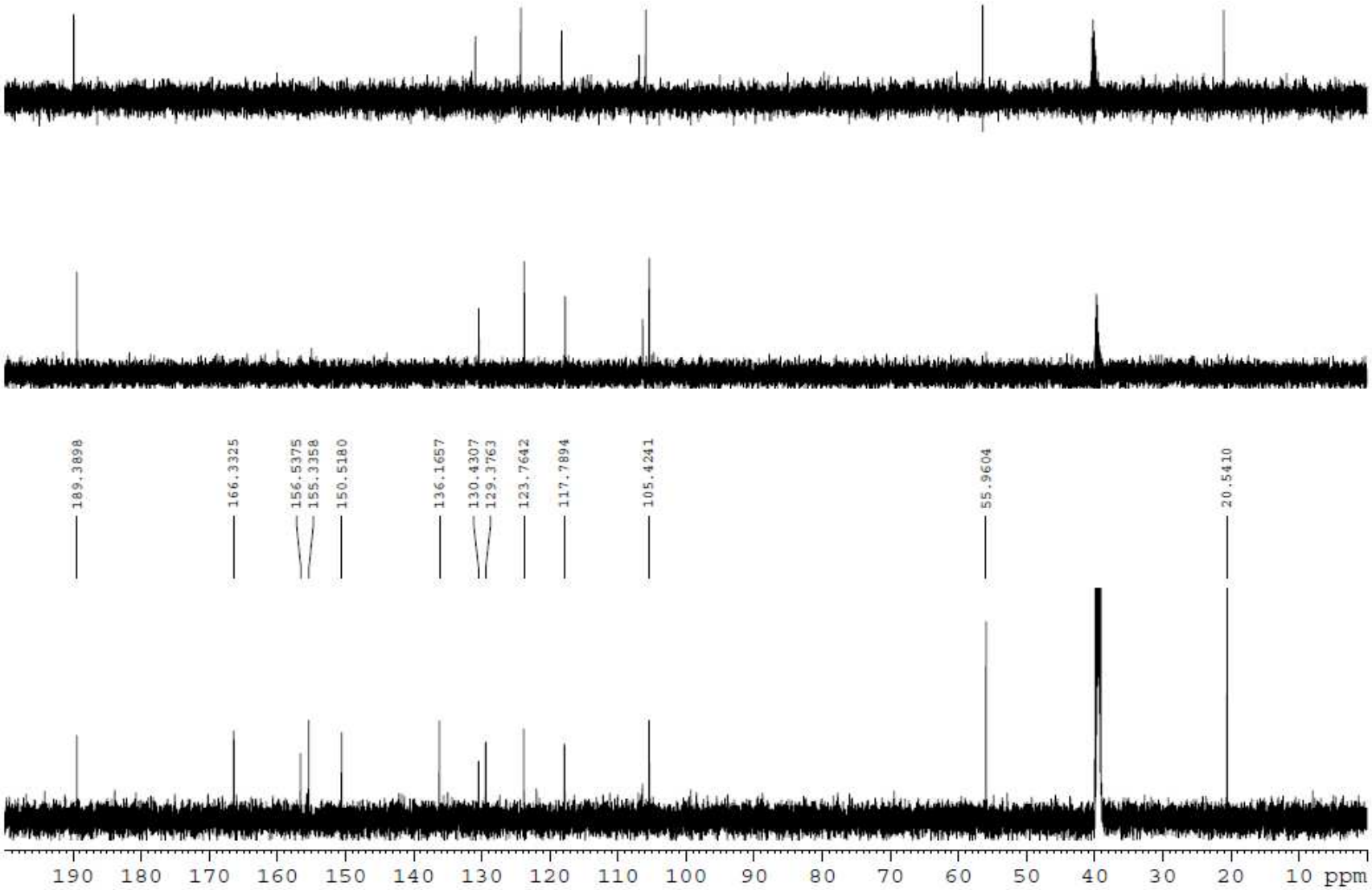
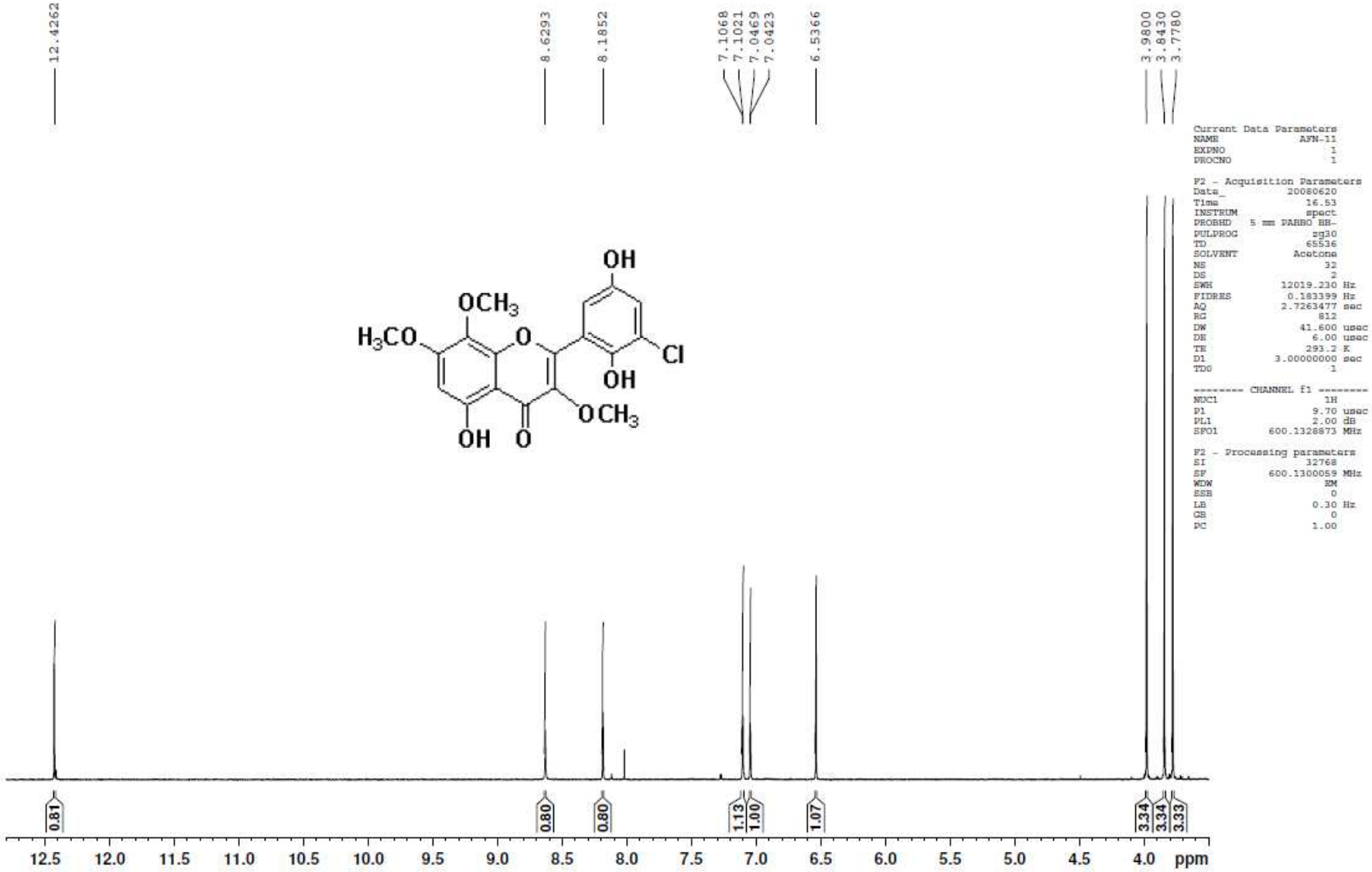


Figure S5 ^{1}H NMR(600 MHz,$(CD_3)_2CO$)spectrum for 5'-hydroxychlorflavonin (3)

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PROCNO                     1

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TD                    65536
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DS                          2
SWH               12019.230 Hz
FIDRES            0.183399 Hz
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RG                        812
DW                   41.600 usec
DE                    6.00 usec
TE                   293.2 K
D1                3.00000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                    9.70 usec
PL1                   2.00 dB
SFO1             600.1328873 MHz

F2 - Processing parameters
SI                        32768
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WDW                       EM
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Figure S6 ^{13}C NMR(150 MHz,$(CD_3)_2CO$)spectrum for 5'-hydroxychlorflavonin (3)

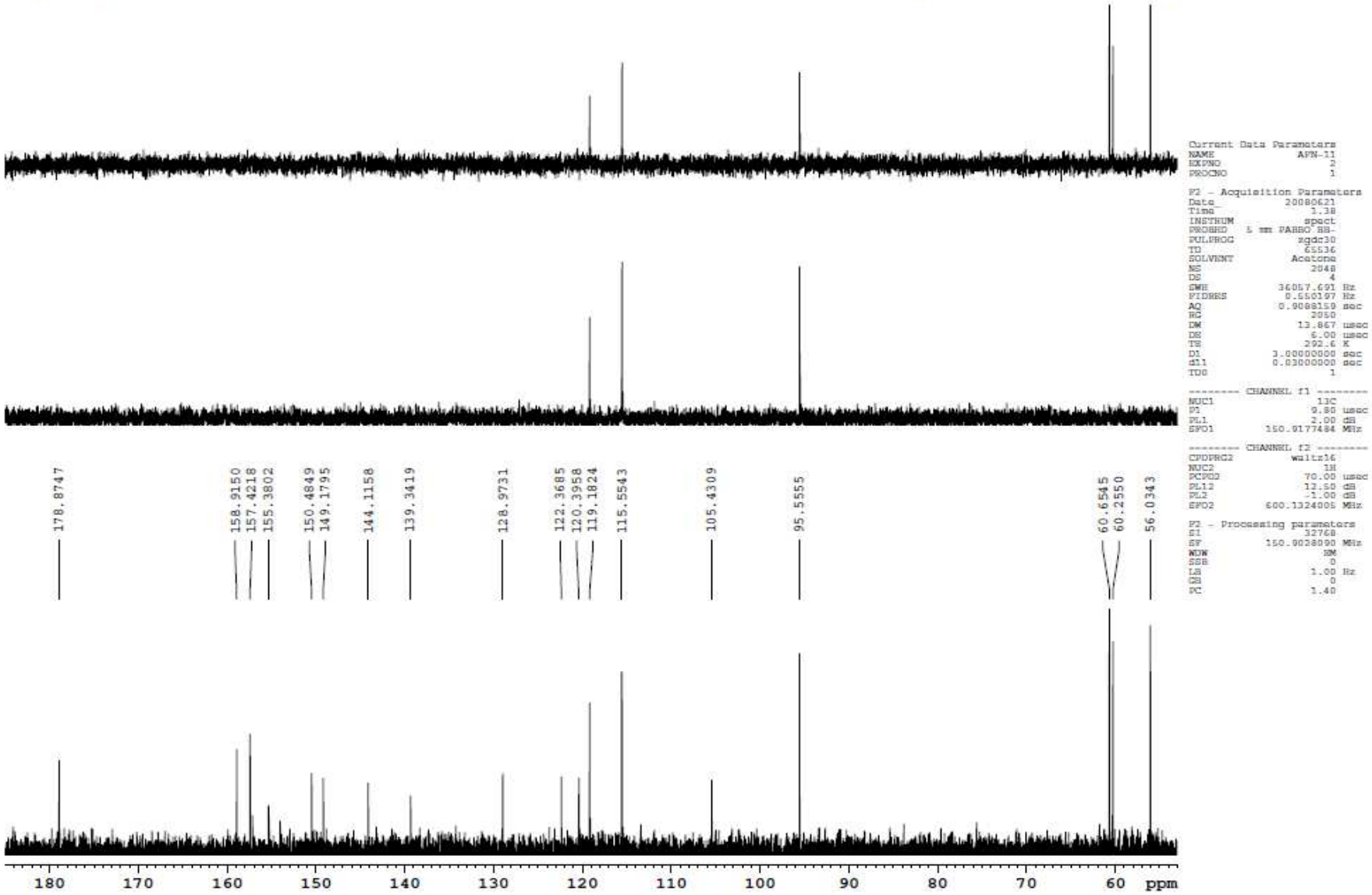


Figure S7 ^{1}H NMR(600 MHz,DMSO)spectrum for chlorflavonin (**4**)

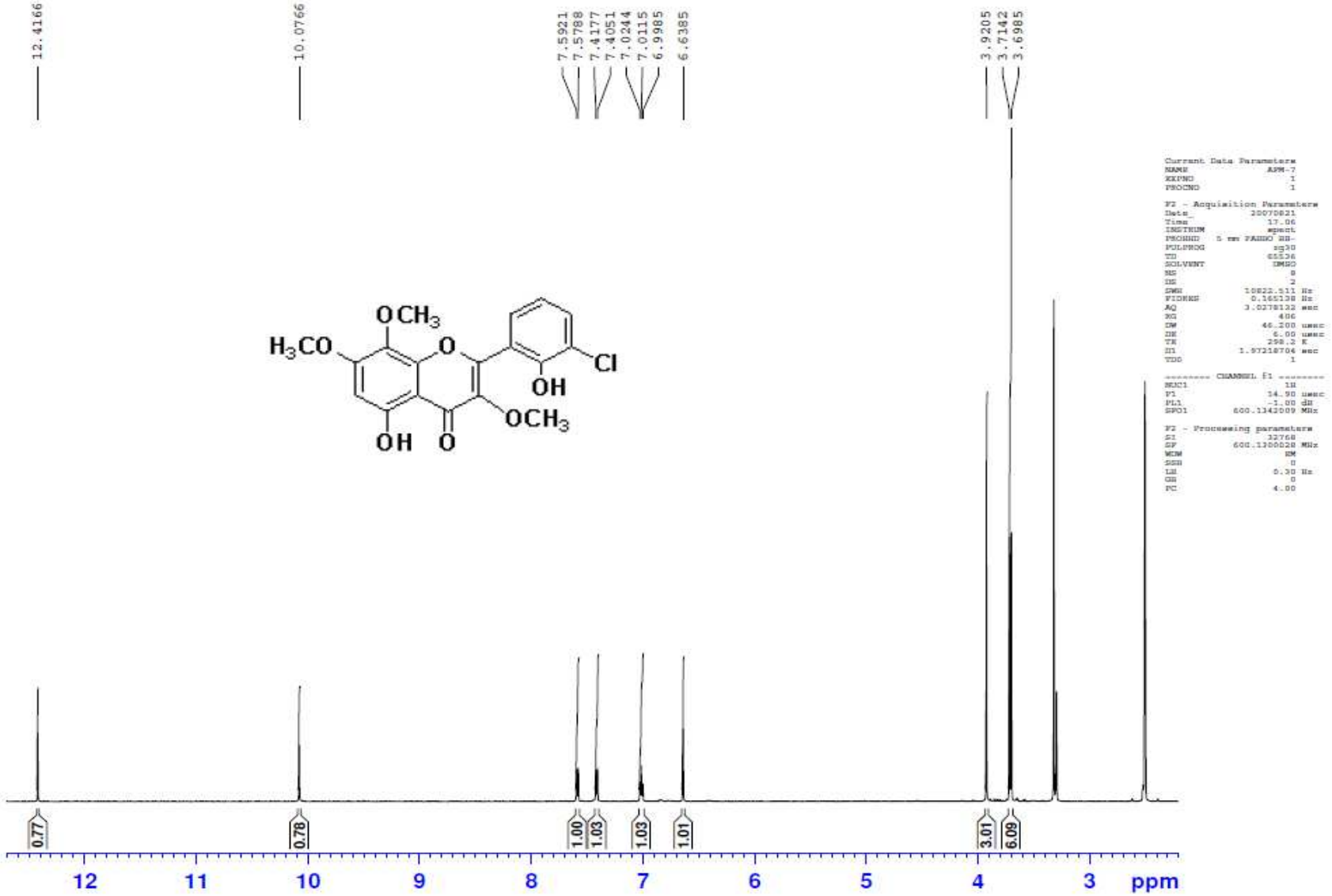
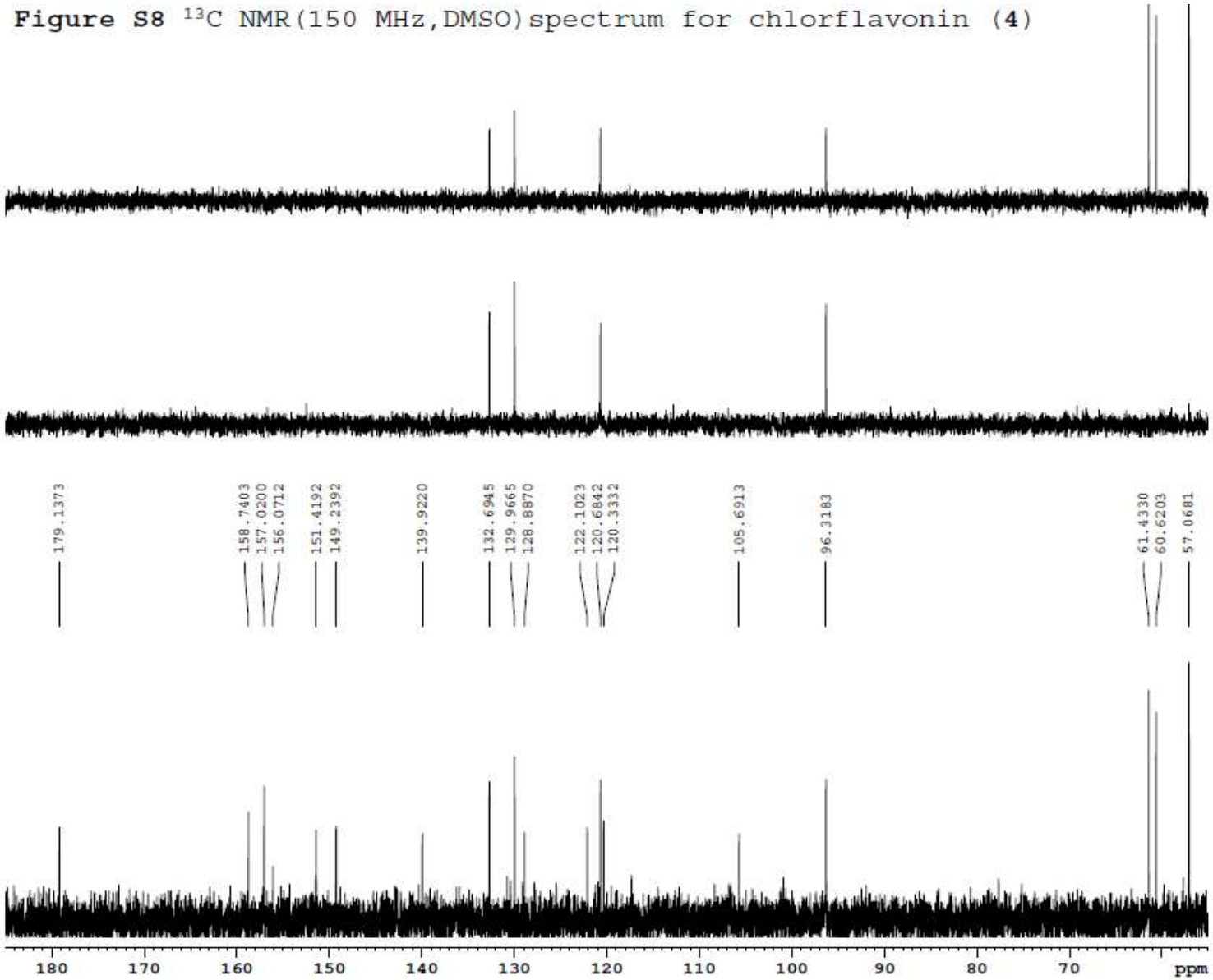


Figure S8 ^{13}C NMR(150 MHz,DMSO)spectrum for chlorflavonin (**4**)

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PROCNO                    1

F2 - Acquisition Parameters
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TD                     65536
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NS                      1024
DS                         4
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FIDRES             0.550197 Hz
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RG                      2050
DW                 13.867 usec
DE                      6.00 usec
TE                     300.3 K
D1                3.00000000 sec
d11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                     13C
P1                      9.80 usec
PL1                     2.00 dB
SFO1           150.9177484 MHz

======== CHANNEL f2 ========
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NUC2                     1H
PCPD2                 70.00 usec
PL12                  12.50 dB
PL2                   -1.00 dB
SFO2           600.1324005 MHz

F2 - Processing parameters
SI                     32768
SF             150.9028090 MHz
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SSB                        0
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GB                         0
PC                      1.40
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Figure S9 MS spectrum for 5'-hydroxychlorflavonin (**3**)

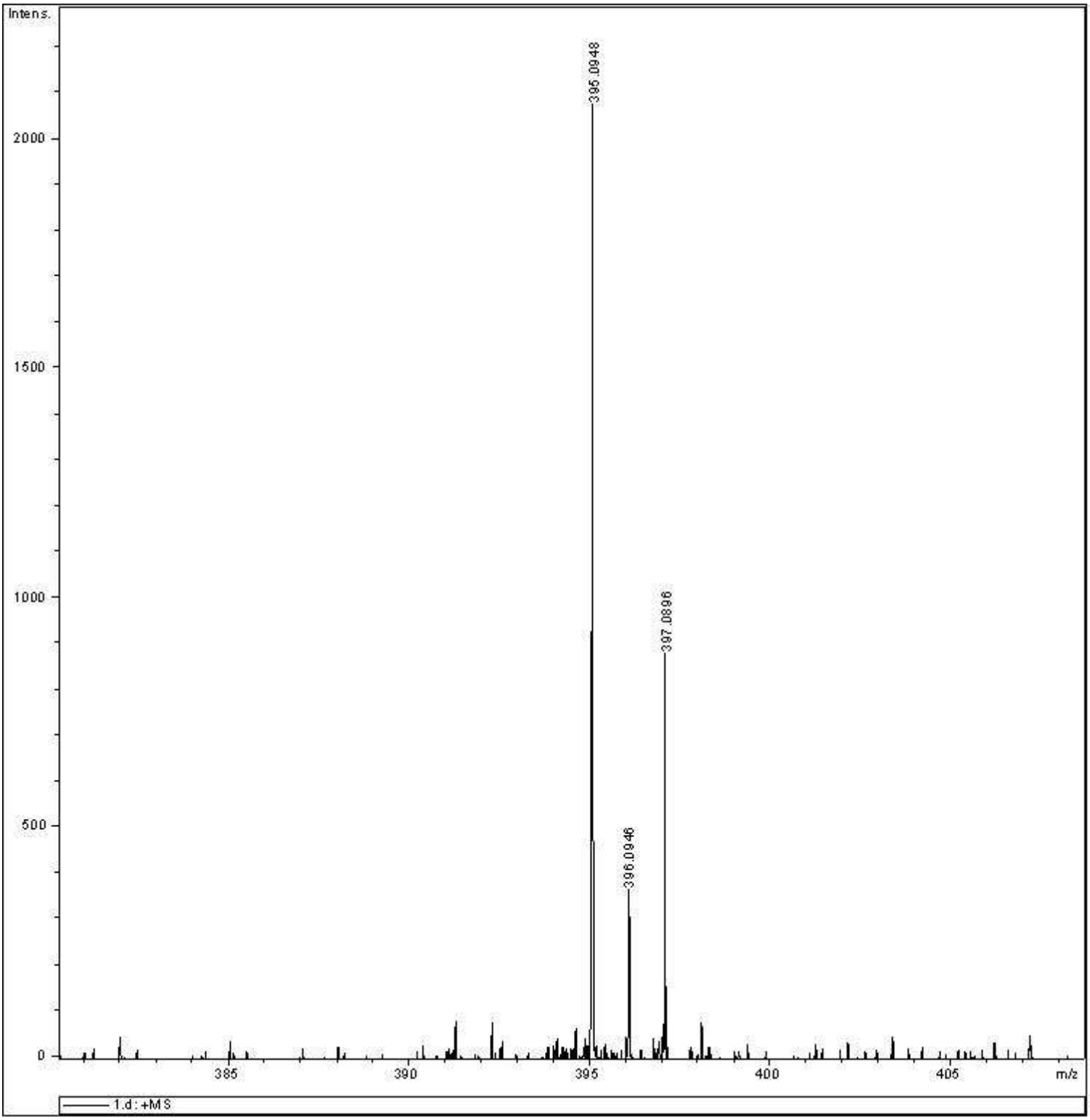


Figure S10 MS spectrum for chlorflavonin (**4**)

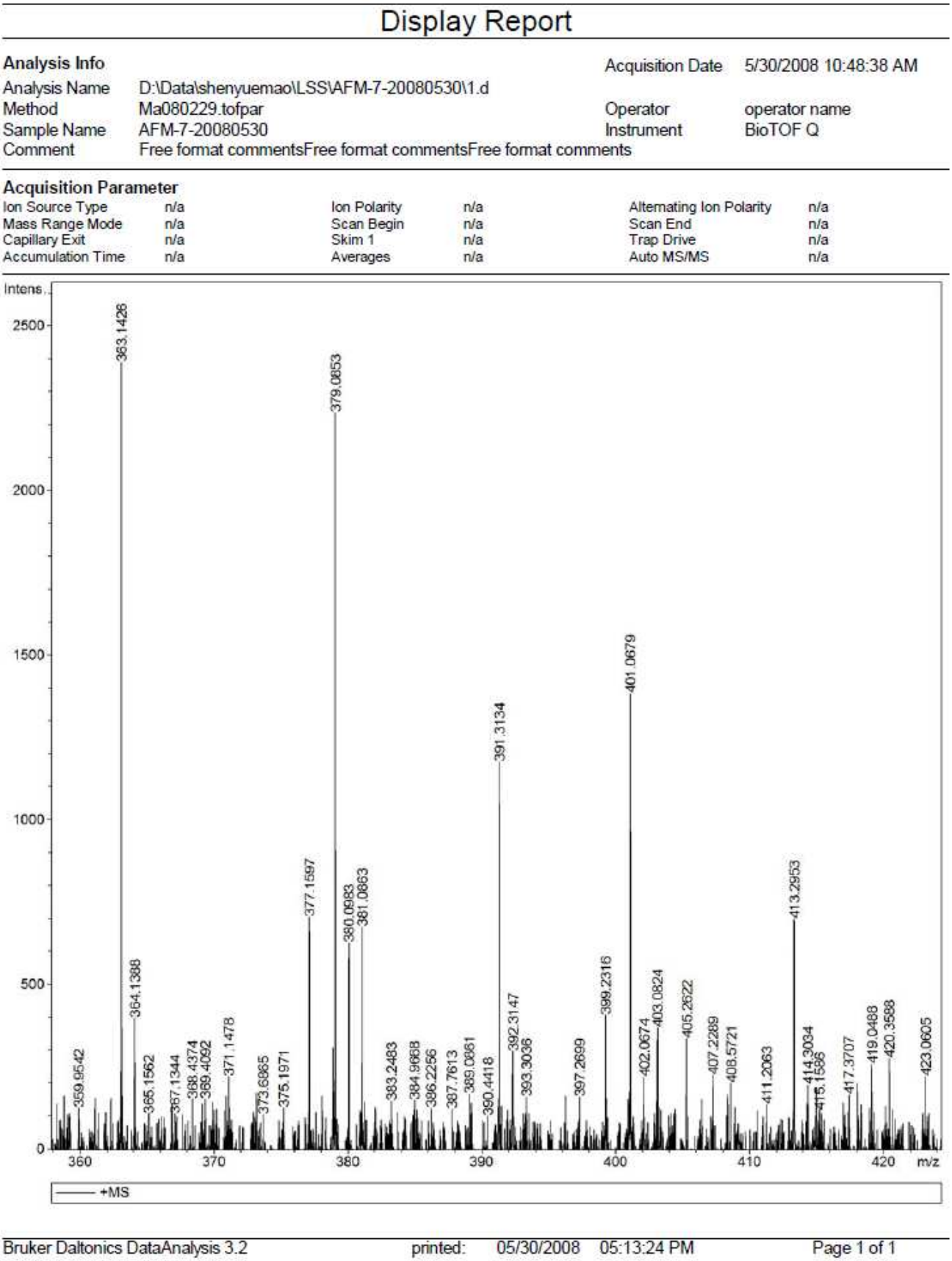
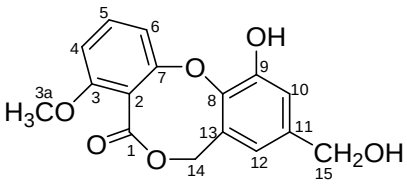


Figure S11 Structure of secondary metabolites from the strain AF119



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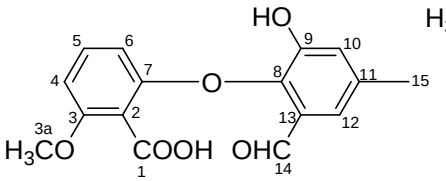

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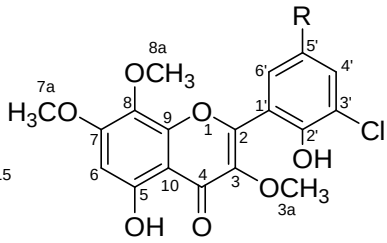

3 R = OH
4 R = H