

**CHEMICAL CONSTITUENTS, ANTI-INFLAMMATORY, AND FREE-RADICAL SCAVENGING ACTIVITIES OF
Guettarda viburnoides CHAM. & SCHLTDL. (RUBIACEAE)**

Maria Augusta Naressi^a, Daniele Domingos Manholer^a, Franciele Queiroz Ames^b, Ciomar Aparecida Bersani-Amado^b, Anelise Samara Nazari Formagio^c, Zefa Valdivina Pereira^d, Willian Ferreira da Costa^a, Debora Cristina Baldoqui^a and Maria Helena Sarragiotto^{a,*}

^aDepartamento de Química, Universidade Estadual de Maringá, Avenida Colombo, 5790, 87020-900 Maringá – PR, Brasil

^bDepartamento de Farmacologia e Terapêutica, Universidade Estadual de Maringá, Avenida Colombo, 5790, 87020-900 Maringá – PR, Brasil

^cFaculdade de Ciências Agrárias, Universidade Federal da Grande Dourados, Rodovia Dourados-Itahum, Km 12, 79804-970 Dourados – MS, Brasil

^dFaculdade de Ciências Biológicas e Ambientais, Universidade Federal da Grande Dourados, Rodovia Dourados-Itahum, Km 12, 79804-970 Dourados – MS, Brasil

Table 1S. ^{13}C and ^1H NMR data for uncaric acid (**GV-4**)

	^{13}C (δ CD ₃ OD)	^1H (δ CD ₃ OD, J in Hz)
1	41.8	1,56 (m); 0,96 (m)
2	27.3	1.66 (m)
3	80.1	3,08 (dd, J=11.1; 4.5)
4	39.0	-
5	57.2	0,74 (d, J= 3,0)
6	68.9	4.47 (brs)
7	41.8	1.74 (m); 1.56 (m)
8	40.1	-
9	48.0	1.65 (m)
10	37.6	-
11	24.6	2.02 (m)
12	129.8	5.30 (t, J=3.0)
13	139.6	-
14	40.7	-
15	28.0	1.70 (m); 0.98 (m)
16	26.7	2.55 (dd, J= 13.2; 3.9); 1.56 (m)
17	47.0	-
18	55.1	2.51 (s)
19	73.6	-
20	42.0	1.49 (m)
21	26.3	1.22 (m); 1.56 (m)
22	39.0	1.74 (m); 1.61 (m)
23	17.6	1.03 (s)
24	28.8	1.04 (s)
25	17.2	1.29 (s)
26	18.4	1.07 (s)
27	24.8	1.30 (s)
28	182.3	-
29	27.1	1.19 (s)
30	16.6	0.93 (d, J=6.0)

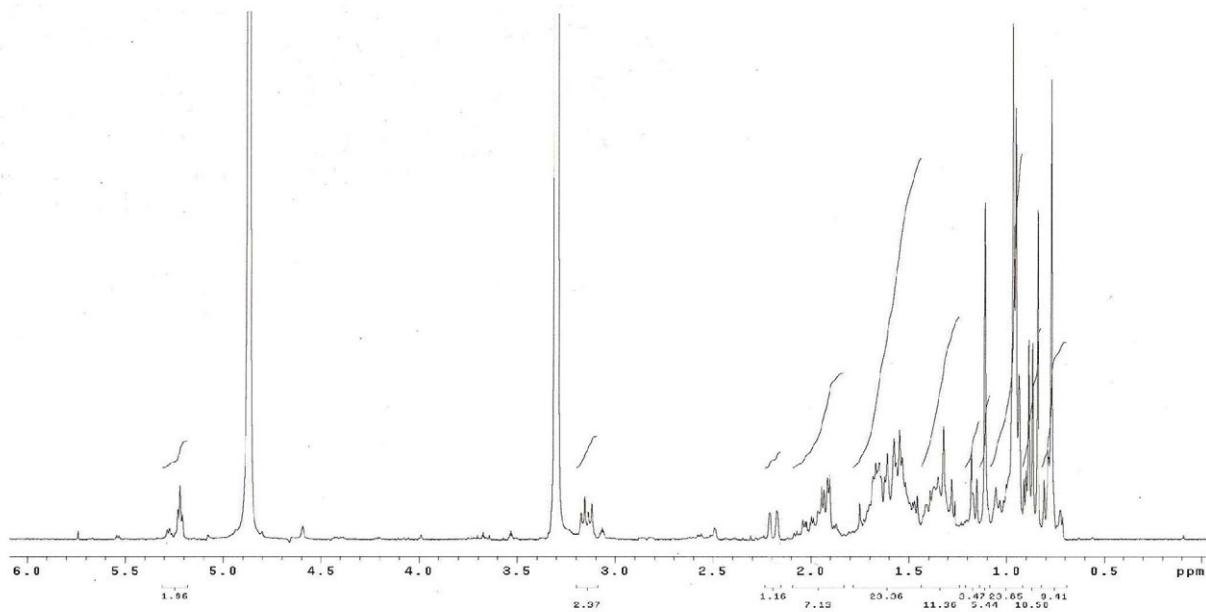


Figure 1S. ¹H NMR spectra (300 MHz, CD₃OD) of ursolic acid (3)

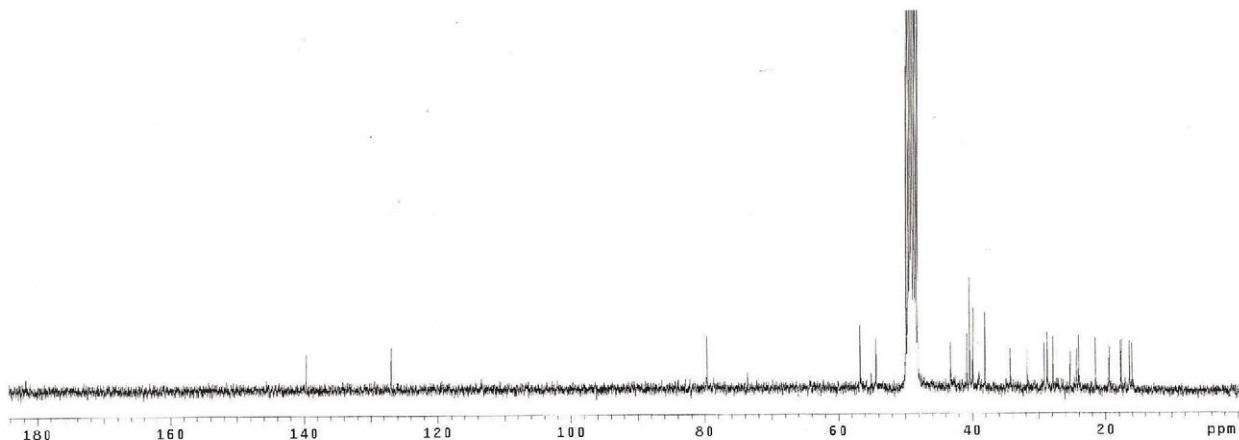


Figure 2S. ¹³C NMR spectra (75.5 MHz, CD₃OD) of ursolic acid (3)

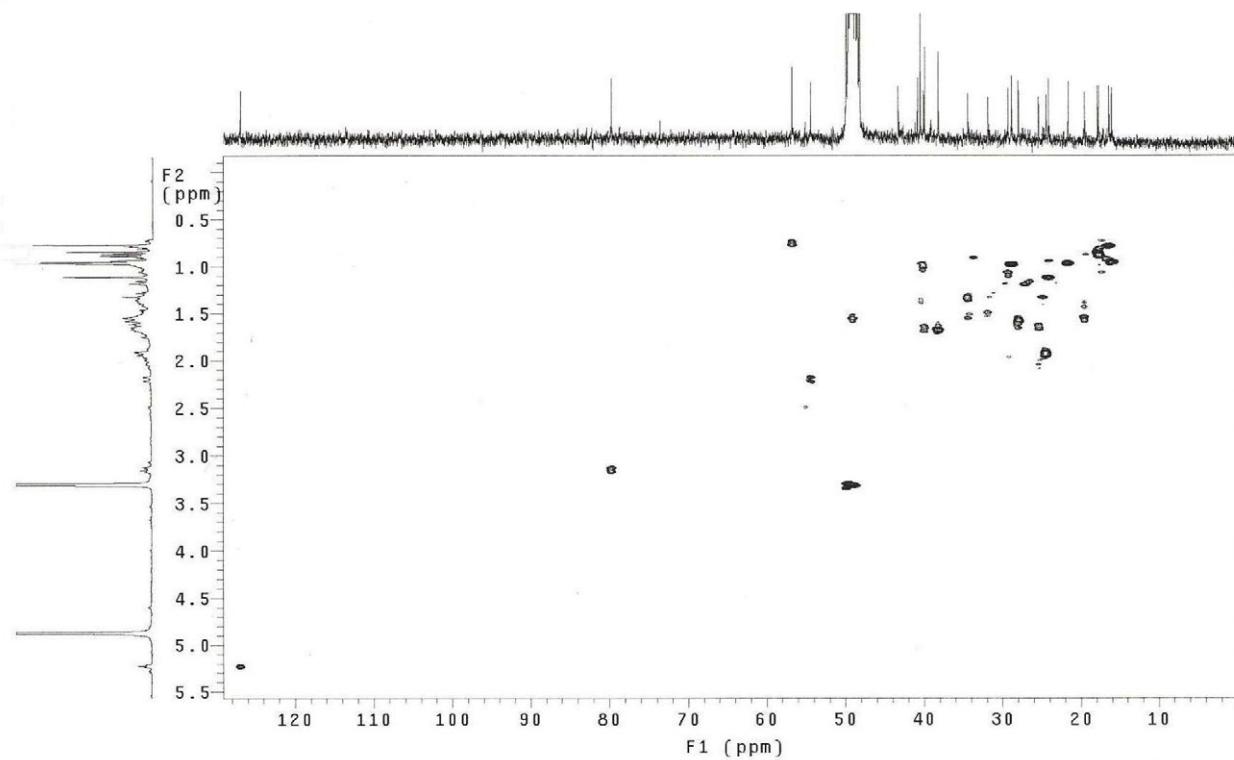


Figure 3S. HSQC spectra (300 MHz, CD_3OD) of ursolic acid (**3**)

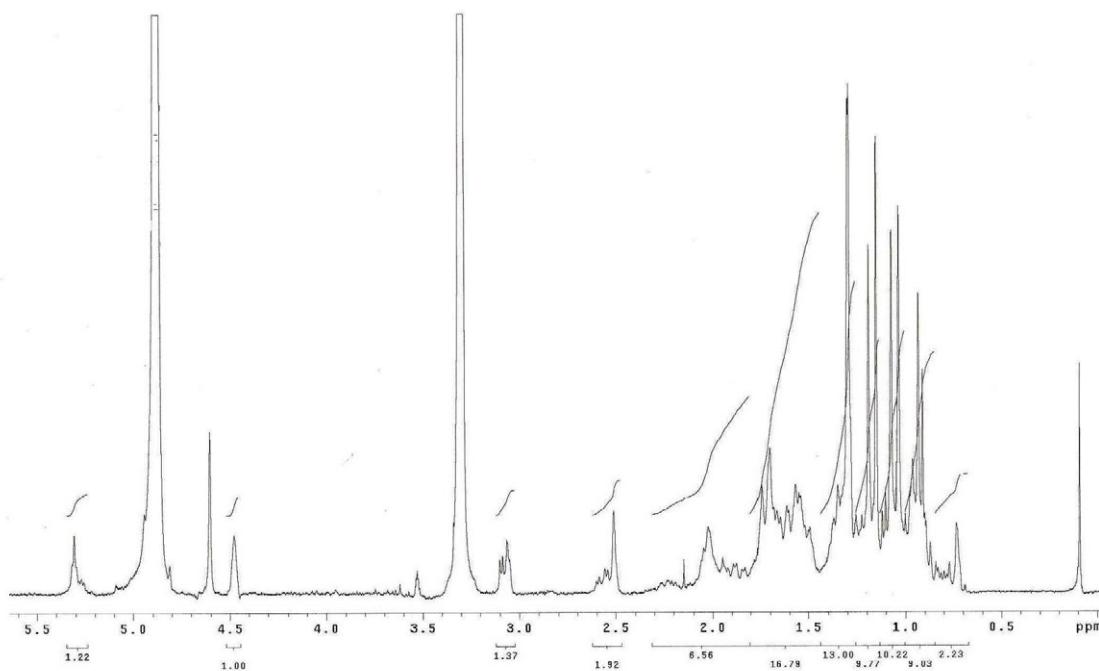


Figure 4S. ¹H NMR spectra (300 MHz, CD_3OD) of uncaric acid (**4**)

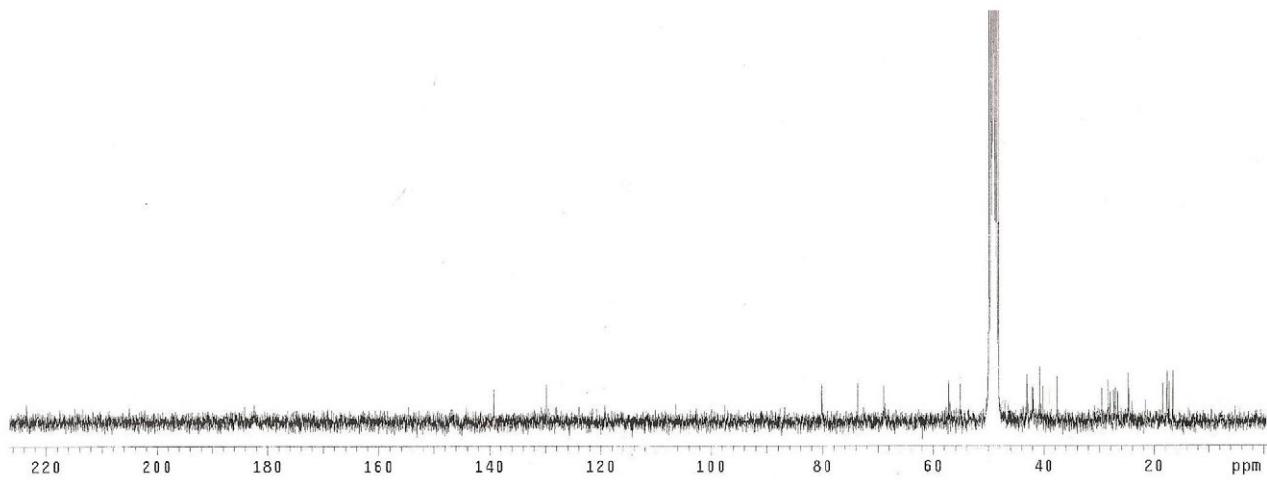


Figure 5S. ^{13}C NMR spectra (75.5 MHz, CD_3OD) of uncaric acid (**4**)

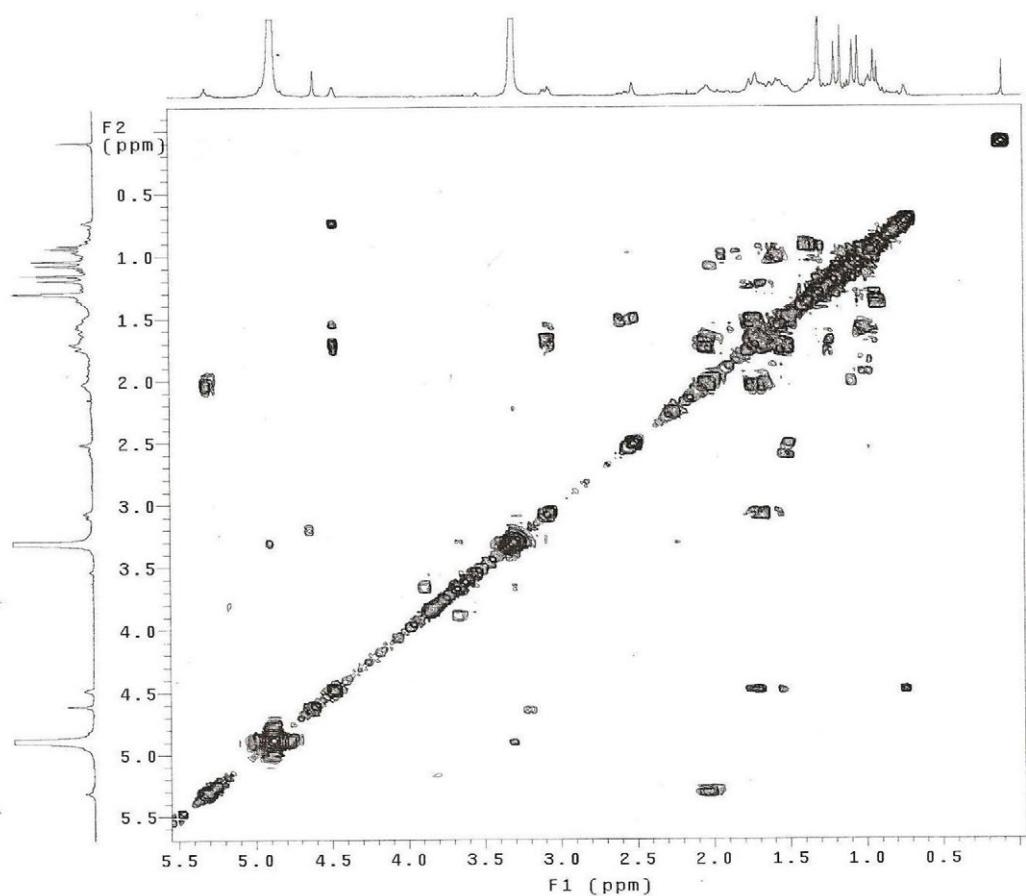


Figure 6S. COSY spectra (300 MHz, CD_3OD) of uncaric acid (**4**)

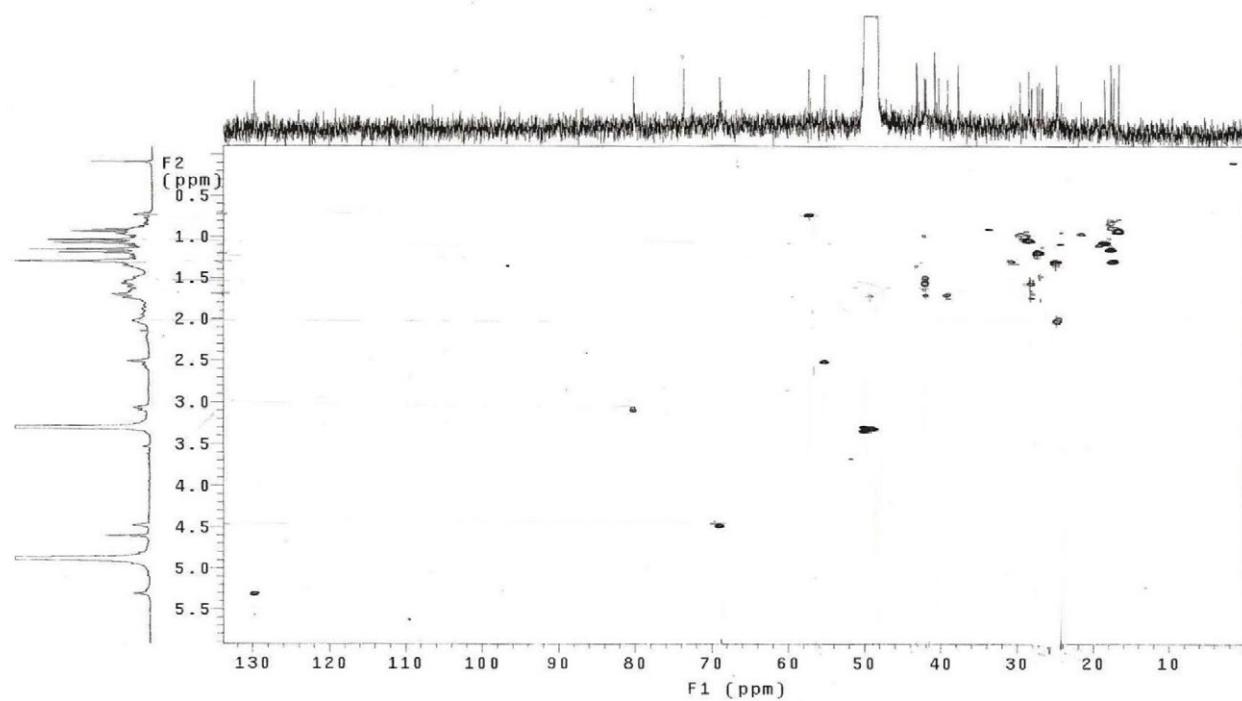


Figure 7S. HSQC spectra (300 MHz, CD₃OD) of uncaric acid (4)

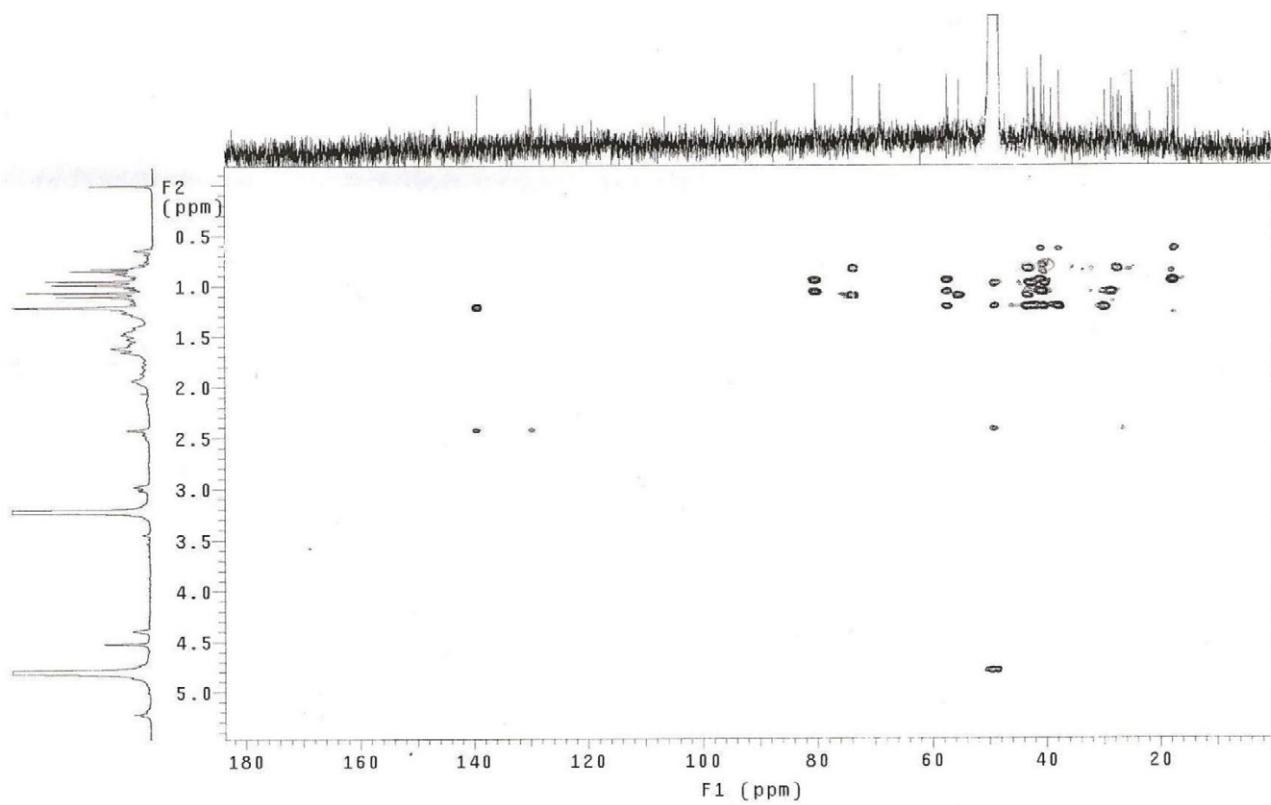


Figure 8S. HMBC spectra (300 MHz, CD₃OD) of uncaric acid (4)

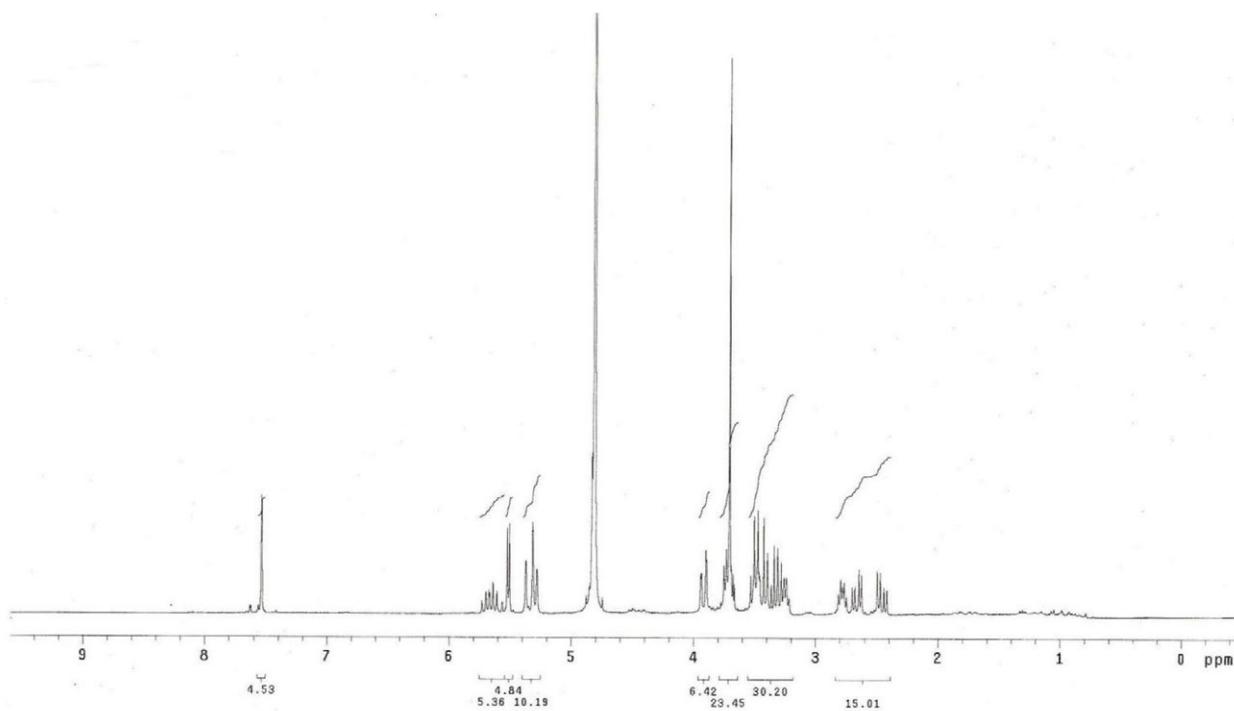


Figure 9S. ¹H NMR spectra (300 MHz, D₂O) of secoxyloganin (5)

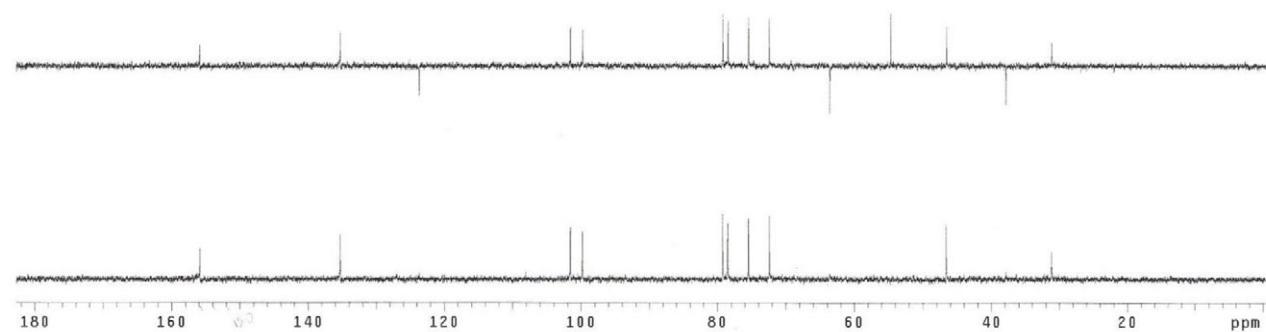


Figure 10S. DEPT spectra 135°-90° (D₂O) of secoxyloganin (5)

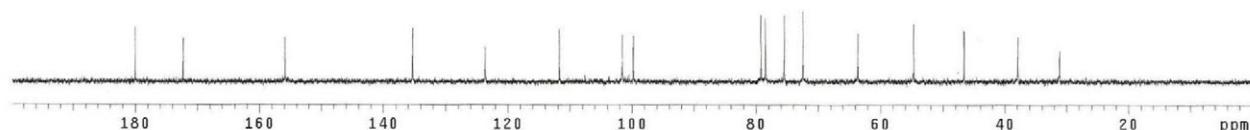


Figure 11S. ¹³C NMR spectra (75.5 MHz, D₂O) of secoxyloganin (5)

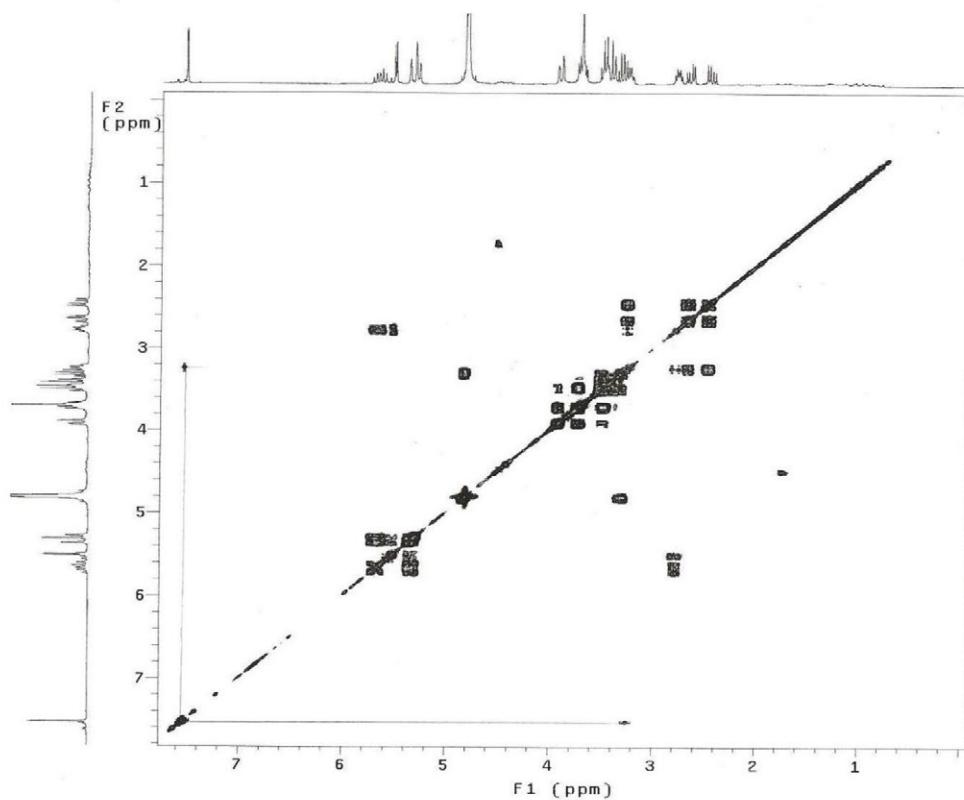


Figure 12S. ^1H x ^1H – COSY spectra (300 MHz, D_2O) of secoxyloganin (5)

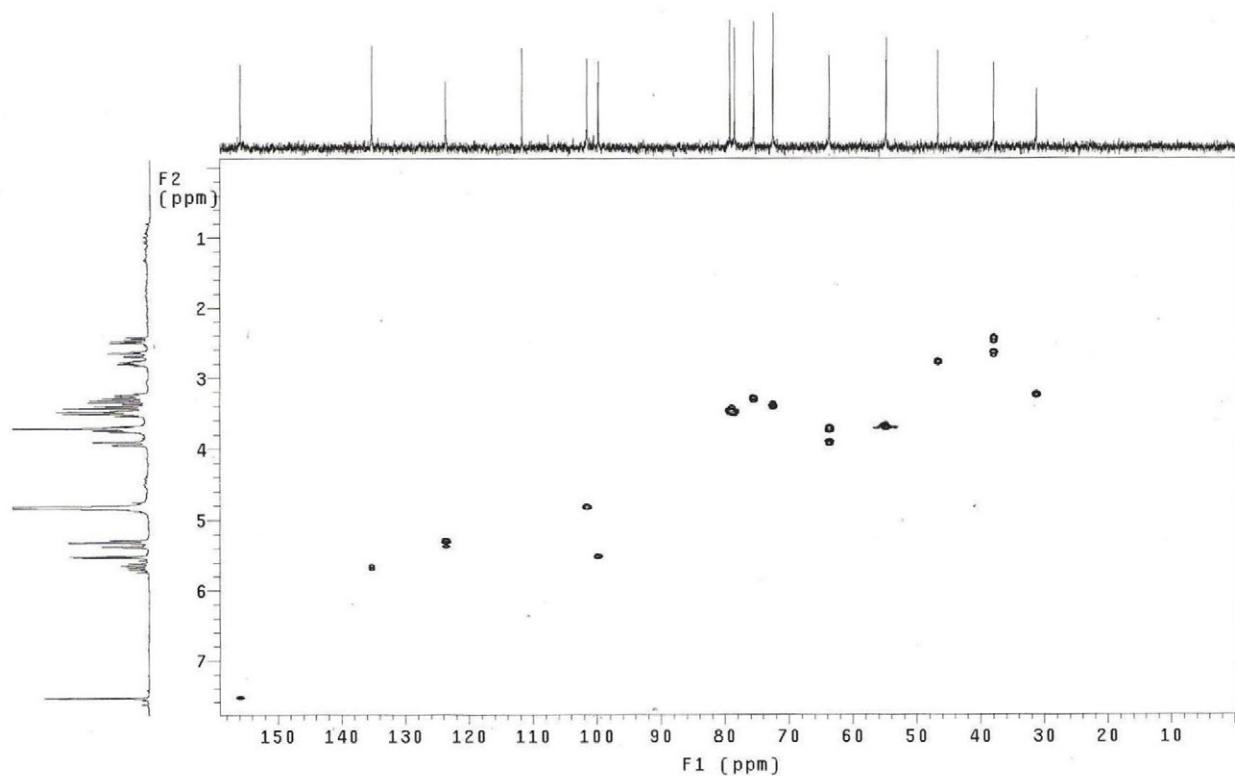


Figure 13S. HSQC spectra (300 MHz, D_2O) of secoxyloganin (5)

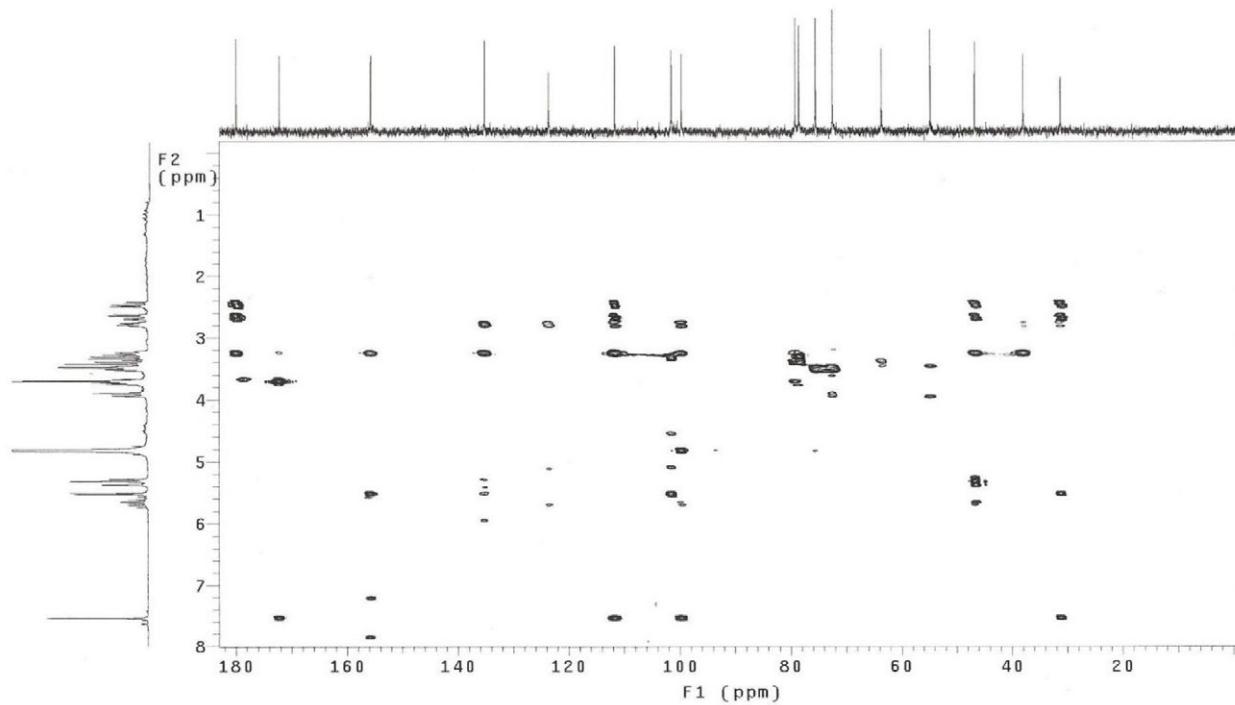


Figure 14S. HMBC spectra (300 MHz, $D_2\text{O}$) of secoxyloganin (**5**)

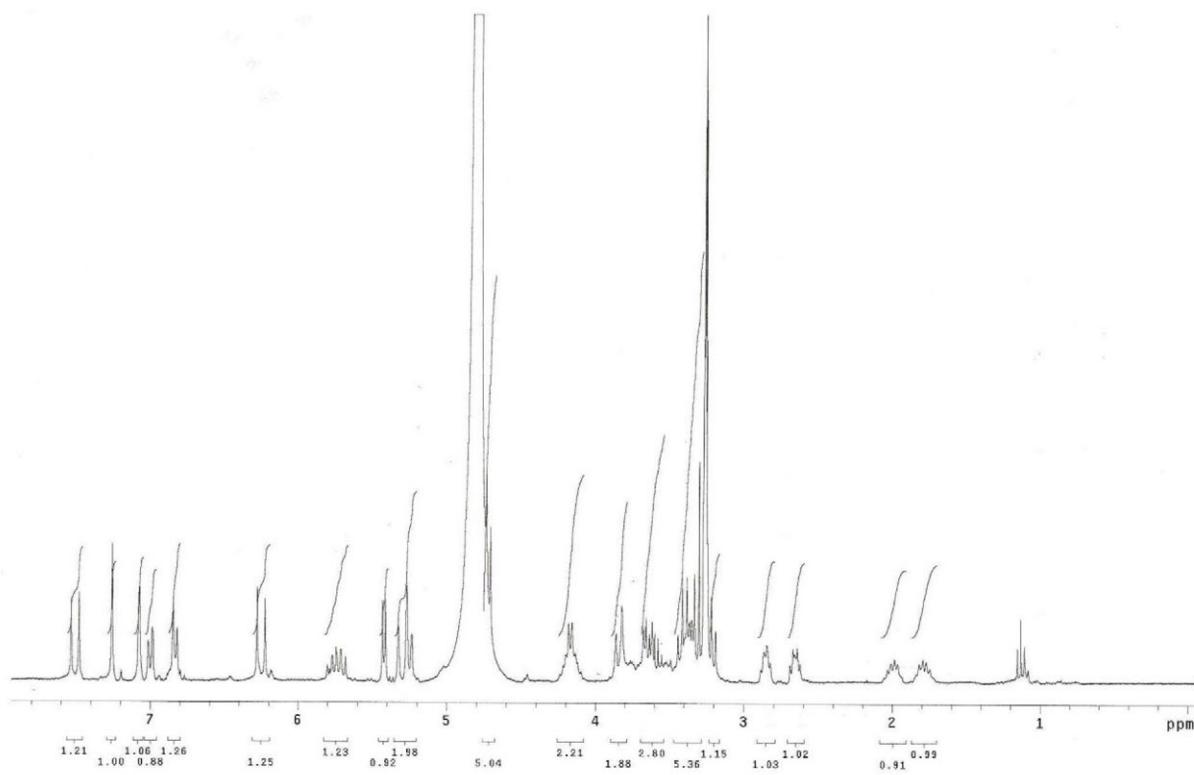


Figure 15S. ^1H NMR spectra (300 MHz, $CD_3\text{OD}$) of grandifloroside (**6**)

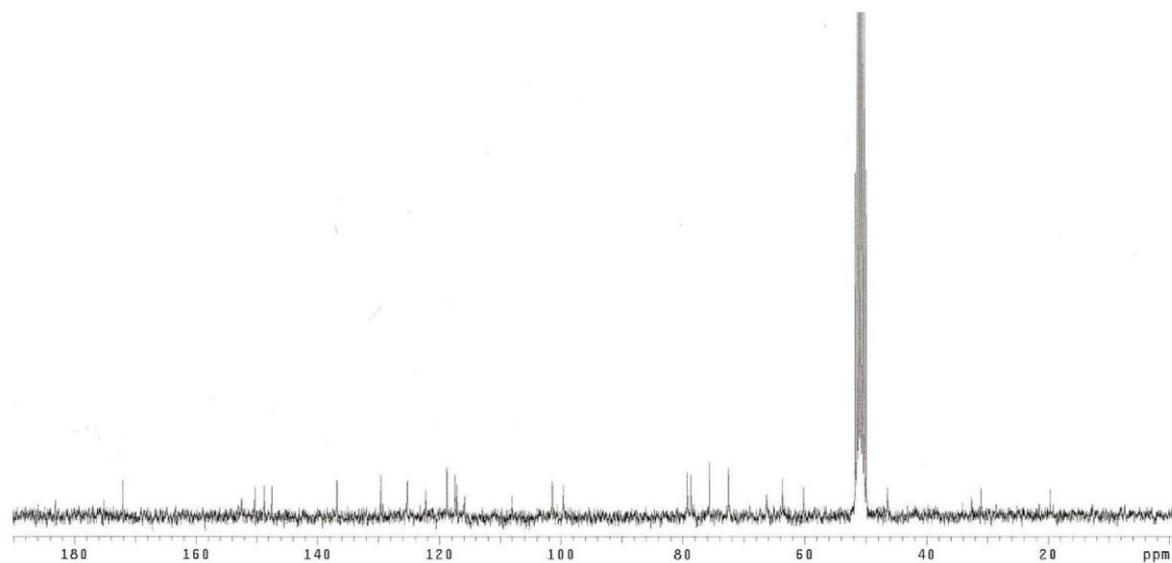


Figure 16S. ^{13}C NMR spectra (75.5 MHz, CD_3OD) of grandifloroside (6)

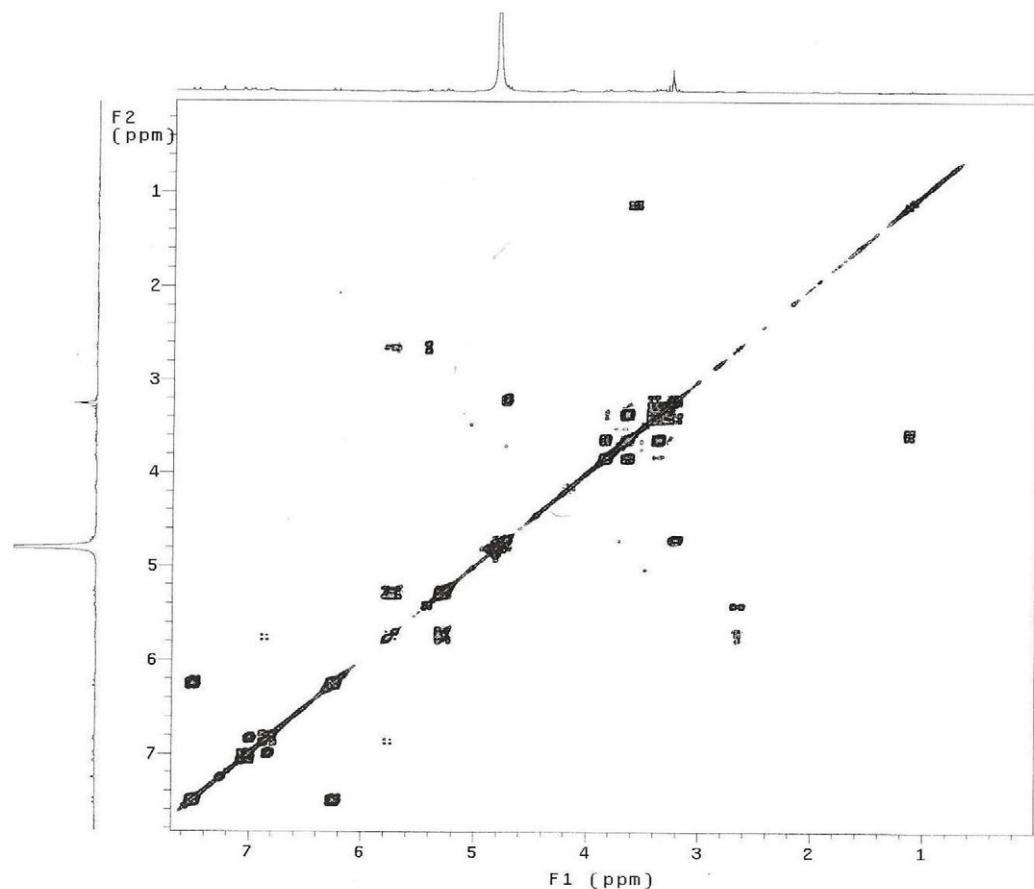


Figure 17S. $^1\text{H} \times ^1\text{H}$ - COSY spectra (300 MHz, CD_3OD) of grandifloroside (6)

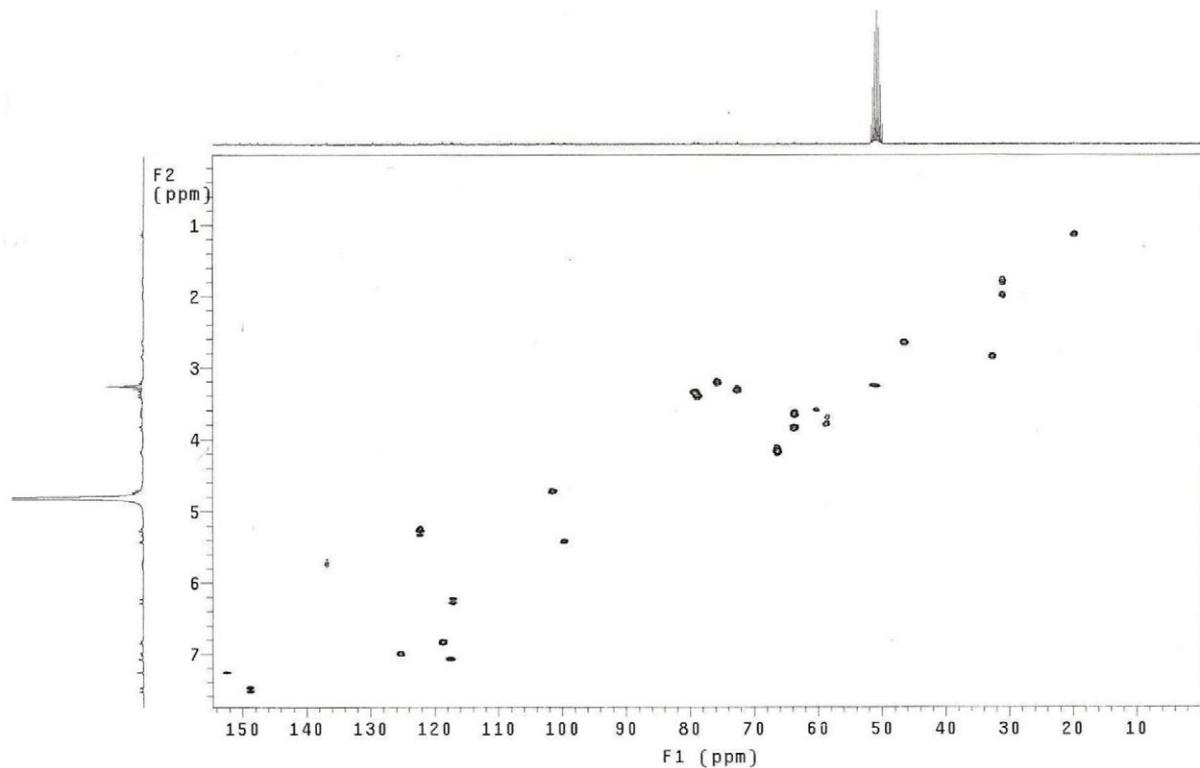


Figure 18S. HSQC spectra (300 MHz, CD_3OD) of grandifloroside (6)

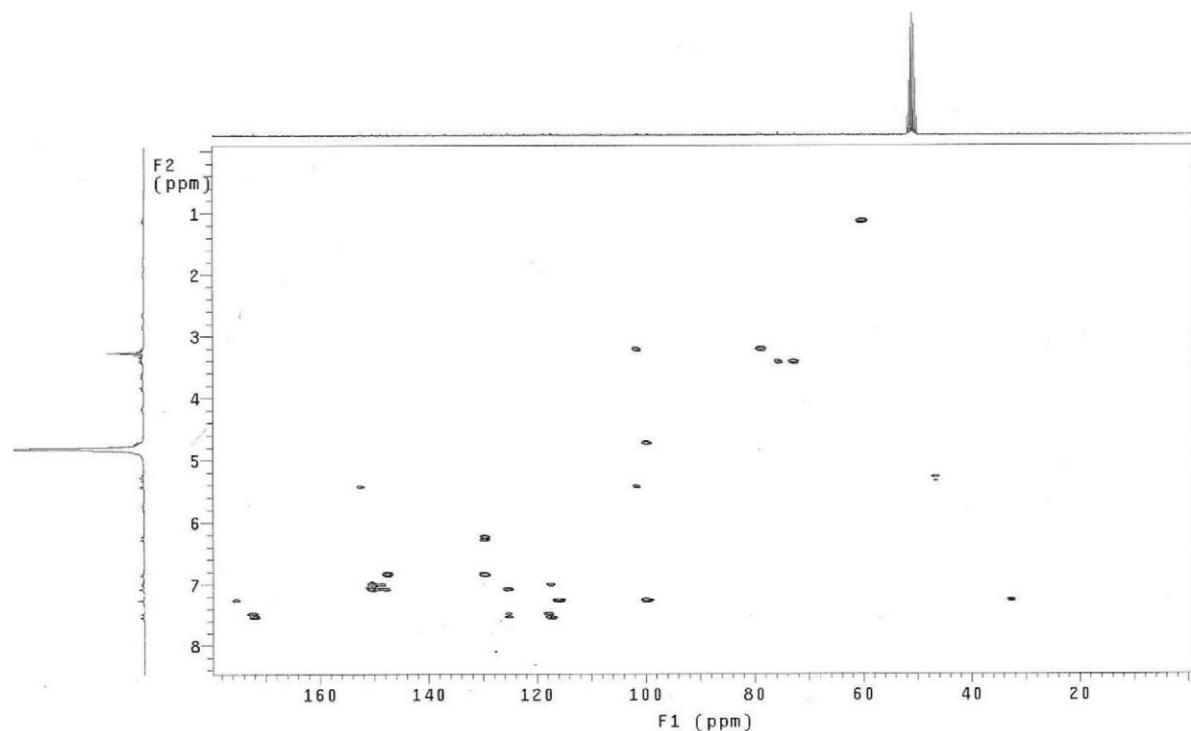
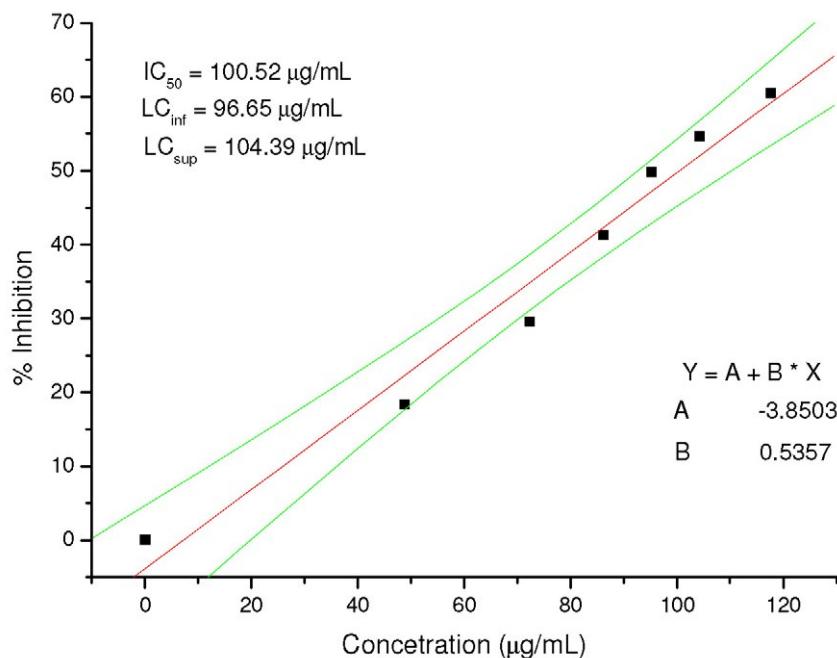
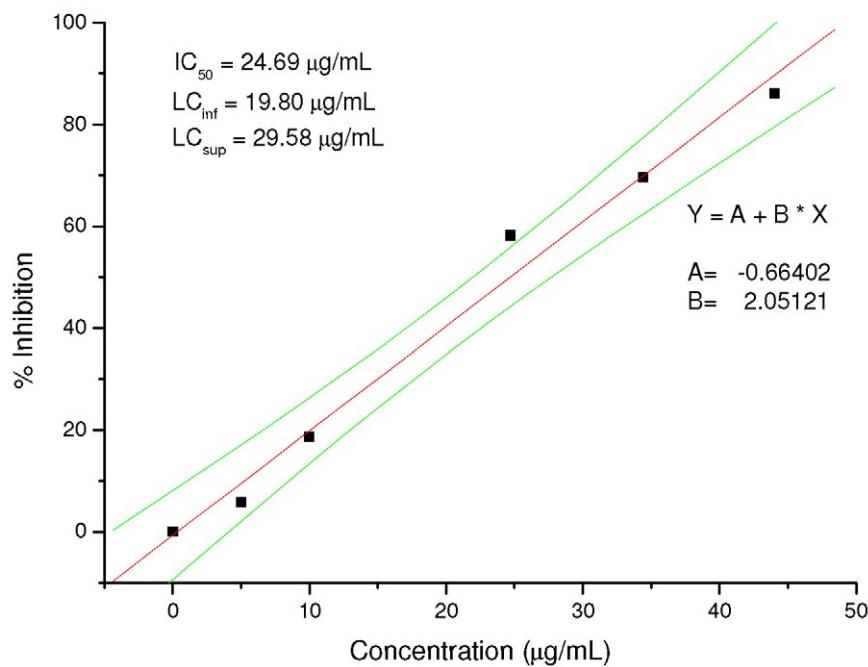


Figure 19S. HMBC spectra (300 MHz, CD_3OD) of grandifloroside (6)



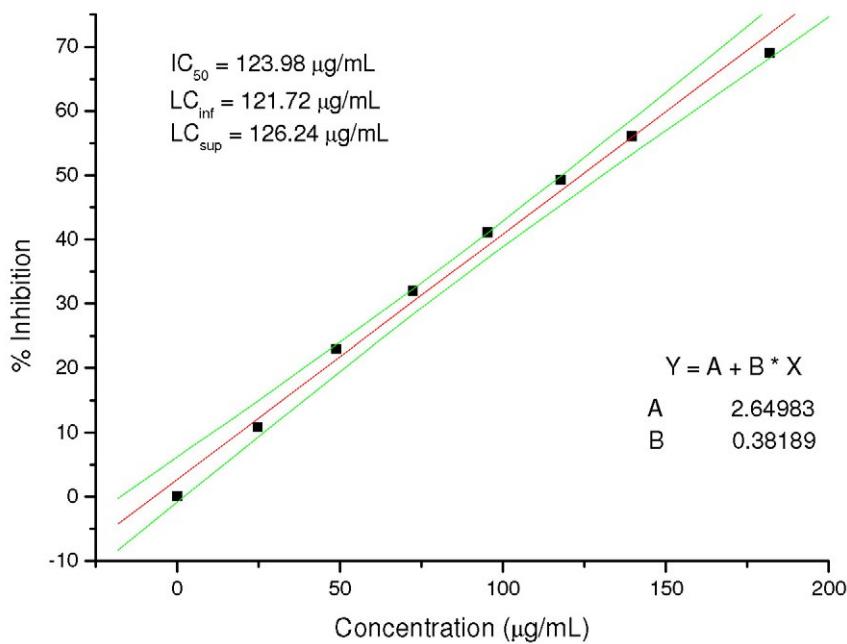


Figure 22S. Graphic of % inhibition vs concentration of **CF** in the DPPH assay

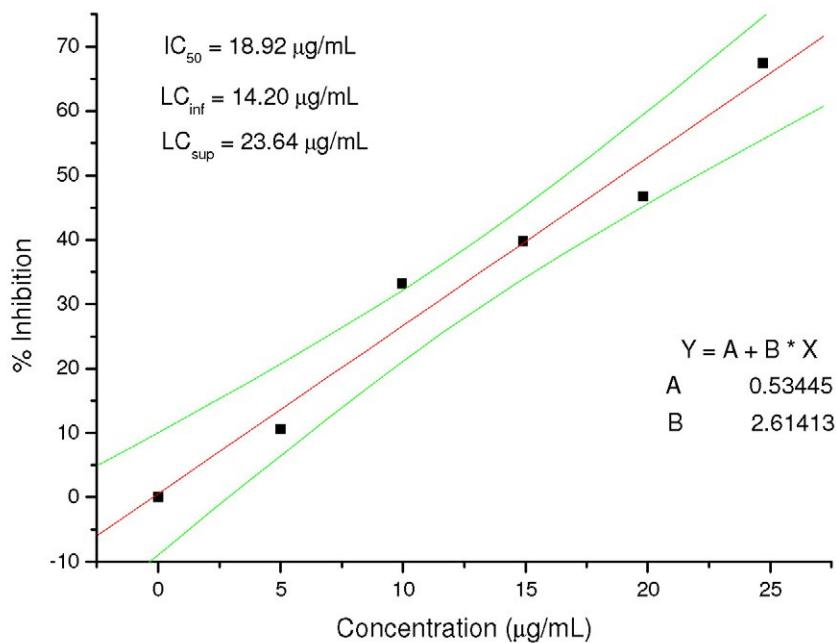


Figure 23S. Graphic of % inhibition vs concentration of **EAF** in the DPPH assay

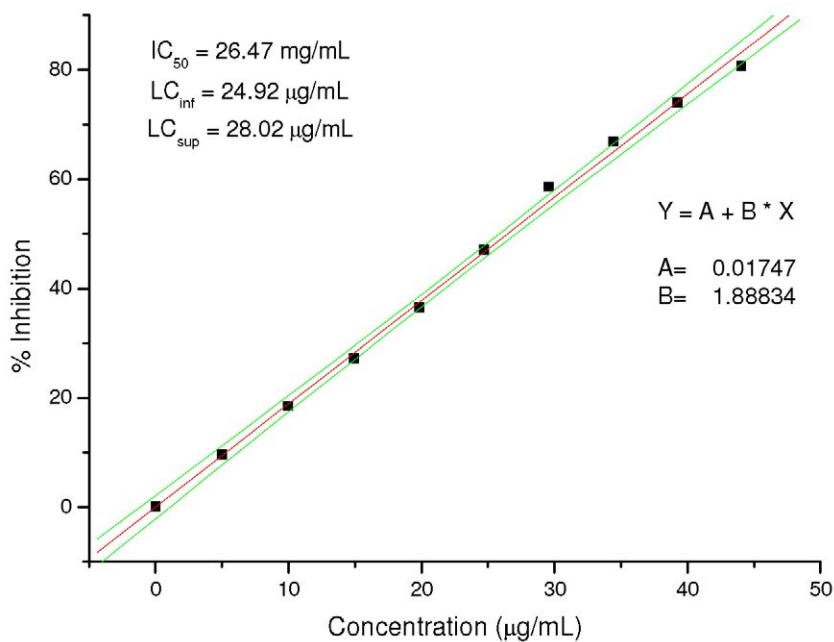


Figure 24S. Graphic of % inhibition vs concentration of AMF in the DPPH assay

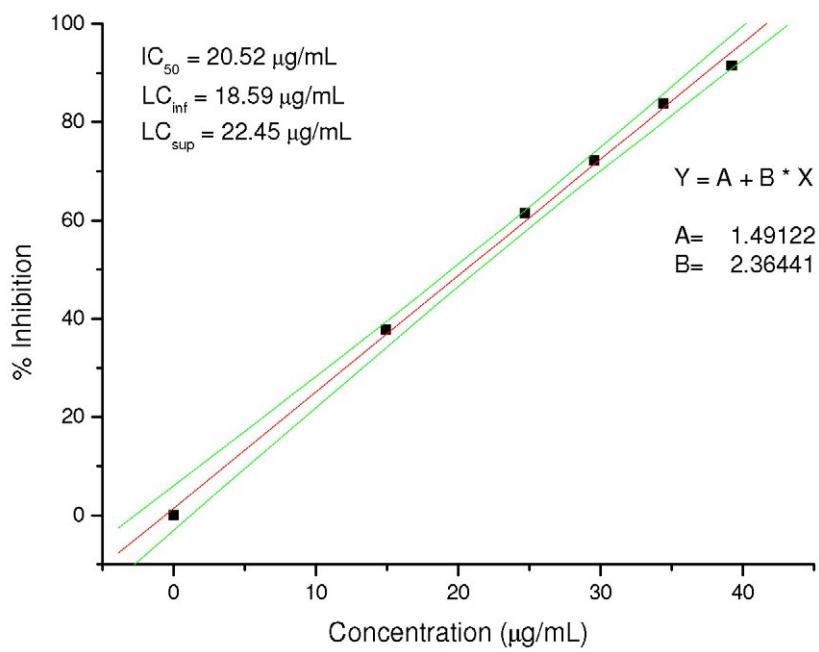


Figure 25S. Graphic of % inhibition vs concentration of grandifloroside (6) in the DPPH assay

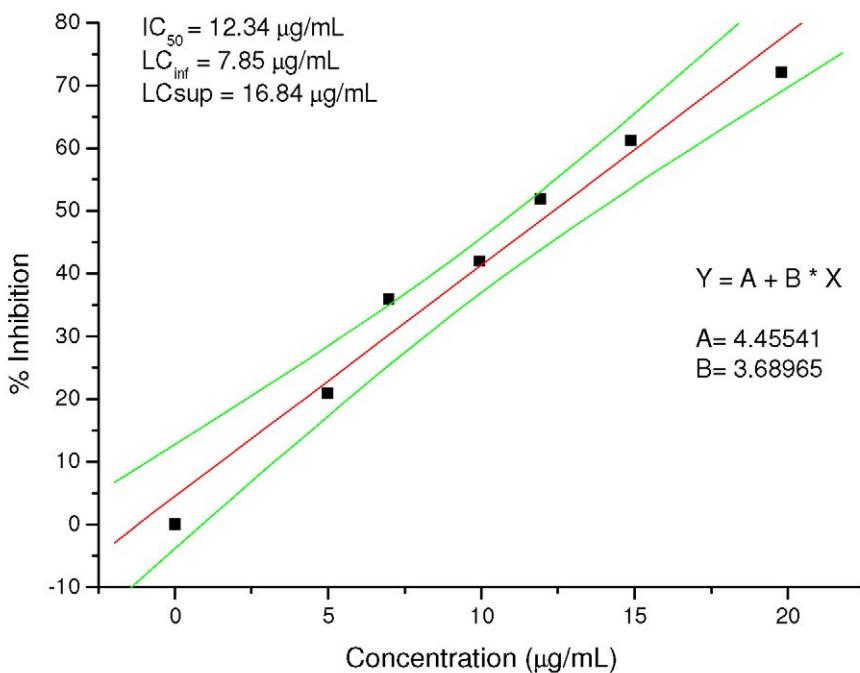


Figure 26S. Graphic of % inhibition vs concentration of BHT in the DPPH assay