Supporting information

Hybrid flavan-flavanones from *Friesodielsia desmoides* and their inhibitory activities against nitric oxide production

Pornphimol Meesakul,[a] Khanitha Pudhom,[b] Stephen G. Pyne,[c] Surat Laphookhieo*,[a]

[a]Natural Products Research Laboratory, School of Science, Mae Fah Luang University, Chiang Rai, 57100, Thailand

[b]Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok, 10330 Thailand

[c]School of Chemistry, University of Wollongong, Wollongong, New South Wales, 2522 Australia

Corresponding Author E-mail: surat.lap@mfu.ac.th

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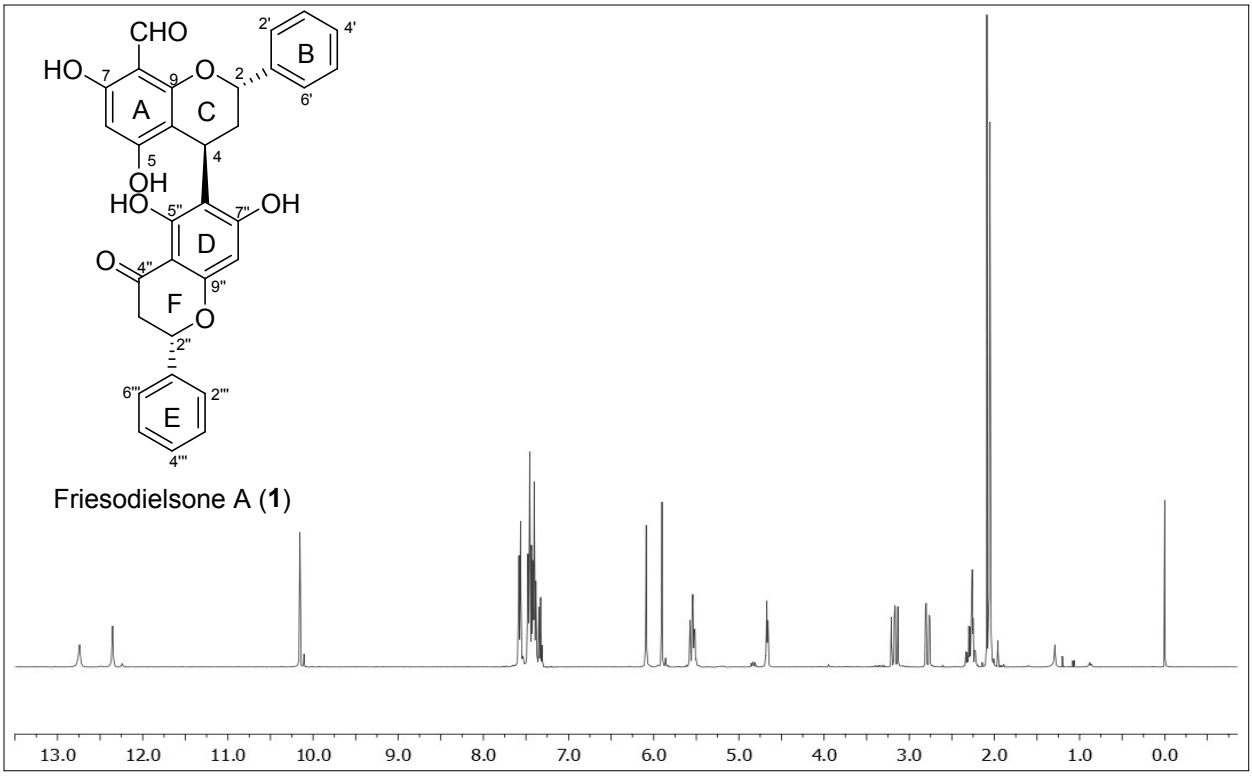
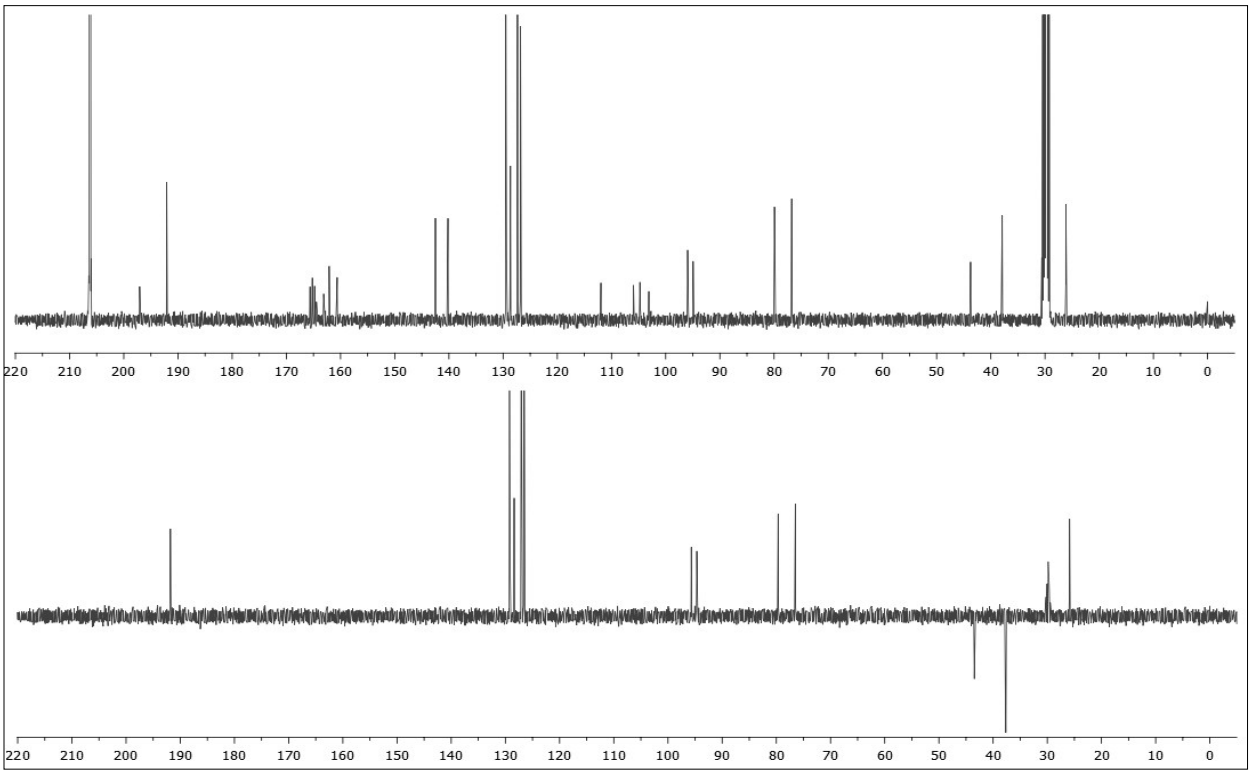
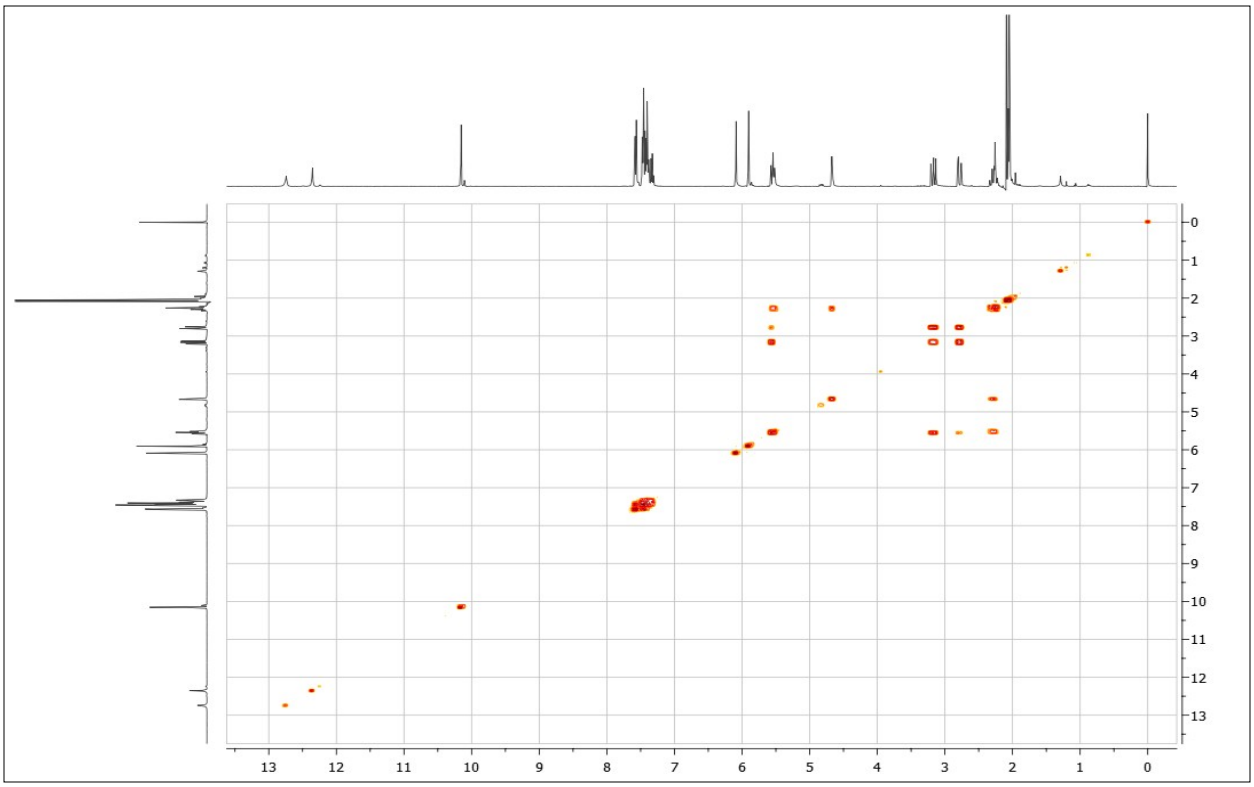


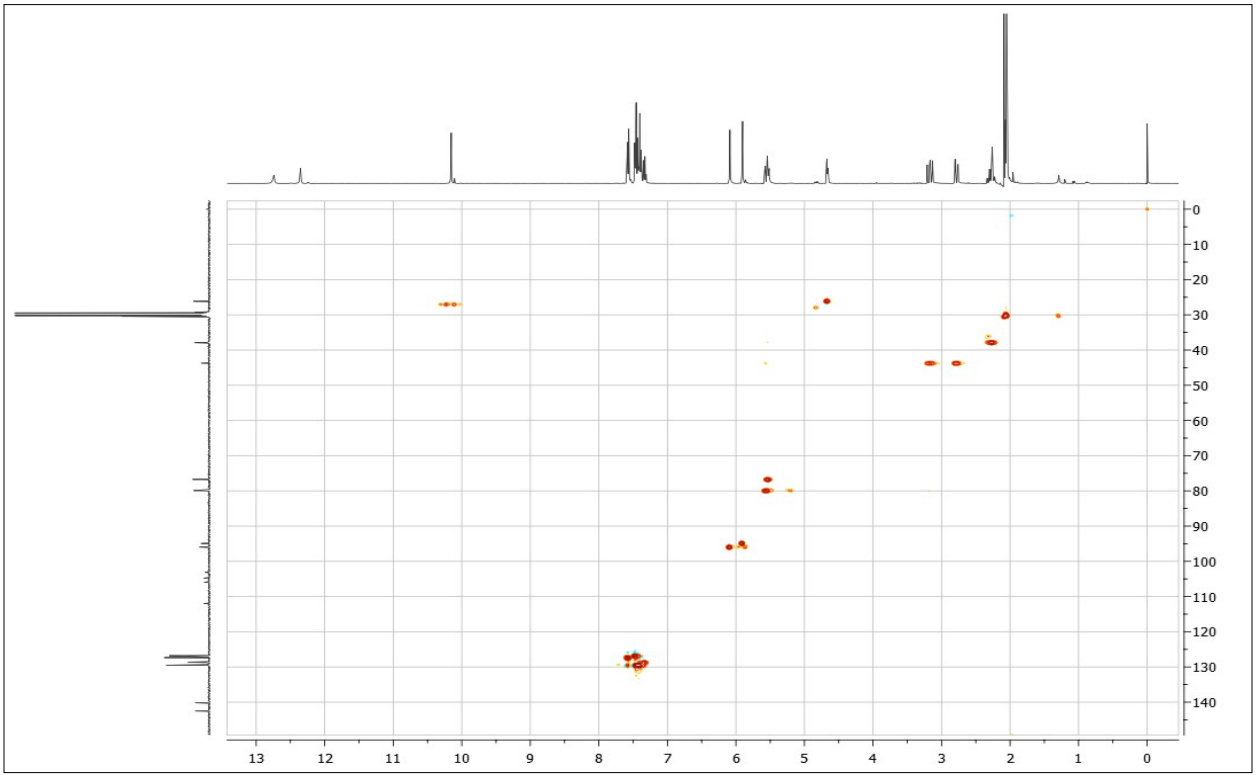
S1. ^{1}H NMR spectrum (400 MHz, acetone-d_6) of compound **1**



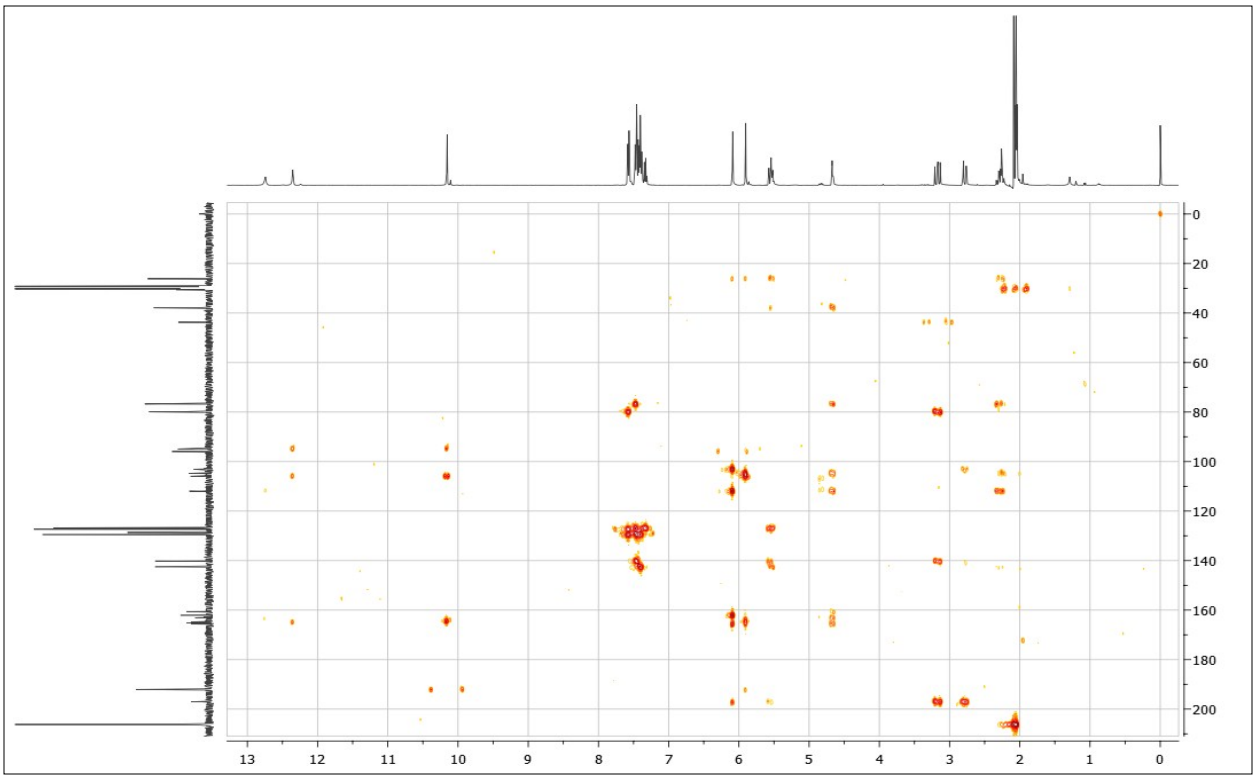
S2. ^{13}C NMR spectrum (100 MHz, acetone-d_6) of compound **1**



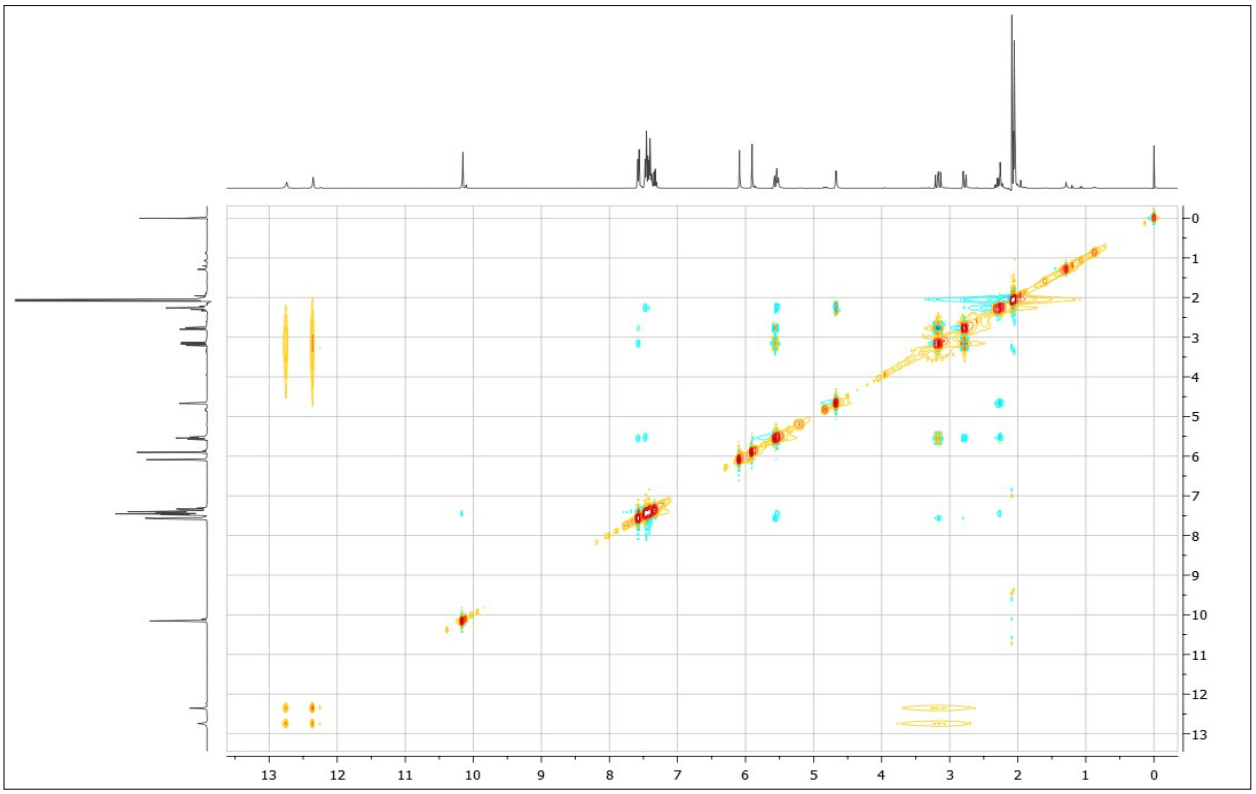
S3. COSY NMR spectrum (acetone-d_6) of compound **1**



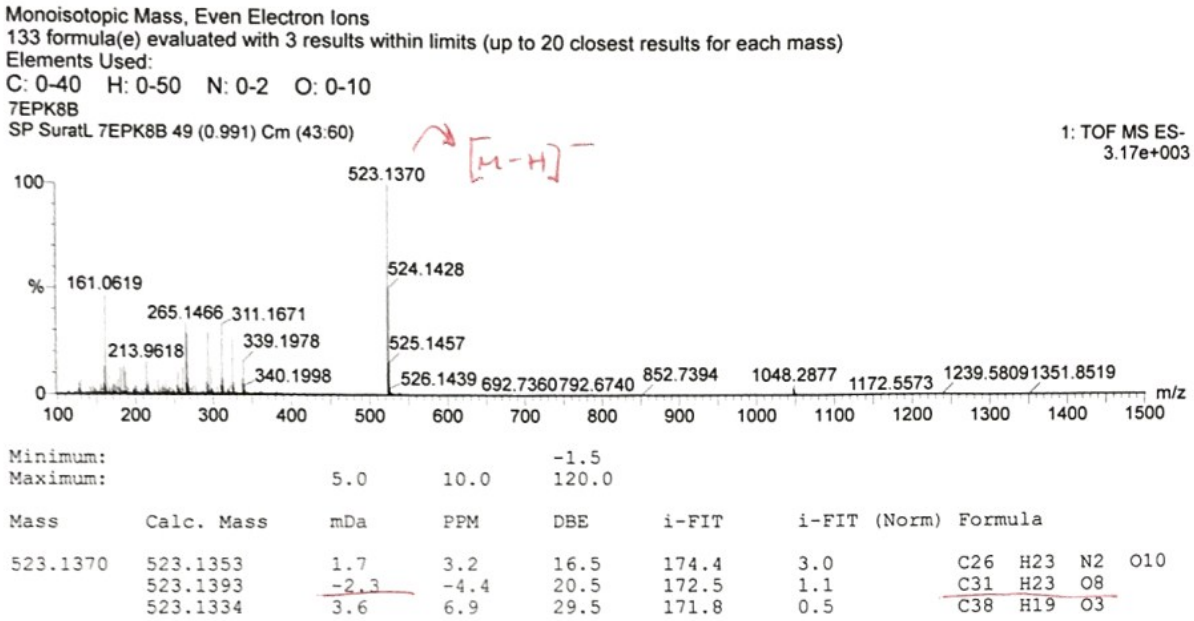
S4. HMQC NMR spectrum (acetone-d_6) of compound **1**



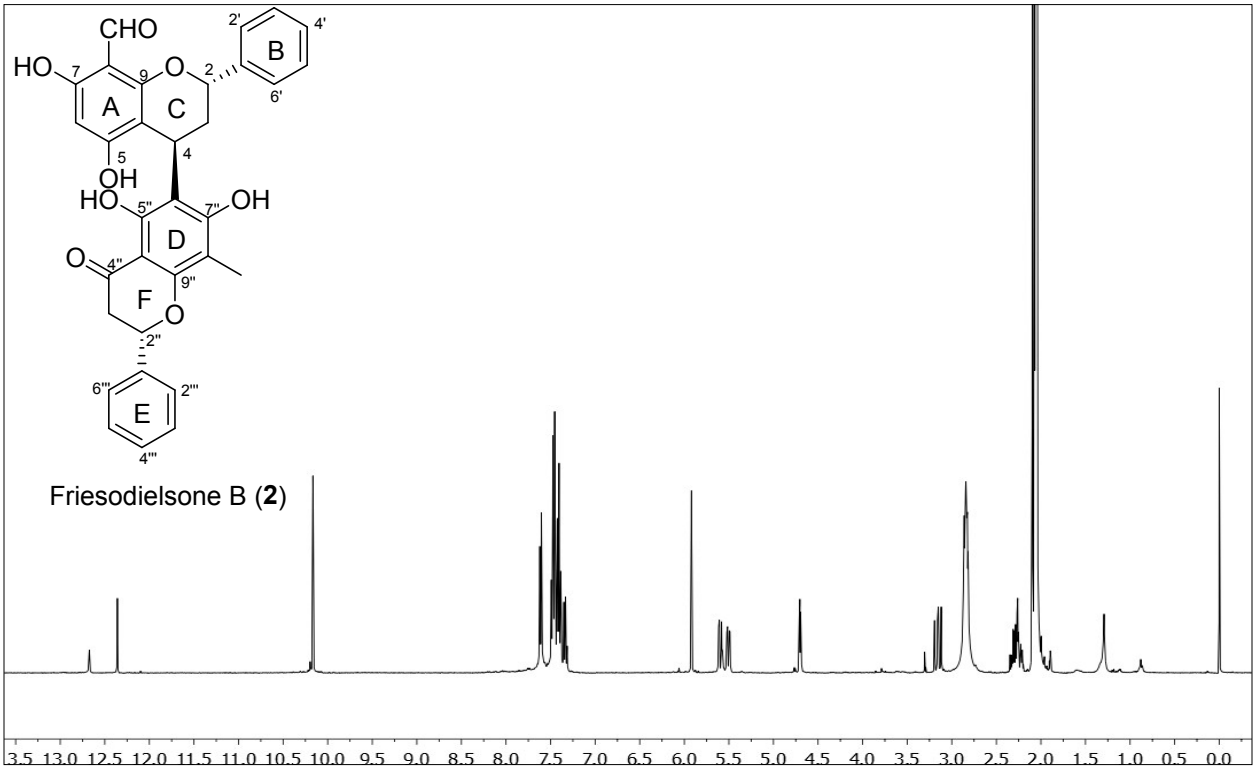
S5. HMBC NMR spectrum (acetone-d_6) of compound **1**



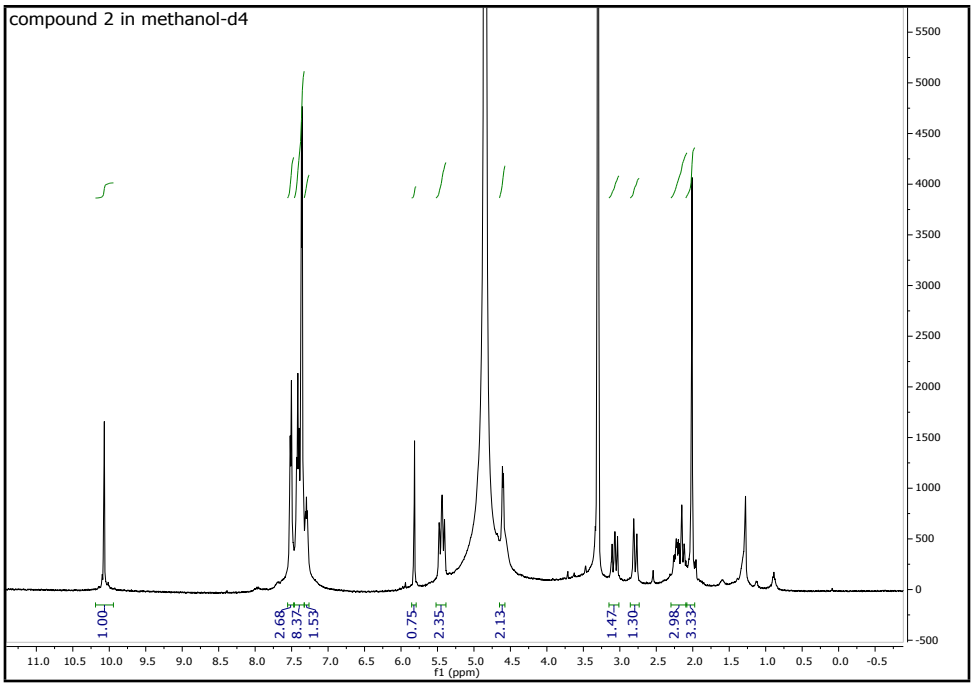
S6. NOESY spectrum (acetone-d_6) of compound **1**



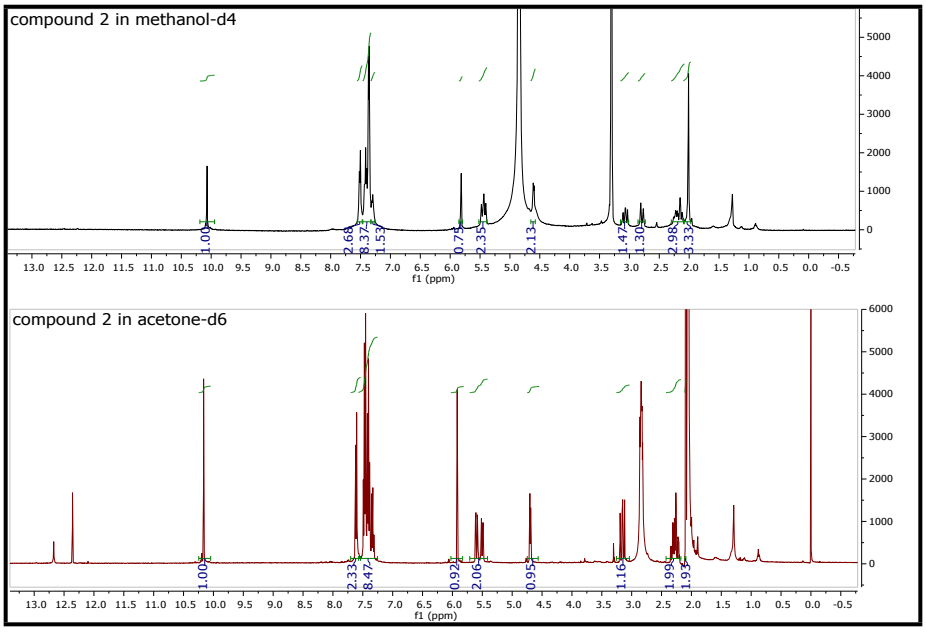
S7. HRESIMS spectrum of compound **1**



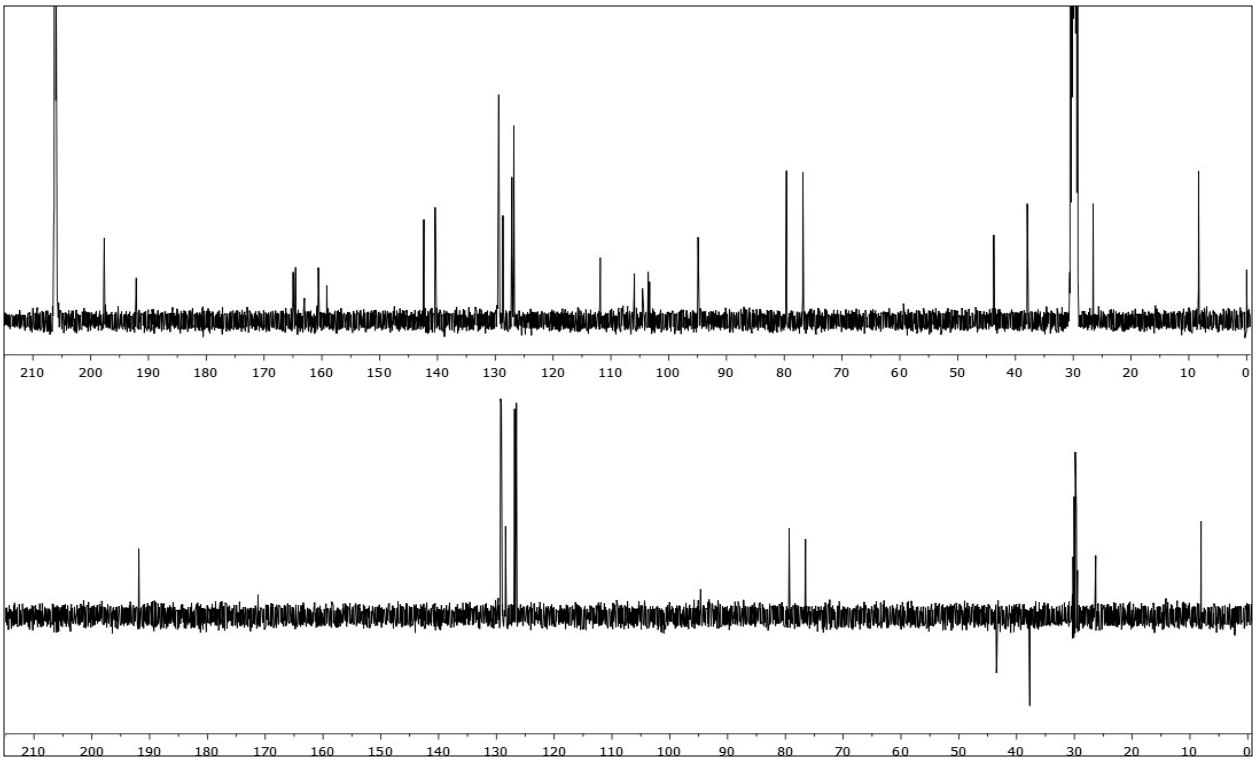
S8. ^{1}H NMR spectrum (400 MHz, acetone-d_6) of compound **2**



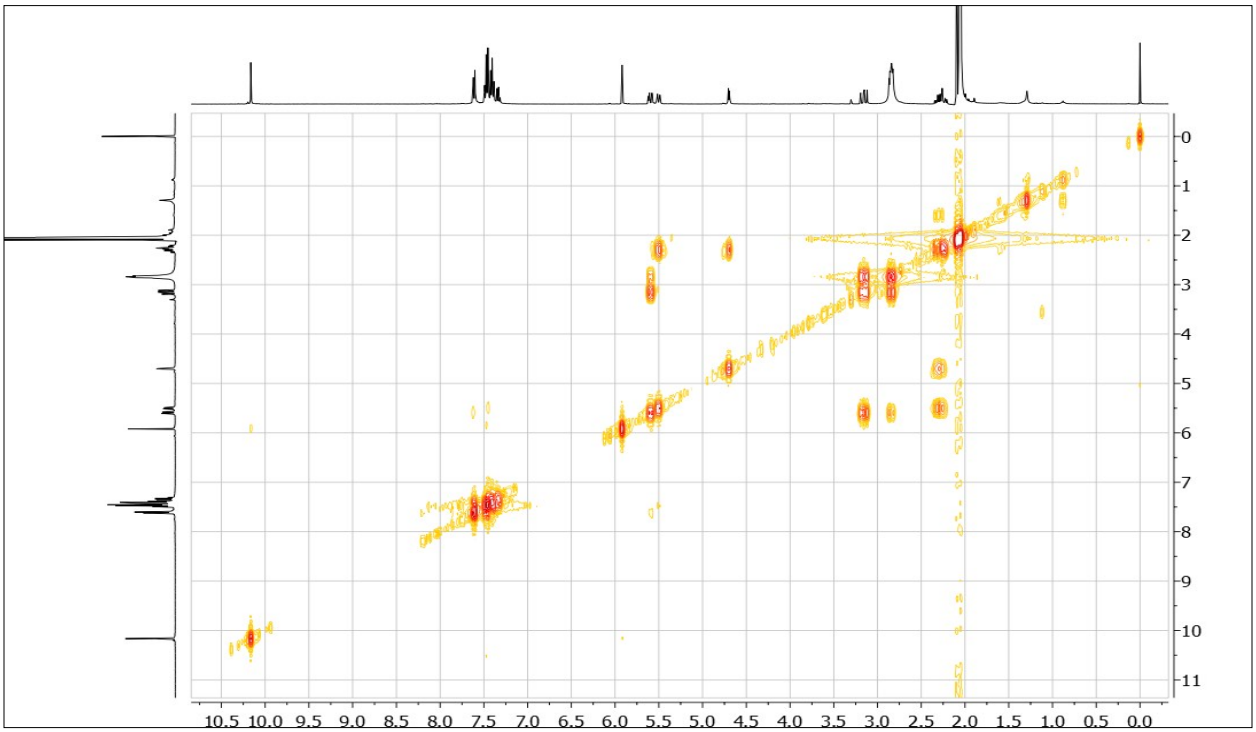
S9. ^{1}H NMR spectrum (400 MHz, methanol-d_4) of compound **2**



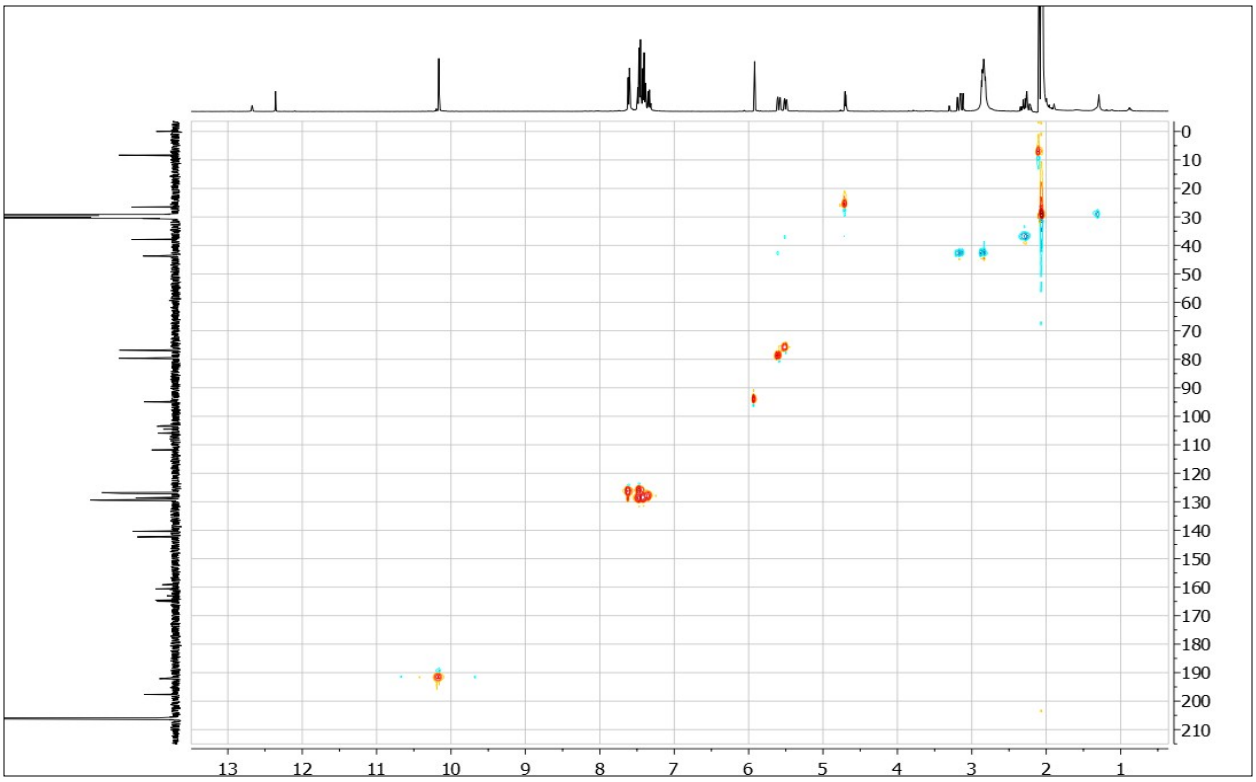
S10. Comparison of ^{1}H NMR spectra of compound **2** (400 MHz) in methanol-d_4 and acetone-d_6



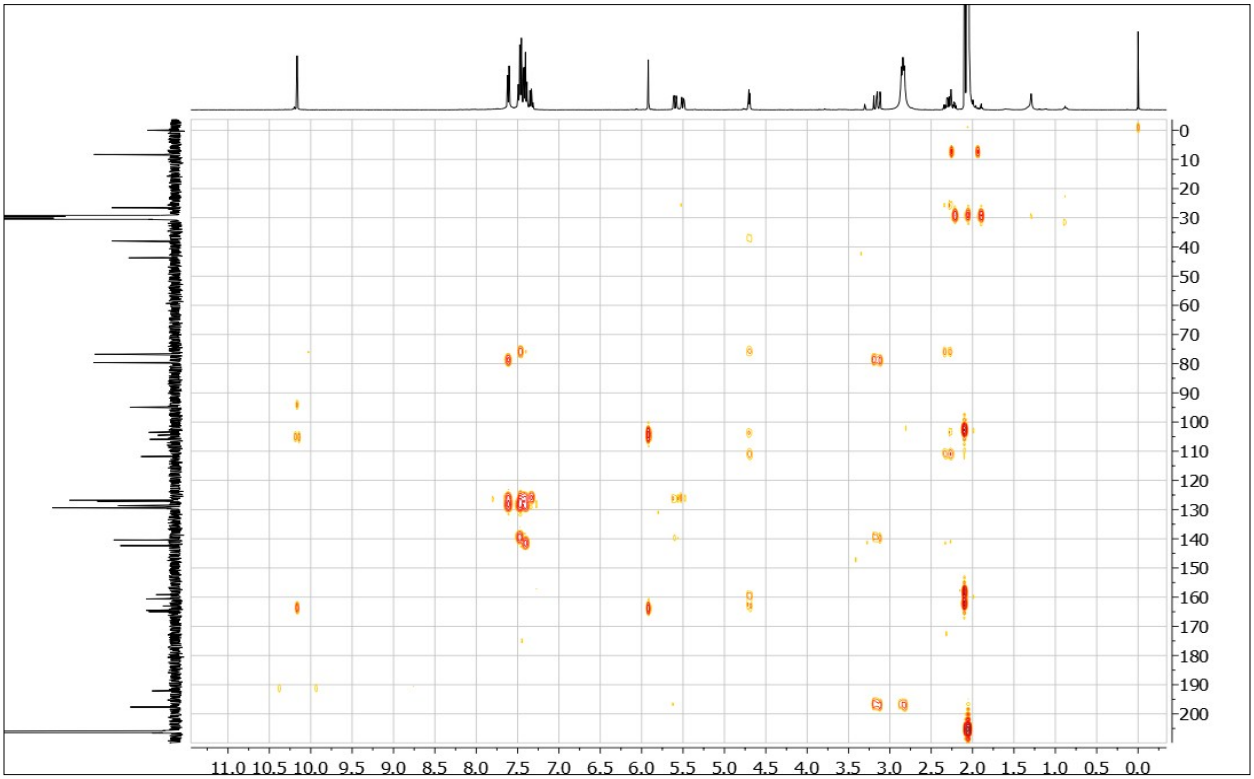
S11. ^{13}C NMR spectrum (100 MHz, acetone-d_6) of compound **2**



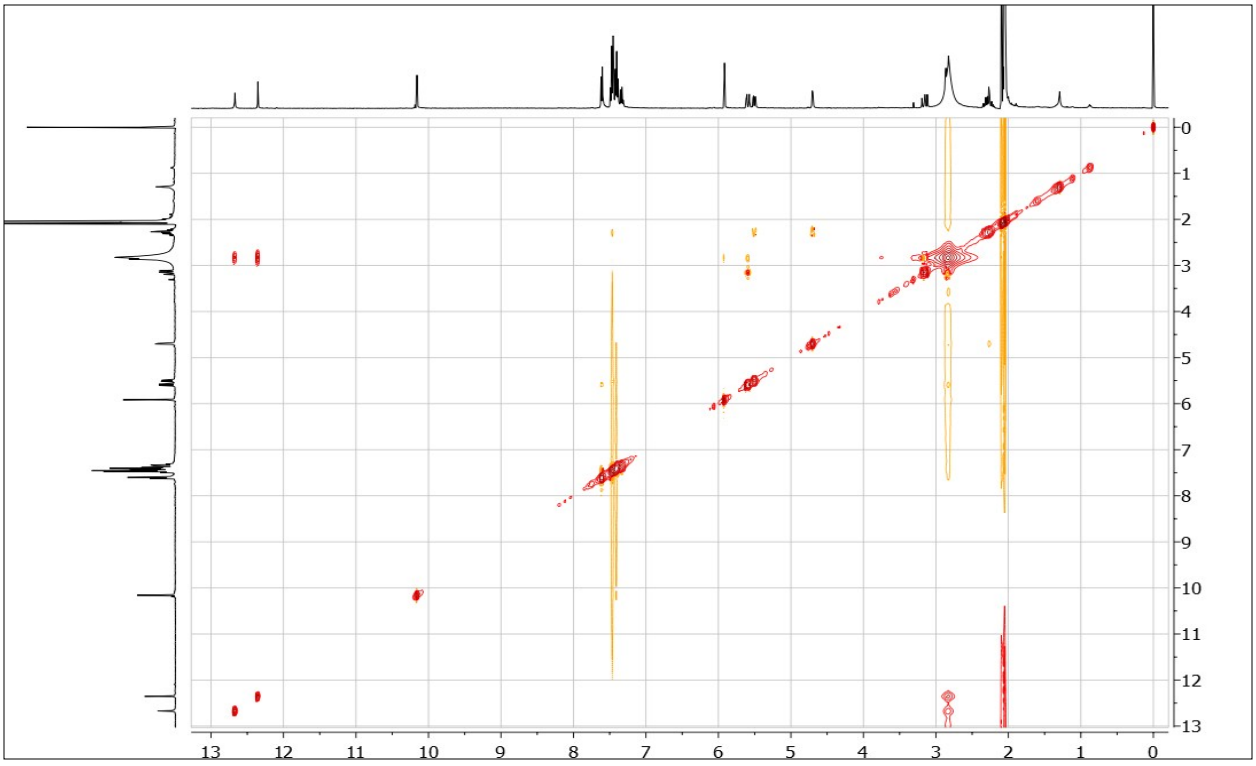
S12. COSY NMR spectrum (acetone-d_6) of compound **2**



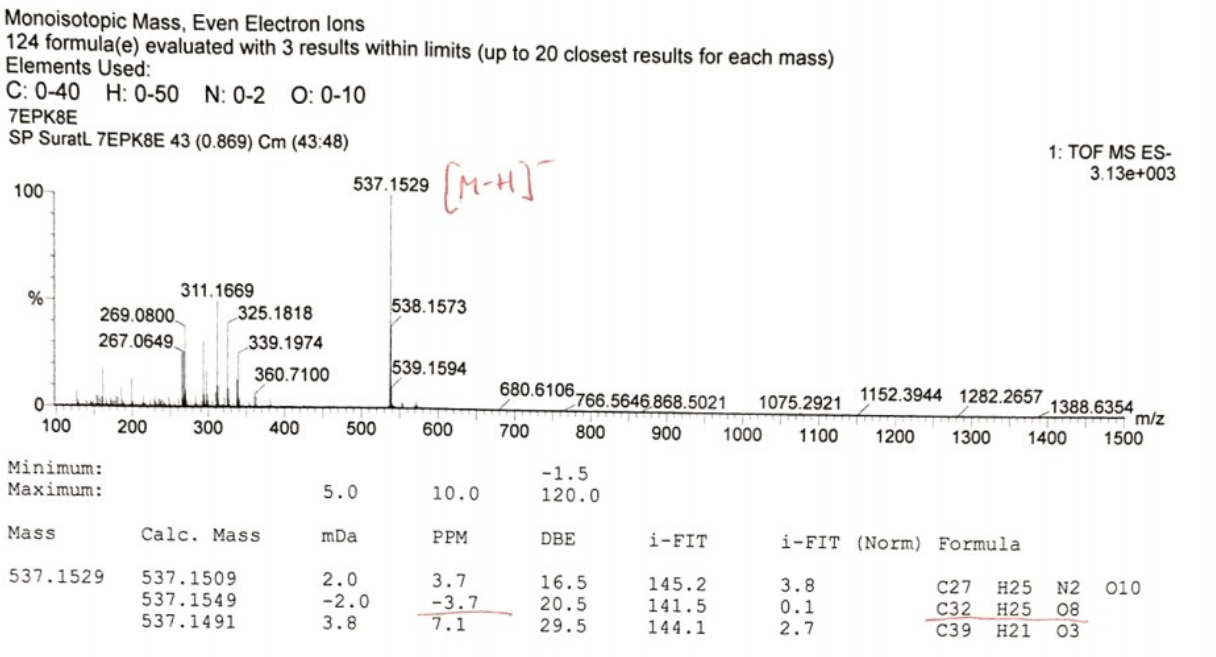
S13. HMQC NMR spectrum (acetone-d_6) of compound **2**



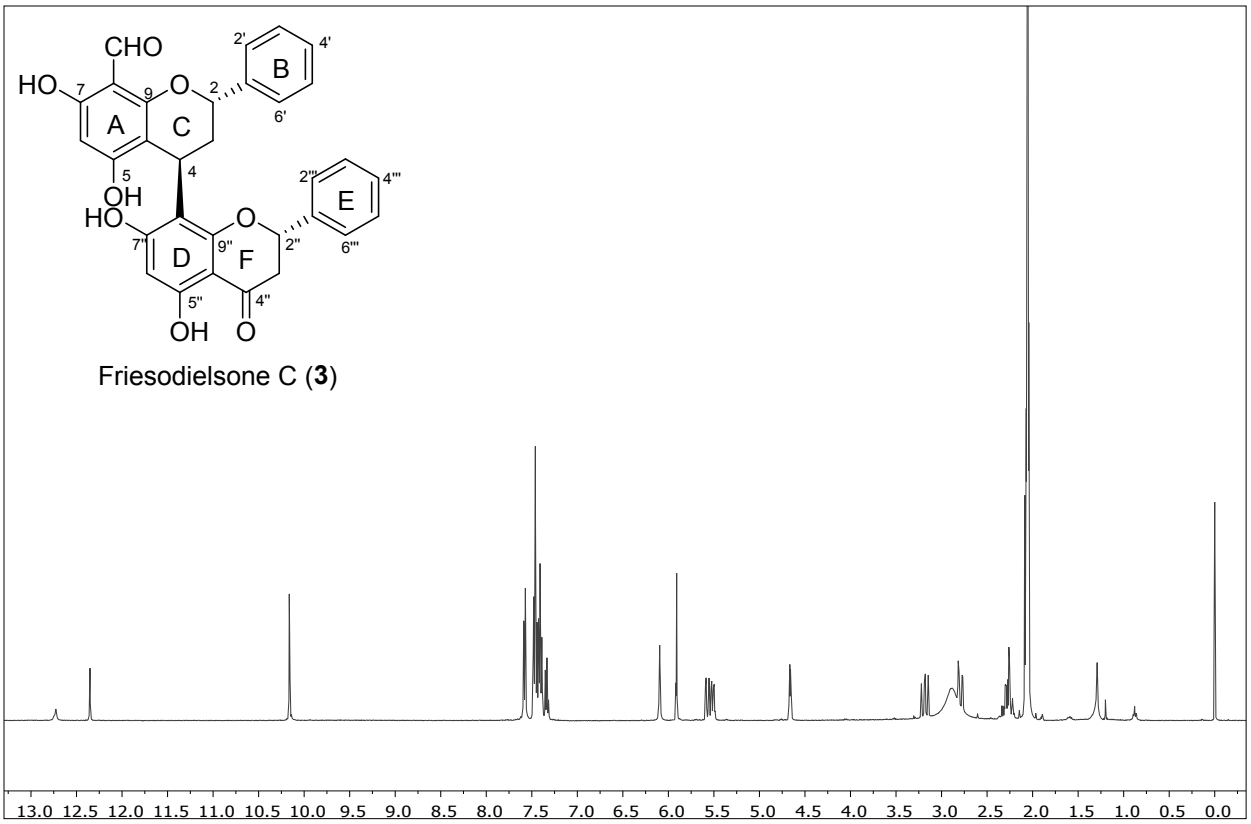
S14. HMBC NMR spectrum (acetone-d_6) of compound **2**



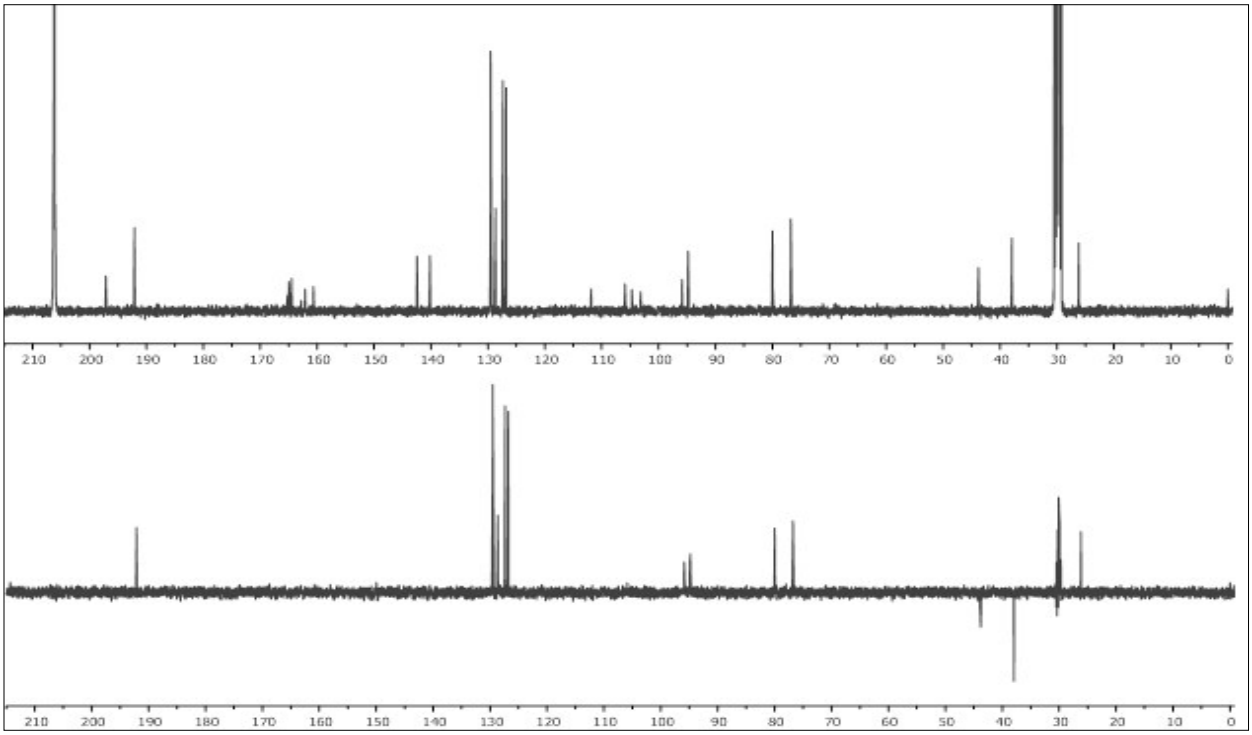
S15. NOESY spectrum (acetone-d_6) of compound **2**



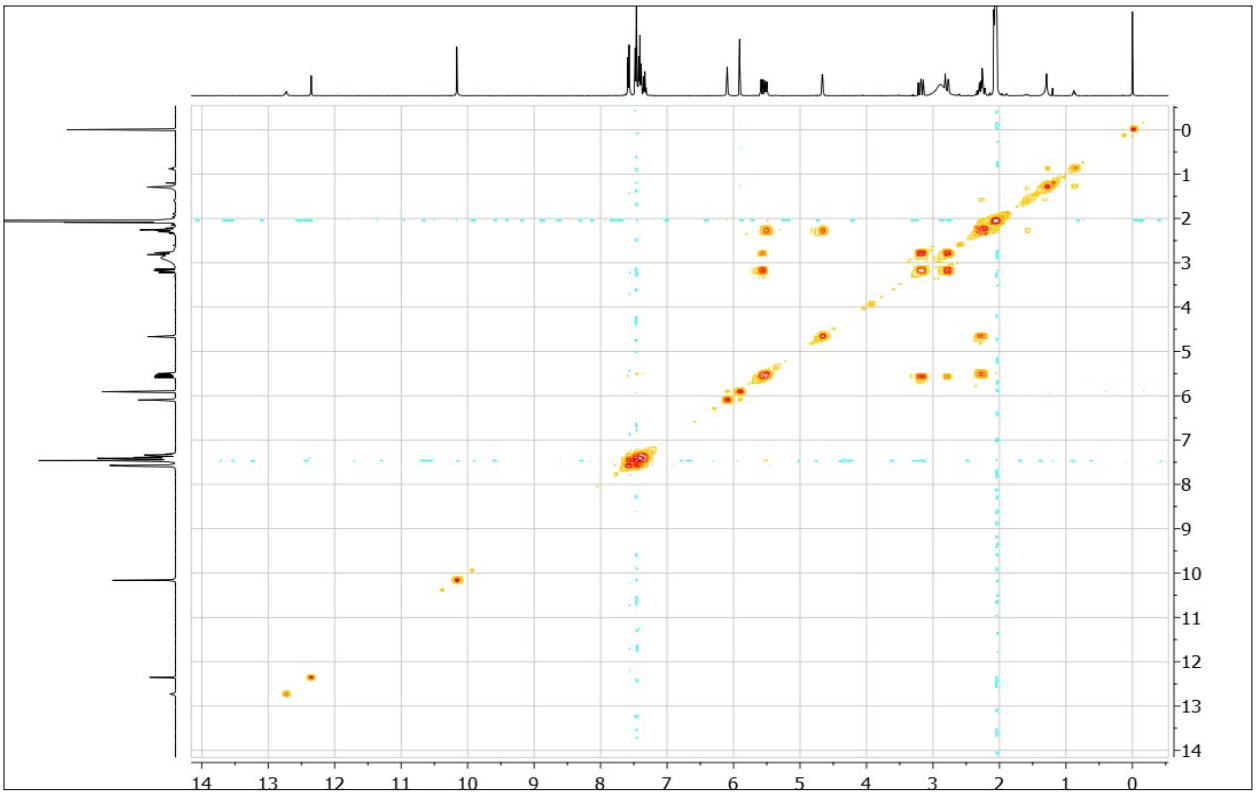
S16. HRESIMS spectrum of compound **2**



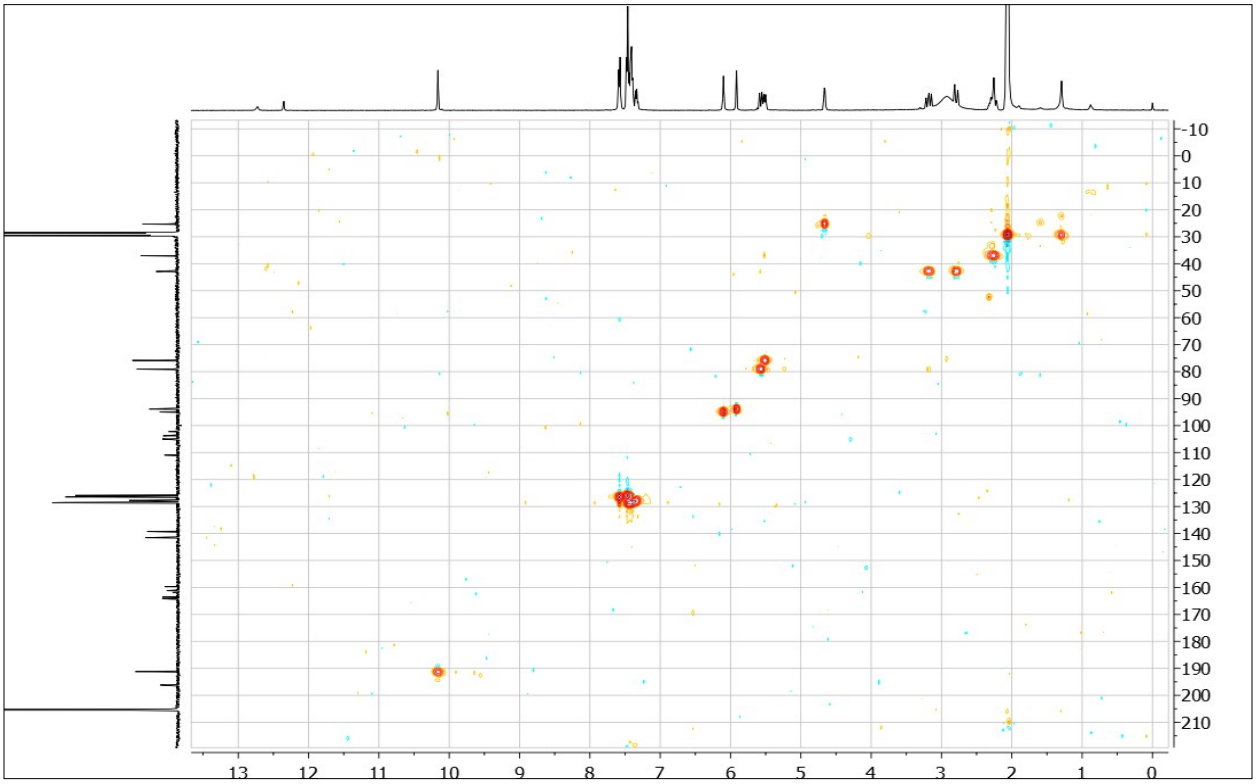
S17. ^{1}H NMR spectrum (400 MHz, acetone-d_6) of compound **3**



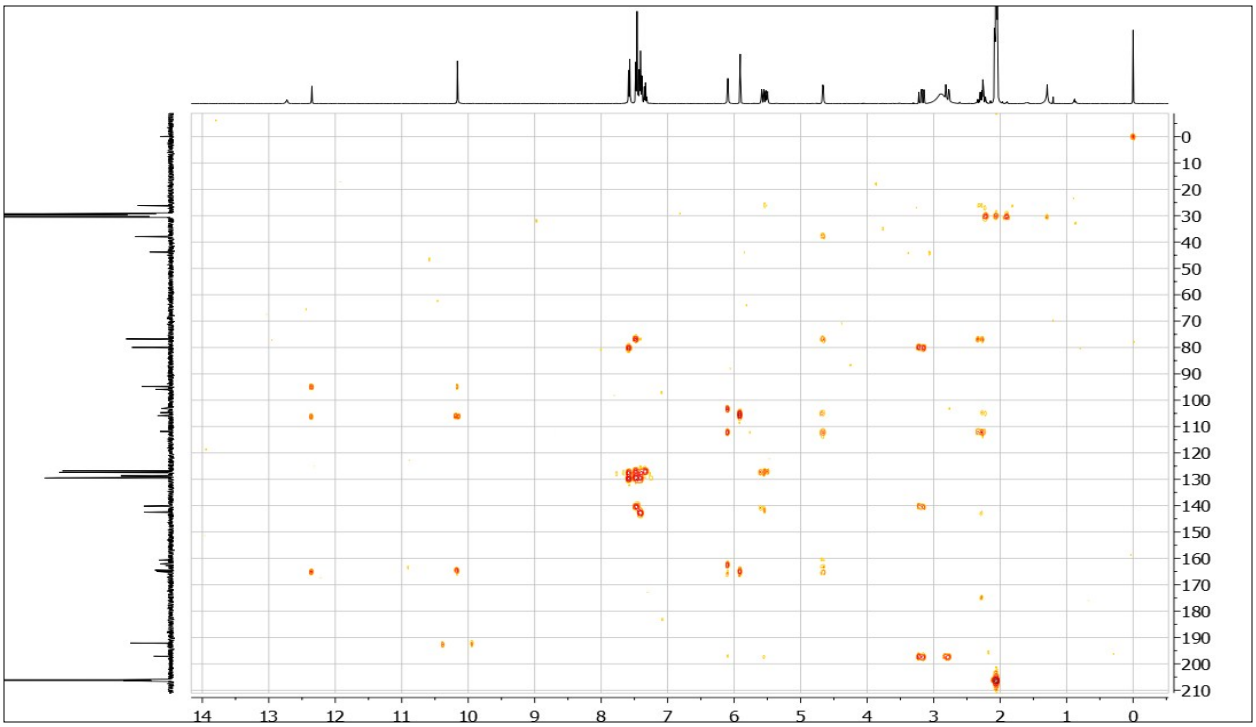
S18. ^{13}C NMR spectrum (100 MHz, acetone-d_6) of compound **3**



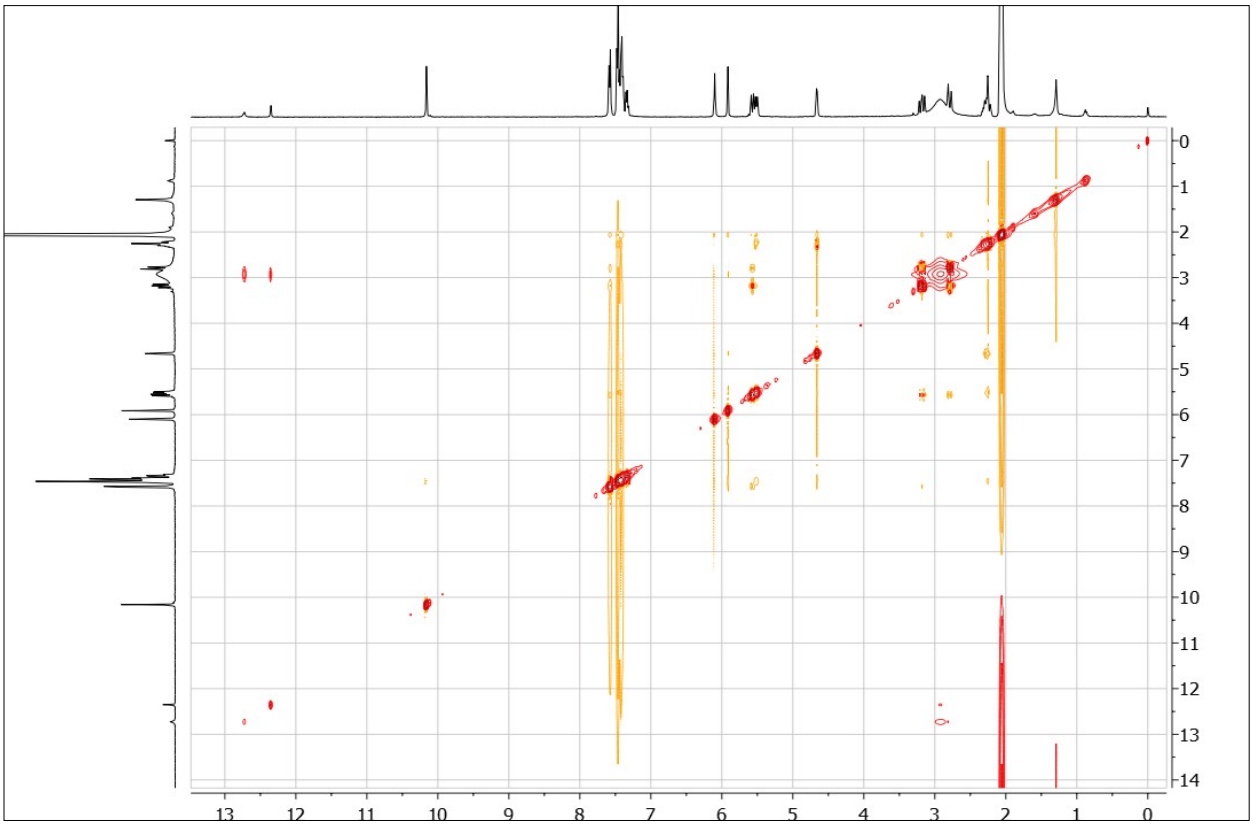
S19. COSY NMR spectrum (acetone-d_6) of compound **3**



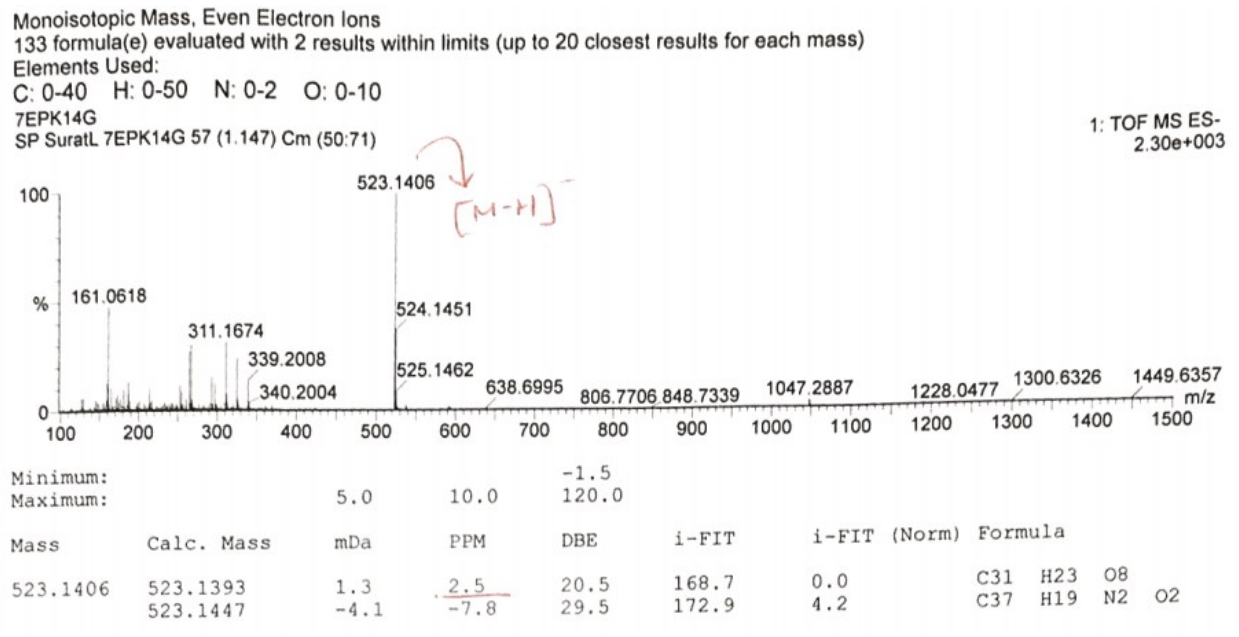
S20. HMQC NMR spectrum (acetone-d_6) of compound **3**



S21. HMBC NMR spectrum (acetone-d_6) of compound **3**



S22. NOESY spectrum (acetone-d_6) of compound **3**



Minimum:				-1.5			
Maximum:		5.0	10.0	120.0			
Mass	Calc. Mass	mDa	PPM	DBE	i-FIT	i-FIT (Norm)	Formula
523.1406	523.1393	1.3	2.5	20.5	168.7	0.0	C31 H23 O8
	523.1447	-4.1	-7.8	29.5	172.9	4.2	C37 H19 N2 O2

S23. HRESIMS spectrum of compound **3**

Table S1. ^{1}H (400 MHz) and ^{13}C (100 MHz) spectroscopic data for friesodielsone A (**1**) in acetone-d_6.

Position	Friesodielsone A (**1**)		
	δ_C	δ_H (J in Hz)	HMBC ($^{1}H \rightarrow {}^{13}C$)
2	76.7	5.53 (dd, 3.5, 10.0)	C-3, C-4,C-1′, C-2′, C-6′
3	37.9	2.24-2.33 (m)	C-2, C-4, C-10, C-6
4	26.1	4.67 (dd, 2.6, 5.4)	C-2, C-3,C-9, C-10, C-5, C-6, C-7
5	162.1	-	-
6	94.9	5.90 (s)	C-7, C-8
7	164.8	-	-
8	105.9	-	-
9	160.6	-	-
10	104.7	-	-
11	192.1	10.10 (s)	C-6, C-7, C-8
1′	142.5	-	-
2′,6′	126.8	7.44-7.47 (m)	C-2, C-1′, C-3′, C-5′
3′,5′	129.4	7.40-7.42 (m)	C-1′, C-2′, C-4′, C-6′
4′	128.6	7.30-7.34 (m)	C-2′, C-3′, C-5′, C-6′
2″	79.9	5.57 (dd, 3.0, 13.5)	C-4″, C-1‴, C-2‴, C-6‴
3″	43.7	2.80 (dd, 3.0, 17.1)	C-2″, C-4″, C-10″, C-5″
		3.16 (dd, 13.5, 17.1)	C-2″, C-4″, C-10″, C-5″
4″	197.0	-	-
5″	163.1	-	-
6″	111.9	-	-
7″	165.2	-	-
8″	95.9	6.08 (s)	C-6″, C-7″, C-9″
9″	162.1	-	-
10″	103.1	-	-
1‴	140.2	-	-
2‴,6‴	127.8	7.56-7.58 (m)	C-2‴, C-1‴, C-3‴, C-5‴
3‴,5‴	129.5	7.43-7.47 (m)	C-1‴, C-2‴, C-4‴, C-6‴
4‴	129.4	7.40-7.43 (m)	C-2‴, C-3‴, C-5‴, C-6′
7-OH	-	12.35 (s)	C-6, C-7, C-8
5″-OH	-	12.73 (s)	C-5″, C-6″

Table S2. ^{1}H (400 MHz) and ^{13}C (100 MHz) spectroscopic data for friesodielsone B (**2**) in acetone-d_6.

Position	Friesodielsone B (**2**)		
	δ_C	δ_H (J in Hz)	HMBC ($^{1}H \rightarrow {}^{13}C$)
2	76.7	5.52 (dd, 3.0, 10.8)	C-1′, C-2′, C-6′
3	37.9	2.25-2.30 (m)	C-2, C-4, C-10, C-1′, C-6
4	26.5	4.70 (dd, 2.4, 5.6)	C-2, C-9, C-10, C-6, C-7
5	159.1	-	-
6	94.9	5.91 (s)	C-7, C-10
7	164.9	-	-
8	106.0	-	-
9	160.8	-	-
10	105.9	-	-
11	192.1	10.16 (s)	C-6, C-7, C-8
1′	142.3	-	-
2′,6′	126.8	7.45-7.47 (m)	C-2, C-1′, C-3′, C-5′
3′,5′	129.4	7.38-7.42 (m)	C-1′, C-2′, C-4′, C-6′
4′	128.6	7.32-7.34 (m)	C-2′, C-3′, C-5′, C-6′
2″	79.6	5.61 (dd, 3.0, 13.0)	C-1‴, C-2‴, C-6‴
3″	43.6	2.82 (dd, 3.0, 17.0)	C-2″, C-4″, C-1‴
		3.16 (dd, 13.0, 17.0)	C-2″, C-4″, C-1‴
4″	197.7	-	-
5″	160.6	-	-
6″	111.8	-	-
7″	160.6	-	-
8″	159.1	-	-
9″	164.5	-	-
10″	103.8	-	-
11″	8.32	2.09 (s)	C-8″, C-9″
1‴	140.4	-	-
2‴,6‴	127.2	7.60-7.61 (m)	C-2″, C-1‴, C-3‴, C-5‴
3‴,5‴	129.5	7.45-7.47 (m)	C-1‴, C-2‴, C-4‴, C-6‴
4‴	129.3	7.38-7.42 (m)	C-2‴, C-3‴, C-5‴, C-6‴
7-OH	-	12.35 (s)	C-6, C-7, C-8
5″-OH	-	12.67 (s)	C-5″, C-6″, C-10″

Table 3. ^{1}H (400 MHz) and ^{13}C (100 MHz) spectroscopic data for friesodielsone C (**3**) in acetone-d_6.

Position	Friesodielsone C (**3**)		
	δ_C	δ_H (J in Hz)	HMBC ($^{1}H \rightarrow {}^{13}C$)
2	76.7	5.53 (dd, 3.2, 10.7)	C-4, C-1′, C-2′, C-6′
3	37.9	2.25-2.32 (m)	C-2, C-4, C-8
4	26.1	4.67 (dd, 2.6, 5.5)	C-2, C-3, C-9, C-10, C-7, C-8, C-9
5	162.8	-	-
6	94.8	5.90 (s)	C-5, C-8
7	165.2	-	-
8	105.8	-	-
9	164.7	-	-
10	104.7	-	-
11	192.1	10.15(s)	C-6, C-8, C-9
1′	142.4	-	-
2′,6′	126.8	7.44-7.48 (m)	C-2, C-1′, C-3′, C-5′
3′,5′	129.4	7.39-7.42 (m)	C-1′, C-2′, C-4′, C-6′
4′	128.6	7.33-7.35 (m)	C-2′, C-3′, C-5′, C-6′
2″	79.9	5.59 (dd, 3.0,13.0)	C-4″, C-1‴, C-2‴, C-6‴
3″	43.7	2.81 (dd, 3.0, 17.0)	C-2″, C-4″, C-1‴
		3.22 (dd, 13.0, 17.0)	C-2″, C-4″, C-1‴
4″	197.1	-	-
5″	162.0	-	-
6″	95.8	6.08 (s)	C-4″, C-5″, C-7″, C-10″
7″	162.8	-	-
8″	111.8	-	-
9″	160.6	-	-
10″	103.5	-	-
1‴	140.1	-	-
2‴,6‴	129.4	7.44-7.46 (m)	C-2″, C-1‴, C-3‴, C-5‴
3‴,5‴	129.4	7.57-7.58 (m)	C-1‴, C-2‴, C-4‴, C-6‴
4‴	128.6	7.39-7.42 (m)	C-2‴, C-3‴, C-5‴, C-6‴
7-OH	-	12.35 (s)	C-6, C-7, C-8
5″-OH	-	12.72 (s)	-