Supporting information for

Yangpumicins F and G, Enediyne Congeners from *Micromonospora yangpuensis* DSM 45577

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Table S1. ^{1}H NMR (600 MHz) and ^{13}C NMR (150 MHz) Data of YPM G (**7**) in Acetone-d_6 and DMSO-d_6

position	**7** acetone-d_6		**7** DMSO-d_6	
	δ_C, type	δ_H (J in Hz)	δ_C, type	δ_H (J in Hz)
1		10.16, d (4.0)		9.98, d (4.5)
2	145.0, C		143.6, C	
3	111.8, C		110.4, C	
4	188.3, C		187.0, C	
5	135.9, C		135.0, C	
6	127.7, CH	8.31, m	126.6, CH	8.24, m
7	133.7, CH	7.89, td (7.5, 1.4)	132.2, CH	7.89, m
8	134.2, CH	7.93, td (7.5, 1.4)	133.7, CH	7.95, m
9	127.1, CH	8.33, m	126.2, CH	8.25, m
10	135.5, C		134.4, C	
11	183.7, C		182.3, C	
12	113.9, C		112.8, C	
13	156.9, C		154.8, C	
14	131.5, CH	8.74, s	130.0, CH	8.54, s
15	136.4, C		135.5, C	
16	64.2, C		63.4, C	
17	65.4, CH	5.36, d (4.7)	62.7, CH	5.16, d (5.1)
18	100.4, C		100.2, C	
19	90.8, C		89.7, C	
20	123.9, CH	6.02, dd (9.9, 0.4)	123.3, CH	6.06, d (9.9)
21	124.6, CH	5.94, dt (9.9, 0.5)	124.1, CH	5.99, d (9.9)
22	88.5, C		87.4, C	
23	99.3, C		98.8, C	
24	44.8, CH	5.22, dd (4.4, 1.6)	43.6, CH	5.10, dd (4.5, 1.5)
25	75.6, C		74.7, C	
26	69.8, CH	4.36, m	68.4, CH	4.12, td (6.6, 3.5)
27	65.4, CH_2	3.73, m	64.4, CH_2	3.66, ddd (11.7, 5.5, 3.5)
		3.84, d (11.6)		(Overlapped) 3.47, ddd (11.8, 7.1, 6.1)
13-OH		13.30, br s		13.19, br s
17-OH		-		6.72, d (5.0)
26-OH		5.82, d (4.9)		5.54, d (5.9)
27-OH		4.64, d (4.6)		4.81, t (5.8, 11.6)

Table S2. ^{1}H NMR (400 MHz and 500 MHz) Data of YPM F (**6**) in Acetone-d_6

position	**6**	
	400 MHz, δ_H (J in Hz)	500 MHz, δ_H (J in Hz)
1	10.25, d (4.0)	10.25, br s
7	7.28, dd (7.3, 2.2)	7.28, br d (7.6)
8	7.80, m	7.80, m
9	7.83, m	7.83, m
14	8.72, s	8.72, s
17	5.35, s	5.36, s
20	6.04, d (9.9)	6.04, d (9.9)
21	5.96, d (9.9)	5.96, d (10.0)
24	5.23, dd (4.4, 1.4)	5.23, d (4.4)
26	4.37, m	4.37, m
27	3.72, dd (11.4, 7.1)	3.72, dd (11.4, 7.1)
	3.83, dd (11.6, 2.7)	3.84, dd (11.6, 2.7)
6-OH	12.18, br s	12.18, br s
13-OH	12.58, br s	12.58, br s
17-OH	-	-
26-OH	5.90, br s	5.90, br s
27-OH	4.74, br s	4.73, br s

Figure S1. HRESIMS analysis of YPM F (**6**) and YPM G (**7**) in comparison to YPM A (**1**)

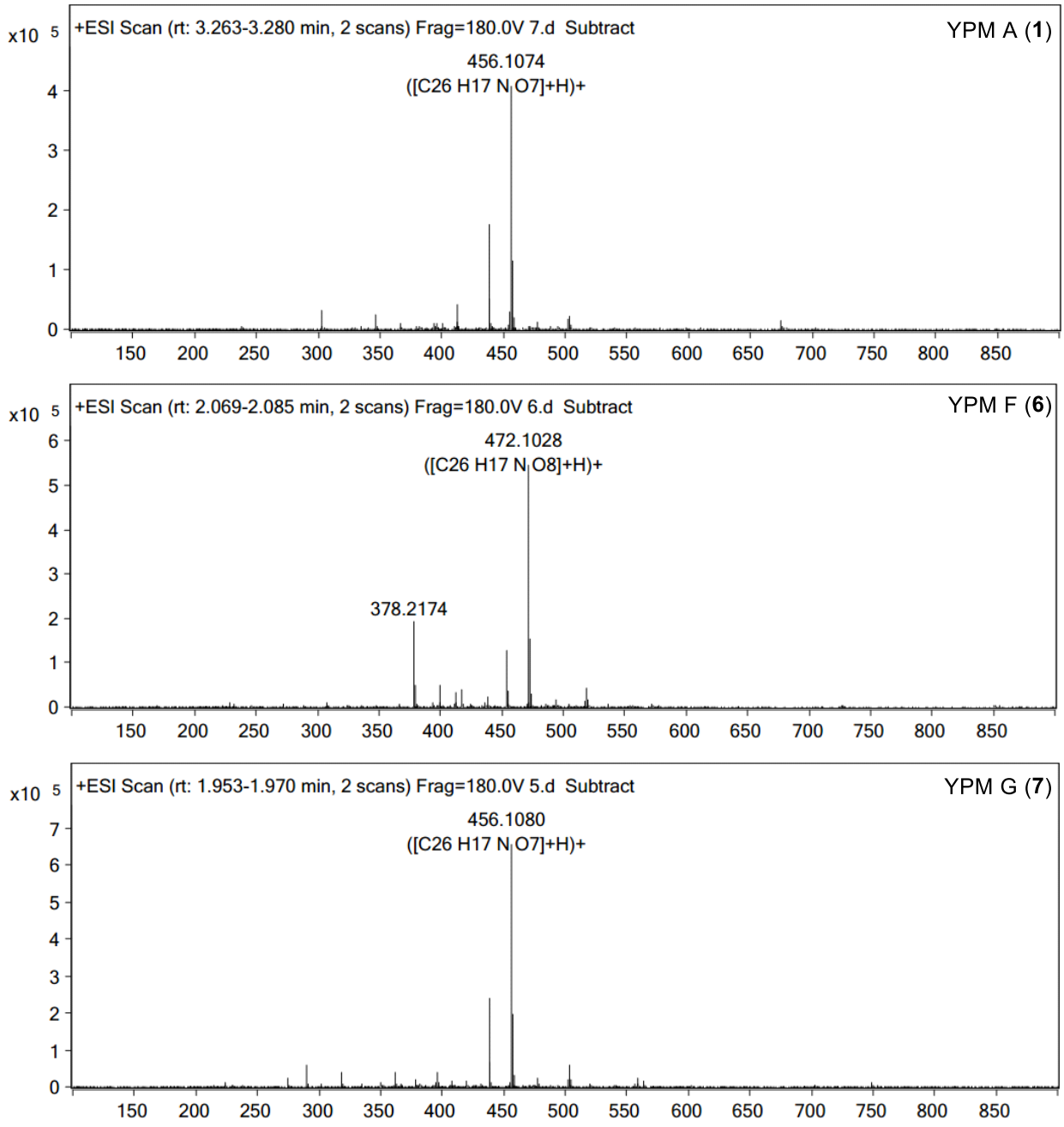


Figure S2. CD spectra of YPM F (**6**) and YPM G (**7**) in comparison with YPM A (**1**)

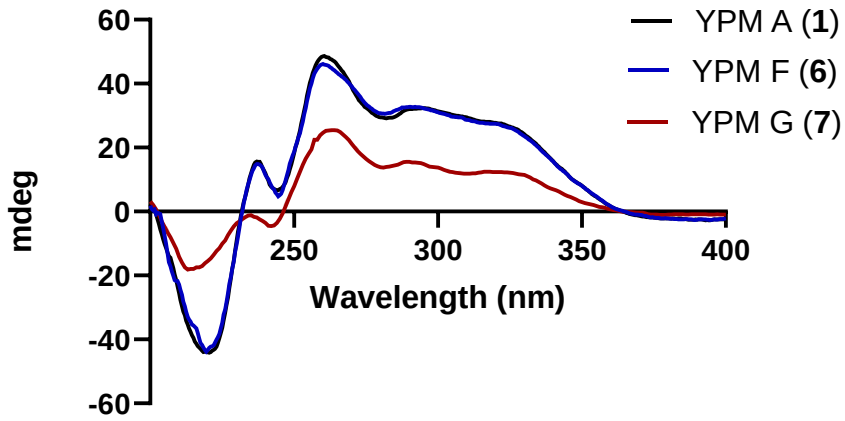


Figure S3. UV spectrum of YPM F (**6**) and YPM G (**7**) in comparison with YPM A (**1**)

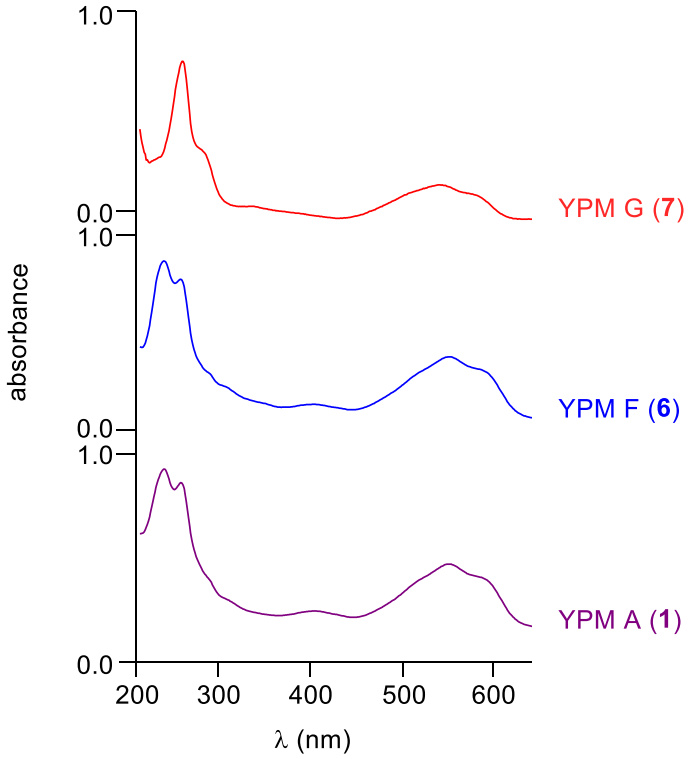


Figure S4. The ^{1}H-NMR spectrum of YPM F (**6**) (400 MHz, acetone-d_6)

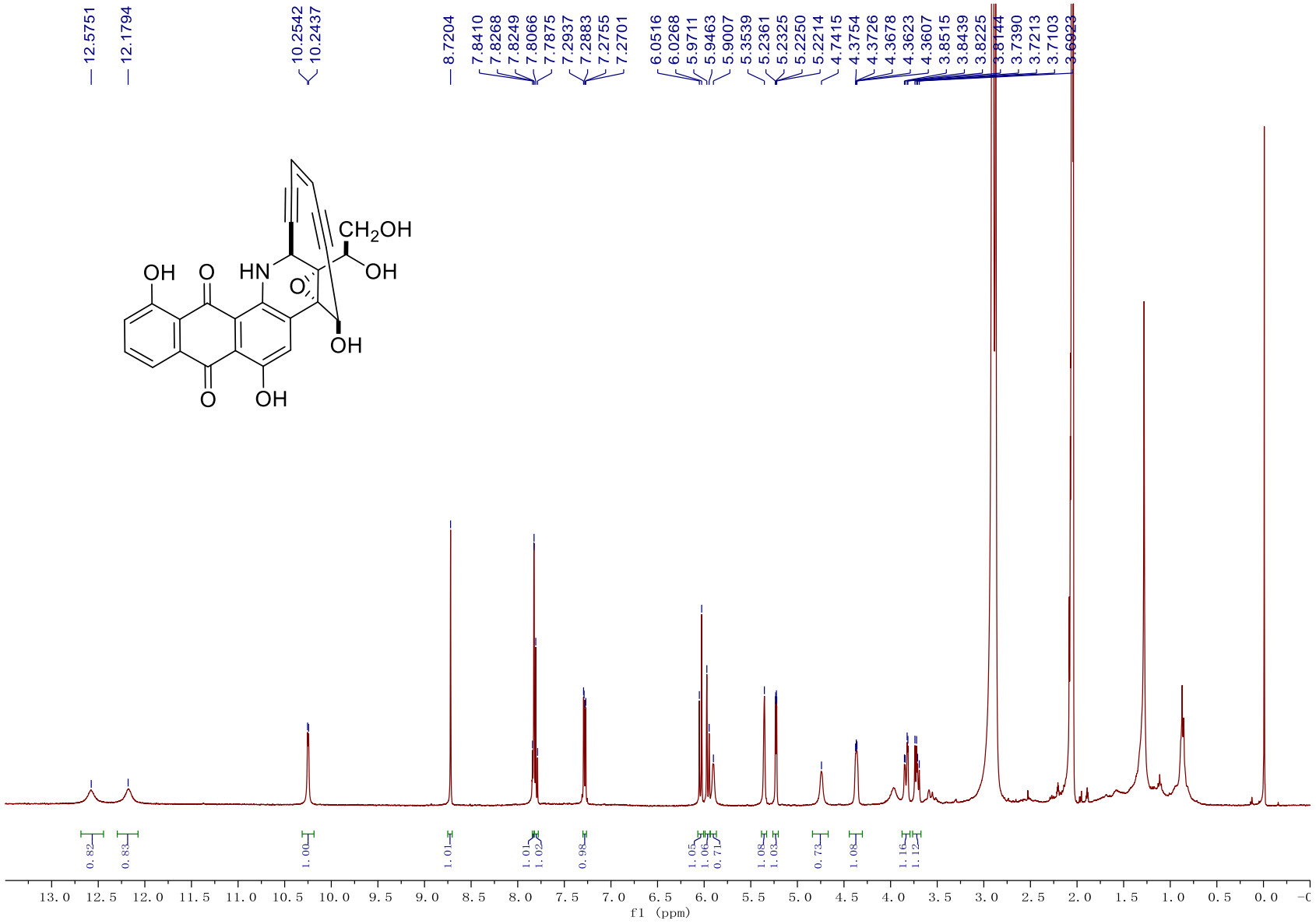


Figure S5. The ^{1}H-NMR spectrum of YPM F (**6**) (500 MHz, acetone-d_6)

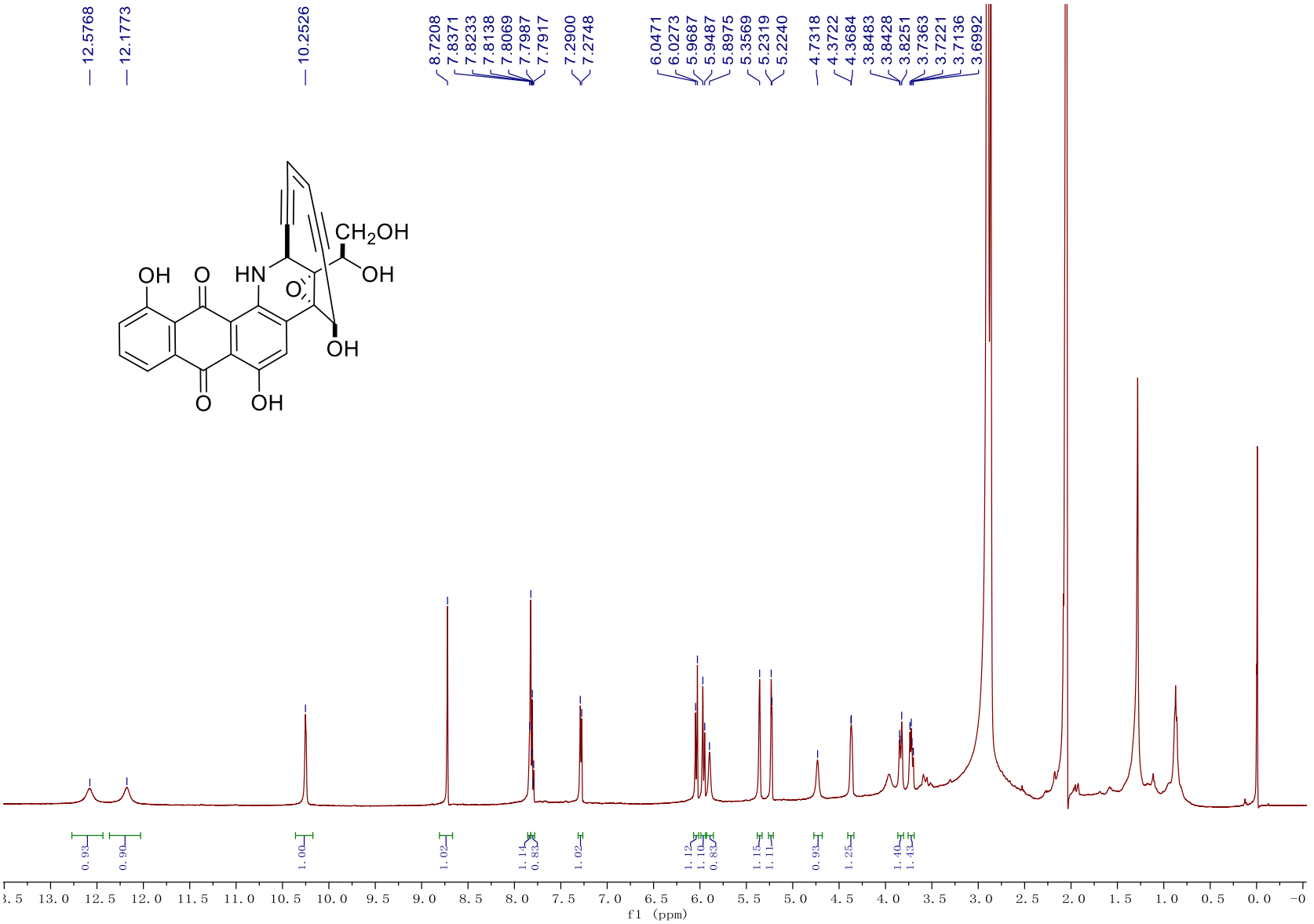


Figure S6. The ^{13}C-NMR spectrum of YPM F (**6**) (125 MHz, acetone-d_6)

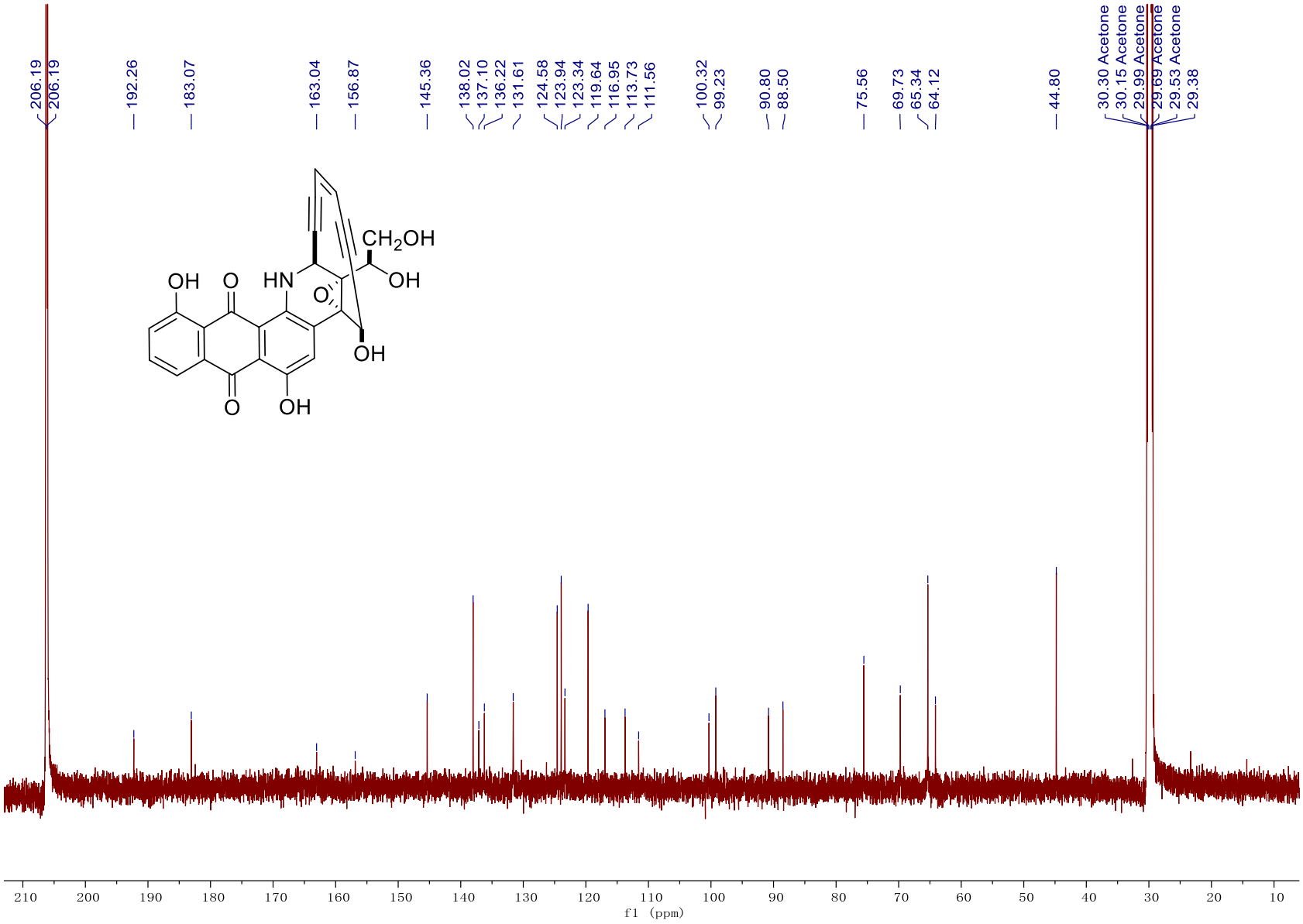


Figure S7. The COSY spectrum of YPM F (**6**) (acetone-d_6)

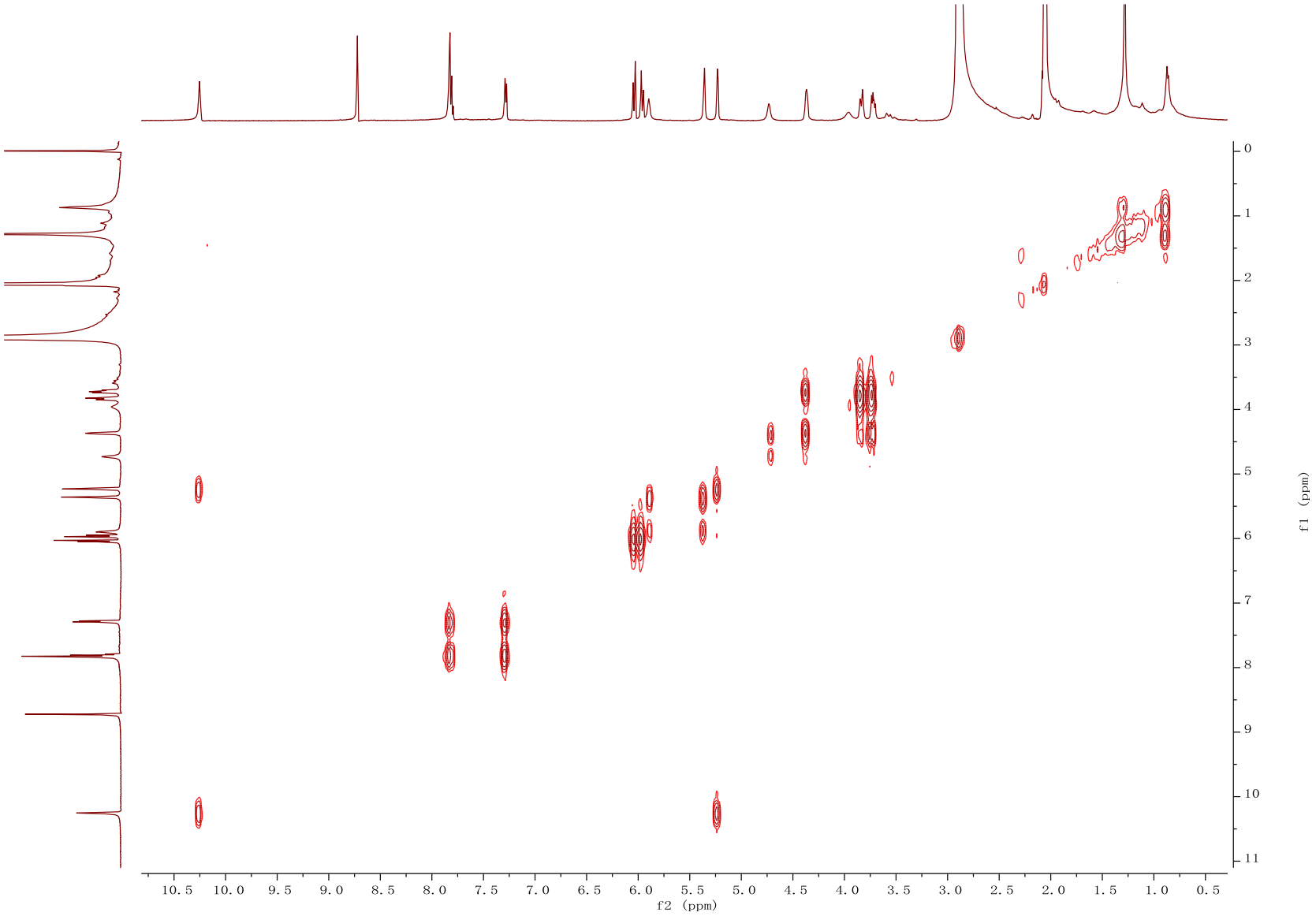


Figure S8. The HSQC spectrum of YPM F (**6**) (acetone-d_6)

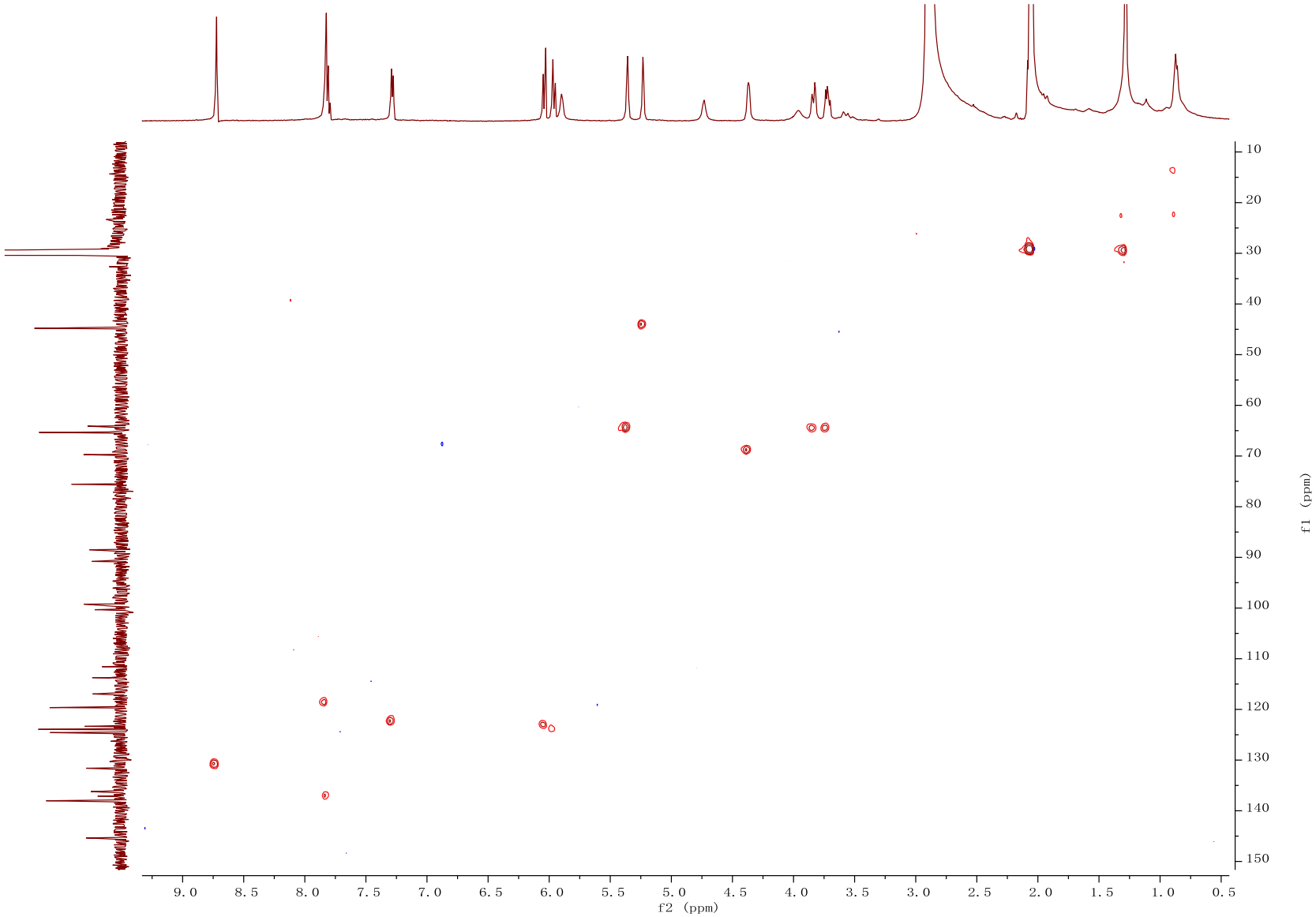


Figure S9. The HMBC spectrum of YPM F (**6**) (acetone-d_6)

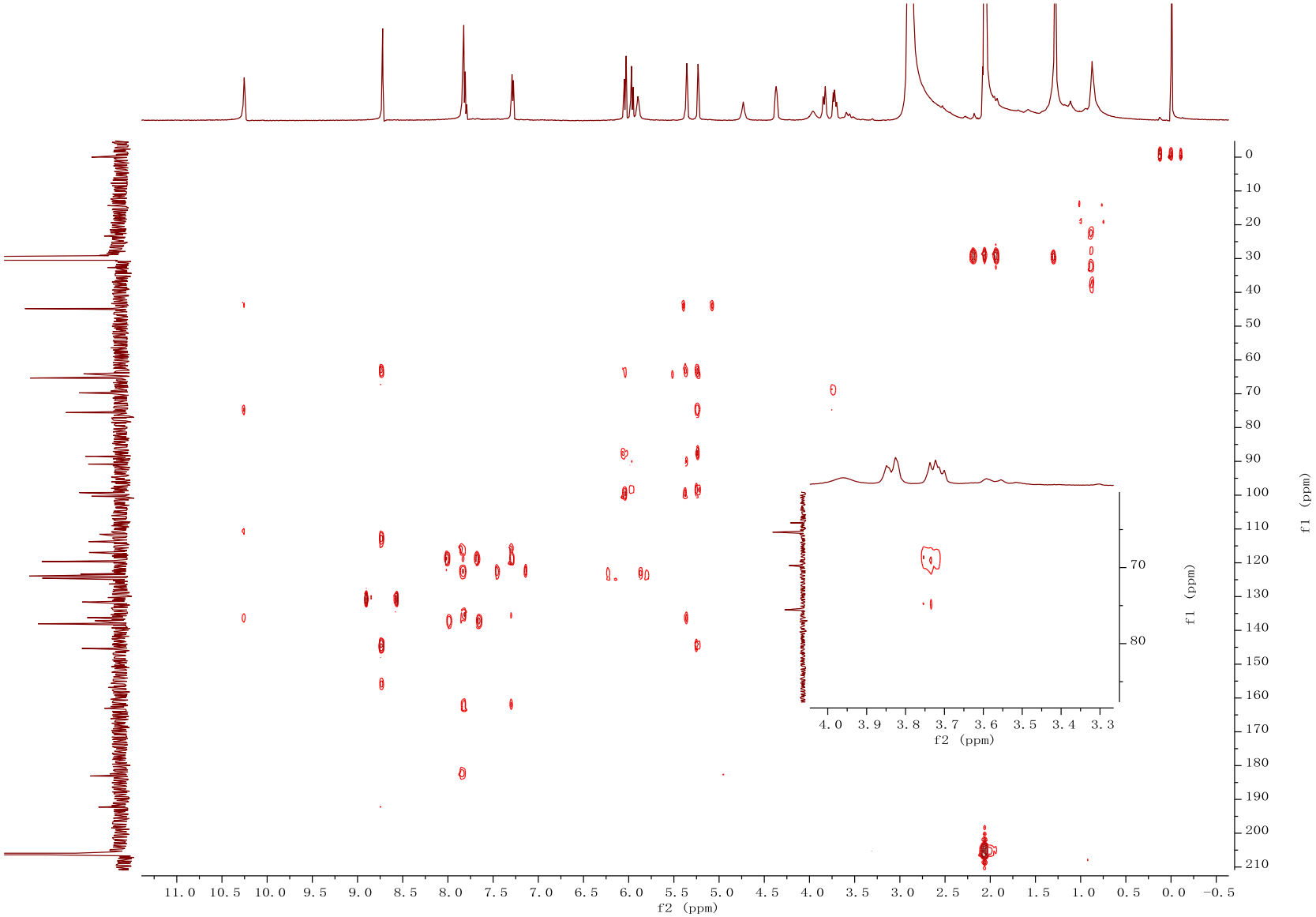


Figure S10. ROESY spectrum of YPM F (**6**) (acetone-d_6)

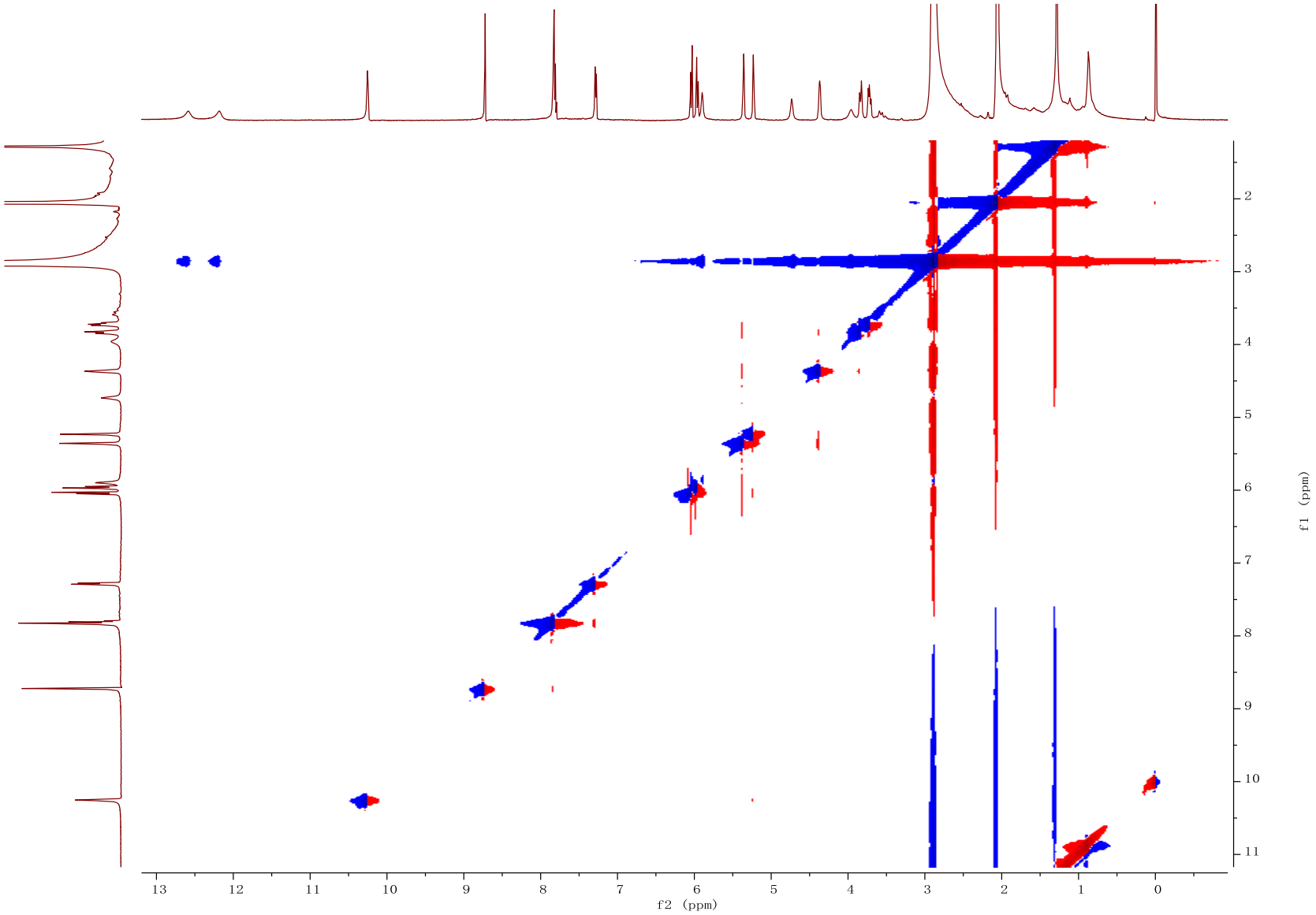


Figure S11. DEPT135 spectrum of YPM F (**6**) (acetone-d_6)

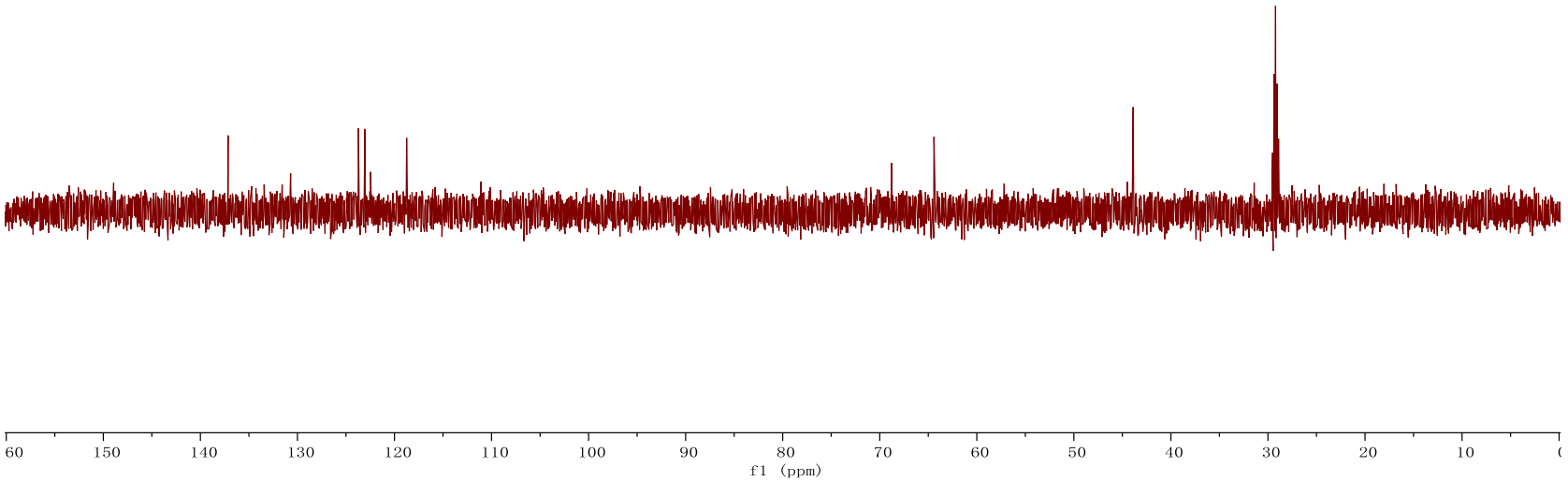


Figure S12. The ^{1}H-NMR spectrum of YPM G (**7**) (600 MHz, acetone-d_6)

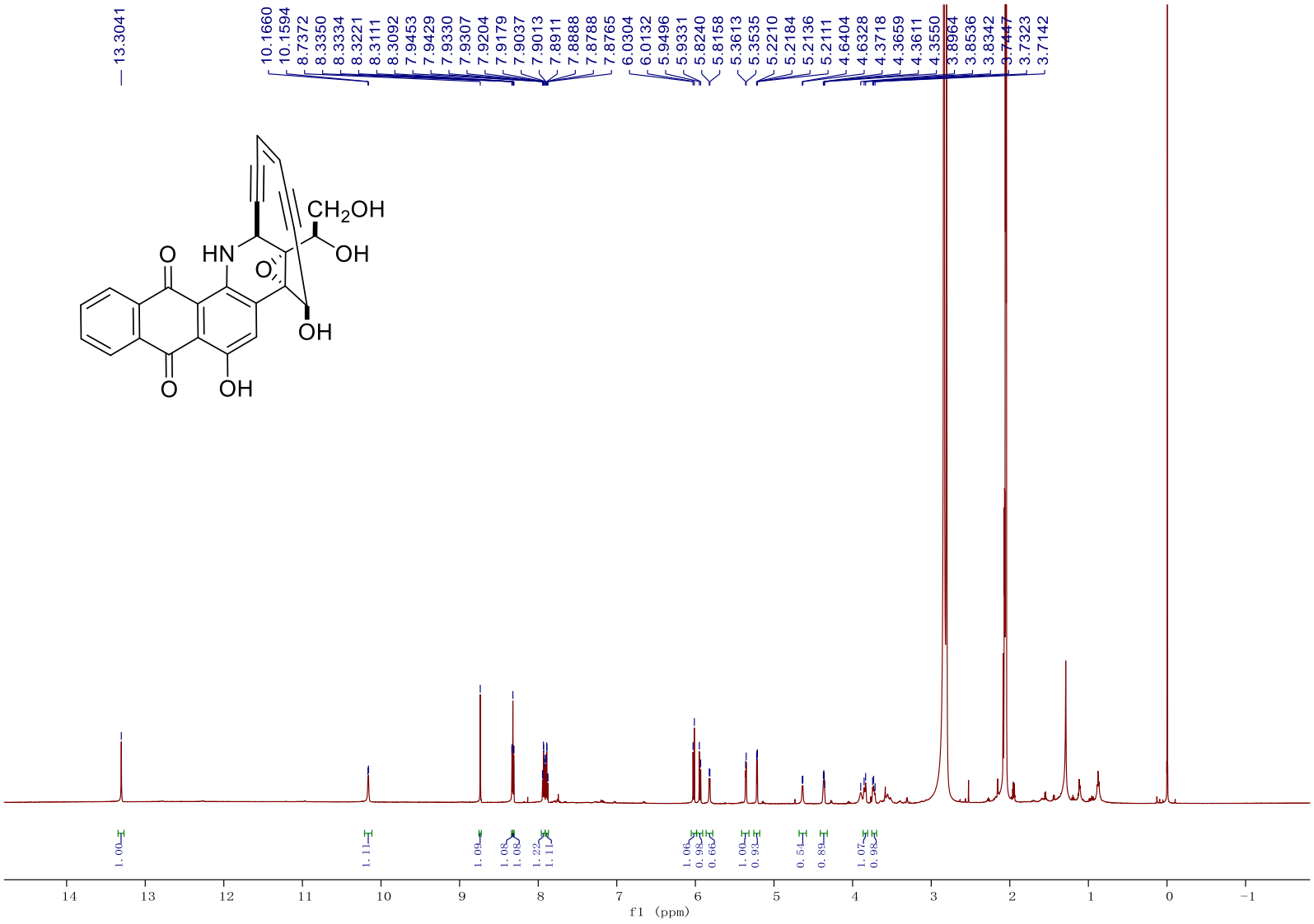


Figure S13. The ^{1}H-NMR spectrum of YPM G (**7**) (600 MHz, DMSO-d_6)

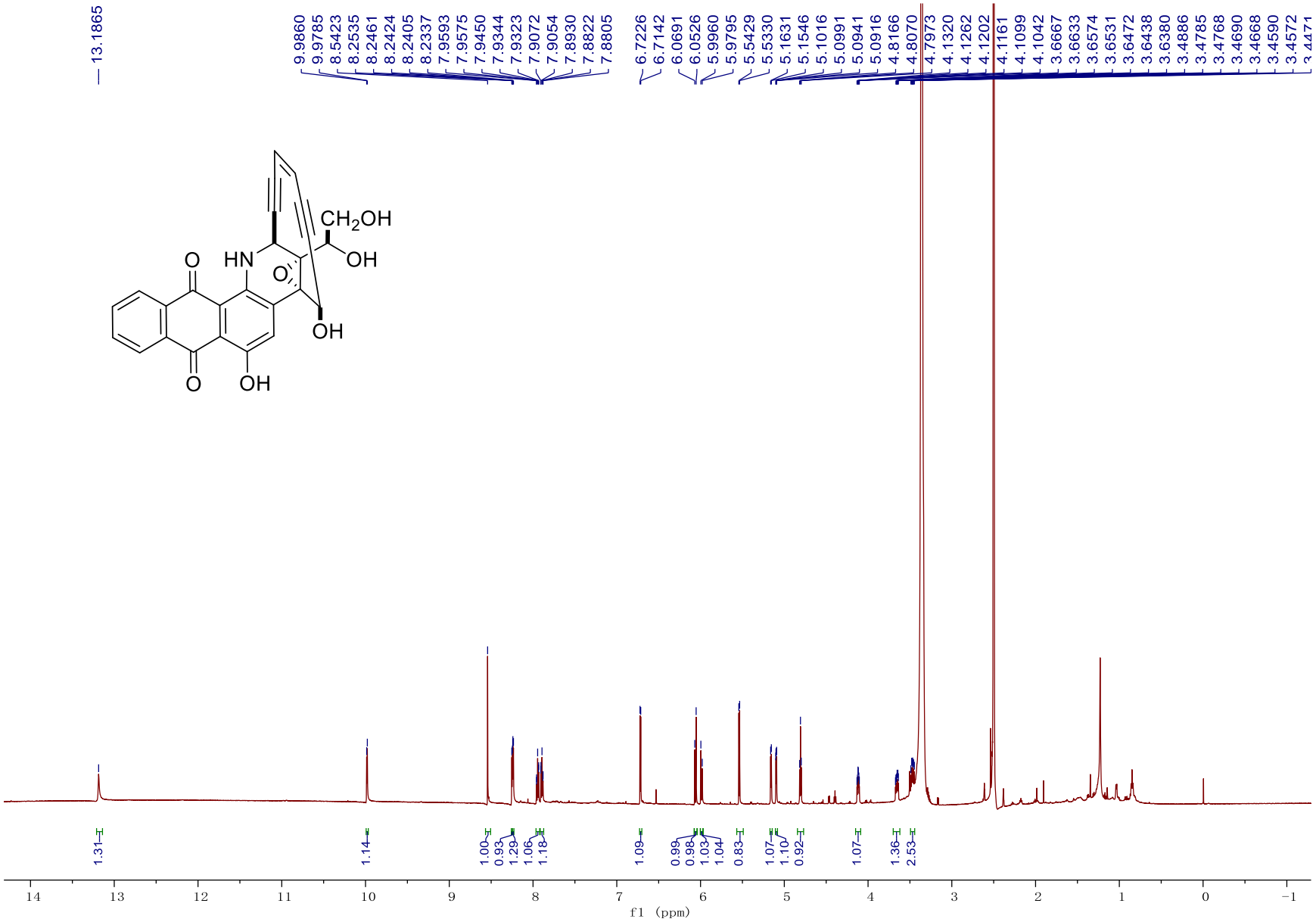


Figure S14. The ^{13}C-NMR spectrum of YPM G (**7**) (150 MHz, acetone-d_6)

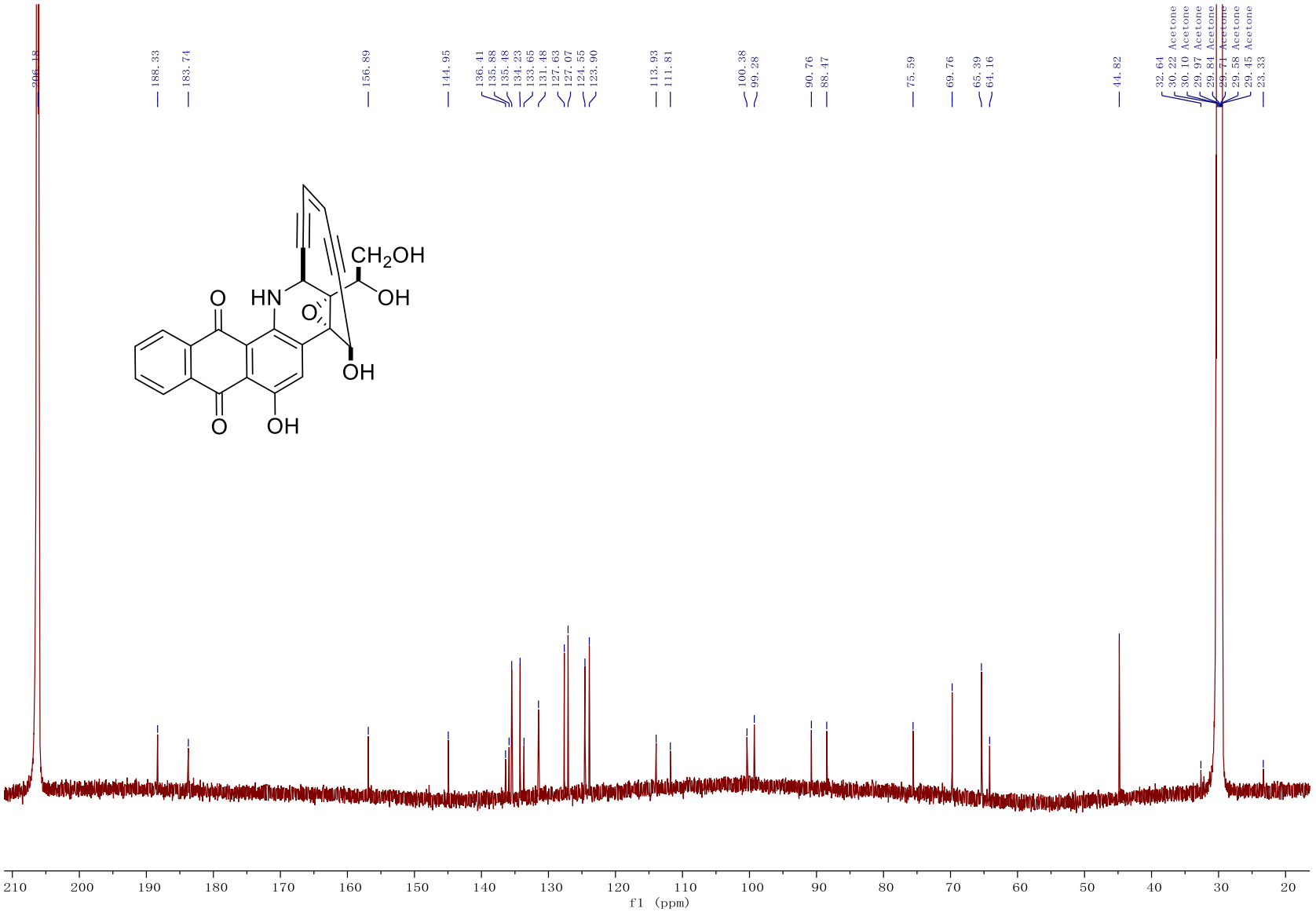


Figure S15. The ^{13}C-NMR spectrum of YPM G (**7**) (150 MHz, DMSO-d_6)

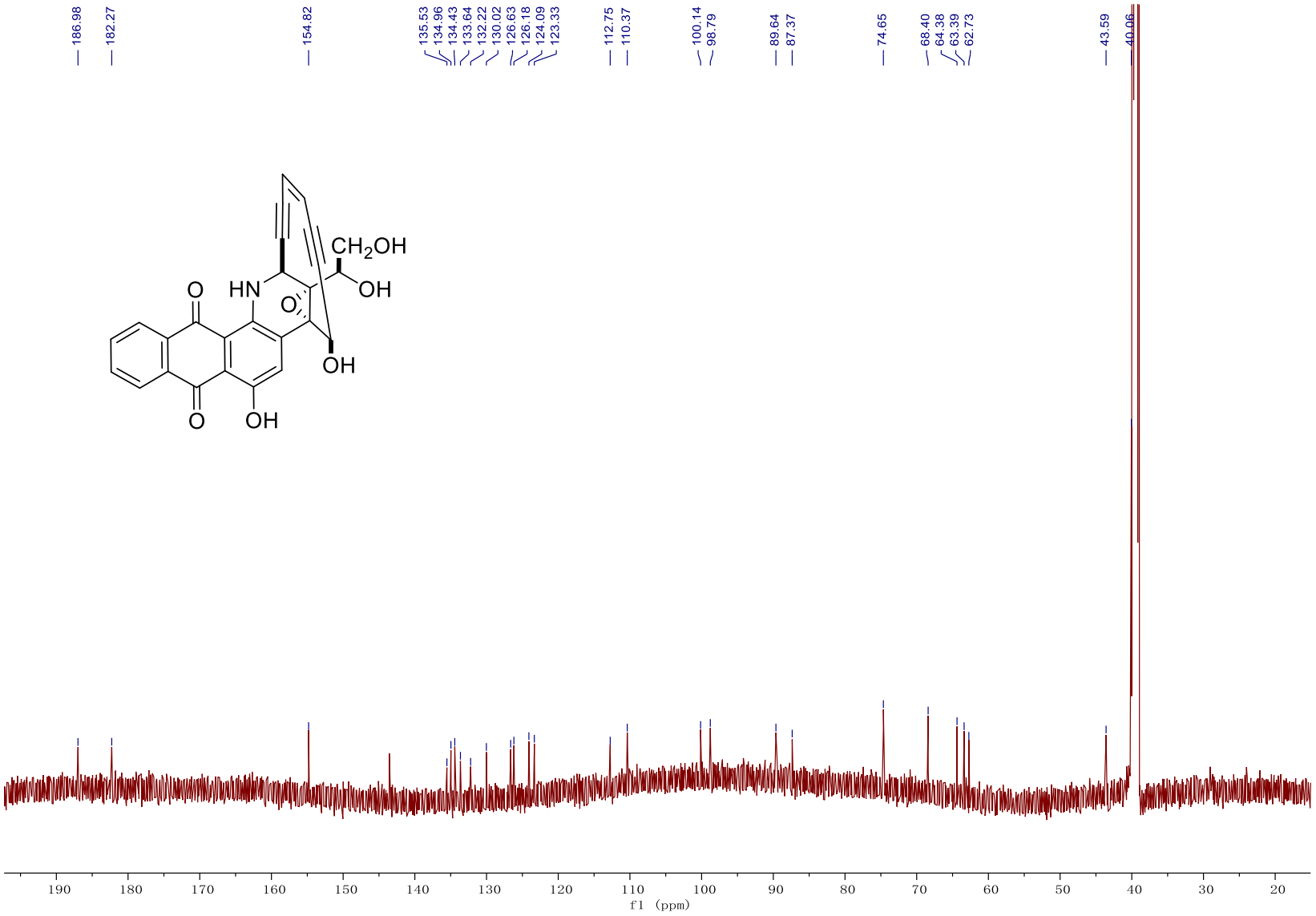


Figure S16. The COSY spectrum of YPM G (**7**) (acetone-d_6)

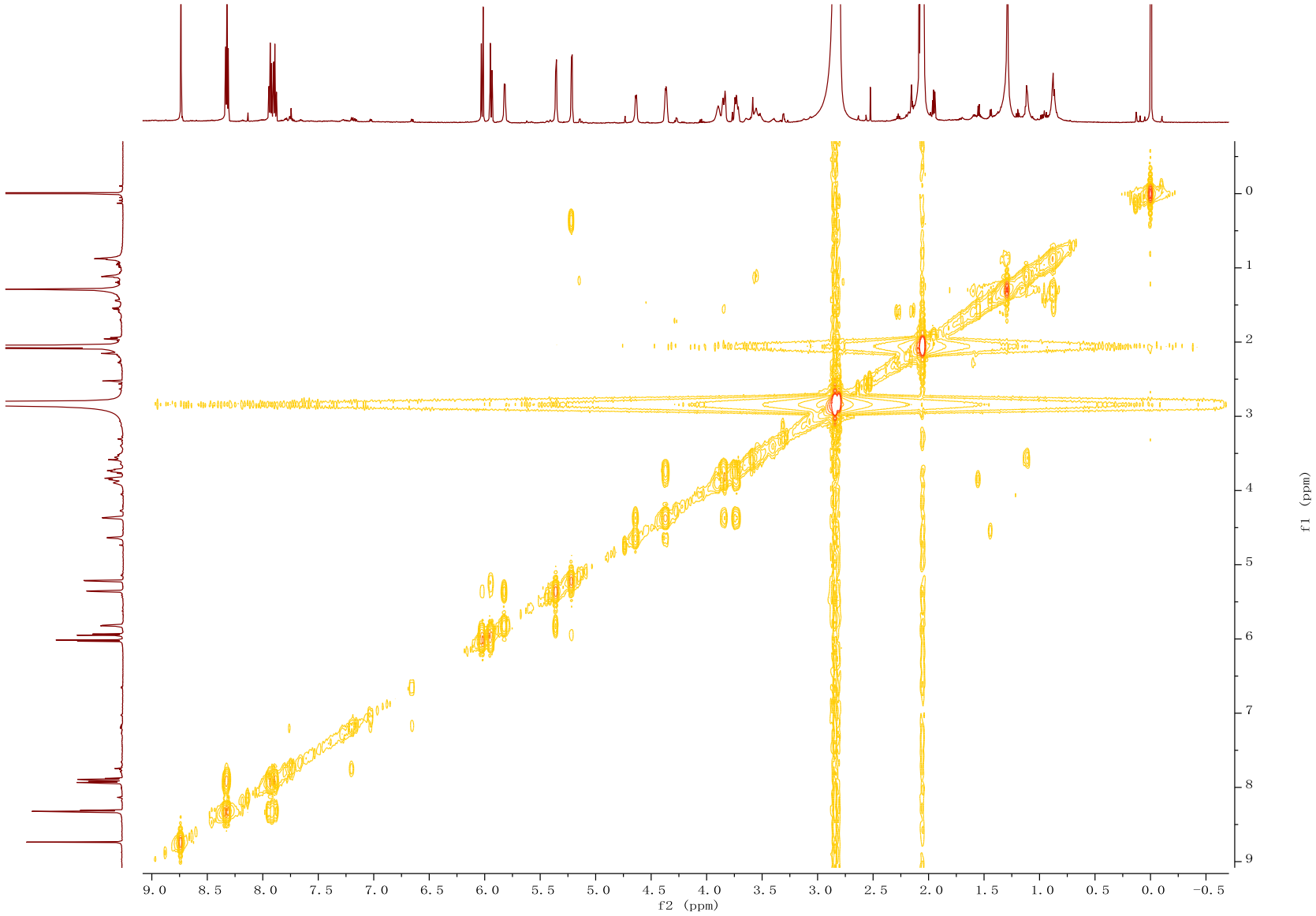


Figure S17. The HSQC spectrum of YPM G (**7**) (acetone-d_6)

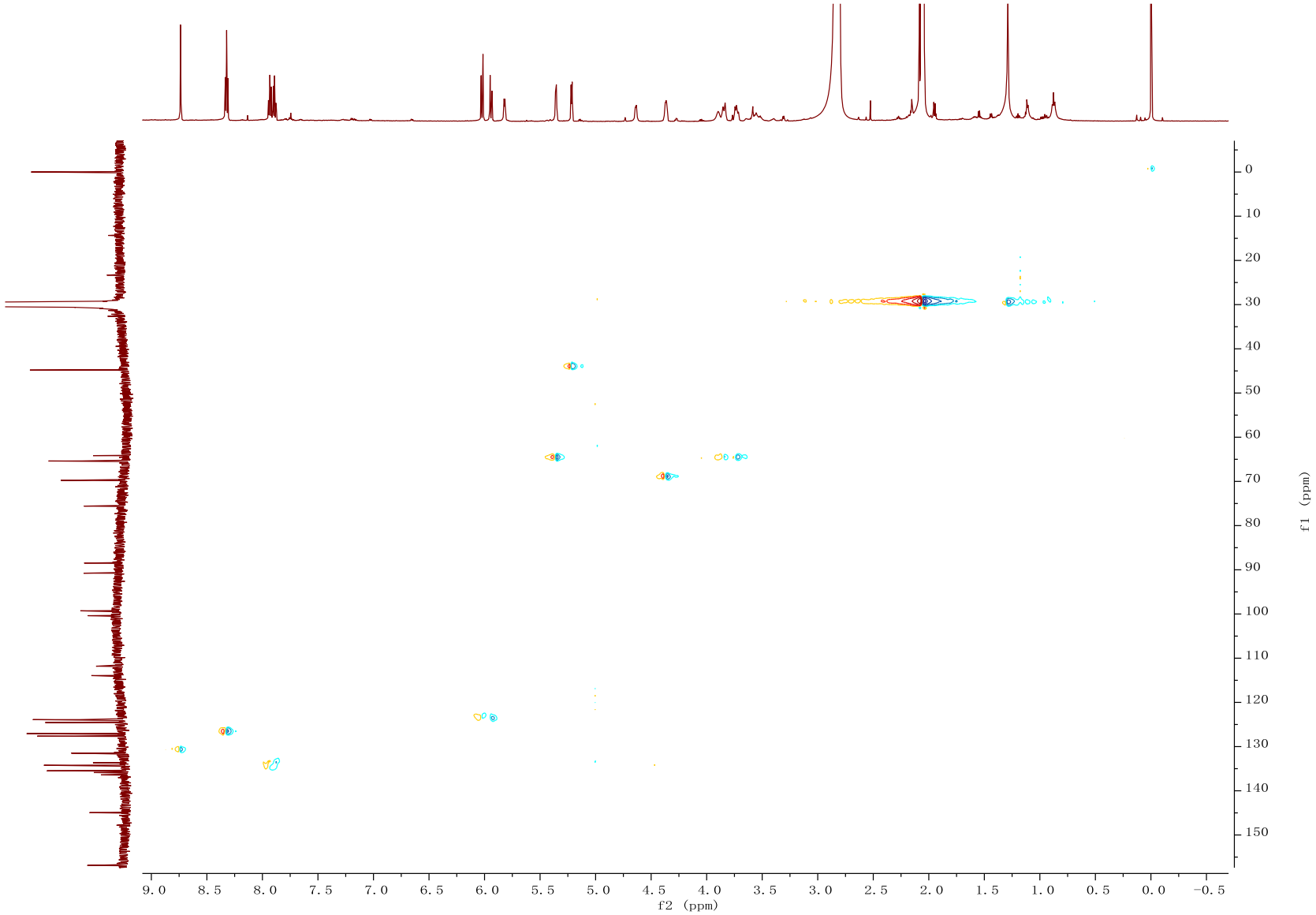


Figure S18. The HMBC spectrum of YPM G (**7**) (600 MHz, acetone-d_6)

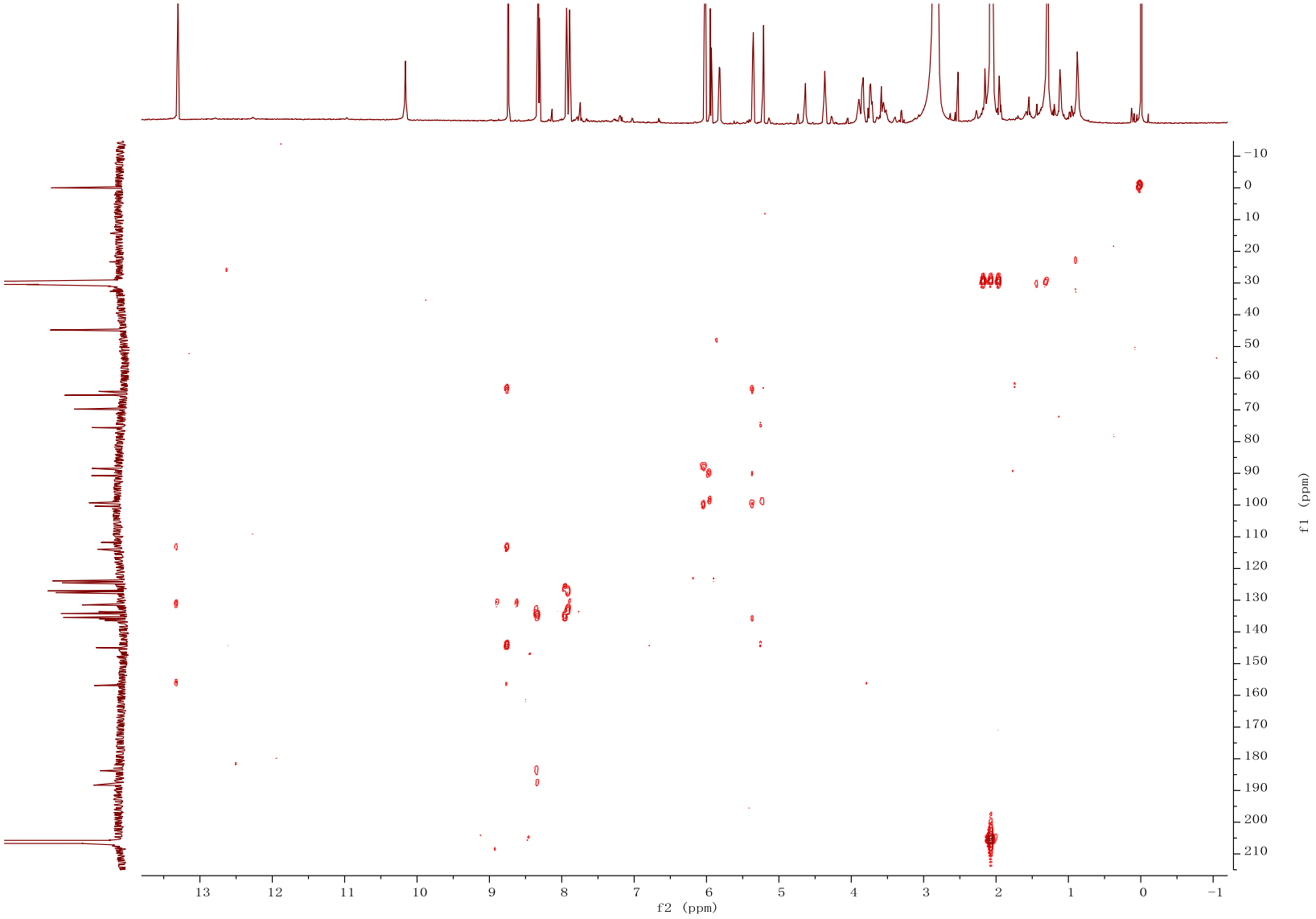


Figure S19. The HMBC spectrum of YPM G (**7**) (500 MHz, DMSO-d_6)

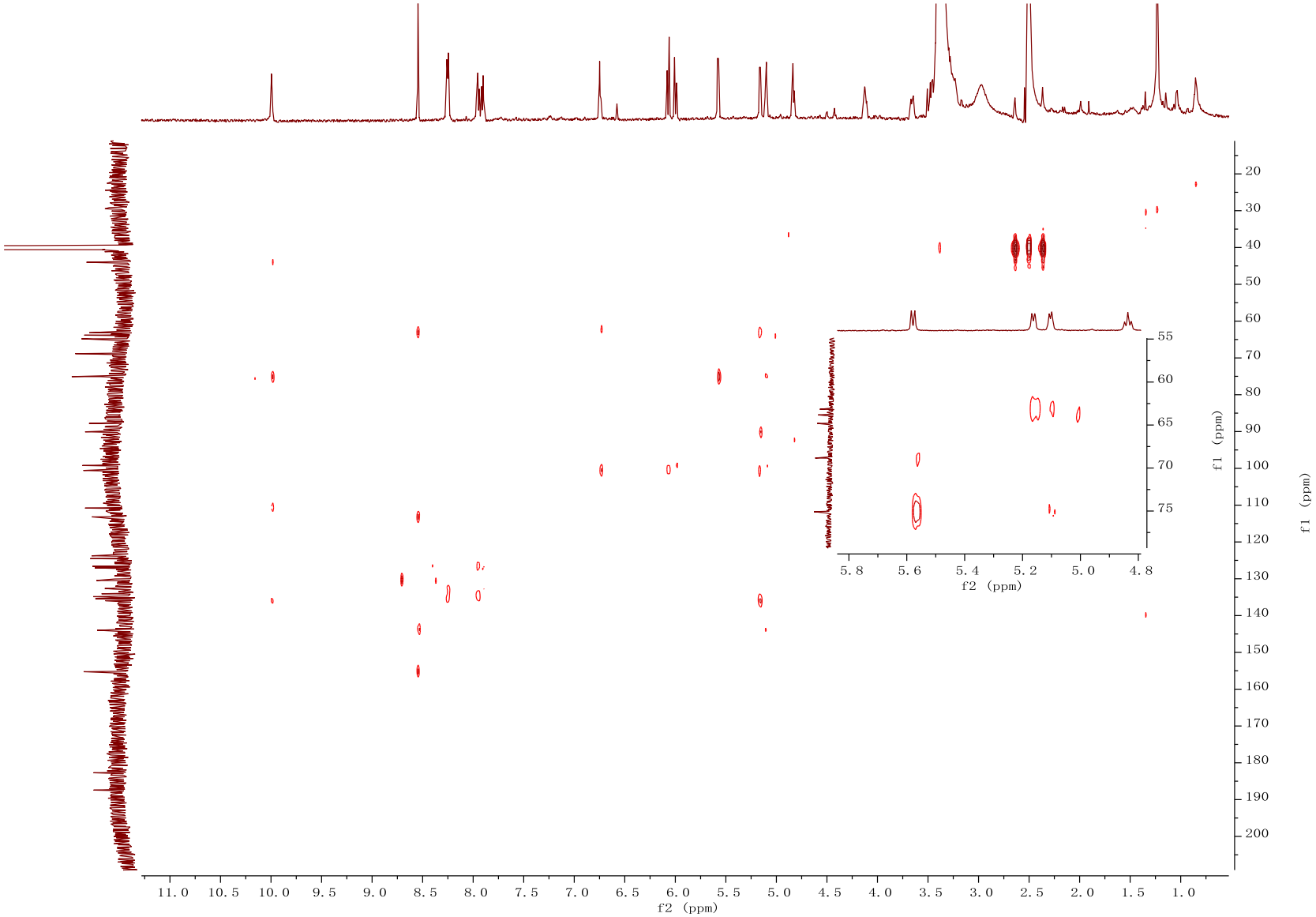


Figure S20. The ROESY spectrum of YPM G (**7**) (acetone-d_6)

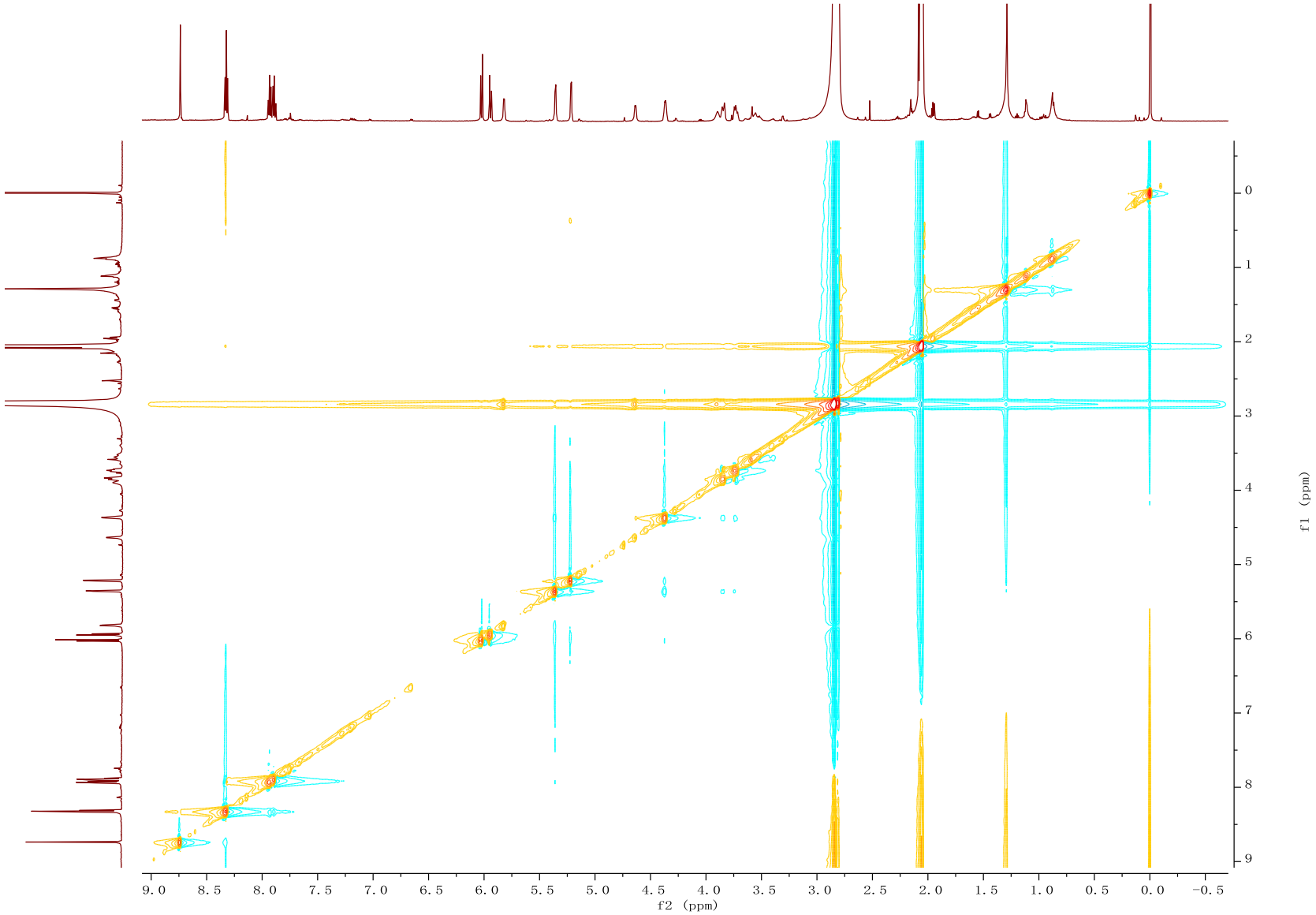


Figure S21. The DEPT 135 spectrum of YPM G (**7**) (acetone-d_6)

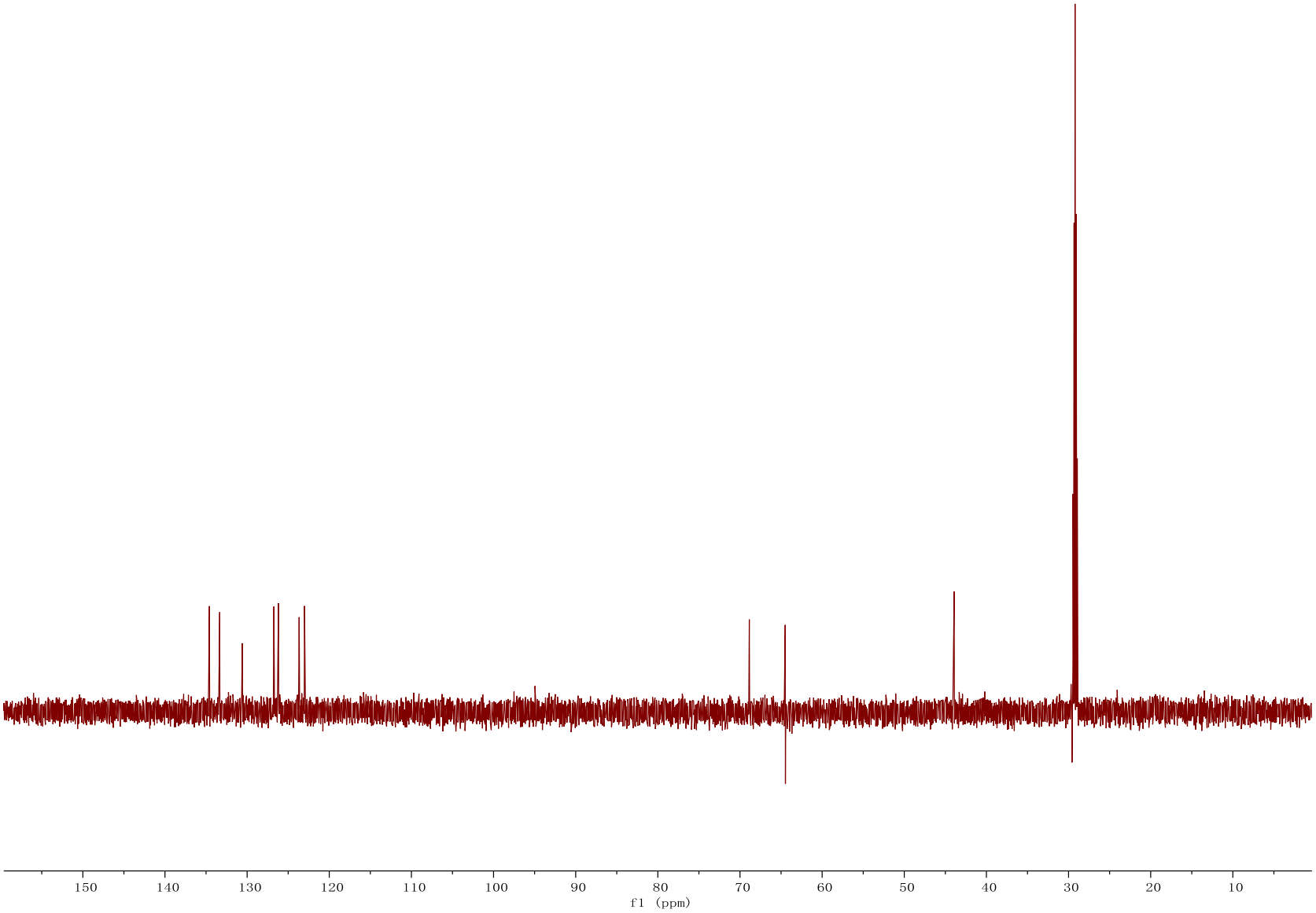


Figure S22. DEPT 90 spectrum of YPM G (**7**) (acetone-d_6)

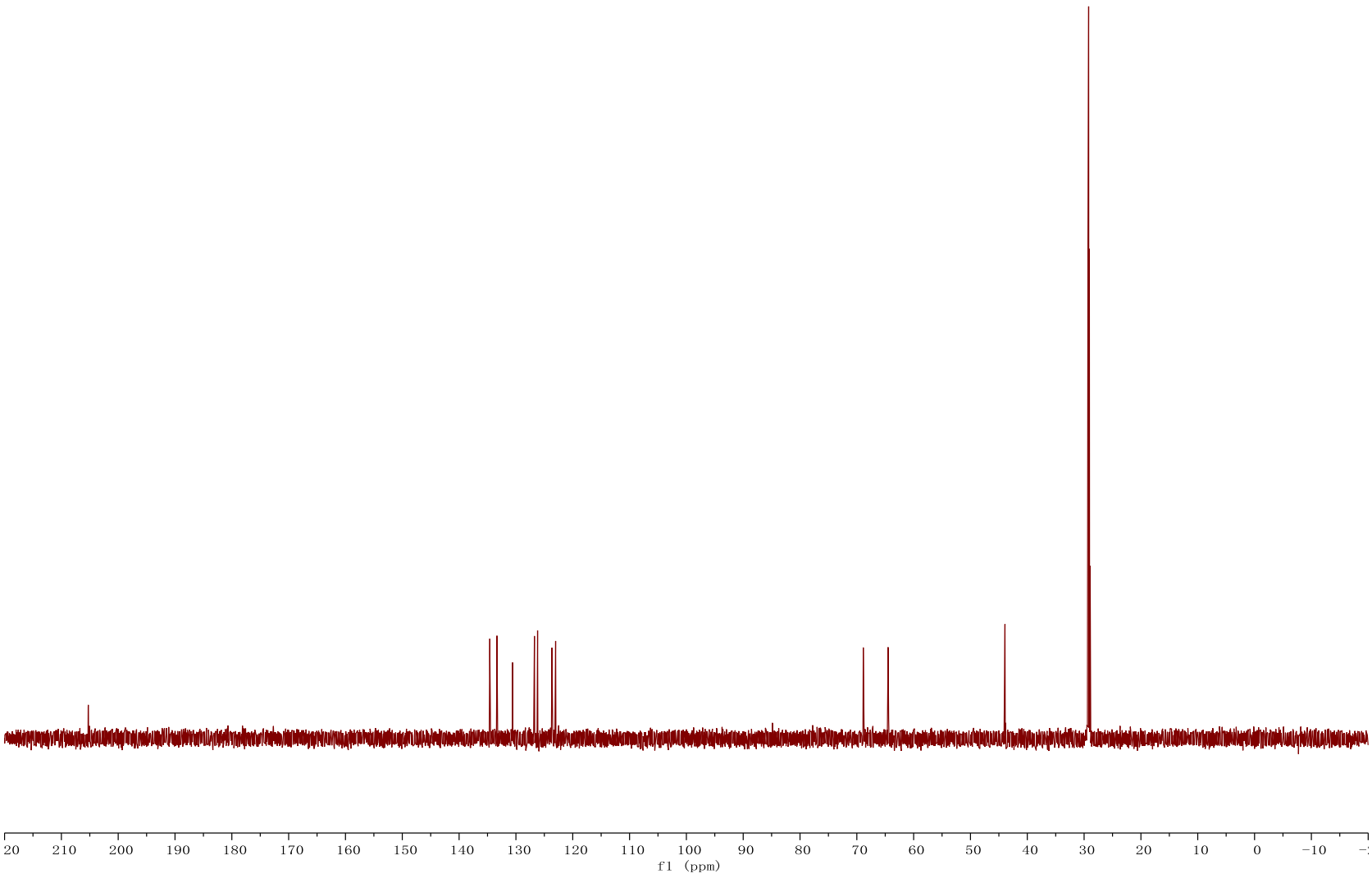
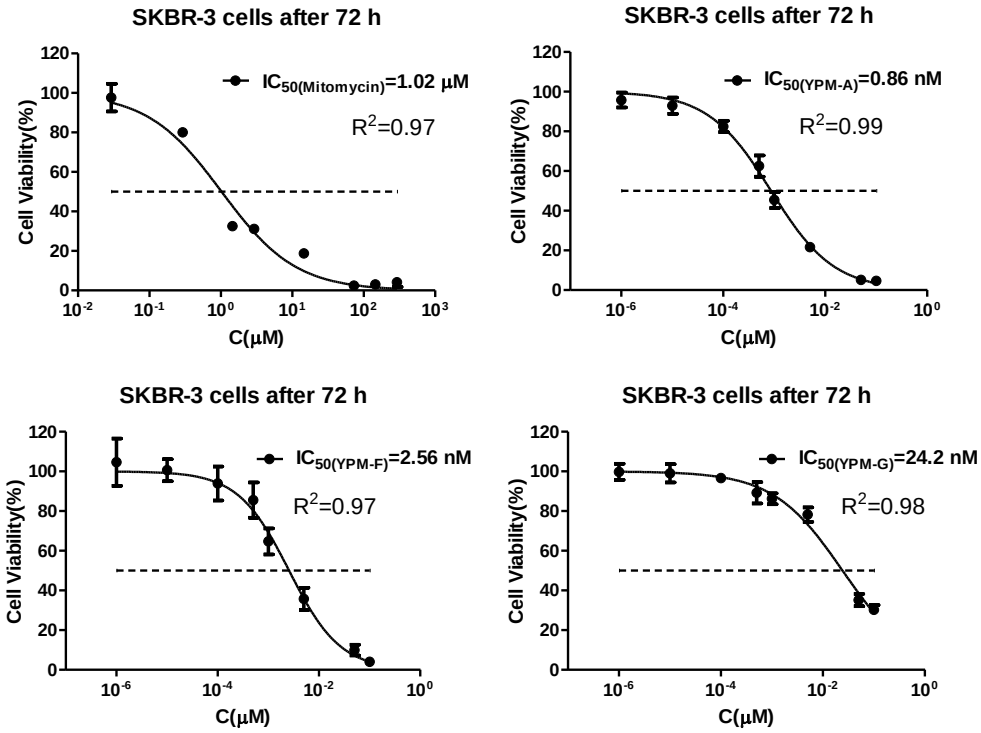
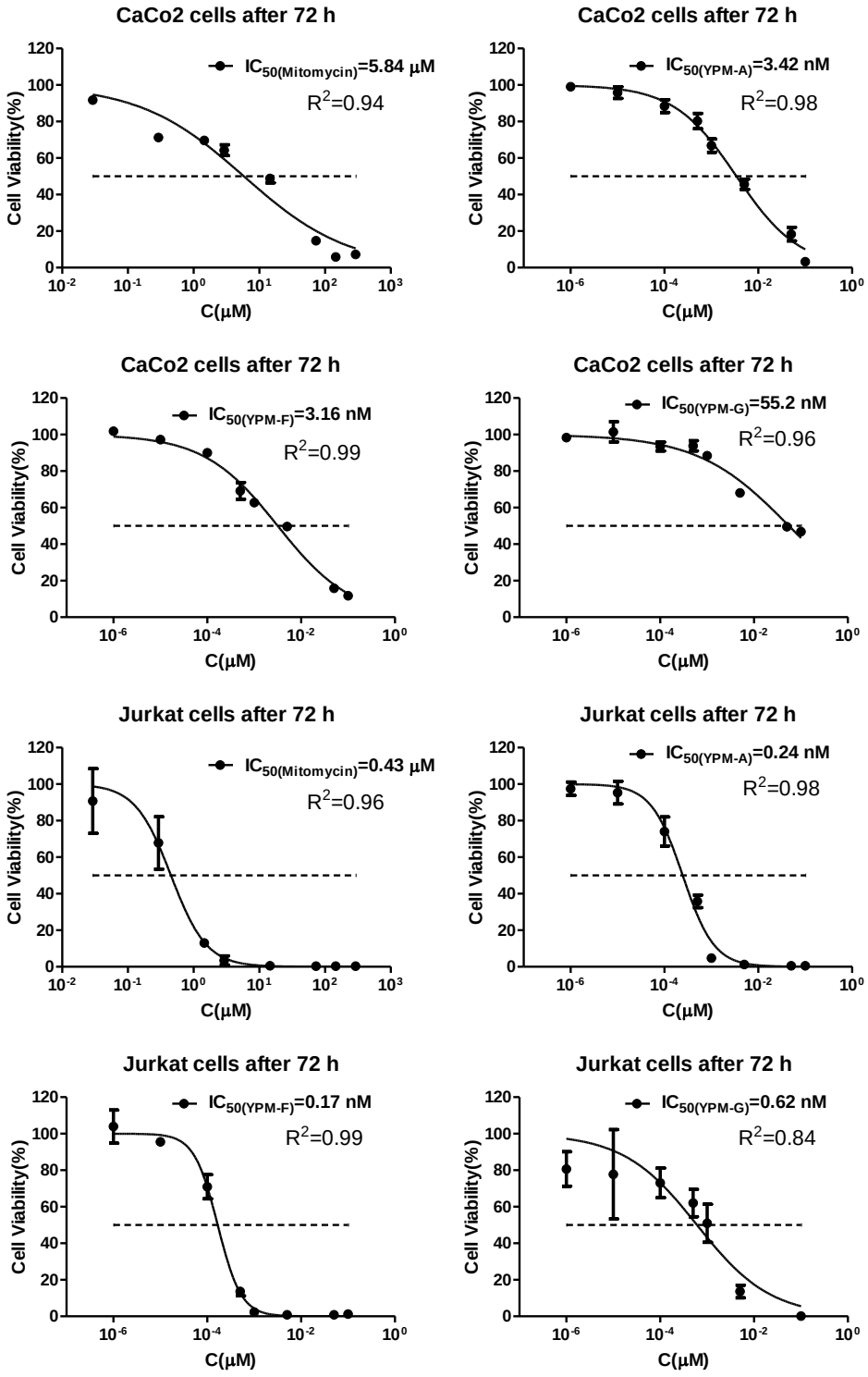
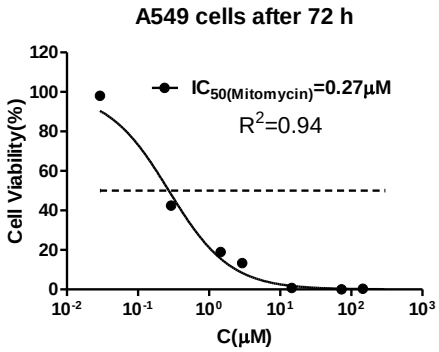
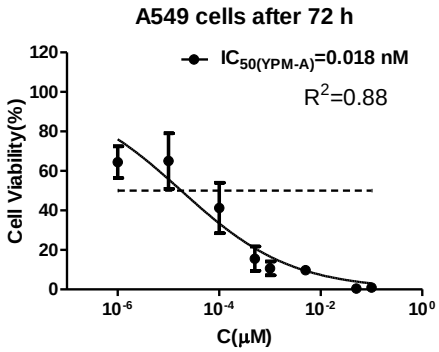


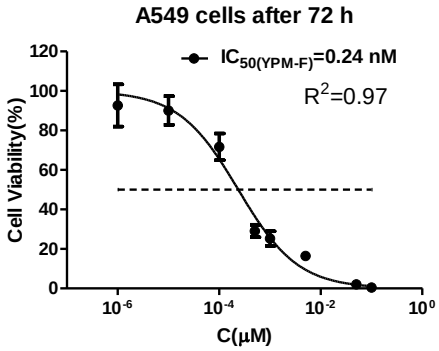
Figure S23. Cytotoxicity assay of YPM F (**6**) and YPM G (**7**) in comparison with YPM A (**1**) and mitomycin.




CaCo2 cells after 72 h
IC50(Mitomycin)=5.84 μM
R2=0.94
CaCo2 cells after 72 h
IC50(YPM-A)=3.42 nM
R2=0.98
CaCo2 cells after 72 h
IC50(YPM-F)=3.16 nM
R2=0.99
CaCo2 cells after 72 h
IC50(YPM-G)=55.2 nM
R2=0.96
Jurkat cells after 72 h
IC50(Mitomycin)=0.43 μM
R2=0.96
Jurkat cells after 72 h
IC50(YPM-A)=0.24 nM
R2=0.98
Jurkat cells after 72 h
IC50(YPM-F)=0.17 nM
R2=0.99
Jurkat cells after 72 h
IC50(YPM-G)=0.62 nM
R2=0.84
Cell Viability(%)
C(μM)


A549 cells after 72 h
IC50(Mitomycin)=0.27μM
R2=0.94
Cell Viability(%)
C(μM)


A549 cells after 72 h
IC50(YPM-A)=0.018 nM
R2=0.88
Cell Viability(%)
C(μM)


A549 cells after 72 h
IC50(YPM-F)=0.24 nM
R2=0.97
Cell Viability(%)
C(μM)

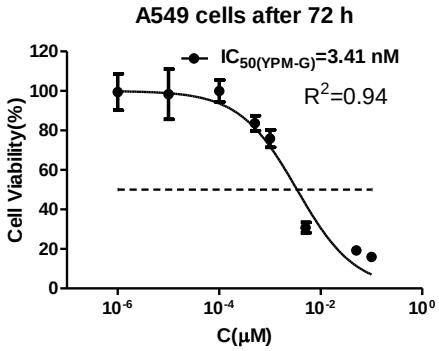
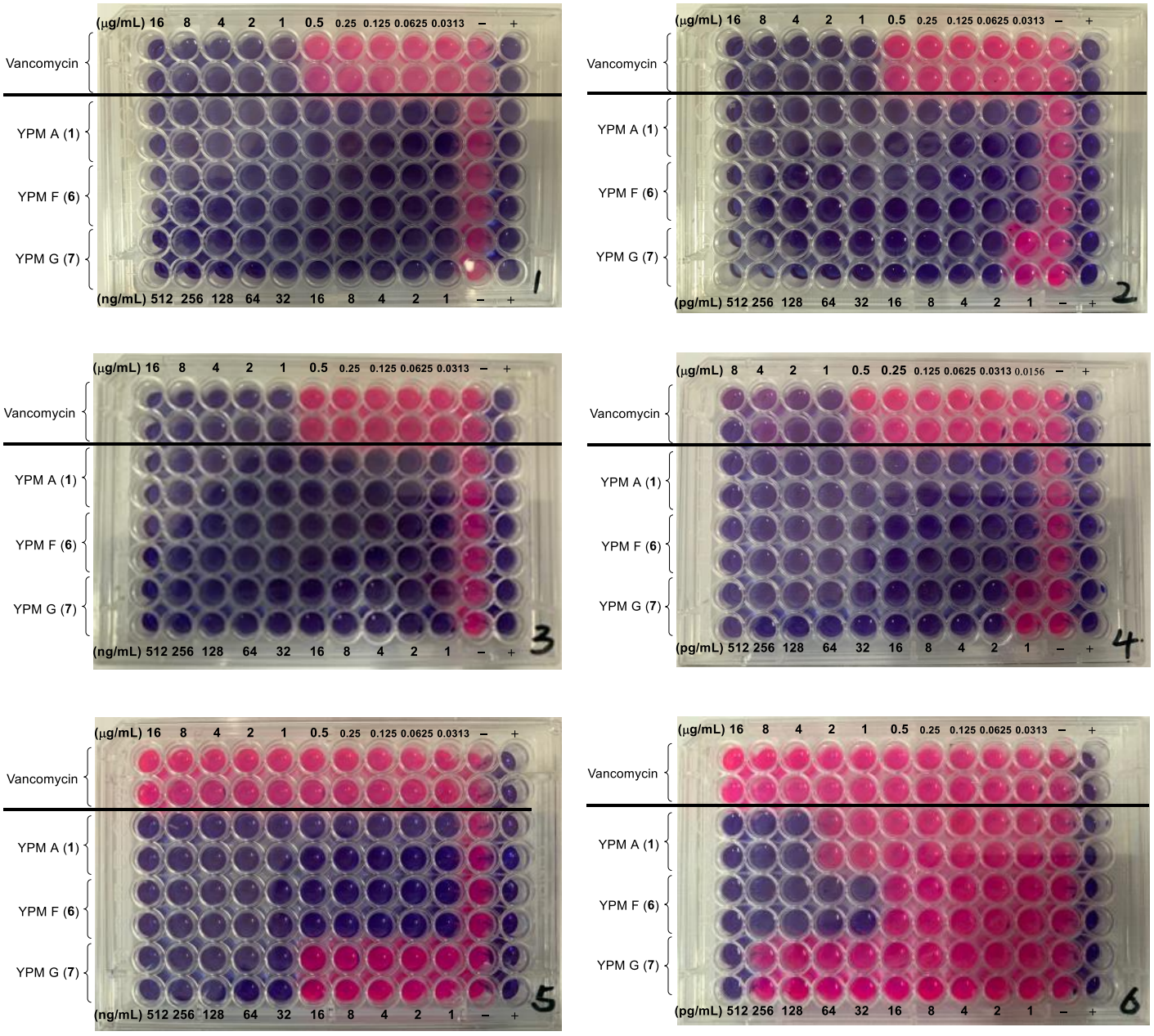

A549 cells after 72 h
IC50(YPM-G)=3.41 nM
R2=0.94
Cell Viability(%)
C(μM)

Figure S24. 96 well plate assay of YPMs against *S. aureus* ATCC 29213, MRSA and *E. coli* using the microbroth dilution method.



" – " means 200 μL of bacterial solution as negative control; " + " means 200 μL untreated media as positive control; " 1 " and " 2 ": *S. aureus* ATCC 29213; " 3 " and " 4 ": MRSA; " 5 " and " 6 ": *E.coli*. The strains were cultured overnight and diluted to 10^6 CFU/mL in Luria-Bertani broth. 100 μL YPMs or vancomycin and 100 μL of bacterial solution were mixed per well. YPMs and vancomycin were tested in duplicate on each 96-well plate. The plates were incubated at 37 °C for 18 h. Finally, 50 μL resazurin was added into each well to visualized the result. YPM, yangpumicin.