

Supplementary Information for

New Octadecanoid Enantiomers from the Whole Plants of *Plantago depressa*

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Figure S1. Comparisons of ^1H NMR spectra of scalemic mixture and pure enantiomers (**1–6**).

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Figure S15. The ^1H NMR spectrum of **5/6** in CDCl_3 .

Figure S16. The ^{13}C NMR spectrum of **5/6** in CDCl_3 .

Figure S17. The ^1H - ^1H COSY spectrum of **5/6** in CDCl_3 .

Figure S18. The HSQC spectrum of **5/6** in CDCl_3 .

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Figure S21. The ^1H NMR spectrum of **9** in CDCl_3 .

Figure S22. The ^{13}C NMR spectrum of **9** in CDCl_3 .

Figure S23. The ^1H - ^1H COSY spectrum of **9** in CDCl_3 .

Figure S24. The HSQC spectrum of **9** in CDCl_3 .

Figure S25. The HMBC spectrum of **9** in CDCl_3 .

Figure S26. The (+)-HRESIMS spectrum of **9**.

Table S1. Preliminary antimicrobial assay results.

Table S2. Preliminary anti-acetylcholinesterase and anti-inflammatory assay results.

Figure S1. Comparisons of ^1H NMR spectra of scalemic mixture and pure enantiomers (**1–6**).

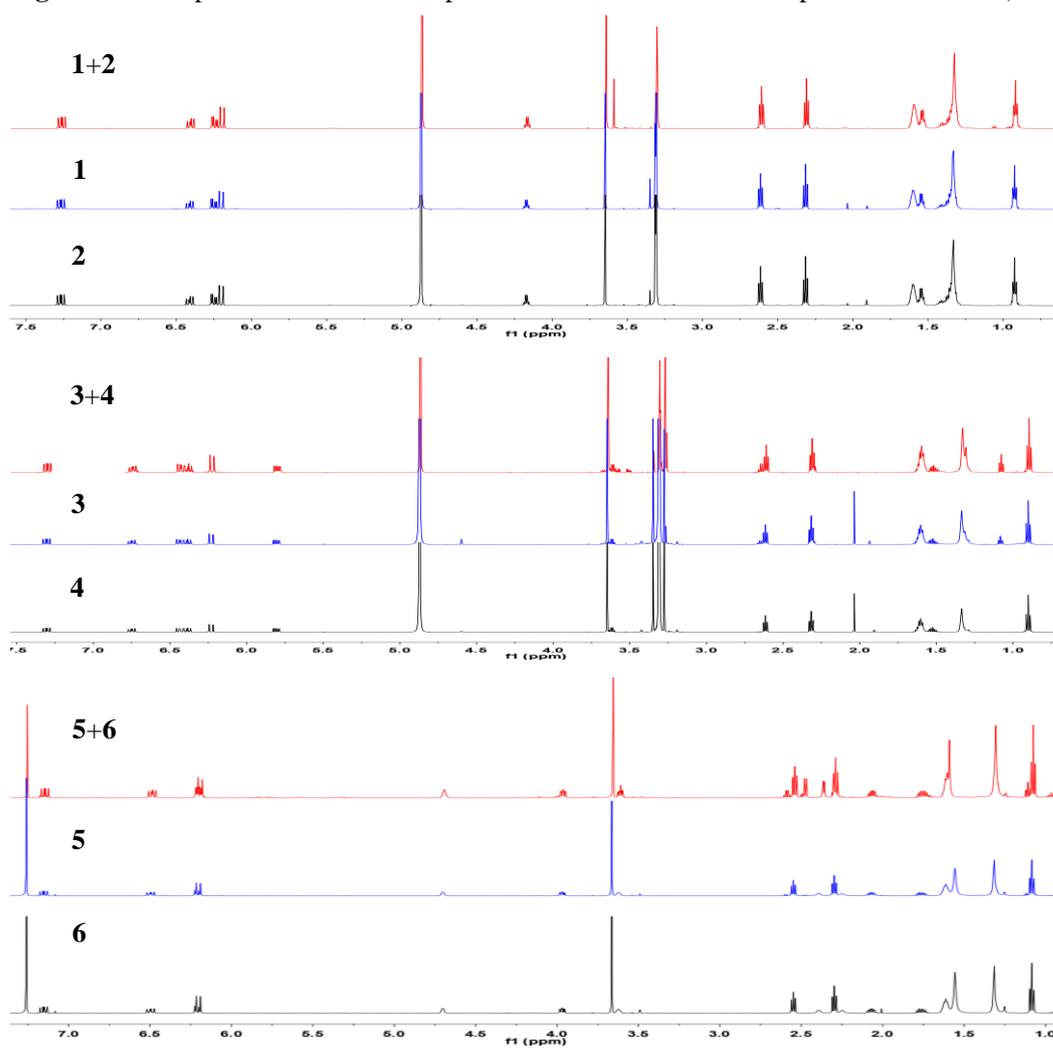


Figure S2. Chiral HPLC chromatograms for **1–8**.

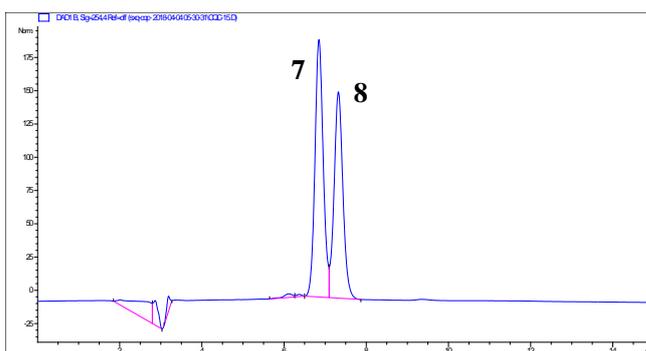
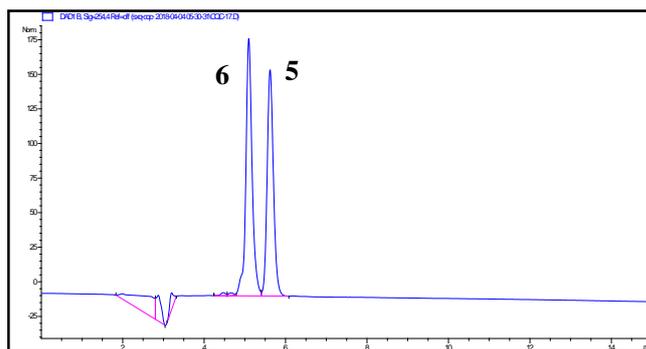
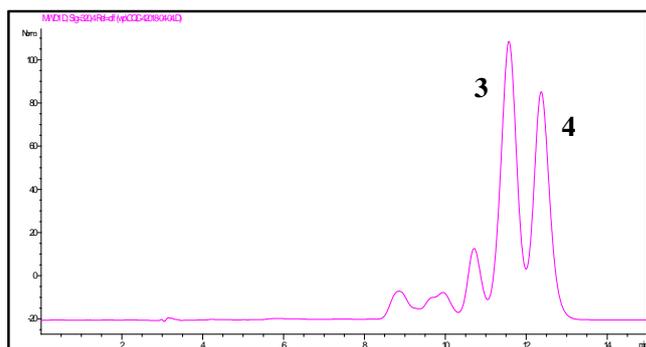
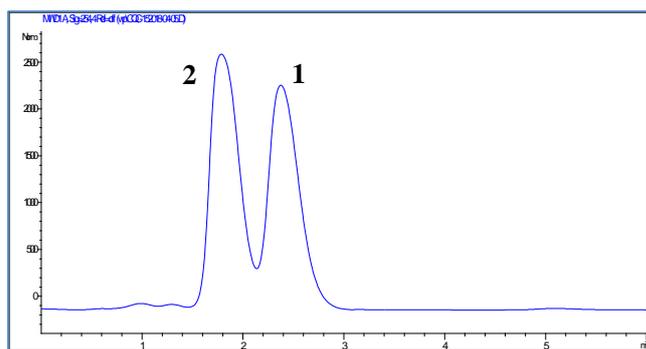


Figure S3. The ^1H NMR spectrum of **1/2** in CD_3OD

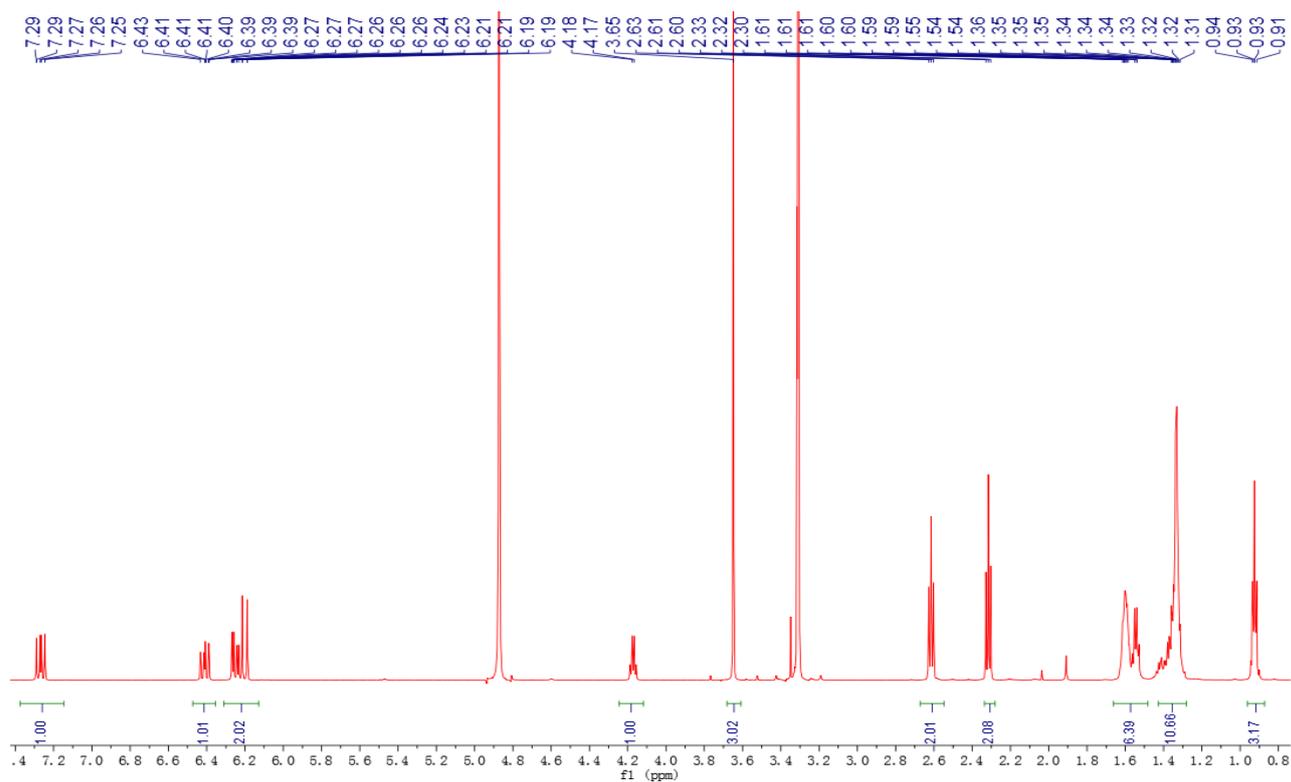


Figure S4. The ^{13}C NMR spectrum of **1/2** in CD_3OD

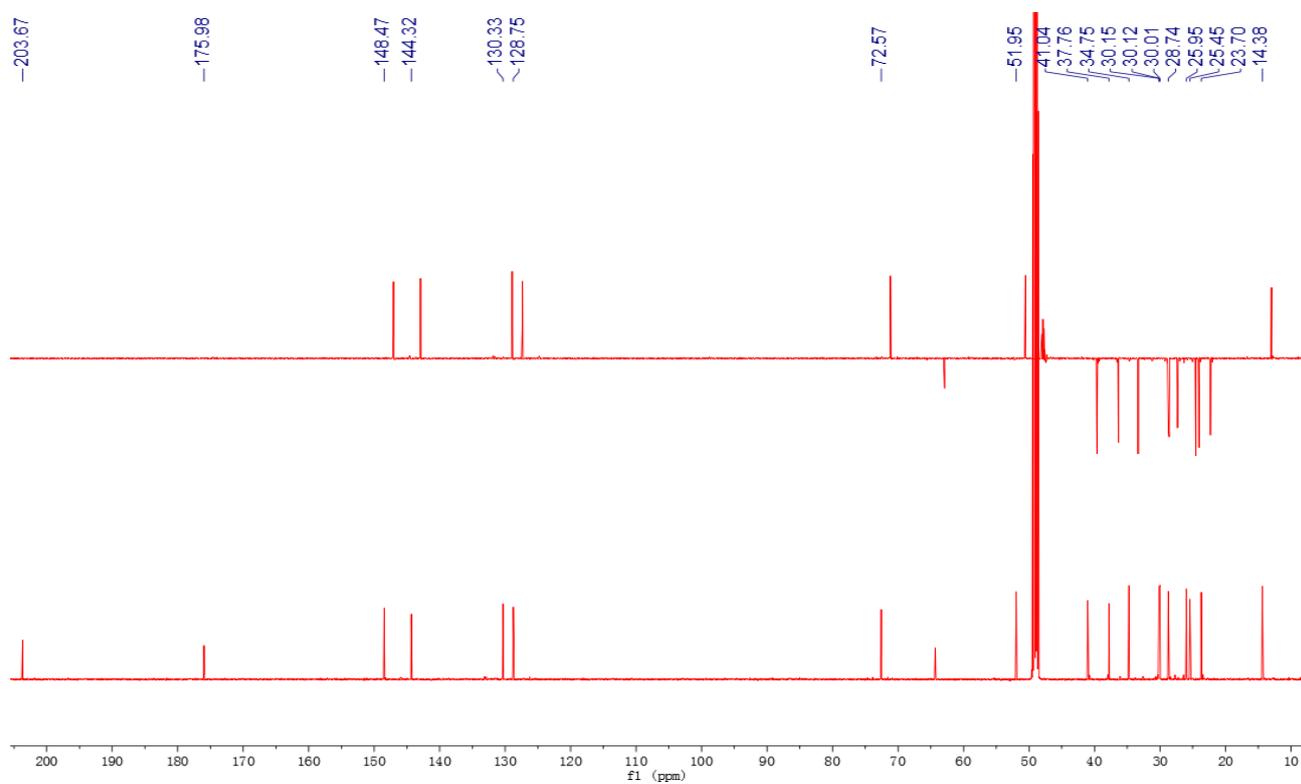


Figure S5. The ^1H - ^1H COSY spectrum of **1/2** in CD_3OD .

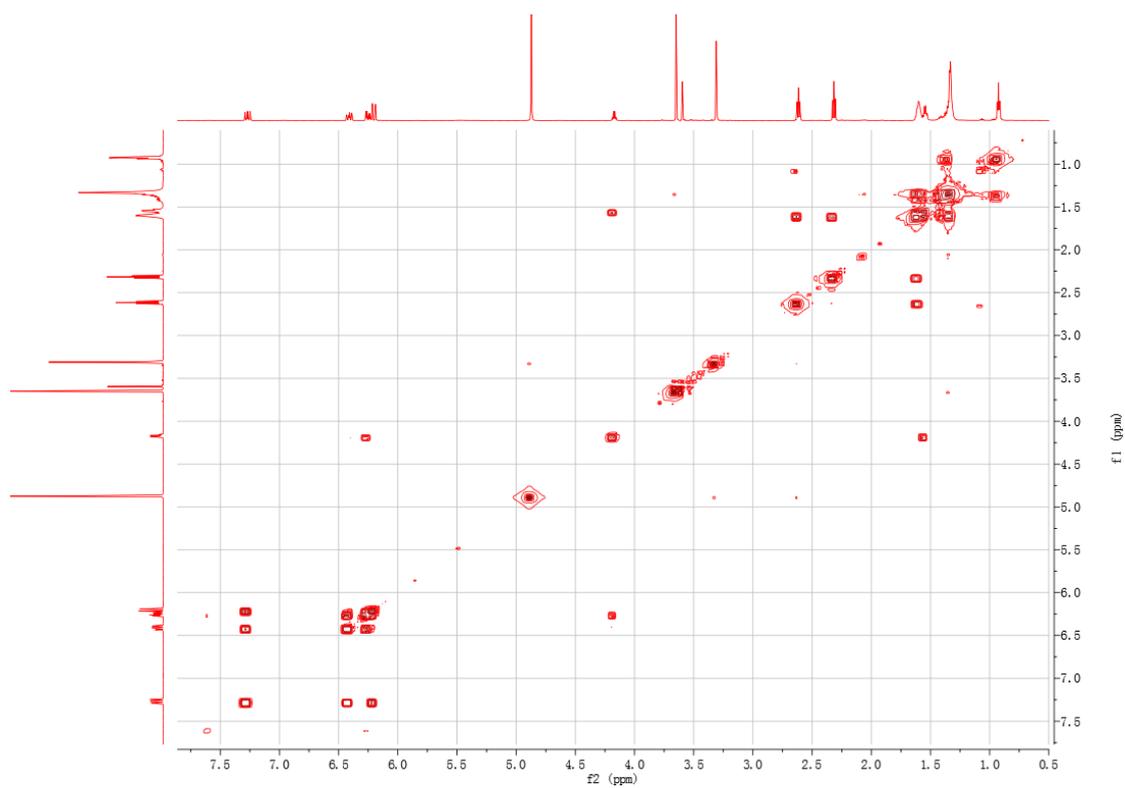


Figure S6. The HSQC spectrum of **1/2** in CD_3OD .

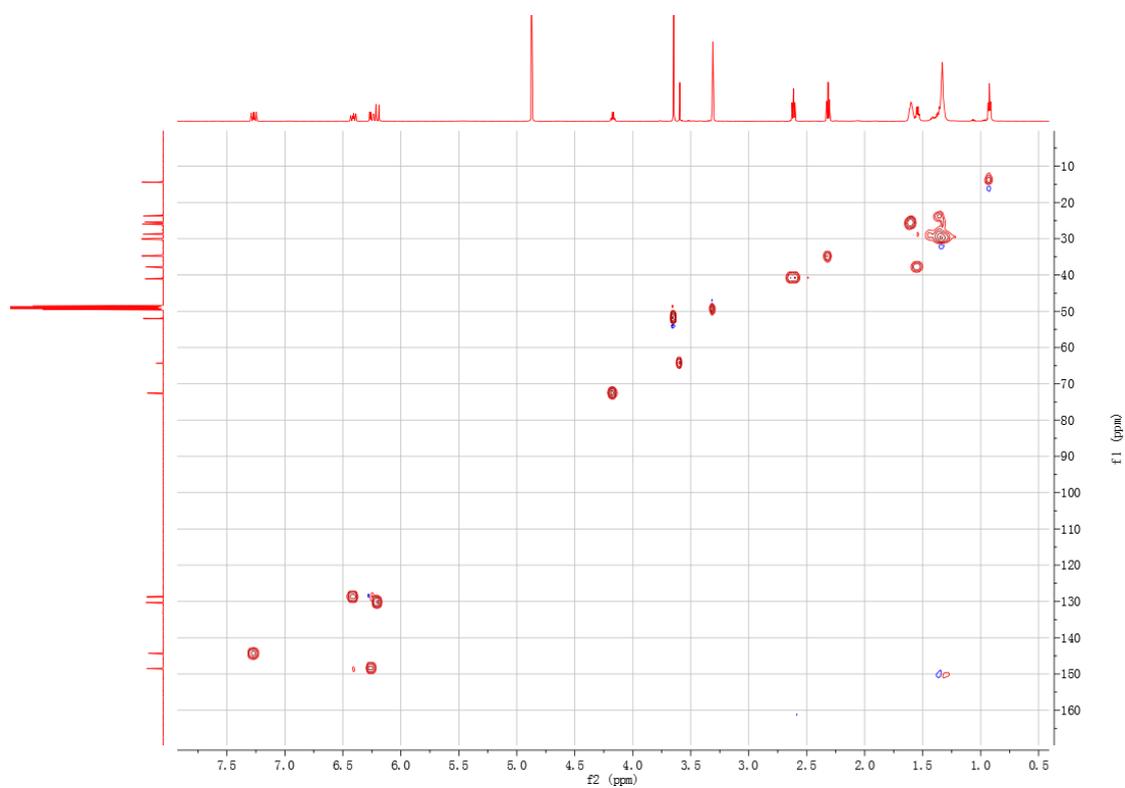


Figure S7. The HMBC spectrum of **1/2** in CD₃OD.

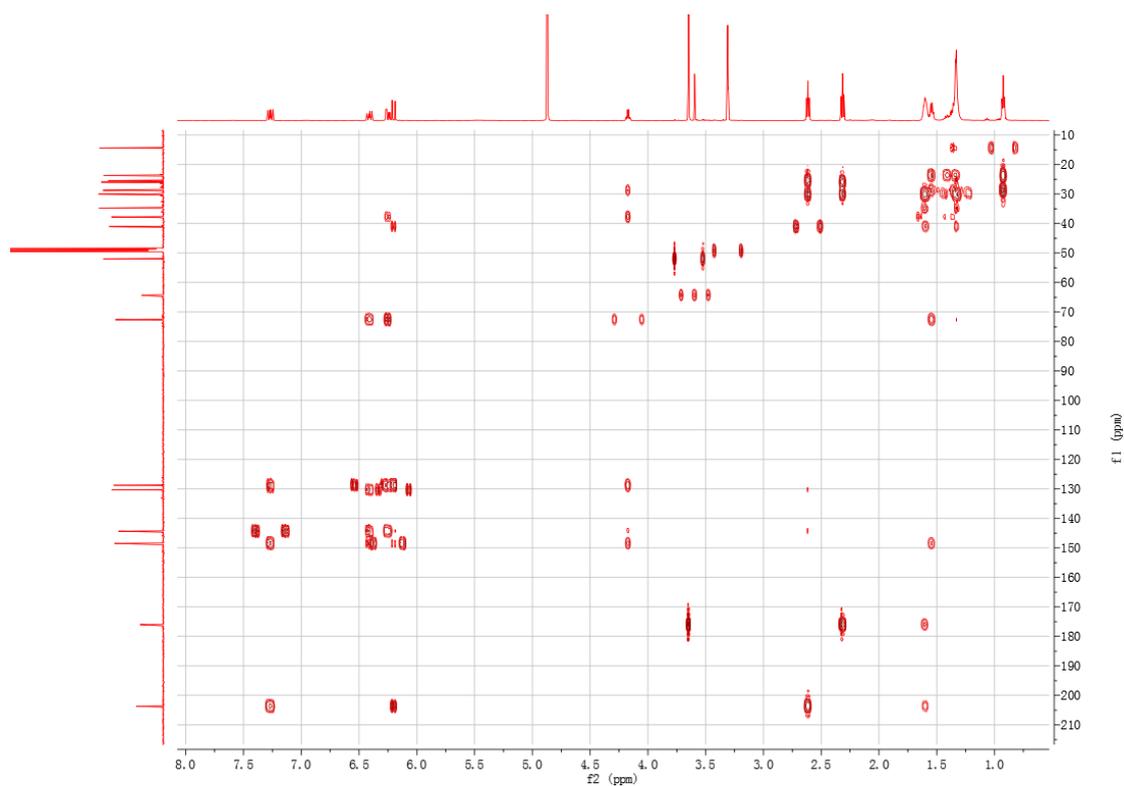


Figure S8. The (+)-HRESIMS spectrum of **1/2**.

Sample Name	CQC-15	Position	P1-C1	Instrument Name	Instrument 1
User Name		Inj Vol	1	InjPosition	
Sample Type	Sample	IRM Calibration Status	All Ions Missed	Data Filename	CQC-15.d
ACQ Method	wss-isocratic elution-Positive.m	Comment		Acquired Time	3/26/2018 4:09:41 PM

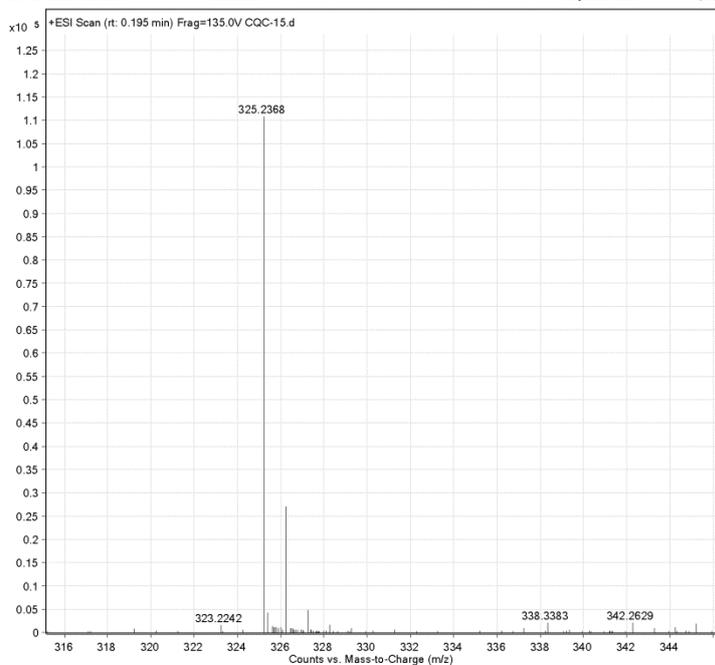


Figure S9. The ^1H NMR spectrum of **3/4** in CD_3OD .

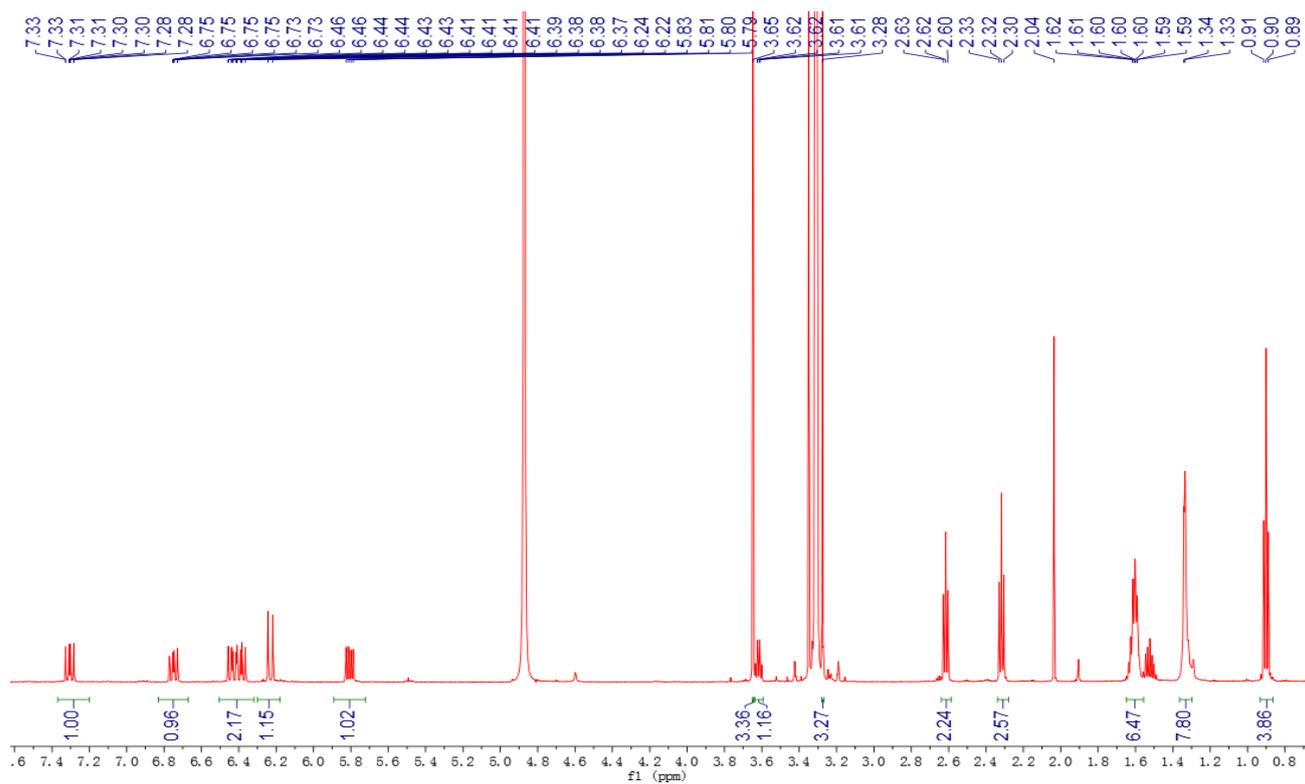


Figure S10. The ^{13}C NMR spectrum of **3/4** in CD_3OD .

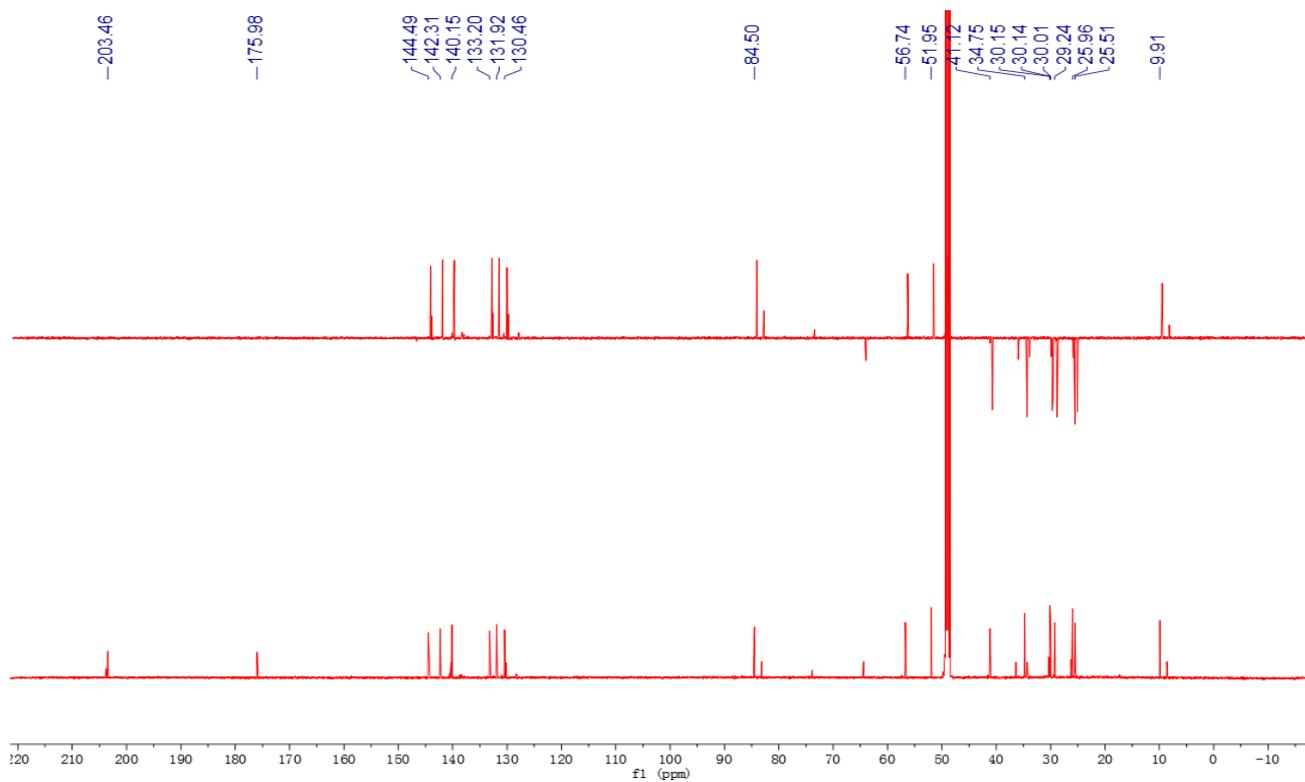


Figure S11. The ^1H - ^1H COSY spectrum of **3/4** in CD_3OD .

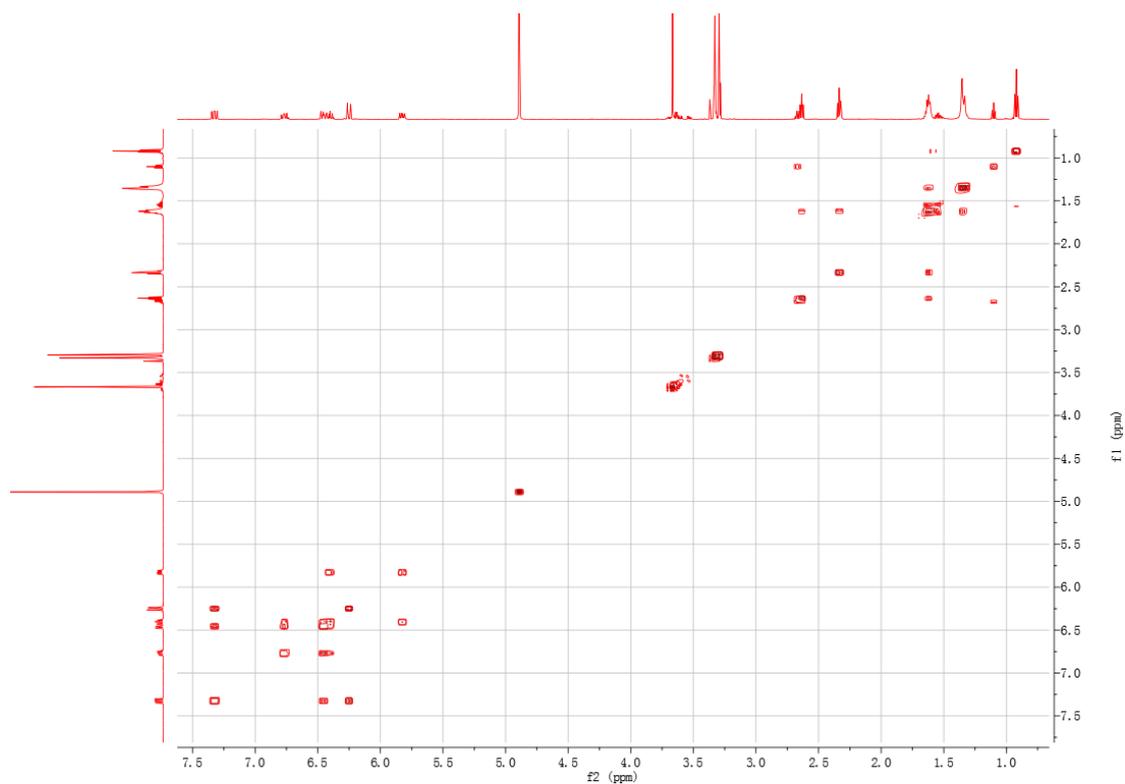


Figure S12. The HSQC spectrum of **3/4** in CD_3OD .

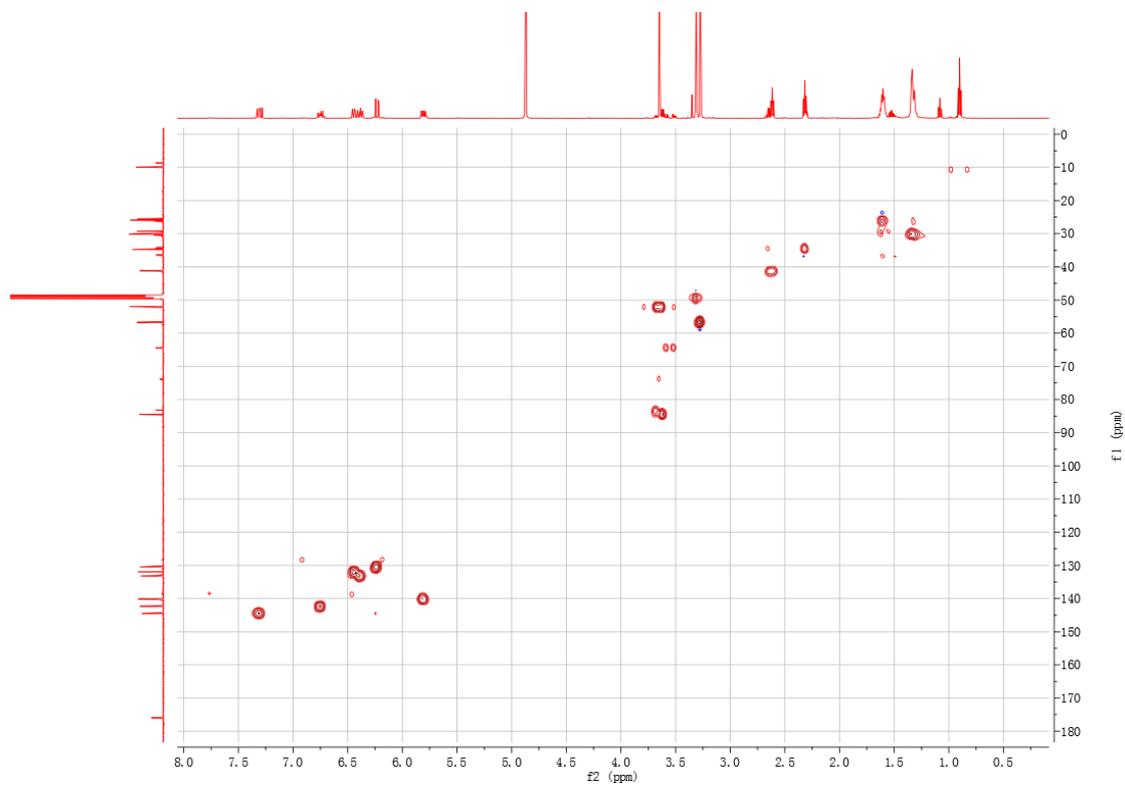


Figure S13. The HMBC spectrum of **3/4** in CD₃OD.

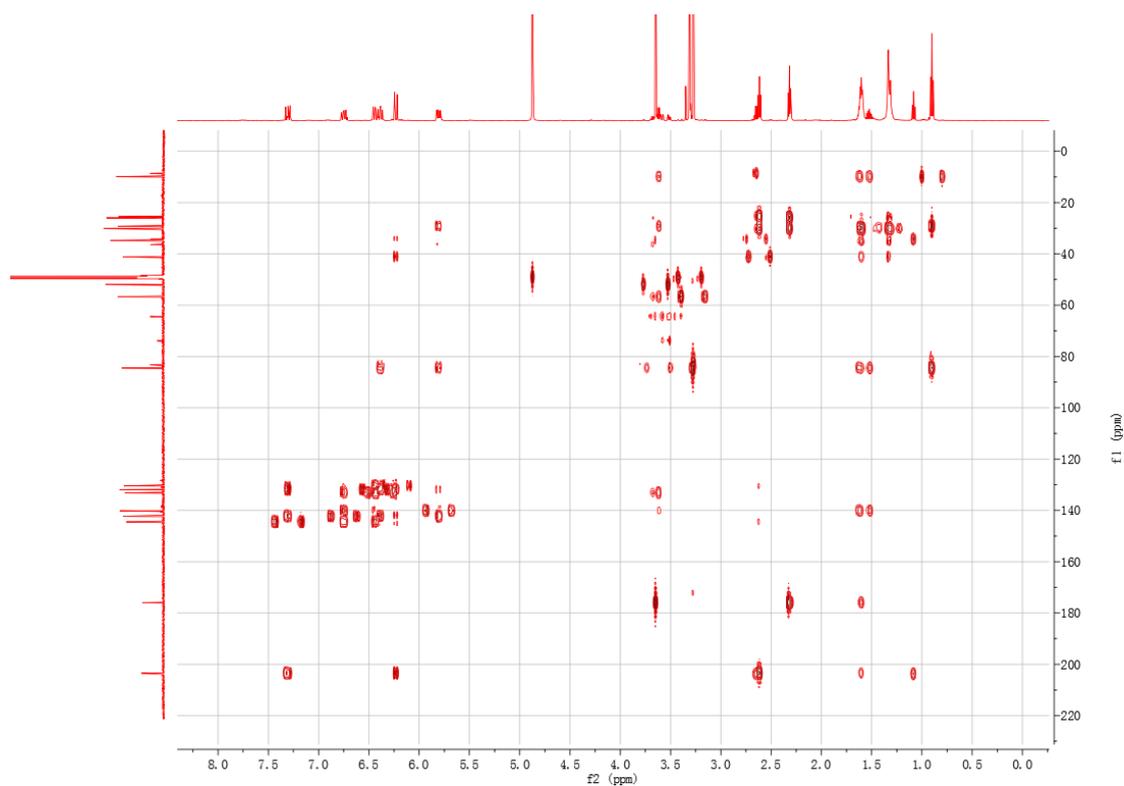


Figure S14. The (+)-HRESIMS spectrum of **3/4**.

Sample Name	CQC-4	Position	P1-B8	Instrument Name	Instrument 1
User Name		Inj Vol	1	InjPosition	
Sample Type	Sample	IRM Calibration Status	All Ions Missed	Data Filename	CQC-4.d
ACQ Method	wss-isocratic elution-Positive.m	Comment		Acquired Time	3/26/2018 4:04:12 PM

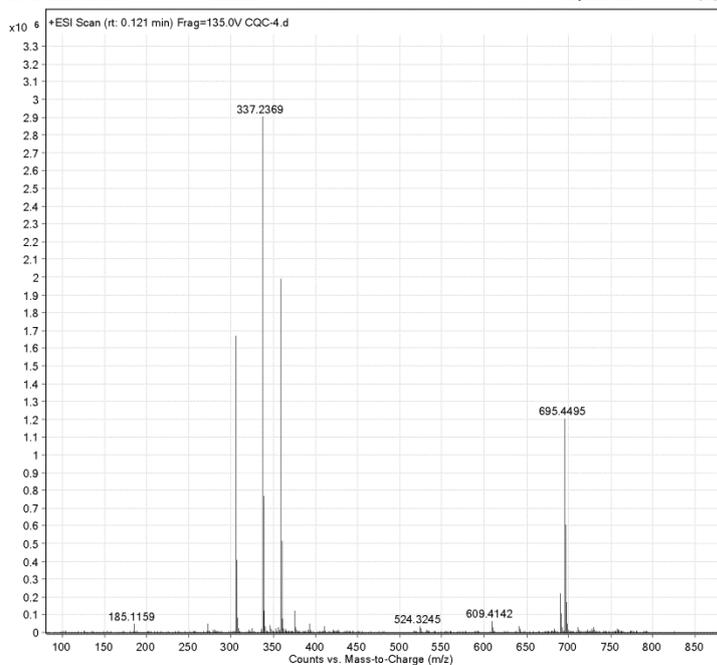


Figure S15. The ^1H NMR spectrum of **5/6** in CDCl_3 .

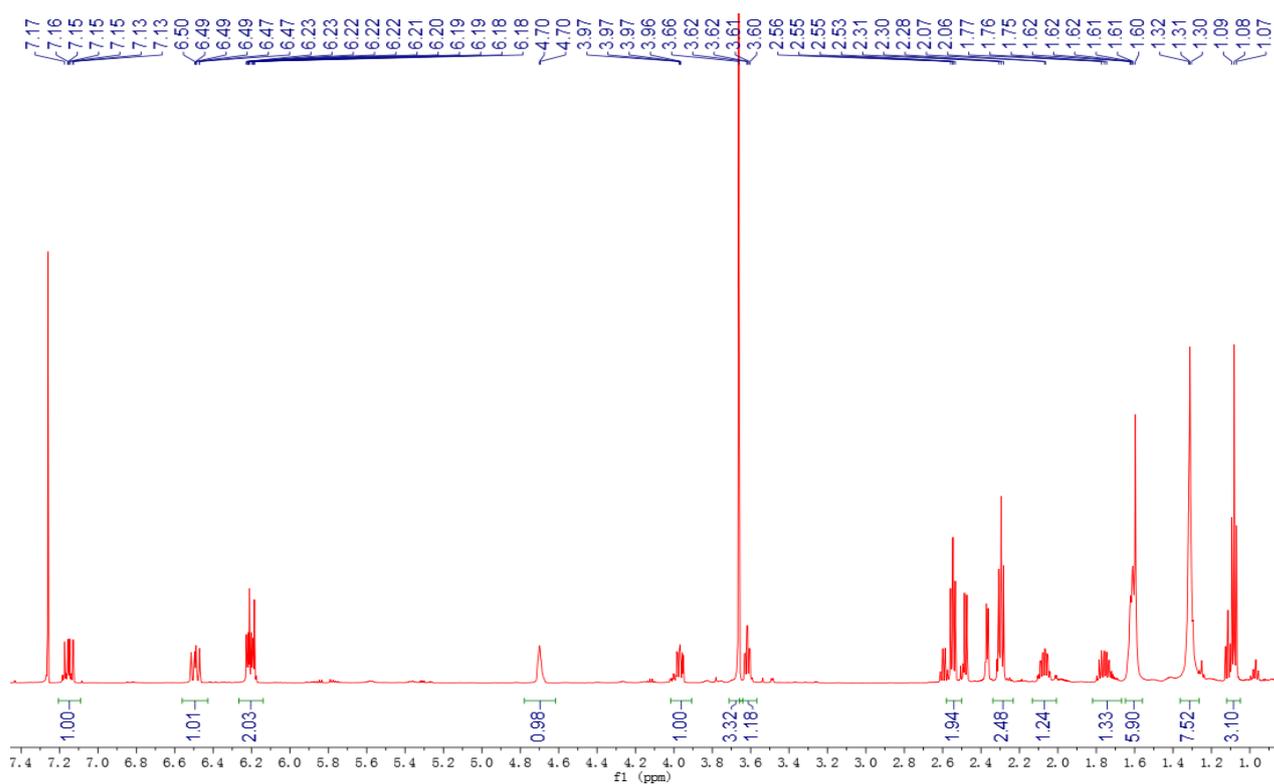


Figure S16. The ^{13}C NMR spectrum of **5/6** in CDCl_3 .

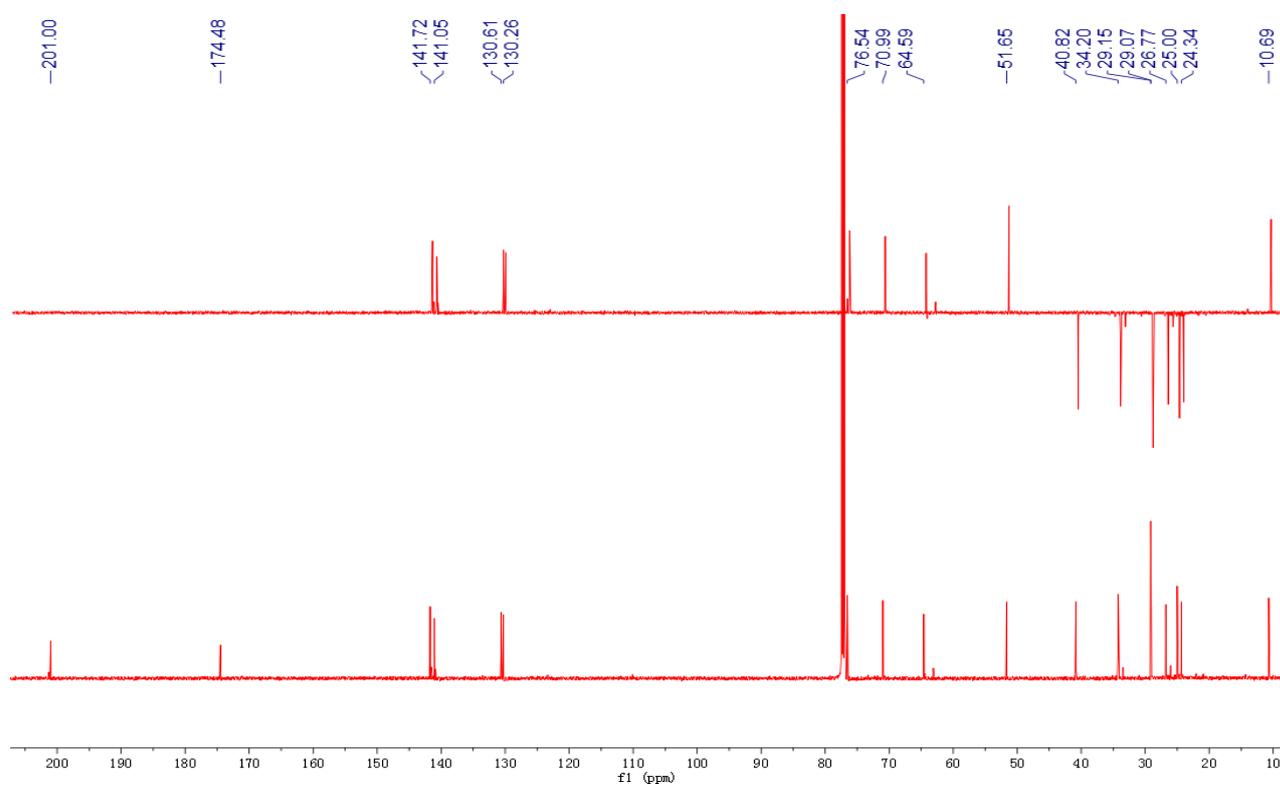


Figure S17. The ^1H - ^1H COSY spectrum of **5/6** in CDCl_3 .

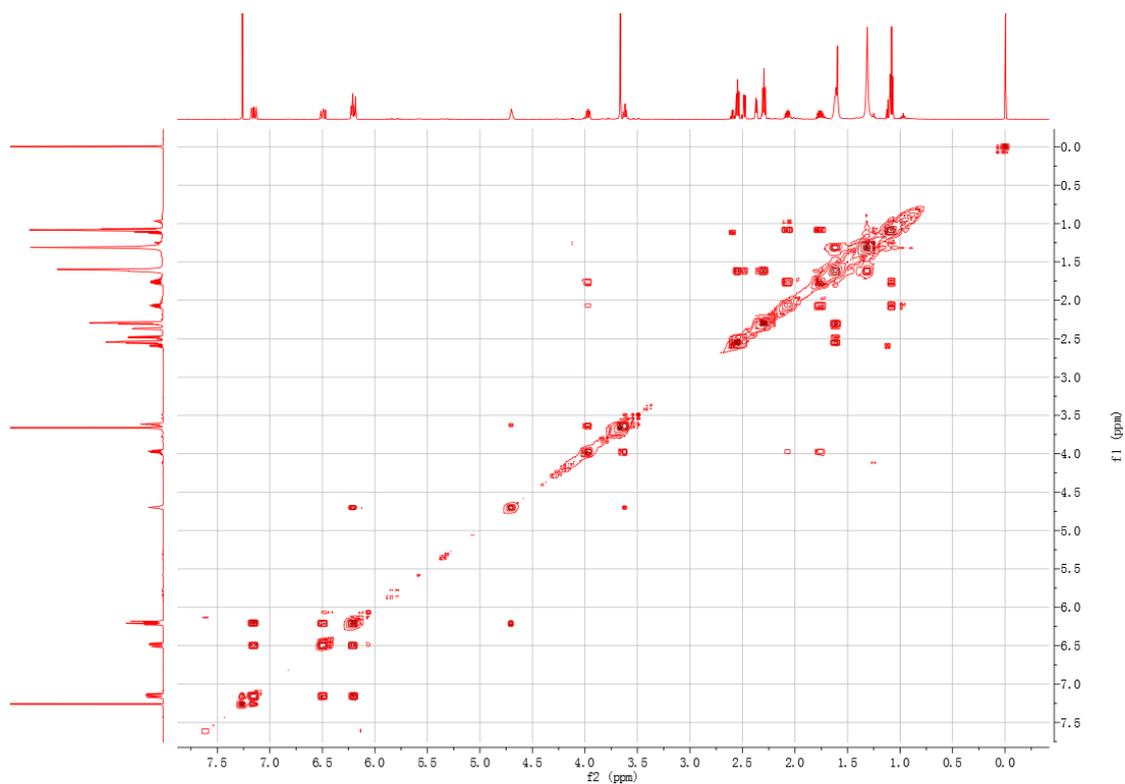


Figure S18. The HSQC spectrum of **5/6** in CDCl_3 .

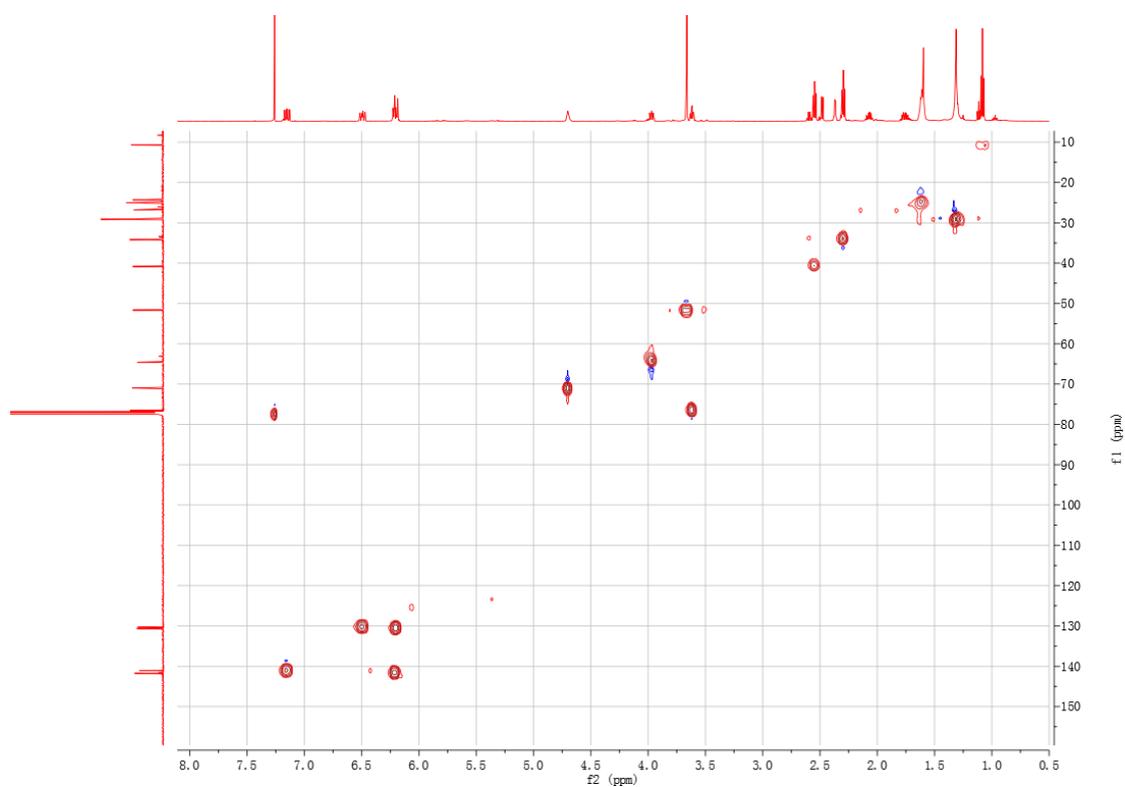


Figure S19. The HMBC spectrum of 5/6 in CDCl₃.

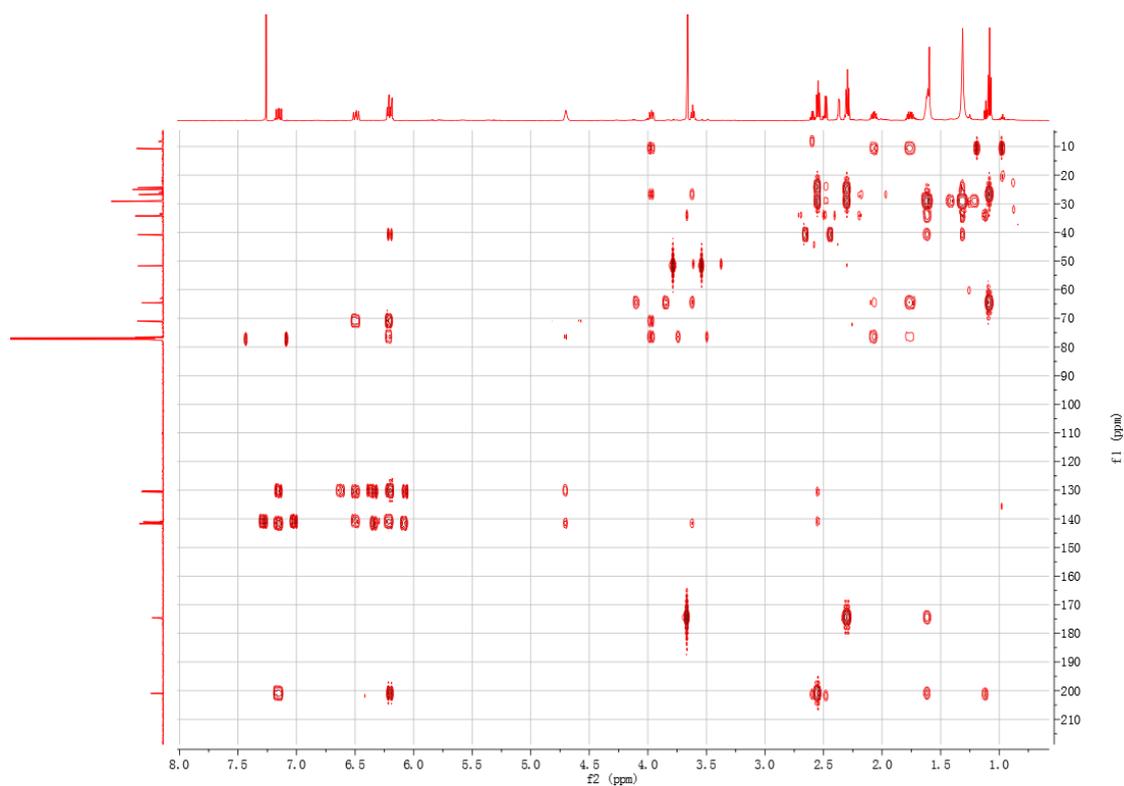


Figure S20. The (+)-HRESIMS spectrum of 5/6.

Sample Name	CQC-17	Position	P1-C3	Instrument Name	Instrument 1
User Name		Inj Vol	1	InjPosition	
Sample Type	Sample	IRM Calibration Status	Some Ions Missed	Data Filename	CQC-17.d
ACQ Method	wss-isocratic elution-Positive.m	Comment		Acquired Time	3/26/2018 4:15:01 PM

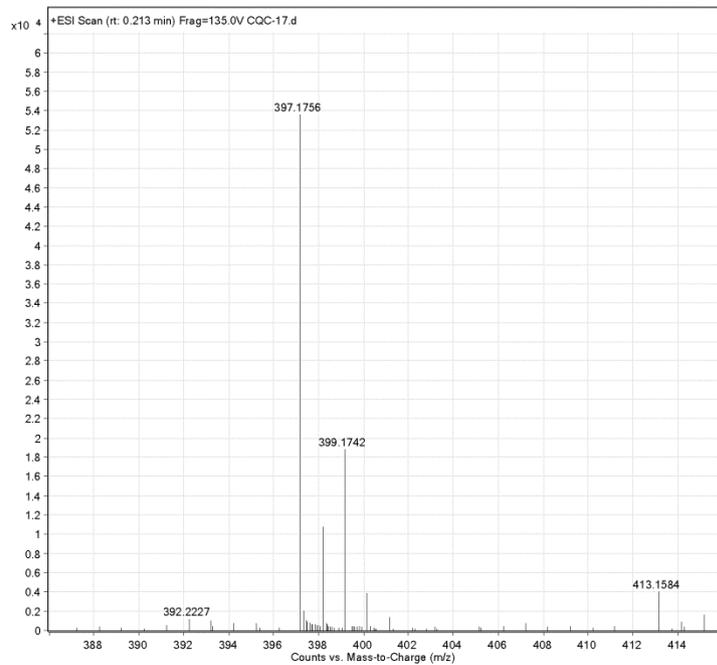


Figure S21. The ^1H NMR spectrum of **9** in CDCl_3 .

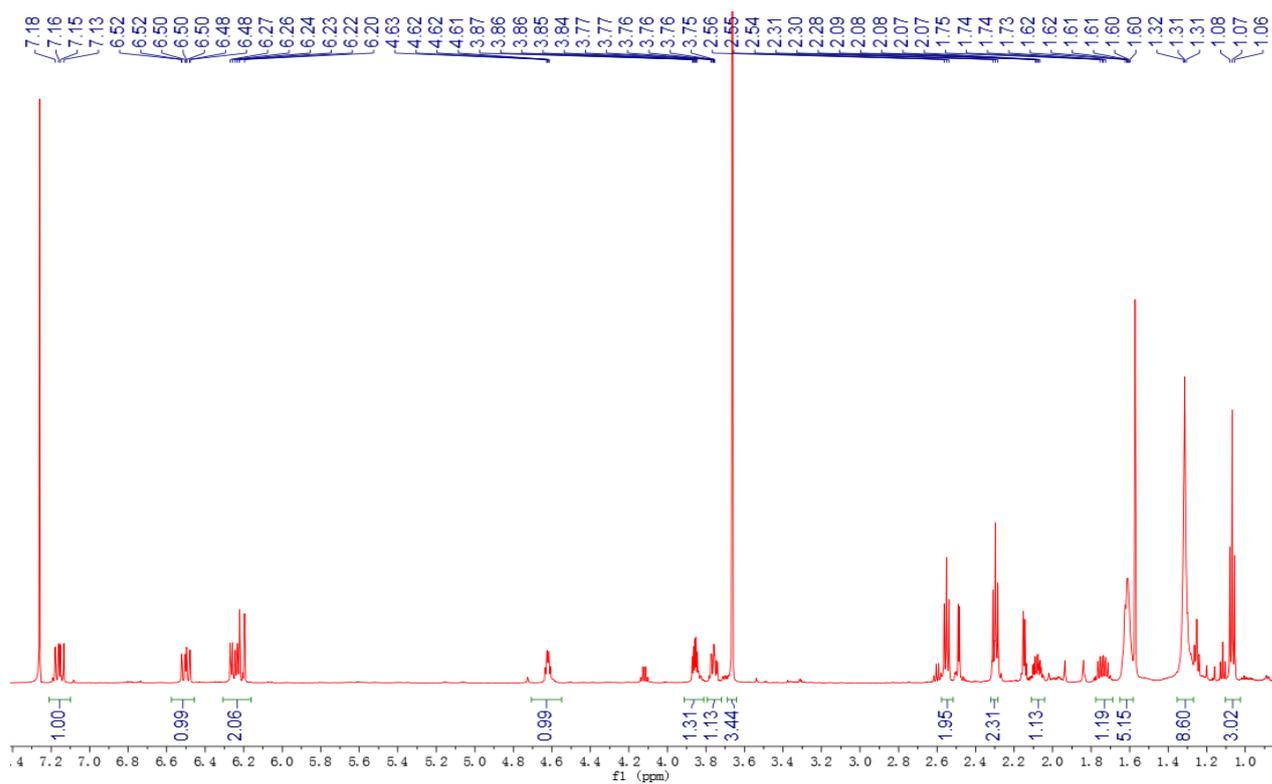


Figure S22. The ^{13}C NMR spectrum of **9** in CDCl_3 .

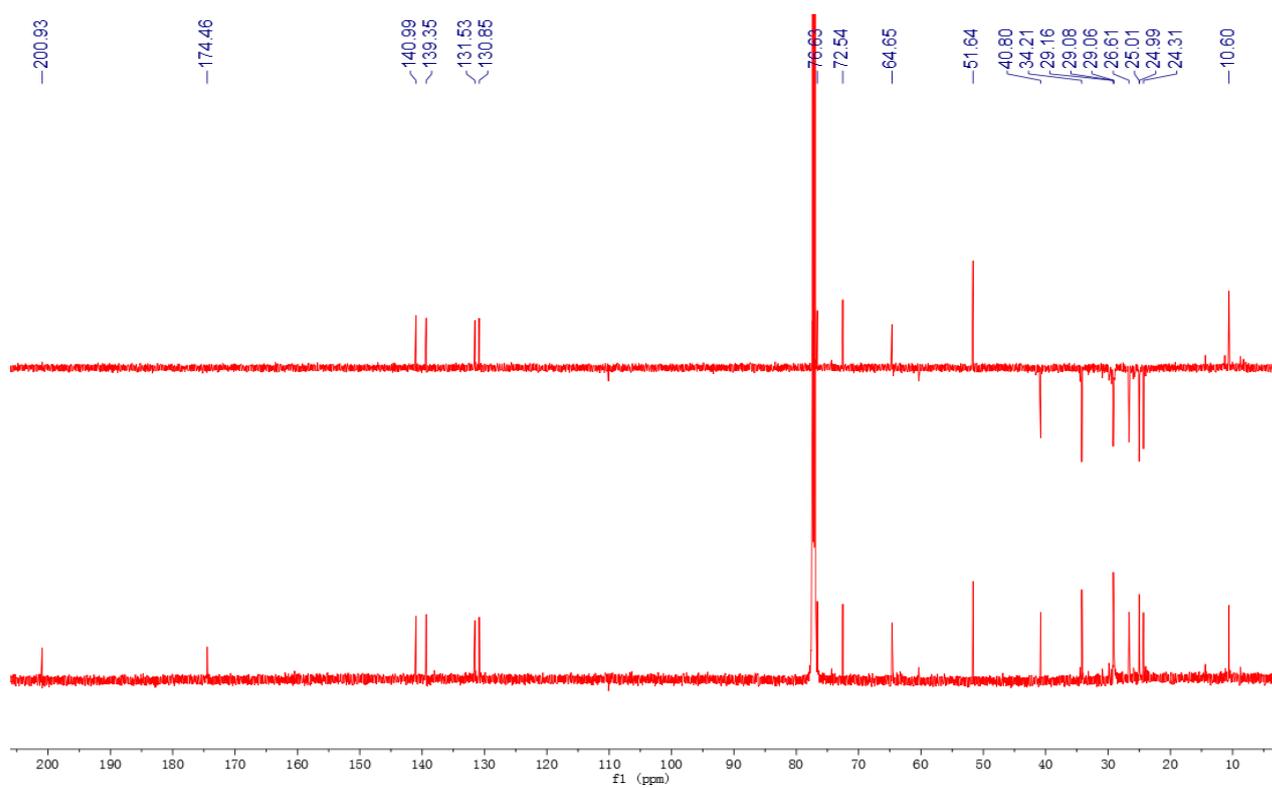


Figure S23. The ^1H - ^1H COSY spectrum of **9** in CDCl_3 .

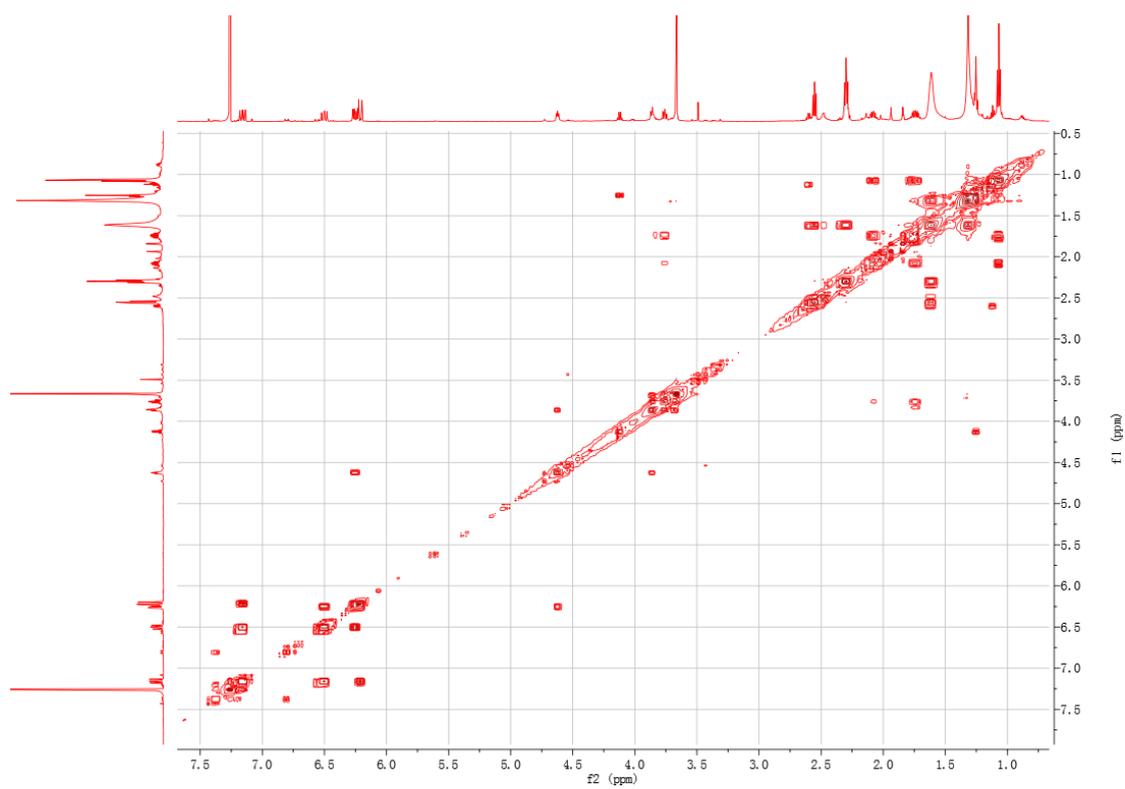


Figure S24. The HSQC spectrum of **9** in CDCl_3 .

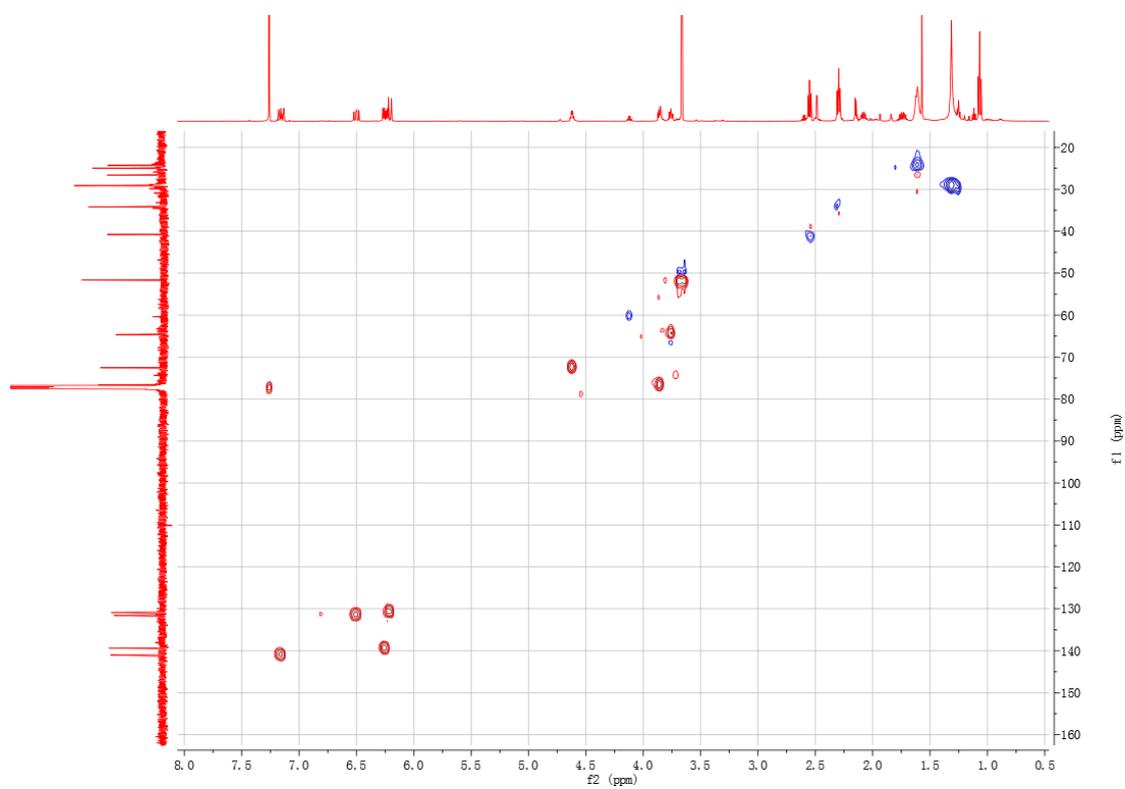


Figure S25. The HMBC spectrum of **9** in CDCl₃.

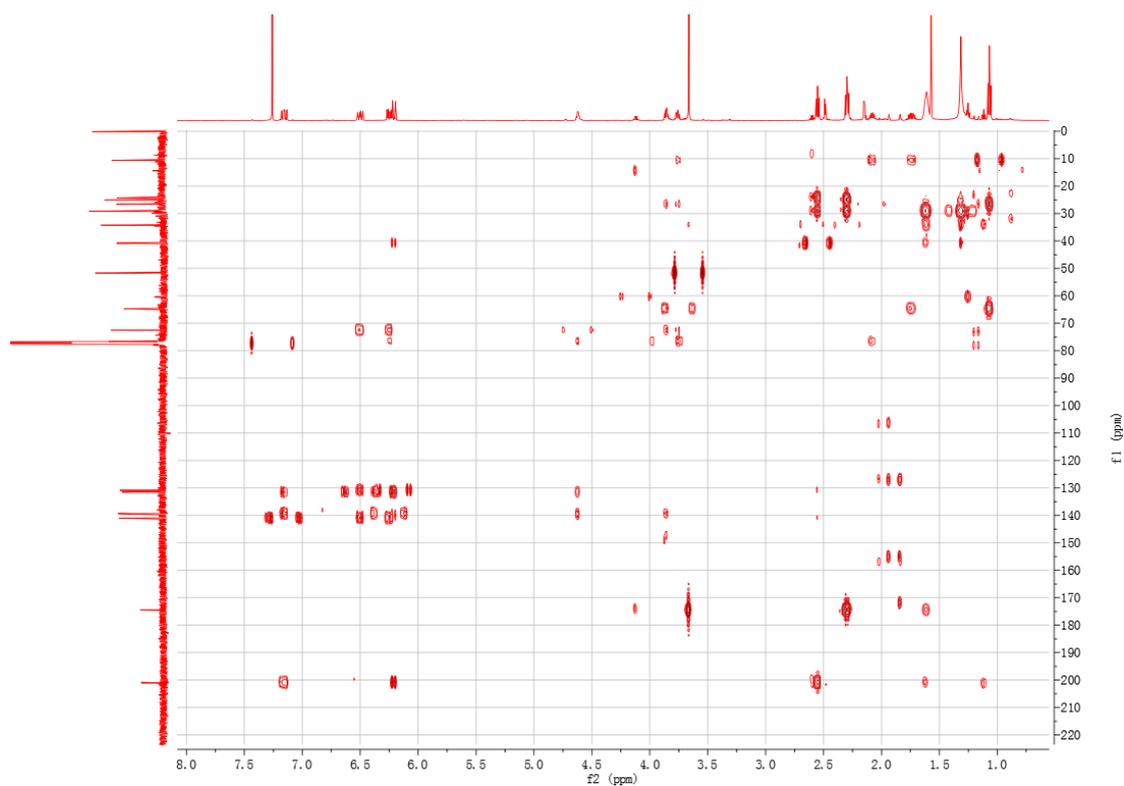


Figure S26. The (+)-HRESIMS spectrum of **9**.

Sample Name	CQC-16	Position	P1-C2	Instrument Name	Instrument 1
User Name		Inj Vol	1	InjPosition	
Sample Type	Sample	IRM Calibration Status	Some Ions Missed	Data Filename	CQC-16.d
ACQ Method	wss-isocratic-elution-Positive.m	Comment		Acquired Time	3/26/2018 4:12:18 PM

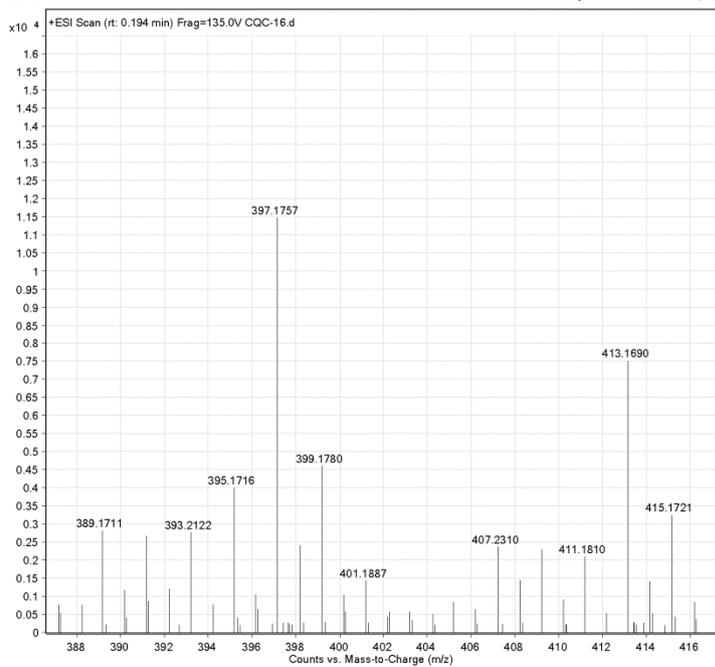


Table S1. Preliminary antimicrobial assay results (tested at 50 μ M).

No.	EC	SA	BS	PA	CA
1	8.47%	6.35%	-60.04%	0.18%	1.80%
2	11.15%	8.85%	-18.46%	-0.43%	7.12%
7	22.65%	10.66%	-41.62%	4.40%	10.62%
8	14.03%	8.25%	-44.04%	5.11%	-3.48%
10	7.36%	9.23%	-61.78%	0.89%	12.04%
11	14.19%	7.05%	-19.20%	9.02%	16.79%
12	29.48%	13.77%	16.68%	2.29%	2.67%
13	7.86%	24.45%	-94.47%	5.44%	9.27%
14	9.57%	4.33%	-92.05%	8.68%	39.38%
15	-3.54%	8.75%	-51.87%	9.32%	43.54%
17	-1.14%	6.19%	-69.79%	2.61%	-13.91%
18	11.07%	21.41%	-109.43%	6.82%	12.21%

EC: *Escherichia coli* ATCC 8739; SA: *Staphylococcus aureus* ATCC 25923; BS: *Bacillus subtilis* ATCC 6633 ; PA: *Pseudomonas aeruginosa* ATCC 9027; CA: *Candida albicans* ATCC 10231.

Table S2. Preliminary anti-acetylcholinesterase and anti-inflammatory assay results.

No.	anti-acetylcholinesterase ^a	anti-inflammatory ^b (NO inhibition)	anti-inflammatory ^b (Cell viability)
1	23.19%	38.91%	-
2	0%	45.60%	-
3	14.27%	15.83%	-
4	14.32%	-9.72%	-
5	1.44%	27.61%	-
6	3.79%	15.14%	-
7	0%	22.70%	-
8	0%	23.13%	-
10	18.67%	31.42%	-
11	21.62%	30.41%	-
12	13.83%	-2.68%	-
13	3.21%	71.12%	105.2%
14	6.06%	39.31%	-
15	12.64%	28.74%	-
16	0%	23.63%	-
17	0%	45.51%	-
18	9.26%	60.21%	119.8%
19	0%	45.93%	-

^a Tested at 50 μ M; ^b Tested at 20 μ M.