**Supplementary Information for**

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

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

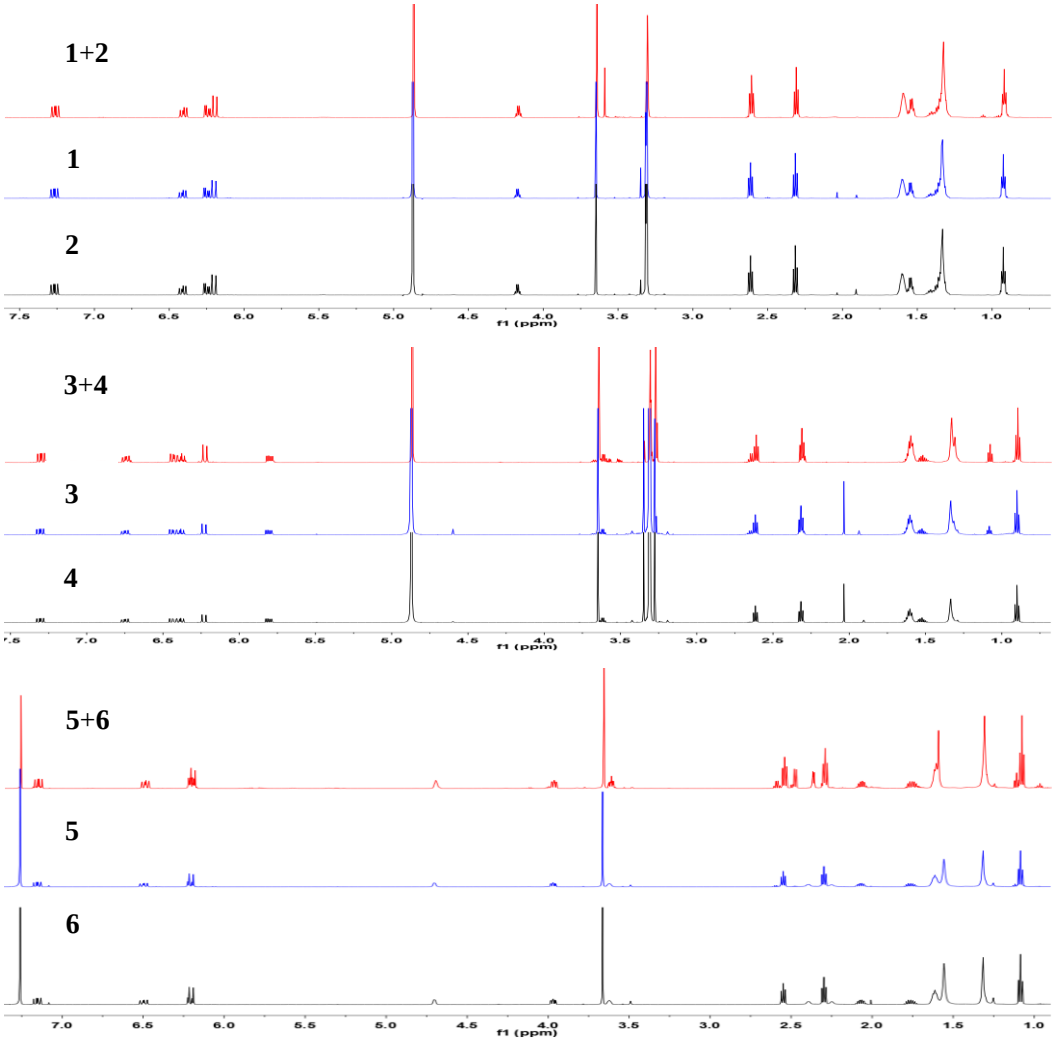

**Figure S2.** Chiral HPLC chromatograms for **1**–**8**.

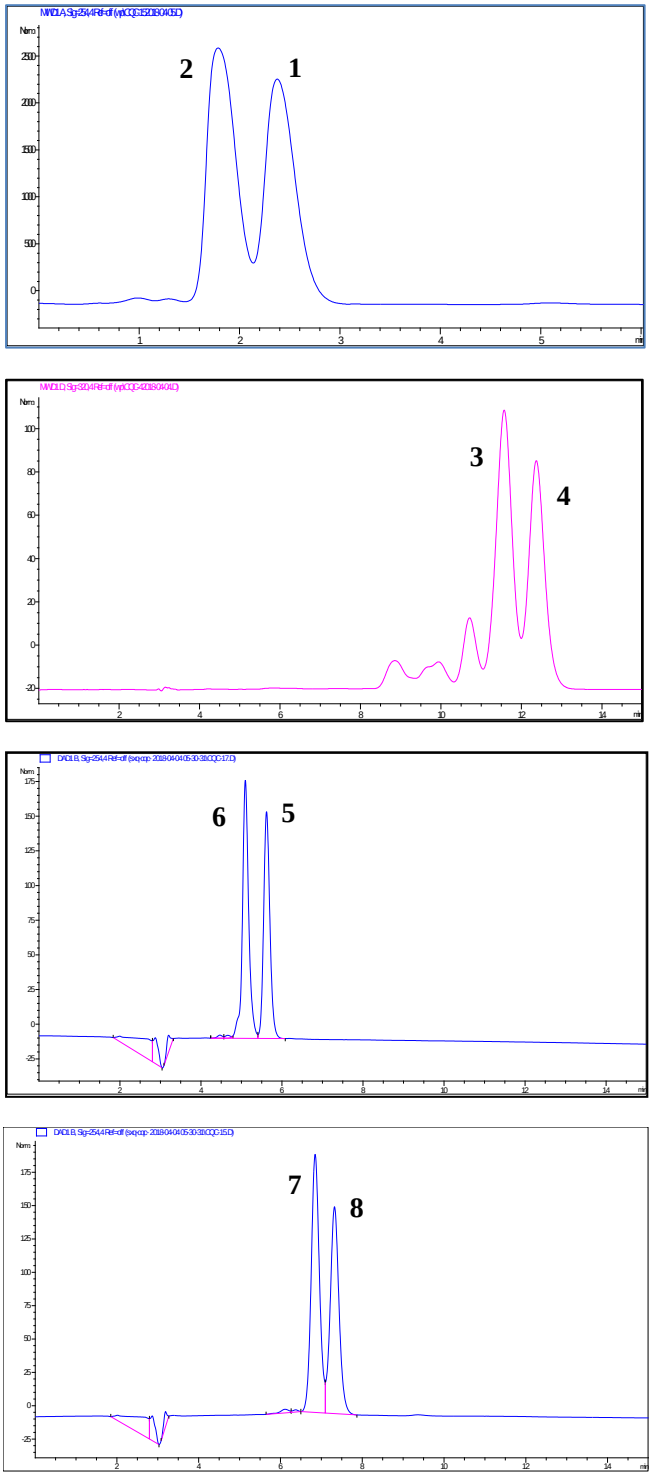

**Figure S3.** The $^{1}H$ NMR spectrum of **1**/**2** in $CD_3OD$

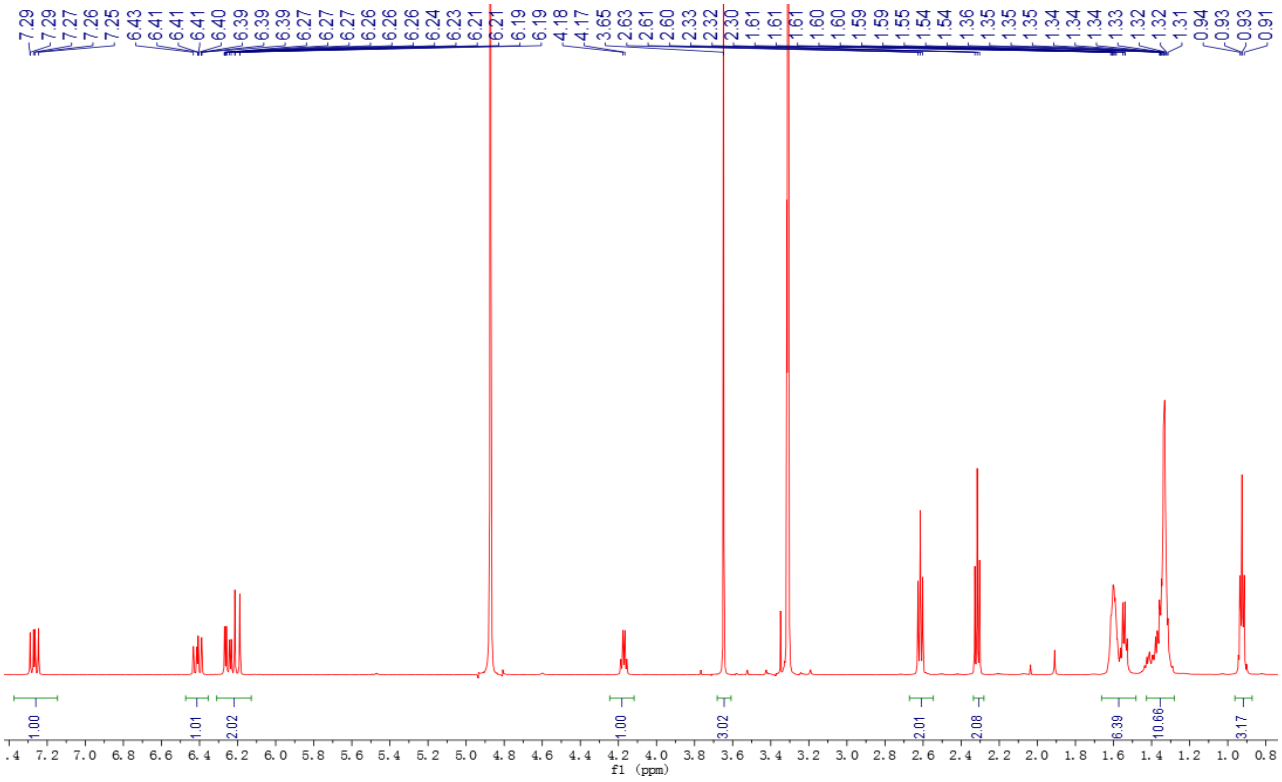

**Figure S4.** The $^{13}C$ NMR spectrum of **1**/**2** in $CD_3OD$

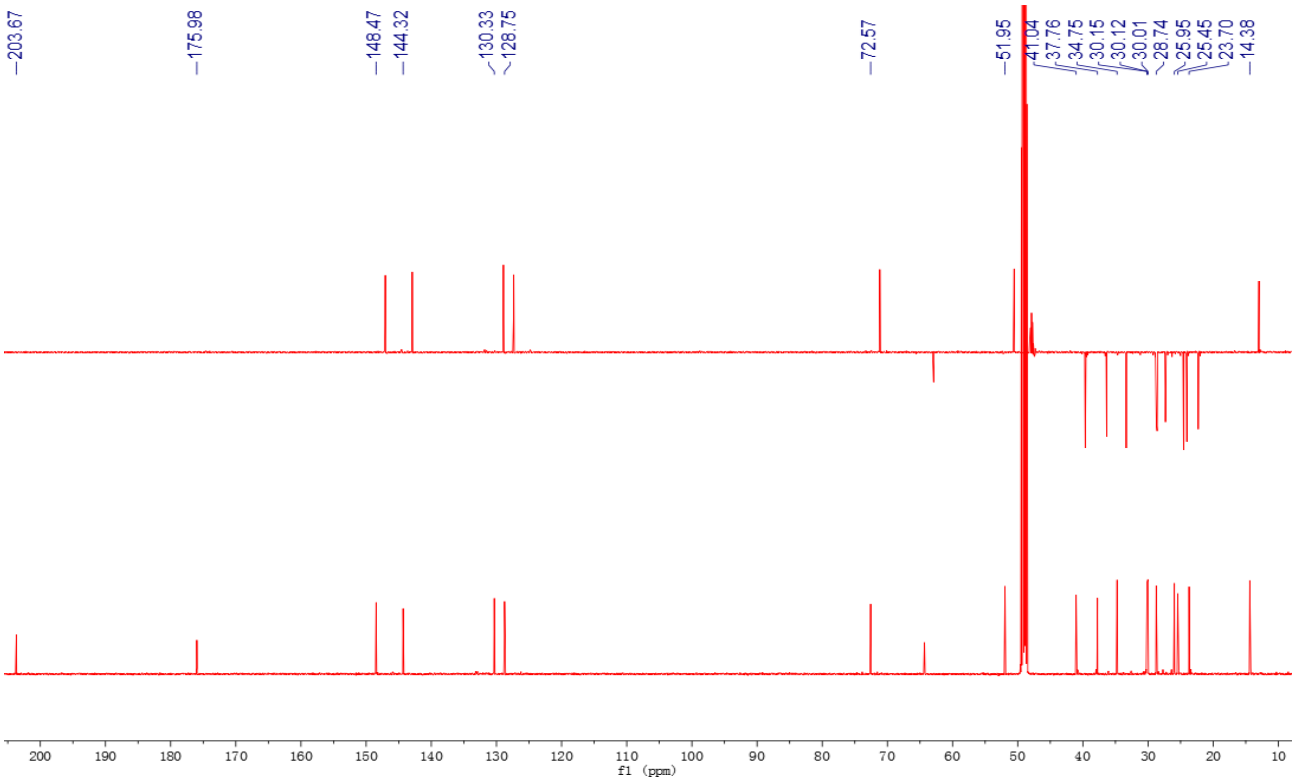

**Figure S5.** The $^{1}H$-$^{1}H$ COSY spectrum of **1/2** in $CD_3OD$.

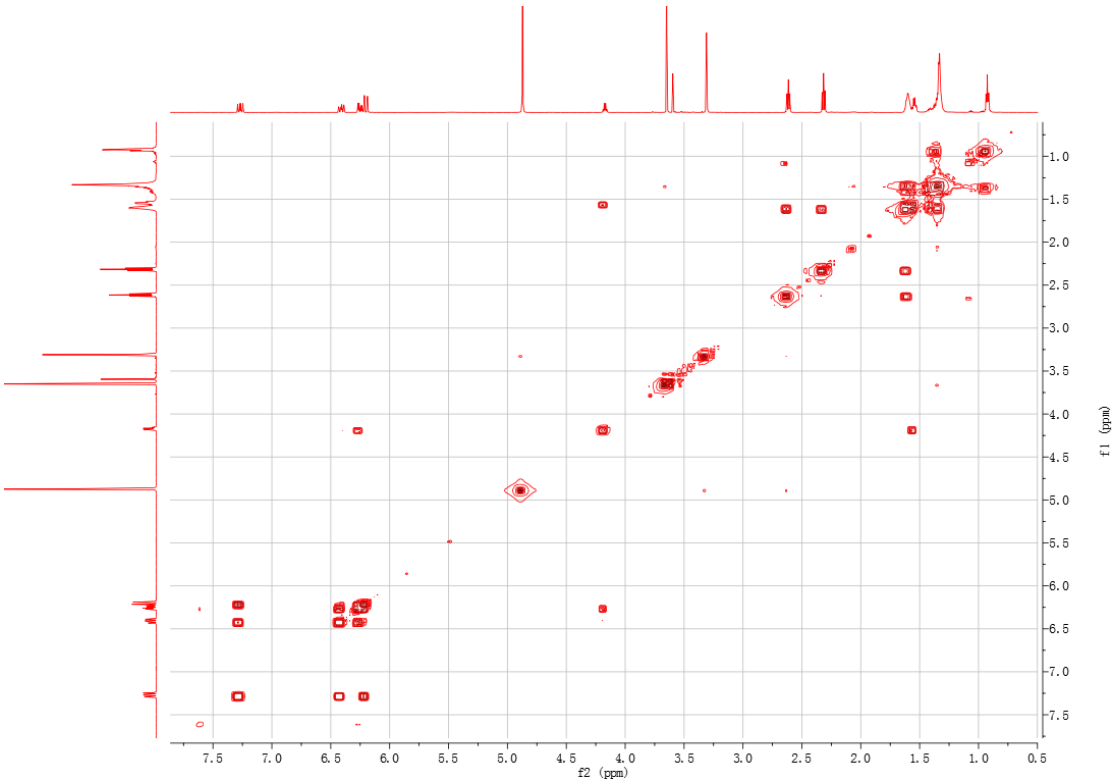


**Figure S6.** The HSQC spectrum of **1/2** in $CD_3OD$.

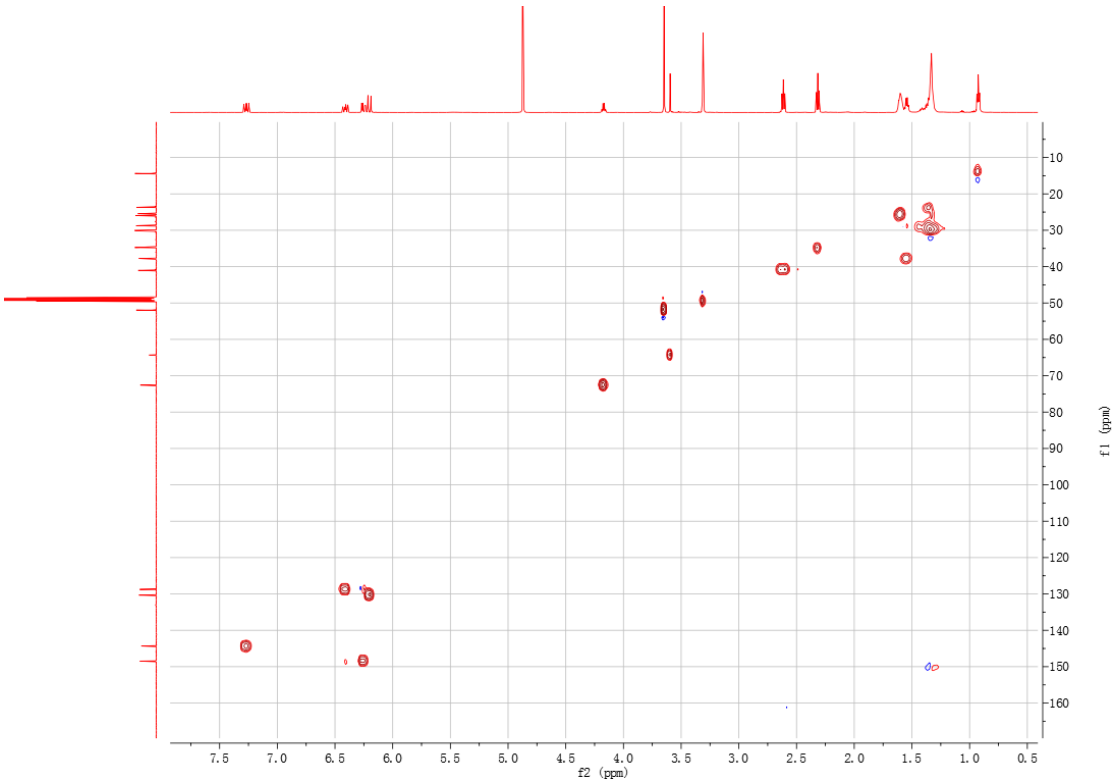

**Figure S7.** The HMBC spectrum of **1/2** in $CD_3OD$.

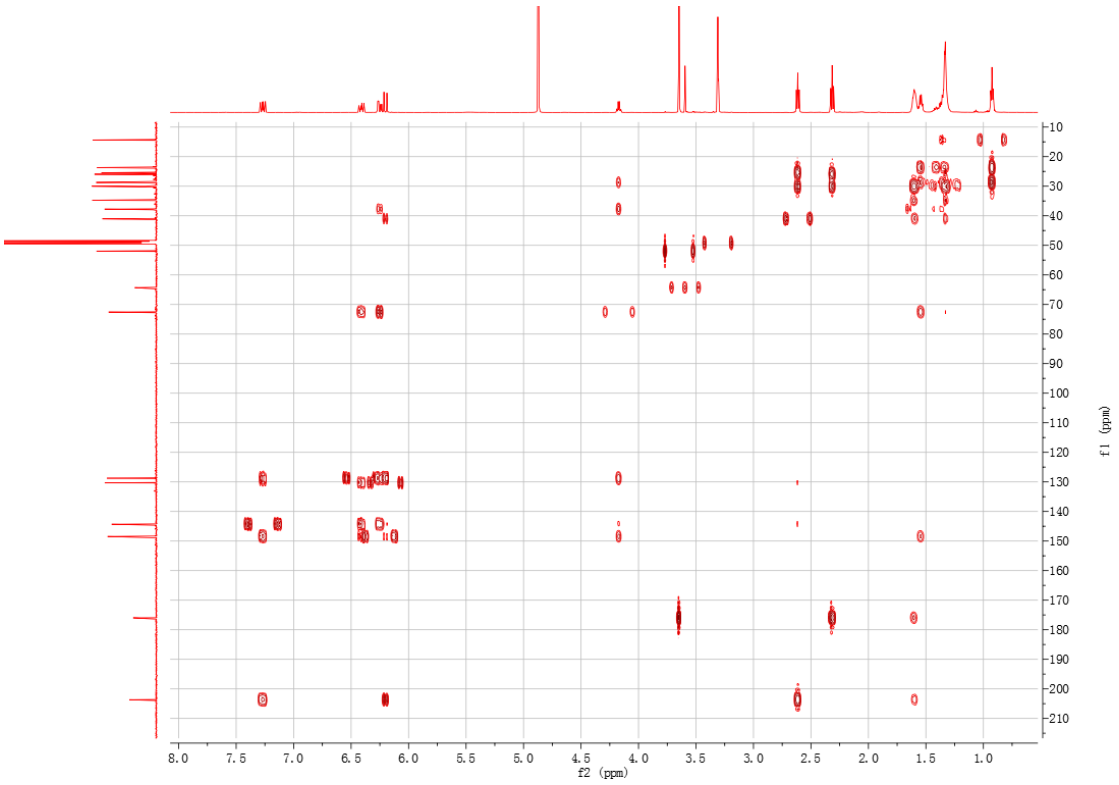


**Figure S8.** The (+)-HRESIMS spectrum of **1/2**.

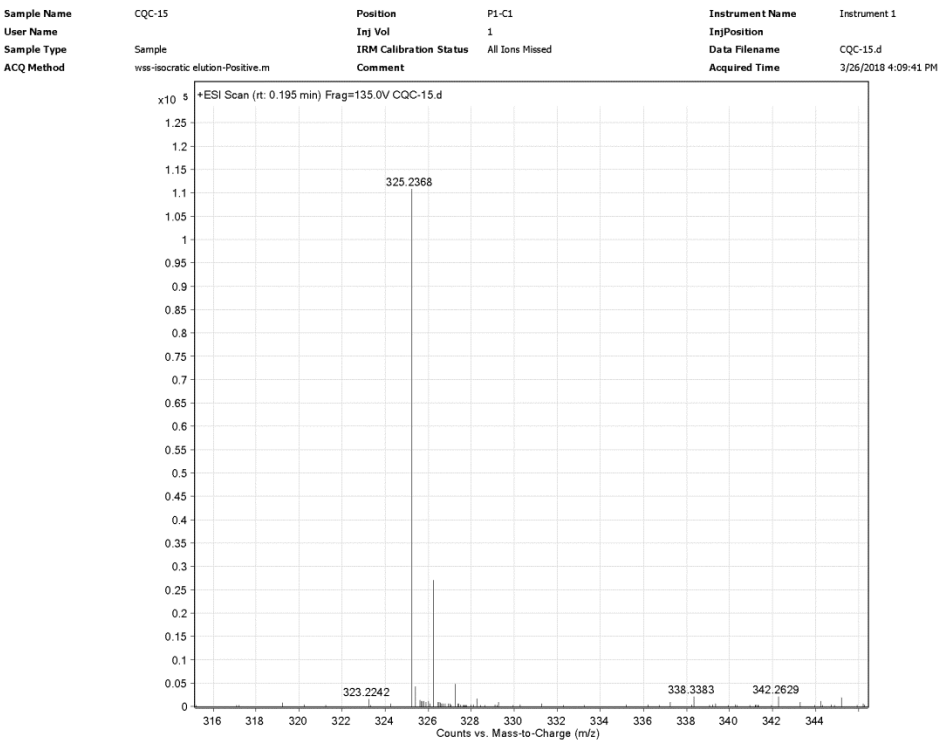

**Figure S9.** The $^{1}H$ NMR spectrum of **3/4** in $CD_3OD$.

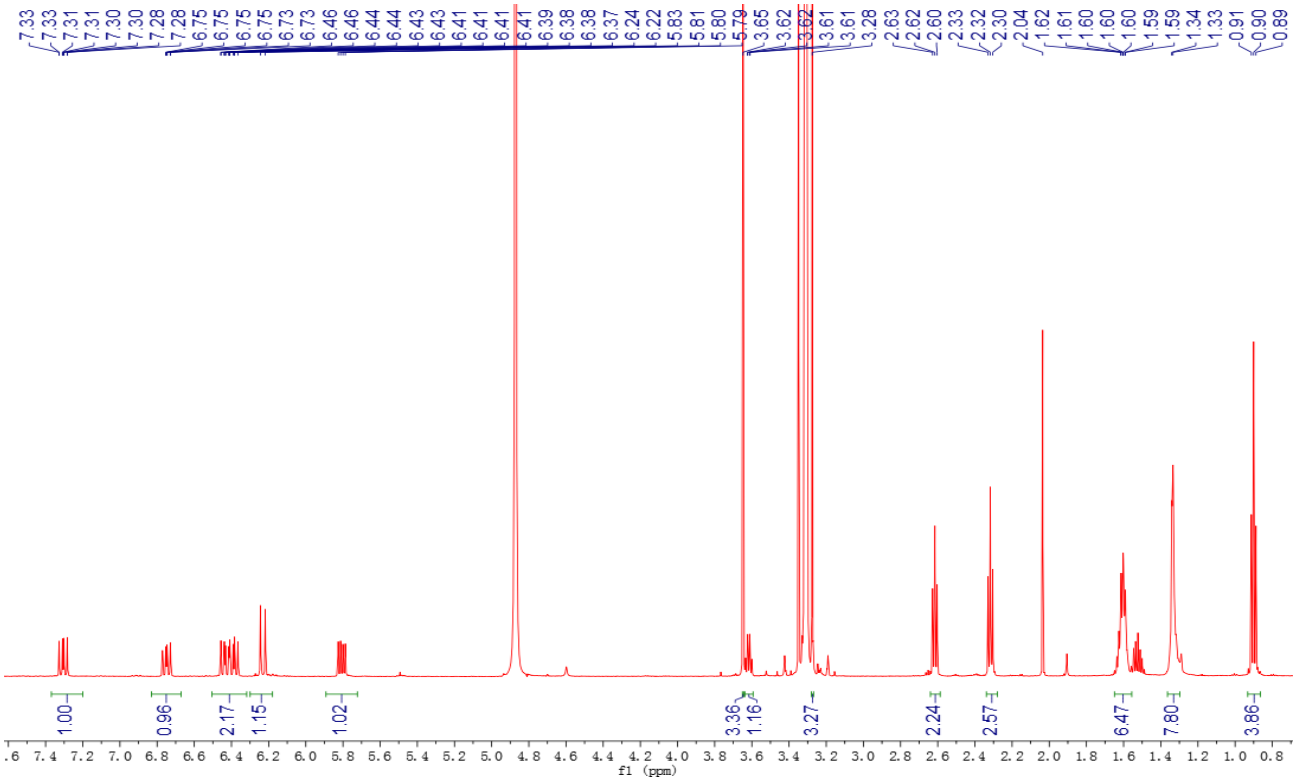


**Figure S10.** The $^{13}C$ NMR spectrum of **3/4** in $CD_3OD$.

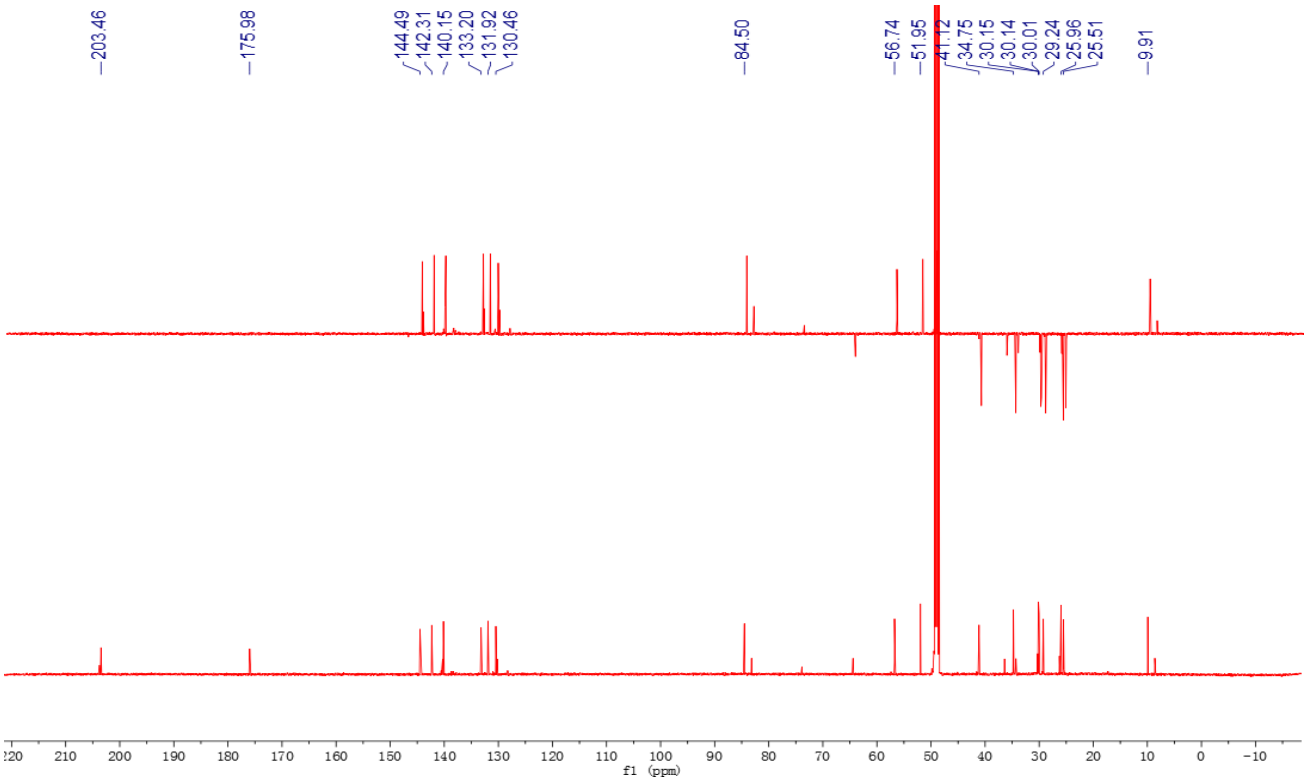

**Figure S11.** The $^{1}H$-$^{1}H$ COSY spectrum of **3/4** in $CD_3OD$.

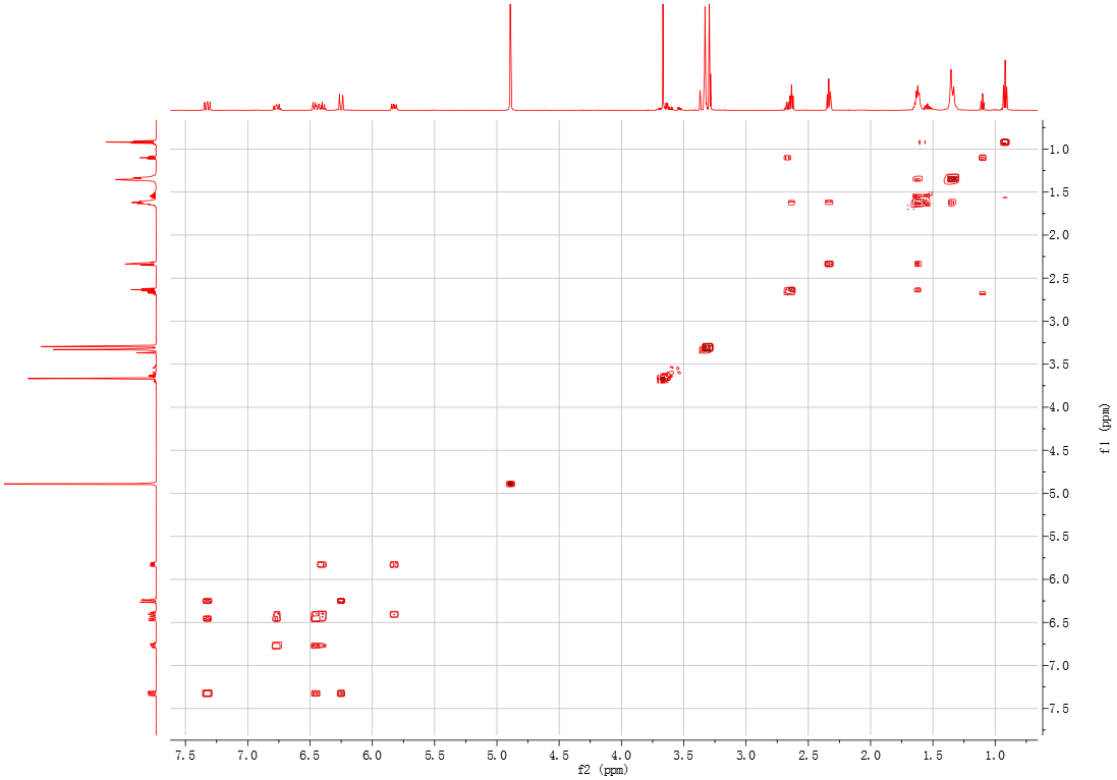


**Figure S12.** The HSQC spectrum of **3/4** in $CD_3OD$.

**Figure S13.** The HMBC spectrum of **3**/**4** in $CD_3OD$.

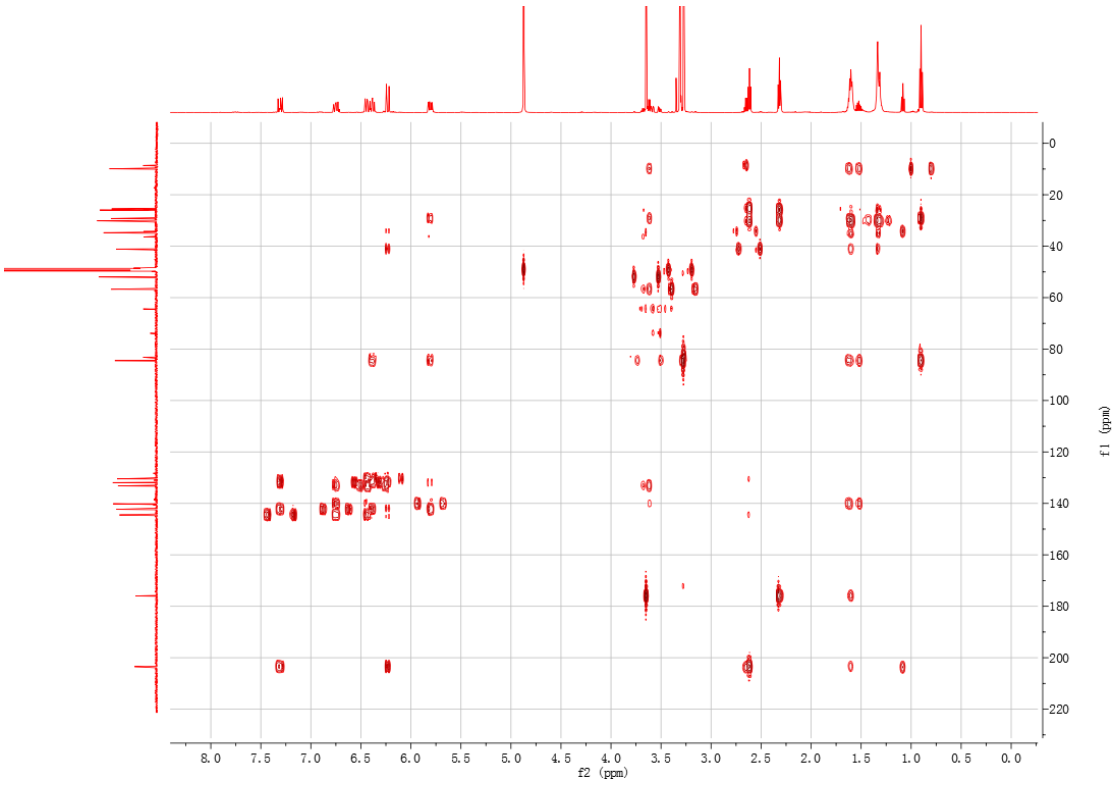


**Figure S14.** The (+)-HRESIMS spectrum of **3**/**4**.

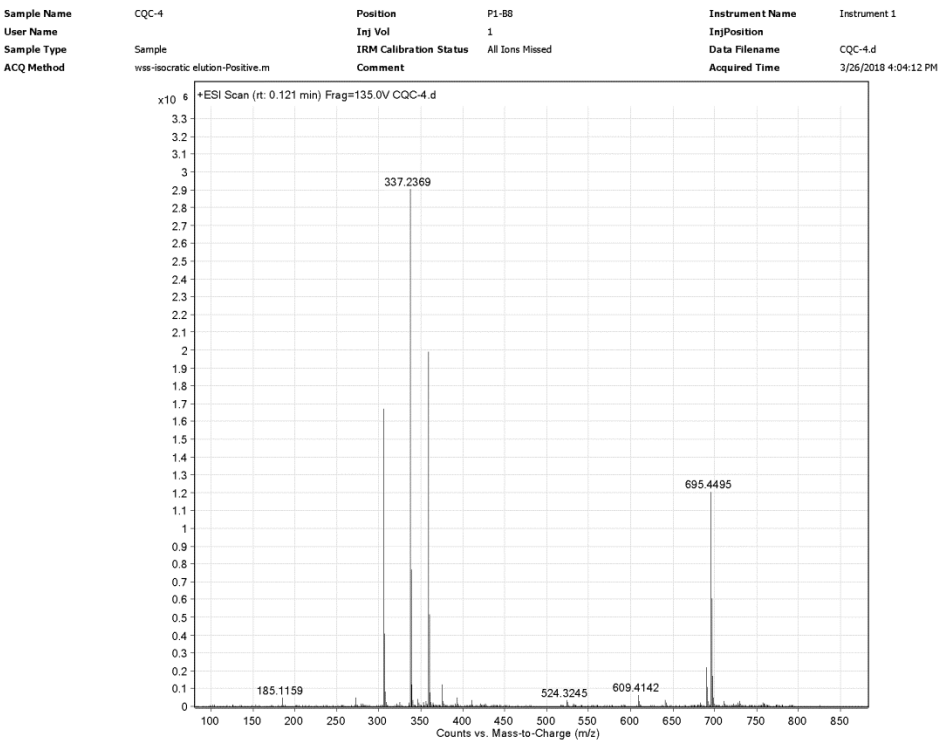

**Figure S15.** The $^{1}H$ NMR spectrum of **5/6** in $CDCl_3$.

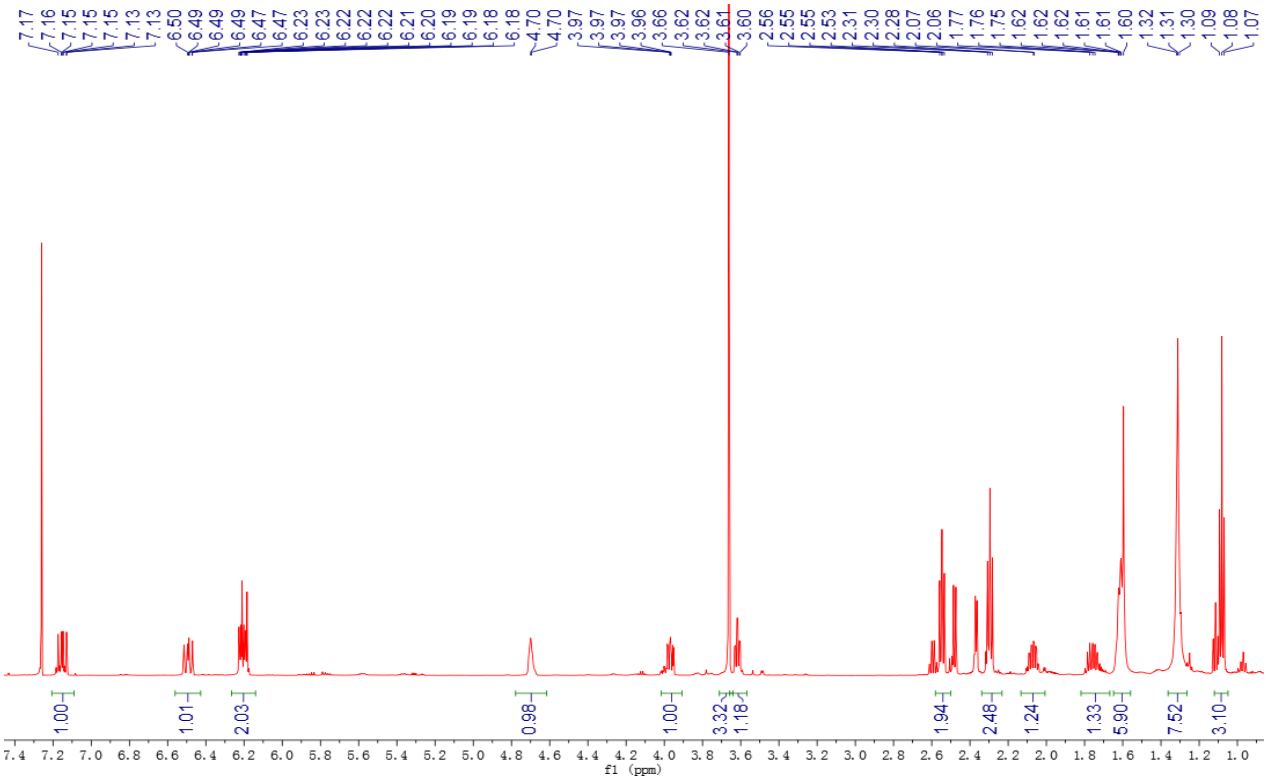

**Figure S16.** The $^{13}C$ NMR spectrum of **5/6** in $CDCl_3$.

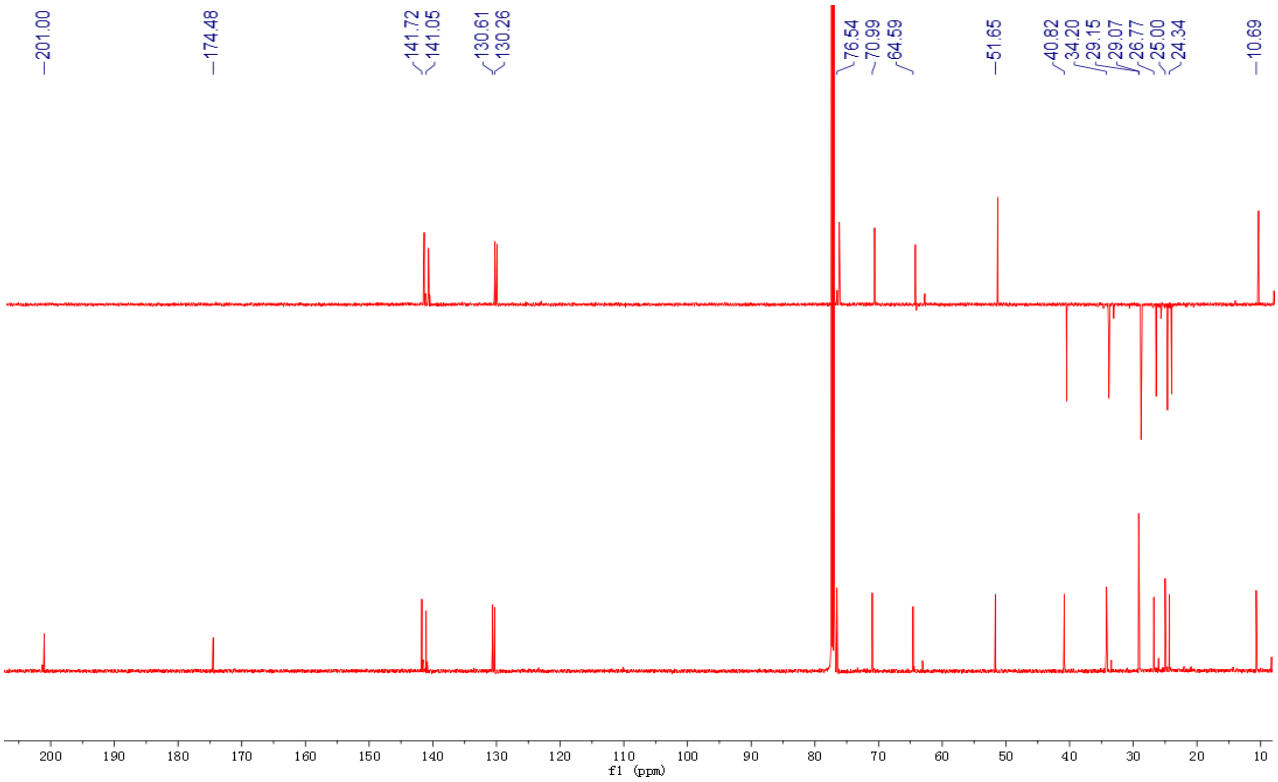

**Figure S17.** The $^{1}$H-$^{1}$H COSY spectrum of **5**/**6** in $CDCl_3$.


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

**Figure S19.** The HMBC spectrum of **5**/**6** in $CDCl_3$.


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

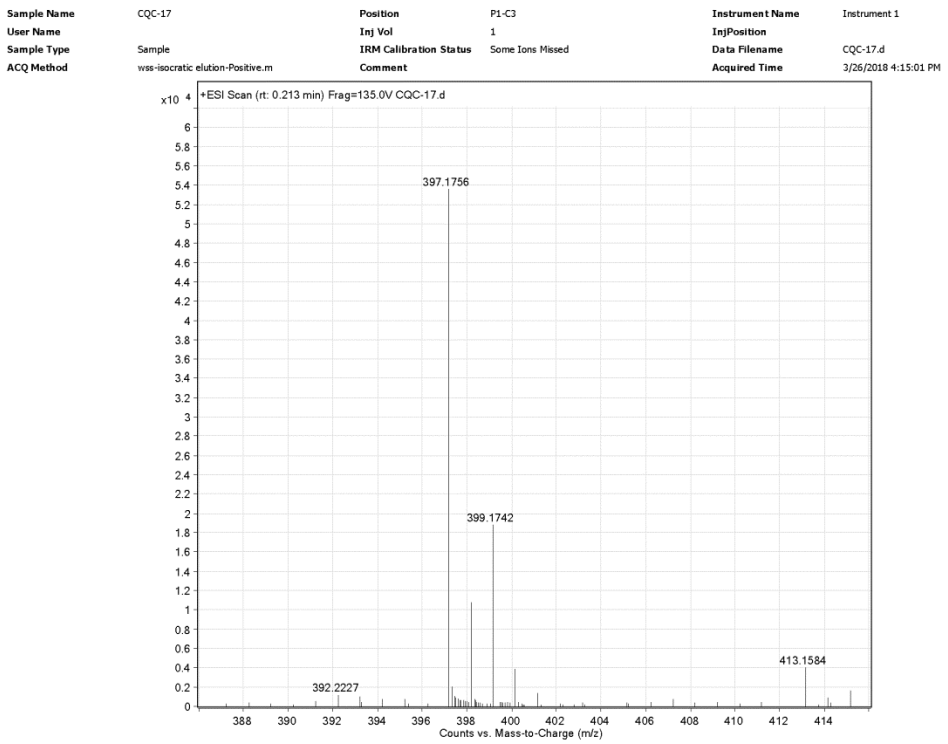

**Figure S21.** The $^{1}H$ NMR spectrum of **9** in $CDCl_3$.

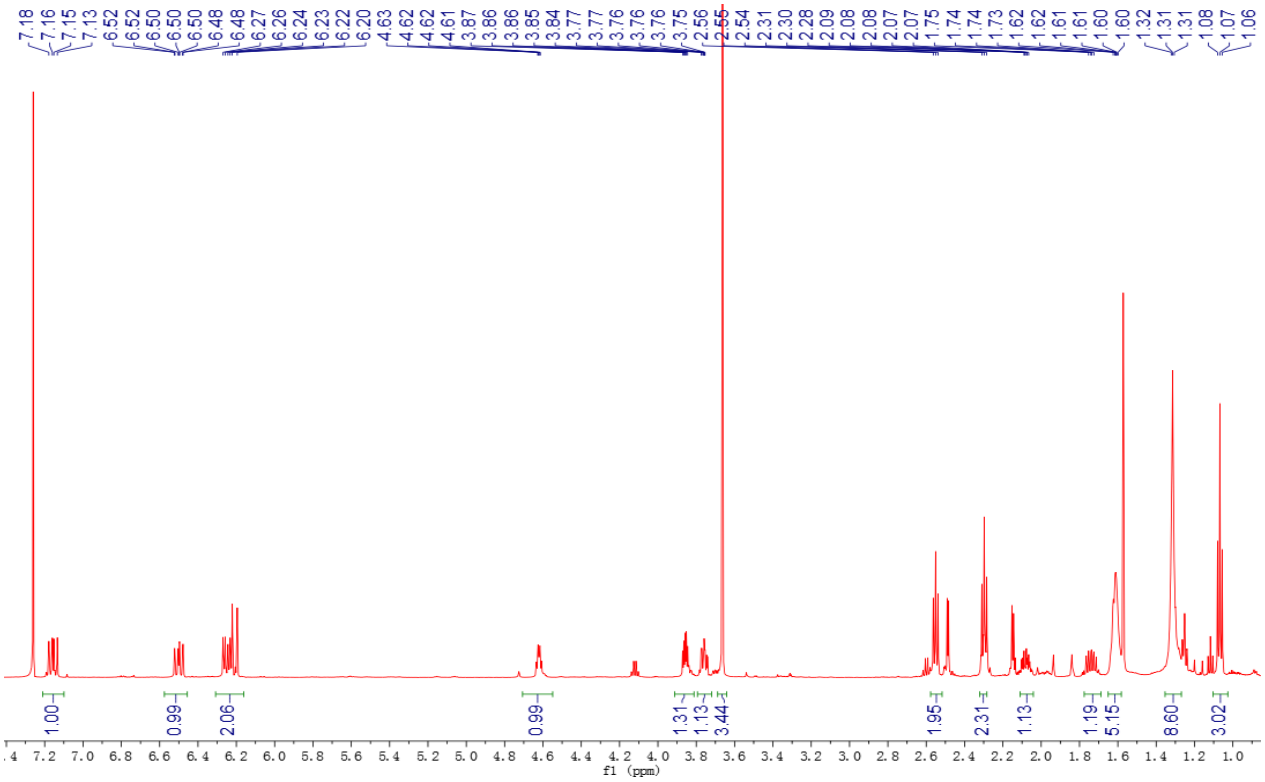

**Figure S22.** The $^{13}C$ NMR spectrum of **9** in $CDCl_3$.

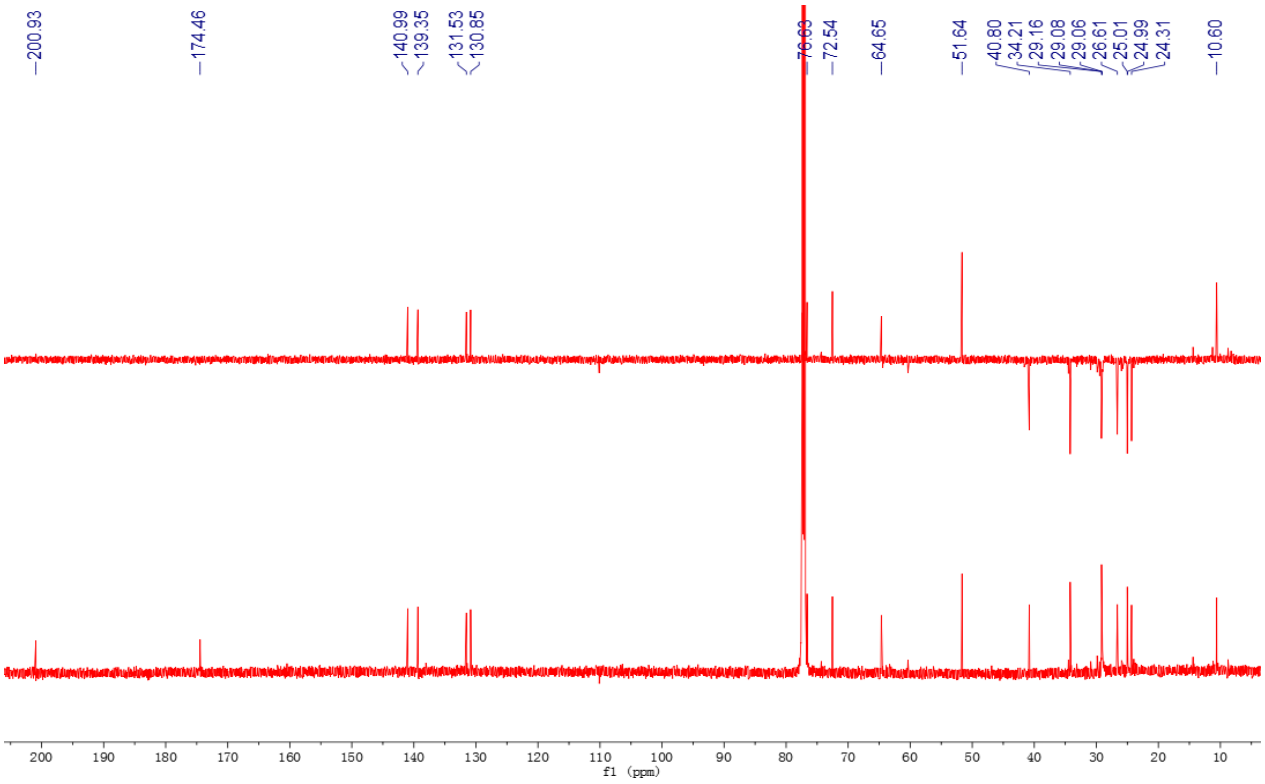

**Figure S23.** The $^{1}H$-$^{1}H$ COSY spectrum of **9** in $CDCl_3$.

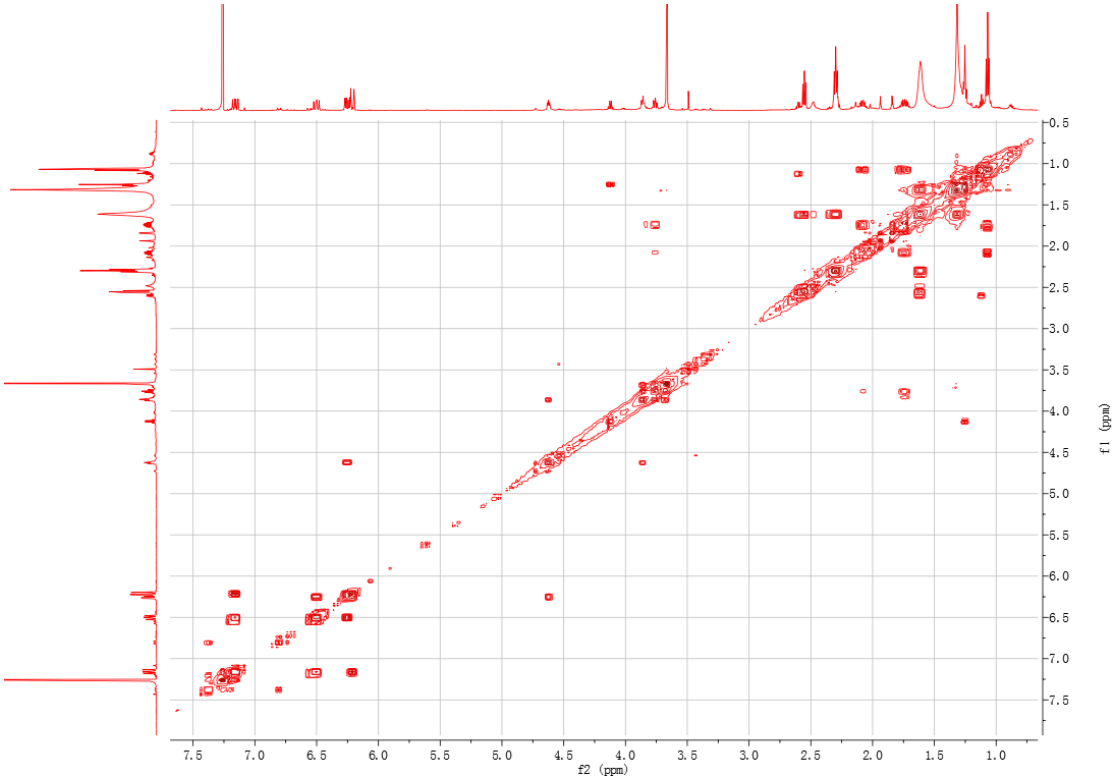


**Figure S24.** The HSQC spectrum of **9** in $CDCl_3$.

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

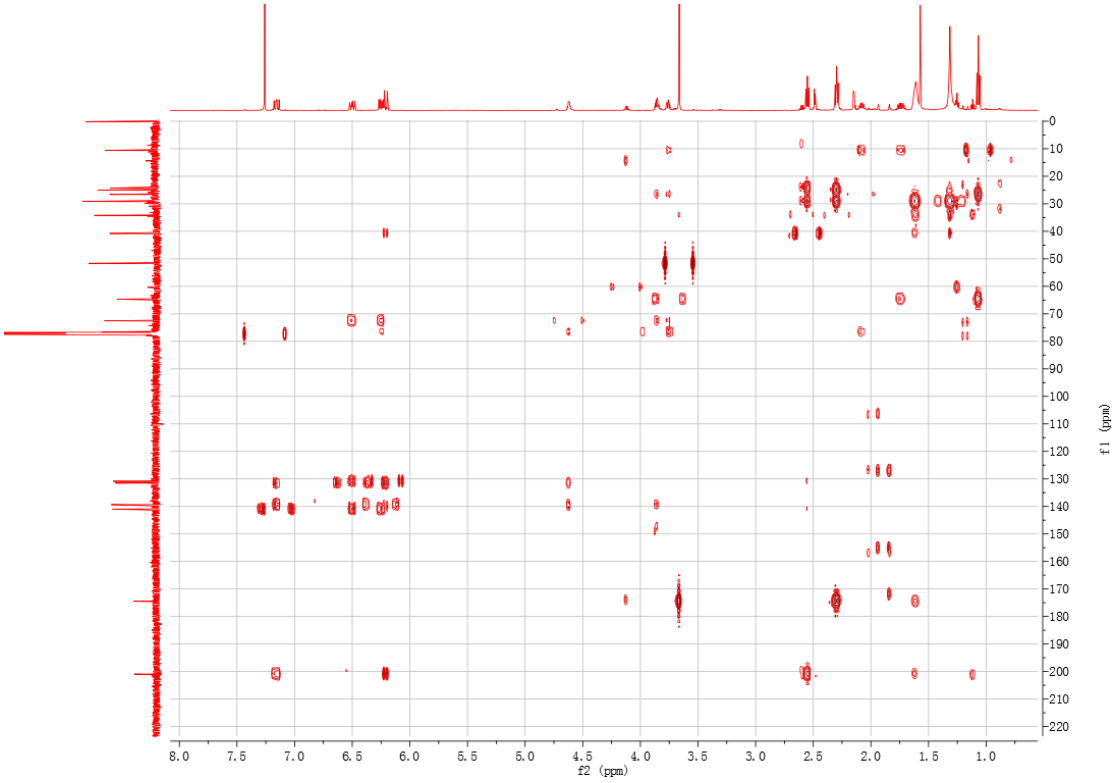


**Figure S26.** The (+)-HRESIMS spectrum of **9**.

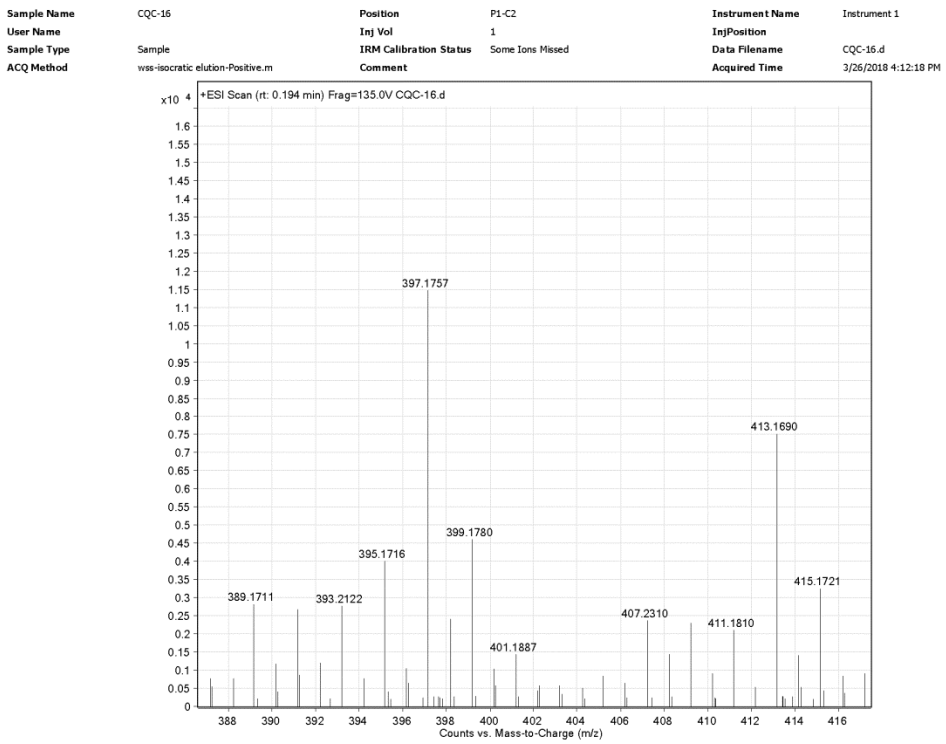

**Table S1.** Preliminary antimicrobial assay results (tested at 50 μM).

| 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 μM; [b] Tested at 20 μM.