

Supplementary data



Figure S1. The picture of *Hericium* sp. WBSP8.

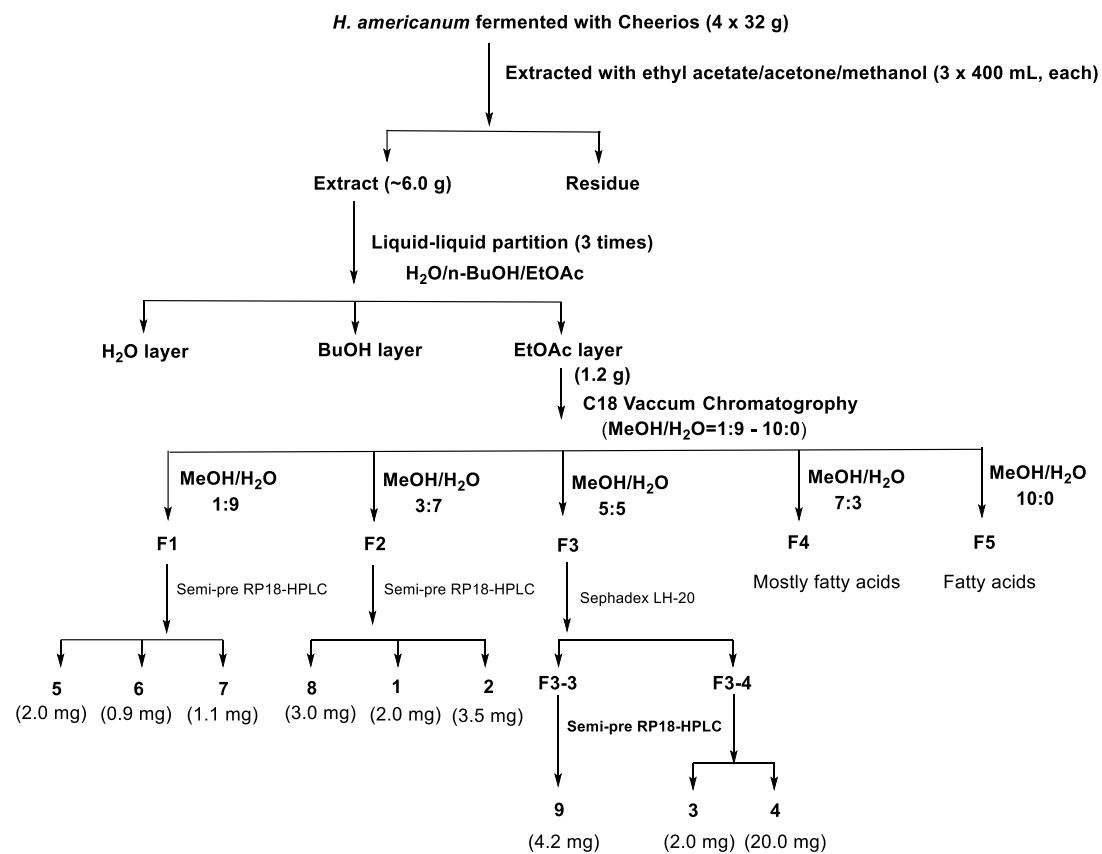


Figure S2. Flow diagram of extraction and isolation procedure of compounds 1-9 as described in detail in the Materials and Methods.

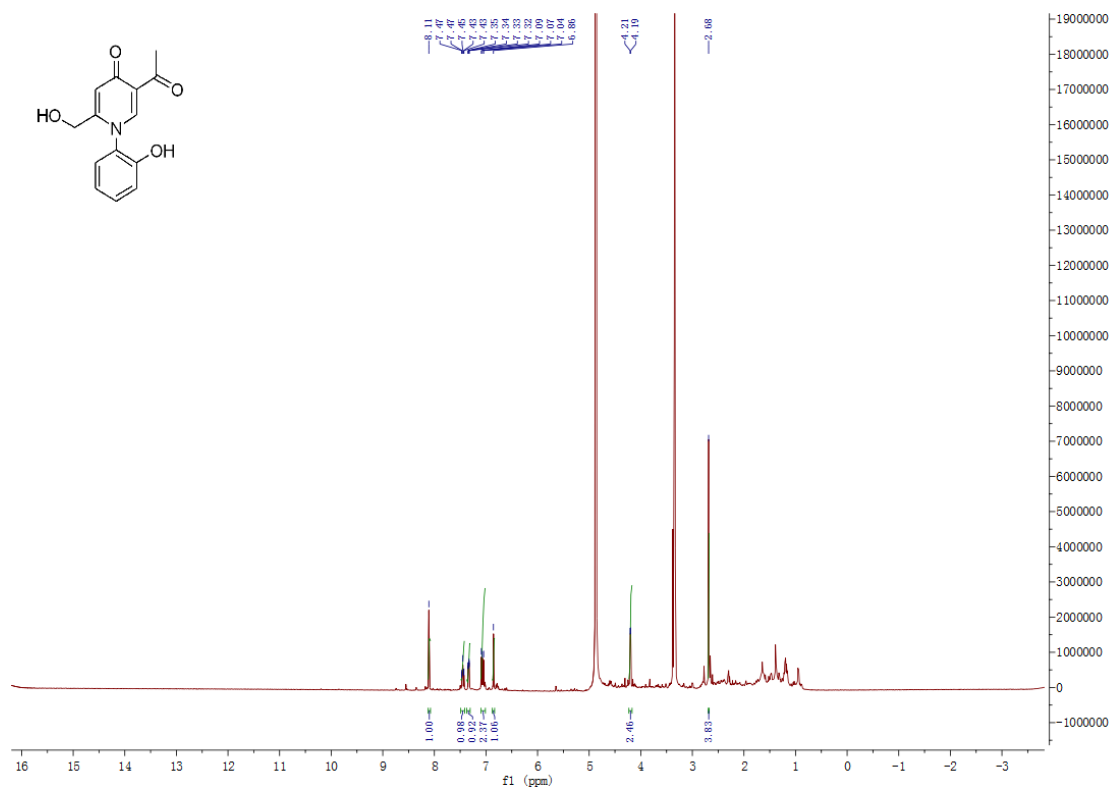


Figure S3. ^1H NMR (400 MHz, CD_3OD) spectrum of compound **1**

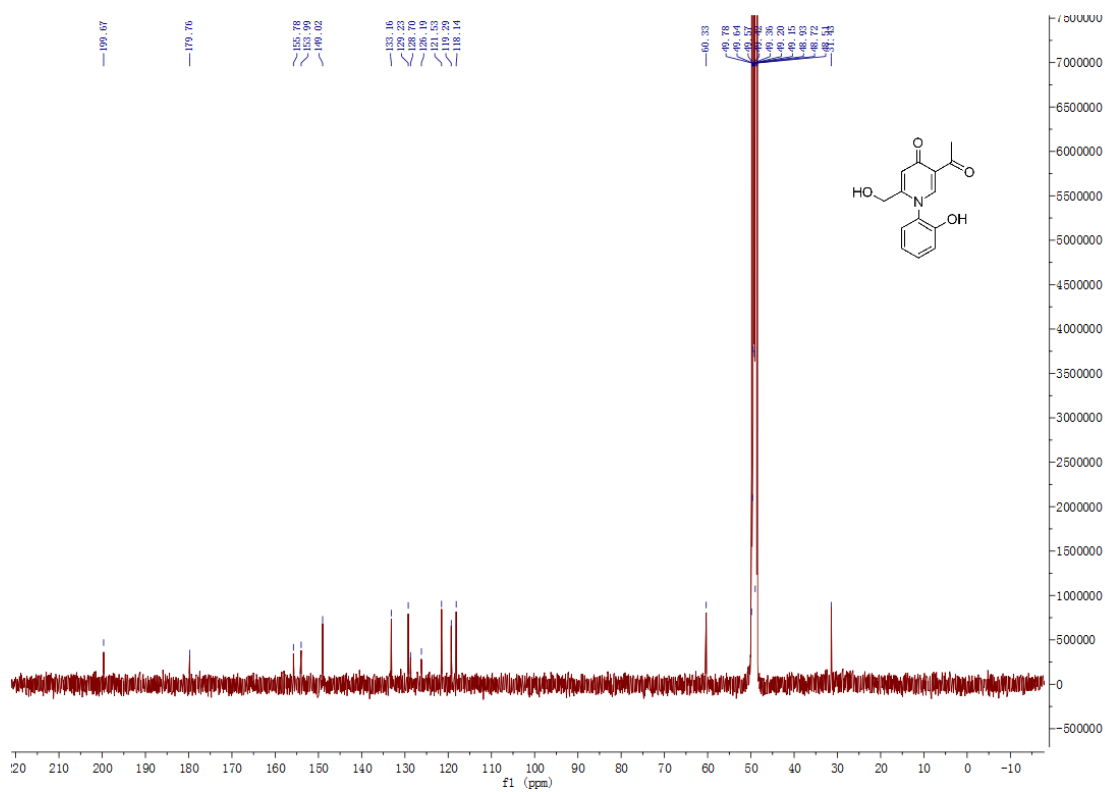


Figure S4. ^{13}C NMR (400 MHz, CD_3OD) spectrum of compound **1**

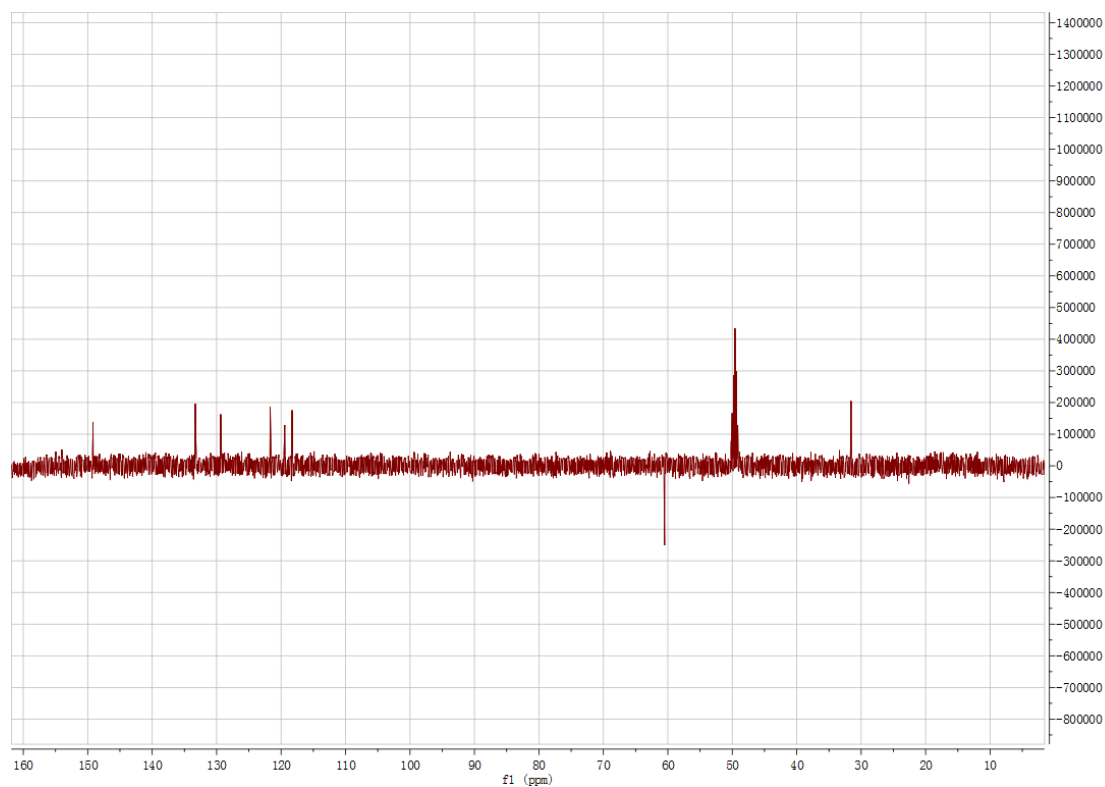


Figure S5. DEPT135 NMR (400 MHz, CD_3OD) spectrum of compound **1**

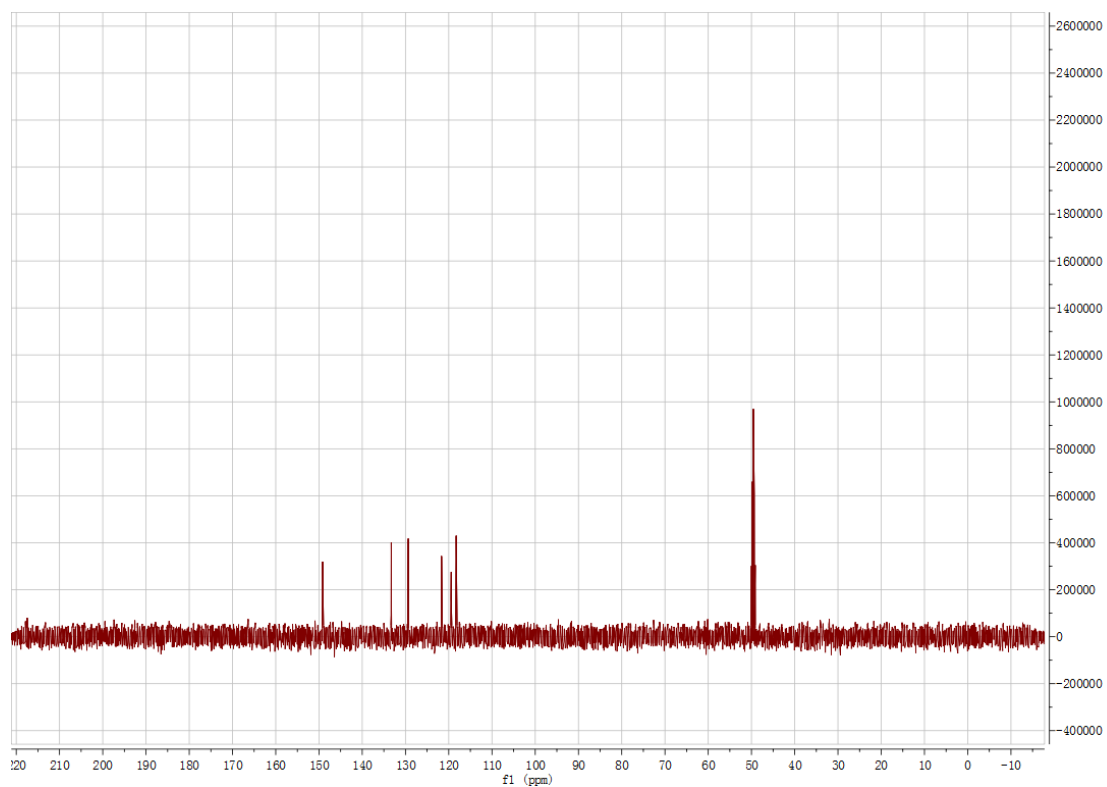


Figure S6. DEPT90 NMR (400 MHz, CD₃OD) spectrum of compound **1**

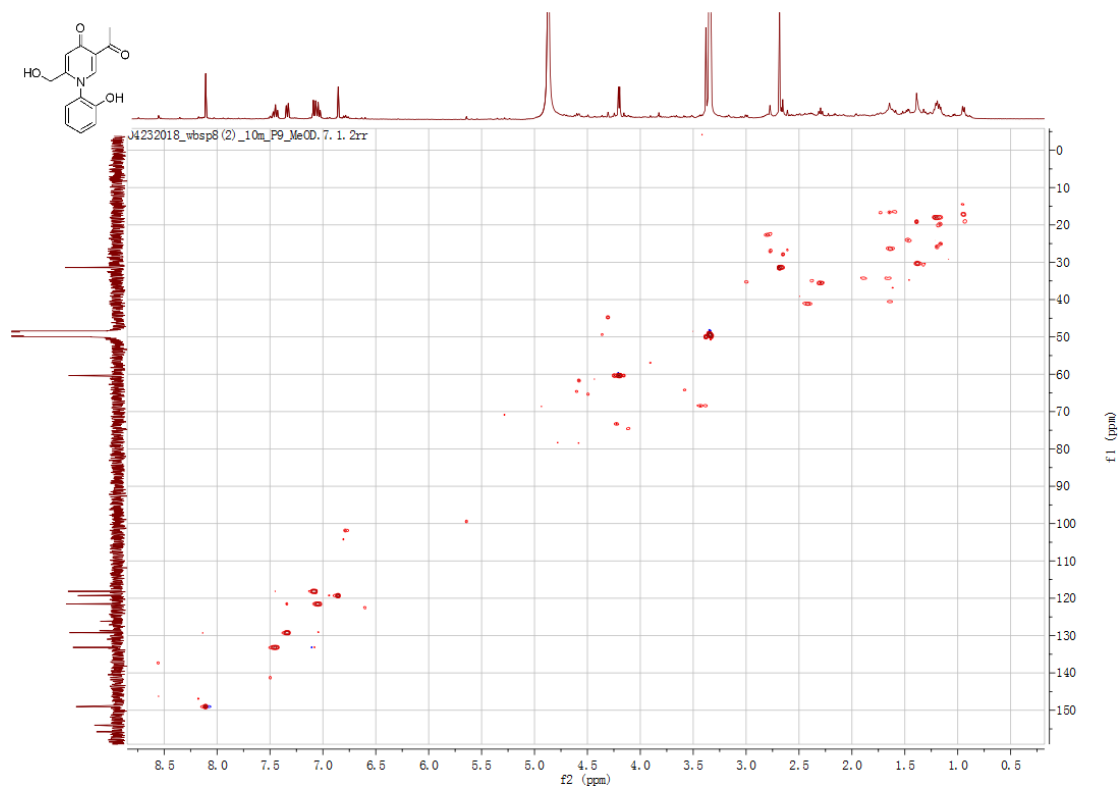
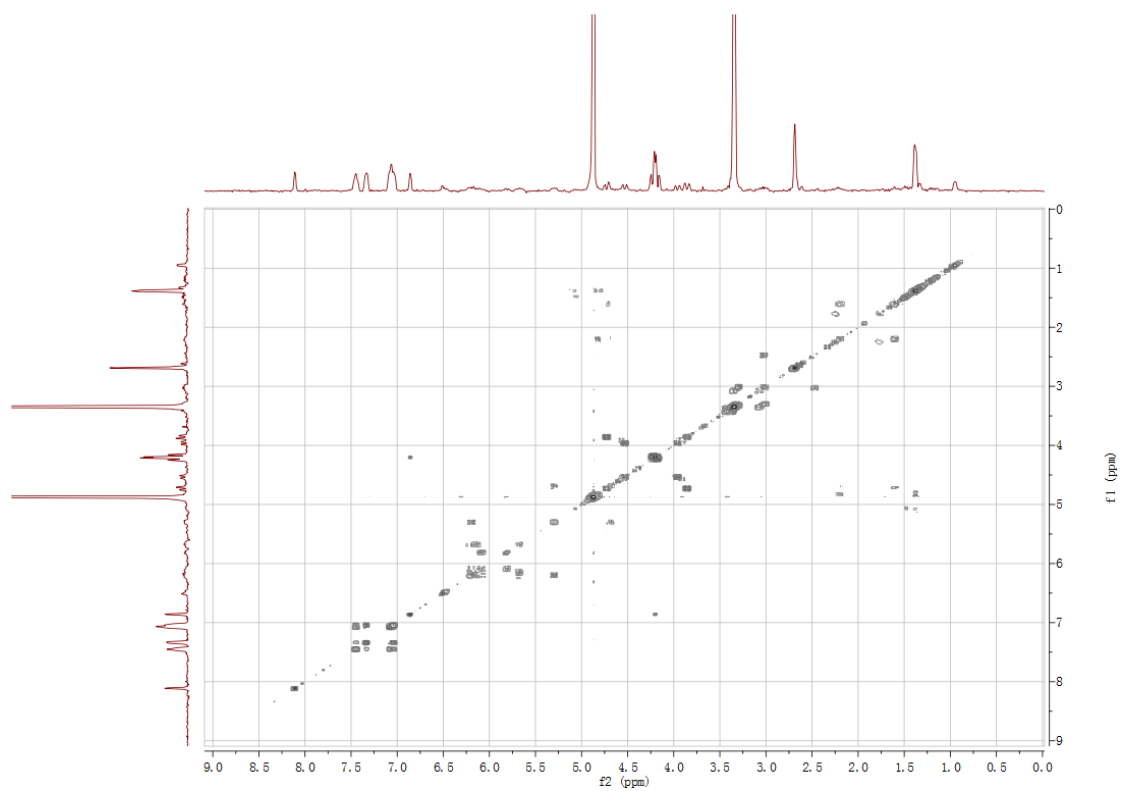
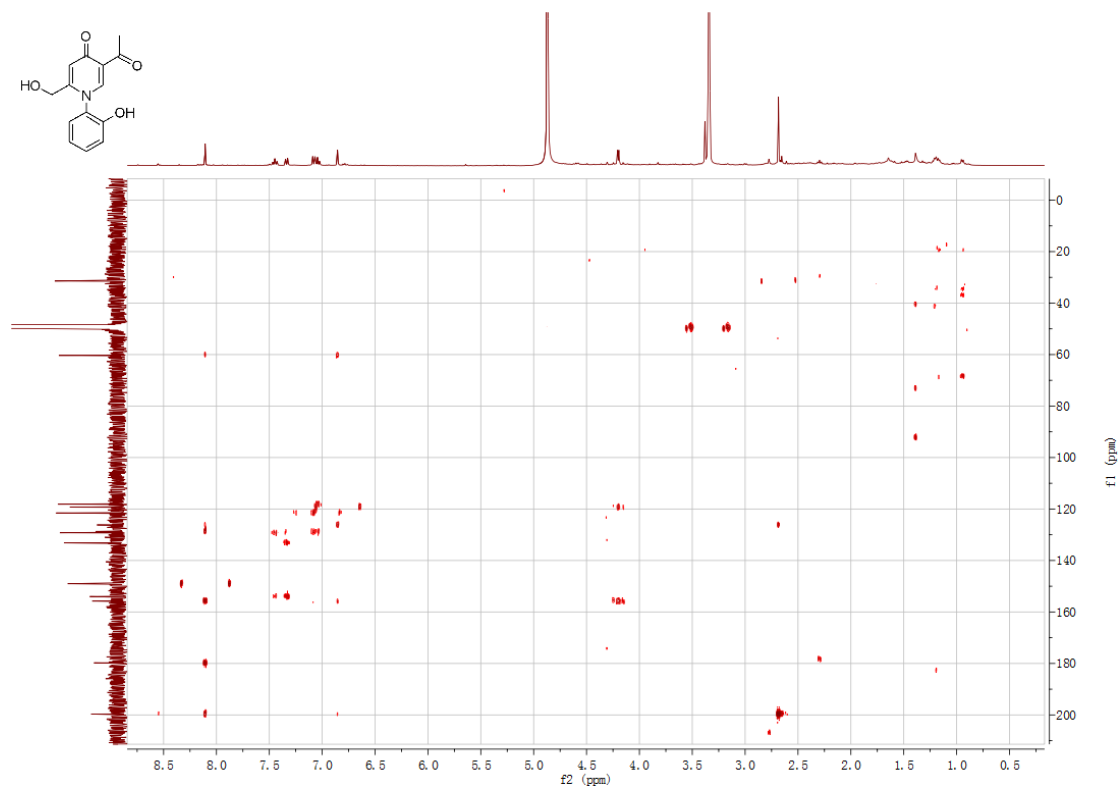


Figure S7. ¹H-¹³C HSQC spectrum of compound **1** (400 MHz, CD₃OD)



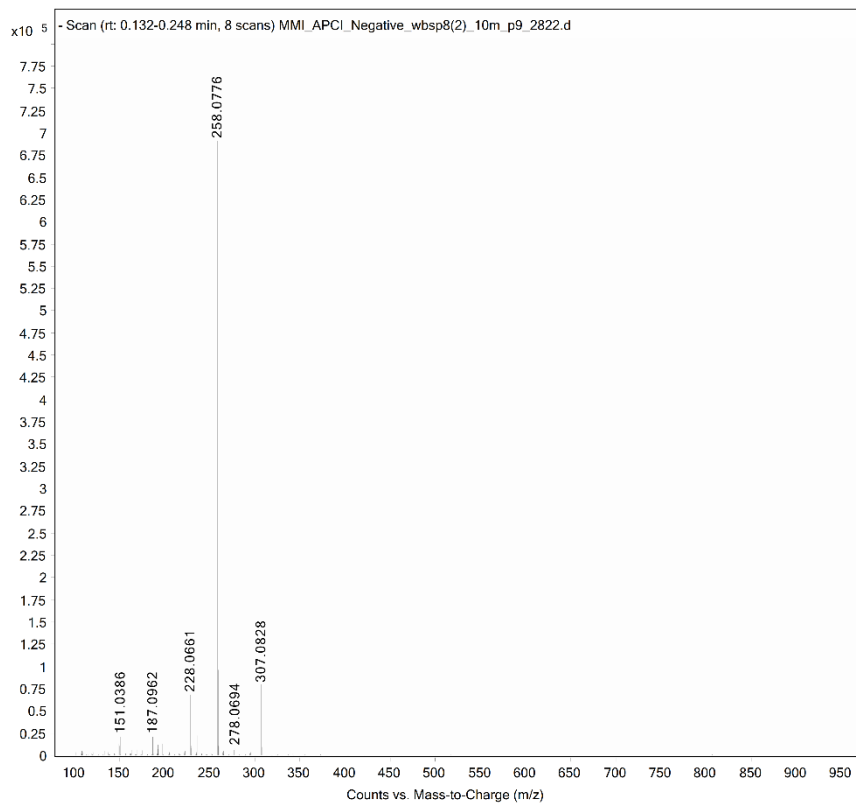


Figure S10. HRTOFMS spectrum of compound **1**

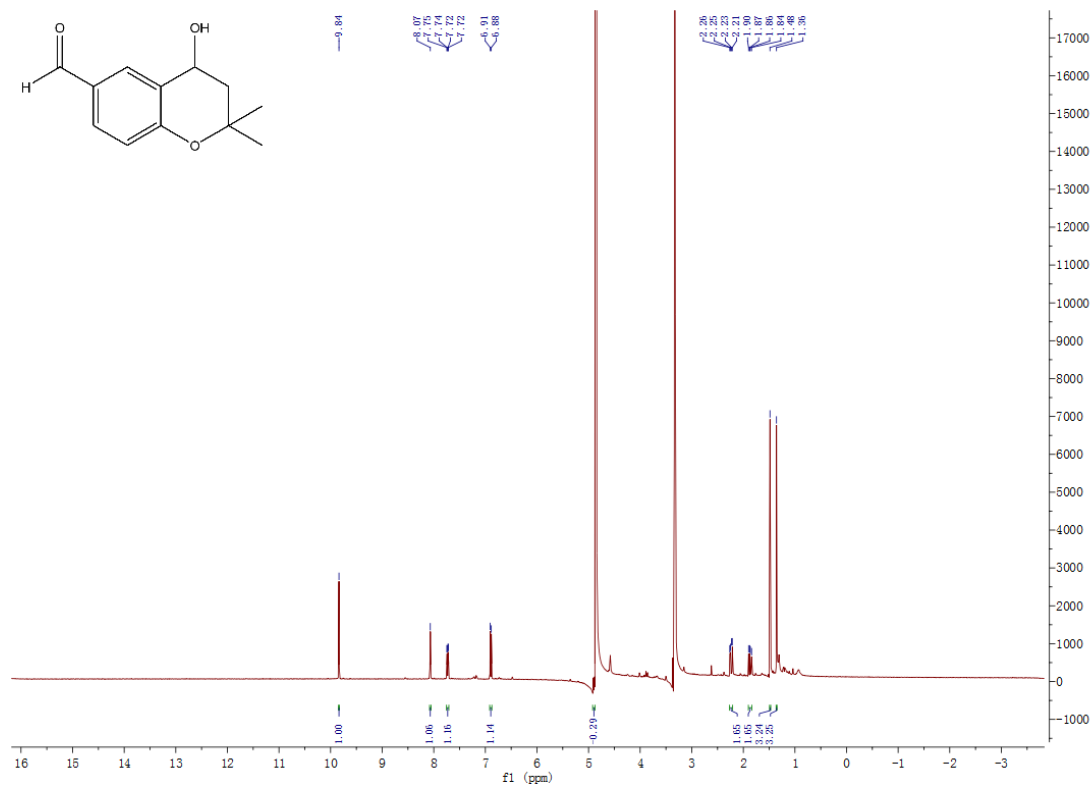


Figure S11. ¹H NMR (400 MHz, CD₃OD) spectrum of compound **2**

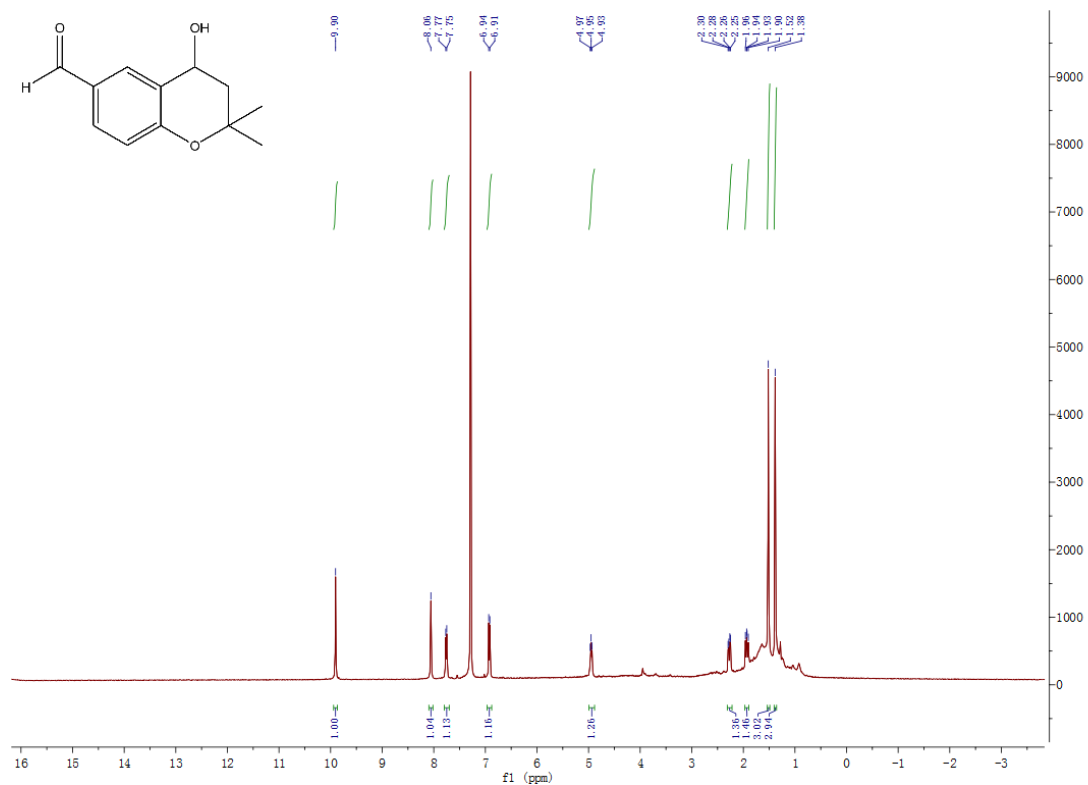


Figure S12. ¹H NMR (400 MHz, CD₃Cl₃) spectrum of compound 2

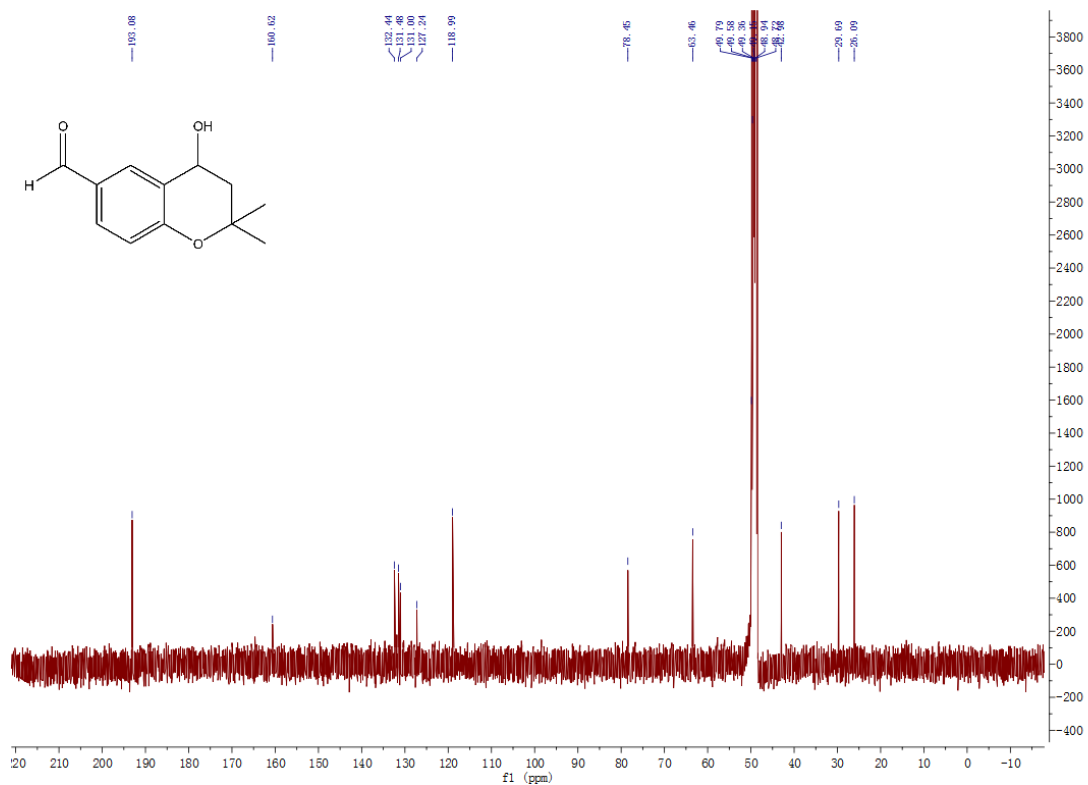
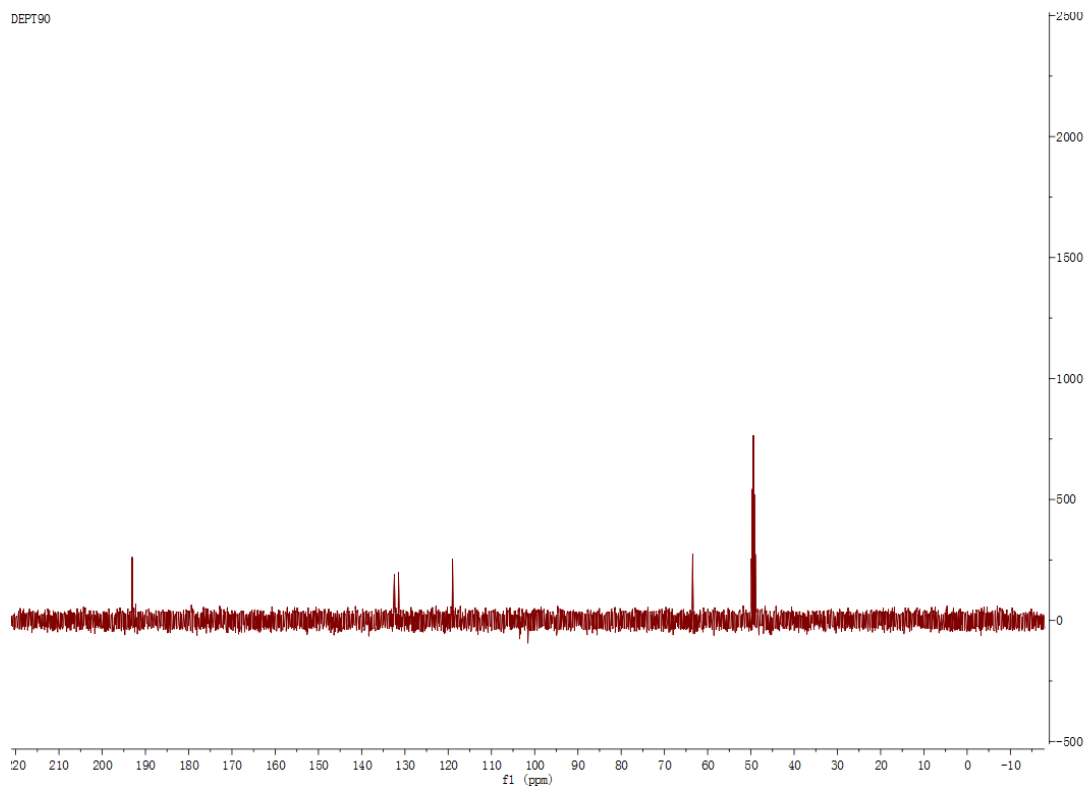
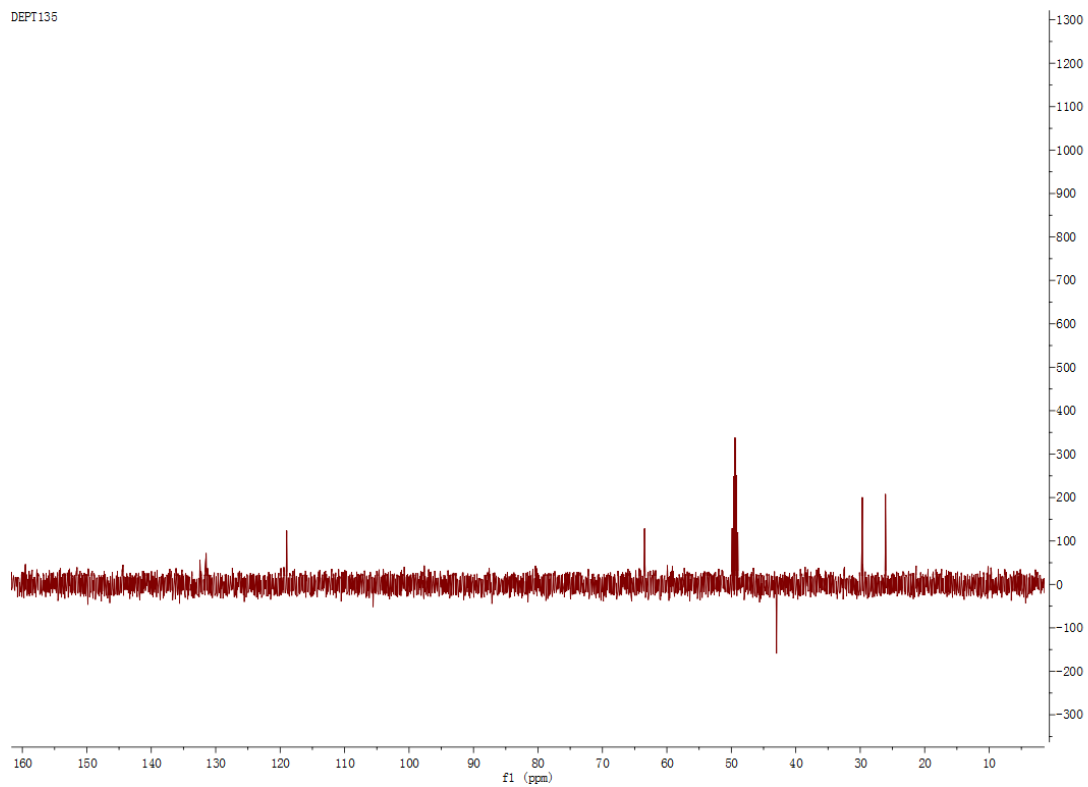
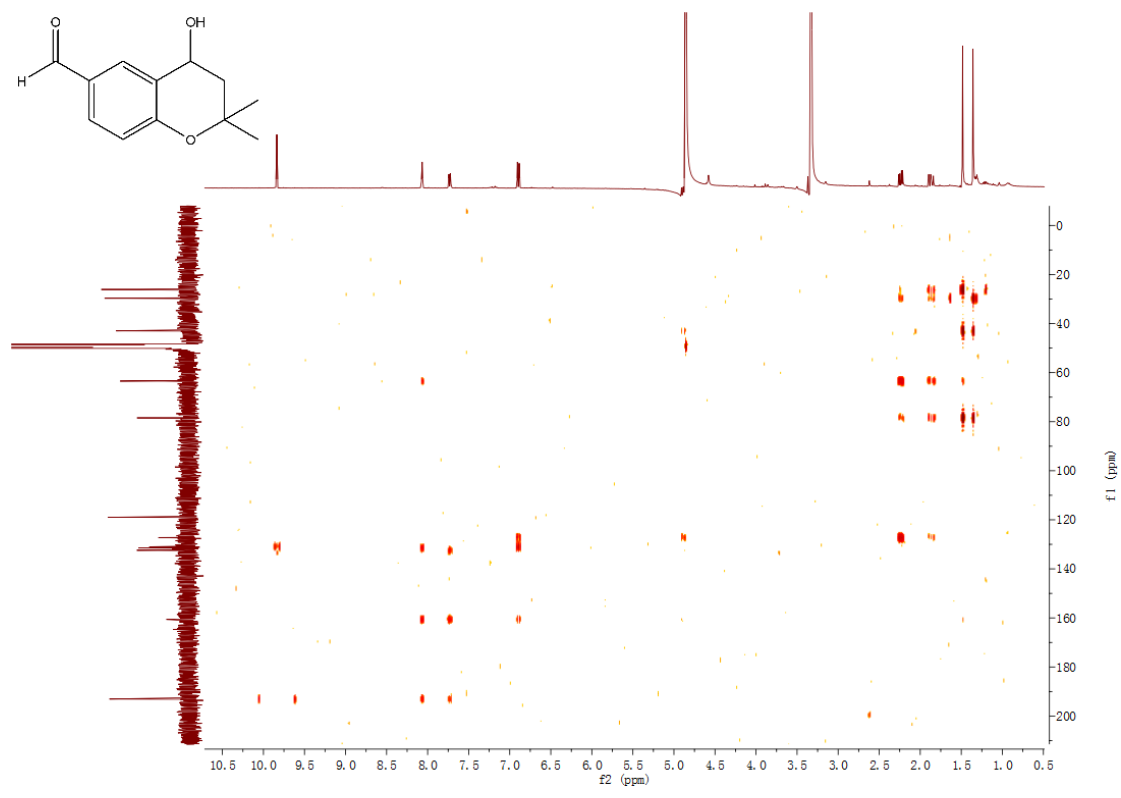
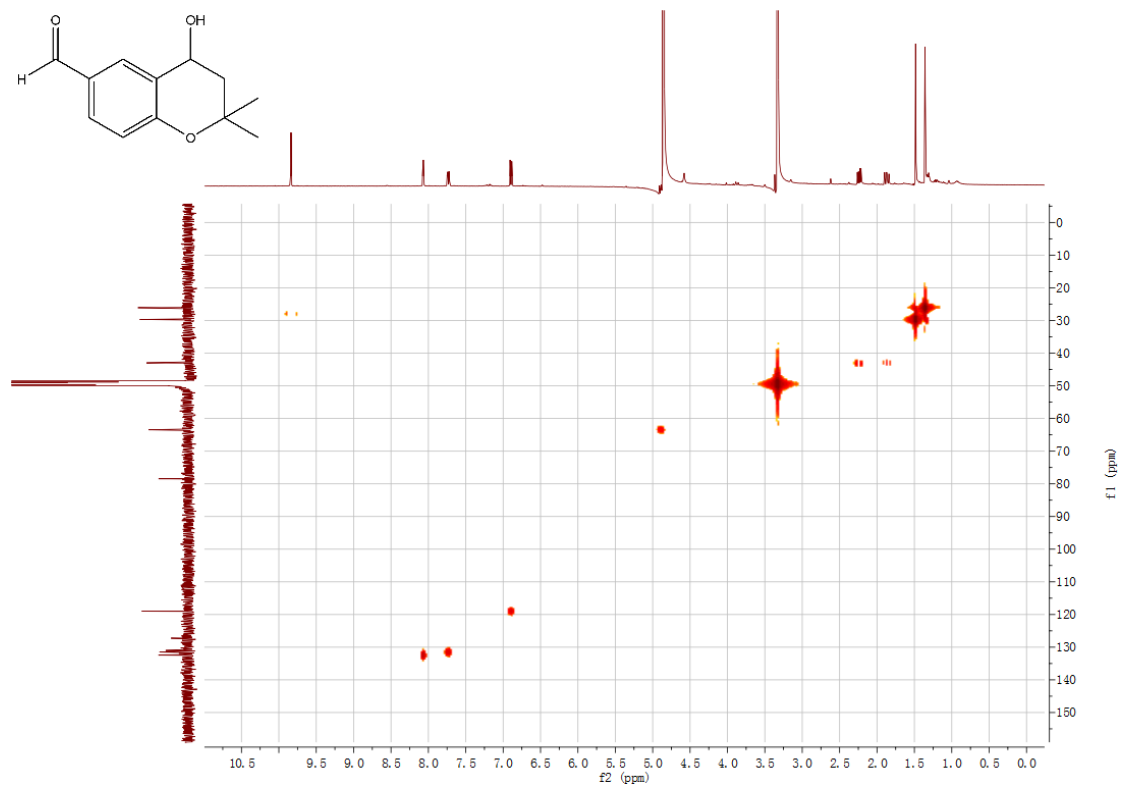


Figure S13. ¹³C NMR (400 MHz, CD₃OD) spectrum of compound 2





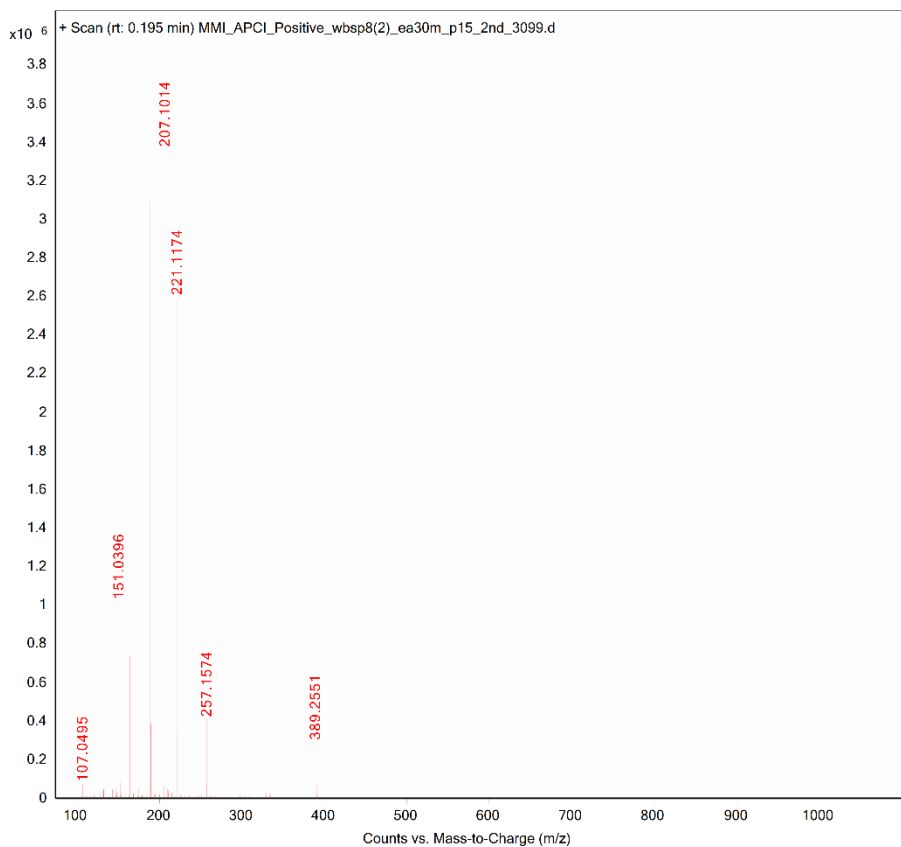


Figure S18. HRTOFMS spectrum of compound **2**

Table S1. Optical rotation data of compound **2** and similar compounds

| Compound | Structure | Solvent | $[\alpha]_D^{25}$ (degree) |
|---|-----------|----------------|-------------------------------|
| (<i>S</i>)-1-(4-hydroxy-2,2-dimethylchroman-6-yl)ethan-1-one ^[1] | | c = 0.26, MeOH | +68.6 |
| (<i>R</i>)-1-(4-hydroxy-2,2-dimethylchroman-6-yl)ethan-1-one ^[1] | | c = 0.25, MeOH | -79.8 |
| Compound 2 | | c = 0.12, MeOH | +10.0 |

^[1] Sun *et al.*, Chromane Enantiomers from the Flower Buds of *Tussilago farfara* L. and Assignments of Their Absolute Configurations. *Chem. Biodiversity* 2019, 16, e1800581

Table S2. MS, ¹H and ¹³C NMR Data of Known Compounds

| Compounds | MS and NMR data |
|---|---|
| 4-chloro-3,5-dimethoxy benzaldehyde (3) | HR-MS (APCI ⁺): m/z 218.0657 [M+NH ₄] ⁺ . ¹ H NMR (400 MHz, CDCl ₃) δ 9.93 (s, 1H), 7.12 (s, 2H), 3.99 (s, 6H). ¹³ C NMR (101 MHz, CDCl ₃) δ 191.32, 157.13, 135.53, 117.71, 105.68, 56.98. |
| 2-chloro-1,3-dimethoxy-5-methylbenzene (4) | HR-MS (APCI ⁺): m/z 187.0516 [M+H] ⁺ . ¹ H NMR (400 MHz, CDCl ₃) δ 6.40 (s, 2H), 3.86 (s, 6H), 2.32 (s, 3H). ¹³ C NMR (101 MHz, CDCl ₃) δ 156.03, 137.80, 107.76, 105.87, 56.50, 22.24. |
| (4-chloro-3,5-dimethoxy phenyl) methanol (5) | HR-MS (APCI): m/z 201.0353 [M-H] ⁻ . ¹ H NMR (400 MHz, CDCl ₃) δ 6.63 (s, 2H), 4.69 (s, 2H), 3.91 (s, 6H). ¹³ C NMR (101 MHz, CDCl ₃) δ 156.57, 140.84, 109.98, 103.37, 65.59, 56.74. |
| 3,6-bis(hydroxymethyl)-2-methyl-4H-pyran-4-one (6) | HR-MS (APCI): m/z 215.0118 [M-H] ⁻ . ¹ H NMR (400 MHz, CD ₃ OD) δ 7.46 (s, 2H), 3.97 (s, 6H). ¹³ C NMR (101 MHz, CD ₃ OD) δ 171.18, 157.69, 130.98, 111.55, 106.96, 57.15. |
| 4-chloro-3,5-dimethoxy benzoic acid (7) | HR-MS (APCI ⁺): m/z 171.0651 [M+H] ⁺ . ¹ H NMR (400 MHz, CD ₃ OD) δ 6.42 (s, 1H), 4.52 (s, 2H), 4.43 (s, 2H), 2.47 (s, 3H). ¹³ C NMR (101 MHz, CD ₃ OD) δ 181.53, 170.71, 167.96, 124.87, 111.76, 61.24, 55.11, 17.57. |
| 5-hydroxy-6-(1-hydroxyethyl)isobenzofuran-1(3H)-one (8) | HR-MS (APCI ⁺): m/z 195.0651 [M+H] ⁺ . ¹ H NMR (400 MHz, CD ₃ OD) δ 7.89 (s, 1H), 6.93 (s, 1H), 5.28 (s, 2H), 5.18 (q, J = 6.4 Hz, 1H), 1.46 (d, J = 6.4 Hz, 3H). ¹³ C NMR (101 MHz, CD ₃ OD) δ 174.10, 161.98, 150.07, 136.79, 124.05, 117.34, 108.86, 70.83, 66.19, 24.13. |
| Erinacines E (9) | [α] ¹⁸ D: -144 (c 0.50, MeOH). HR-MS (APCI): m/z 431.2439 [M-H] ⁻ . ¹ H NMR (400 MHz, CD ₃ OD) δ 5.63(m,1H), 4.96 (s,1H), 4.72(br.s, 1H), 4.23(d, J= 6.23, 1H), 3.93 (d,J=12.28, 1H), 3.92(s, 1H), 3.24(d, J=12.28,1H), 3.13(m, 1H),2.96(qq, J=6.60, 6.96,1H), 2.88(br.d, J=12.46, 1H), 2.68(m, 1H), 2.62(m, 1H) 2.32(m, 2H), 1.70(m, 1H), 1.55(m, 3H), 1.31(m, 1H), 1.11(s, 3H), 1.02(d, J=6.96, 3H), 1.00(d, J=6.96, 3H), 0.98(s, 3H). ¹³ C NMR (101 MHz, CD ₃ OD) δ 142.74, 140.34, 138.89, 124.19, 106.65, 97.65, 80.36, 76.05, 75.08, 72.38, 66.74, 51.0,44.44, 44.14, 42.43, 40.29, 38.32, 32.11, 29.38, 28.69, 28.32, 25.20, 22.26, 17.54. |