

Figure S1. ^1H NMR spectrum of compound **1** in CDCl_3

e635 ^1H NMR in CDCl_3 at 400MHz Bruker AVANCEIII 400

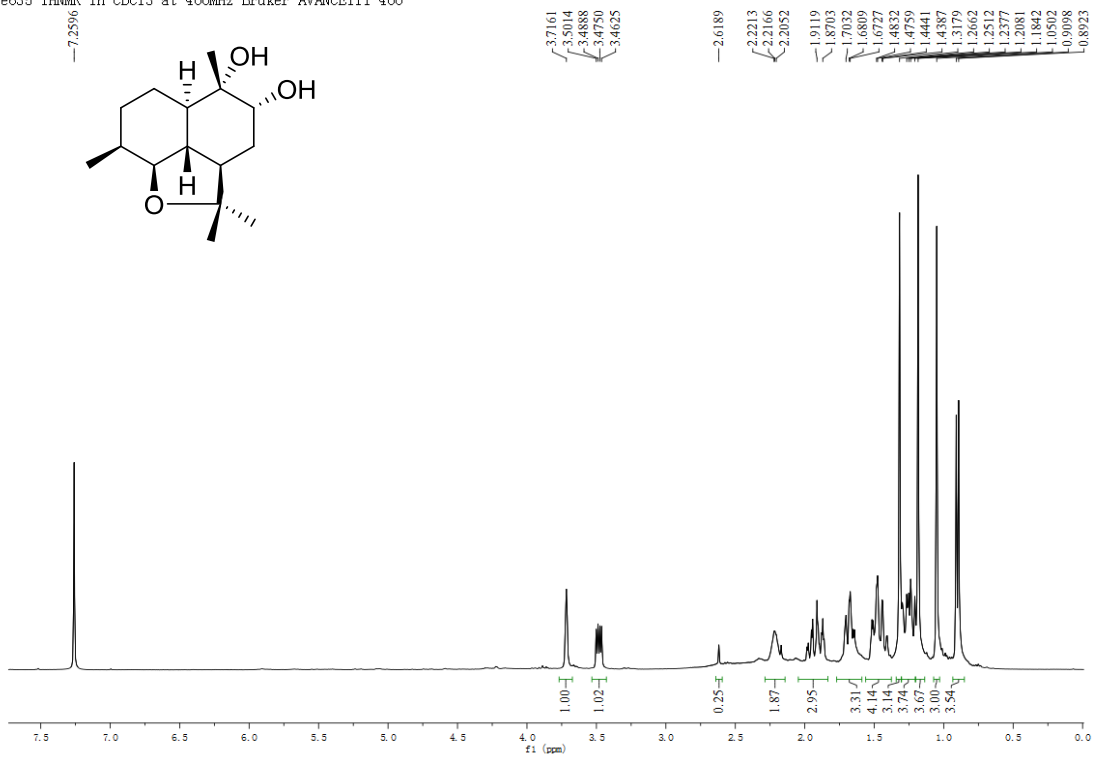


Figure S2. ^{13}C NMR spectrum of compound **1** in CDCl_3

e635 in CDCl_3 at 100MHz Bruker AVANCEIII 400

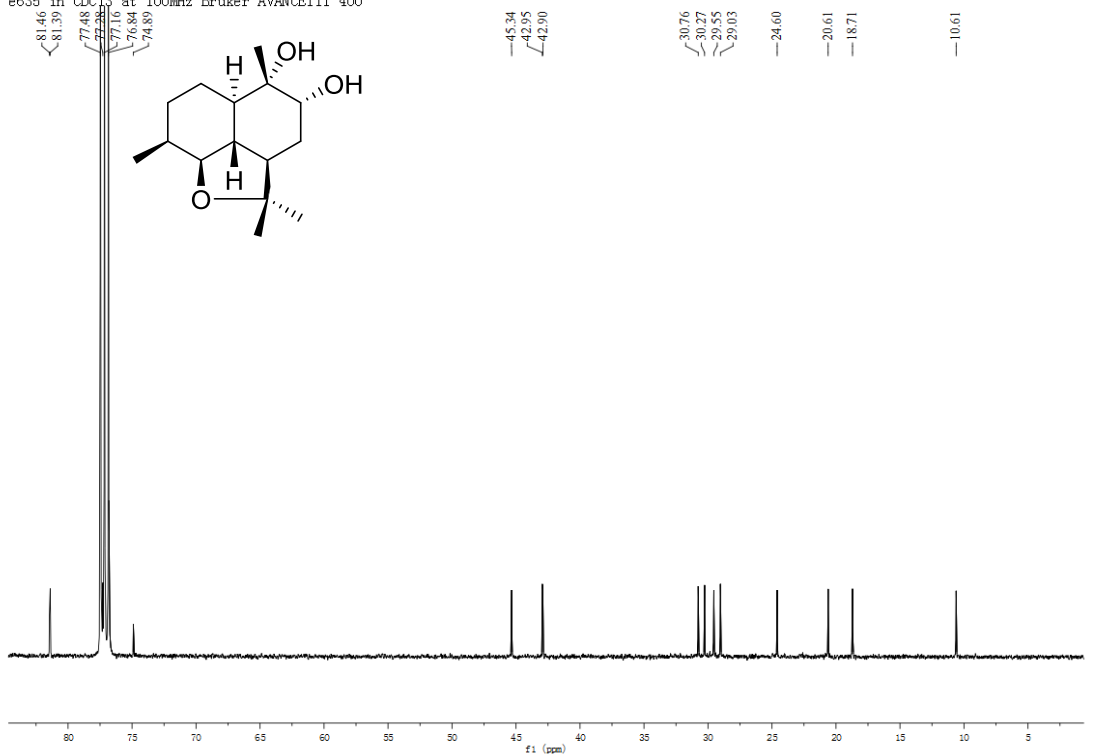


Figure S2-2. Enlarge ^{13}C NMR spectrum of compound **1** in CDCl_3

e635 in CDCl_3 at 100MHz Bruker AVANCEIII 400

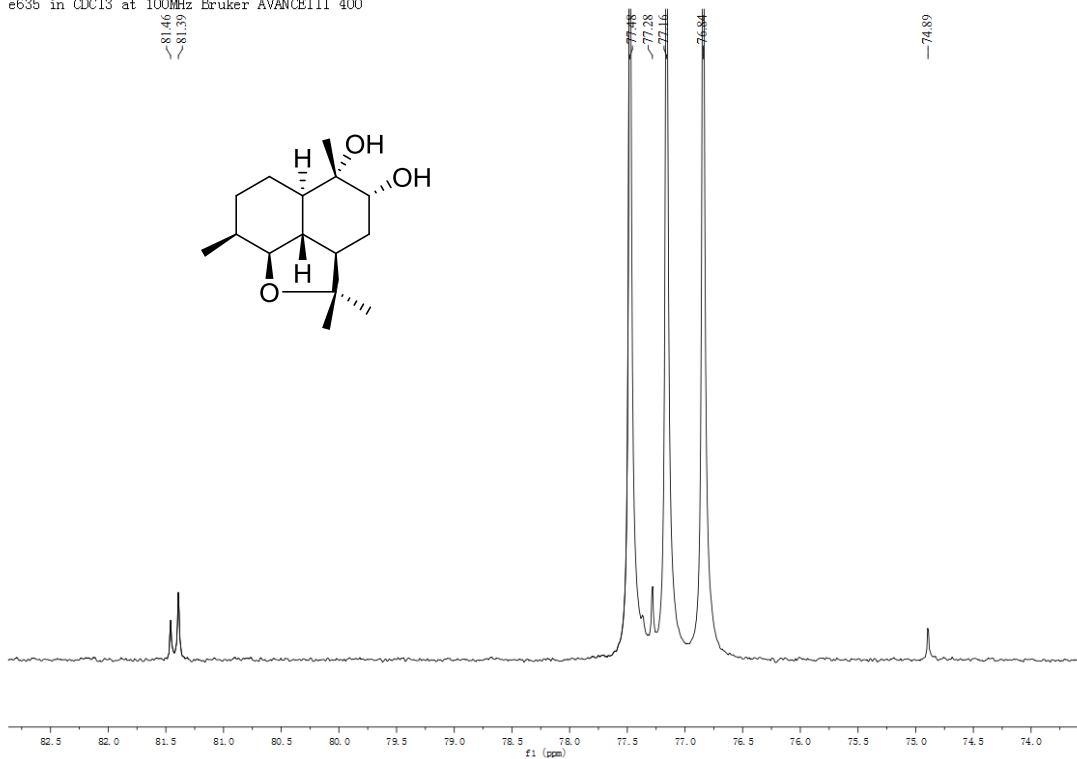


Figure S3. DEPT spectrum of compound **1** in CDCl_3

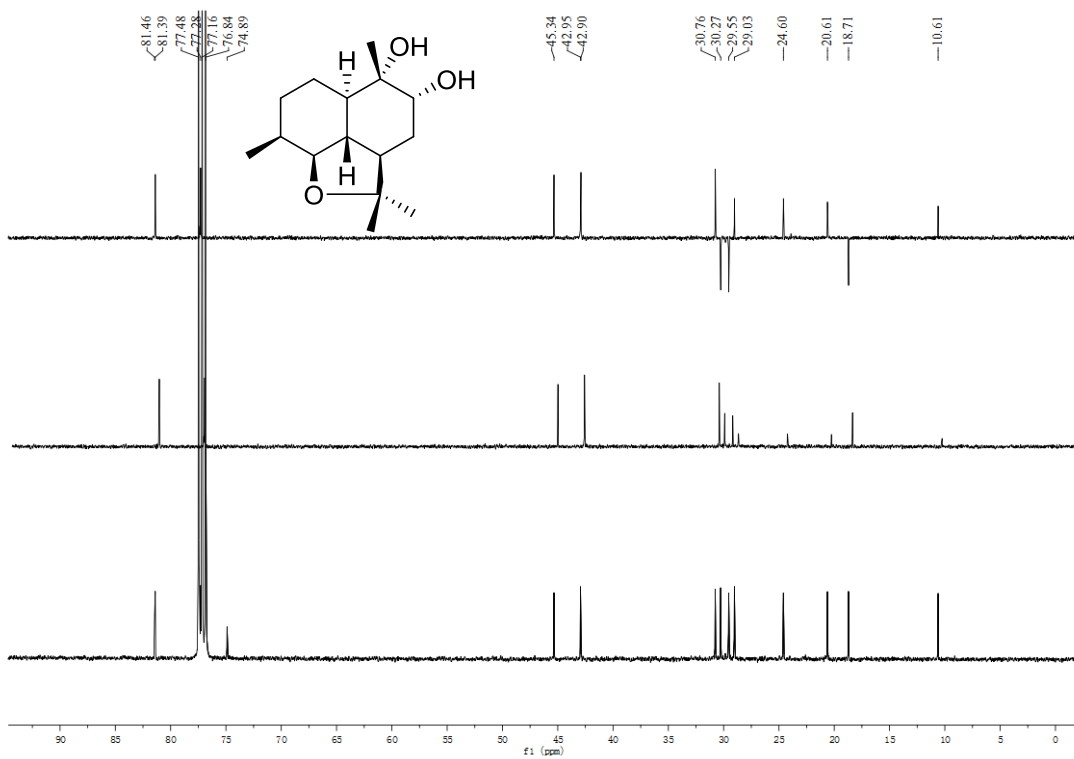


Figure S4. HSQC spectrum of compound 1 in CDCl₃

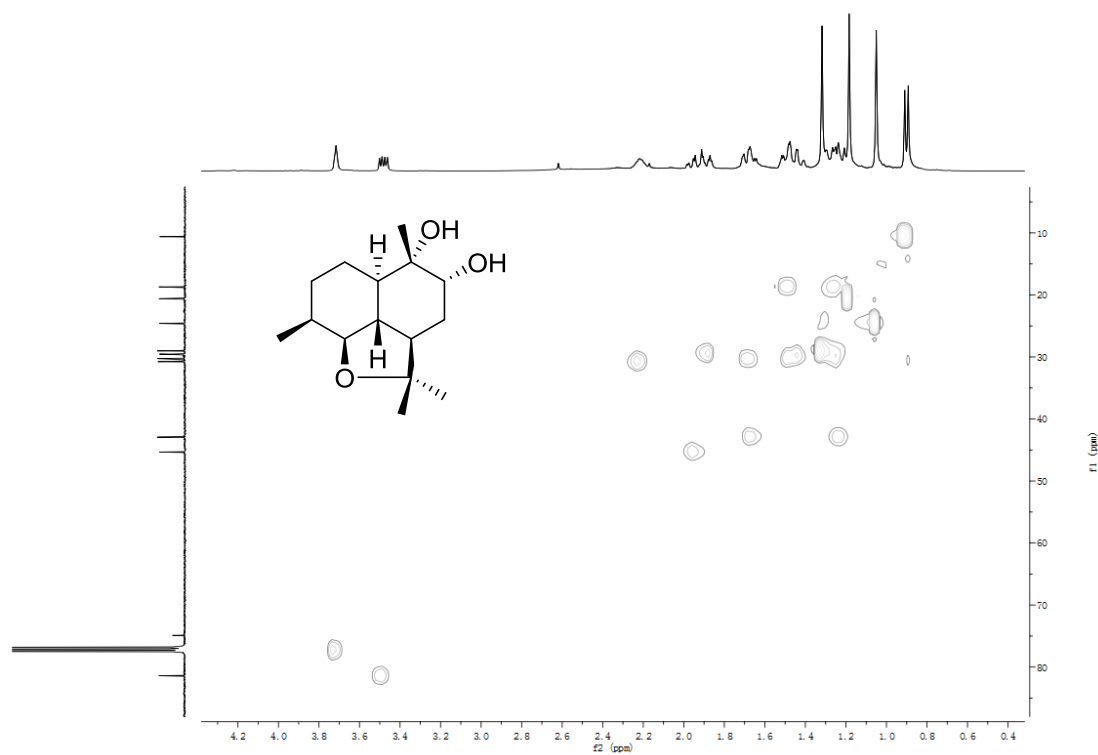


Figure S5. ¹H-¹H COSY spectrum of compound 1 in CDCl₃

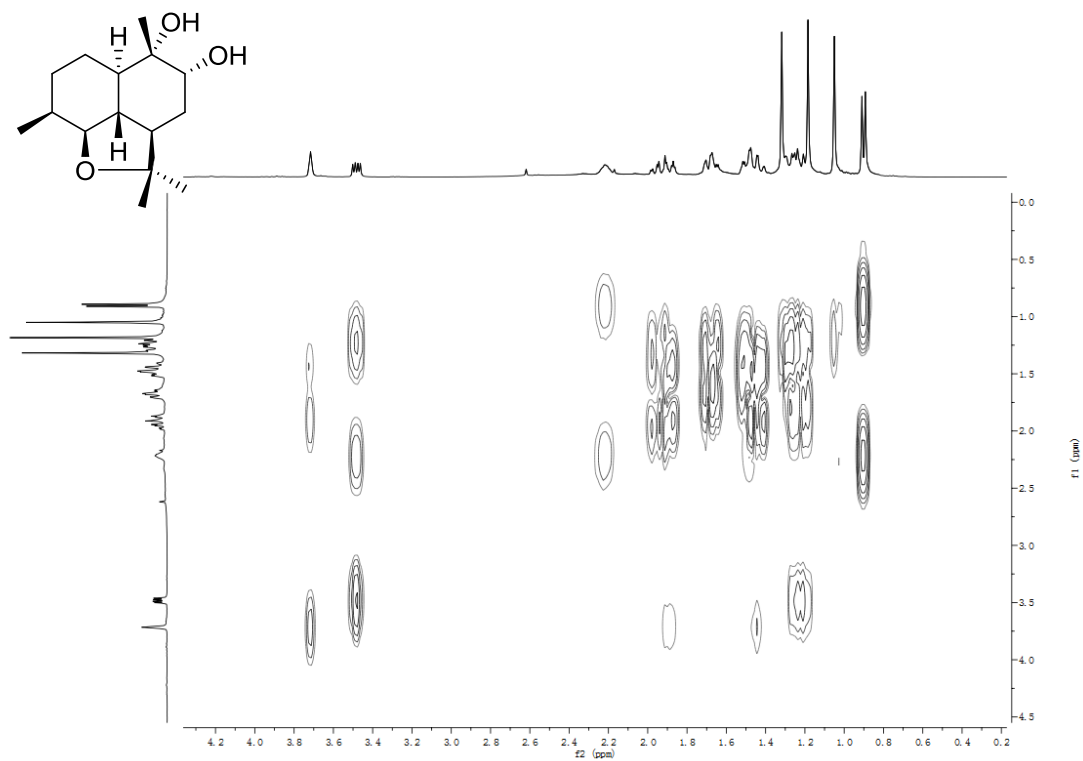


Figure S6. HMBC spectrum of compound **1** in CDCl₃

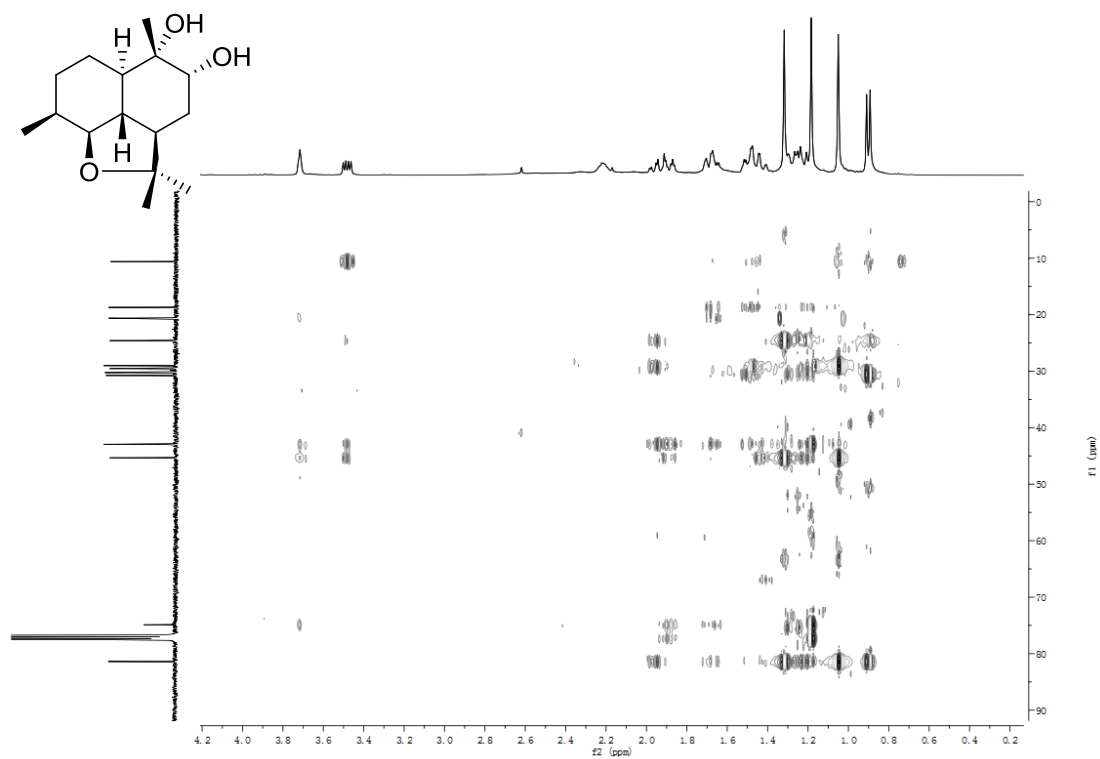


Figure S7. NOESY spectrum of compound **1** in CDCl₃

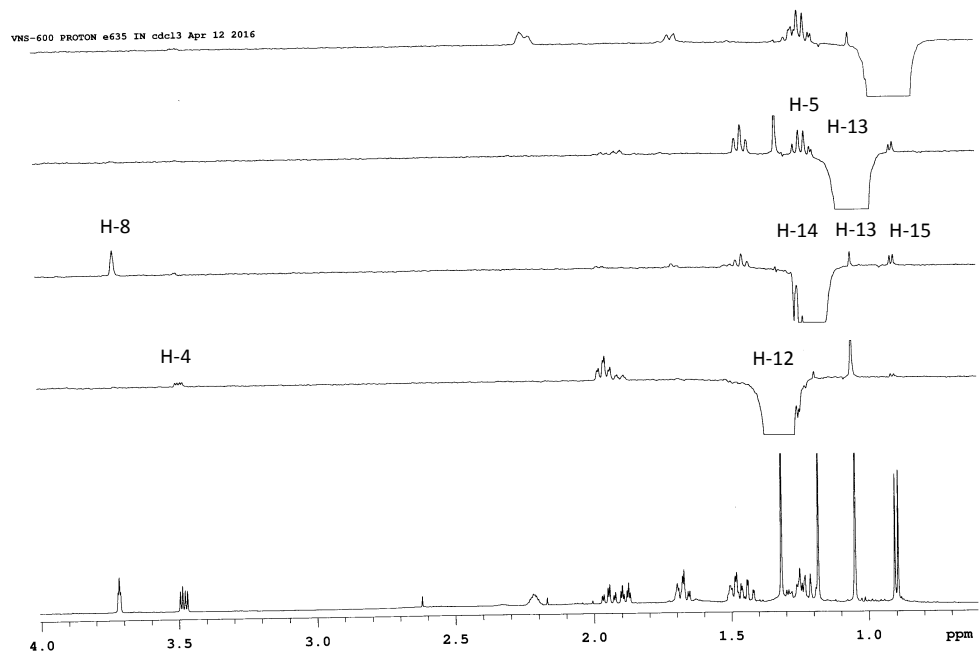
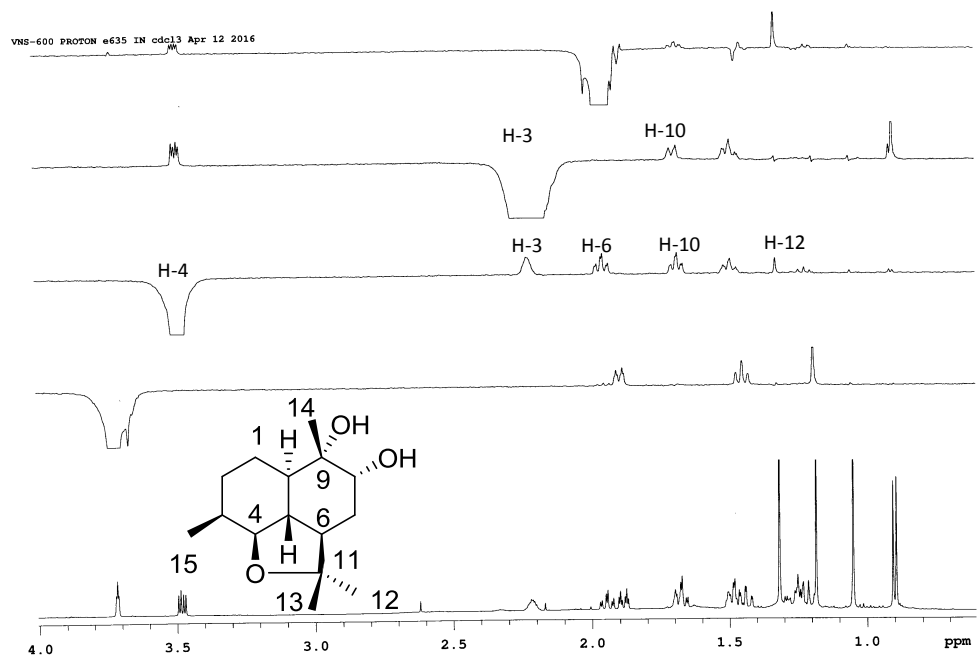


Figure S8. HRESIMS spectrum of compound 1

E635 #969 RT: 3.46 AV: 1 NL: 1.05E8
 T: FTMS + c ESI Full ms [100.00-1000.00]
 255.1945
 C₁₅ H₂₇ O₃ = 255.1955
 2.5 RDBE
 -3.7311 ppm

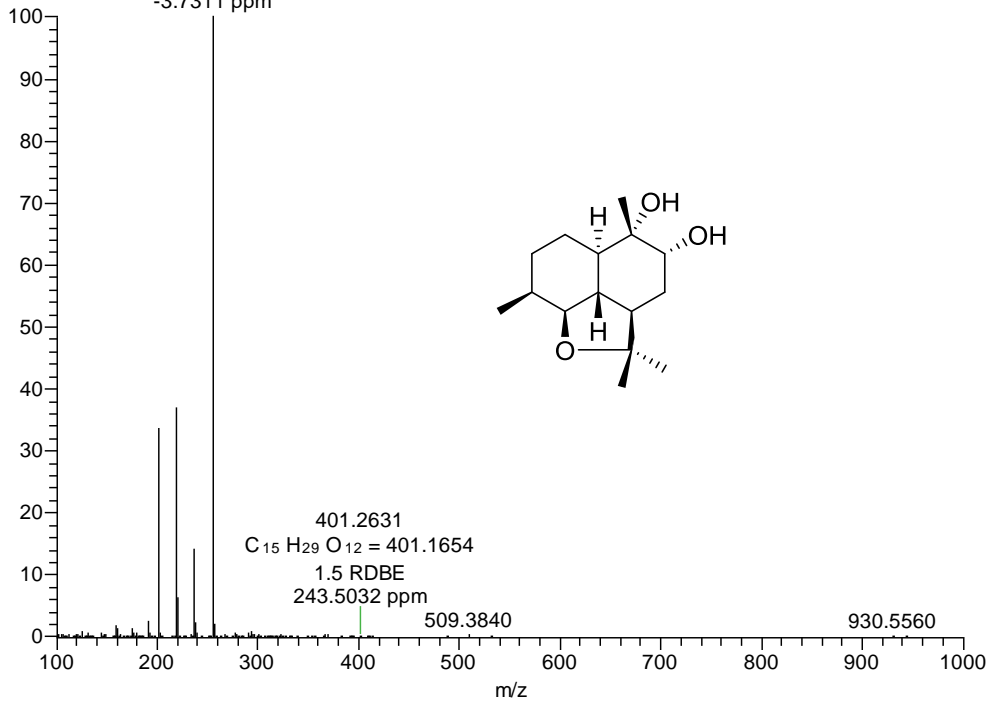


Figure S9. IR spectrum of compound 1

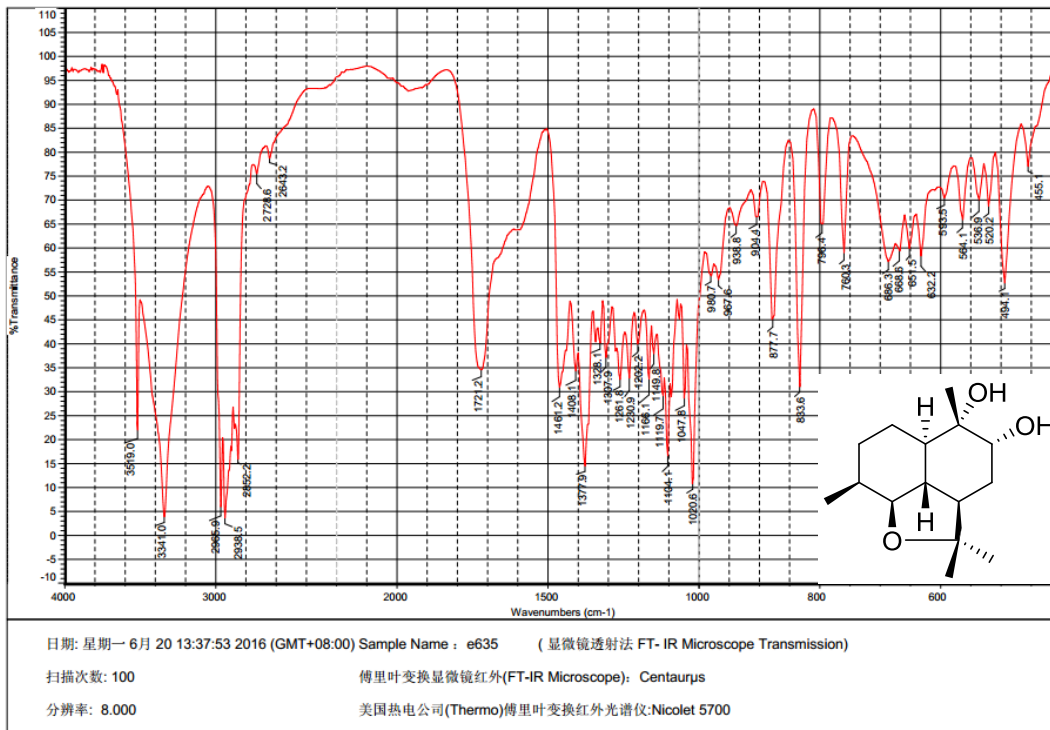
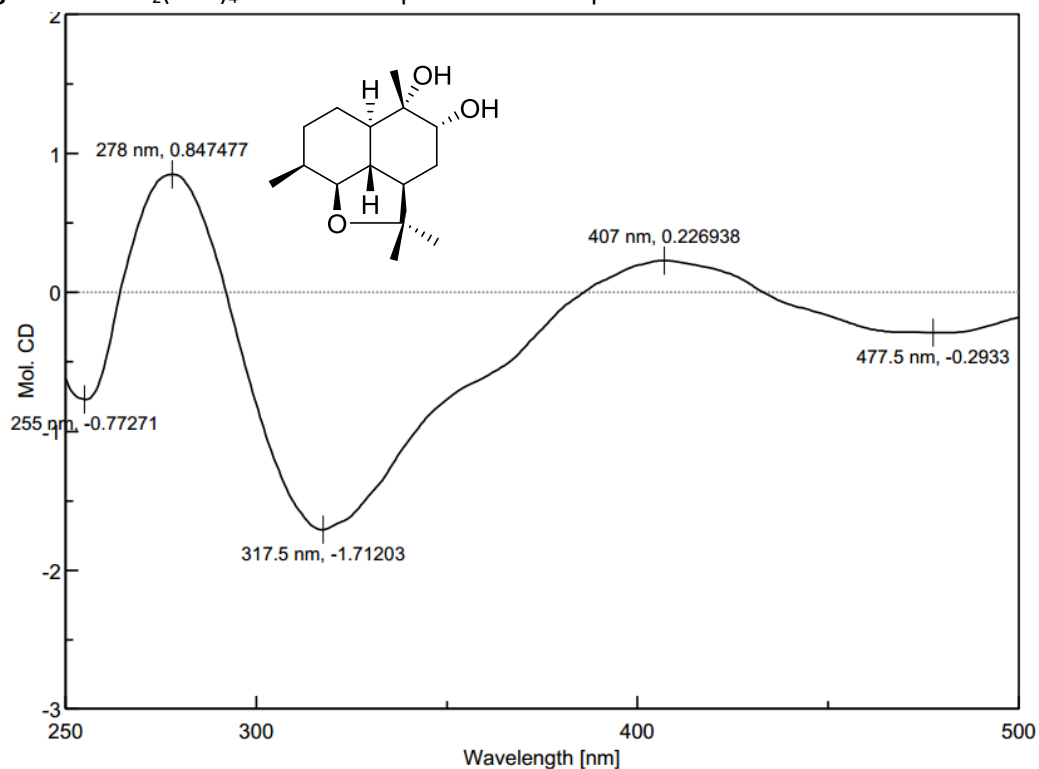


Figure S10. Mo₂(AcO)₄-induced CD spectrum of compound **1**



[Comments]
 Sample name e635-Mo
 Comment

Memory-11

Figure S11. ¹H NMR spectrum of compound **2** in CDCl₃

¹H NMR in CDCl₃ at 400MHz

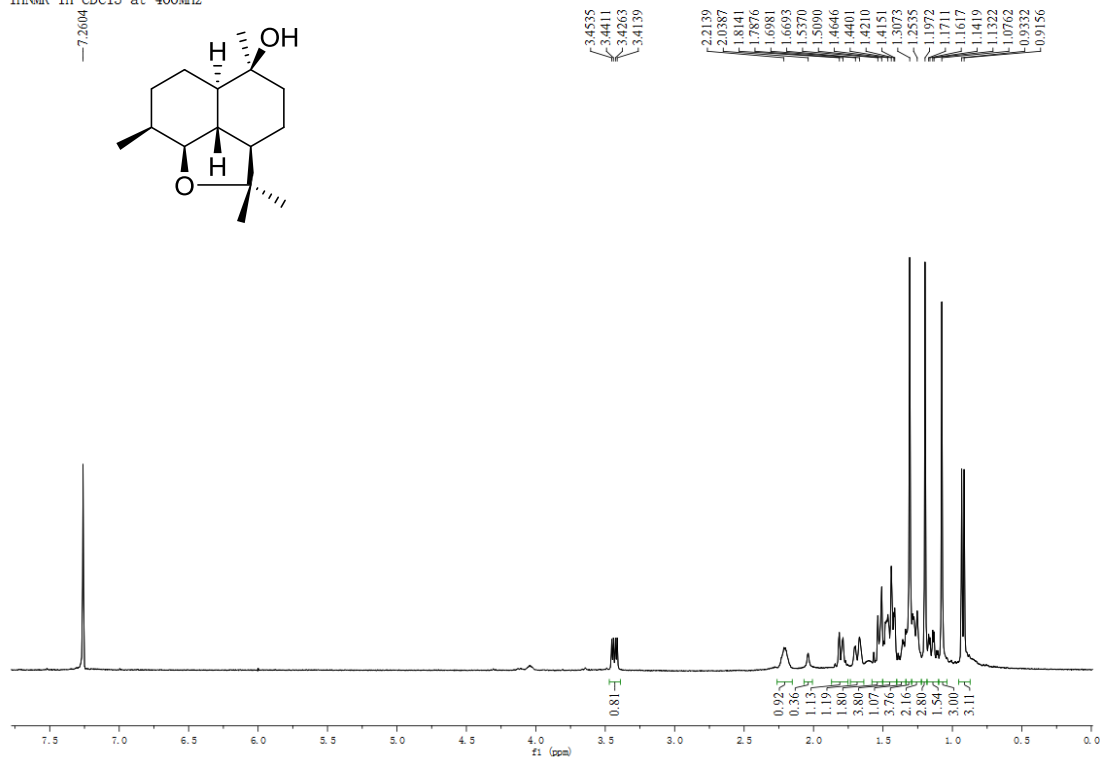


Figure S12. ^{13}C NMR spectrum of compound **2** in CDCl_3

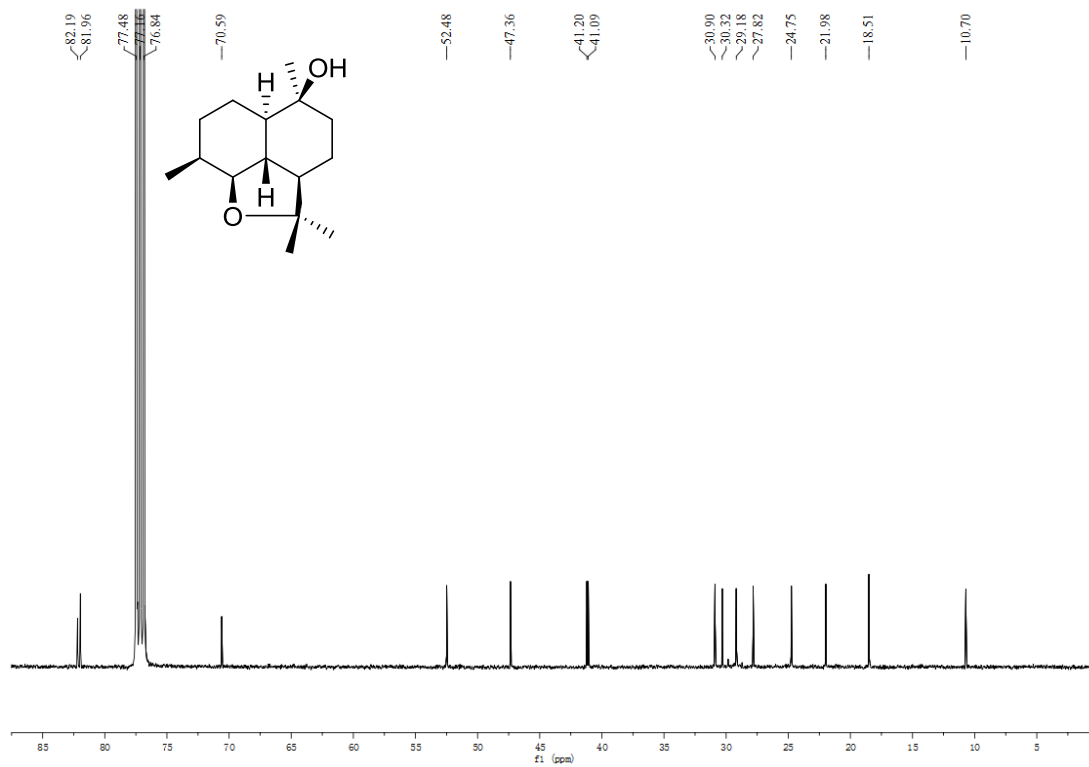


Figure S13. DEPT spectrum of compound **2** in CDCl_3

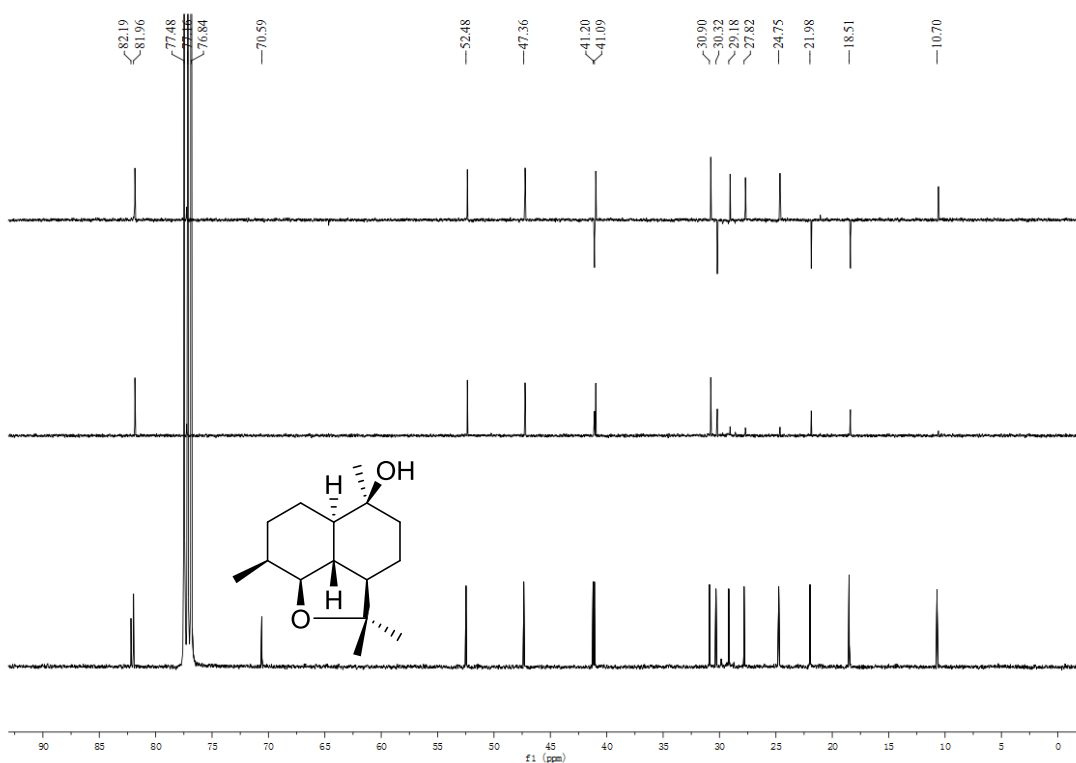


Figure S14. HSQC spectrum of compound **2** in CDCl₃

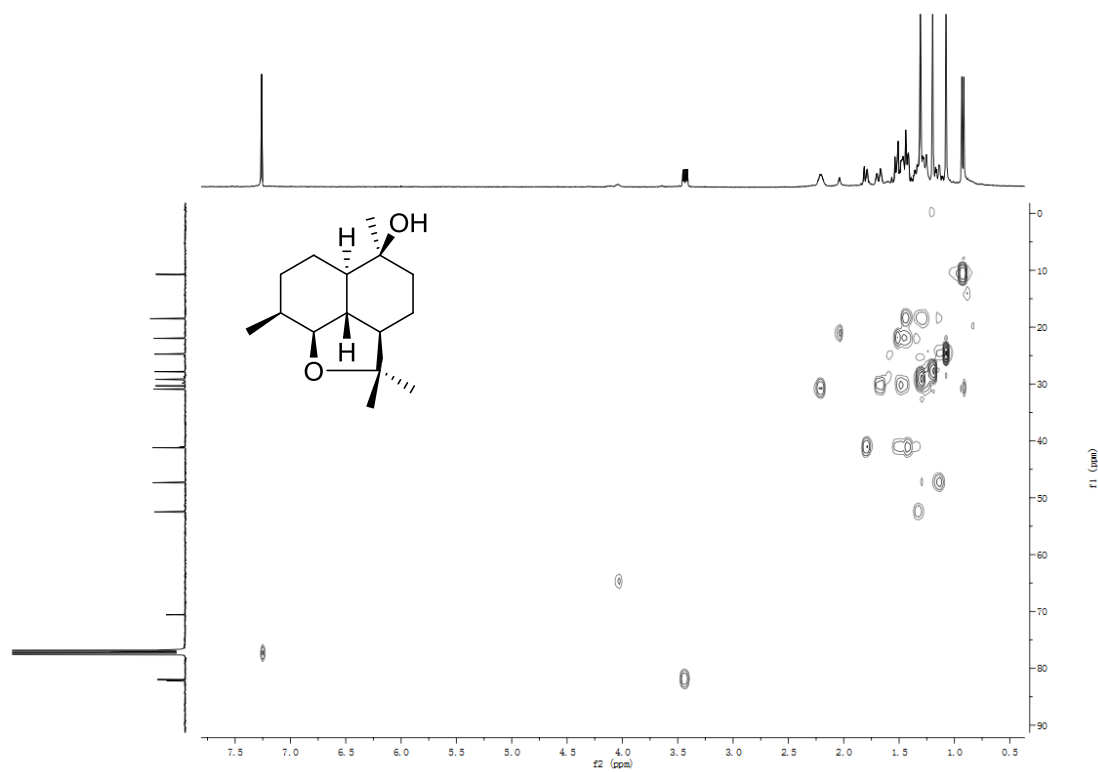


Figure S15. ¹H-¹H COSY spectrum of compound **2** in CDCl₃

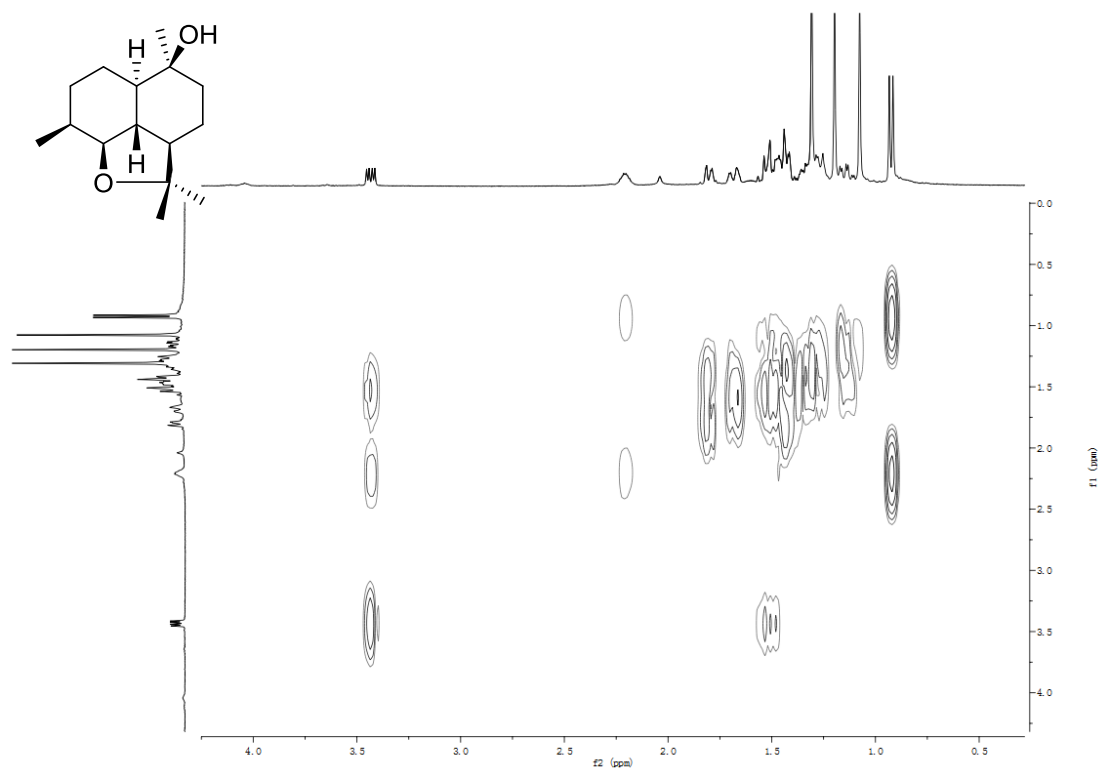


Figure S16. HMBC spectrum of compound **2** in CDCl₃

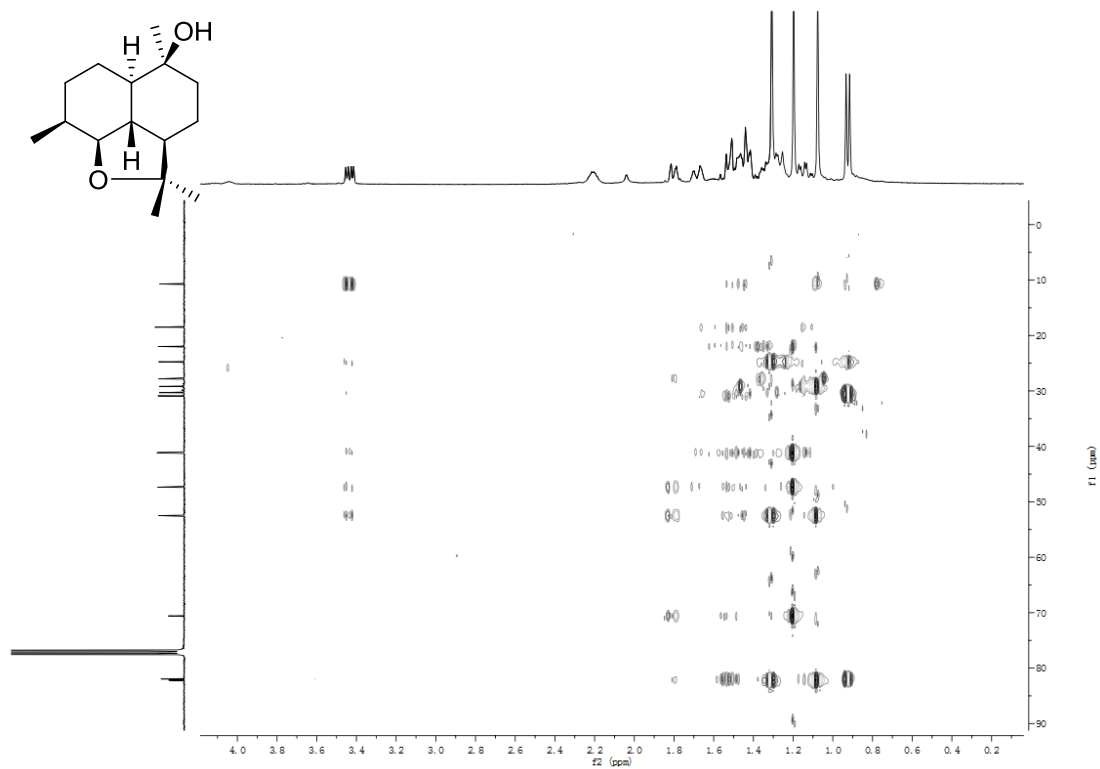
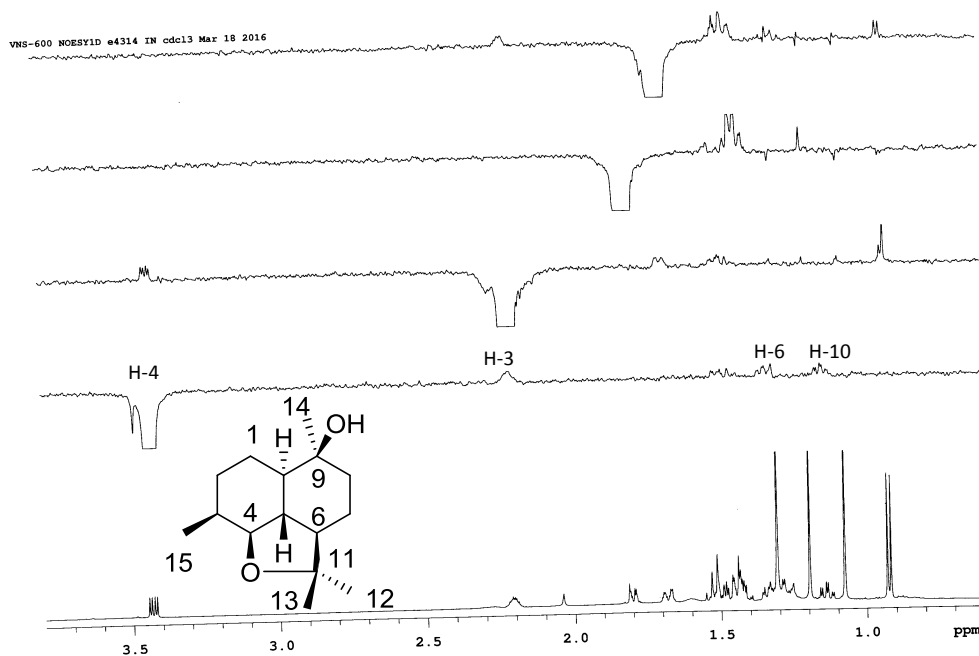
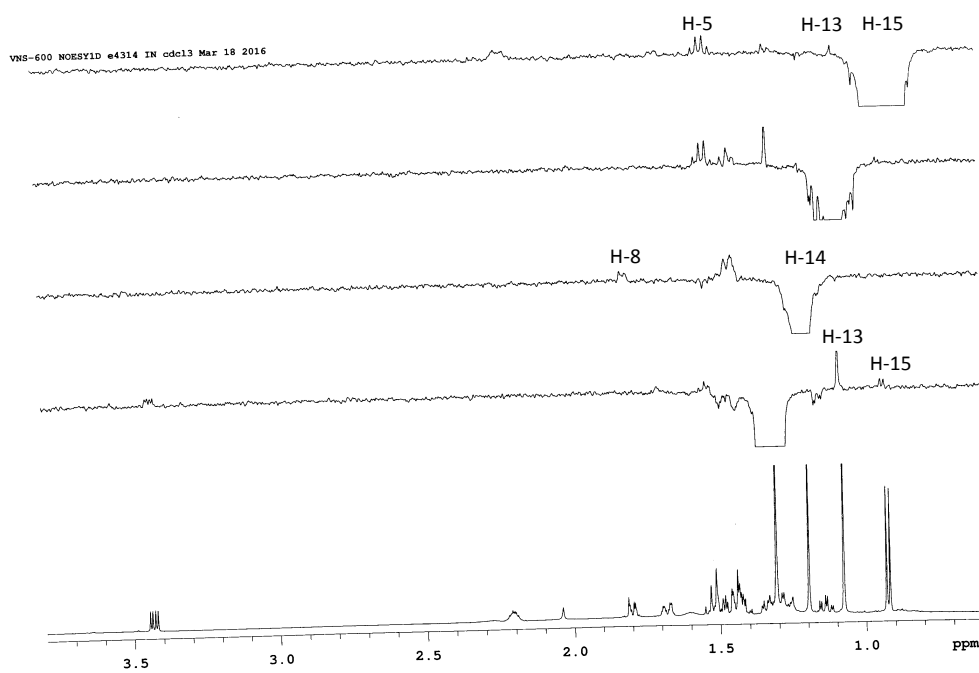


Figure S17. NOESY spectrum of compound **2** in CDCl_3





VNS-600 NOESY1D e4314 IN cdc13 Mar 30 2016

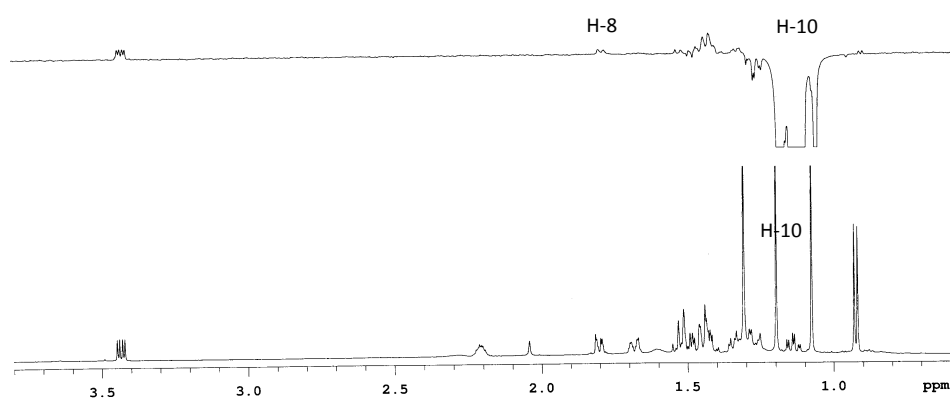


Figure S18. HRESIMS spectrum of compound **2**

E4314 #1352 RT: 4.58 AV: 1 NL: 8.57E7
 T: FTMS + c ESI Full ms [100.00-1000.00]

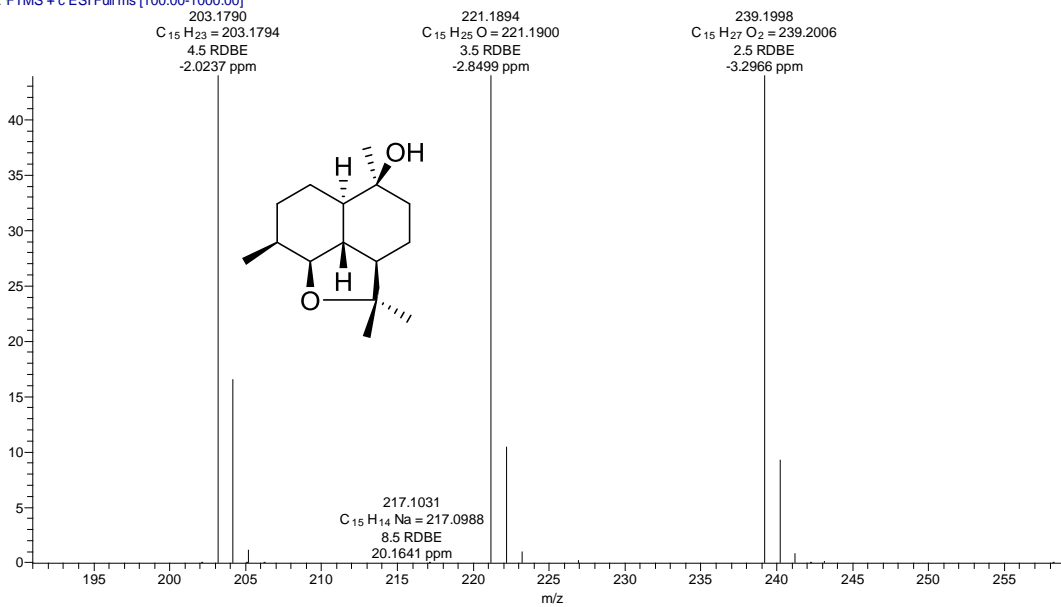
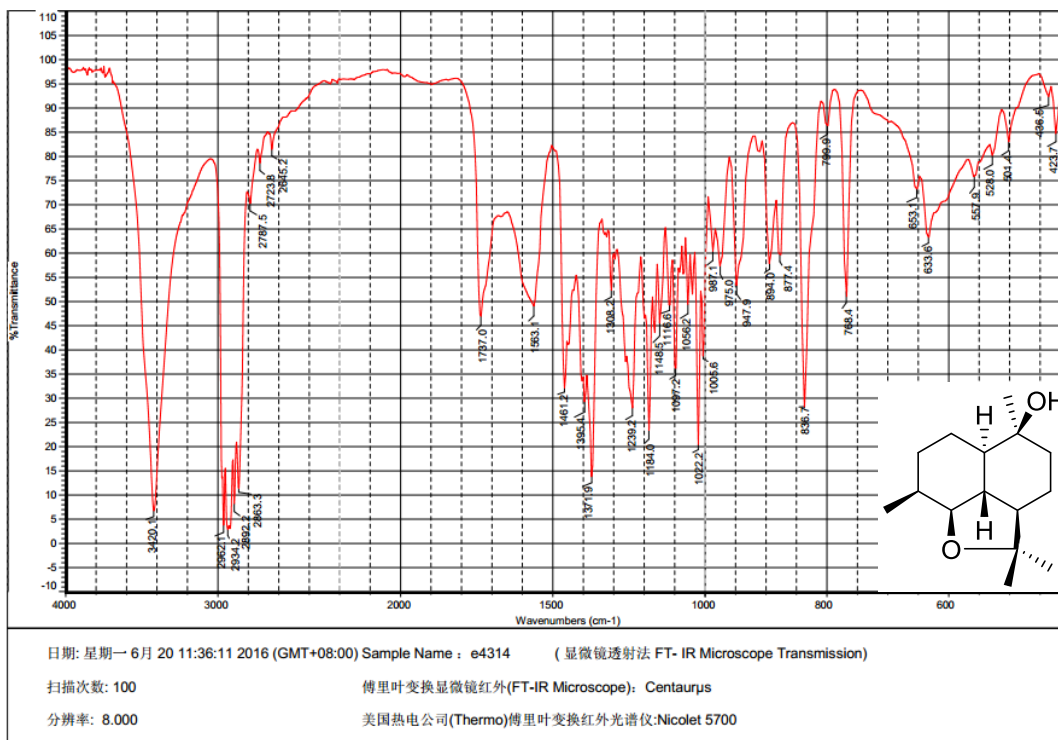


Figure S19. IR spectrum of compound 2



日期: 星期一 6月 20 11:36:11 2016 (GMT+08:00) Sample Name : e4314 (显微镜透射法 FT-IR Microscope Transmission)
 扫描次数: 100 傅里叶变换显微镜红外 (FT-IR Microscope): Centaurus
 分辨率: 8.000 美国热电公司 (Thermo) 傅里叶变换红外光谱仪: Nicolet 5700

Figure S20. ^1H NMR spectrum of compound **3** in CDCl_3

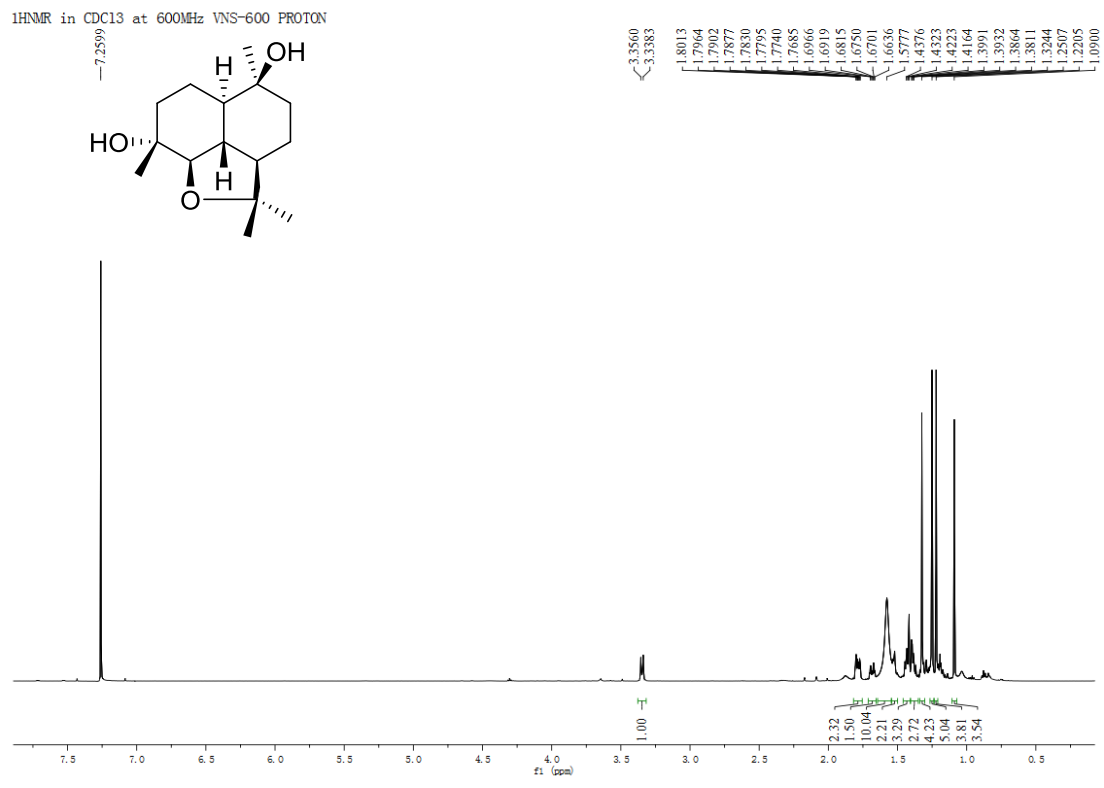


Figure S21. ^{13}C NMR spectrum of compound **3** in CDCl_3

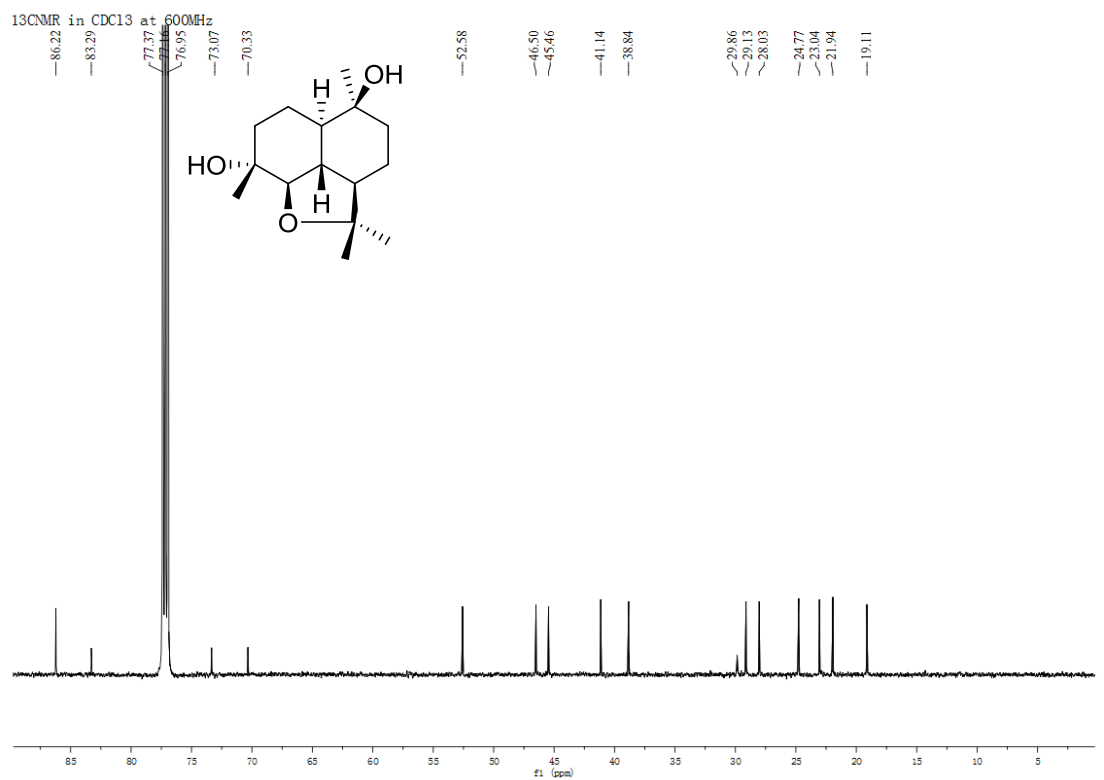


Figure S22. DEPT spectrum of compound **3** in CDCl₃

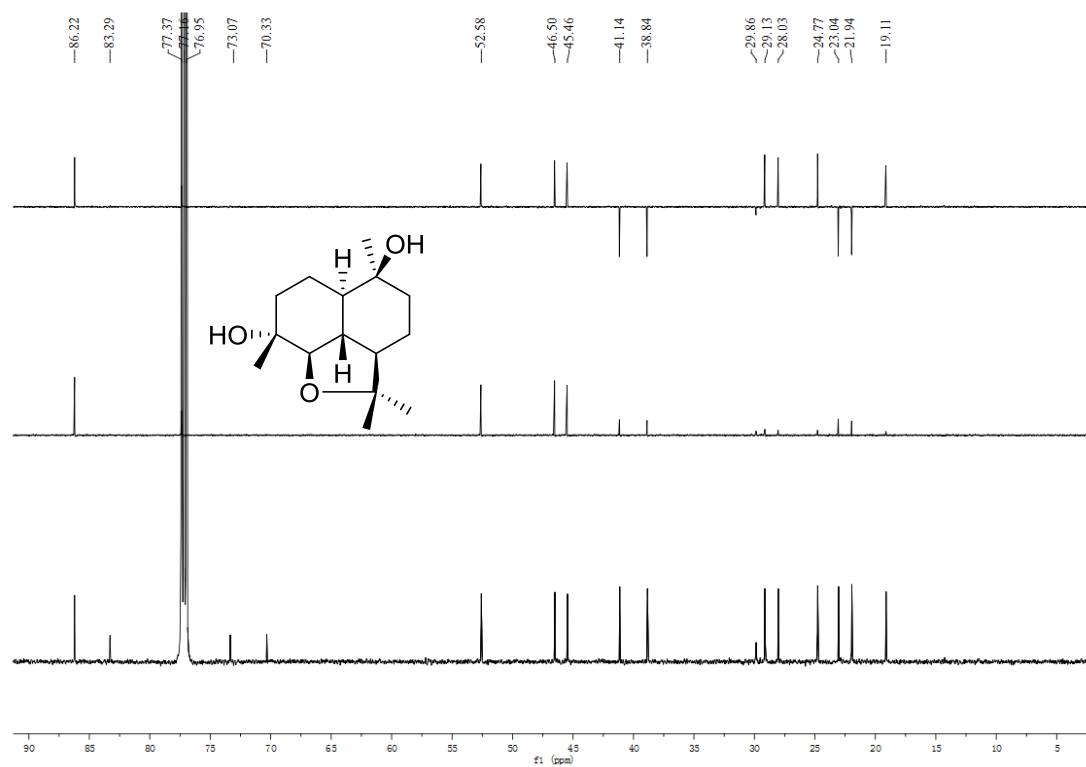


Figure S23. HSQC spectrum of compound **3** in CDCl₃

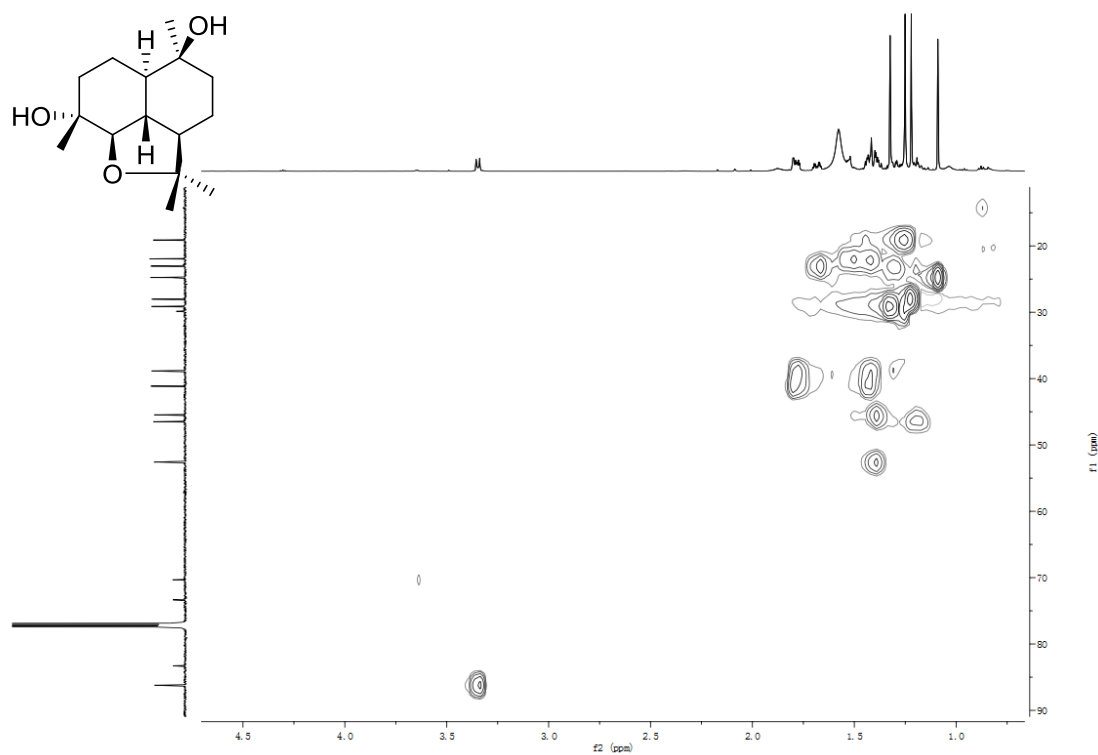


Figure S24. ¹H-¹H COSY spectrum of compound **3** in CDCl₃

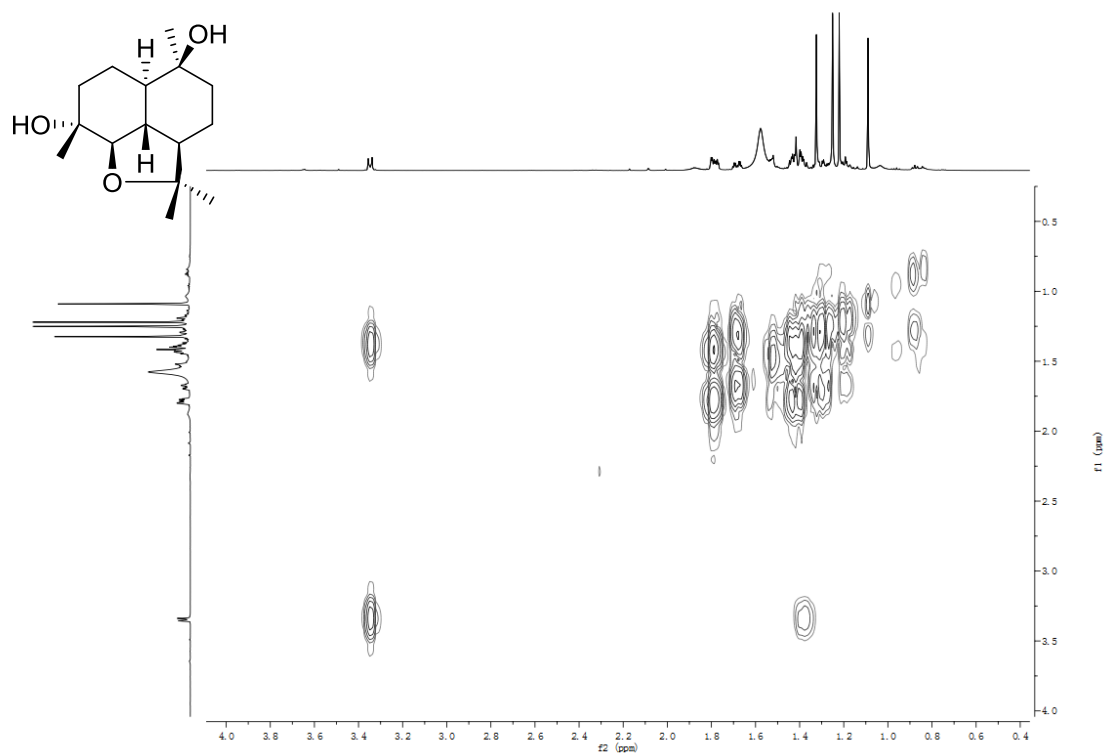


Figure S25. HMBC spectrum of compound **3** in CDCl_3

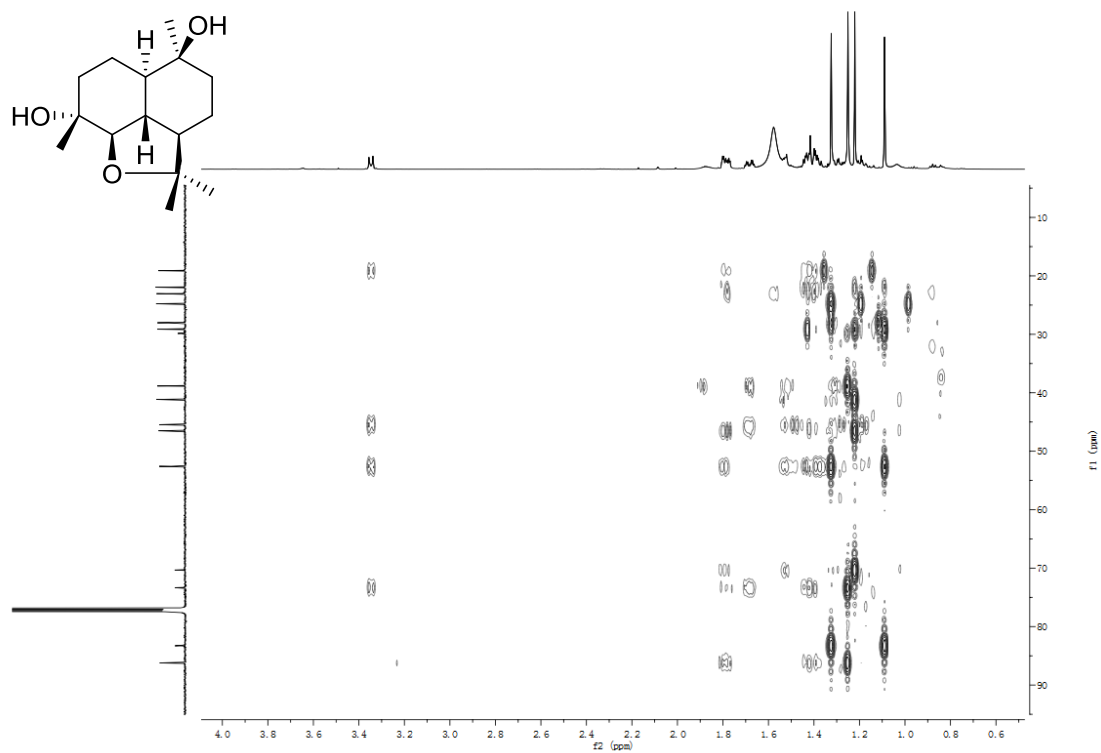


Figure S26. NOESY spectrum of compound **3** in CDCl_3

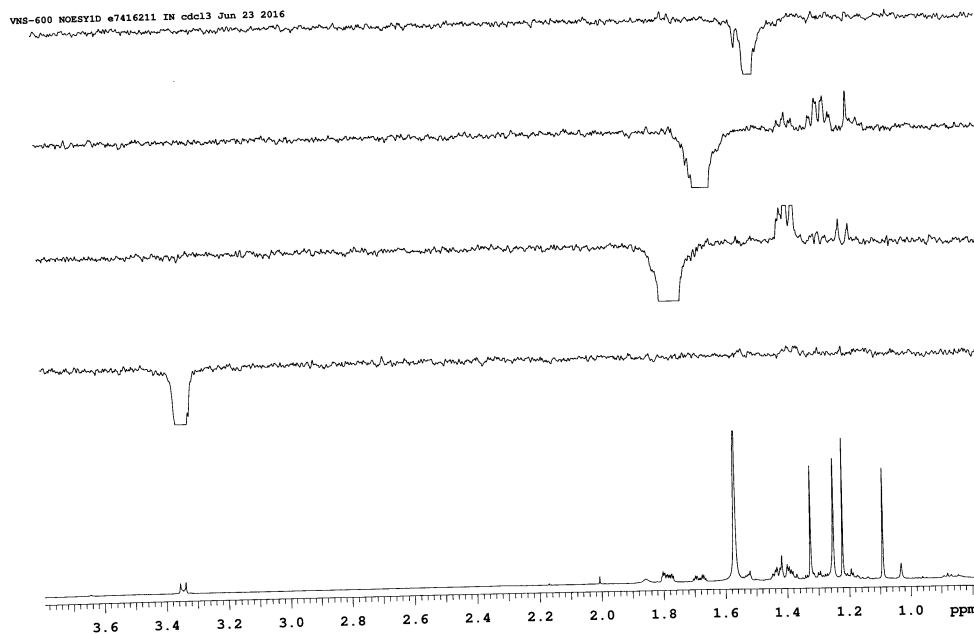
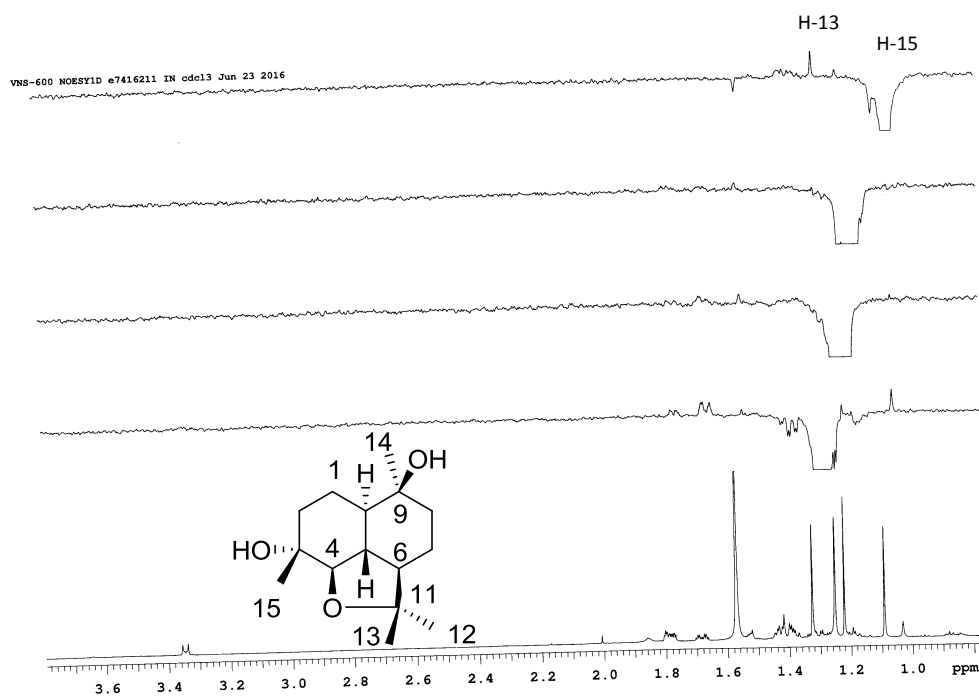


Figure S27. HRESIMS spectrum of compound 3

E7416211 #960 RT: 3.21 AV: 1 NL: 8.52E7
T: FTMS + c ESI Full ms [100.00-1000.00]

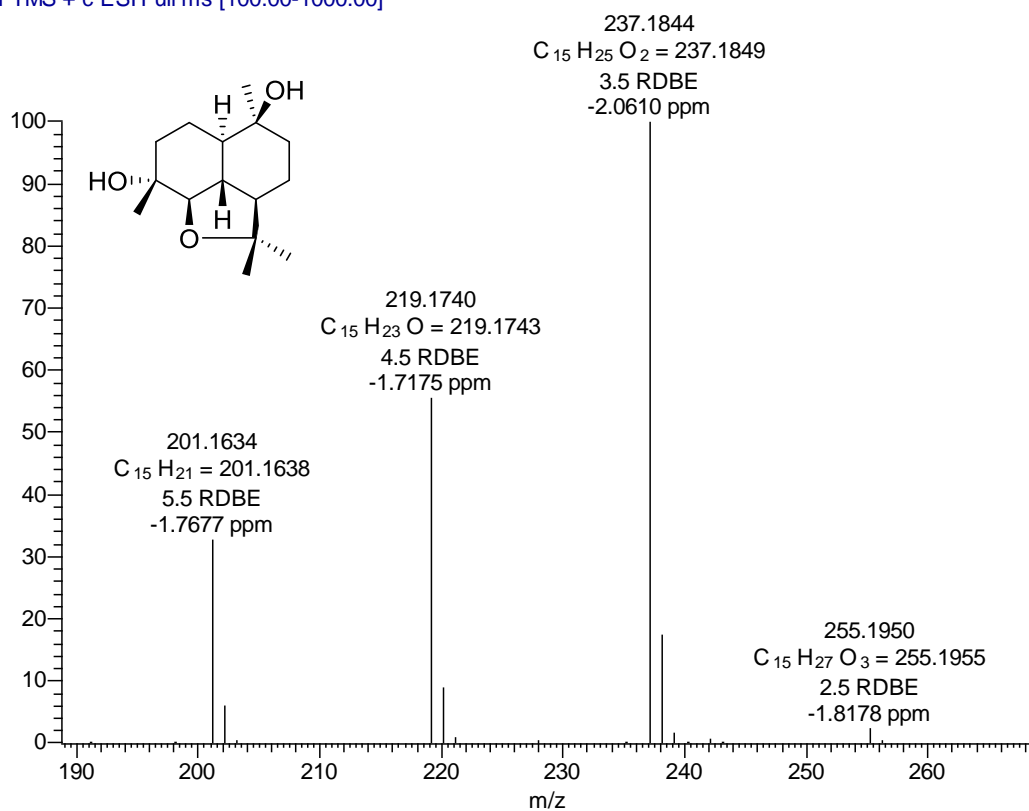


Figure S28. IR spectrum of compound 3

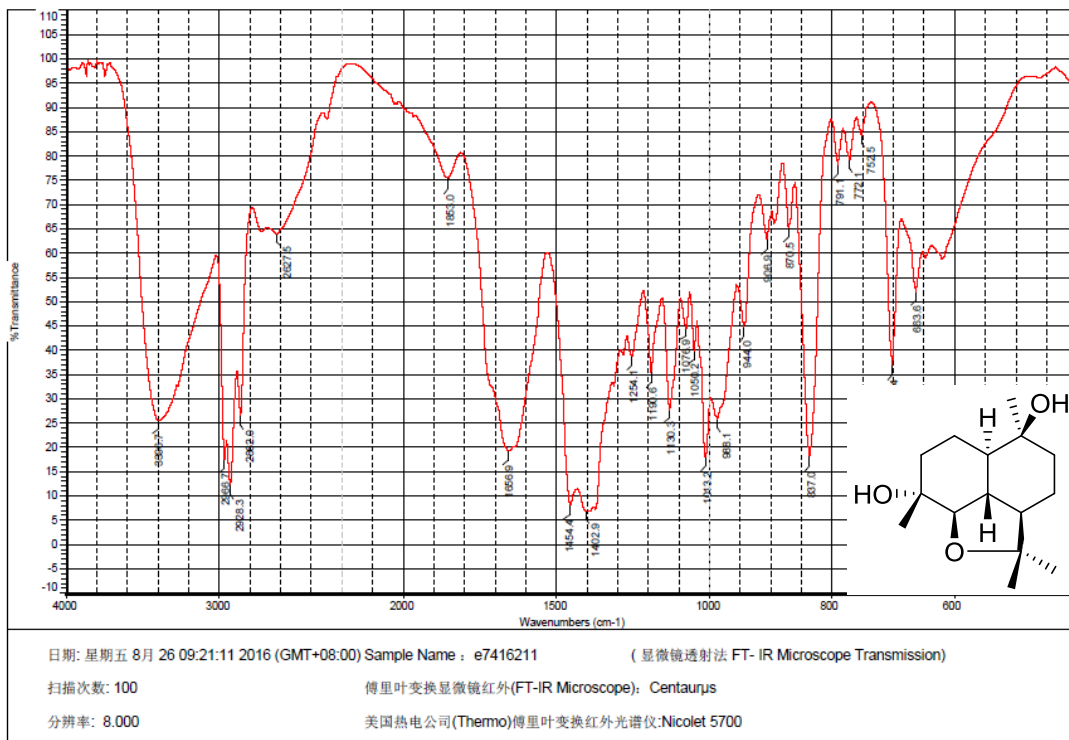


Figure S29. ^1H NMR spectrum of compound **4** in CDCl_3

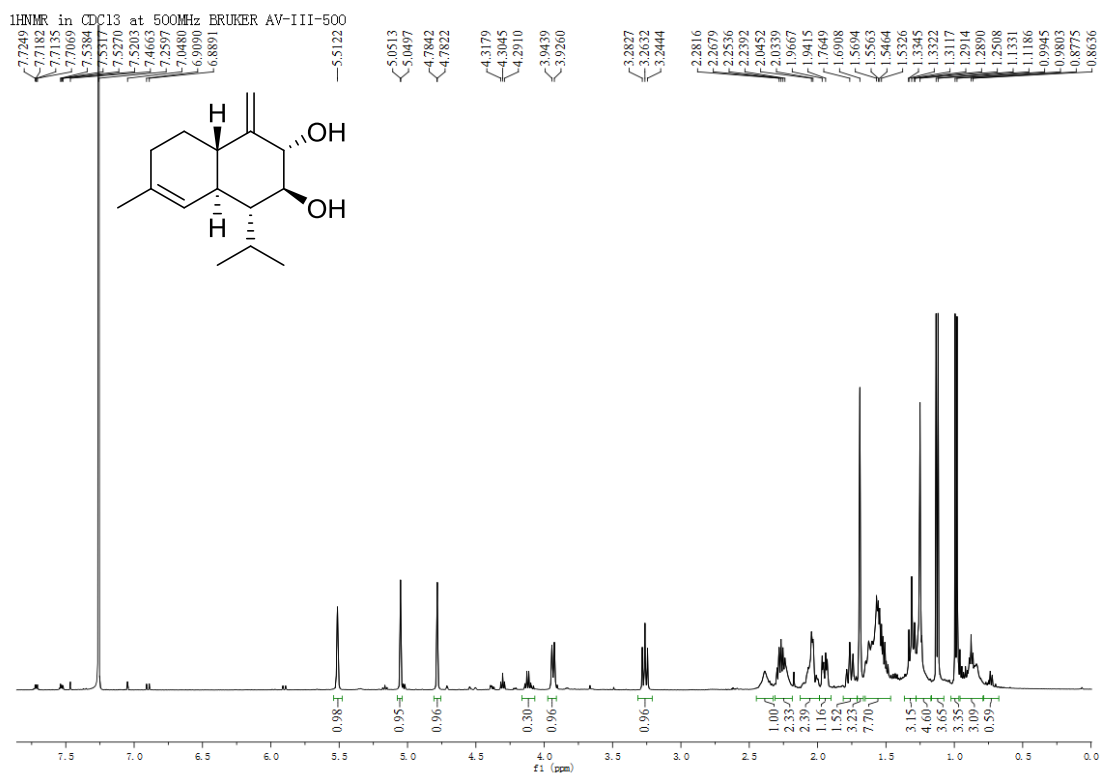


Figure S30. ^{13}C NMR spectrum of compound **4** in CDCl_3

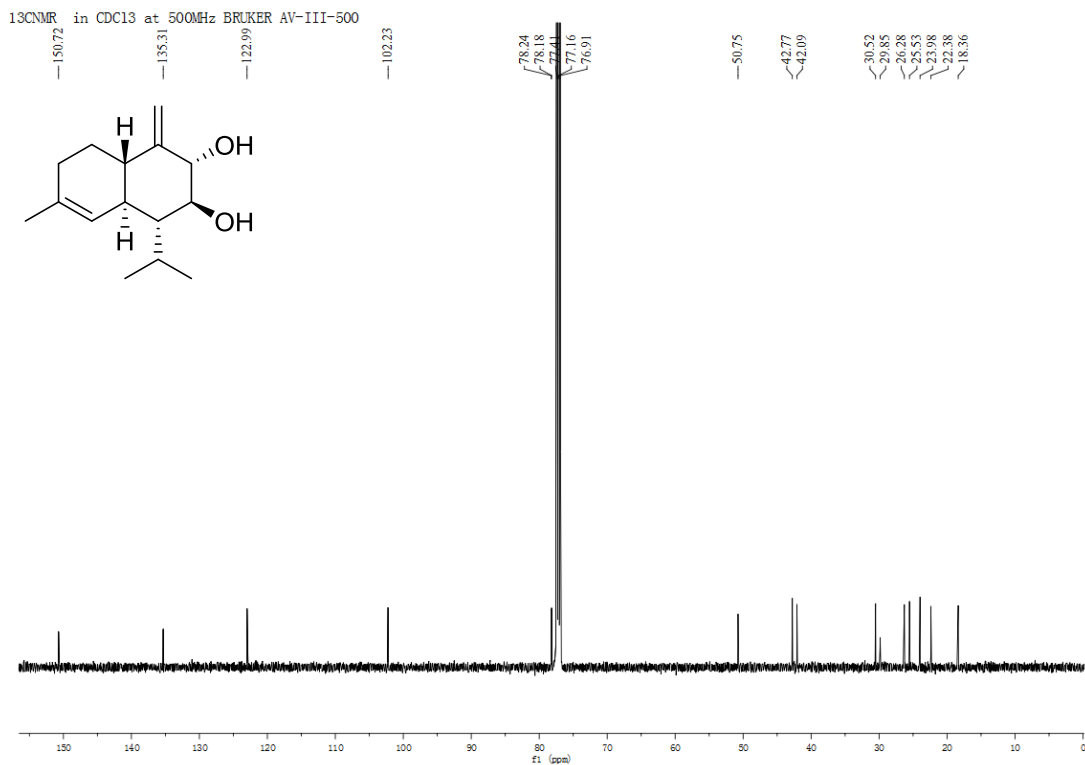


Figure S31. DEPT spectrum of compound 4 in CDCl₃

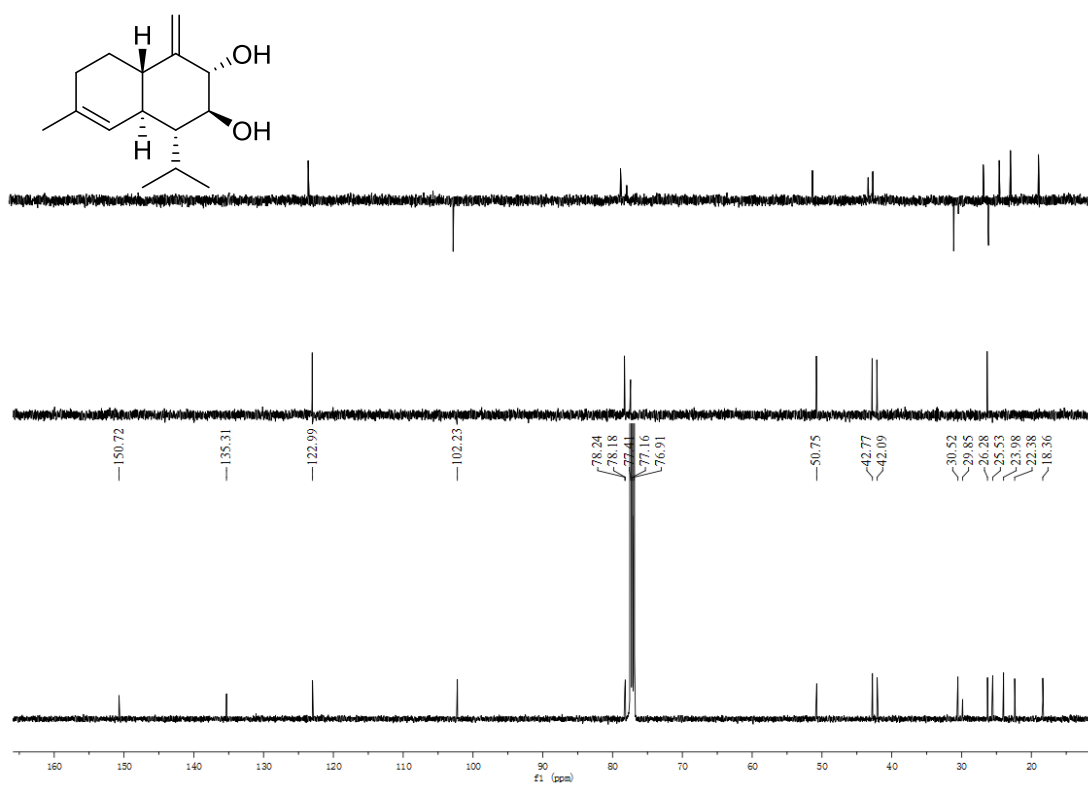


Figure S32. HSQC spectrum of compound 4 in CDCl₃

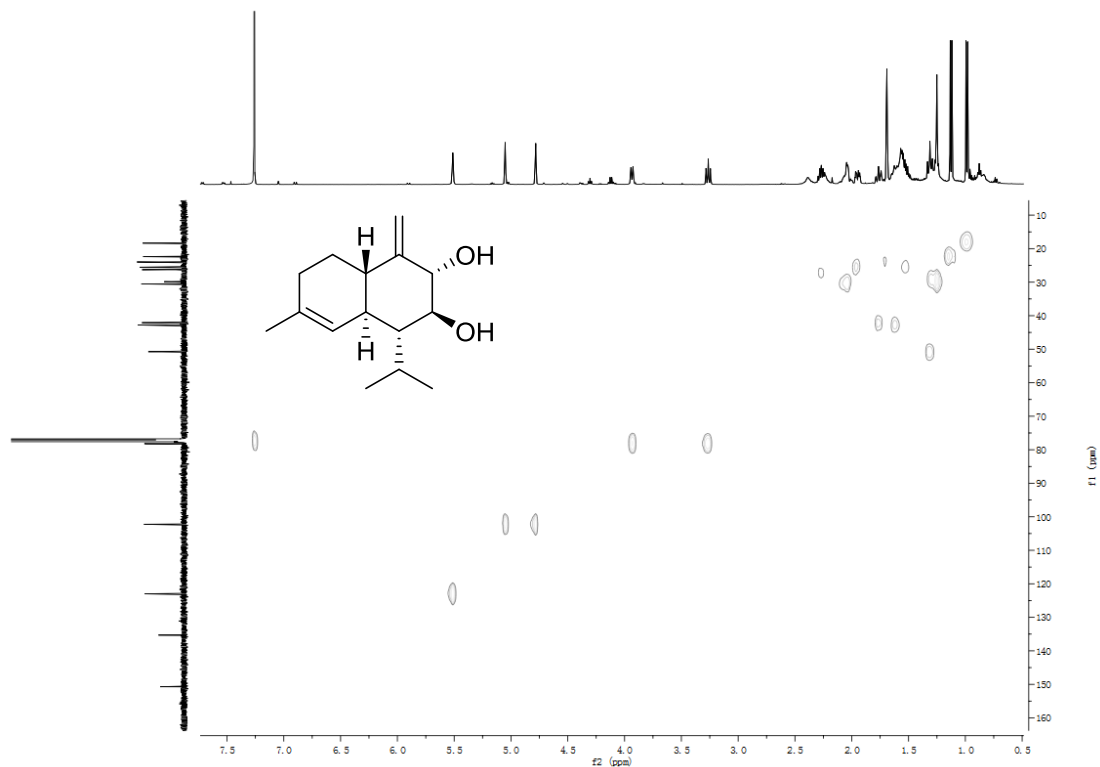


Figure S33. ^1H - ^1H COSY spectrum of compound **4** in CDCl_3

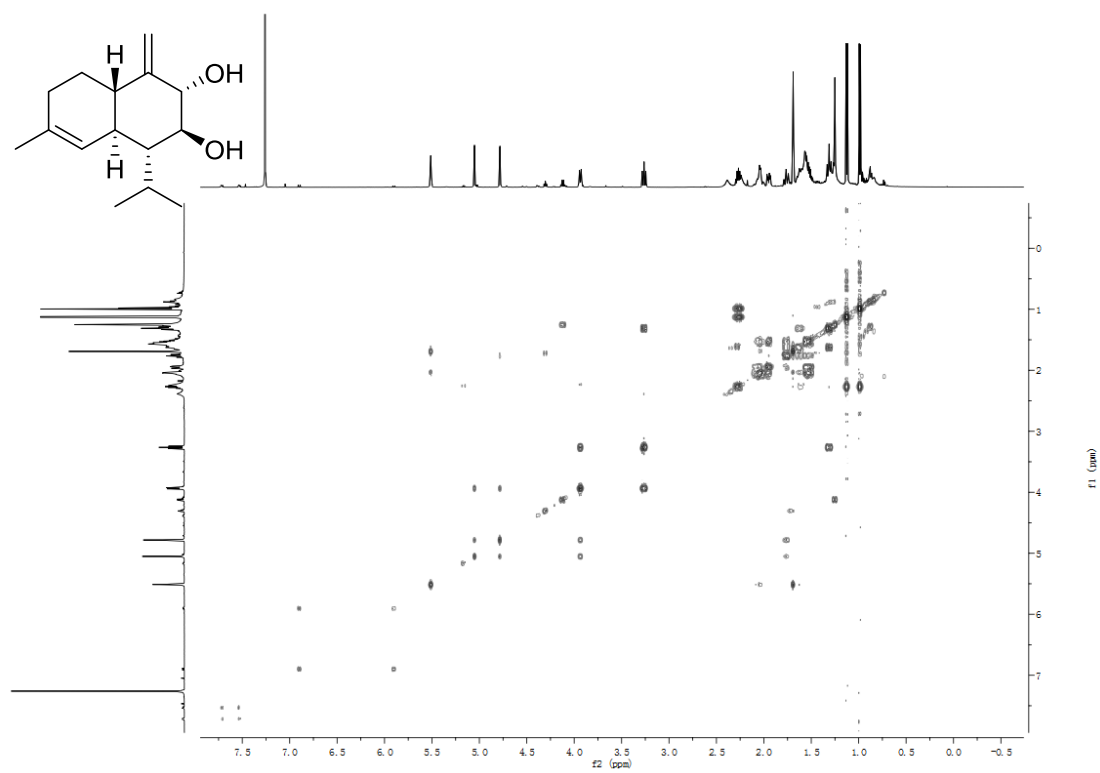


Figure S34. HMBC spectrum of compound **4** in CDCl_3

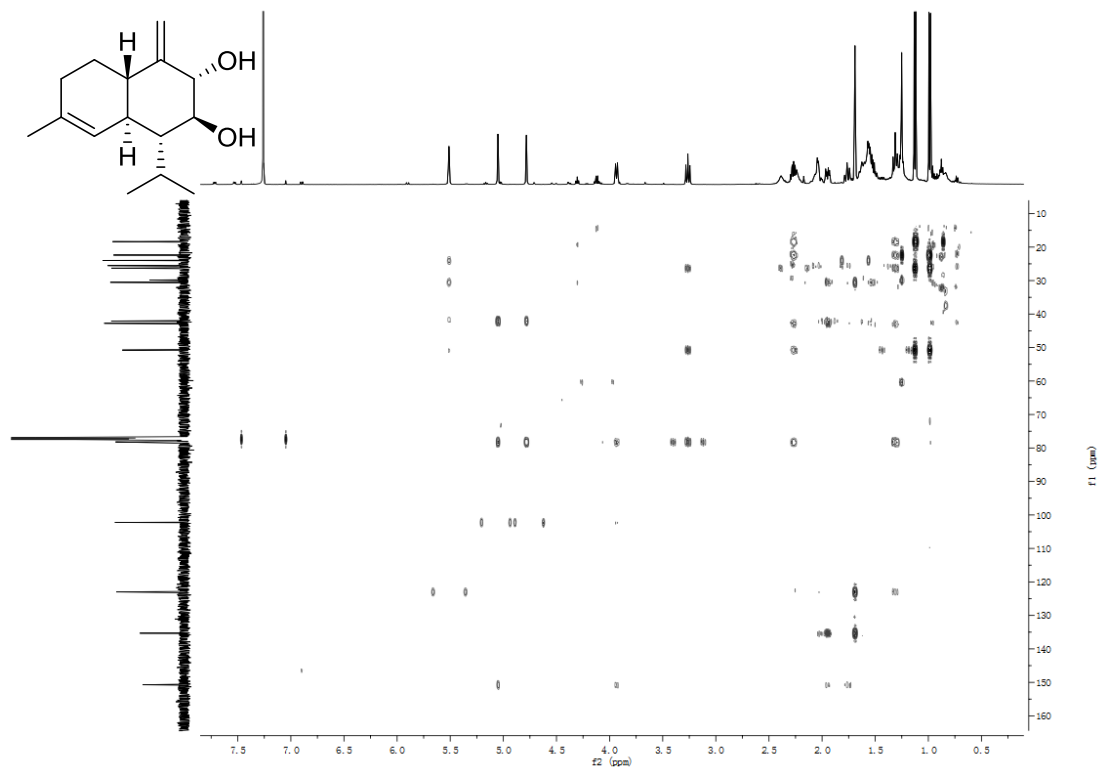
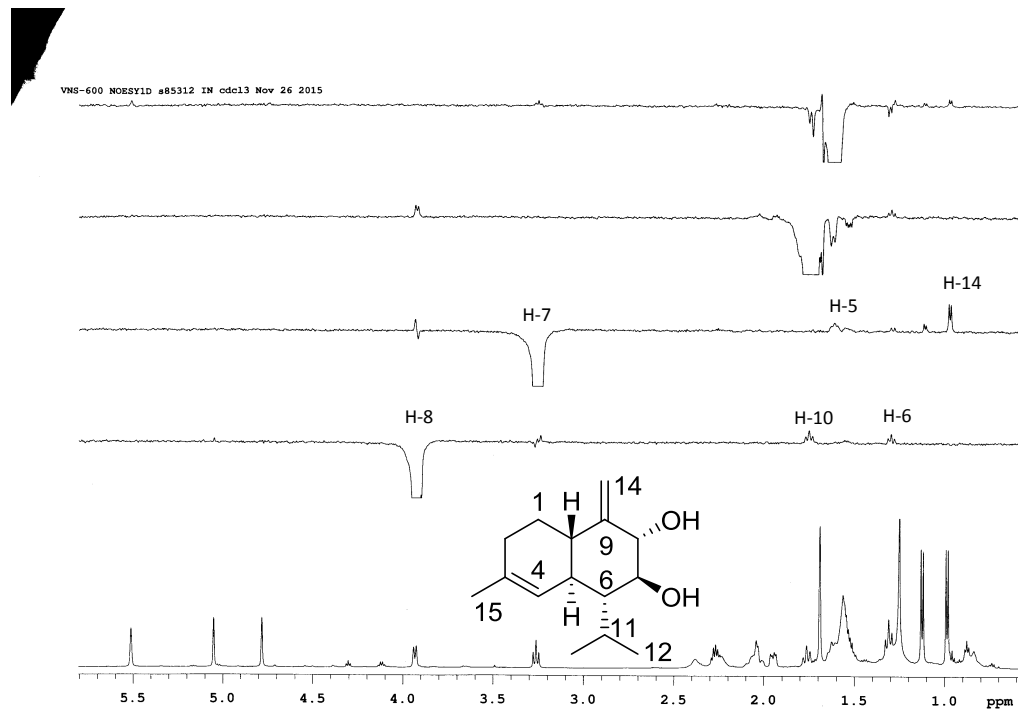


Figure S35. NOESY spectrum of compound **4** in CDCl_3



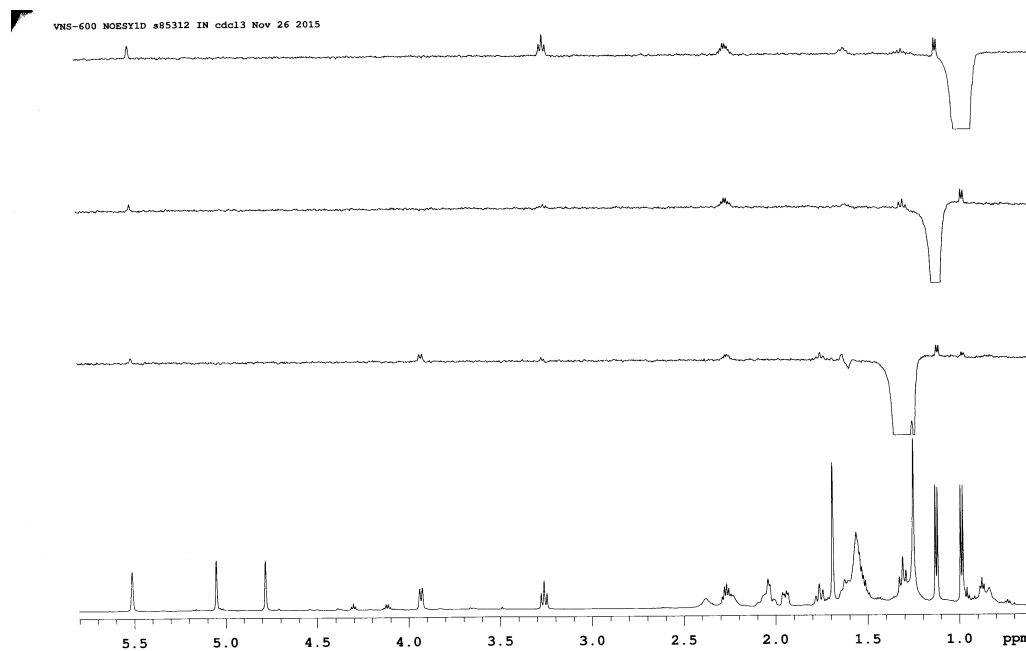


Figure S36. HRESIMS spectrum of compound **4**

S85312 #1884 RT: 5.23 AV: 1 NL: 7.52E6

T: FTMS + c ESI Full ms [100.00-1000.00]

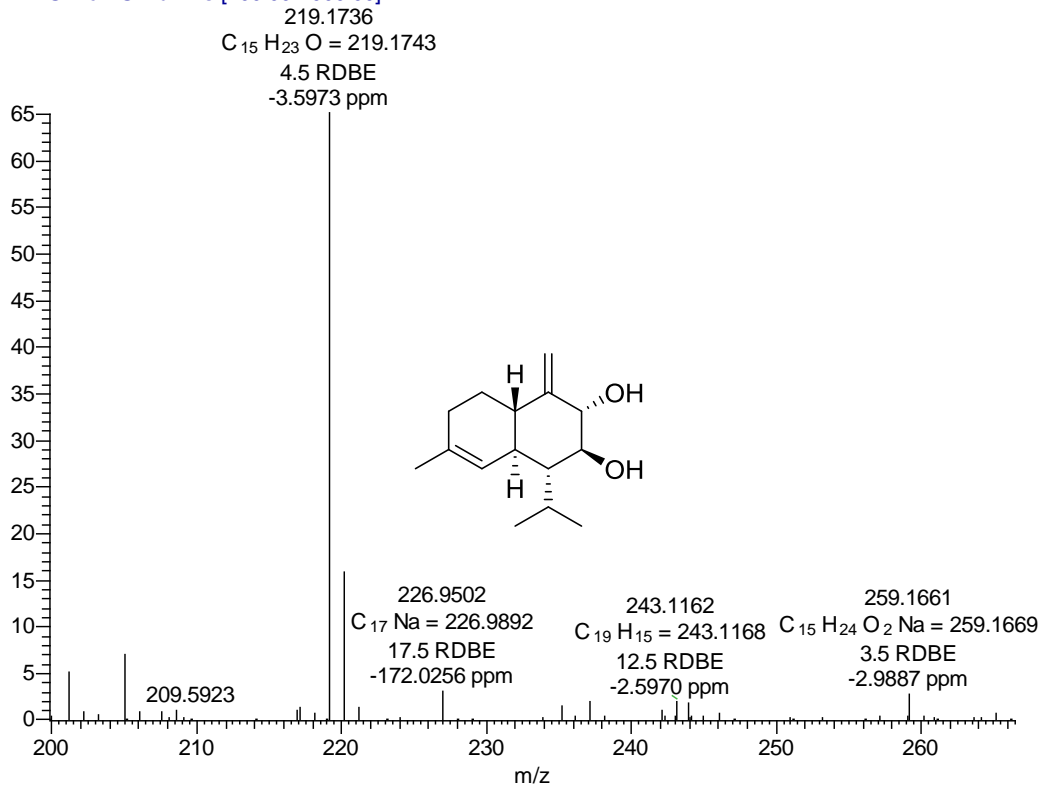


Figure S37. IR spectrum of compound 4

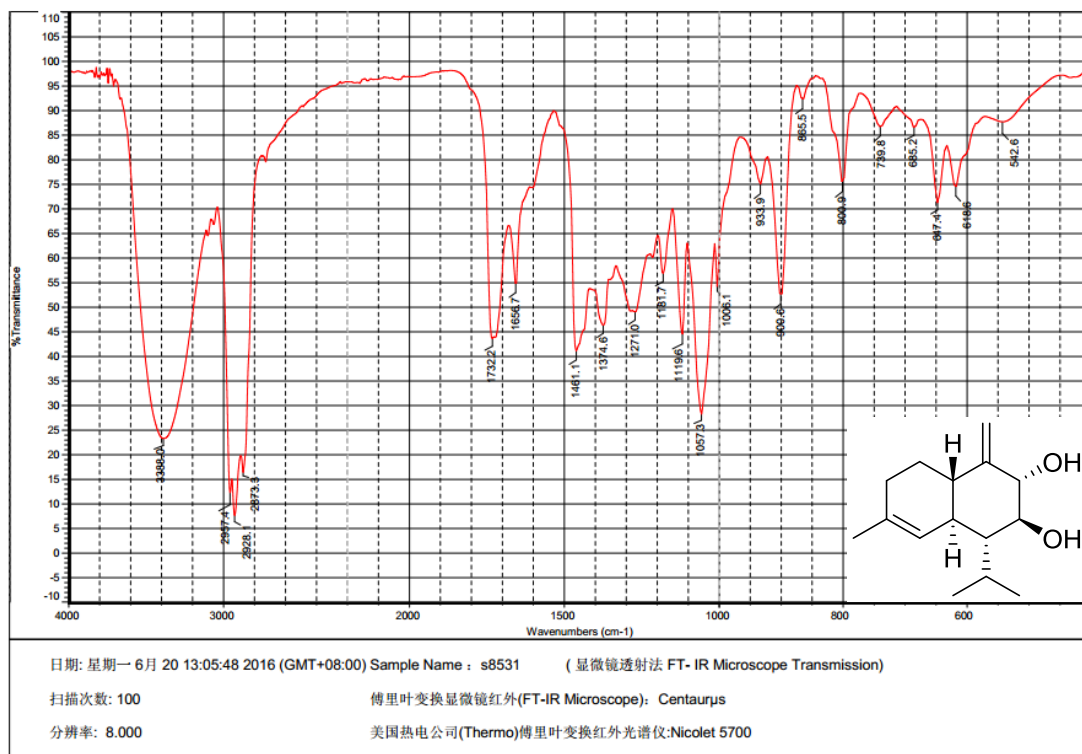
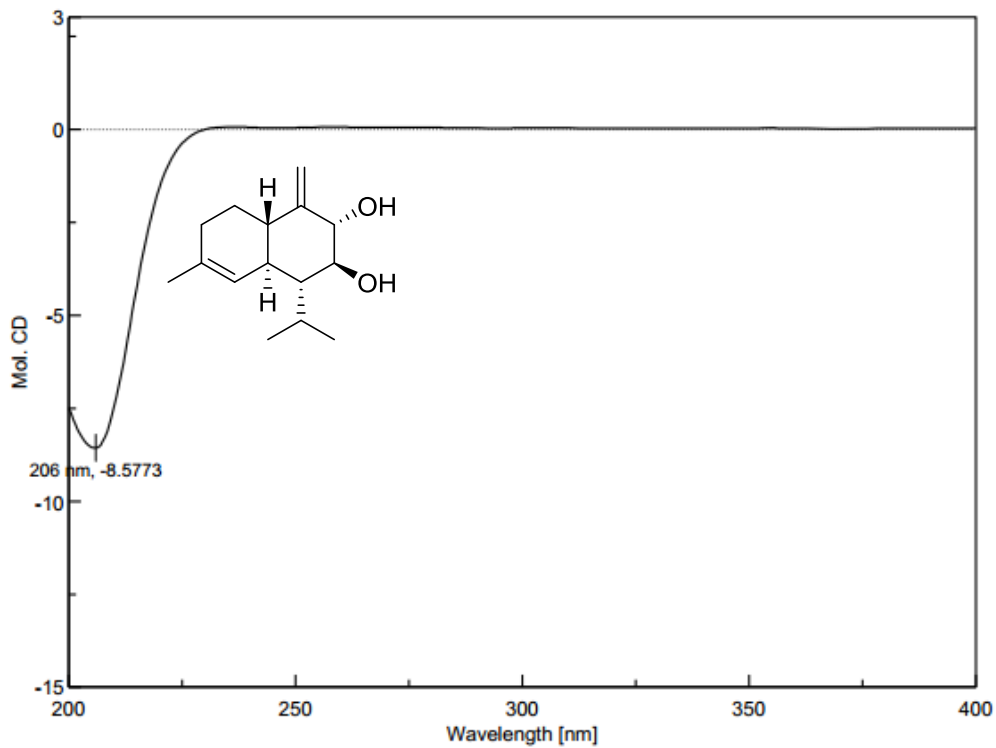


Figure S38. CD spectrum of compound 4



[Comments]
Sample name S85312

— S85312-1-s-m.jws

Figure S39. ¹H NMR spectrum of compound 5 in CDCl₃

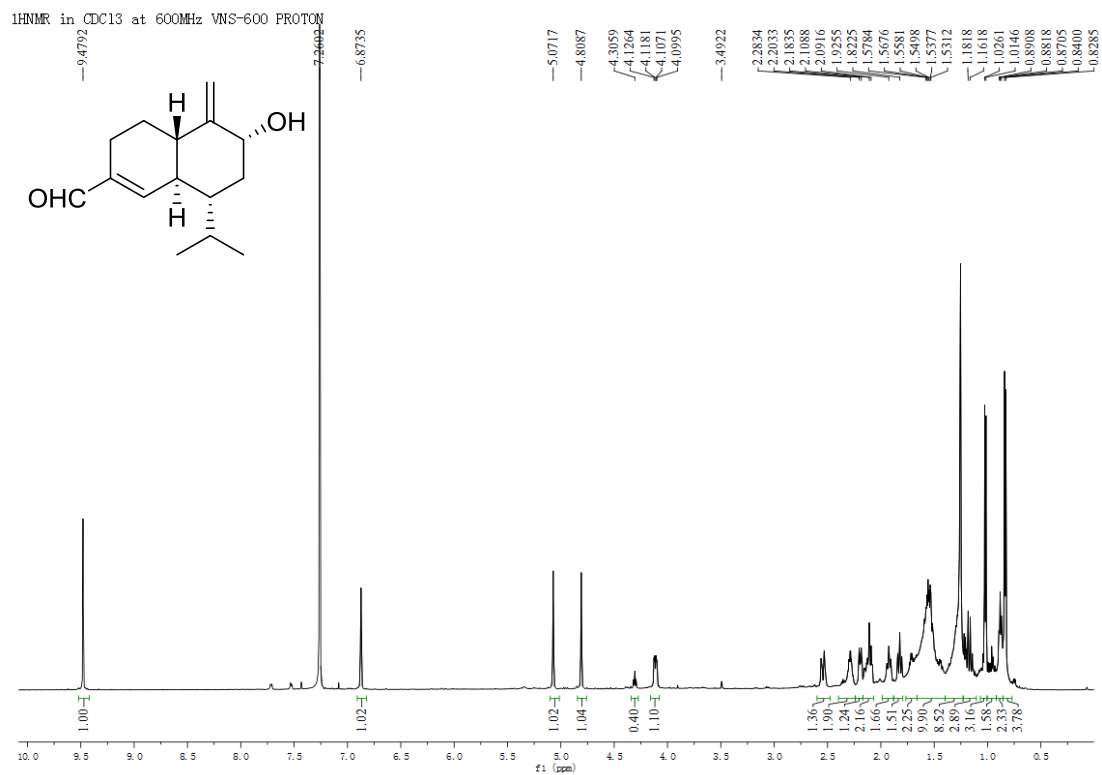


Figure S40. ¹³C NMR spectrum of compound 5 in CDCl₃

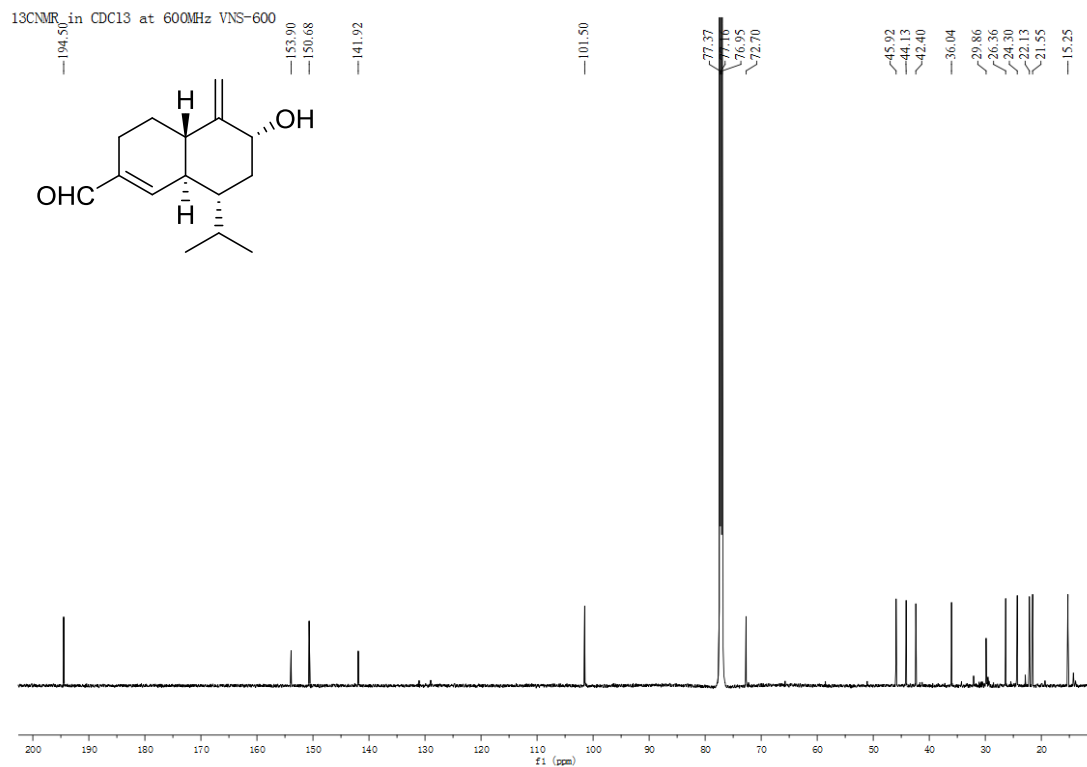


Figure S41. DEPT spectrum of compound 5 in CDCl₃



Figure S42. HSQC spectrum of compound 5 in CDCl₃

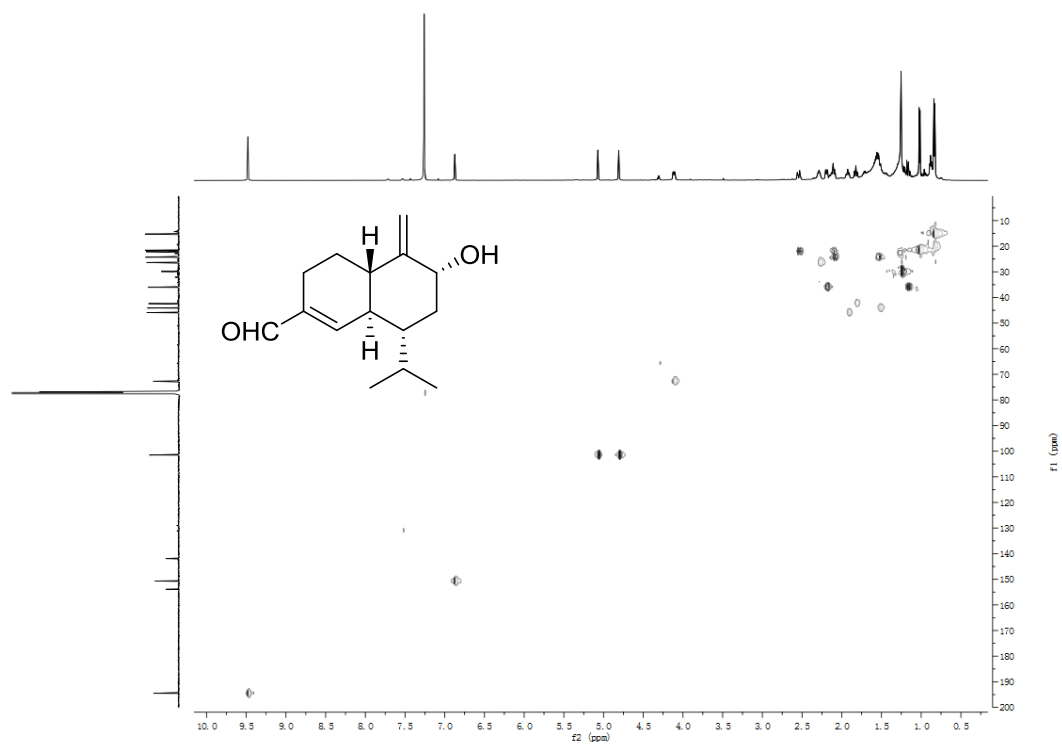


Figure S43. ^1H - ^1H COSY spectrum of compound **5** in CDCl_3

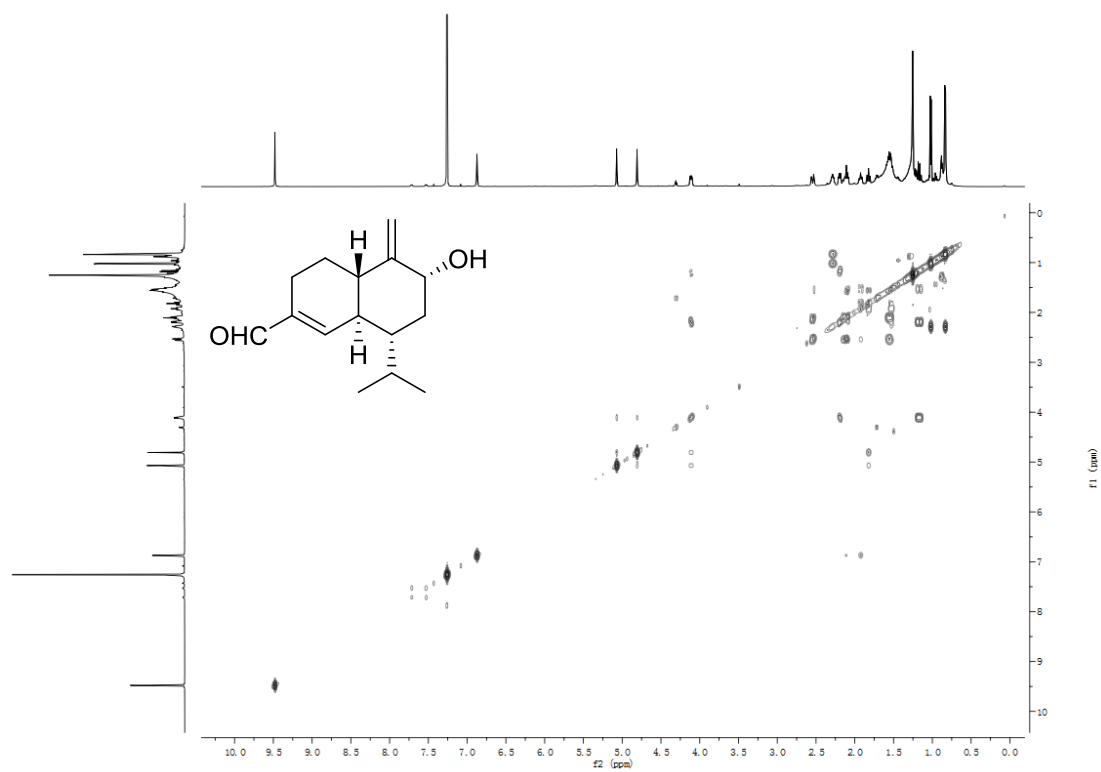


Figure S44. HMBC spectrum of compound **5** in CDCl_3

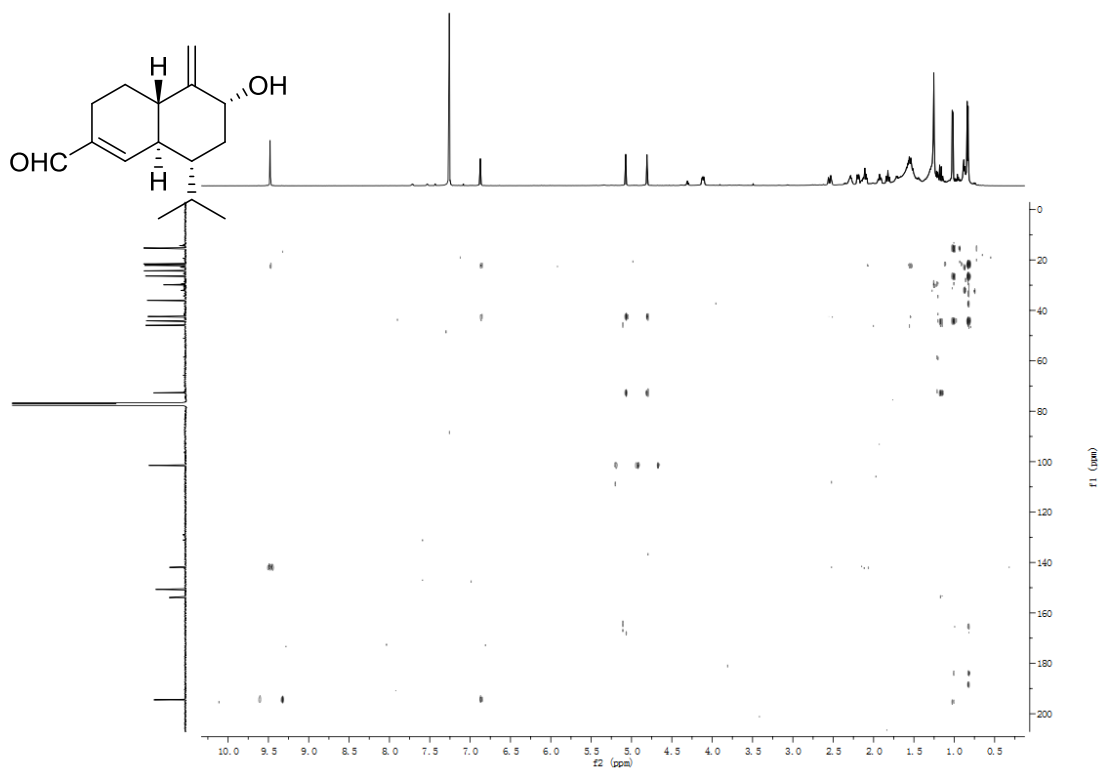


Figure S45. NOESY spectrum of compound **5** in CDCl₃

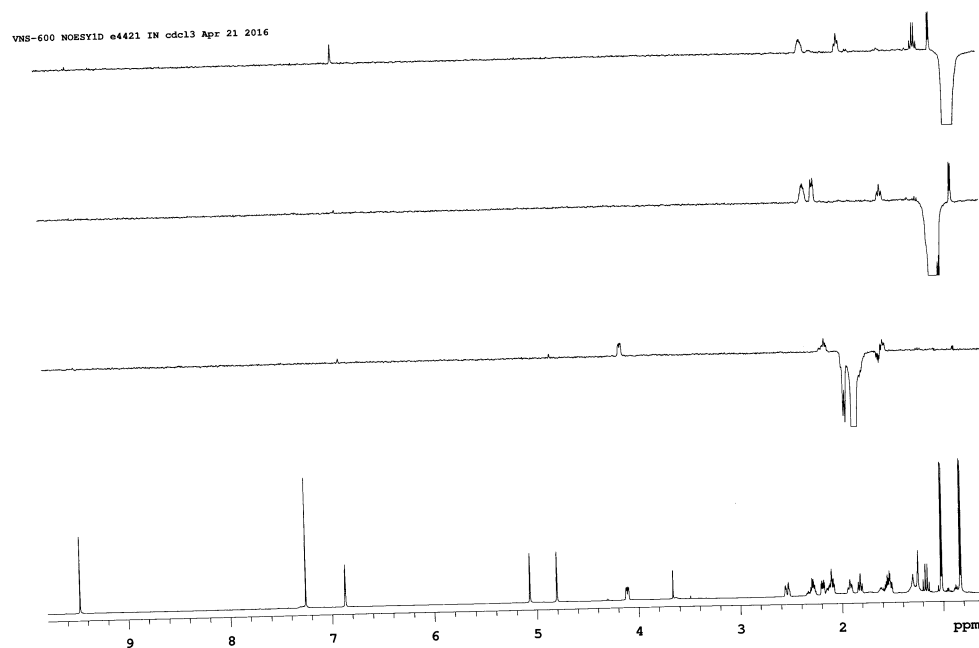
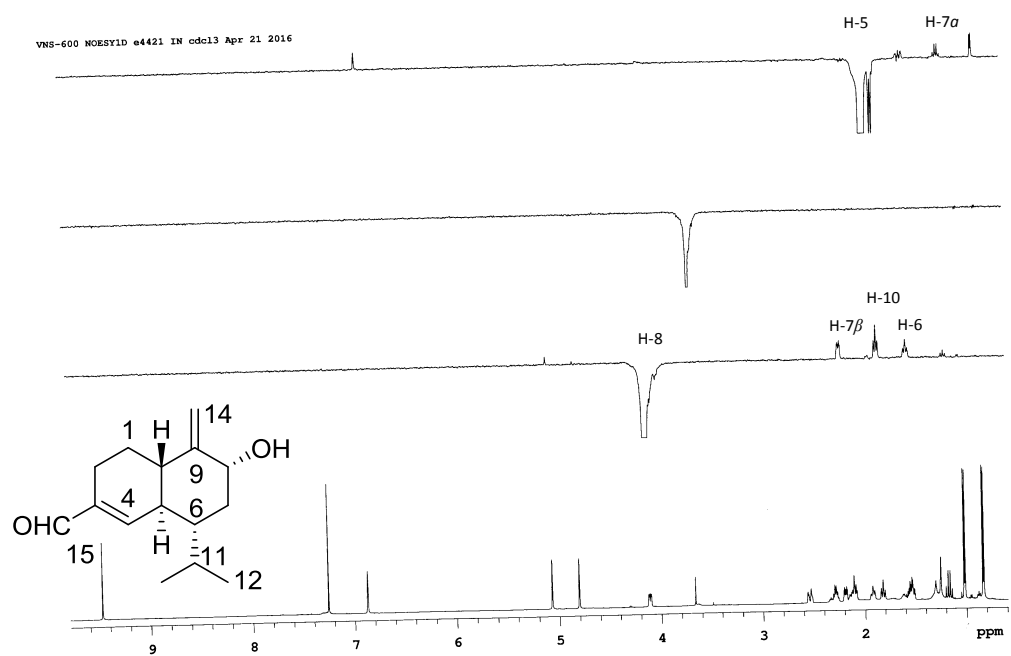


Figure S46. HRESIMS spectrum of compound 5

E4421 #1404 RT: 4.74 AV: 1 NL: 5.25E6
T: FTMS + c ESI Full ms [100.00-1000.00]

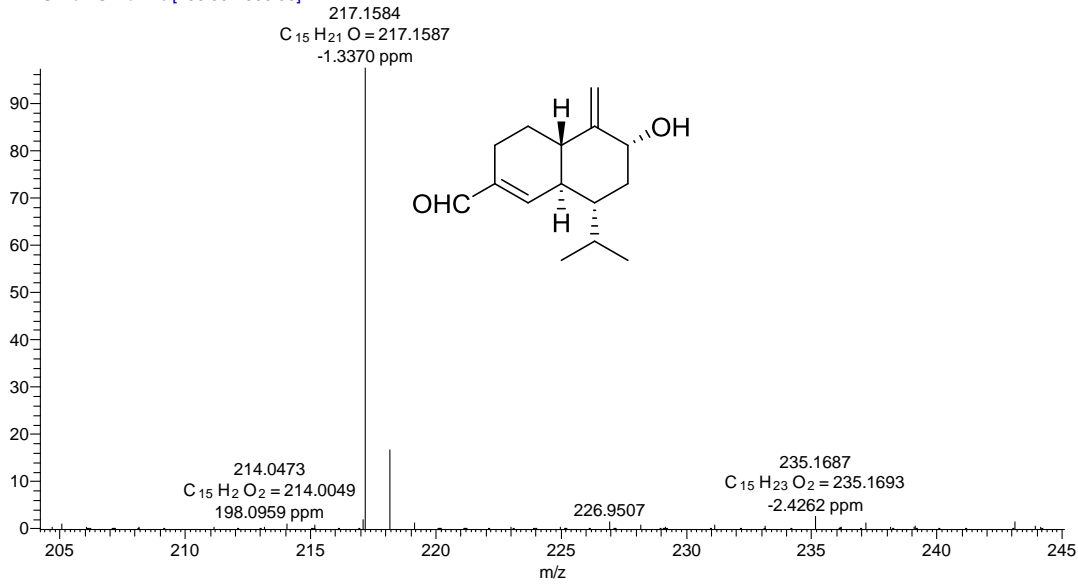


Figure S47. IR spectrum of compound 5

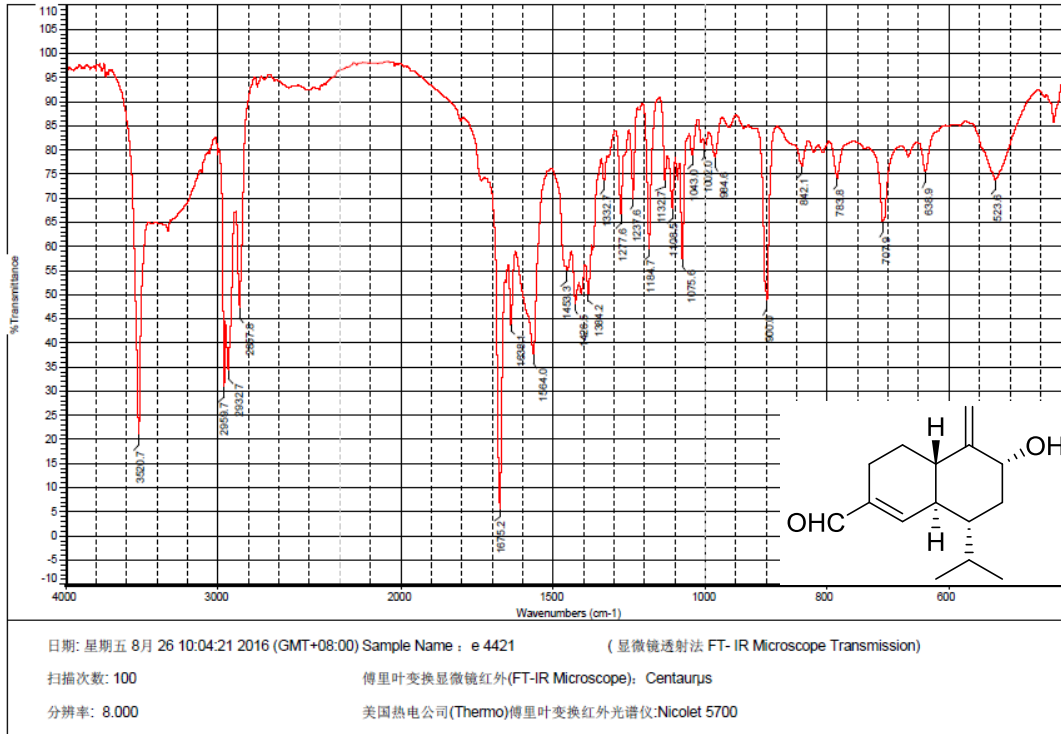
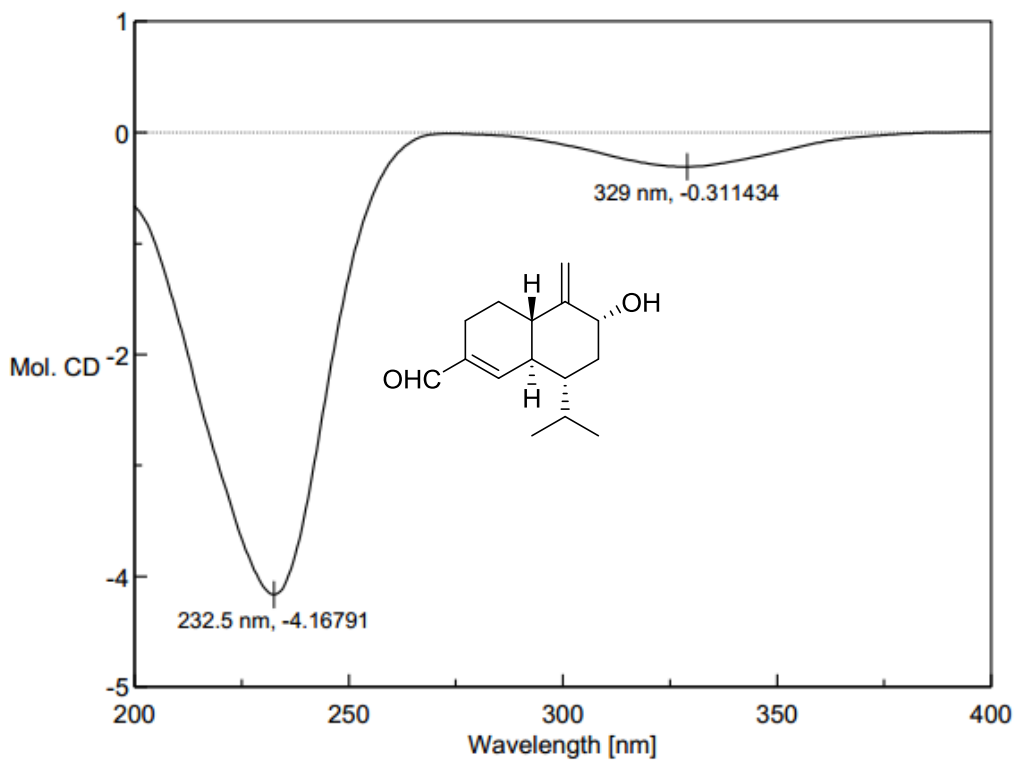


Figure S48. CD spectrum of compound 5



[Comment]
Sample Name e4421

Figure S49. ¹H NMR spectrum of compound 6 in CDCl₃

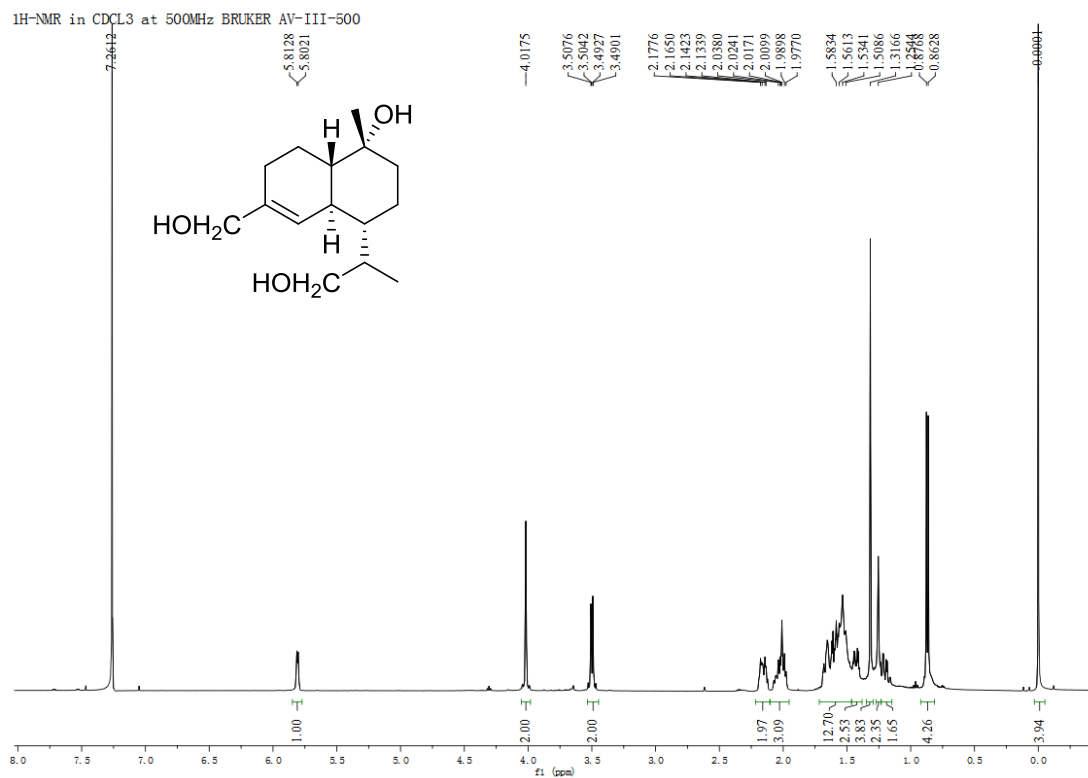


Figure S50. ^{13}C NMR spectrum of compound **6** in CDCl_3

^{13}C -NMR IN CDCl_3 at 500MHz BRUKER AV-III-500

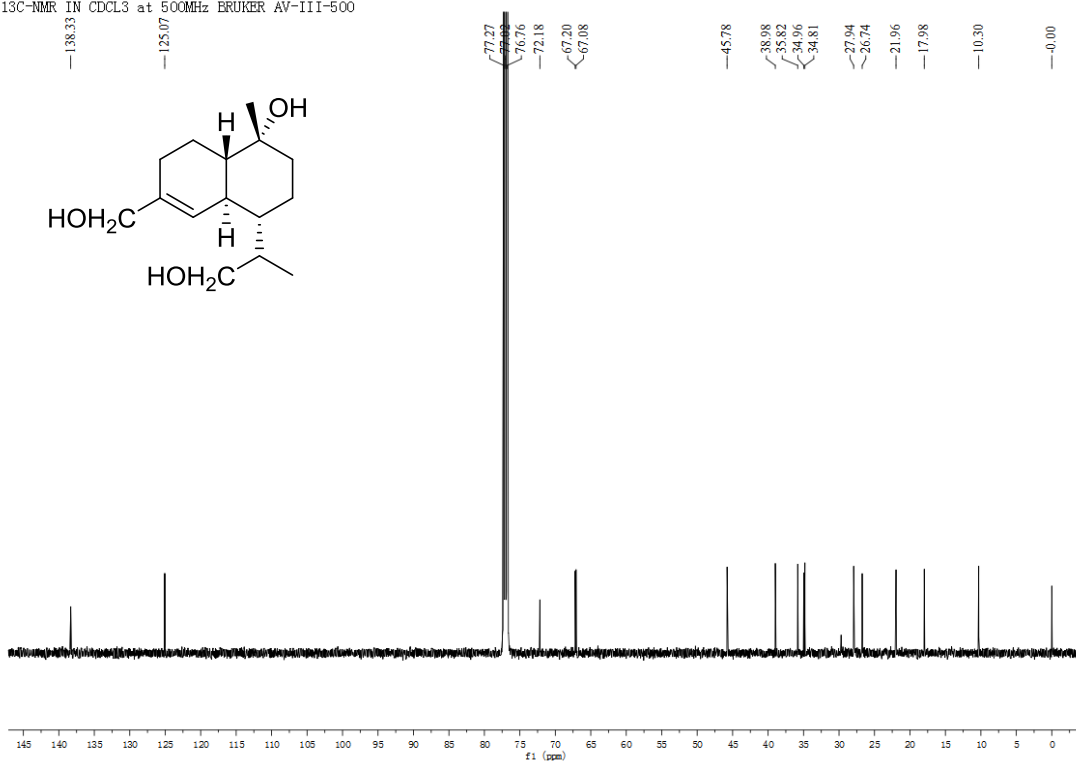


Figure S51. DEPT spectrum of compound **6** in CDCl_3

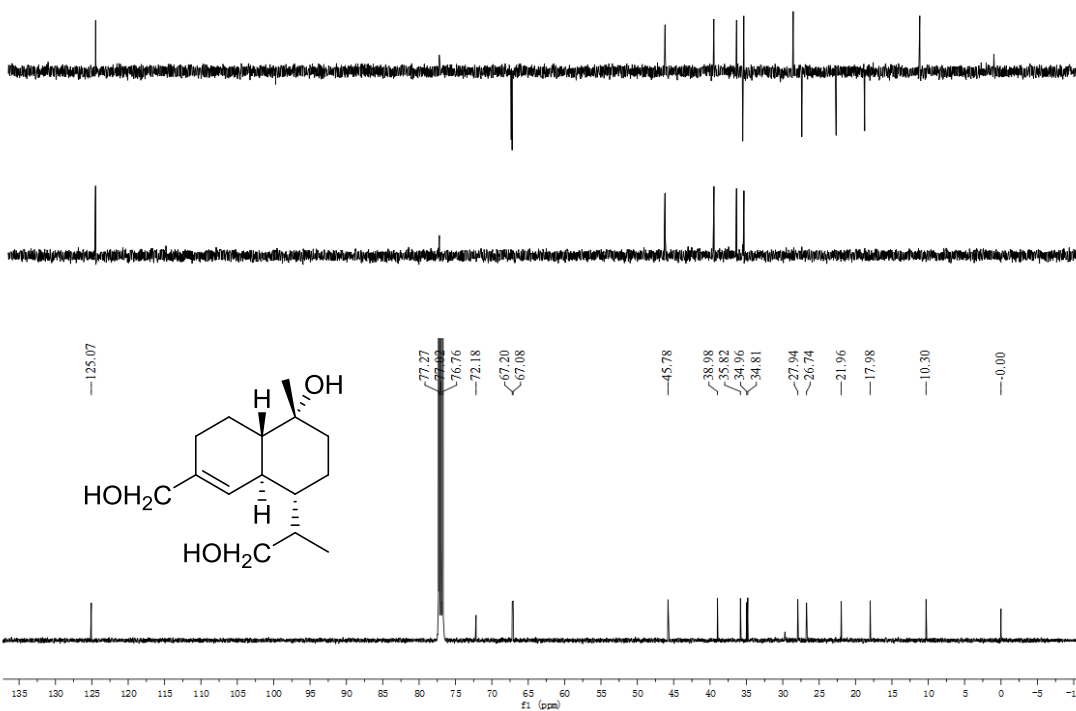


Figure S52. HSQC spectrum of compound **6** in CDCl₃

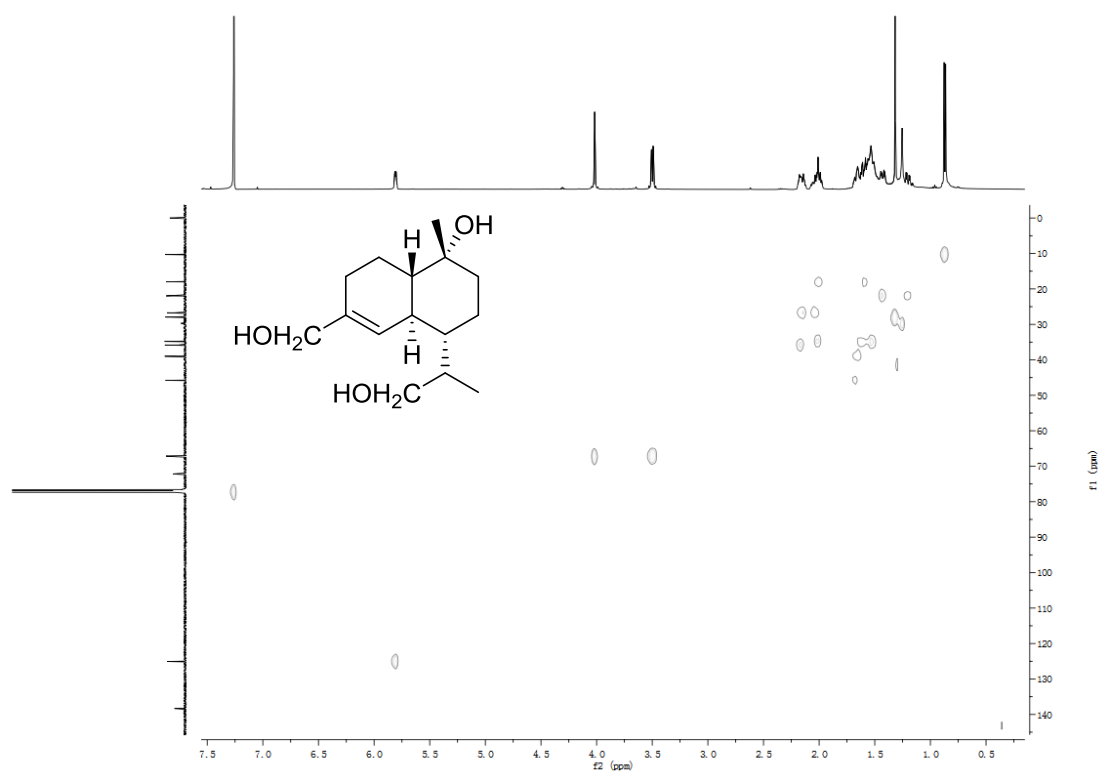


Figure S53. ¹H-¹H COSY spectrum of compound **6** in CDCl₃

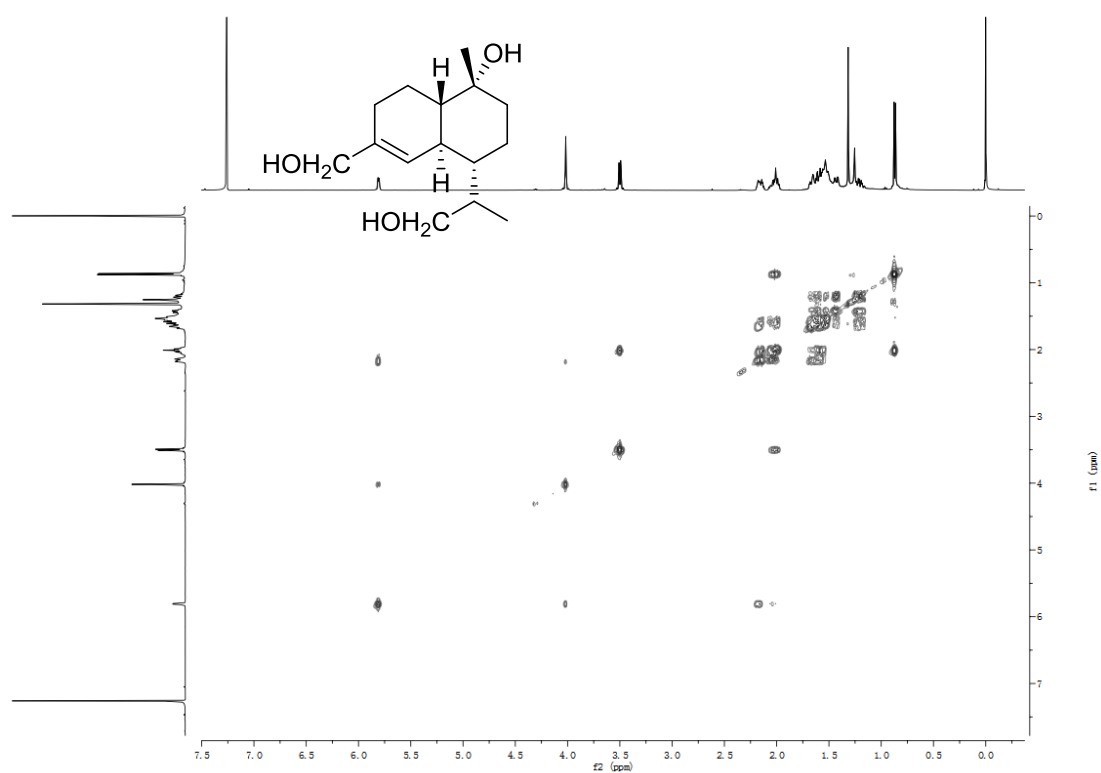


Figure S54. HMBC spectrum of compound 6 in CDCl₃

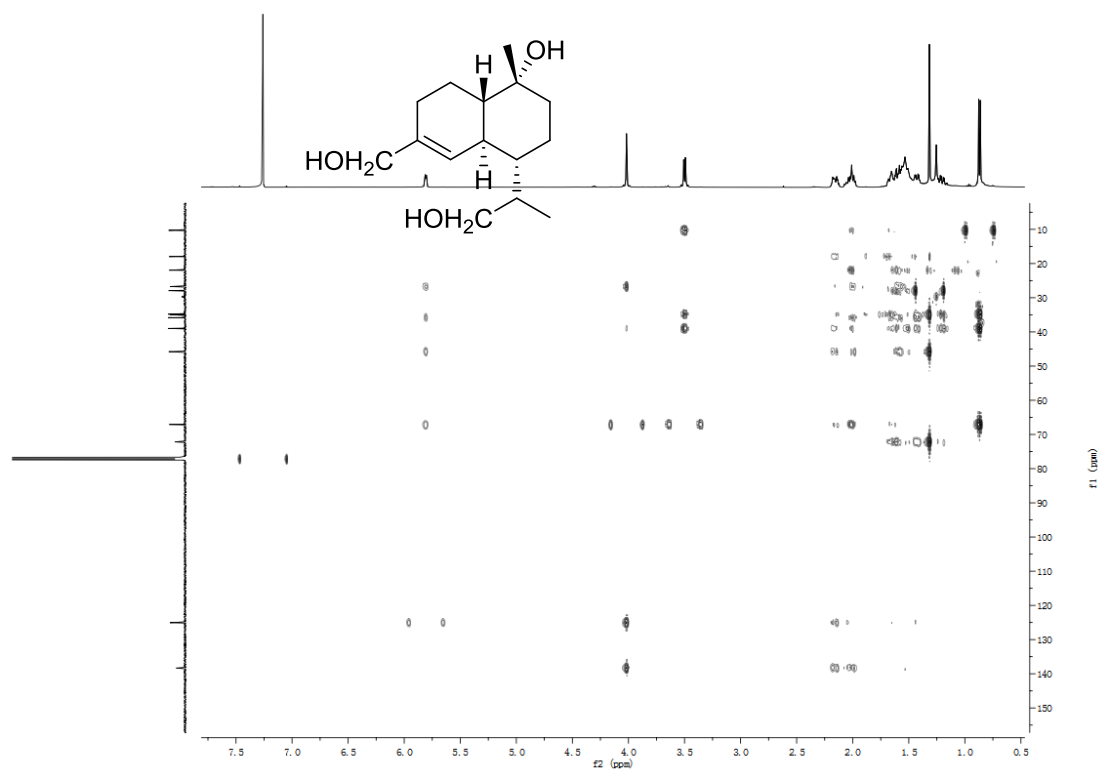
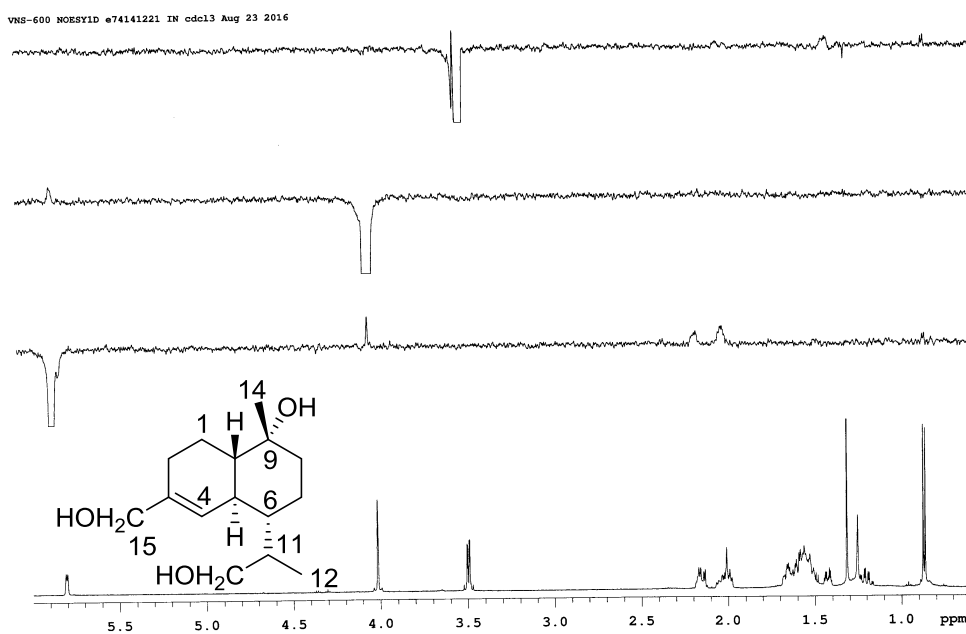
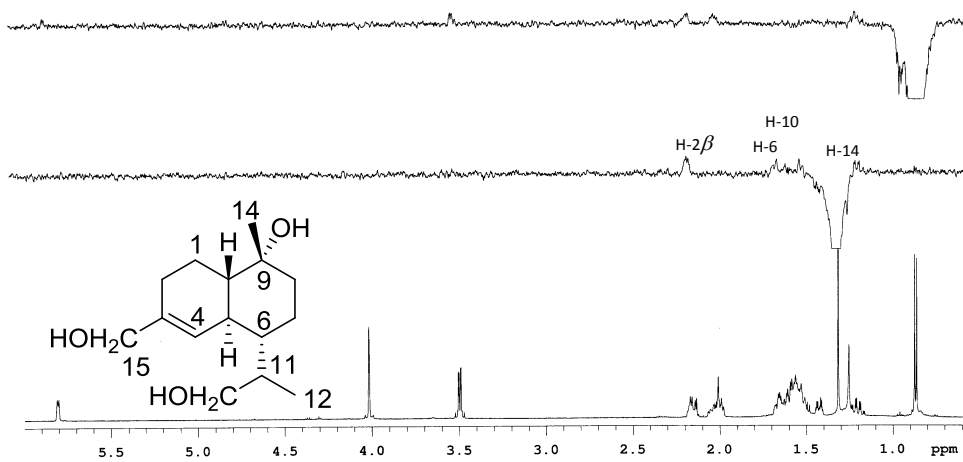


Figure S55. NOESY spectrum of compound 6 in CDCl₃



VNS-600 NOESY1D e74141221 IN cdc13 Aug 23 2016



VNS-600 NOESY1D e74141221 IN cdc13 Aug 25 2016

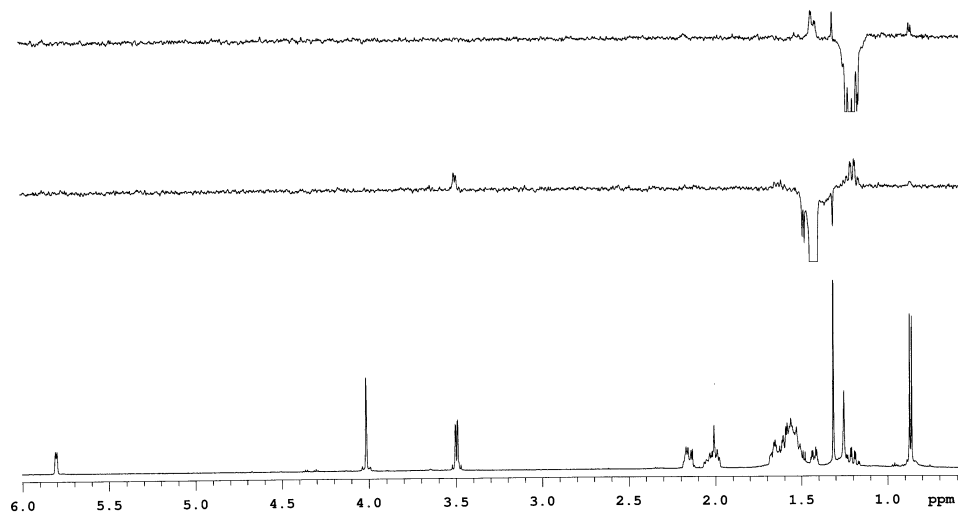


Figure S56. HRESIMS spectrum of compound 6

E74141221 #836 RT: 2.94 AV: 1 NL: 6.79E7
T: FTMS + c ESI Full ms [100.00-1000.00]

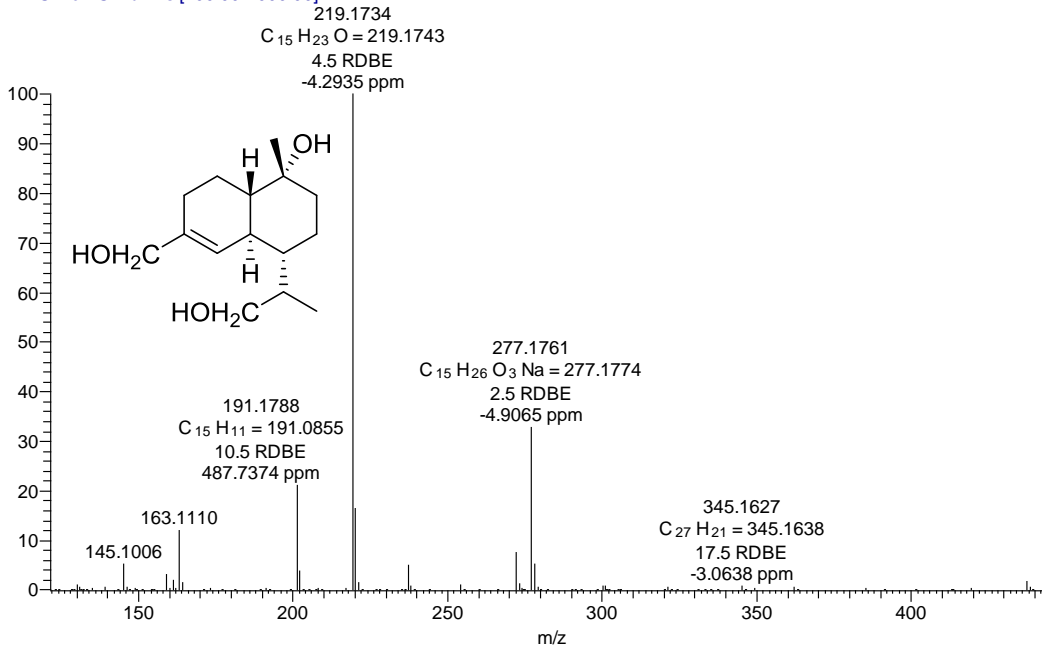


Figure S57. IR spectrum of compound 6

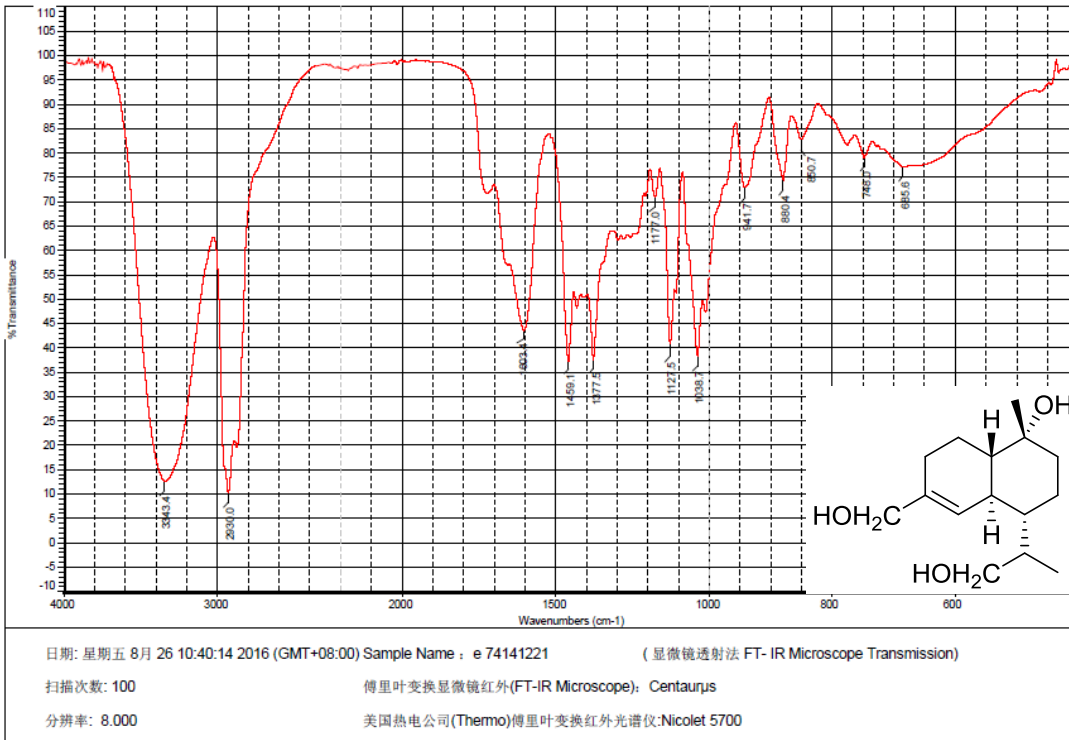


Figure S58. ^1H NMR spectrum of compound **7** in CDCl_3

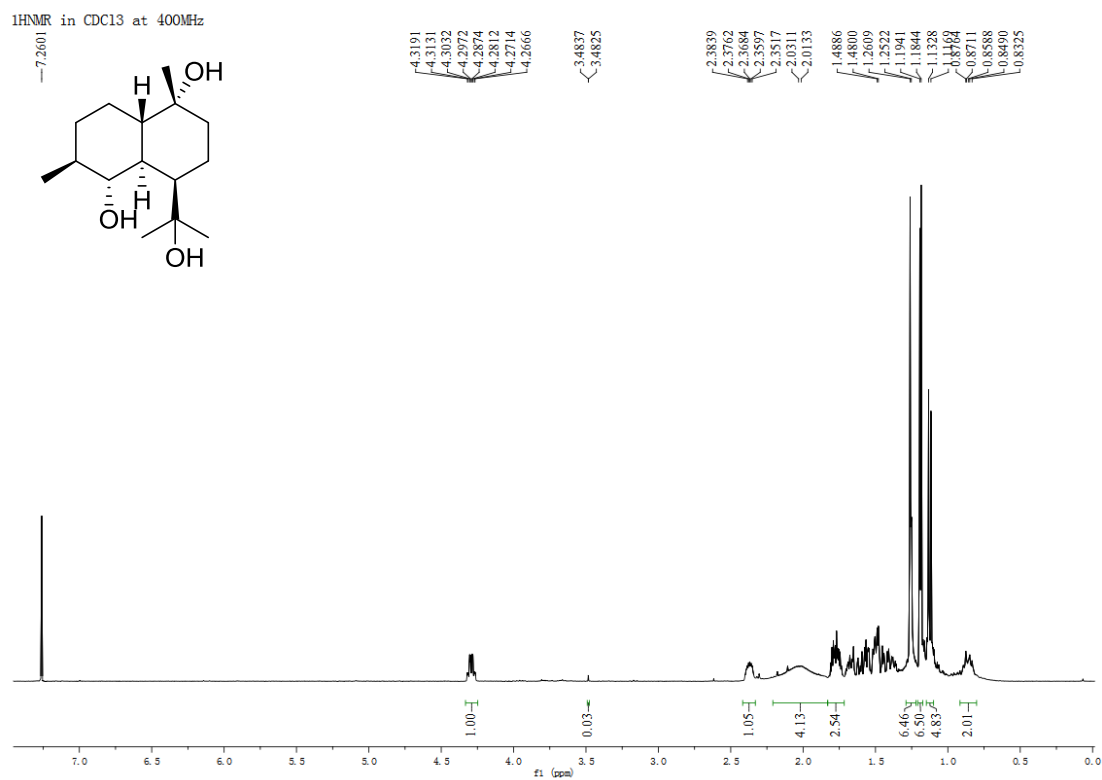


Figure S59. ^{13}C NMR spectrum of compound **7** in CDCl_3

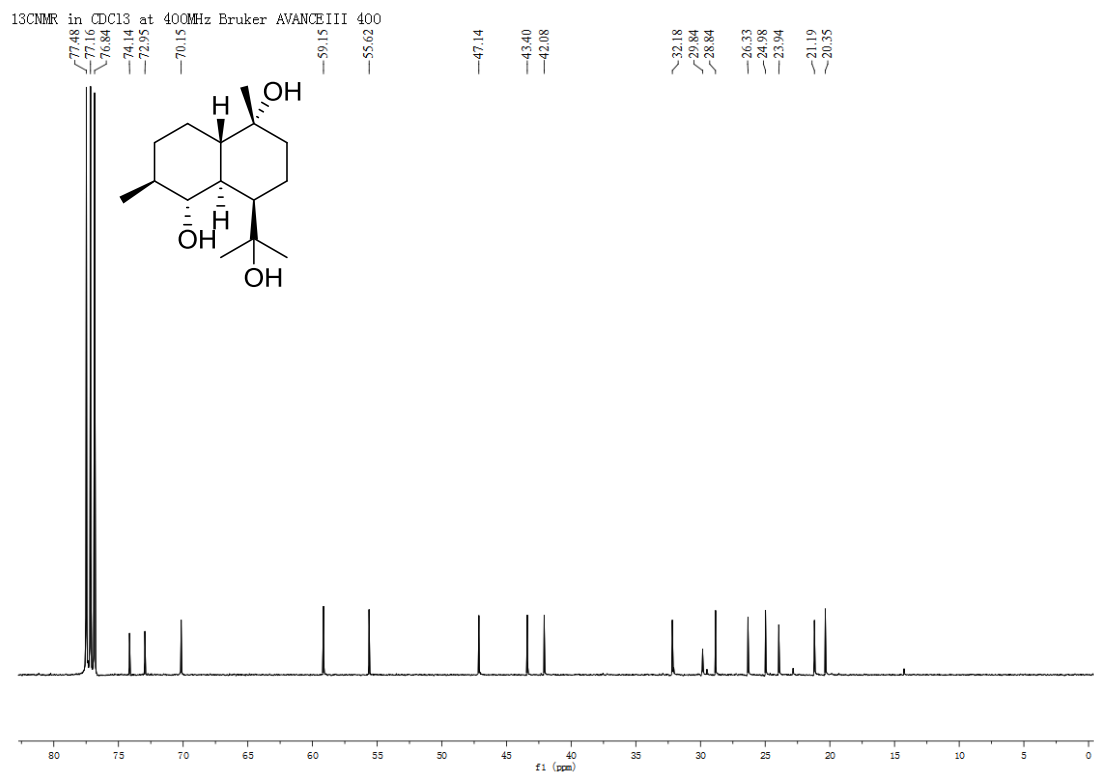


Figure S60. DEPT spectrum of compound **7** in CDCl₃

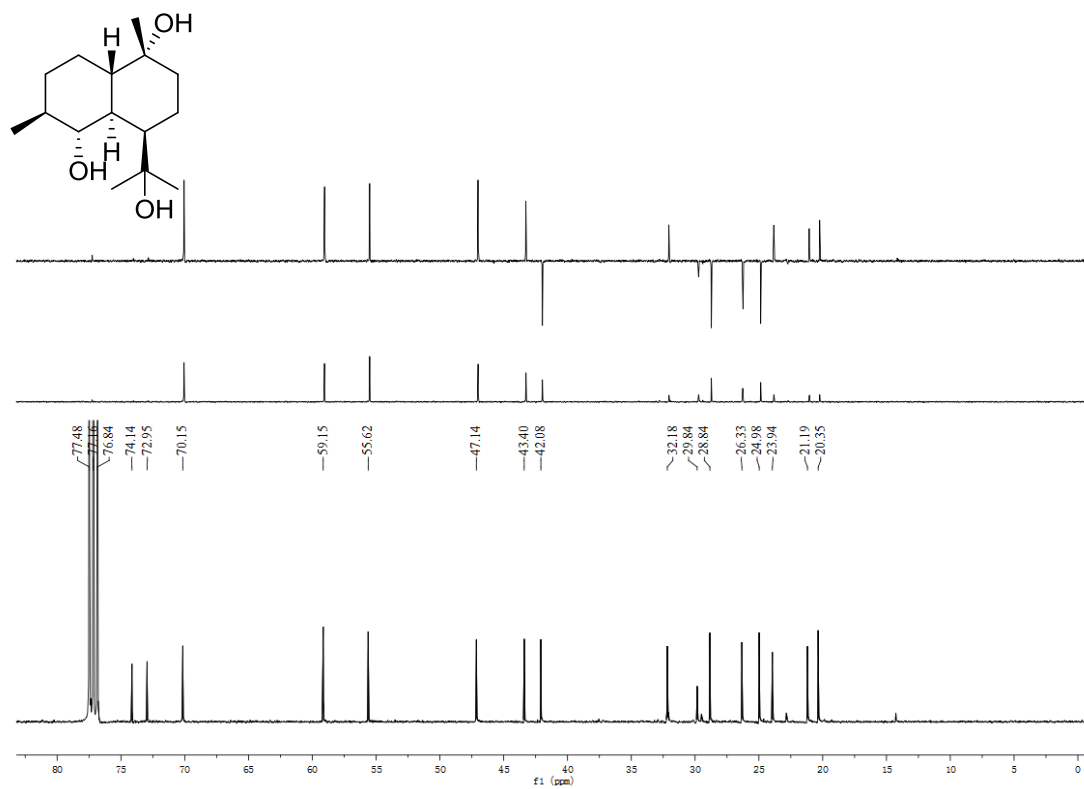


Figure S61. HSQC spectrum of compound **7** in CDCl₃

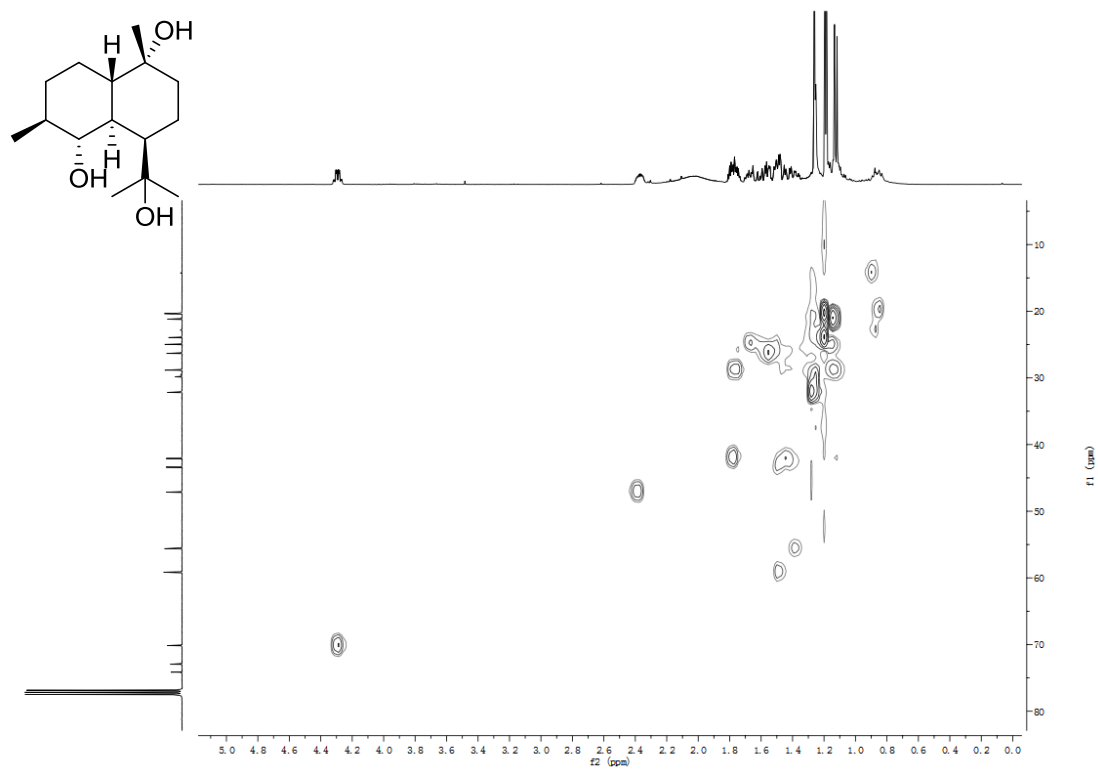


Figure S62. ^1H - ^1H COSY spectrum of compound **7** in CDCl_3

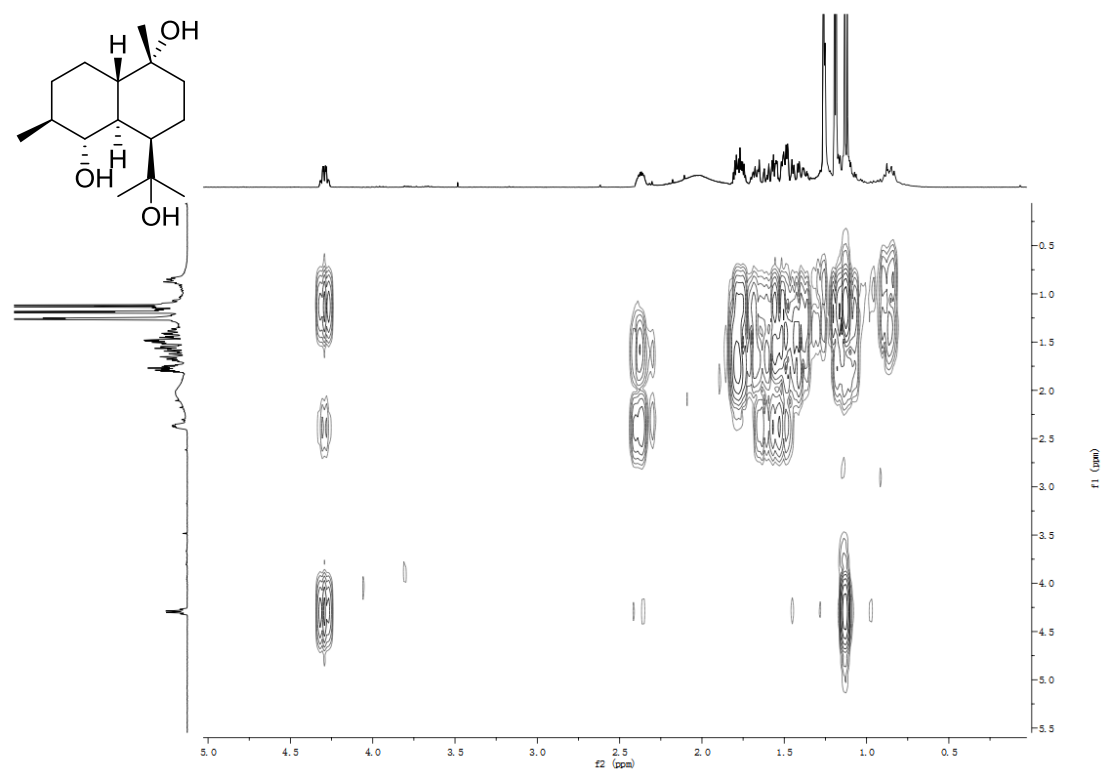


Figure S63. HMBC spectrum of compound **7** in CDCl_3

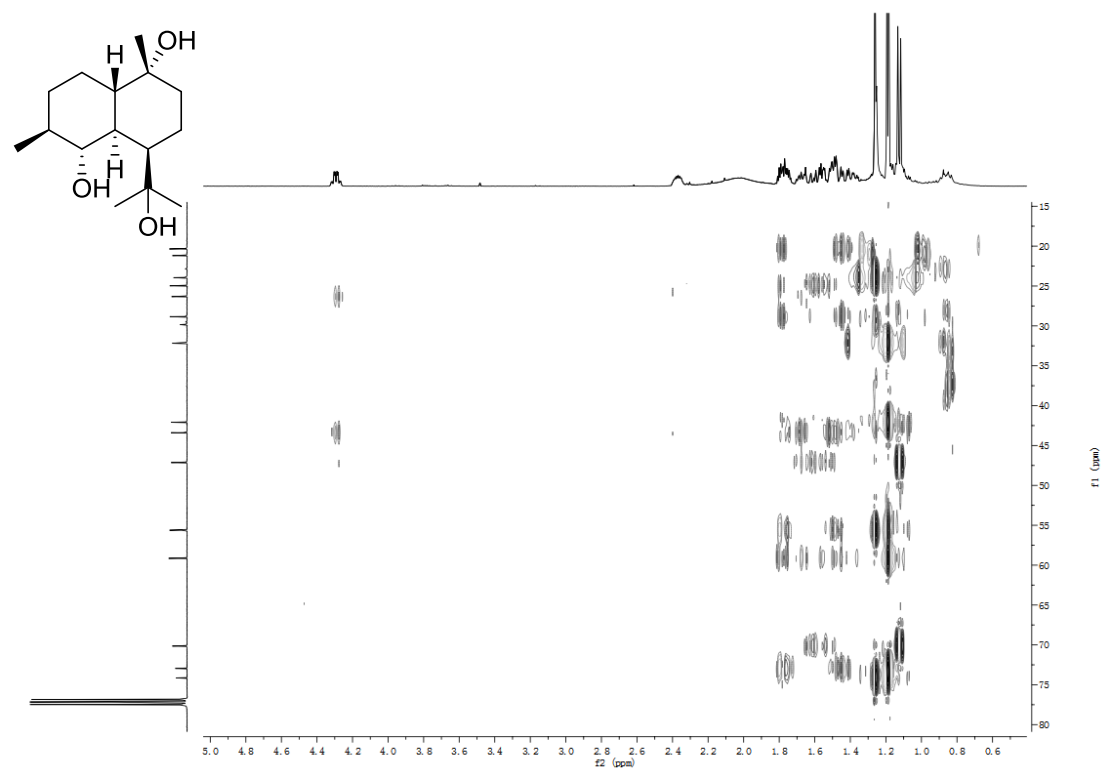


Figure S64. NOESY spectrum of compound 7 in CDCl₃

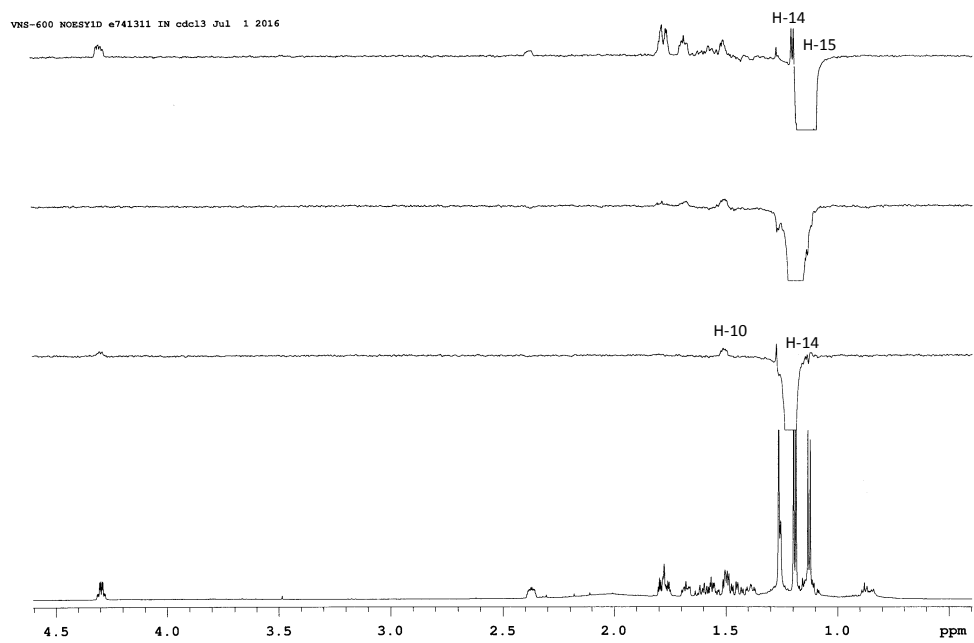
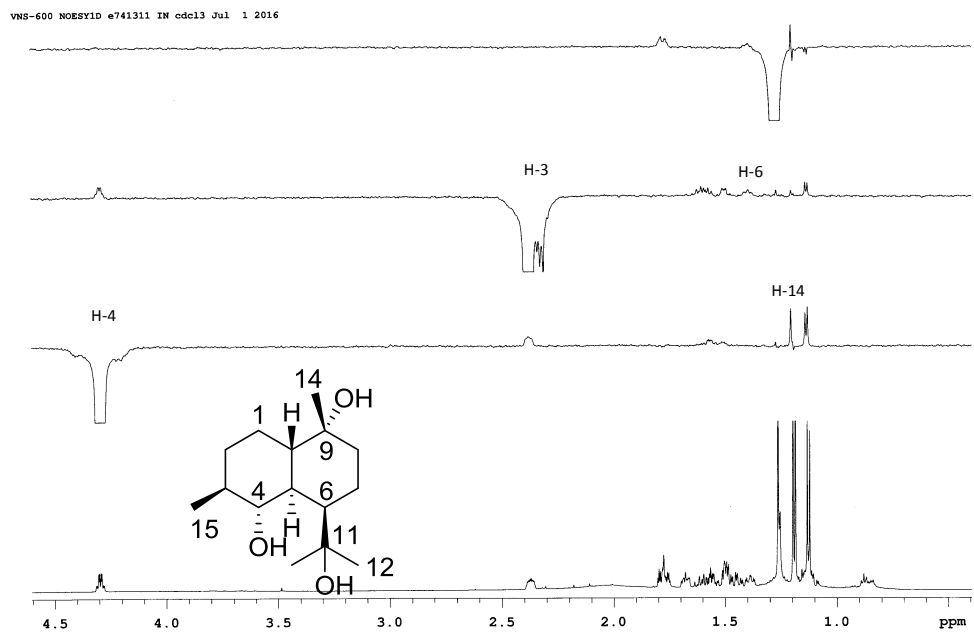


Figure S65. HRESIMS spectrum of compound 7

E741311 #793 RT: 2.68 AV: 1 NL: 2.78E7

T: FTMS + c ESI Full ms [100.00-1000.00]

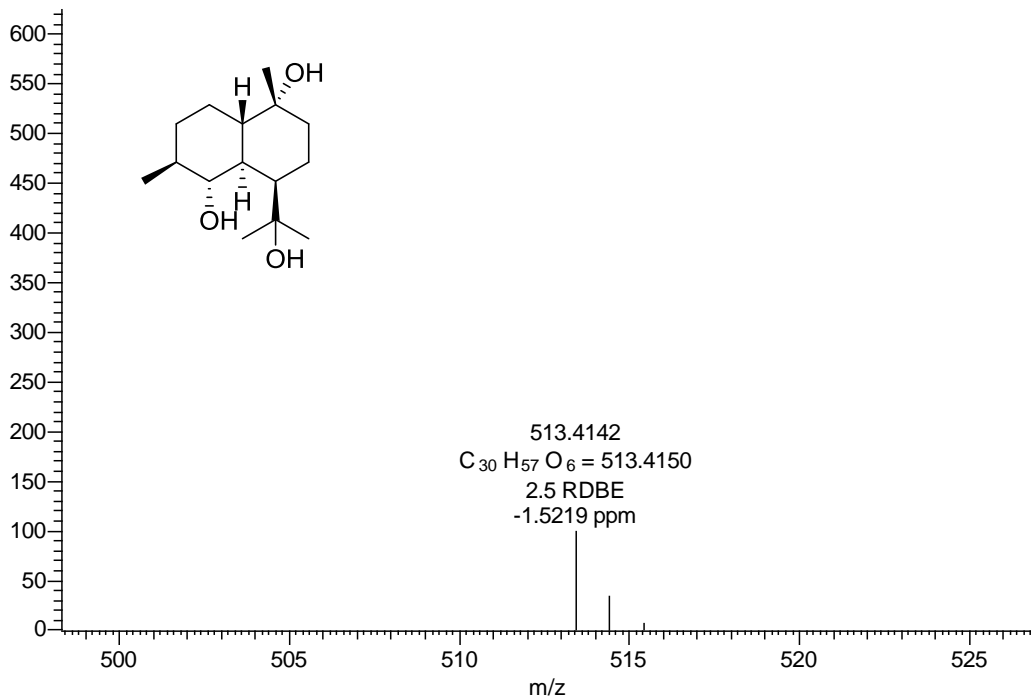


Figure S66. IR spectrum of compound 7

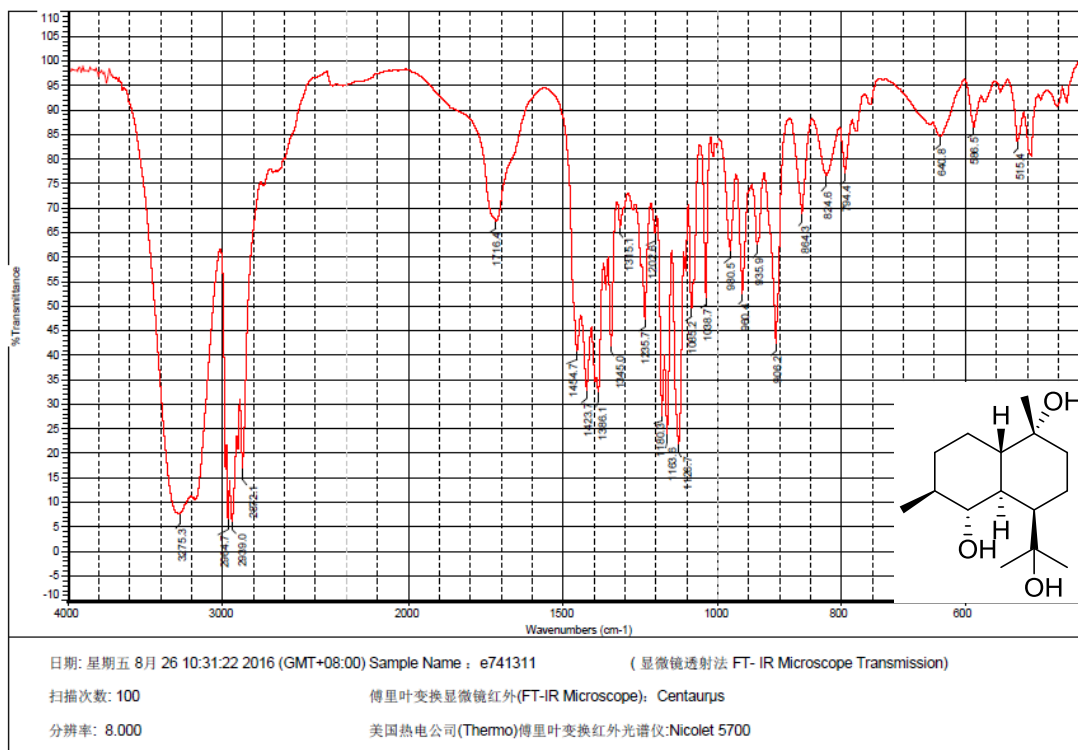


Figure S67. ^1H NMR spectrum of compound 4-Benzoyl-ganodermanol G in CDCl_3

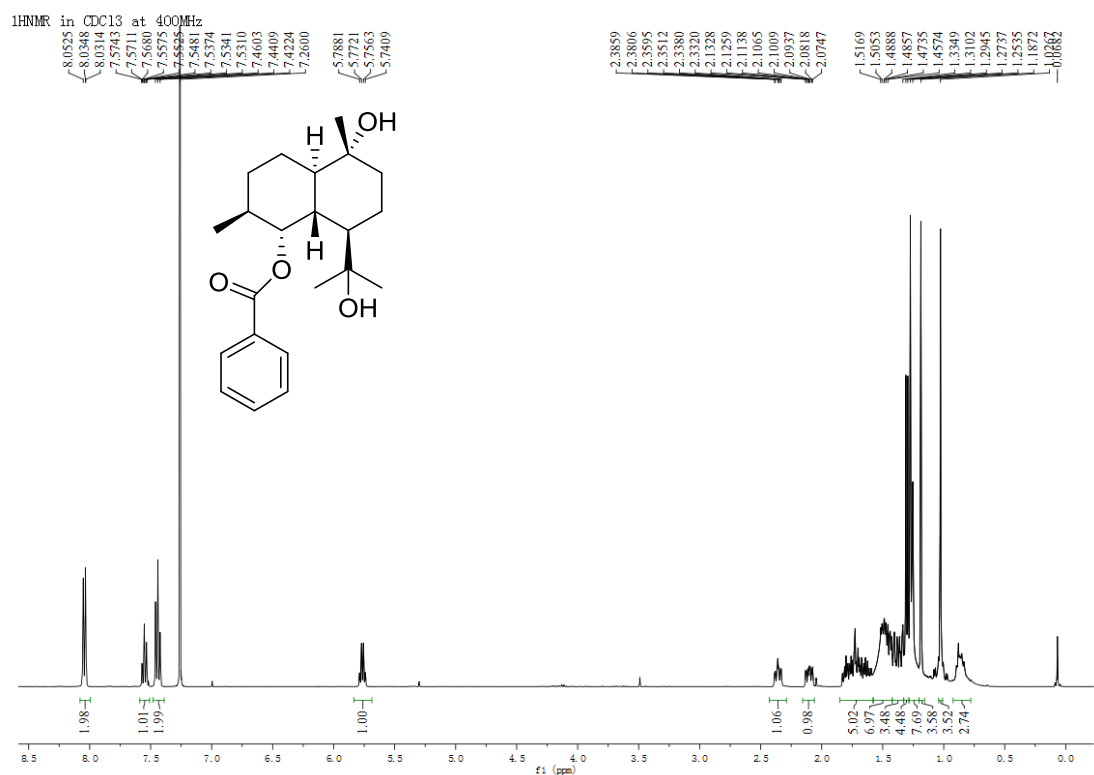


Figure S68. ^{13}C NMR spectrum of compound 4-Benzoyl-ganodermanol H in CDCl_3

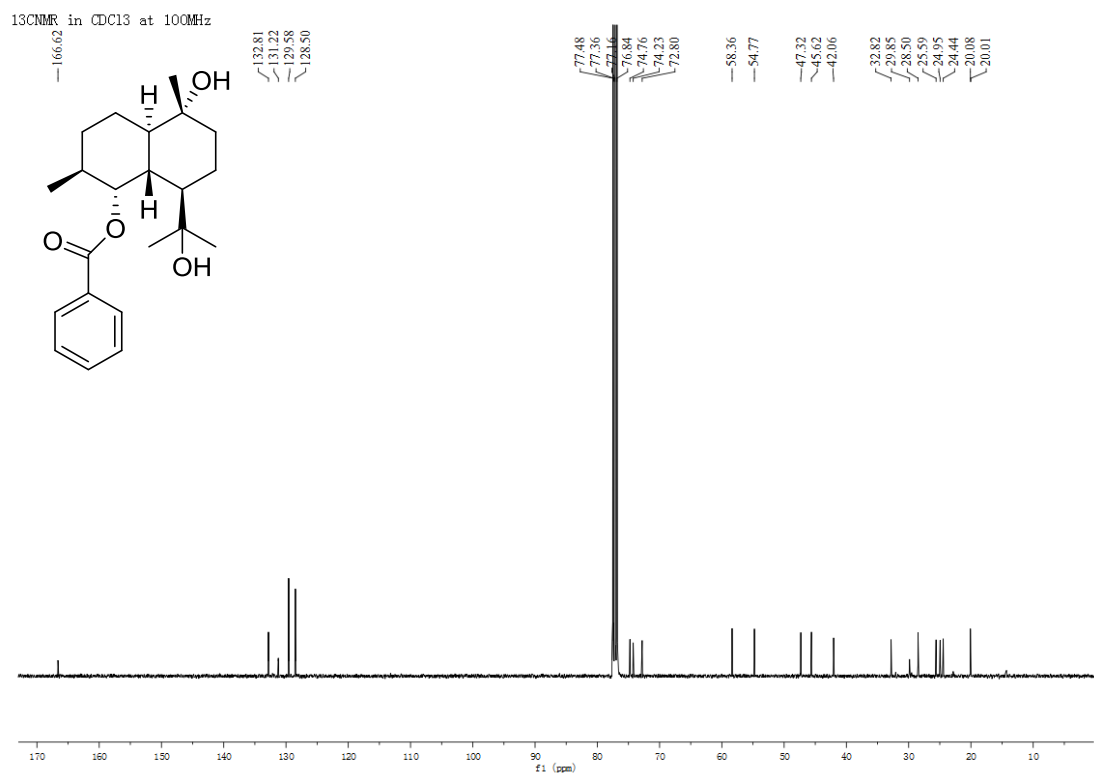


Figure S69. HMBC spectrum of compound 4-Benzoyl-ganodermanol G in CDCl₃

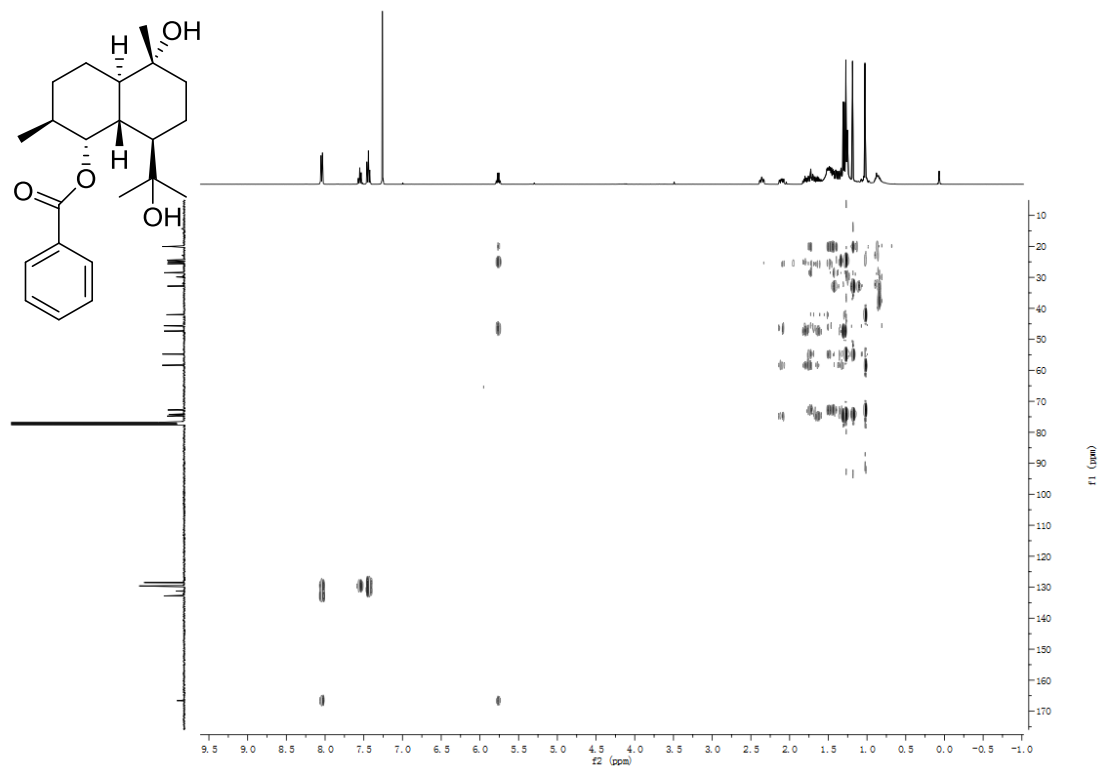


Figure S70. ¹H NMR spectrum of compound 8 in CDCl₃

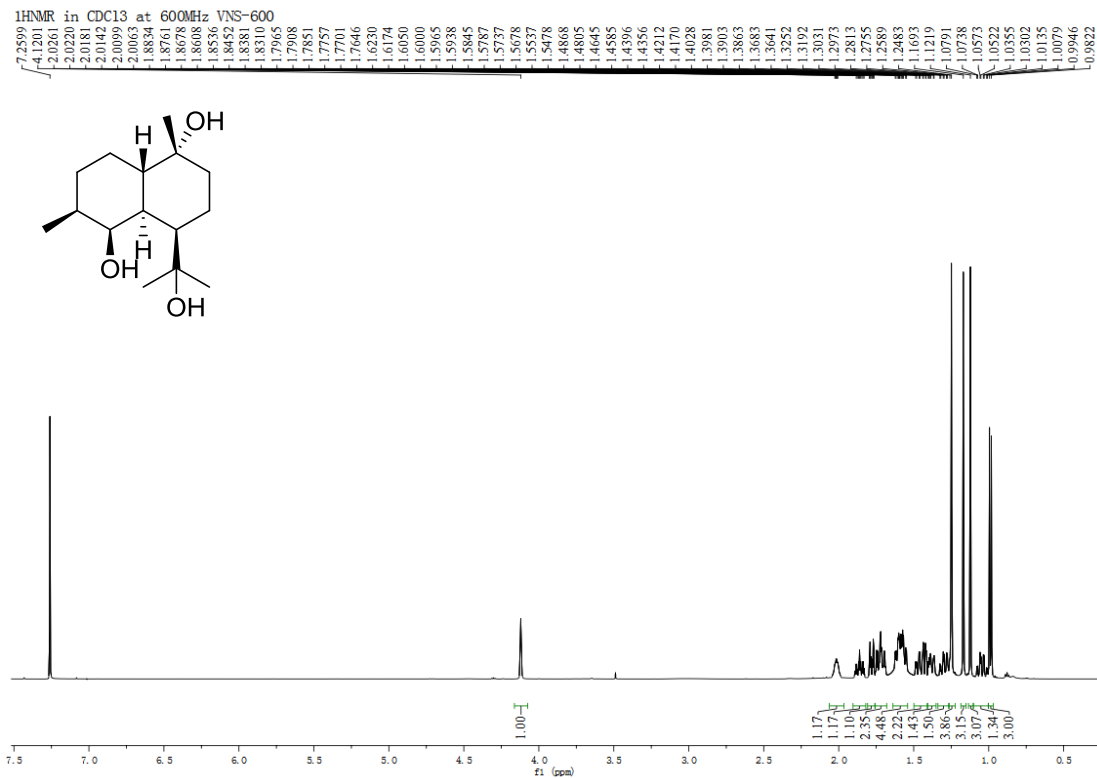


Figure S71. ^{13}C NMR spectrum of compound **8** in CDCl_3

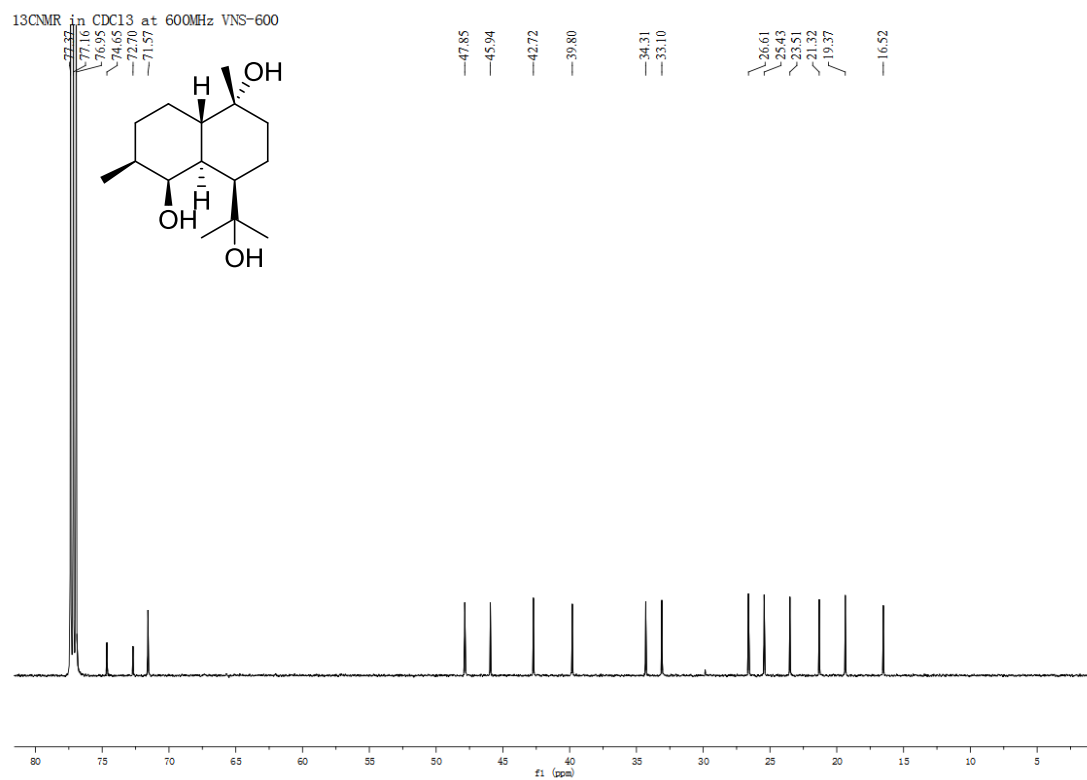


Figure S72. DEPT spectrum of compound **8** in CDCl_3

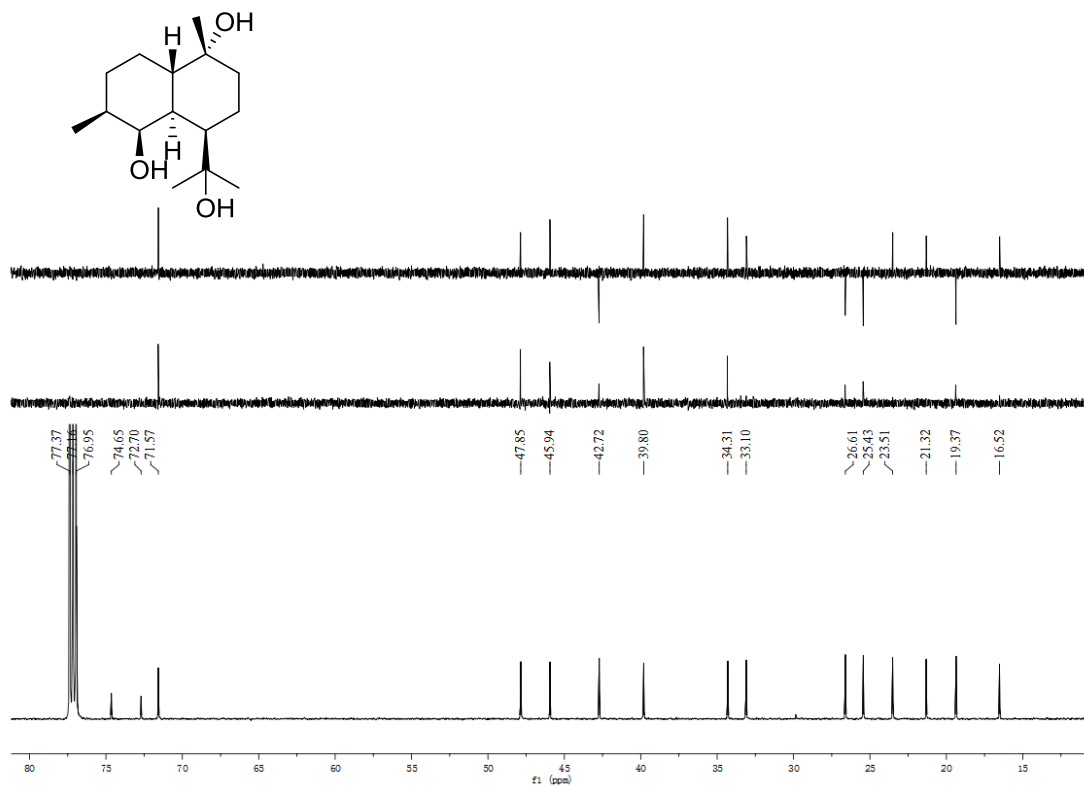


Figure S73. HSQC spectrum of compound **8** in CDCl₃

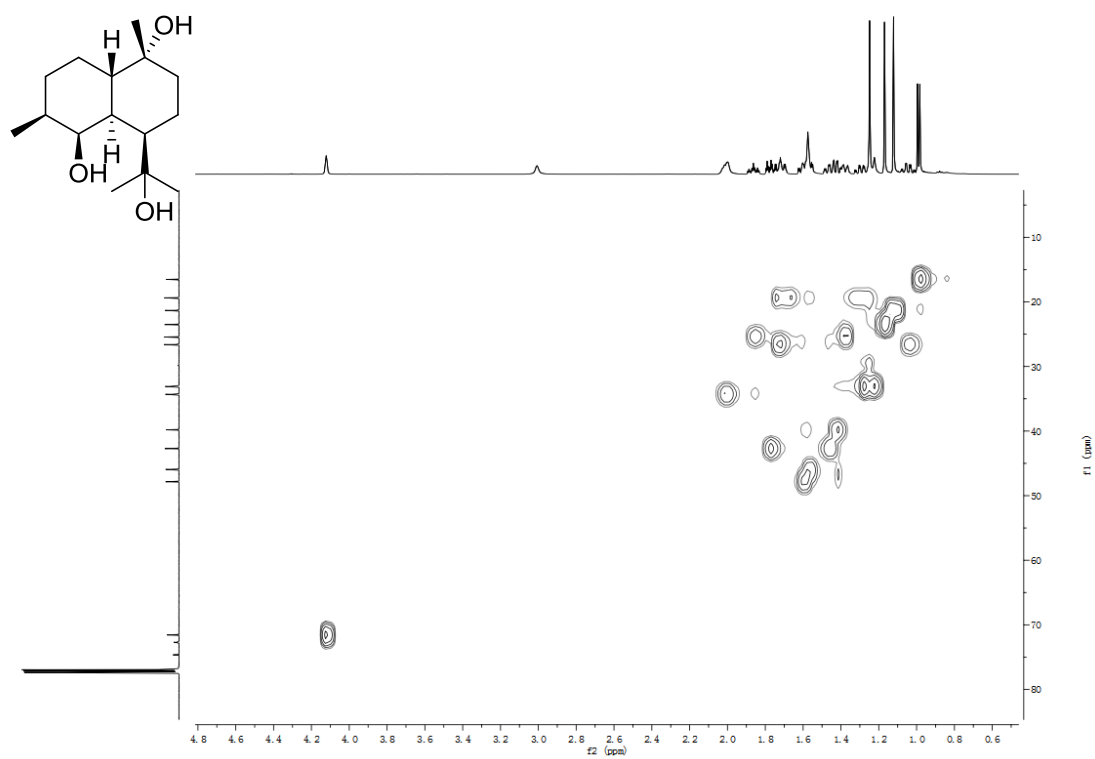


Figure S74. ¹H-¹H COSY spectrum of compound **8** in CDCl₃

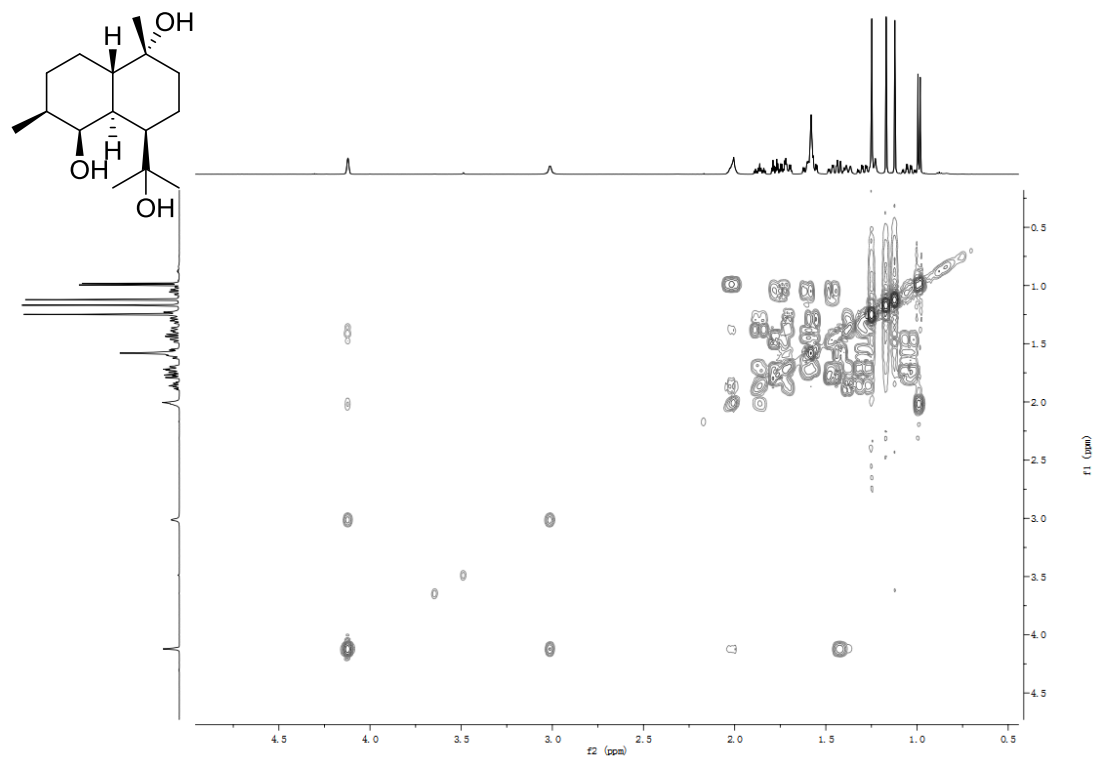


Figure S75. HMBC spectrum of compound **8** in CDCl₃

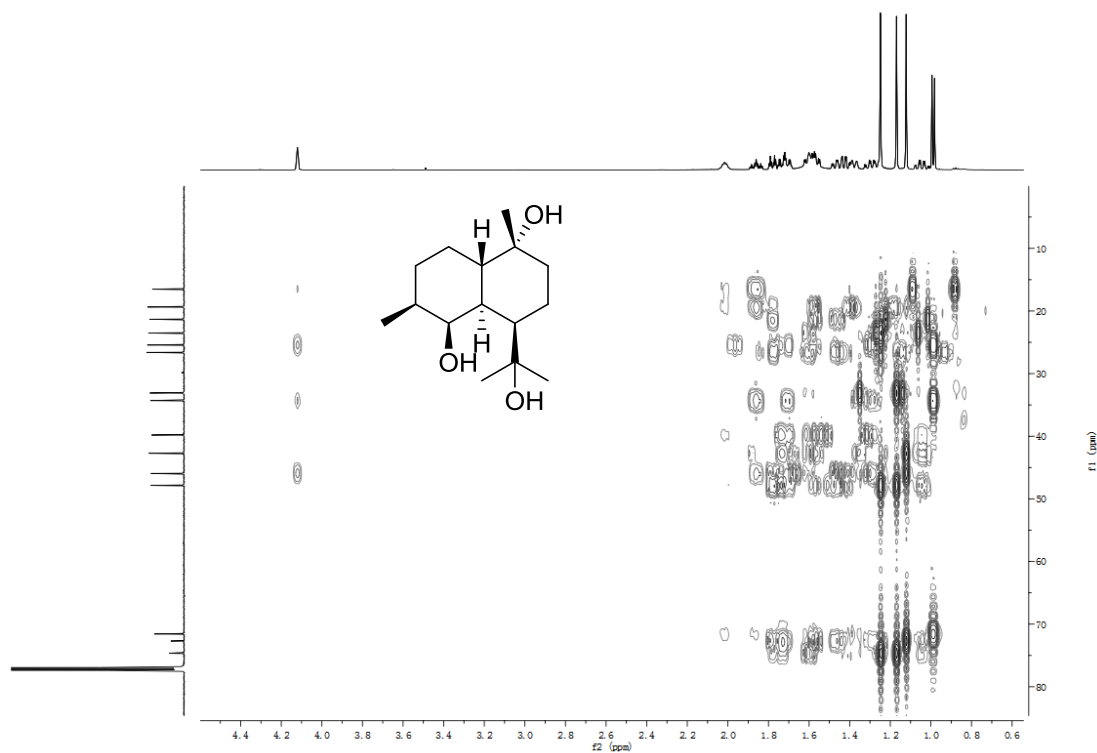
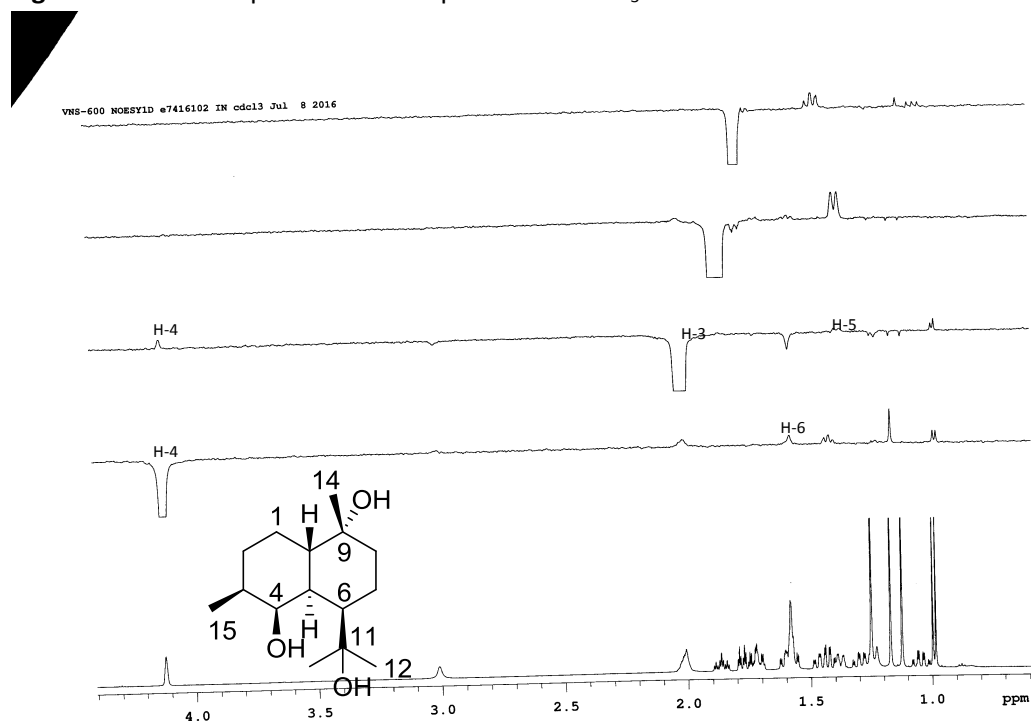
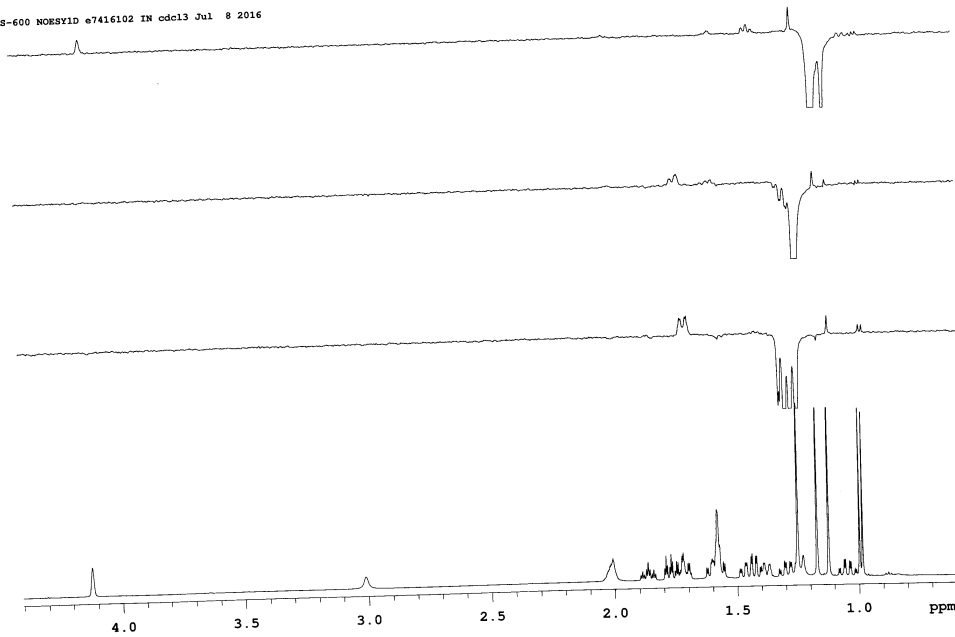


Figure S76. NOESY spectrum of compound **8** in CDCl₃



VNS-600 NOESYID e7416102 IN cdcl3 Jul 8 2016



VNS-600 NOESYID e7416102 IN cdcl3 Jul 8 2016

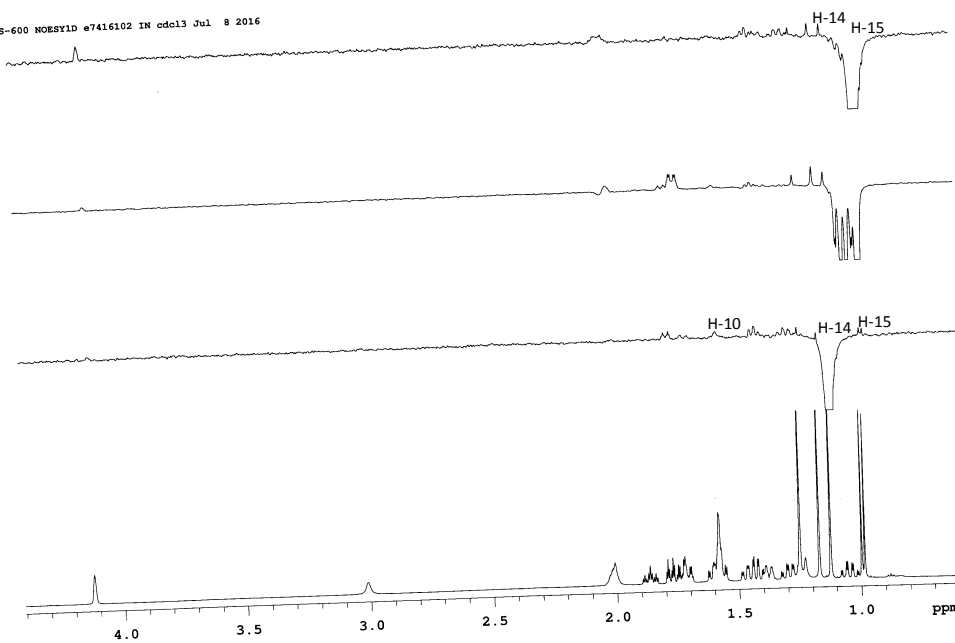


Figure S77. HRESIMS spectrum of compound 8

E7416102 #999 RT: 3.43 AV: 1 NL: 2.60E8
T: FTMS + c ESI Full ms [100.00-1000.00]

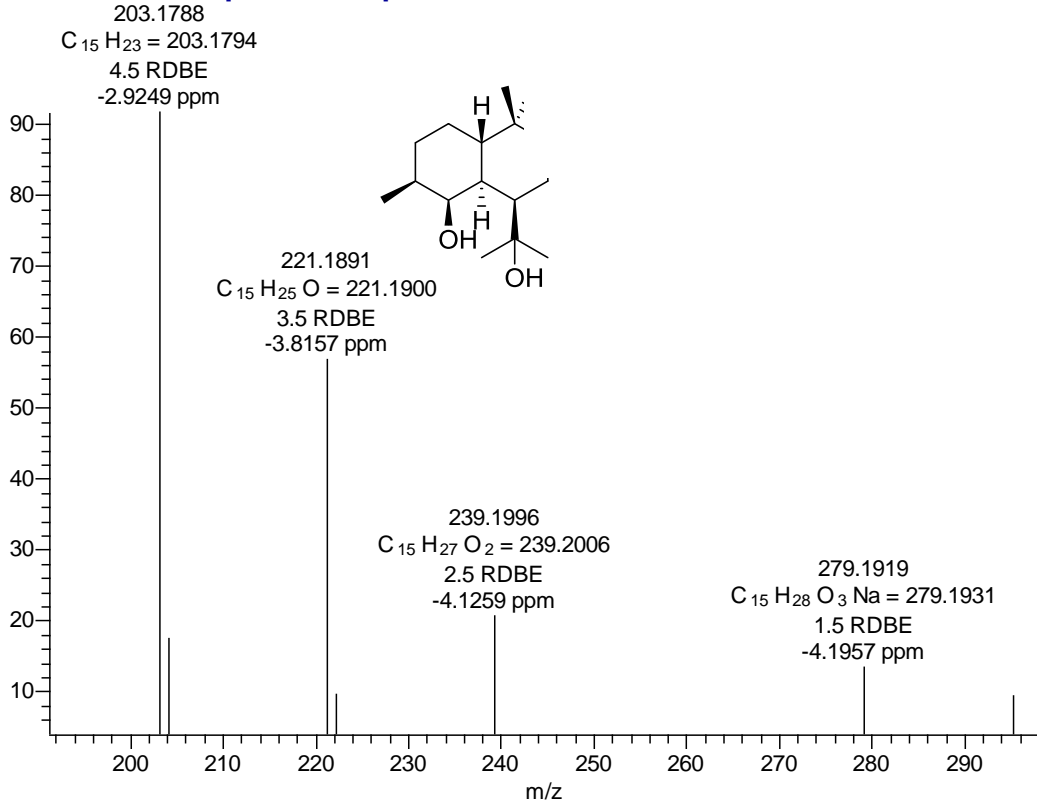


Figure S78. IR spectrum of compound 8

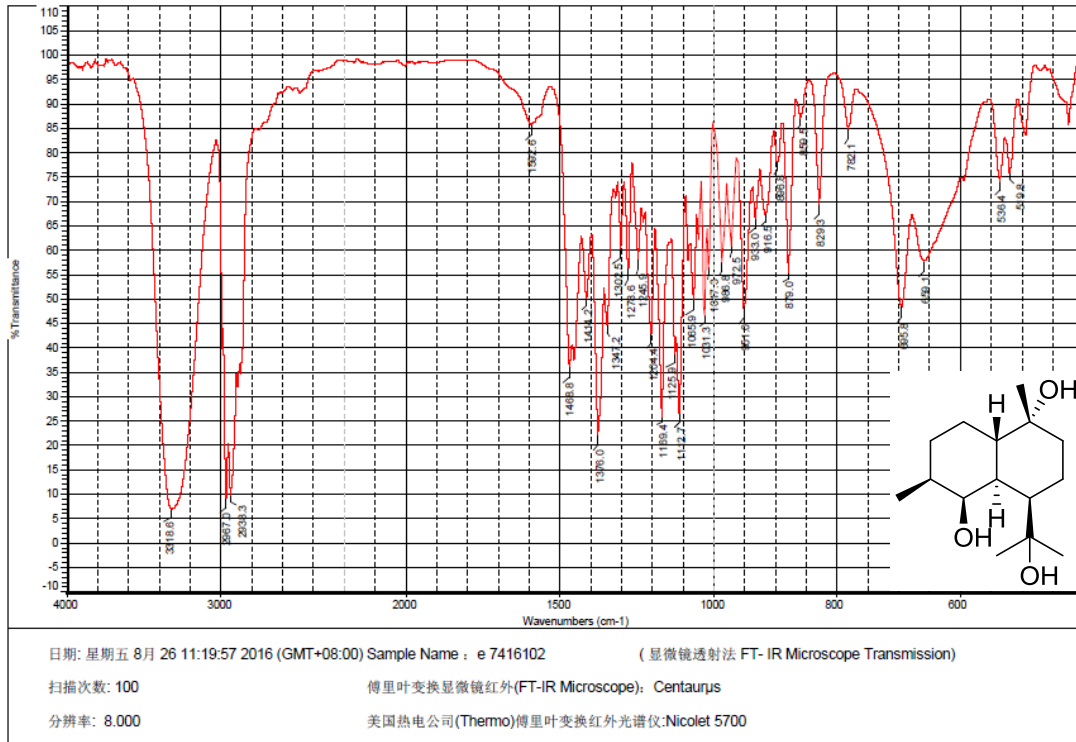


Figure S79. ^1H NMR spectrum of compound **9** in CDCl_3

^1H NMR in CDCl_3 at 400MHz Bruker AVANCEIII 400

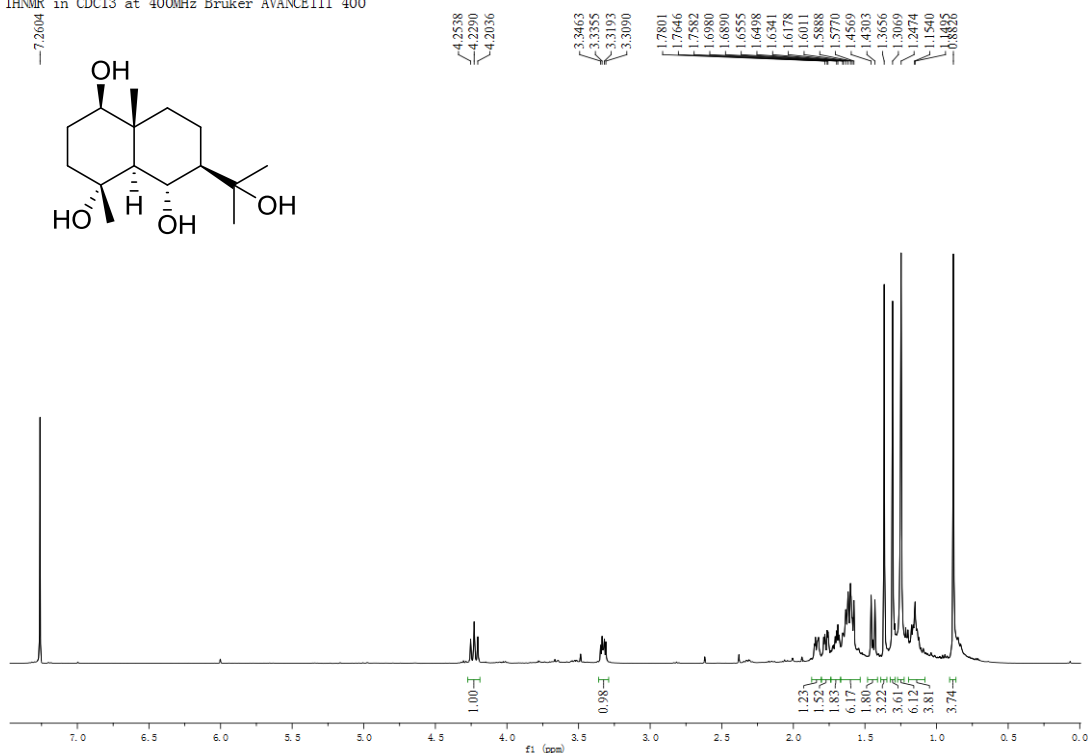


Figure S80. ^{13}C NMR spectrum of compound **9** in CDCl_3

^{13}C NMR in CDCl_3 at 400MHz Bruker AVANCEIII 400

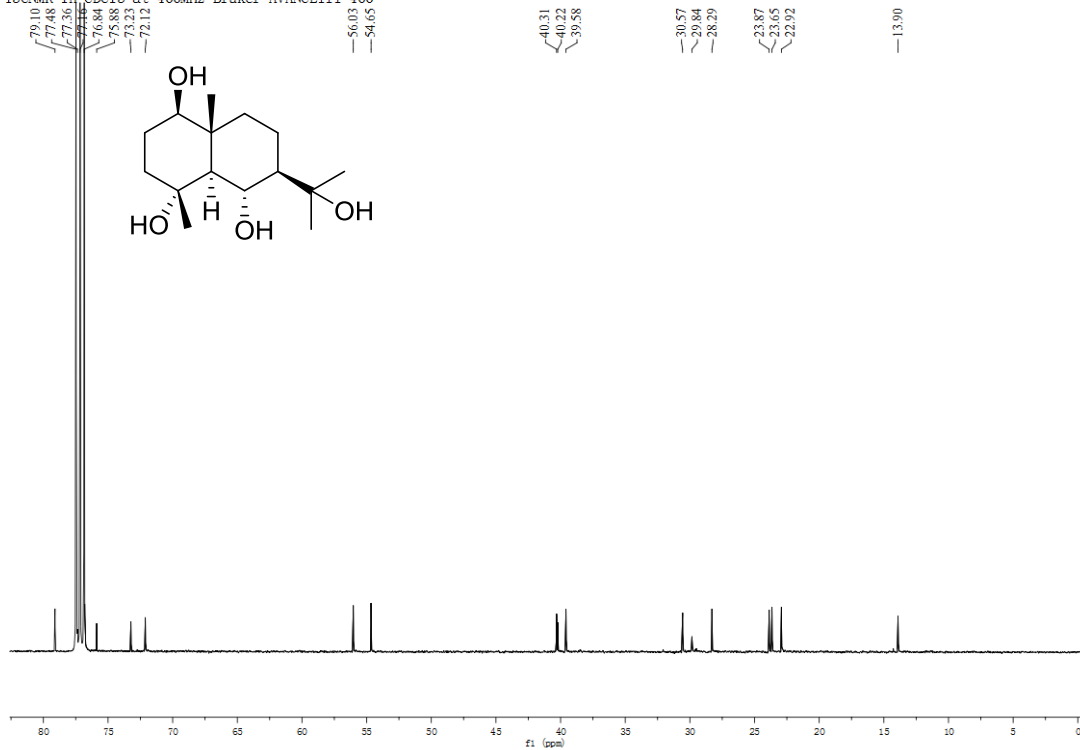


Figure S81. DEPT spectrum of compound **9** in CDCl₃

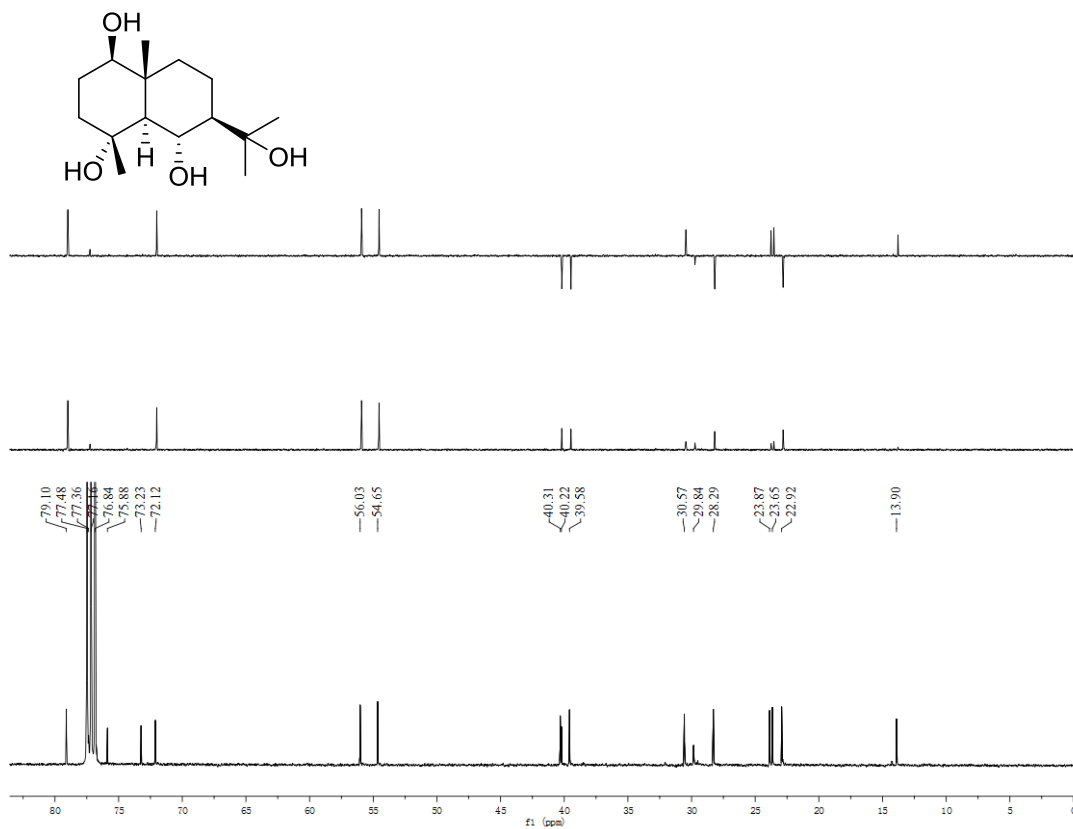


Figure S82. HSQC spectrum of compound **9** in CDCl₃

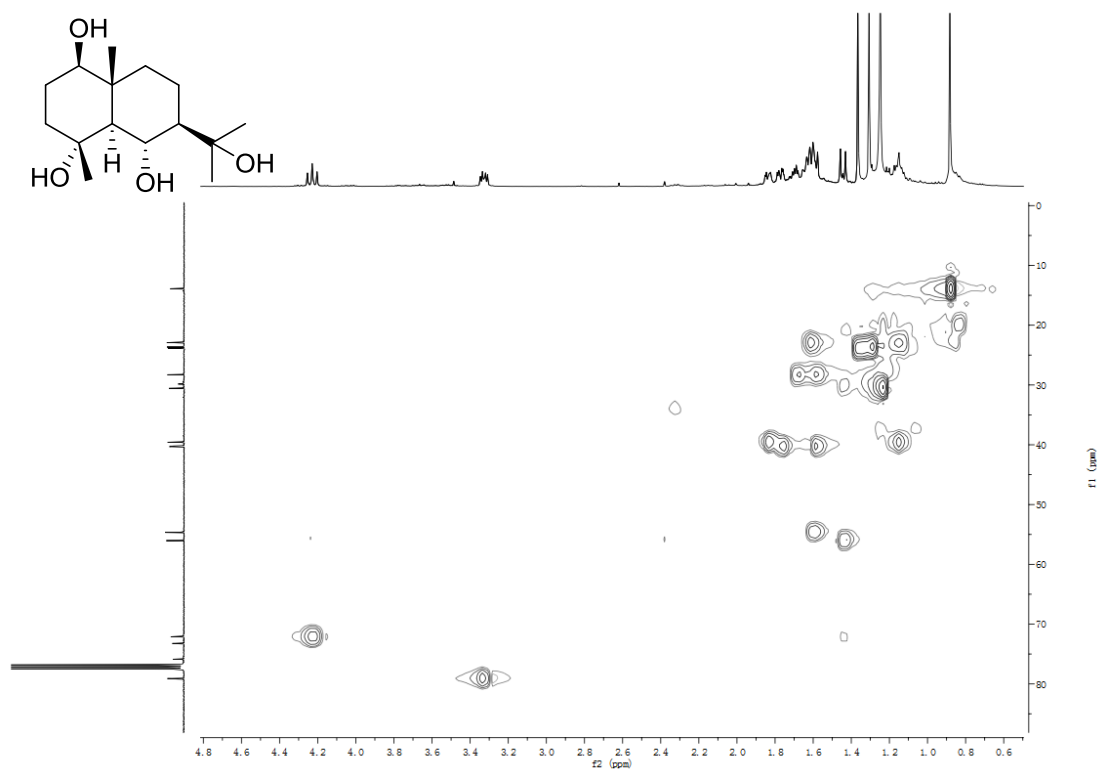


Figure S83. ^1H - ^1H COSY spectrum of compound **9** in CDCl_3

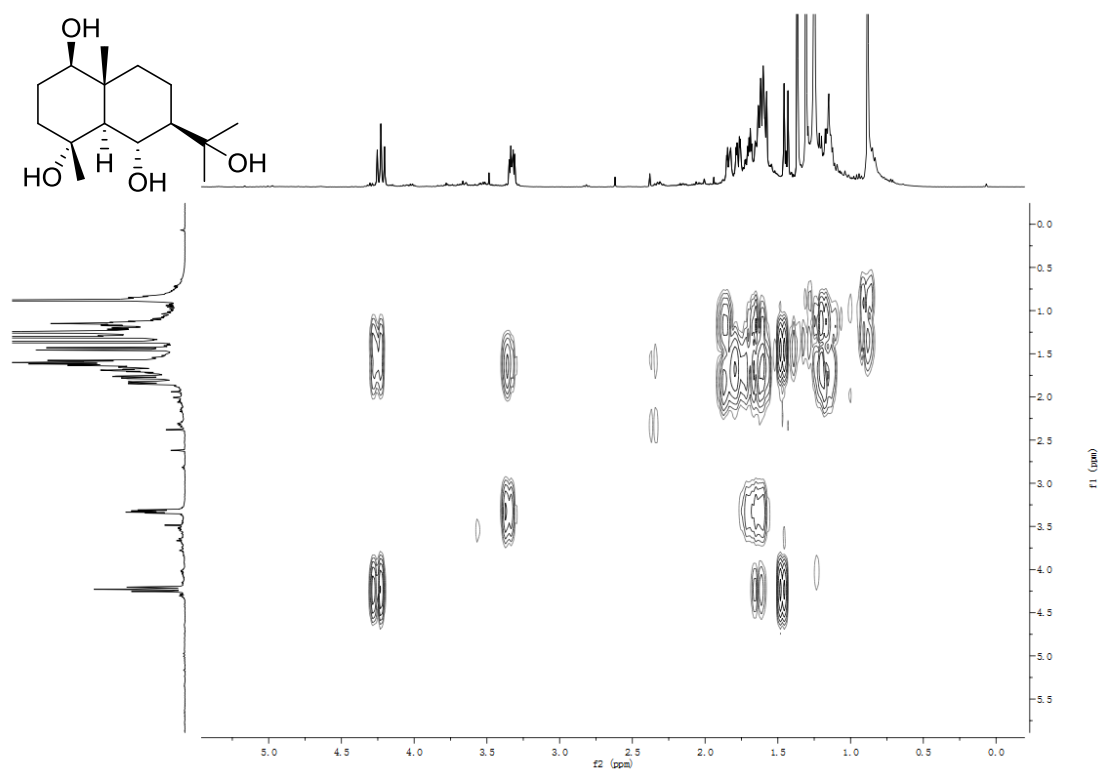


Figure S84. HMBC spectrum of compound **9** in CDCl_3

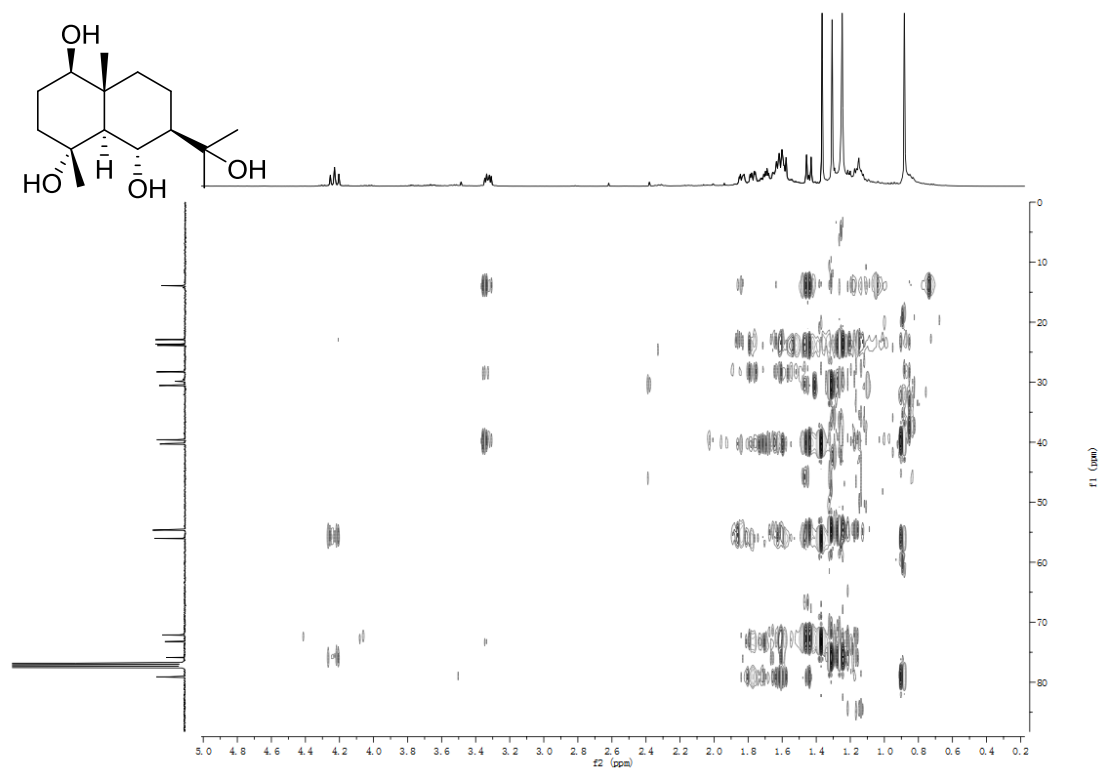
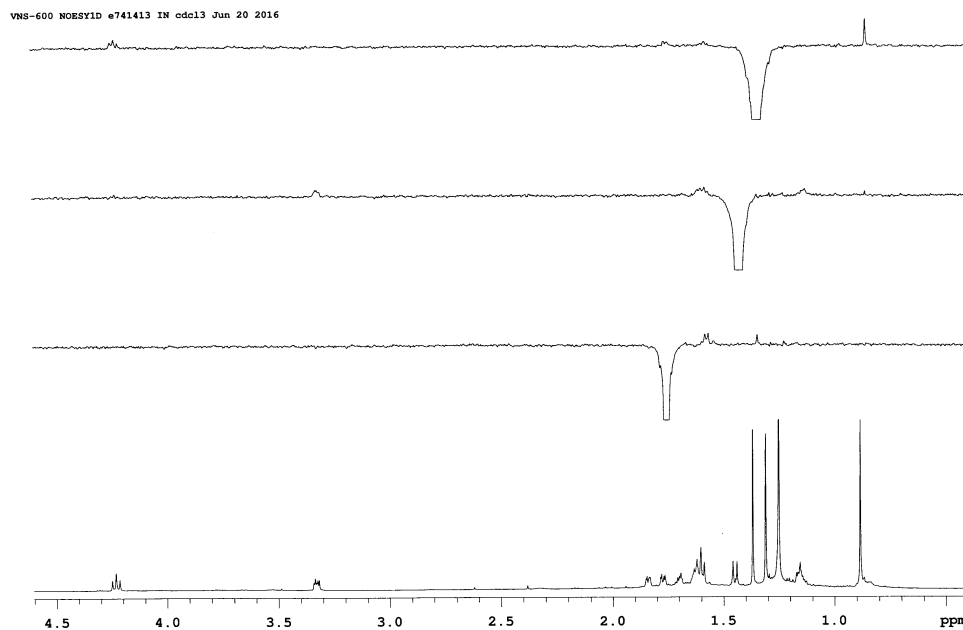
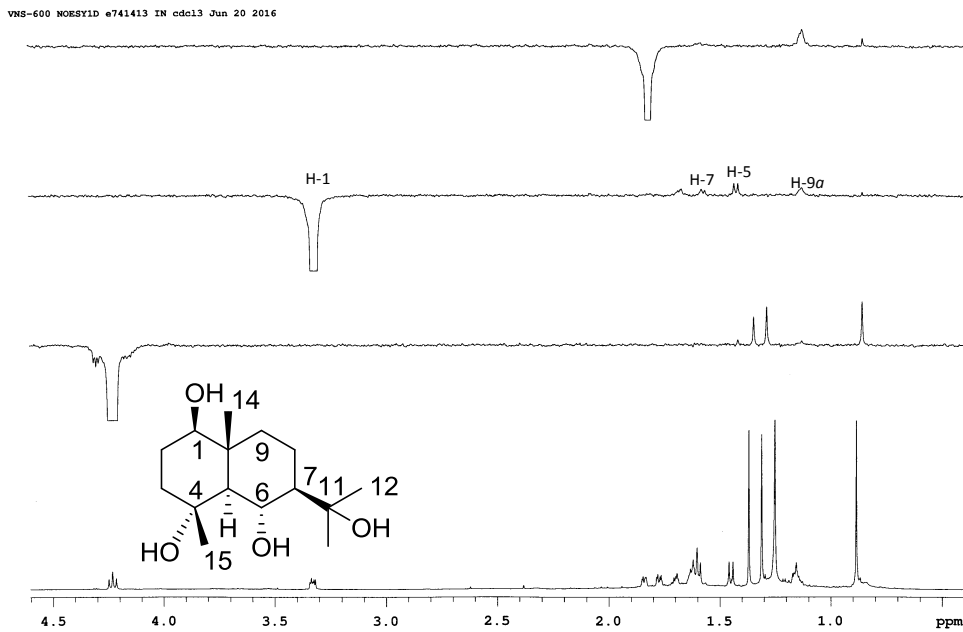


Figure S85. NOESY spectrum of compound **9** in CDCl₃



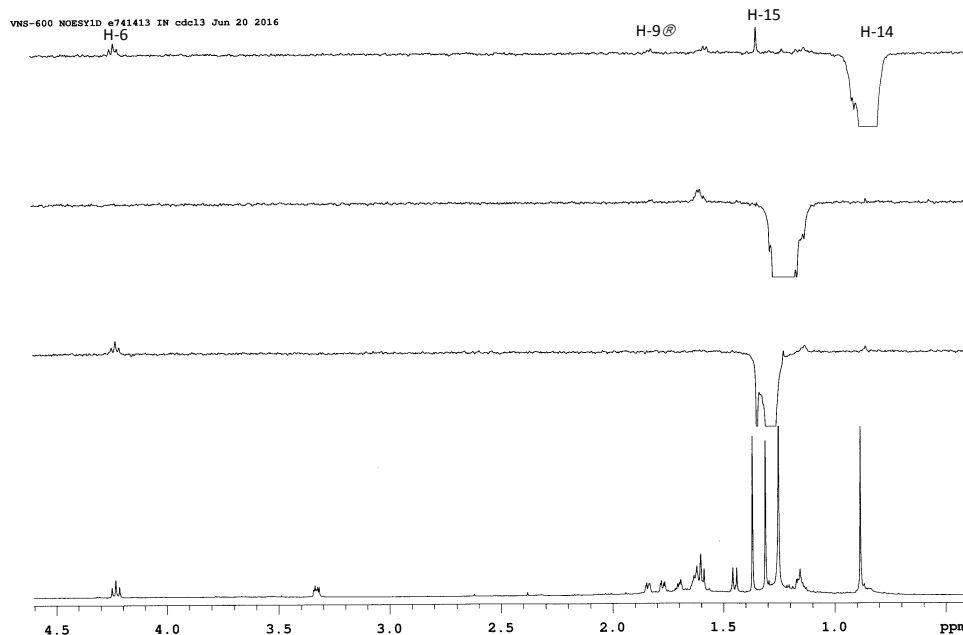


Figure S86. HRESIMS spectrum of compound **9**

E741413 #1474 RT: 3.01 AV: 1 NL: 2.98E8
T: FTMS + c ESI Full ms [100.00-1000.00]

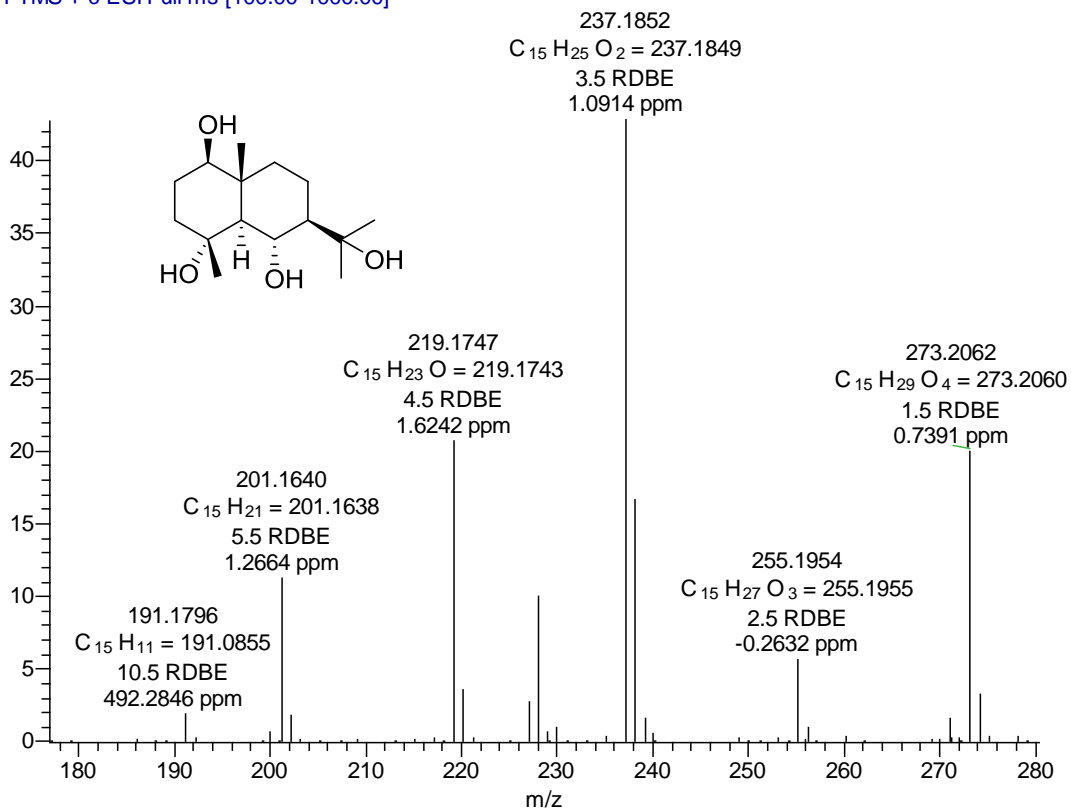


Figure S87. IR spectrum of compound 9

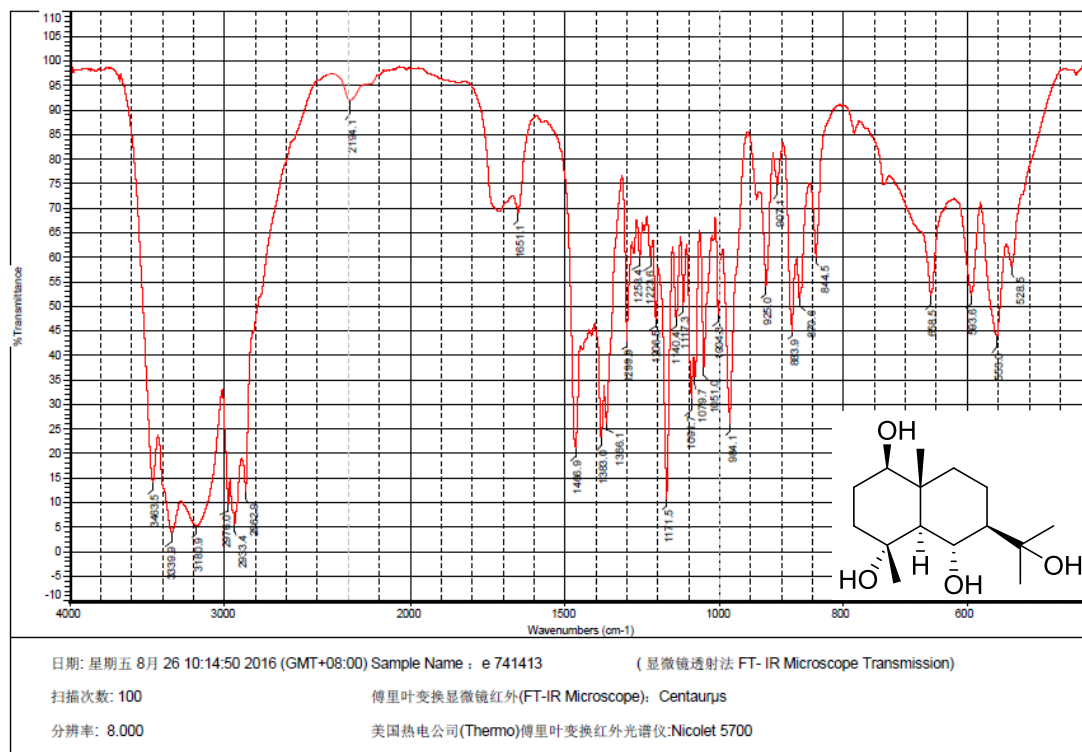


Figure S88. ¹H NMR spectrum of compound 10 in CDCl₃

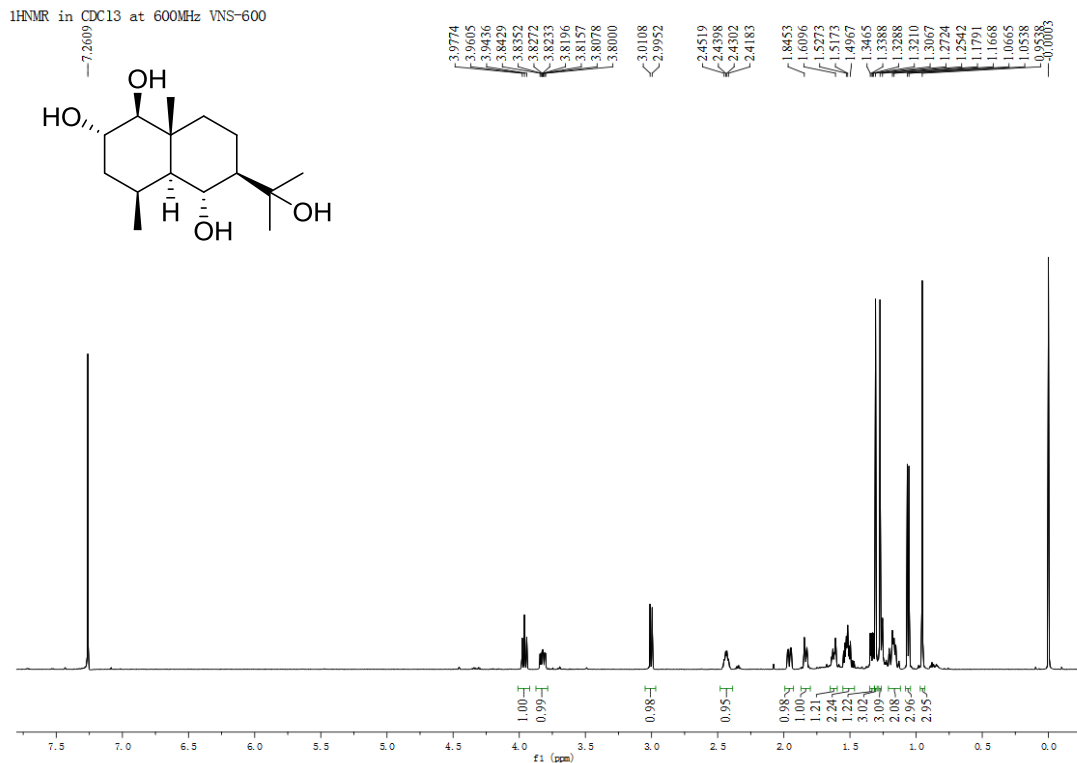


Figure S89. ^{13}C NMR spectrum of compound **10** in CDCl_3

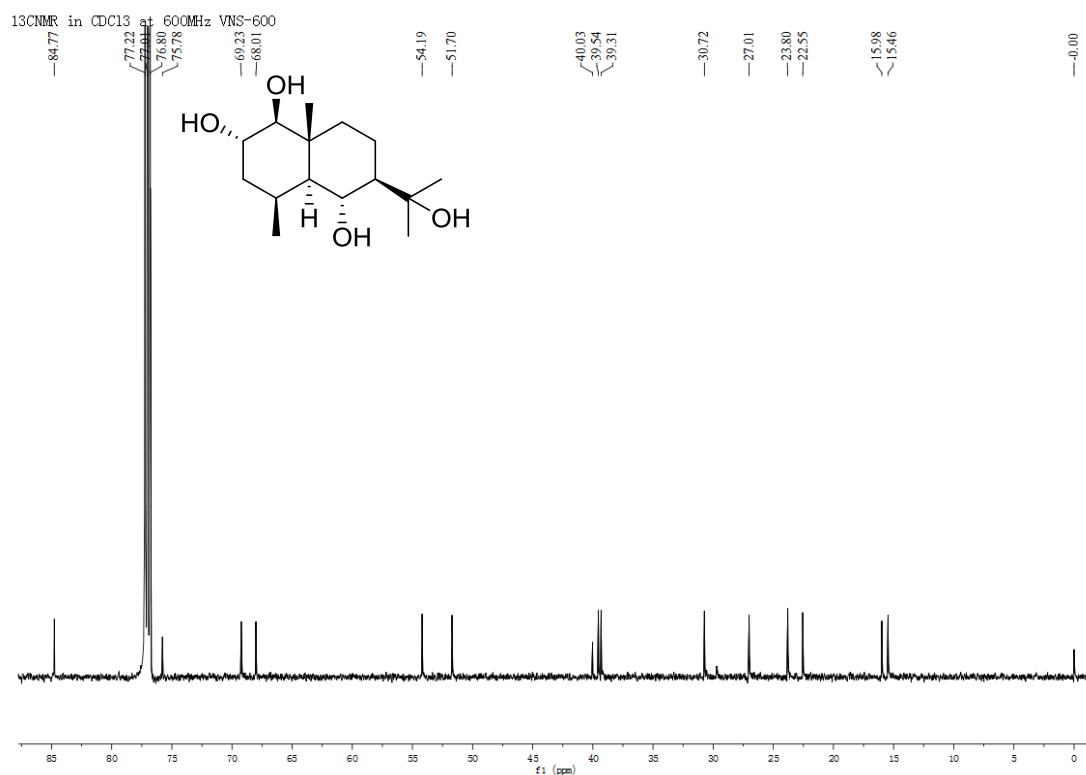


Figure S90. DEPT spectrum of compound **10** in CDCl_3

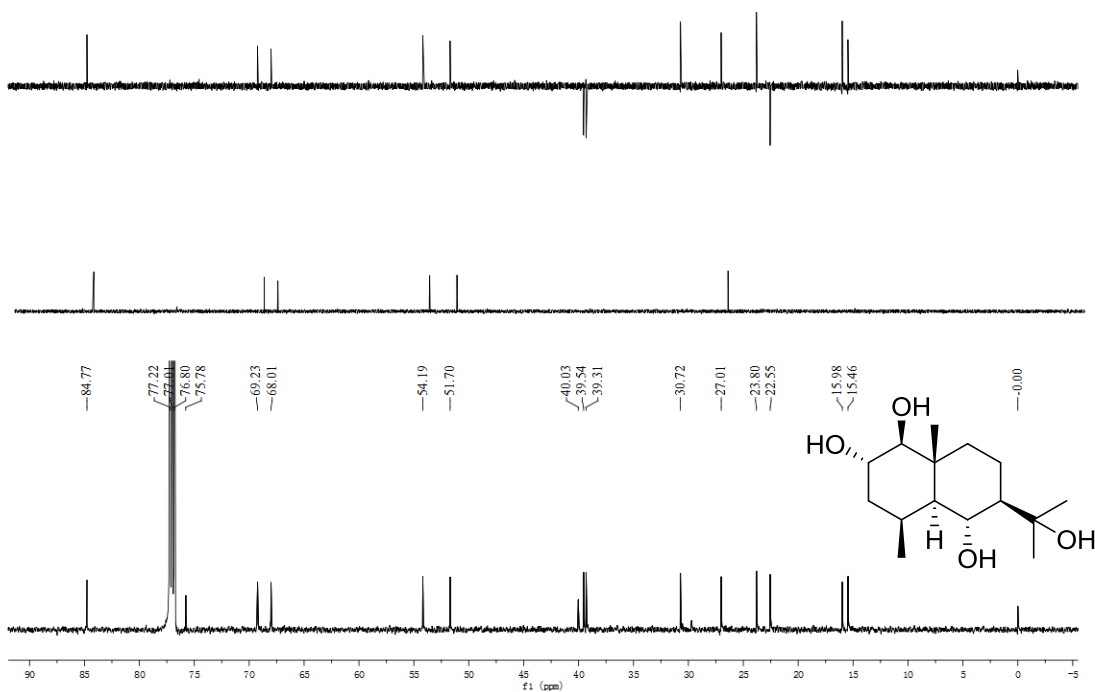


Figure S91. HSQC spectrum of compound **10** in CDCl₃

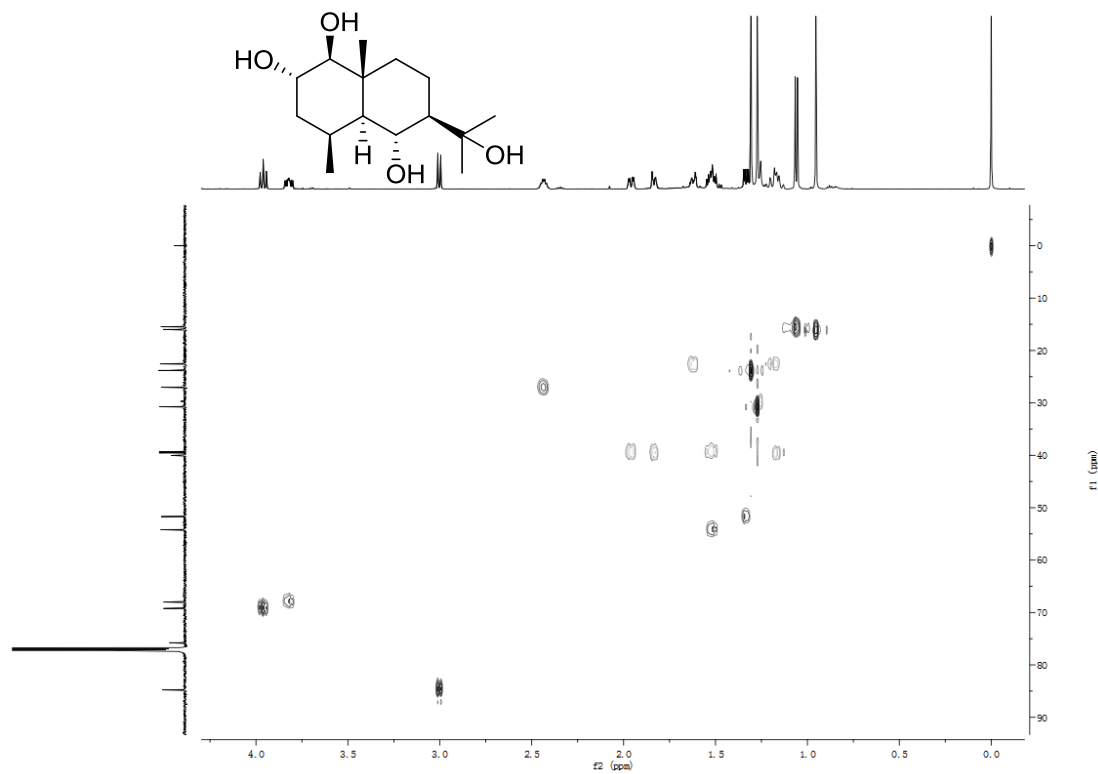


Figure S92. ¹H-¹H COSY spectrum of compound **10** in CDCl₃

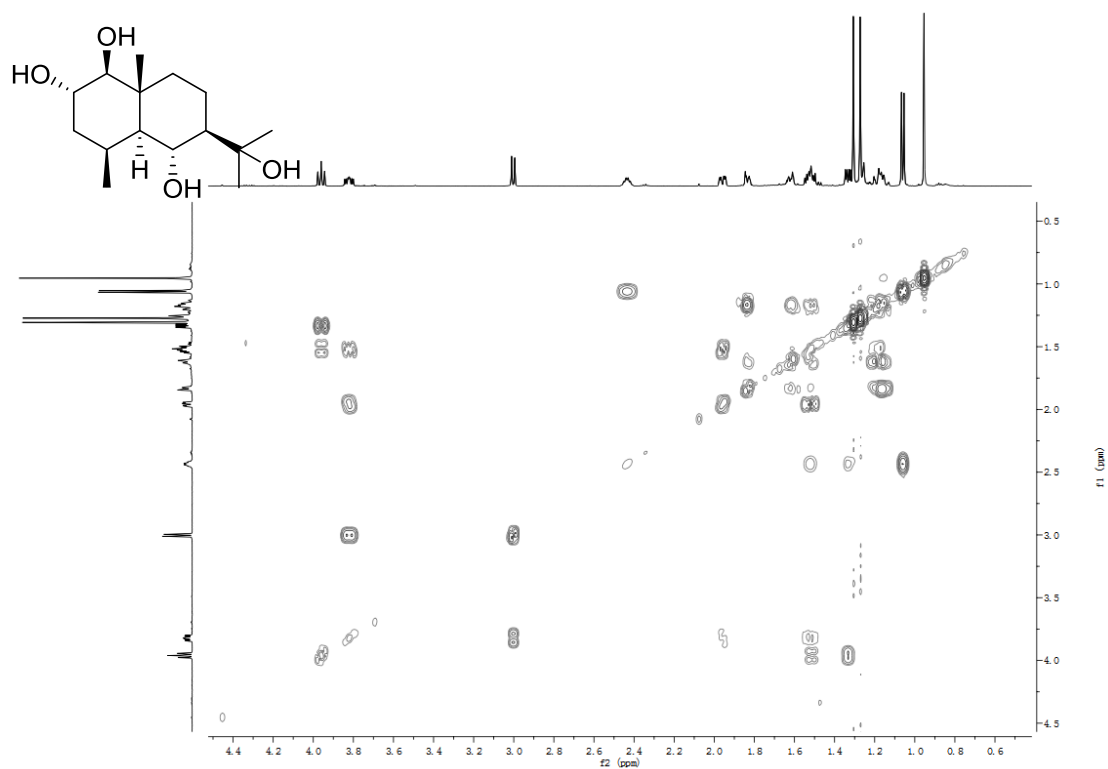


Figure S93. HMBC spectrum of compound **10** in CDCl₃

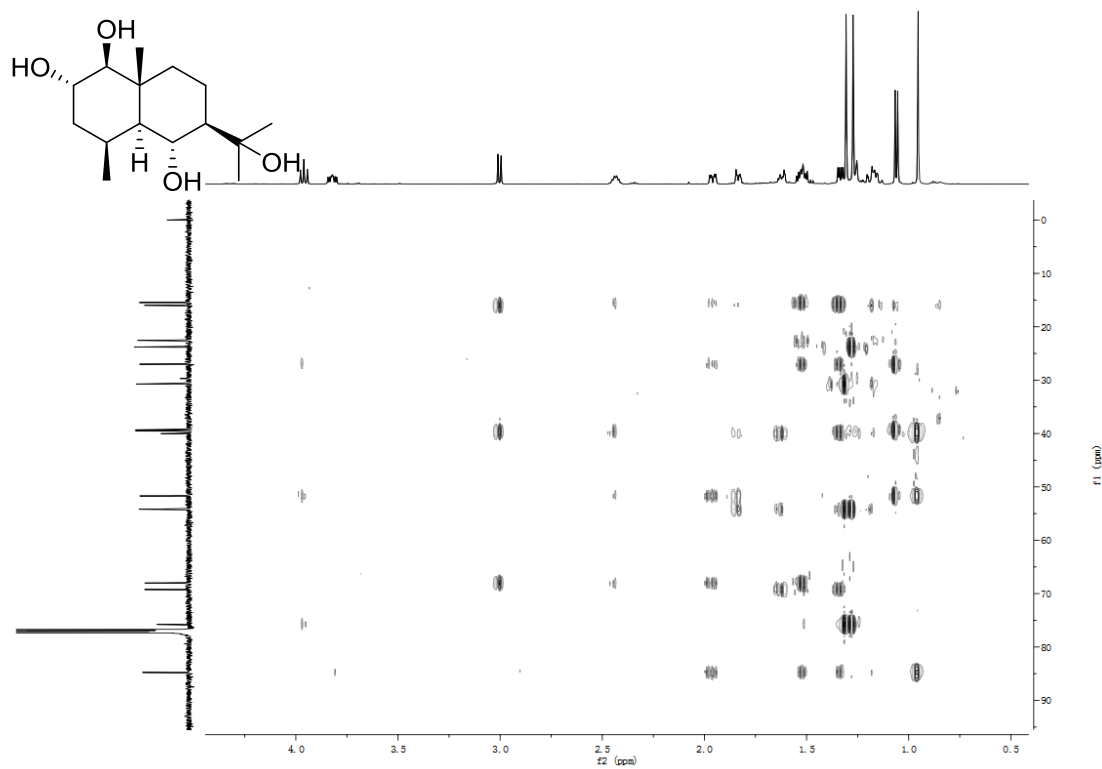
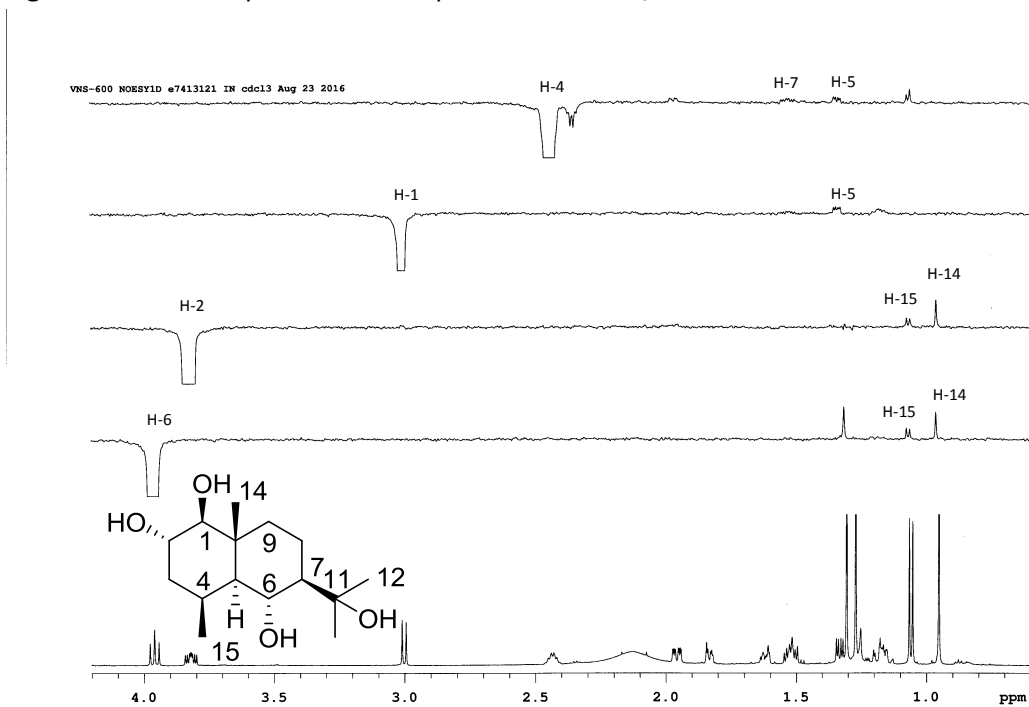
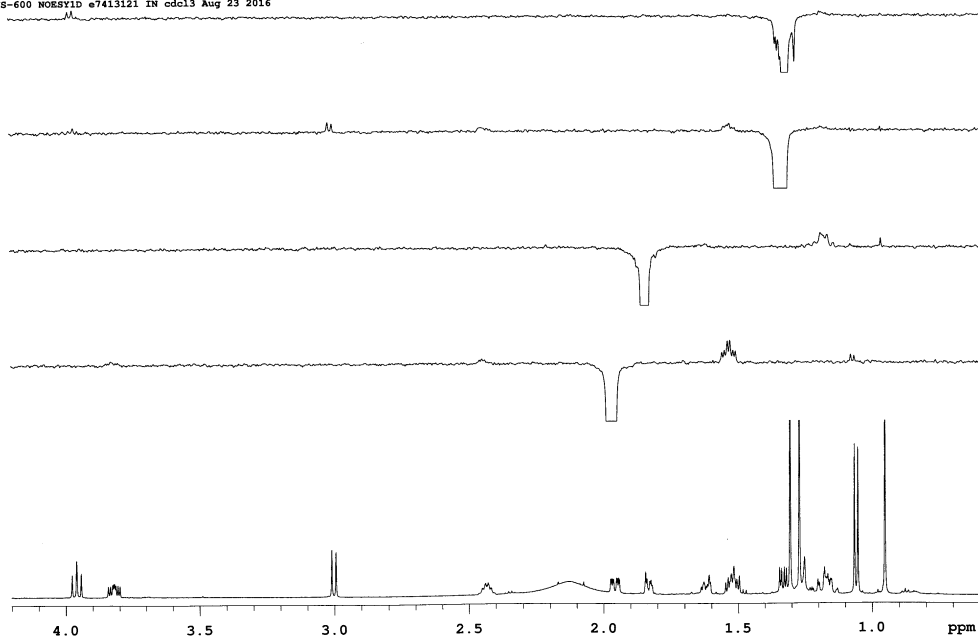


Figure S94. NOESY spectrum of compound **10** in CDCl₃



VNS-600 NOESY1D e7413121 IN cdcl3 Aug 23 2016



VNS-600 NOESY1D e7413121 IN cdcl3 Aug 23 2016

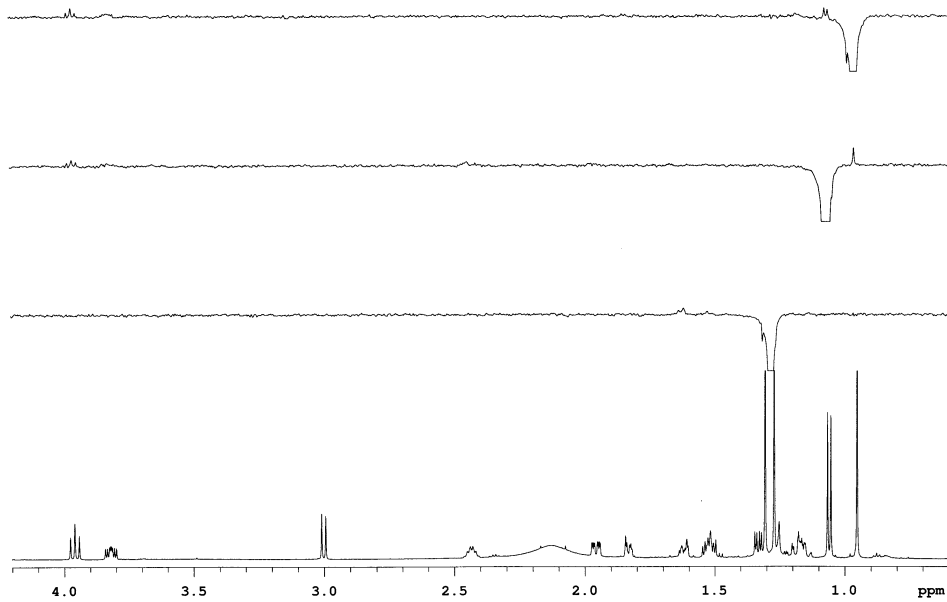


Figure S95. HRESIMS spectrum of compound 10

E7413121 #788 RT: 2.71 AV: 1 NL: 5.16E7

T: FTMS + c ESI Full ms [100.00-1000.00]

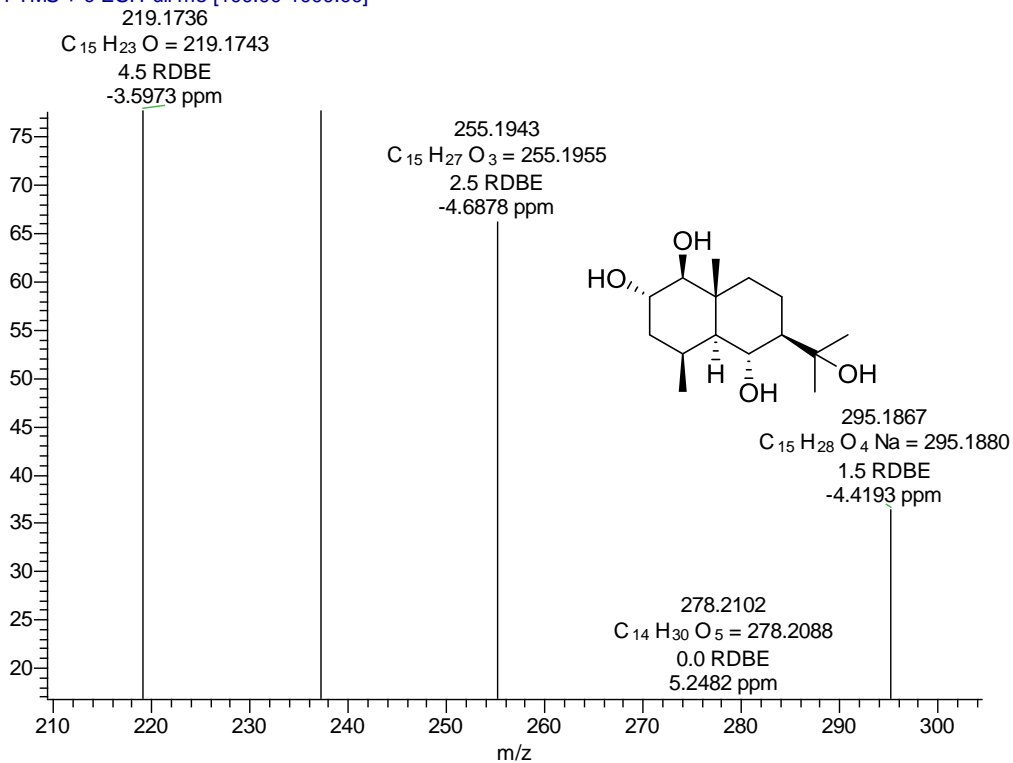


Figure S96. IR spectrum of compound 10

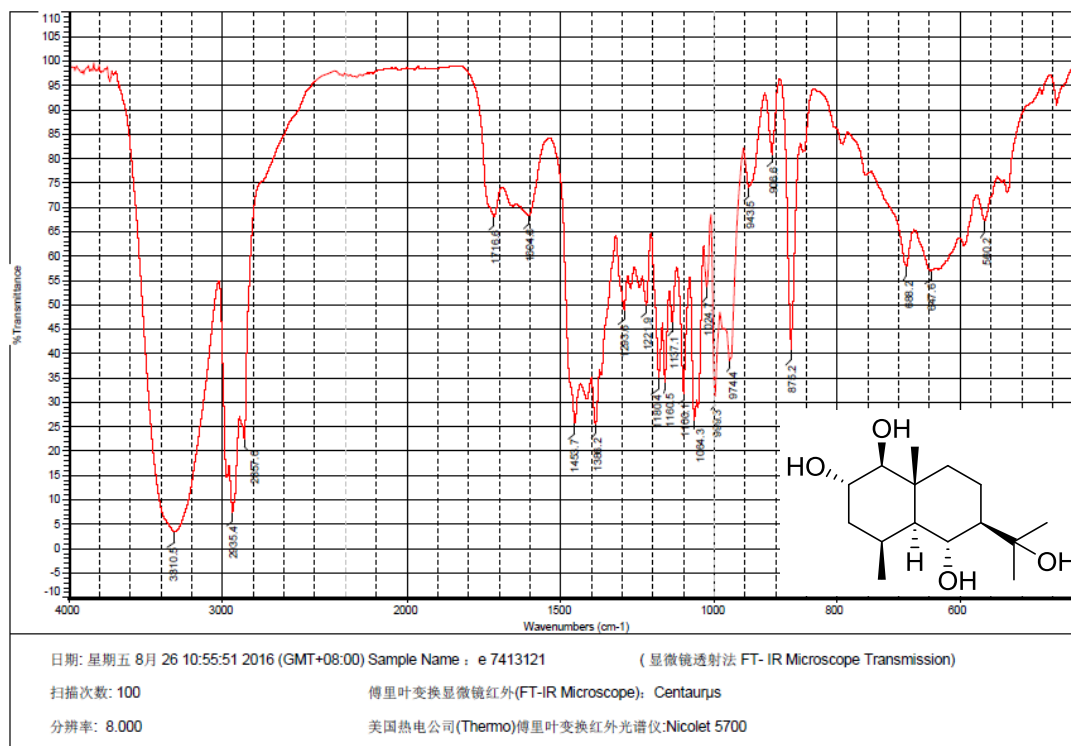


Figure S97. ^1H NMR spectrum of compound **11** in CDCl_3

^1H NMR in CDCl_3 at 400MHz

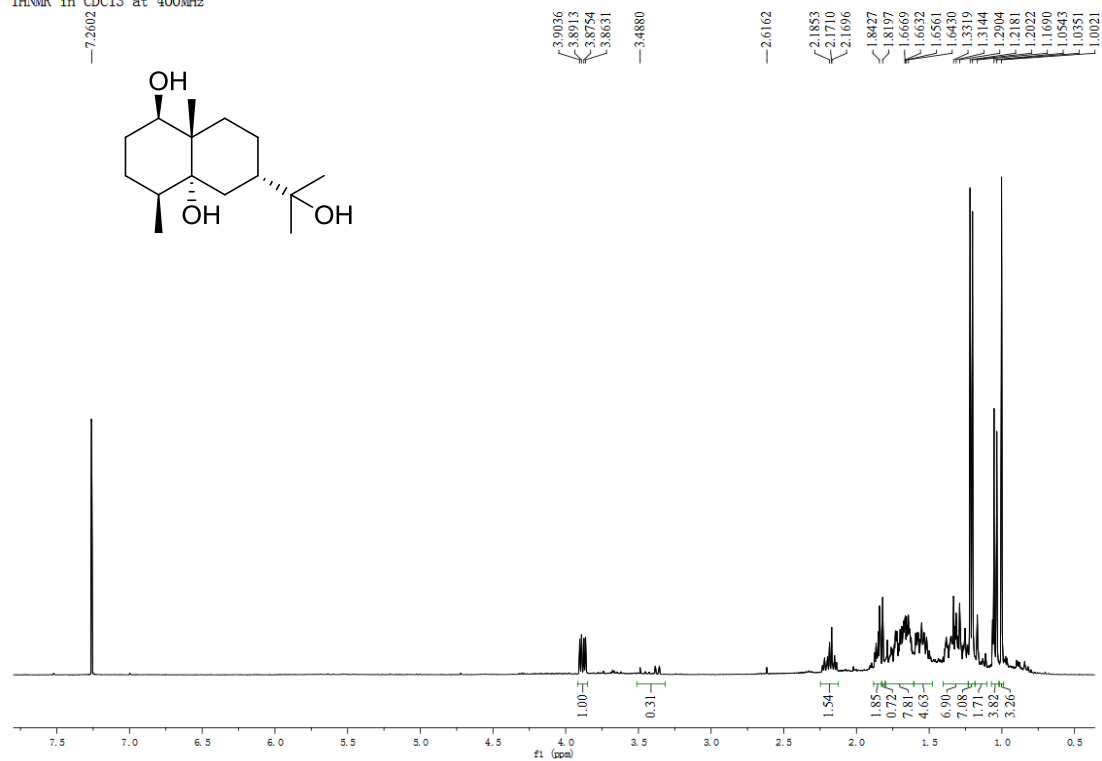


Figure S98. ^{13}C NMR spectrum of compound **11** in CDCl_3

^{13}C NMR in CDCl_3 at 400MHz Bruker AVANCEIII 400

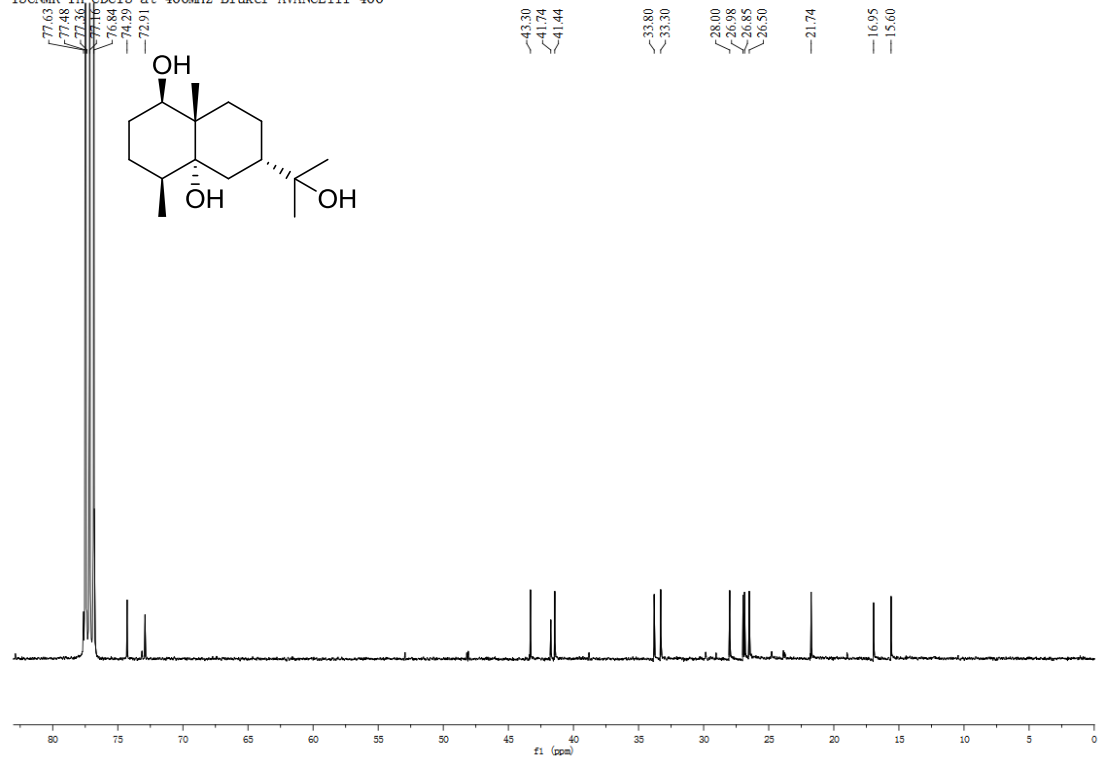


Figure S98-2. Enlarge ^{13}C NMR spectrum of compound **11** in CDCl_3

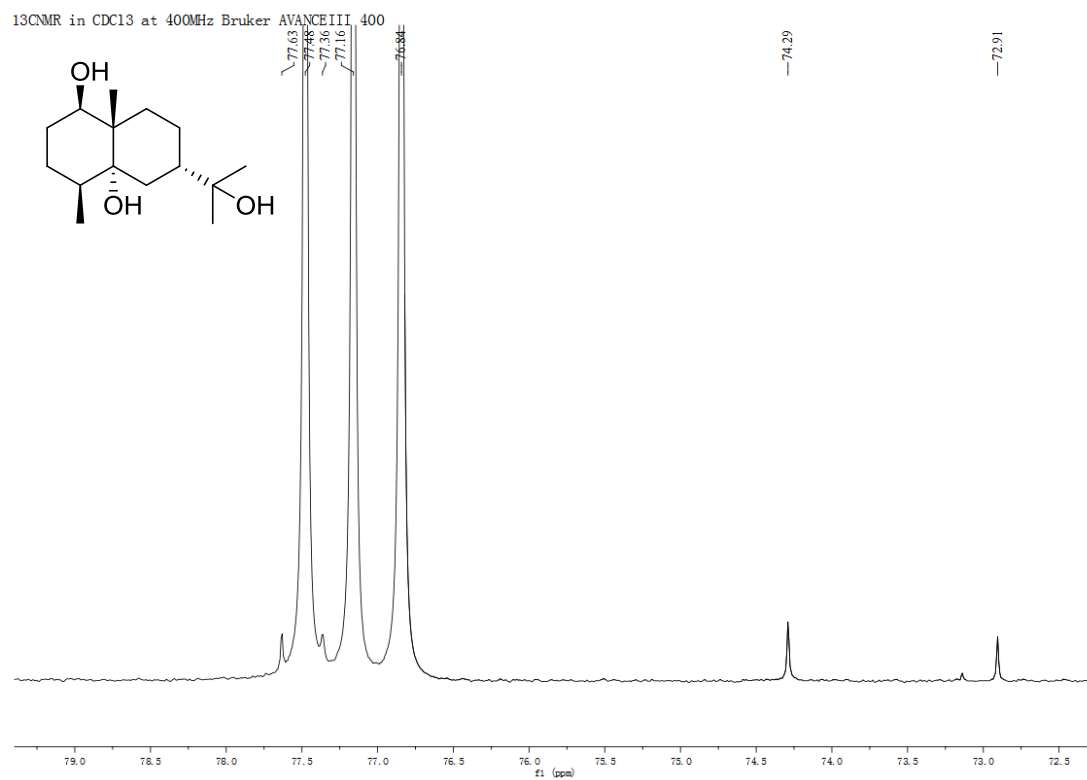


Figure S99. DEPT spectrum of compound **11** in CDCl_3

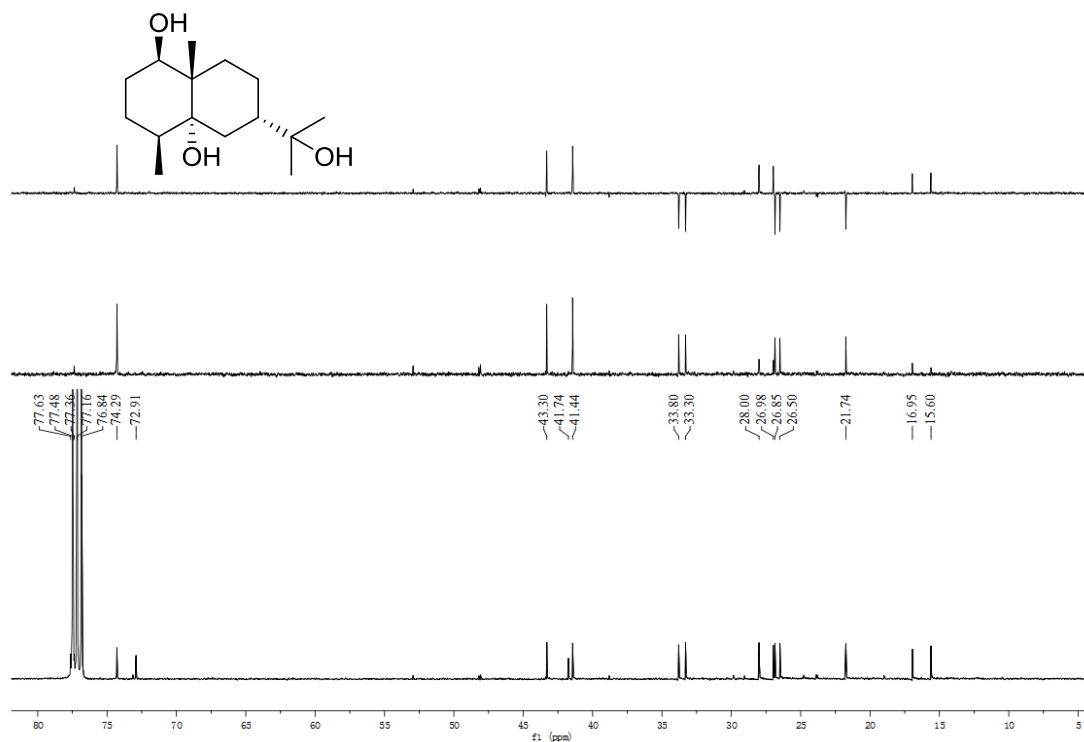


Figure S100. HSQC spectrum of compound **11** in CDCl₃

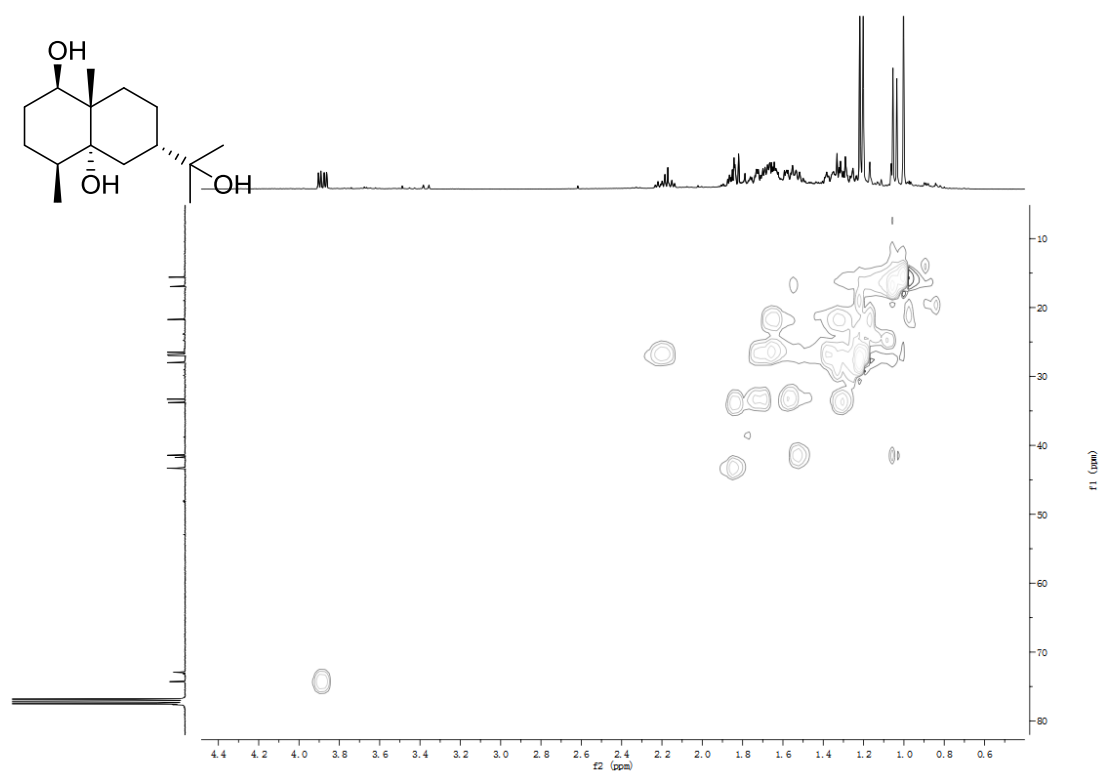


Figure S101. ¹H-¹H COSY spectrum of compound **11** in CDCl₃

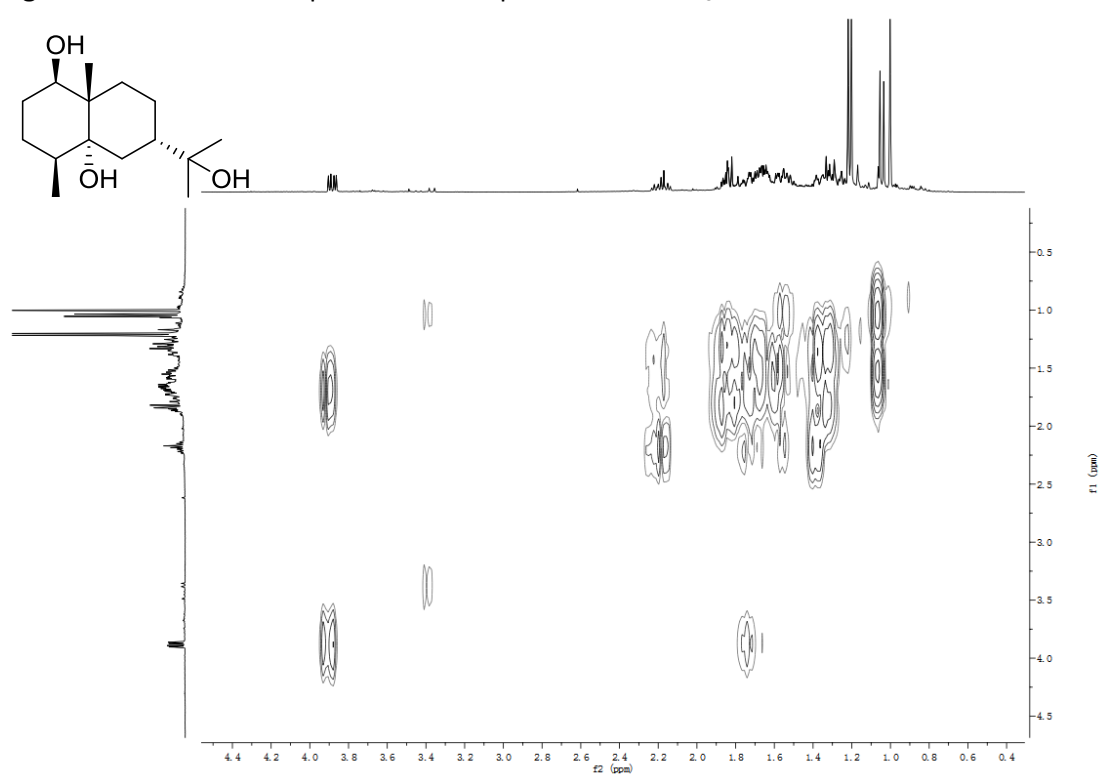


Figure S102. HMBC spectrum of compound **11** in CDCl₃

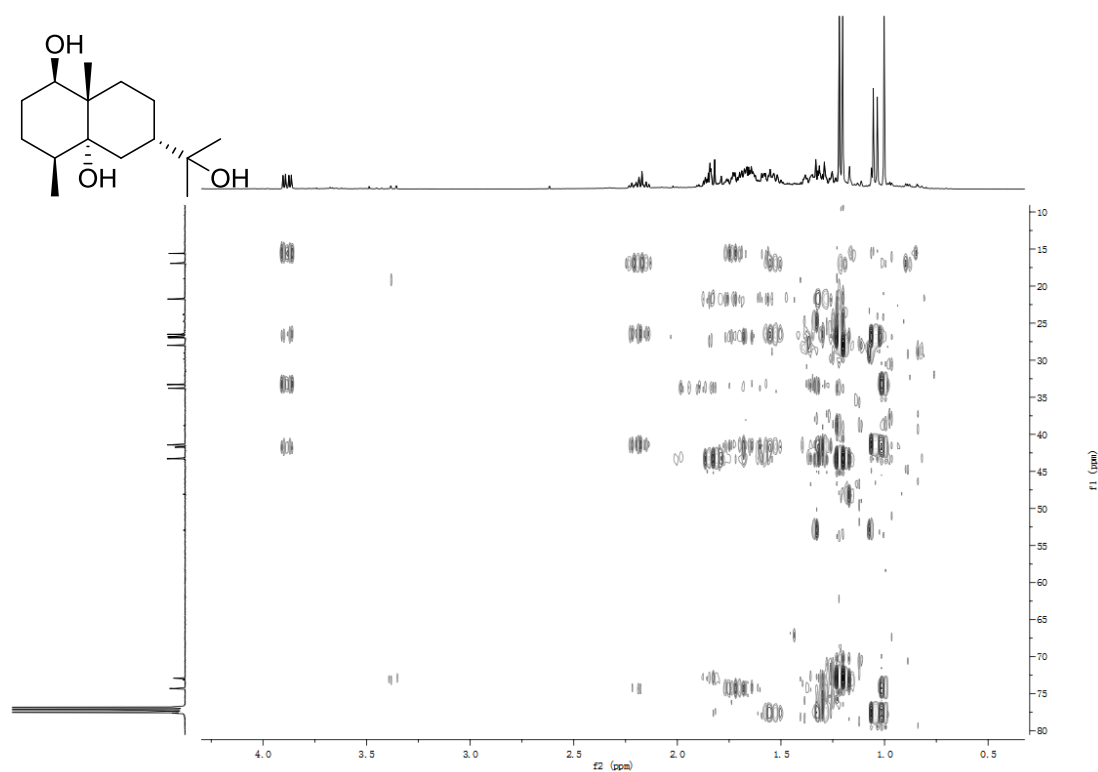
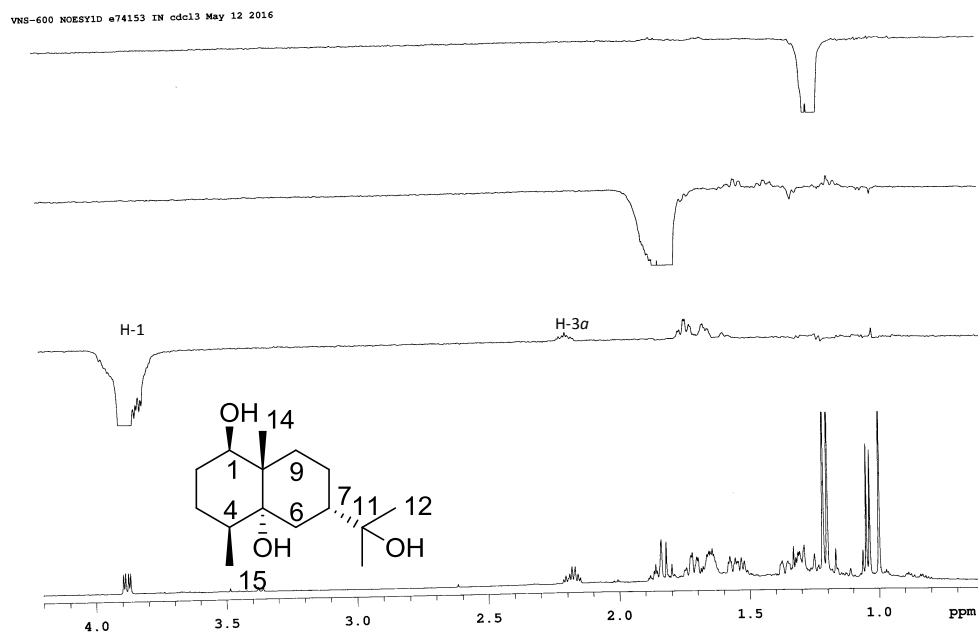


Figure S103. NOESY spectrum of compound **11** in CDCl₃



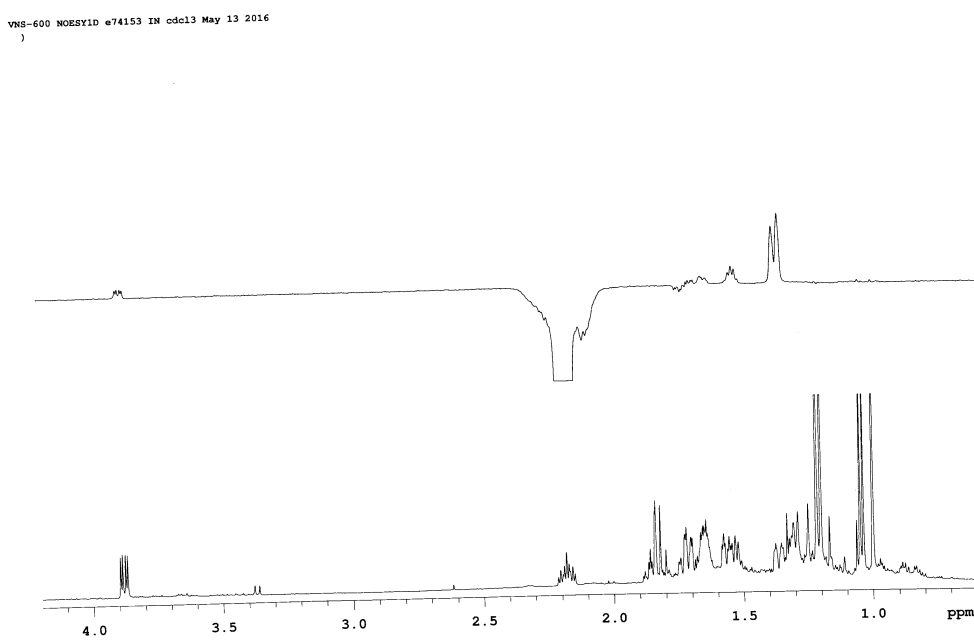
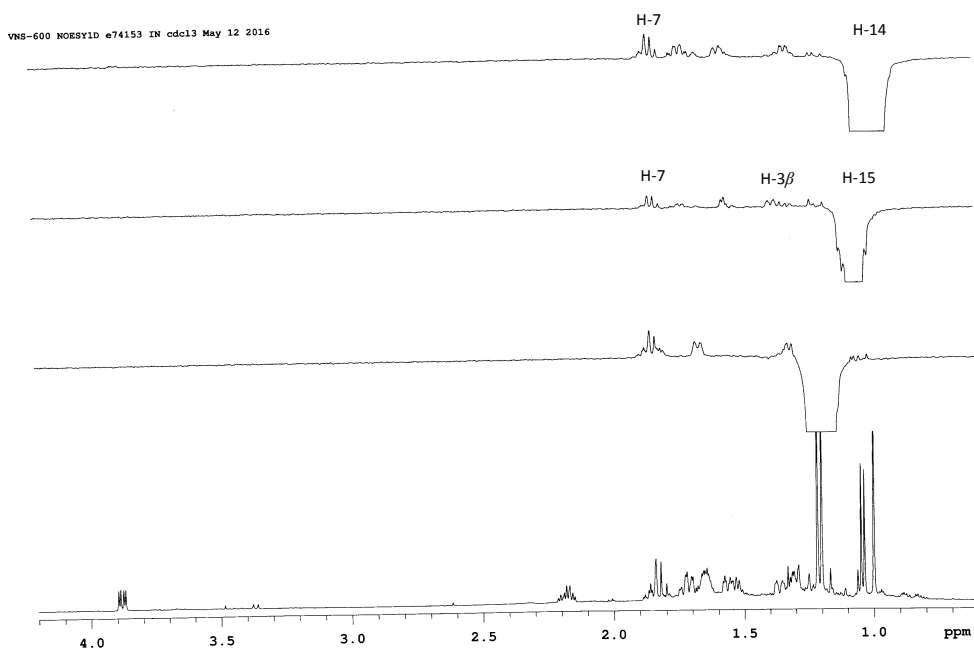


Figure S104. HRESIMS spectrum of compound 11

e74153 #1004 RT: 3.07 AV: 1 NL: 7.54E7
T: FTMS + c ESI Full ms [100.00-1000.00]

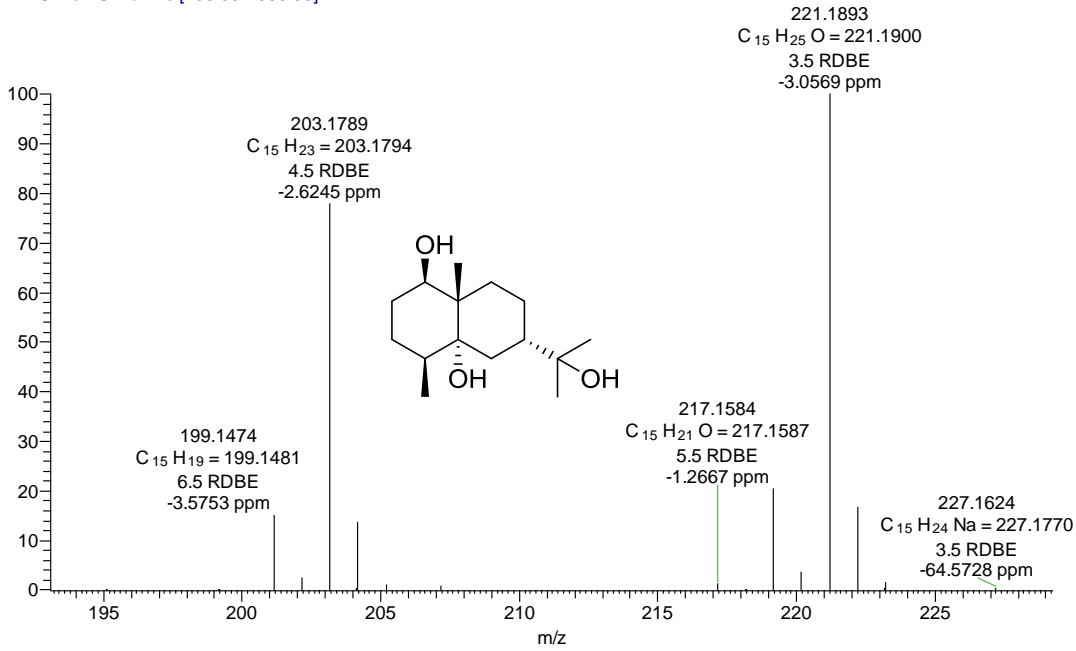


Figure S105. IR spectrum of compound 11

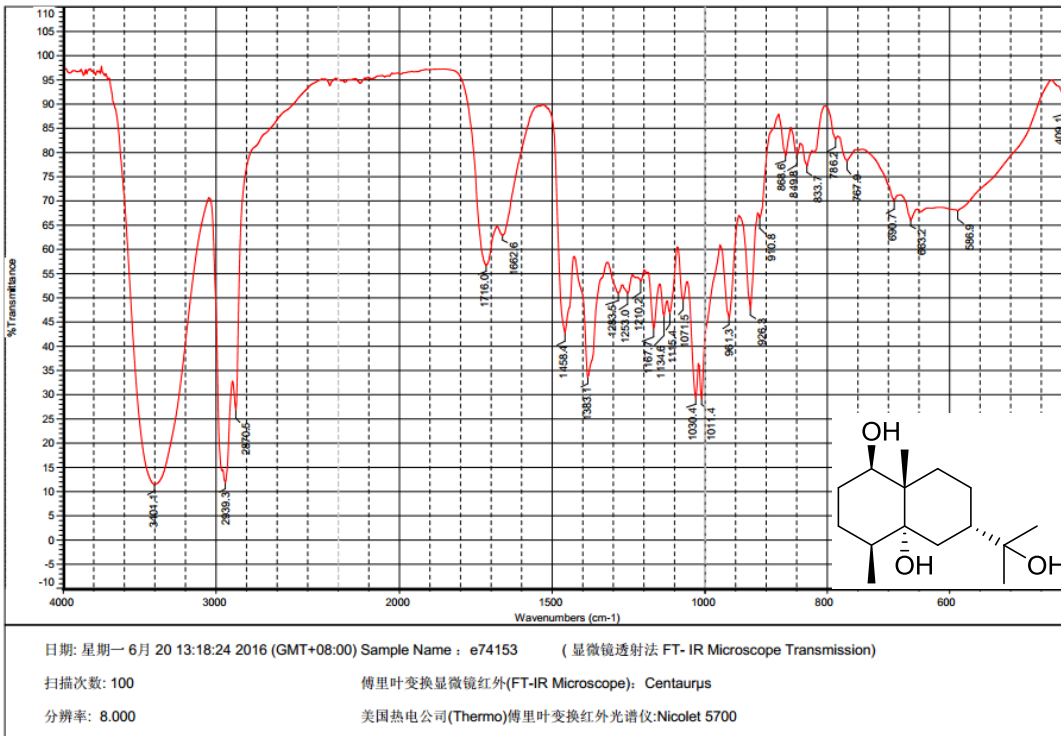


Figure S106. ^1H NMR spectrum of compound **11** in $\text{DMSO}-d_6$

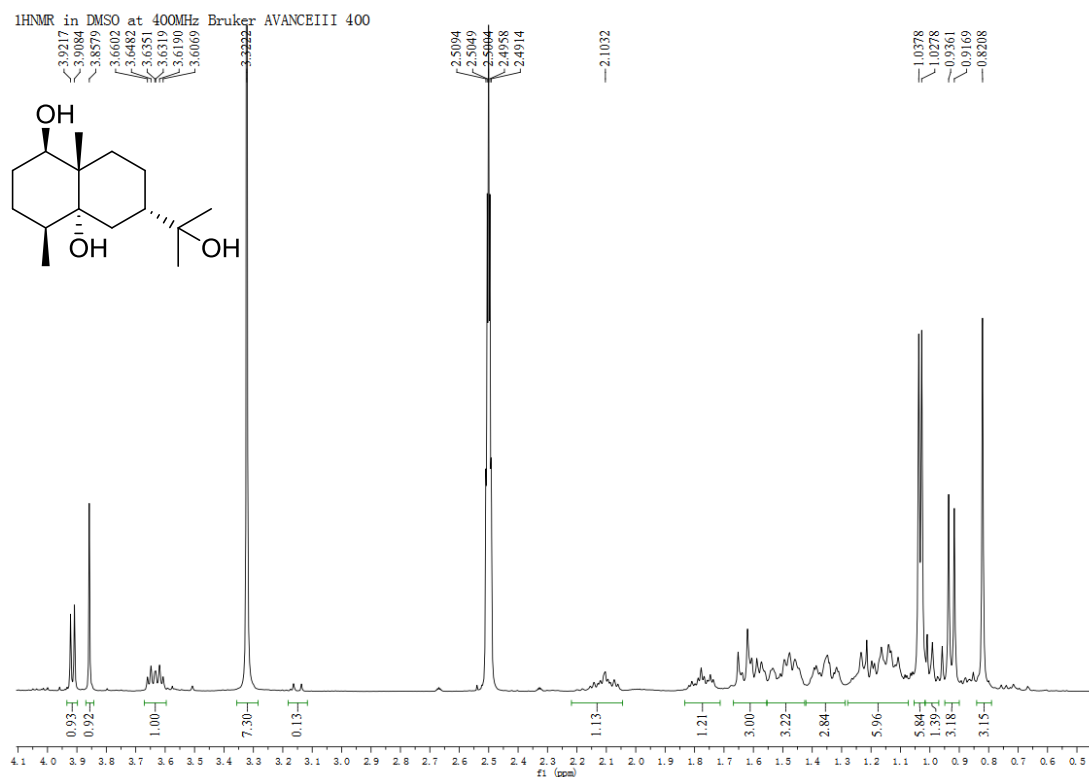


Figure S107. ^{13}C NMR spectrum of compound **11** in $\text{DMSO}-d_6$

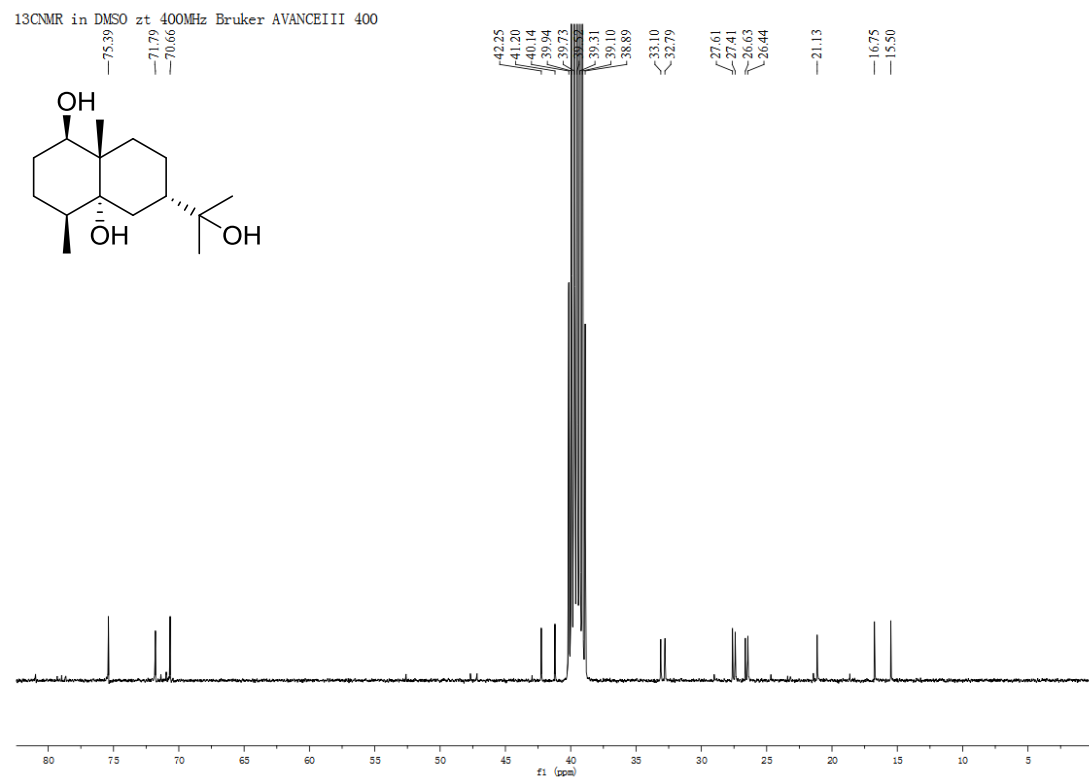
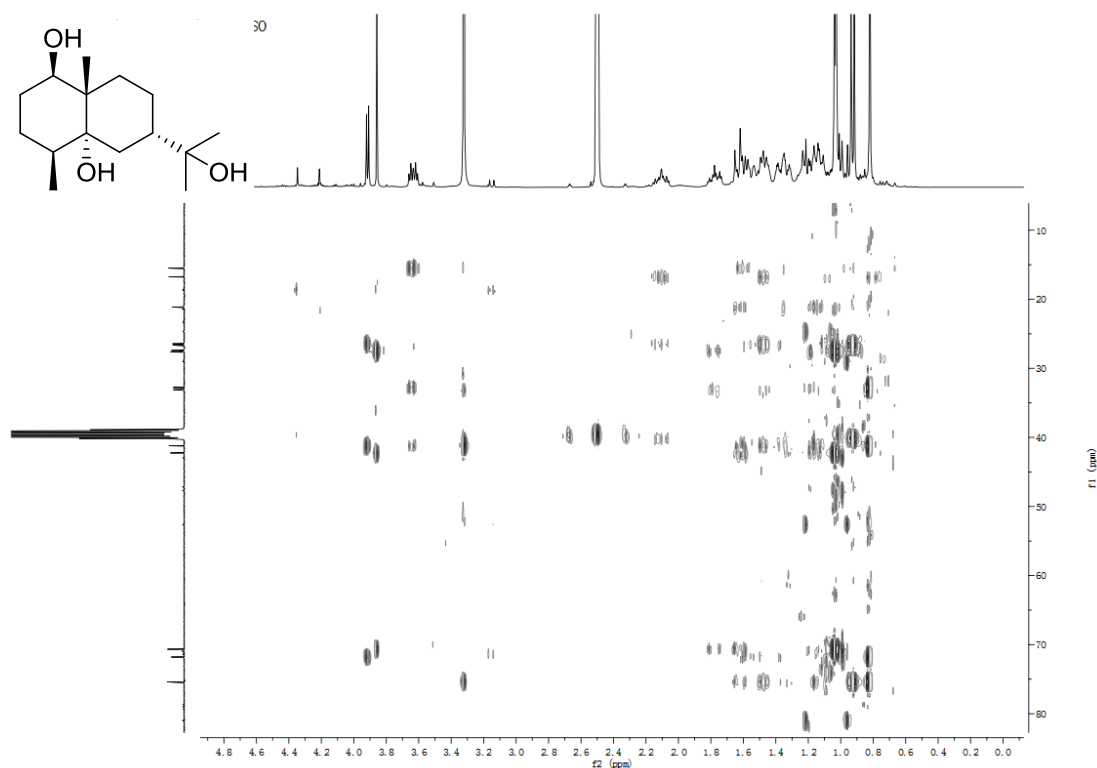


Figure S108. HMBC spectrum of compound **11** in DMSO-*d*₆



¹H NMR and ¹³C NMR data of Compounds **11**

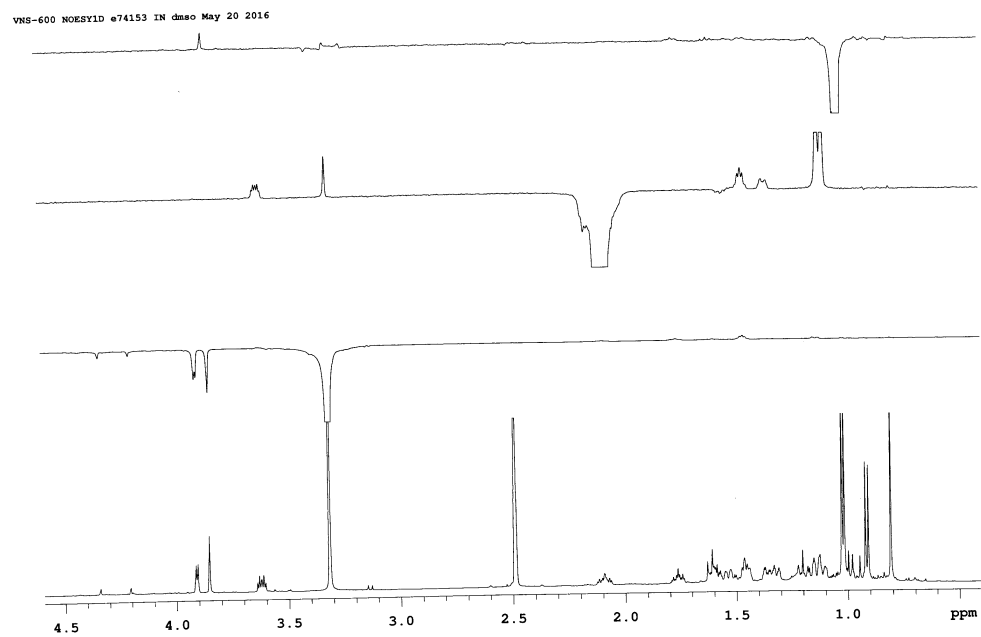
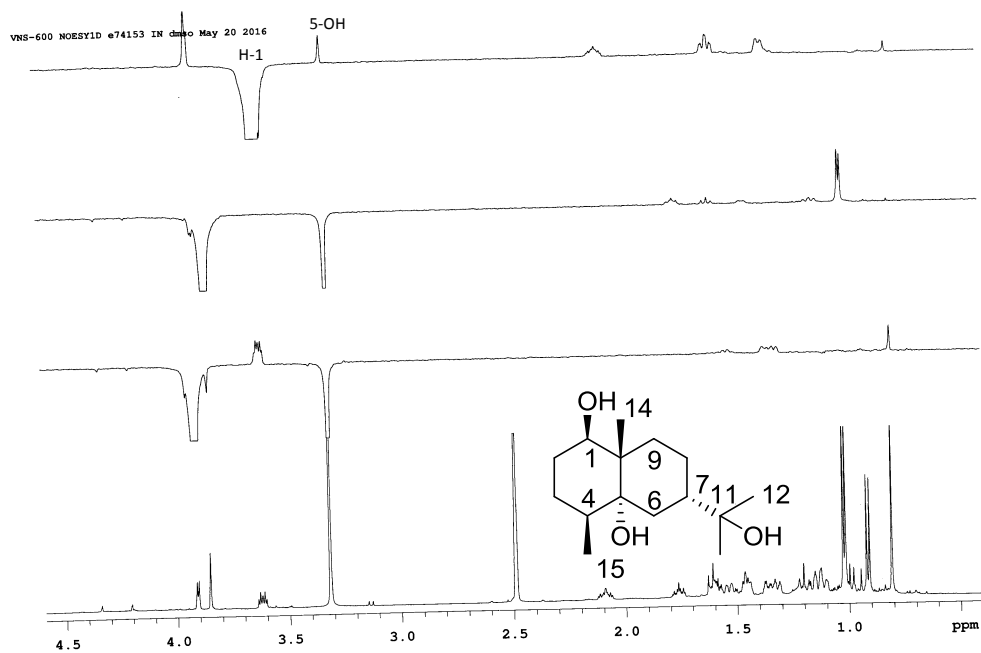
positio n	11^a		11^b	
	δ_c type	δ_H (J in Hz)	δ_c type	δ_H (J in Hz)
1	74.3, CH	3.88, dd (11.3, 4.9)	71.8, CH	3.63, dt (11.3, 4.8)
2	26.5, CH ₂	1.66, m, H α	26.4, CH ₂	1.57, m, H α^c
		1.71, m, H β		1.59, m, H β^c
3	26.9, CH ₂	2.20, m, H α	26.6, CH ₂	2.10, m, H α
		1.37, m, H β		1.07, m, H β^c
4	41.4, CH	1.53, m	40.2, CH	1.47, m
5	77.6, C		75.4, C	
6	33.8, CH ₂	1.84, m, H α	33.1, CH ₂	1.74, m, H α^c
		1.30, m, H β		1.20, m, H β^c
7	43.3, CH	1.85, m	42.3, CH	1.77, m
8	21.7, CH ₂	1.65, m, H α	21.1, CH ₂	1.55, m, H α^c
		1.32, m, H β		1.22, m, H β^c
9	33.3, CH ₂	1.72, m, H α	32.8, CH ₂	1.78, m, H α
		1.57, m, H β		1.49, m, H β^c
10	42.7, C		41.2, C	
11	72.9, C		70.7, C	
12	28.0, CH ₃	1.22, s	27.6, CH ₃	1.04, s
13	27.0, CH ₃	1.20, s	27.4, CH ₃	1.02, s
14	15.6, CH ₃	1.00, s	15.5, CH ₃	0.82, s
15	16.9, CH ₃	1.04, d (7.7)	16.8, CH ₃	0.93, d (7.7)
1-OH				3.92, d (5.3)
5-OH				3.32, s
11-OH				3.86, s

^aData were recorded at 400 MHz for proton and at 100 MHz for carbon in CDCl₃.

^bData were recorded at 400 MHz for proton and at 100 MHz for carbon in DMSO-*d*₆.

^cOverlapped with other signals.

Figure S109. NOESY spectrum of compound **11** in DMSO-*d*₆



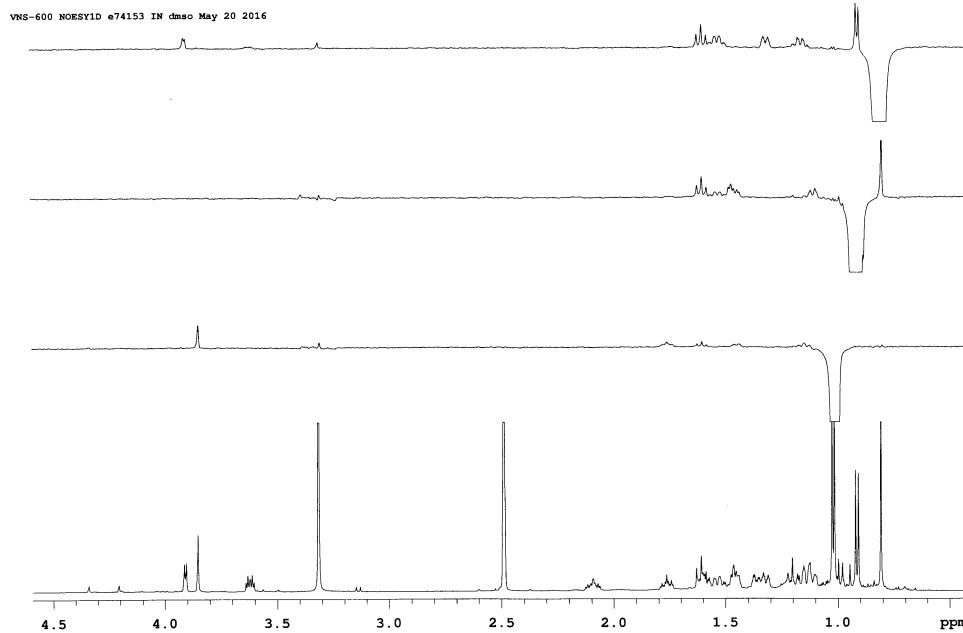


Table S1

Cytotoxicities of isolated compounds against five human cancer cell lines (IC_{50} , μM).

Compounds	IC_{50}				
	HCT116	NCI-H1650	BGC823	Daoy	HepG2
1	>50.0	>50.0	>50.0	>50.0	>50.0
2	>50.0	>50.0	>50.0	>50.0	>50.0
3	24.5	>50.0	>50.0	>50.0	>50.0
4	16.6	>50.0	49.9	31.1	27.9
5	>50.0	>50.0	>50.0	>50.0	>50.0
6	>50.0	28.9	>50.0	35.5	>50.0
7	>50.0	>50.0	>50.0	>50.0	>50.0
8	>50.0	>50.0	>50.0	>50.0	>50.0
9	12.2	>50.0	>50.0	>50.0	>50.0
10	>50.0	>50.0	>50.0	>50.0	>50.0
11	>50.0	>50.0	>50.0	>50.0	>50.0
12	>50.0	>50.0	>50.0	>50.0	>50.0
13	>50.0	>50.0	>50.0	>50.0	>50.0
14	>50.0	>50.0	>50.0	>50.0	>50.0
Paclitaxel	0.000809	0.945	0.00177	0.00933	0.0249

Table S2Anti-HIV-1 activity of isolated compounds (IC₅₀, μM).

Compounds	HIV-1
1	NA
2	NA
3	NA
4	37.9
5	NA
6	NA
7	NA
8	NA
9	NA
10	NA
11	NA
12	NA
13	NA
14	NA
Efavirenz	0.002

NA=No activity