

Article

Brain Targeting by Intranasal Drug Delivery: Effect of Different Formulations of the Biflavone “Cupressuflavone” from *Juniperus Sabina* L. on the Motor Activity of Rats

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Table S1. ^1H -NMR in ppm (multiplicity, J in parentheses in Hz) of 1-3 in CD_3OD .

	1-I	2-I	3-I		1-II	2-II	3-II
3	6.81, s	6.76, s	6.56, s	3	6.81, s	6.67, s	6.38, s
6	6.49 s	5.98 s	-	6	6.49 s	6.15 s	6.17 (bs)
8	-	-	5.83, s	8	-	6.27 s	6.05 (bs)
2'	7.52 (d, $J=8.8$)	7.69 (d, $J=8.6$)	7.83 (d, $J=7.6$)	2'	7.52 (d, $J=8.8$)	8.32 (d, $J=1.8$)	8.18 (bs)
3'	6.76 (d, $J=8.8$)	6.53 (d, $J=8.6$)	6.87 (d, $J=7.6$)	3'	6.76 (d, $J=8.8$)	-	-
5'	6.76 (d, $J=8.8$)	6.53 (d, $J=8.6$)	6.87 (d, $J=7.6$)	5'	6.76 (d, $J=8.8$)	6.86 (d, $J=8.6$)	6.79 (d, $J=8.3$)
6'	7.52 (d, $J=8.8$)	7.69 (d, $J=8.6$)	7.83 (d, $J=7.6$)	6'	7.52 (d, $J=8.8$)	7.87 (dd, $J=1.8, 8.6$)	7.66 (bd, $J=8.3$)

Table S2. ^{13}C -NMR data in ppm of 1-3 in CD_3OD .

	1-I	2-I	3-I		1-II	2-II	3-II
2	163.0	165.1	163.9	2	163.0	165.1	164.2
3	103.0	102.2	101.6	3	103.0	102.8	101.5
4	182.6	182.5	181.4	4	182.6	182.2	180.6
5	161.5	160.9	159.5	5	161.5	161.4	161.6
6	99.0	102.6	103.2	6	99.0	99.2	97.1
7	161.3	161.4	163.0	7	161.3	160.9	164.7
8	98.9	107.8	101.4	8	98.9	94.4	95.7
9	155.3	155.2	157.3	9	155.3	157.7	158.5
10	104.2	101.9	100.5	10	104.2	103.8	100.7
1'	121.6	122.1	124.9	1'	121.6	117.9	112.7
2'	128.4	128.5	128.4	2'	128.4	131.8	131.6
3'	116.3	115.9	117.0	3'	116.3	124.3	118.6
4'	164.1	164.5	161.6	4'	164.1	160.8	158.5
5'	116.3	115.9	117.0	5'	116.3	120.20	119.9
6'	128.4	128.5	128.4	6'	128.4	126.70	125.7

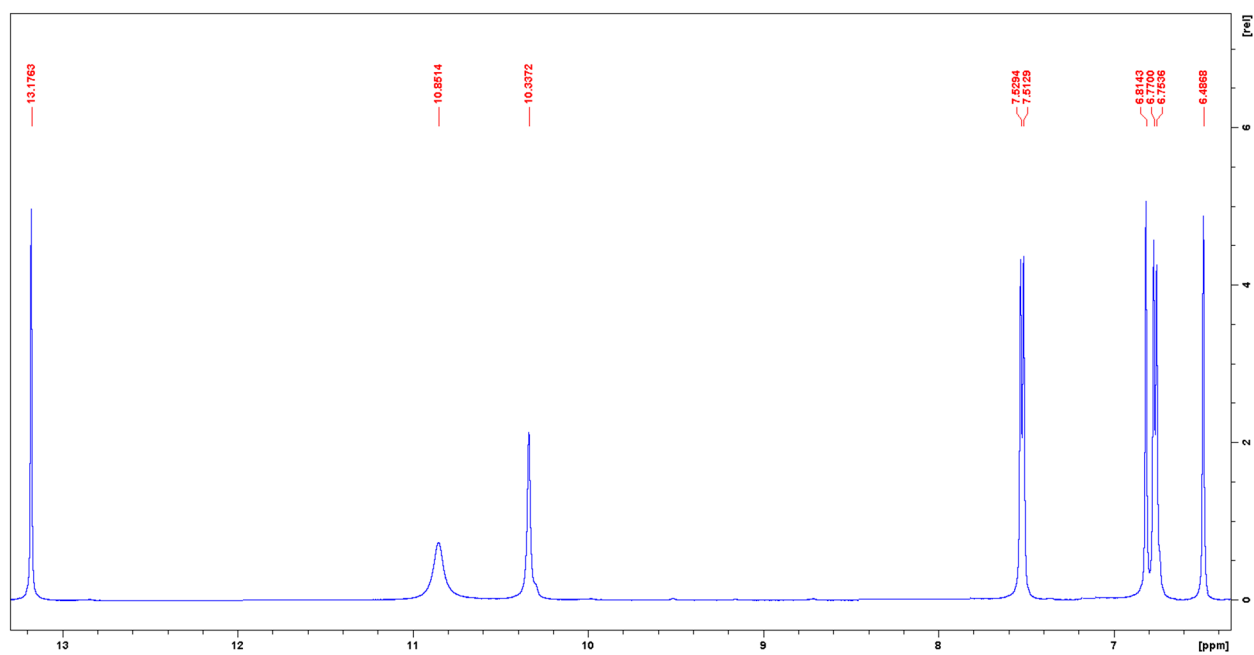


Figure S1: ^1H NMR of 1.

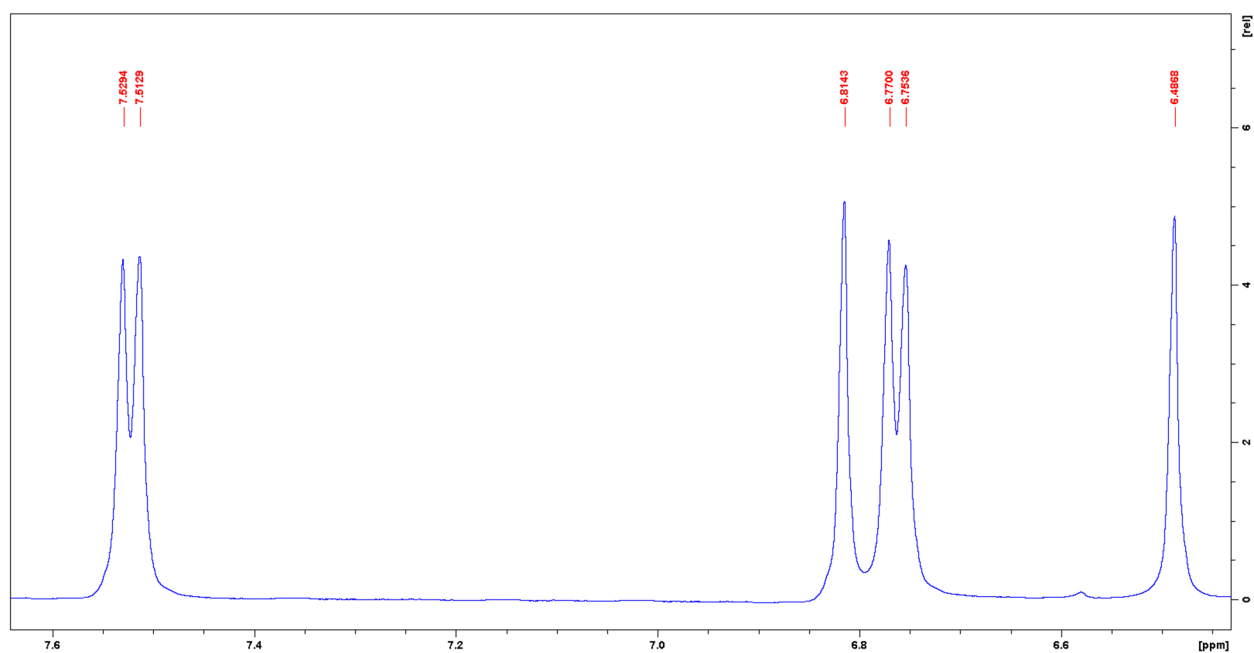


Figure S2: ^1H NMR of 1 (Exp.).

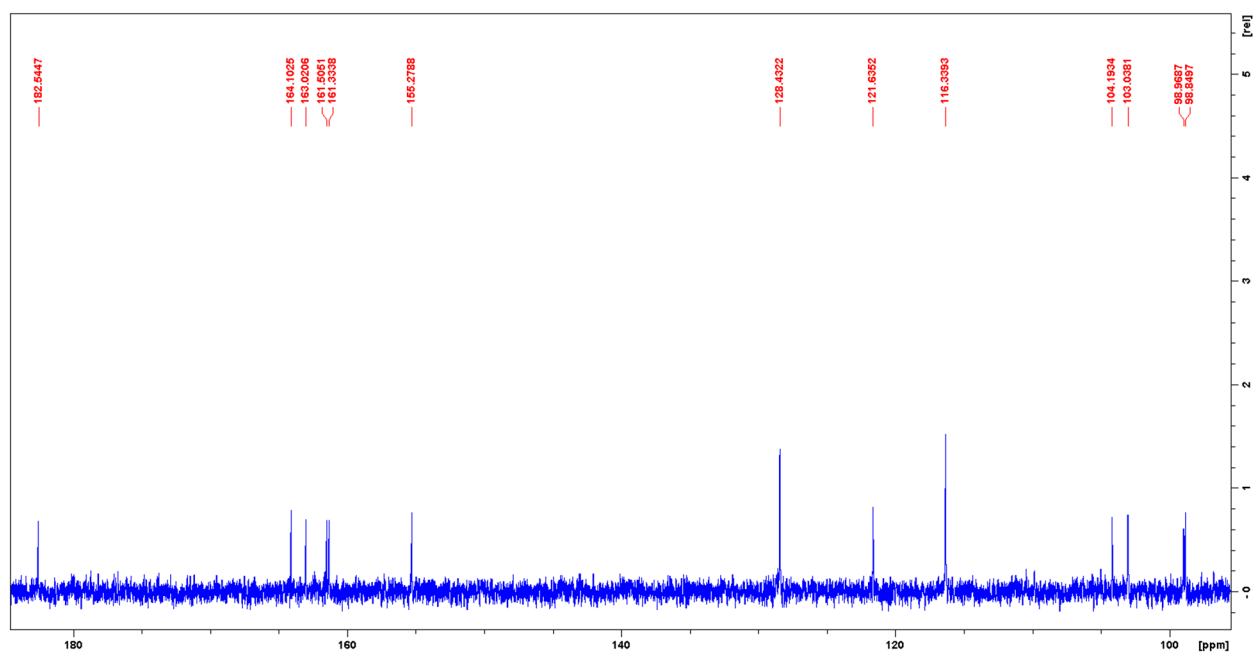


Figure S3: ¹³CNMR of 1.

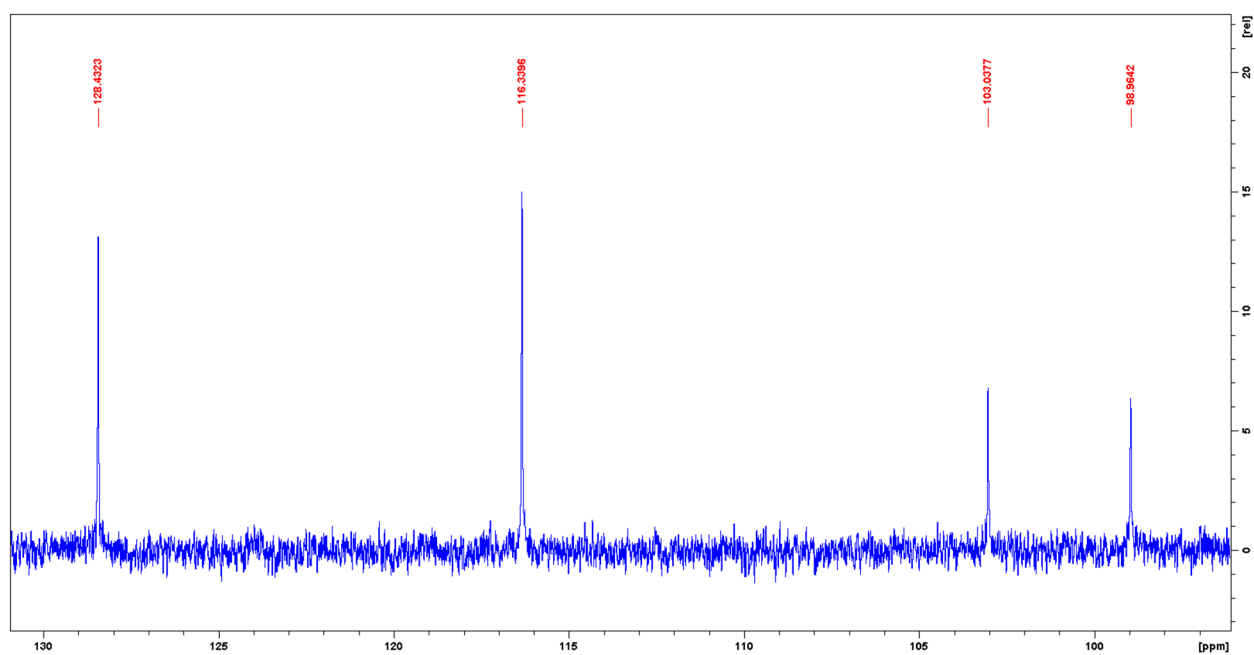


Figure S4: DEPT135 of 1.

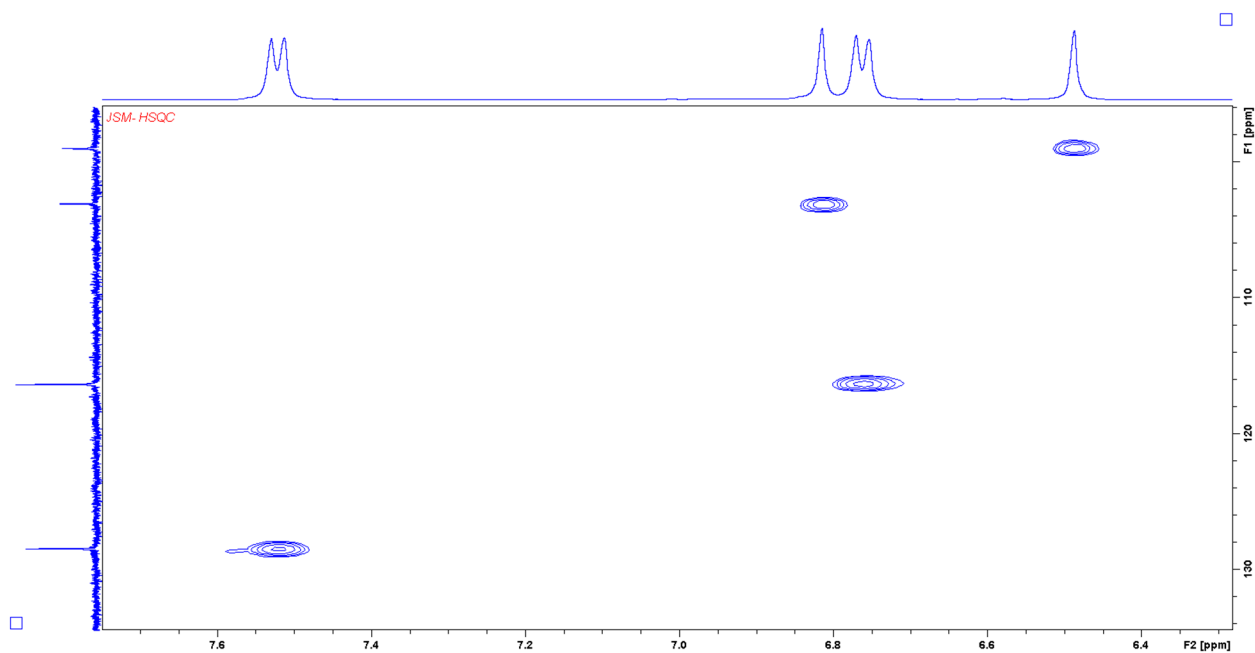


Figure S5: HSQC of 1.

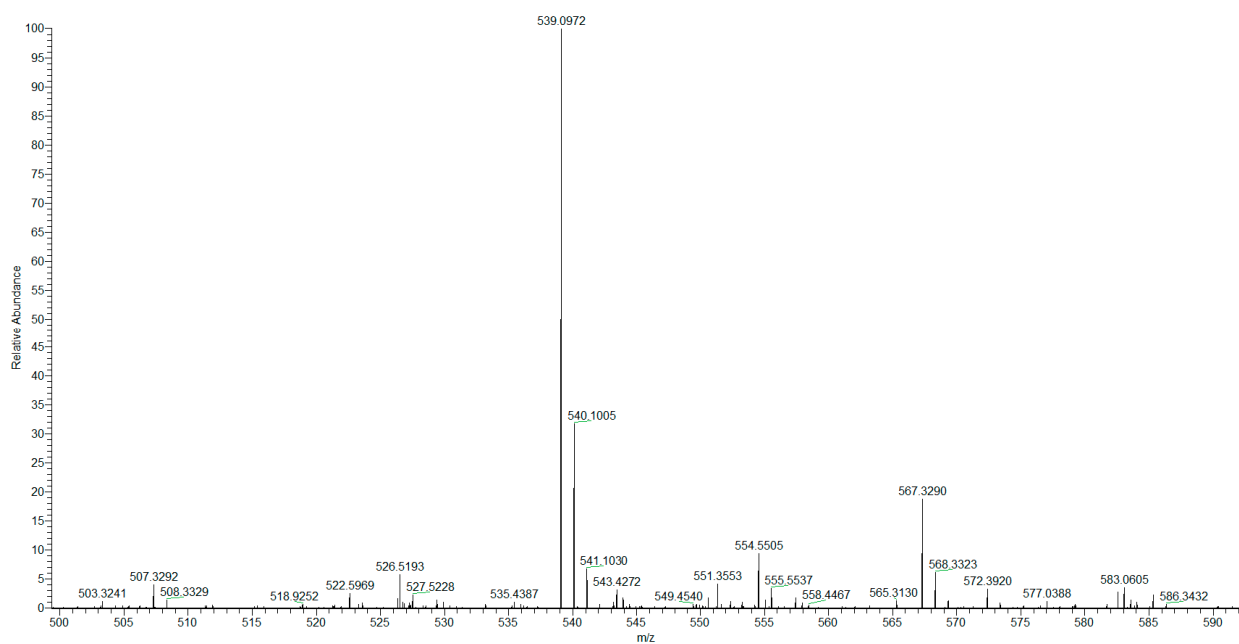


Figure S6: HRESIMS of 1.

¹H NMR spectrum of compound 10 in CDCl₃. The spectrum shows several peaks in the aromatic region (6.0-8.3 ppm) and one in the aliphatic region (5.3 ppm). The x-axis is chemical shift in ppm, ranging from 6.0 to 8.0. The y-axis is relative intensity. Peaks are labeled with their chemical shifts: 8.3211, 8.3176, 7.8936, 7.8798, 7.8685, 7.8626, 7.7457, 7.6866, 6.8739, 6.8566, 6.7630, 6.6738, 6.5384, 6.5212, 6.2695, 6.1618, 6.1453, and 5.3758.

Figure S8: ^1H NMR of **2 (Exp.).**

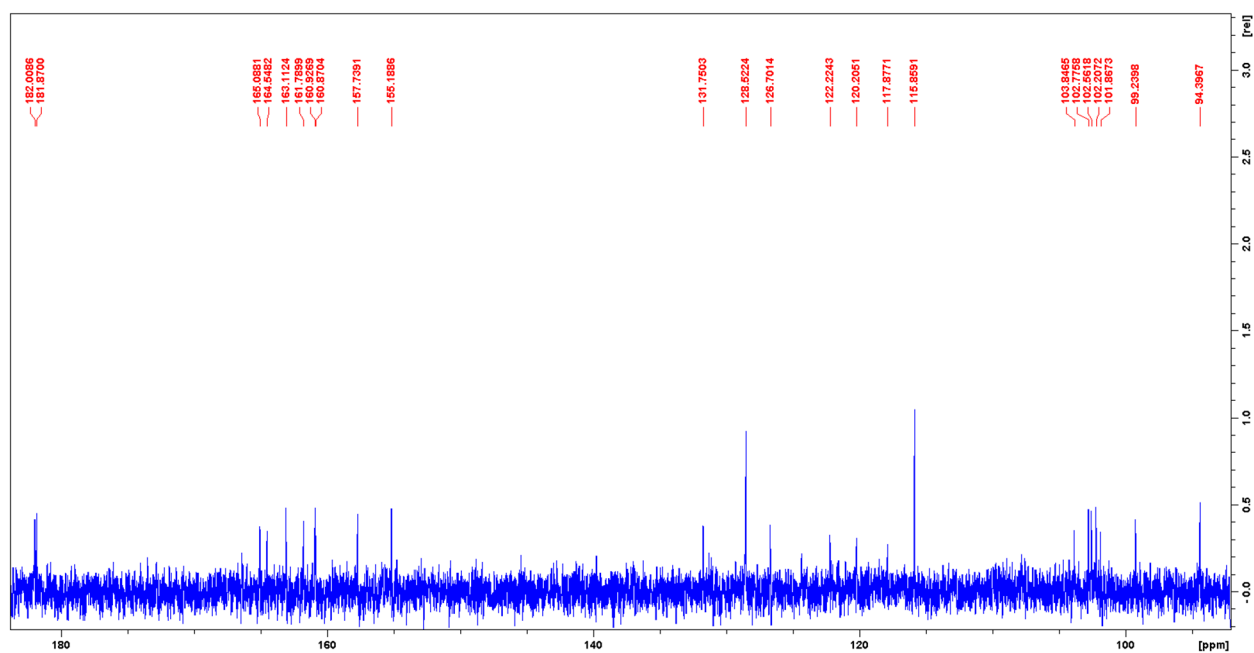
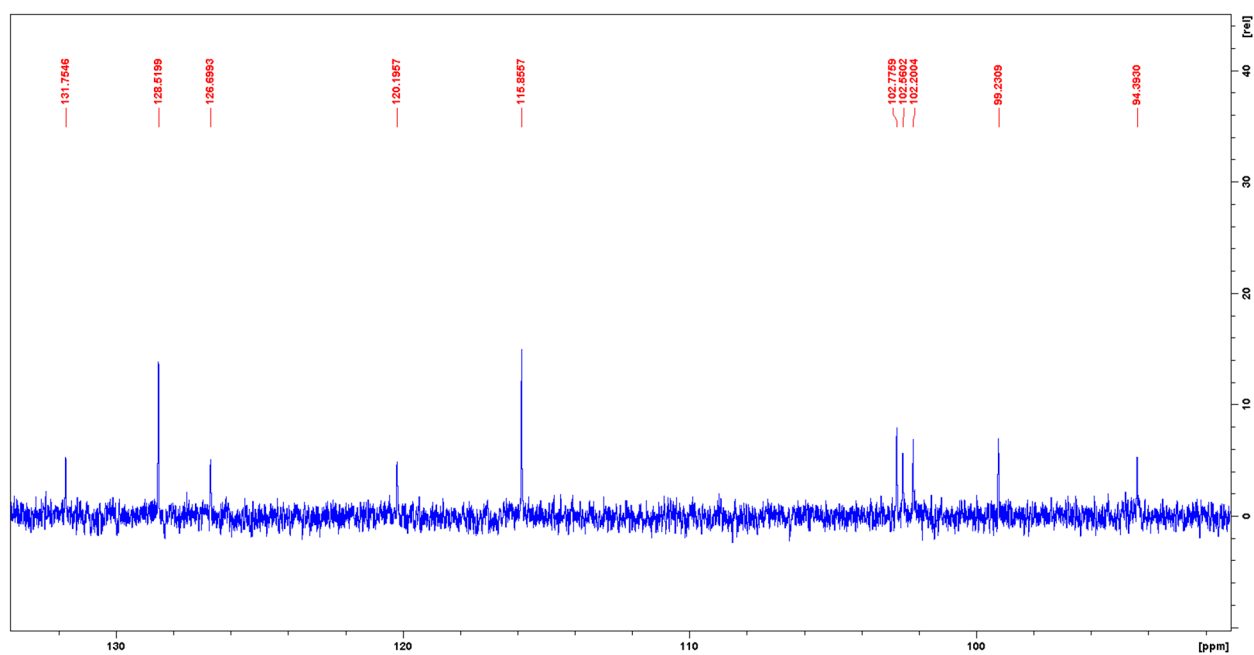
Figure S9: ^{13}C NMR of 2.

Figure S10: DEPT135 of 2.

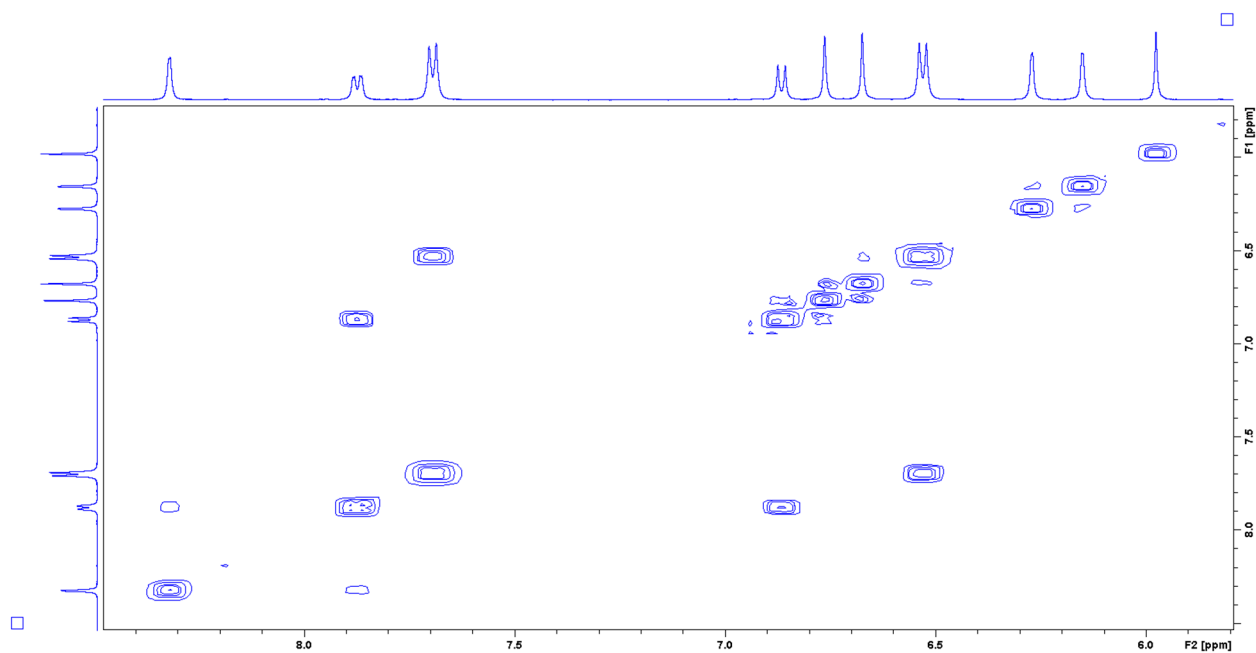


Figure S11: COSY of 2.

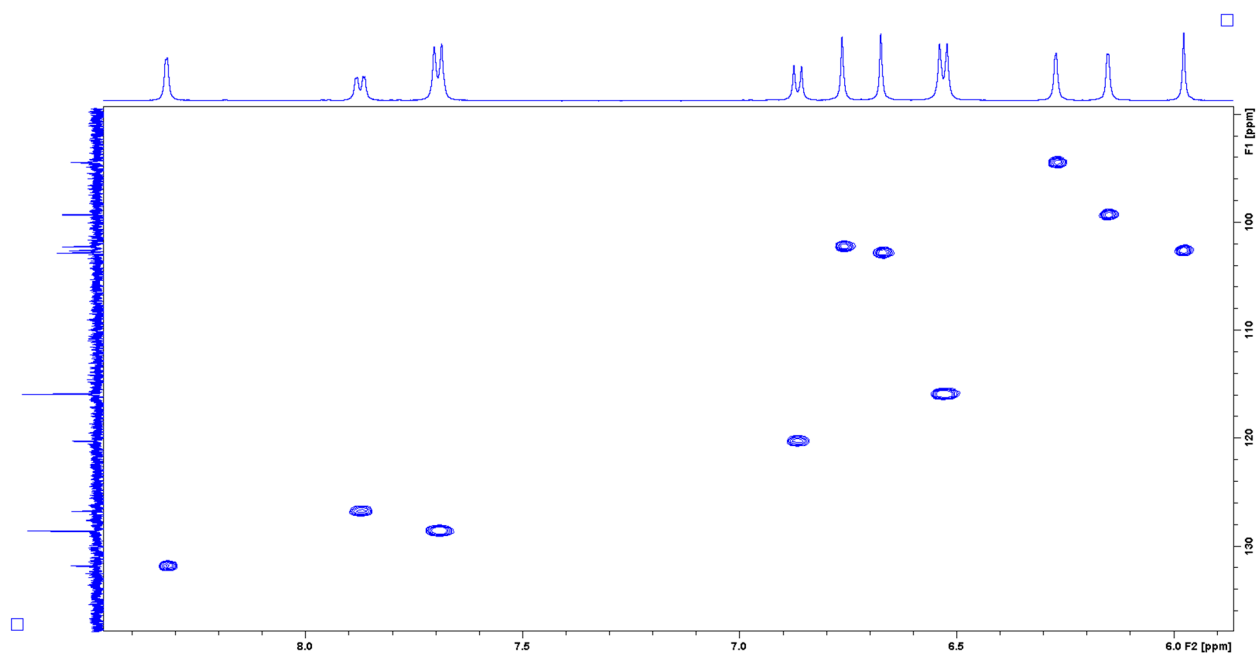


Figure S12: HSQC of 2.

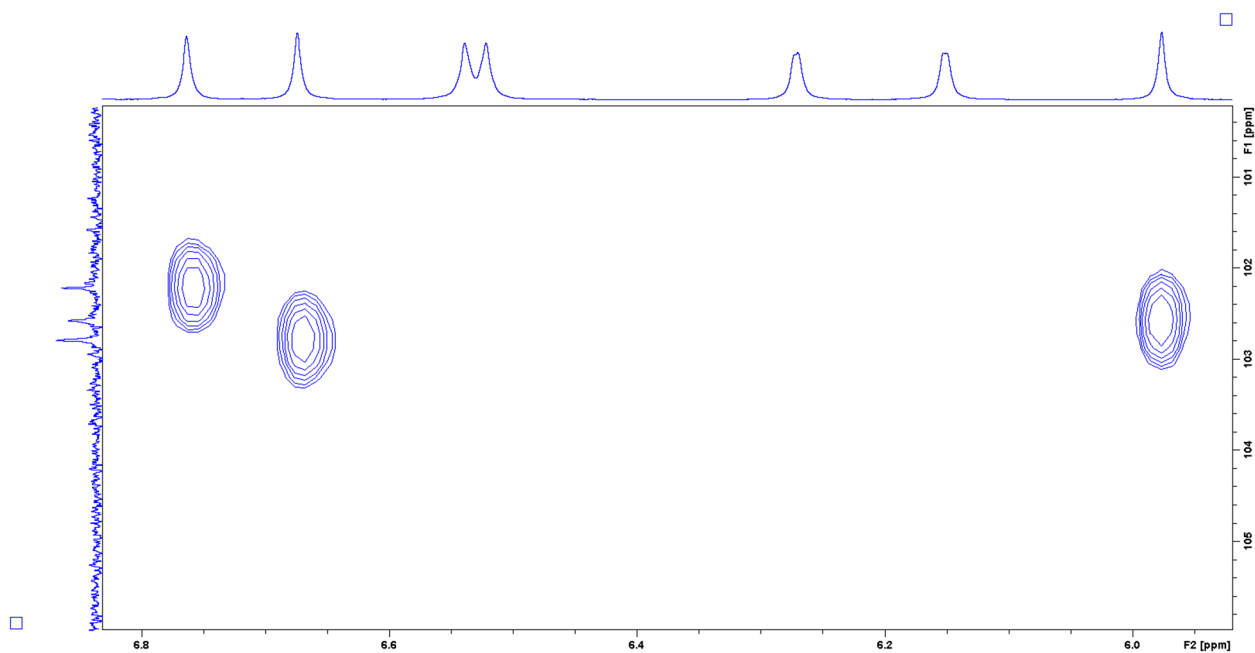


Figure S13: HSQC of 2 (Exp.).

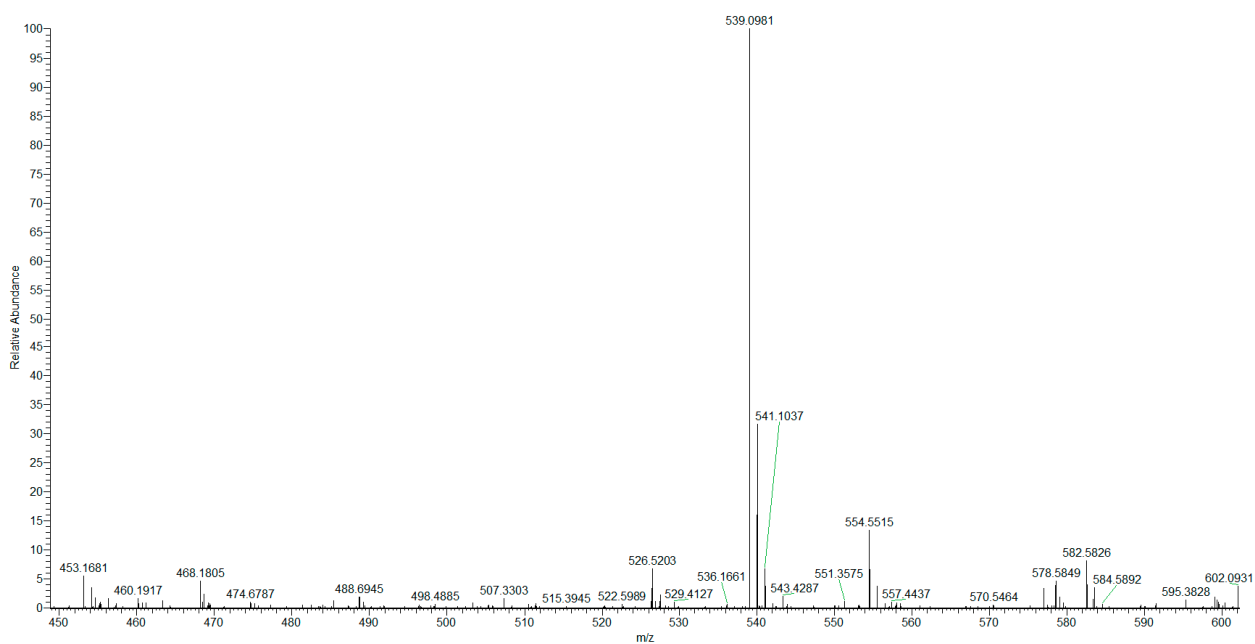
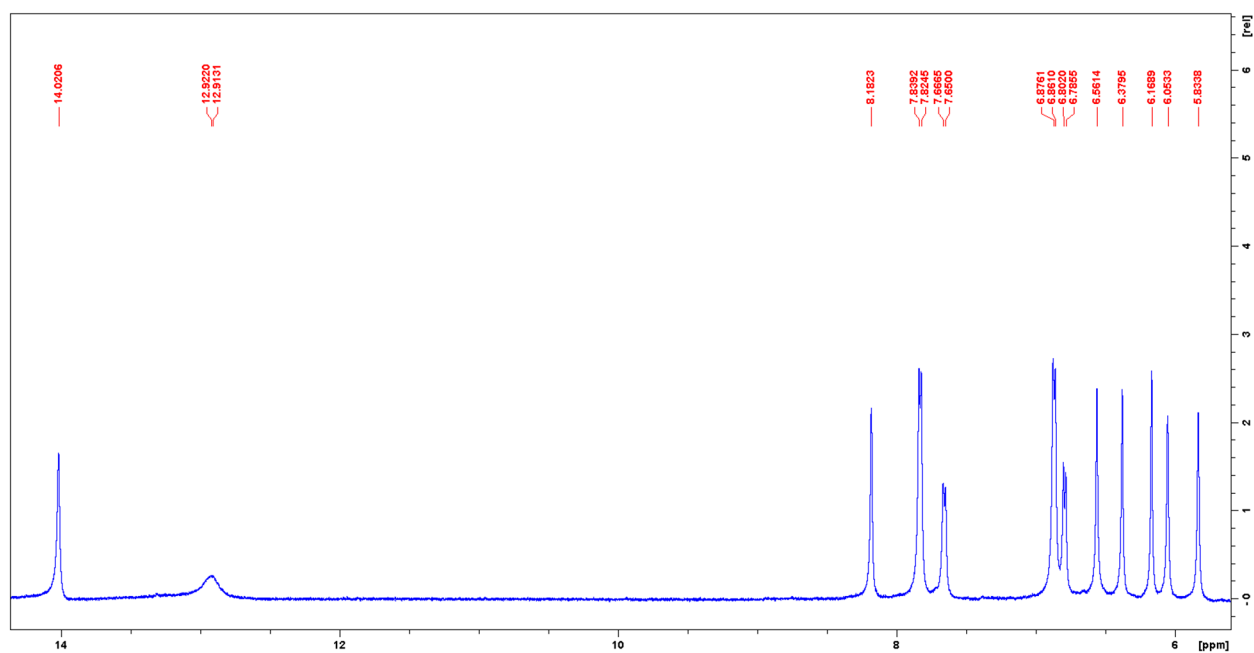
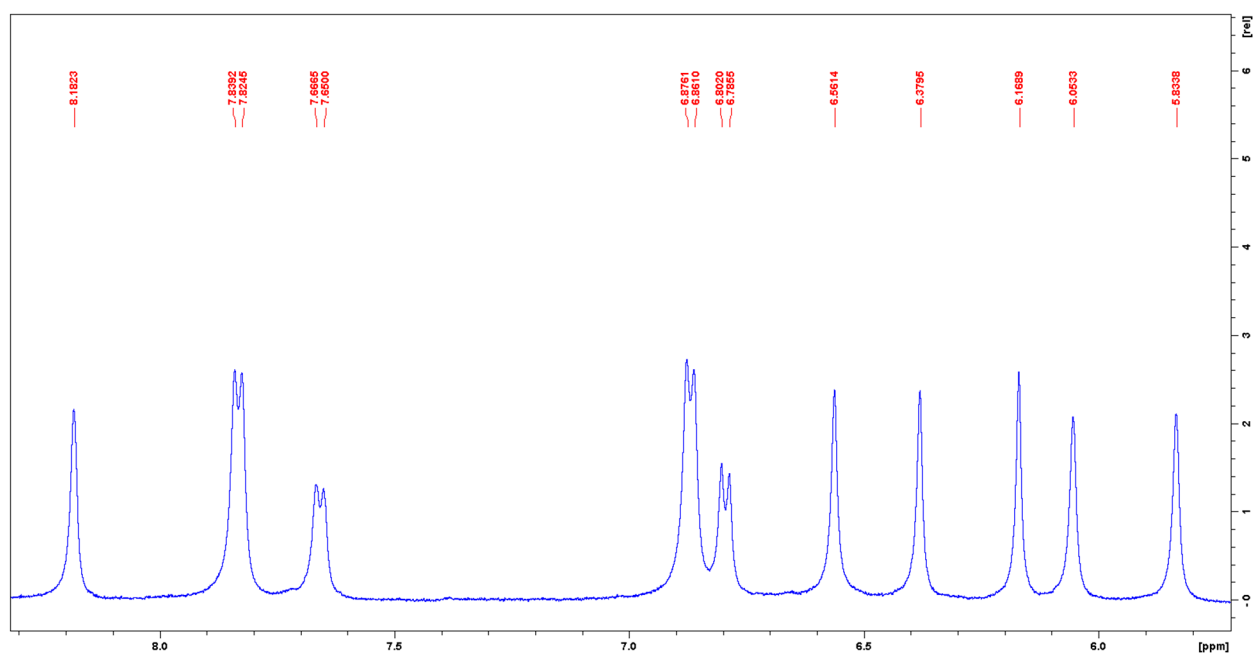


Figure S14: HRESIMS of 2.

Figure S15: ^1H NMR of 3.Figure S16: ^1H NMR of 3 (Exp.).

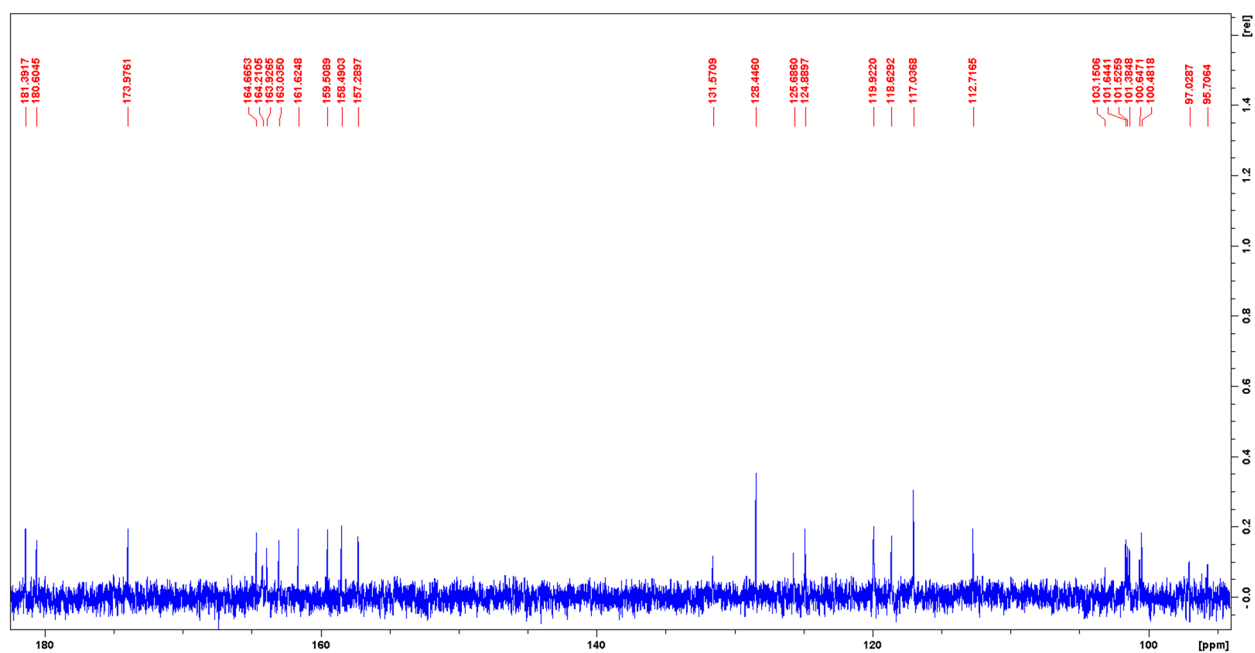


Figure S17: ^{13}C NMR of 3.

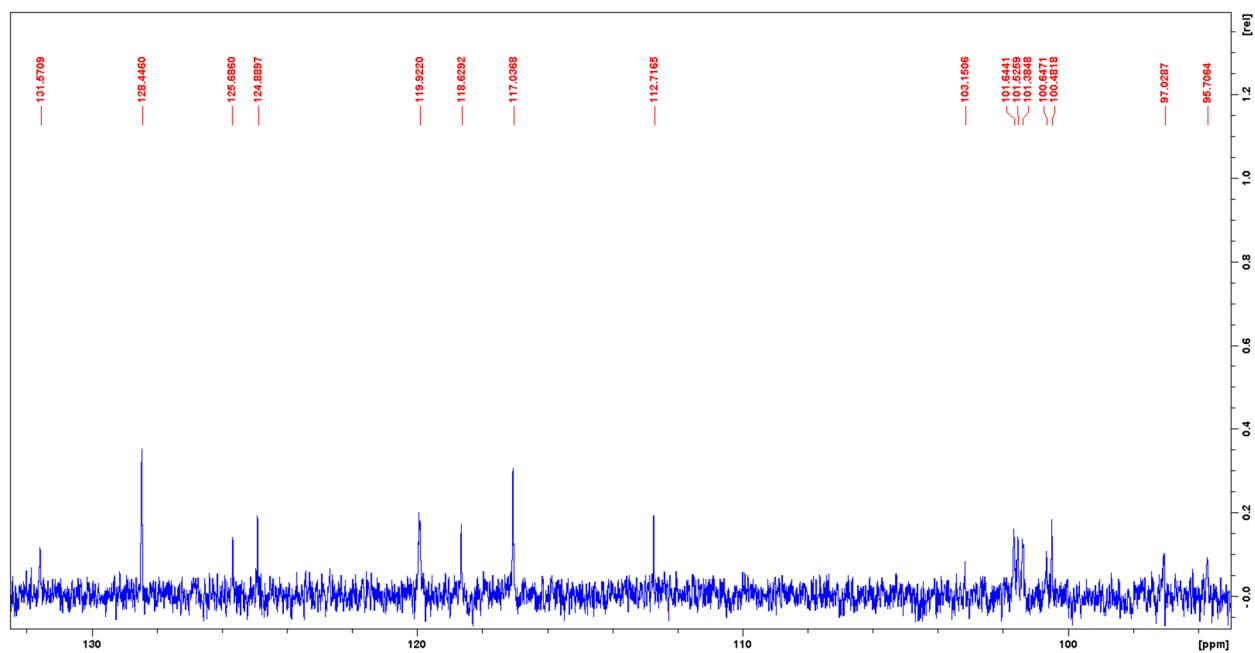


Figure S18: ^{13}C NMR of 3 (Exp.).

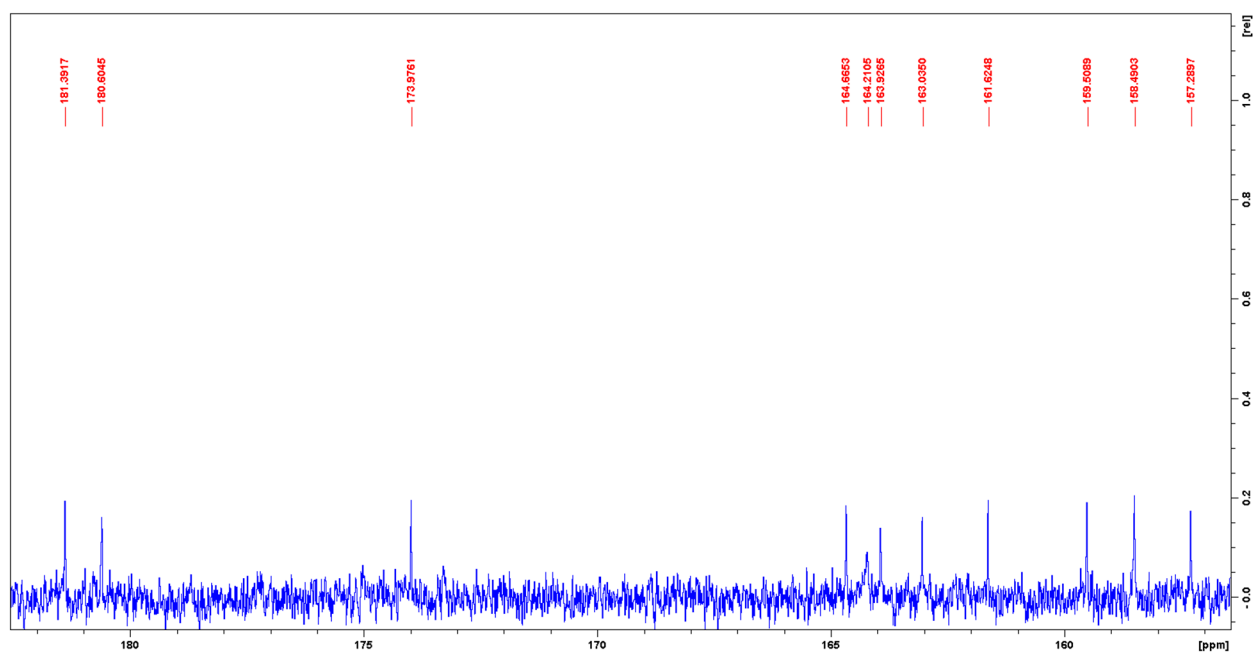


Figure S19: ¹³CNMR of 3 (Exp.).

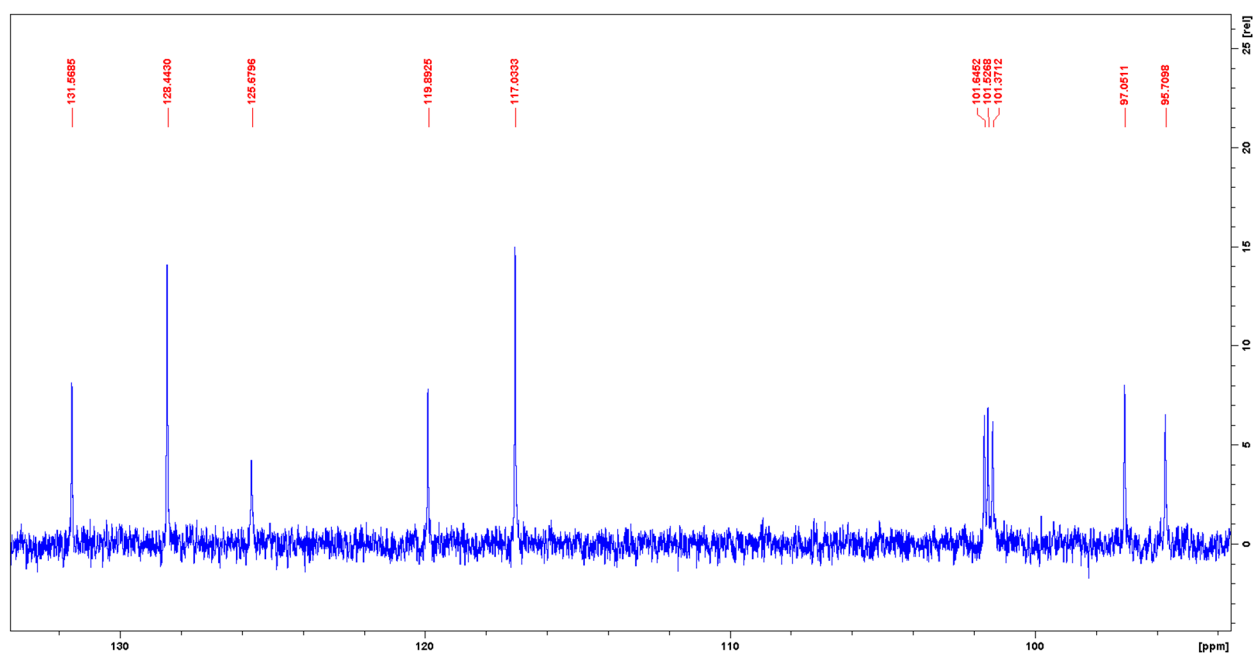


Figure S20: DEPT135 of 3.

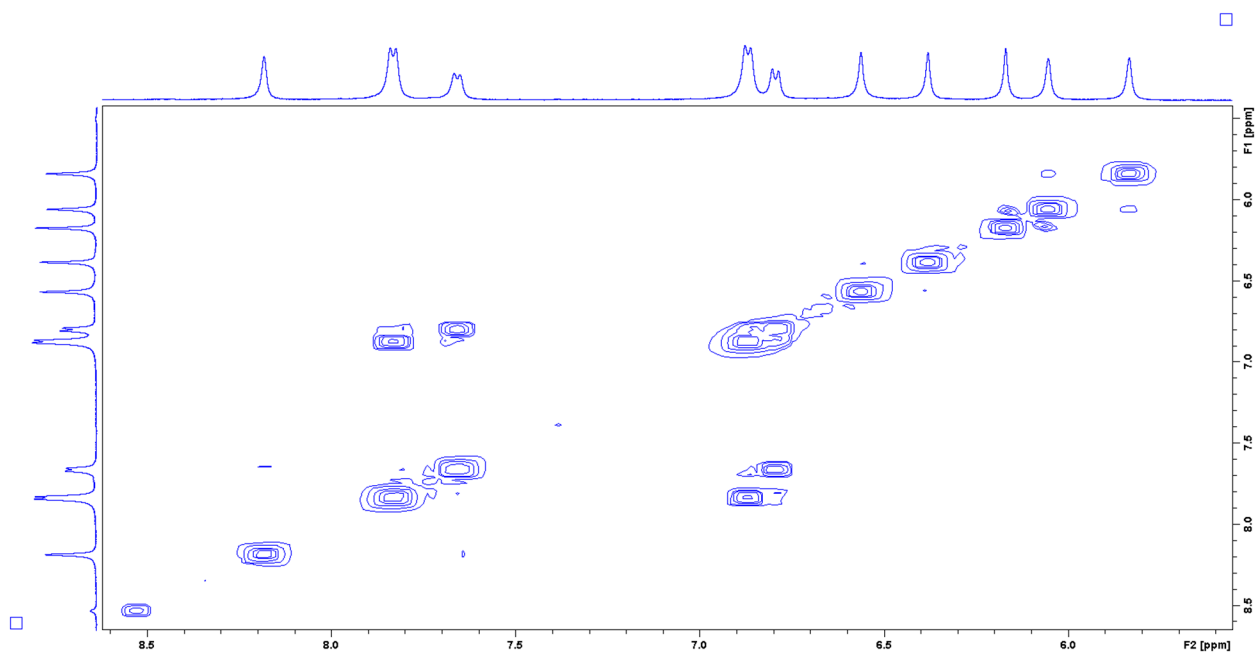


Figure S21: COSY of 3.

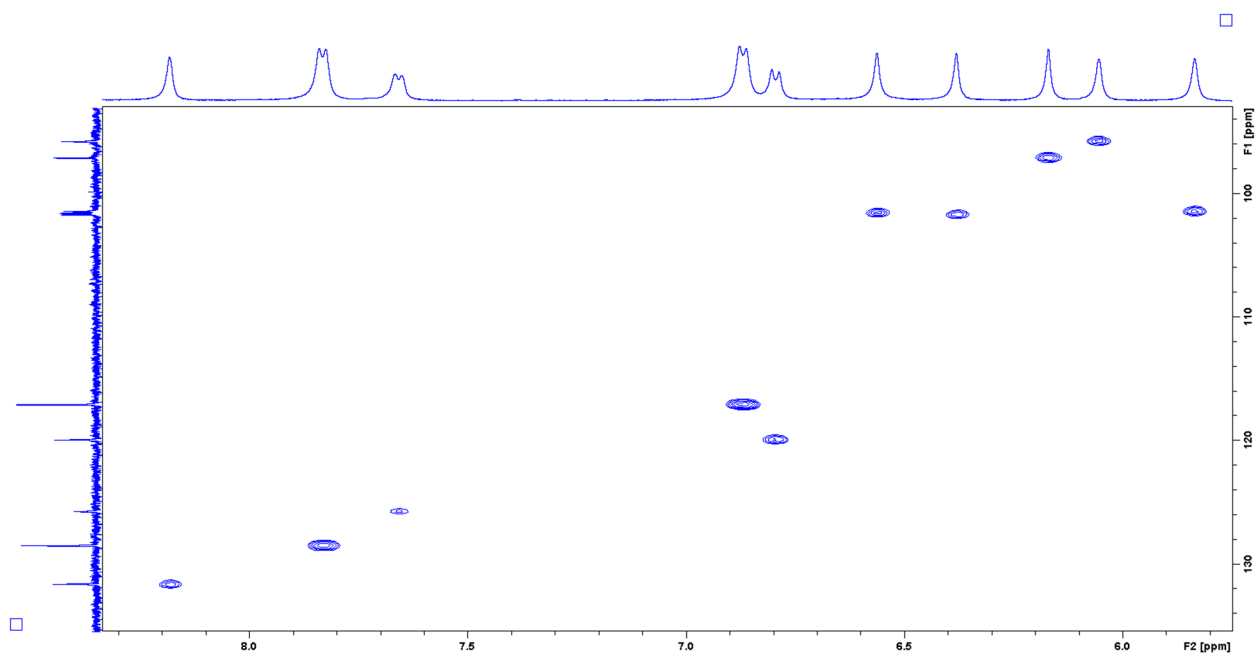


Figure S22: HSQC of 3.

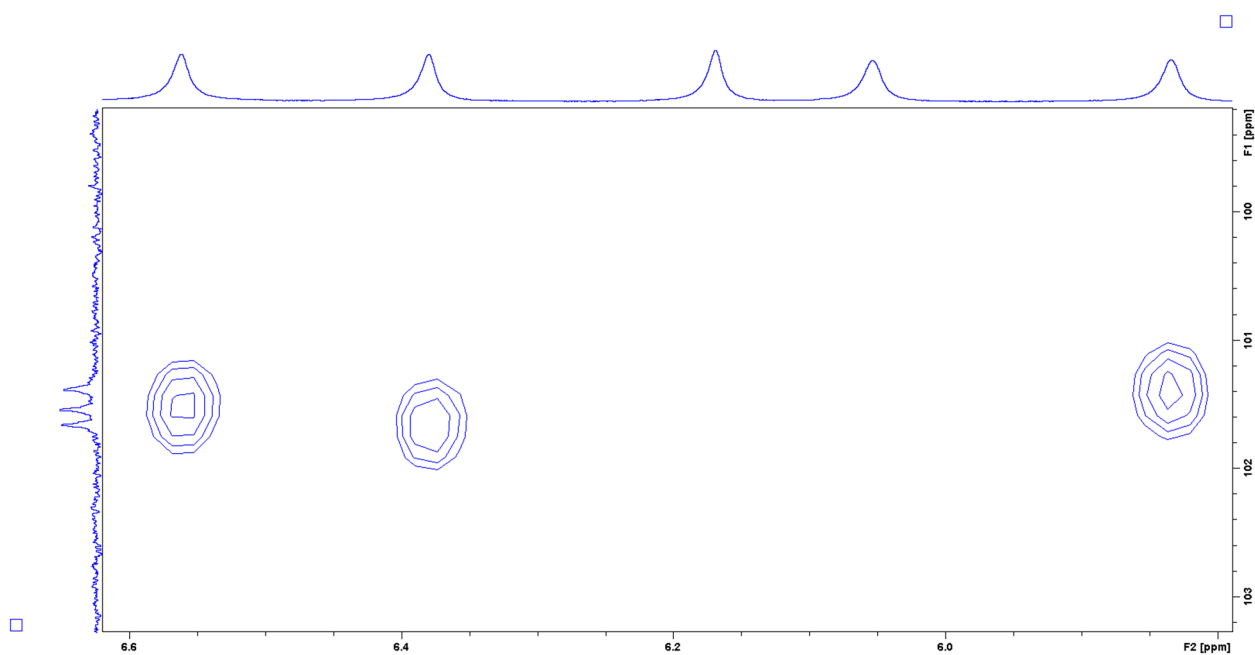


Figure S23: HSQC of 3 (Exp.).

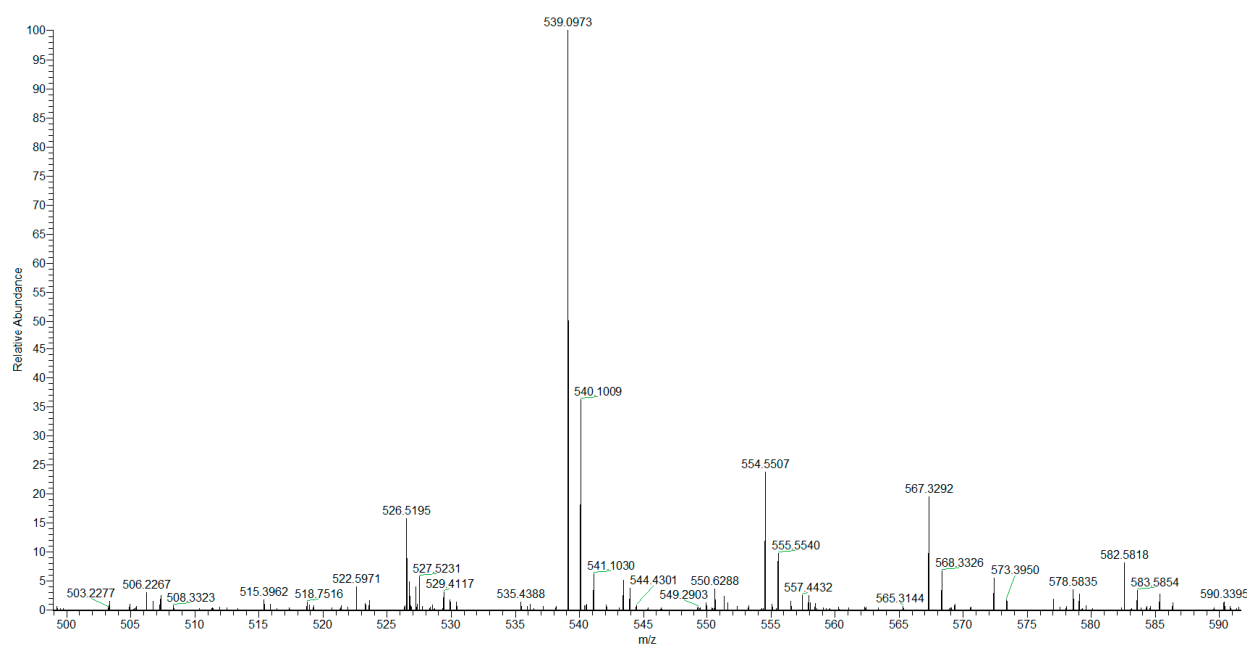


Figure S24: HRESIMS of 3.