

Supplementary Information
for
Melioidosis Patient Serum-Reactive Synthetic Tetrasaccharides Bearing the
Predominant Epitopes of *Burkholderia pseudomallei* and *Burkholderia mallei*
O-Antigens

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Supplementary results

Table S1. Unsuccessful attempts to epimerize tetrasaccharide **23**.

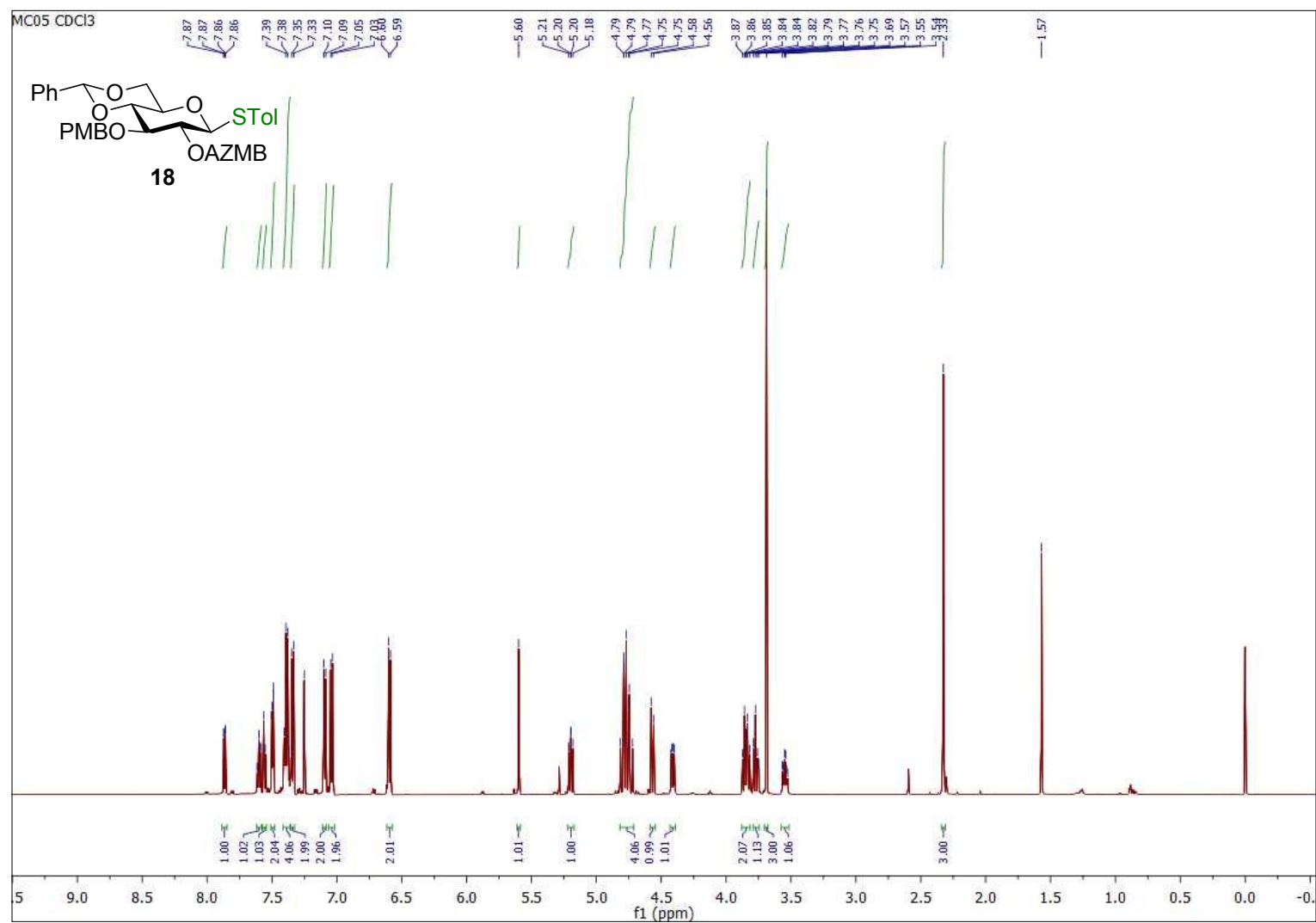
entry	oxidation reagents	solvent	temperature (°C)	yield (%)
1	DMSO, PDCP, Et ₃ N	DCM	−10 to rt	nd ^a
2	DMSO, PDCP, Et ₃ N	DCM	−78 to rt	nd ^b
3	oxalyl chloride, DMSO, Et ₃ N	DCM	−78	nd ^b
4	DMSO, Ac ₂ O	-	rt	nd ^b
5	Dess-Martin periodinane	DCE	reflux	nd ^a

^aDegradation of starting material.

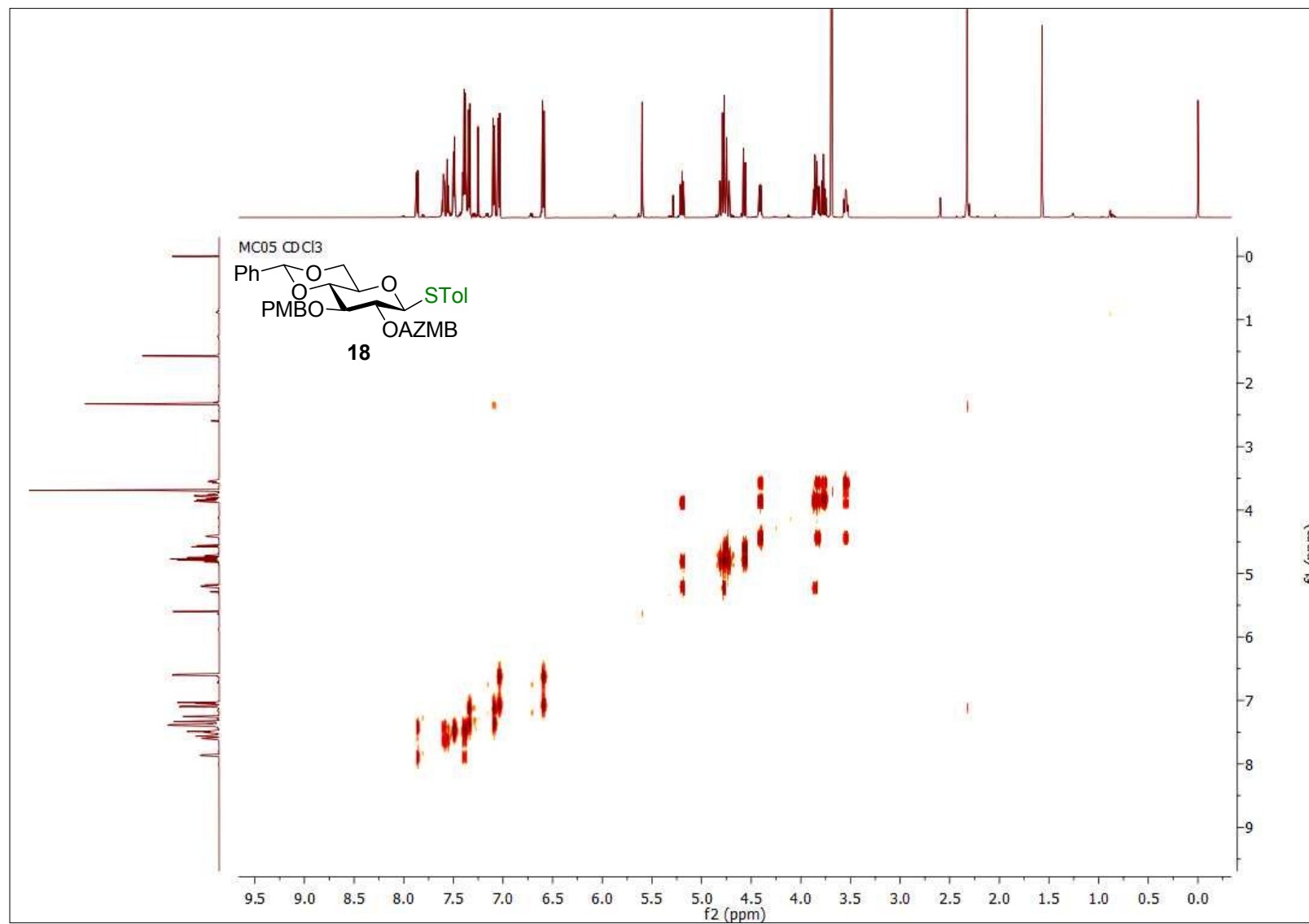
^bNo reaction.

NMR spectra

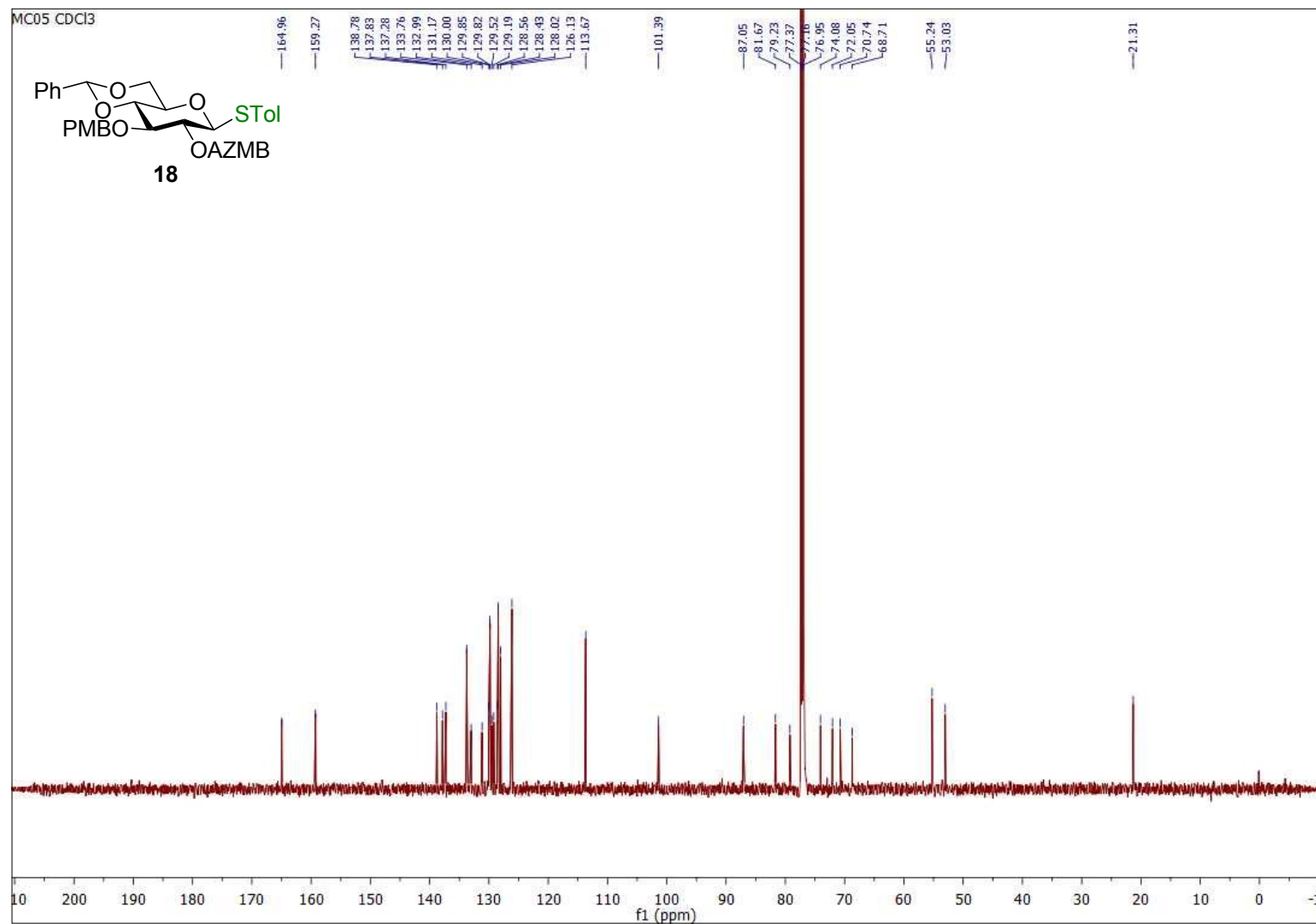
Supplementary Figure 1 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 18



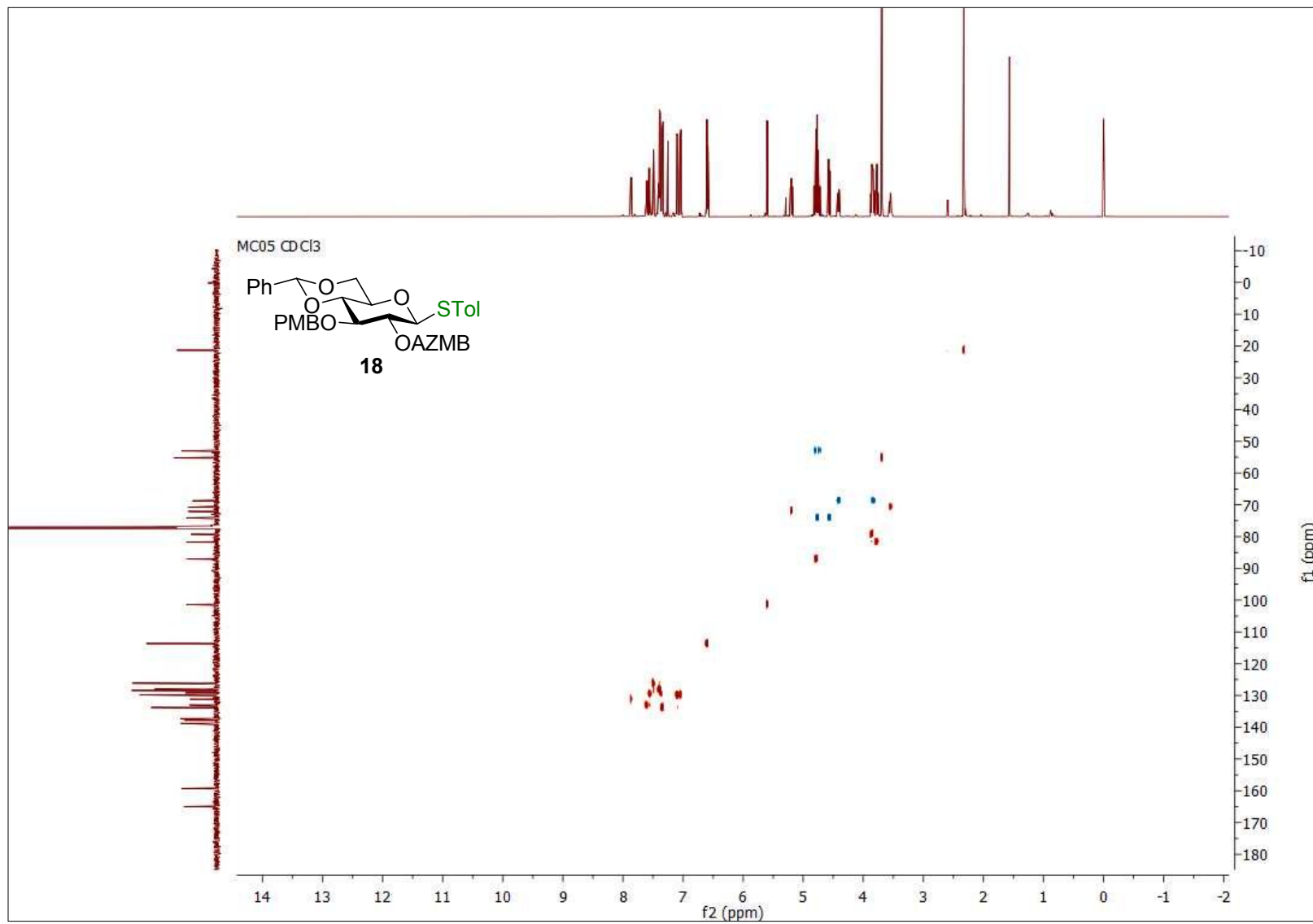
Supplementary Figure 2 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 18



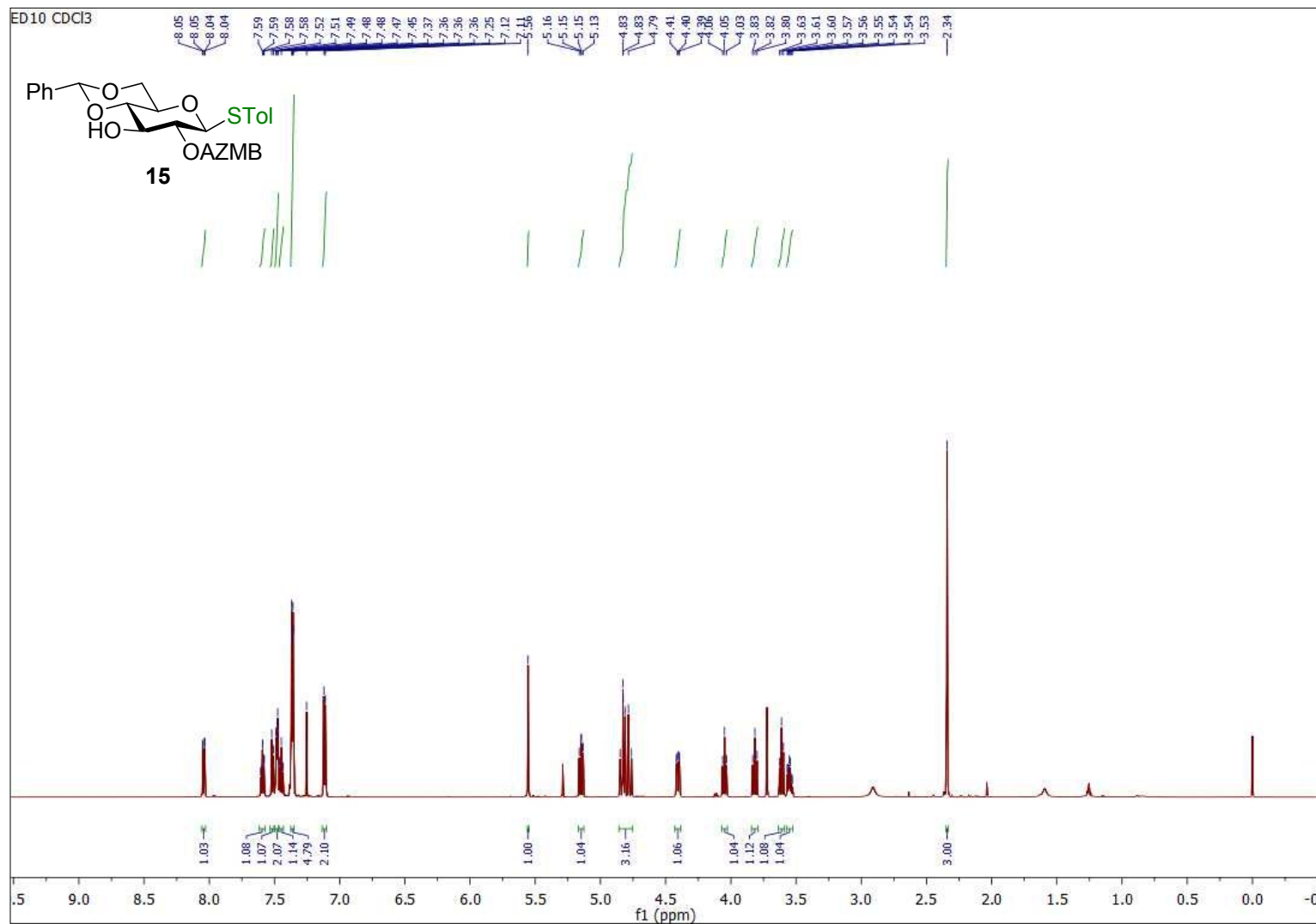
Supplementary Figure 3 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 18



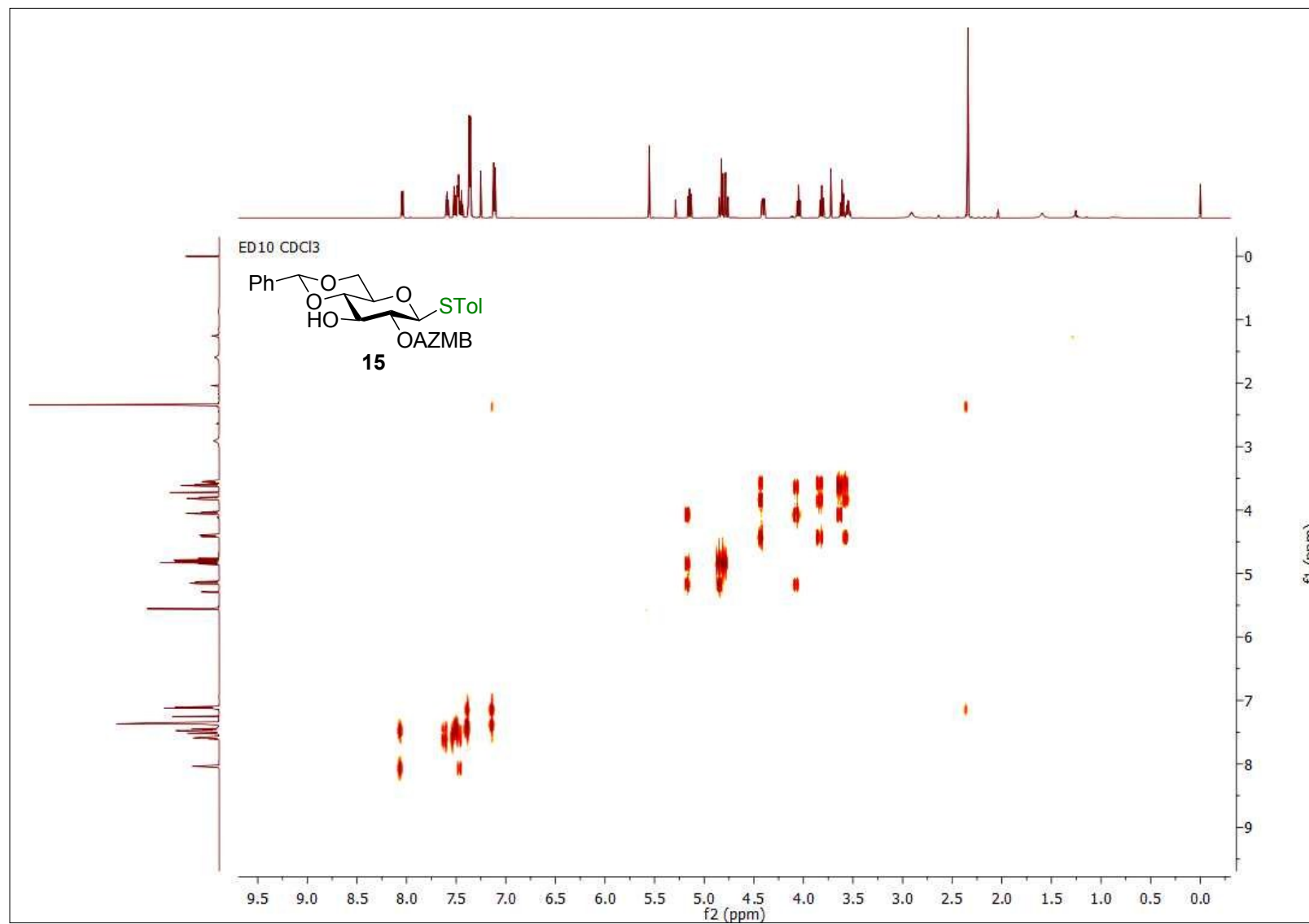
Supplementary Figure 4 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 18



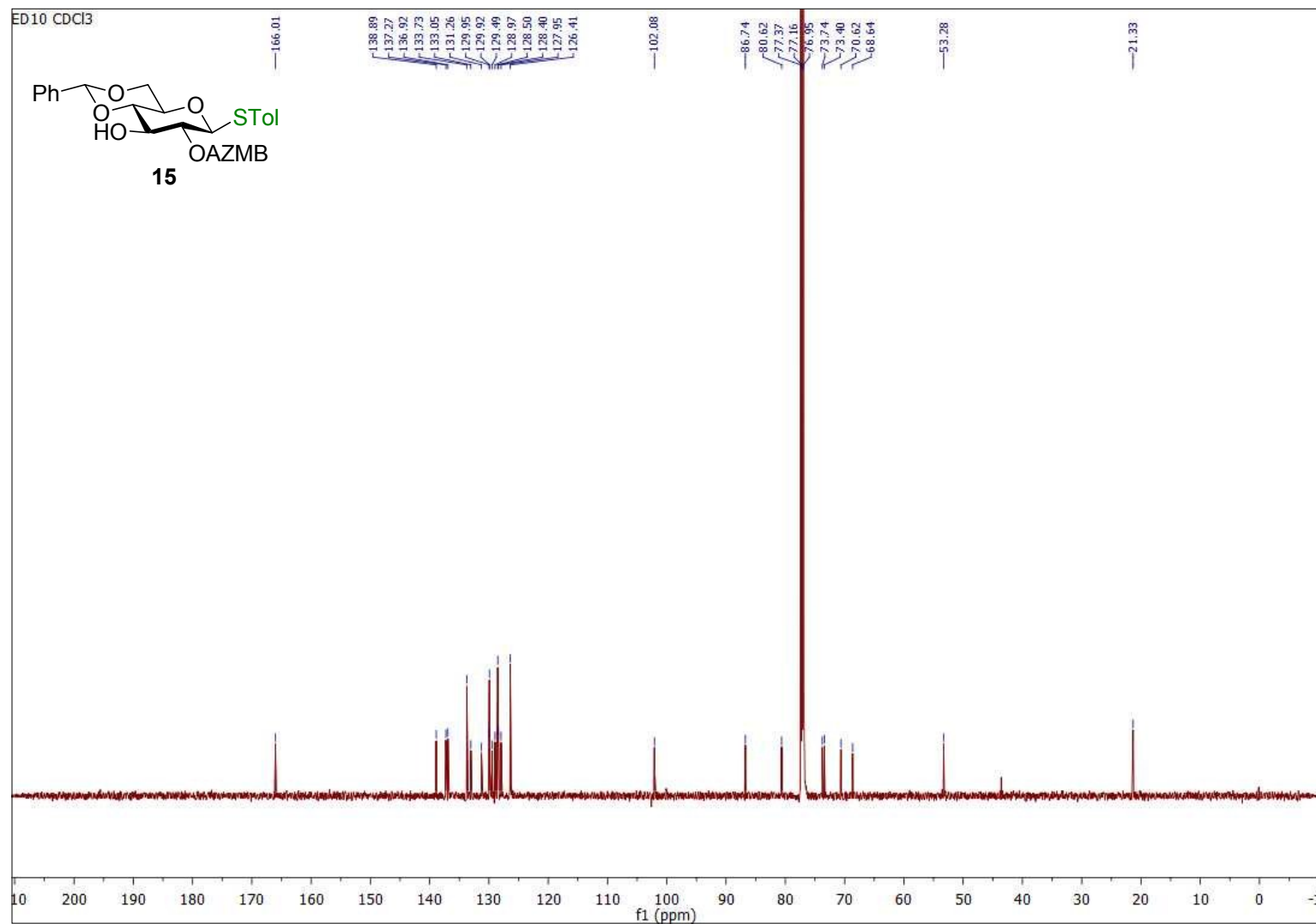
Supplementary Figure 5 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 15



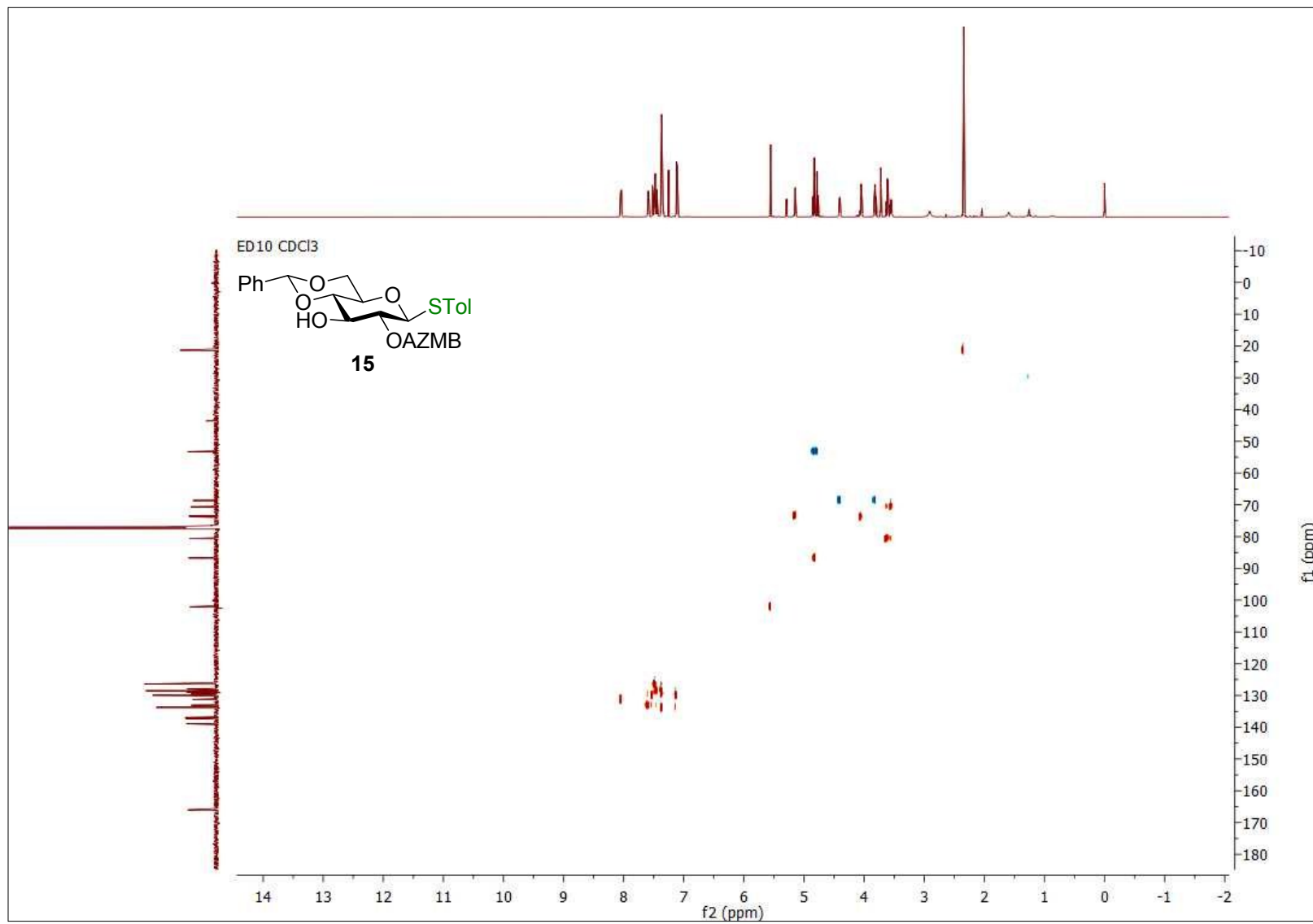
Supplementary Figure 6 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 15



Supplementary Figure 7 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 15

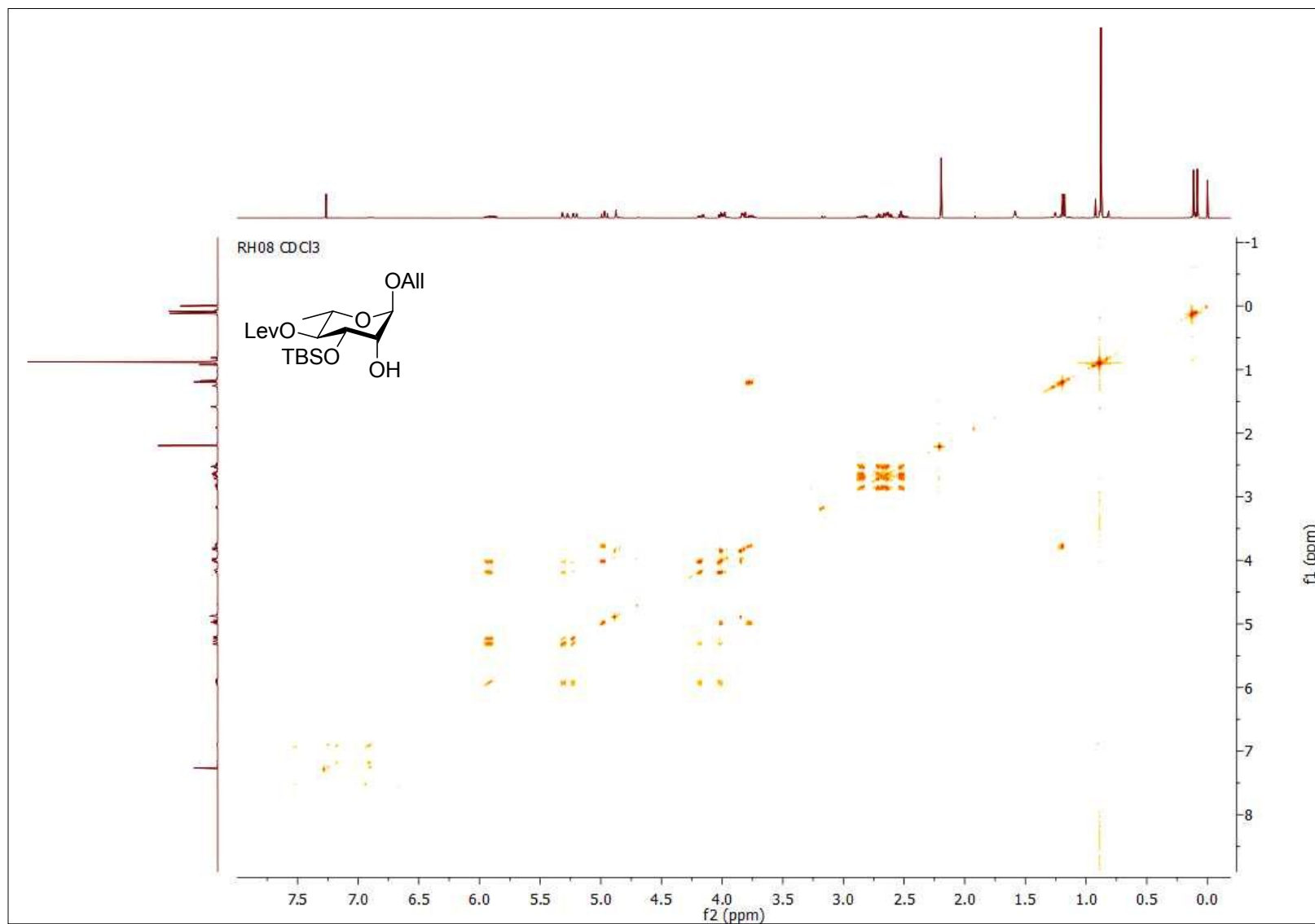


Supplementary Figure 8 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 15

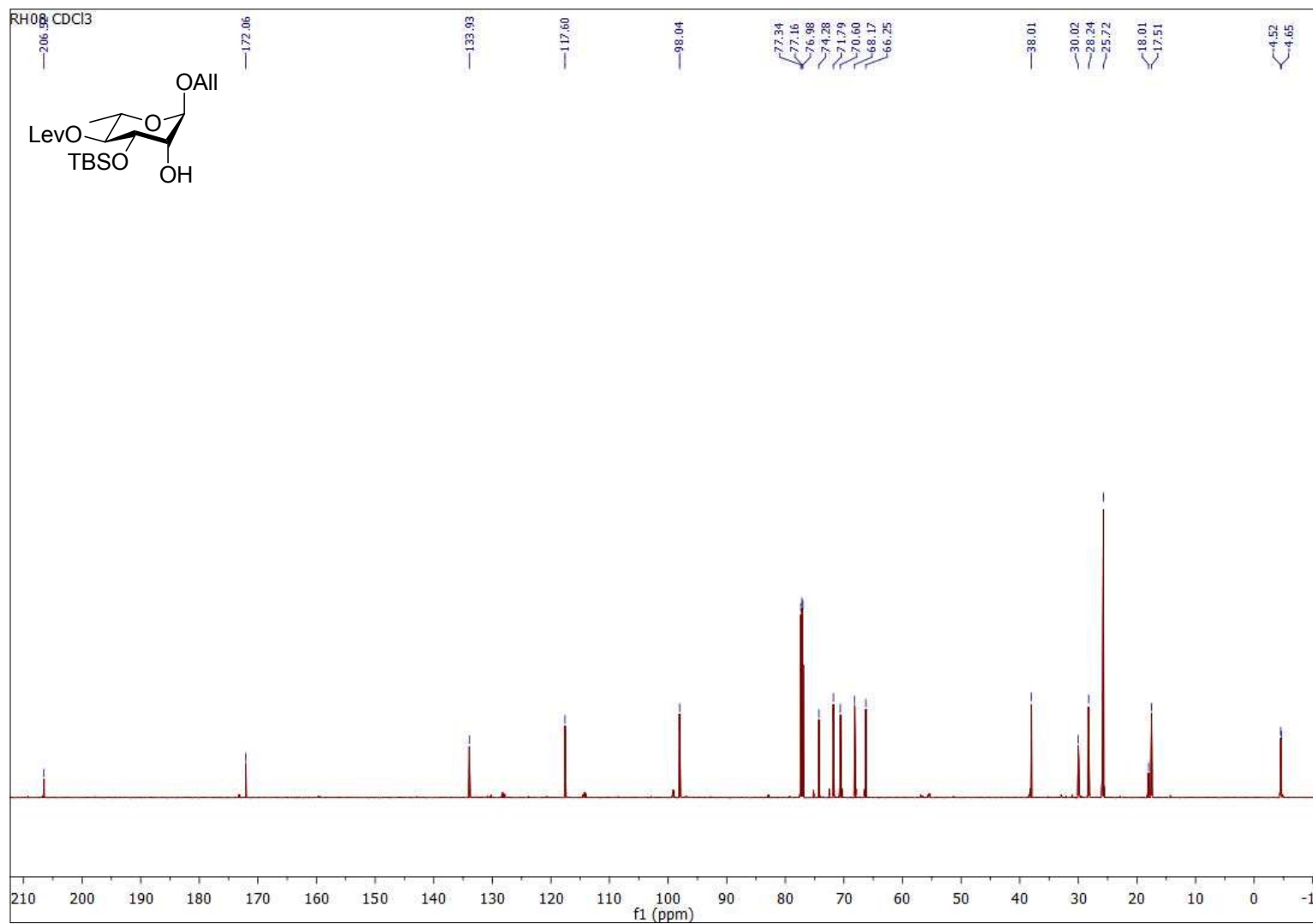


[illegible]

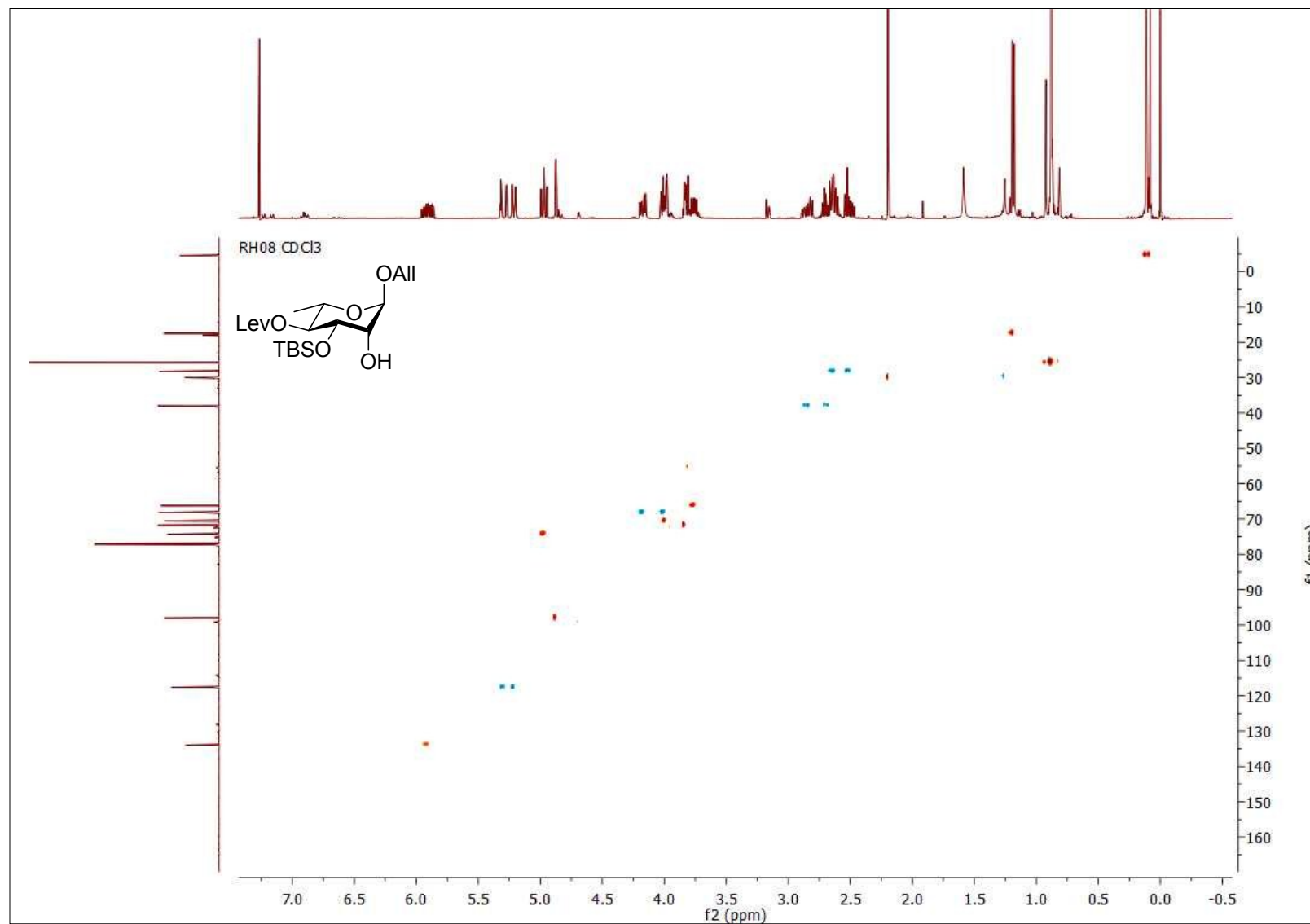
Supplementary Figure 10 | COSY NMR spectrum (CDCl₃, 400 MHz) of allyl 3-*tert*-butyldimethylsilyl-4-*O*-levulinoyl- α -L-rhamnopyranoside



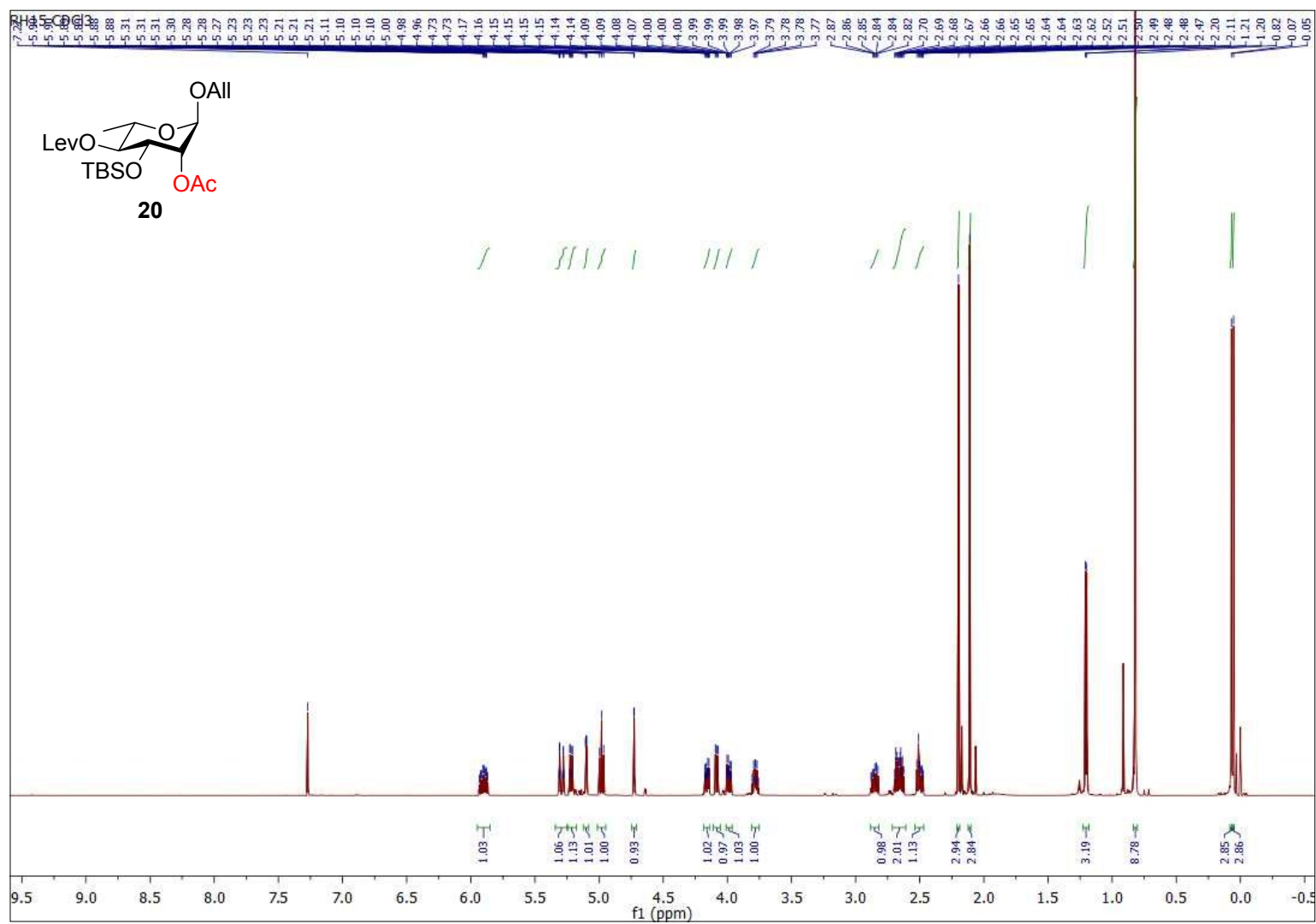
Supplementary Figure 11 | ¹³C NMR spectrum (CDCl₃, 100 MHz) of allyl 3-*tert*-butyldimethylsilyl-4-*O*-levulinoyl- α -L-rhamnopyranoside



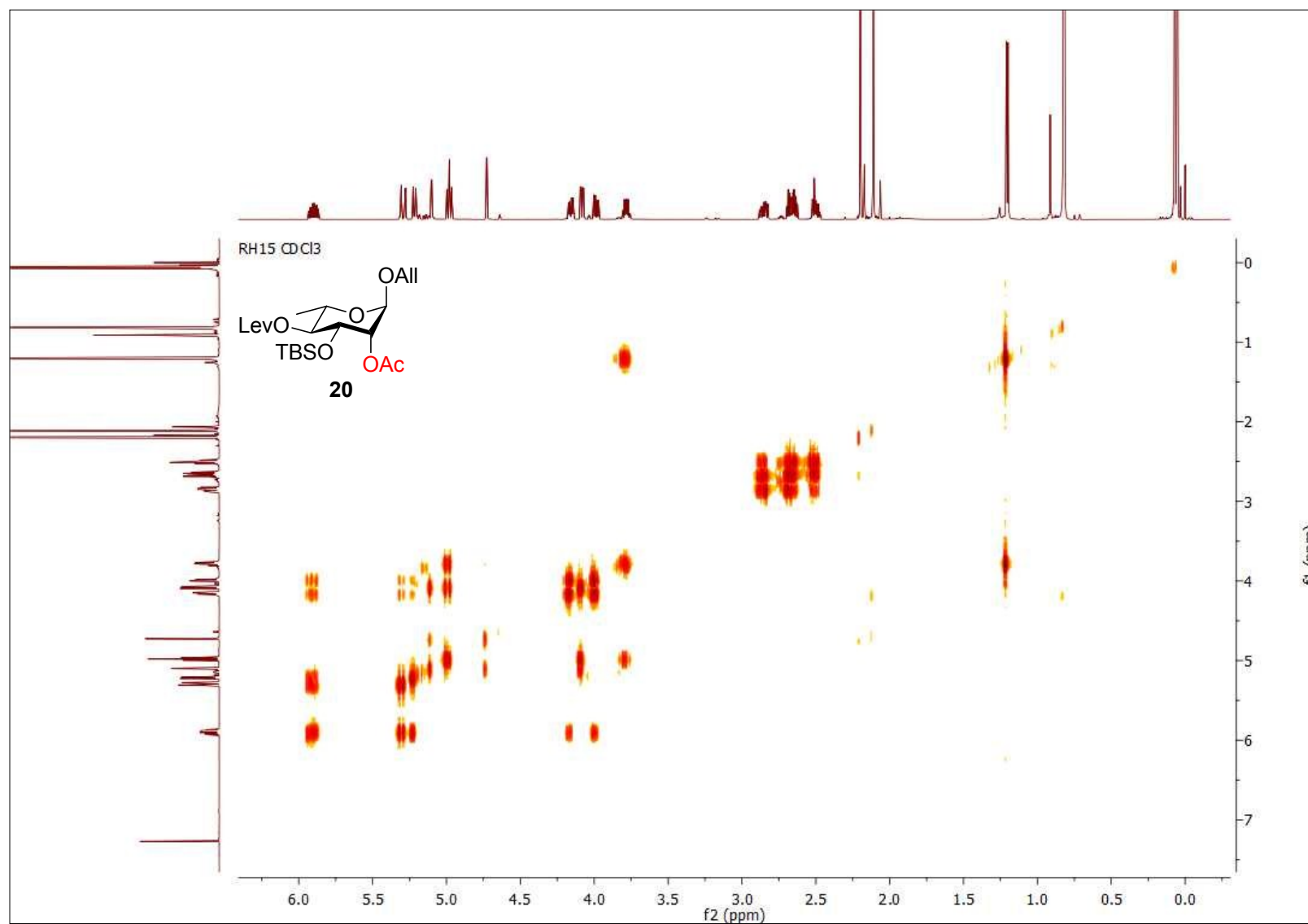
Supplementary Figure 12 | HSQC NMR spectrum (CDCl₃, 400 MHz) of allyl 3-*tert*-butyldimethylsilyl-4-*O*-levulinoyl- α -L-rhamnopyranoside



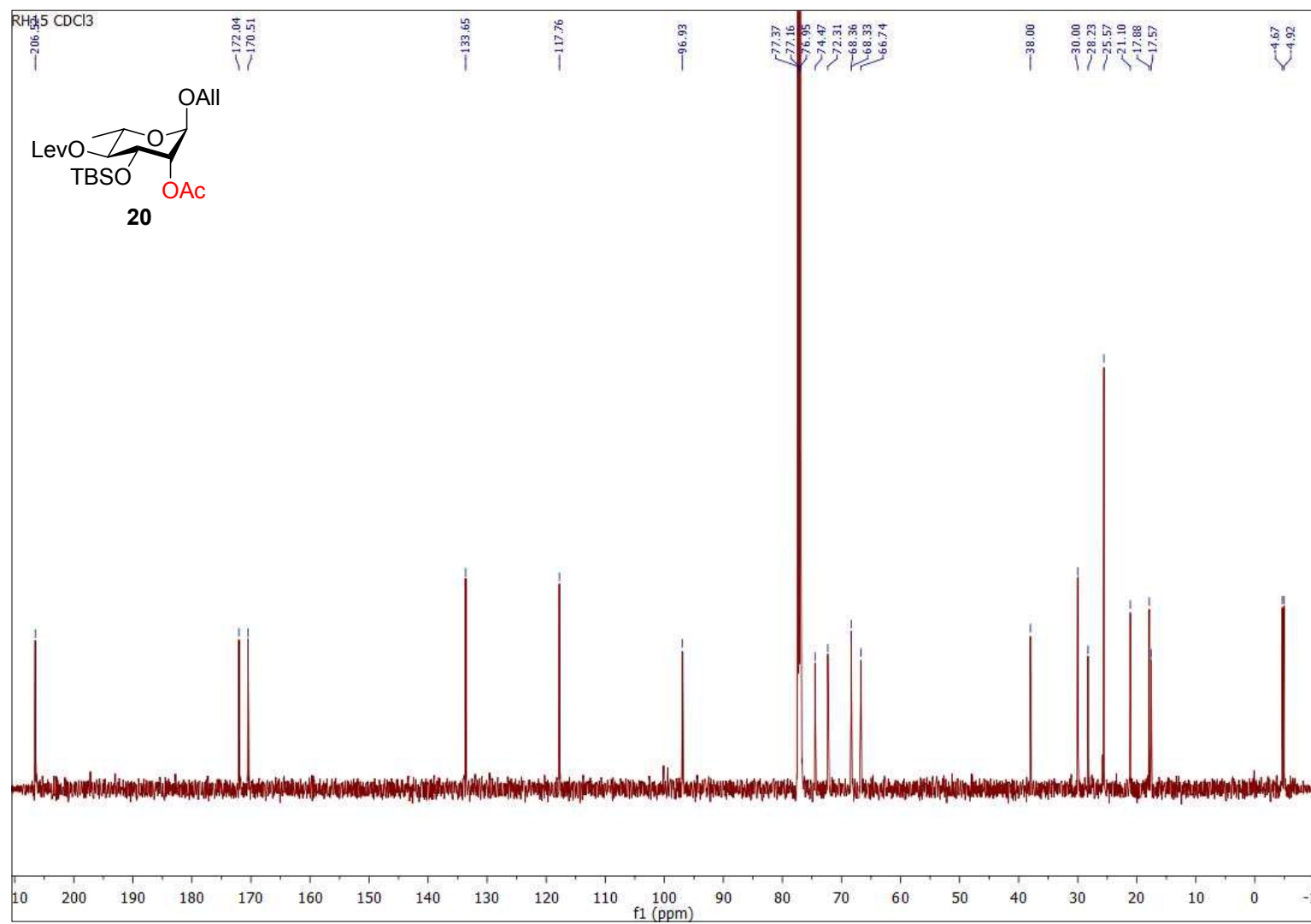
Supplementary Figure 13 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 20



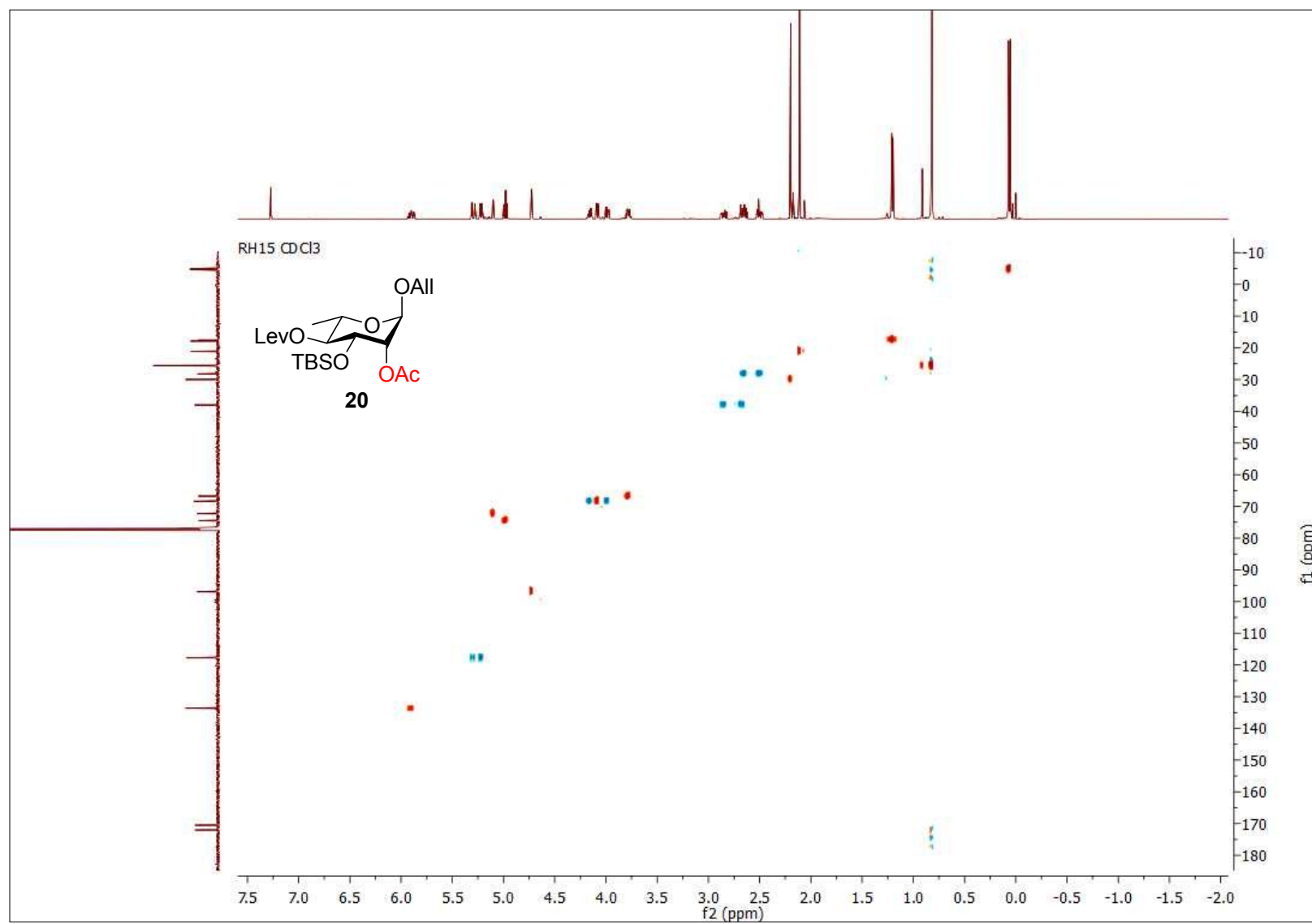
Supplementary Figure 14 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 20



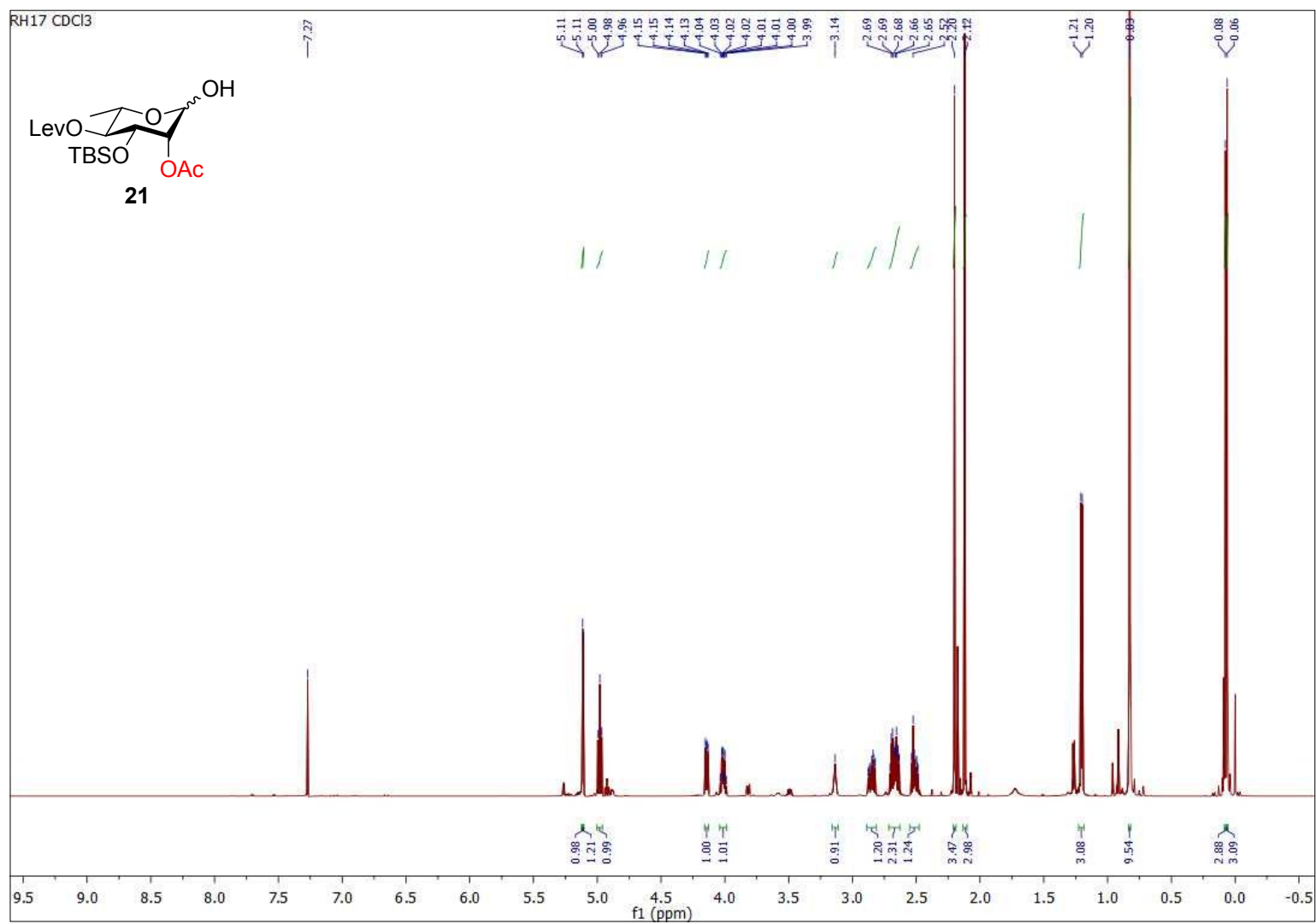
Supplementary Figure 15 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 20



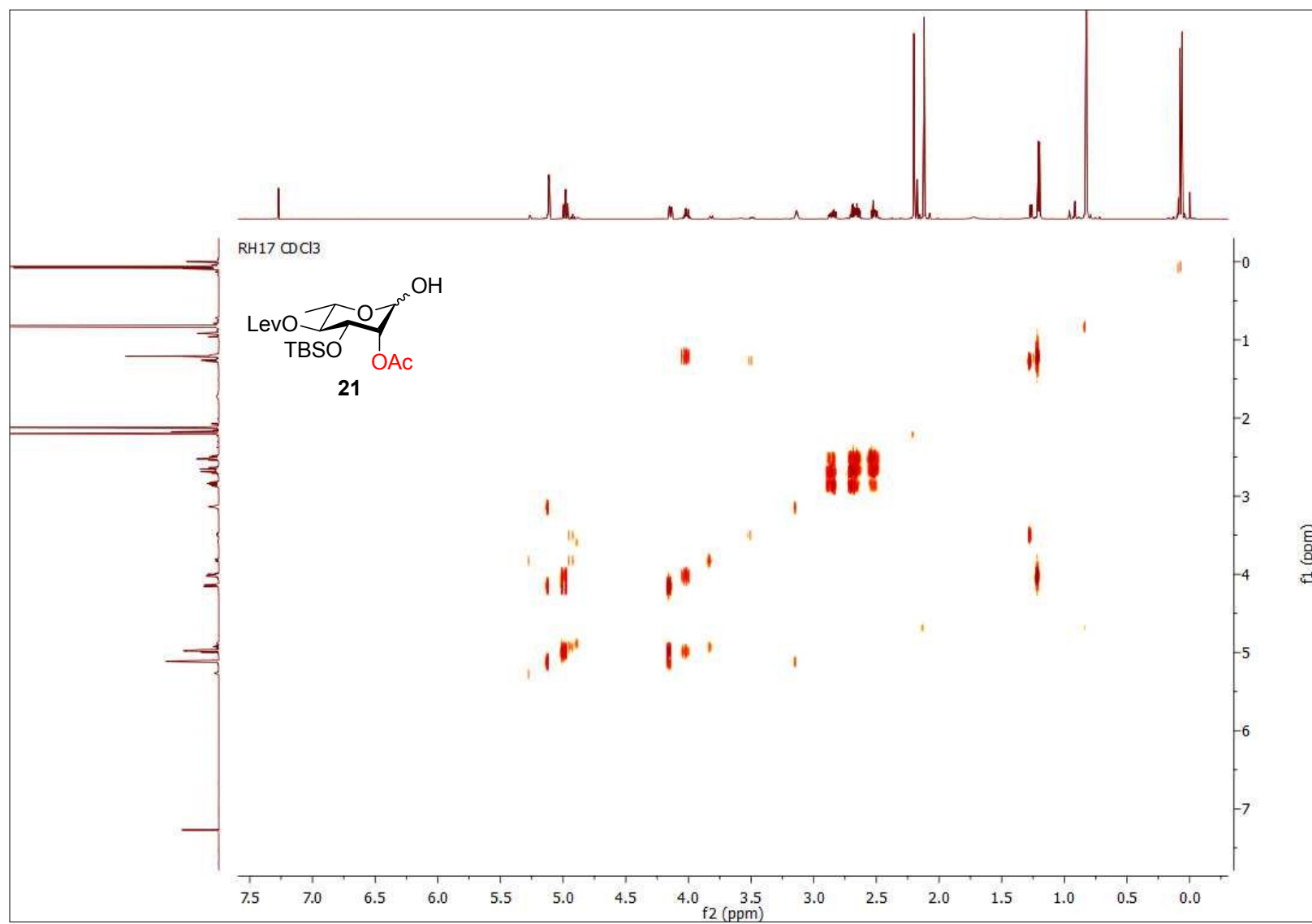
Supplementary Figure 16 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 20



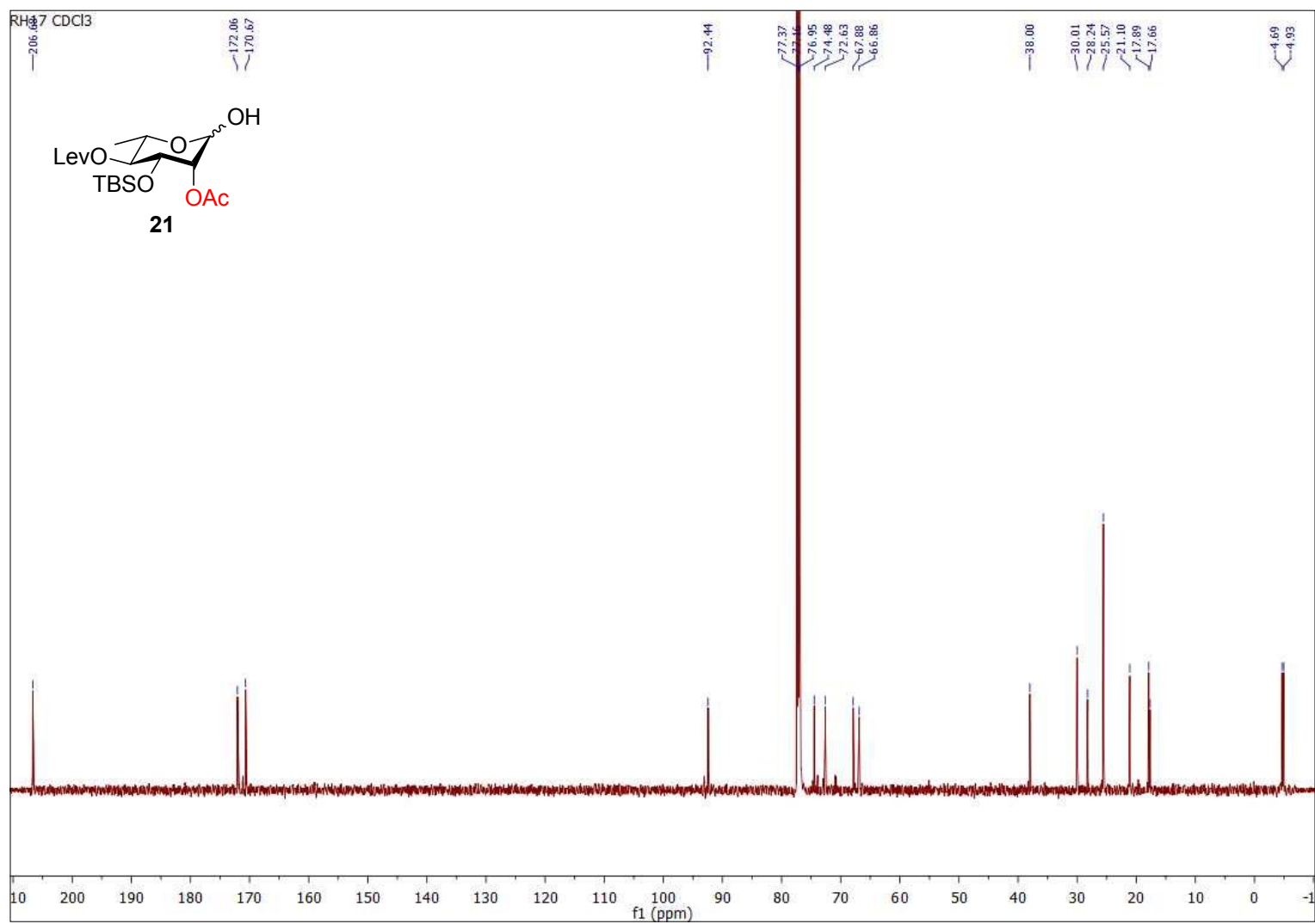
Supplementary Figure 17 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 21



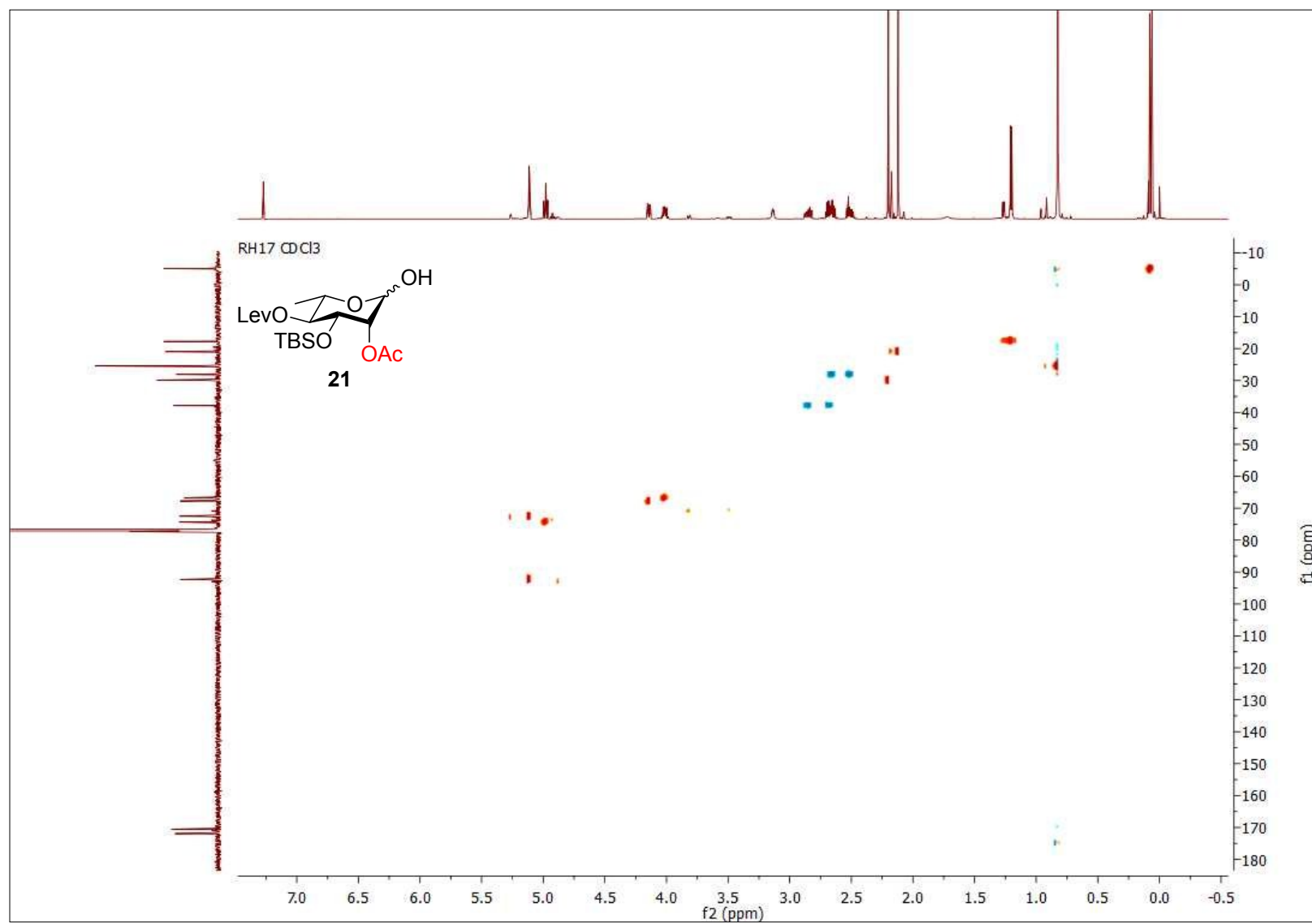
Supplementary Figure 18 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 21



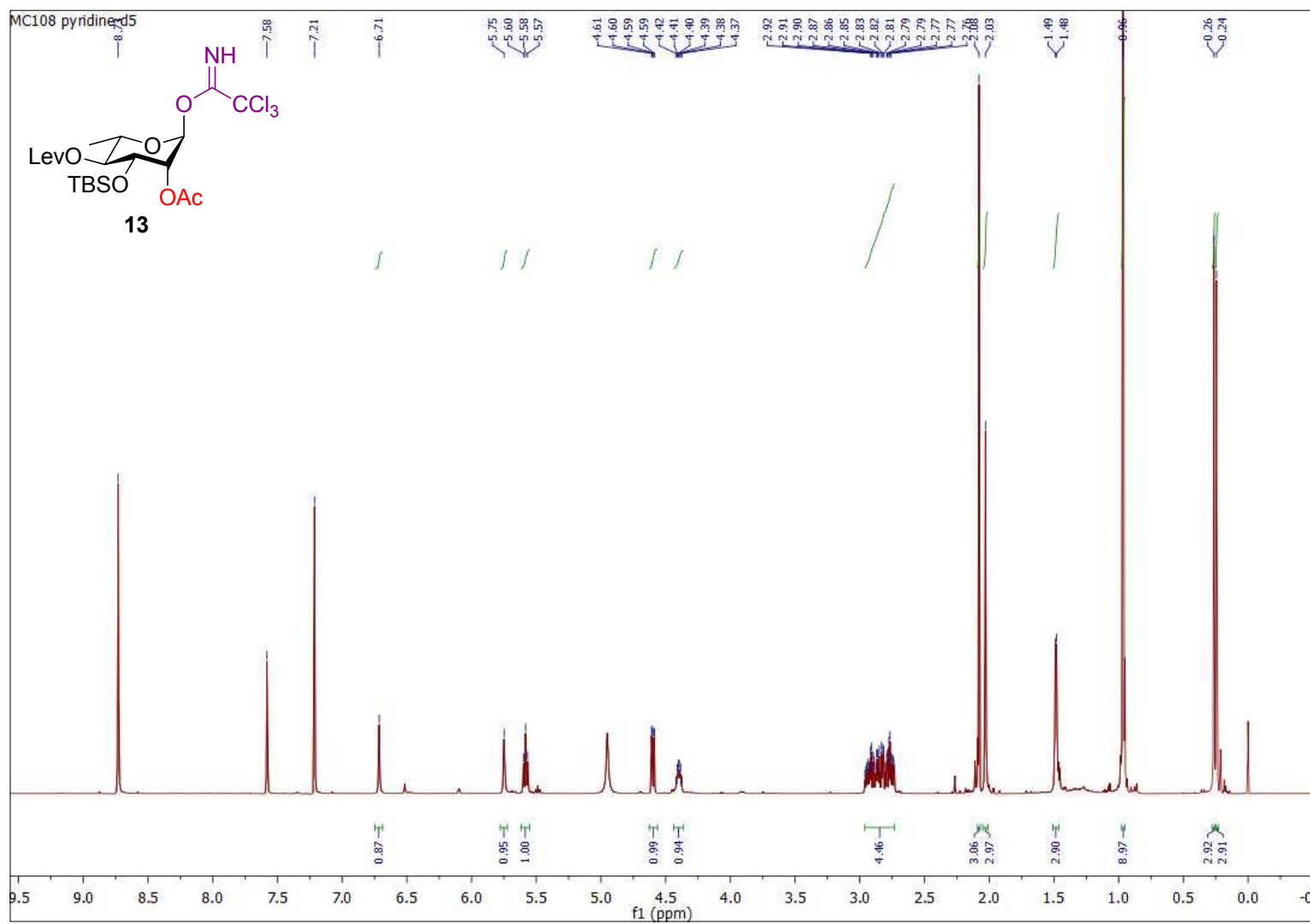
Supplementary Figure 19 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 21



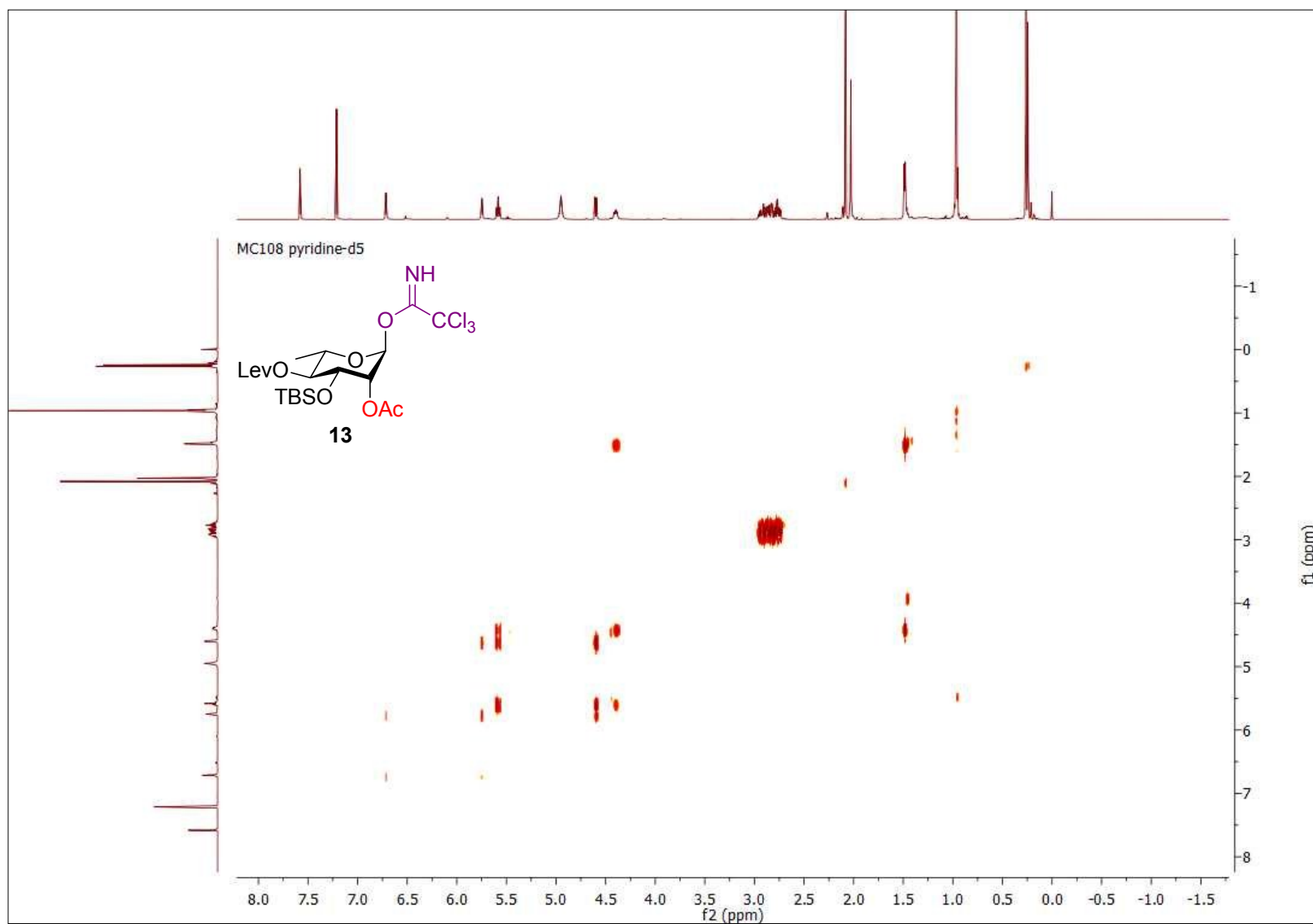
Supplementary Figure 20 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 21



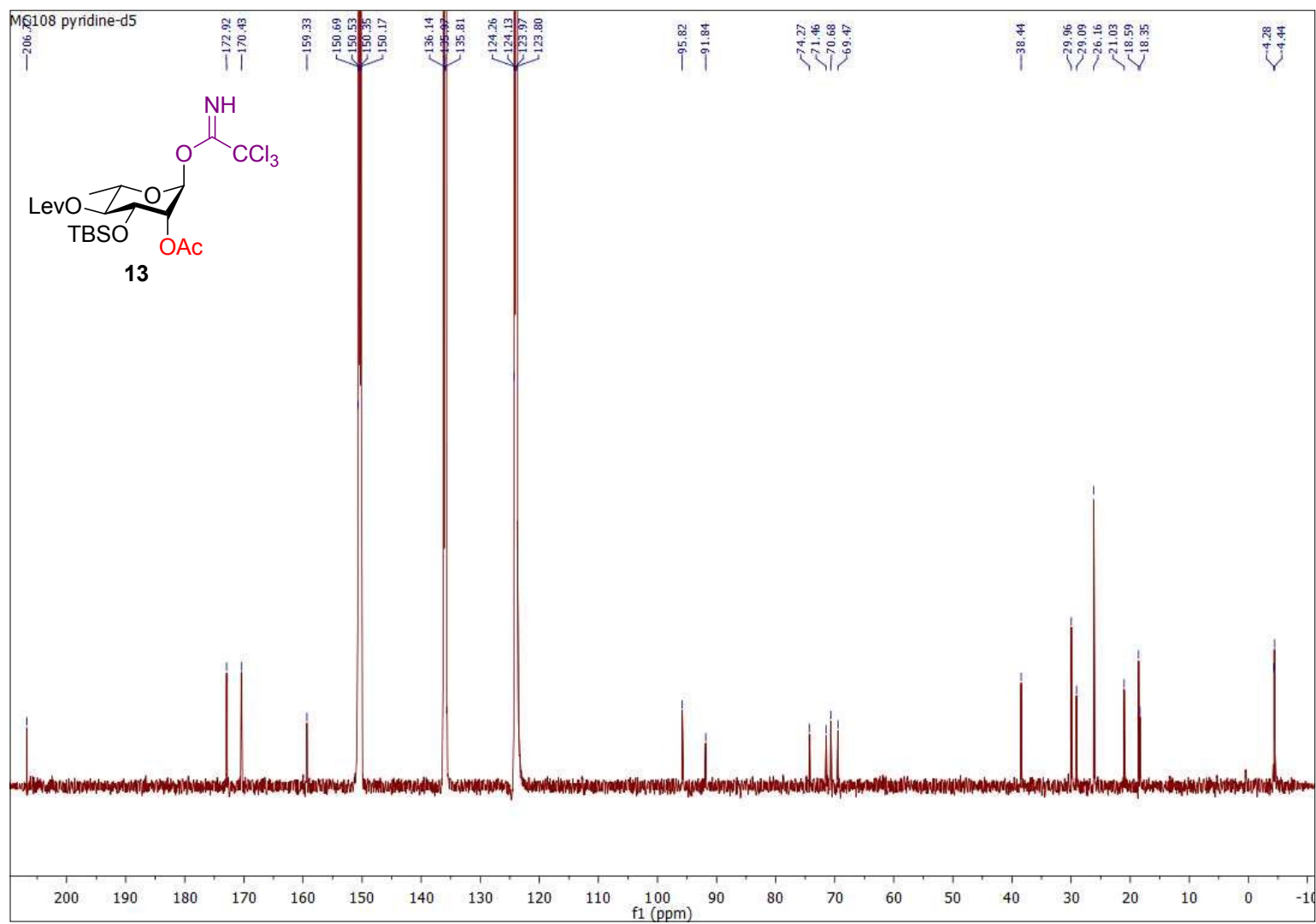
Supplementary Figure 21 | ^1H NMR spectrum (pyridine- d_5 , 600 MHz) of compound 13



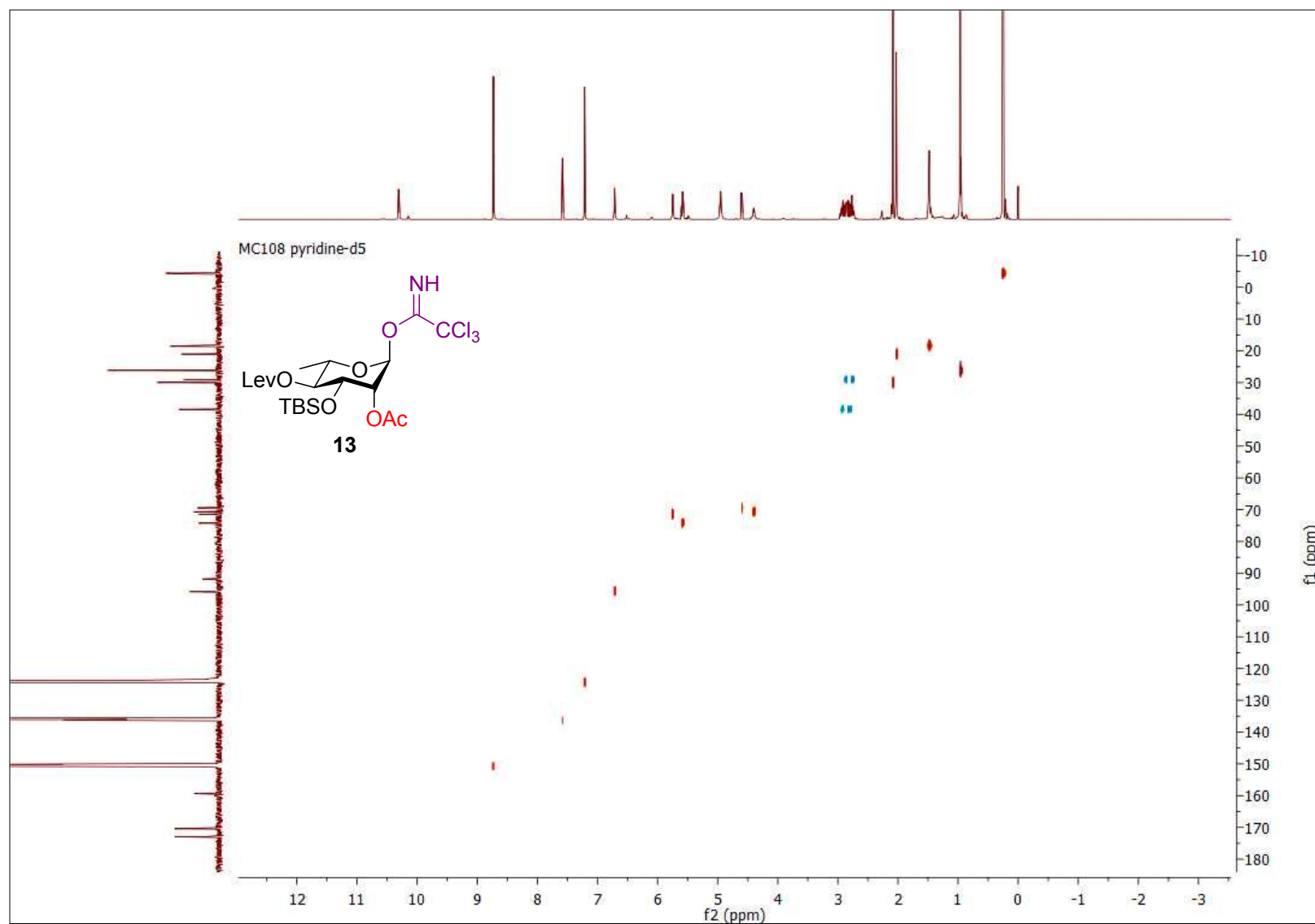
Supplementary Figure 22 | COSY NMR spectrum (pyridine-d₅, 600 MHz) of compound 13



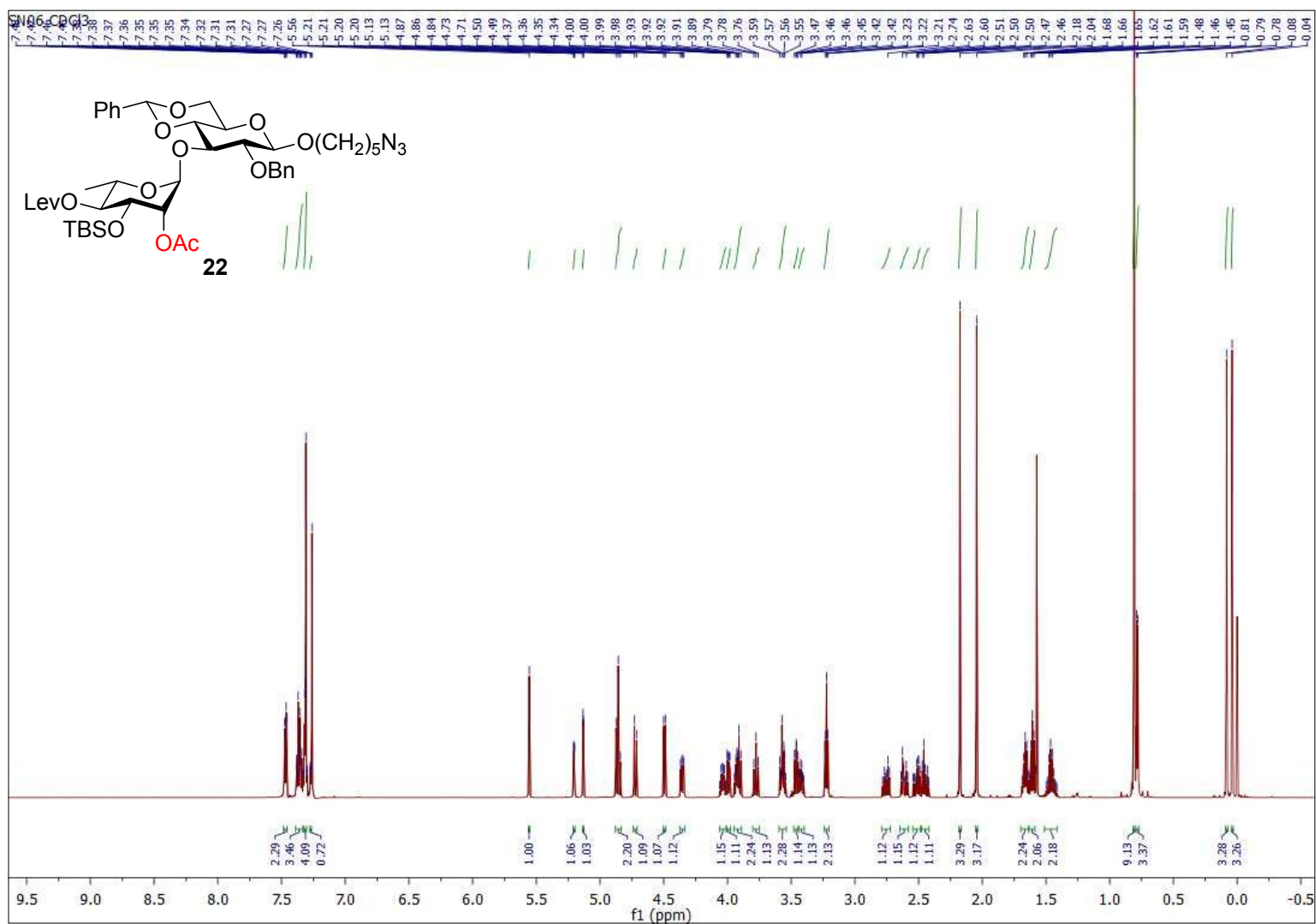
Supplementary Figure 23 | ^{13}C NMR spectrum (pyridine- d_5 , 150 MHz) of compound 13



Supplementary Figure 24 | HSQC NMR spectrum (pyridine-d₅, 600 MHz) of compound 13



Supplementary Figure 25 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 22



SN06 CDCl₃

Ph

LevO

TBSO

OAc

OBn

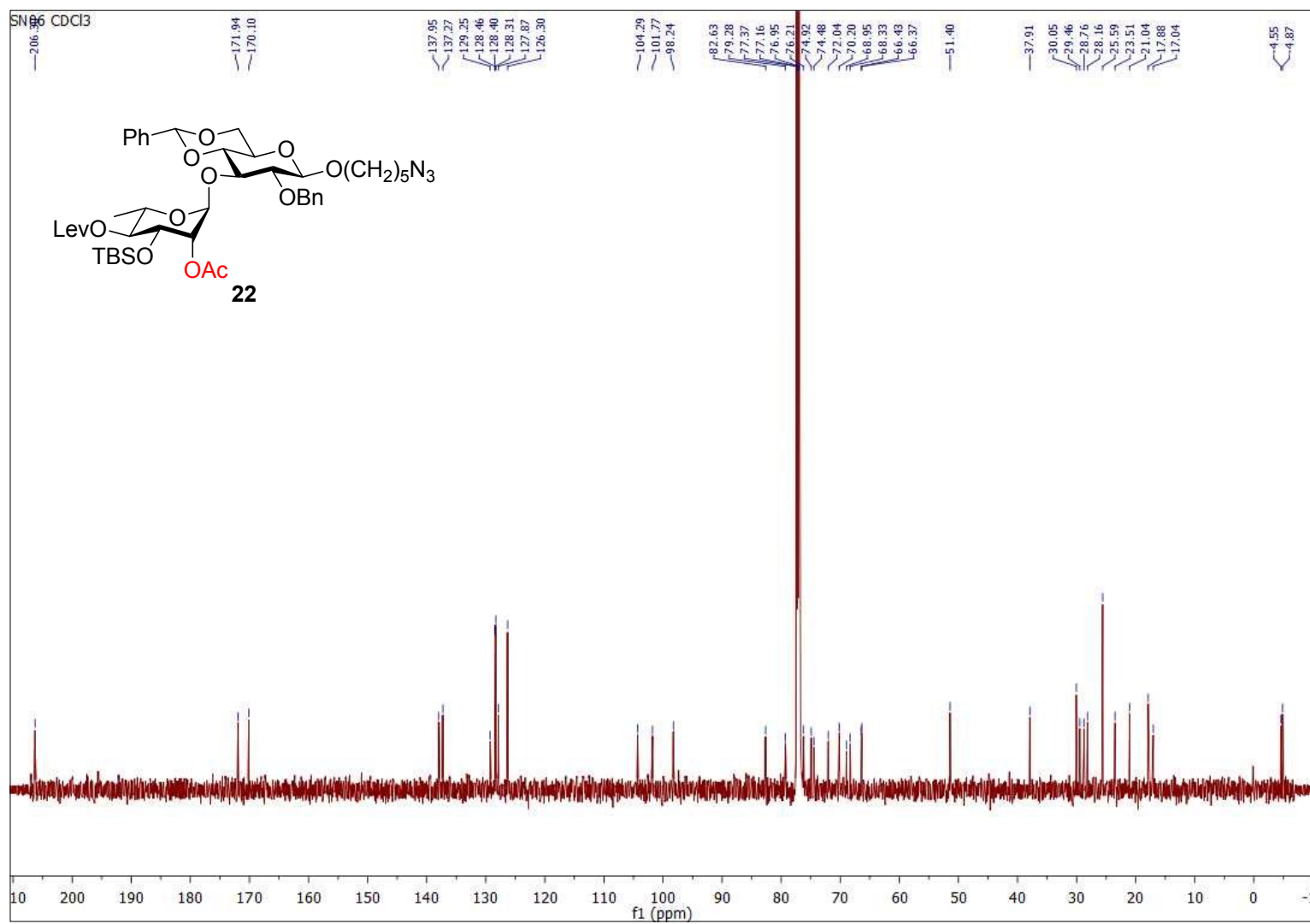
O(CH₂)₅N₃

22

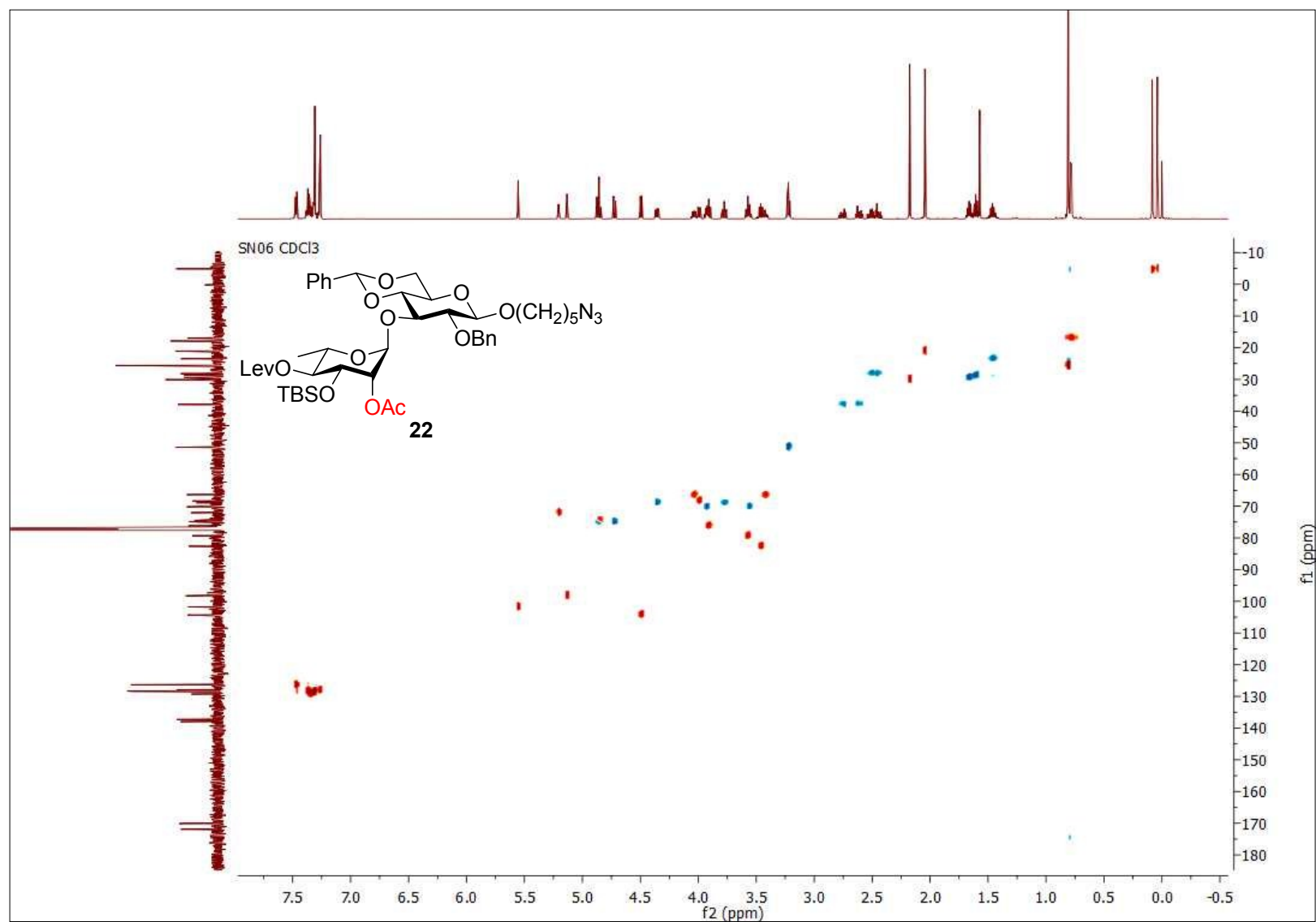
f2 (ppm)

f1 (ppm)

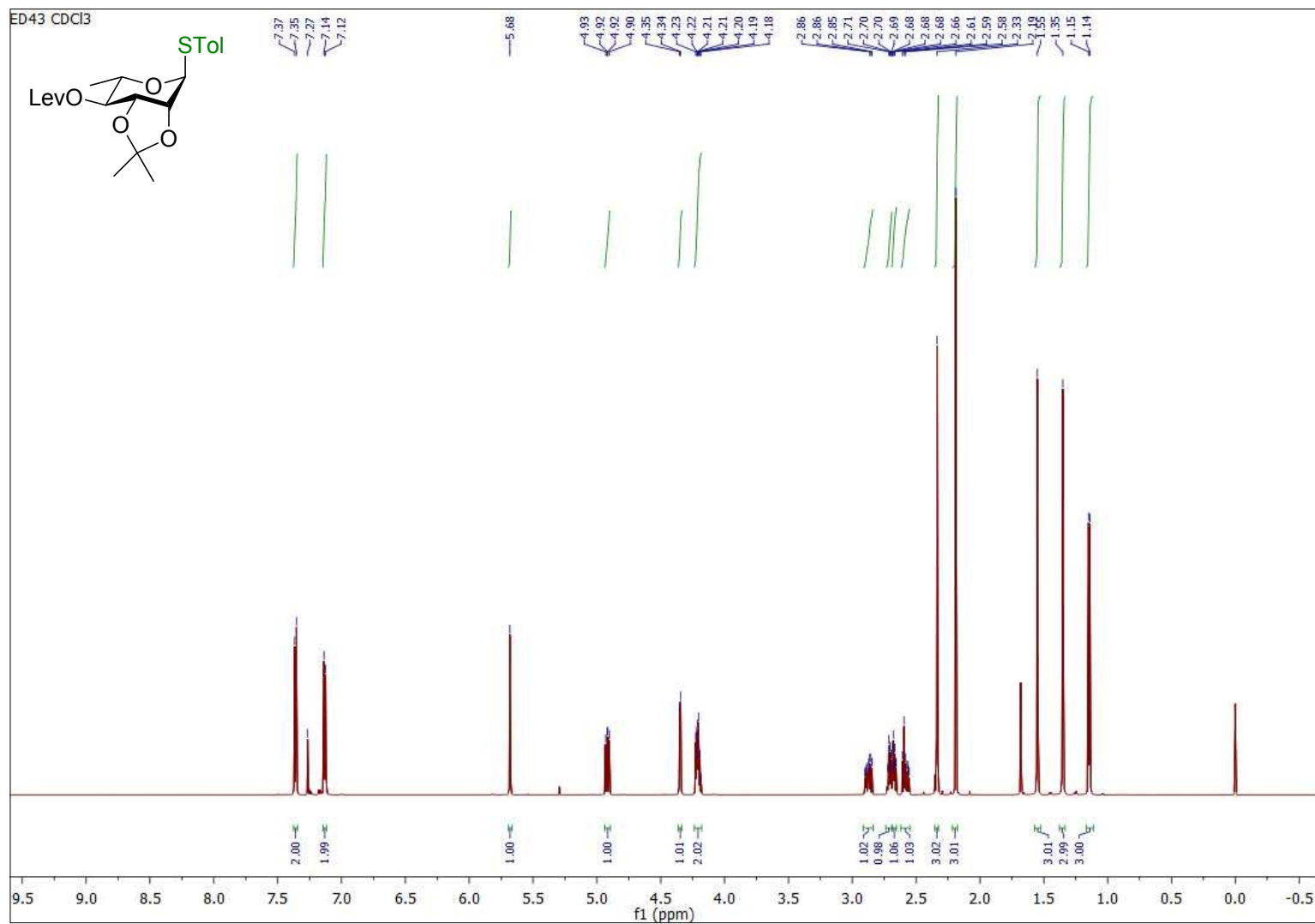
Supplementary Figure 27 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 22



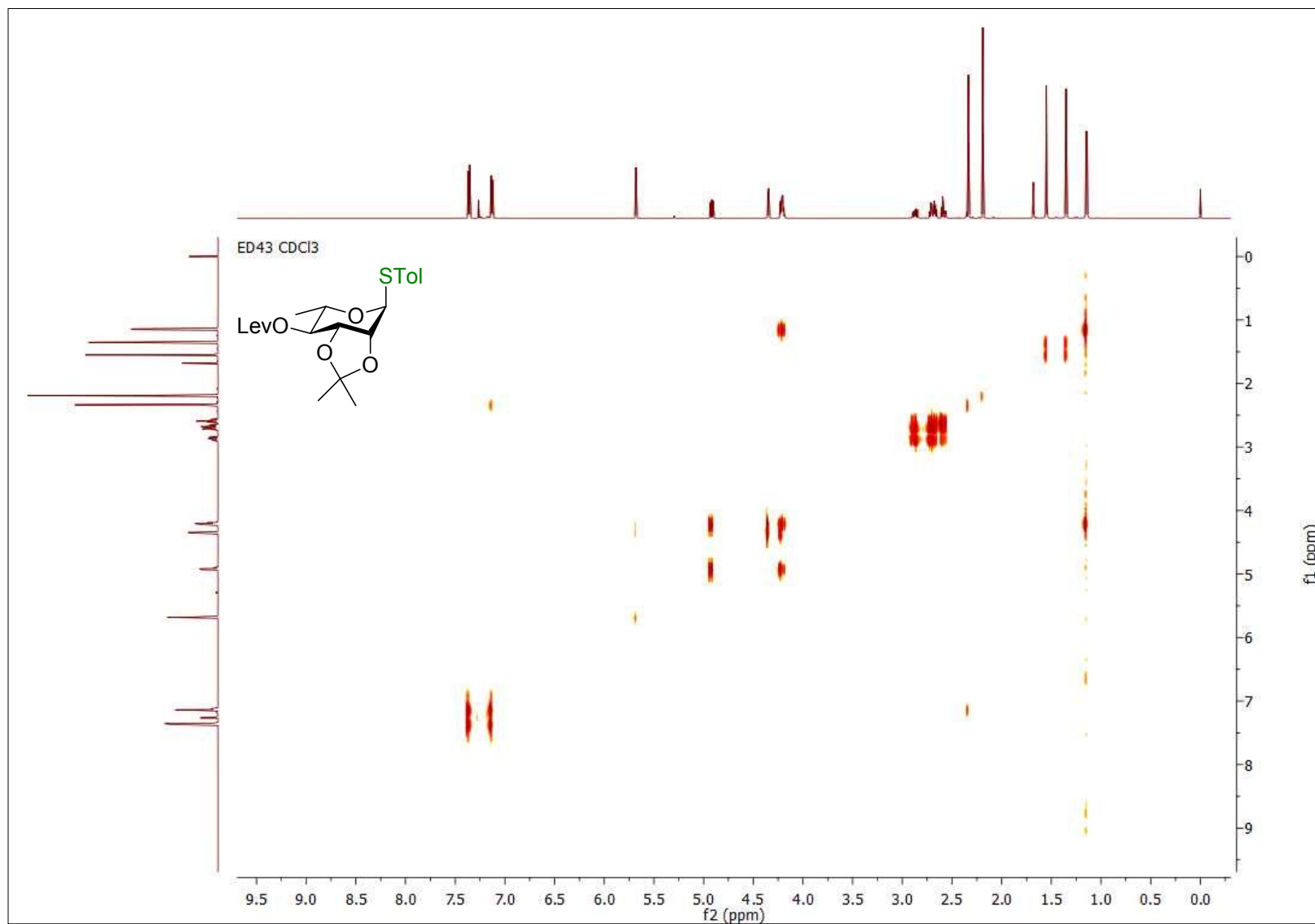
Supplementary Figure 28 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 22



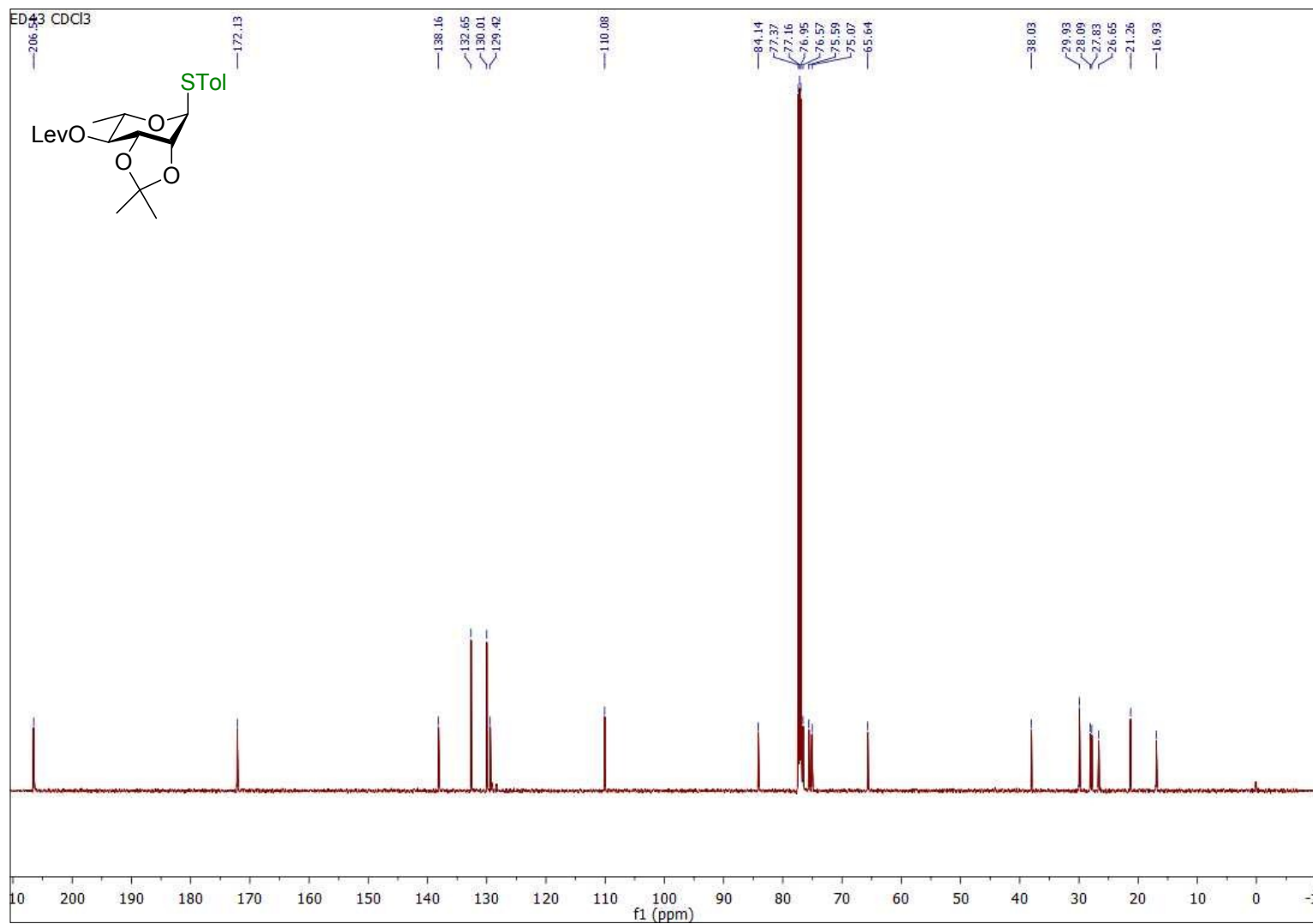
Supplementary Figure 29 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-2,3-*O*-isopropylidene-1-thio- α -L-rhamnopyranoside



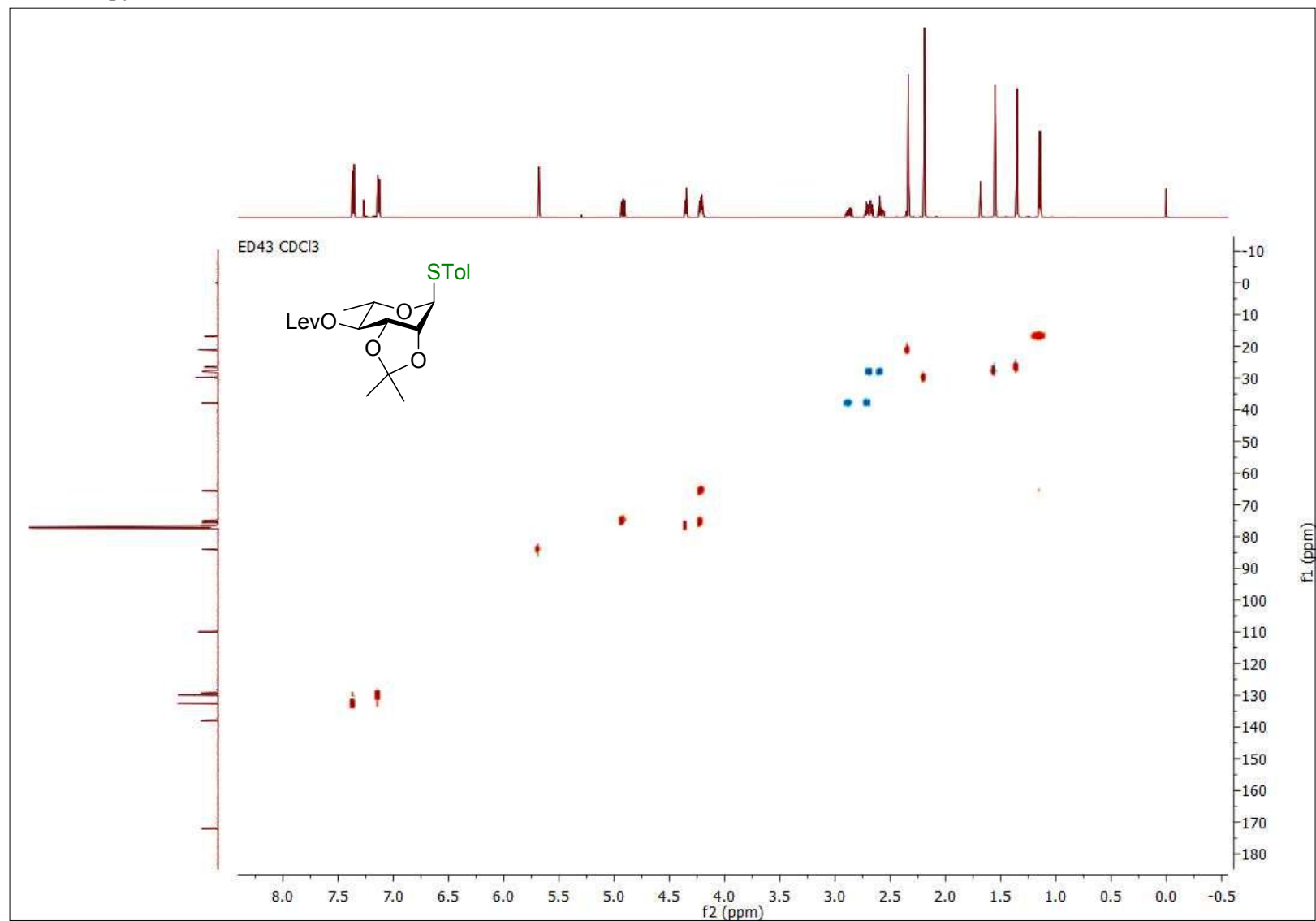
Supplementary Figure 30 | COSY NMR spectrum (CDCl₃, 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-2,3-*O*-isopropylidene-1-thio- α -L-rhamnopyranoside



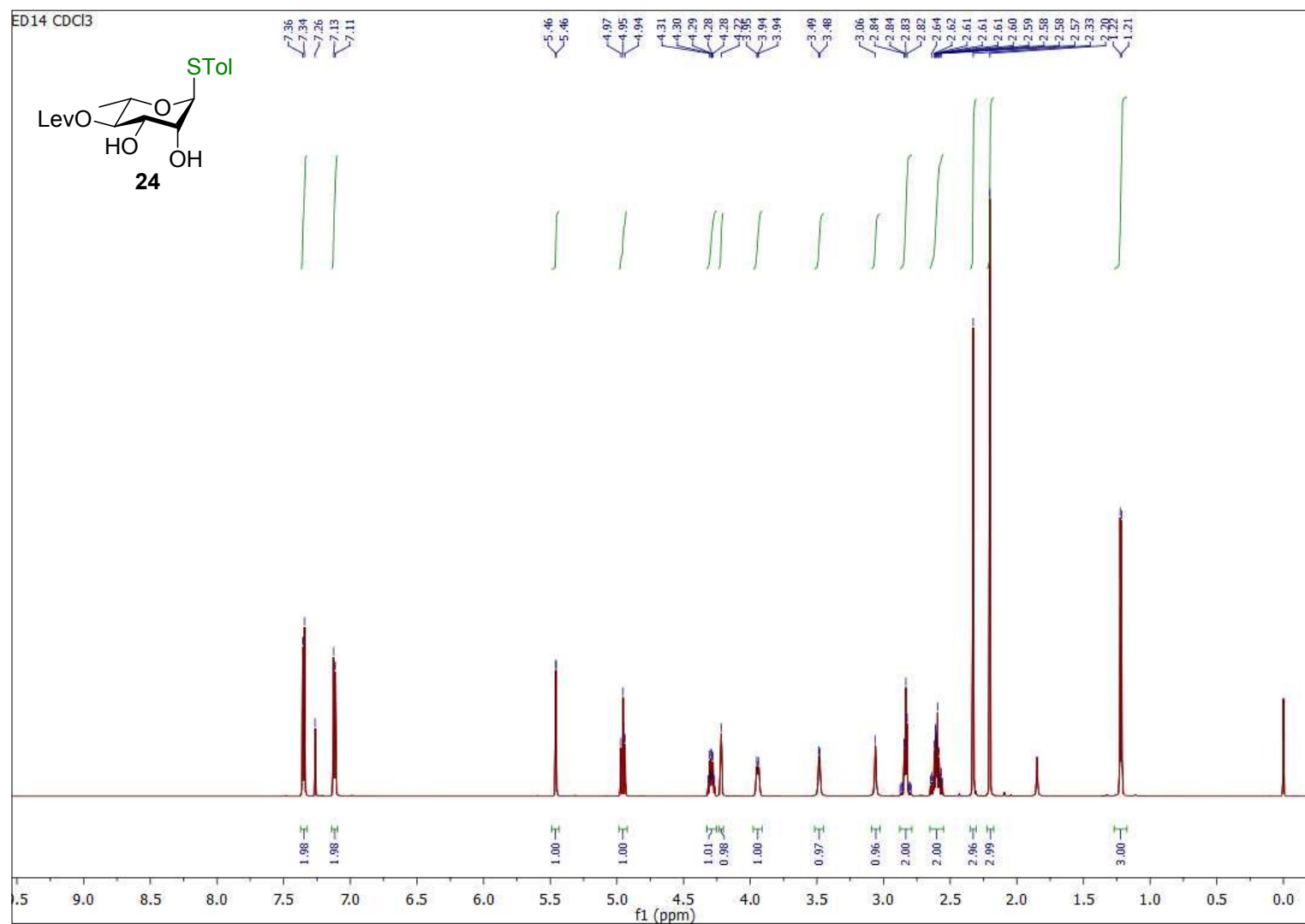
Supplementary Figure 31 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-2,3-*O*-isopropylidene-1-thio- α -L-rhamnopyranoside



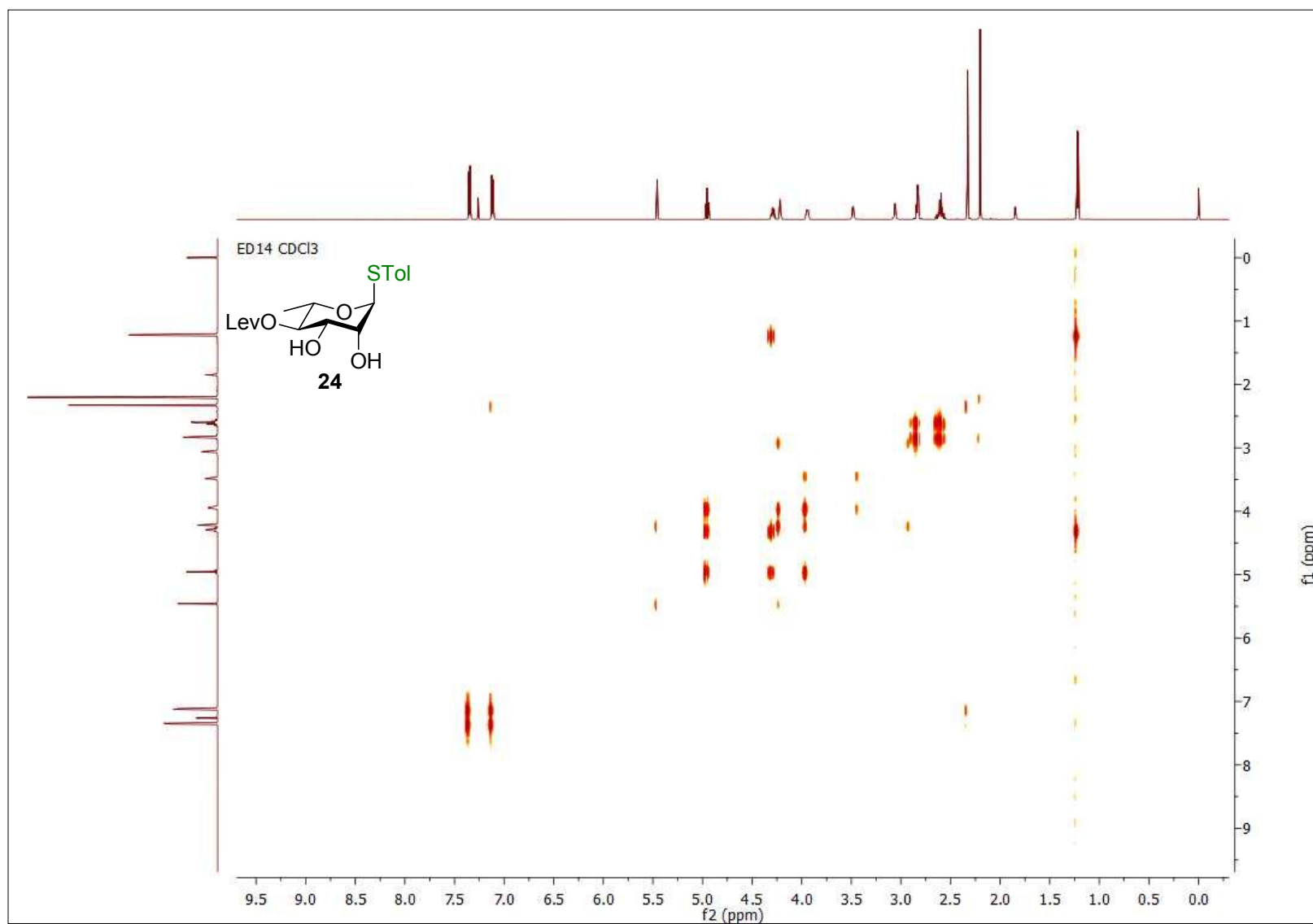
Supplementary Figure 32 | HSQC NMR spectrum (CDCl₃, 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-2,3-*O*-isopropylidene-1-thio- α -L-rhamnopyranoside



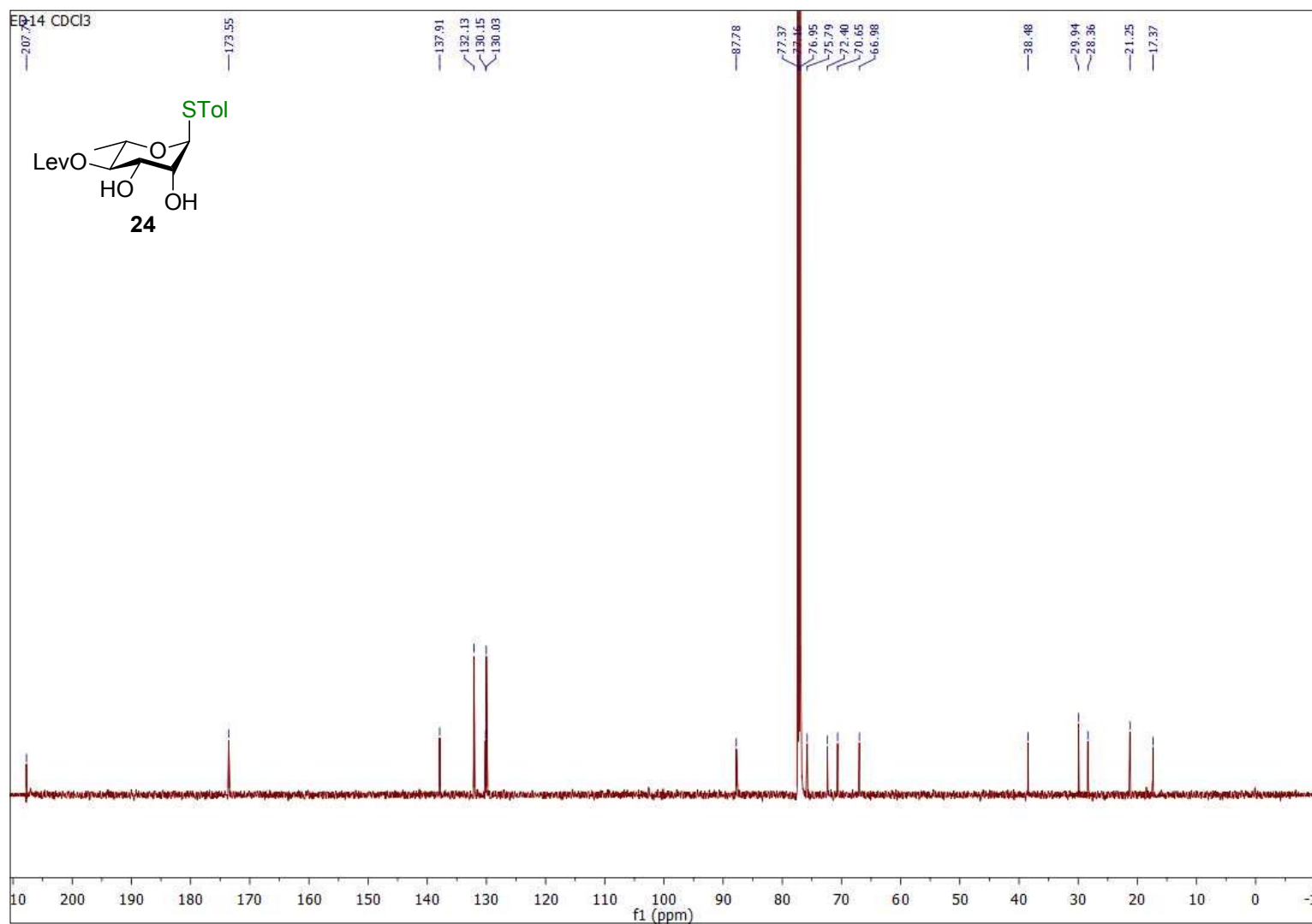
Supplementary Figure 33 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 24



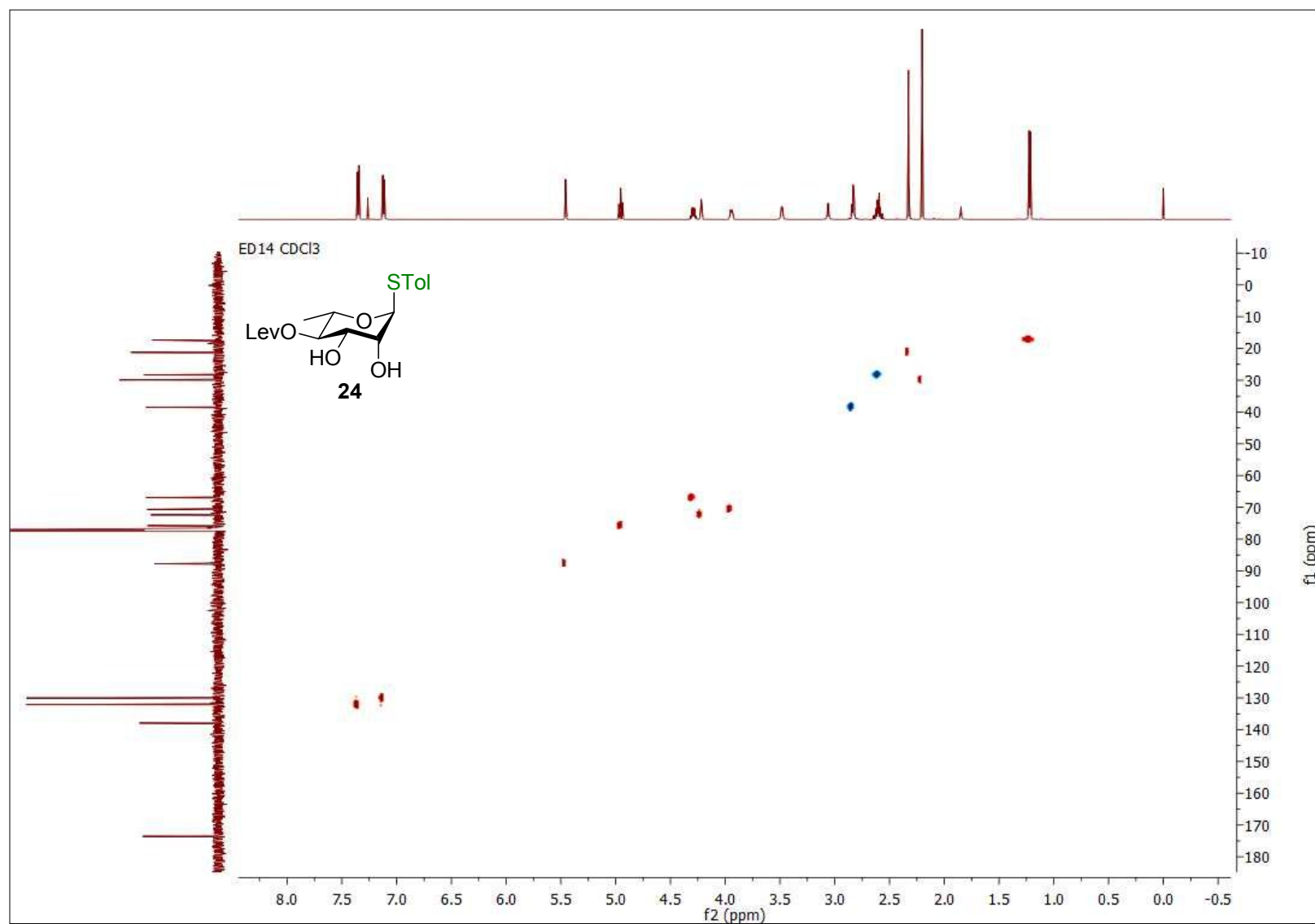
Supplementary Figure 34 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 24



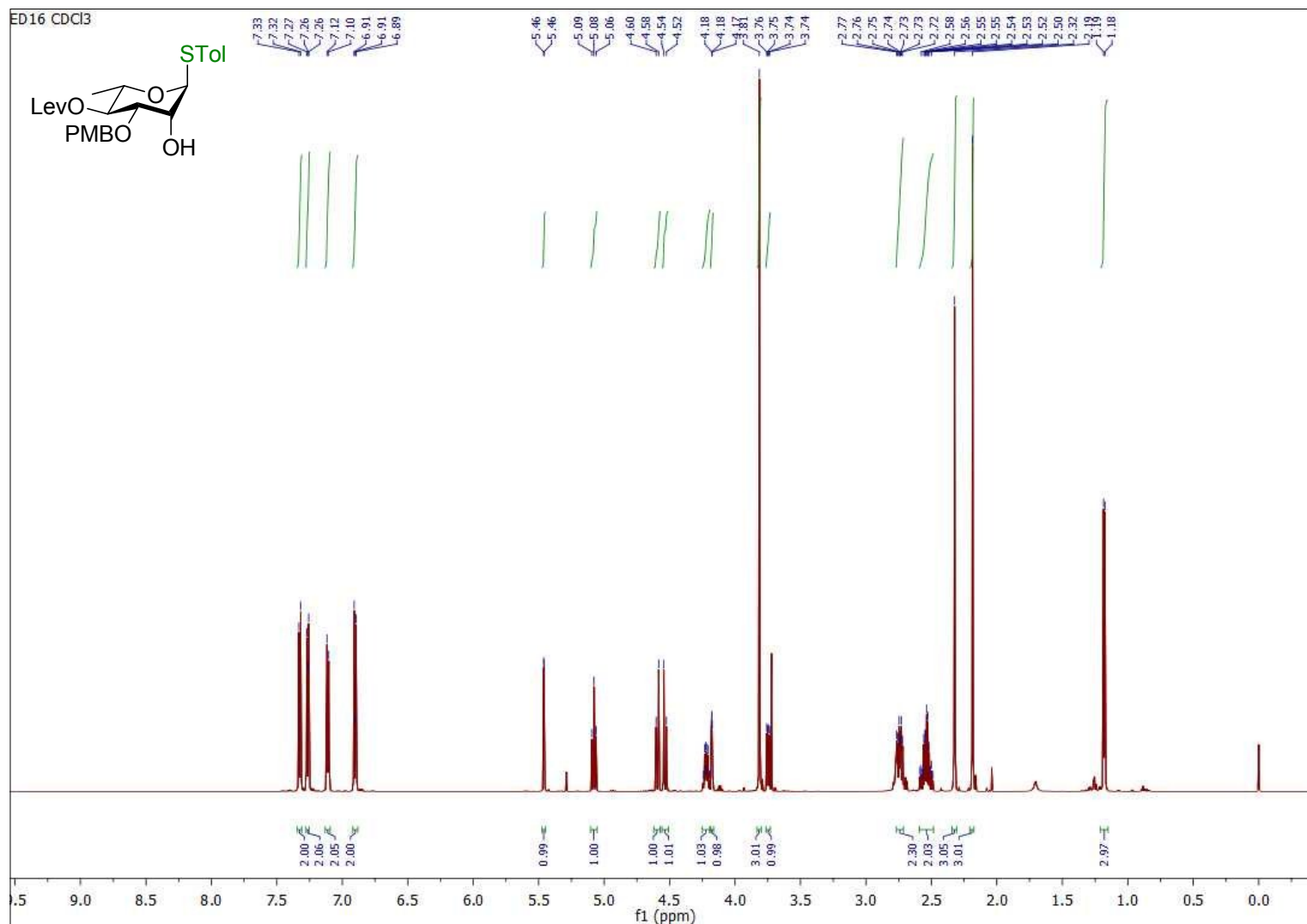
Supplementary Figure 35 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 24



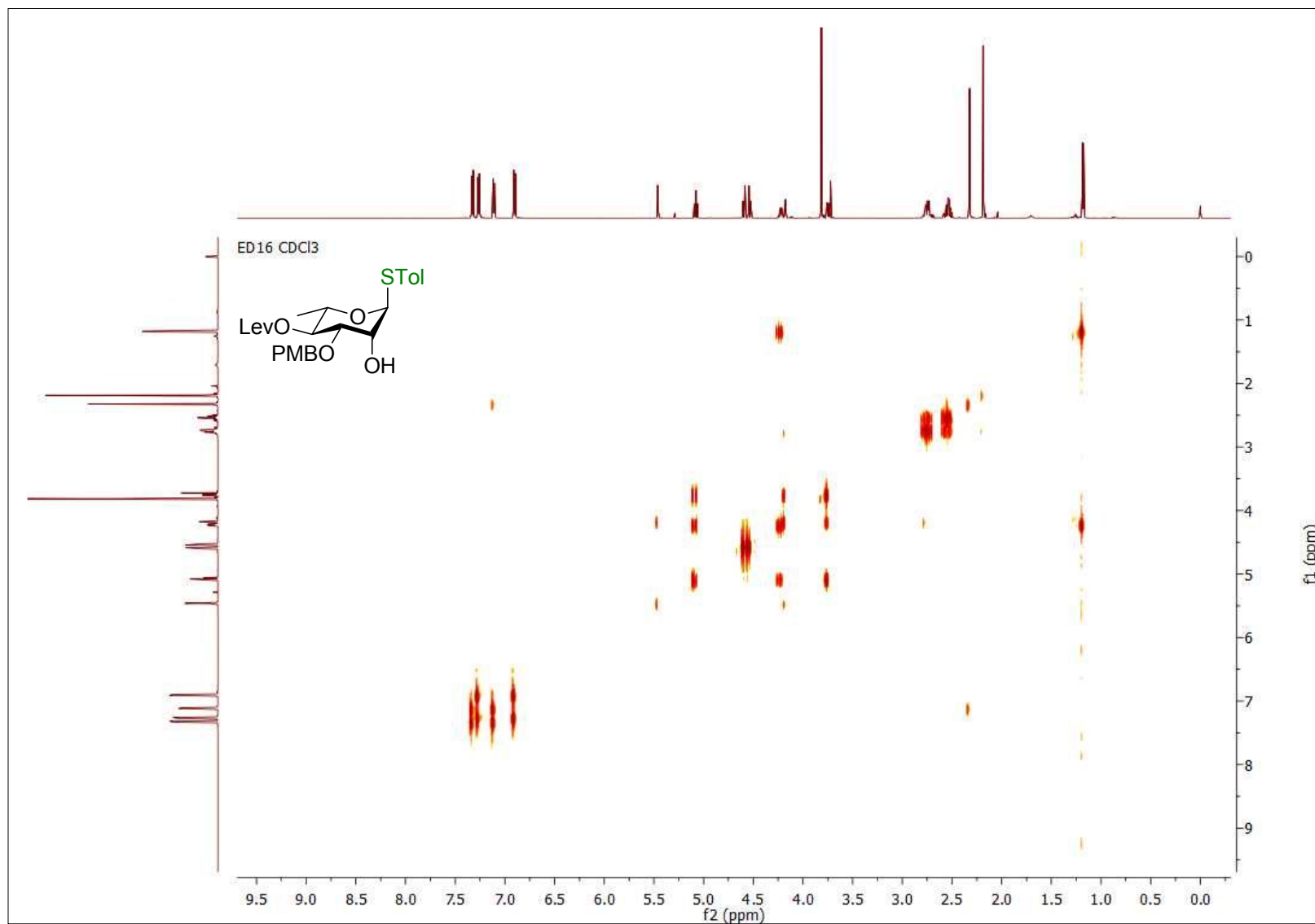
Supplementary Figure 36 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 24



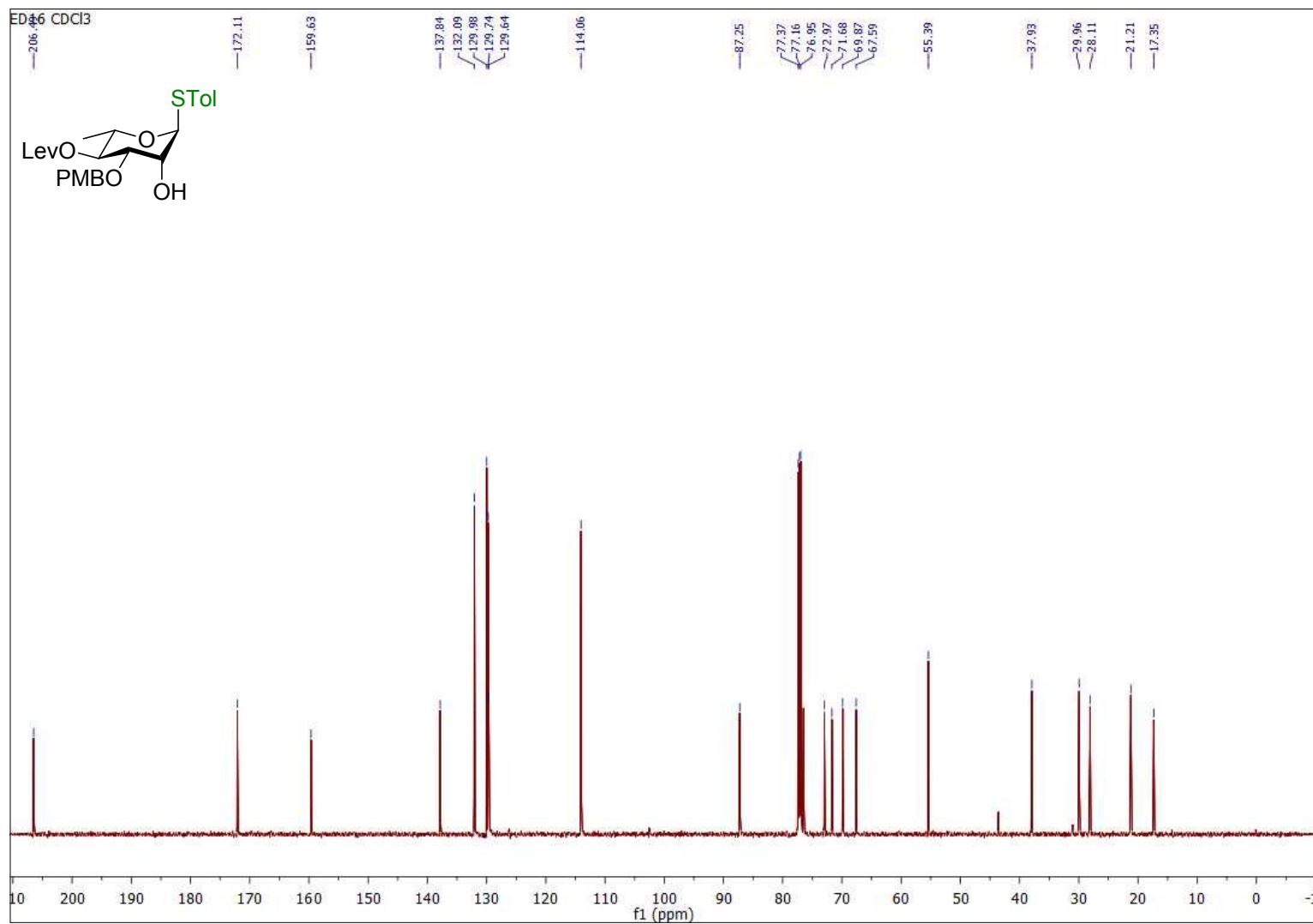
Supplementary Figure 37 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-*para*-methoxybenzyl-1-thio- α -L-rhamnopyranoside



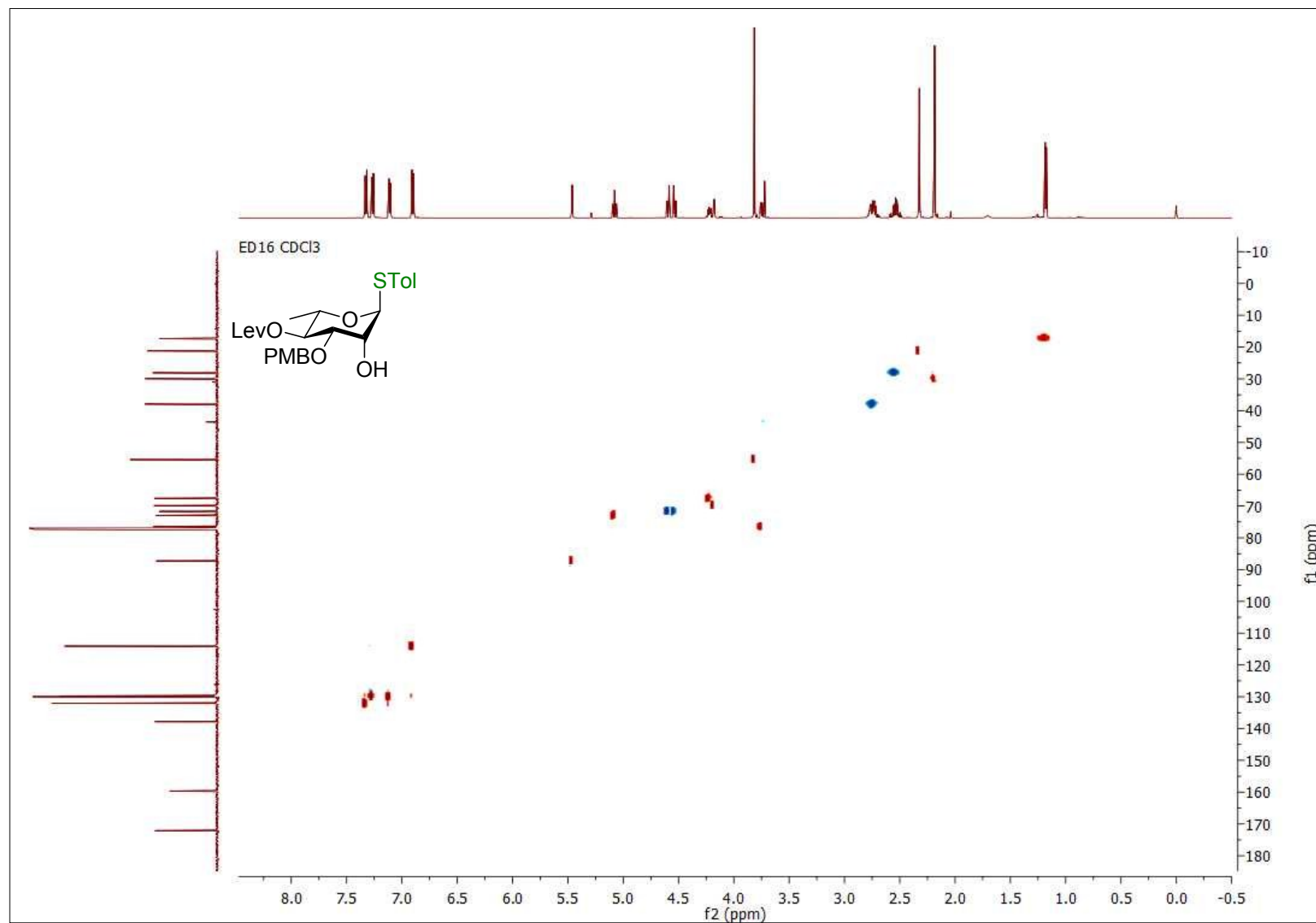
Supplementary Figure 38 | COSY NMR spectrum (CDCl₃, 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-*para*-methoxybenzyl-1-thio- α -L-rhamnopyranoside



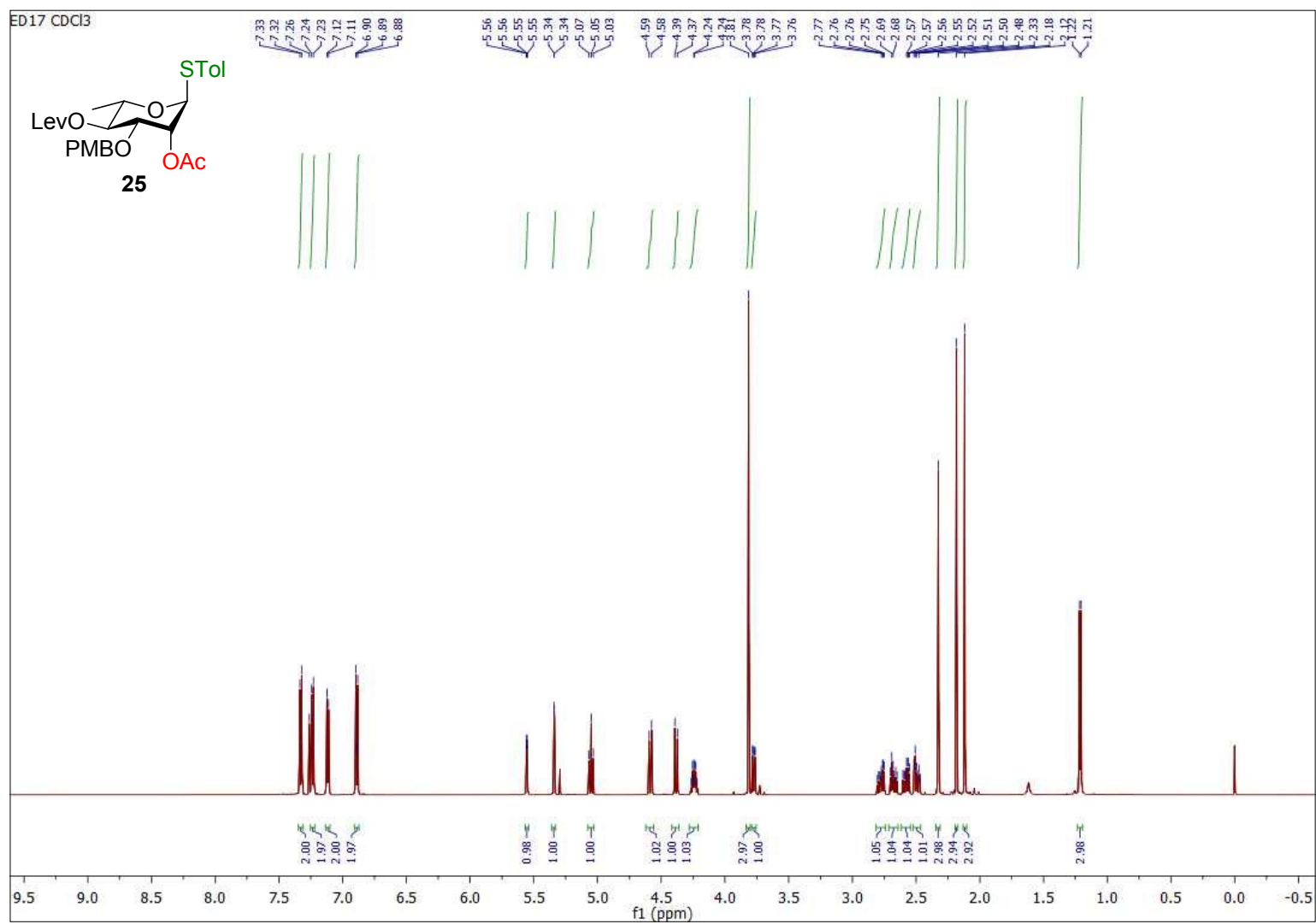
Supplementary Figure 39 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-*para*-methoxybenzyl-1-thio- α -L-rhamnopyranoside



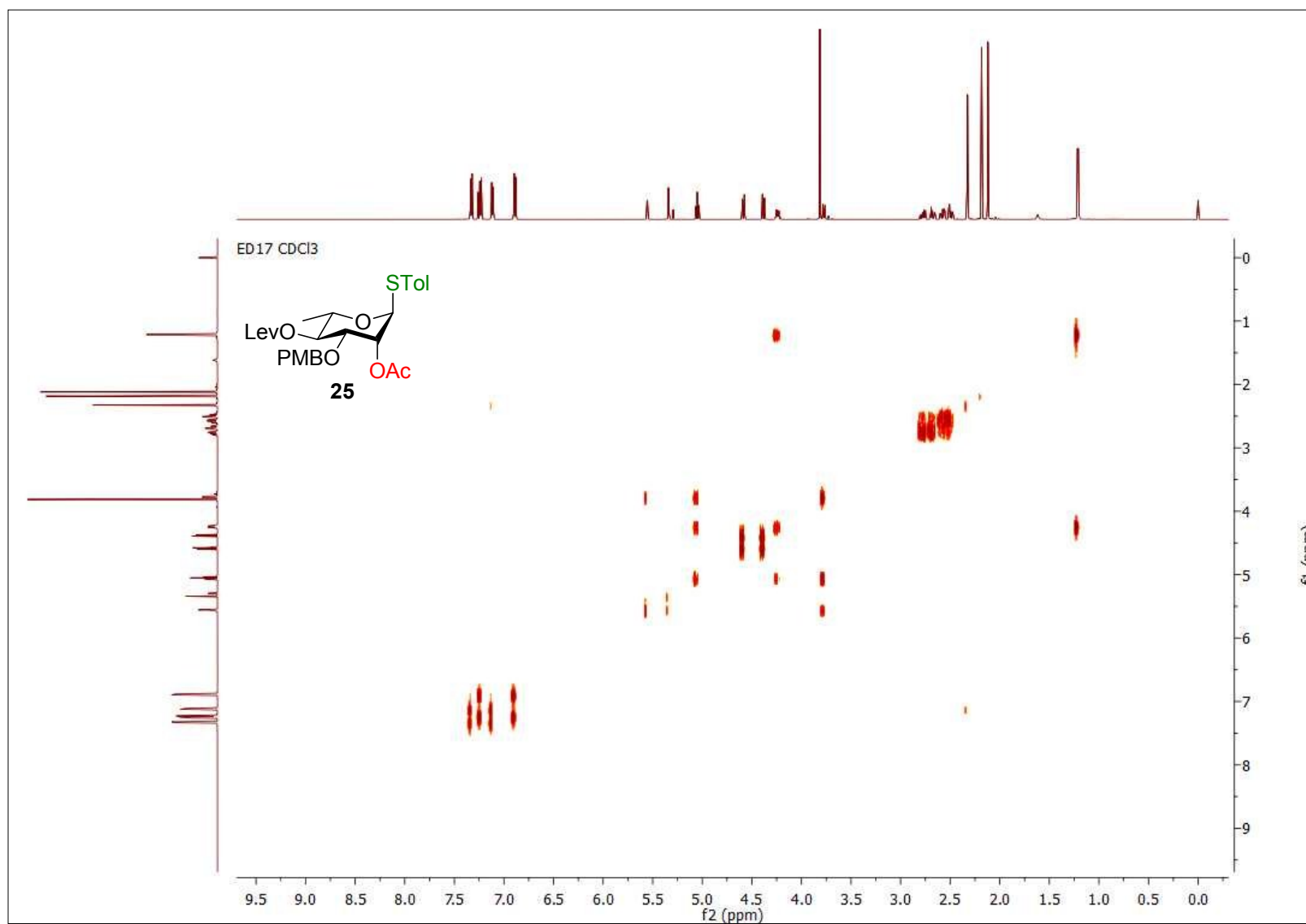
Supplementary Figure 40 | HSQC NMR spectrum (CDCl₃, 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-*para*-methoxybenzyl-1-thio- α -L-rhamnopyranoside



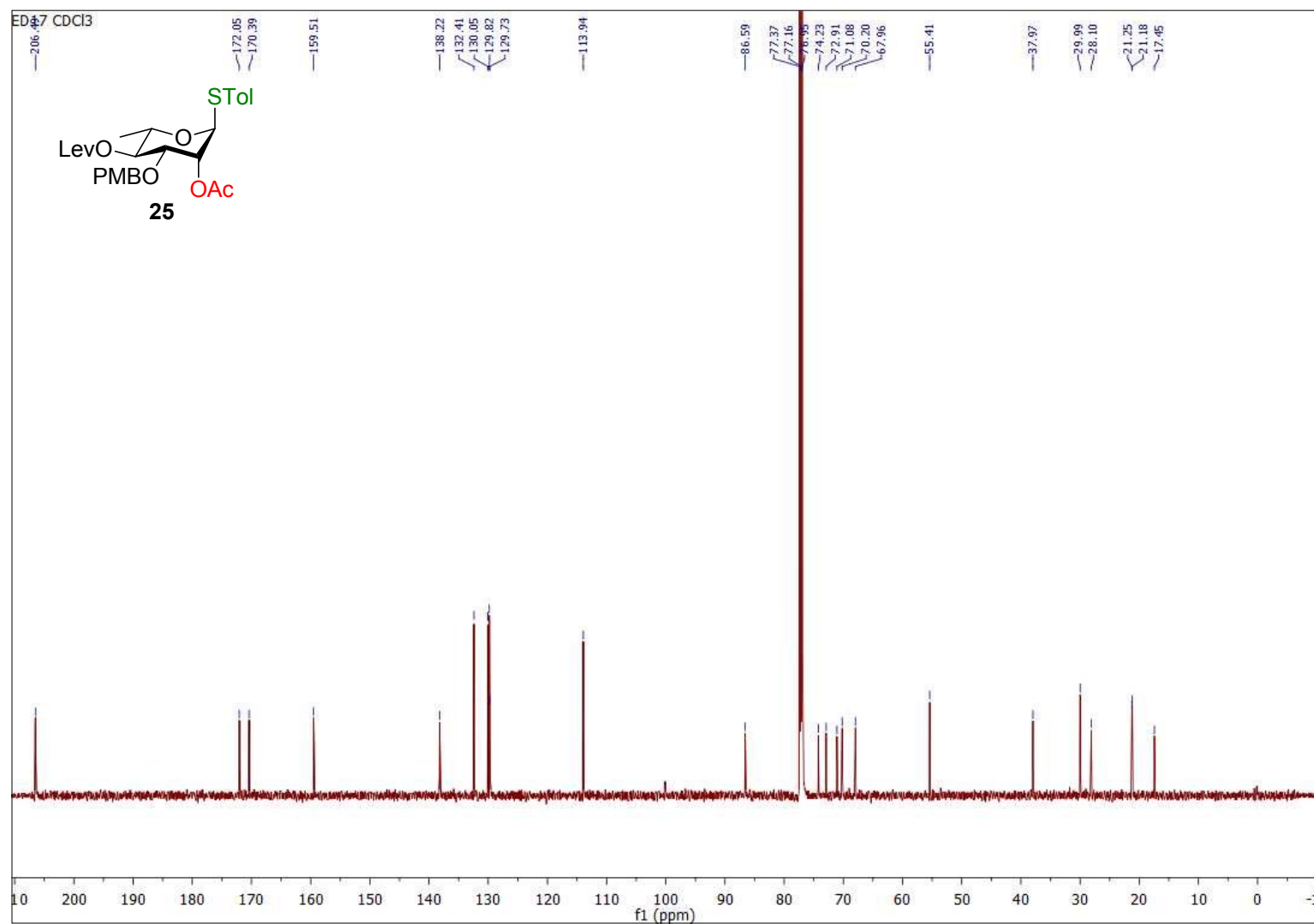
Supplementary Figure 41 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 25



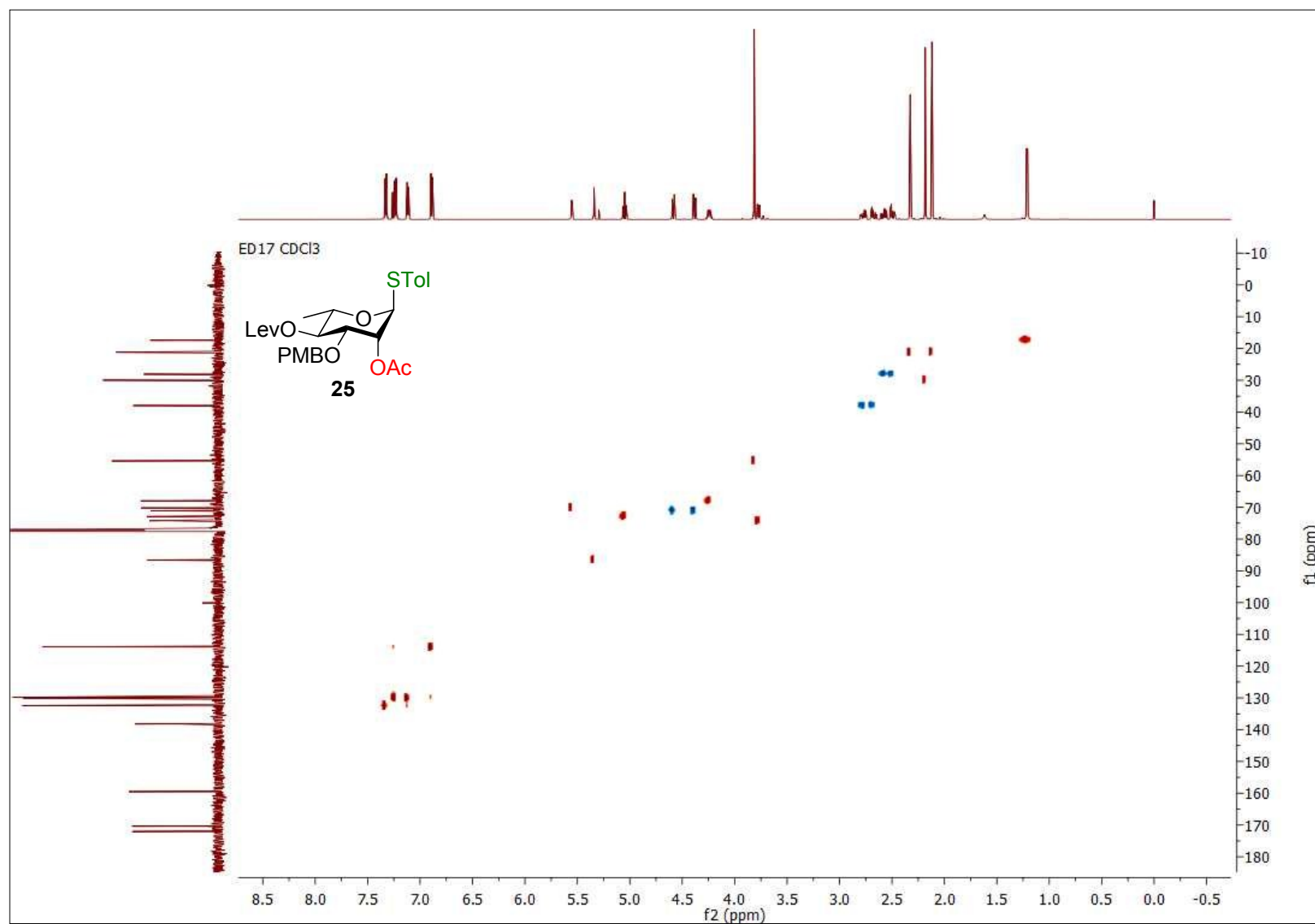
Supplementary Figure 42 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 25



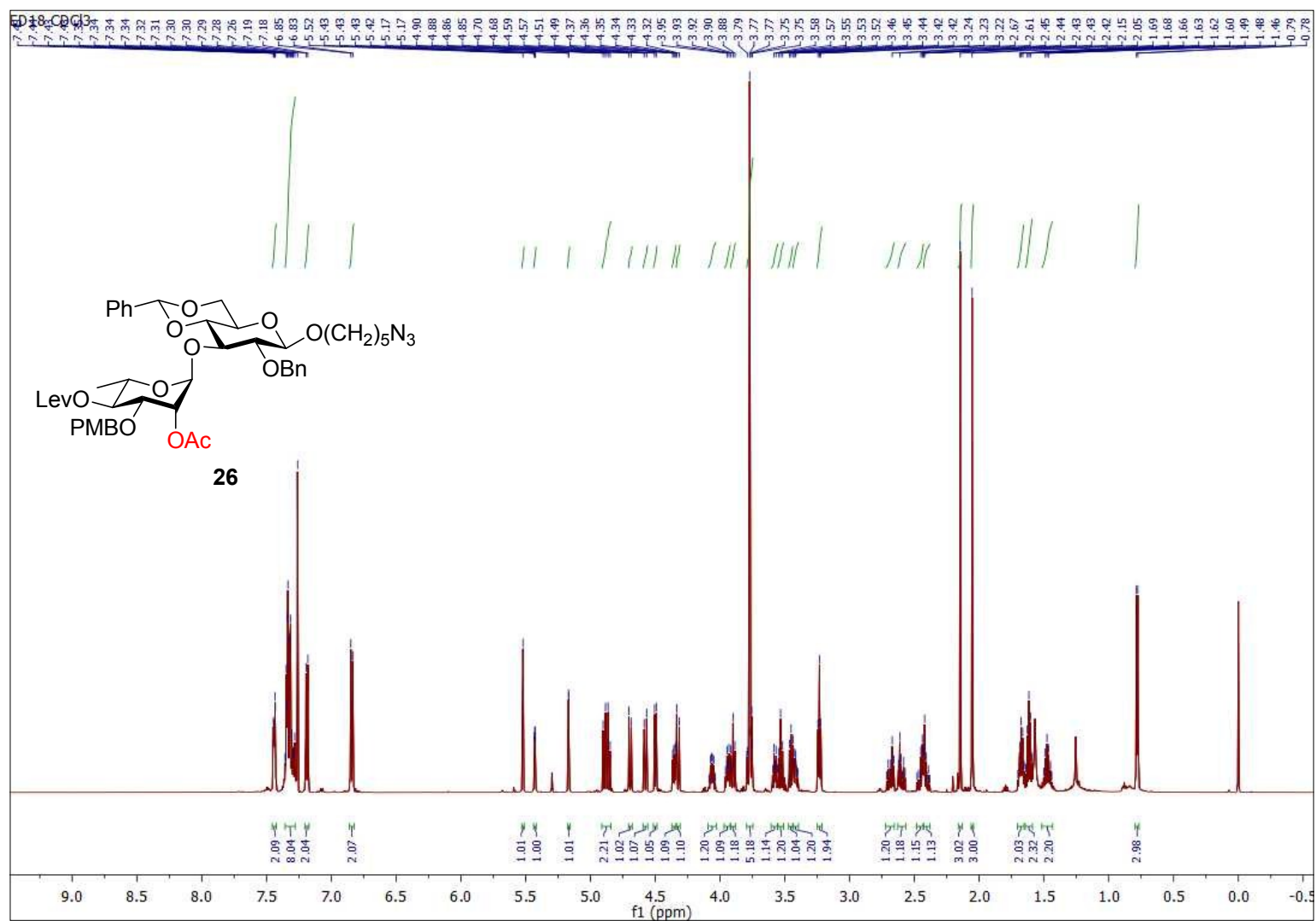
Supplementary Figure 43 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 25



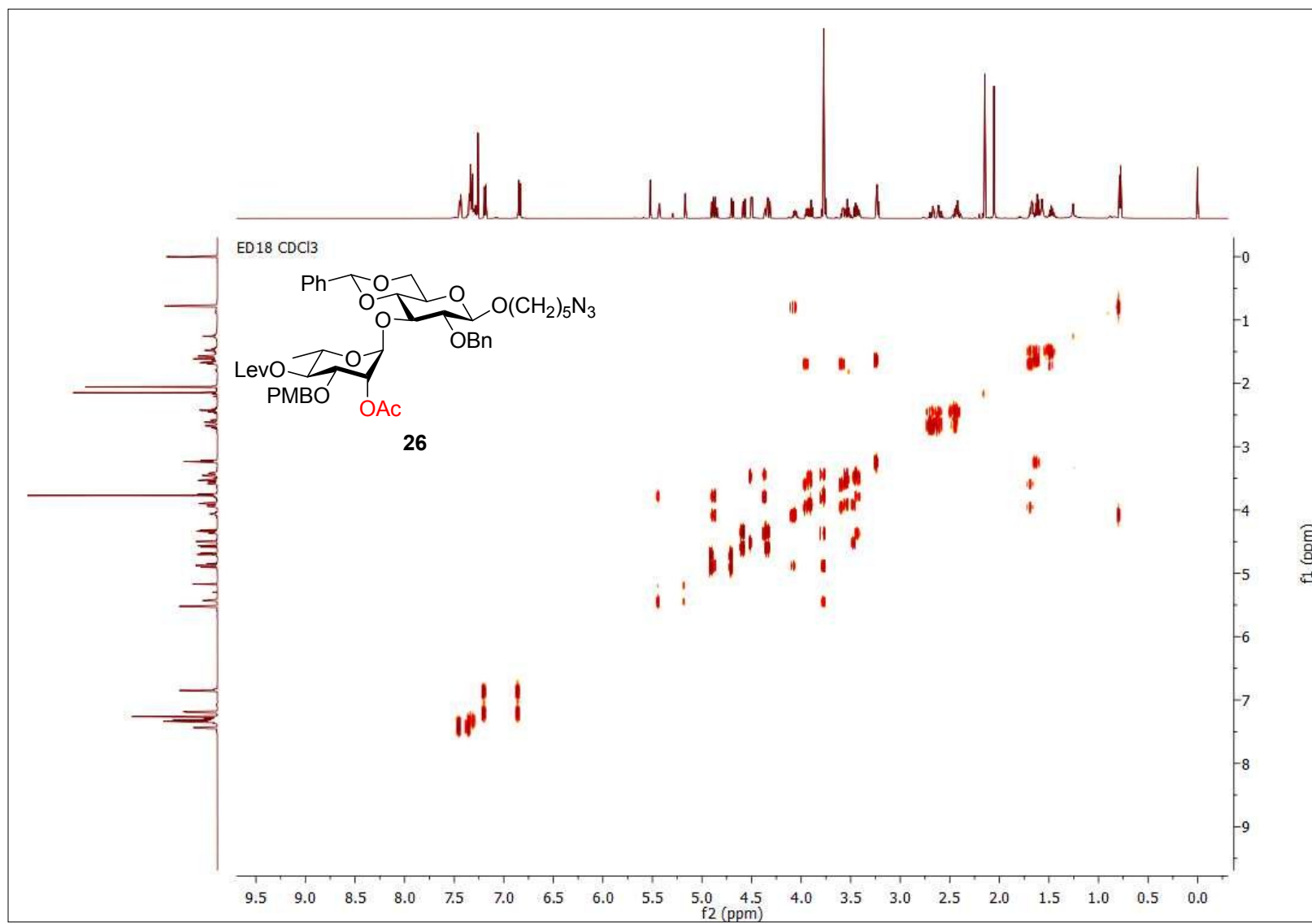
Supplementary Figure 44 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 25



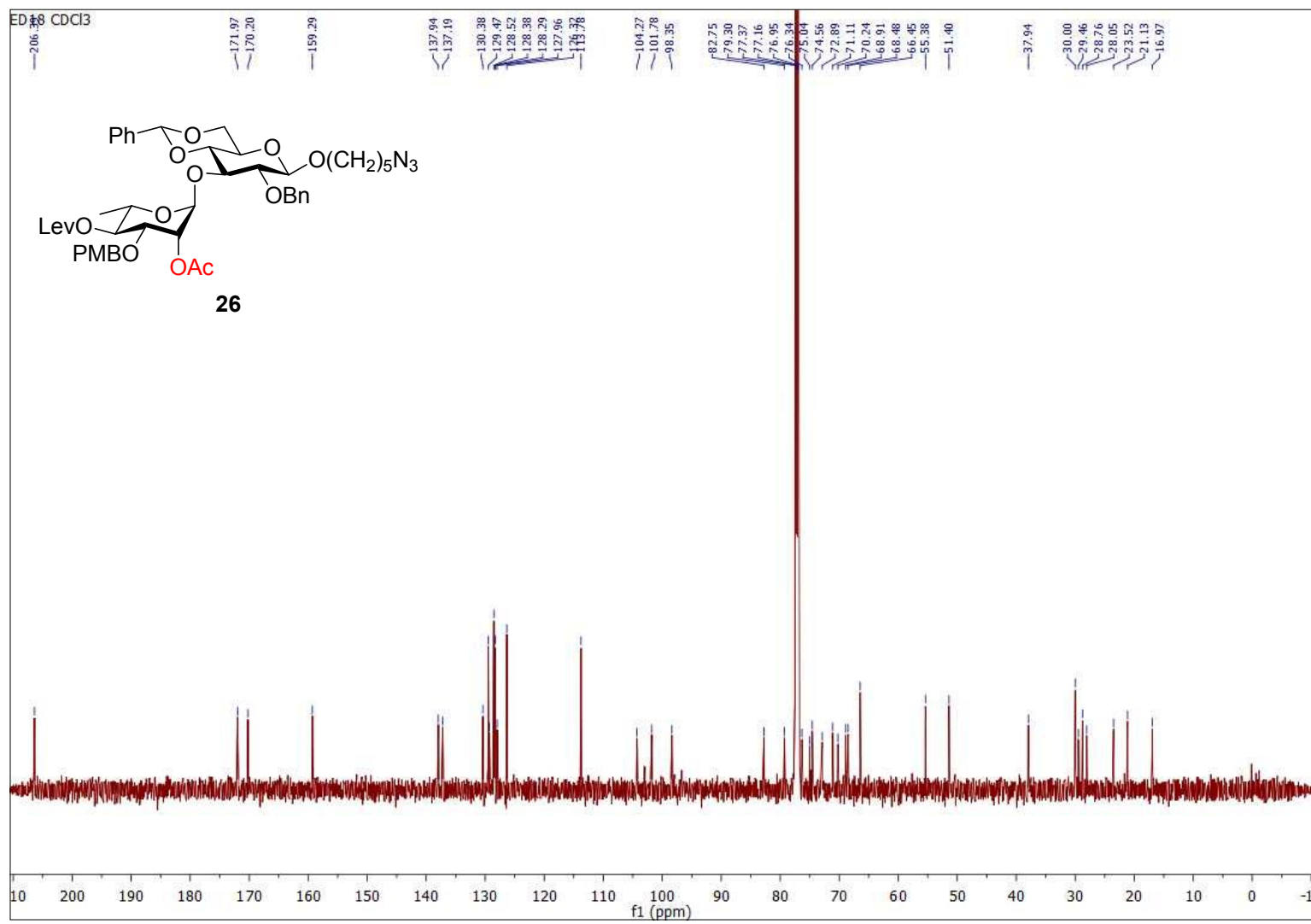
Supplementary Figure 45 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 26



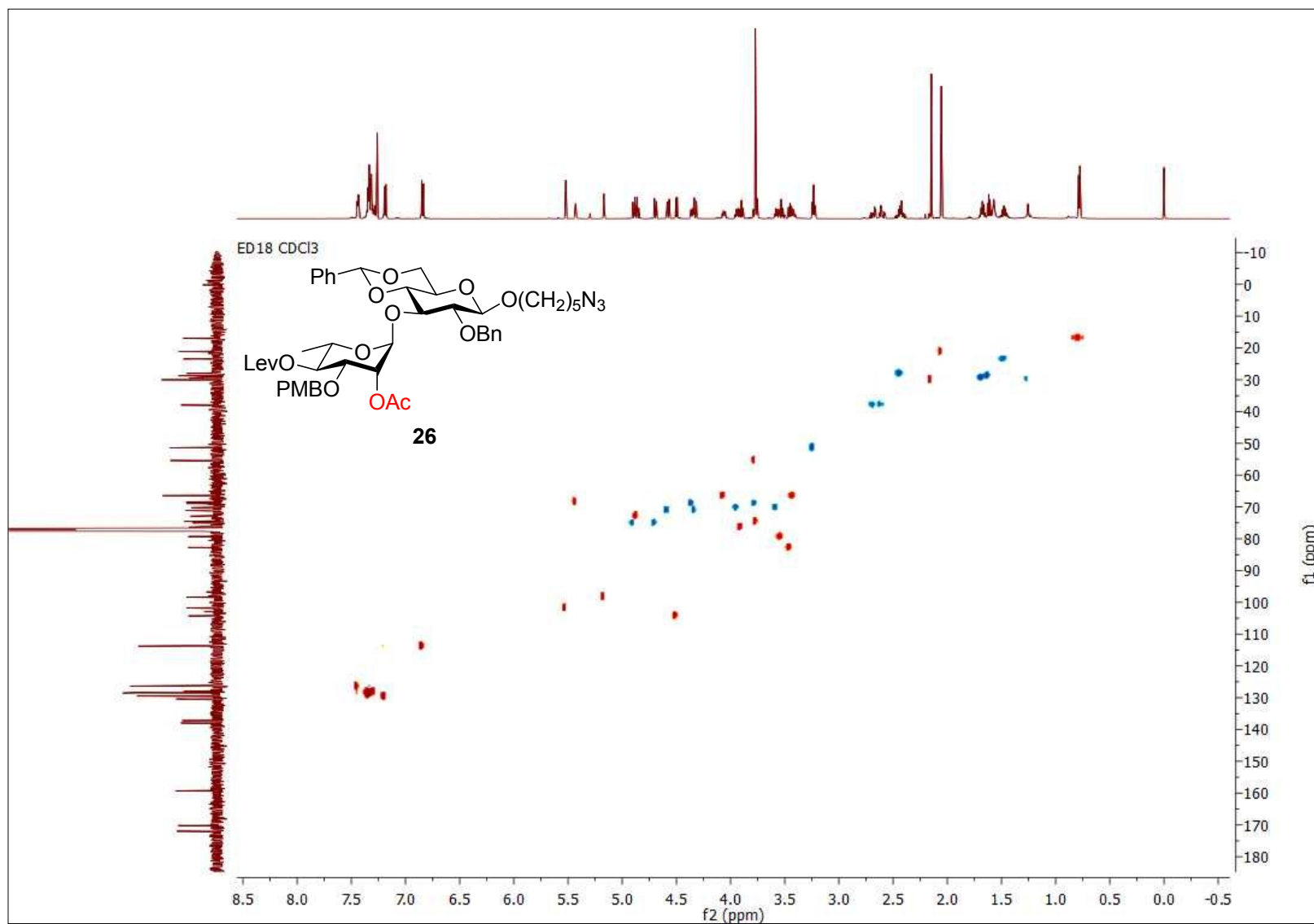
Supplementary Figure 46 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 26



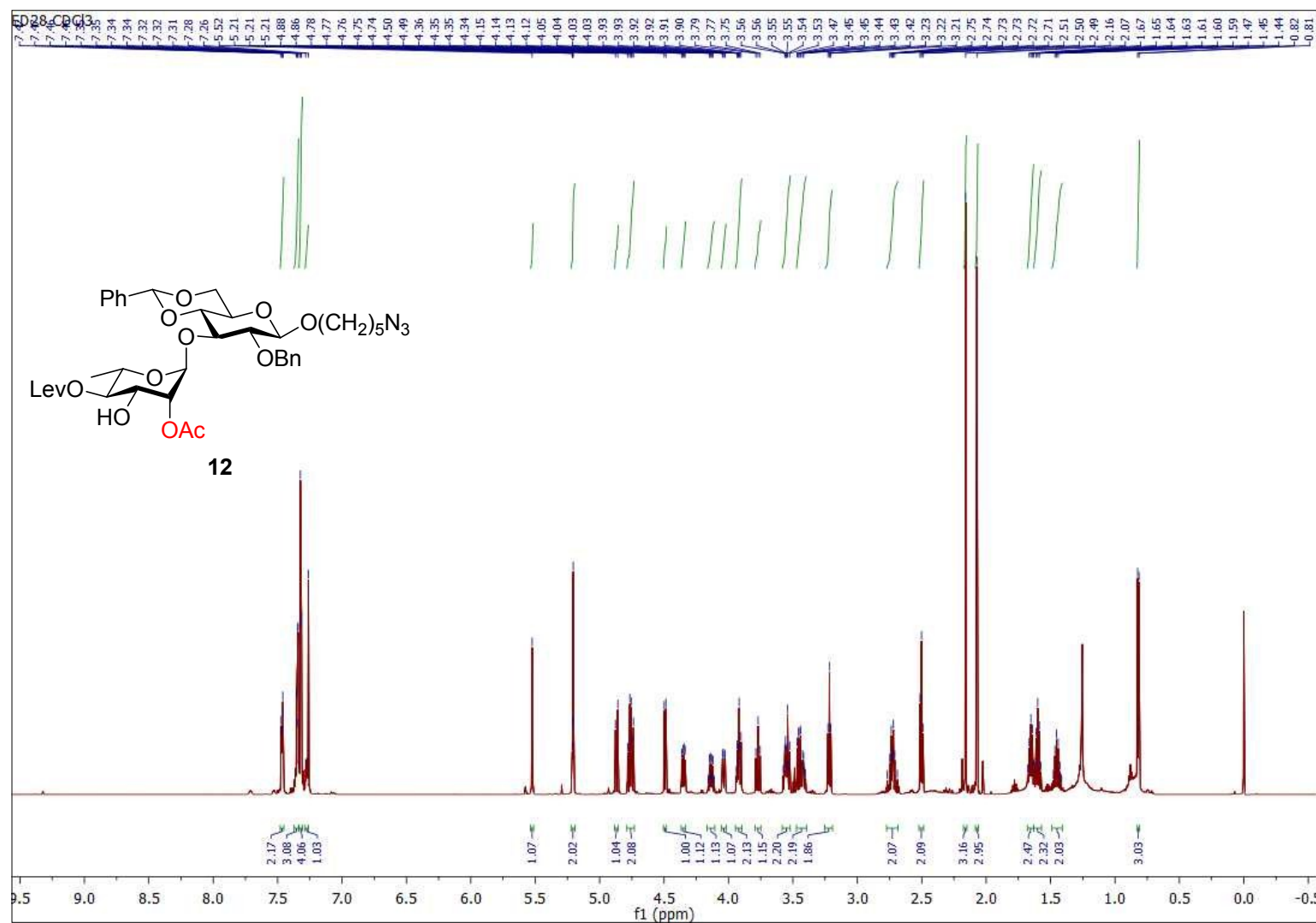
Supplementary Figure 47 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 26



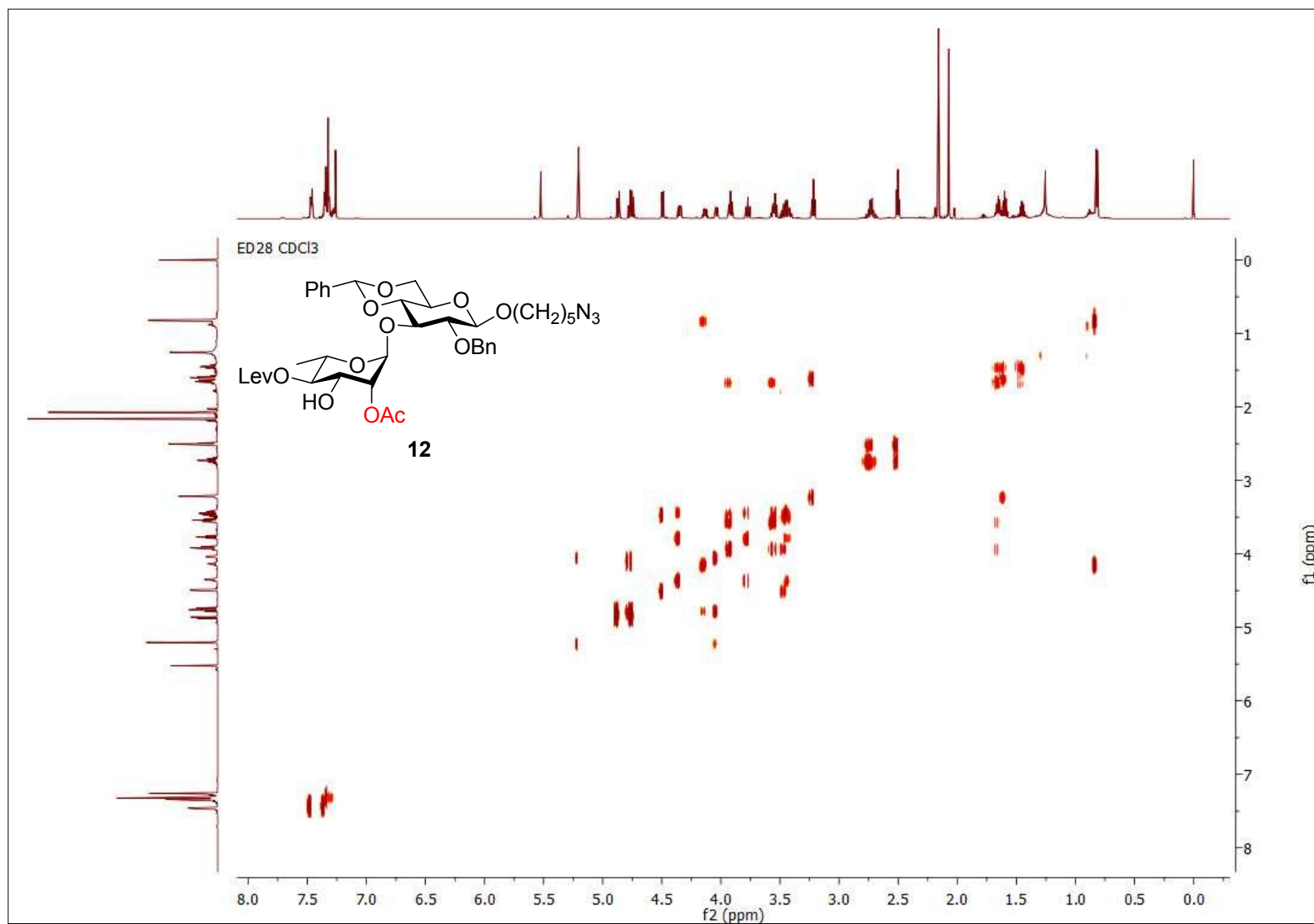
Supplementary Figure 48 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 26



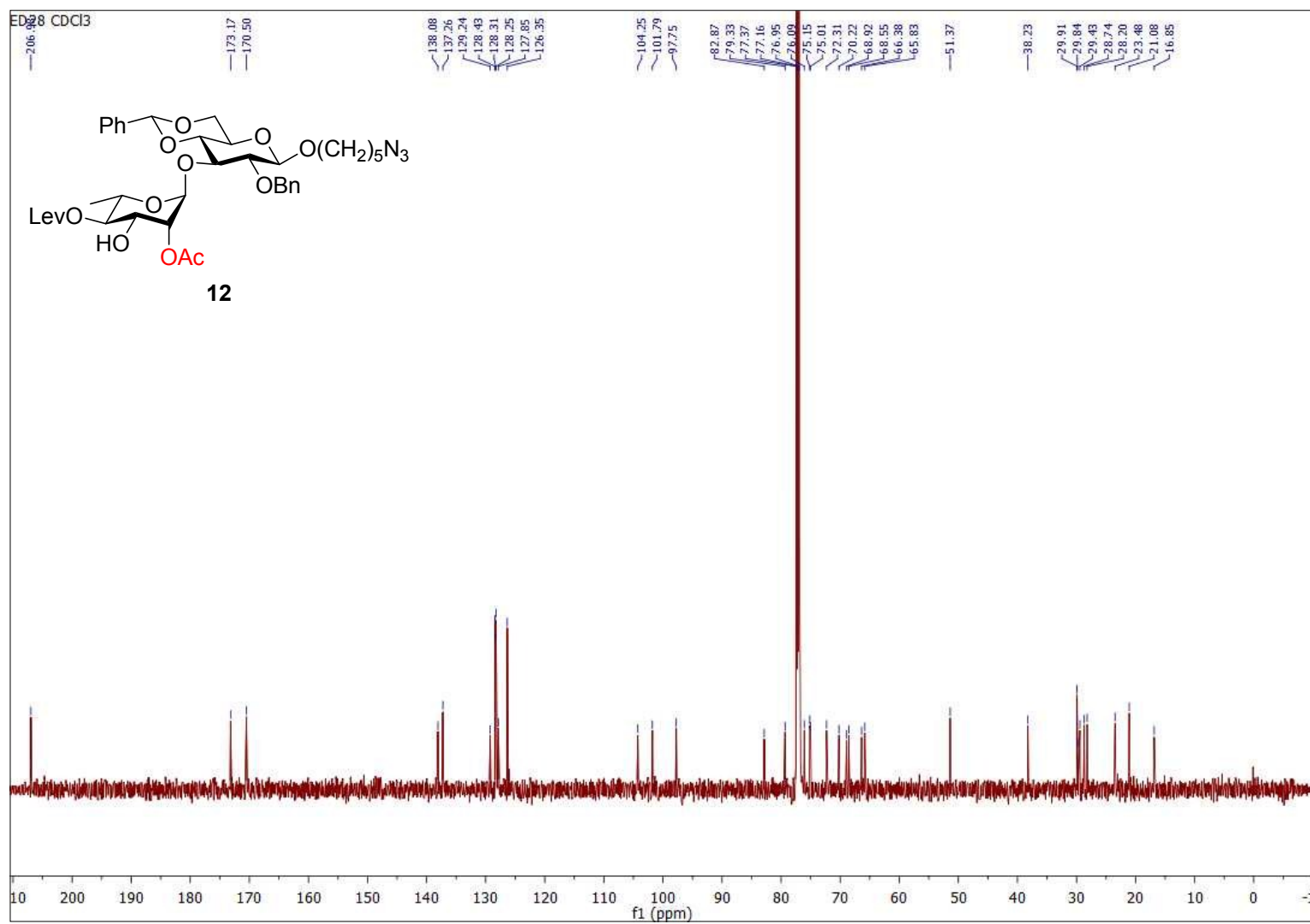
Supplementary Figure 49 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 12



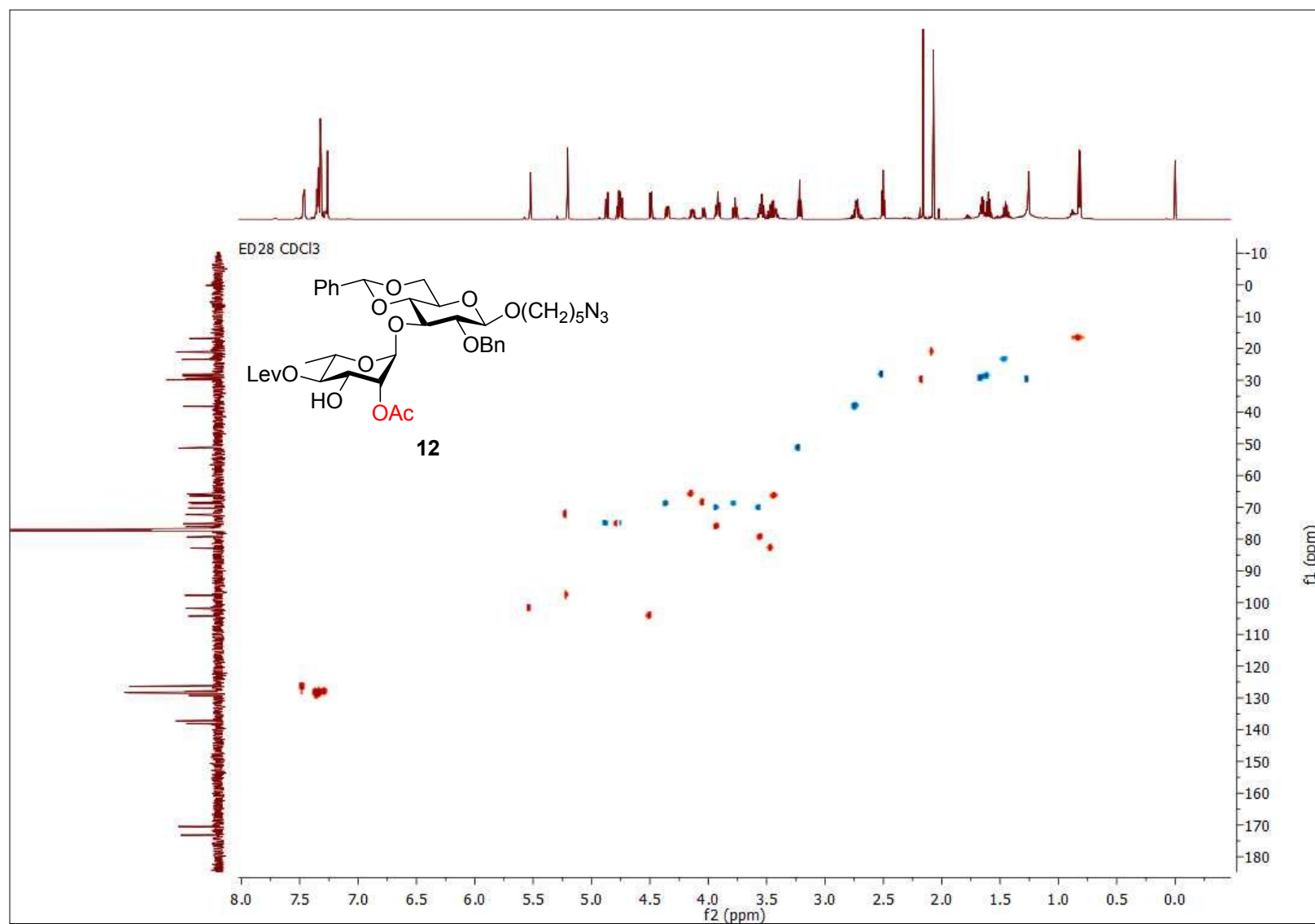
Supplementary Figure 50 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 12



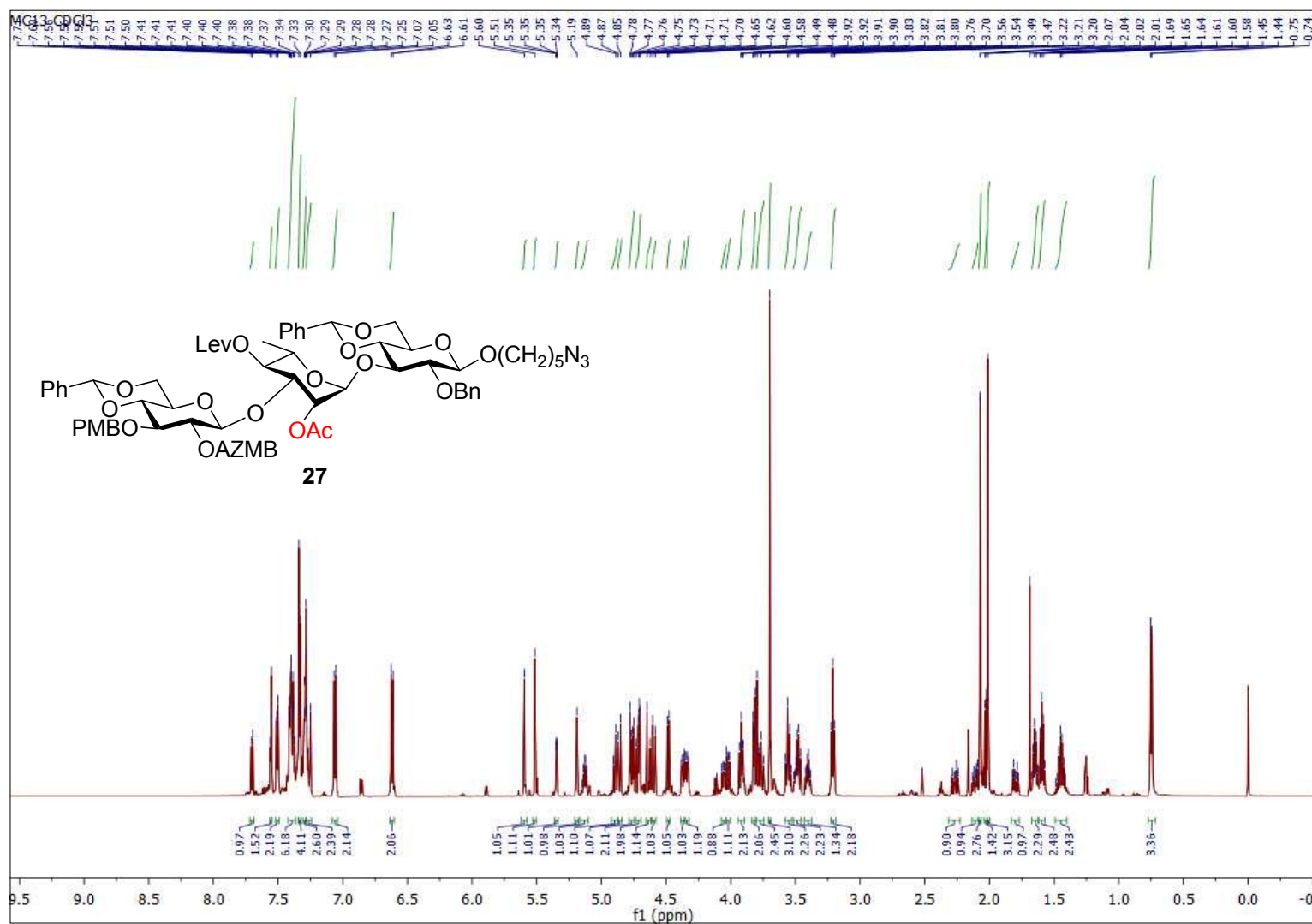
Supplementary Figure 51 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 12



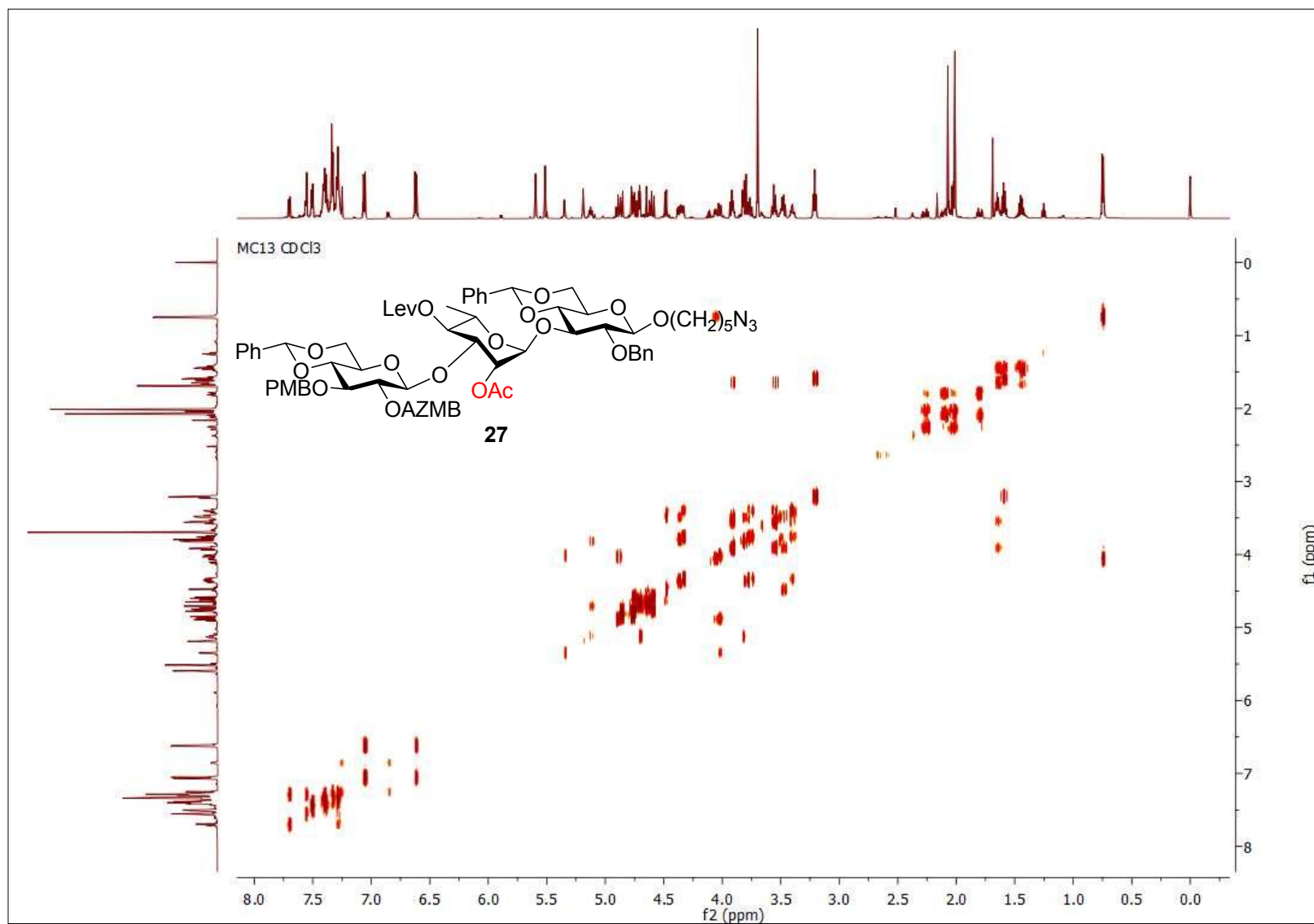
Supplementary Figure 52 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 12



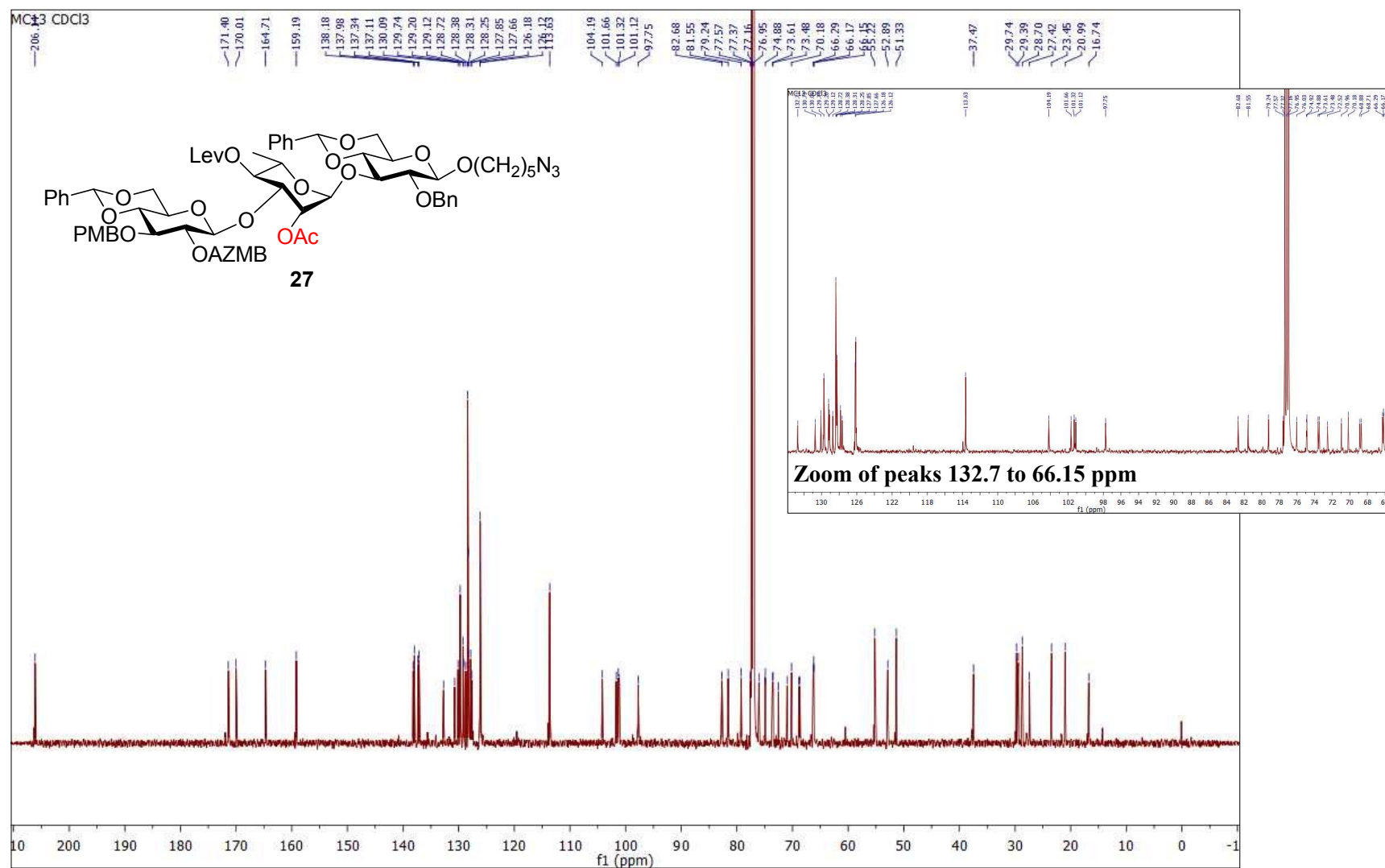
Supplementary Figure 53 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 27 (+ 10% of unknown inseparable impurity)



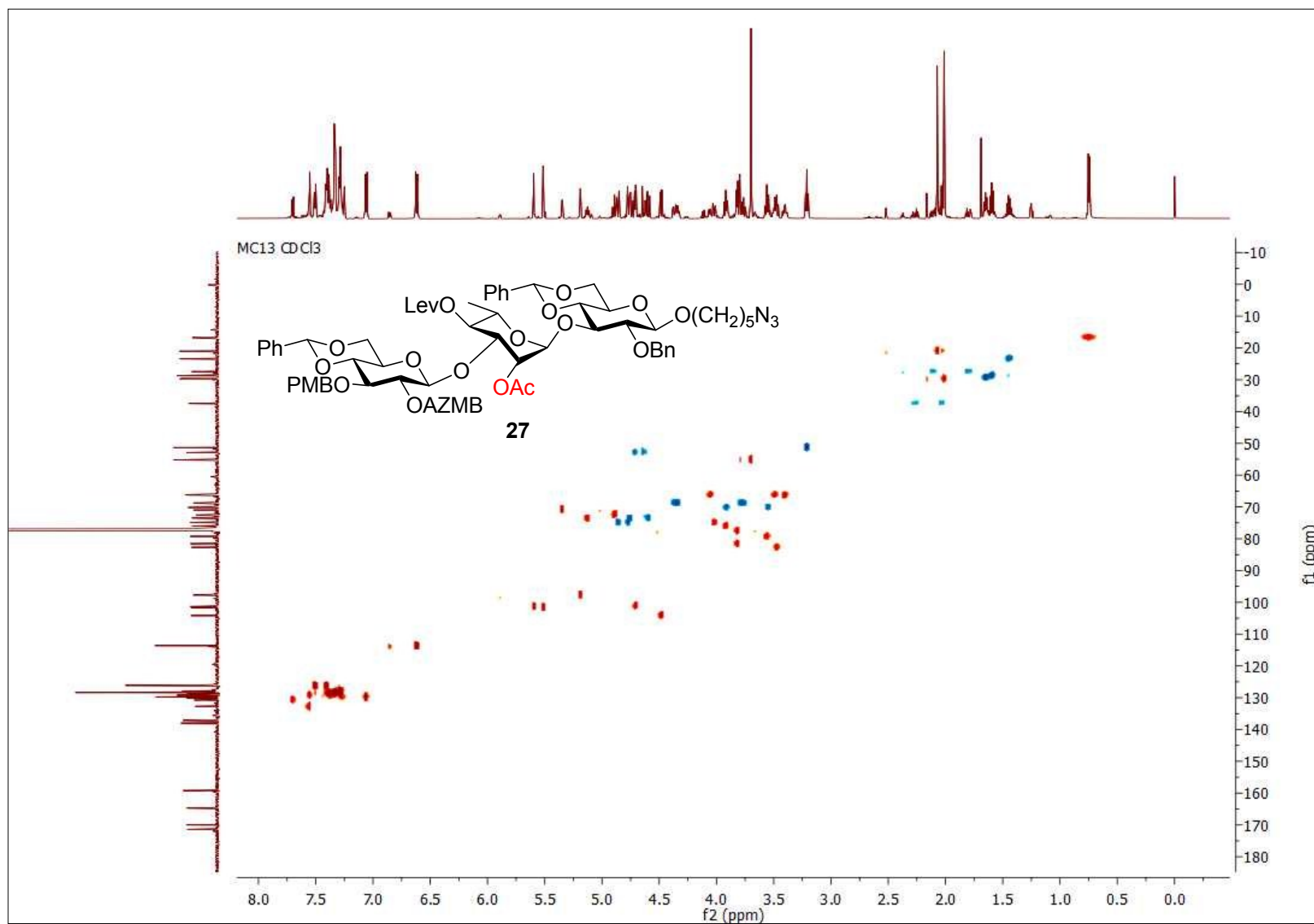
Supplementary Figure 54 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 27 (+ 10% of unknown inseparable impurity)



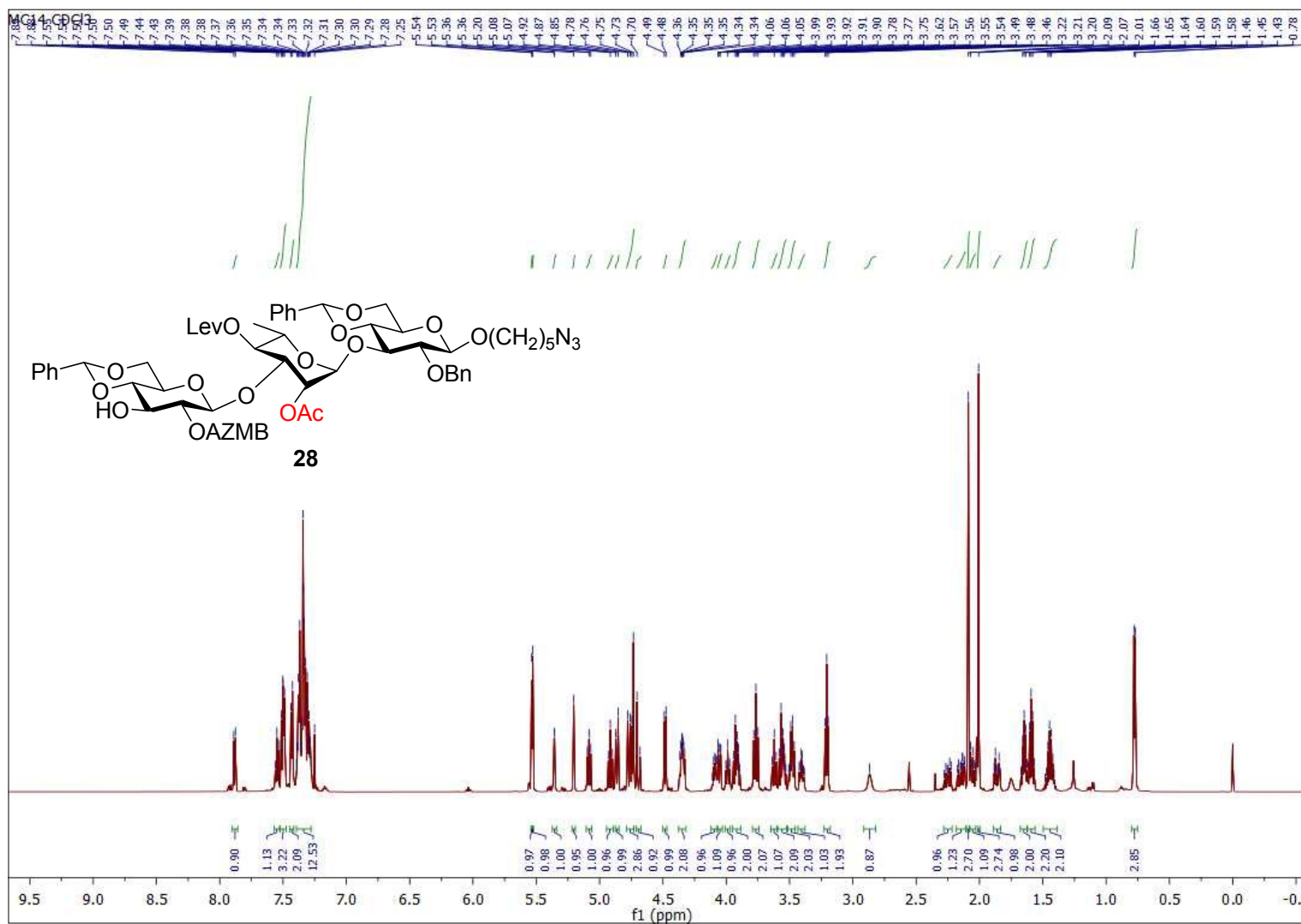
Supplementary Figure 55 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 27 (+ 10% of unknown inseparable impurity)



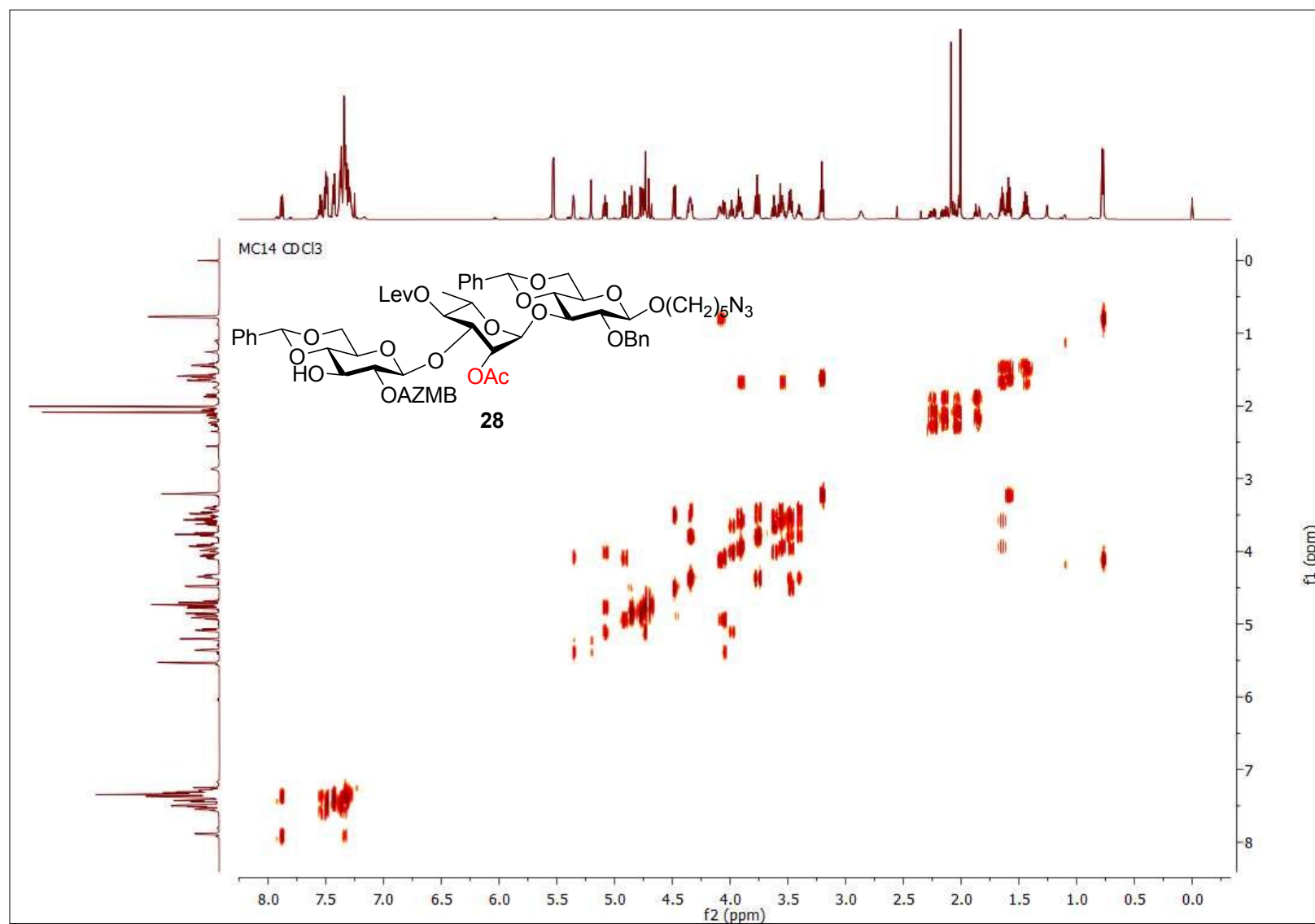
Supplementary Figure S6 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 27 (+ 10% of unknown inseparable impurity)



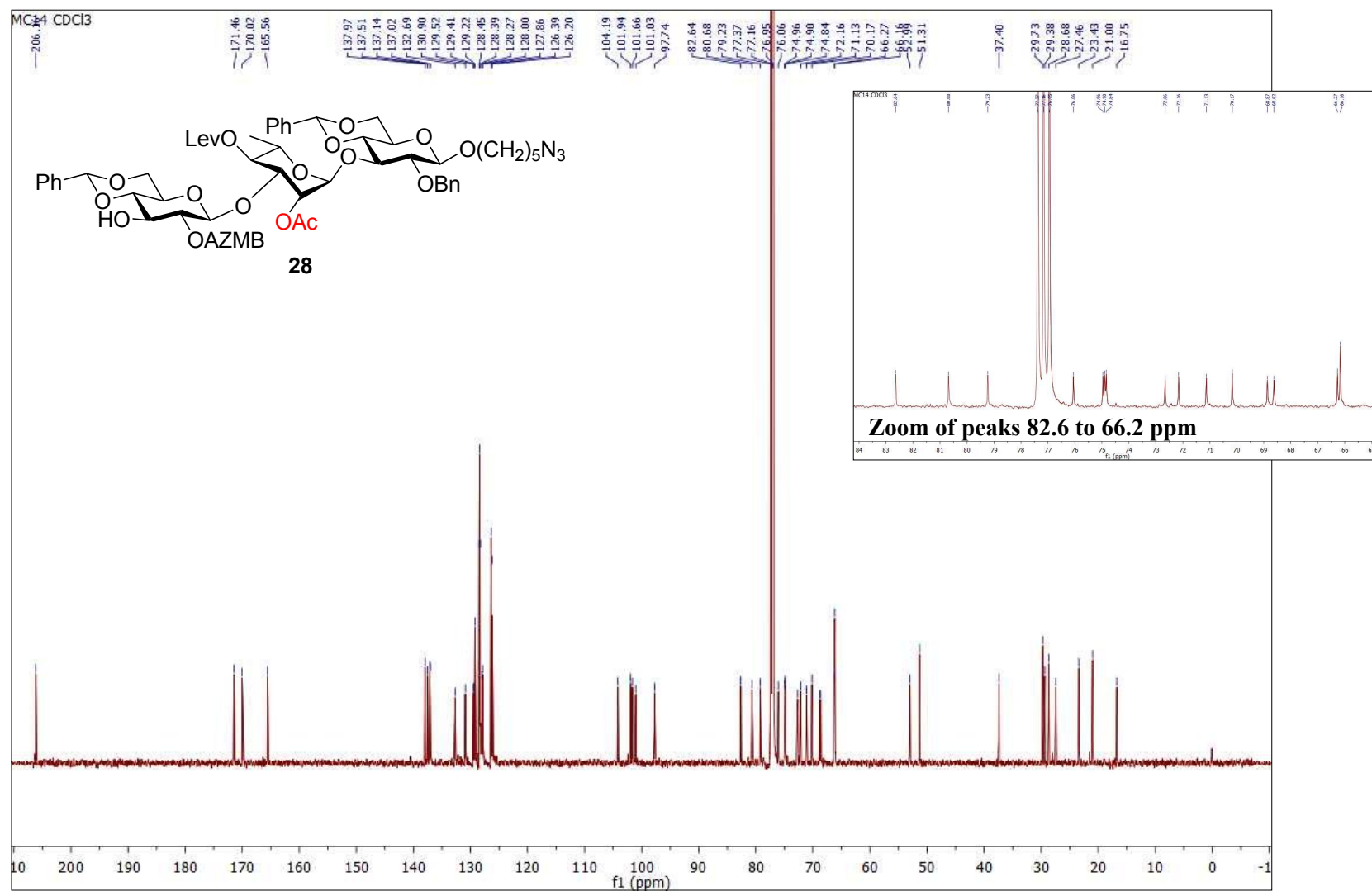
Supplementary Figure S7 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 28



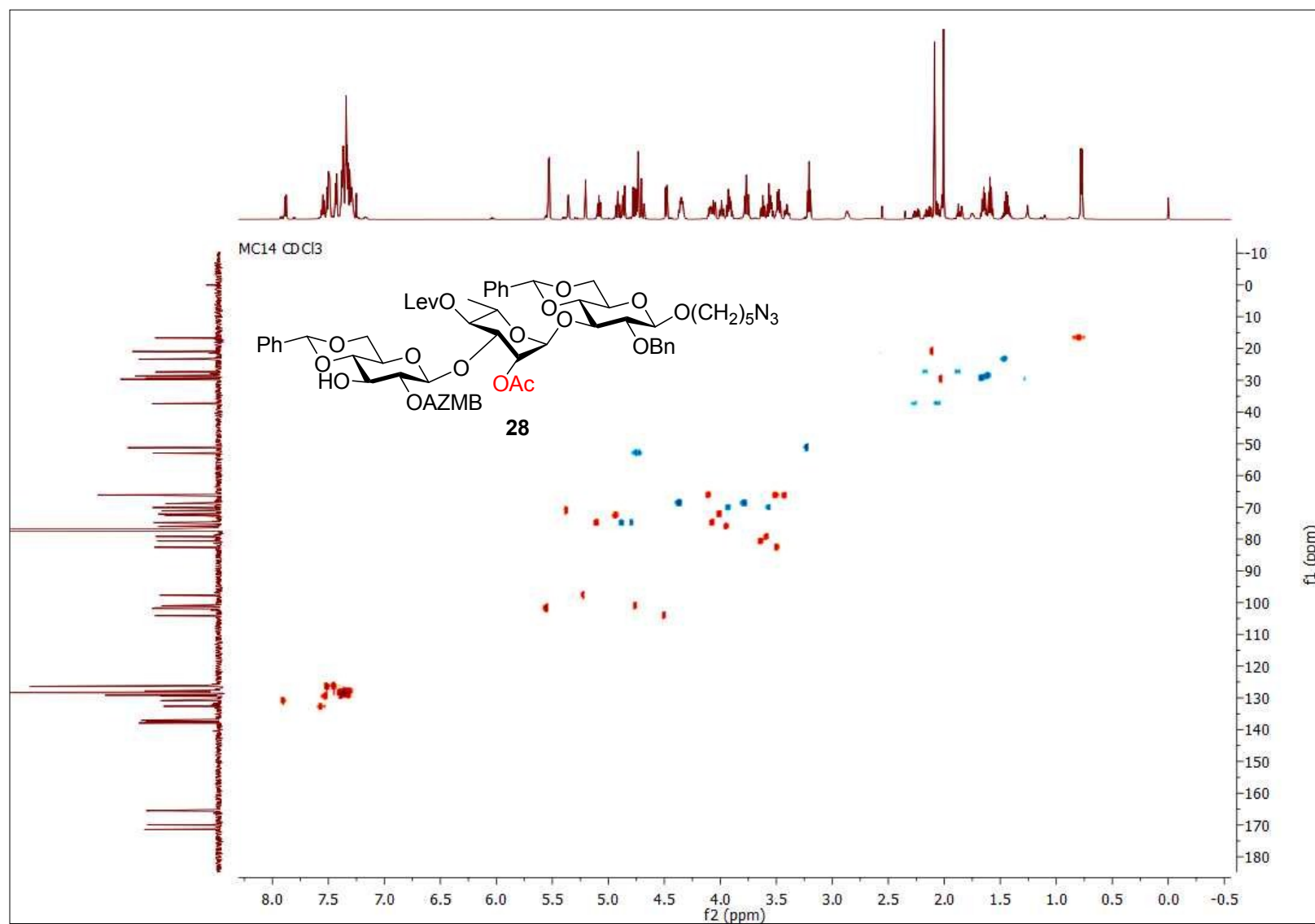
Supplementary Figure 58 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 28



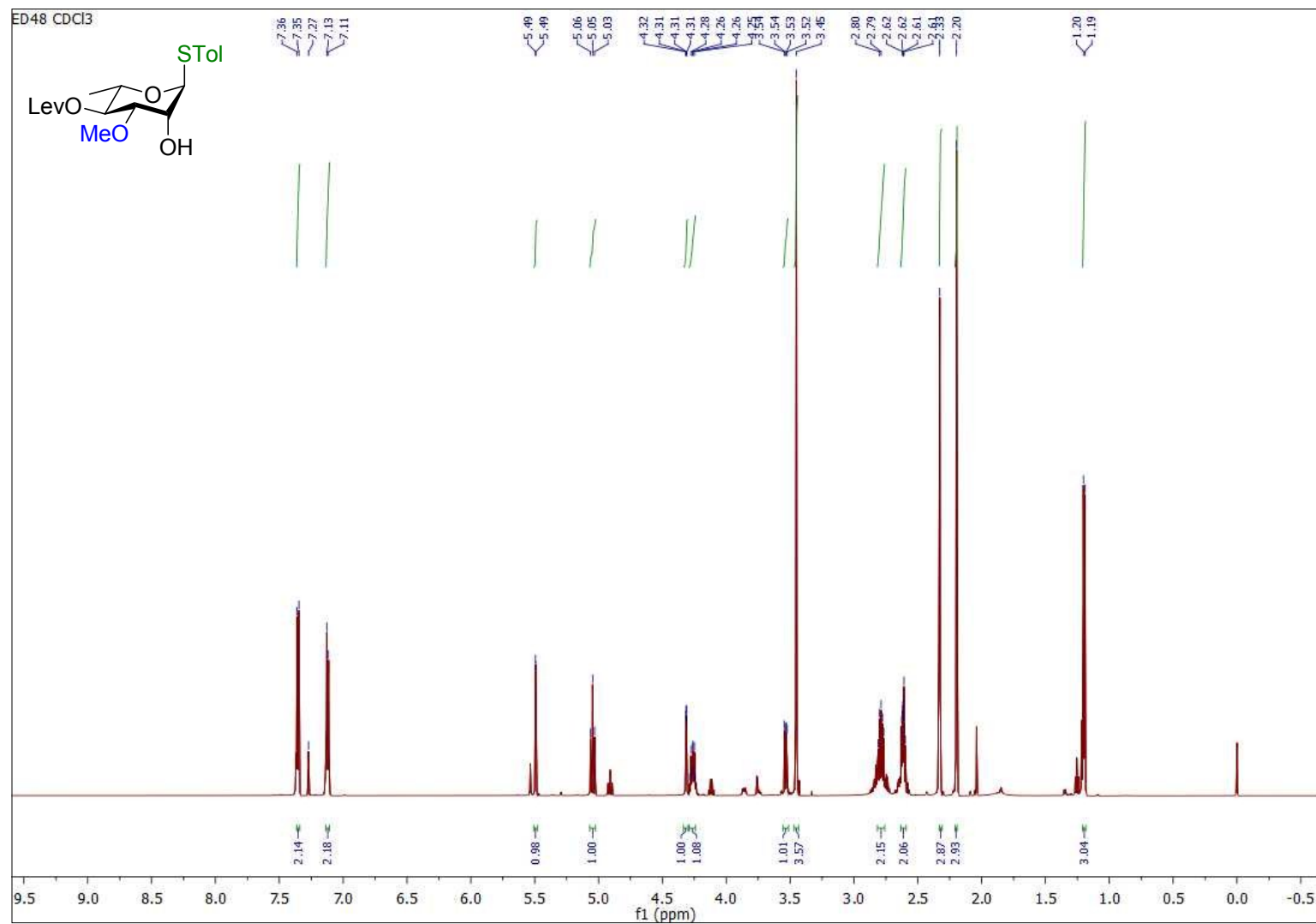
Supplementary Figure 59 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 28



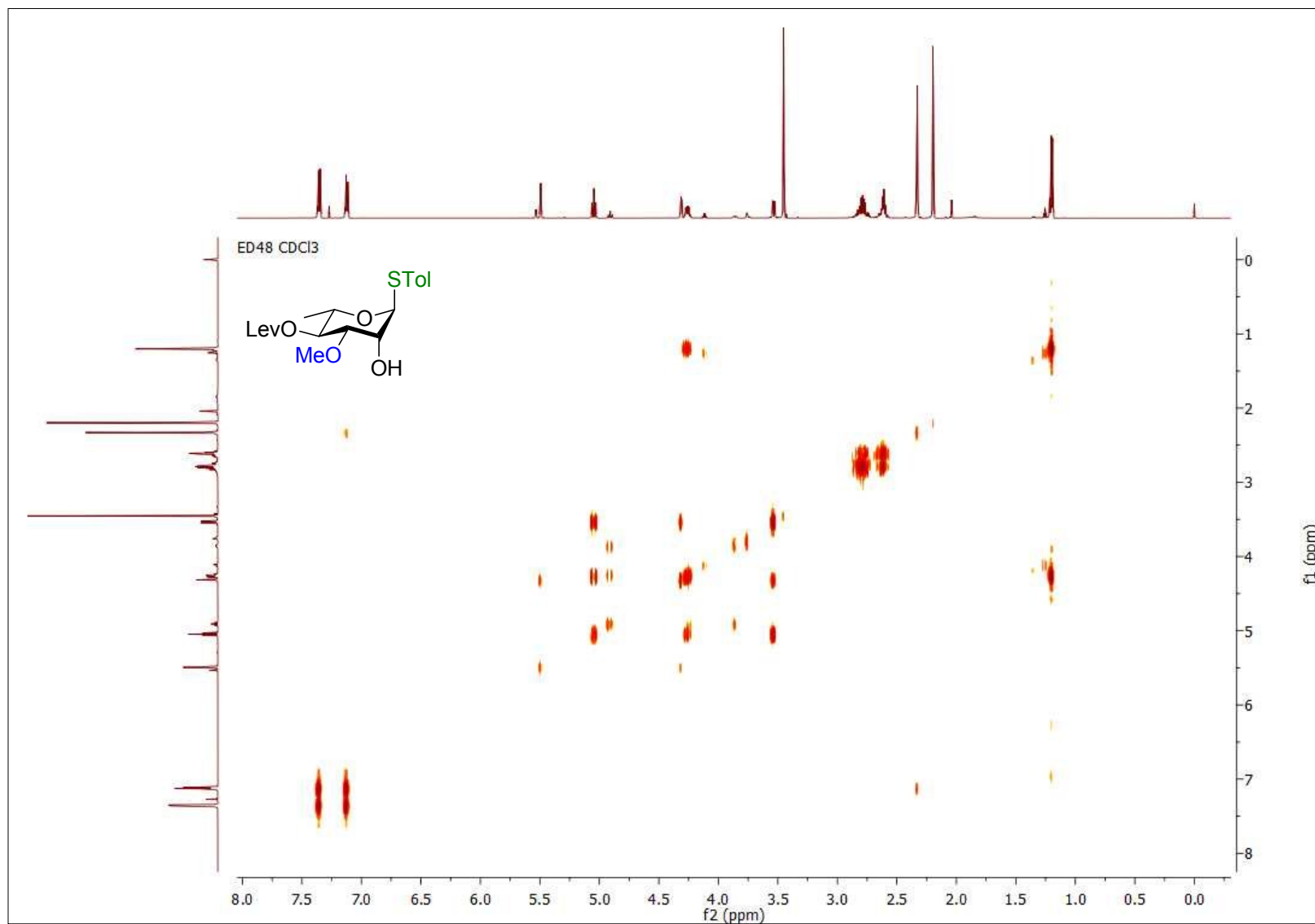
Supplementary Figure 60 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 28



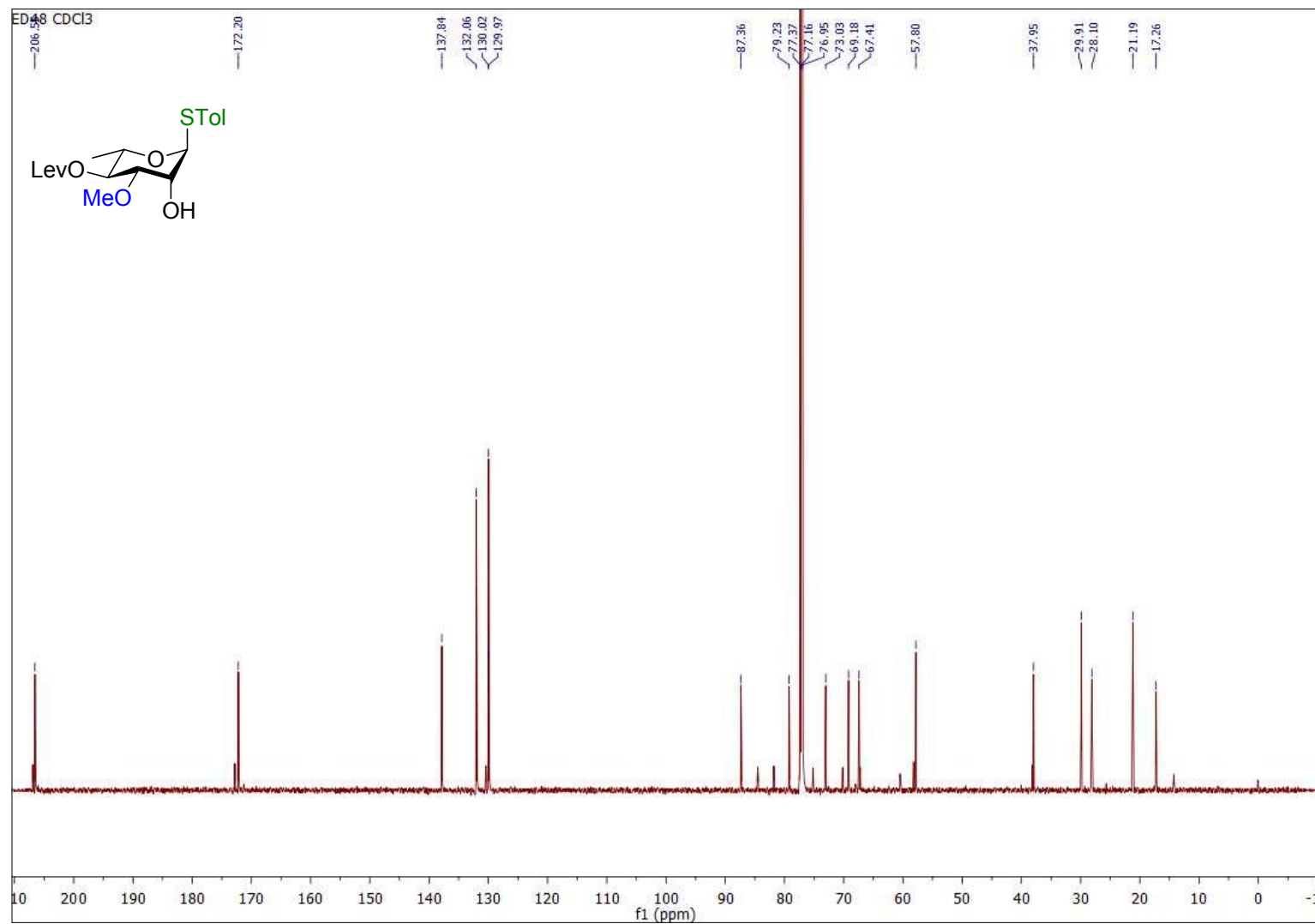
Supplementary Figure 61 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-methyl-1-thio- α -L-rhamnopyranoside



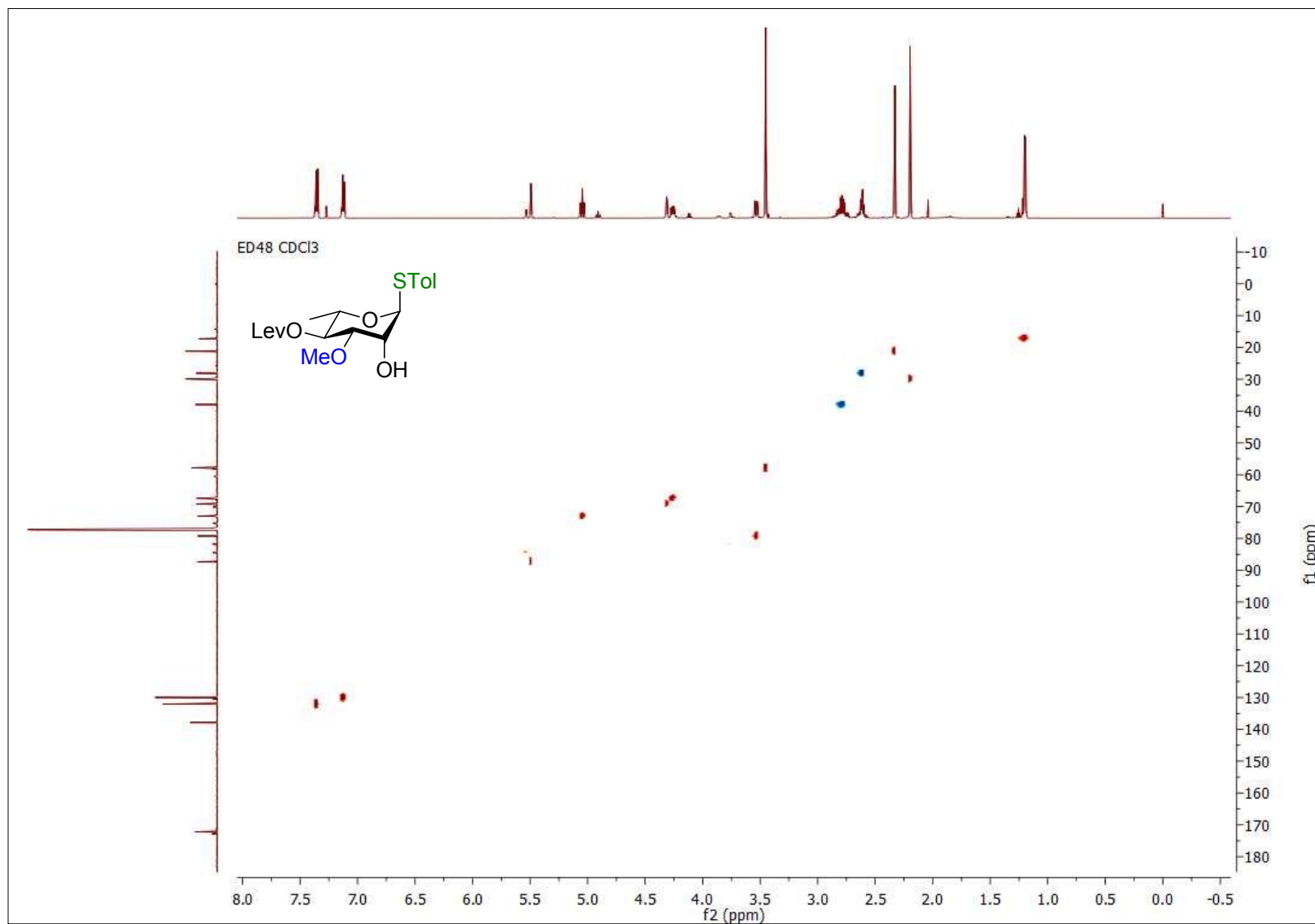
Supplementary Figure 62 | COSY NMR spectrum (CDCl₃, 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-methyl-1-thio- α -L-rhamnopyranoside



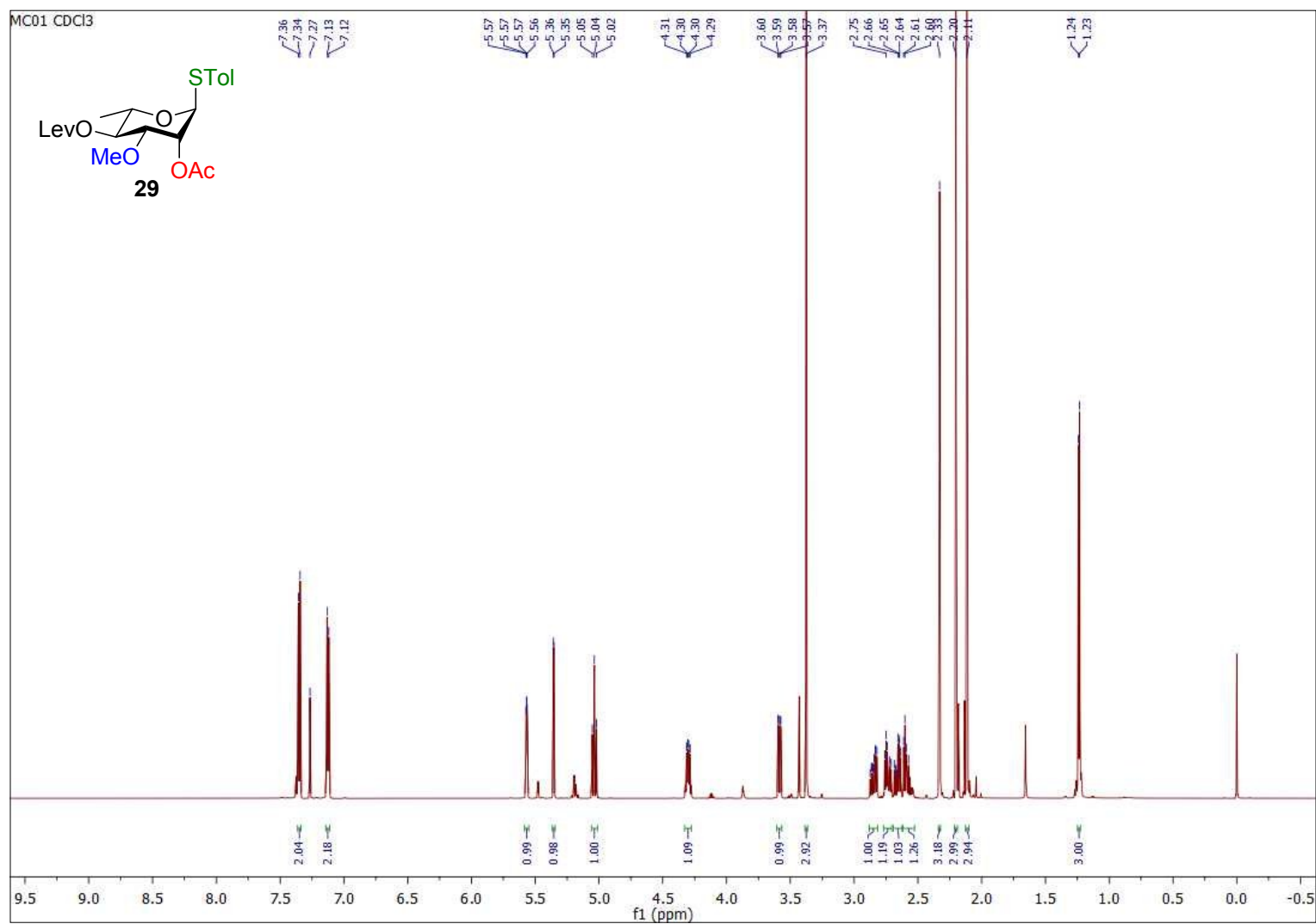
Supplementary Figure 63 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-methyl-1-thio- α -L-rhamnopyranoside



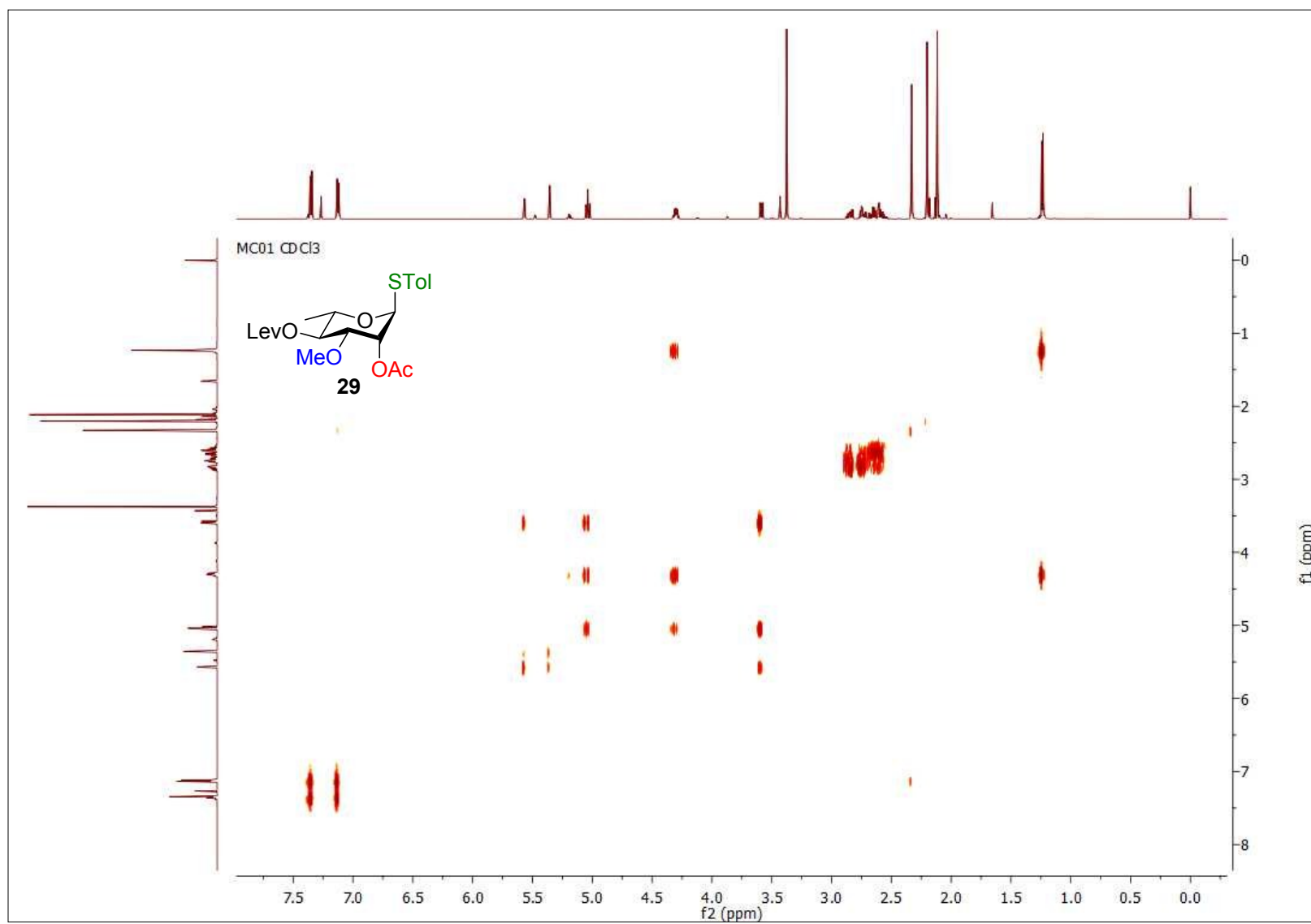
Supplementary Figure 64 | HSQC NMR spectrum (CDCl₃, 600 MHz) of *para*-methylphenyl 4-*O*-levulinoyl-3-*O*-methyl-1-thio- α -L-rhamnopyranoside



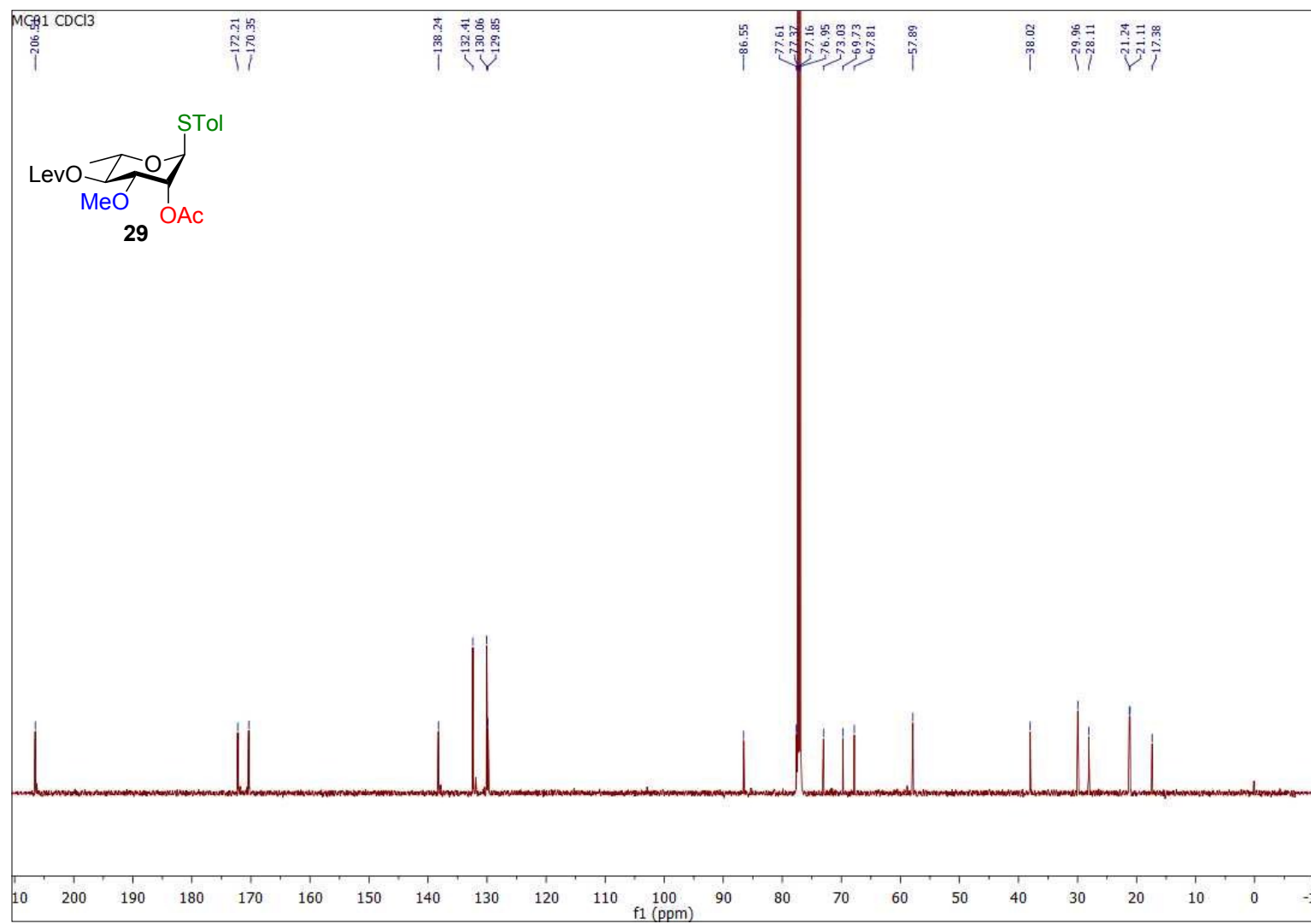
Supplementary Figure 65 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 29



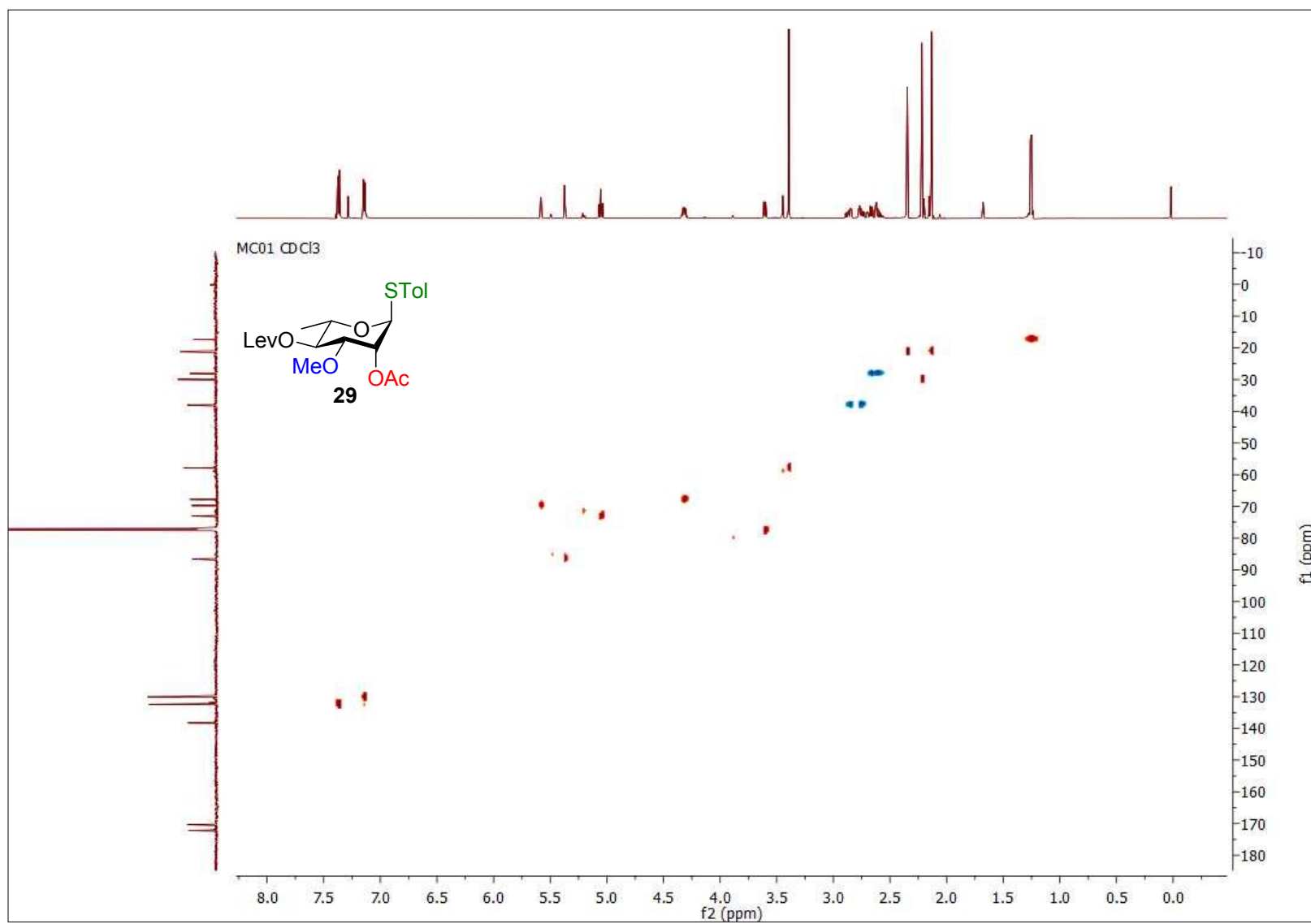
Supplementary Figure 66 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 29



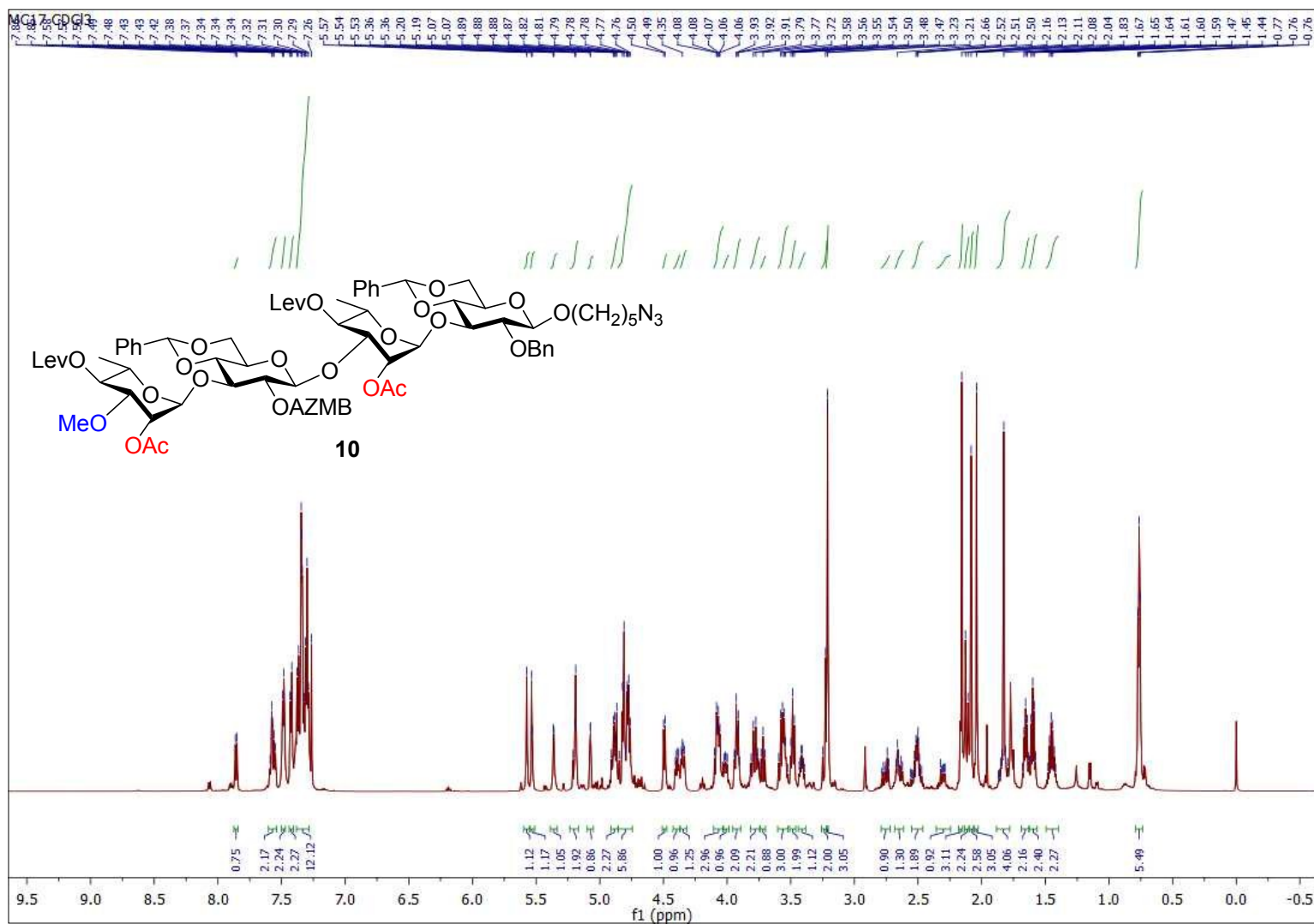
Supplementary Figure 67 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 29



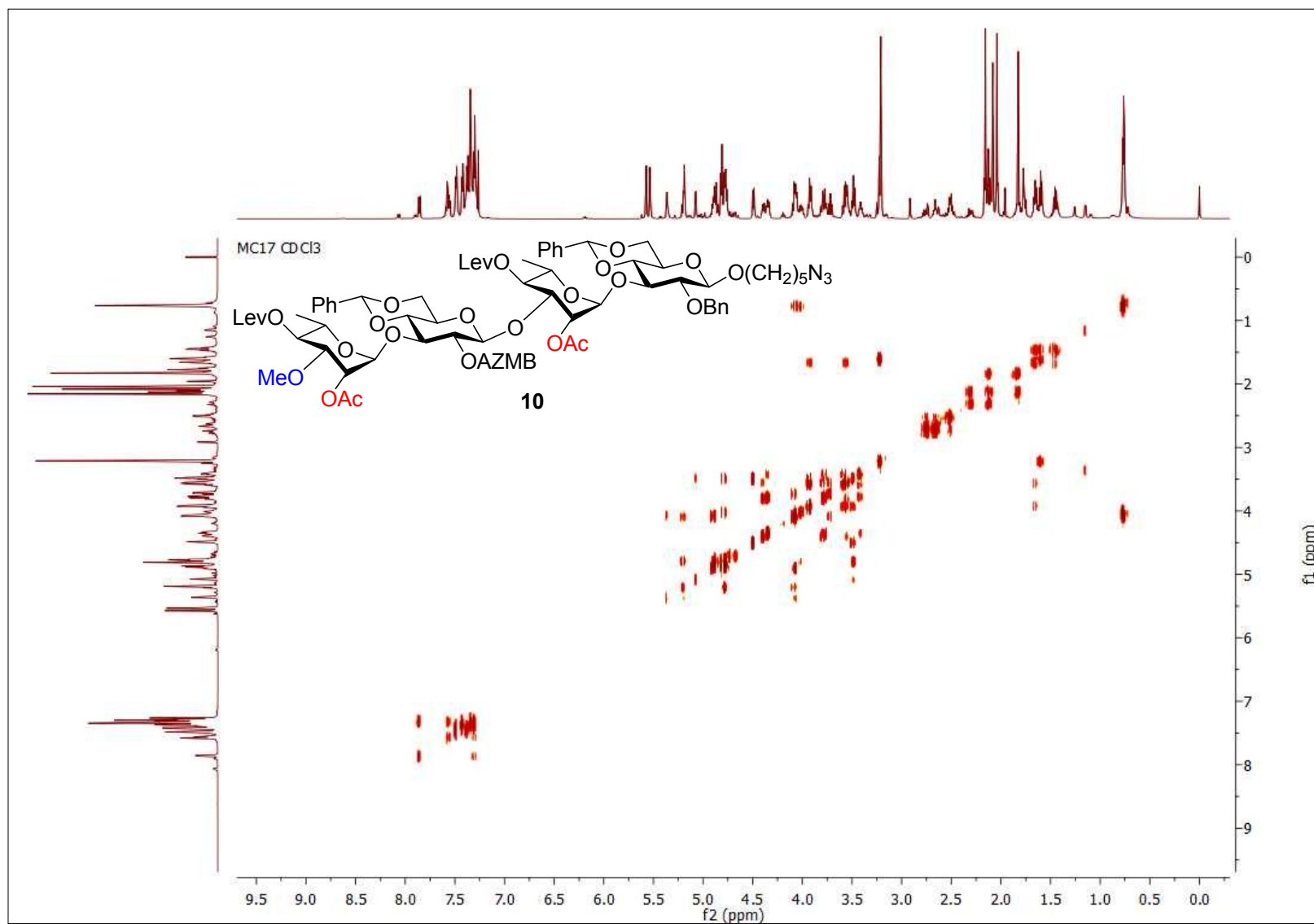
Supplementary Figure 68 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 29



Supplementary Figure 69 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 10 (+ 12% of unknown inseparable impurity)

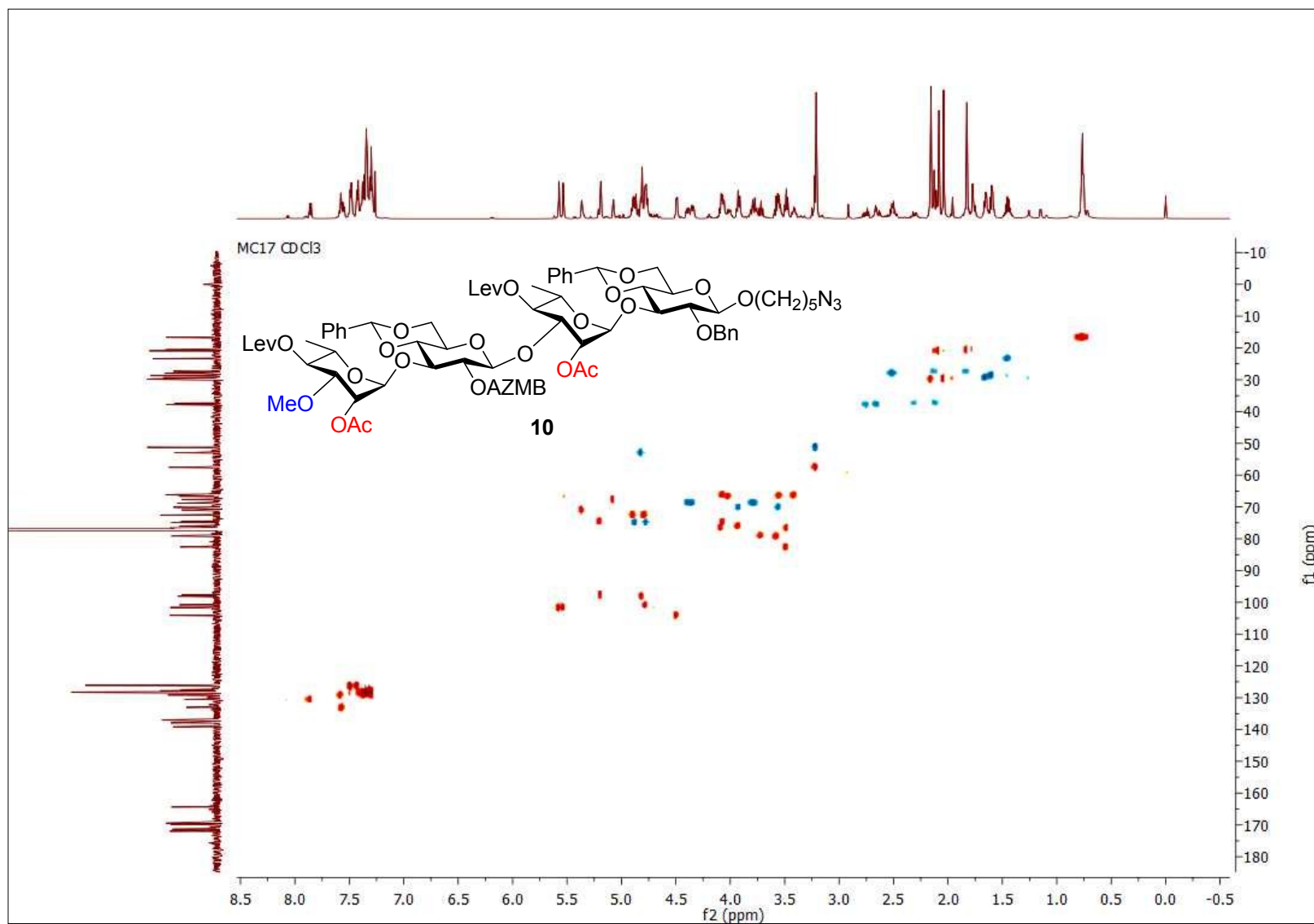


Supplementary Figure 70 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 10 (+ 12% of unknown inseparable impurity)

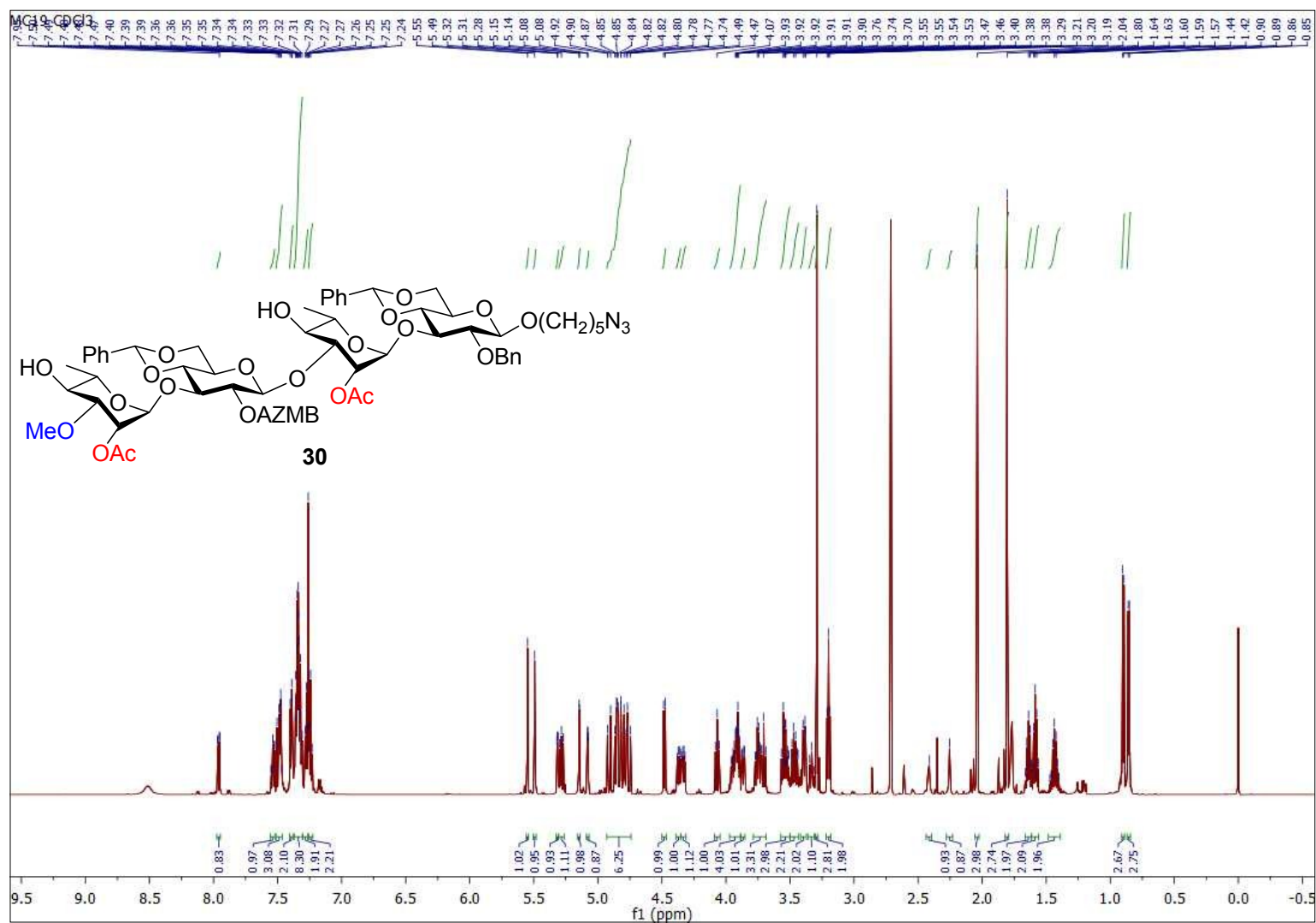


[illegible]

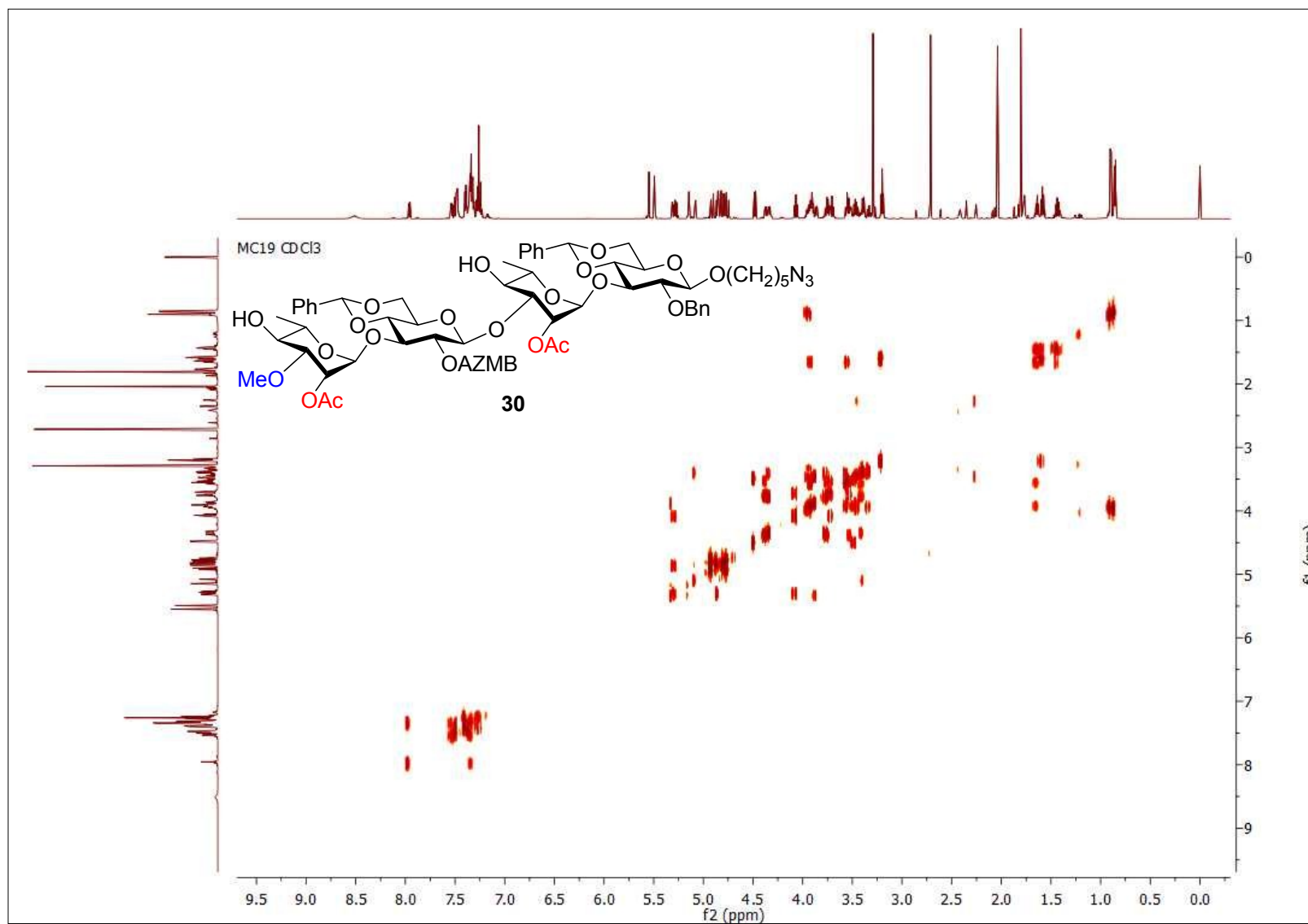
Supplementary Figure 72 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 10 (+ 12% of unknown inseparable impurity)



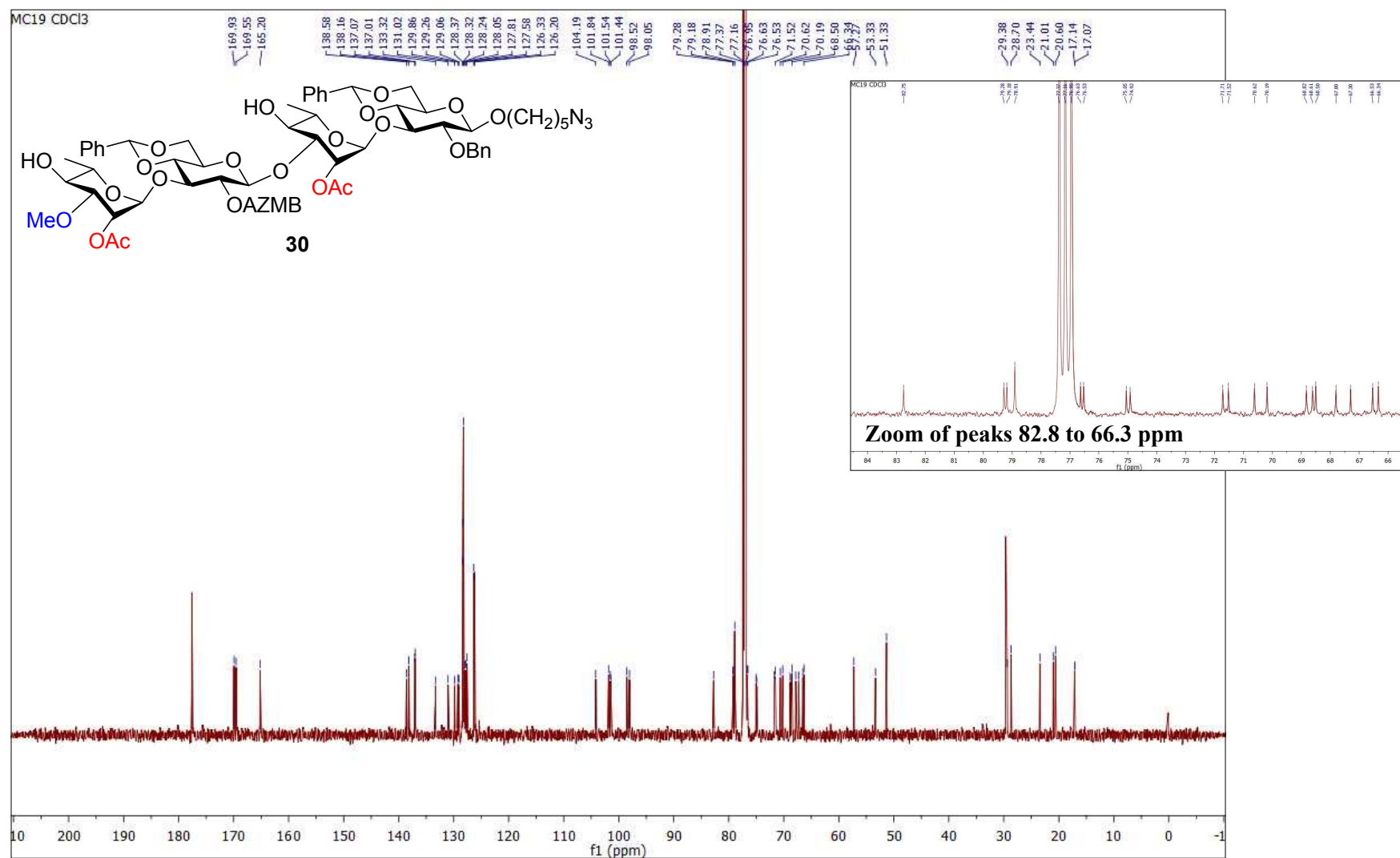
Supplementary Figure 73 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 30



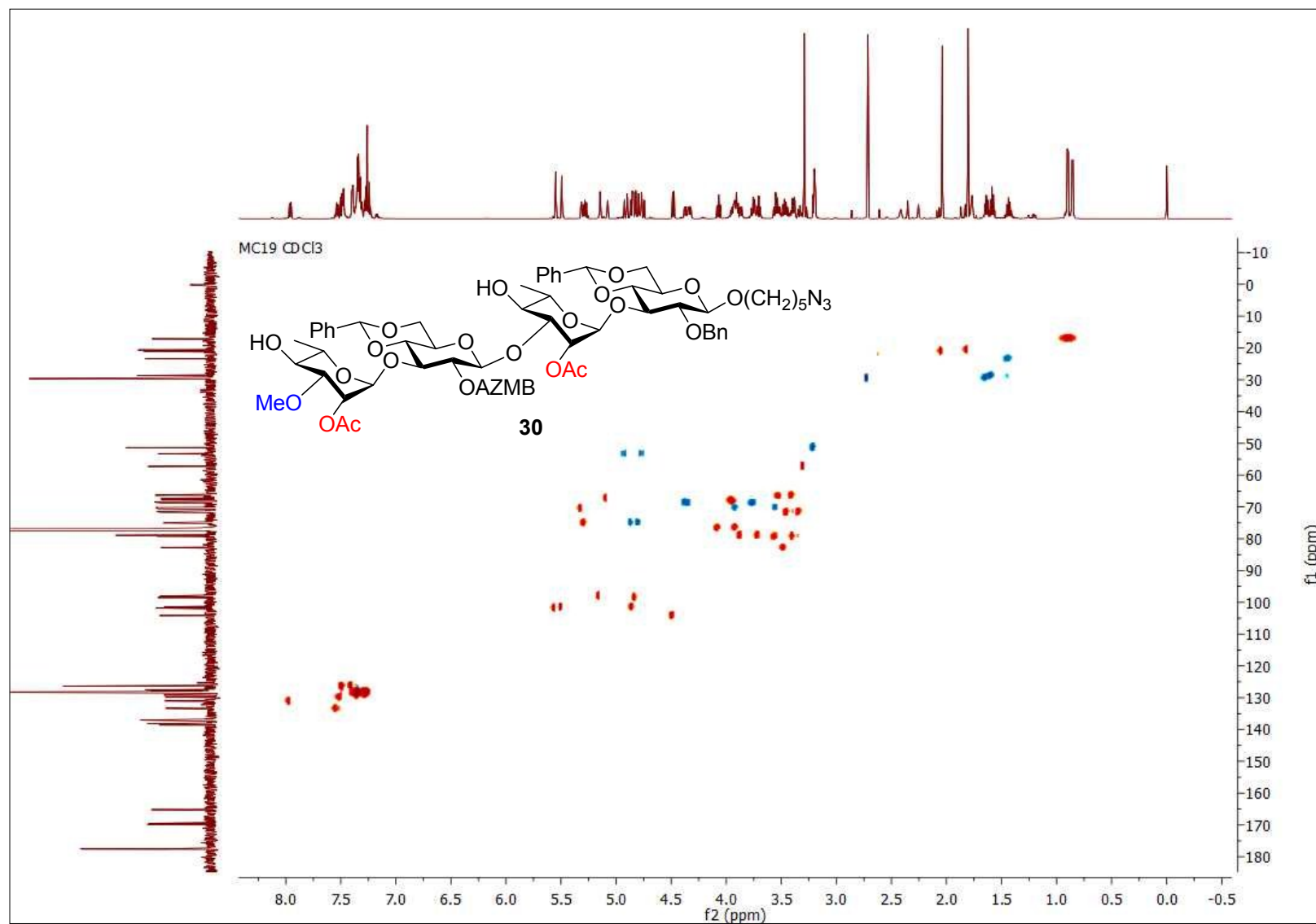
Supplementary Figure 74 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 30



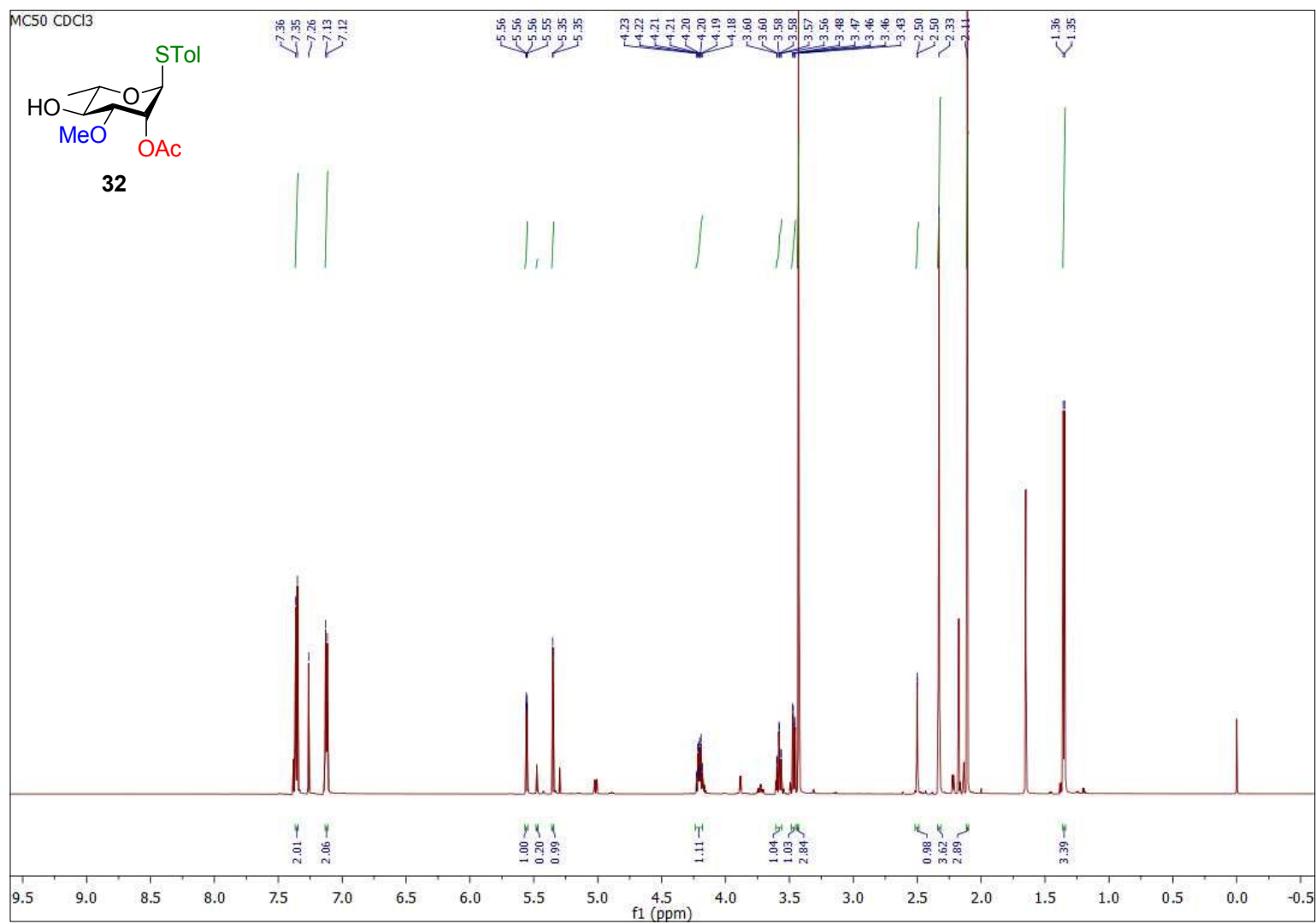
Supplementary Figure 75 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 30



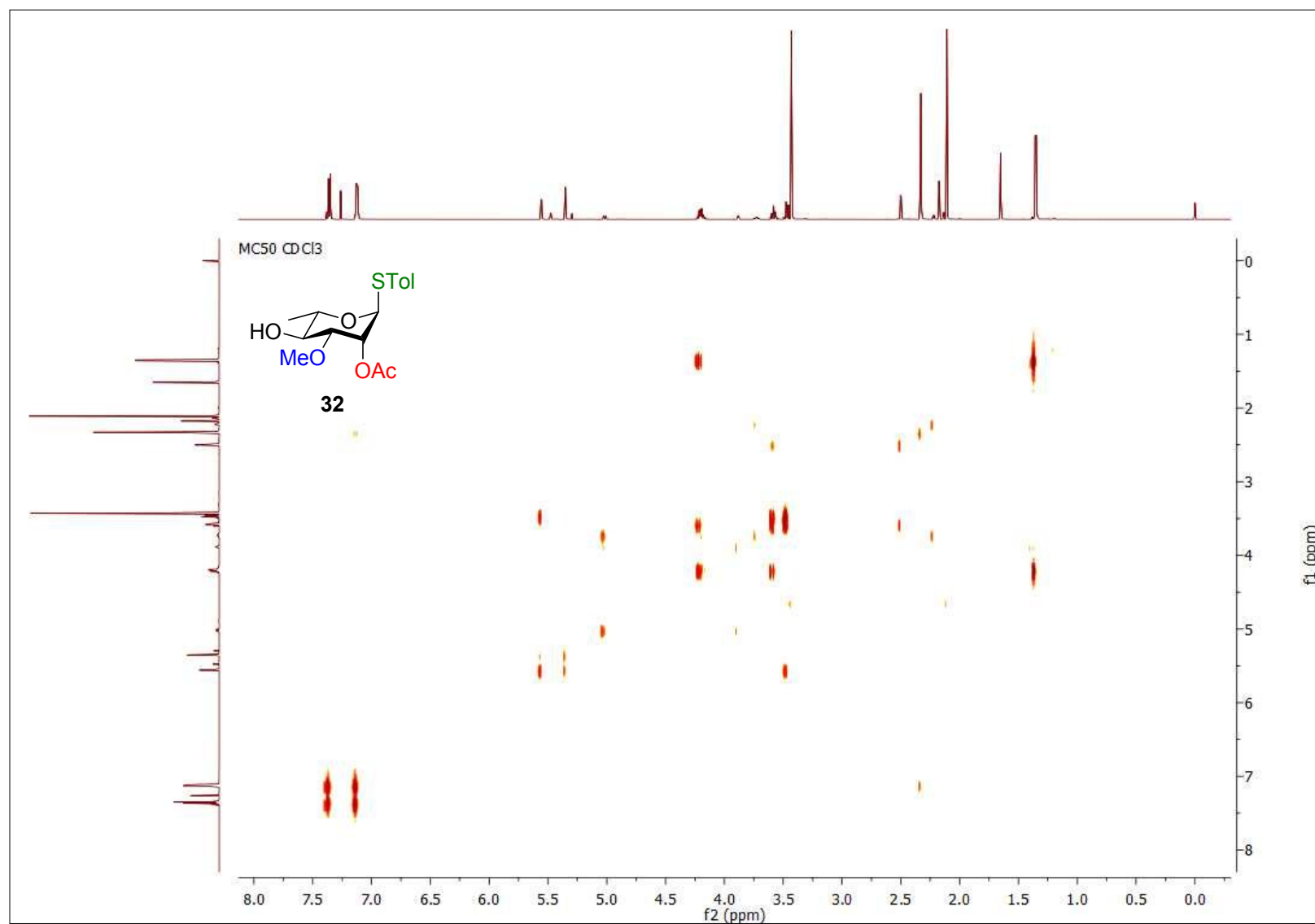
Supplementary Figure 76 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 30



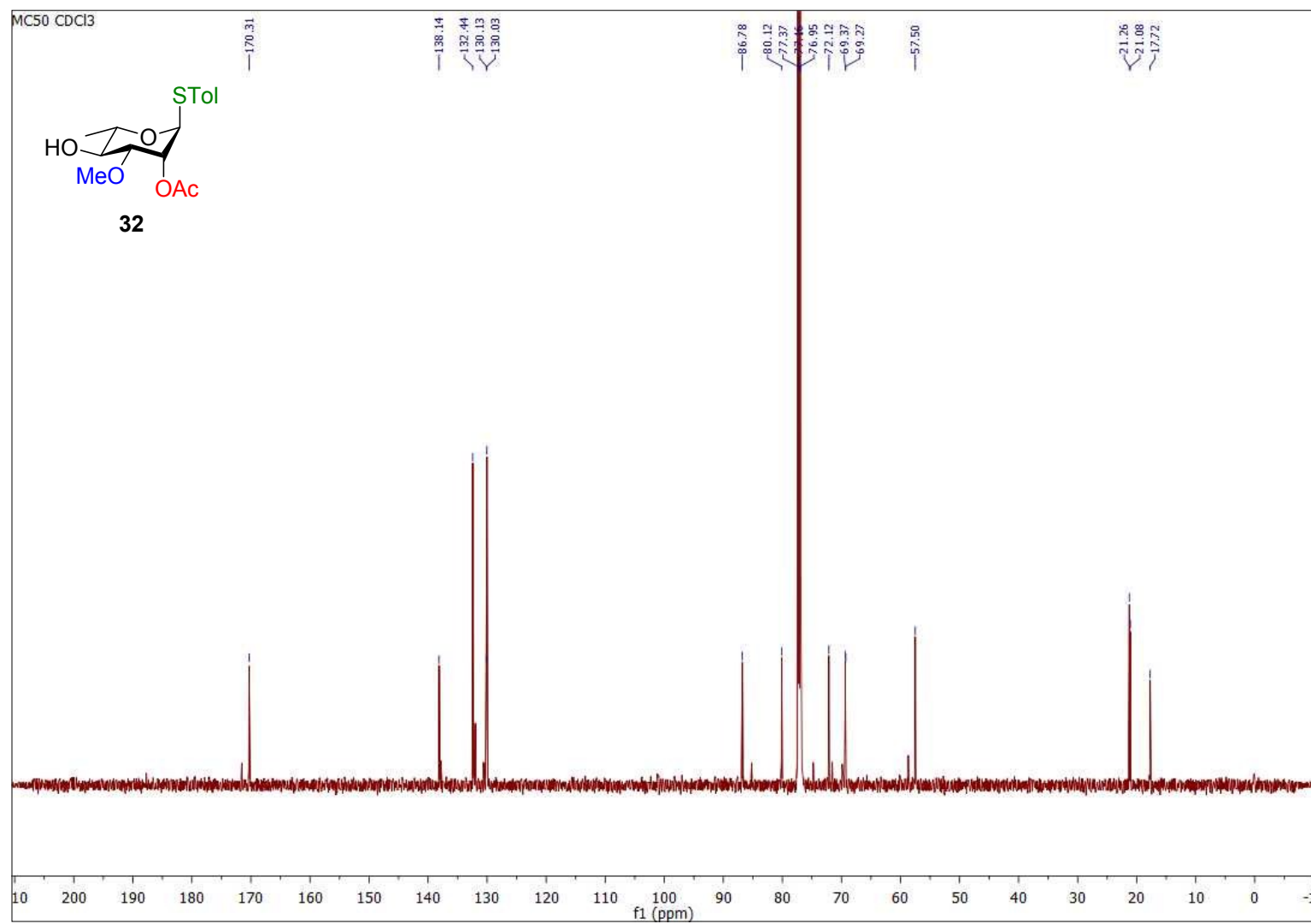
Supplementary Figure 77 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 32



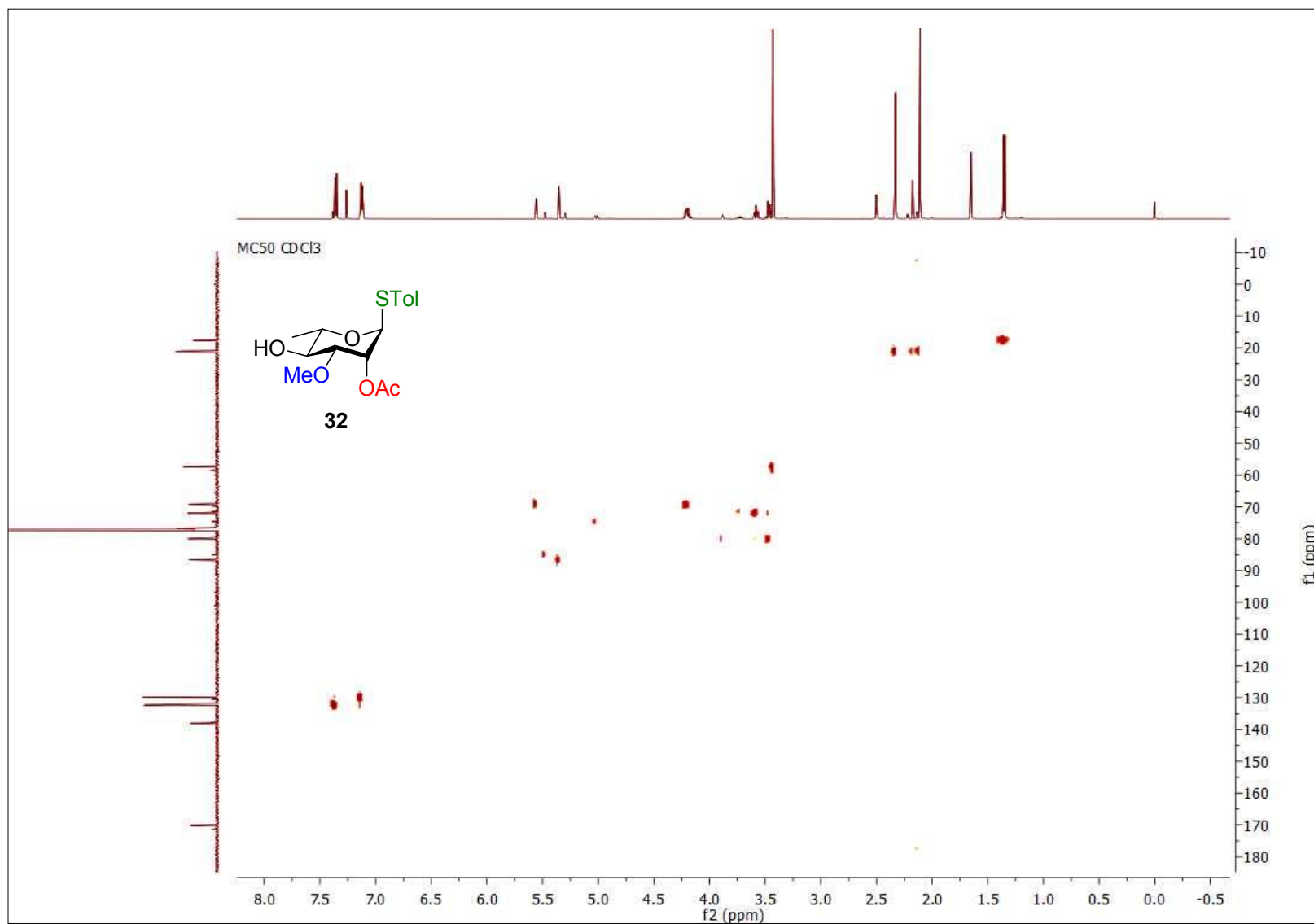
Supplementary Figure 78 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 32



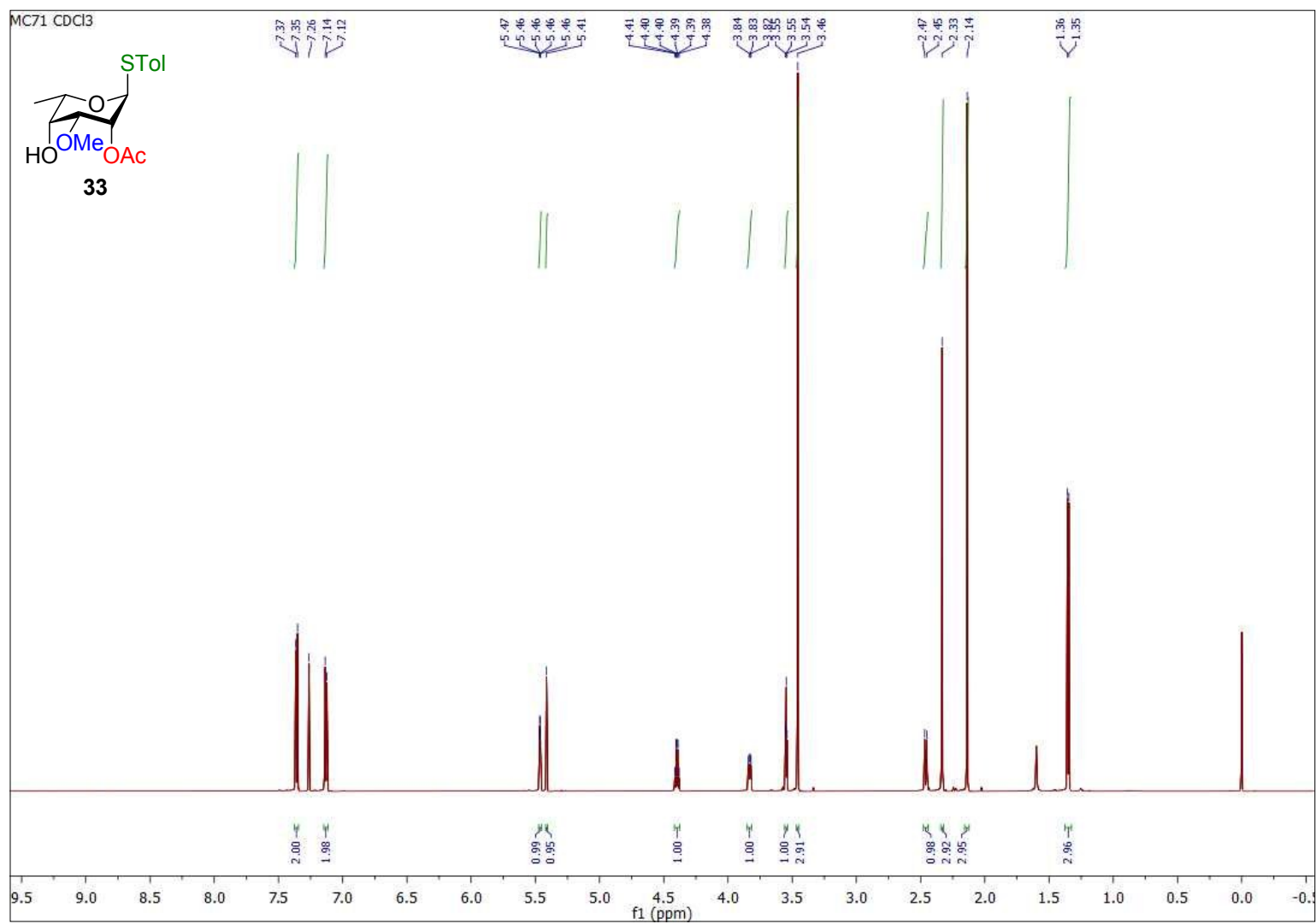
Supplementary Figure 79 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 32



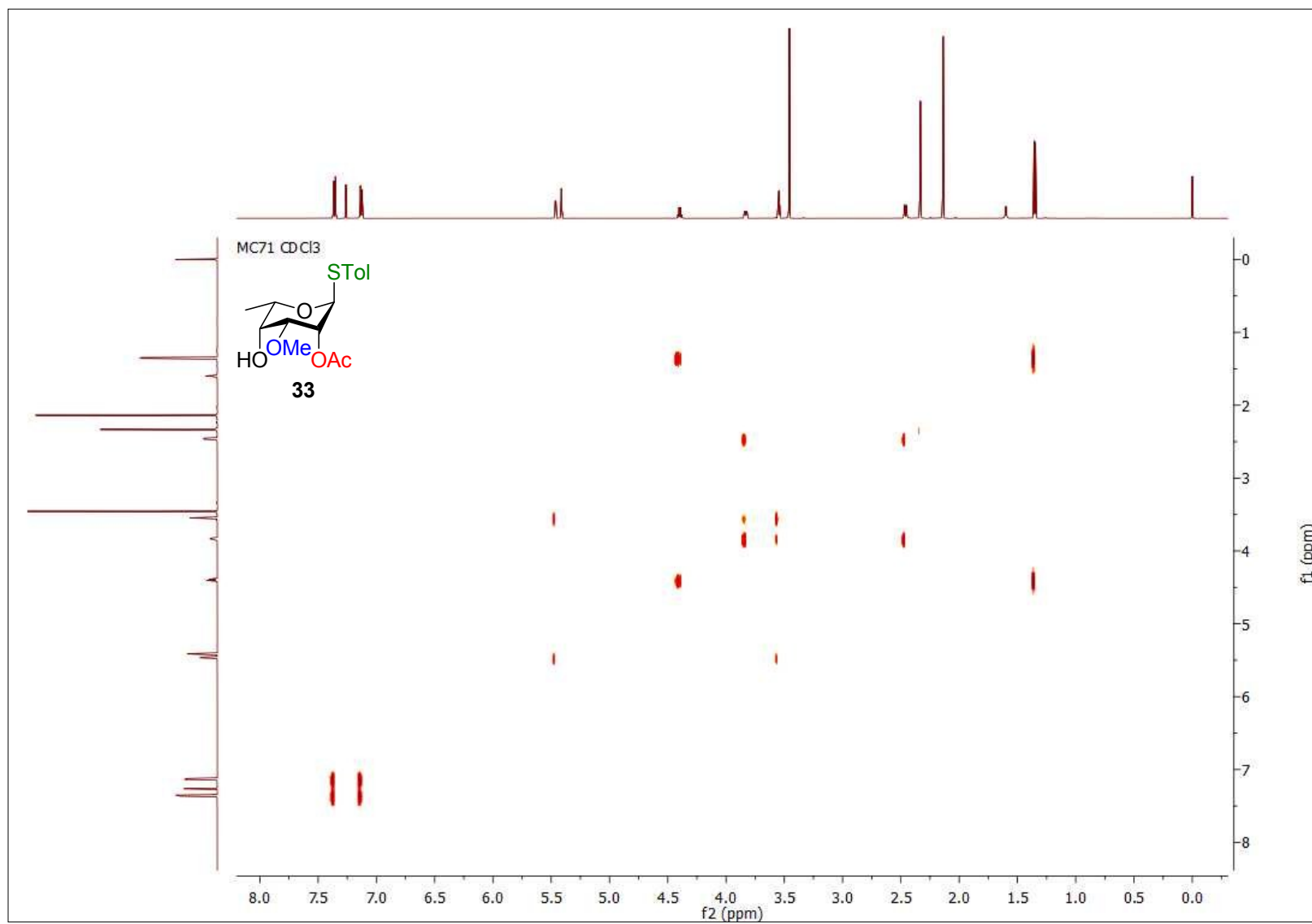
Supplementary Figure 80 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 32



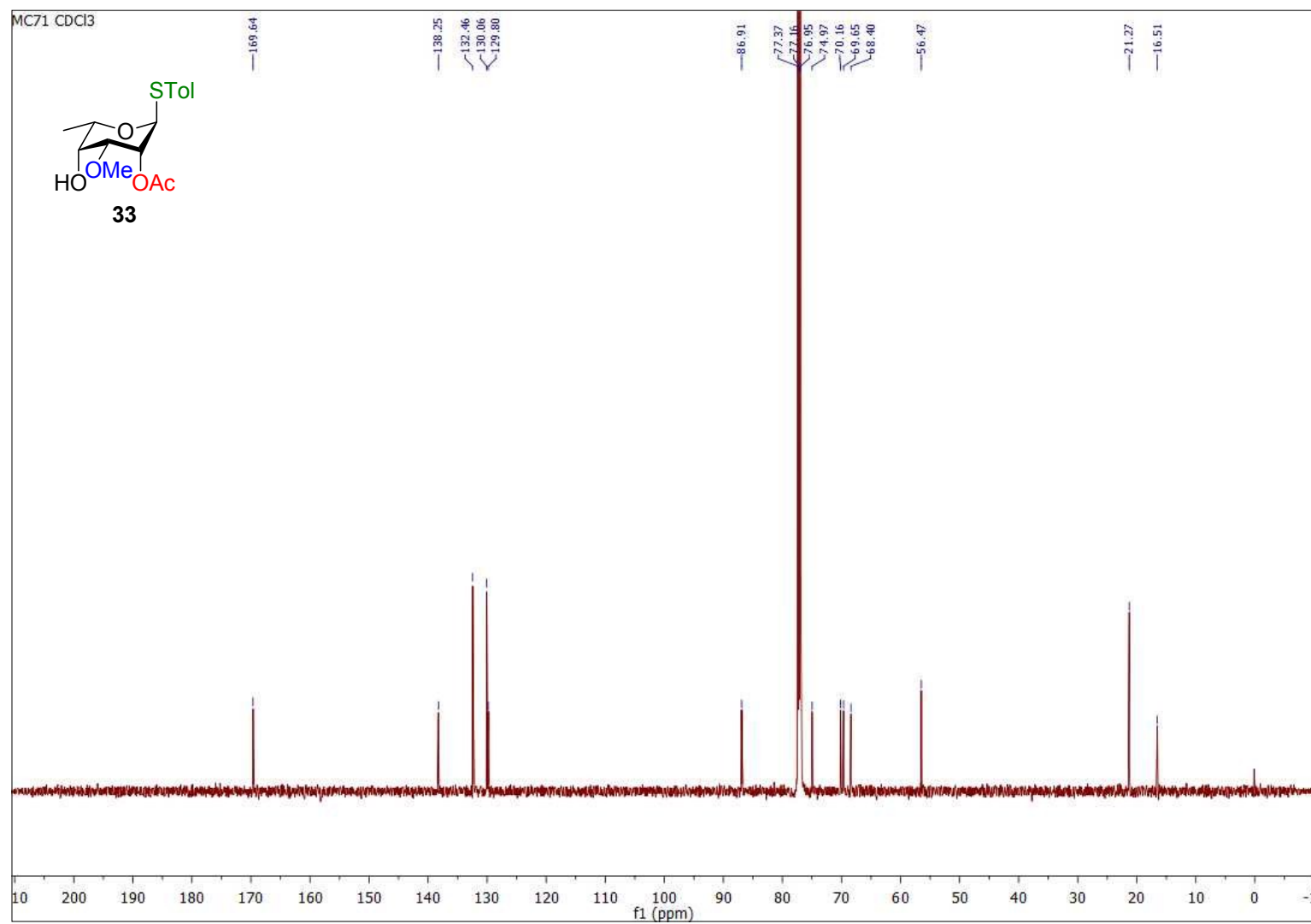
Supplementary Figure 81 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 33



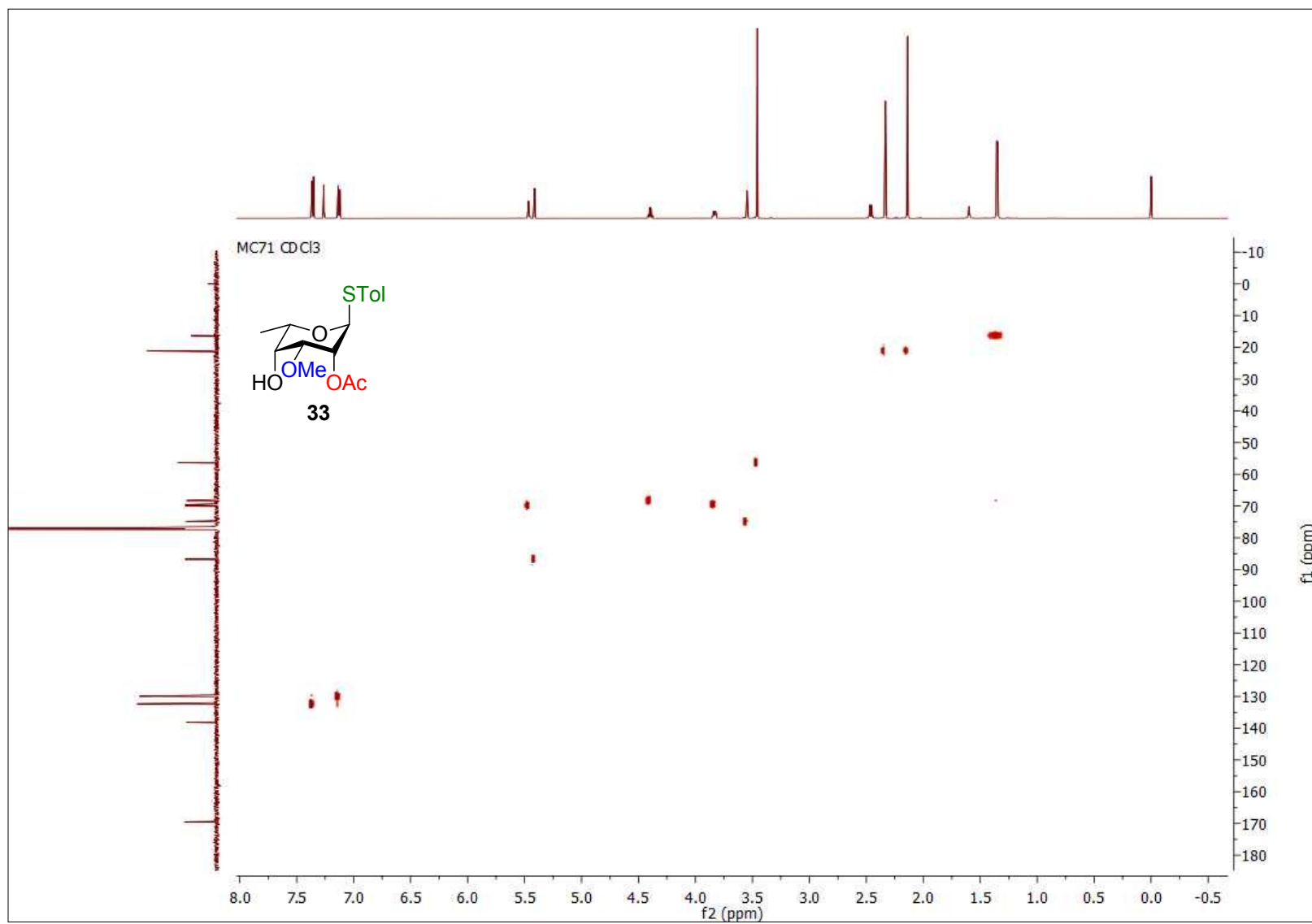
Supplementary Figure 82 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 33



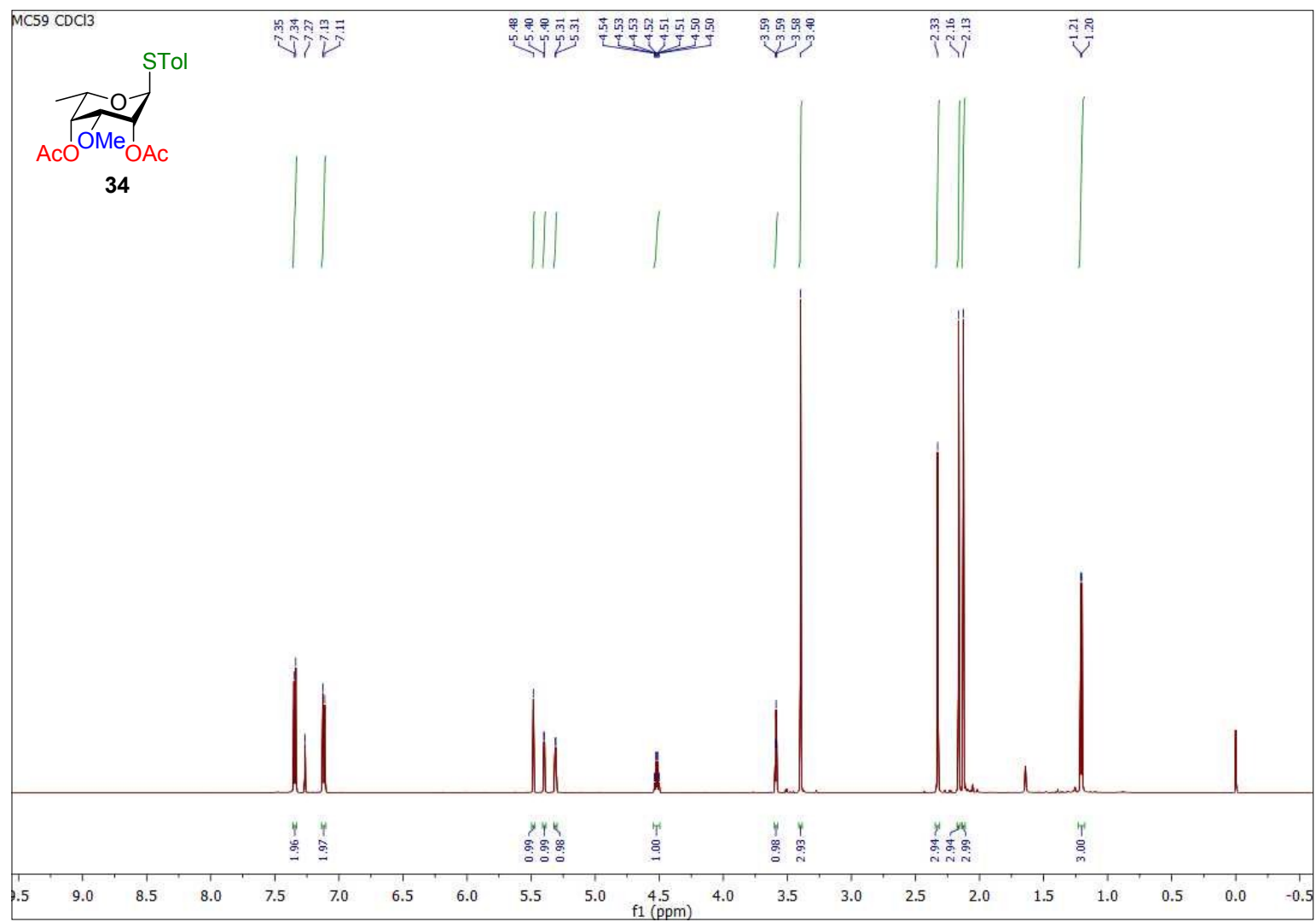
Supplementary Figure 83 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 33



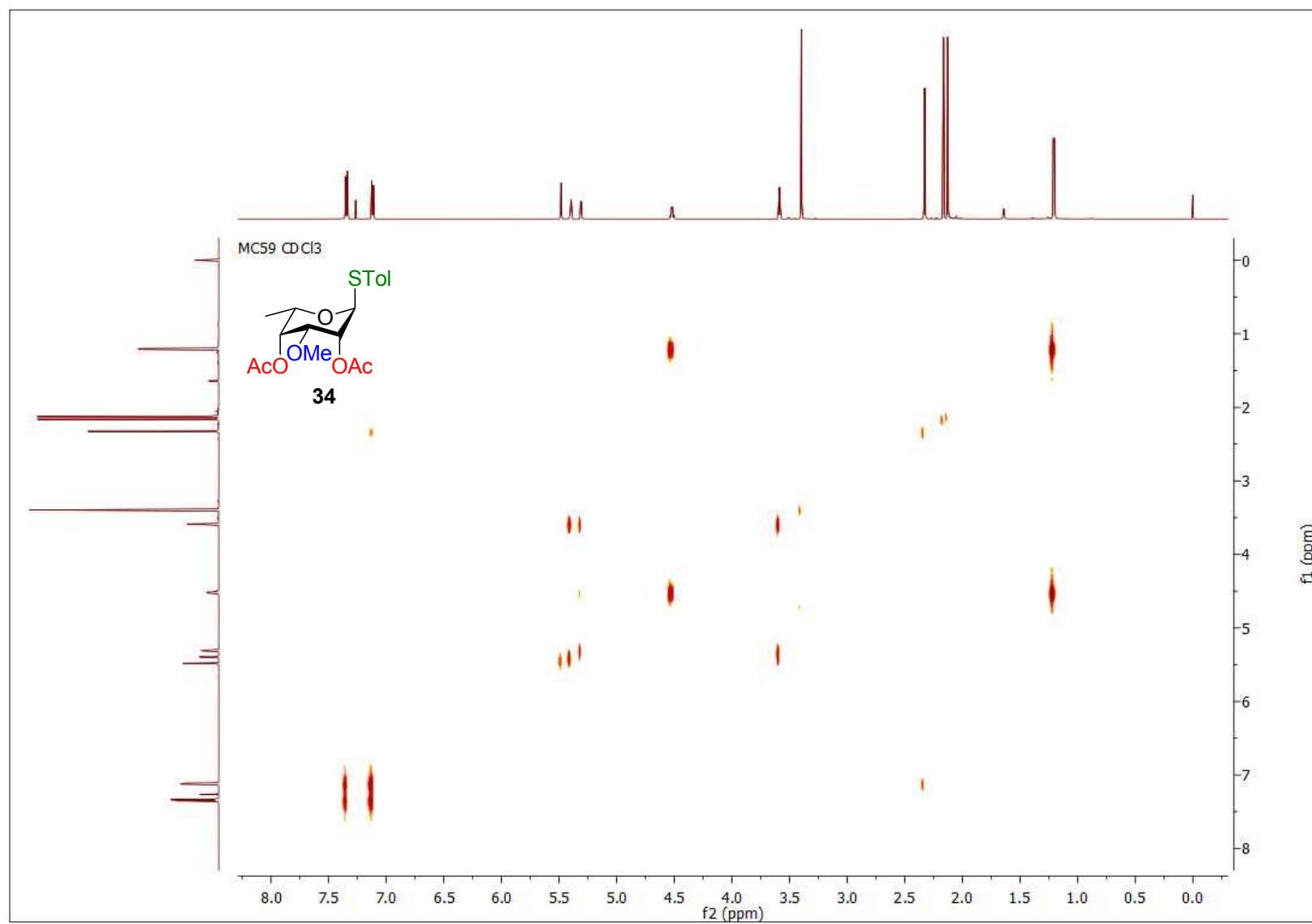
Supplementary Figure 84 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 33



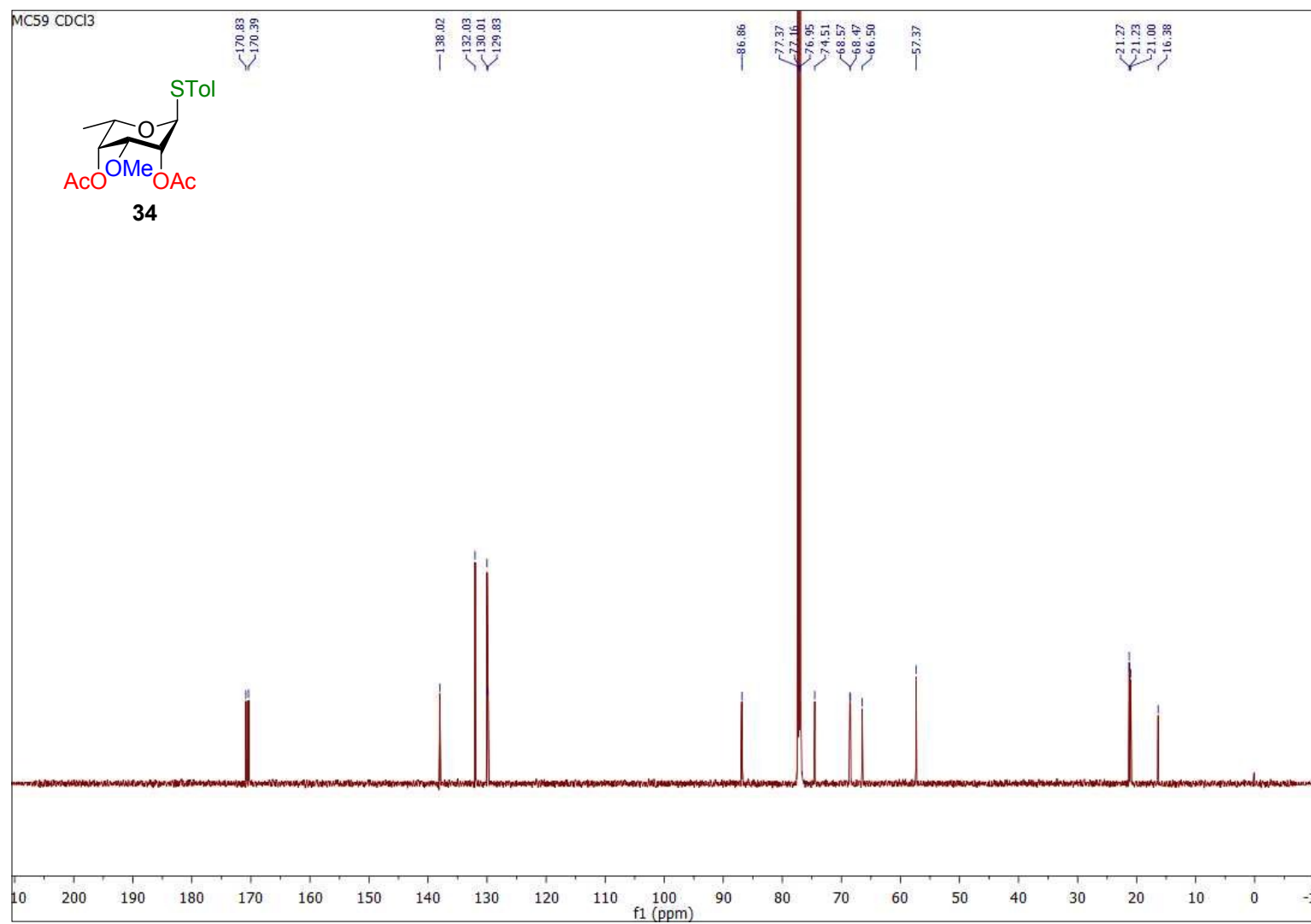
Supplementary Figure 85 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 34



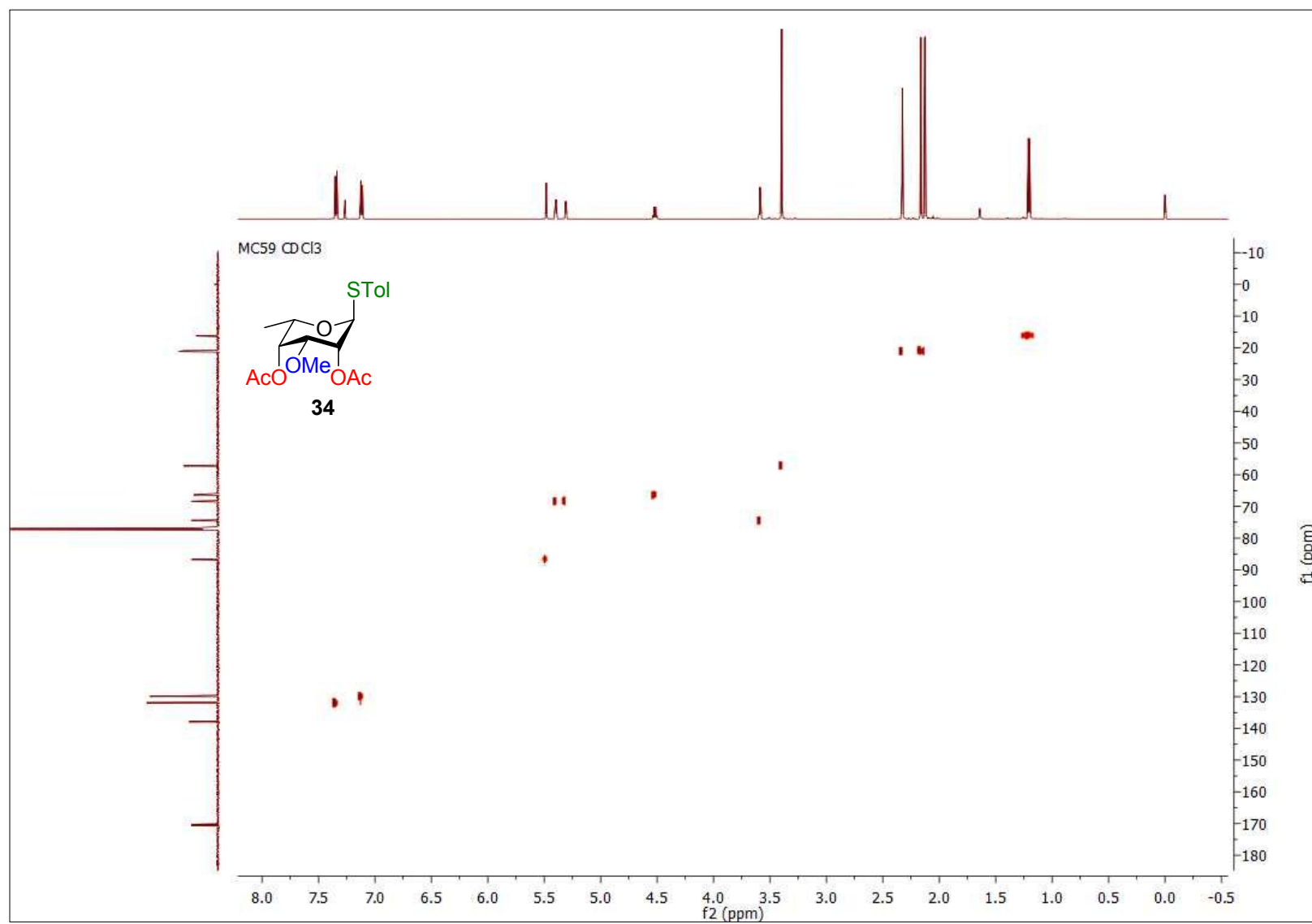
Supplementary Figure 86 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 34



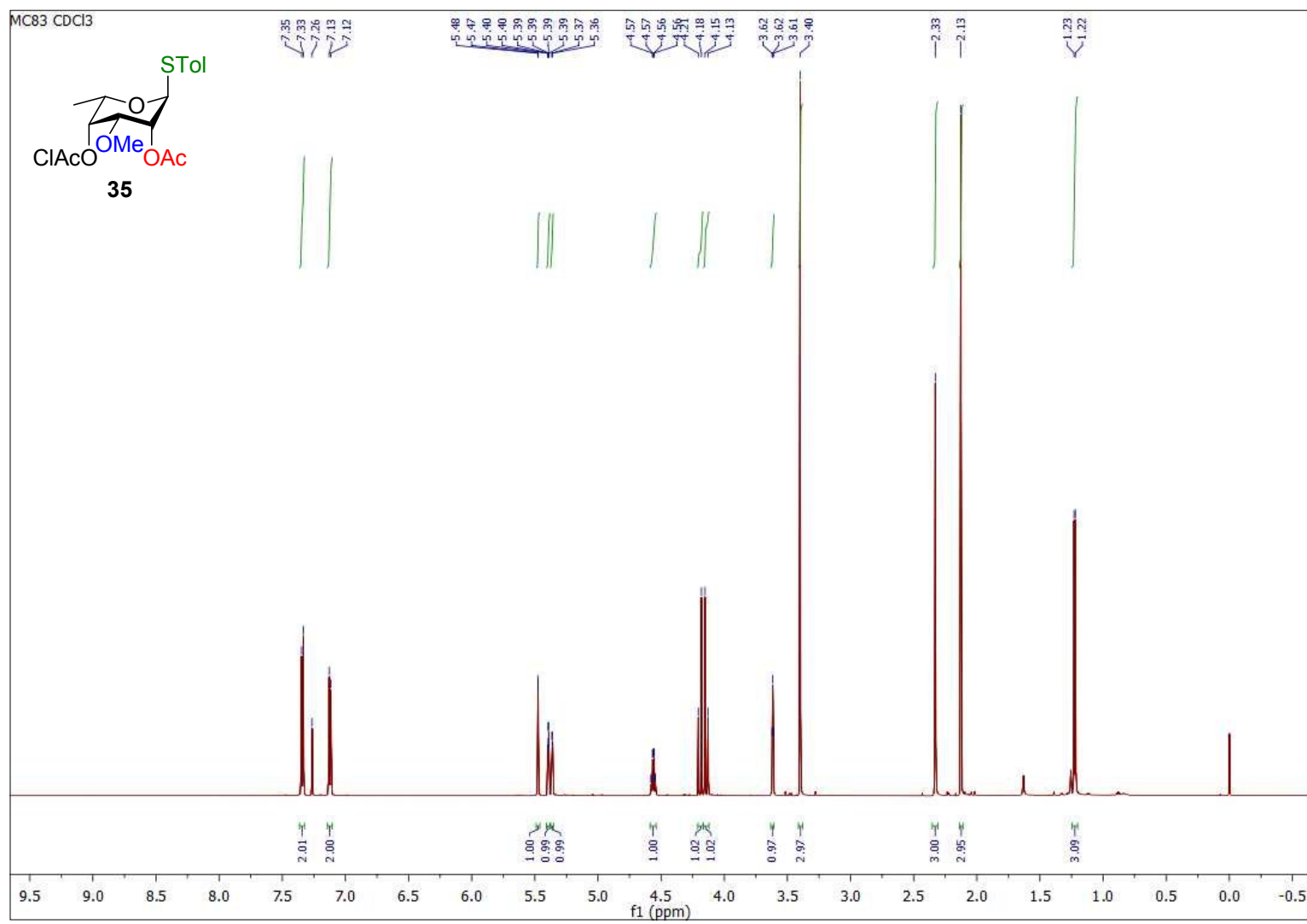
Supplementary Figure 87 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 34



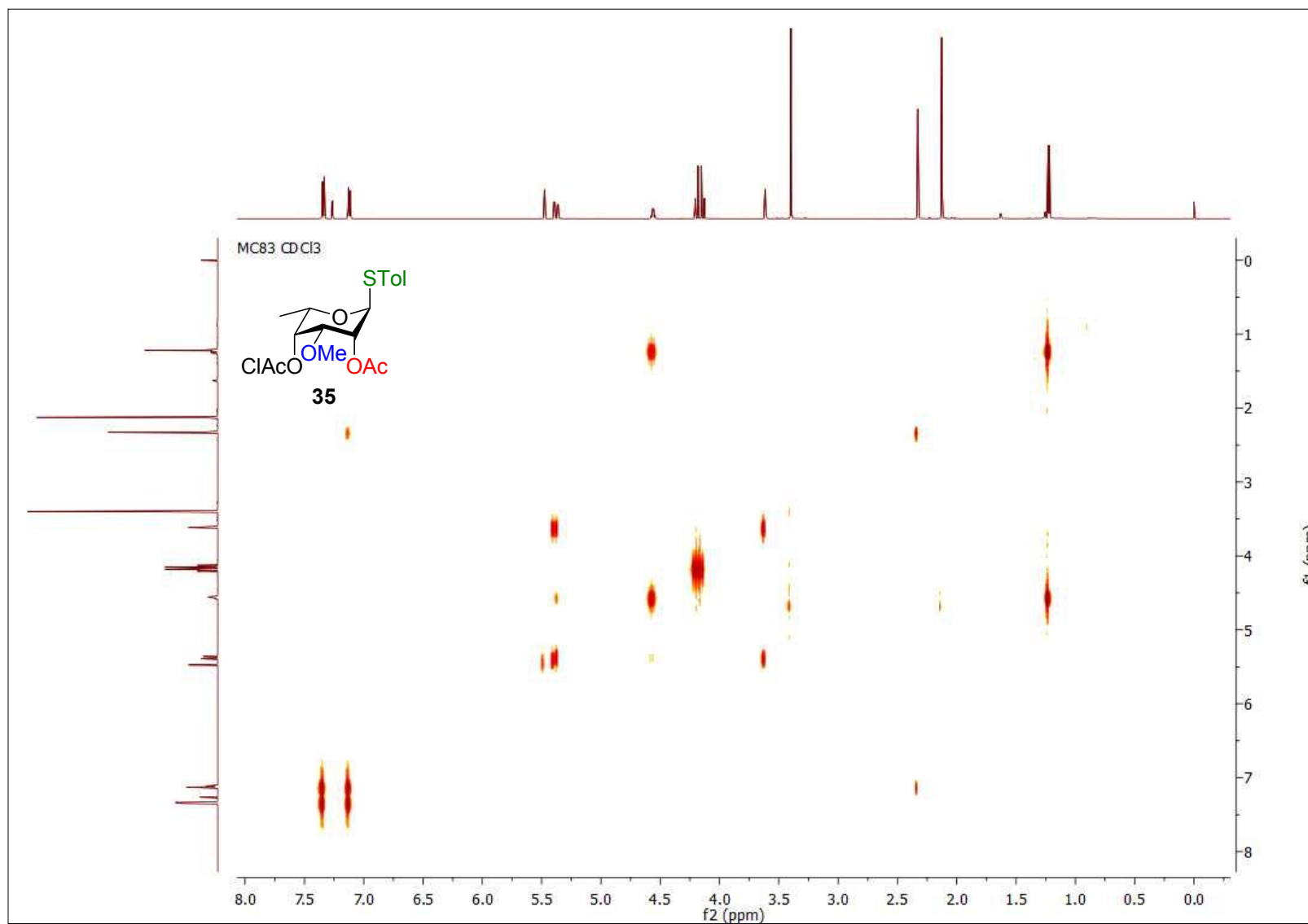
Supplementary Figure 88 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 34



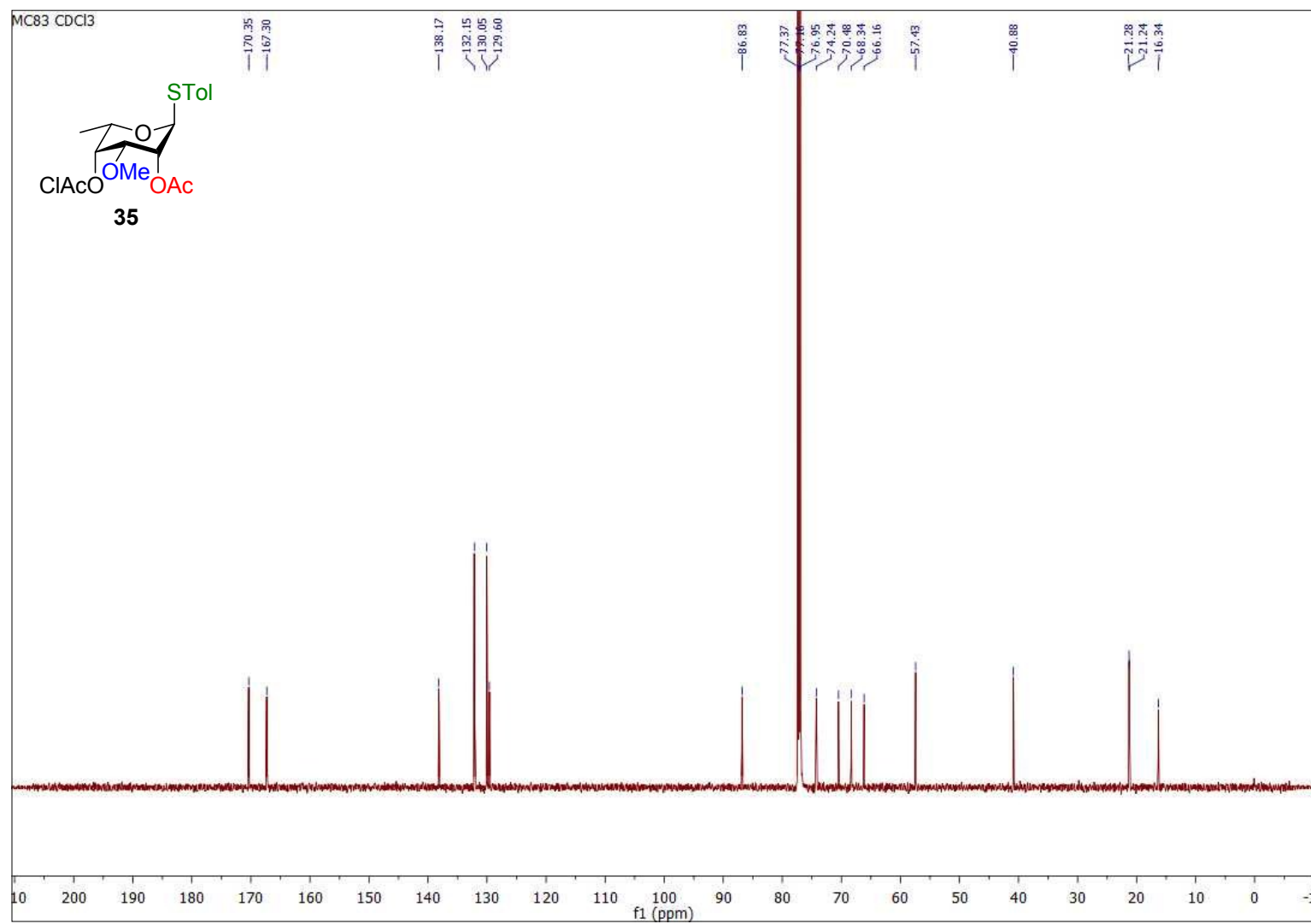
Supplementary Figure 89 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound **35**



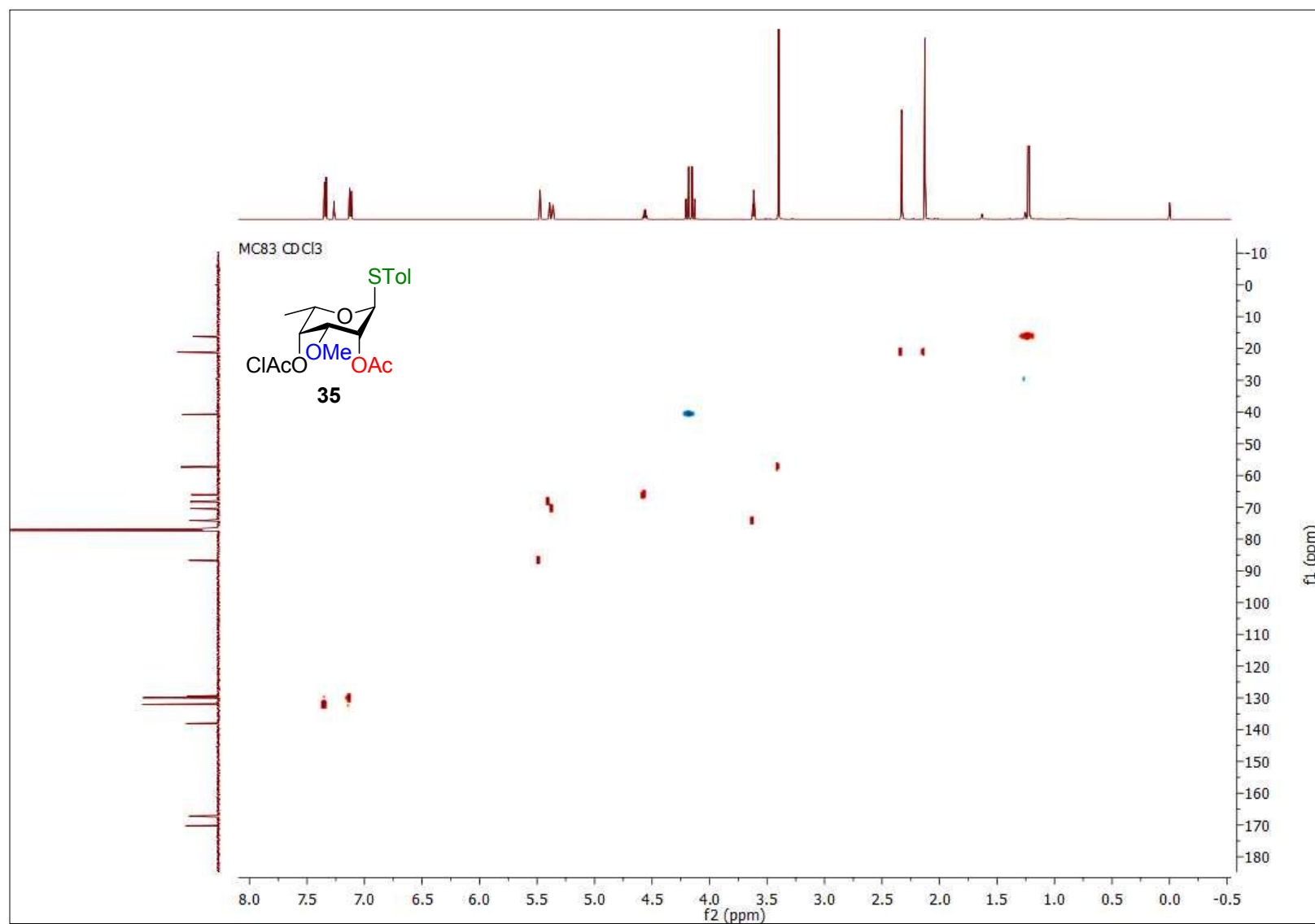
Supplementary Figure 90 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 35



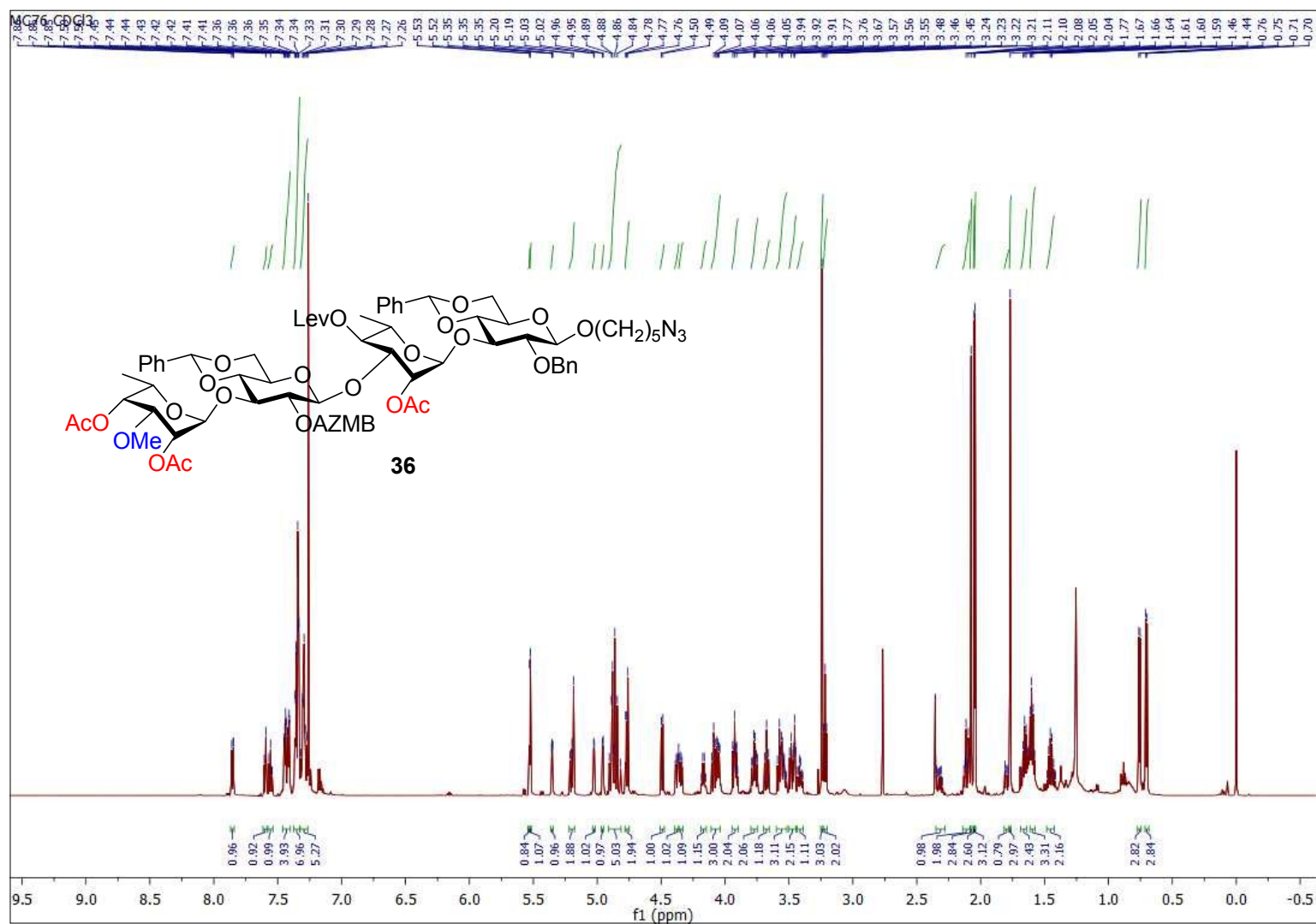
Supplementary Figure 91 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 35



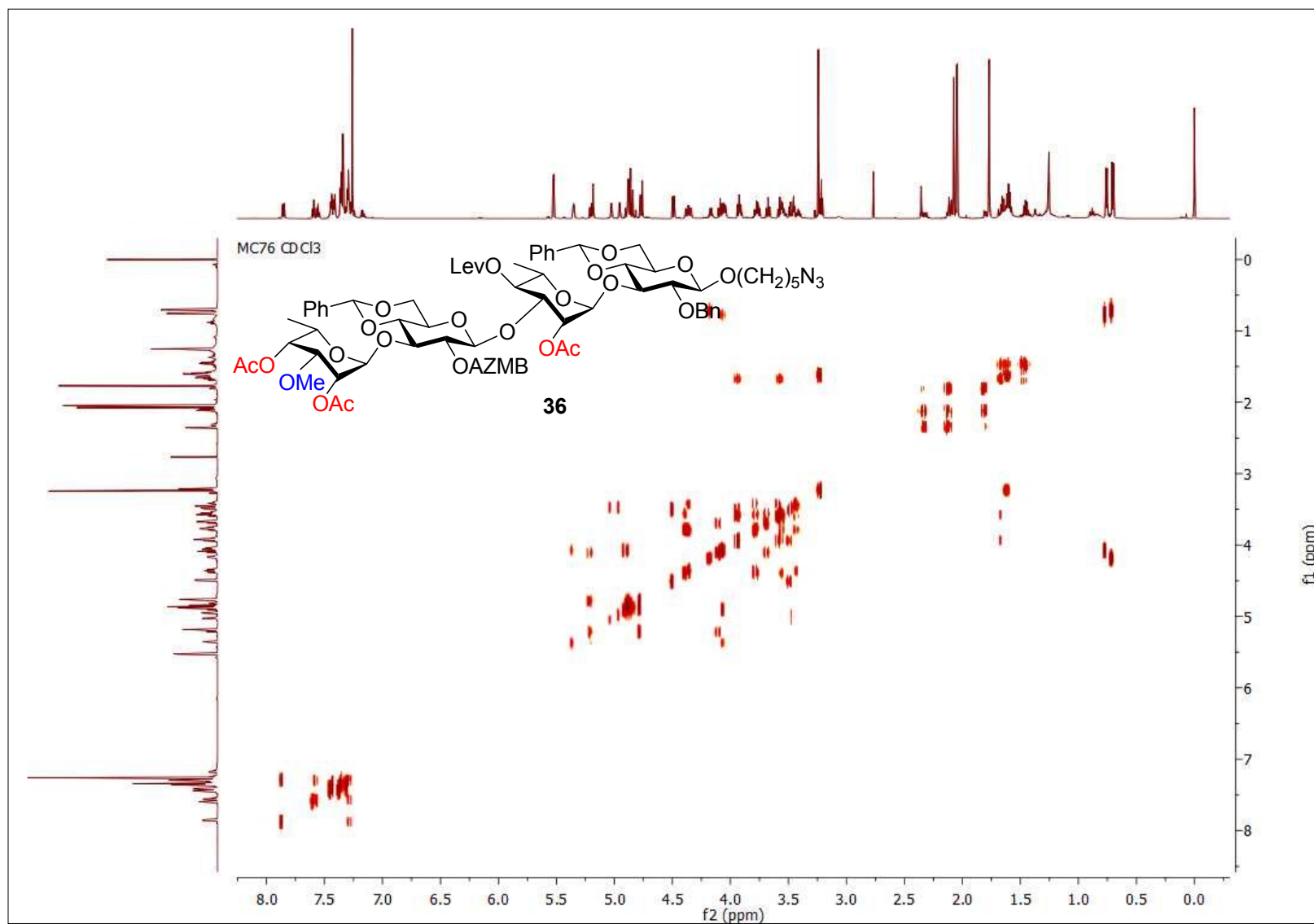
Supplementary Figure 92 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 35



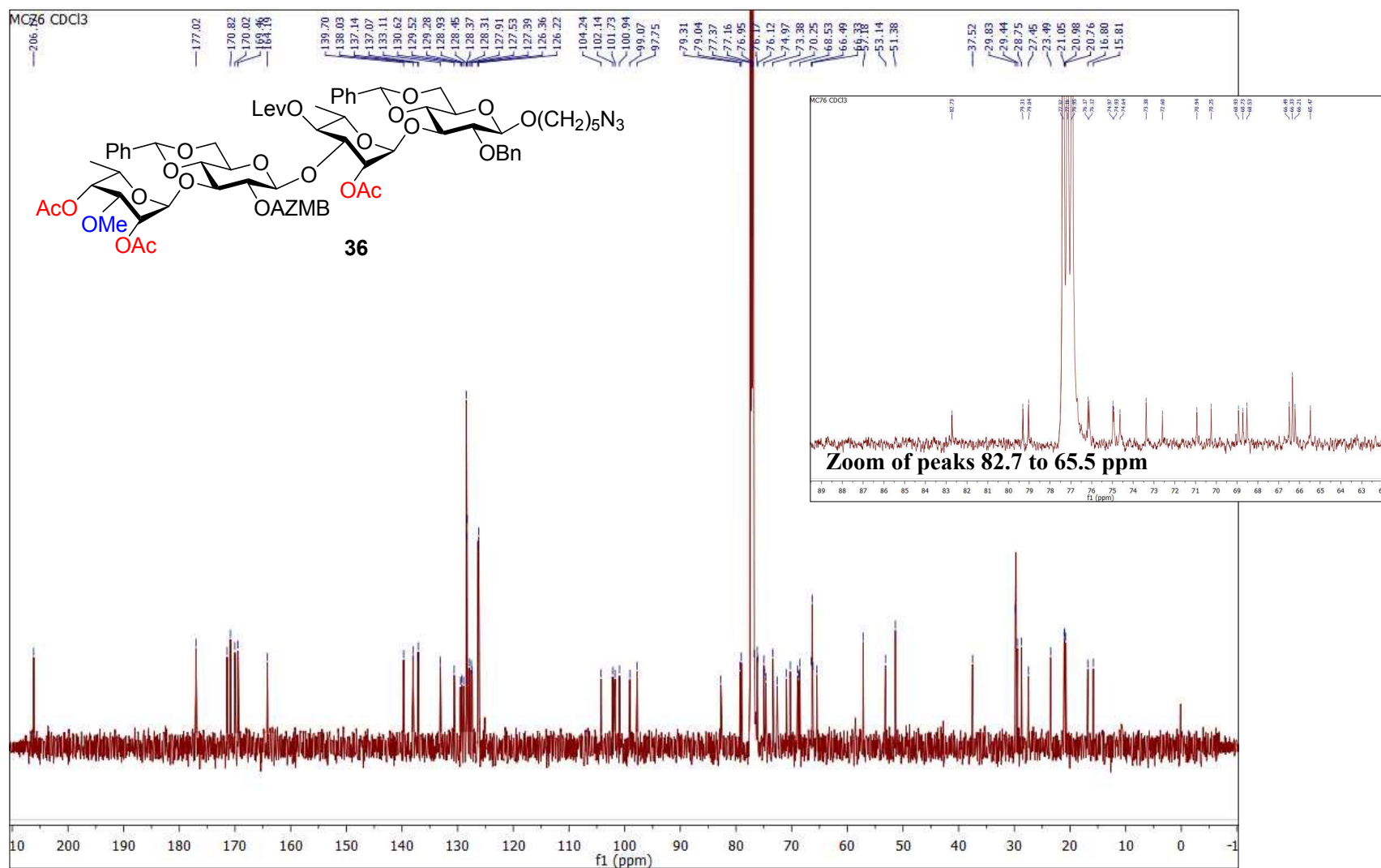
Supplementary Figure 93 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 36



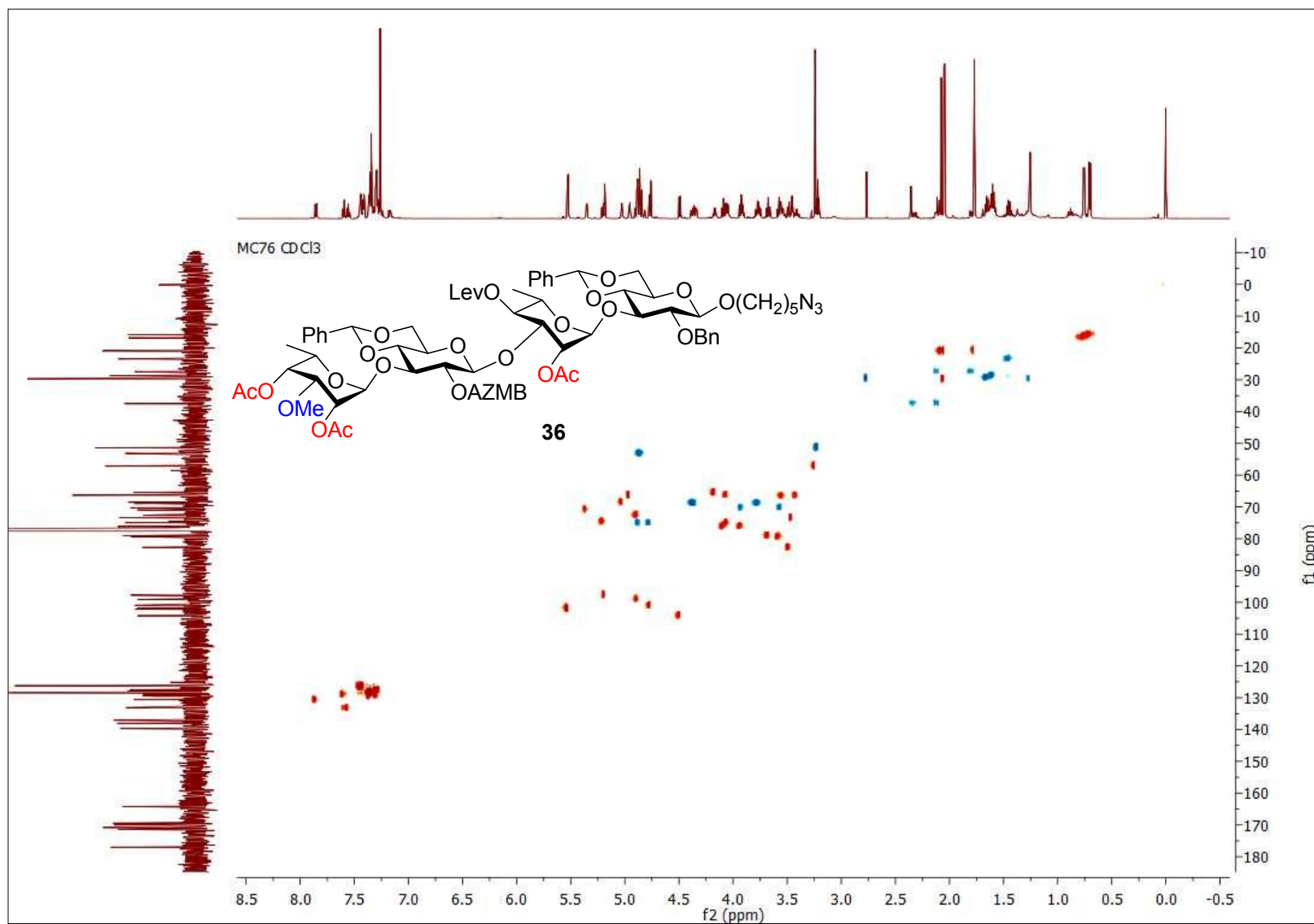
Supplementary Figure 94 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 36



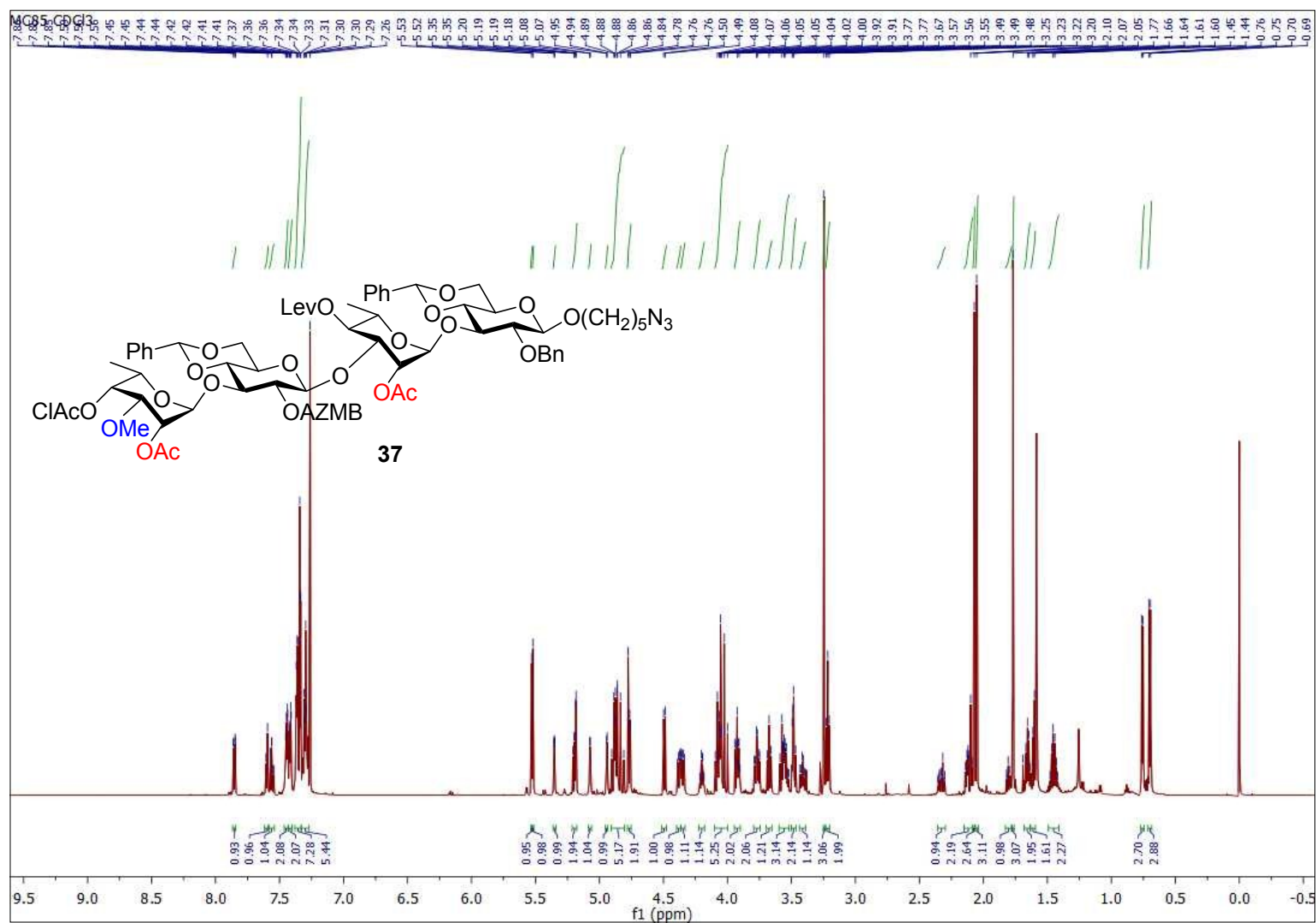
Supplementary Figure 95 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 36



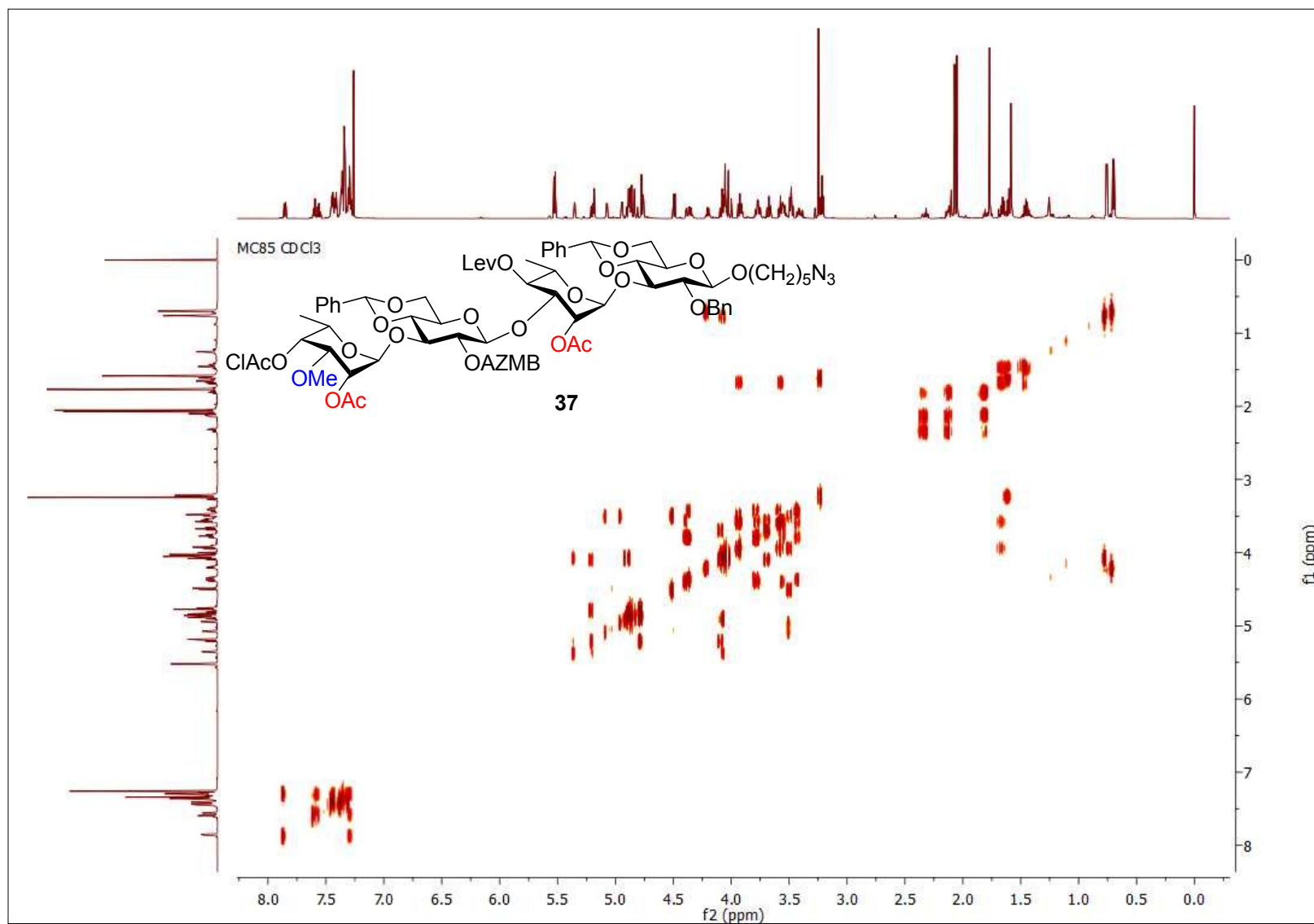
Supplementary Figure 96 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 36



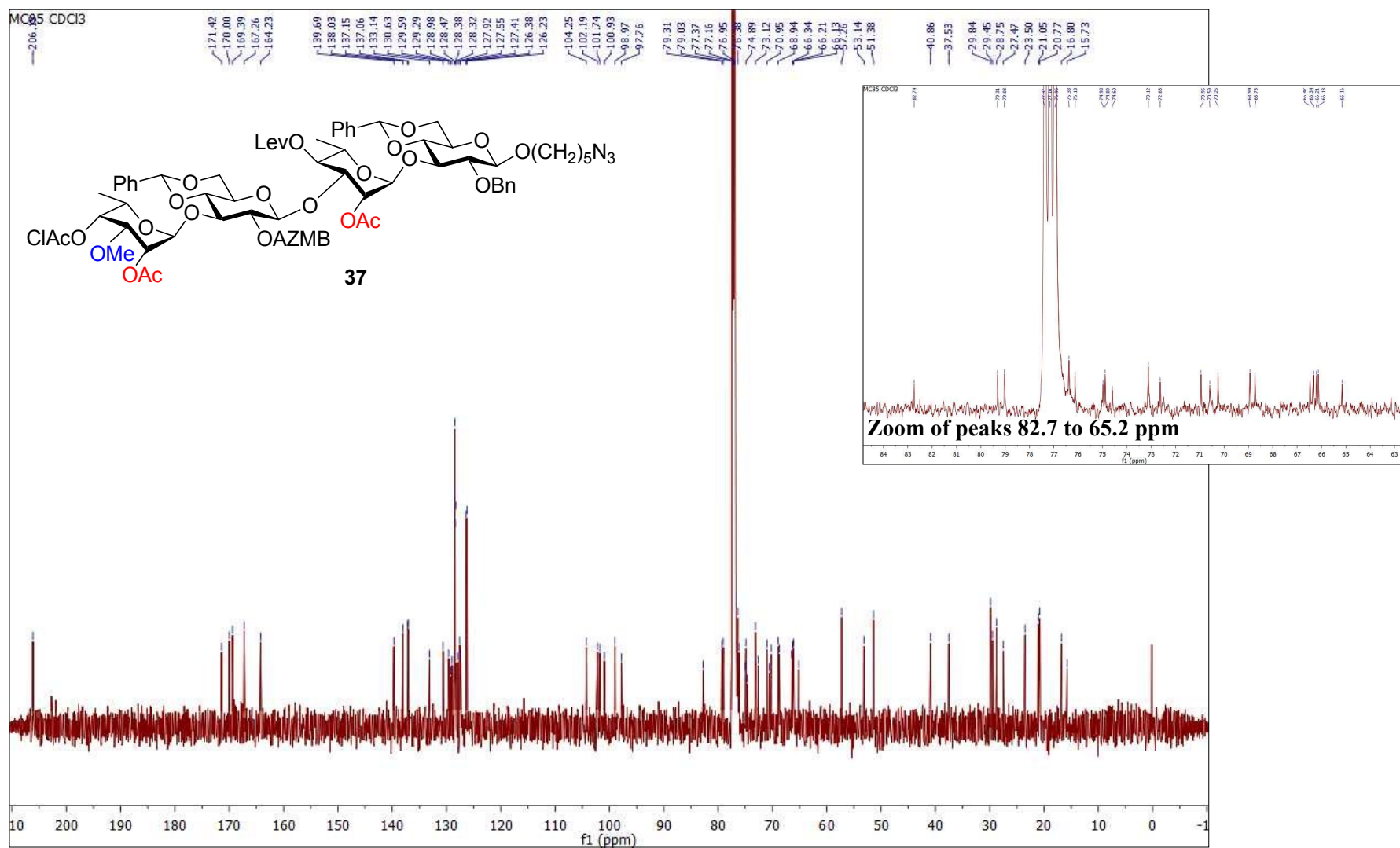
Supplementary Figure 97 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 37



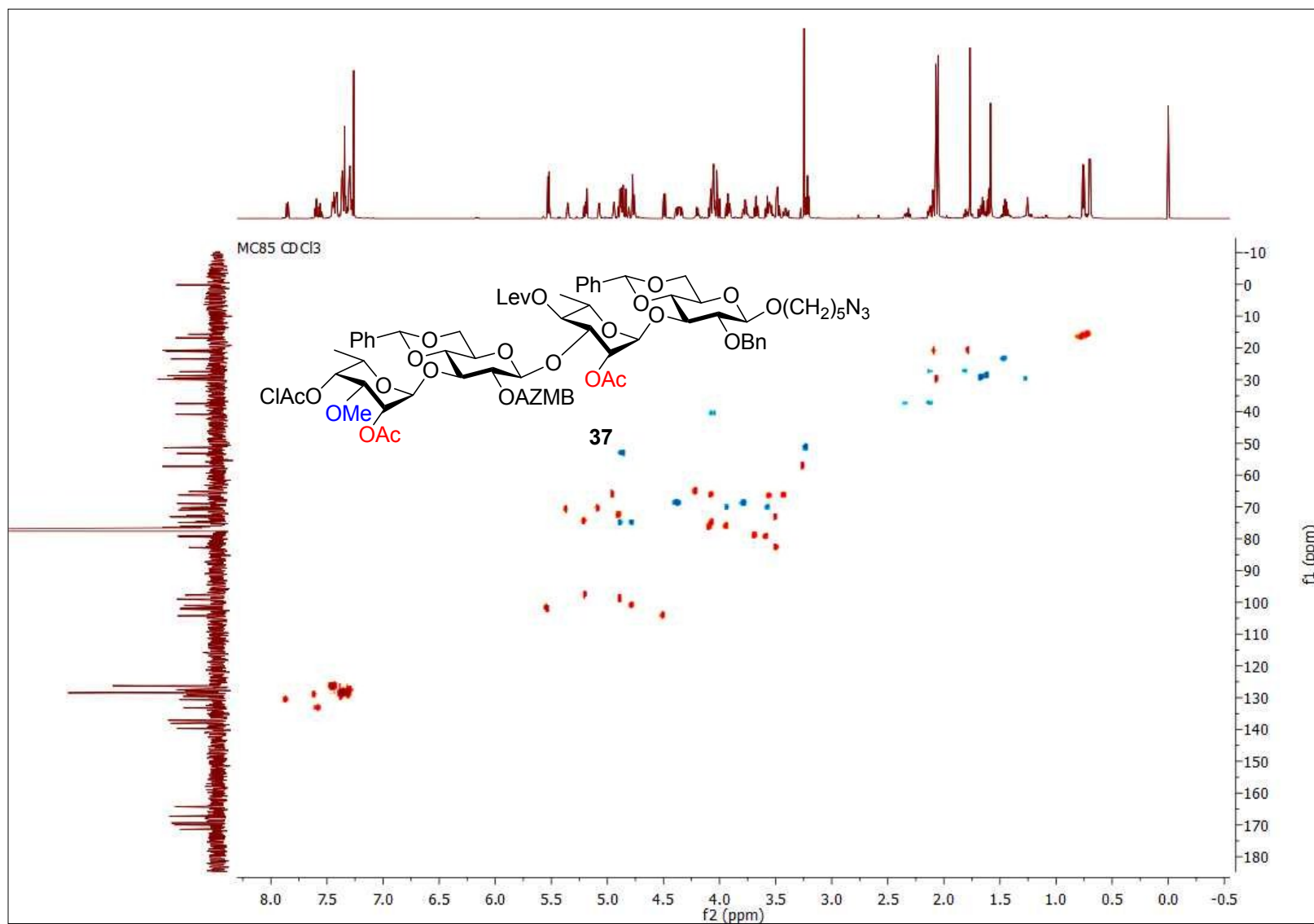
Supplementary Figure 98 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 37



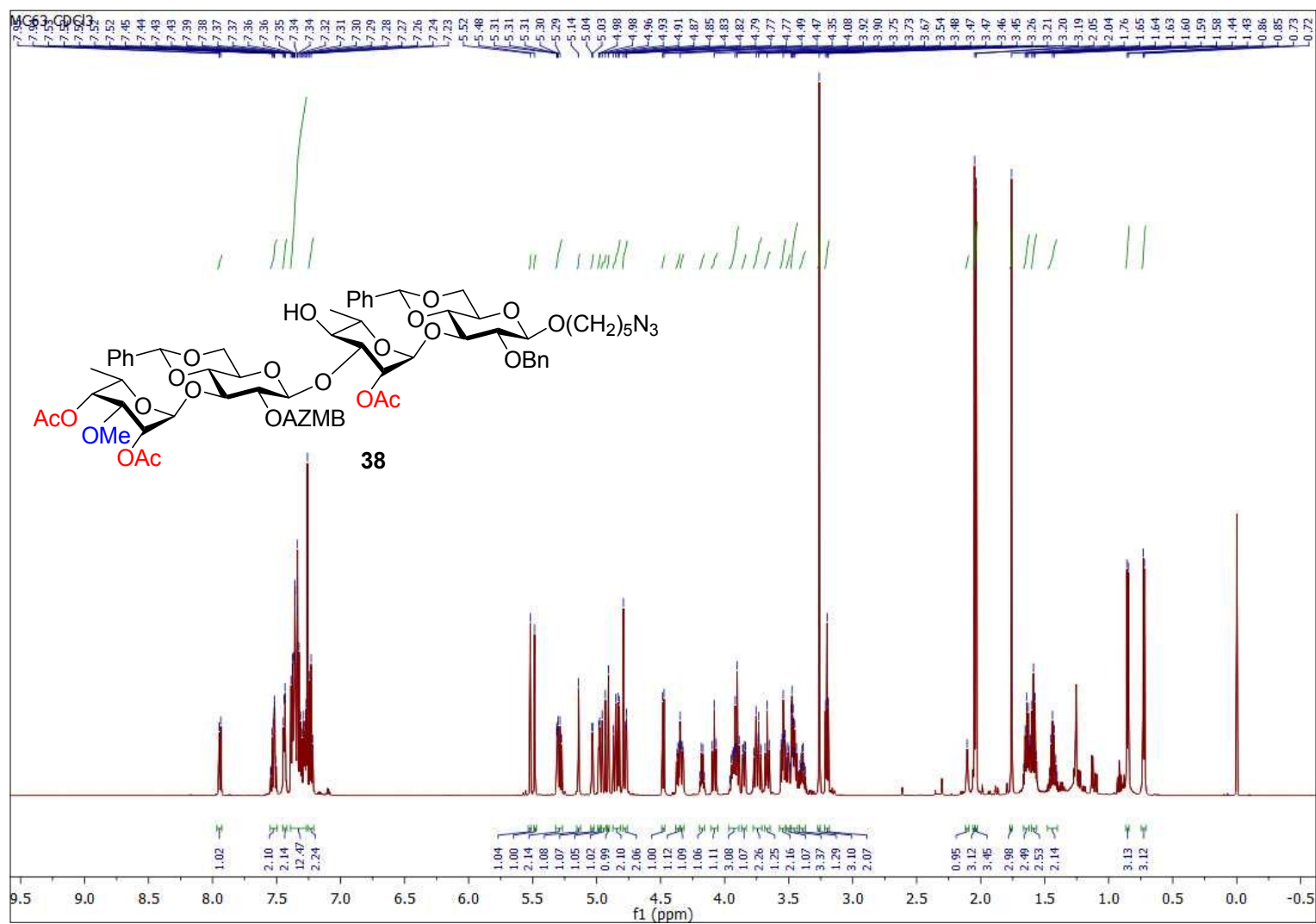
Supplementary Figure 99 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 37



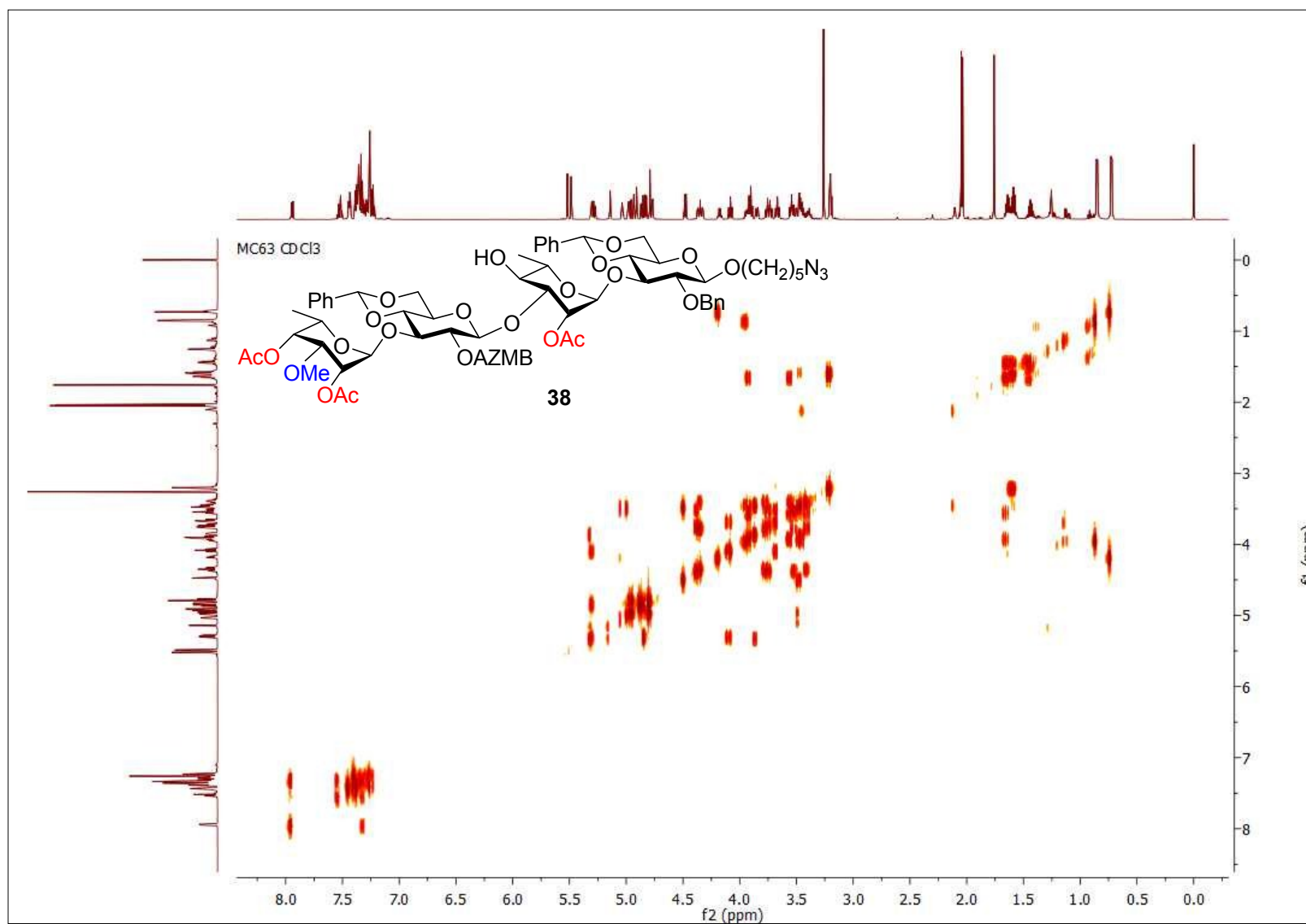
Supplementary Figure 100 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 37



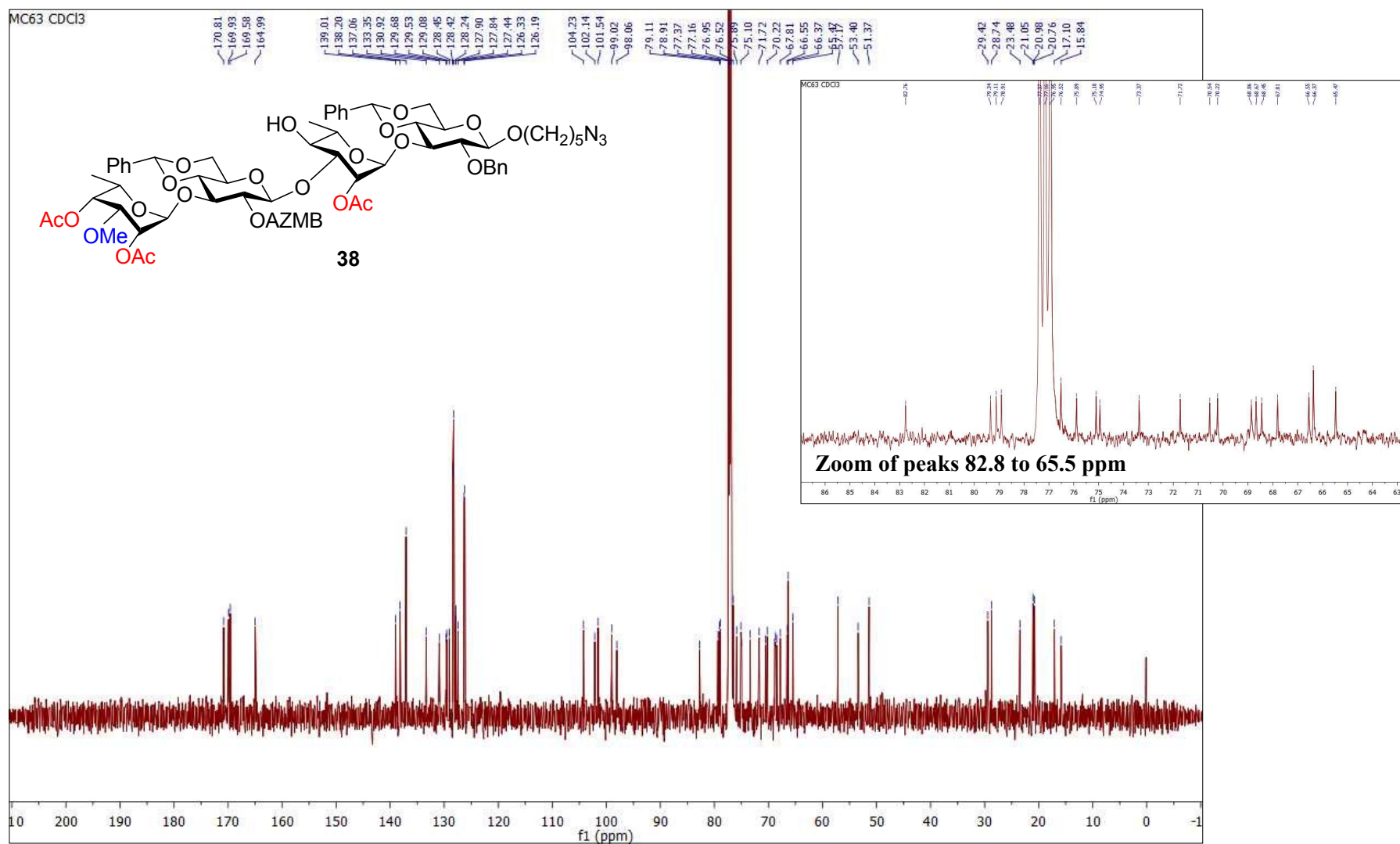
Supplementary Figure 101 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 38



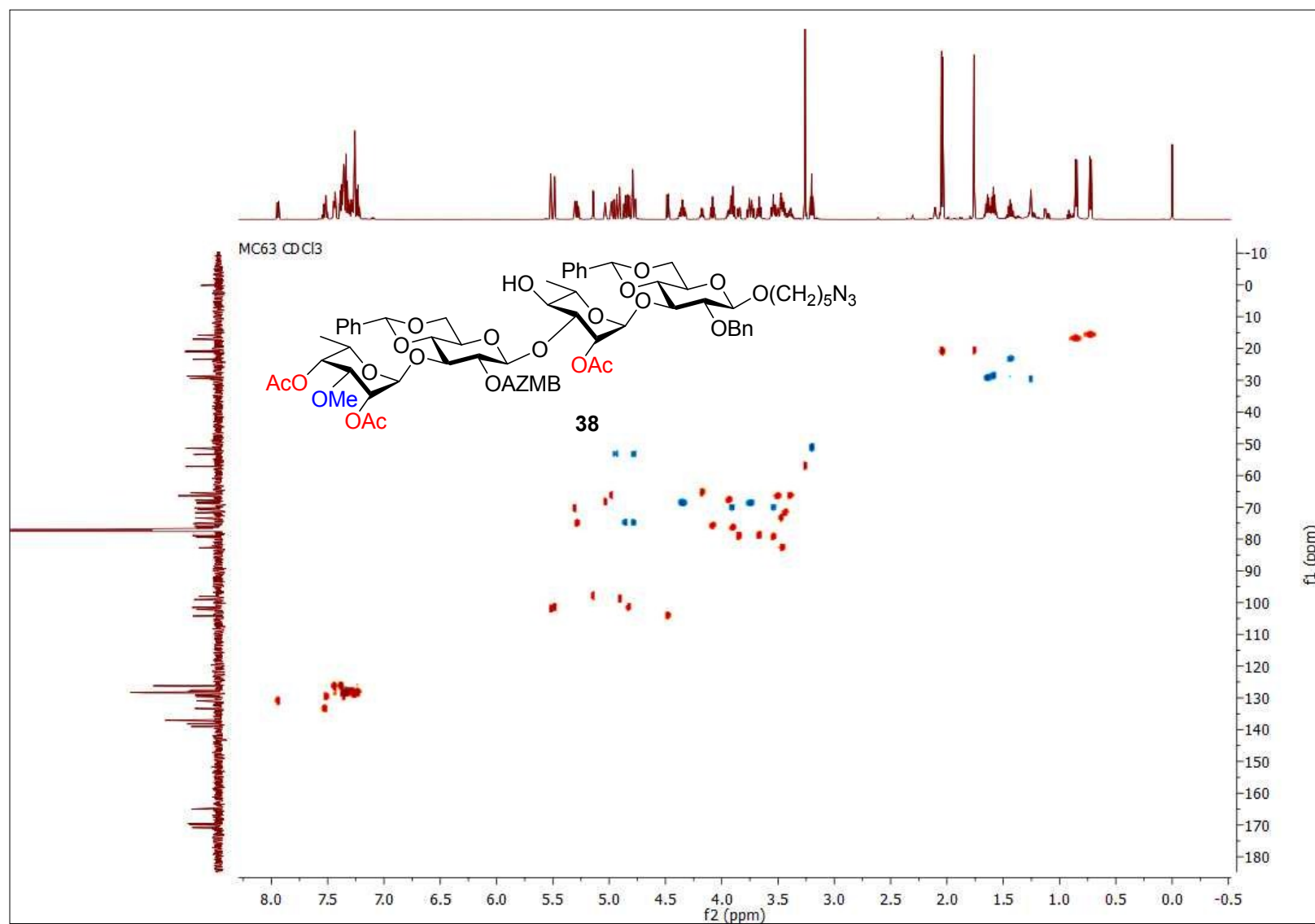
Supplementary Figure 102 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 38



Supplementary Figure 103 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 38



Supplementary Figure 104 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 38

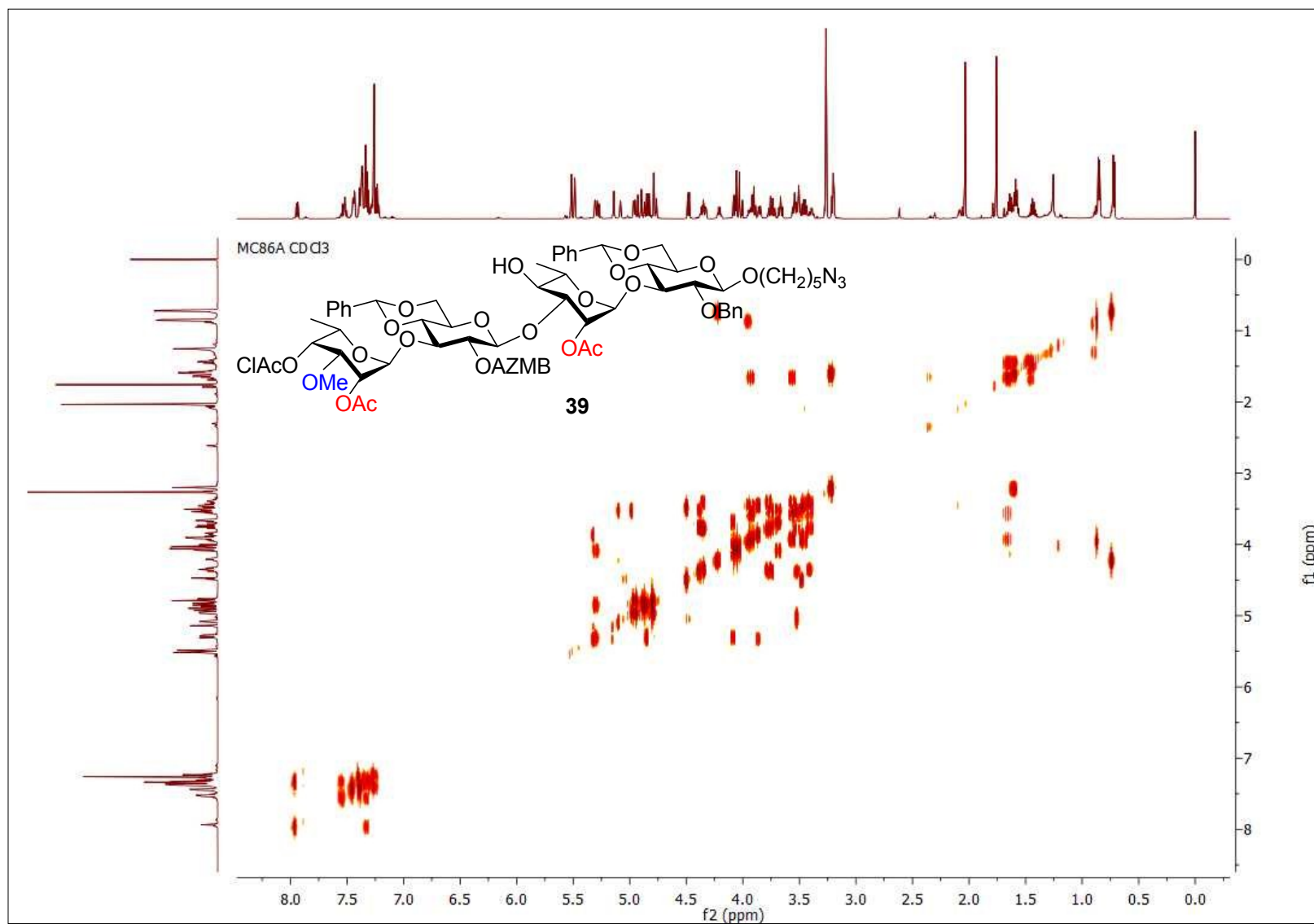


Chemical structure of 39: A complex glycoside consisting of a central glucose unit linked to a phenyl glycoside, a benzyl glycoside, and a pentamethylammonium glycoside. The structure is labeled **39**.

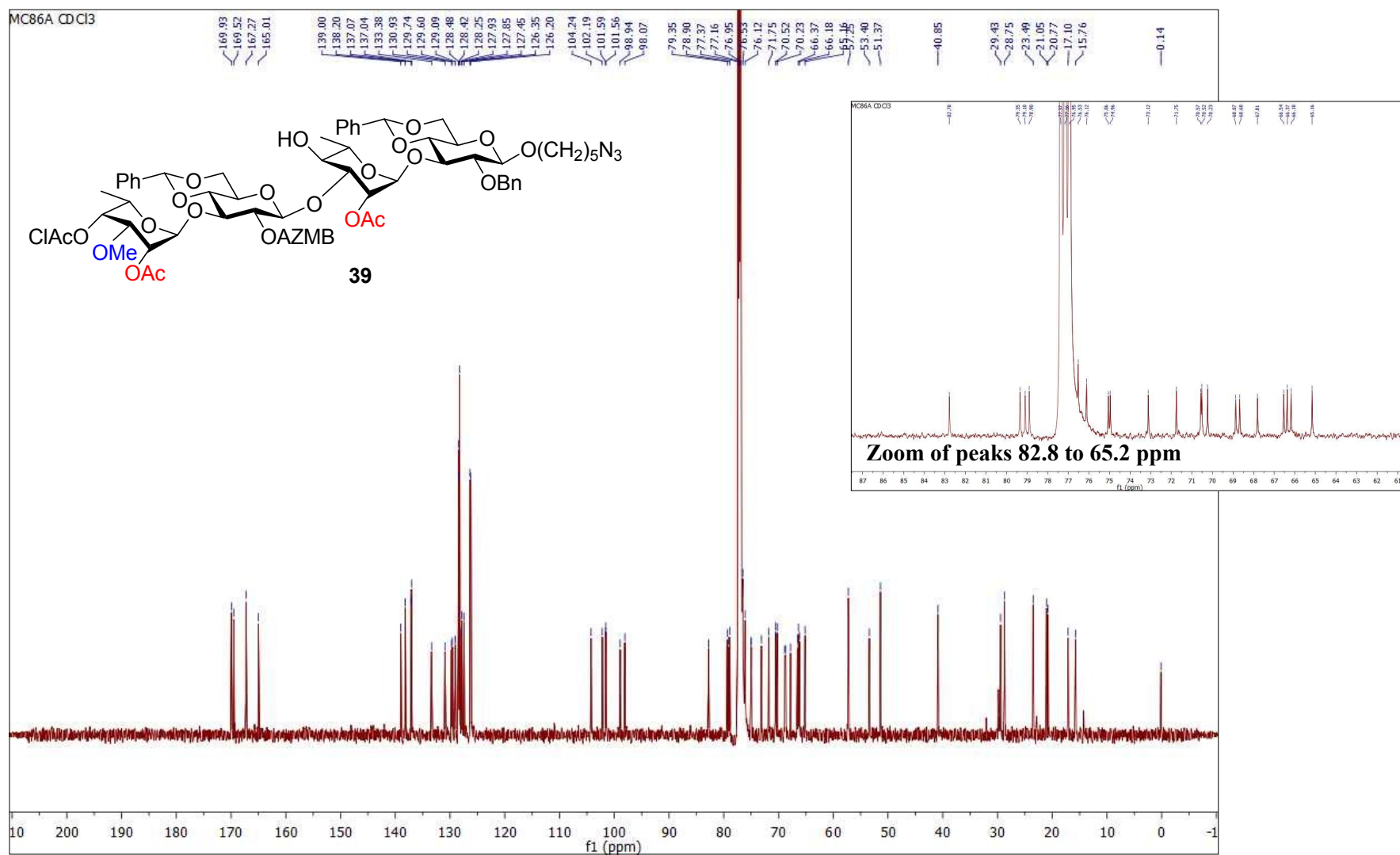
¹H NMR spectrum (CDCl₃): The spectrum shows peaks from 0 to 10 ppm. Key peaks include aromatic protons at 7.0-7.5 ppm, anomeric protons at 4.8-5.2 ppm, and aliphatic protons at 1.0-2.5 ppm. Integration values are provided below the baseline.

Chemical Shift (ppm)	Integration
7.0-7.5	0.91
6.5-7.0	2.02
5.5-6.0	12.41
4.8-5.2	2.12
3.5-4.5	1.02
2.5-3.5	0.94
1.0-2.5	1.05
0.5-1.0	1.12
0.0-0.5	1.01
0.0	0.99
0.0	1.03
0.0	0.94
0.0	1.03
0.0	1.00
0.0	2.02
0.0	1.00
0.0	1.20
0.0	1.16
0.0	1.13
0.0	3.36
0.0	3.08
0.0	1.04
0.0	1.13
0.0	1.09
0.0	1.13
0.0	4.19
0.0	2.20
0.0	1.07
0.0	2.73
0.0	1.92
0.0	0.86
0.0	2.97
0.0	2.73
0.0	2.52
0.0	2.57
0.0	2.17
0.0	2.96
0.0	2.58

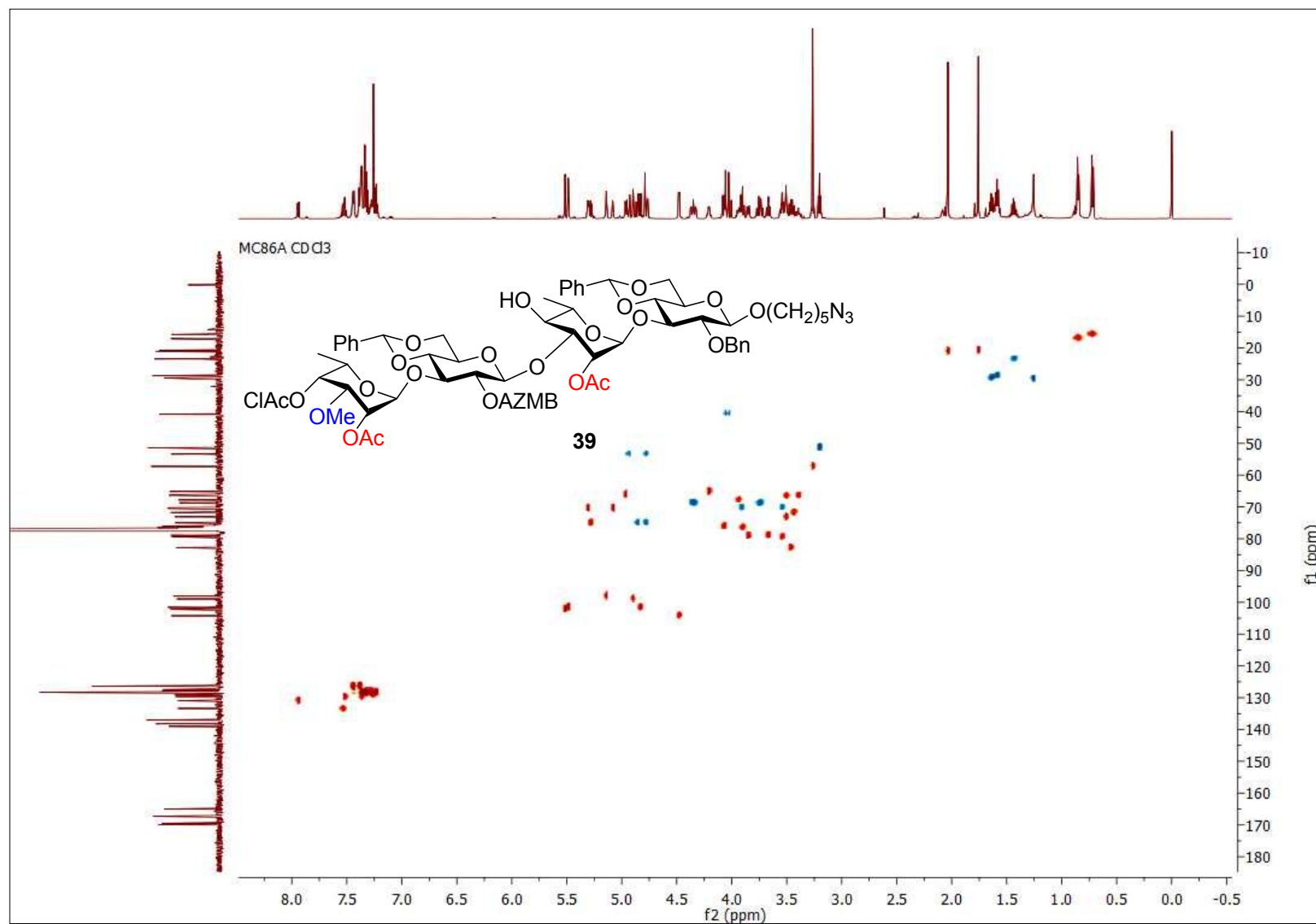
Supplementary Figure 106 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 39



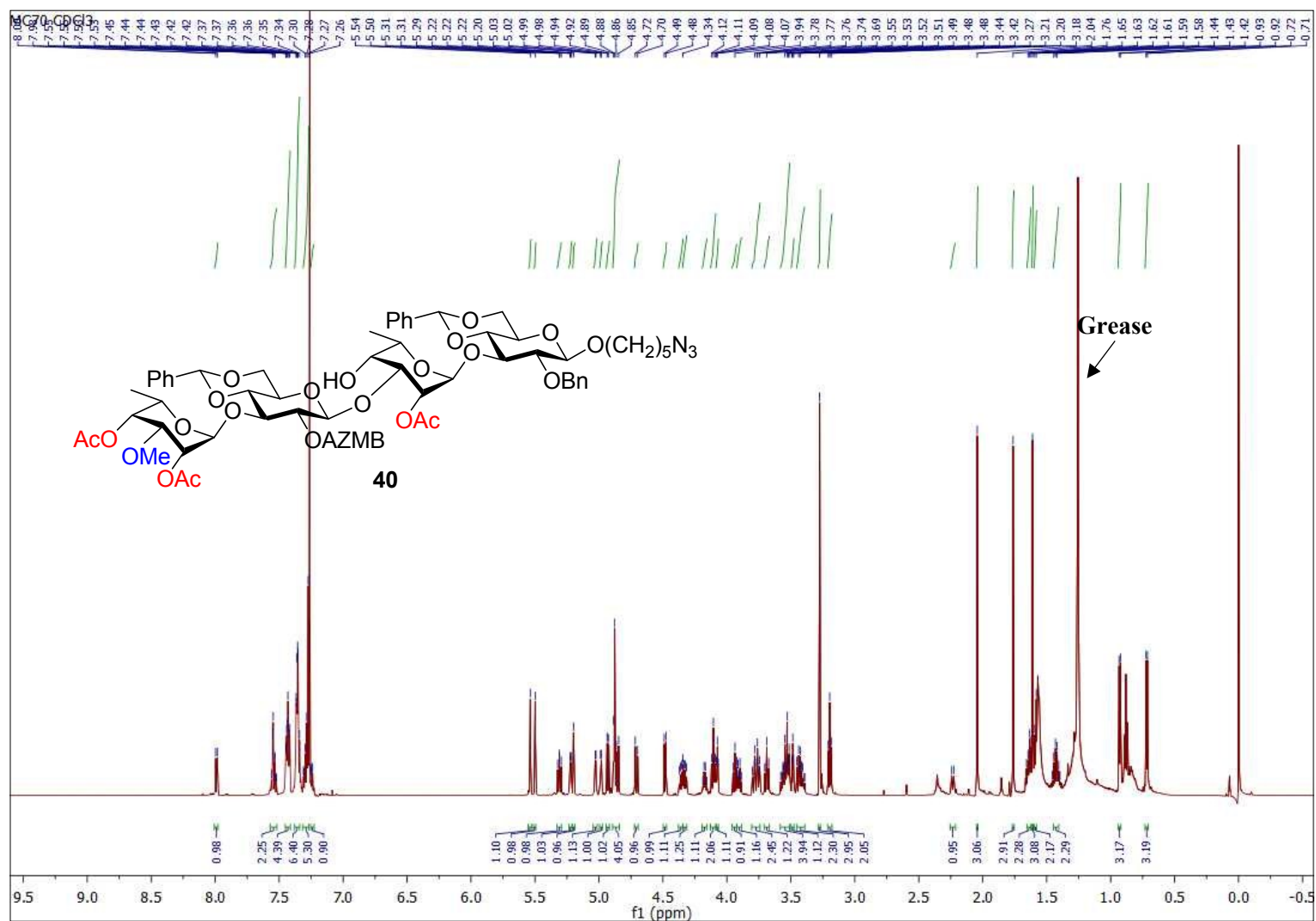
Supplementary Figure 107 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 39



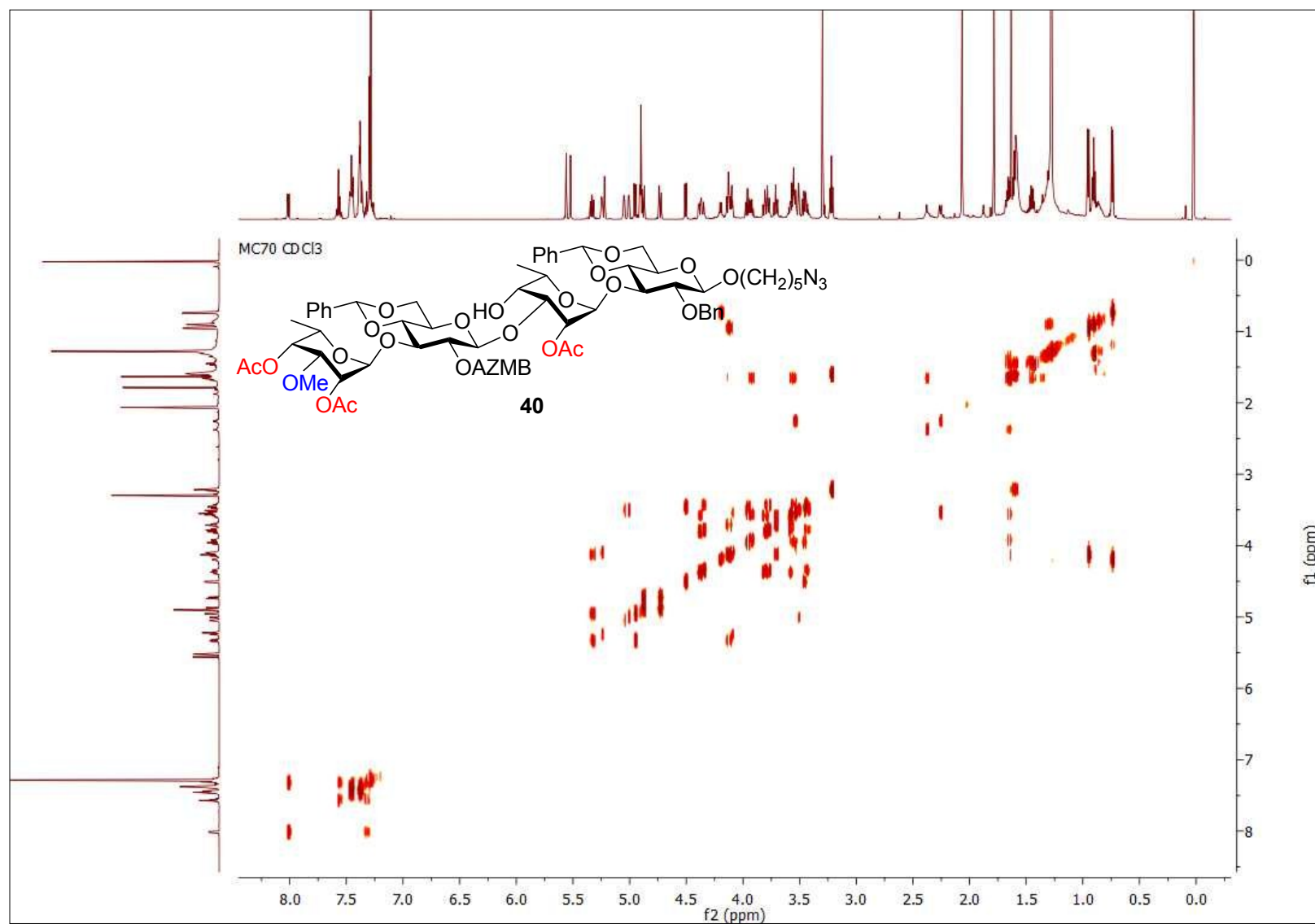
Supplementary Figure 108 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 39



Supplementary Figure 109 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 40



Supplementary Figure 110 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 40



MC70 CDCl₃

Chemical structure of compound **40** is shown, featuring a complex glycoside with multiple sugar units, a phenyl group (Ph), a benzyl group (OBn), and a hexamethylphosphoramide (HMPA) group (O(CH₂)₅N₃). The structure is labeled with various functional groups: AcO, OMe, OAc, and OAZMB.

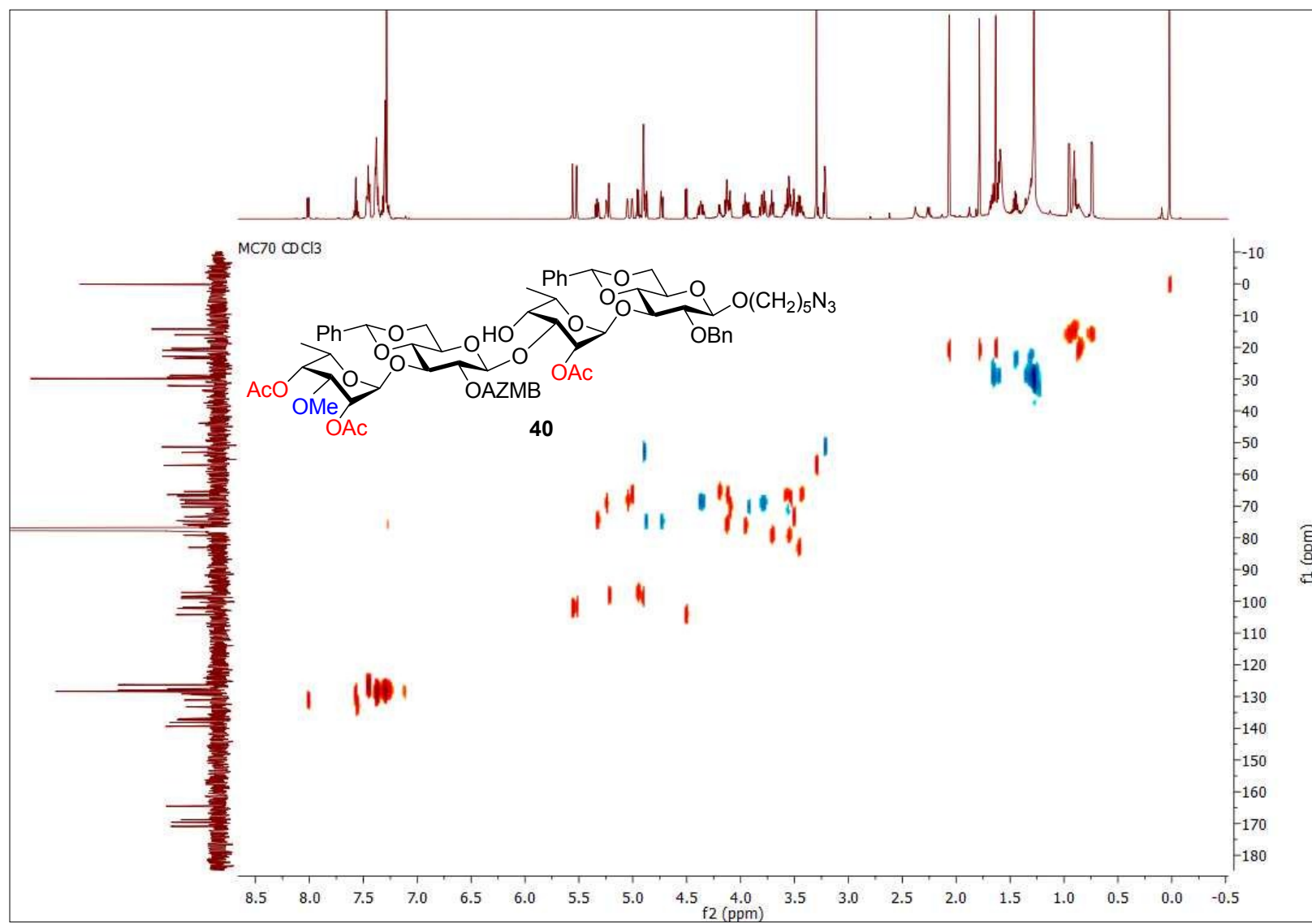
The ¹³C NMR spectrum (CDCl₃) is displayed below the structure, showing peaks from 10 to 180 ppm. The spectrum is characterized by a large peak at approximately 170 ppm, a cluster of peaks between 130 and 150 ppm, and a series of peaks in the 60-80 ppm range. A zoomed-in view of the peaks between 83.1 and 65.4 ppm is provided, showing a complex pattern of signals.

Peak list (ppm):

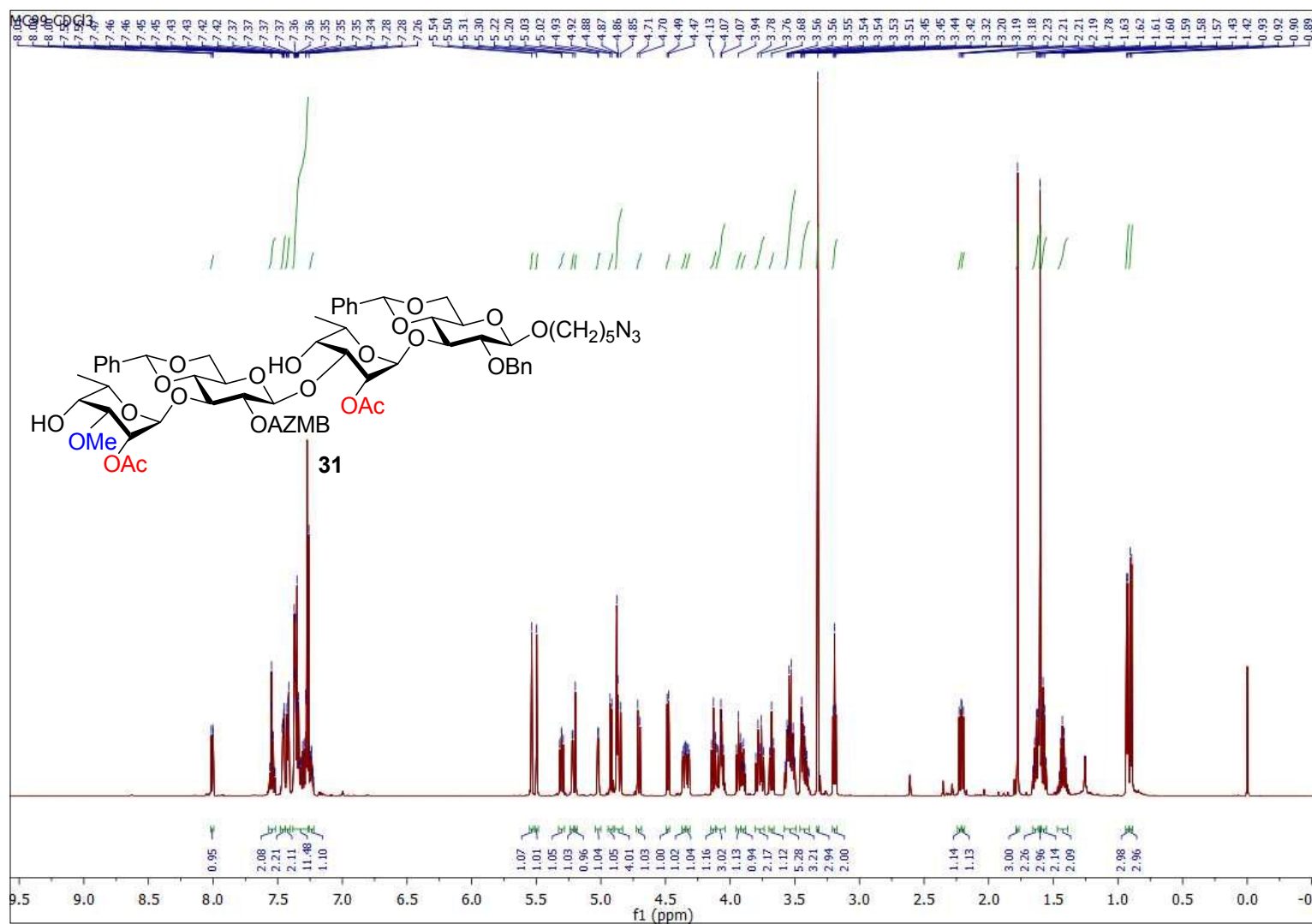
- 170.87, 169.62, 168.80, 164.52
- 139.40, 138.15, 137.35, 136.98, 133.21, 131.12, 129.61, 129.44, 129.18, 128.87, 128.50, 128.38, 128.04, 127.76, 127.70, 127.60, 127.49, 126.34, 126.28, 104.25, 102.23, 101.81, 98.98, 98.37, 97.21
- 79.23, 77.37, 77.16, 76.95, 75.72, 74.54, 70.26, 69.35, 68.00, 66.85, 66.41, 66.39, 65.18, 53.14, 51.37
- 29.42, 28.74, 23.48, 20.99, 20.77, 20.33, 16.10, 15.86

Zoom of peaks 83.1 to 65.4 ppm

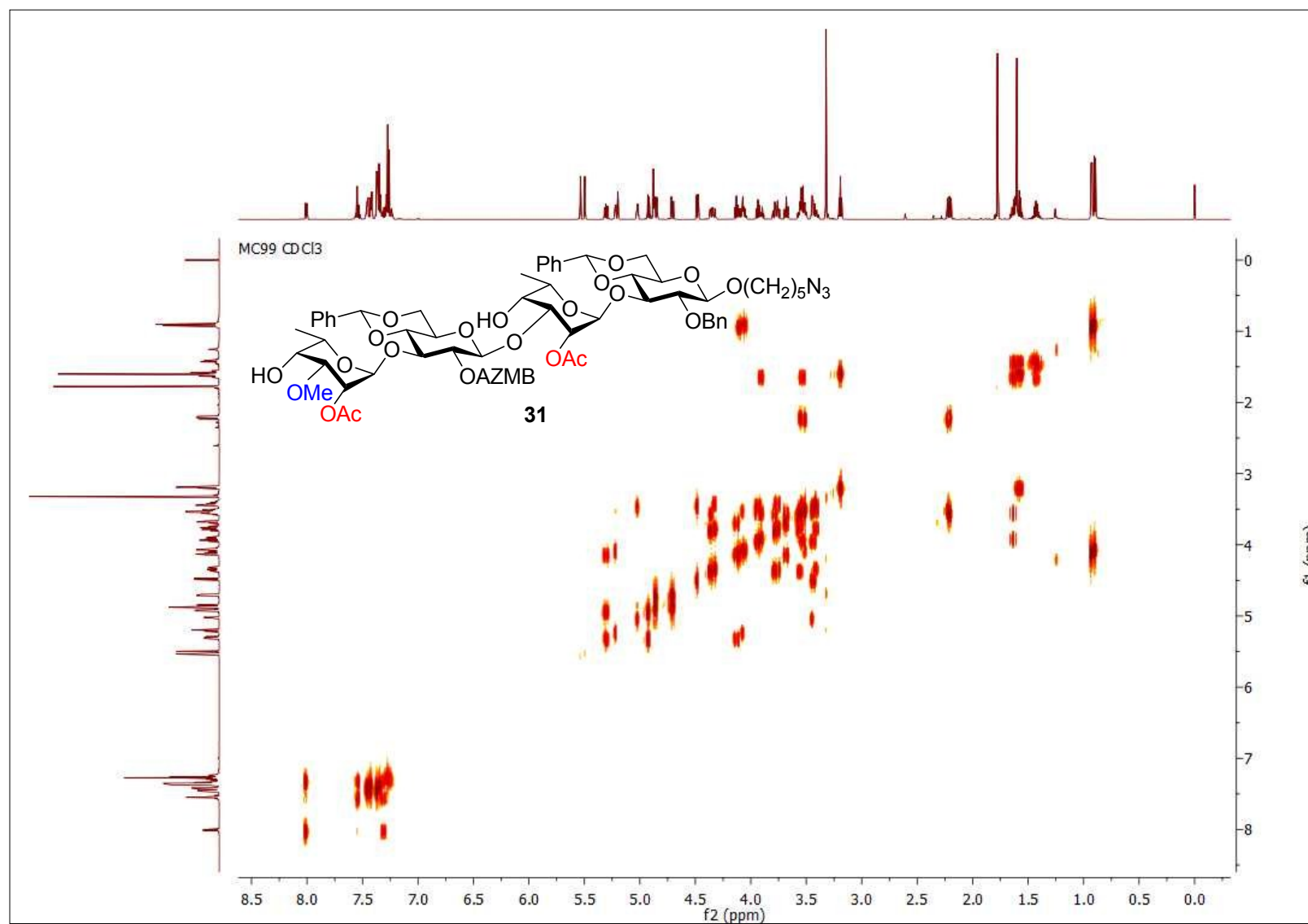
Supplementary Figure 112 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 40



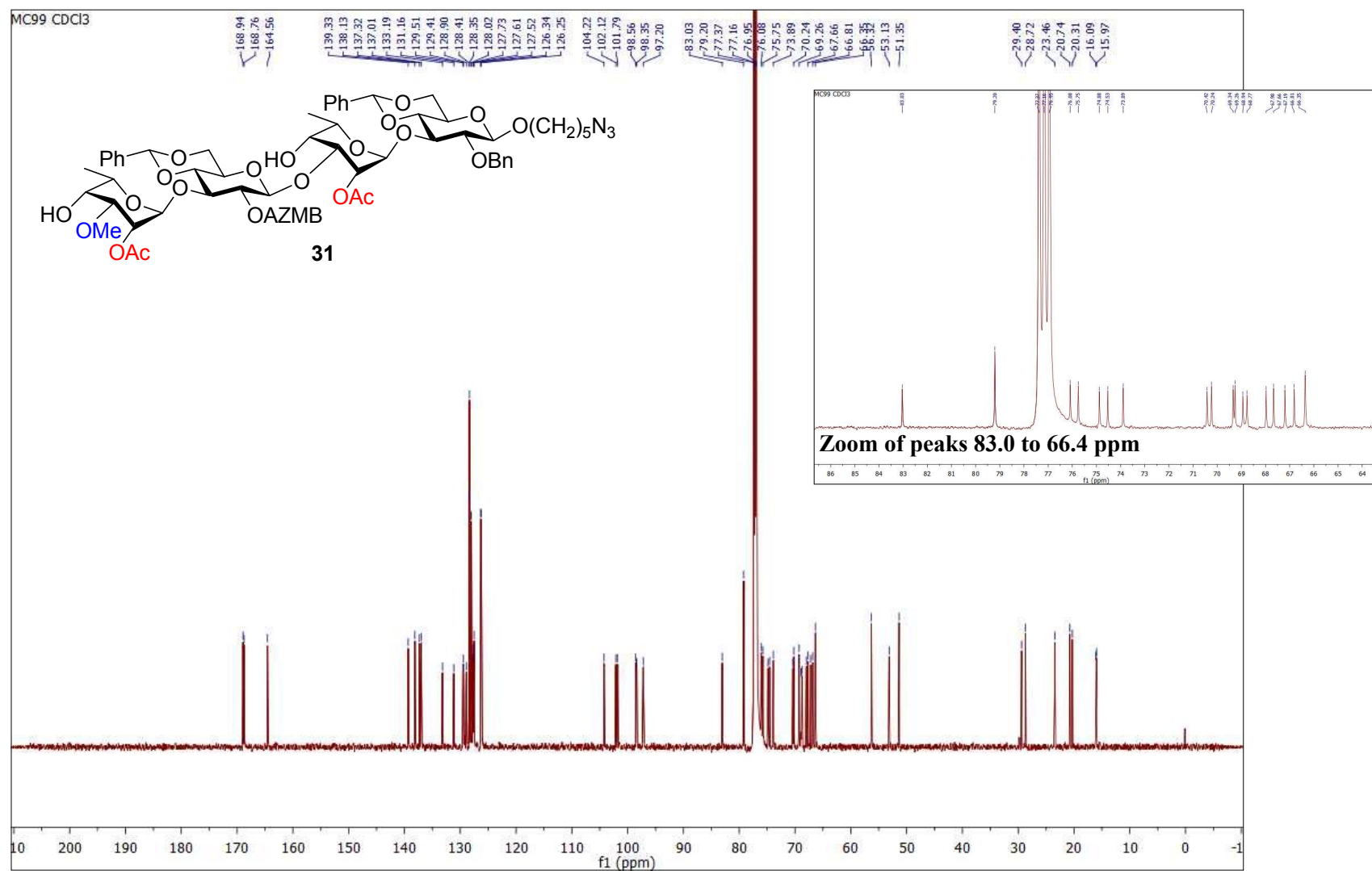
Supplementary Figure 113 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 31



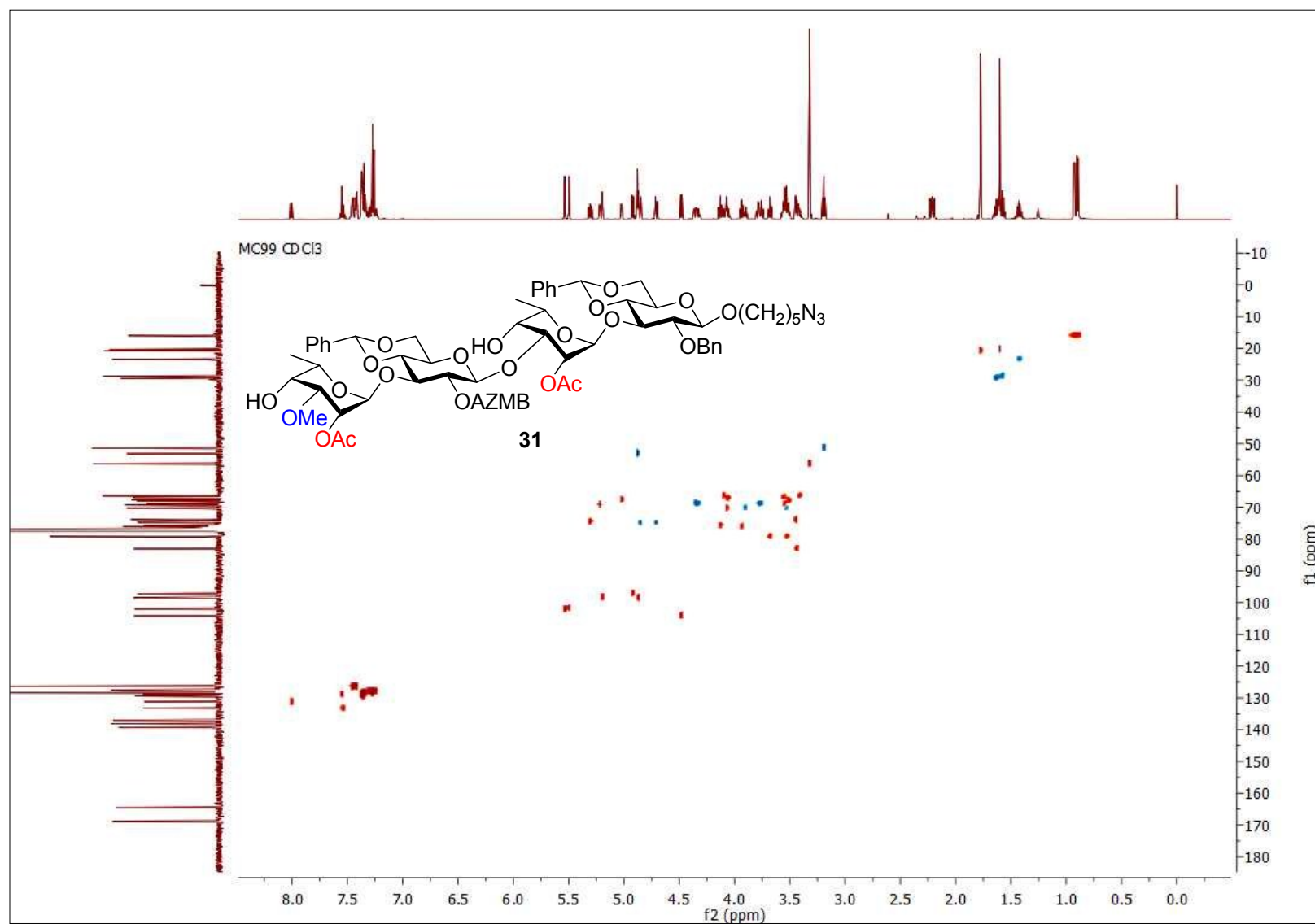
Supplementary Figure 114 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 31



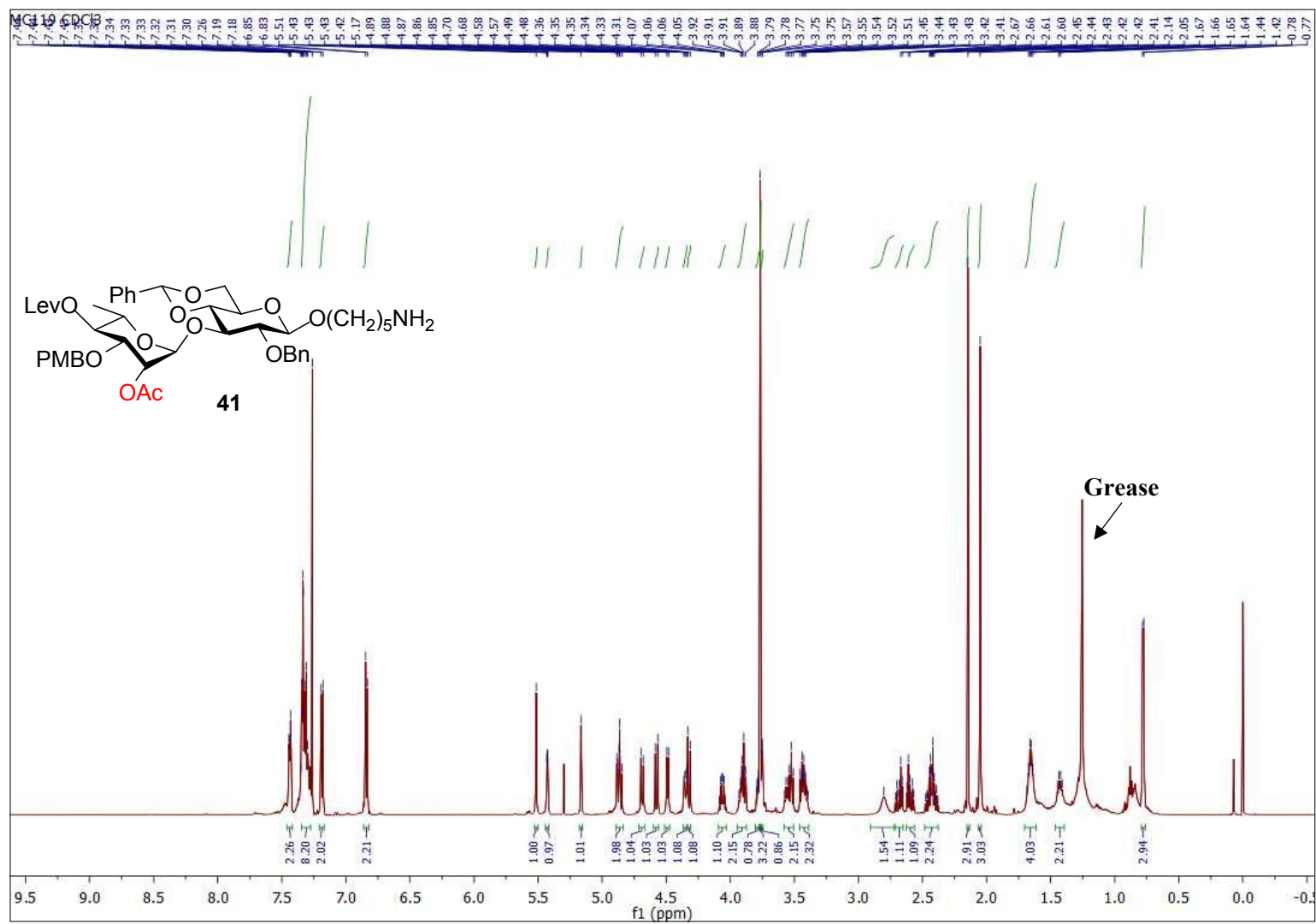
Supplementary Figure 115 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 31



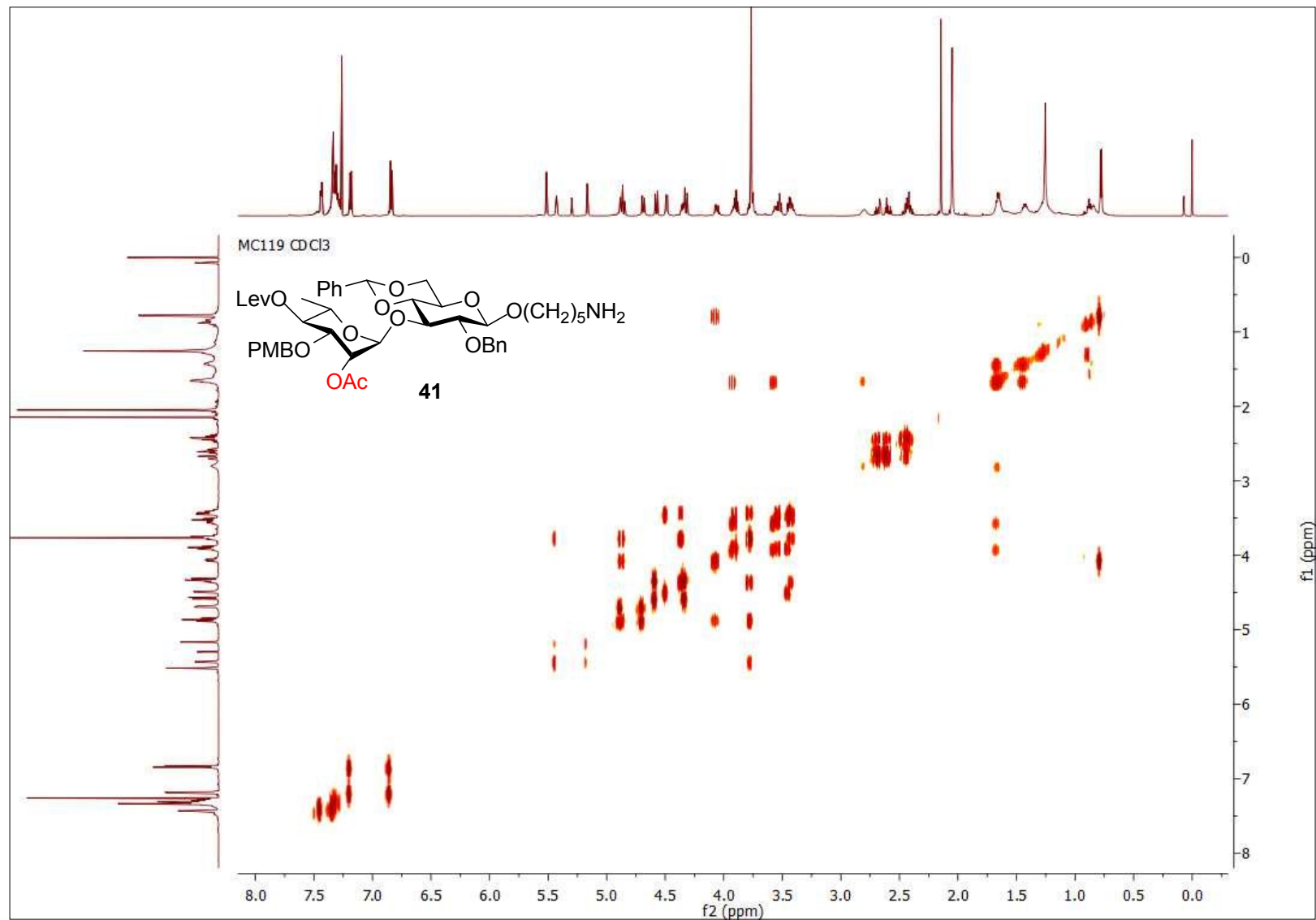
Supplementary Figure 116 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 31



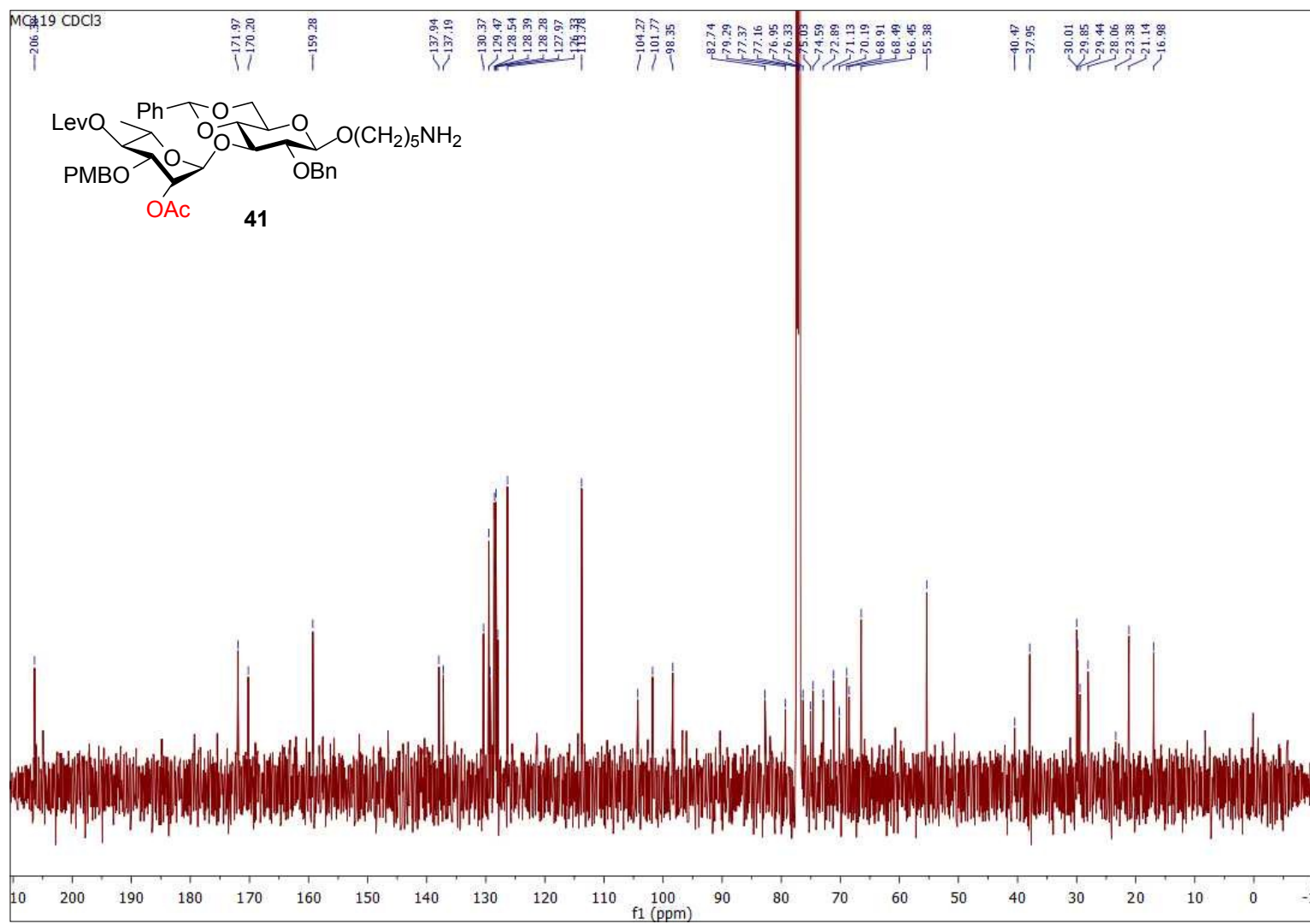
Supplementary Figure 117 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 41



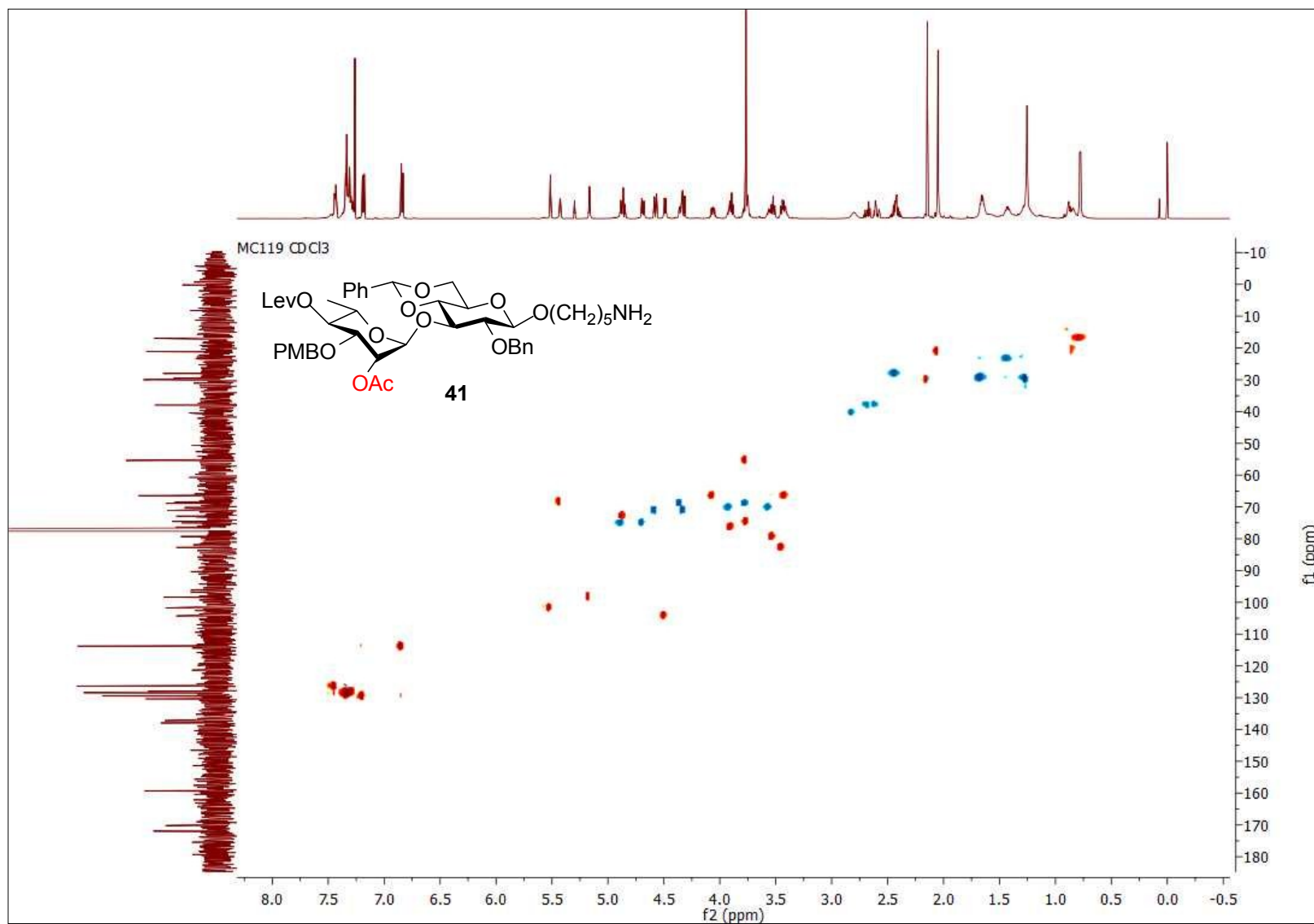
Supplementary Figure 118 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 41



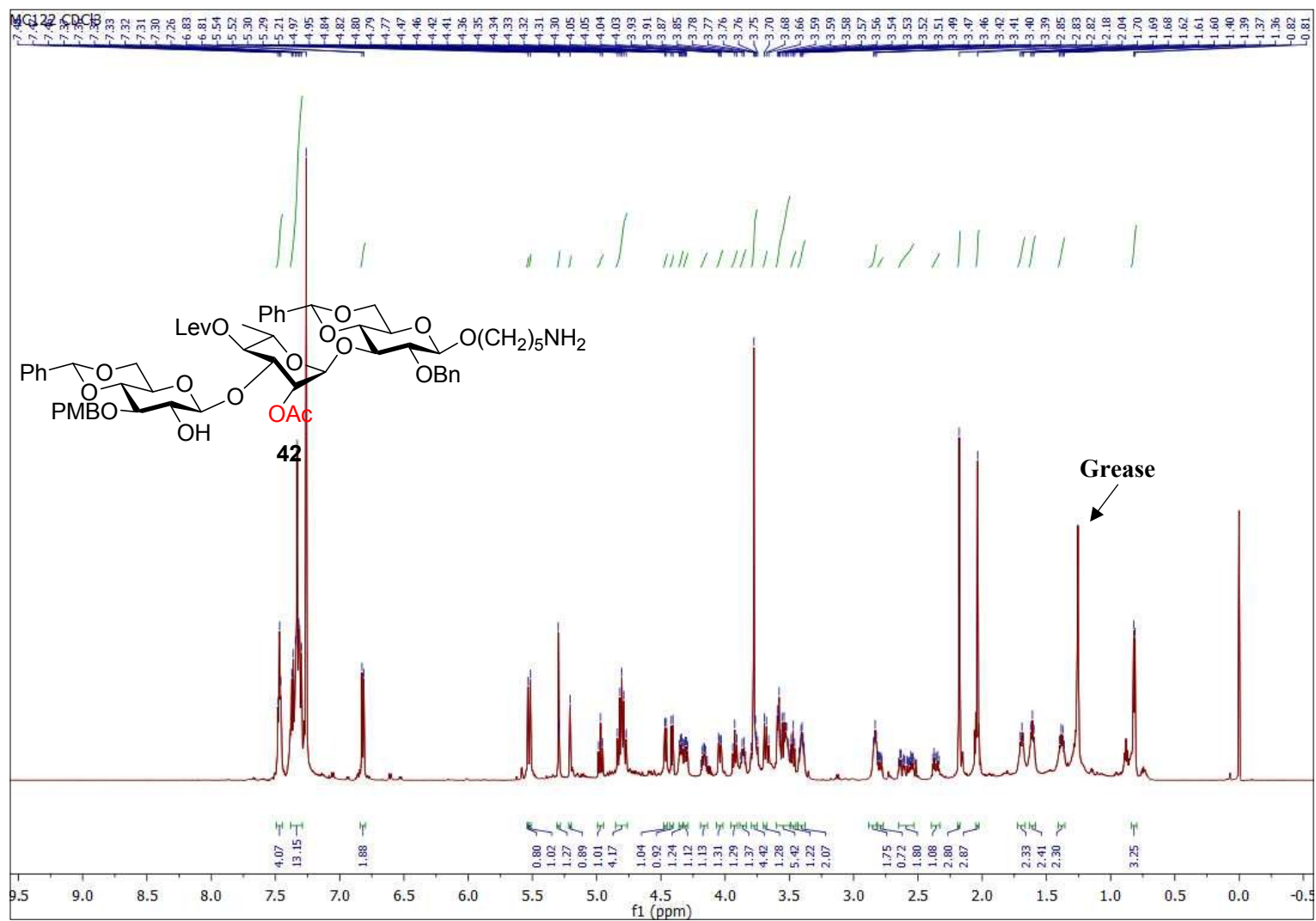
Supplementary Figure 119 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 41



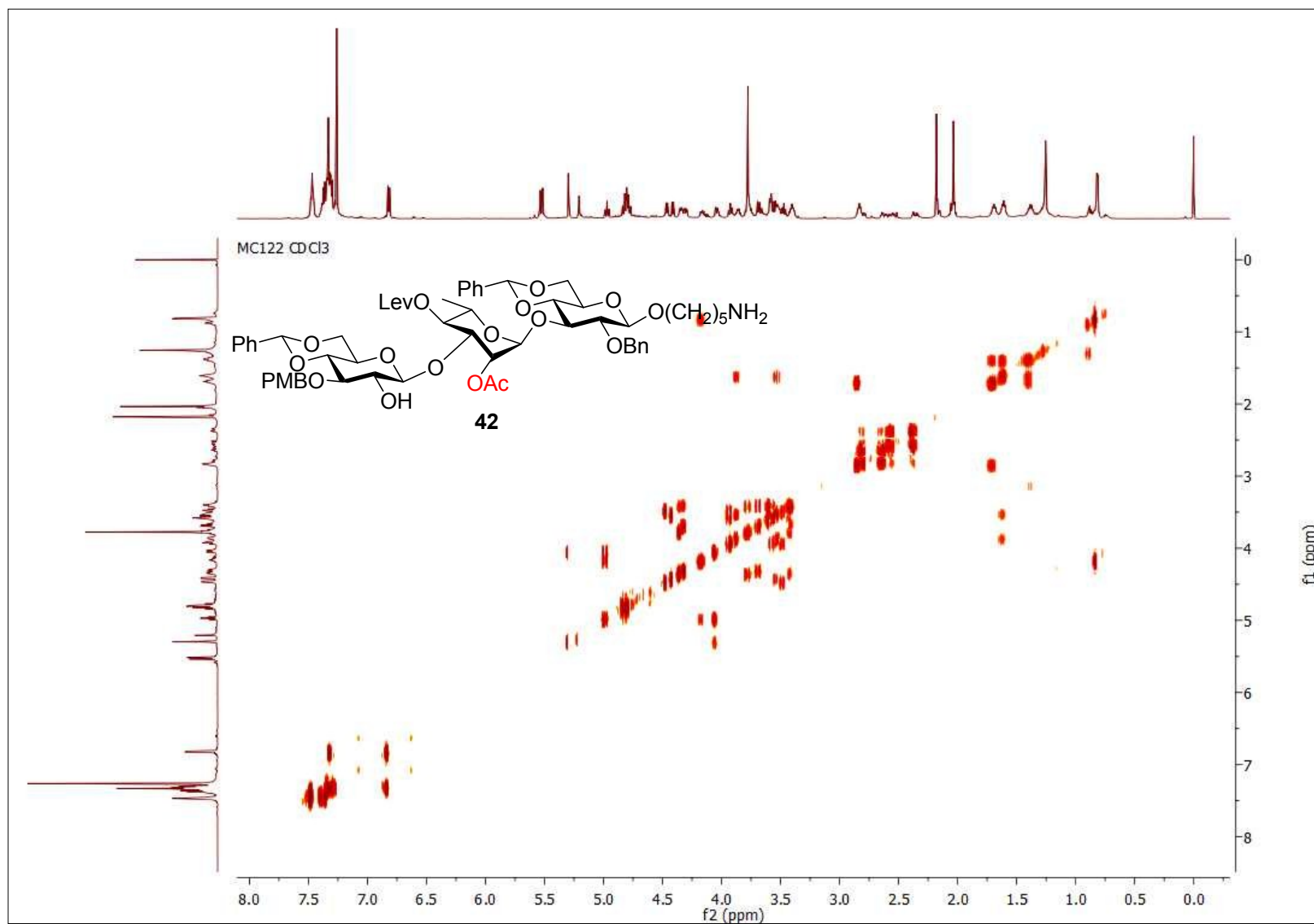
Supplementary Figure 120 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 41



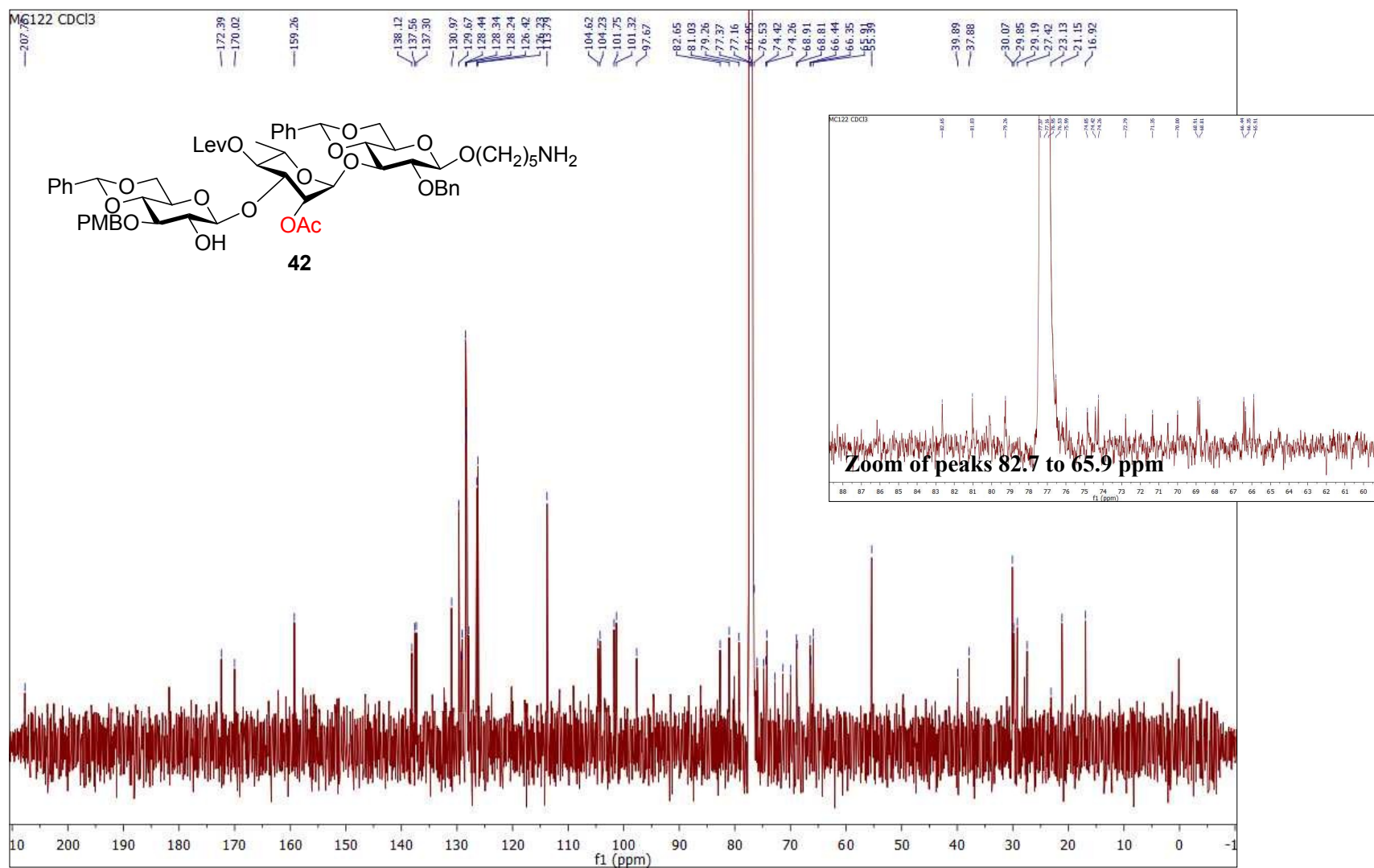
Supplementary Figure 121 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 42



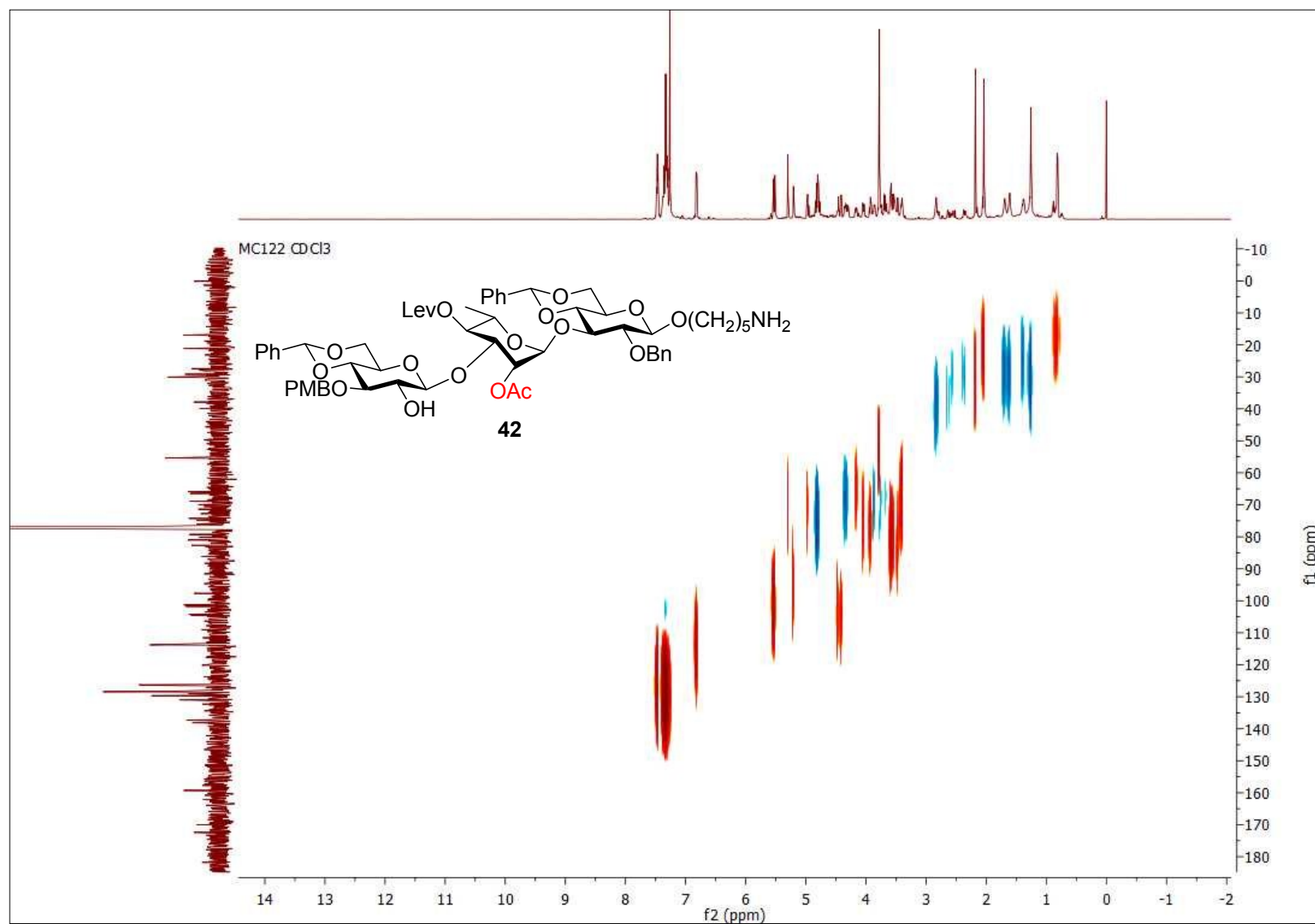
Supplementary Figure 122 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 42



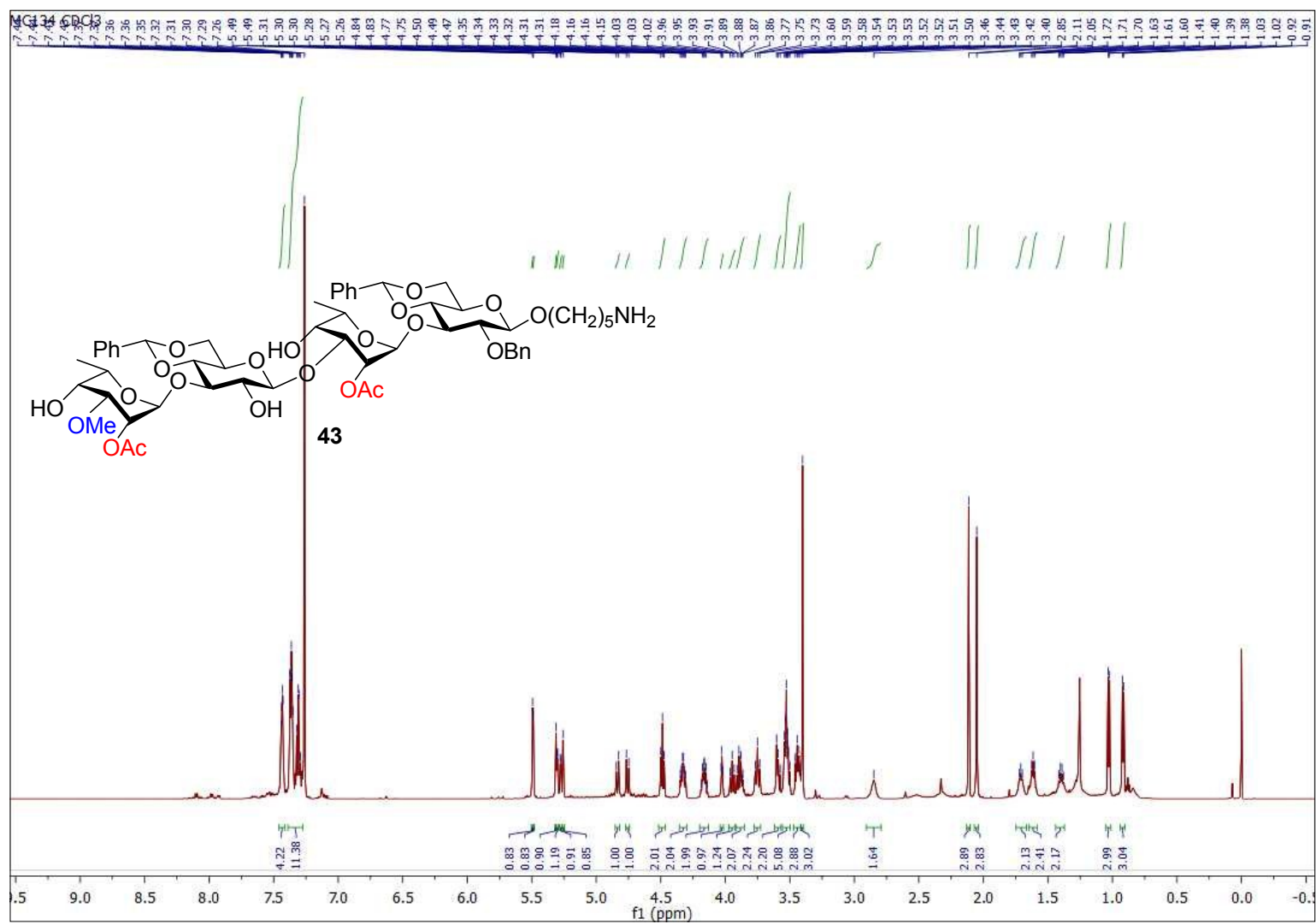
Supplementary Figure 123 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 42



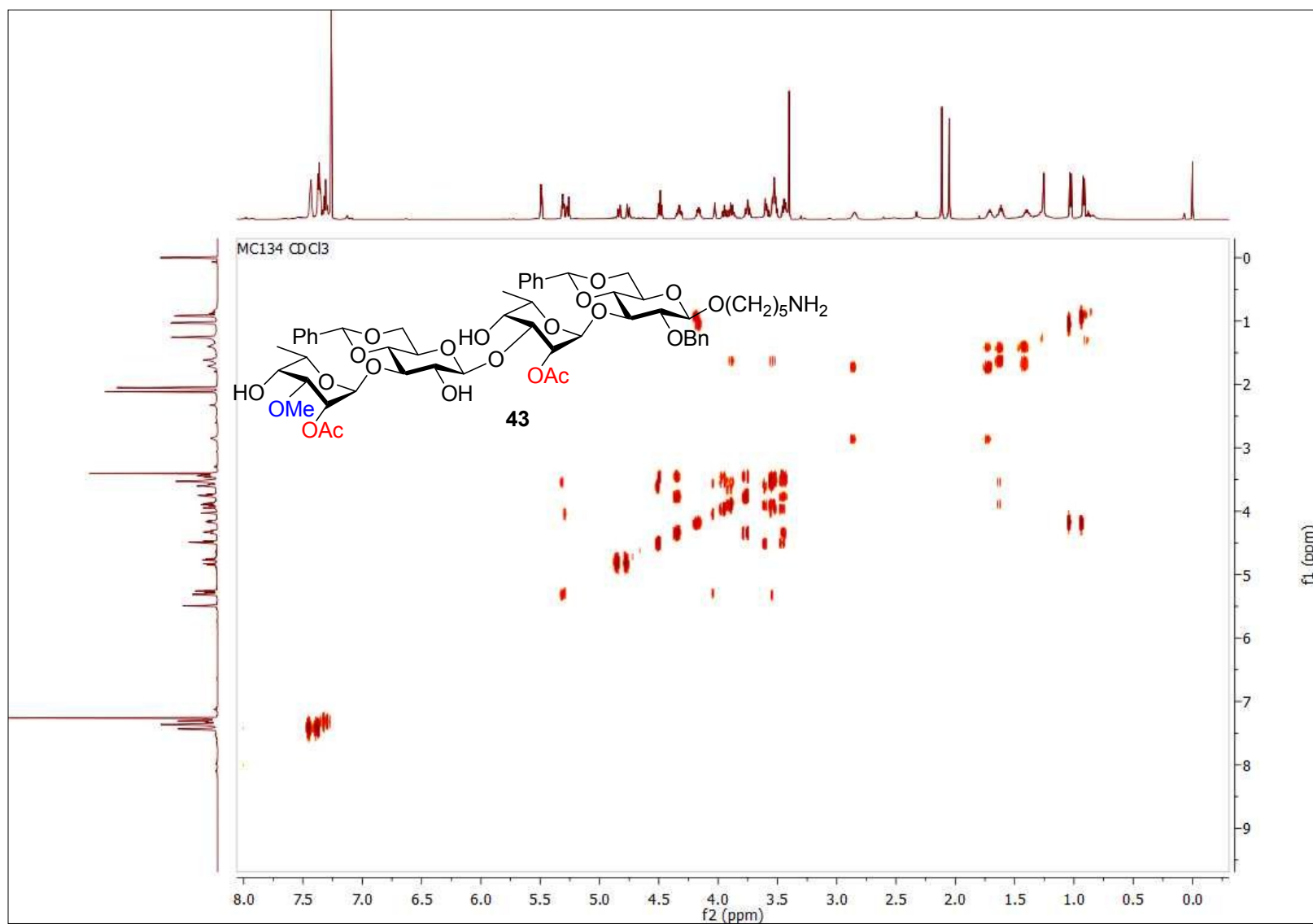
Supplementary Figure 124 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 42



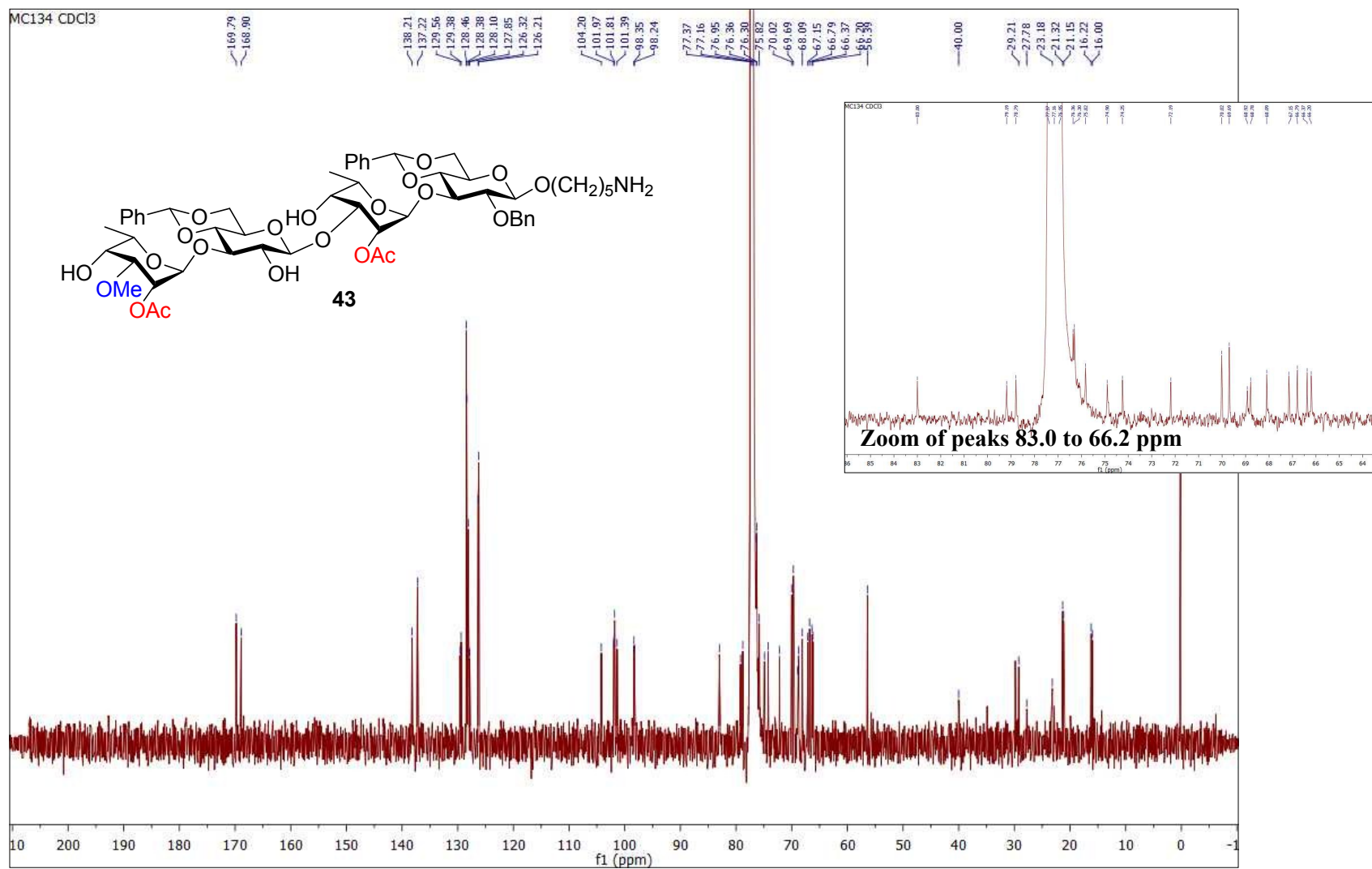
Supplementary Figure 125 | ^1H NMR spectrum (CDCl_3 , 600 MHz) of compound 43



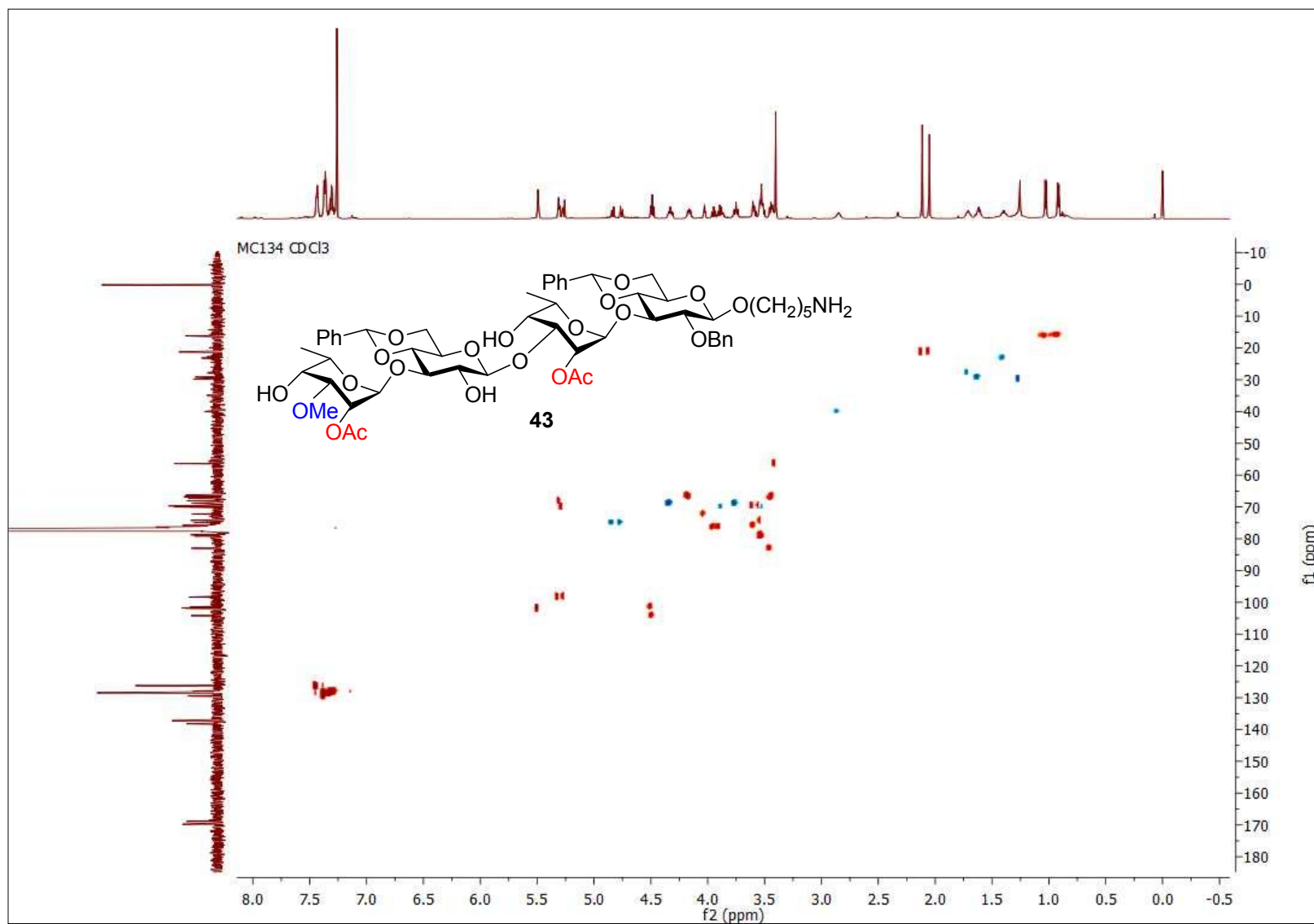
Supplementary Figure 126 | COSY NMR spectrum (CDCl₃, 600 MHz) of compound 43



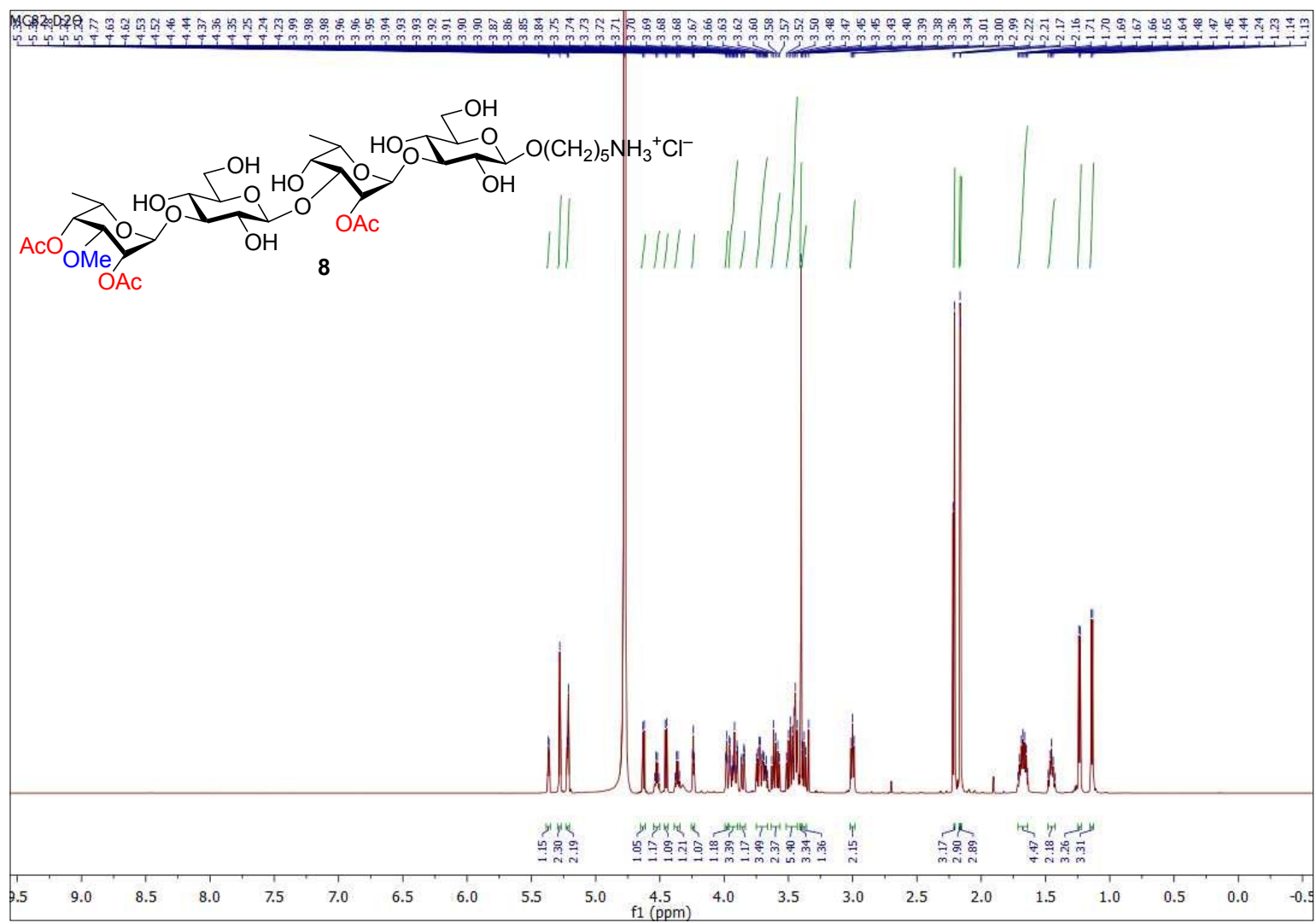
Supplementary Figure 127 | ^{13}C NMR spectrum (CDCl_3 , 150 MHz) of compound 43



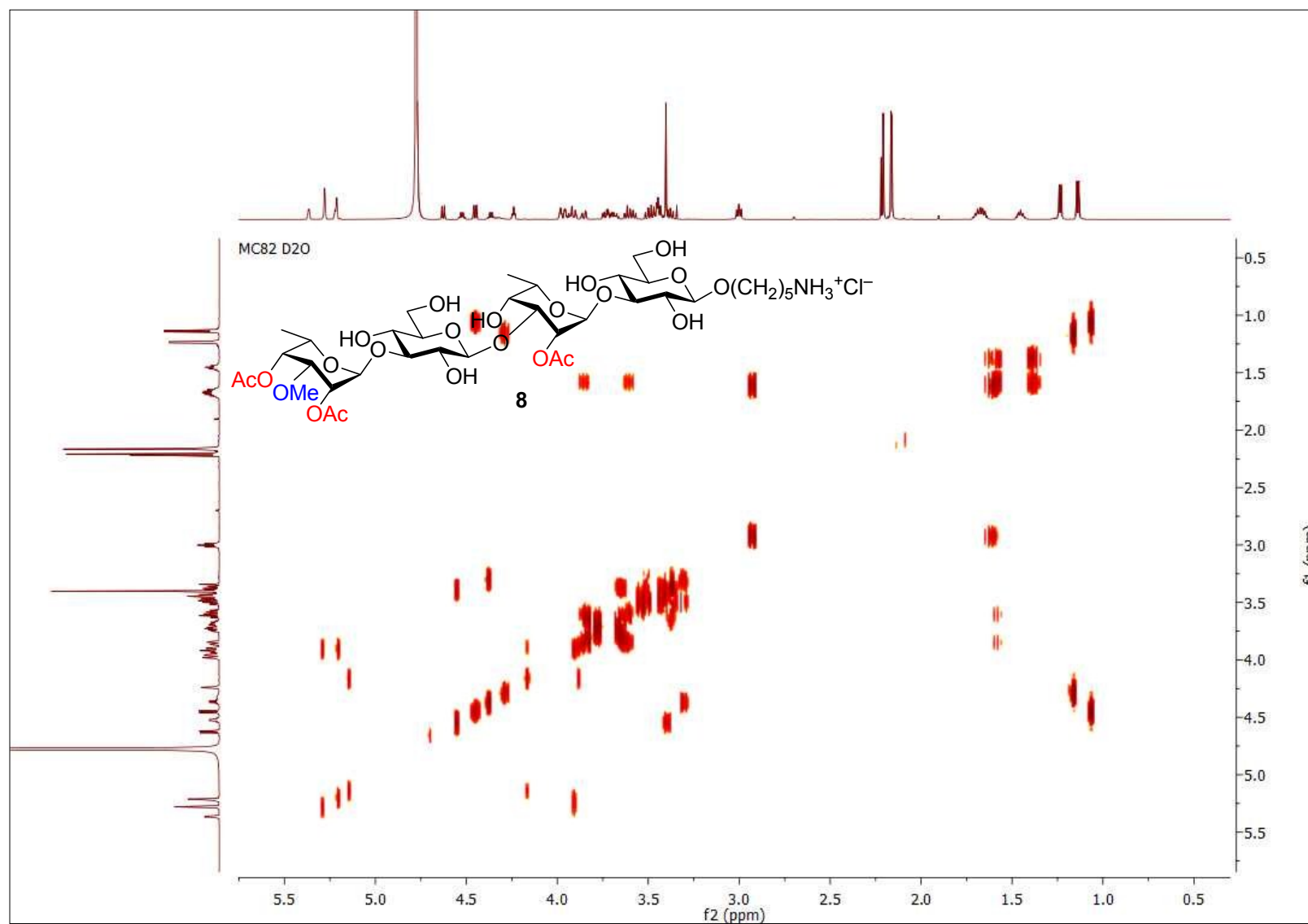
Supplementary Figure 128 | HSQC NMR spectrum (CDCl₃, 600 MHz) of compound 43



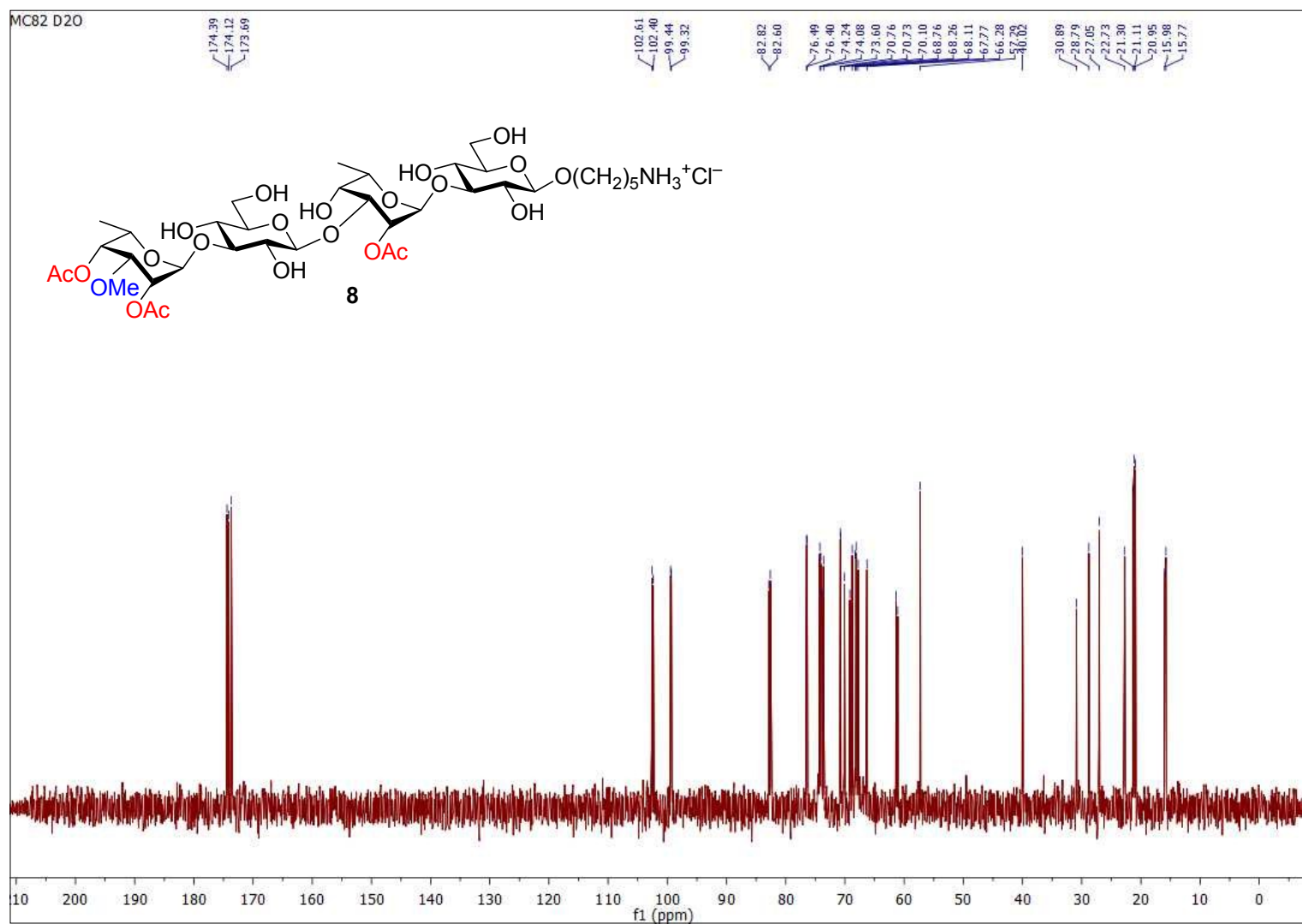
Supplementary Figure 129 | ^1H NMR spectrum (D_2O , 600 MHz) of compound 8



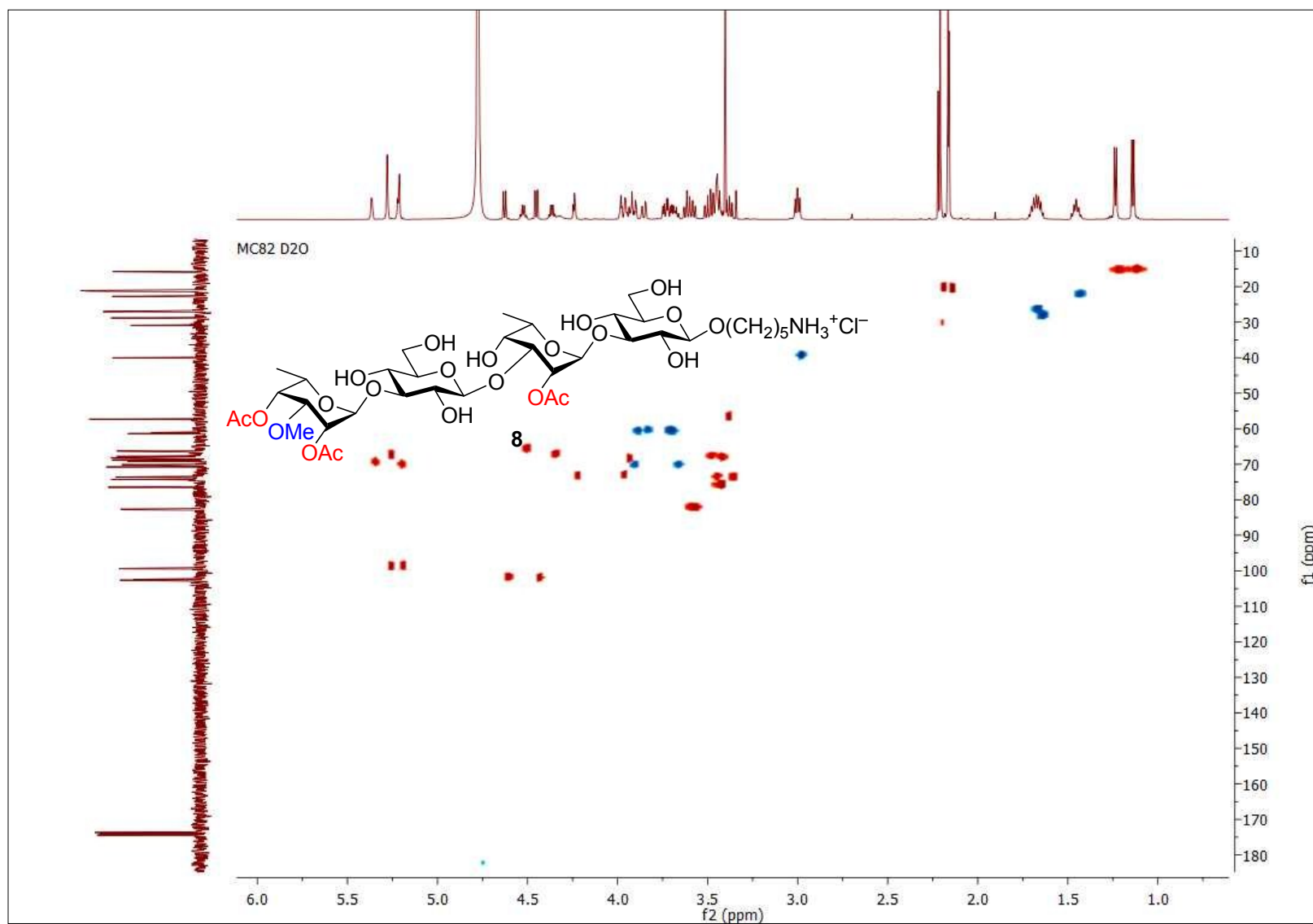
Supplementary Figure 130 | COSY NMR spectrum (D₂O, 600 MHz) of compound 8



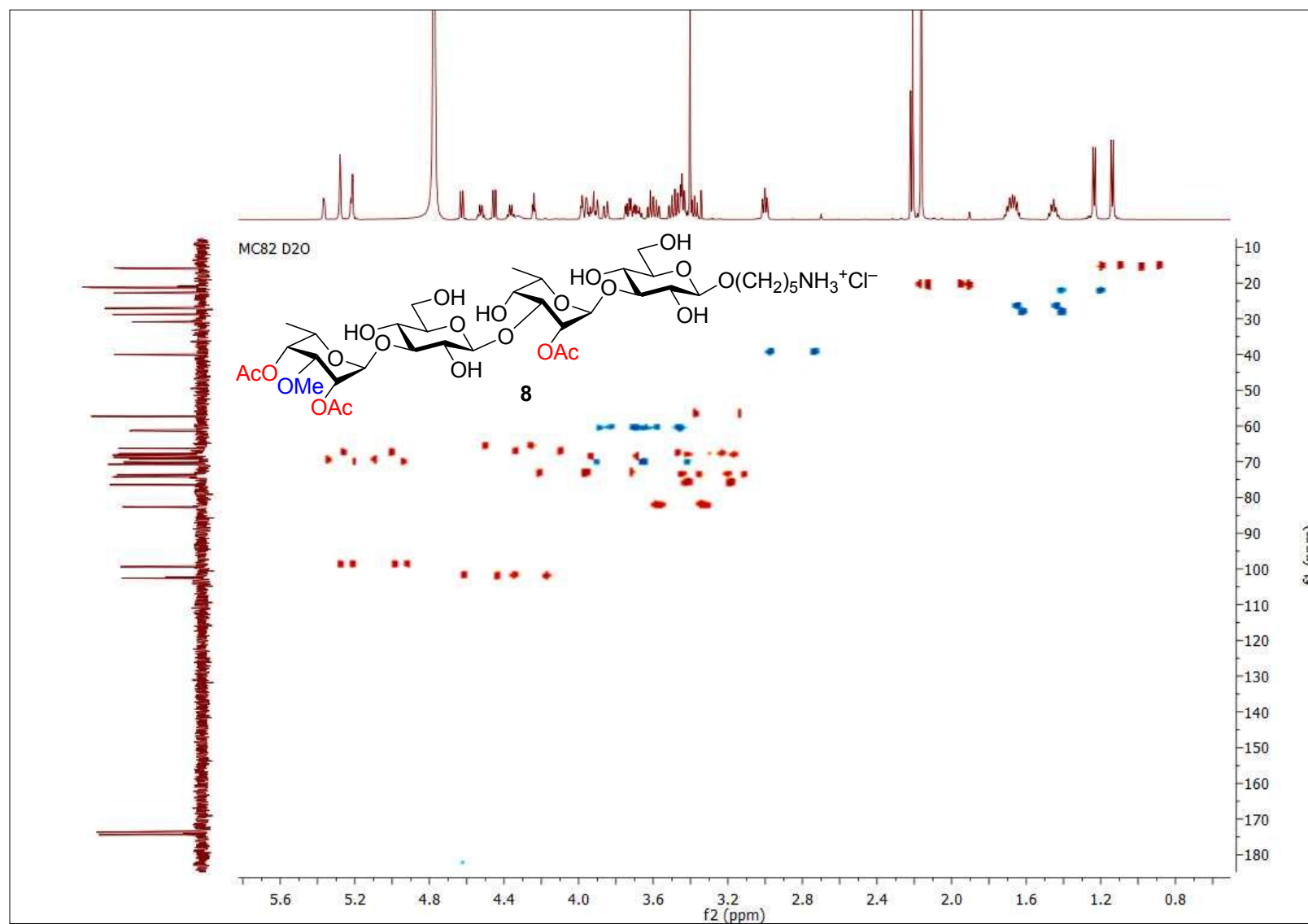
Supplementary Figure 131 | ^{13}C NMR spectrum (D_2O , 150 MHz) of compound 8



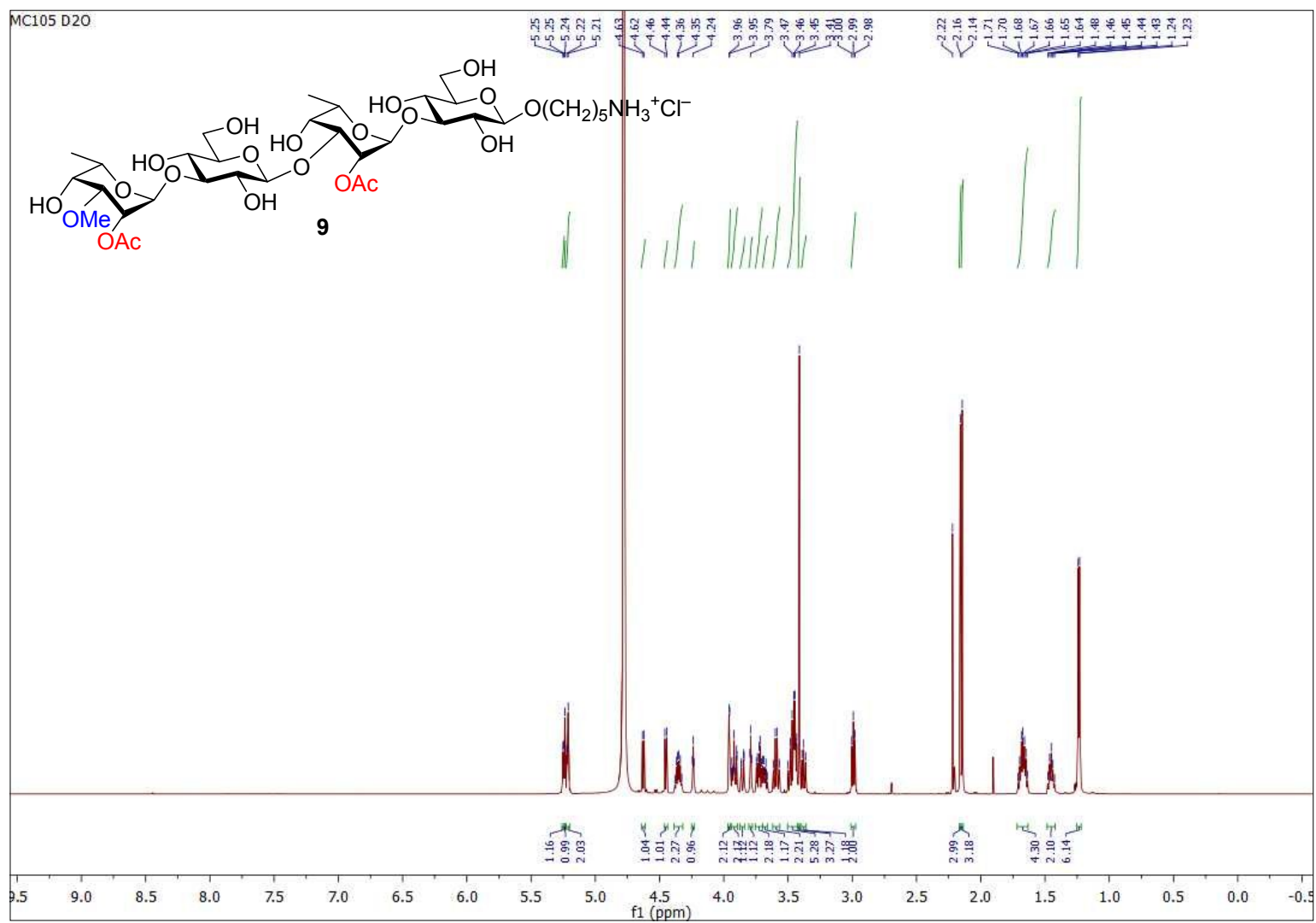
Supplementary Figure 132 | HSQC NMR spectrum (D_2O , 600 MHz) of compound 8



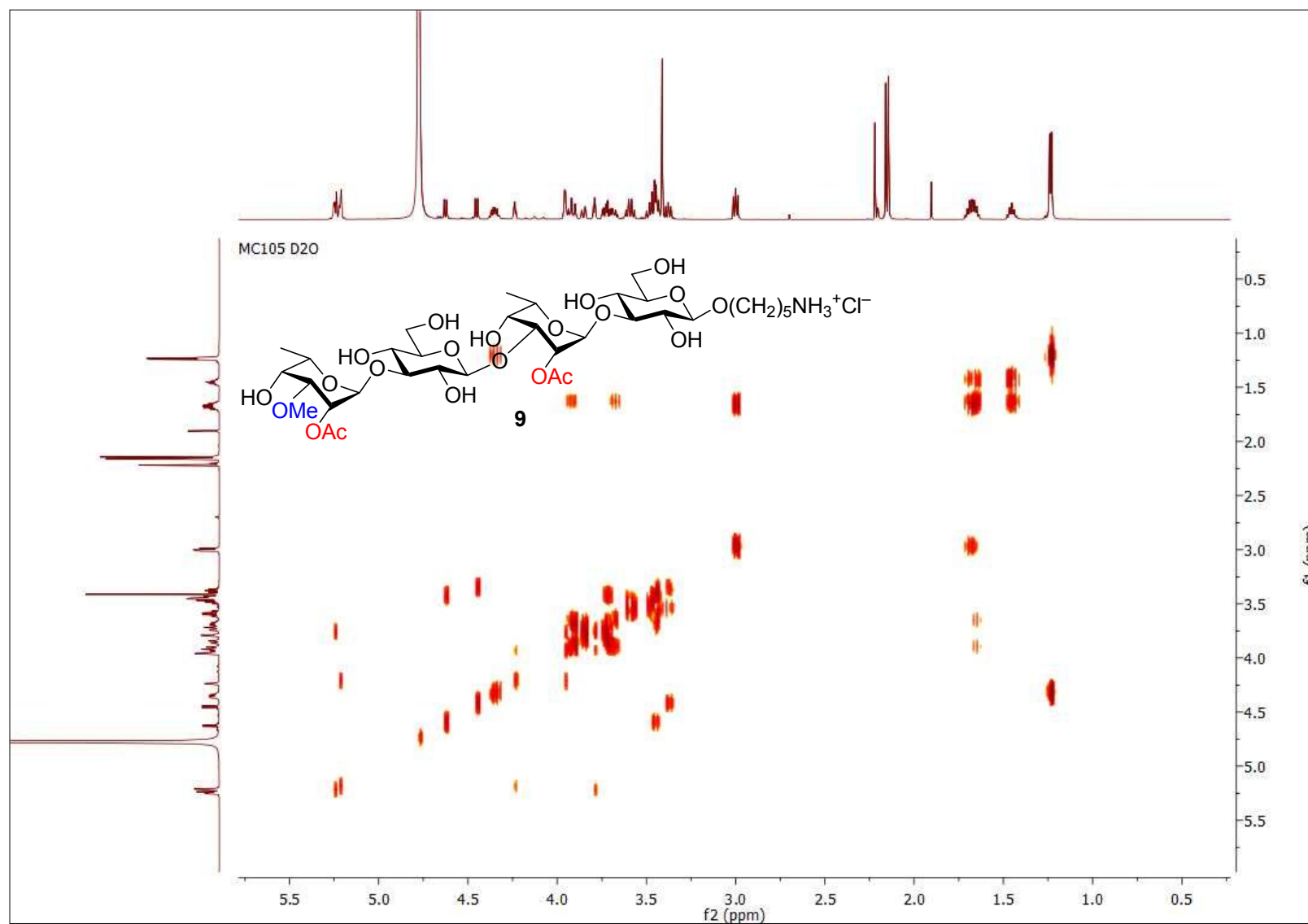
Supplementary Figure 133 | Undecoupled HSQC NMR spectrum (D₂O, 600 MHz) of compound 8



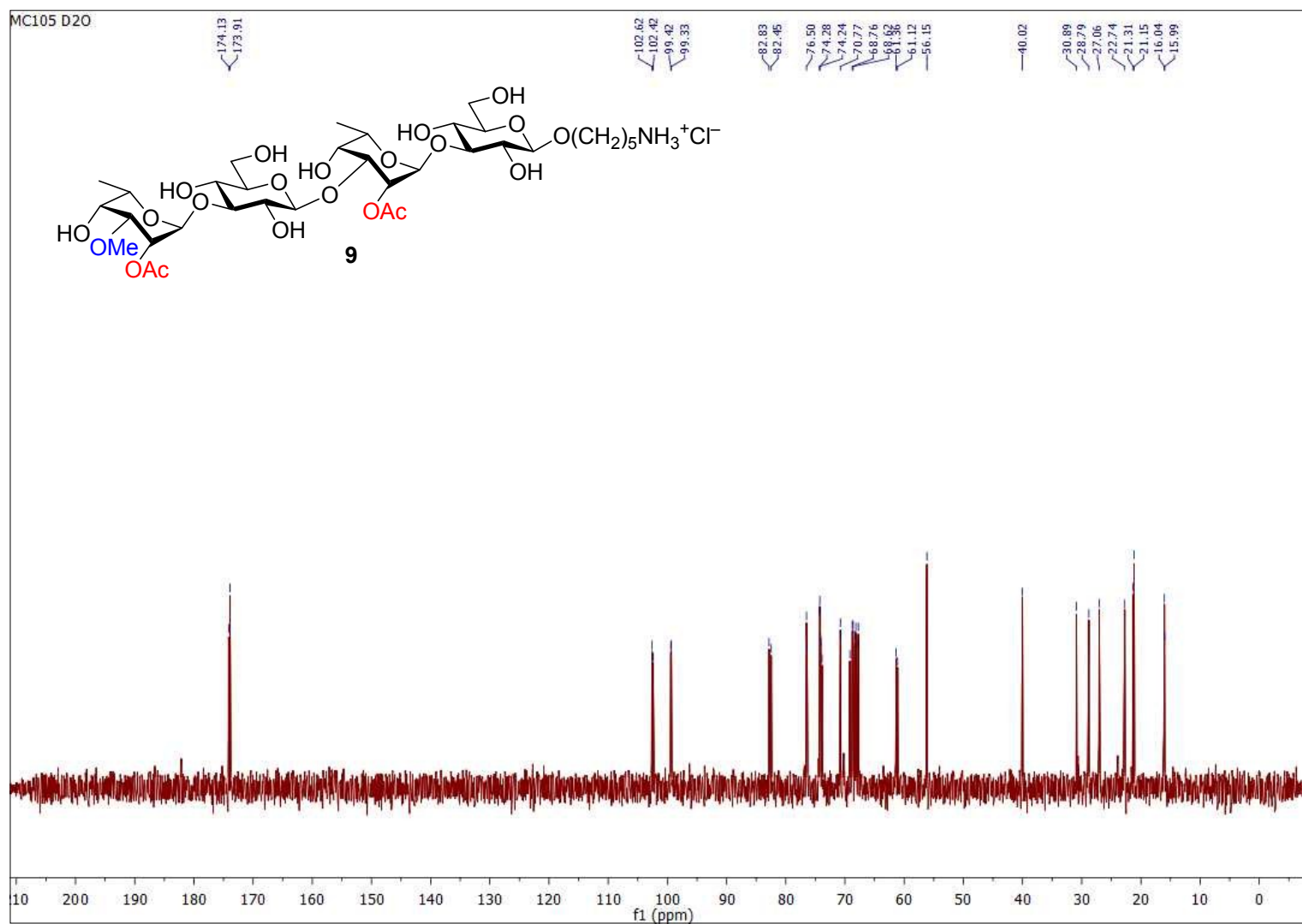
Supplementary Figure 134 | ^1H NMR spectrum (D_2O , 600 MHz) of compound 9



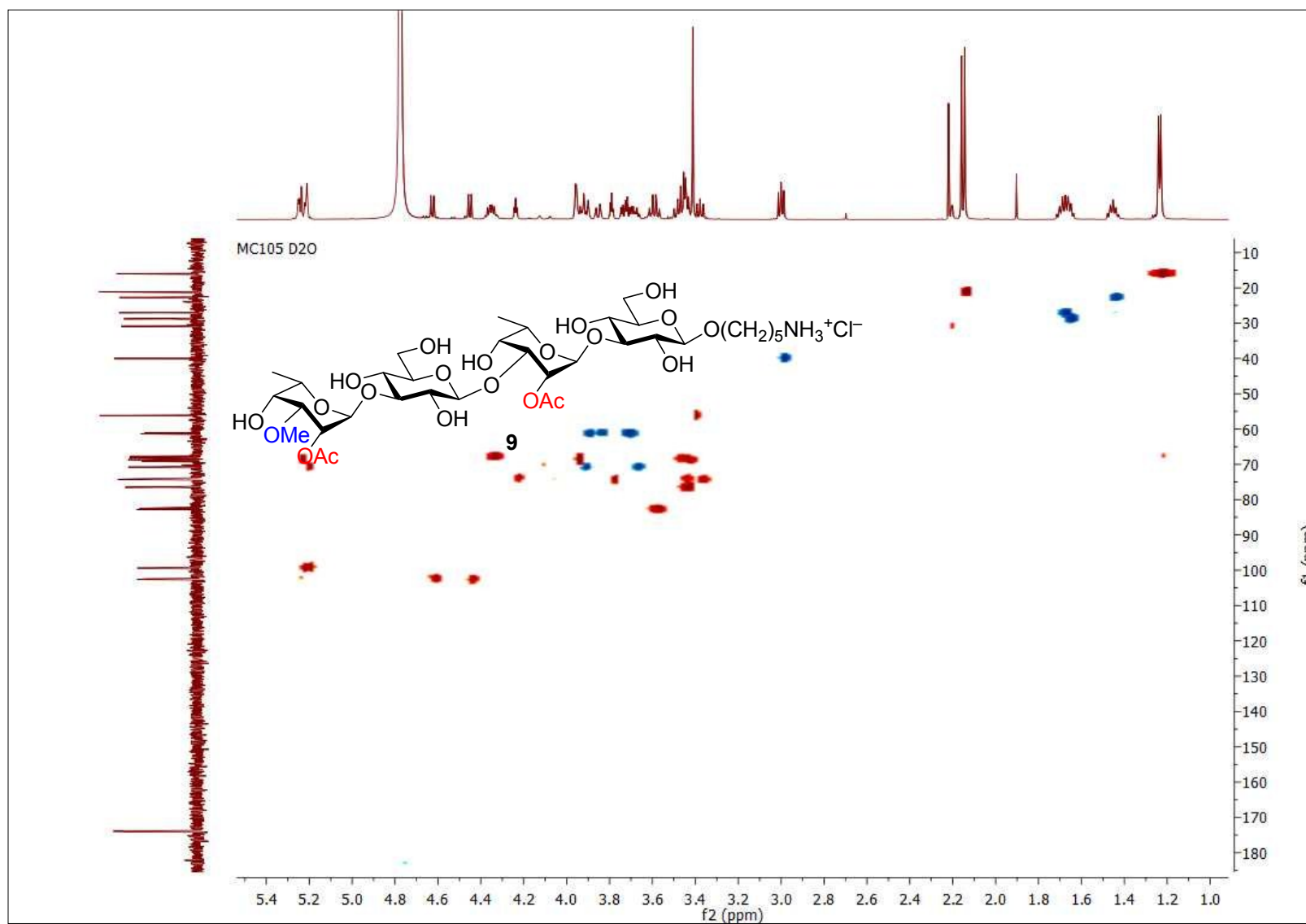
Supplementary Figure 135 | COSY NMR spectrum (D₂O, 600 MHz) of compound 9



Supplementary Figure 136 | ^{13}C NMR spectrum (D_2O , 150 MHz) of compound 9



Supplementary Figure 137 | HSQC NMR spectrum (D₂O, 600 MHz) of compound 9



Supplementary references

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