Supplementary Information

Allelopathic interactions between the brown algal genus *Lobophora* (Dictyotales, Phaeophyceae) and scleractinian corals

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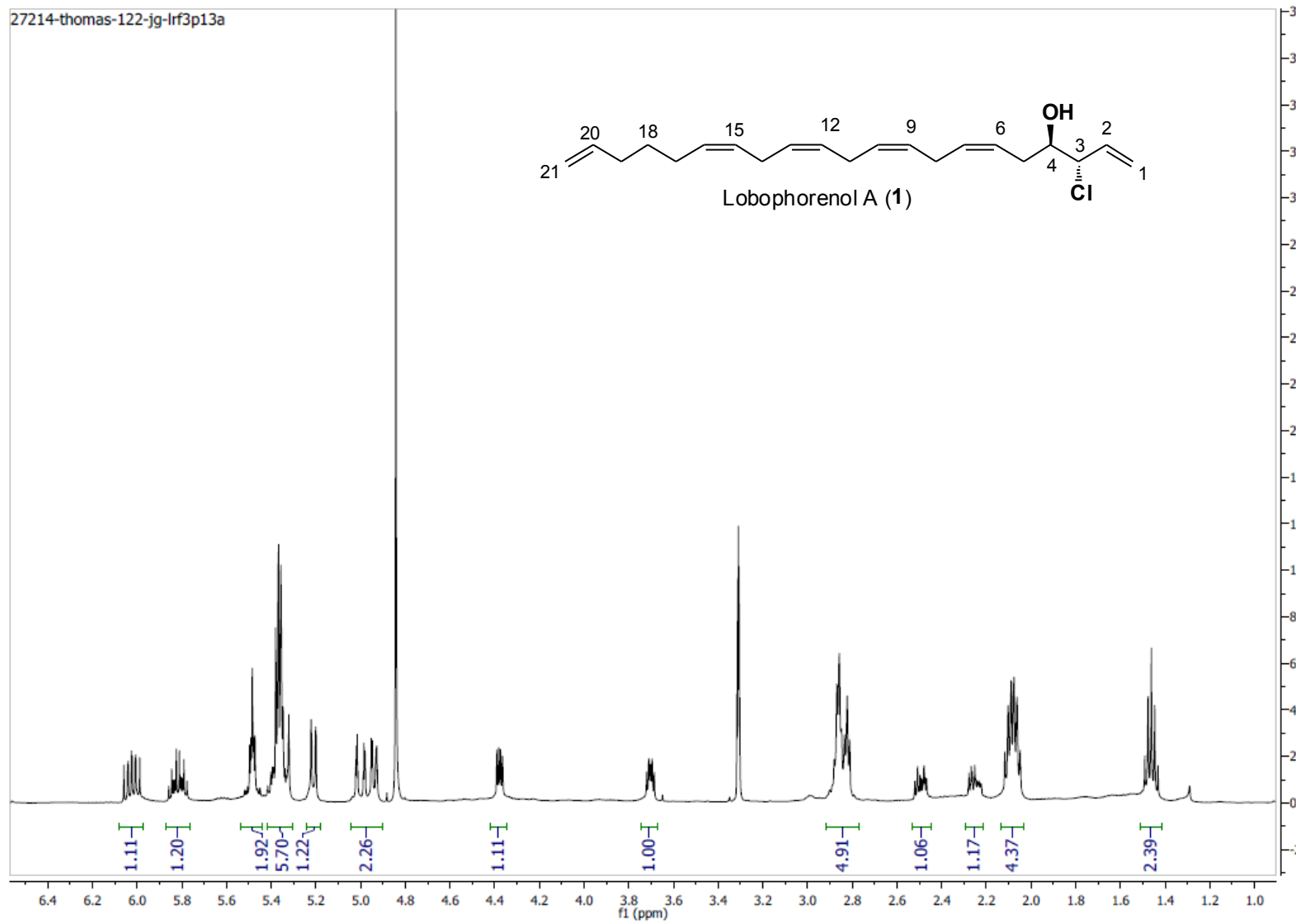
NMR spectra of compounds 1-3

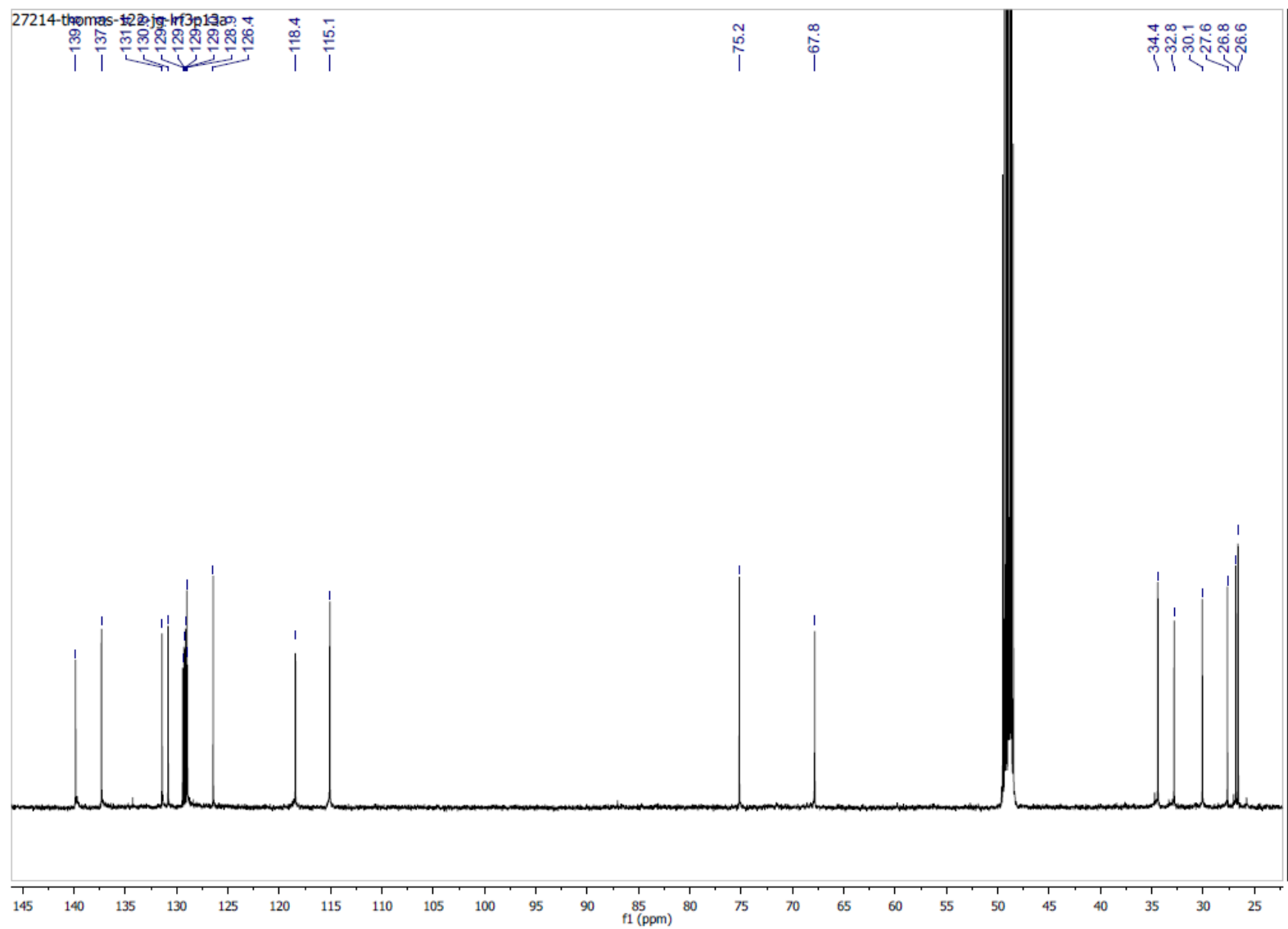HR-(+)ESIMS spectra of compounds 1-3

Assessment of the relative seafloor cover and quantification of Lobophora-corals association
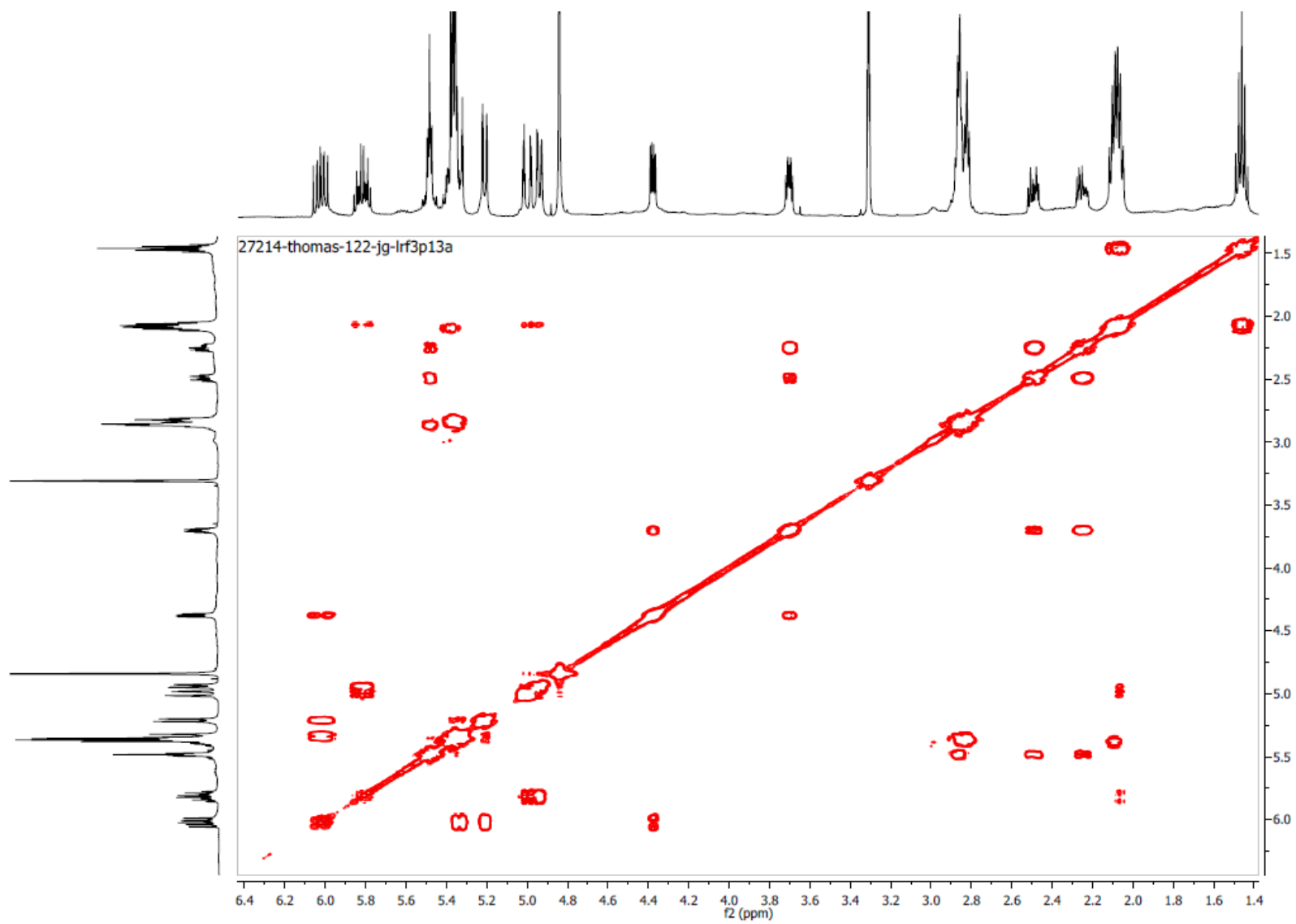
Sampling locations of Lobophora species in New Caledonia
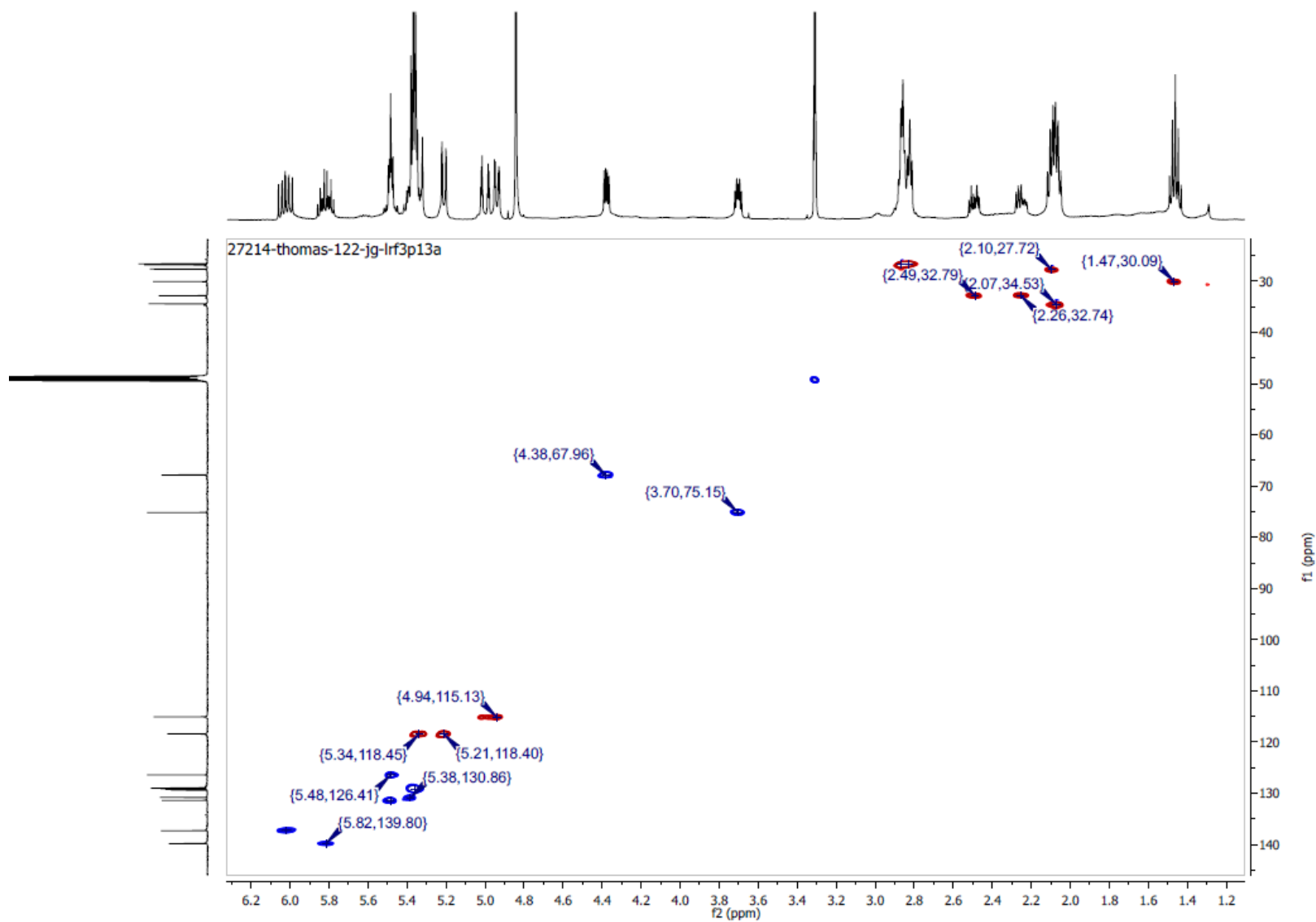
Picture of *in situ* bioassays.

27214-thomas-122-jg-lrf3p13a

Lobophorenol A (**1**)

^{1}H NMR spectrum of **1** in CD$_3$OD at 500 MHz

27214-thomas-t22-jq-lrf3p13a

139
137
131
130
129.7
129
129
128.9
126.4
118.4
115.1
75.2
67.8
34.4
32.8
30.1
27.6
26.8
26.6

145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25
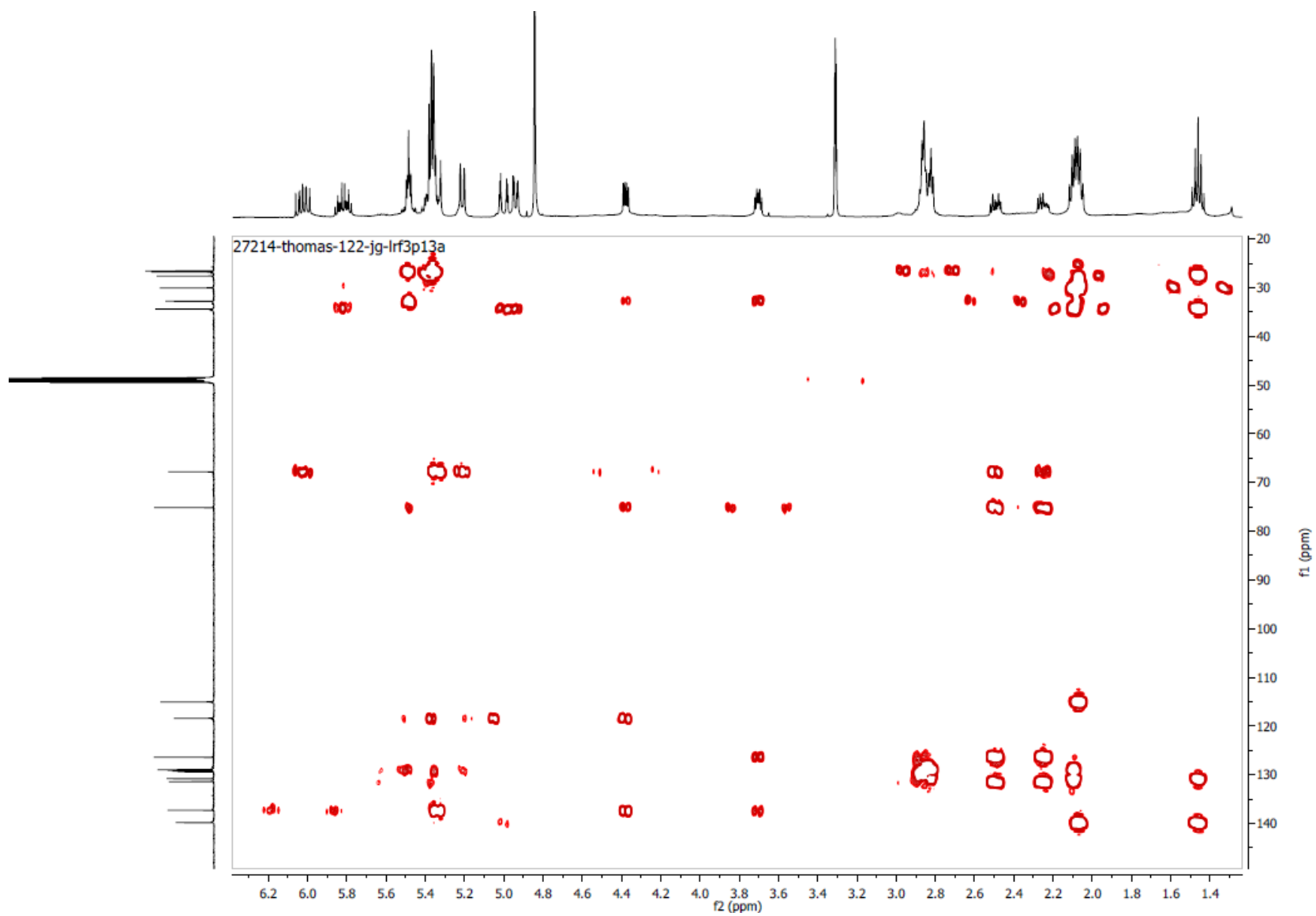f1 (ppm)

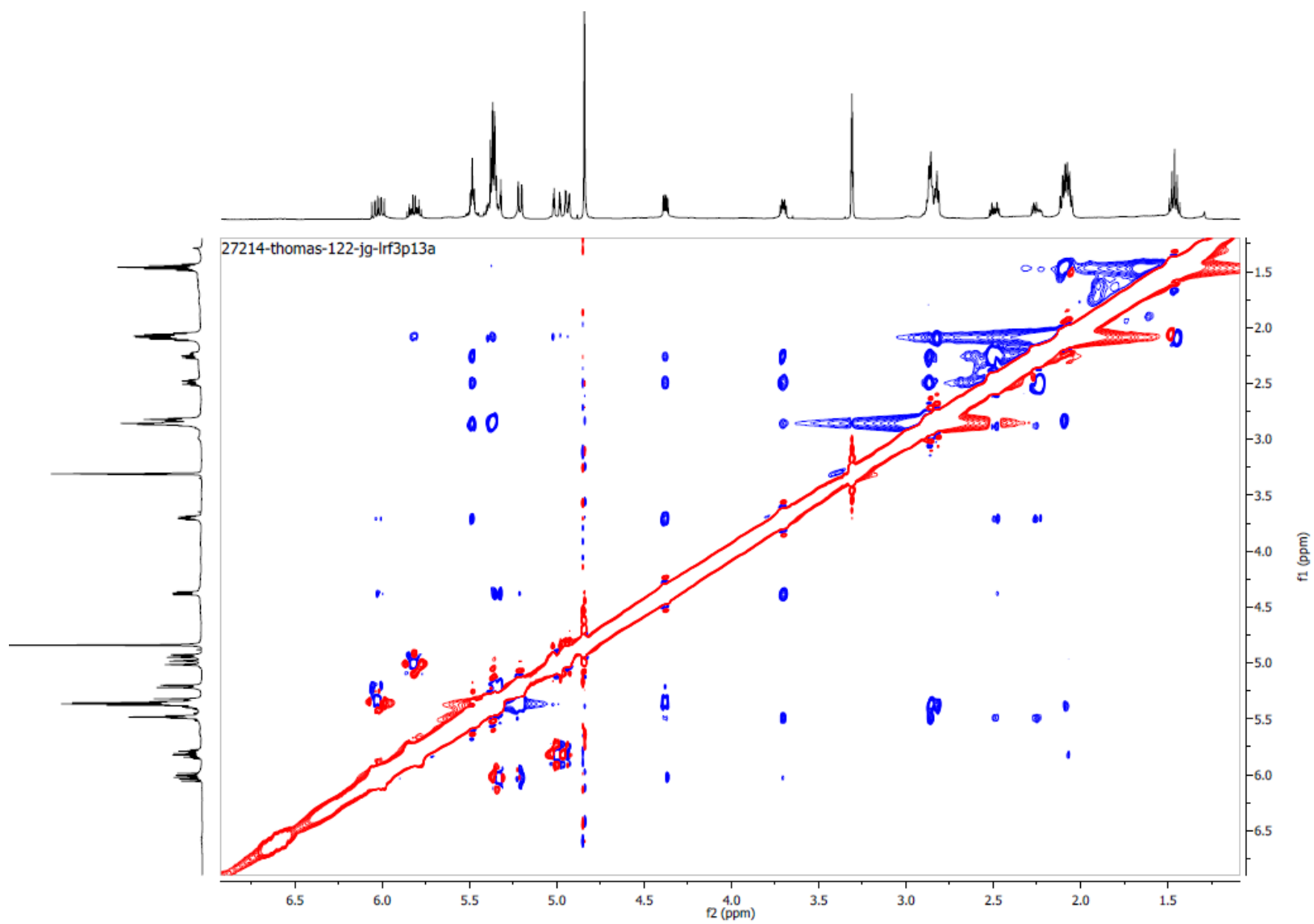^{13}C NMR spectrum of **1** in CD$_3$OD at 125 MHz

COSY NMR spectrum of **1** in CD₃OD (500 MHz)

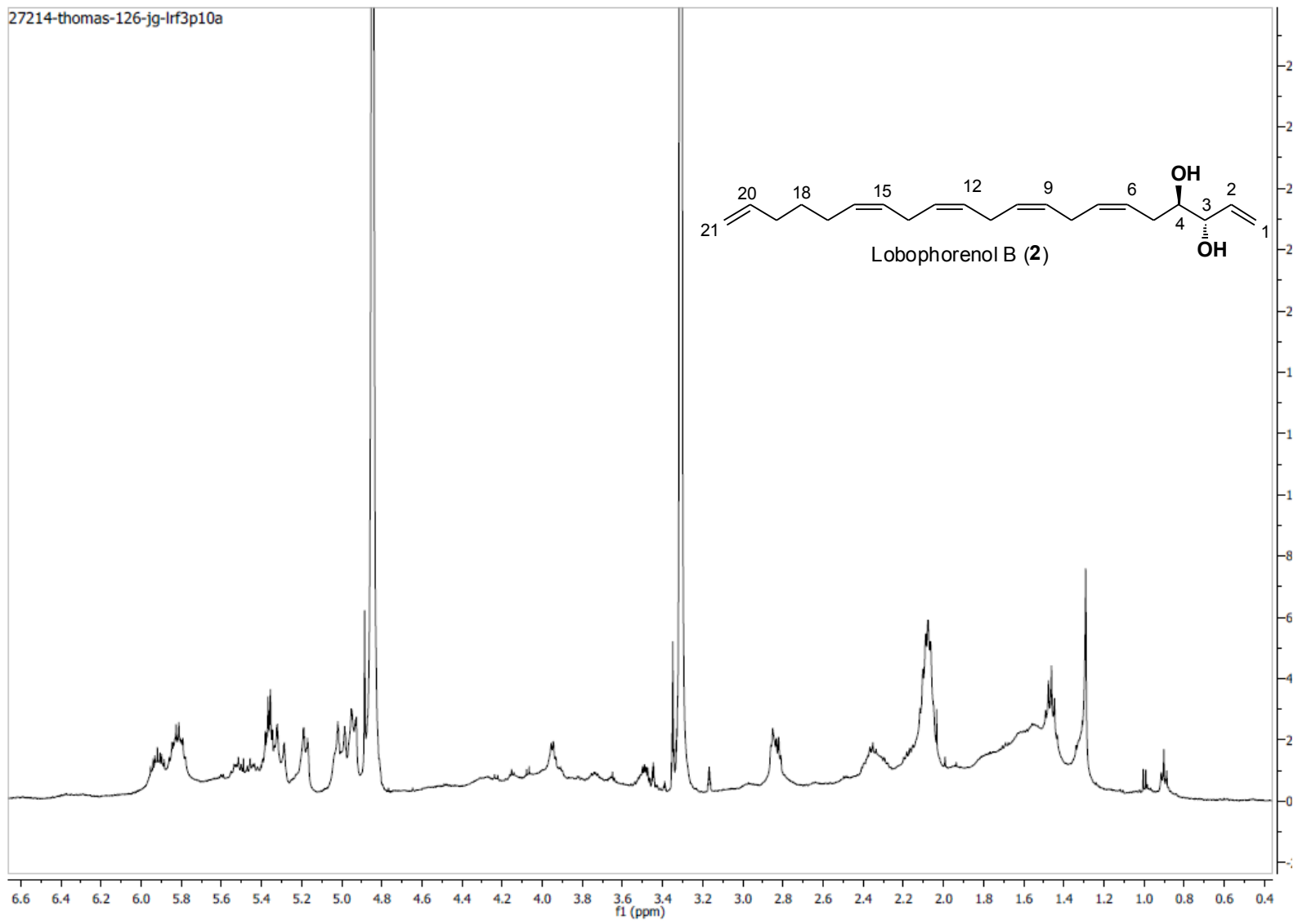HSQC NMR spectrum of **1** in CD$_3$OD (500 MHz)

HMBC NMR spectrum of **1** in CD$_3$OD (500 MHz)

NOESY NMR spectrum of **1** in CD₃OD (500 MHz)

HR-(+)ESIMS spectrum of **1**

Lobophorenol B (2)

^{1}H NMR spectrum of **2** in CD$_3$OD (500 MHz)

27214-thomas-126-jg-lrf3p10a

144.4 139.4 129.3 129.19 129.14 129.00 116.72 115.06 115.03 109.61 76.63 75.52 34.56 34.42 31.75 30.76 30.09 27.63 26.77 26.59 26.57

155 150 145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20
f1 (ppm)

^{13}C NMR spectrum of **2** in CD$_3$OD (125 MHz)

COSY NMR spectrum of **2** in CD₃OD (500 MHz)

HSQC NMR spectrum of **2** in CD$_3$OD (500 MHz)
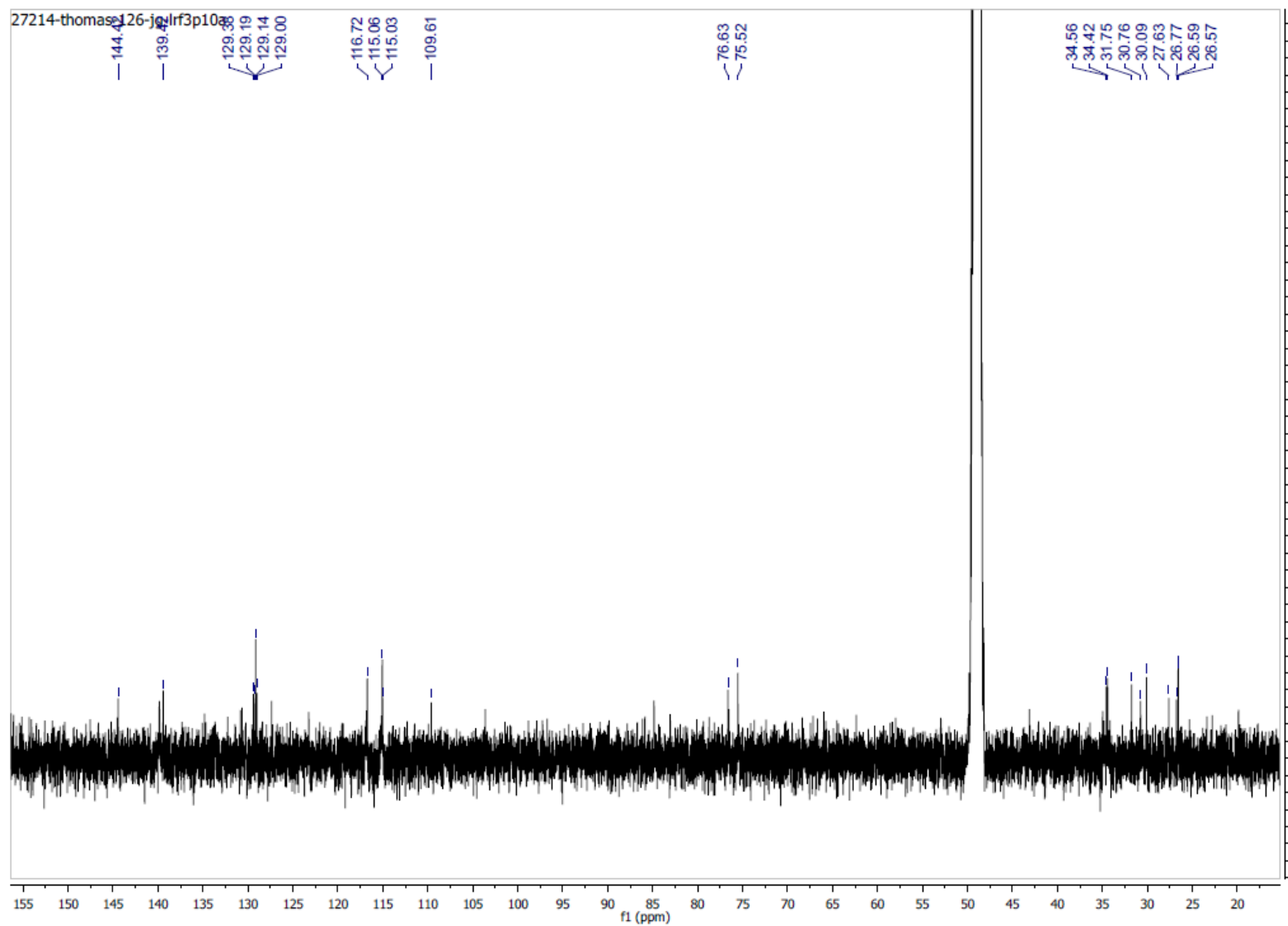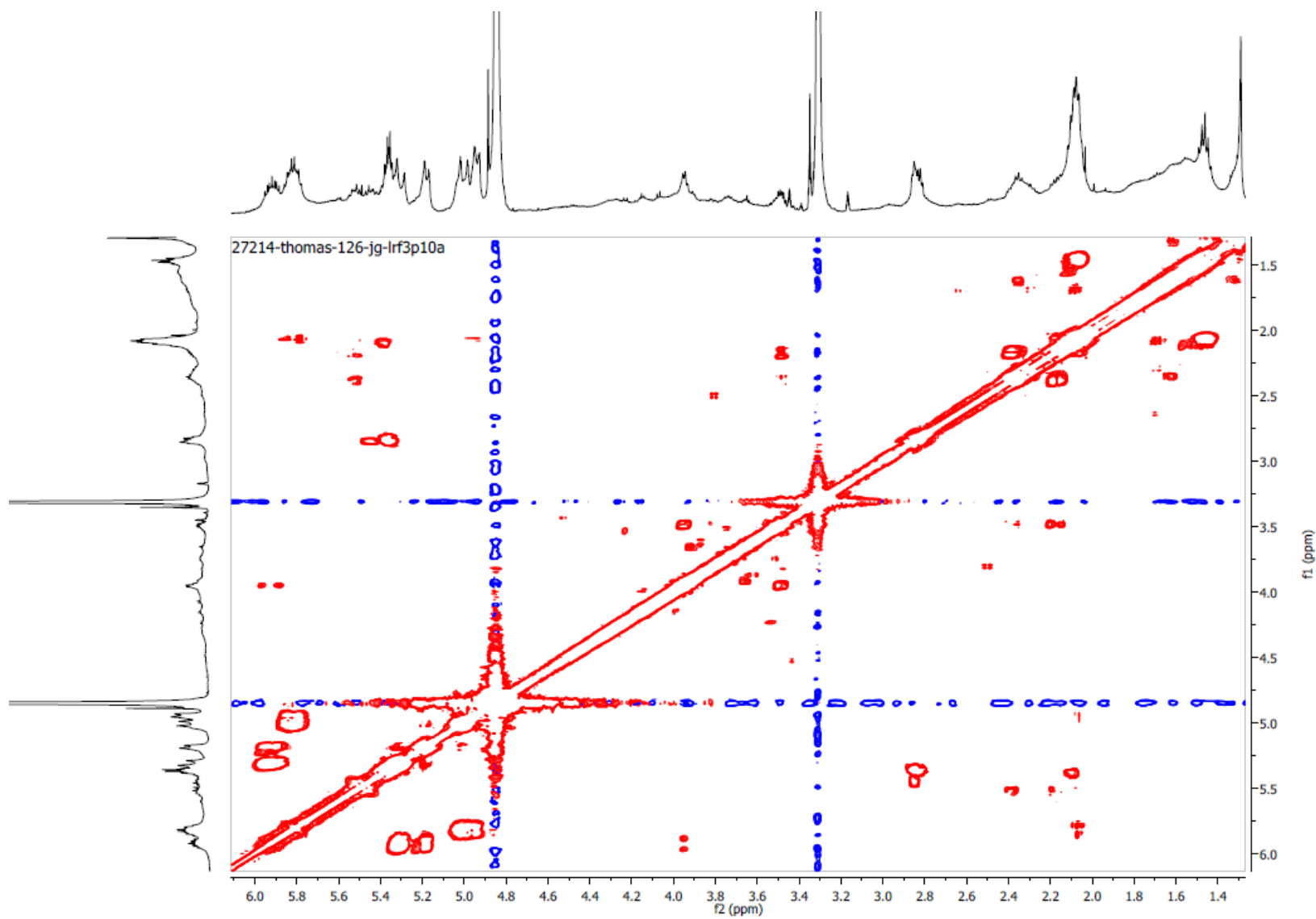
HMBC NMR spectrum of **2** in CD$_3$OD (500 MHz)

HR-(+)ESIMS spectrum of **2**

27214-thomas-133-jgplr5p11b
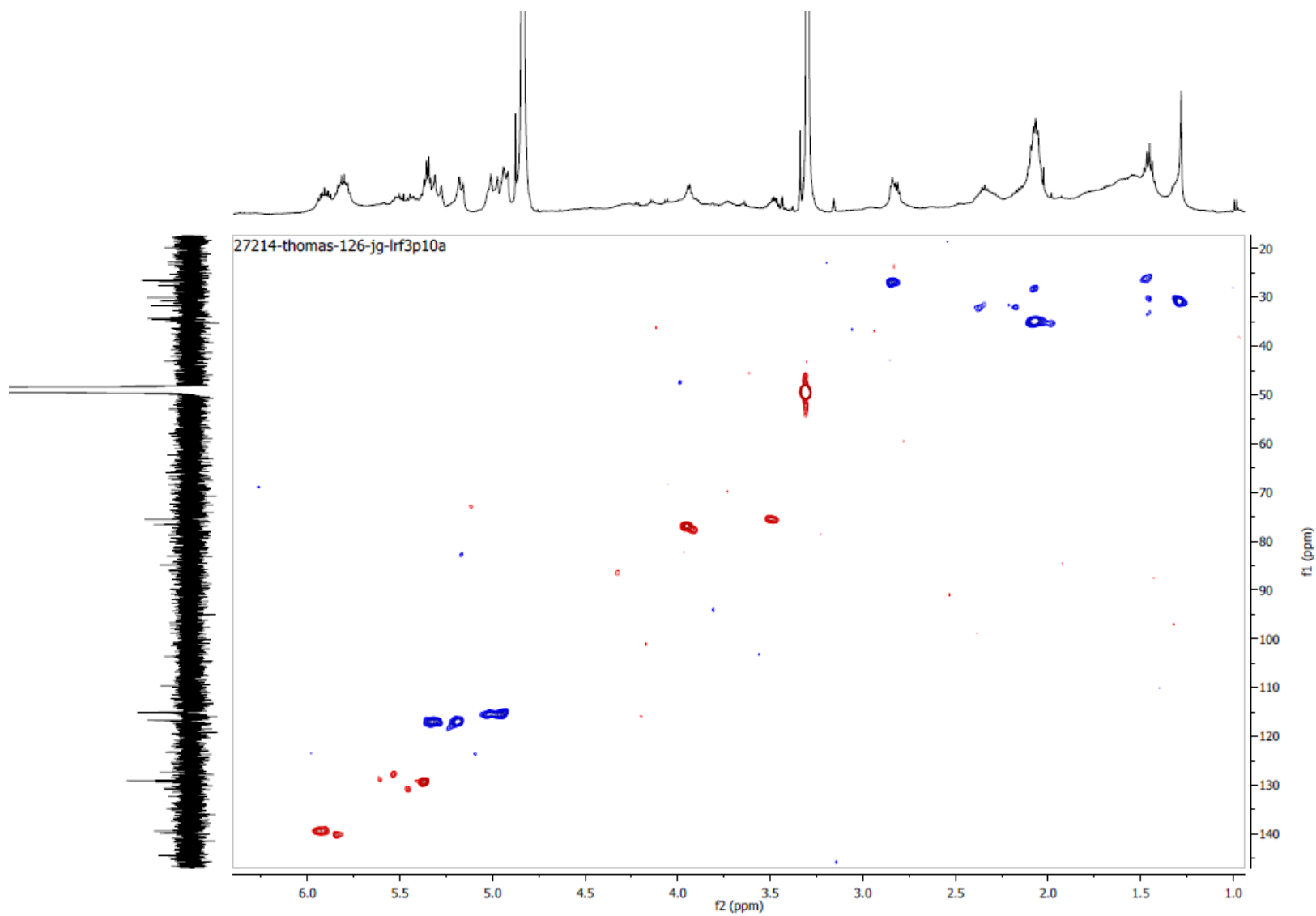
Lobophorenol C (**3**)

^{1}H NMR spectrum of **3** in CD$_3$OD (500 MHz)
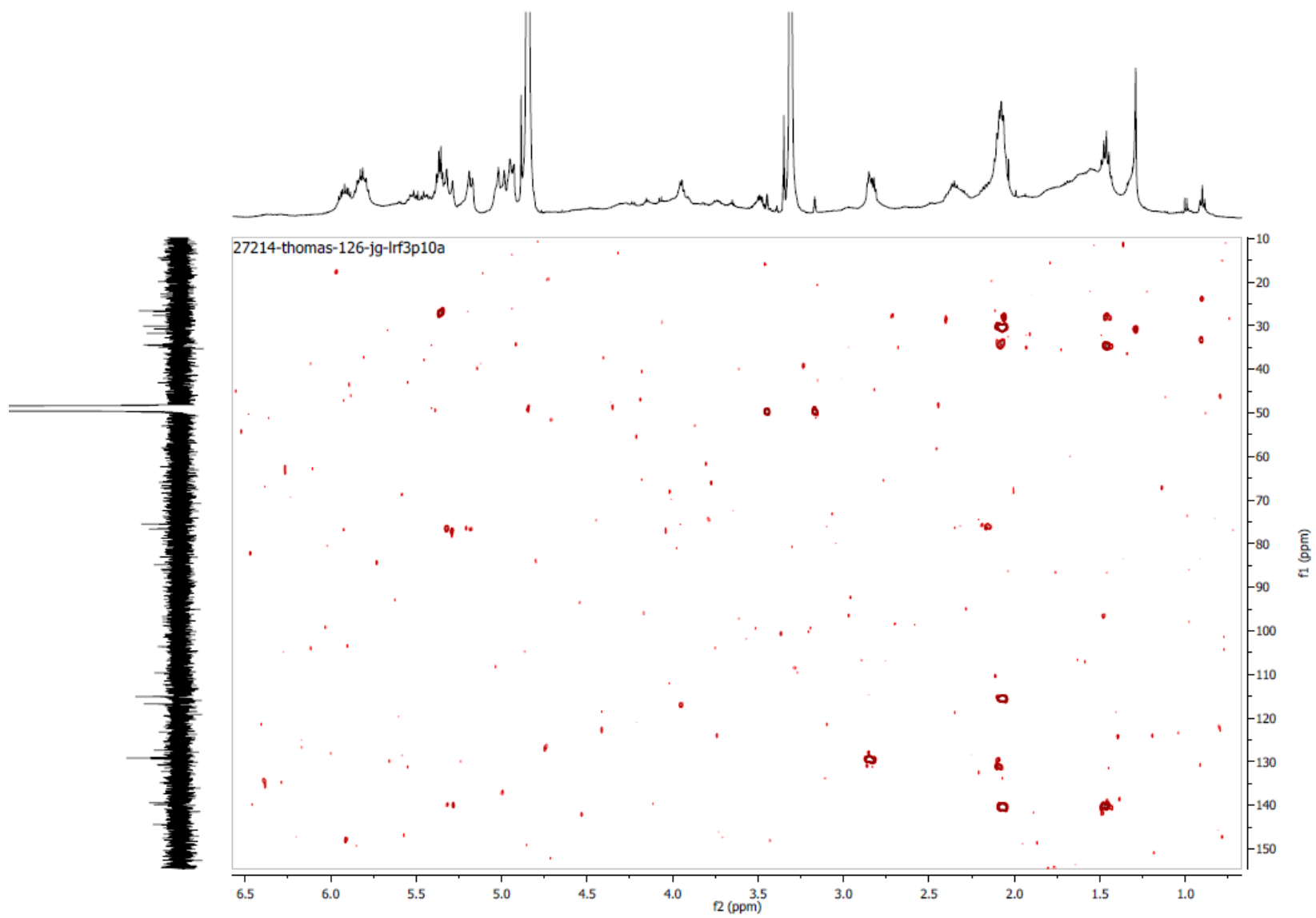
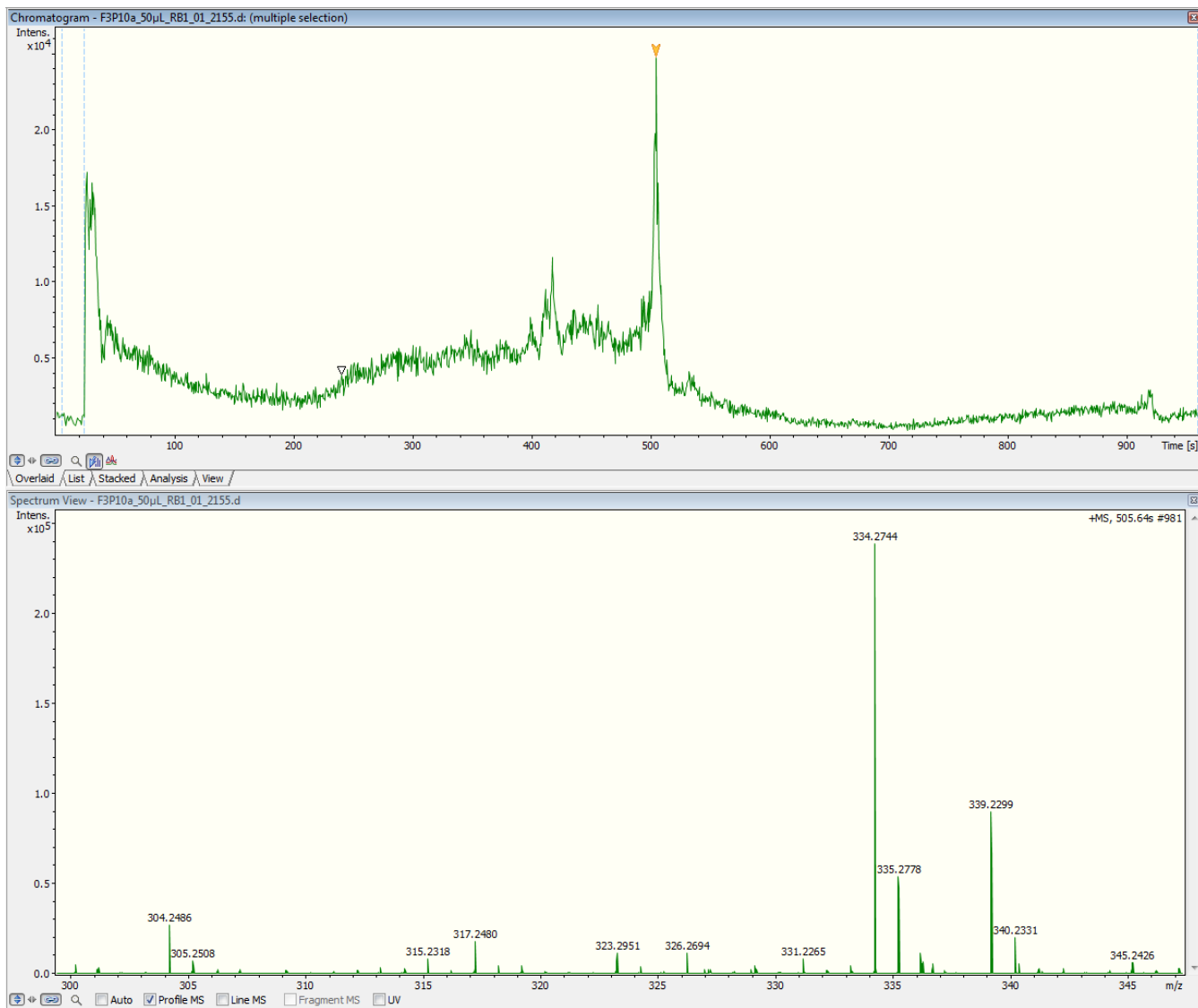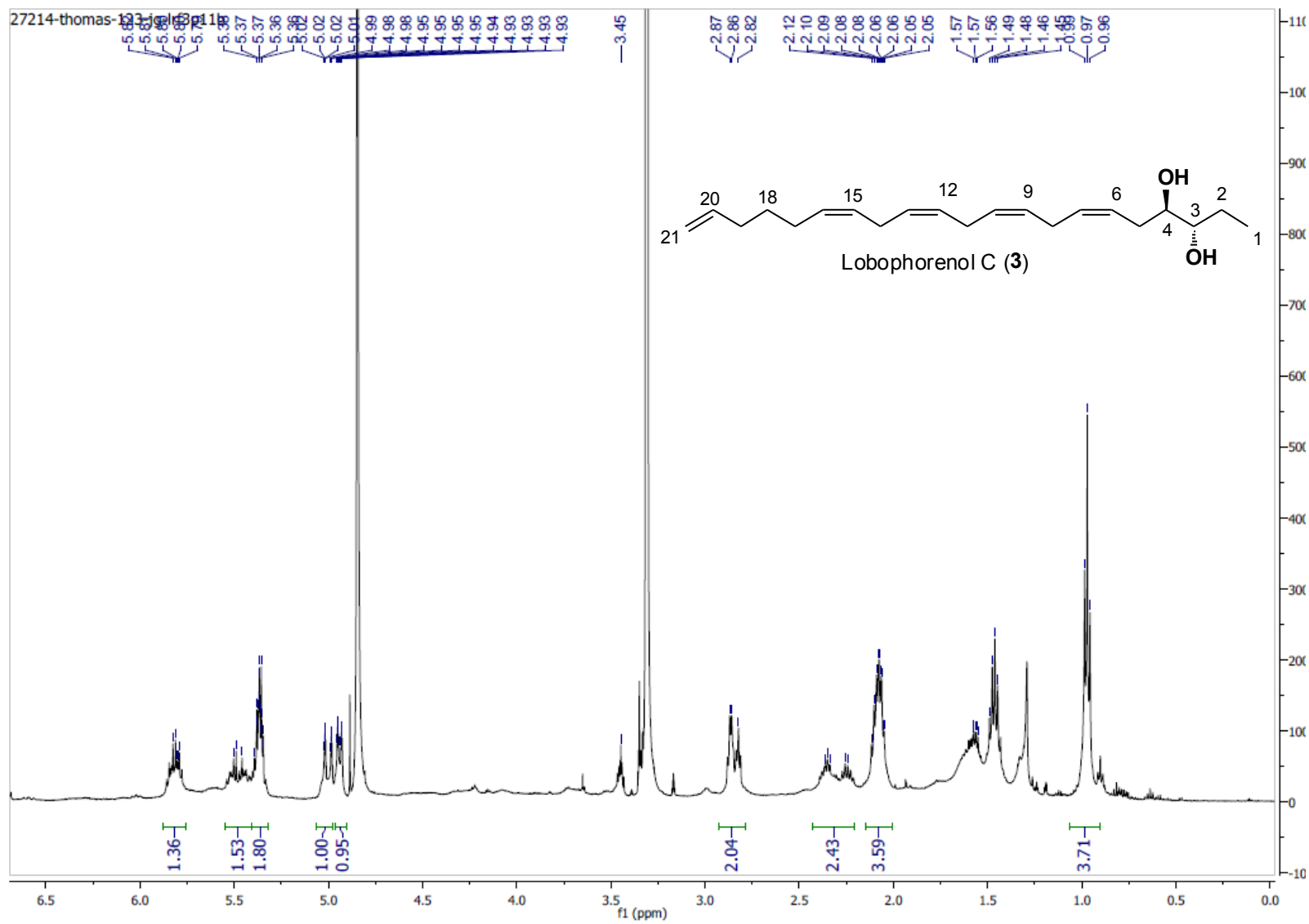^{13}C NMR spectrum of **3** in CD$_3$OD (125 MHz)

COSY NMR spectrum of **3** in CD₃OD (500 MHz)
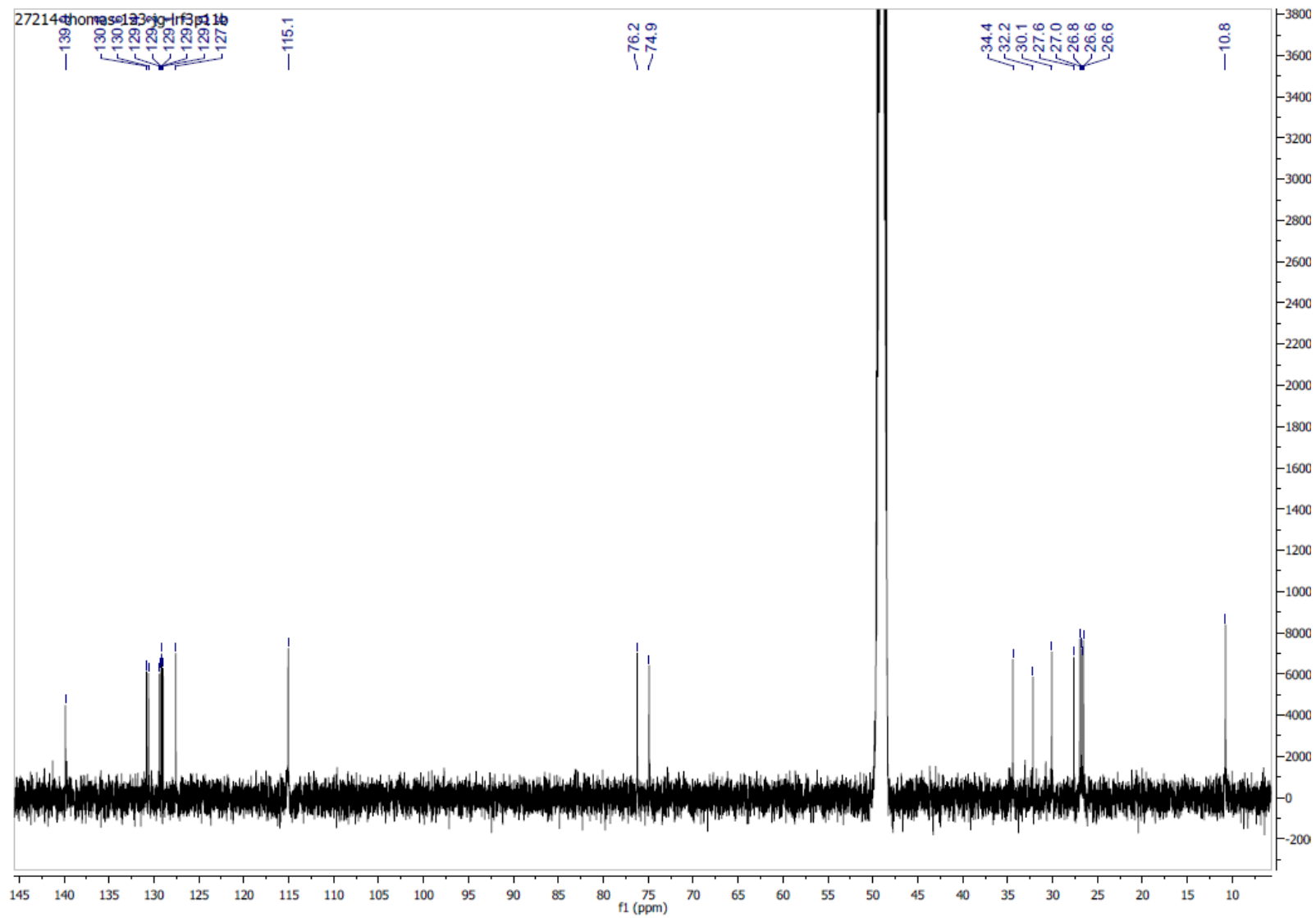
HSQC NMR spectrum of **3** in CD$_3$OD (500 MHz)

HMBC NMR spectrum of **3** in CD$_3$OD (500 MHz)

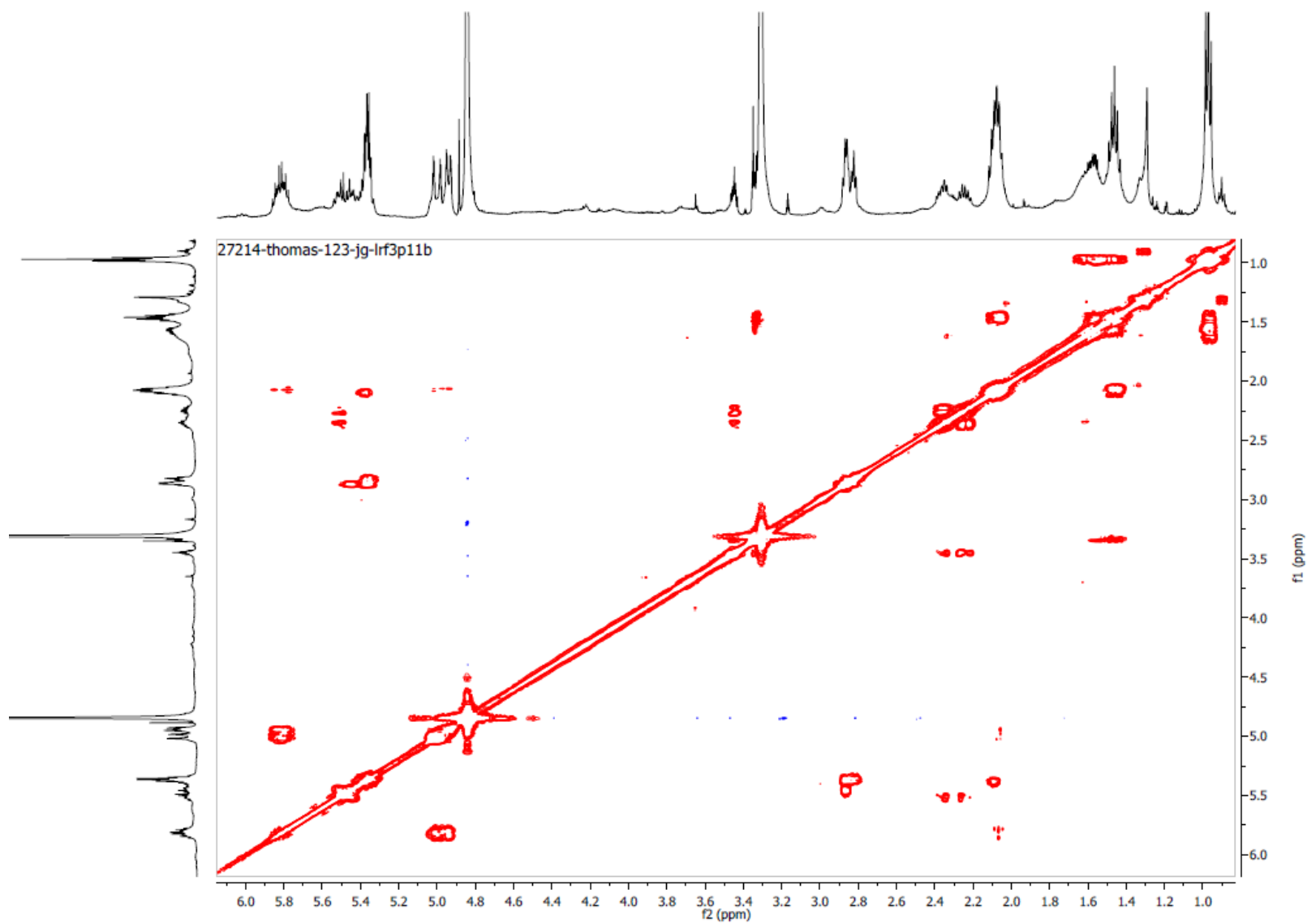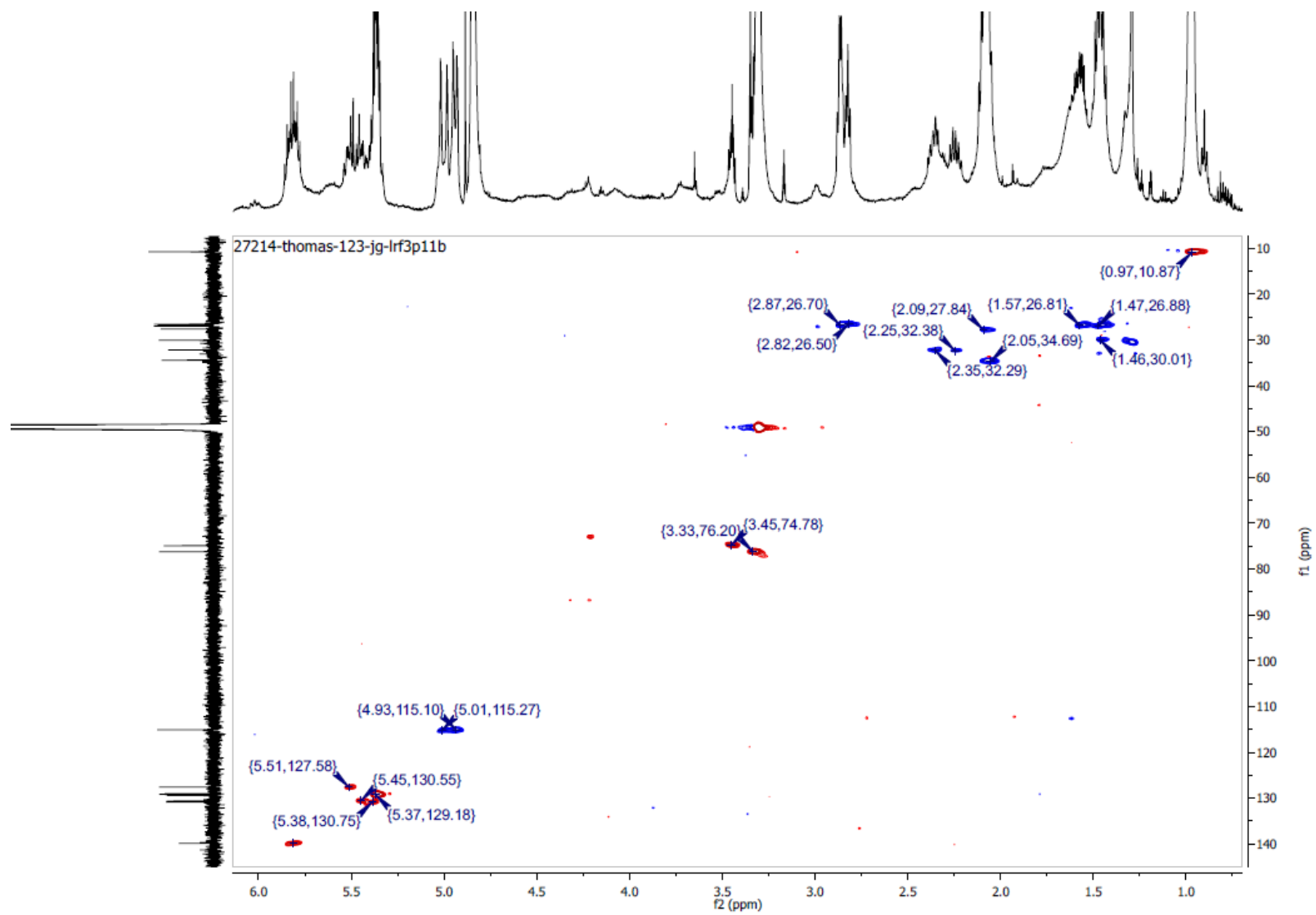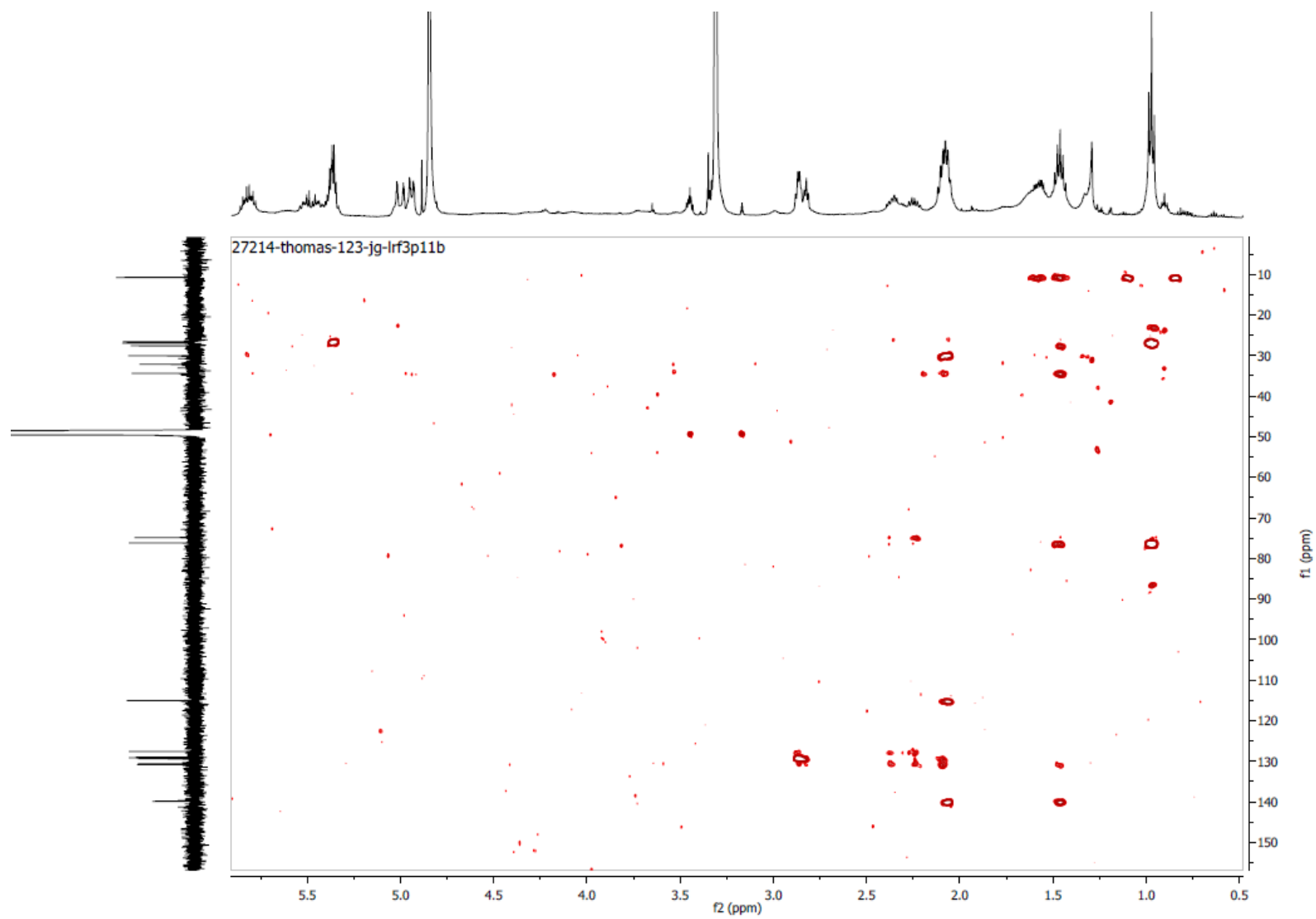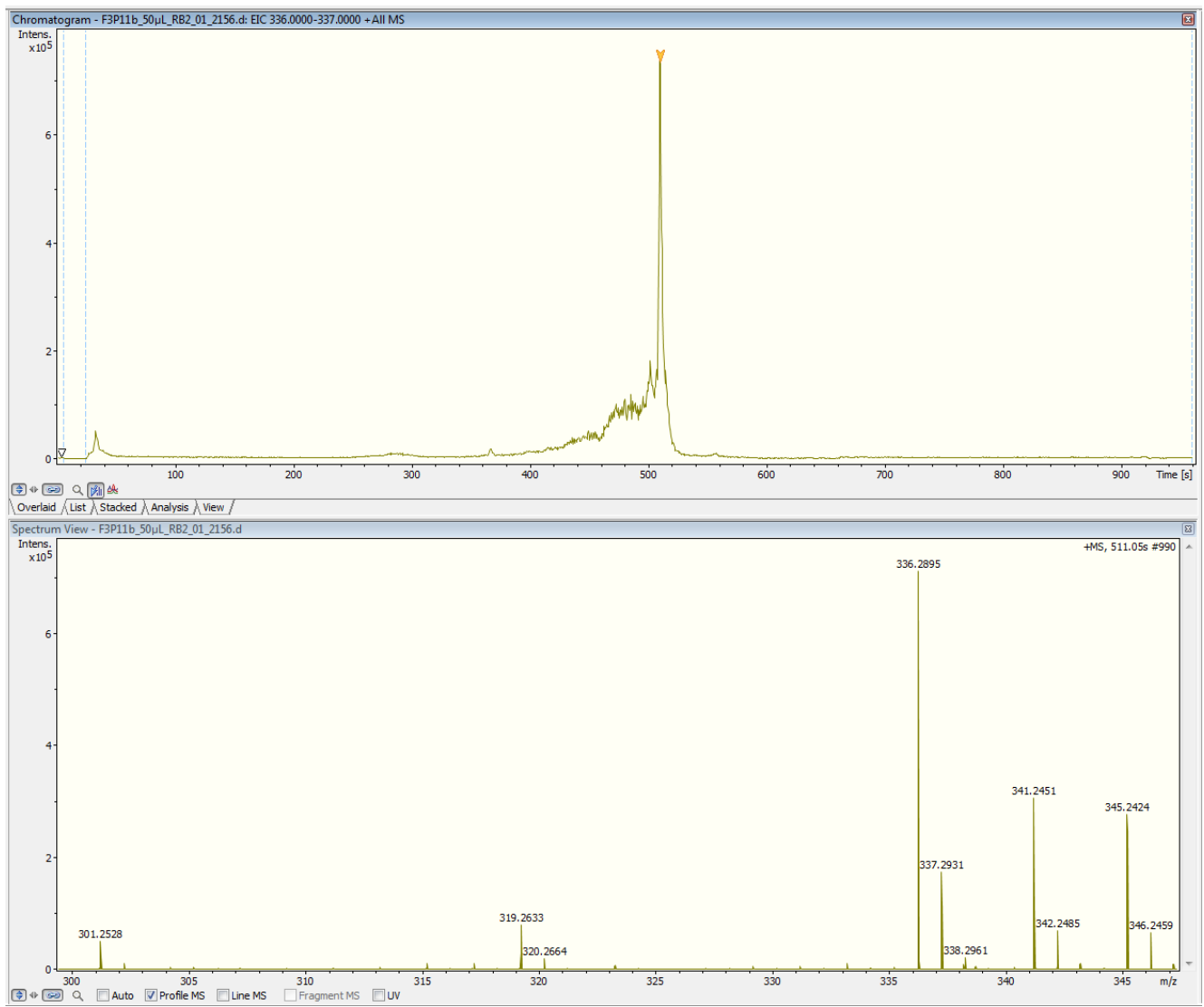**Chromatogram - F3P11b_50µL_RB2_01_2156.d: EIC 336.0000-337.0000 +All MS**

Spectrum View - F3P11b_50µL_RB2_01_2156.d

+MS, 511.05s #990

336.2895
337.2931
341.2451
345.2424
301.2528
319.2633
320.2664
338.2961
342.2485
346.2459

HR-(+)ESIMS of **3**

Assessment of the relative seafloor cover and quantification of *Lobophora*-corals association

Relative seafloor cover (i.e. corals, macroalgae, other benthic organisms) and quantification of *Lobophora*-corals association, assessed with the horizontal belt transect, was determined using the digital image processing software Coral Point Count with Excel extensions. Individual pictures were sub-divided into 4 rows and 4 columns, and each cell was populated with 1 random point lying within the cell borders. The circle with crosshairs with a diameter of 150 pixels was chosen as data point object shape. The feature lying under the circle-crosshairs was identified and recorded. If the crosshairs fell on a coral or *Lobophora,* the occurrence of the alga in direct contact with the coral within the circle was inspected and recorded.

Table S1. Sampling locations of *Lobophora* species in New Caledonia.

Species	Location	Reef type	Latitude	Longitude	Substrate
Lobophora abscondita	Bovis	Fringing reef	22° 13.488'S	166° 20.775'E	Coral
Lobophora crassa	Ricaudy	Fringing reef	22° 18.914'S	166° 27.453'E	Rubble
Lobophora dimorpha	Crouy	Patch reef	22° 21.919'S	166° 21.898'E	Coral
Lobophora hederacea	Abore	Inner barrier reef	22° 27.022'S	166° 22.441'E	Coral
Lobophora monticola	Saint Marie	Islet reef	22° 17.863'S	166° 28.898'E	Coral
Lobophora nigrescens	Crouy	Patch reef	22° 21.114'S	166° 21.084'E	Sand
Lobophora rosacea	Ricaudy	Fringing reef	22° 18.919'S	166° 27.463'E	Coral
Lobophora undulata	Larègnère	Islet reef	22° 19.548'S	166° 18.948'E	Coral

Figure S1. *In situ* allelopathic bioassays. Photo credit: Christophe Vieira