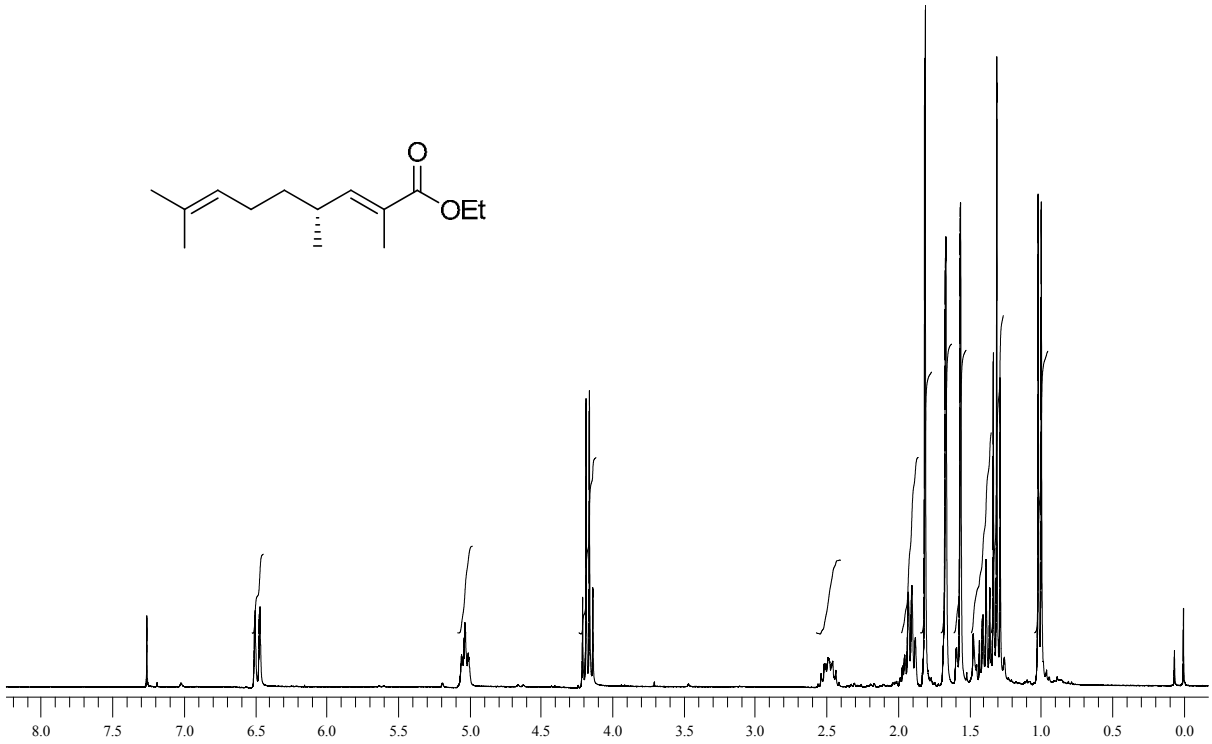
Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry

A stereoselective approach for the southeast segment (C1–C16) of (+)-sorangicin A

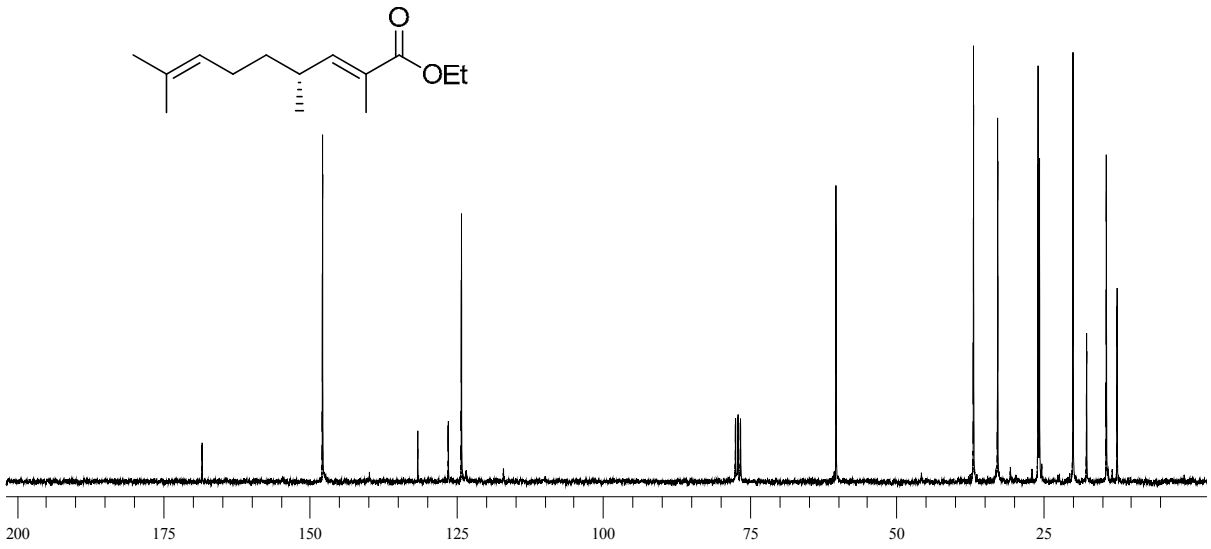
Y. Sridhar and P. Srihari*

Supporting Information

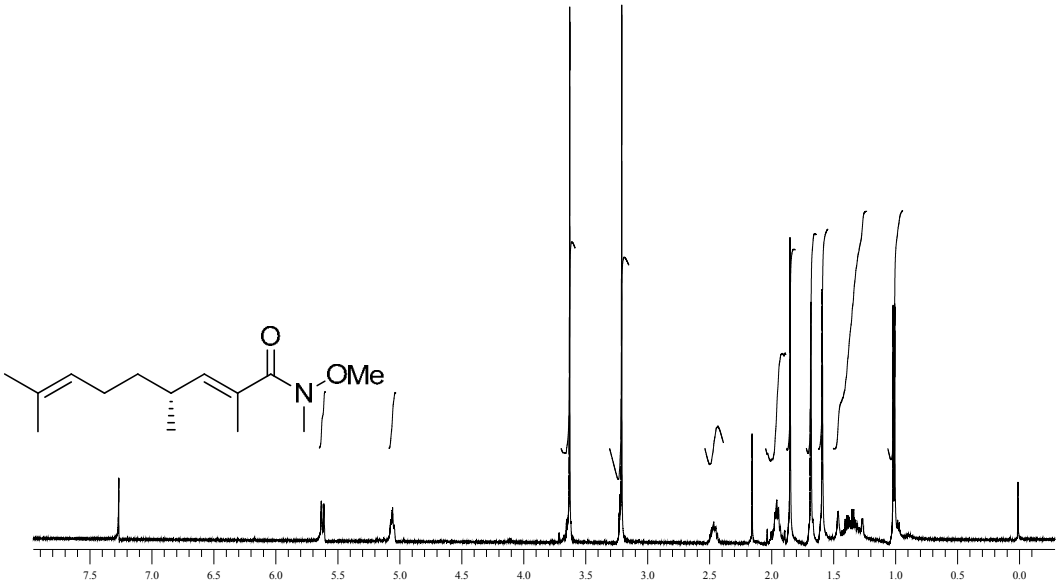
^{1}H NMR and ^{13}C NMR spectra



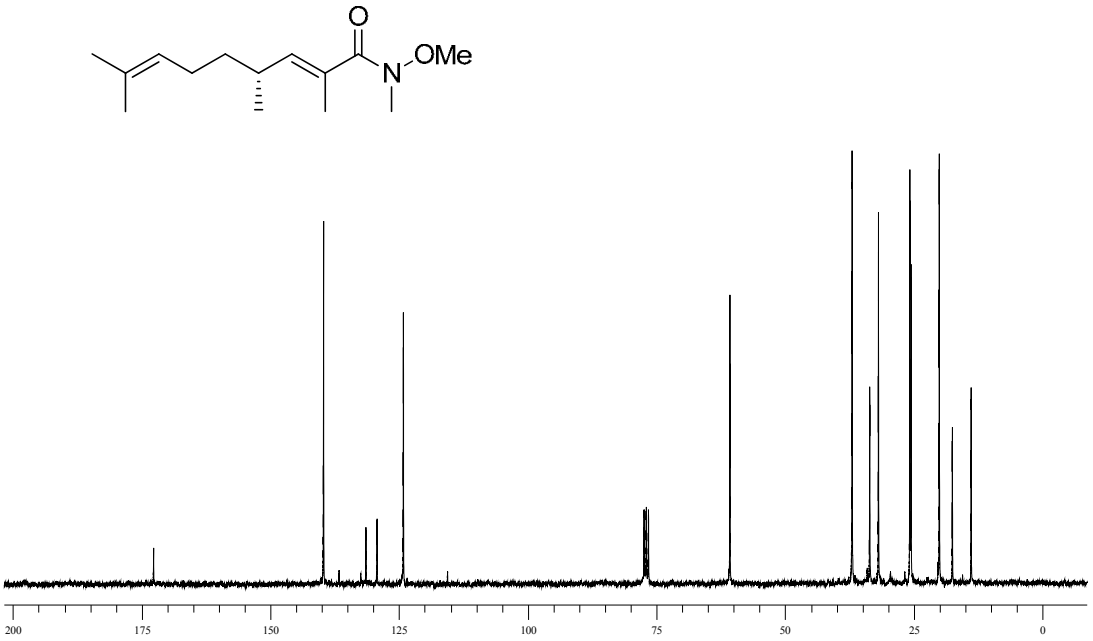
^{1}H NMR of 7 (300 MHz, $CDCl_3$)



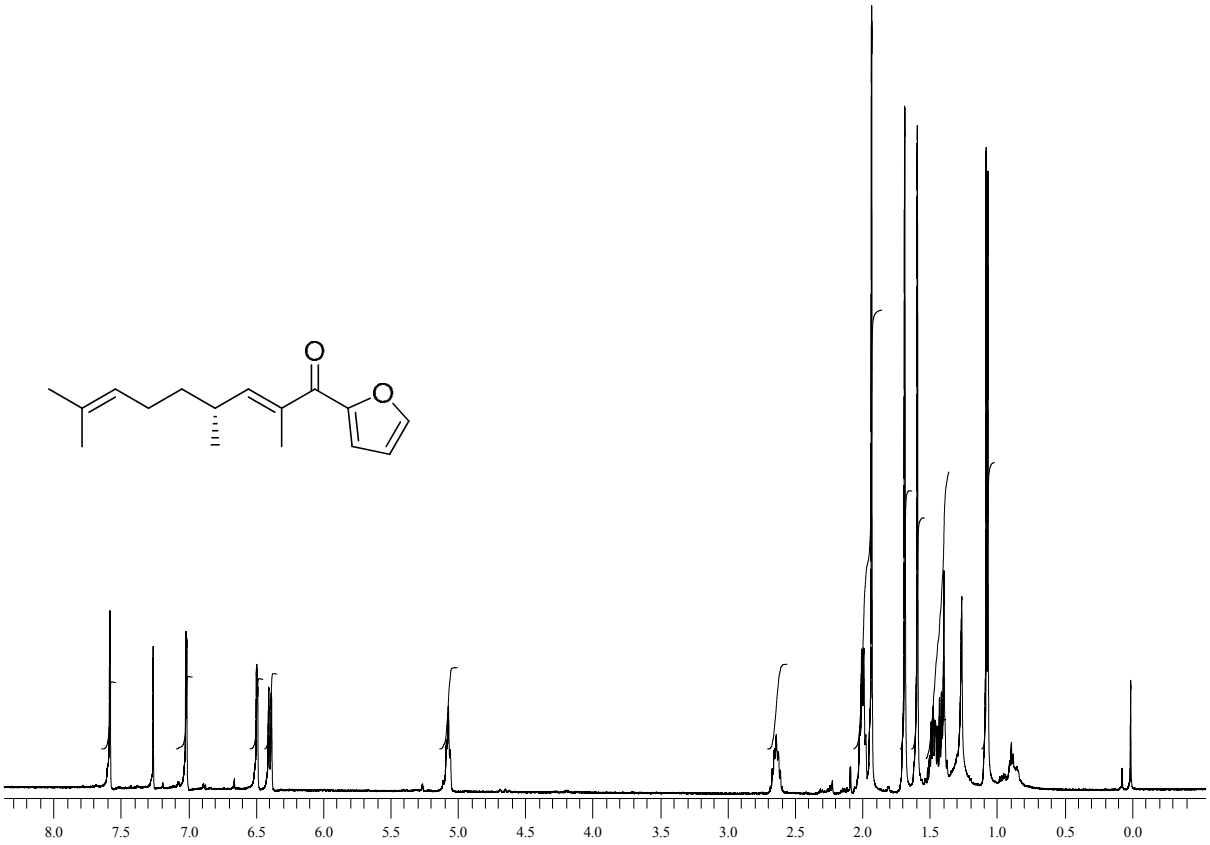
^{13}C NMR of 7 (75 MHz, $CDCl_3$)



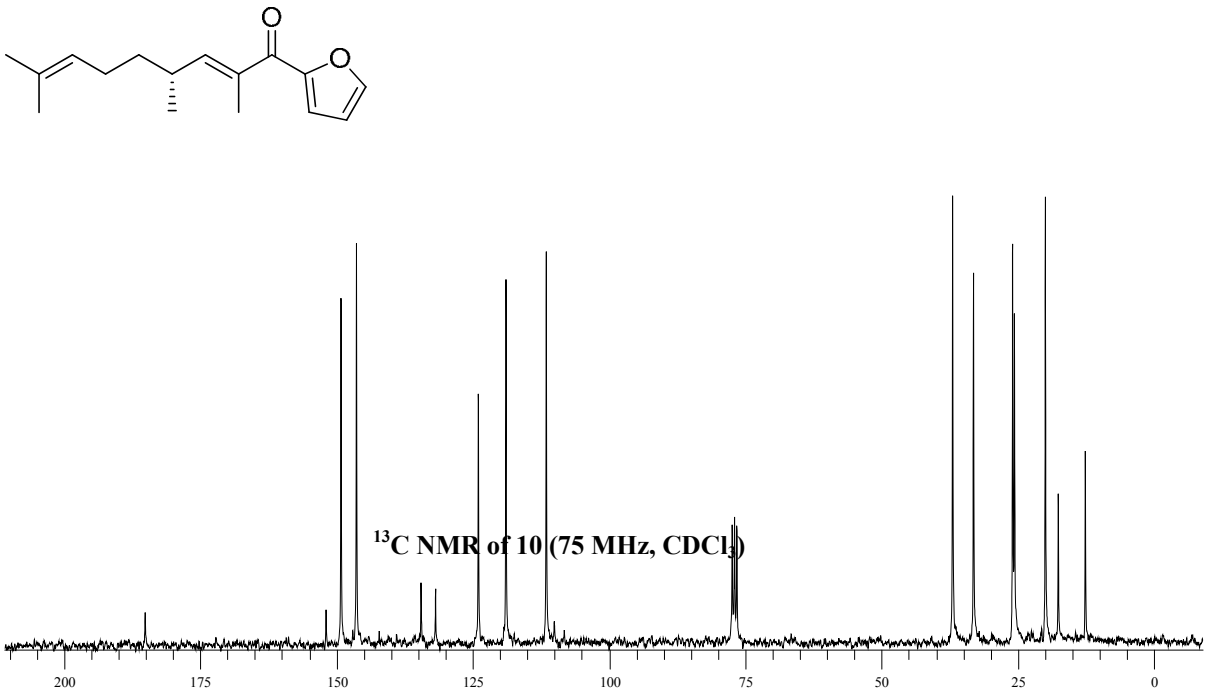
^{1}H NMR of 9 (500 MHz, $CDCl_3$)



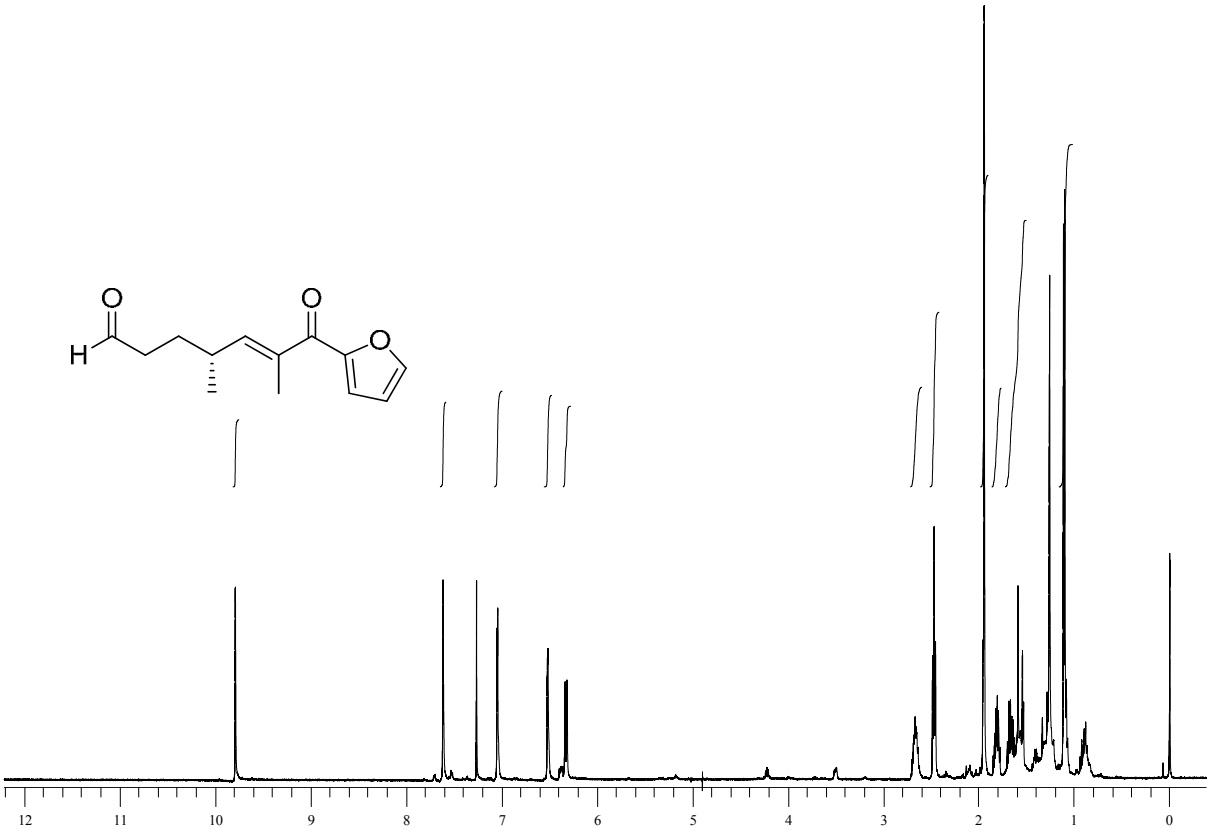
^{13}C NMR of 9 (75 MHz, $CDCl_3$)



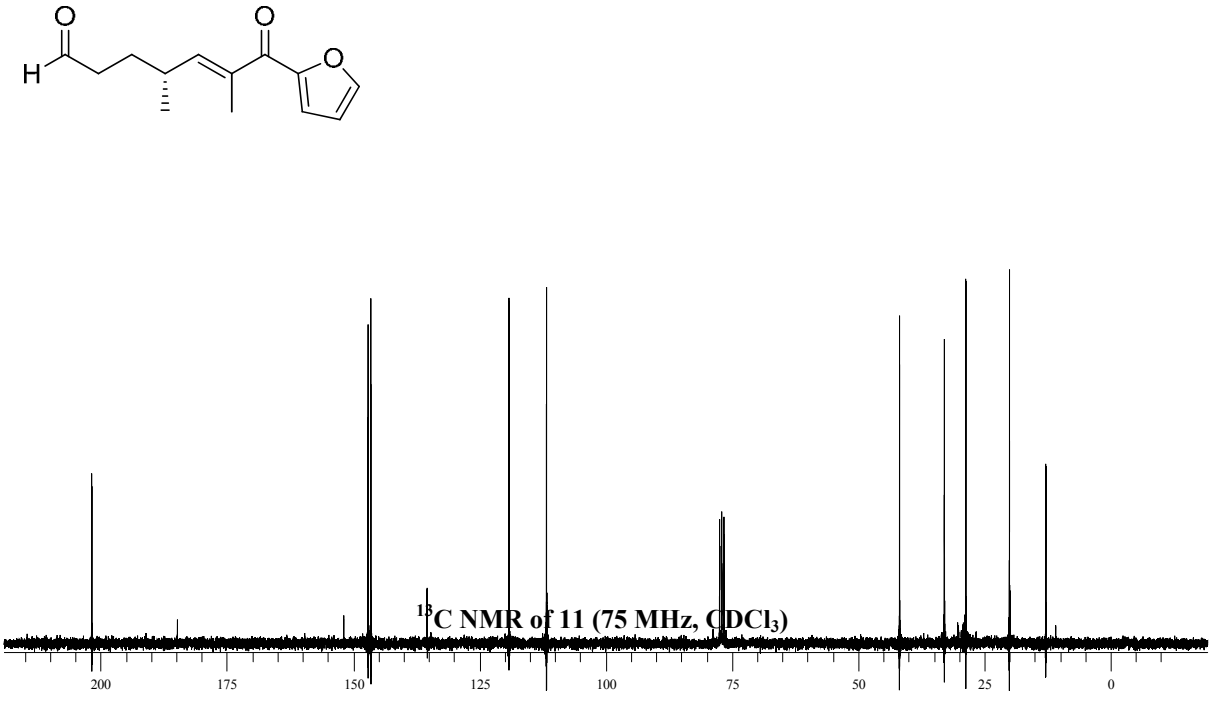
^{1}H NMR of 10 (500 MHz, $CDCl_3$)



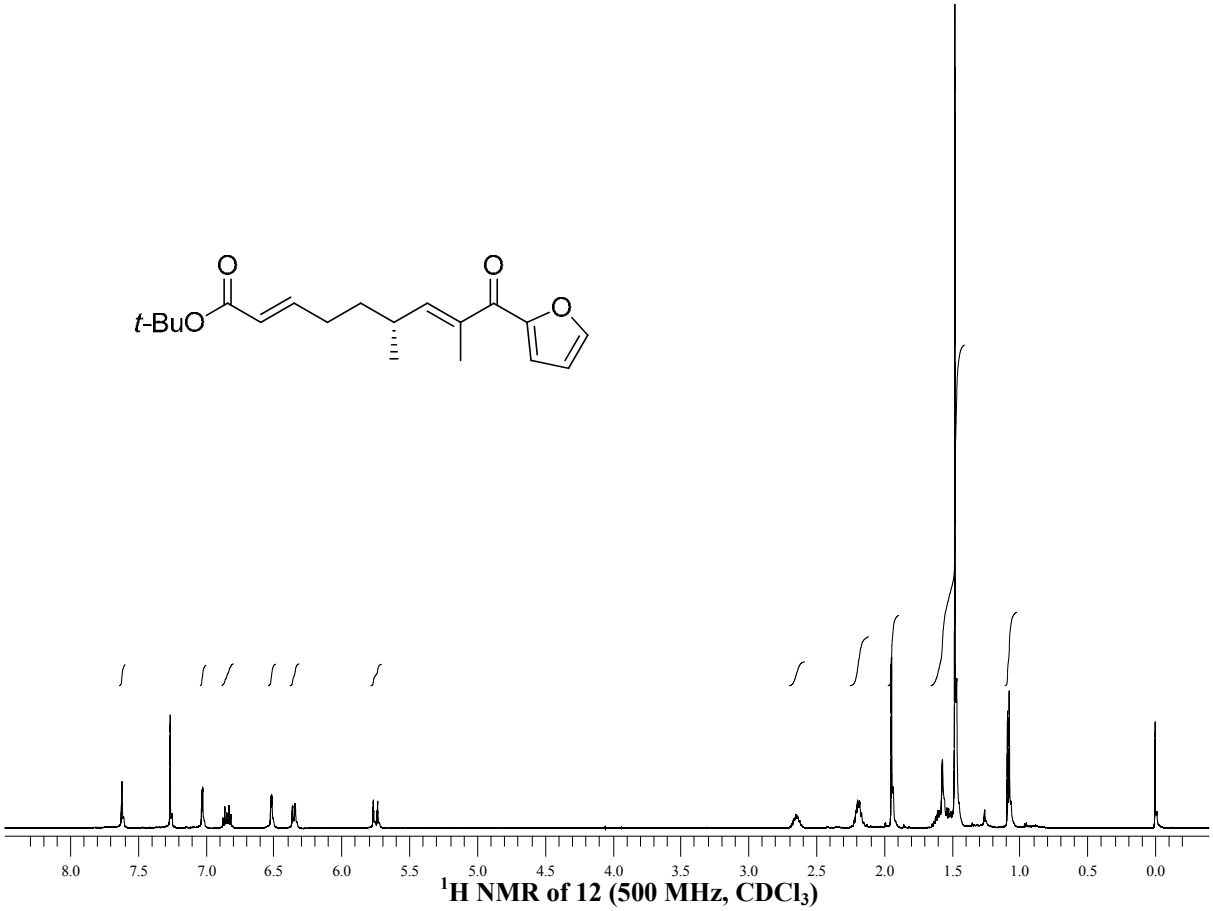
^{13}C NMR of 10 (75 MHz, $CDCl_3$)



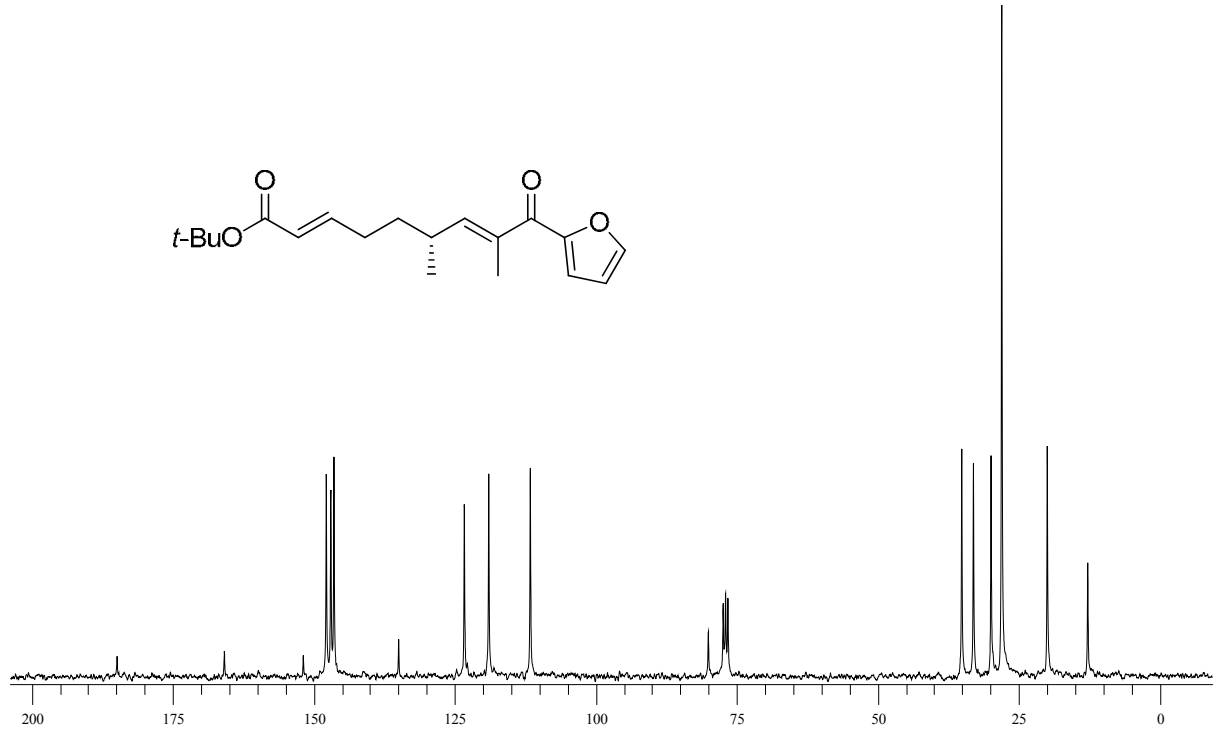
^{1}H NMR of 11 (500 MHz, $CDCl_3$)



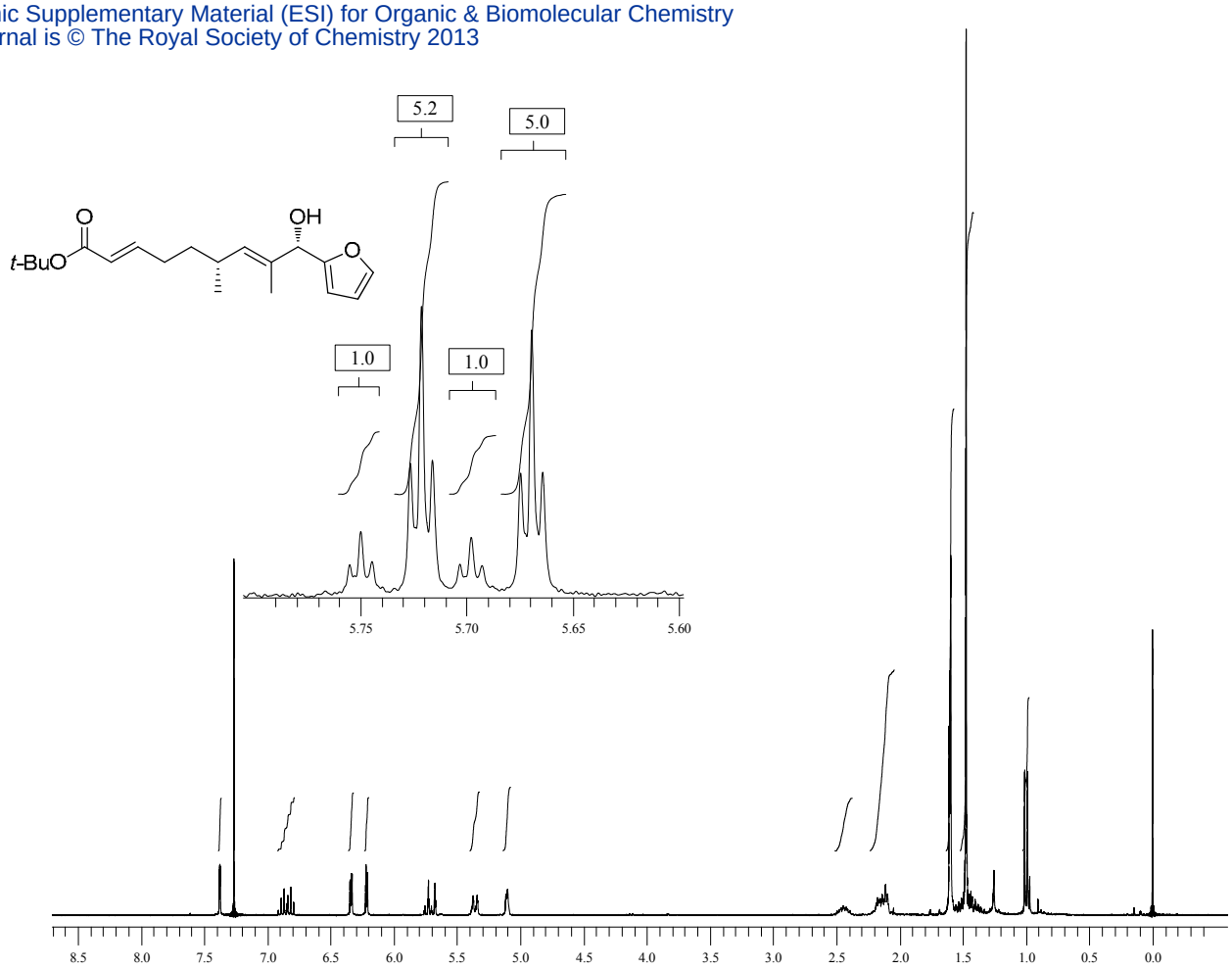
^{13}C NMR of 11 (75 MHz, $CDCl_3$)



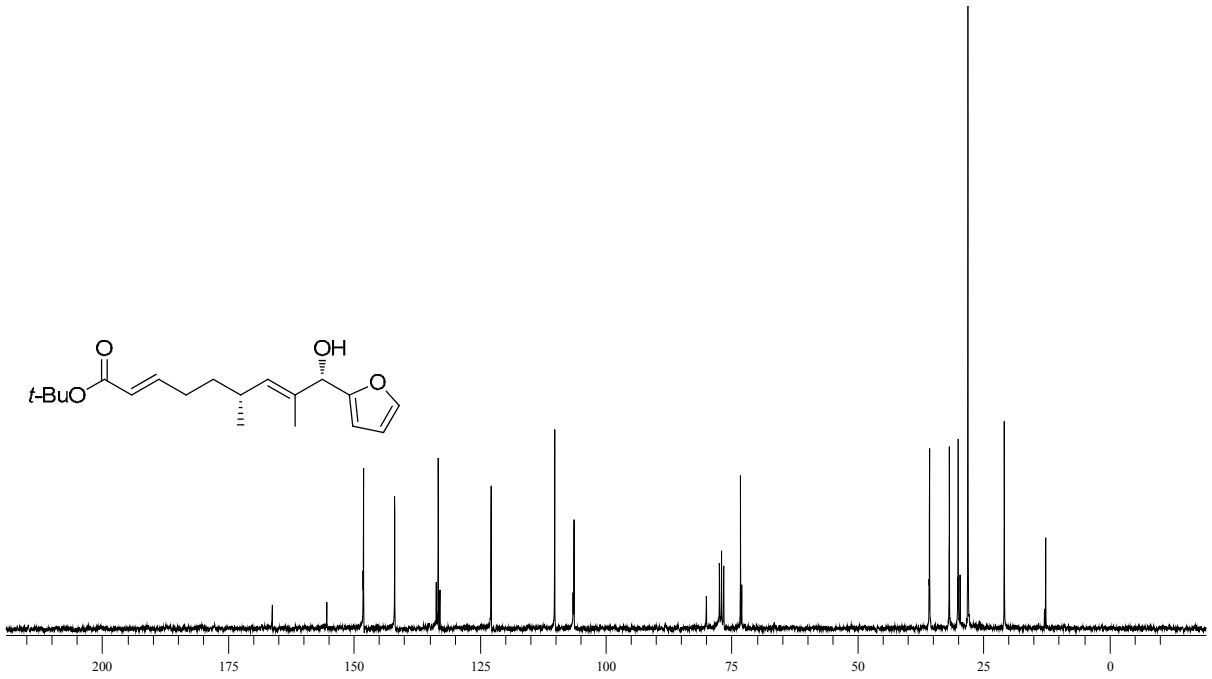
^{1}H NMR of 12 (500 MHz, $CDCl_3$)



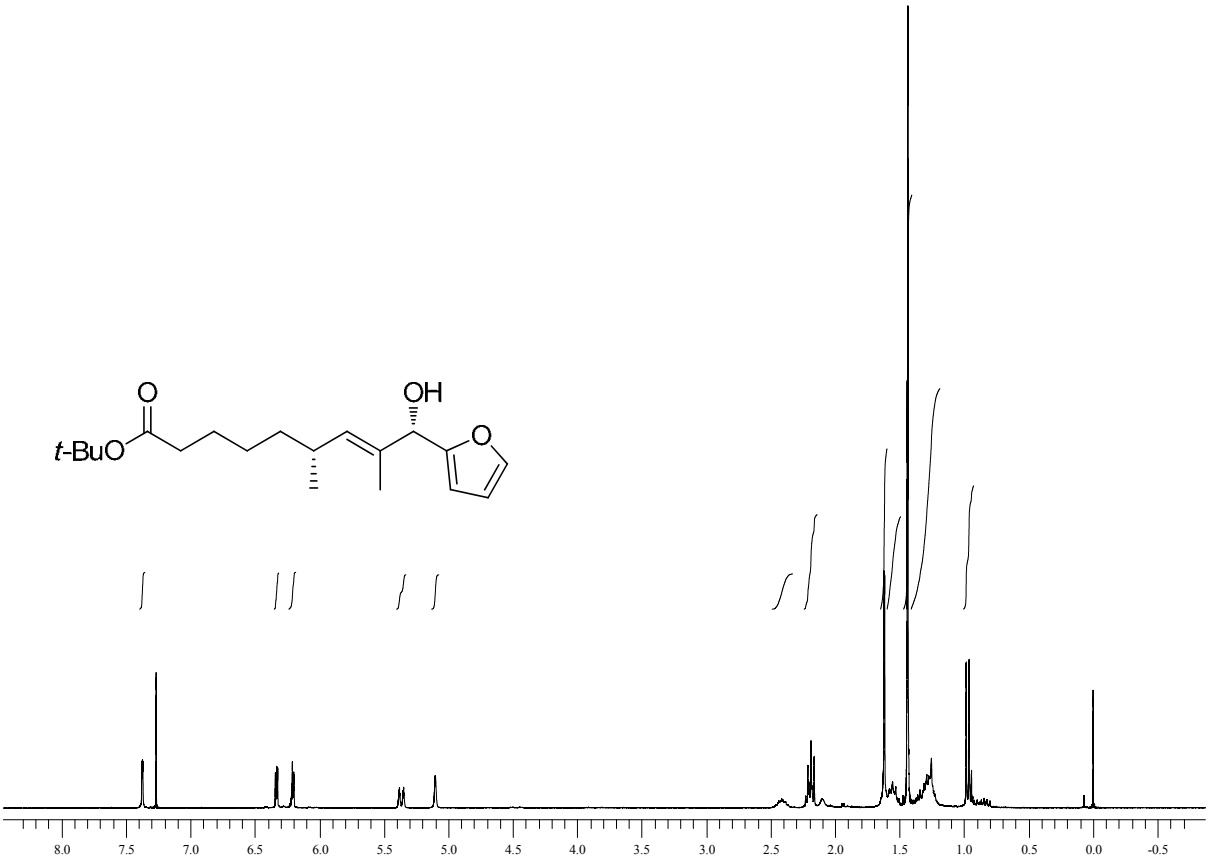
^{13}C NMR of 12 (125 MHz, $CDCl_3$)



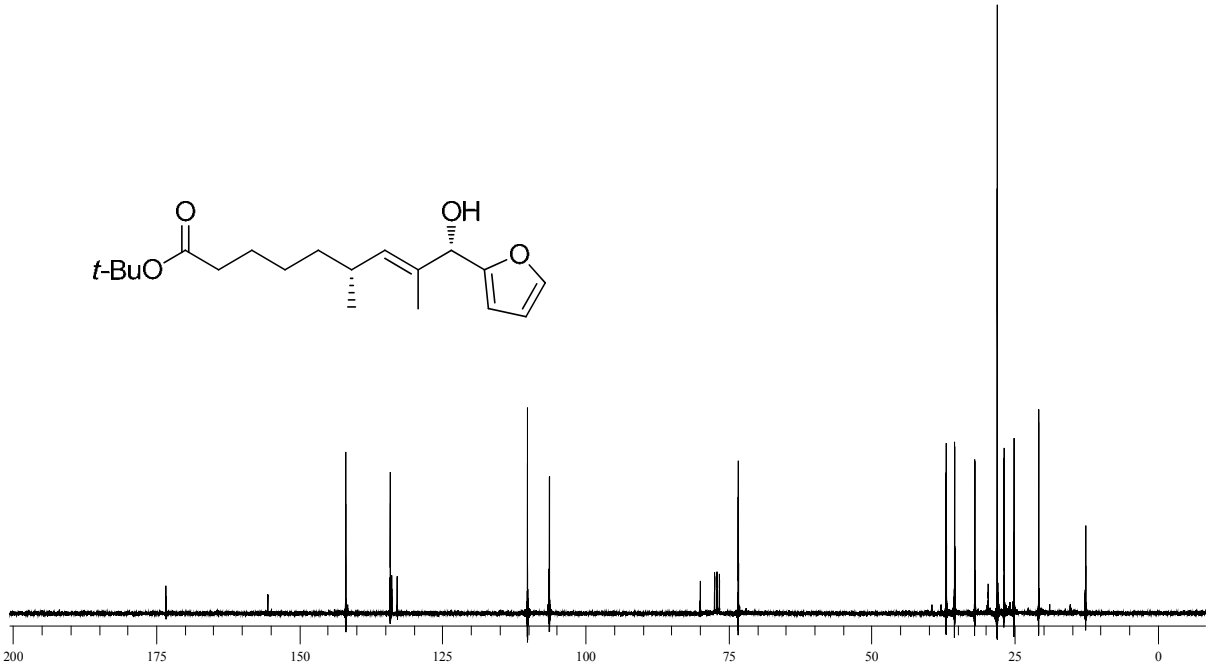
^{1}H NMR of 6/6a (300 MHz, $CDCl_3$)



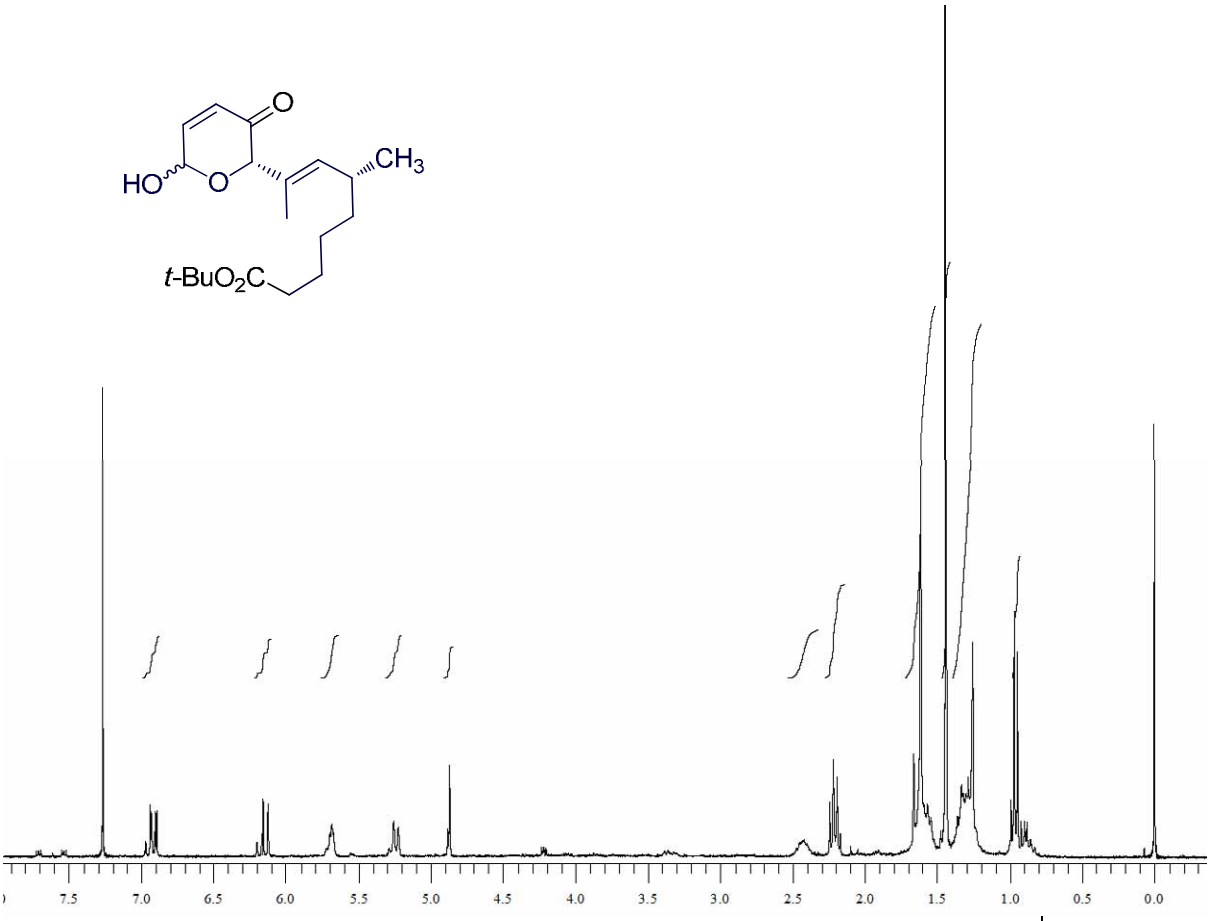
^{13}C NMR of 6/6a (125 MHz, $CDCl_3$)



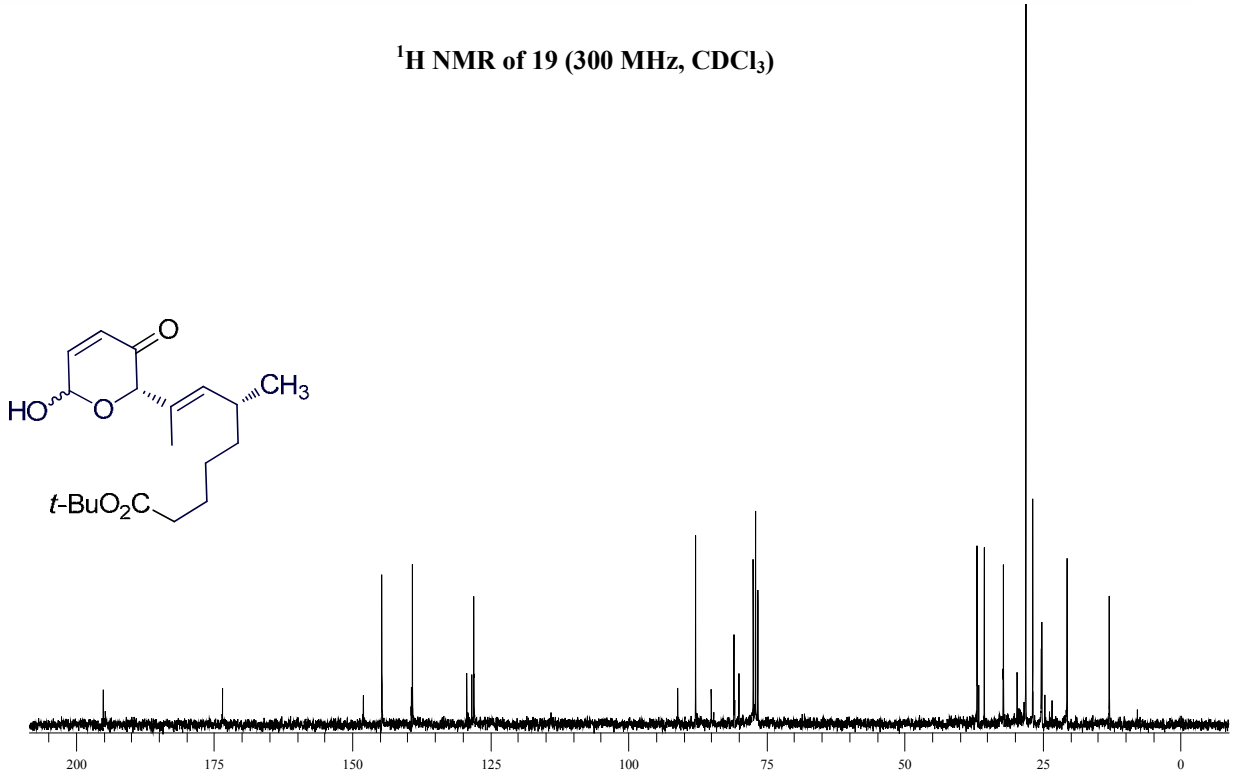
^{1}H NMR of 18/18a (300 MHz, $CDCl_3$)



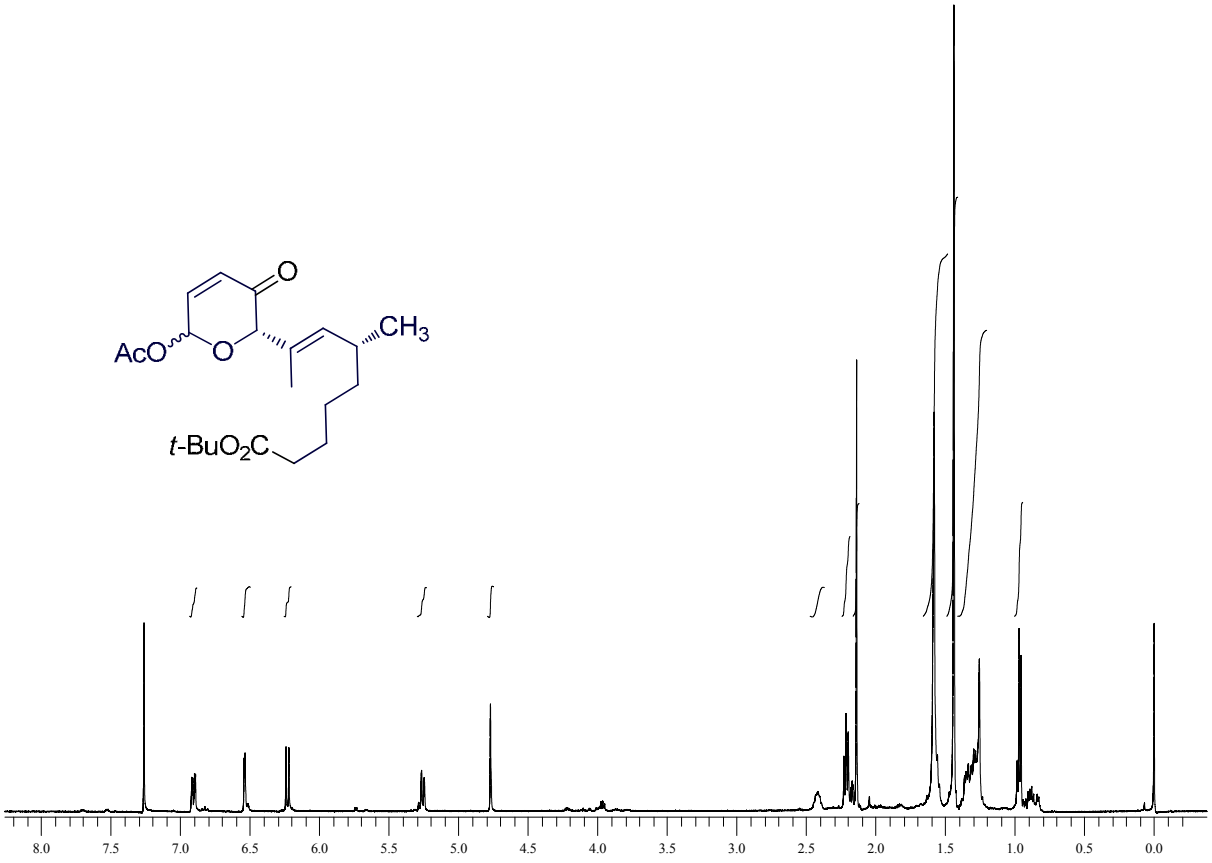
^{13}C NMR of 18/18a (125 MHz, $CDCl_3$)



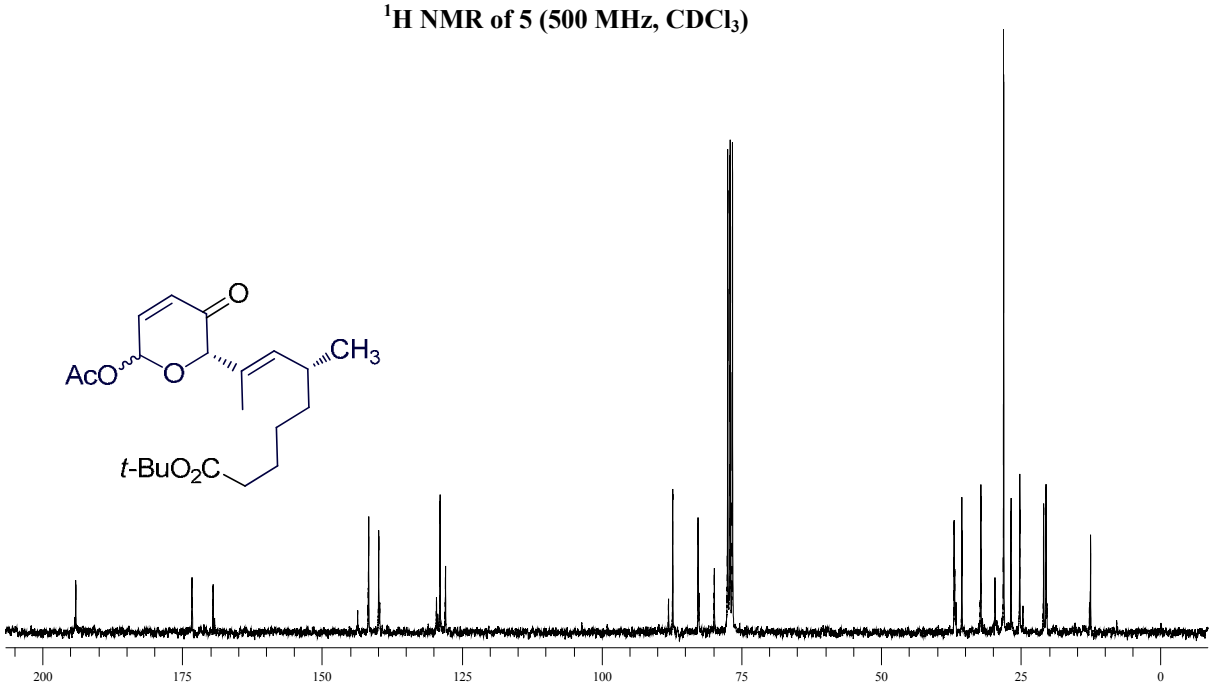
^{1}H NMR of 19 (300 MHz, $CDCl_3$)



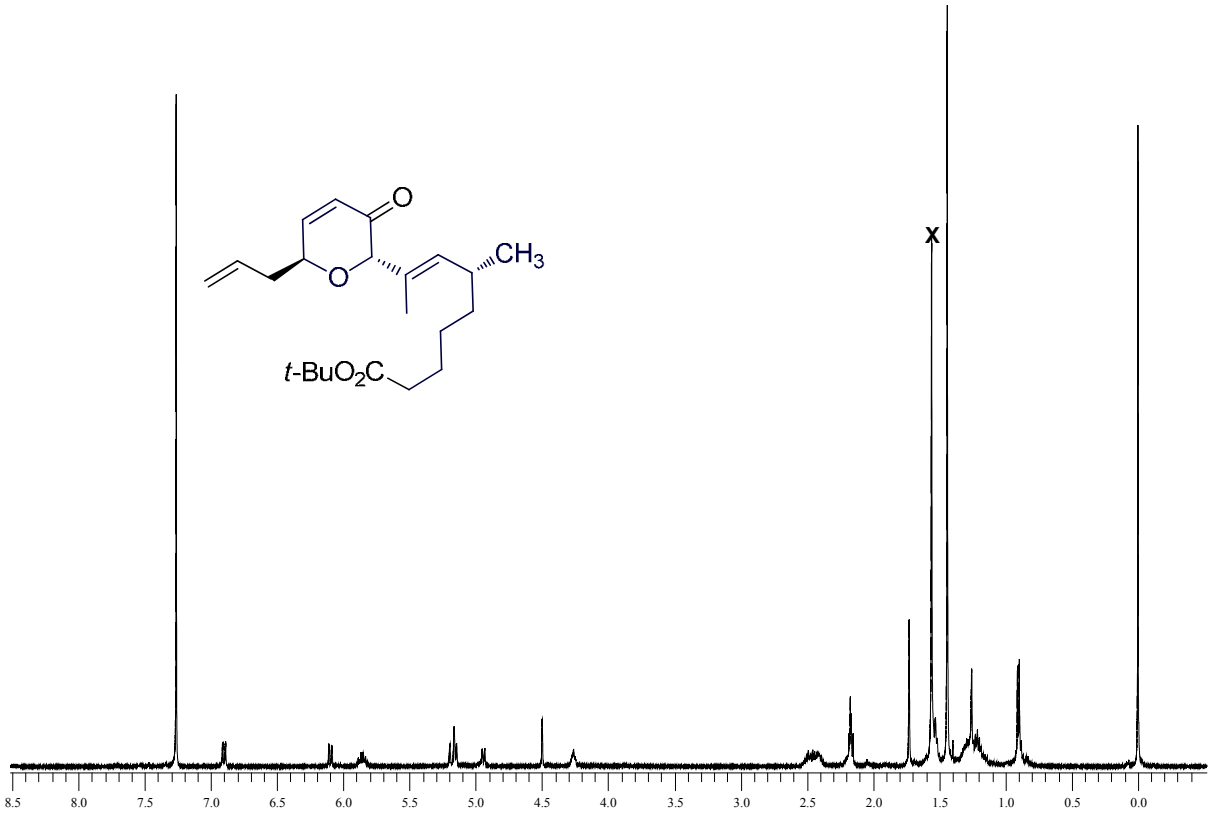
^{13}C NMR of 19 (125 MHz, $CDCl_3$)



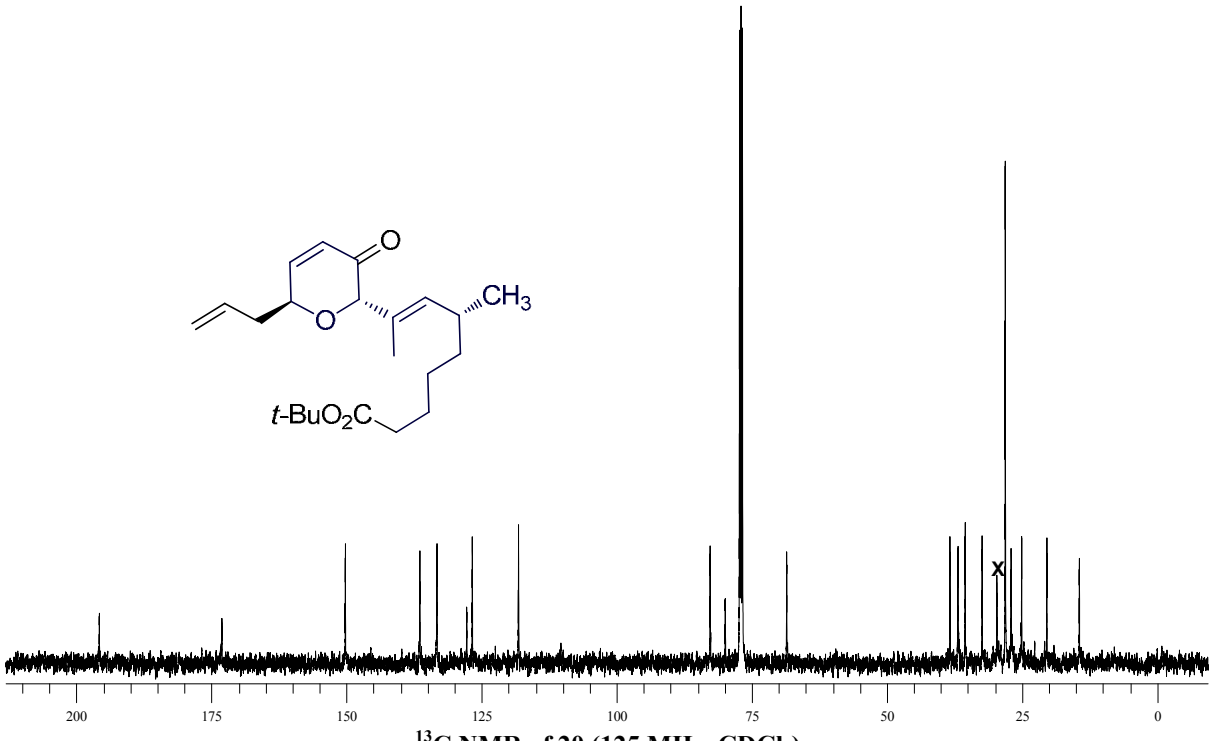
^{1}H NMR of 5 (500 MHz, $CDCl_3$)



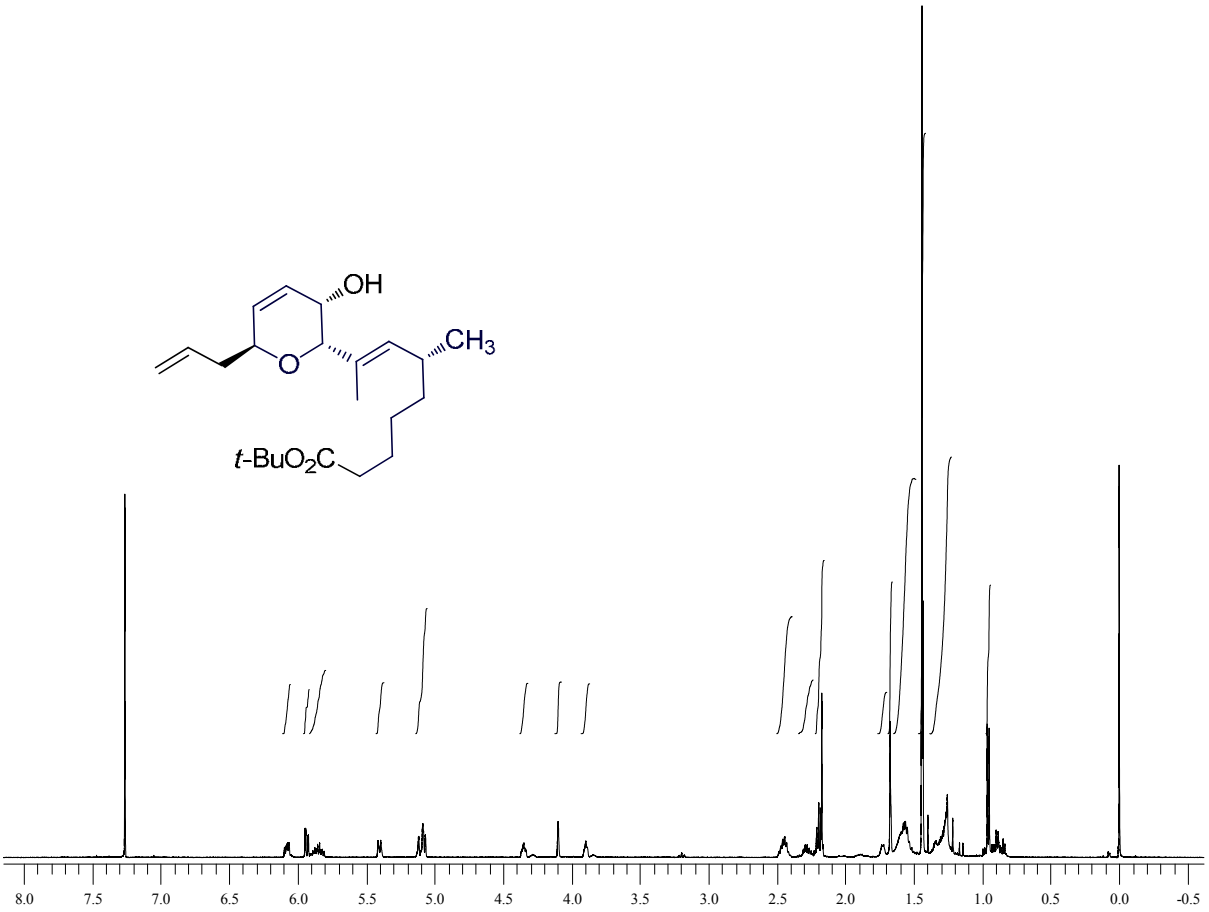
^{13}C NMR of 5 (125 MHz, $CDCl_3$)



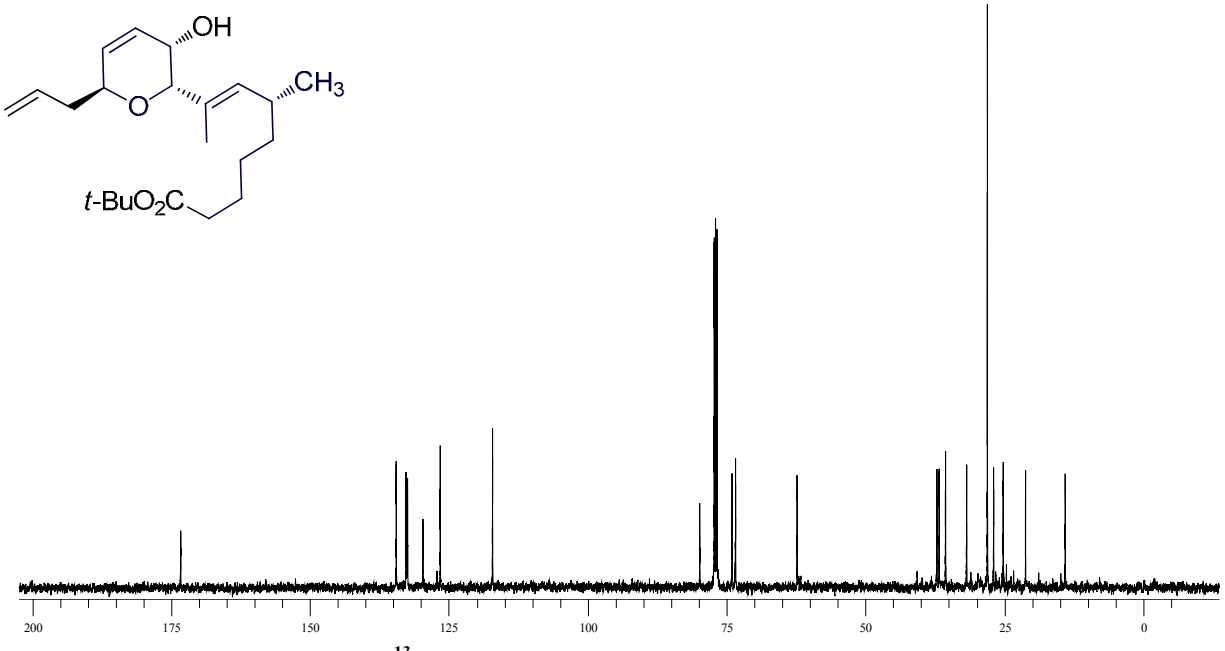
^{1}H NMR of 20 (500 MHz, $CDCl_3$)



^{13}C NMR of 20 (125 MHz, $CDCl_3$)

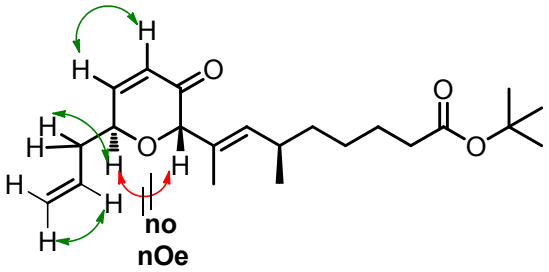


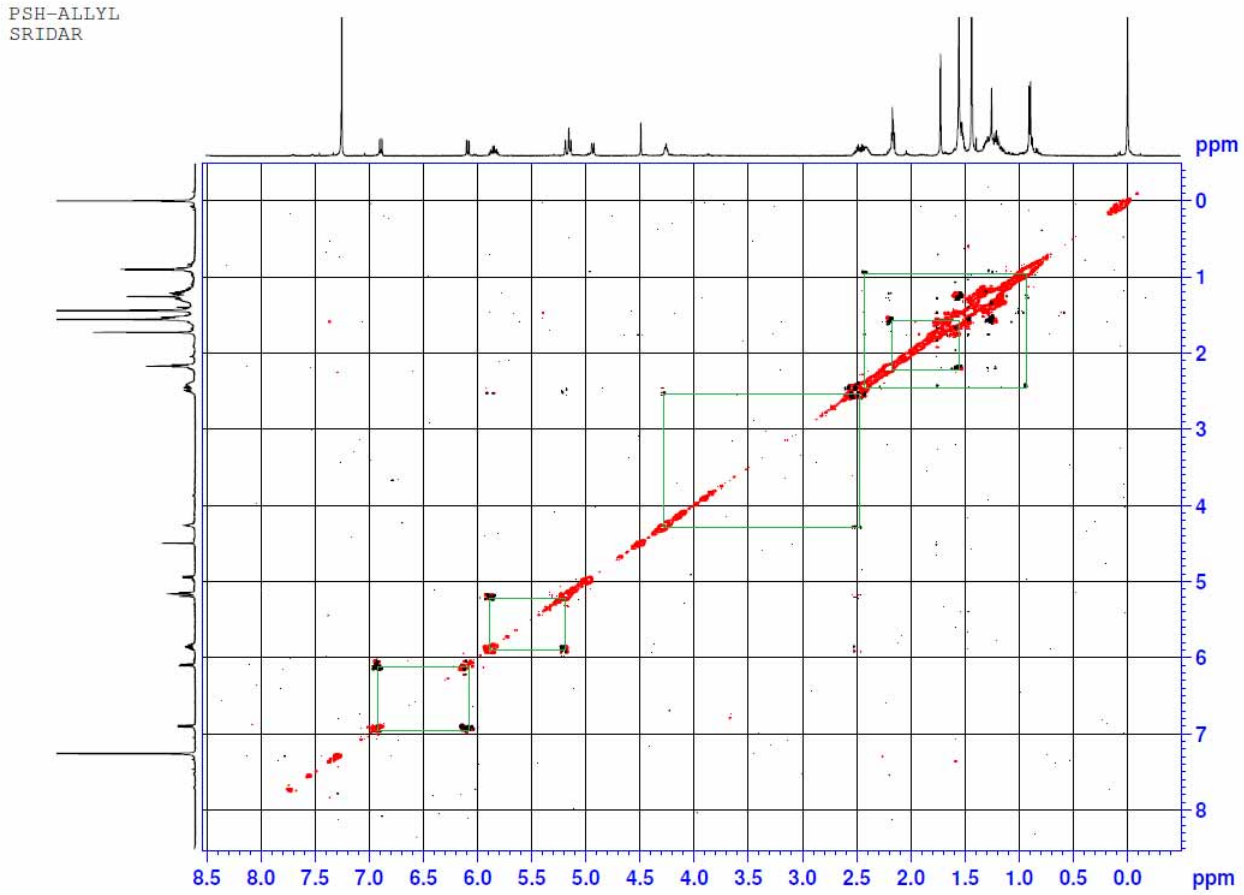
^{1}H NMR of 4 (500 MHz, $CDCl_3$)



^{13}C NMR of 4 (125 MHz, $CDCl_3$)

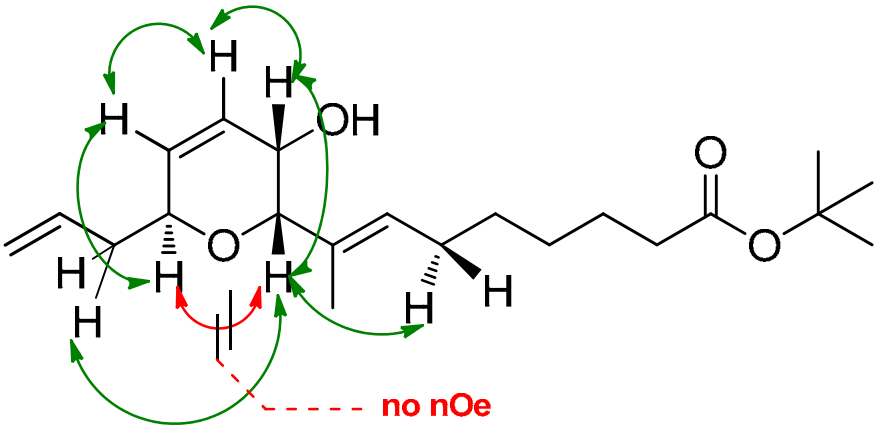
nOe analysis of compound 20

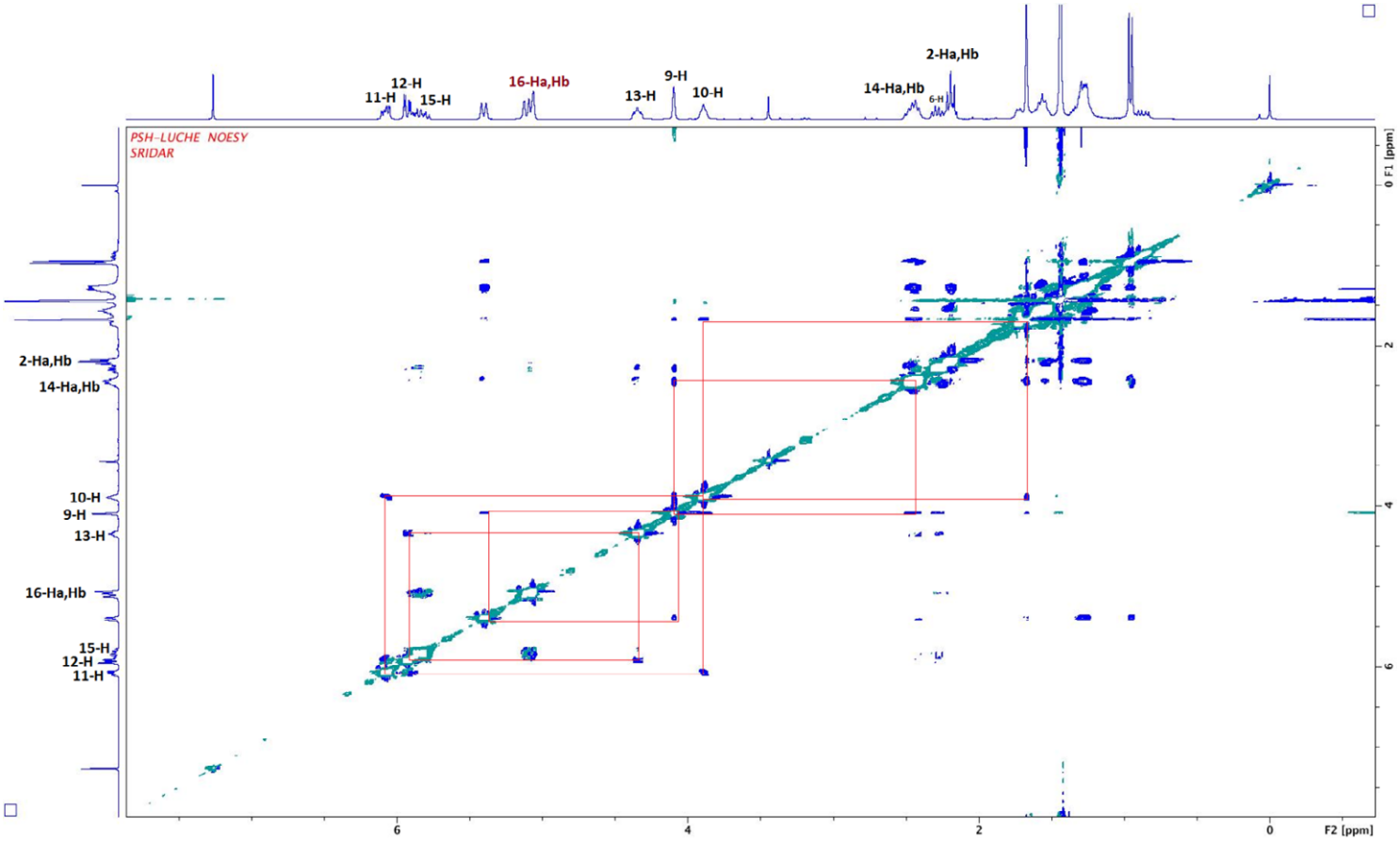




NOESY Spectrum of compound 20 in $CDCl_3$

Key nOe relations in compound 4





NOESY Spectrum of compound 4 in $CDCl_3$

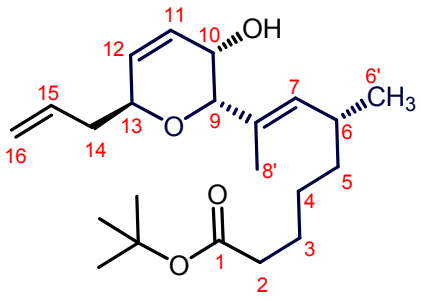


Table 1. ^{1}H-NMR comparision of compound 4

Proton number	Crimmins group data[1] (500 M Hz)	Our data (500 M Hz)
t-Butyl	1.43 (s, 9H)	1.44 (s, 9H)
2-H	2.19 (t, J = 7.5 Hz, 2H)	2.19 (t, J = 7.3 Hz, 2H)
3-Ha, Hb	1.56 (m, 2H)	1.74-1.50 (m, 2H and 1O-H)
4-Ha, Hb, 5-Ha, Hb	1.34 (d, J = 3.67 Hz, 1H 1.26 (m, 3H)	1.38-1.18 (m, 4H)
6-H	2.27 (dt, J = 14.0 Hz, 1H)	2.32-2.23 (m, 1H)
6'-CH_3	0.95 (d, J = 6.6 Hz, 3H)	0.96 (d, J = 6.7 Hz, 3H)
7-H	5.40 (d, J = 9.4 Hz, 1H)	5.40 (d, J = 9.5 Hz, 1H)
8'-CH_3	1.67 (s, 3H)	1.67 (s, 3H)
9-H	4.09 (s, 1H)	4.10 (s, 1H)
10-H	3.89 (m, 1H)	3.92- 3.87 (m, 1H)
11-H	6.08 (m, 1H)	6.08 (ddd, J = 10.1, 5.7, 1.9 Hz, 1H)
12-H	5.93 (m, 1H)	5.93 (dd, J = 10.1, 3.1 Hz, 1H)
13-H	4.35 (m, 1H)	4.37-4.33 (m, 1H)
14-Ha, Hb	2.45 (ddd, J = 13.6, 6.7, 6.5 Hz, 2H)	2.49-2.45 (m, 2H)
15-H	5.84 (m, 1H)	5.91-5.80 (m, 1H)
16-Ha, Hb	5.09 (m, 2H)	5.13-5.07 (m, 2H)

Table 2. ^{13}C-NMR comparision of compound 4

Carbon number		Crimmins group data[1] (125 M Hz)	Our data (125 M Hz)
t-Butyl	3-CH_3	28.1	28.1
	4^o-C	79.9	79.9
1-C		173.3	173.3
2-C		35.6	35.6
3-C		25.2	25.2
4-C		14.1	14.1
5-C		36.8	36.8
6-C		31.8	31.8
6'-C		21.3	21.2
7-C		132.5	132.5
8-C		134.5	134.5
8'-C		27.0	27.0
9-C		73.4	73.4
10-C		62.3	62.3
11-C		132.5	132.5
12-C		126.5	126.6
13-C		74.0	74.0
14-C		37.2	37.2
15-C		132.8	132.7
15-C		117.2	117.2

1. M. T. Crimmins, M. W. Haley, E. A. O'Bryan, *Org. Lett.*, 2011, **13**, 4712