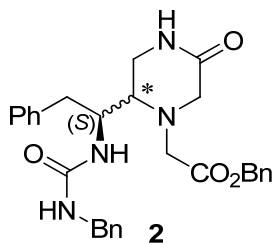
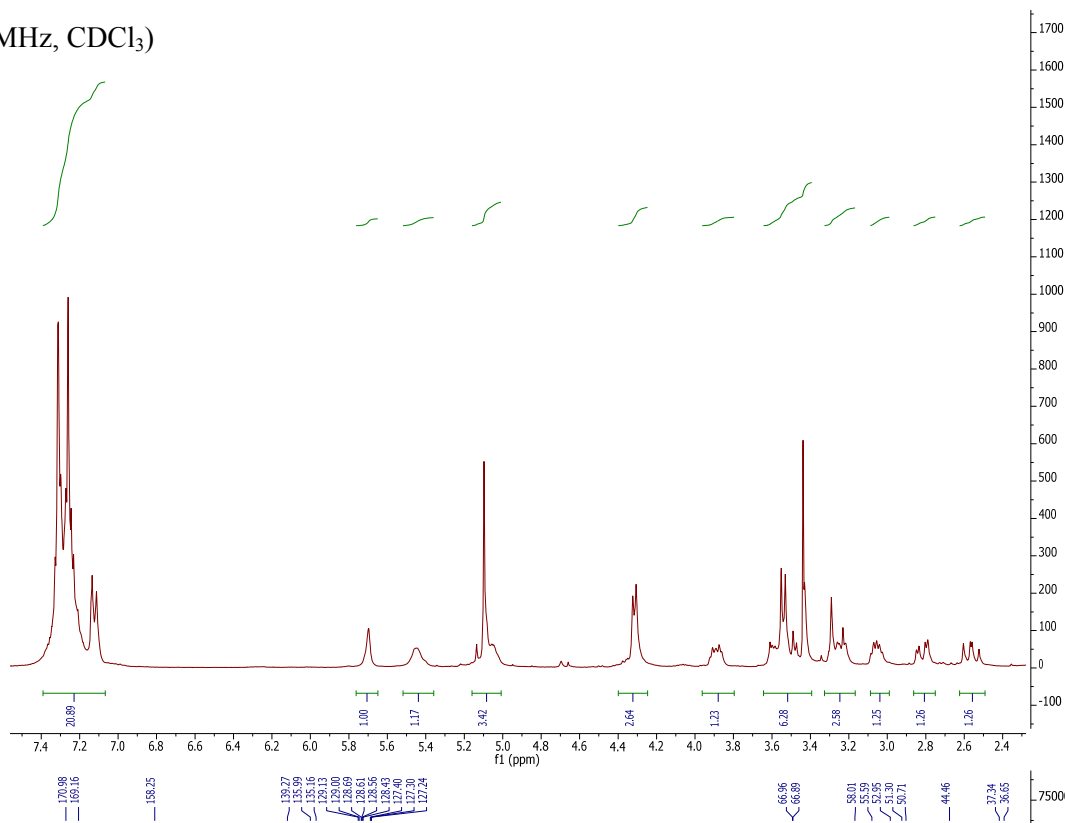


Supplementary Material

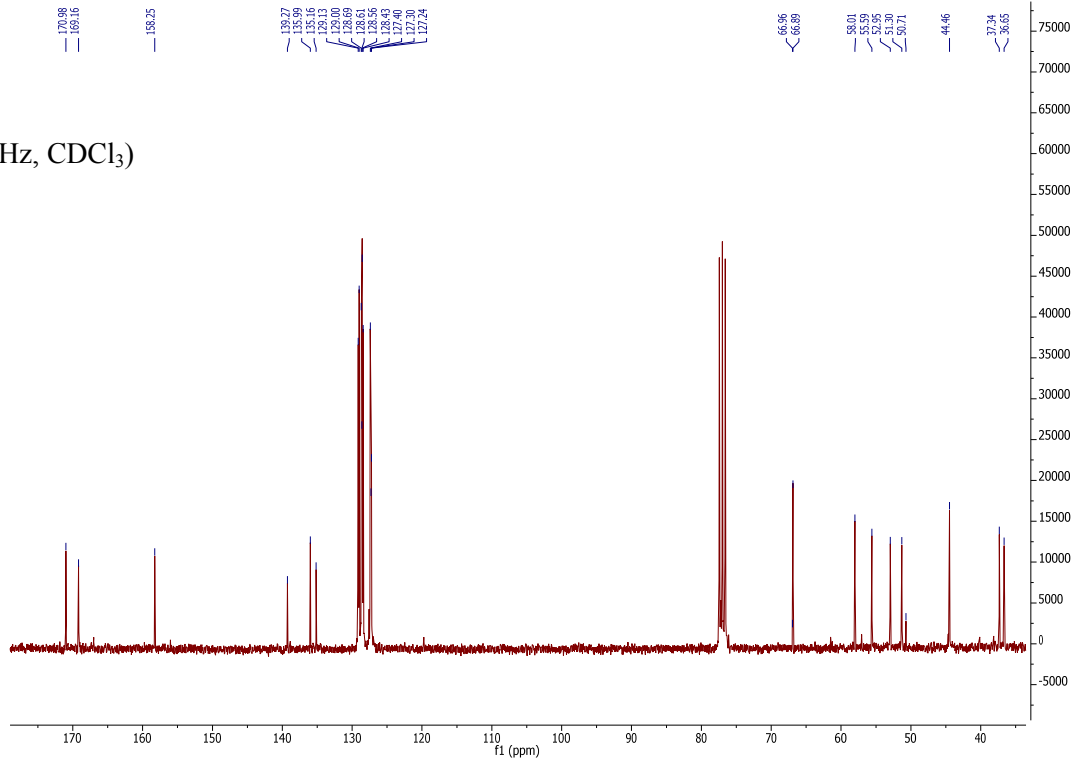
Spectra (^1H -NMR and ^{13}C -NMR) of New Compounds

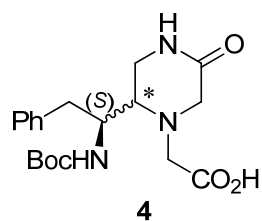
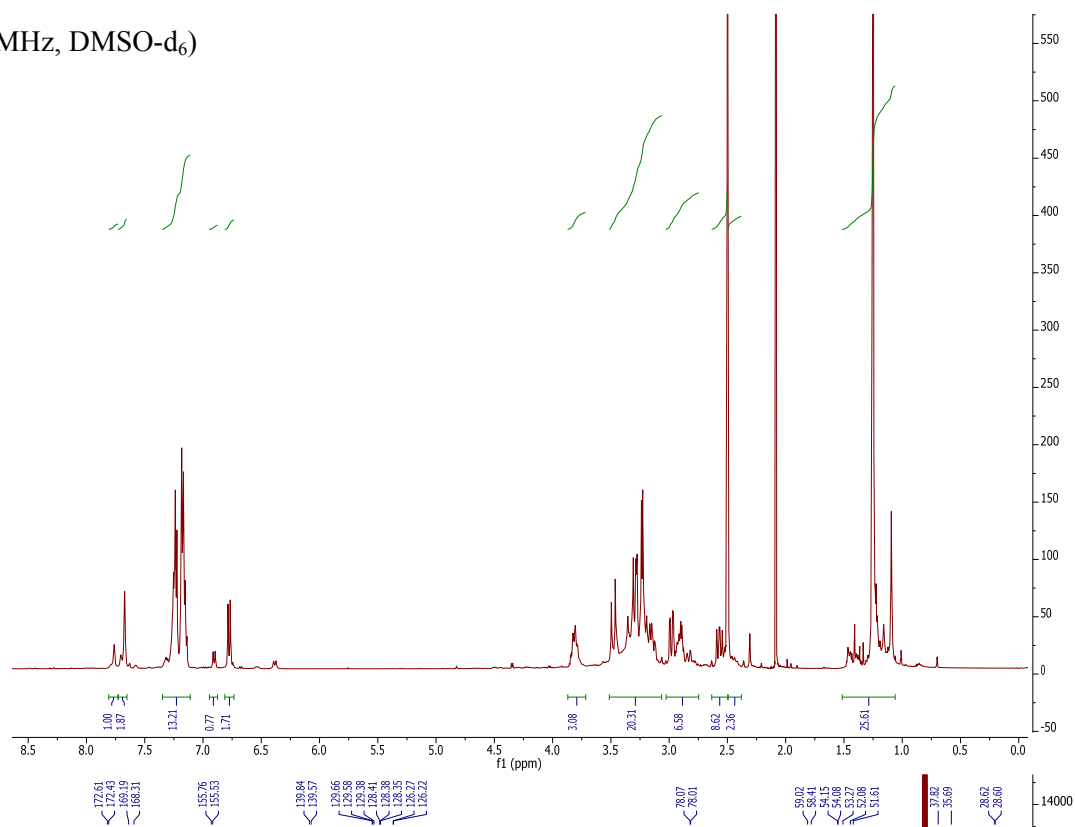
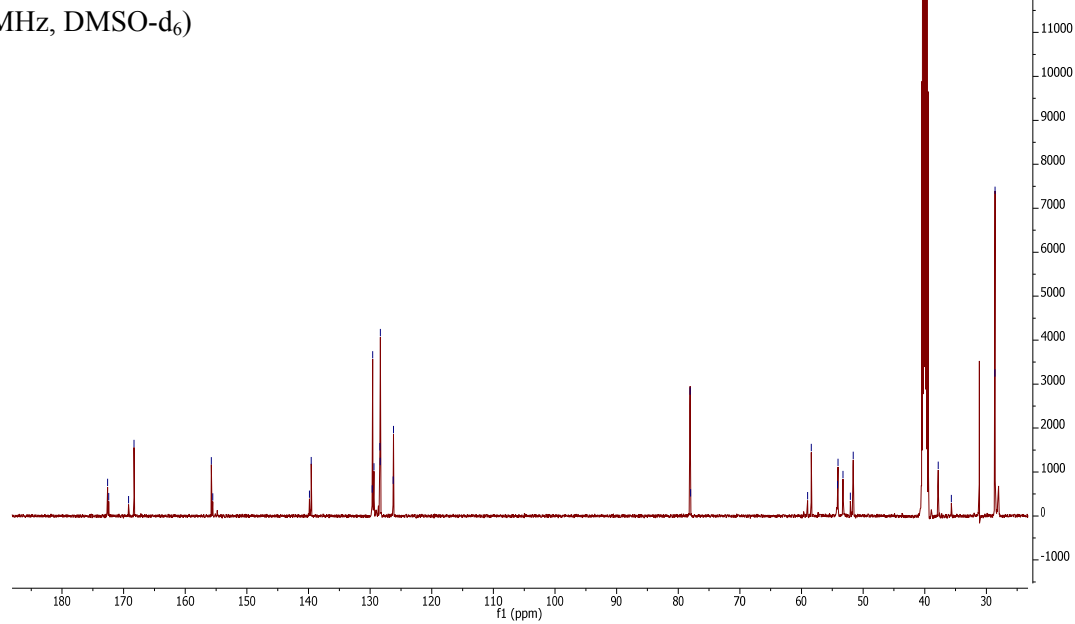


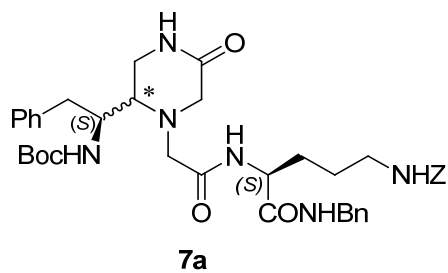
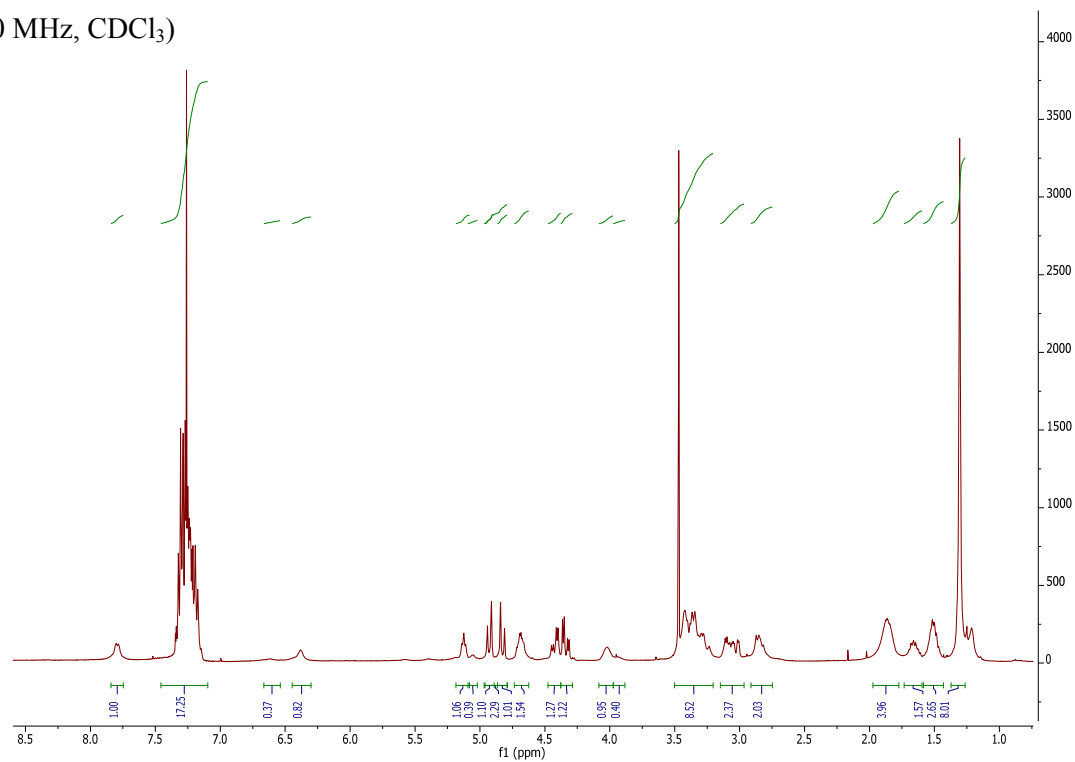
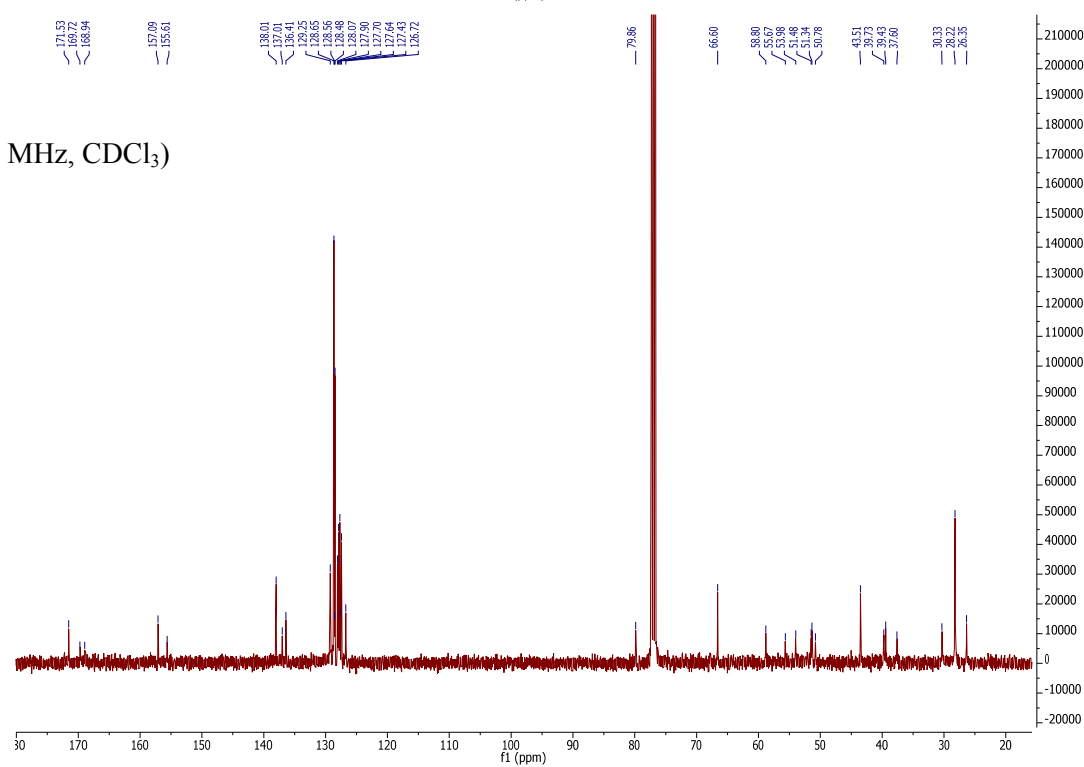
2 (300 MHz, CDCl₃)



2 (75 MHz, CDCl₃)

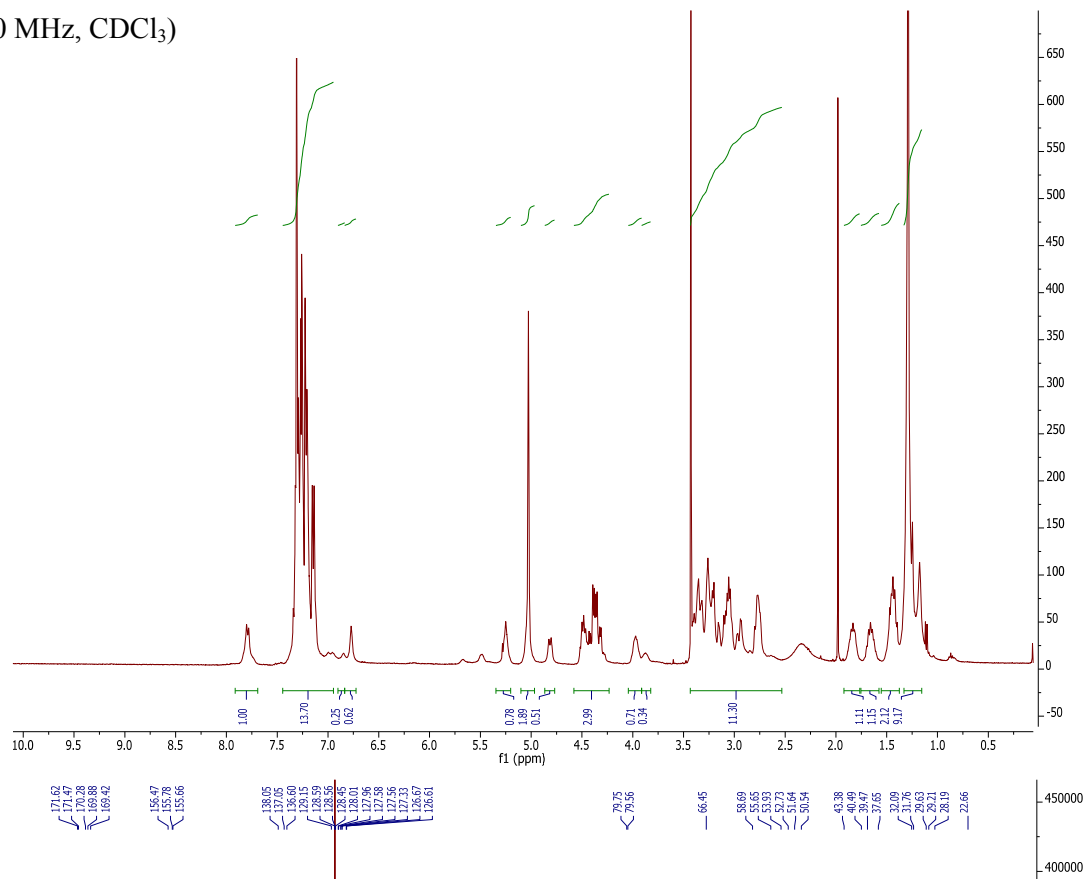


**4** (500 MHz, DMSO-d₆)**4** (125 MHz, DMSO-d₆)

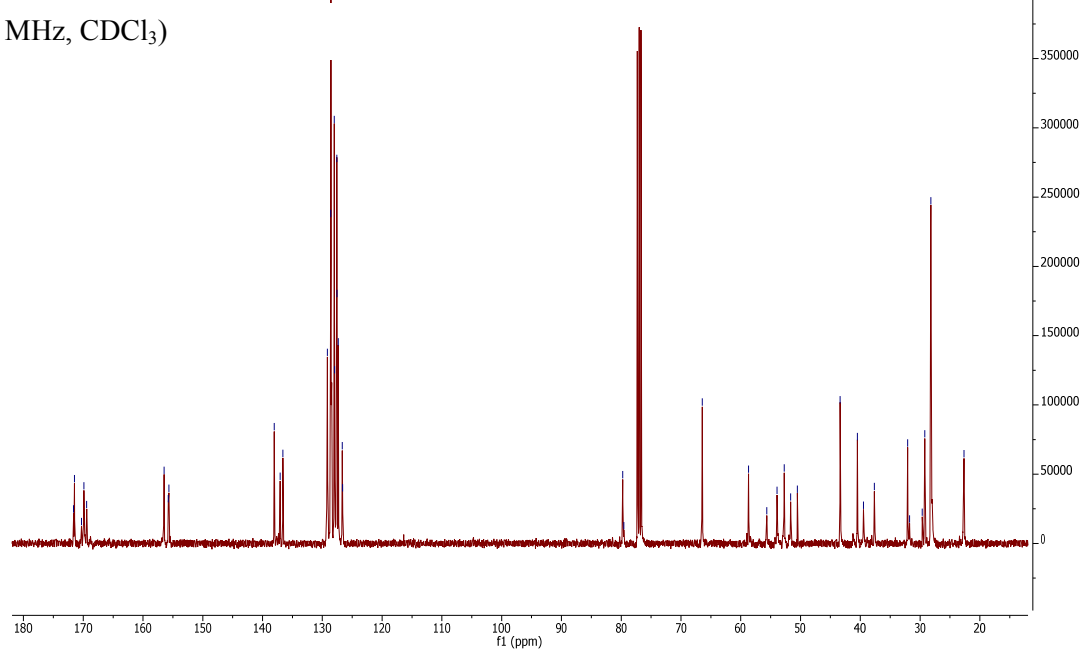
**7a** (400 MHz, CDCl₃)**7a** (100 MHz, CDCl₃)

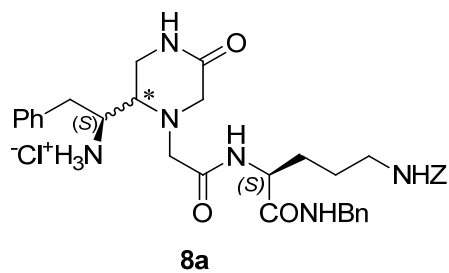
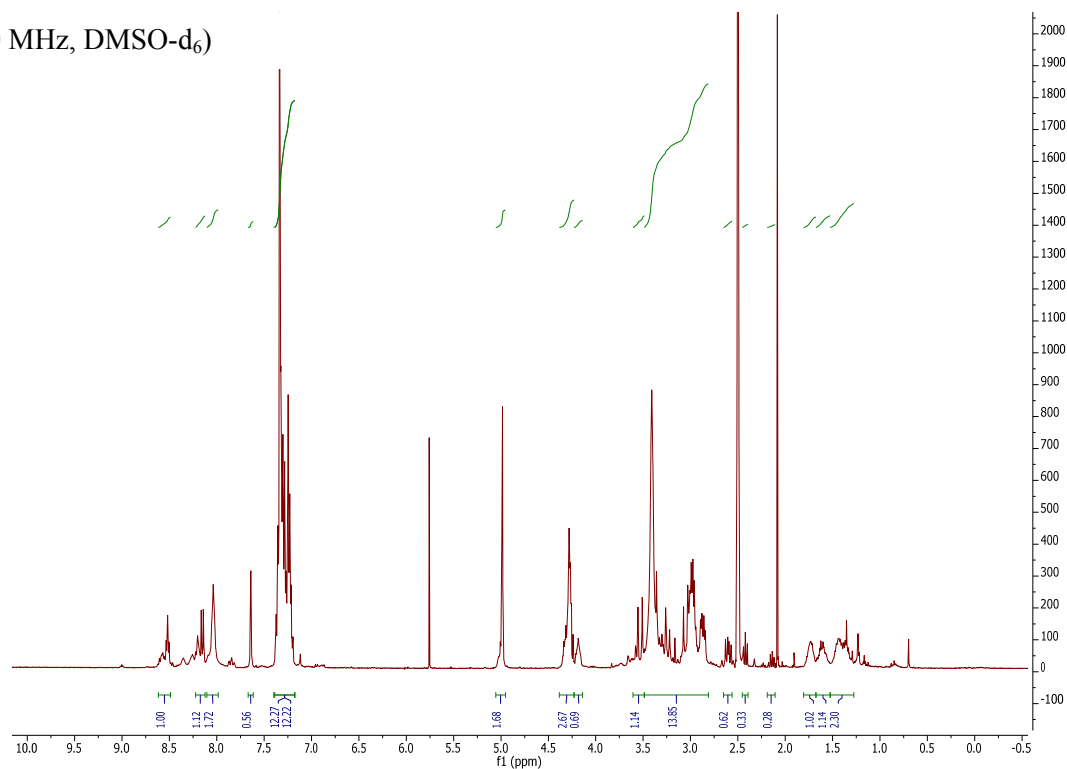
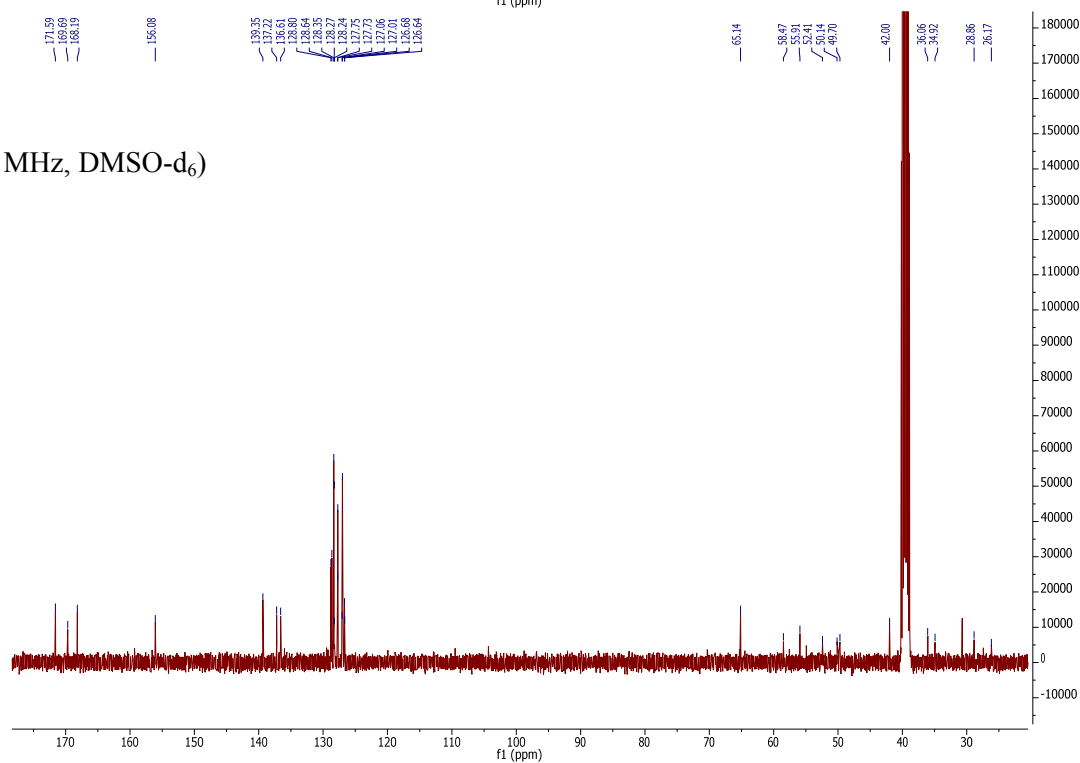


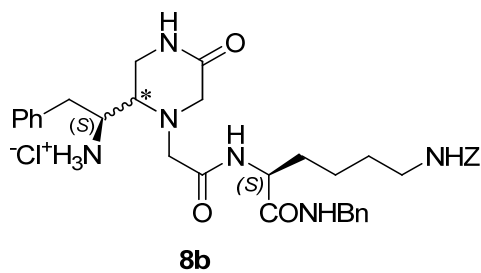
7b (400 MHz, CDCl₃)



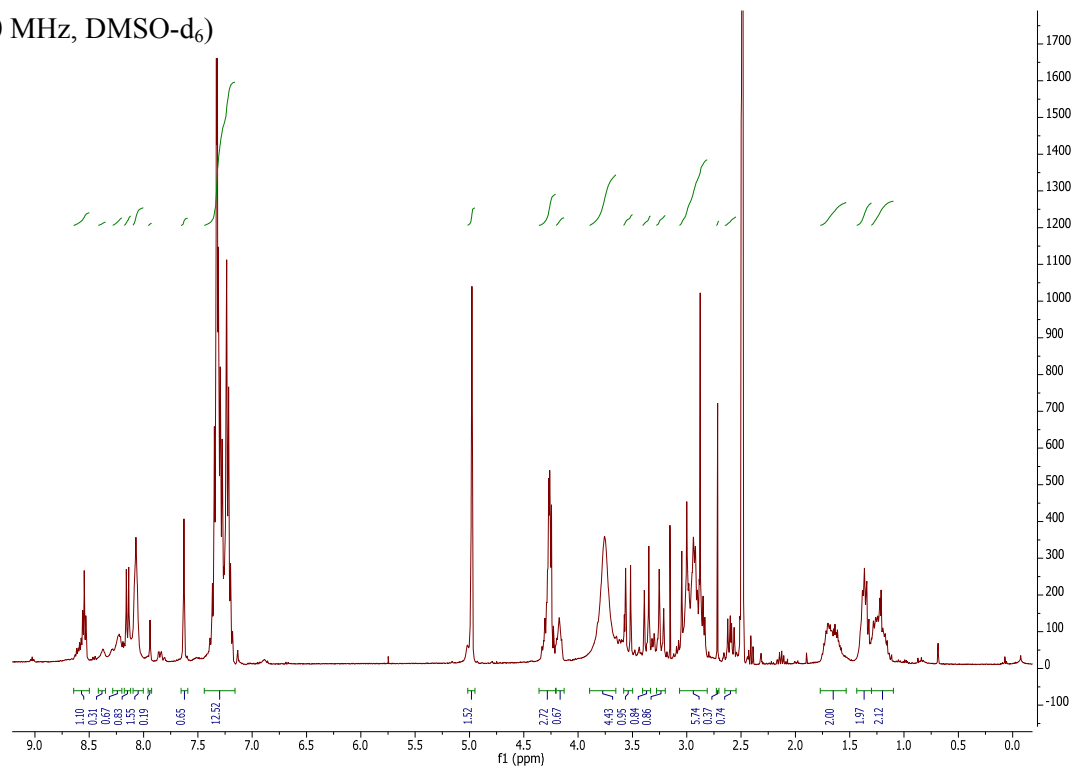
7b (100 MHz, CDCl₃)



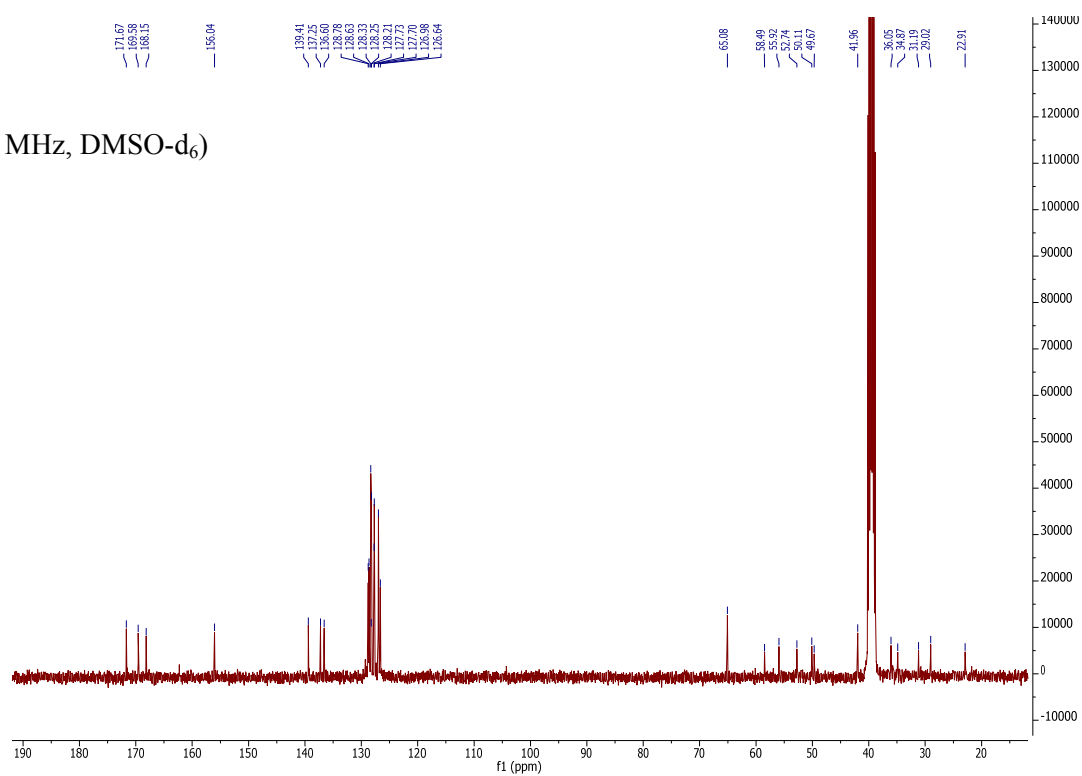
**8a** (400 MHz, DMSO-d₆)**8a** (100 MHz, DMSO-d₆)

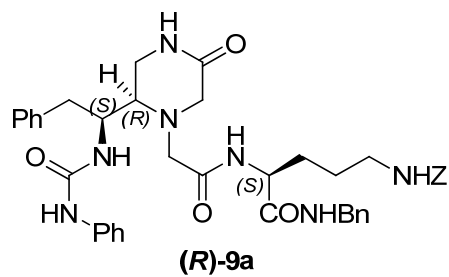


8b (400 MHz, DMSO-d₆)

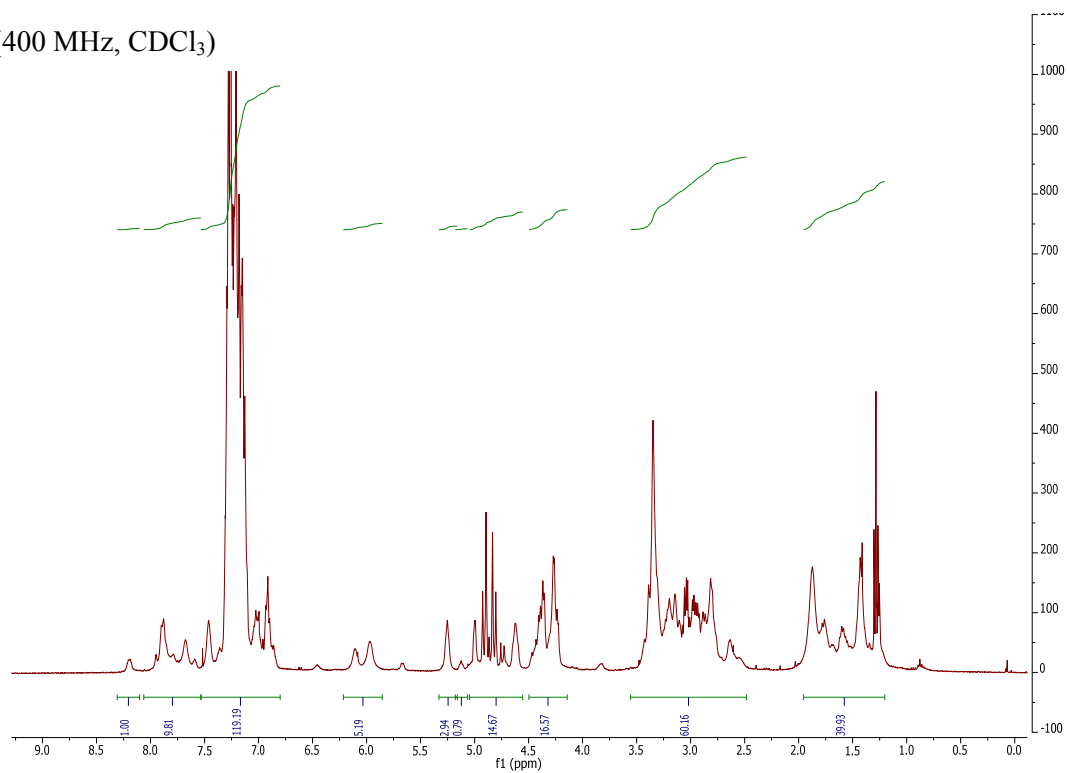


8b (100 MHz, DMSO-d₆)

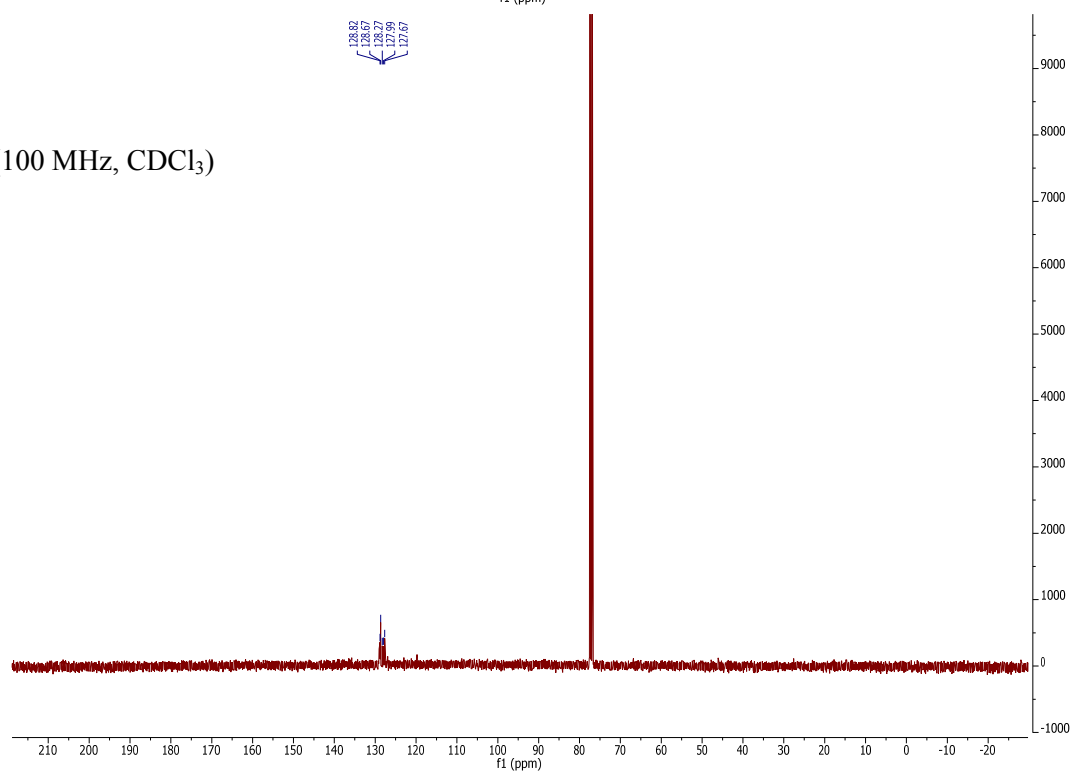


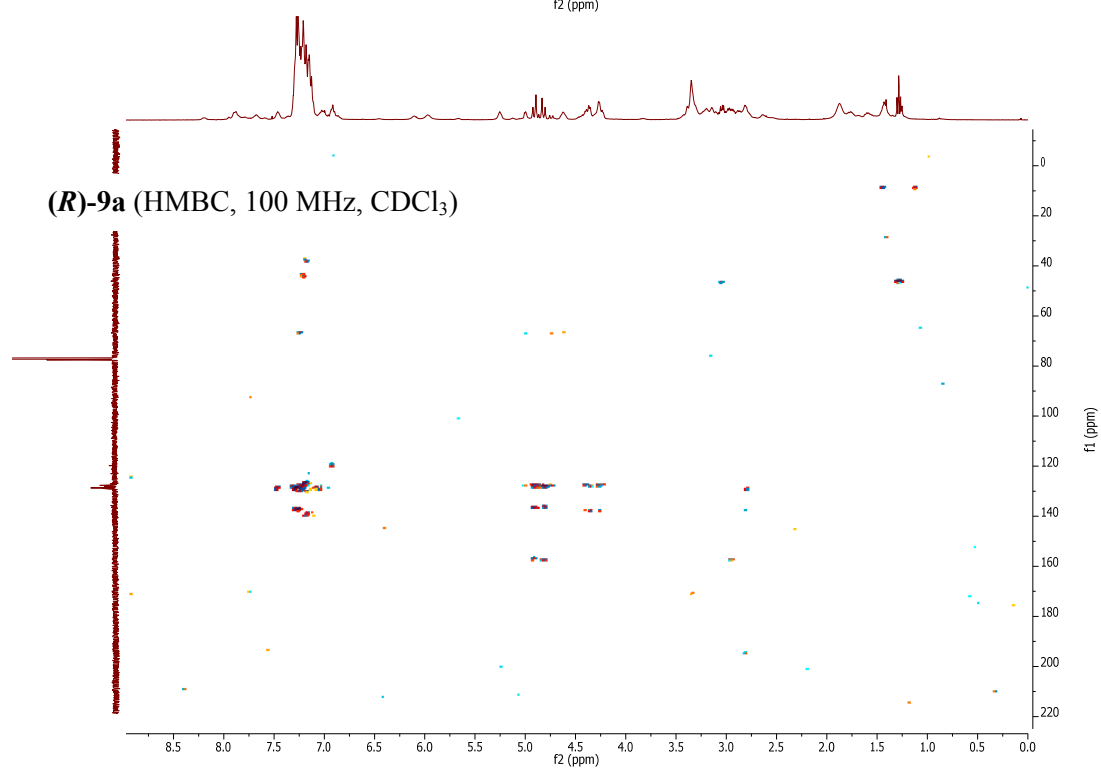
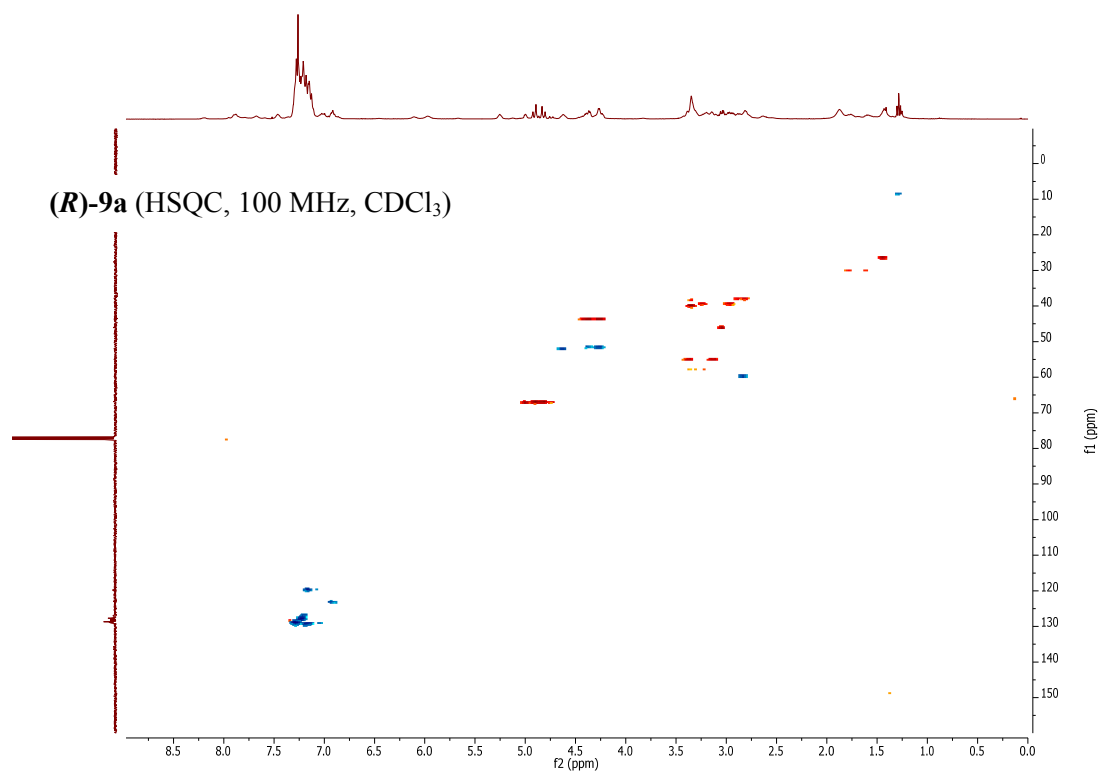


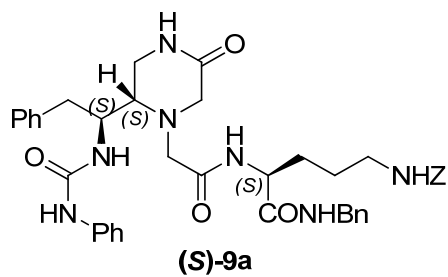
(R)-9a (400 MHz, CDCl₃)



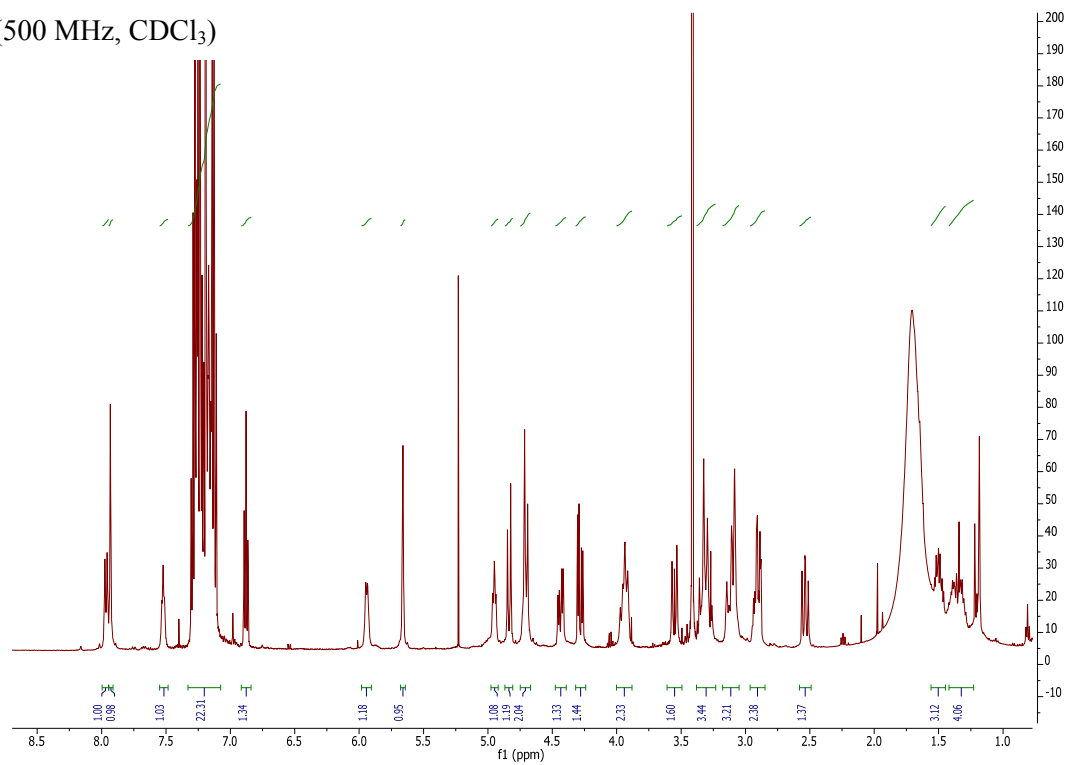
(R)-9a (100 MHz, CDCl₃)



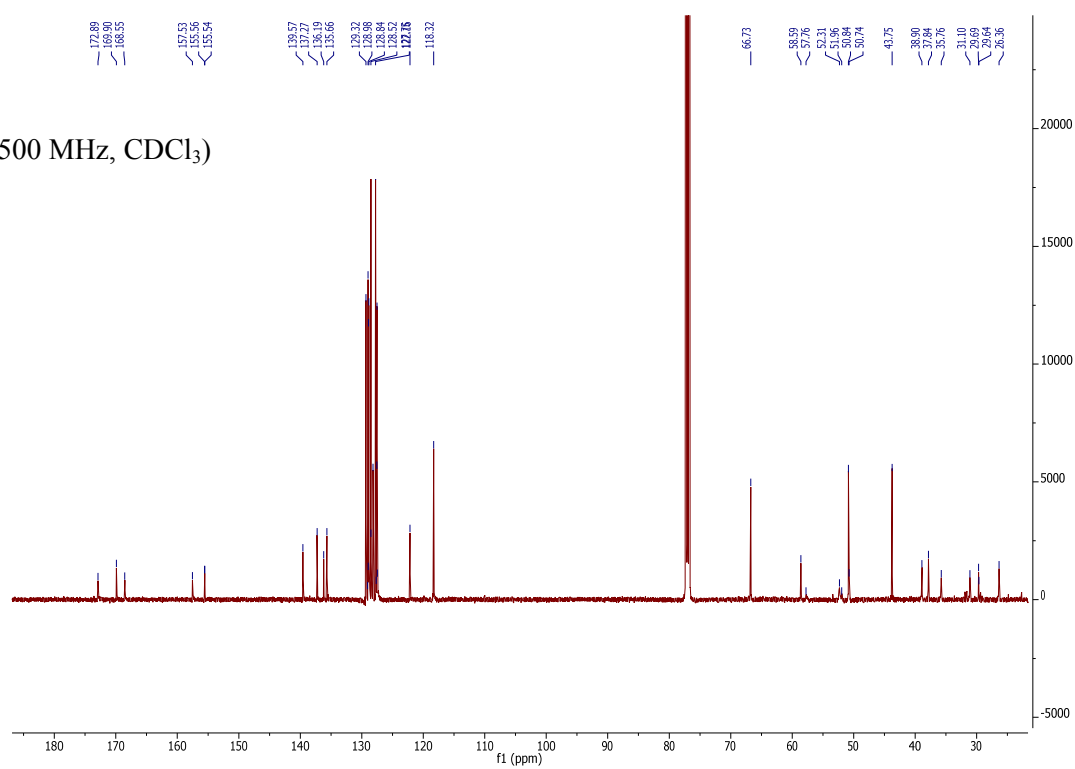


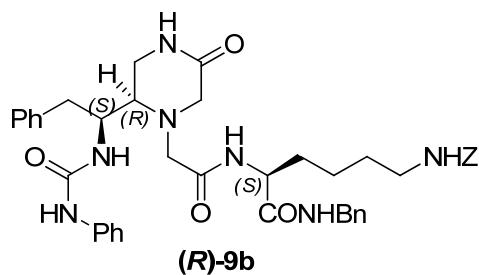


(S)-9a (500 MHz, CDCl₃)

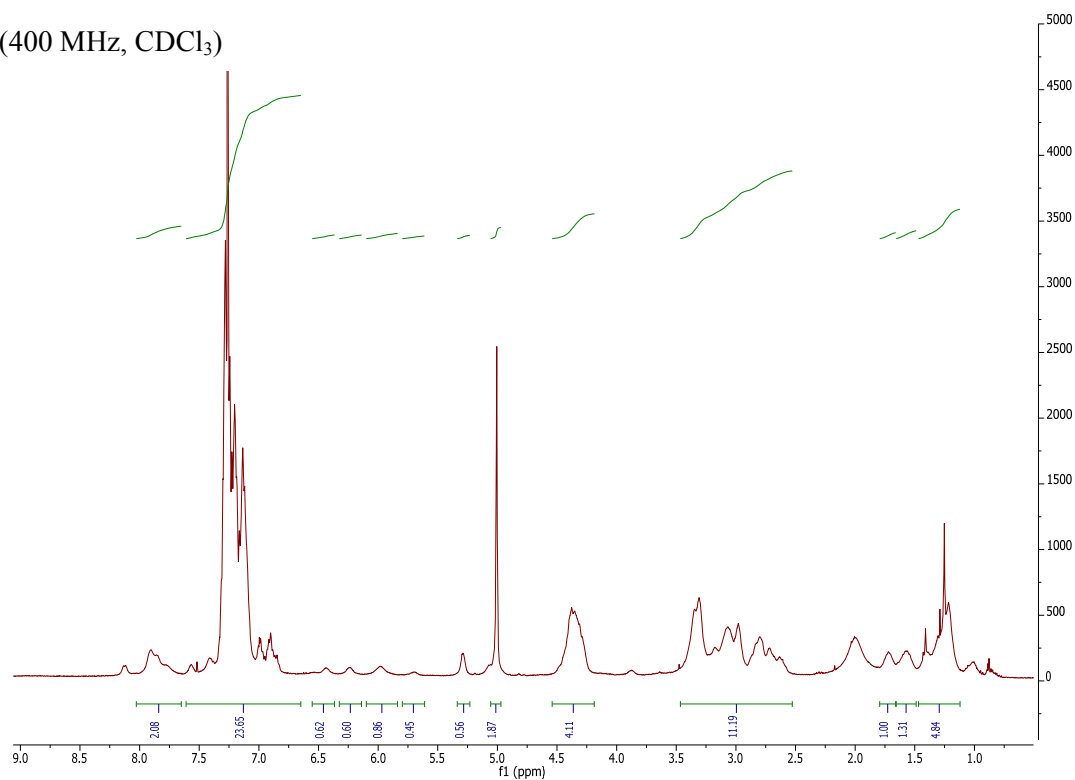


(S)-9a (500 MHz, CDCl₃)

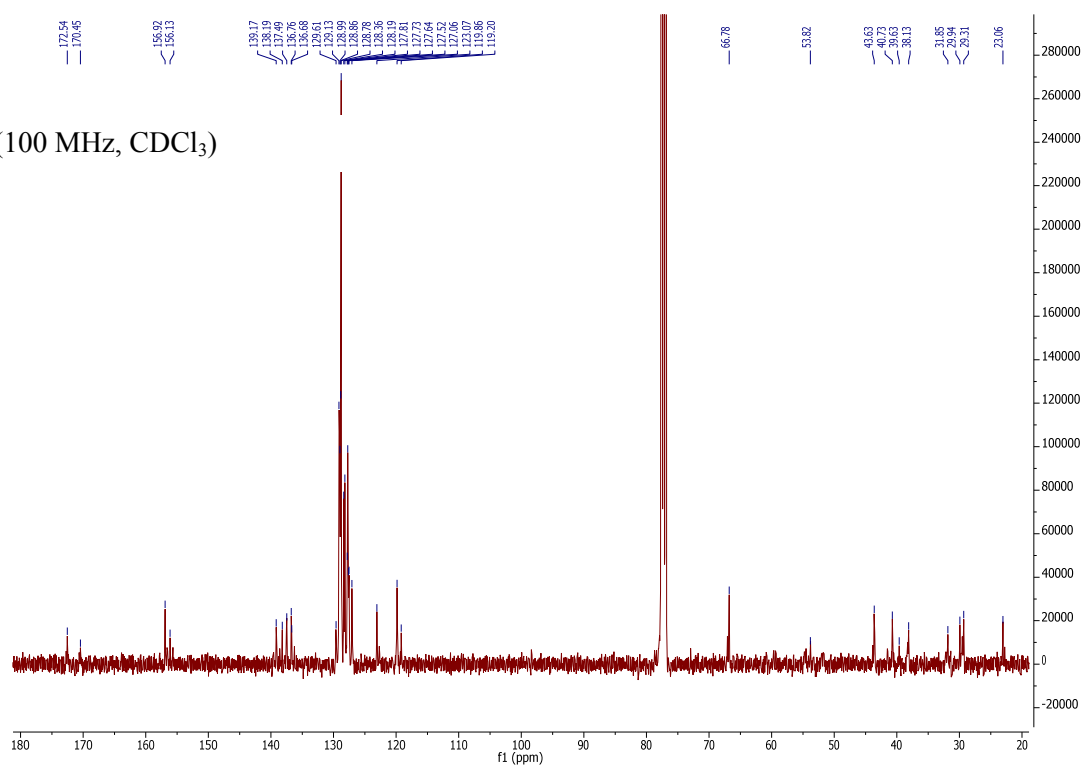


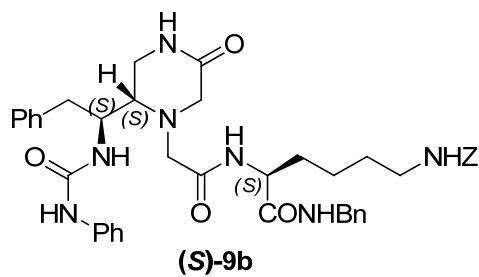


(R)-9b (400 MHz, CDCl₃)

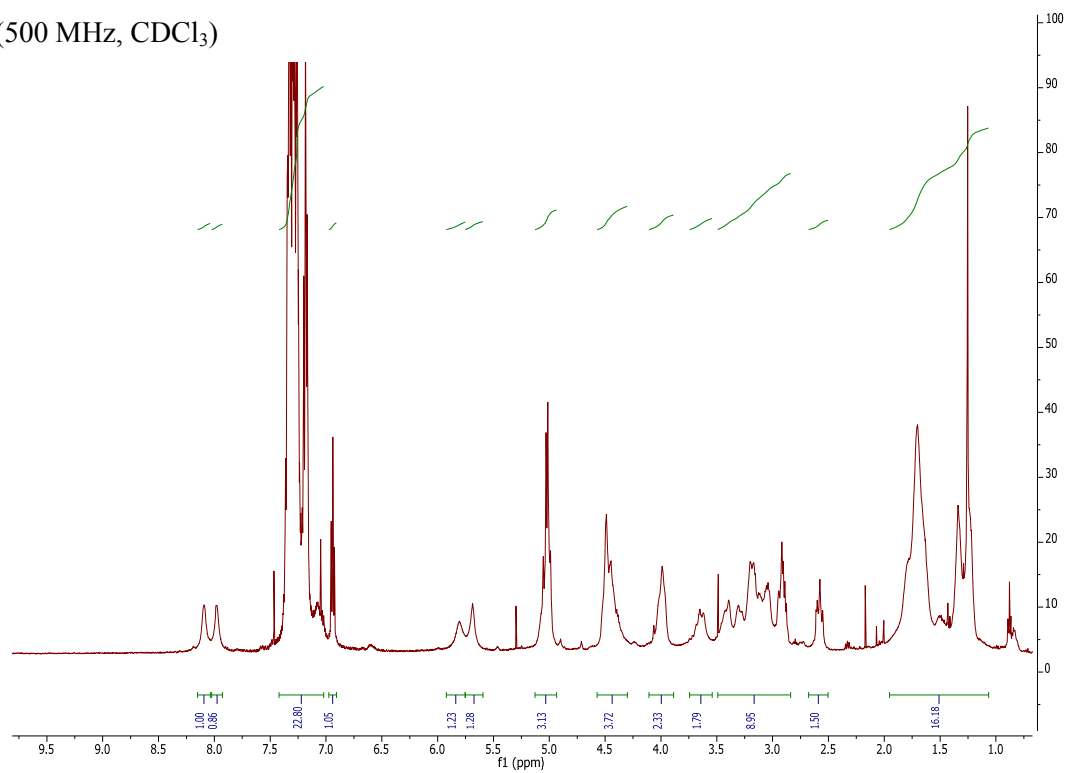


(R)-9b (100 MHz, CDCl₃)

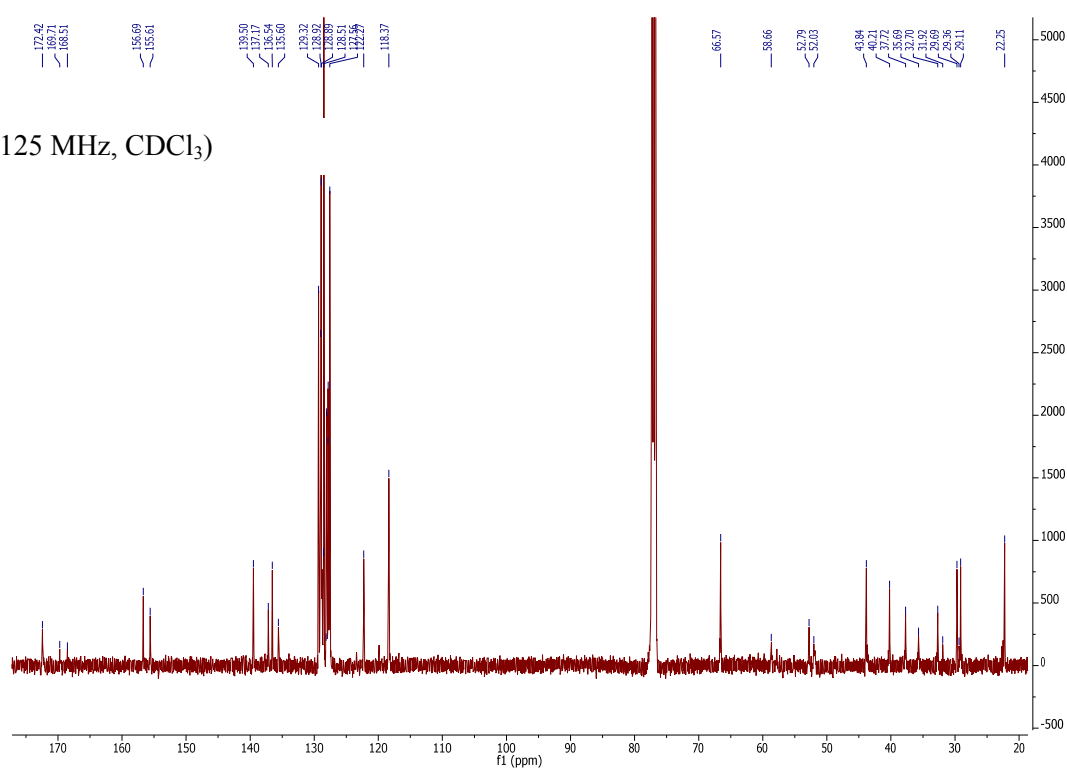


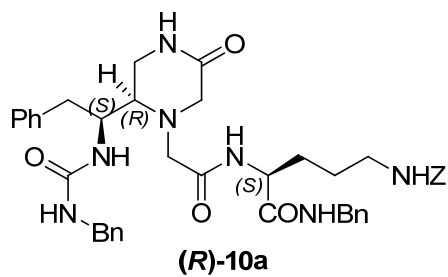


(S)-9b (500 MHz, CDCl₃)

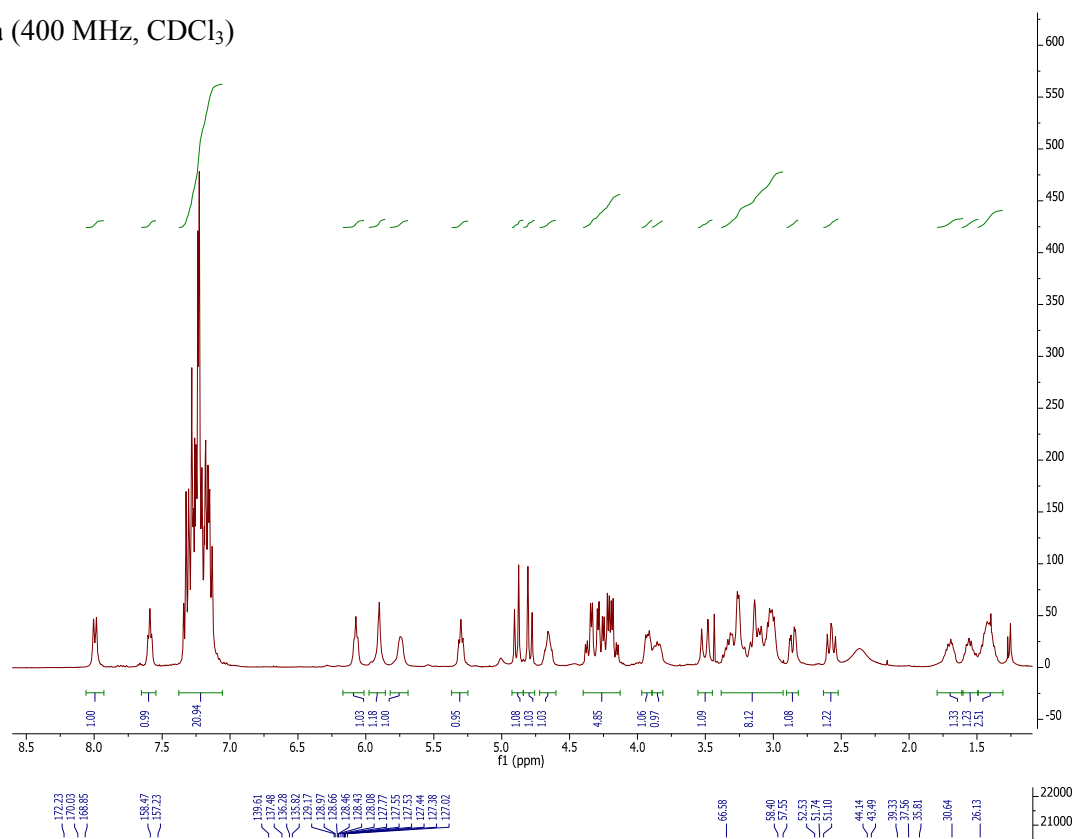


(S)-9b (125 MHz, CDCl₃)

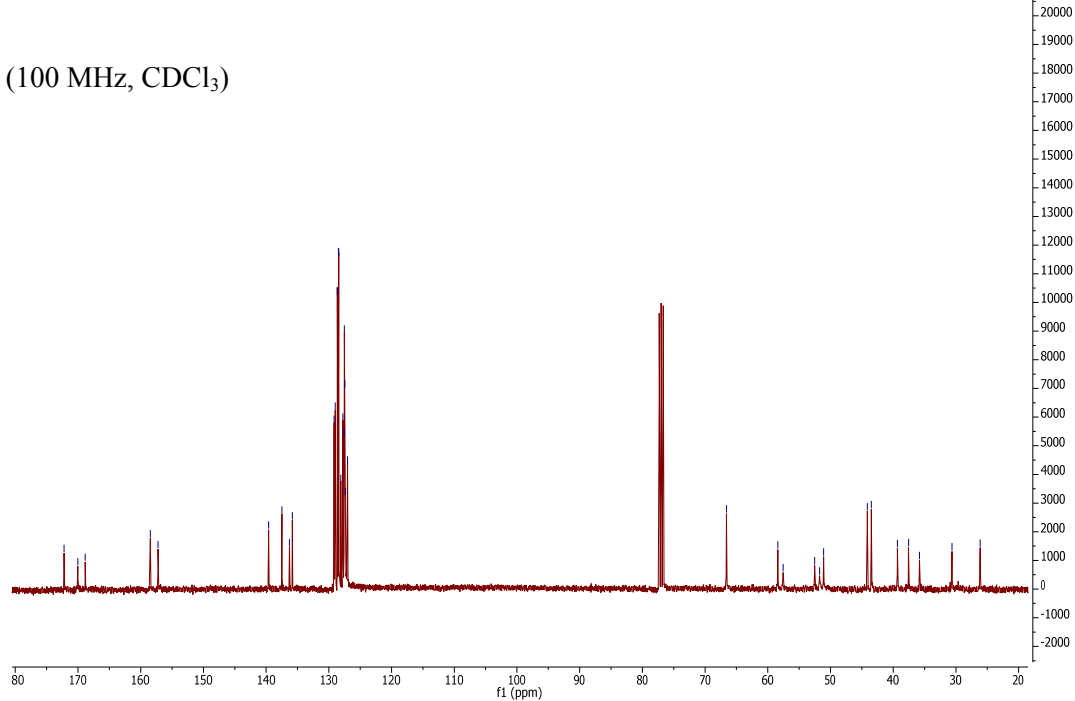


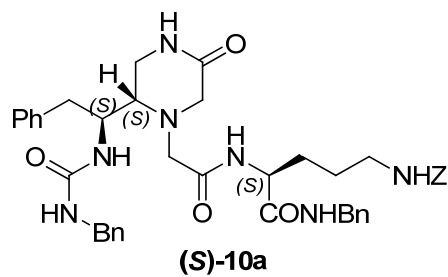


(R)-10a (400 MHz, CDCl₃)

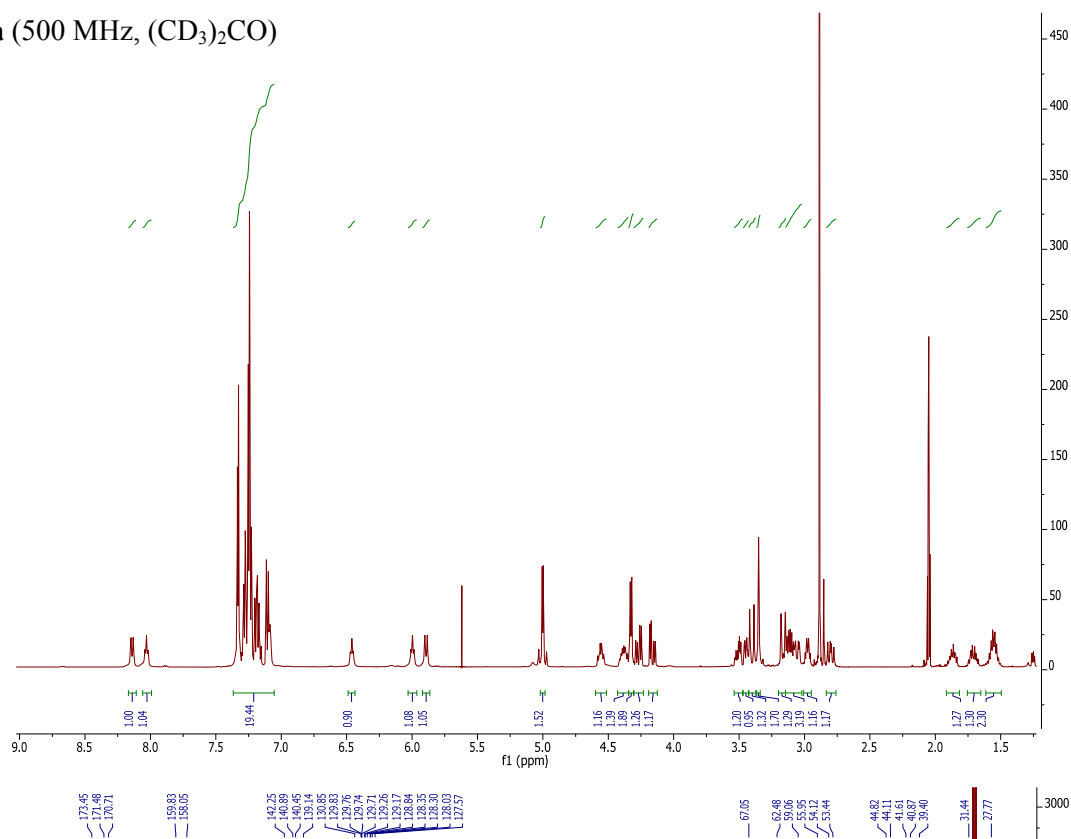


(R)-10a (100 MHz, CDCl₃)

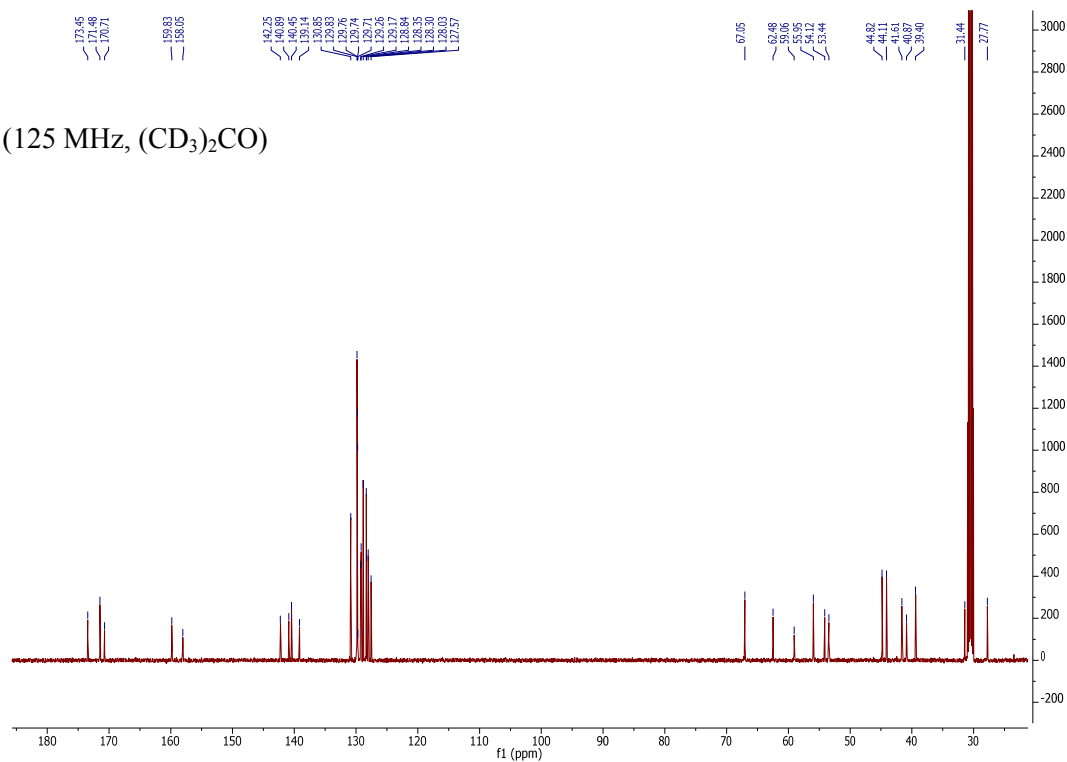


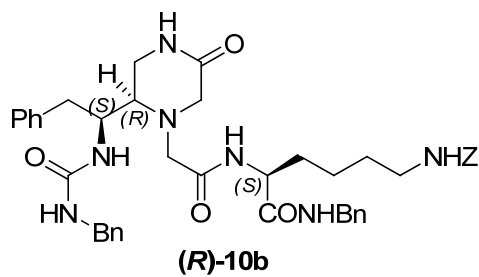


(S)-10a (500 MHz, $(\text{CD}_3)_2\text{CO}$)

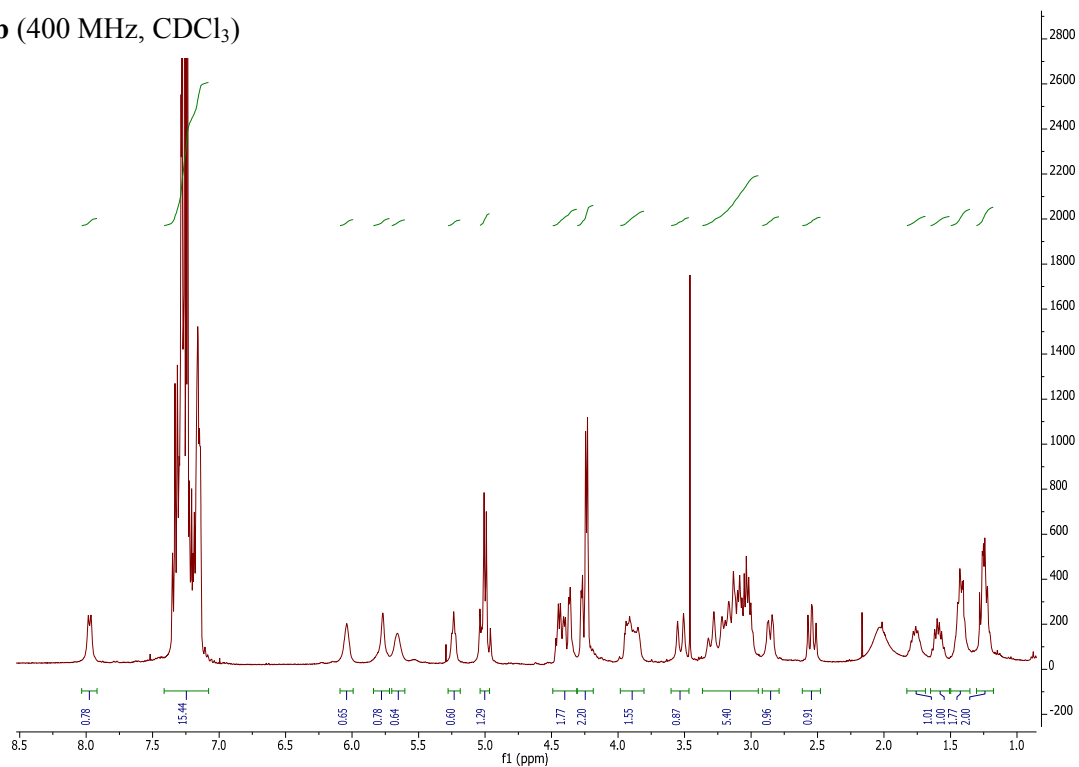


(S)-10a (125 MHz, $(\text{CD}_3)_2\text{CO}$)

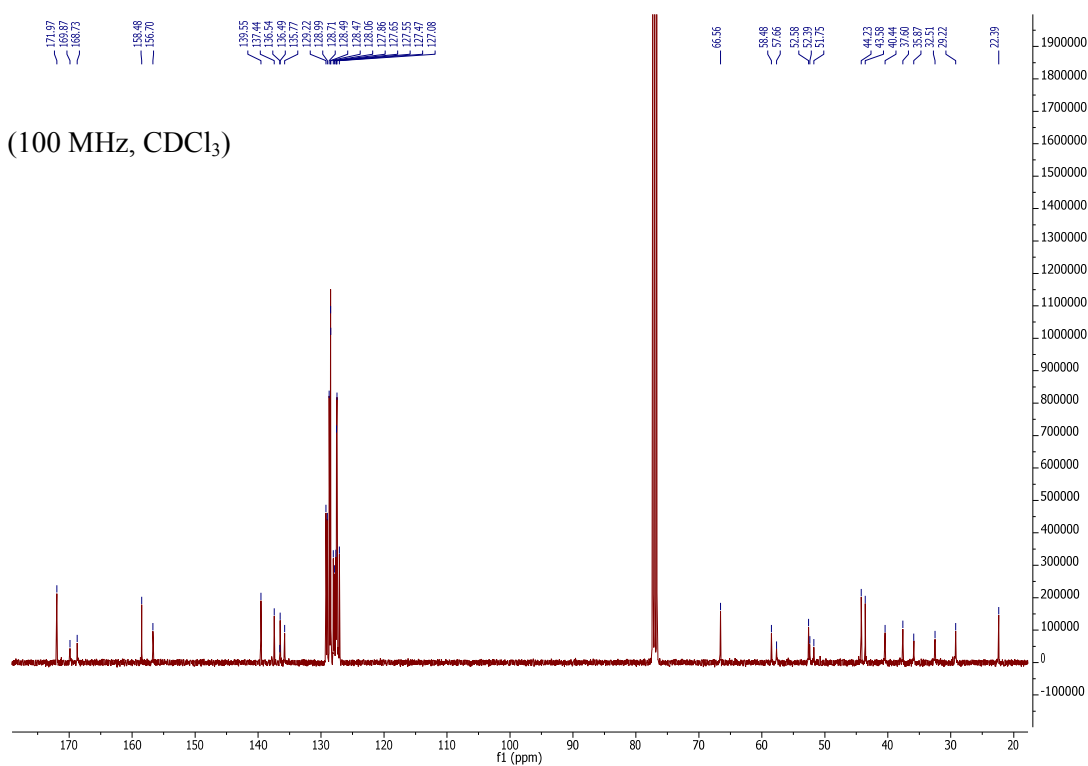


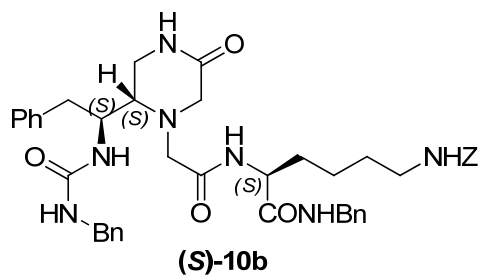


(R)-10b (400 MHz, CDCl₃)

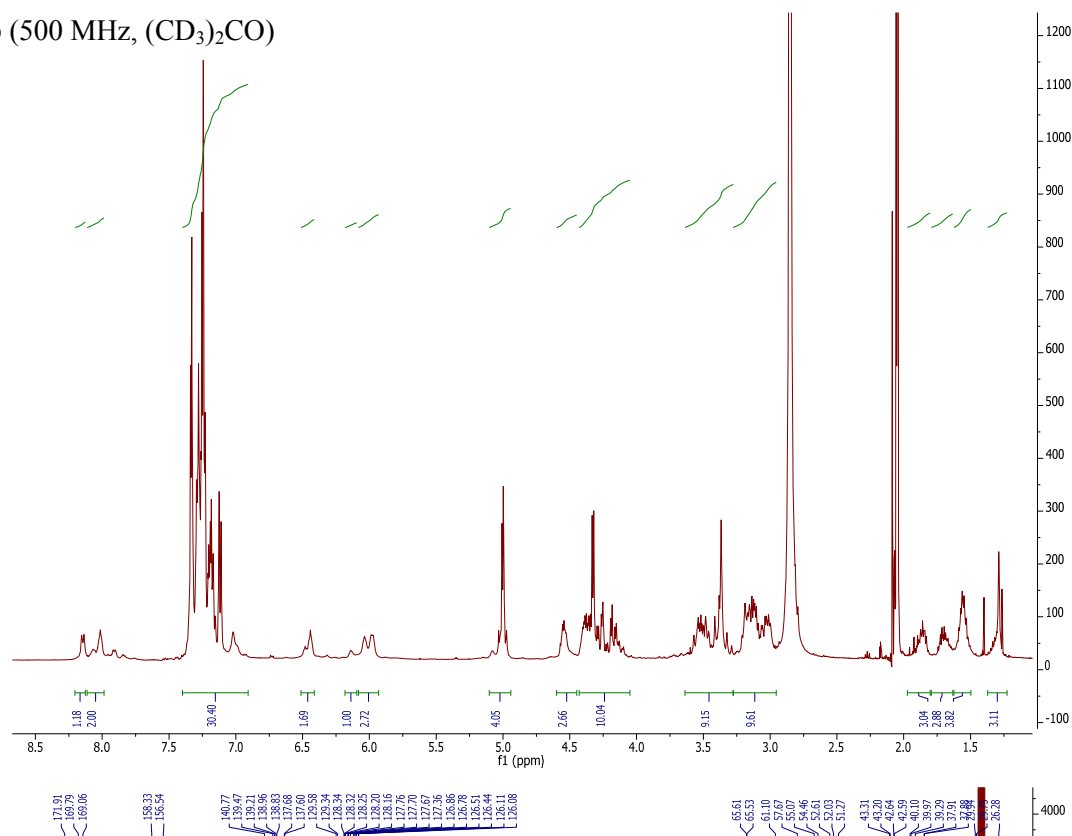


(R)-10b (100 MHz, CDCl₃)

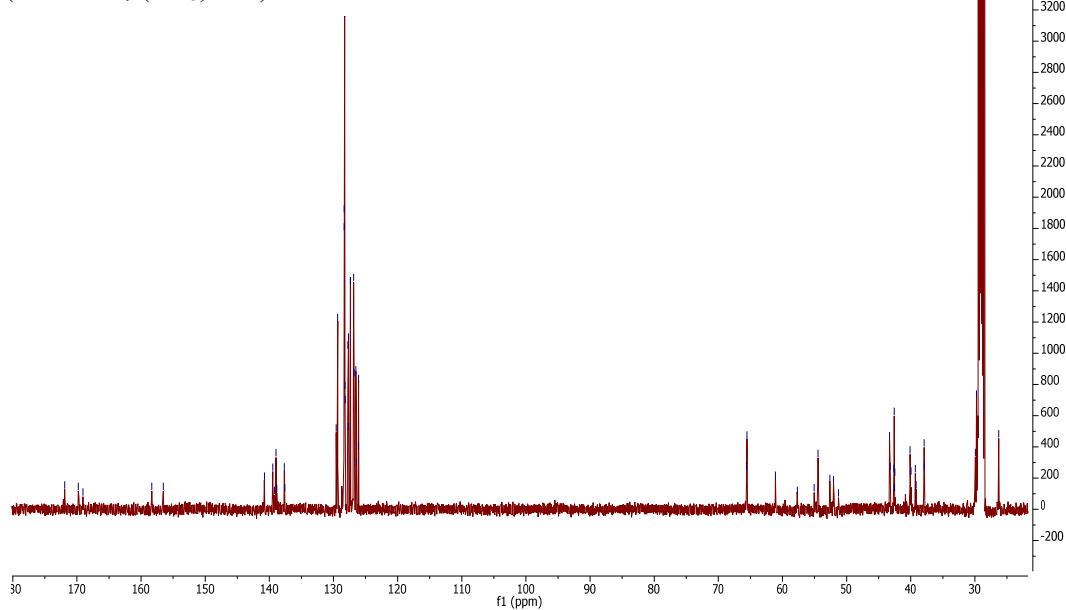


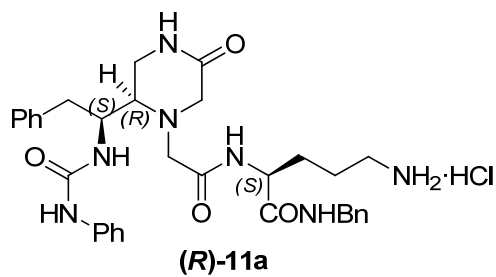


(S)-10b (500 MHz, $(\text{CD}_3)_2\text{CO}$)

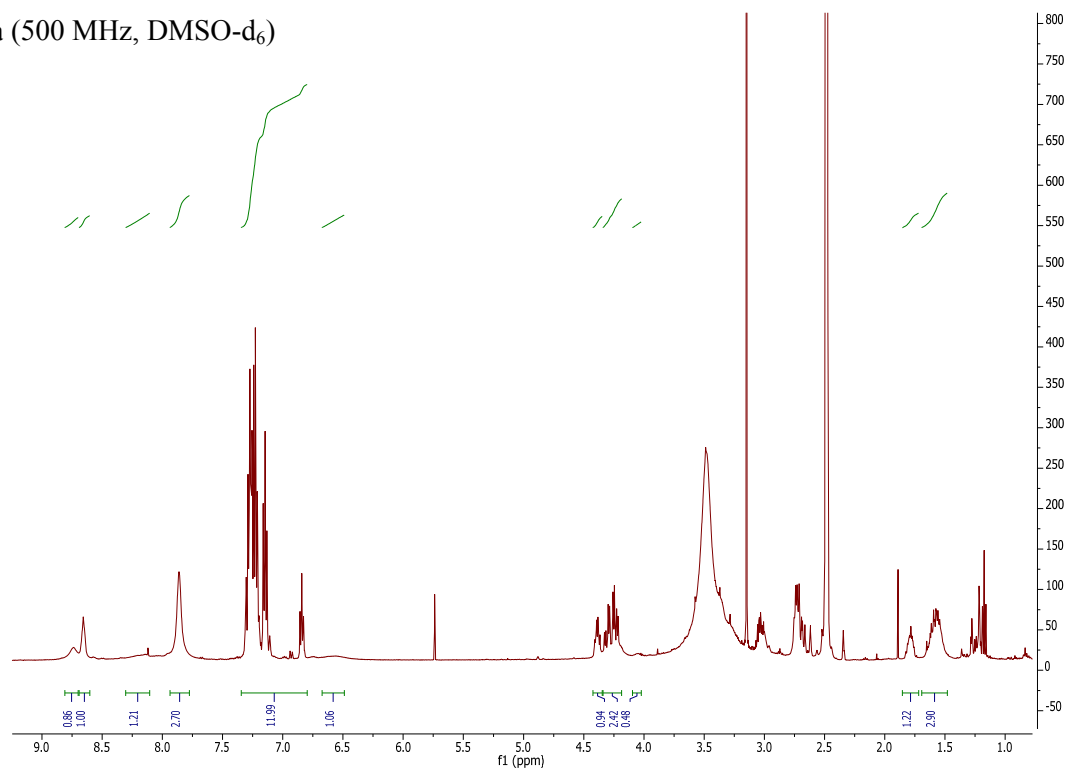


(S)-10b (125 MHz, $(\text{CD}_3)_2\text{CO}$)

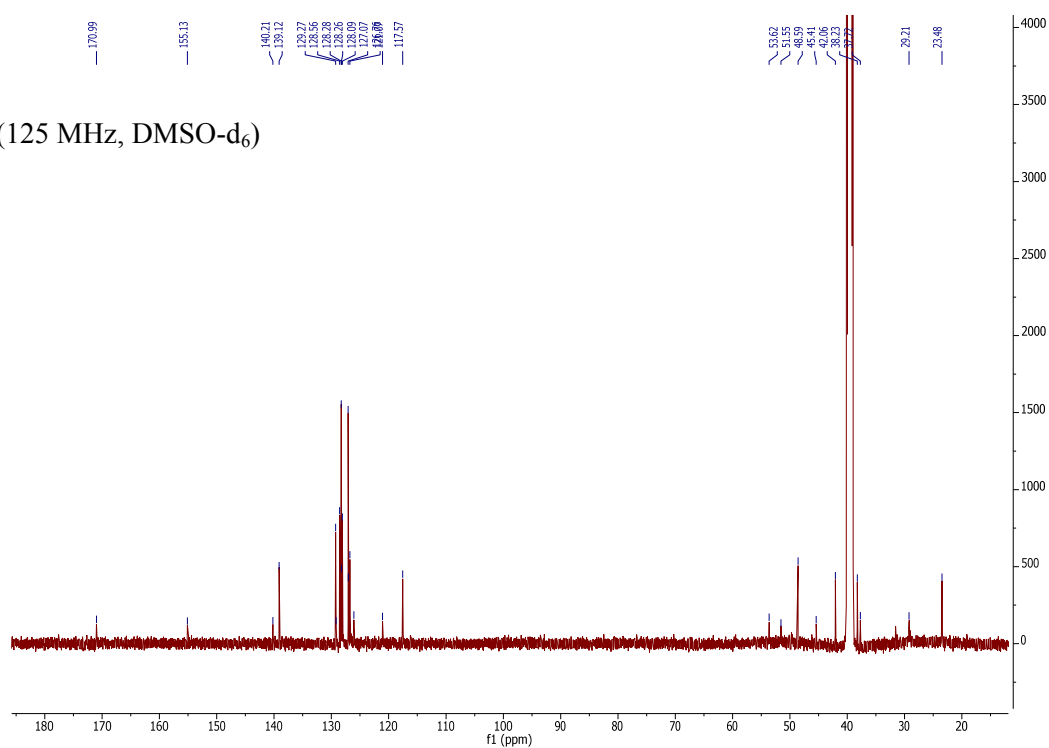


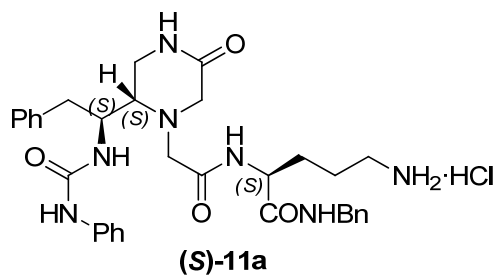


(R)-11a (500 MHz, DMSO-d₆)

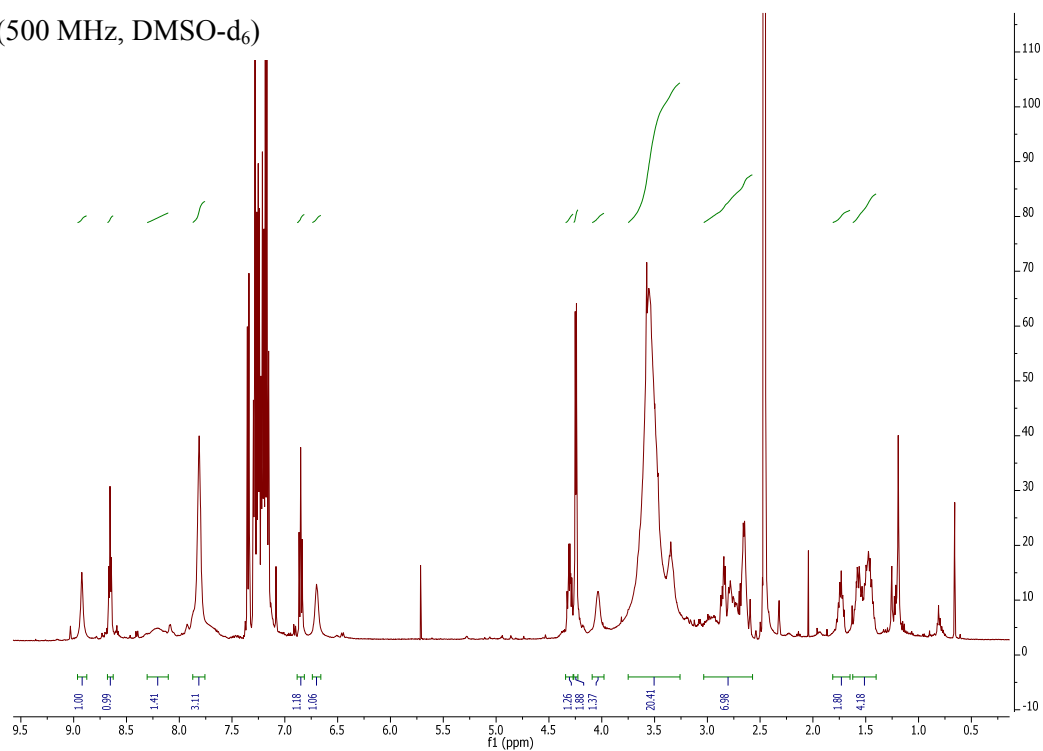


(R)-11a (125 MHz, DMSO-d₆)

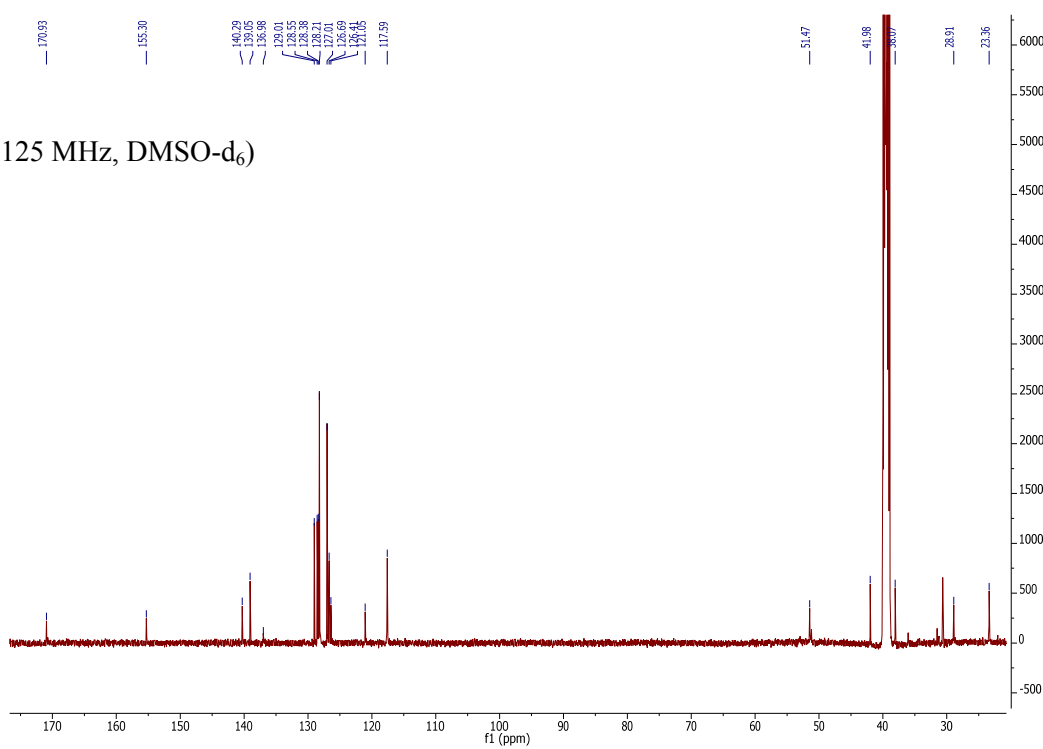


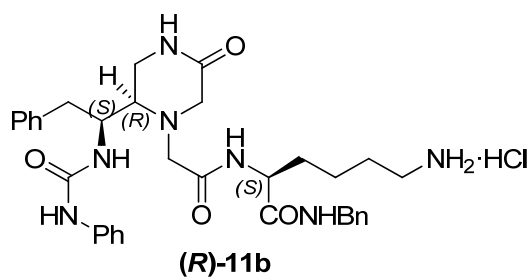


(S)-11a (500 MHz, DMSO-d₆)

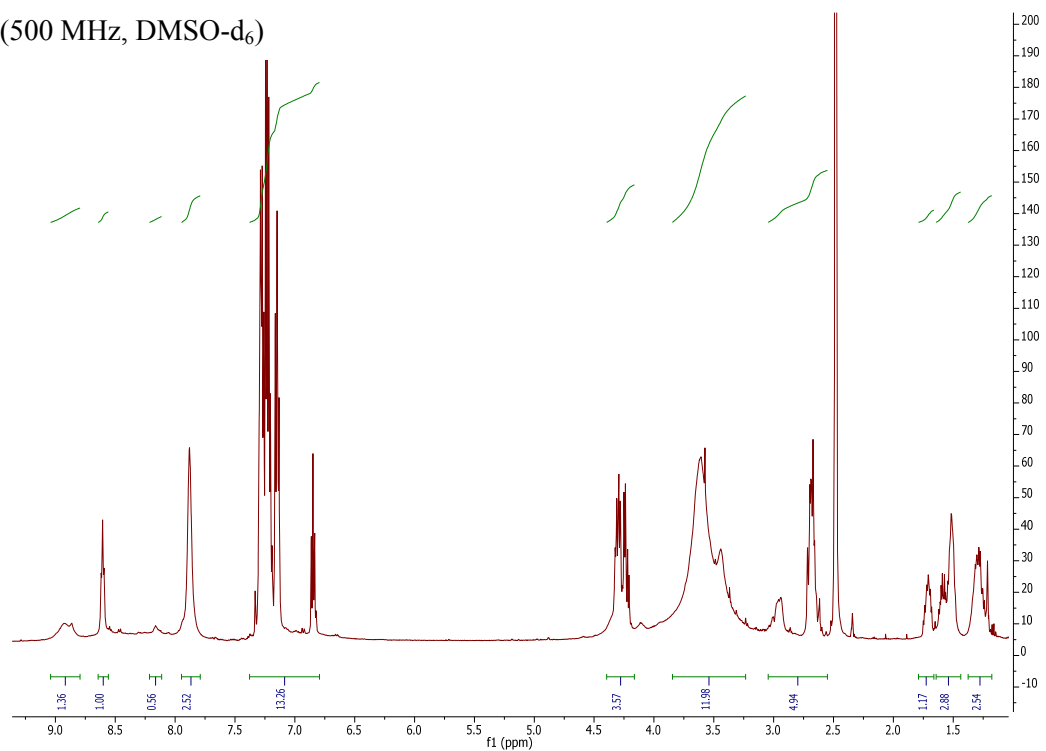


(S)-11a (125 MHz, DMSO-d₆)

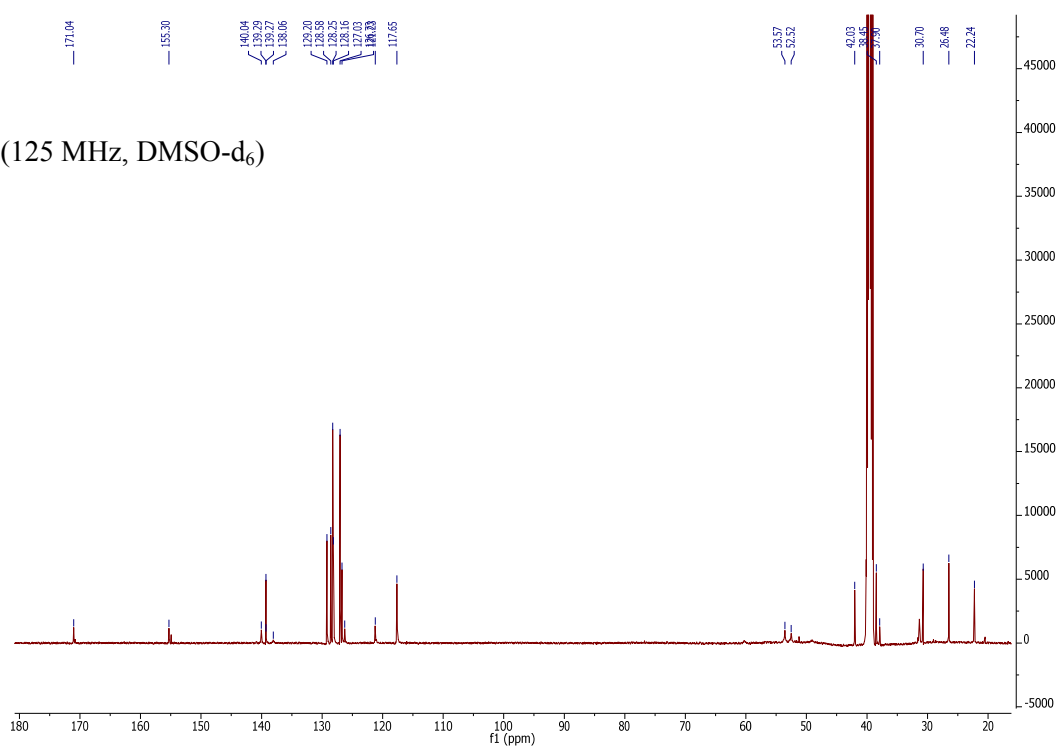




(R)-11b (500 MHz, DMSO-d₆)

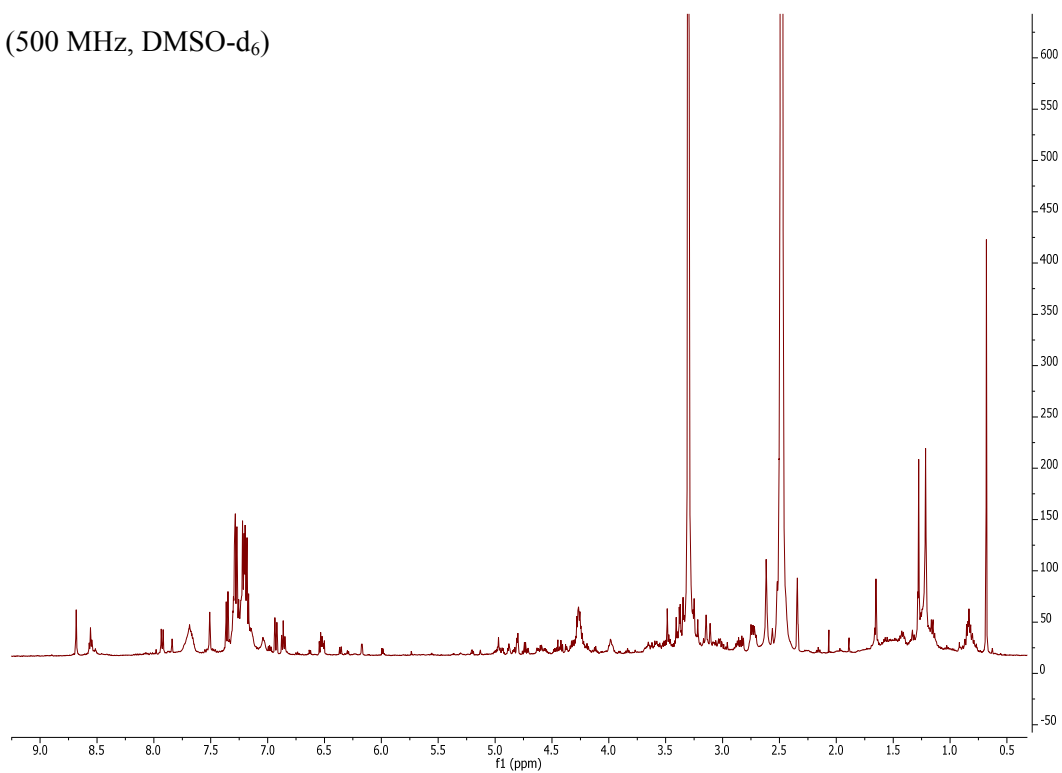


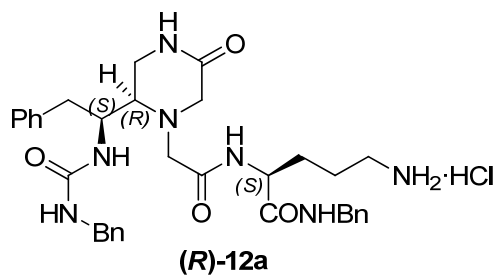
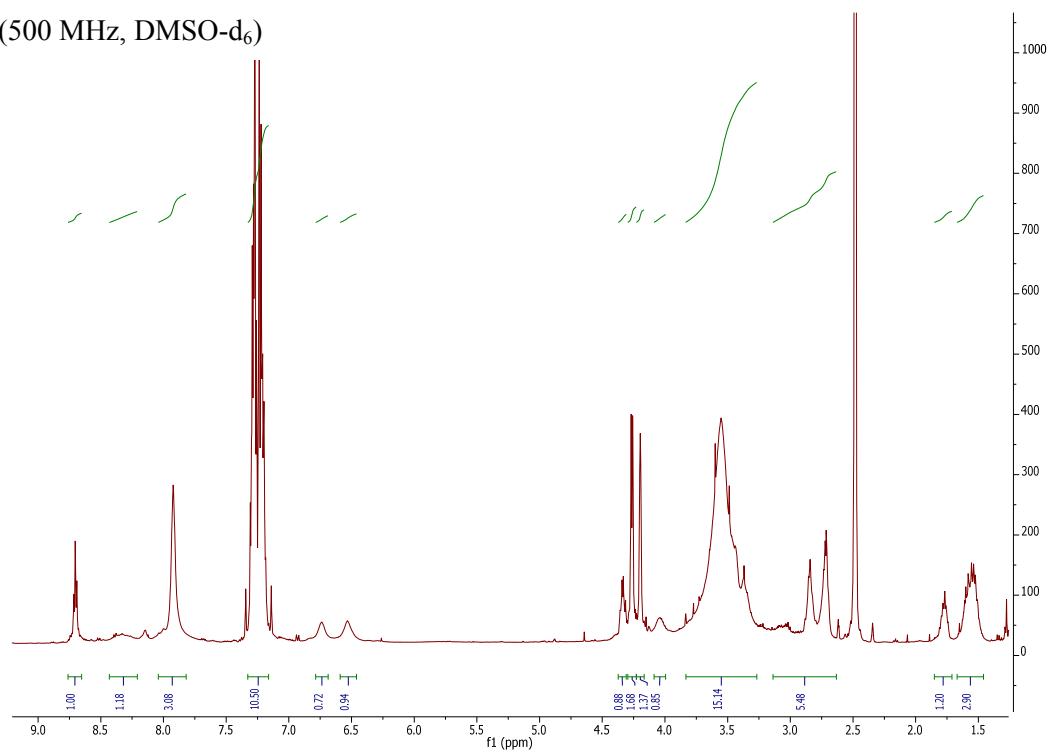
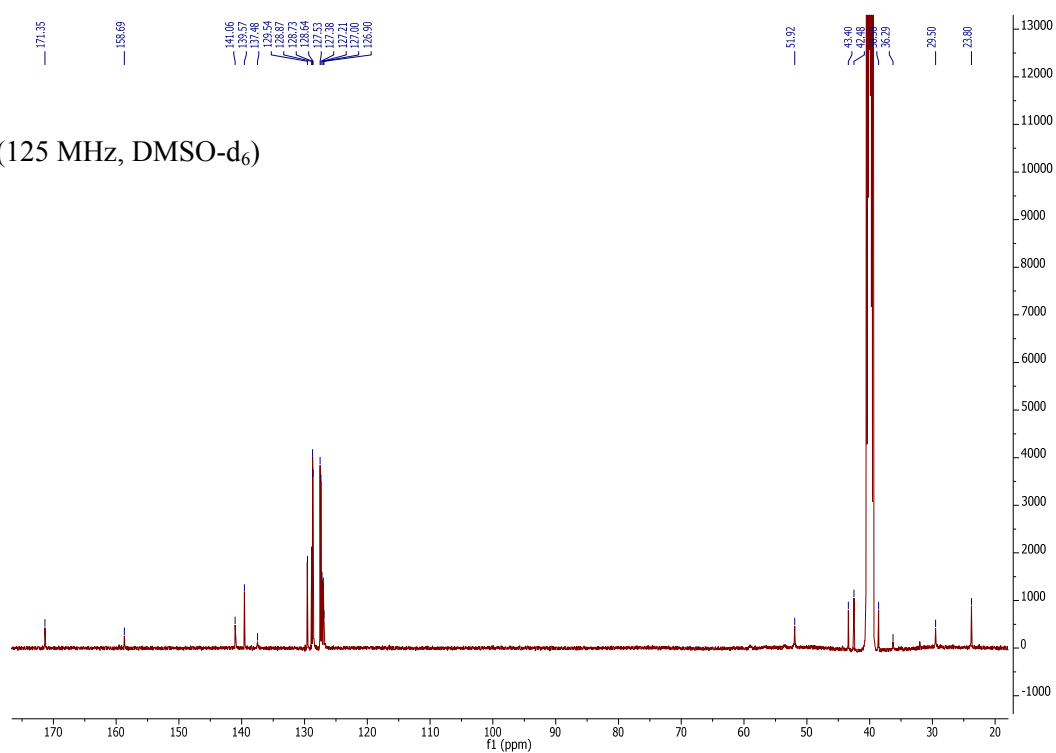
(R)-11b (125 MHz, DMSO-d₆)



(S)-11b

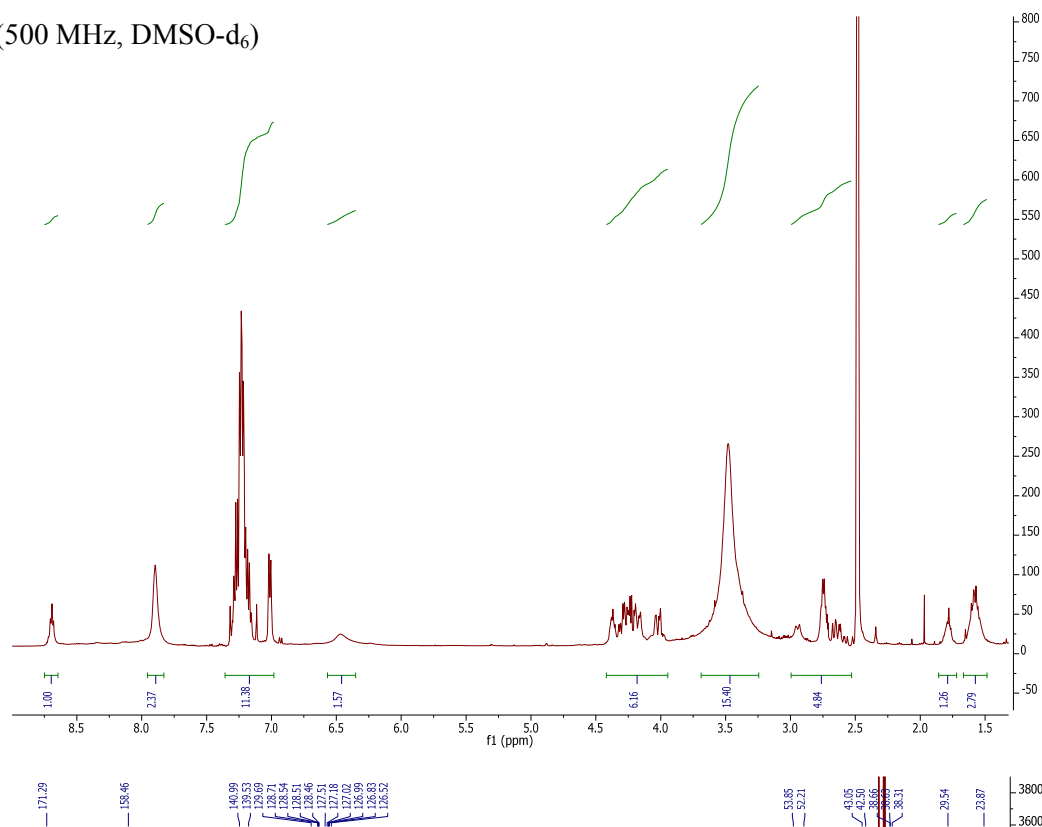
(S)-11b (500 MHz, DMSO-d₆)



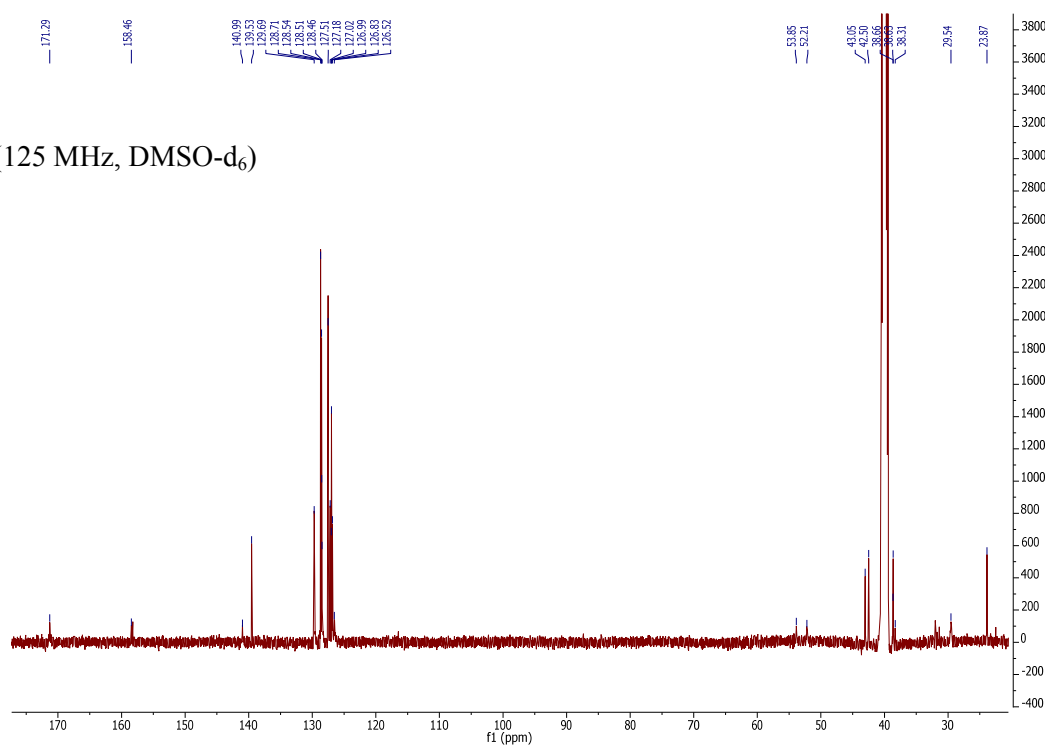
**(R)-12a** (500 MHz, DMSO-d₆)**(R)-12a** (125 MHz, DMSO-d₆)

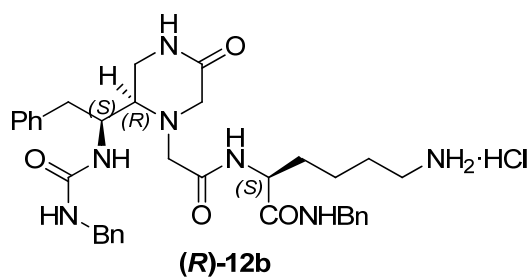
[illegible]

(S)-12a (500 MHz, DMSO-d₆)

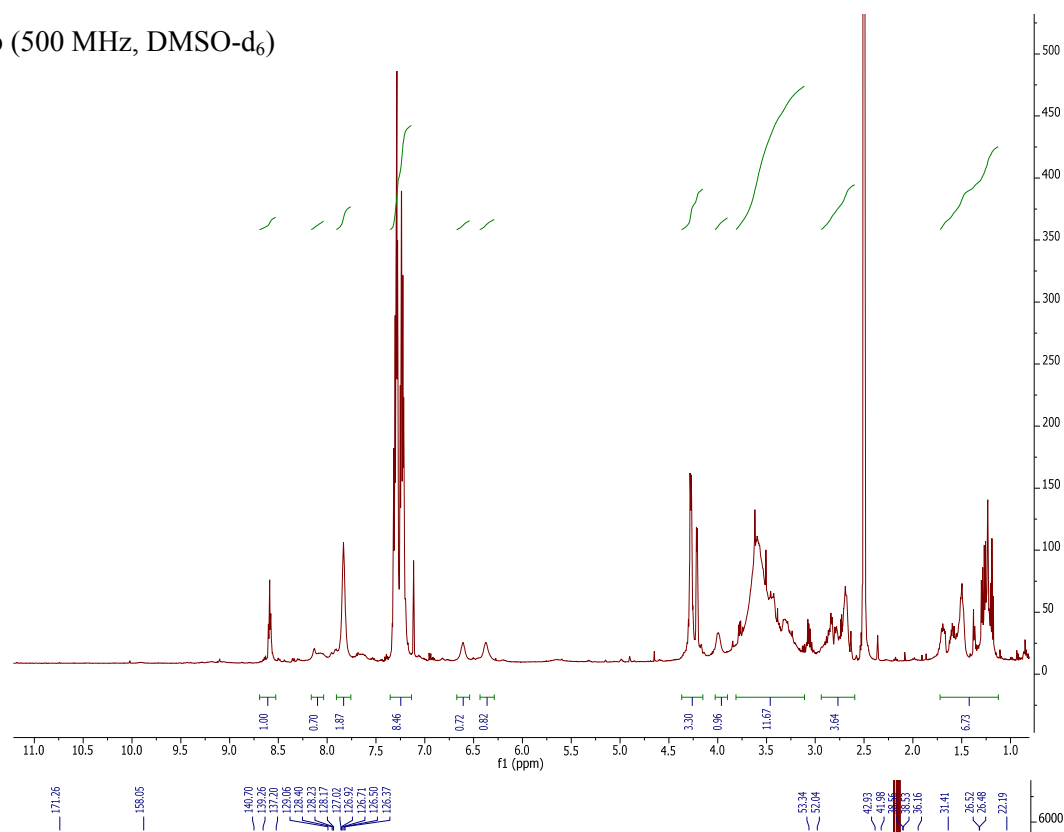


(S)-12a (125 MHz, DMSO-d₆)

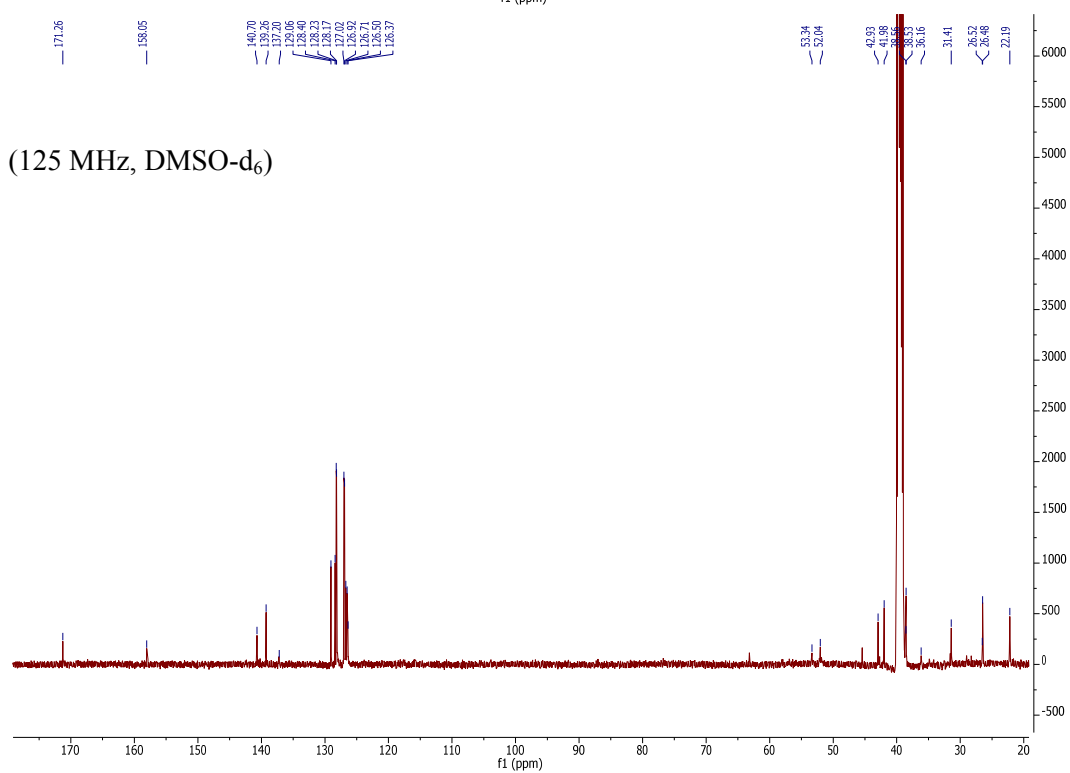


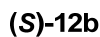


(R)-12b (500 MHz, DMSO-d₆)



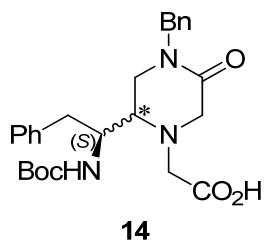
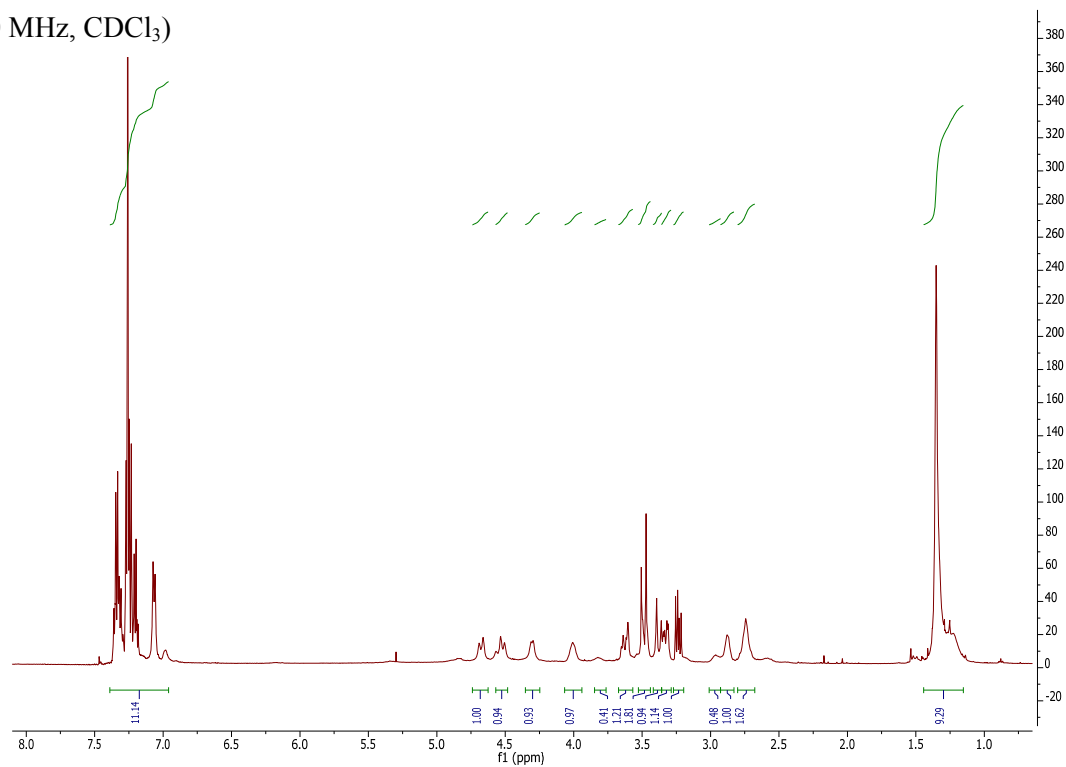
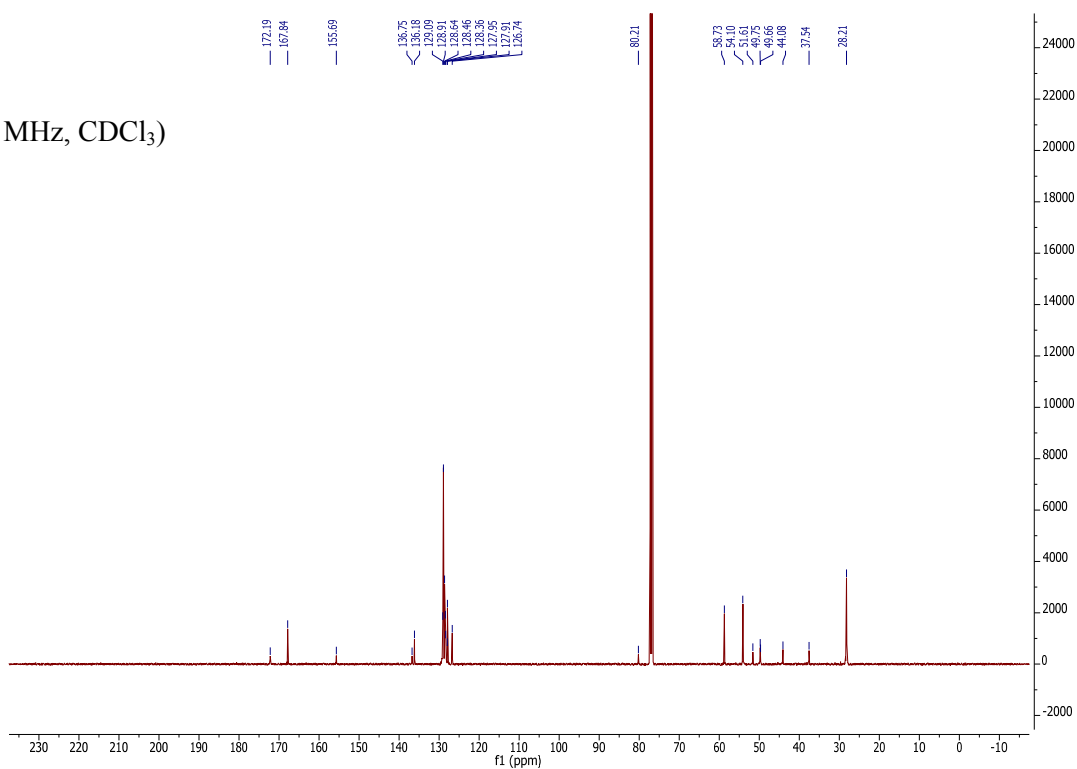
(R)-12b (125 MHz, DMSO-d₆)

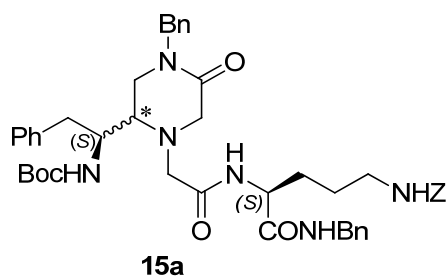
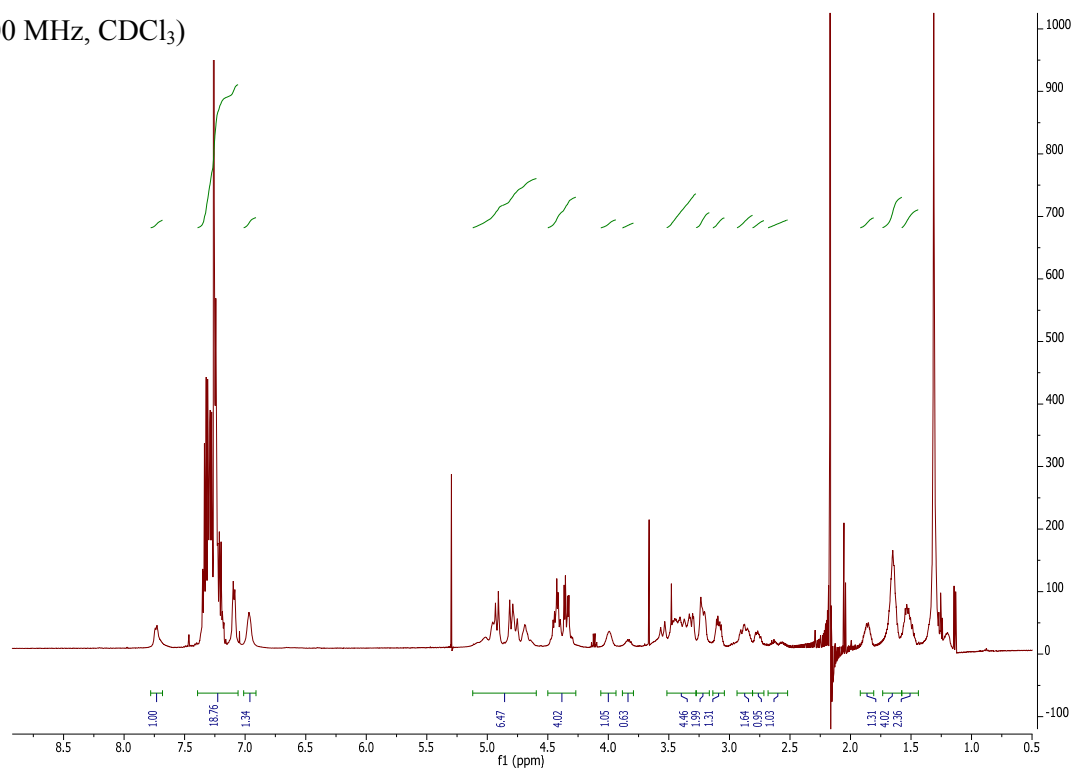
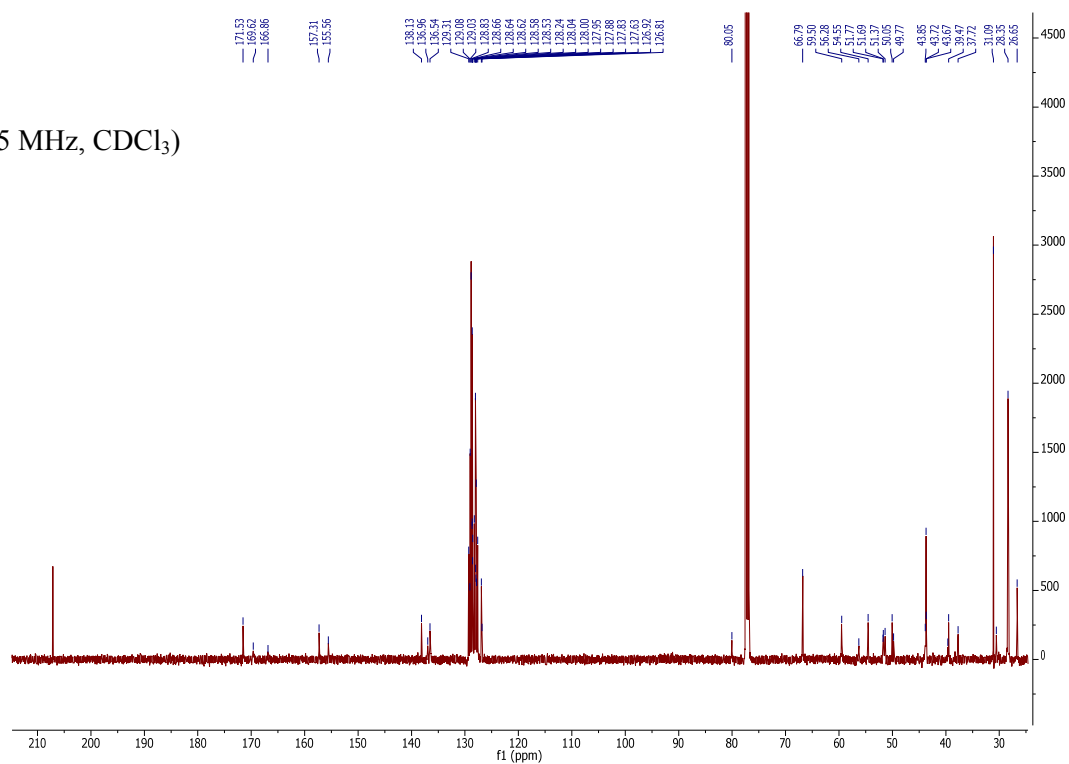


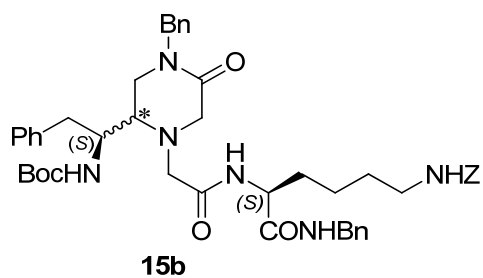


(S)-12b (125 MHz, DMSO-d₆)

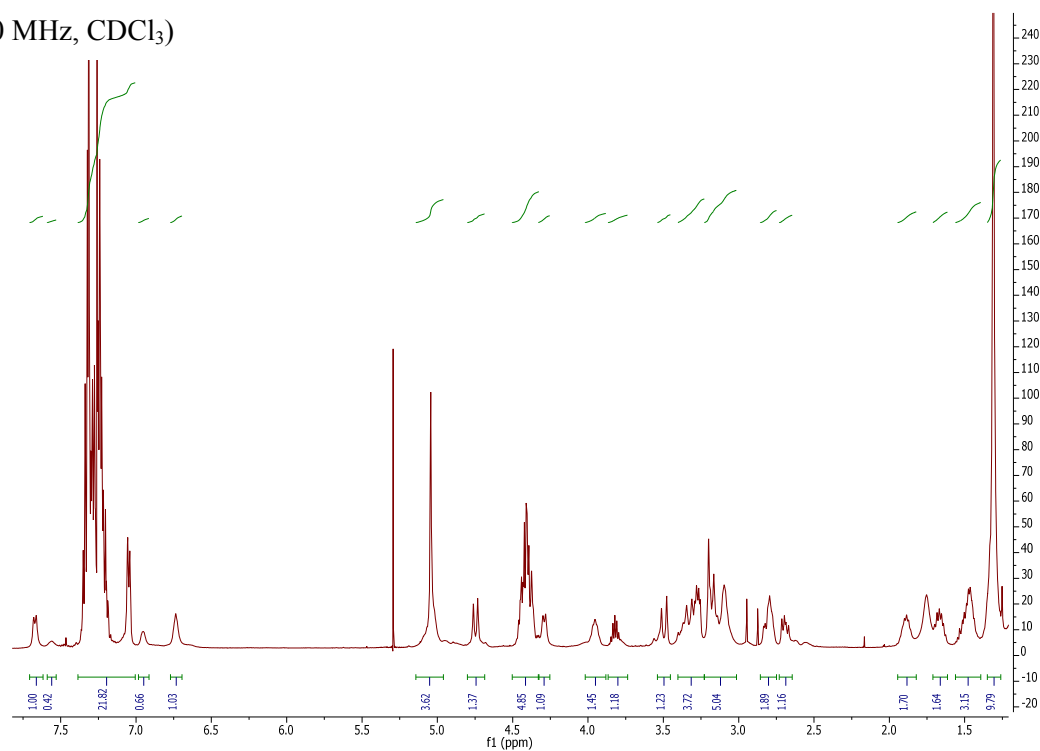
1H NMR spectrum of (S)-12b in DMSO-d₆. The x-axis represents the chemical shift in ppm, ranging from 15.5 to 2.0. The y-axis represents the intensity, ranging from -500 to 4000. The spectrum shows several sharp peaks, including a broad peak at approximately 13.8 ppm, a sharp peak at 13.2 ppm, a multiplet at 12.5 ppm, a sharp peak at 12.2 ppm, a sharp peak at 11.8 ppm, a sharp peak at 11.5 ppm, a sharp peak at 11.2 ppm, a sharp peak at 10.8 ppm, a sharp peak at 10.5 ppm, a sharp peak at 10.2 ppm, a sharp peak at 9.8 ppm, a sharp peak at 9.5 ppm, a sharp peak at 9.2 ppm, a sharp peak at 8.8 ppm, a sharp peak at 8.5 ppm, a sharp peak at 8.2 ppm, a sharp peak at 7.8 ppm, a sharp peak at 7.5 ppm, a sharp peak at 7.2 ppm, a sharp peak at 6.8 ppm, a sharp peak at 6.5 ppm, a sharp peak at 6.2 ppm, a sharp peak at 5.8 ppm, a sharp peak at 5.5 ppm, a sharp peak at 5.2 ppm, a sharp peak at 4.8 ppm, a sharp peak at 4.5 ppm, a sharp peak at 4.2 ppm, a sharp peak at 3.8 ppm, a sharp peak at 3.5 ppm, a sharp peak at 3.2 ppm, a sharp peak at 2.8 ppm, a sharp peak at 2.5 ppm, a sharp peak at 2.2 ppm, a sharp peak at 1.8 ppm, a sharp peak at 1.5 ppm, a sharp peak at 1.2 ppm, a sharp peak at 0.8 ppm, a sharp peak at 0.5 ppm, and a sharp peak at 0.2 ppm.

**14** (500 MHz, CDCl₃)**14** (125 MHz, CDCl₃)

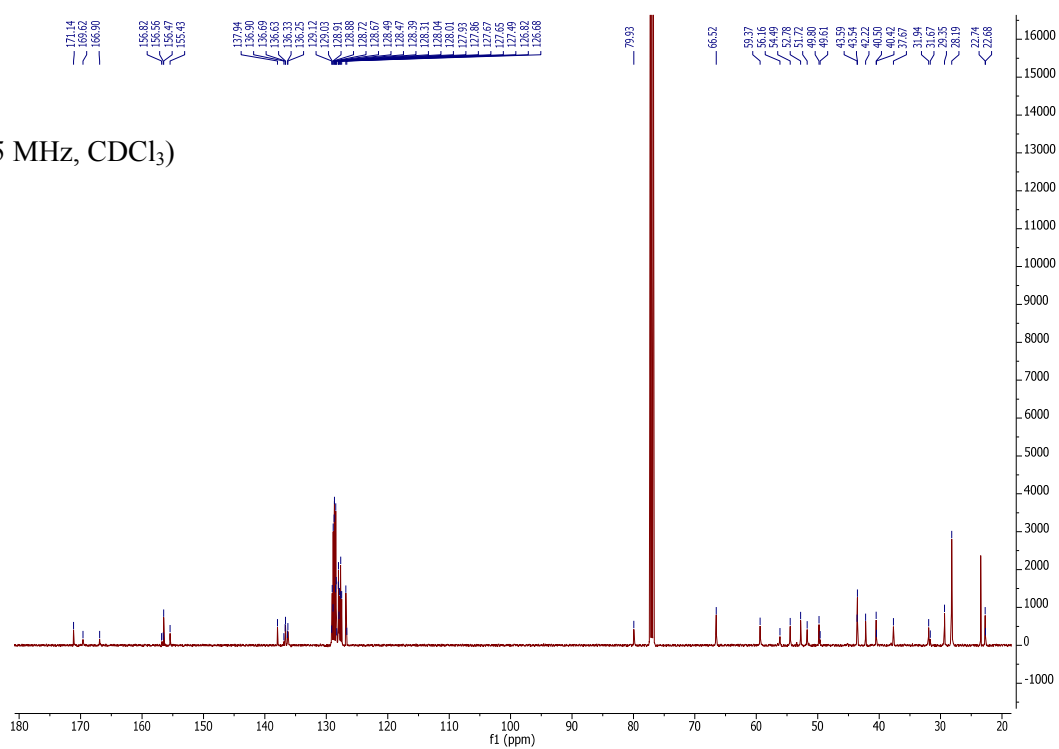
**15a** (500 MHz, CDCl₃)**15a** (125 MHz, CDCl₃)

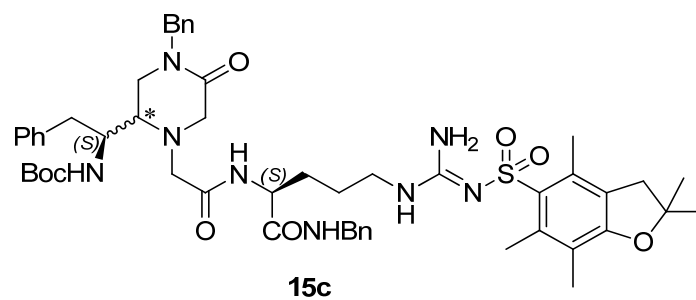


15b (500 MHz, CDCl₃)

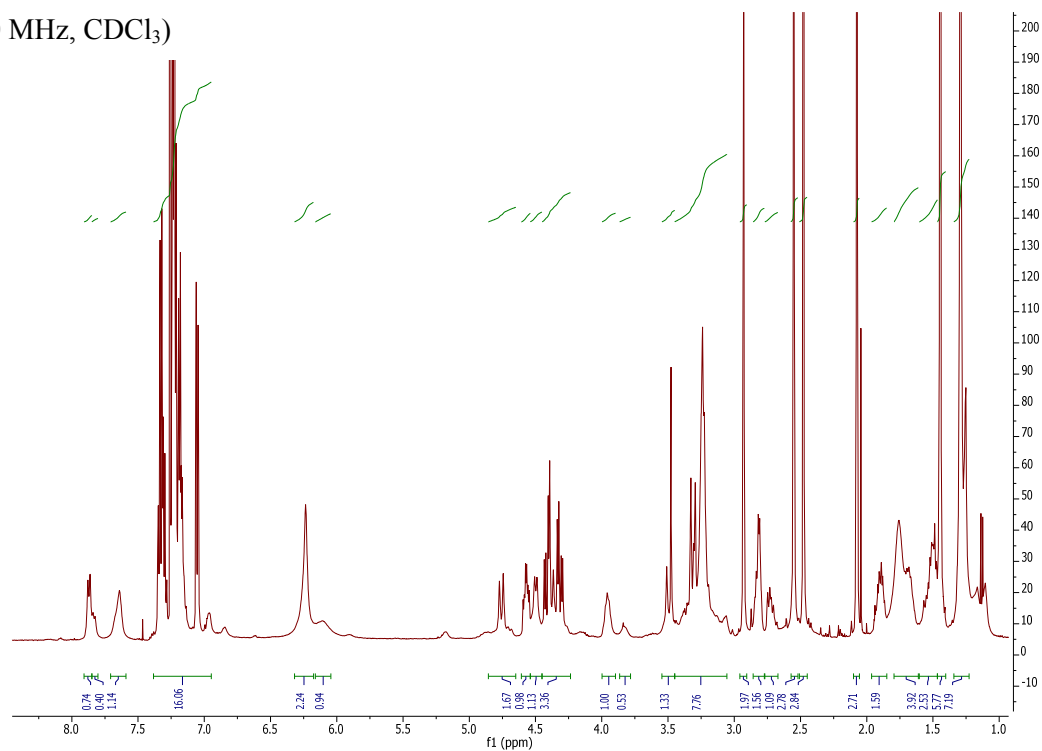


15b (125 MHz, CDCl₃)

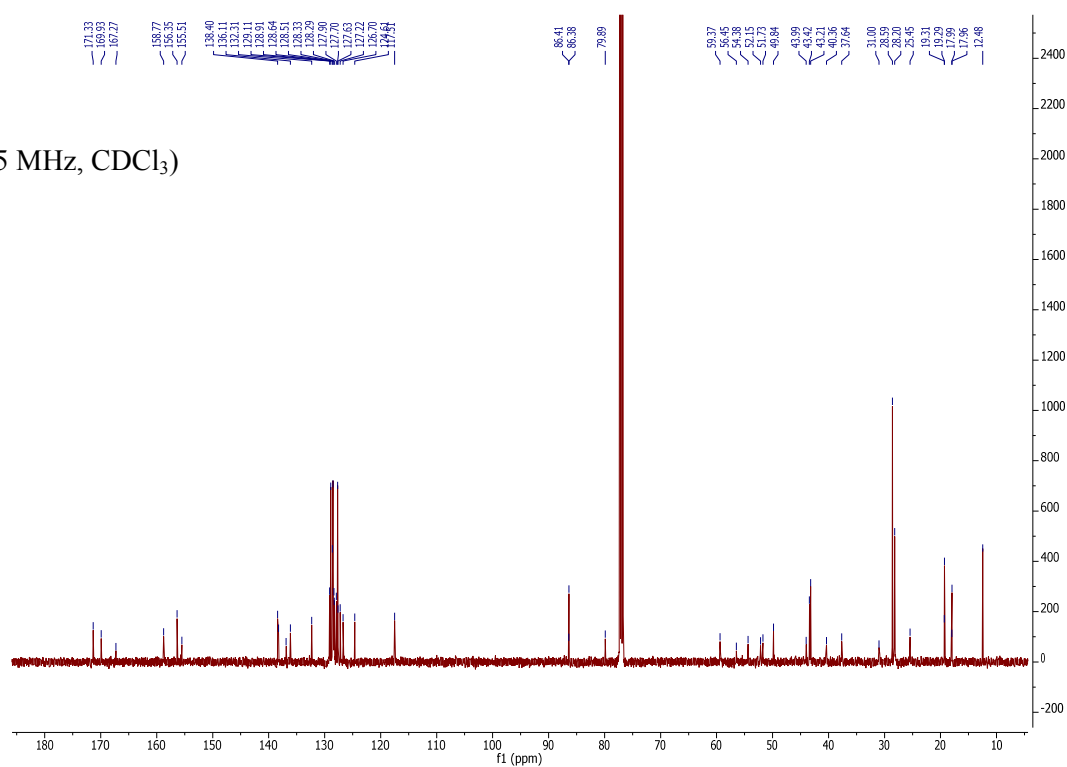


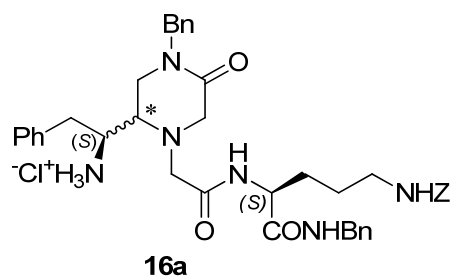
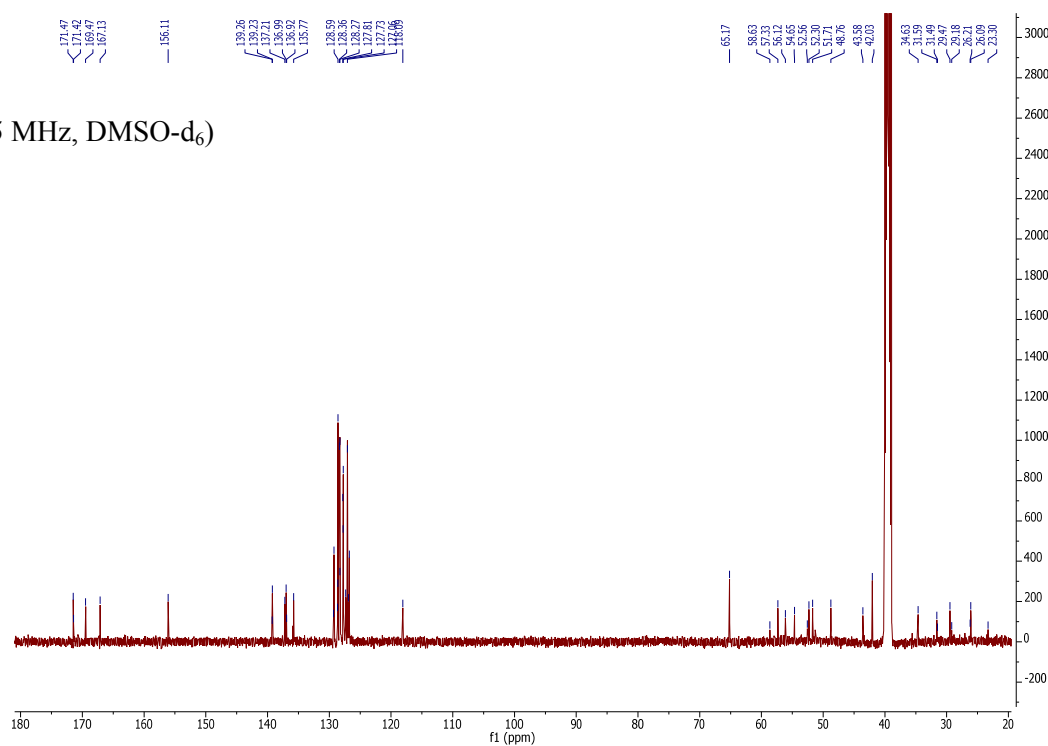
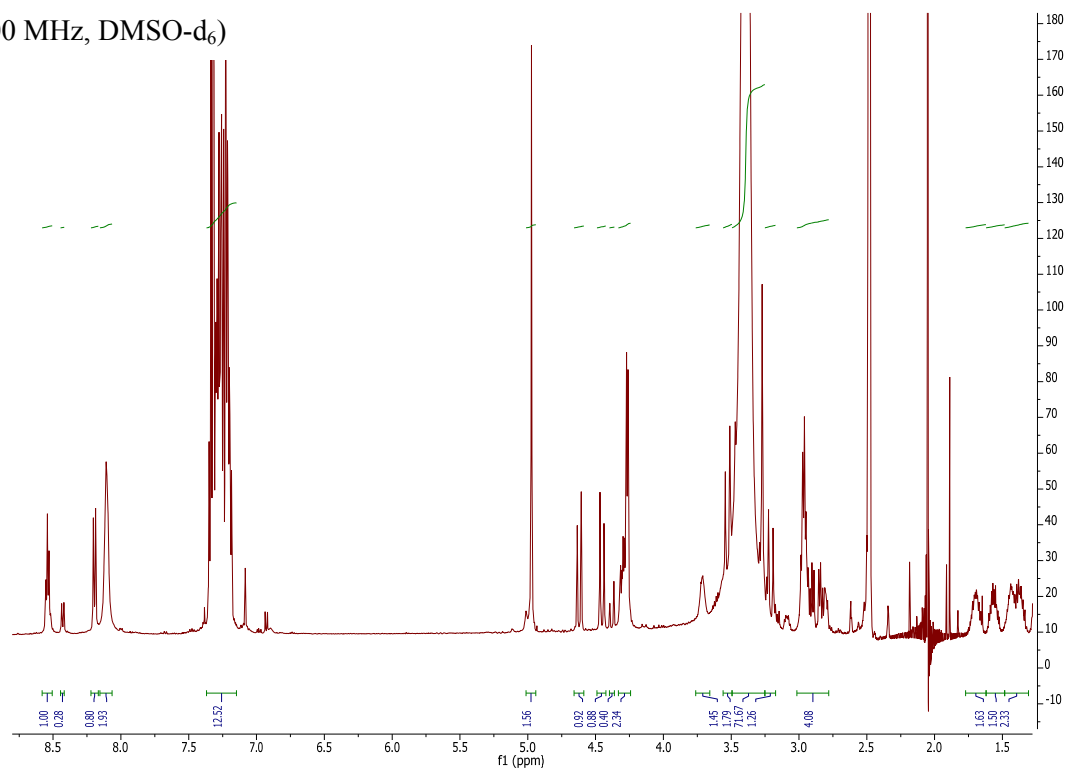


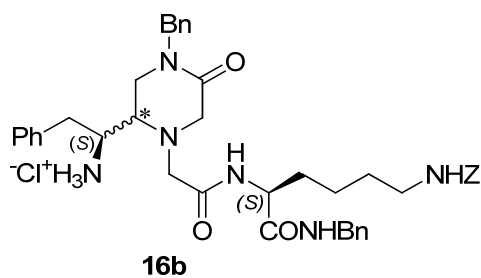
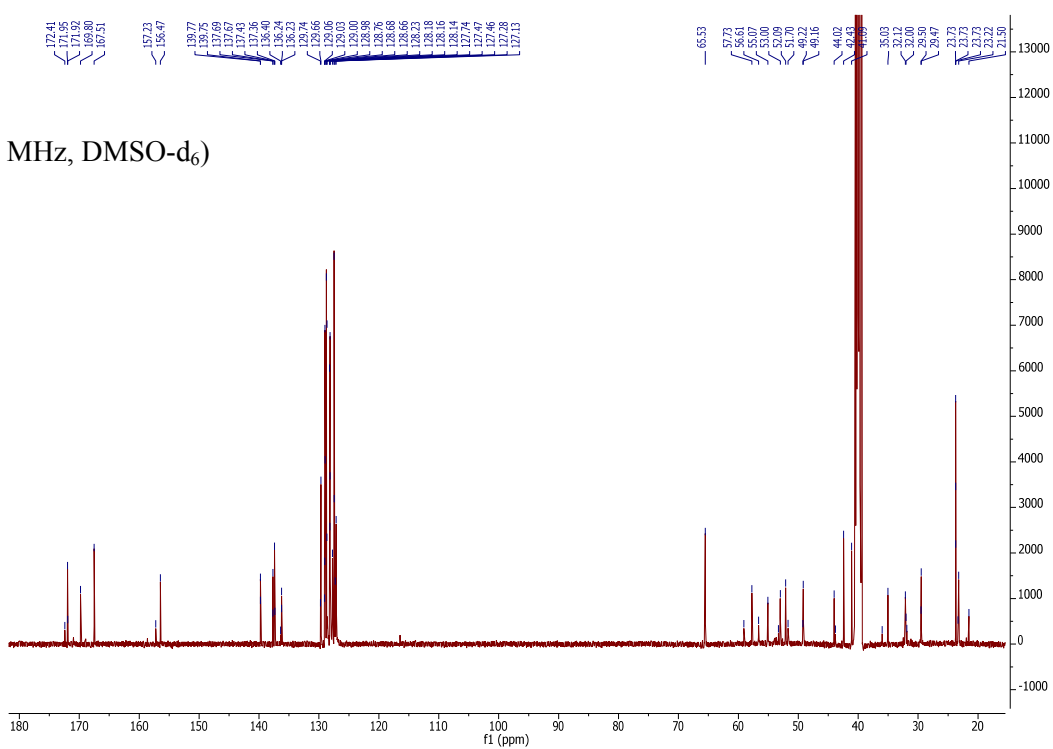
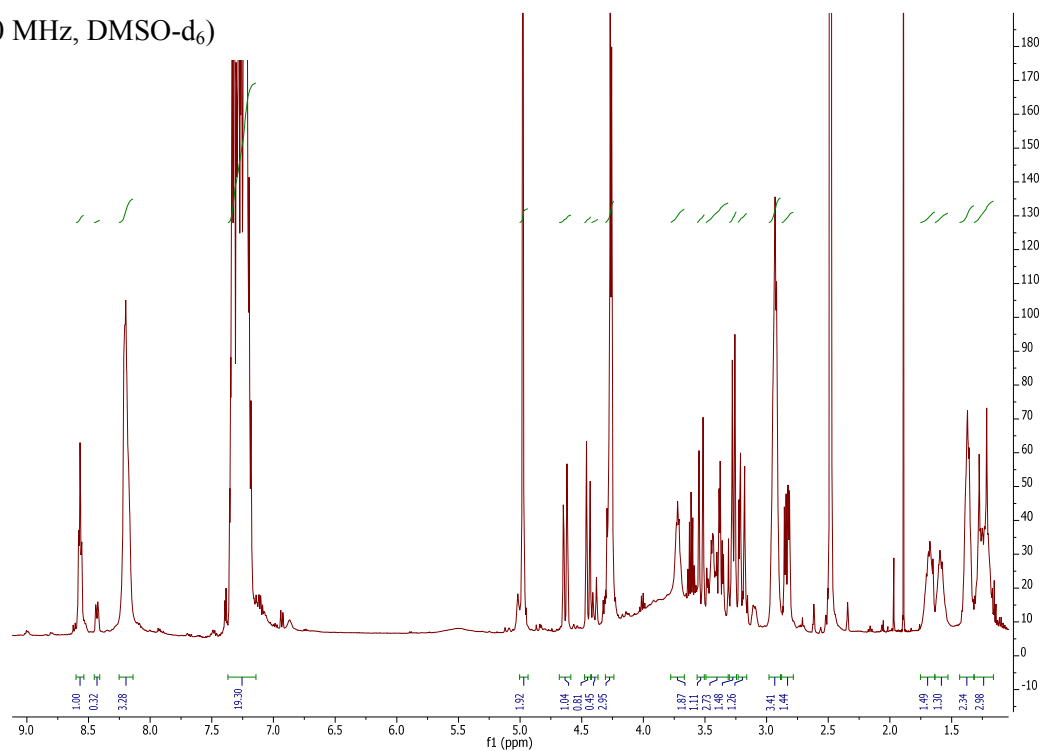
15c (500 MHz, CDCl₃)

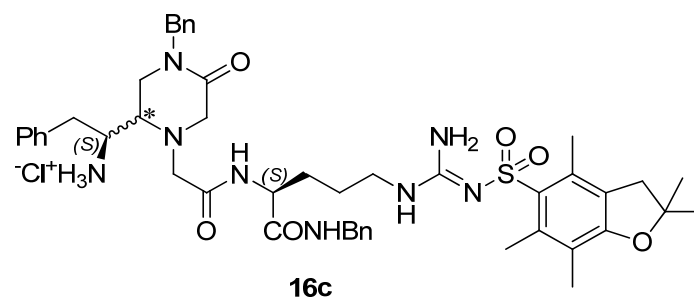


15c (125 MHz, CDCl₃)

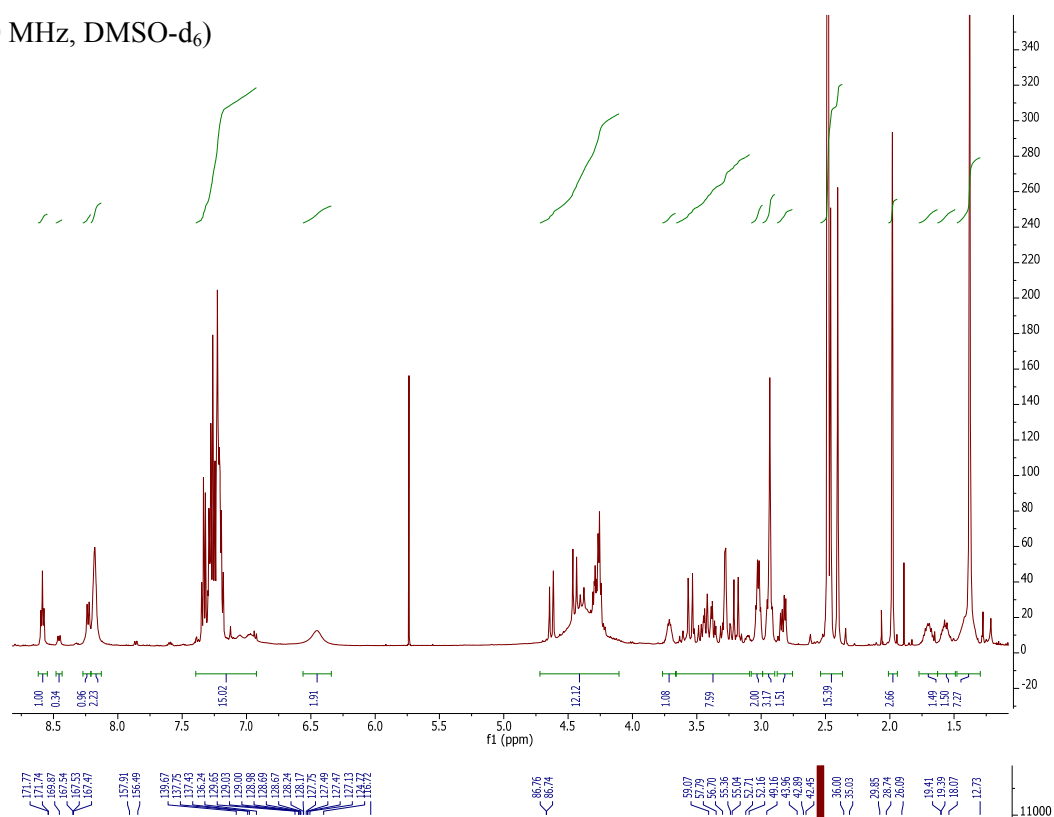


**16a** (500 MHz, DMSO- d_6)**16a** (125 MHz, DMSO- d_6)

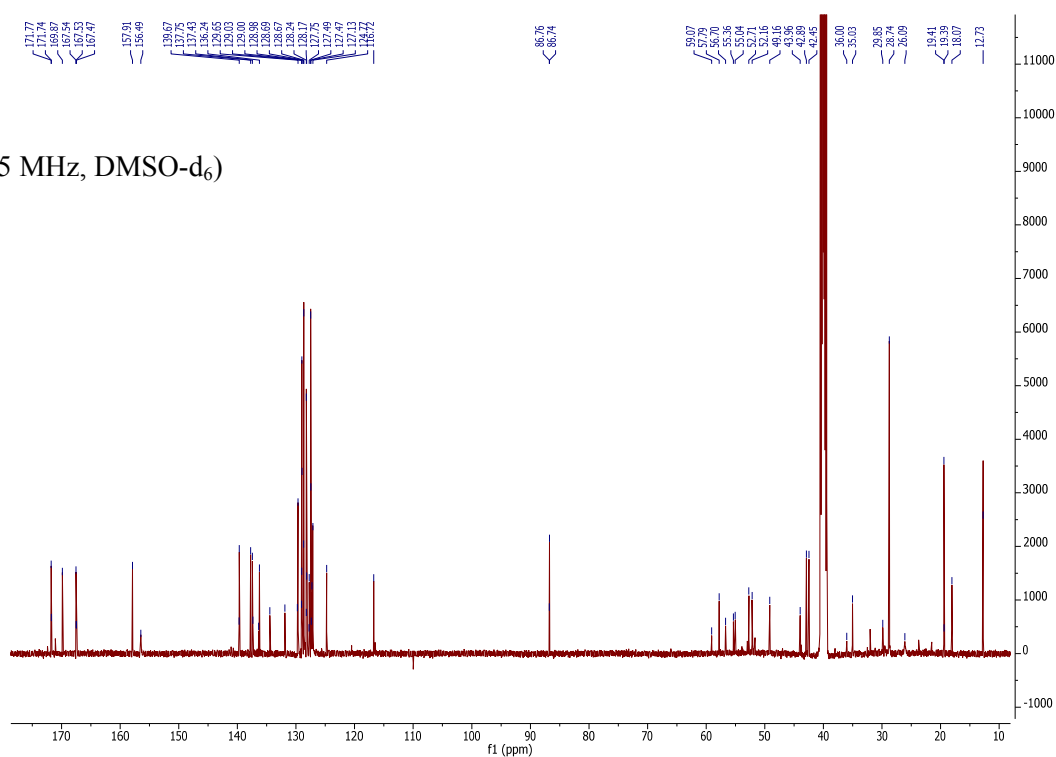
**16b** (500 MHz, DMSO- d_6)

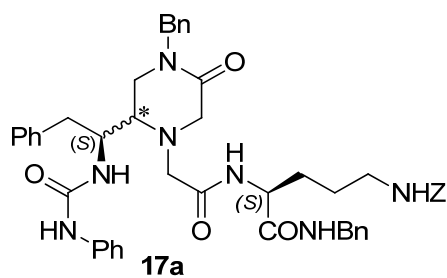
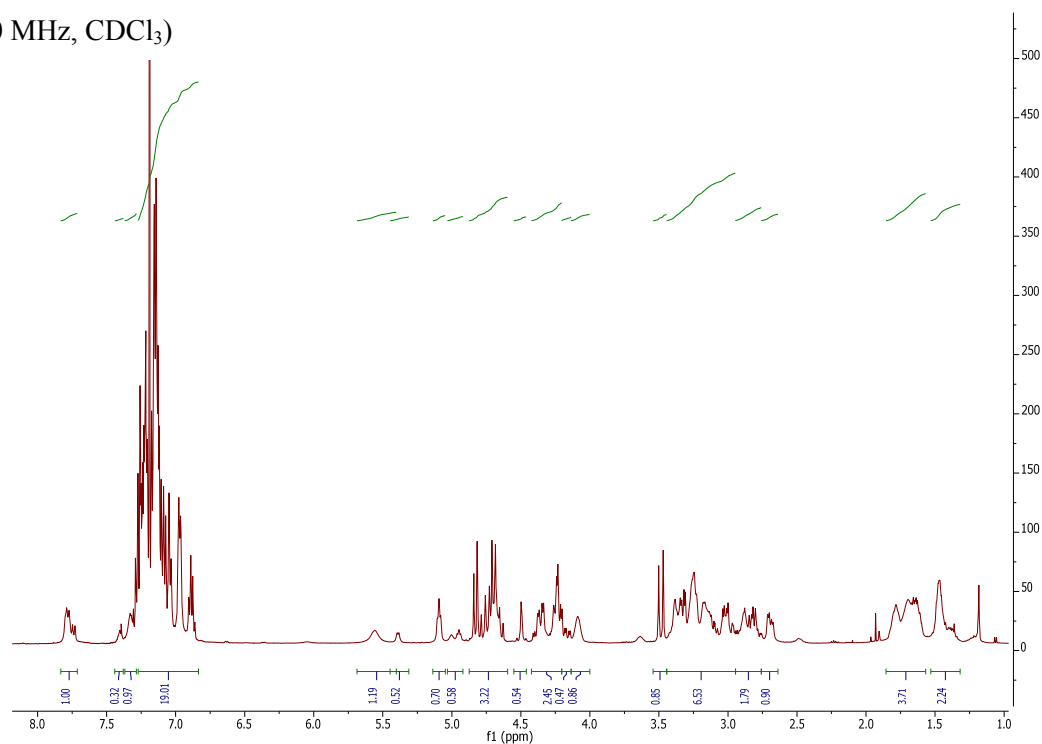
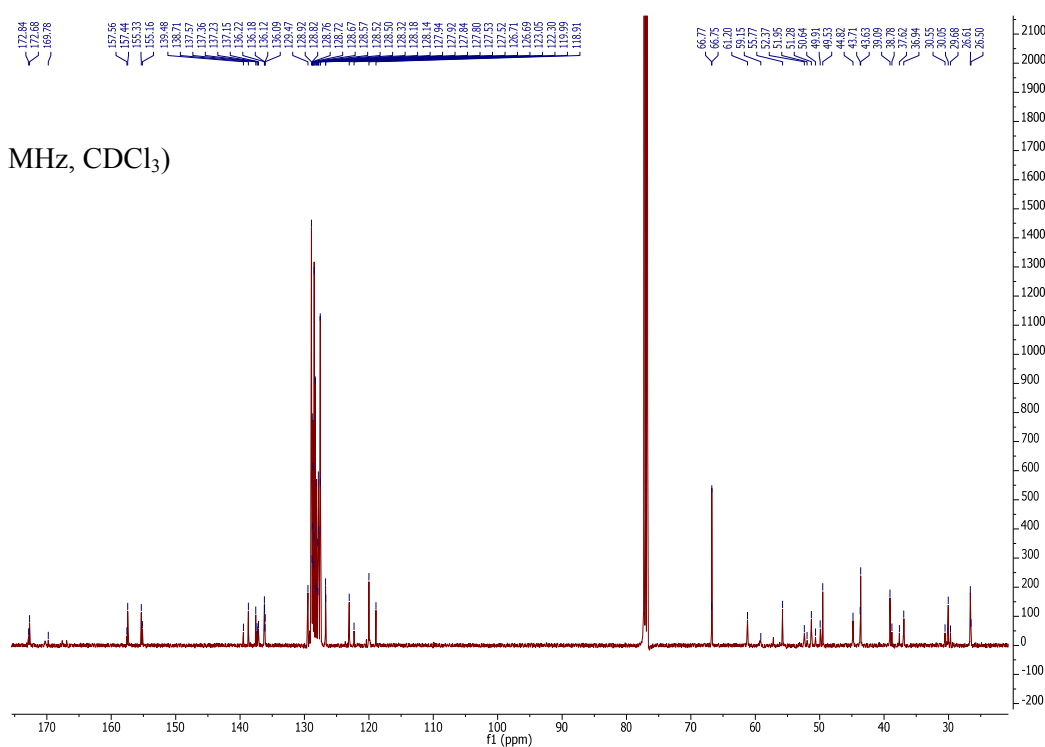


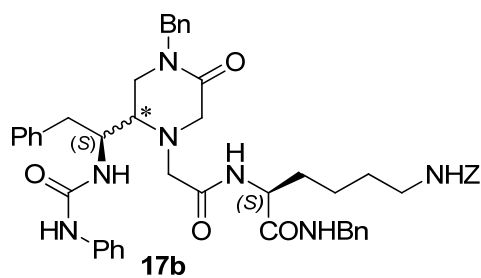
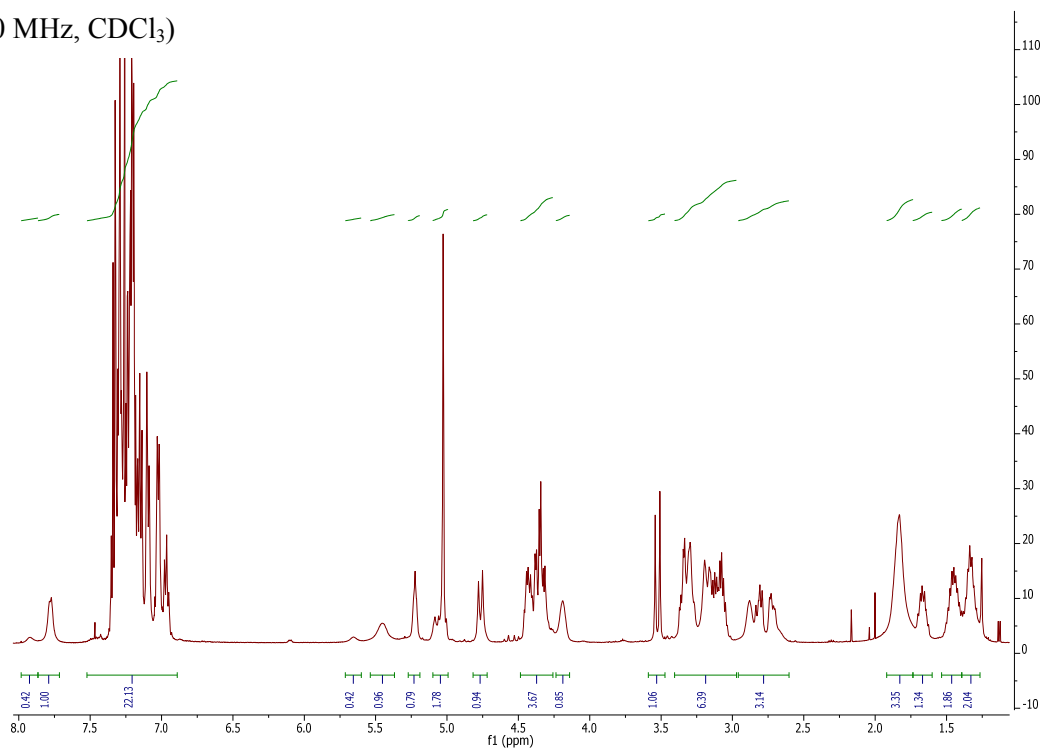
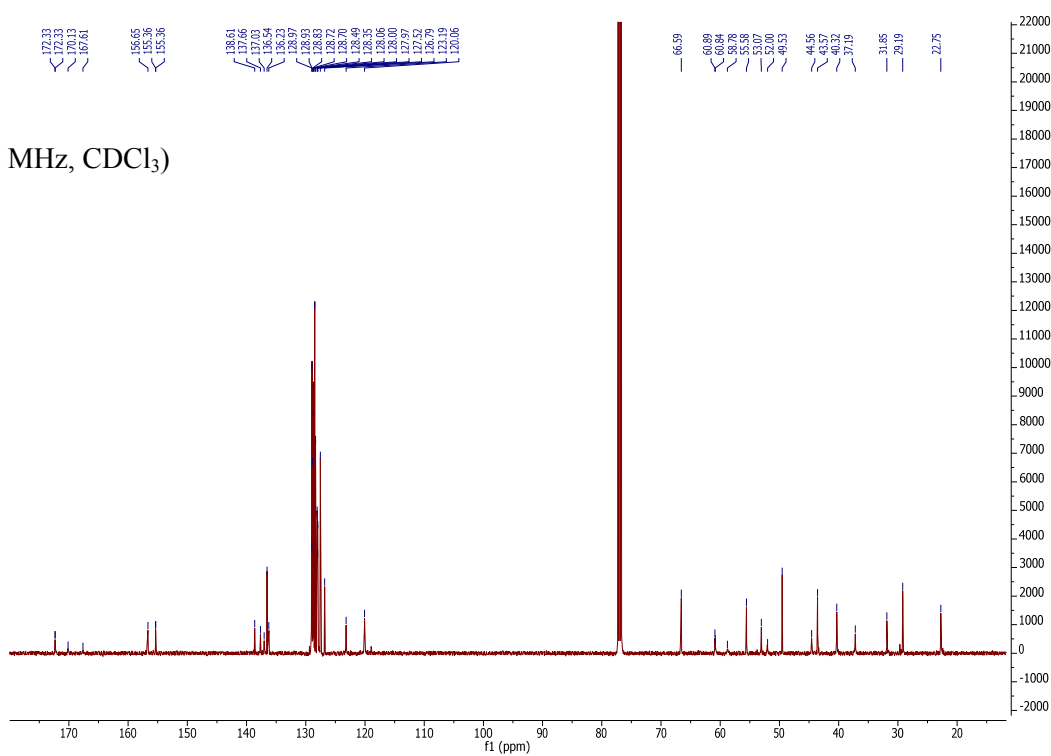
16c (500 MHz, DMSO-d₆)

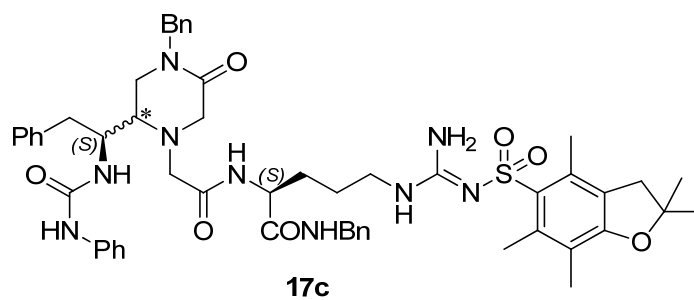
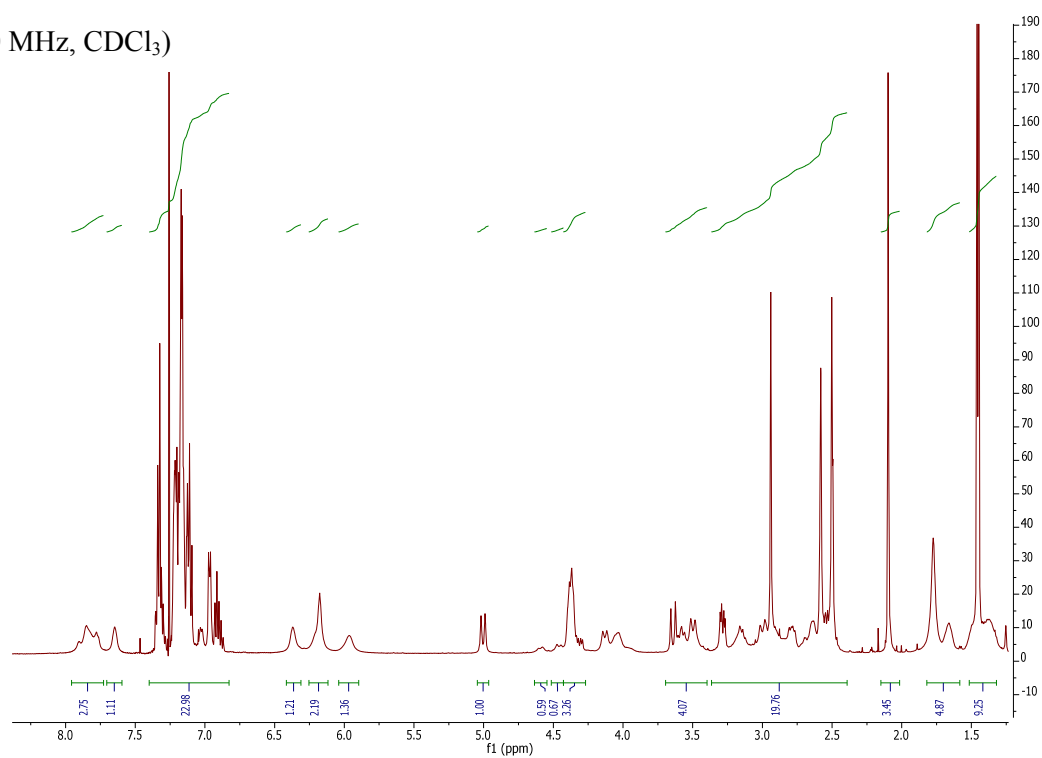
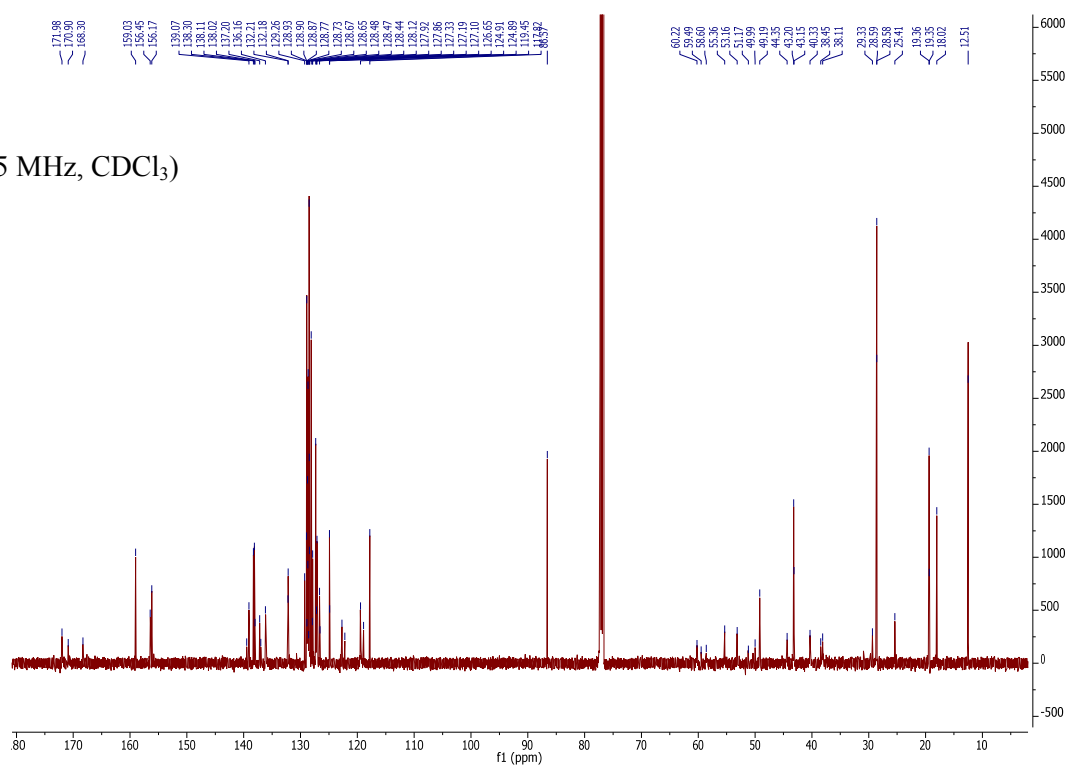


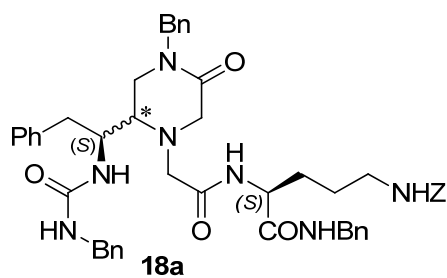
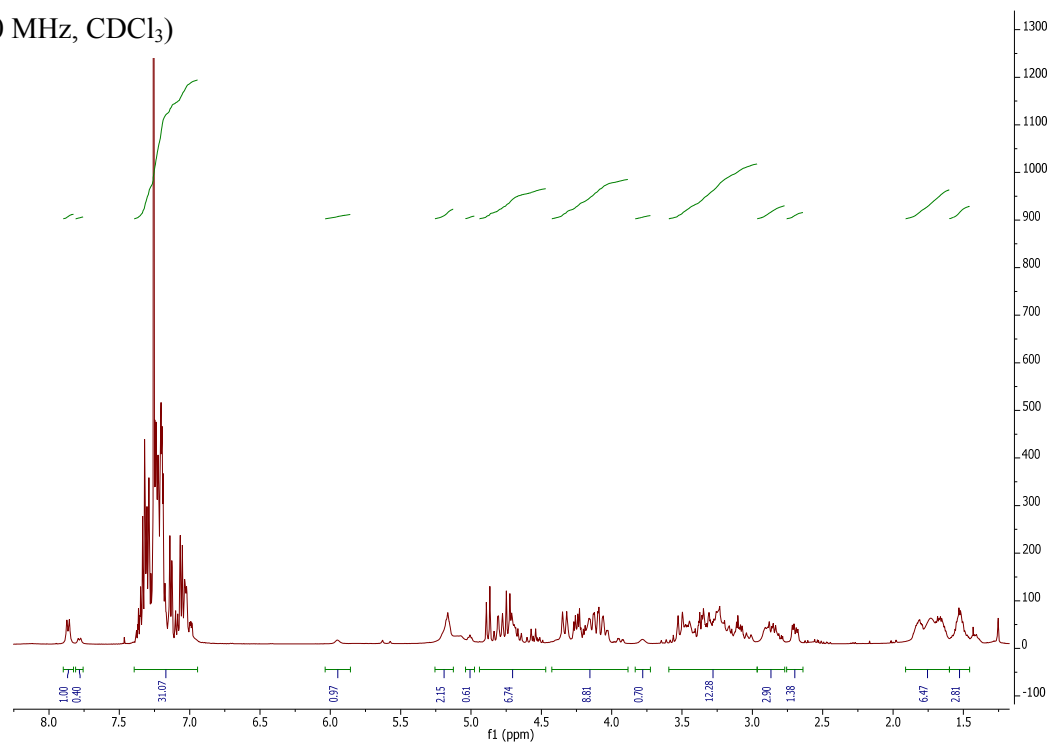
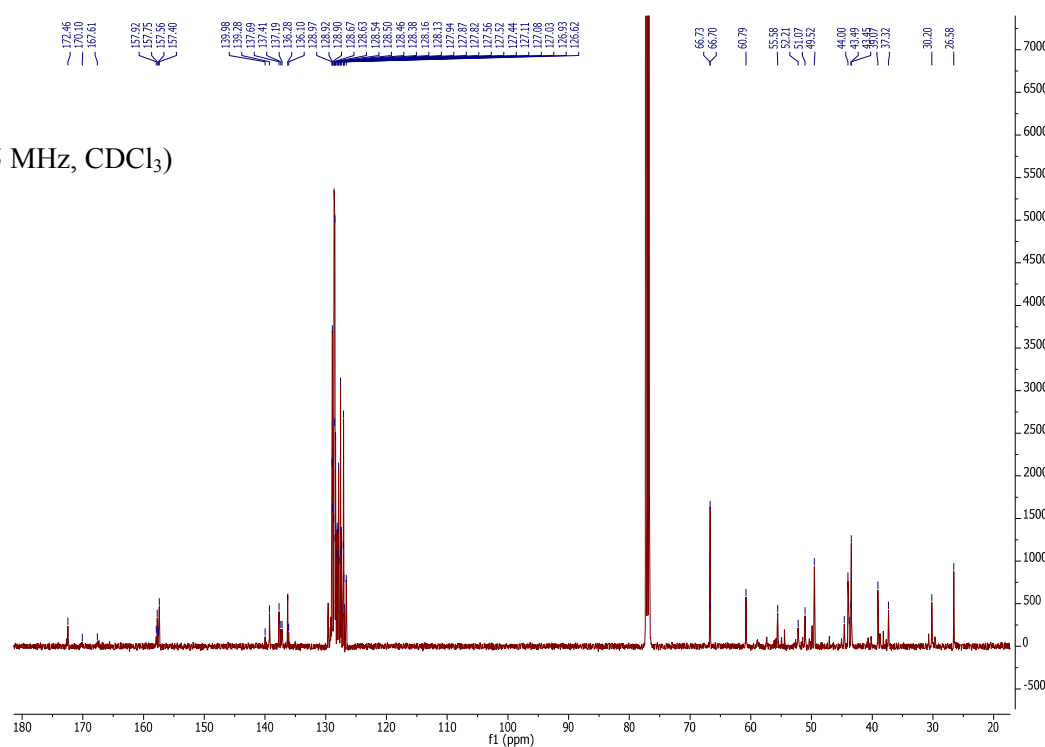
16cc (125 MHz, DMSO-d₆)

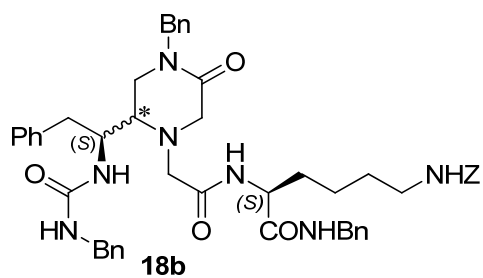


**17a** (500 MHz, CDCl₃)**17a** (125 MHz, CDCl₃)

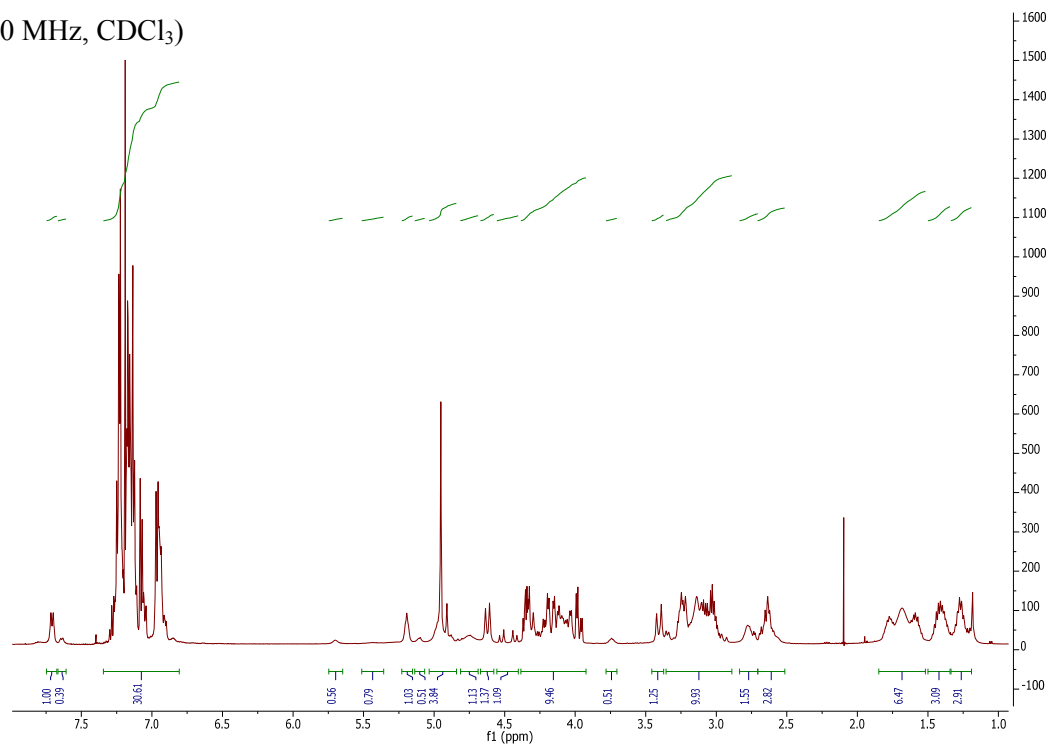
**17b** (500 MHz, CDCl_3)**17b** (125 MHz, CDCl_3)

**17c** (500 MHz, CDCl₃)**17c** (125 MHz, CDCl₃)

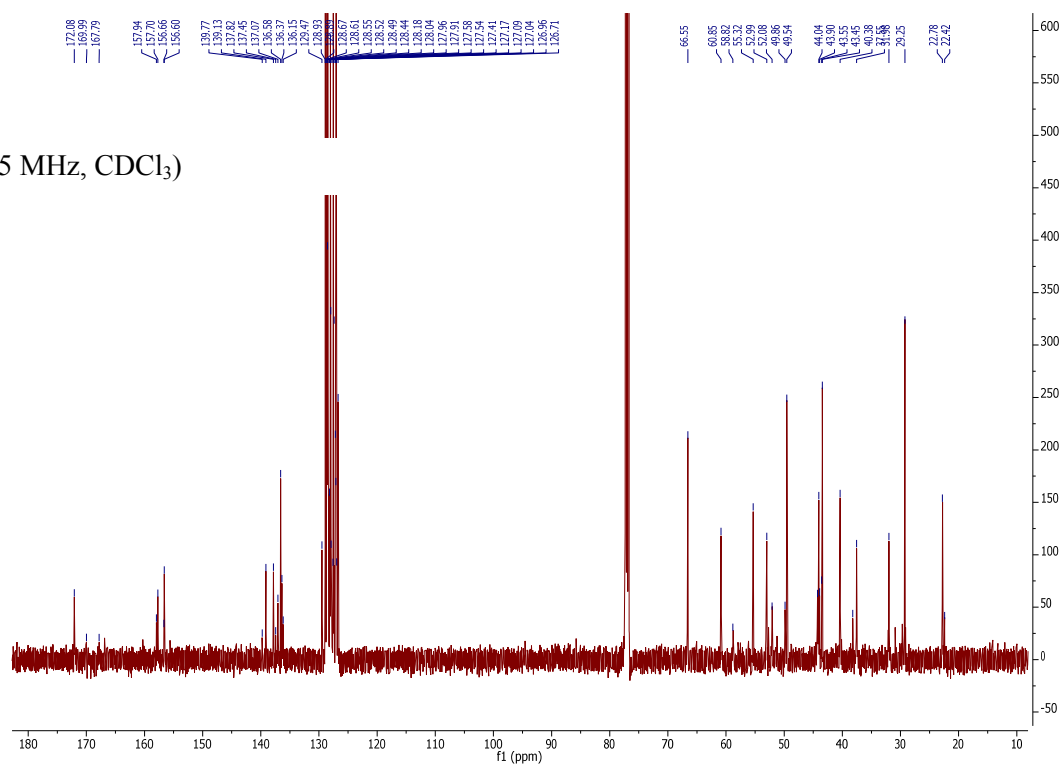
**18a** (500 MHz, CDCl₃)**18a** (125 MHz, CDCl₃)

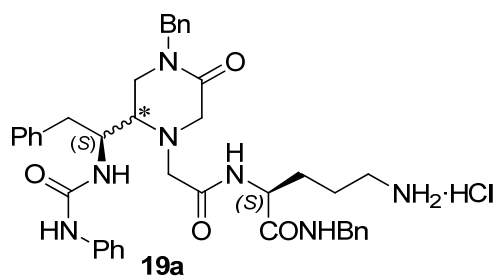
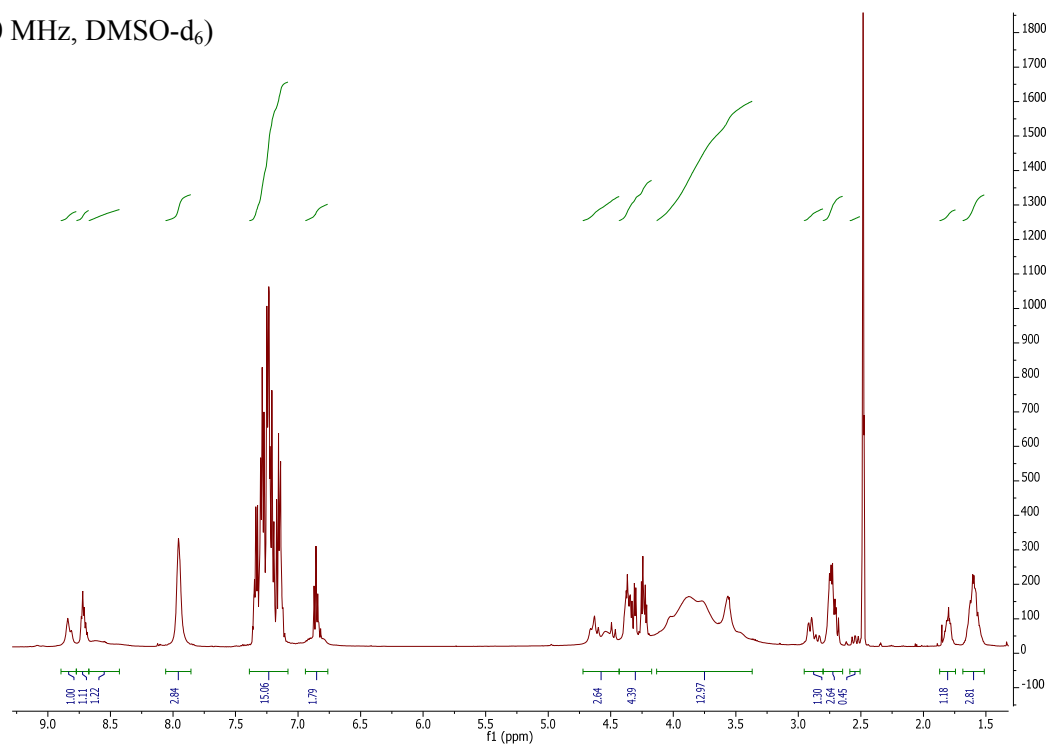
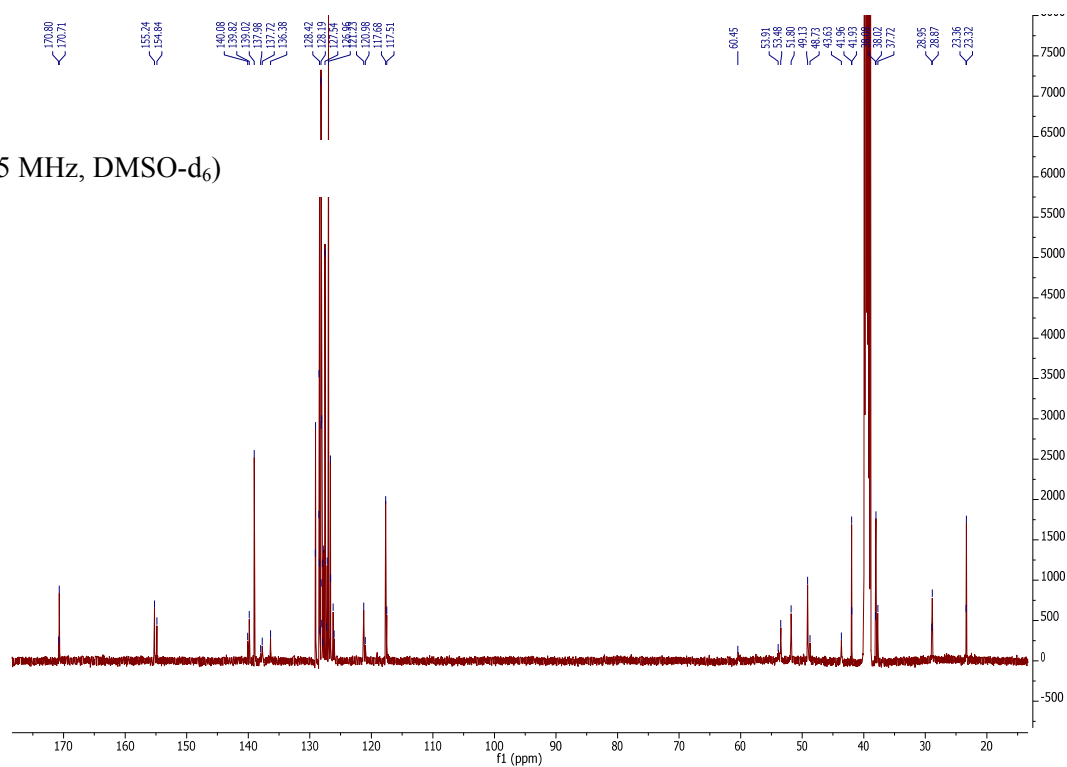


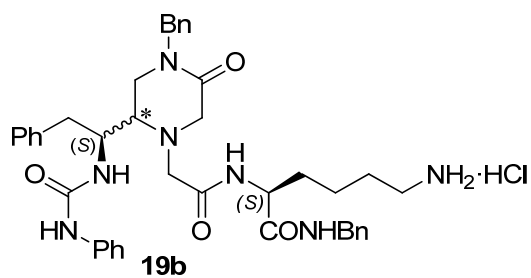
(18b (500 MHz, CDCl₃))



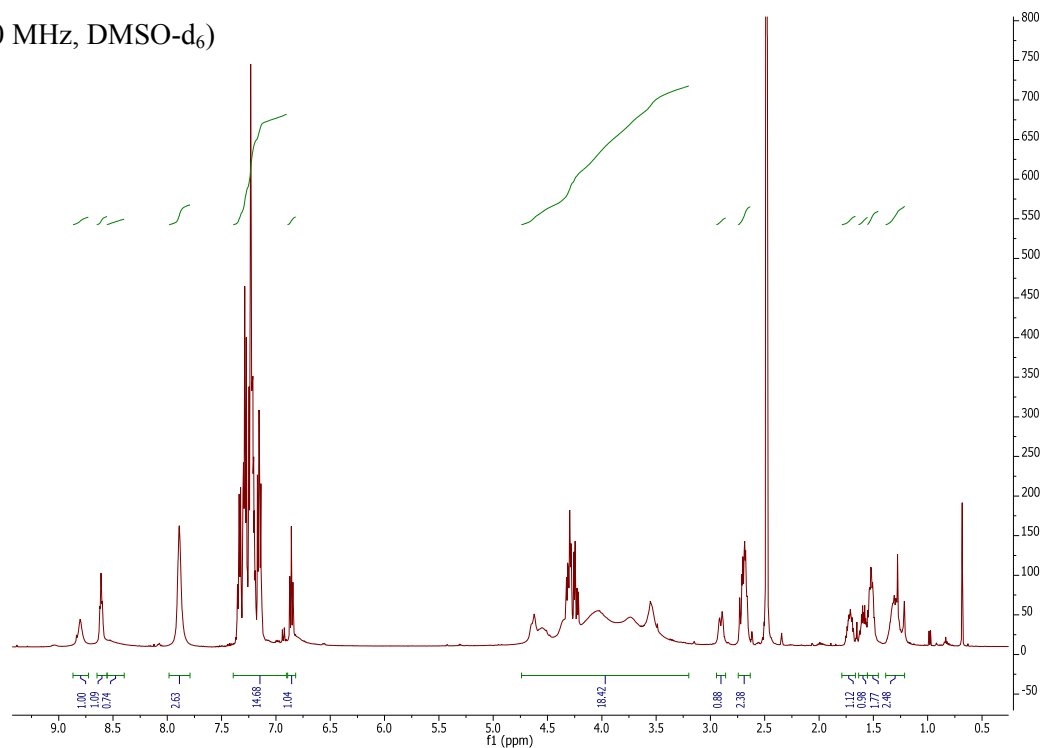
18b (125 MHz, CDCl₃)



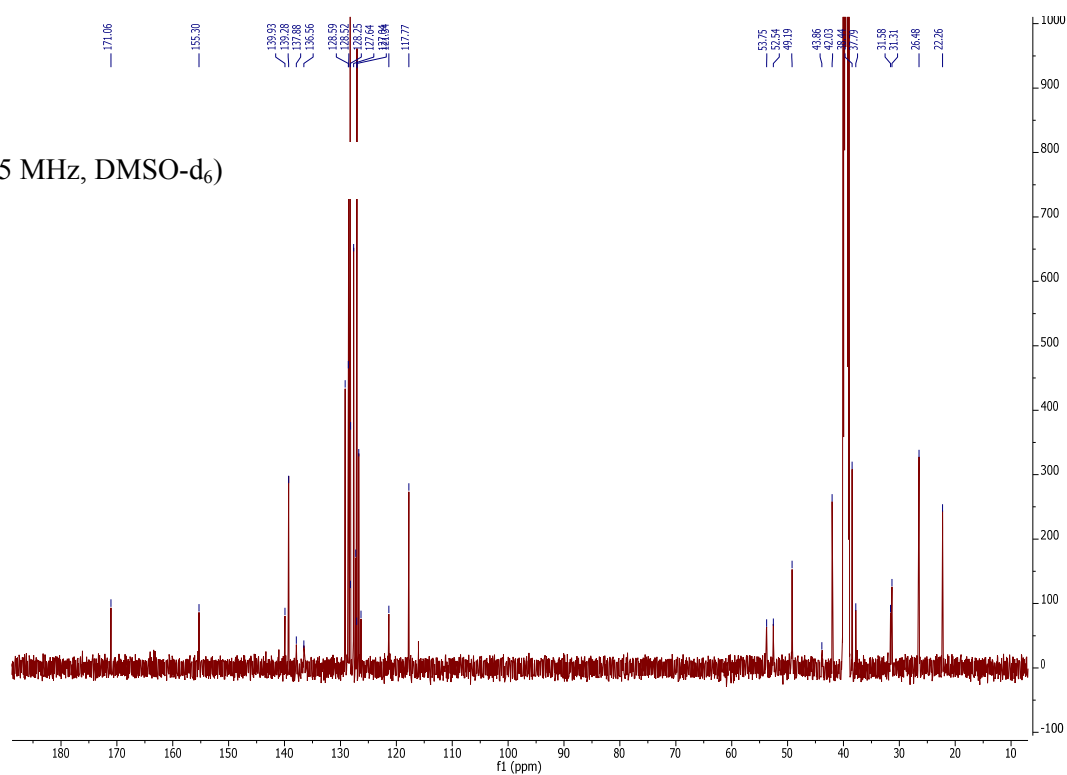
**19a** (500 MHz, DMSO-d₆)**19a** (125 MHz, DMSO-d₆)

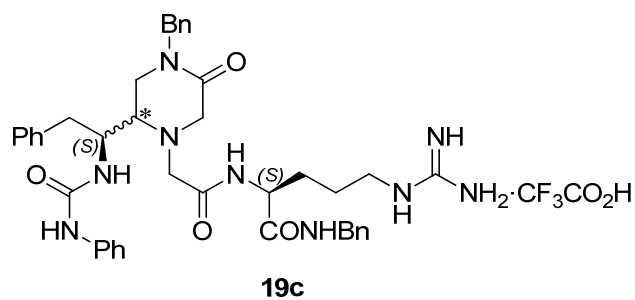
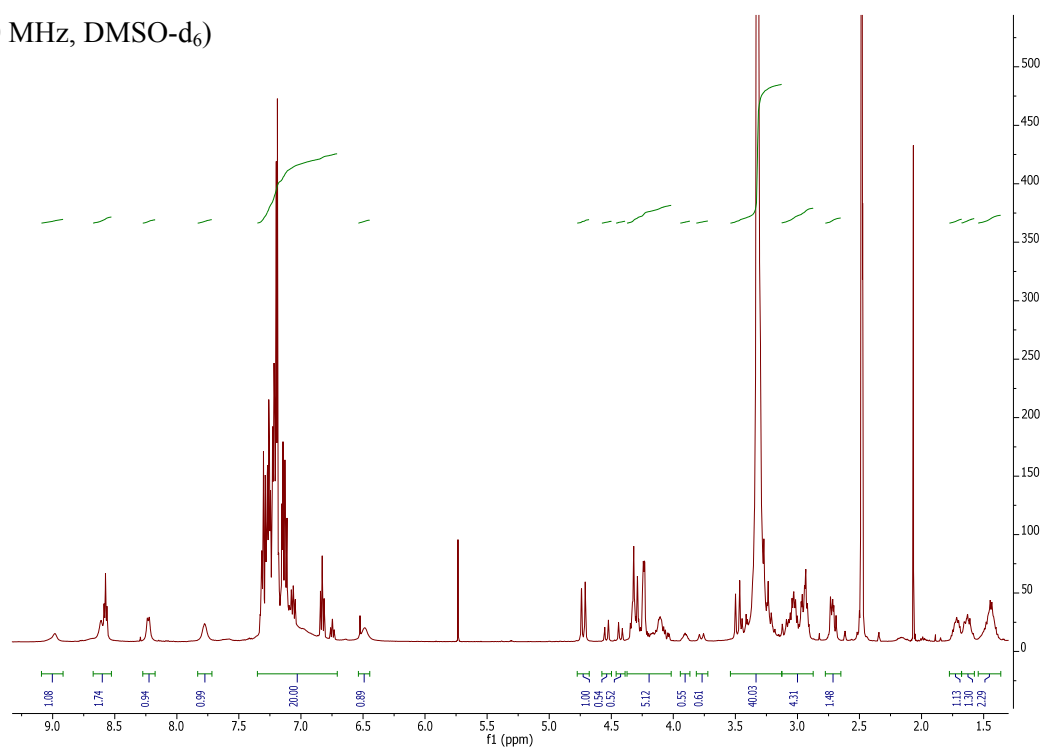
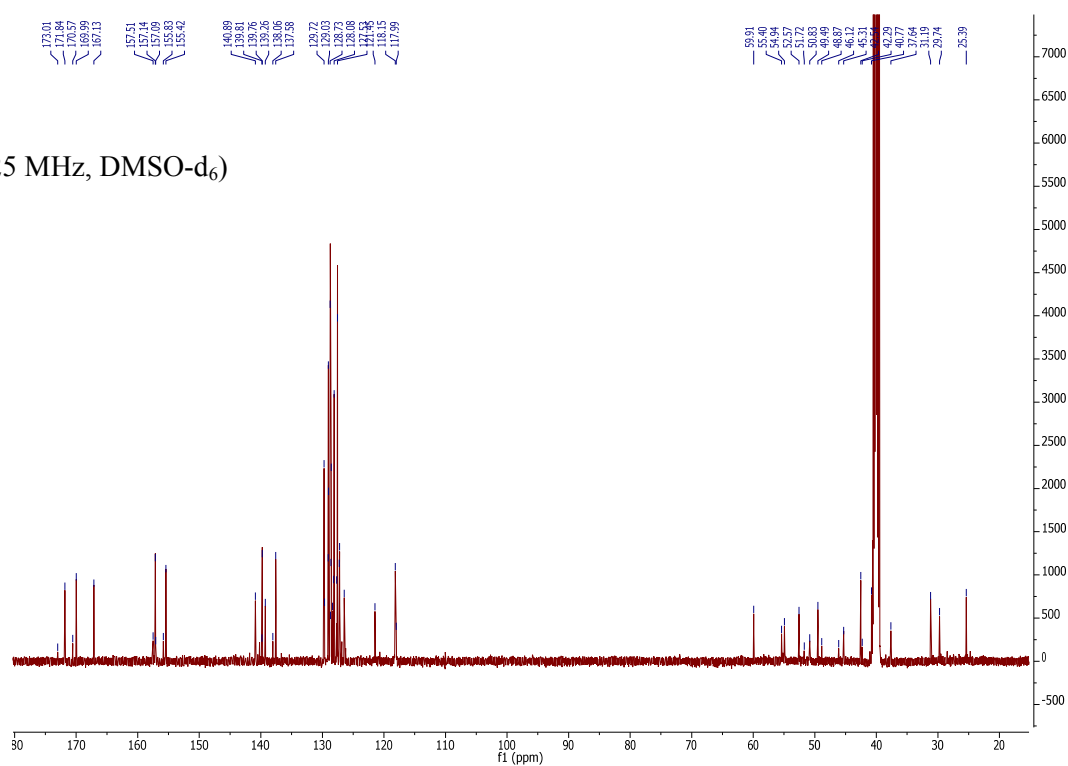


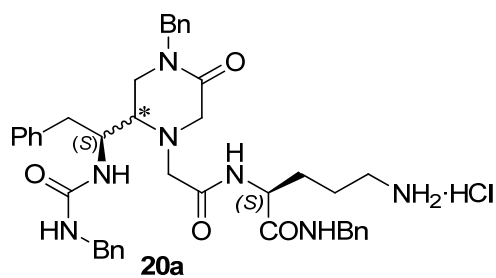
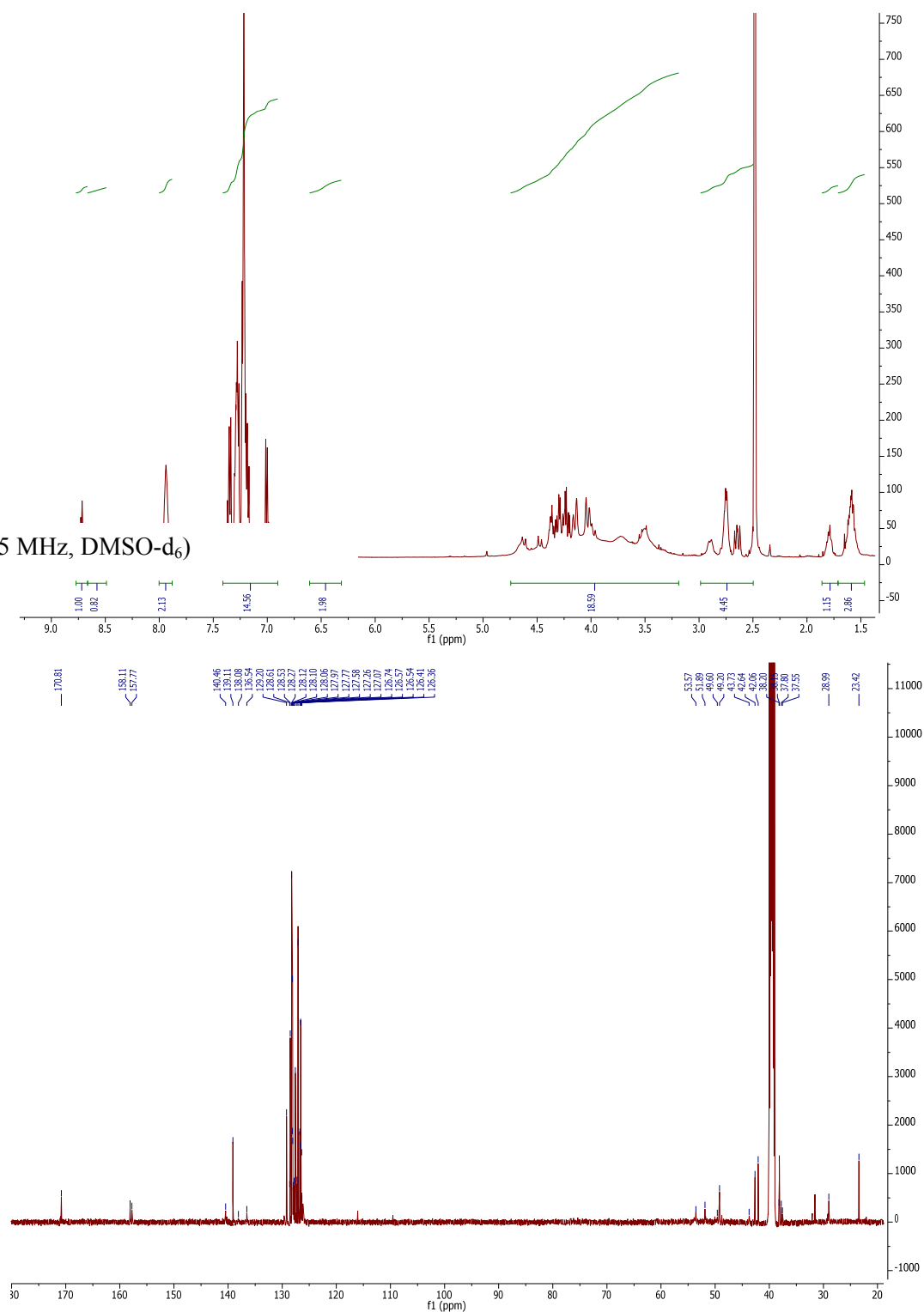
19b (500 MHz, DMSO-d₆)

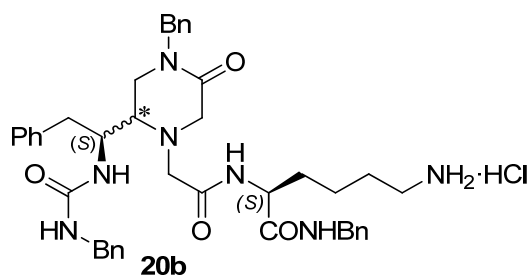
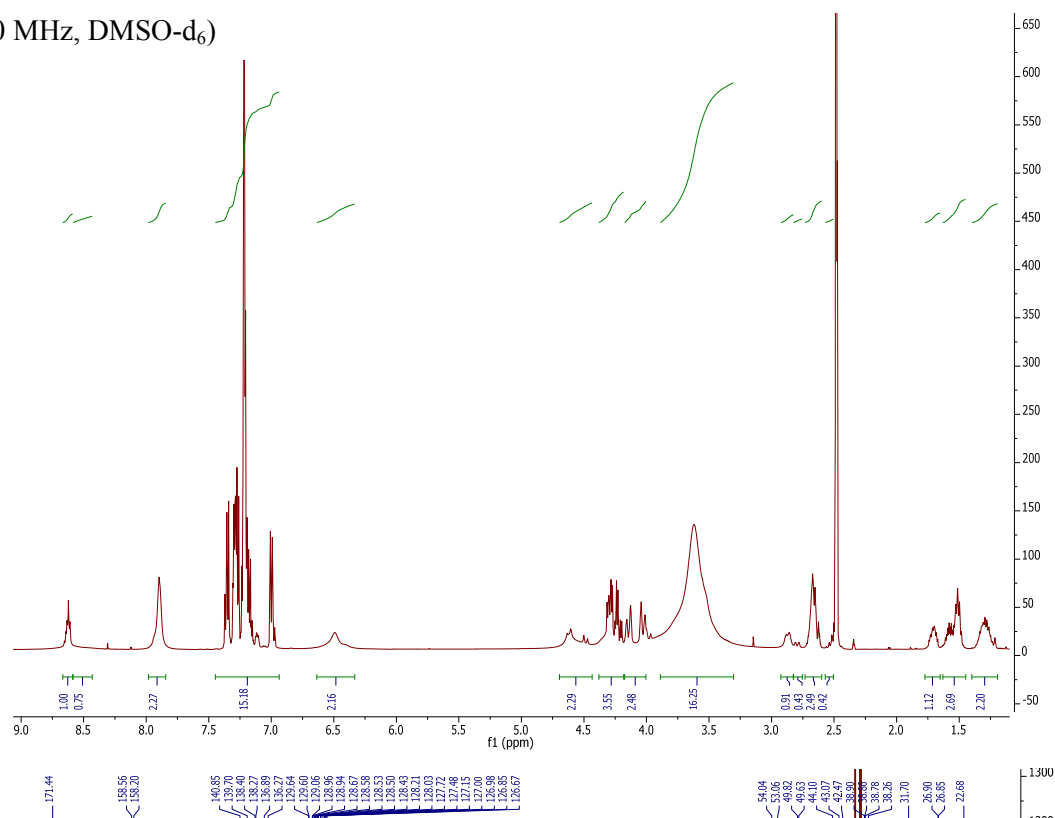
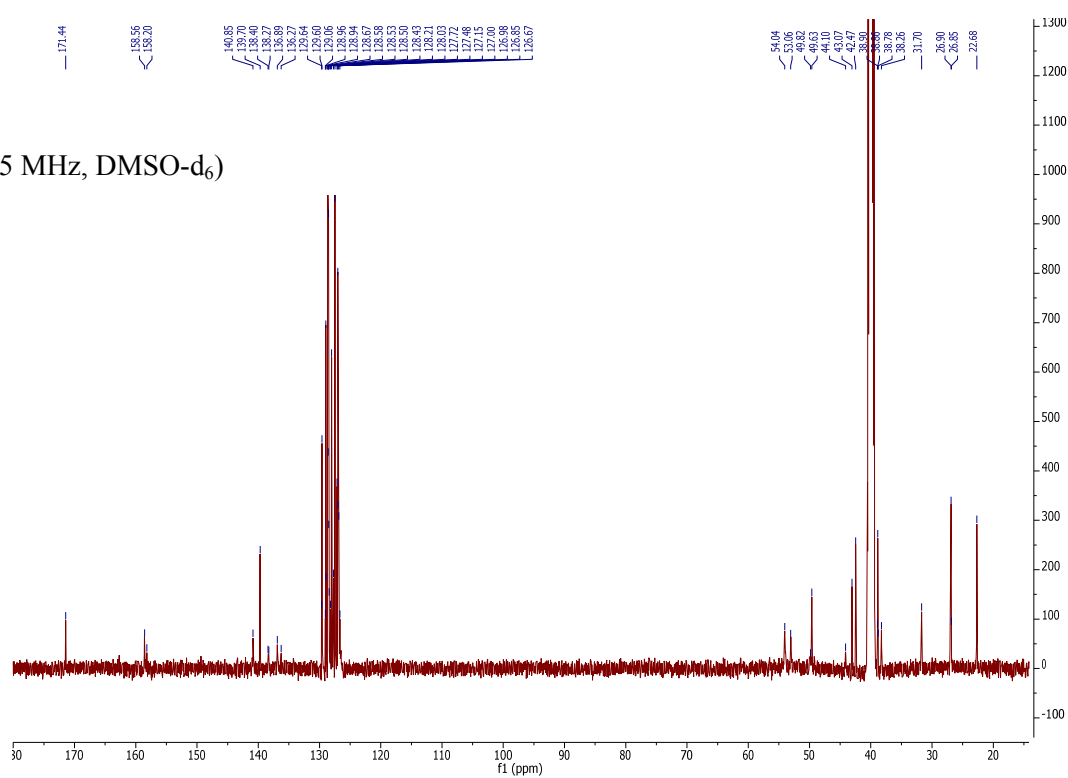


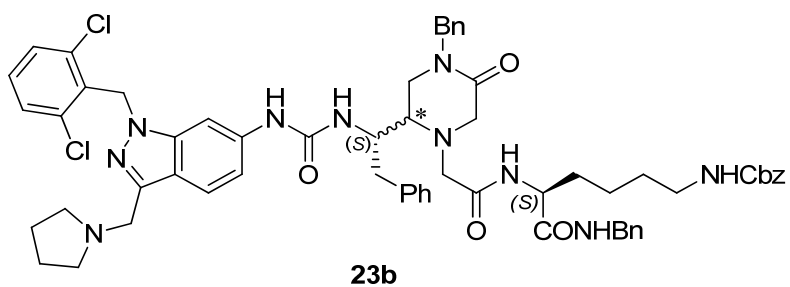
19b (125 MHz, DMSO-d₆)



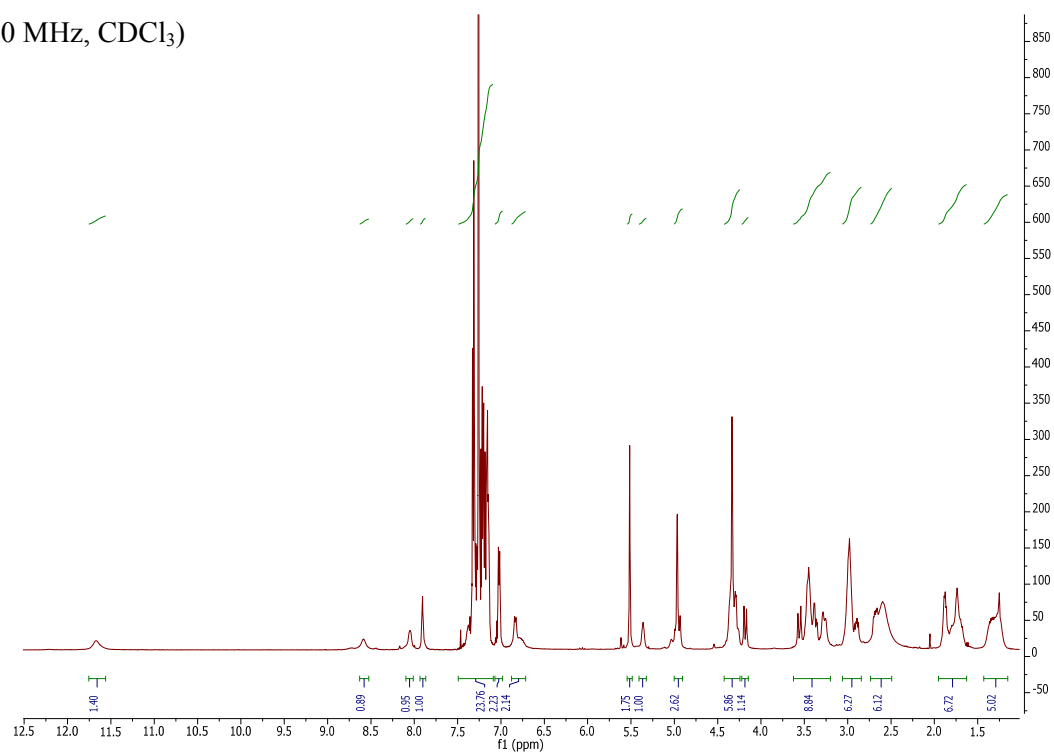
**19c** (500 MHz, DMSO-d₆)**19c** (125 MHz, DMSO-d₆)

20a (500 MHz, DMSO-d₆)**20a** (125 MHz, DMSO-d₆)

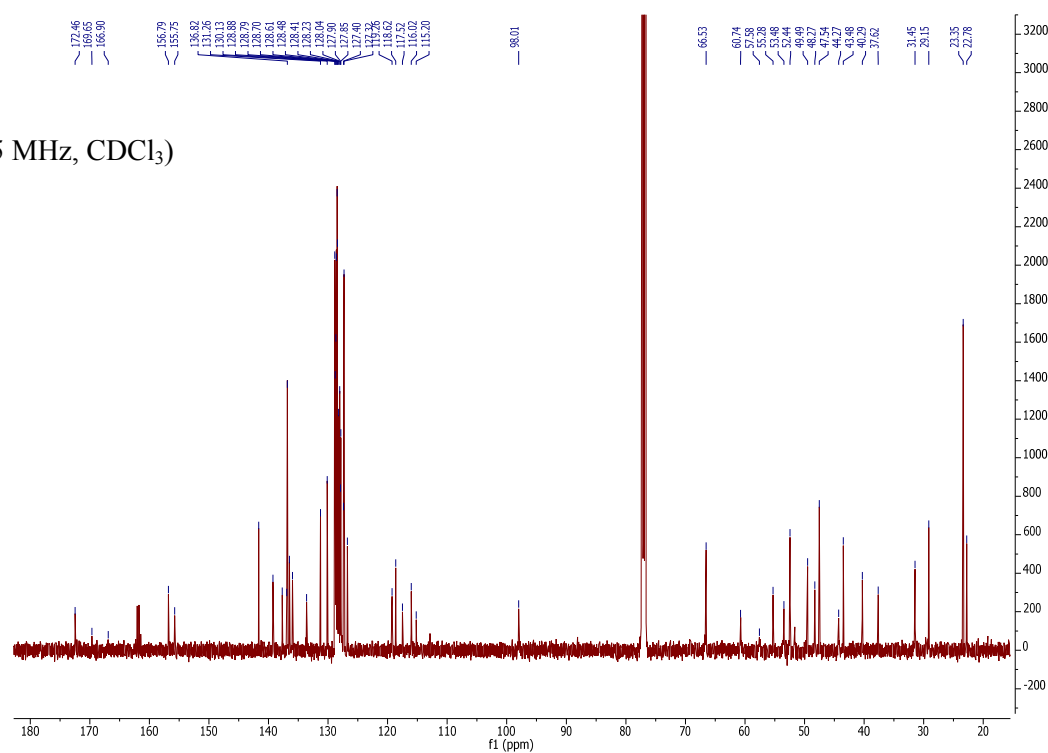
**20b** (500 MHz, DMSO- d_6)**20b** (125 MHz, DMSO- d_6)

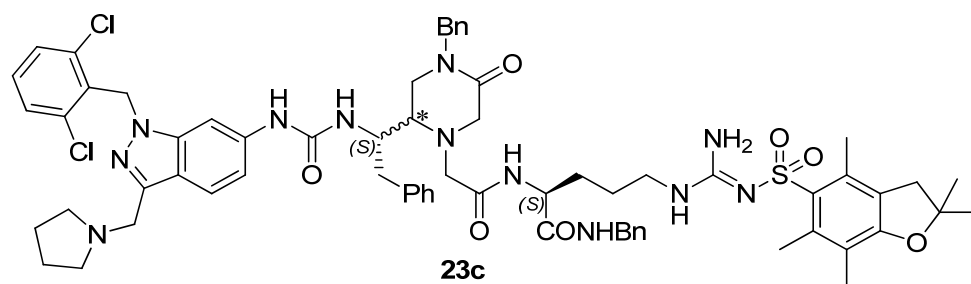
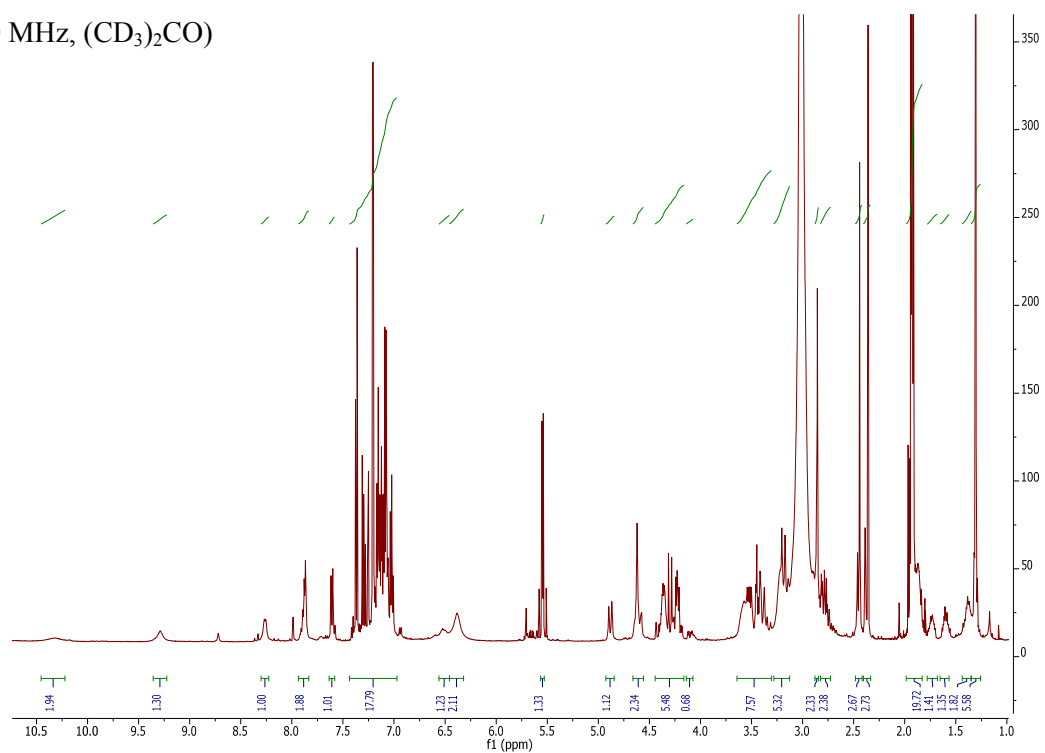
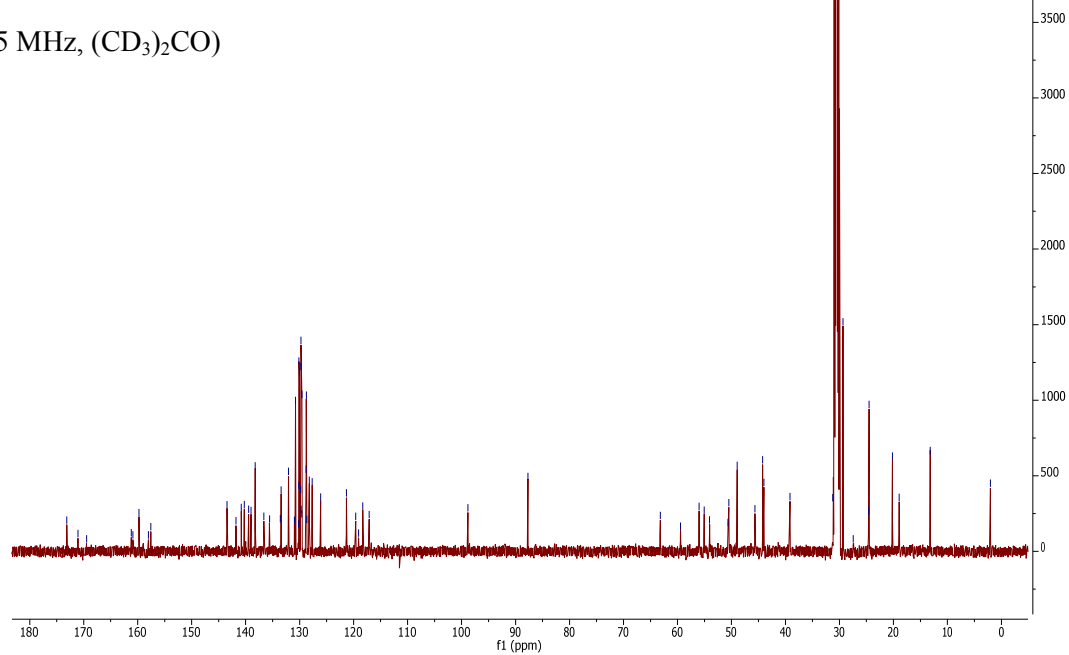


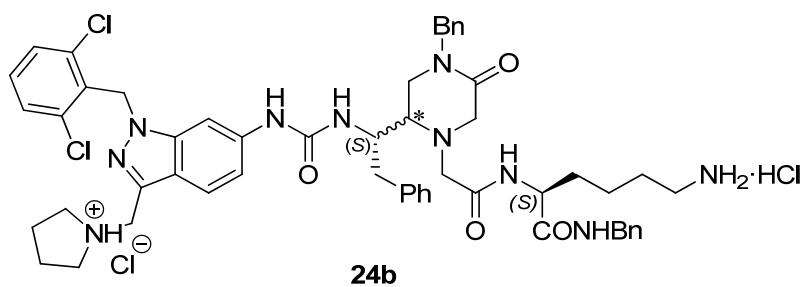
23b (500 MHz, CDCl₃)



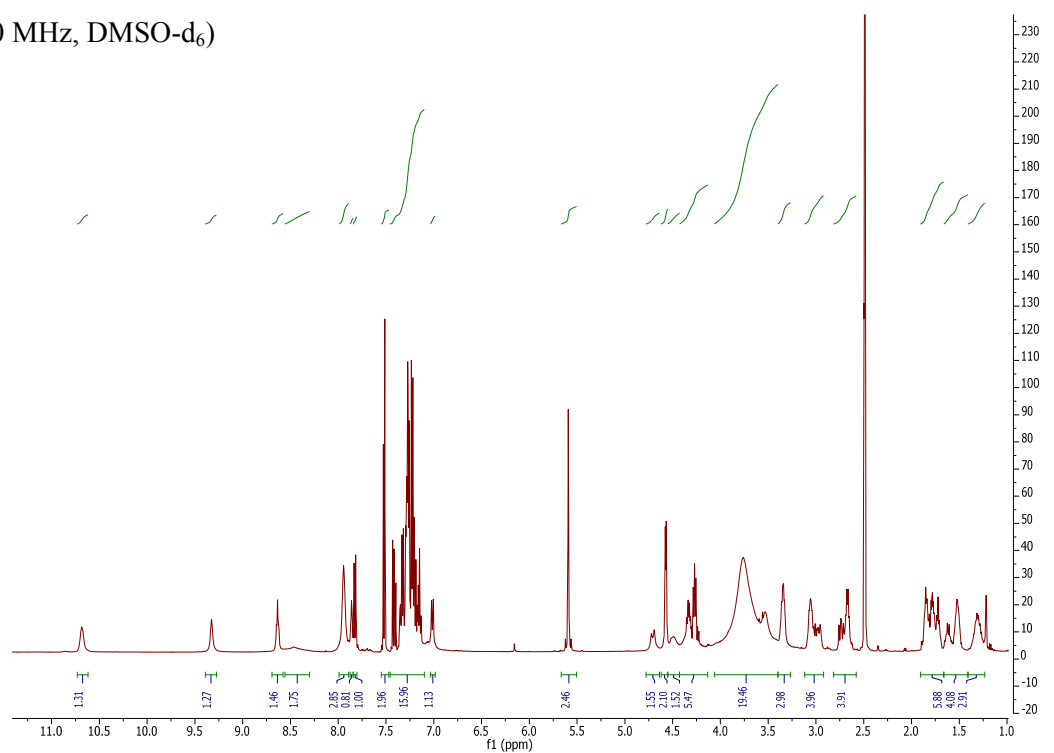
23b (125 MHz, CDCl₃)



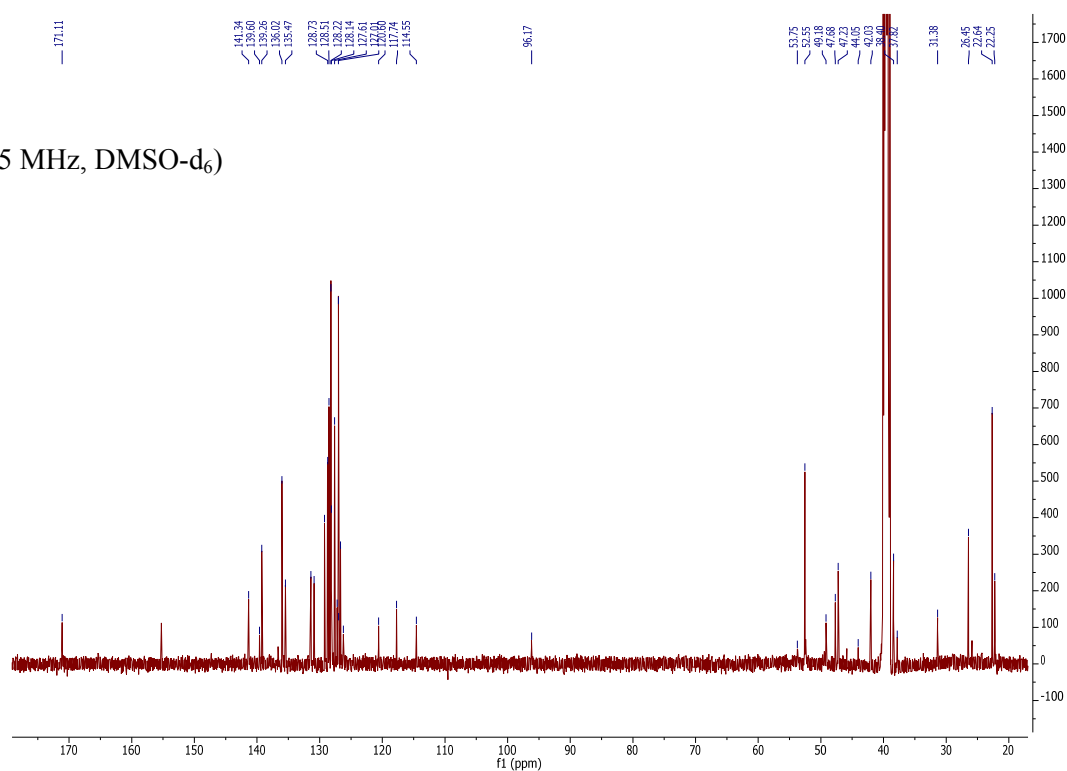
**23c** (500 MHz, $(\text{CD}_3)_2\text{CO}$)**23c** (125 MHz, $(\text{CD}_3)_2\text{CO}$)

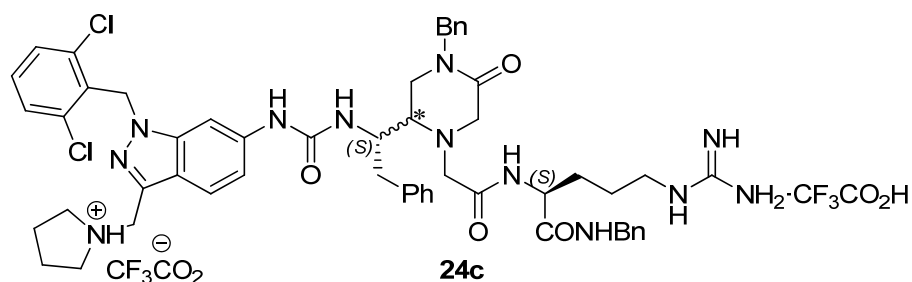


24b (500 MHz, DMSO-d₆)

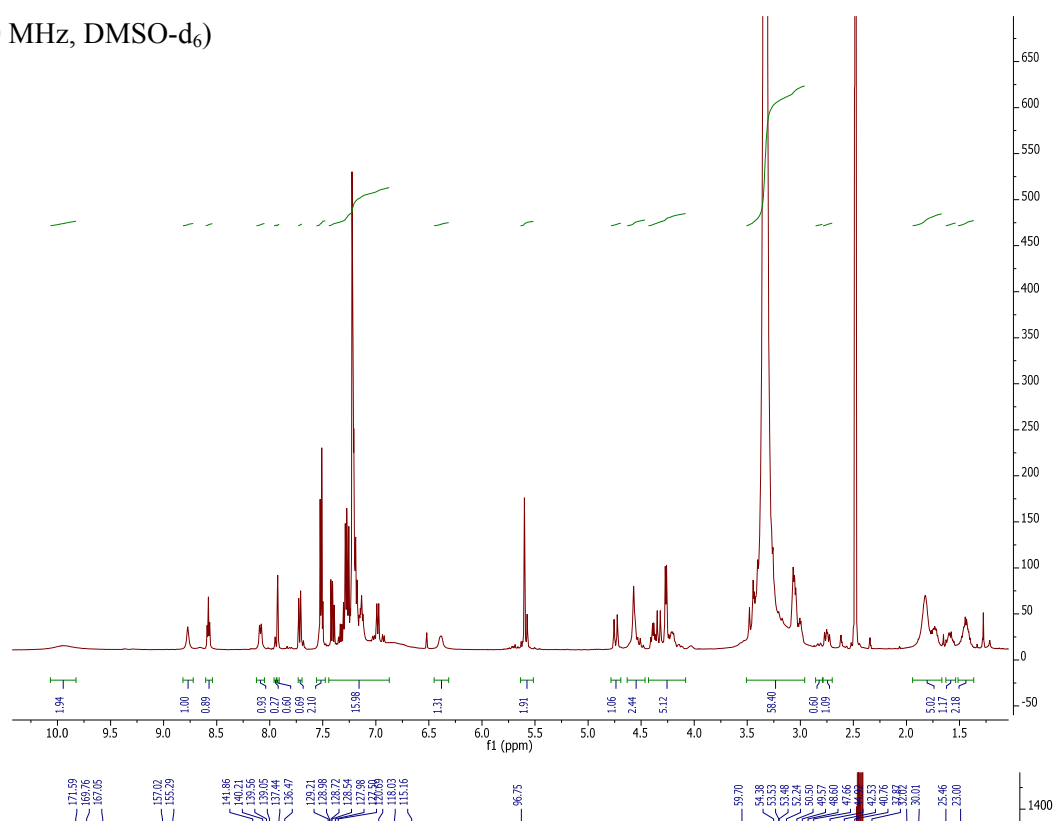


24b (125 MHz, DMSO-d₆)





24c (500 MHz, DMSO-d₆)



24c (125 MHz, DMSO-d₆)

