Supporting Information

Chemoenzymatic Synthesis of Sialosides Containing 7-*N*- or 7,9-Di-*N*-acetyl Sialic Acid as Stable *O*-Acetyl Analogues for Probing Sialic Acid-Binding Proteins

Anoopjit Singh Kooner,[†] Sandra Diaz,[‡,§] Hai Yu,[†] Abhishek Santra,[†,‖] Ajit Varki,[‡,§] and Xi Chen[†,*]

[†]Department of Chemistry, University of California, Davis, California, 95616, United States

[‡]Department of Medicine, University of California, San Diego, California, 92093, United States

[§]Department of Cellular & Molecular Medicine, Glycobiology Research and Training Center, University of California, San Diego, California, 92093, United States

[‖]Current Address: Department of Organic Synthesis and Process Chemistry, CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad 500007, India

*Corresponding author: Email: xiichen@ucdavis.edu

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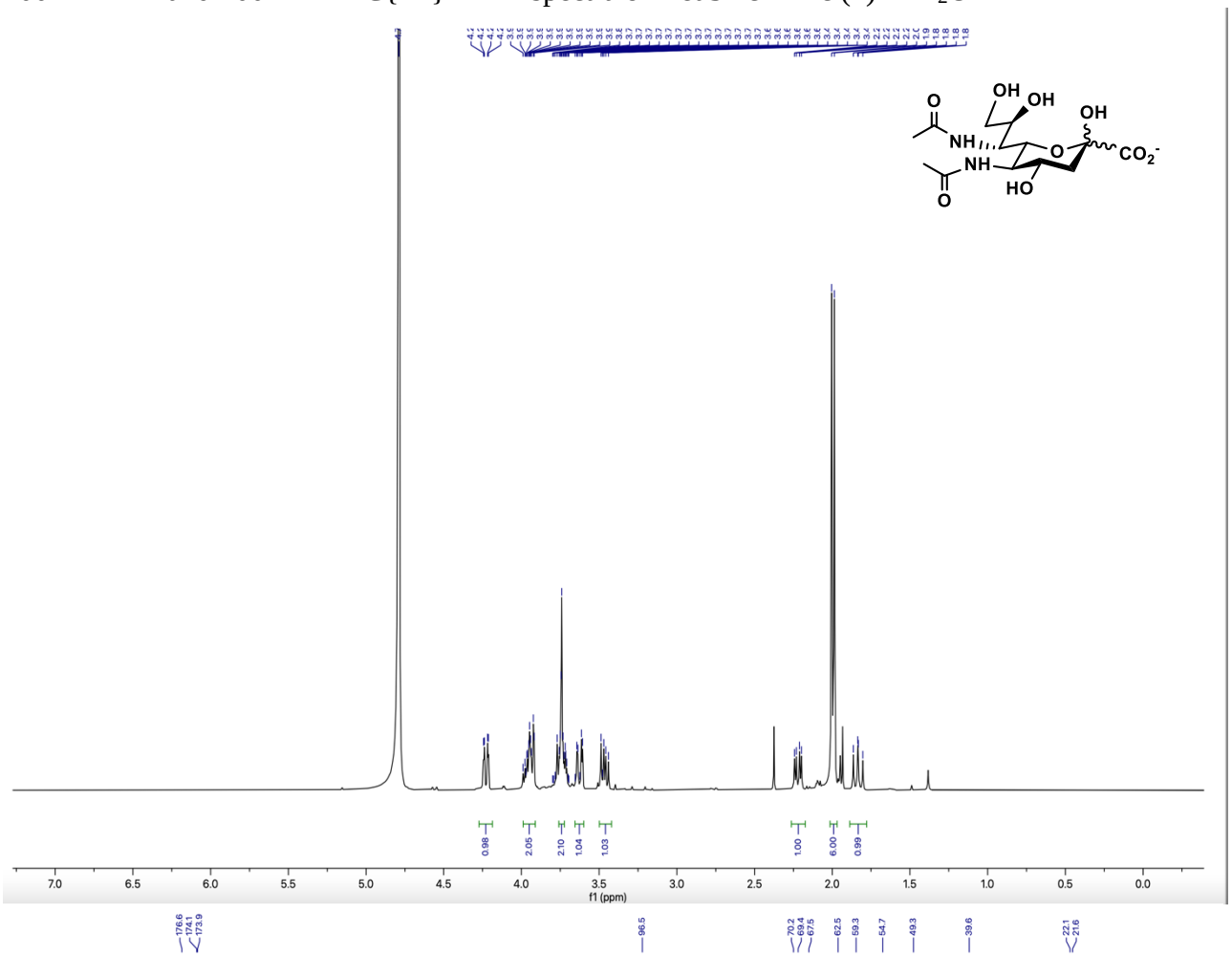
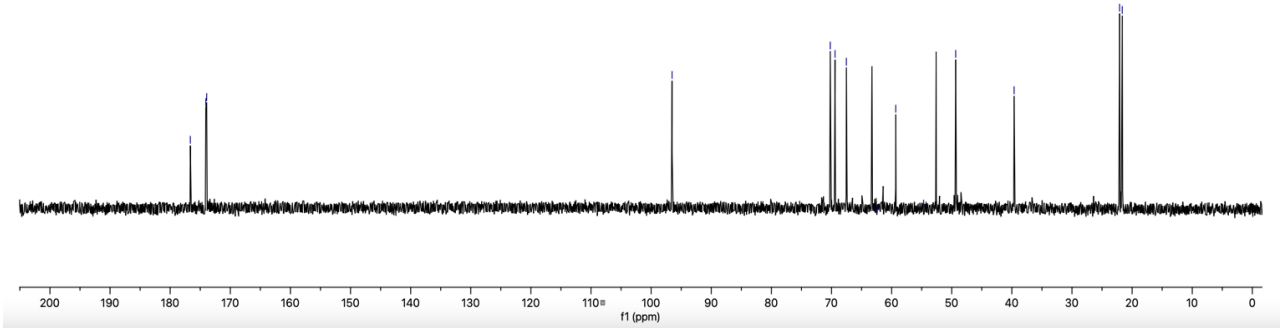
Table S1. Glycan microarray study results (See **Figure 3** for the corresponding bar figure). R1 = $ProNH_2$.

	Glycans	hSiglec 7	hSiglec 9	SNA	MAL II
		Av±SD	Av±SD	Av±SD	Av±SD
A	Neu5Acα3Galβ4GlcβR1	3873±236	44638±3098	70±22	82±16
	Neu5,9Ac_2α3Galβ4GlcβR1	128±45	12452±2402	28±11	2449±2487
	Neu5Ac9NAcα3Galβ4GlcβR1	74±5	3598±1128	13±2	44±10
	Neu5Ac7NAcα3Galβ4GlcβR1	32±13	233±31	23±4	24±3
	Neu5Ac7,9diNAcα3Galβ4GlcβR1	33±12	123±36	16±4	23±6
	Galβ4GlcβR1	86±57	455±85	20±5	61±17
B	Neu5Acα6Galβ4GlcβR1	18232±769	35090±11846	1071±1068	1456±245
	Neu5,9Ac_2α6Galβ4GlcβR1	82±21	763±332	5070±300	65±3
	Neu5Ac9NAcα6Galβ4GlcβR1	1289±104	3074±355	1773±112	52±7
	Neu5Ac7NAcα6Galβ4GlcβR1	57±14	365±205	151±37	22±2
	Neu5Ac7,9diNAcα6Galβ4GlcβR1	24±5	137±8	358±76	30±20
	Galβ4GlcβR1	86±57	455±85	20±5	61±17
C	Neu5Acα3Galβ4GlcNAcβR1	3316±442	43732±12044	24±1	339±276
	Neu5,9Ac_2α3Galβ4GlcNAcβR1				
	Neu5Ac9NAcα3Galβ4GlcNAcβR1	17±14	414±350	8±2	73±17
	Neu5Ac7NAcα3Galβ4GlcNAcβR1	40±8	248±26	20±1	21±3
	Neu5Ac7,9diNAcα3Galβ4GlcNAcβR1	20±1	101±18	15±4	20±5
	Galβ4GlcNAcβR1	111±18	316±40	96±16	81±10
D	Neu5Acα6Galβ4GlcNAcβR1	16232±1719	54607±2394	4170±682	58±11
	Neu5,9Ac_2α6Galβ4GlcNAcβR1	18675±1057	48835±6066	5452±1564	19±2
	Neu5Ac9NAcα6Galβ4GlcNAcβR1	574±63	7438±1391	3794±309	43±6
	Neu5Ac7NAcα6Galβ4GlcNAcβR1	32±10	324±98	97±23	403±232
	Neu5Ac7,9diNAcα6Galβ4GlcNAcβR1	24±9	75±80	56±11	20±3
	Galβ4GlcNAcβR1	111±18	316±40	96±16	81±10
E	Neu5Acα6GalNAcαR1	30069±3743	38633±4875	236±18	164±47
	Neu5,9Ac_2α6GalNAcαR1	15931±4038	22398±2008	56±6	48±9
	Neu5Ac9NAcα6GalNAcαR1	2180±301	1506±471	28±4	22±3
	Neu5Ac7NAcα6GalNAcαR1	37±10	291±106	12±3	12±4
	Neu5Ac7,9diNAcα6GalNAcαR1	27±12	87±18	15±5	16±17
	GalNAcαR1	47±9	179±100	32±4	42±4
F	Neu5Acα3Galβ3GlcNAcβR1	1325±212	32721±1974	40±11	662±86
	Neu5,9Ac_2α3Galβ3GlcNAcβR1	33±8	483±140	65±4	208±52
	Neu5Ac9NAcα3Galβ3GlcNAcβR1	80±11	1008±97	24±9	18±4
	Neu5Ac7NAcα3Galβ3GlcNAcβR1	36±14	189±34	23±1	23±3
	Neu5Ac7,9diNAcα3Galβ3GlcNAcβR1	19±5	138±81	13±1	15±2
	Galβ3GlcNAcβR1	53±14	232±24	29±9	114±17
G	Neu5Acα6Galβ3GlcNAcβR1	22346±3694	45726±10343	249±90	27±9
	Neu5,9Ac_2α6Galβ3GlcNAcβR1				
	Neu5Ac9NAcα6Galβ3GlcNAcβR1	774±72	1542±238	897±72	36±8
	Neu5Ac7NAcα6Galβ3GlcNAcβR1	35±10	230±156	30±12	16±7
	Neu5Ac7,9diNAcα6Galβ3GlcNAcβR1	17±12	60±18	25±2	19±1
	Galβ3GlcNAcβR1	53±14	232±24	29±9	114±17

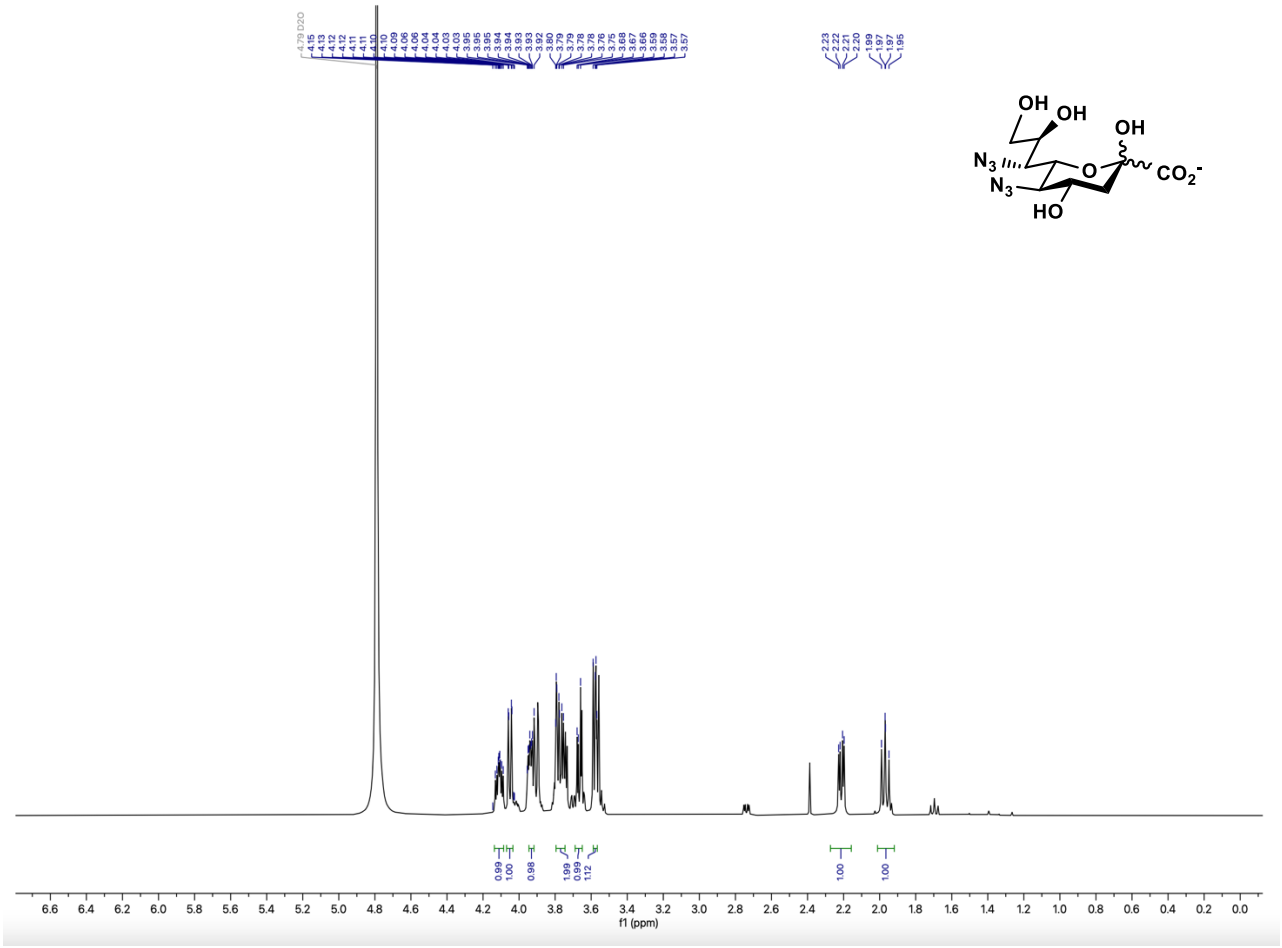
	Glycans	hSiglec 7	hSiglec 9	SNA	MAL II
		Av±SD	Av±SD	Av±SD	Av±SD
H	Neu5Acα3Galβ3GlcNAcαR1	858±249	11809±2780	34±4	915±256
	Neu5,9Ac$_2$α3Galβ3GlcNAcαR1				
	Neu5Ac9NAcα3Galβ3GlcNAcαR1	92±21	702±135	22±5	29±2
	Neu5Ac7NAcα3Galβ3GlcNAcαR1	33±11	160±42	34±5	53±3
	Neu5Ac7,9diNAcα3Galβ3GlcNAcβR1	49±21	75±8	14±4	16±5
	Galβ3GlcNAcαR1				
I	Neu5Acα6Galβ3GlcNAcαR1				
	Neu5,9Ac$_2$α6Galβ3GlcNAcαR1				
	Neu5Ac9NAcα6Galβ3GlcNAcαR1	1114±295	3071±723	384±88	214±270
	Neu5Ac7NAcα6Galβ3GlcNAcαR1	28±7	229±24	66±10	23±3
	Neu5Ac7,9diNAcα6Galβ3GlcNAcαR1	33±5	133±40	39±6	16±3
	Galβ3GlcNAcαR1				
J	Neu5Acα3Galβ3GalNAcβR1	1580±329	32410±5066	27±10	17200±1879
	Neu5,9Ac$_2$α3Galβ3GalNAcβR1	58±15	271±119	99±11	34276±4340
	Neu5Ac9NAcα3Galβ3GalNAcβR1	19±7	244±116	14±2	16576±3253
	Neu5Ac7NAcα3Galβ3GalNAcβR1	2158±2198	4010±416	375±24	778±499
	Neu5Ac7,9diNAcα3Galβ3GalNAcβR1	52±35	259±97	37±4	47±5
	Galβ3GalNAcβR1	55±9	212±42	25±4	57±8
K	Neu5Acα6Galβ3GalNAcβR1	11743±694	28518±4248	11±8	11±7
	Neu5,9Ac$_2$α6Galβ3GalNAcβR1				
	Neu5Ac9NAcα6Galβ3GalNAcβR1	1924±431	1229±394	135±18	695±125
	Neu5Ac7NAcα6Galβ3GalNAcβR1	35±4	124±29	27±6	32±4
	Neu5Ac7,9diNAcα6Galβ3GalNAcβR1	28±5	136±111	16±2	15±3
	Galβ3GalNAcβR1	55±9	212±42	25±4	57±8
L	Neu5Acα3Galβ3GalNAcαR1	1868±177	10988±4120	37±8	45417±4854
	Neu5,9Ac$_2$α3Galβ3GalNAcαR1	121±120	154±89	87±25	34313±4699
	Neu5Ac9NAcα3Galβ3GalNAcαR1	16±5	84±32	7±3	16570±2600
	Neu5Ac7NAcα3Galβ3GalNAcαR1	36±11	145±62	16±2	30441±1702
	Neu5Ac7,9diNAcα3Galβ3GalNAcαR1	37±5	202±102	34±3	14694±1436
	Galβ3GalNAcαR1	66±17	338±29	13±4	46±4
M	Neu5Acα6Galβ3GalNAcαR1				
	Neu5,9Ac$_2$α6Galβ3GalNAcαR1				
	Neu5Ac9NAcα6Galβ3GalNAcαR1	258±40	1414±167	148±2	26±14
	Neu5Ac7NAcα6Galβ3GalNAcαR1	22±3	115±12	24±7	21±2
	Neu5Ac7,9diNAcα6Galβ3GalNAcαR1	26±6	83±46	11±3	9±1
	Galβ3GalNAcαR1	66±17	338±29	13±4	46±4

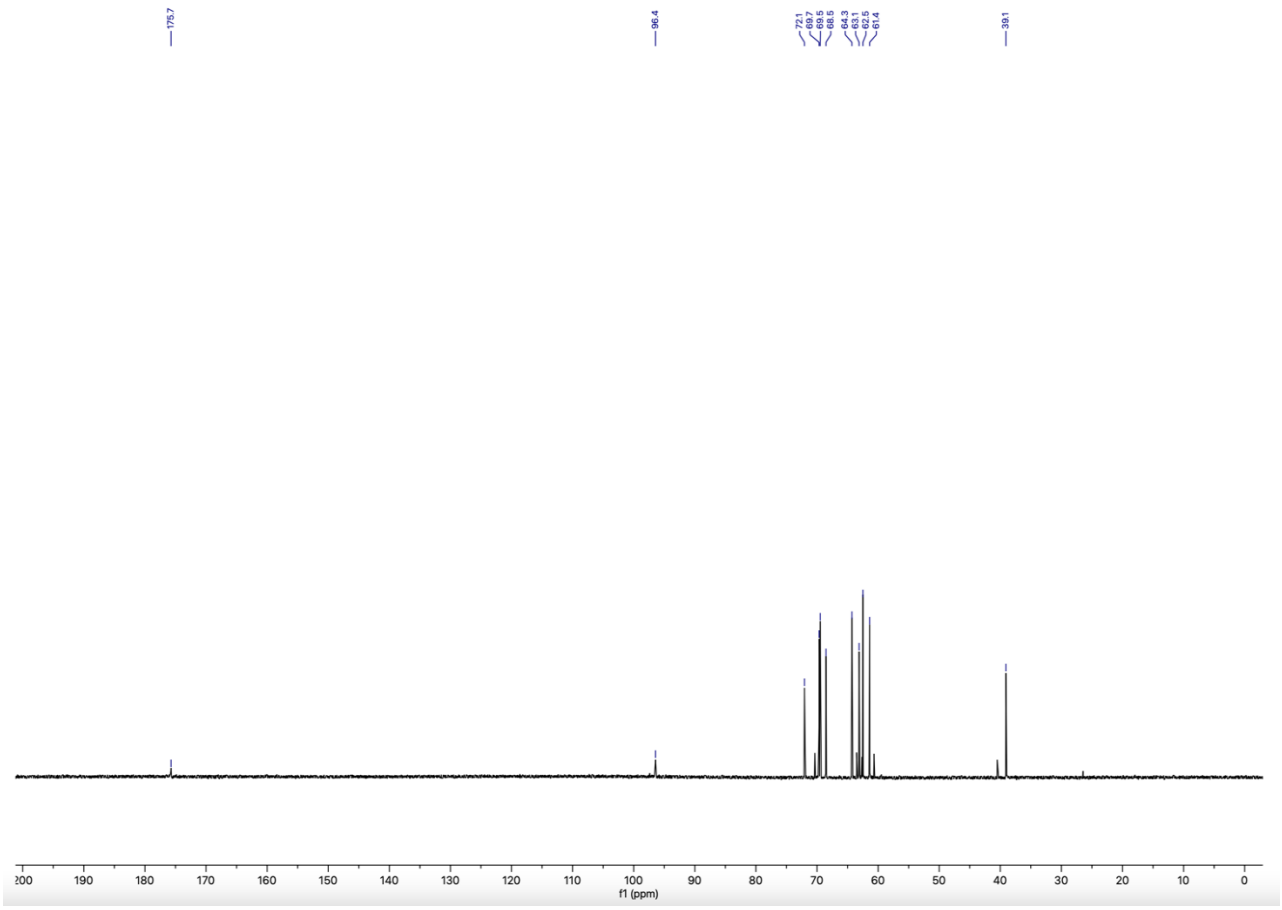
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAc (**4**) in D_2O



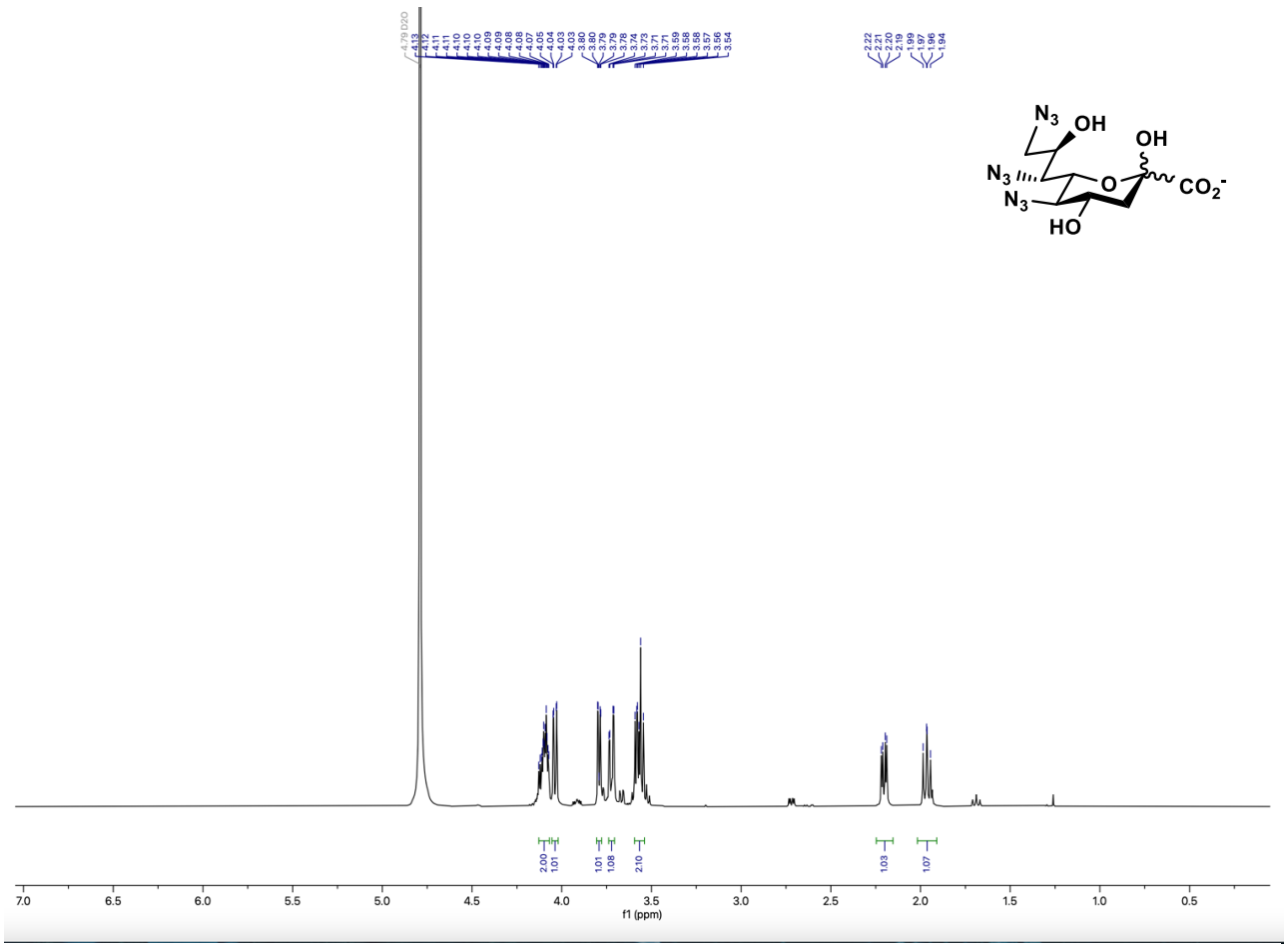


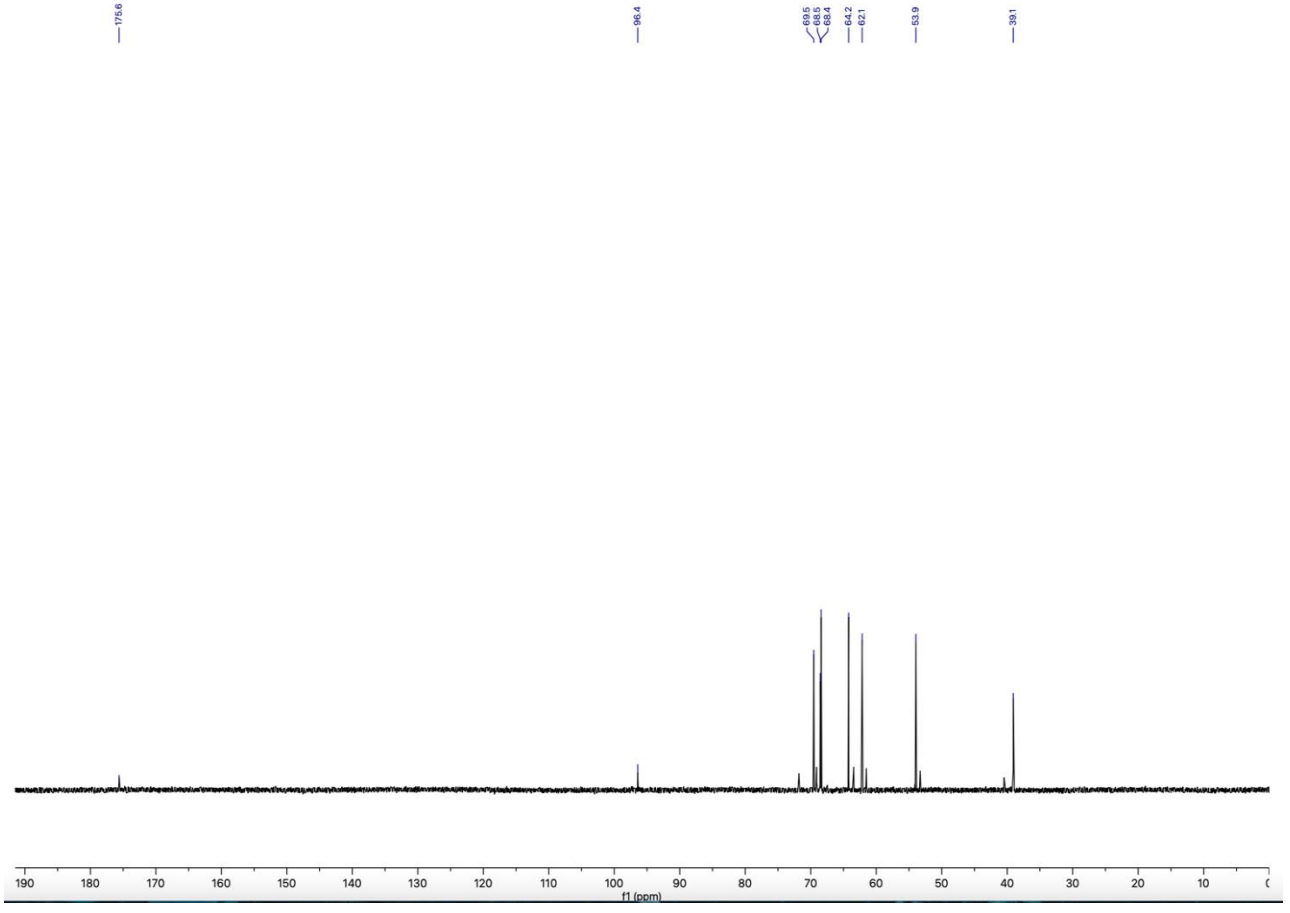
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$ (**5**) in D$_2$O



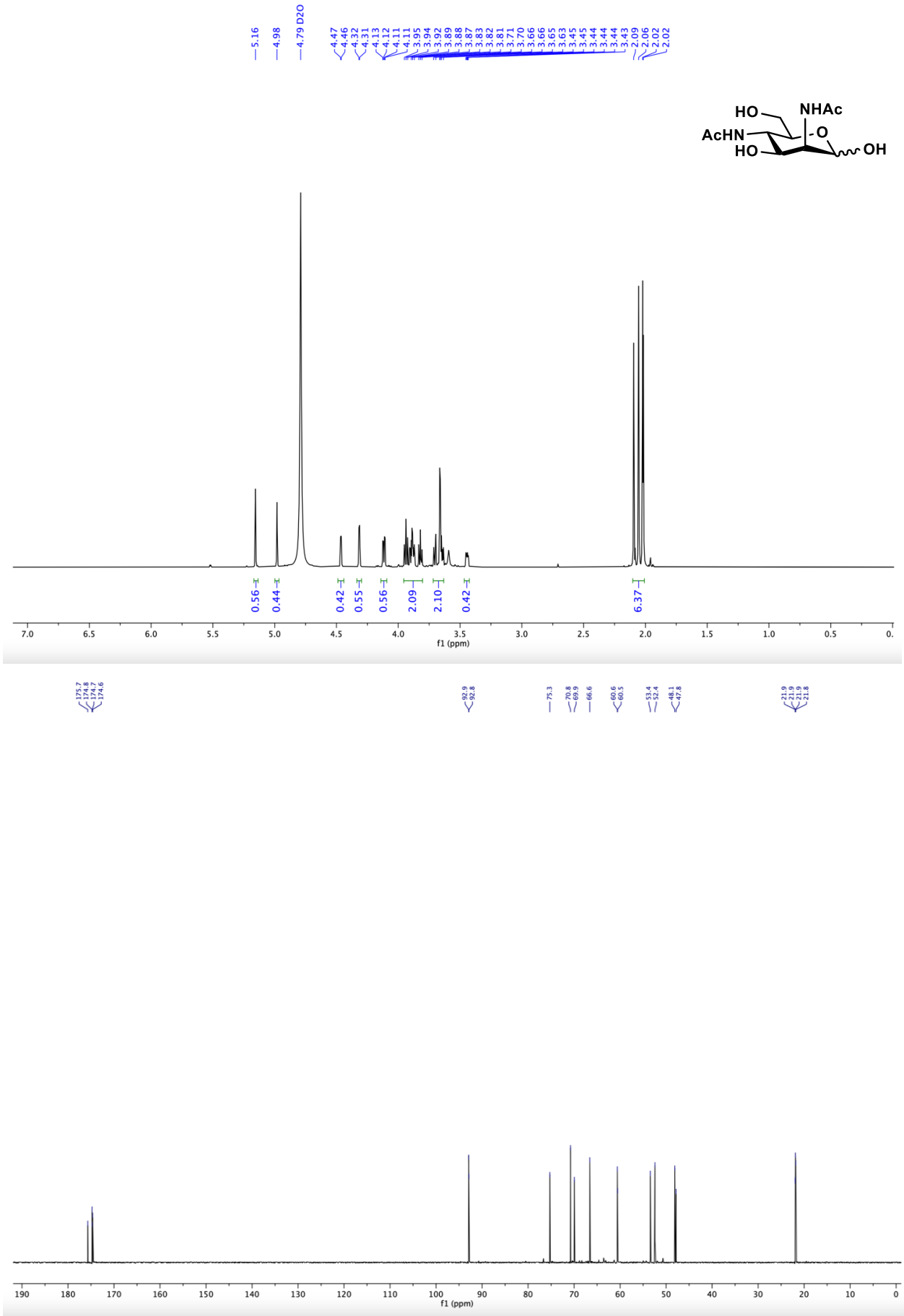


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3 (**7**) in D_2O

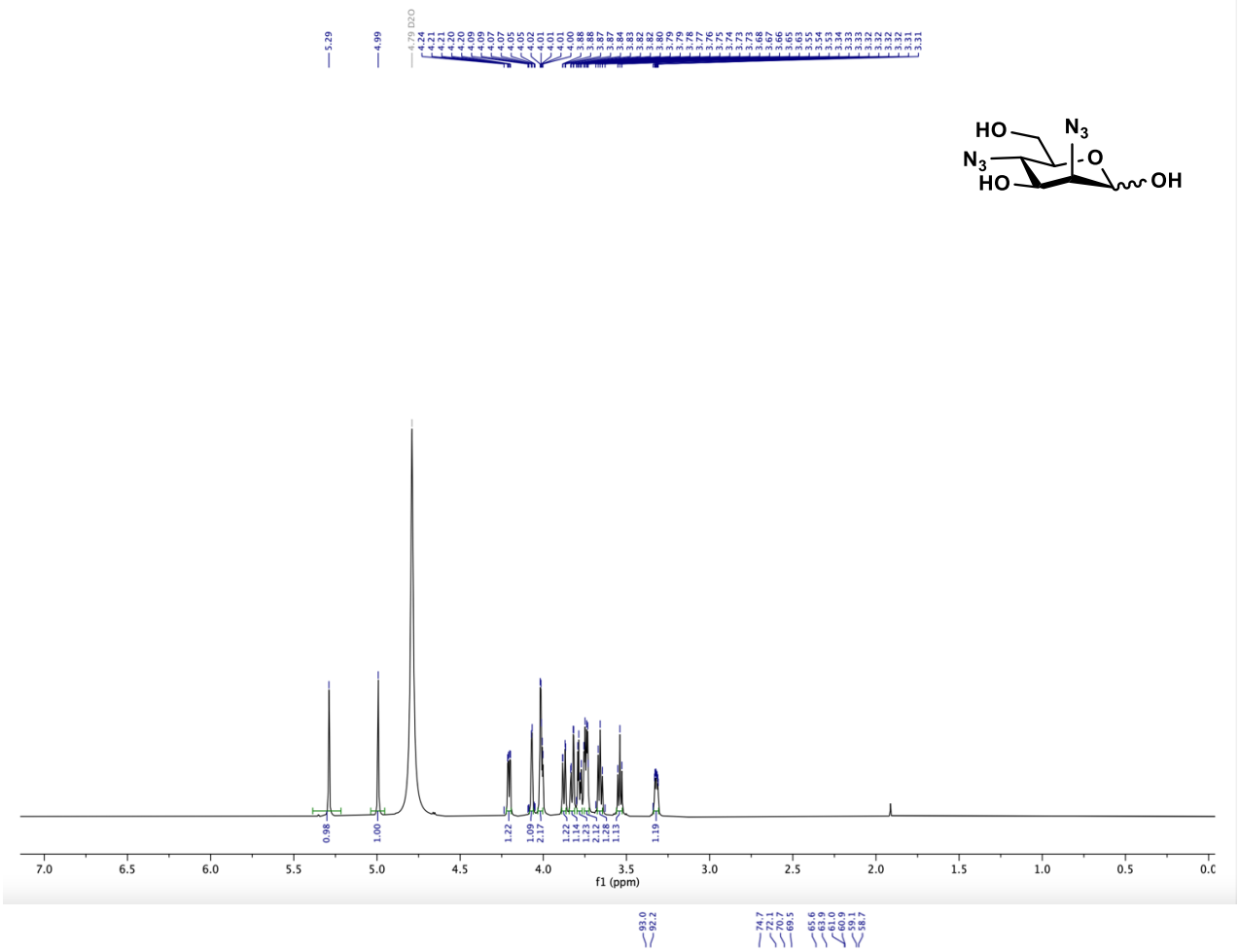


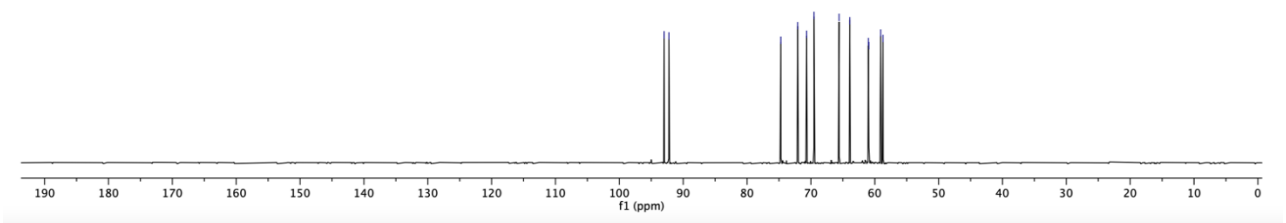


800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of 2,4-diacetamido-2,4-dideoxy-D-mannopyranose (Man2,4diNAc, **8**) in D_2O

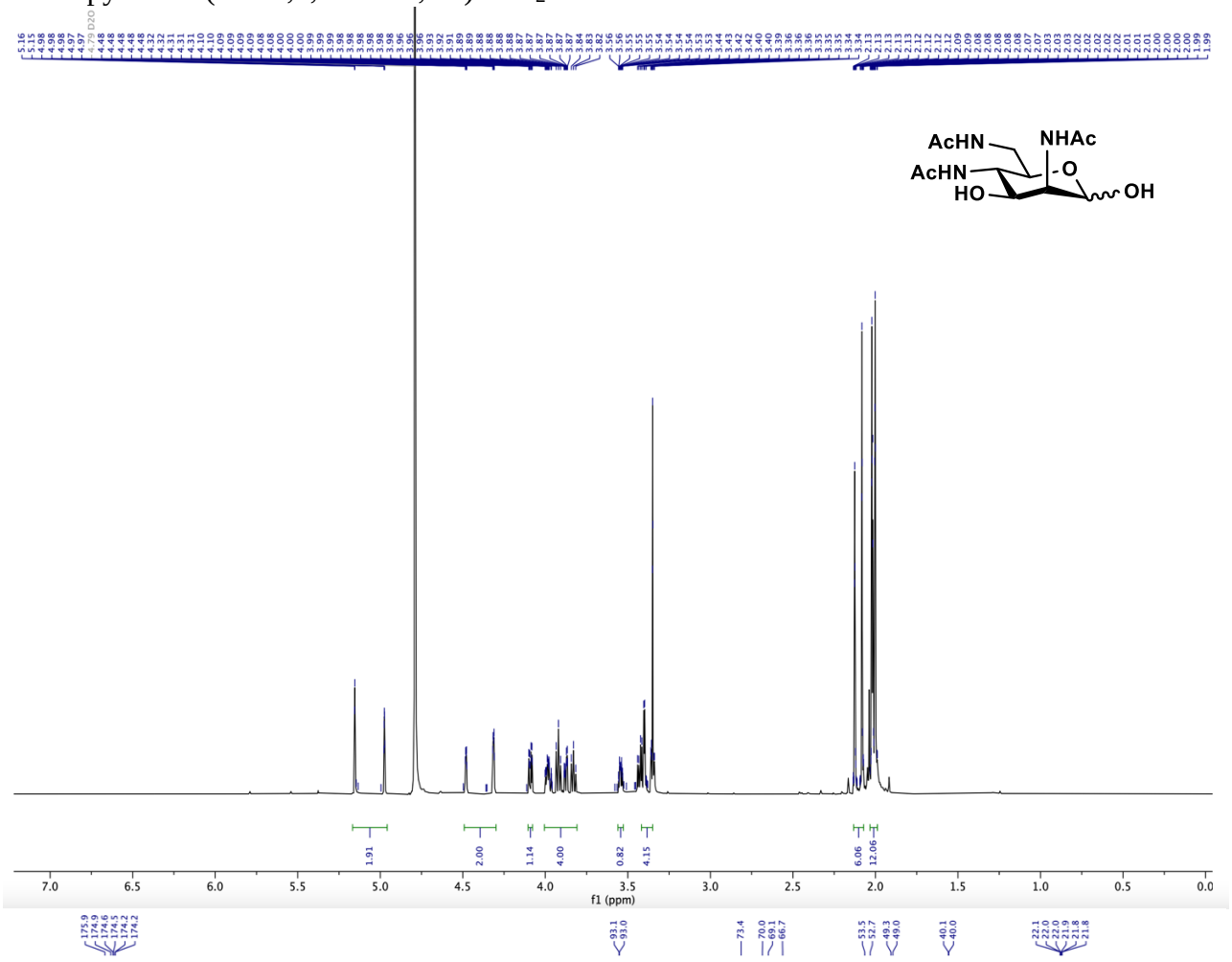


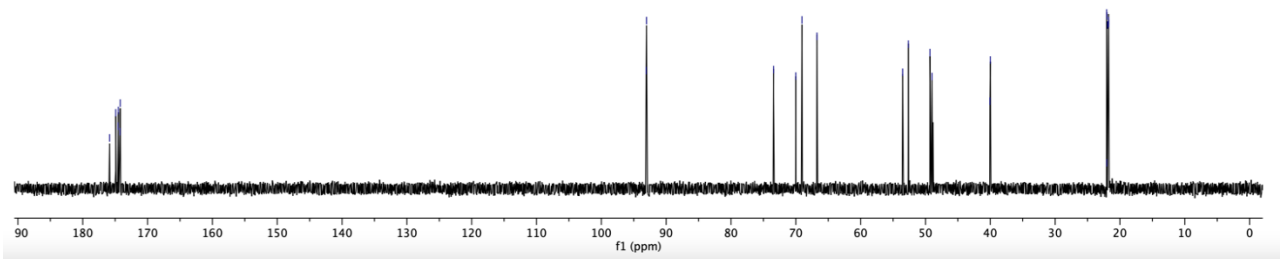
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of 2,4-diazido-2,4-dideoxy-D-mannopyranose (Man2,4diN_3, **9**) in D_2O



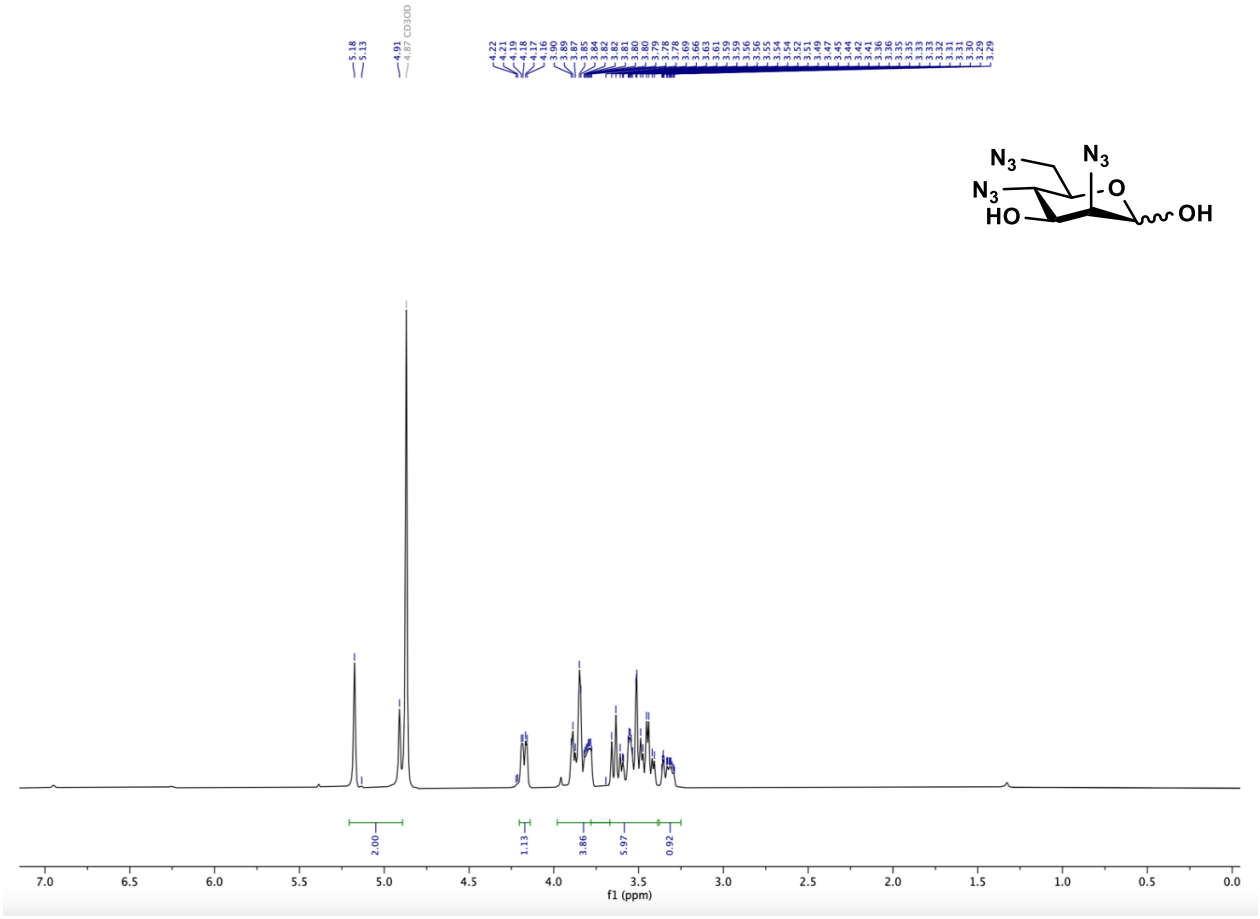


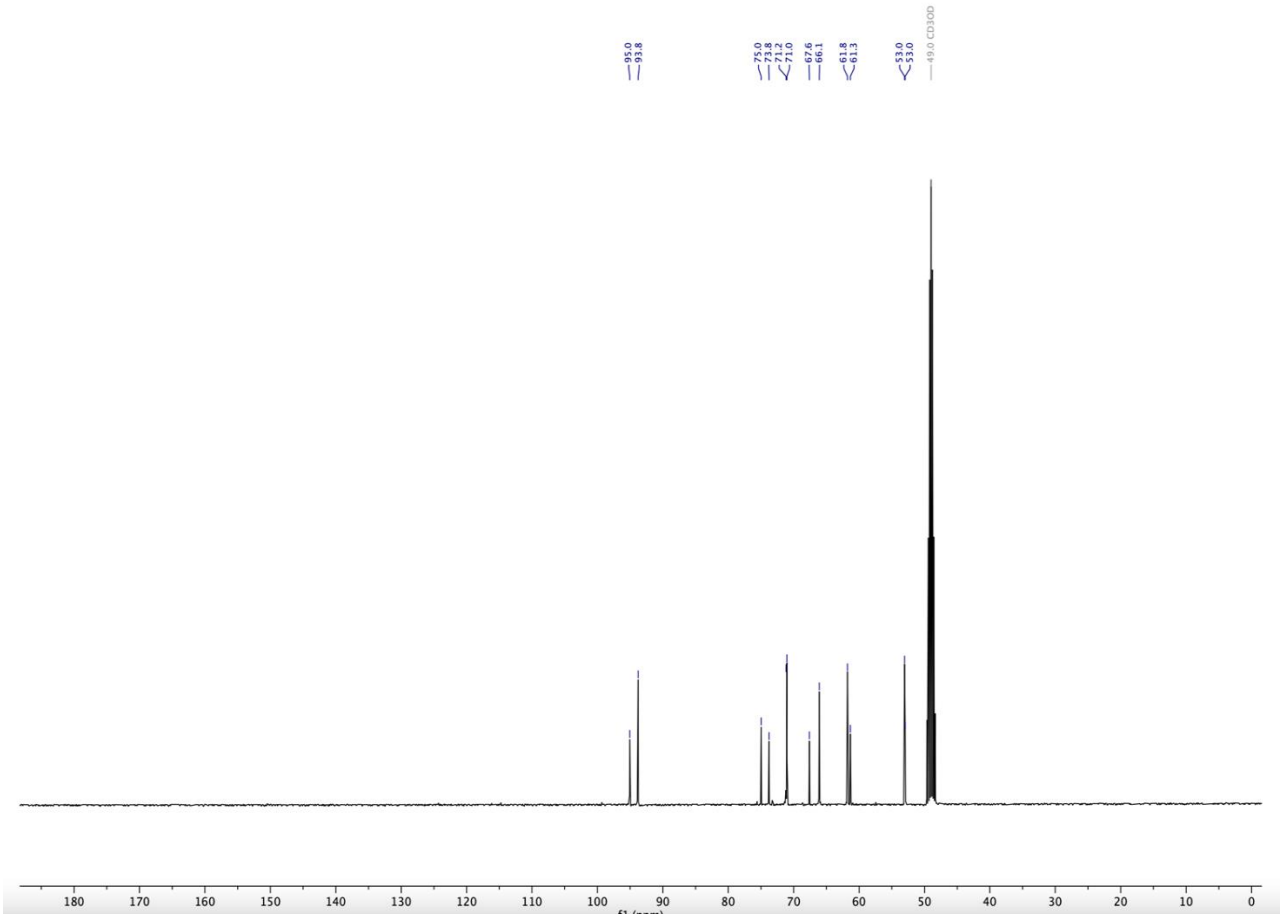
400 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of 2,4,6-triacetamido-2,4,6-trideoxy-D-mannopyranose (Man2,4,6triNAc, **10**) in D_2O



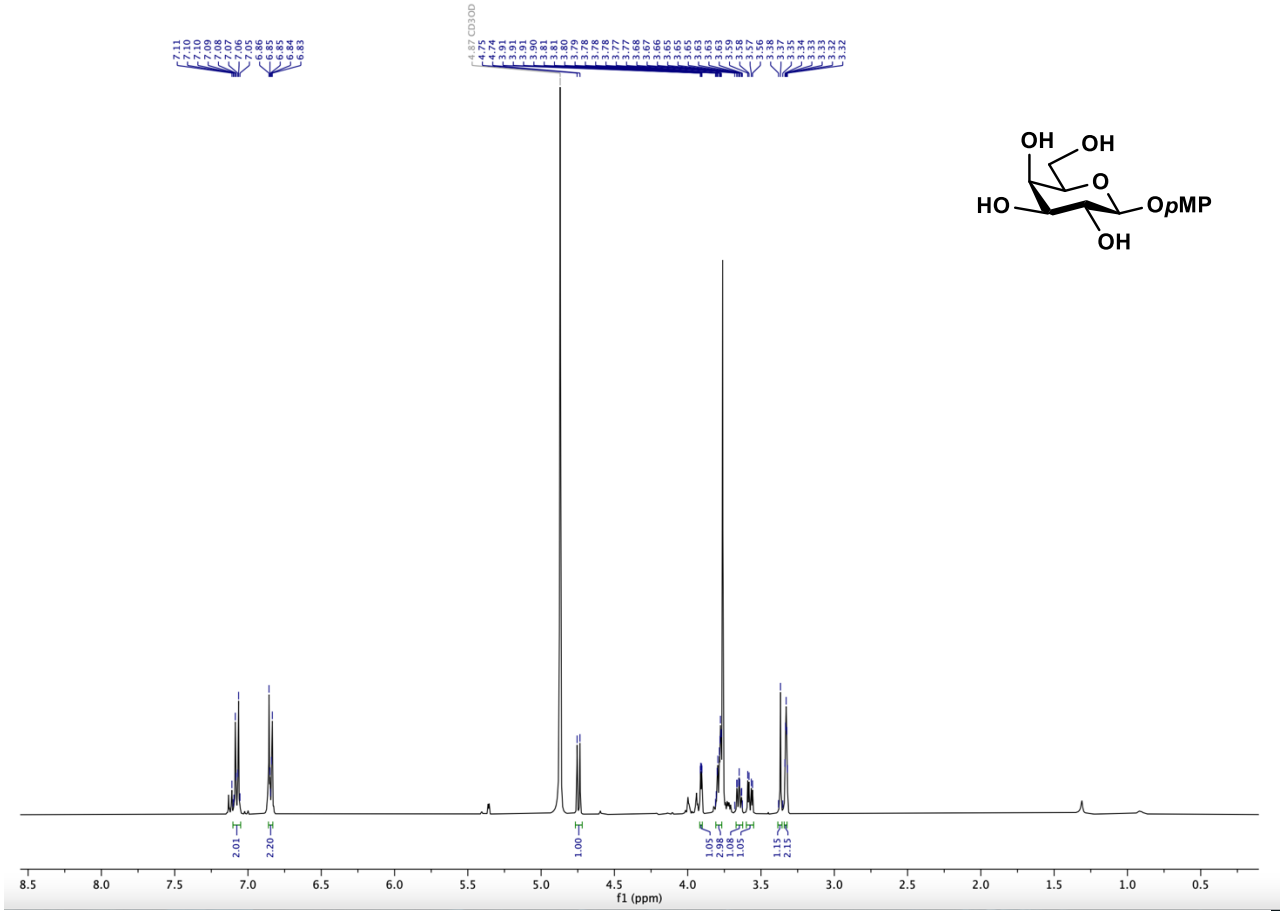


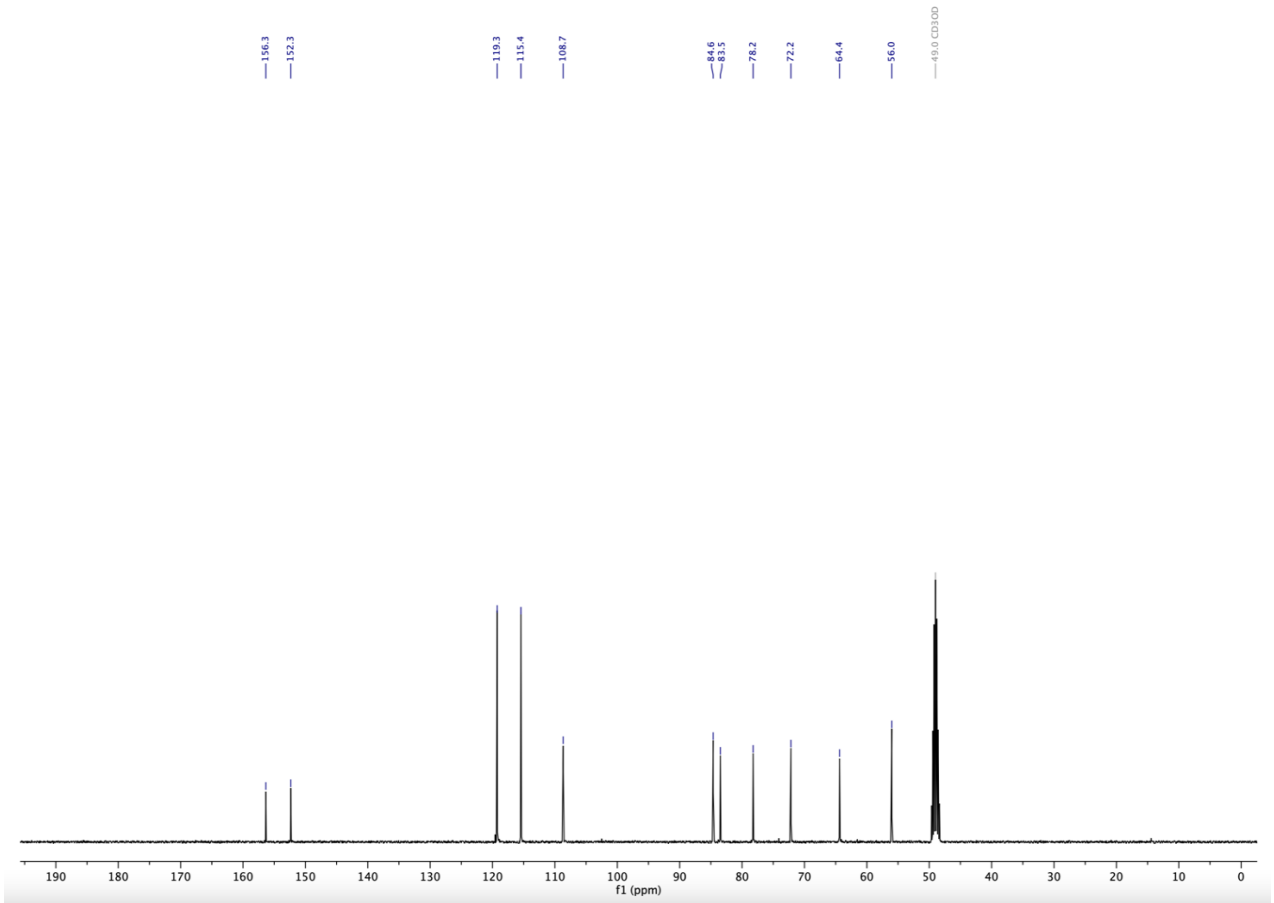
400 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of 2,4,6-triazido-2,4,6-trideoxy-D-mannopyranose (Man2,4,6triN_3, **11**) in CD_3OD



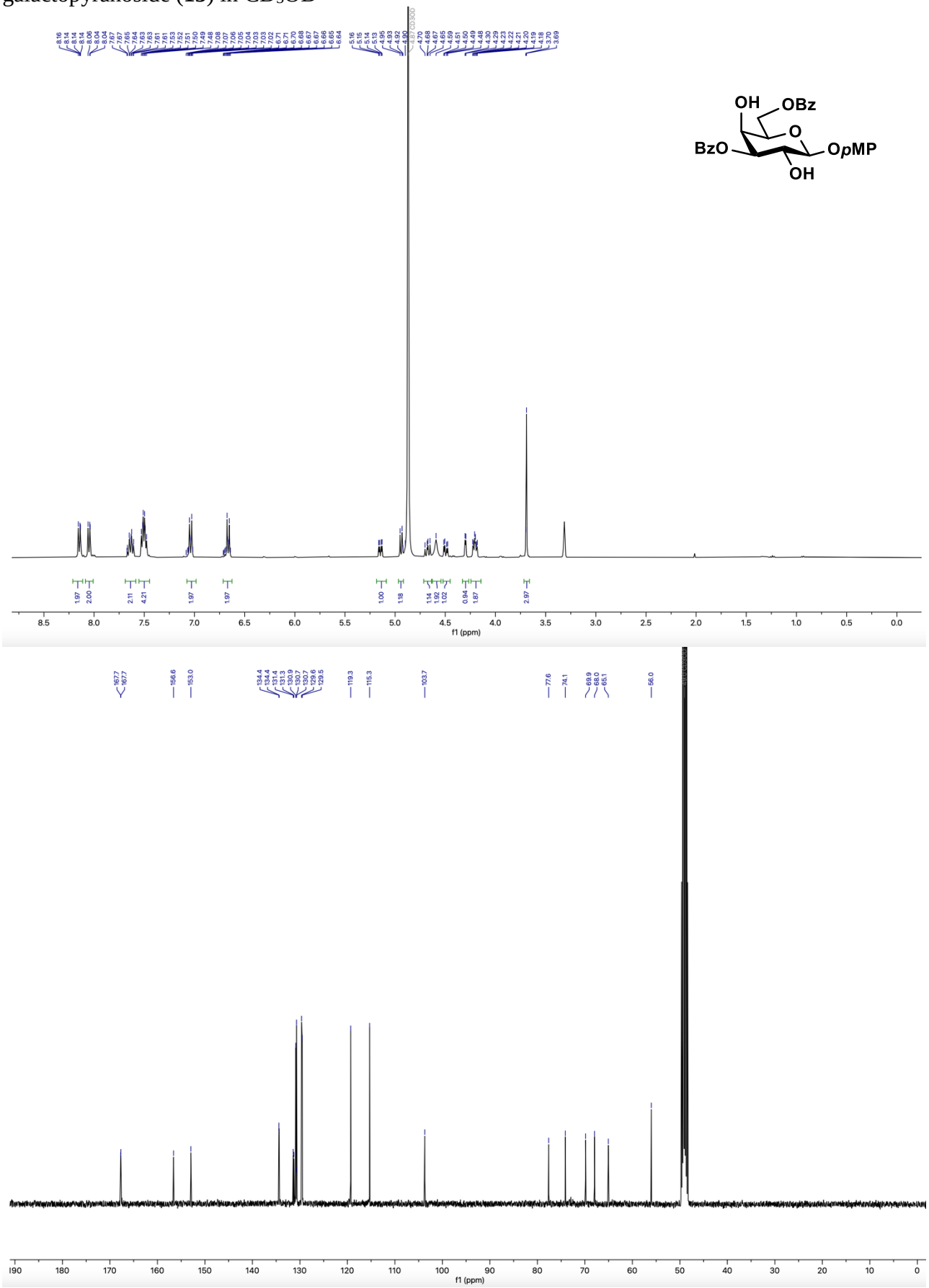


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-β-D-galactopyranoside (**14**) in CD_3OD

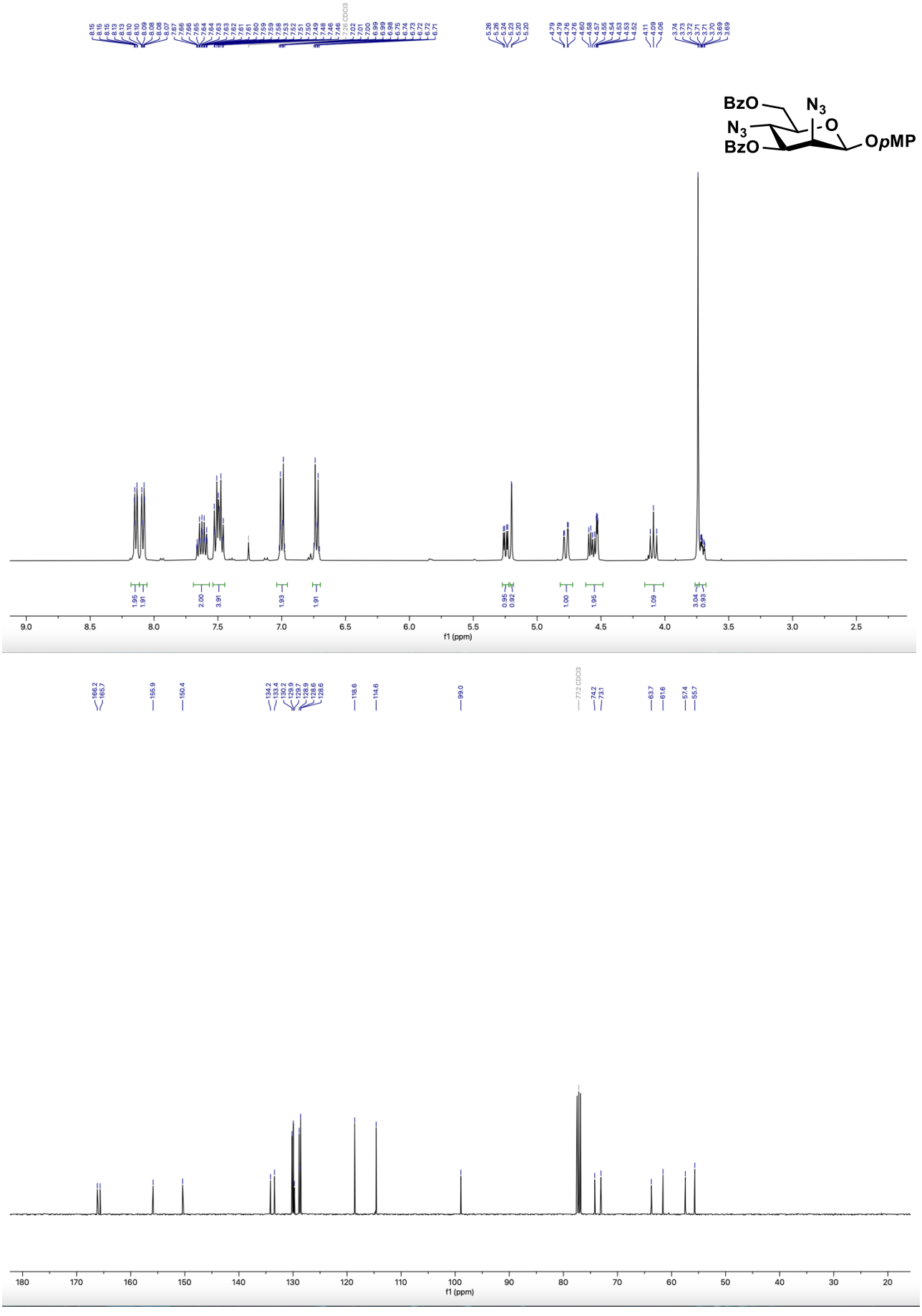




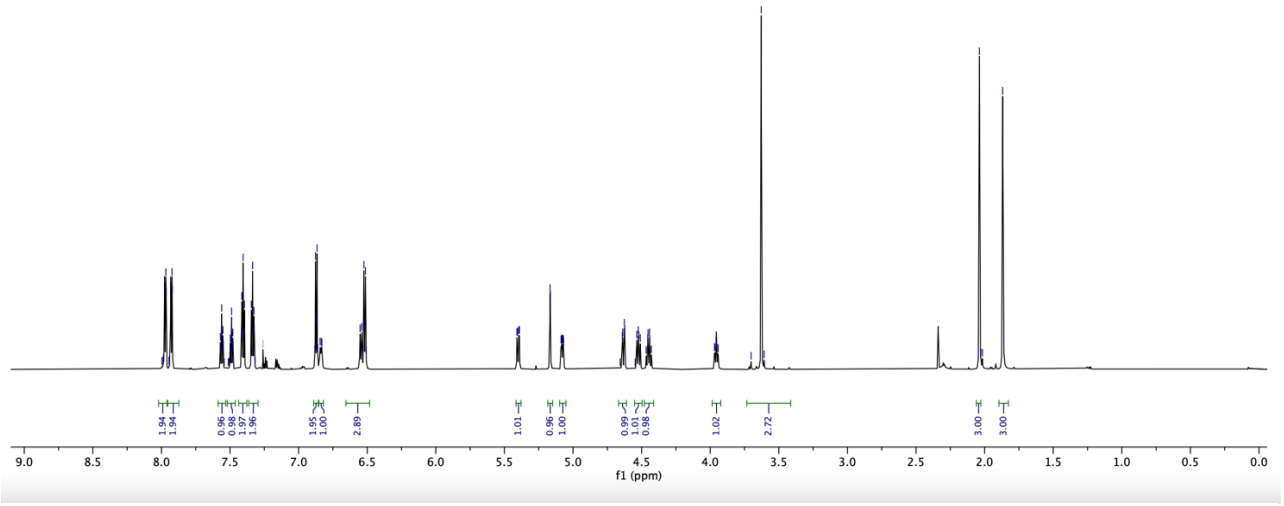
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-3,6-dibenzoyl-β-D-galactopyranoside (**15**) in CD_3OD

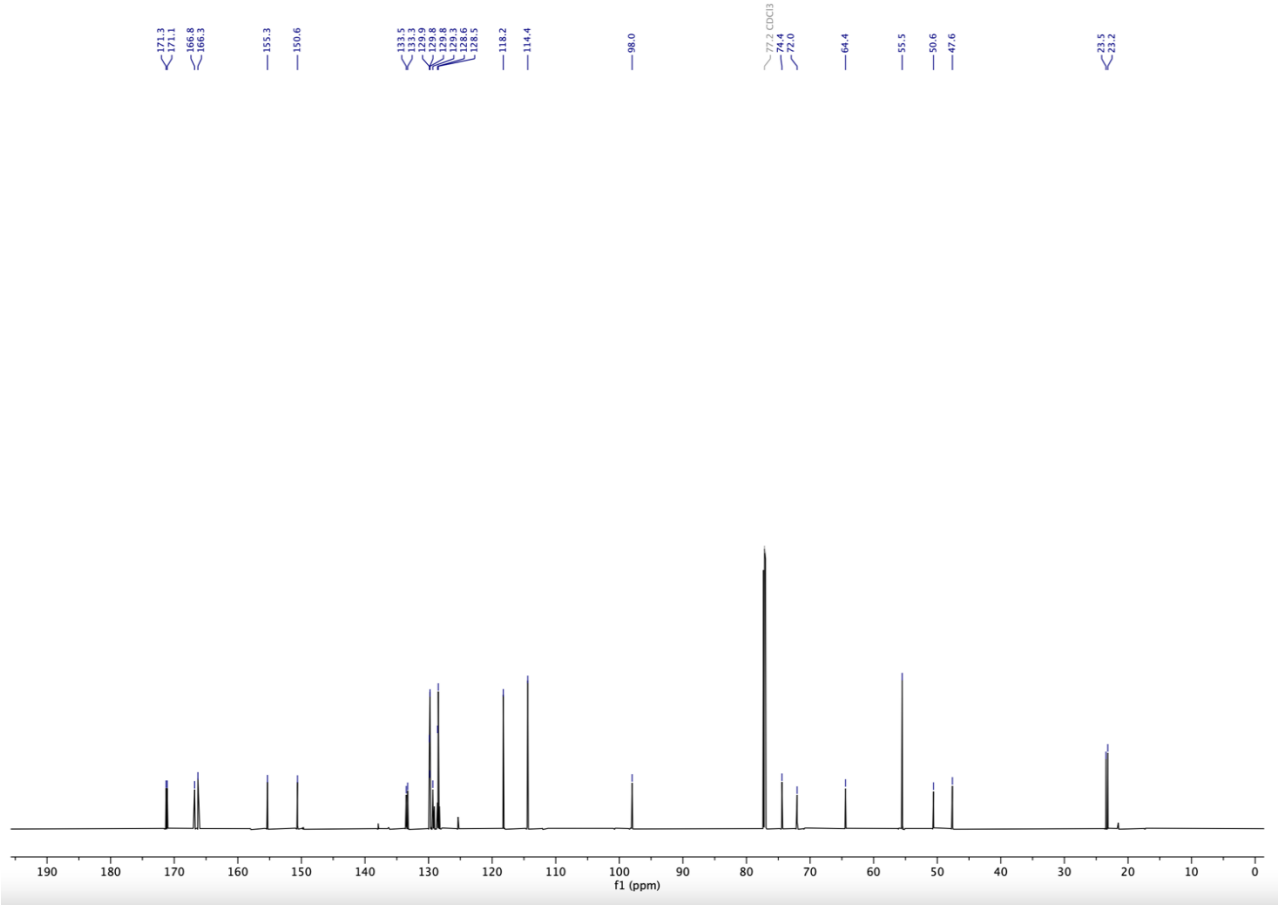


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-2,4-di-azido-3,6-dibenzoyl-2,4-dideoxy-β-D-mannopyranoside (**16**) in $CDCl_3$

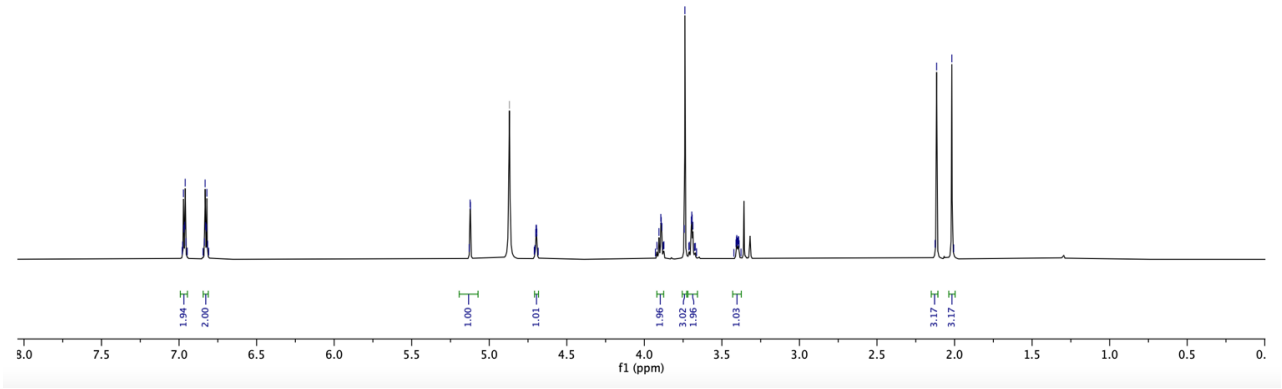


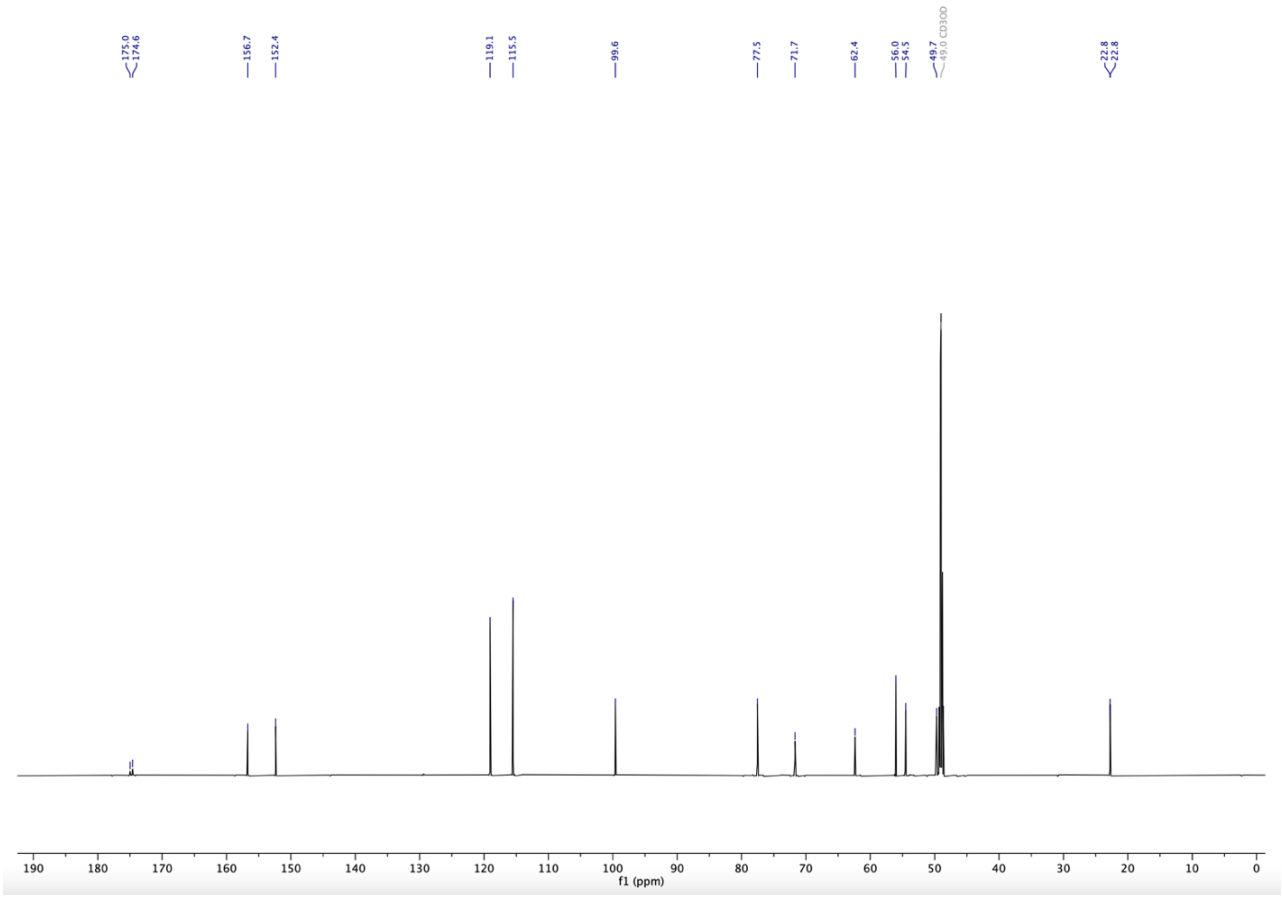
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-2,4-di-acetamido-3,6-dibenzoyl-2,4-dideoxy-β-D-mannopyranoside (**17**) in $CDCl_3$



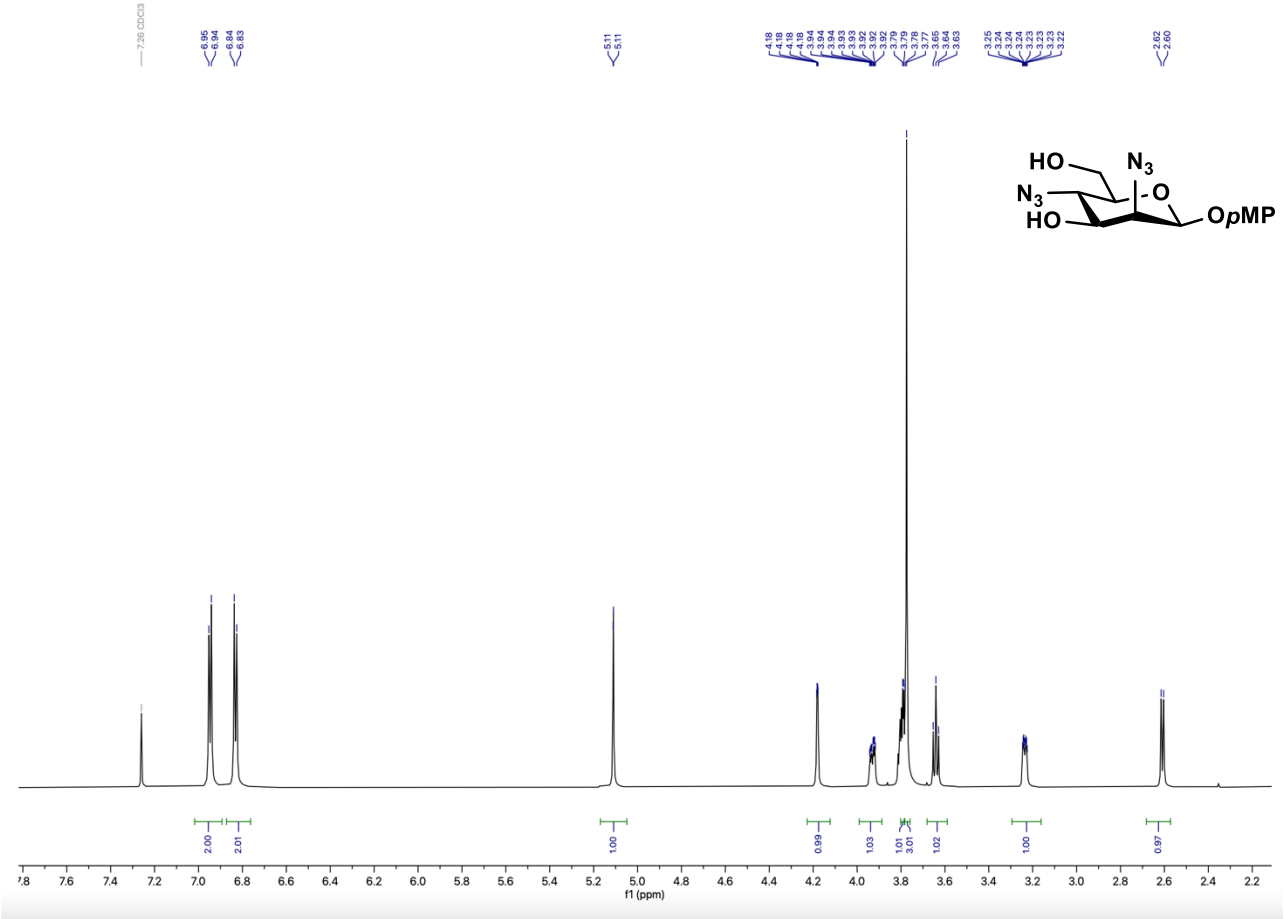


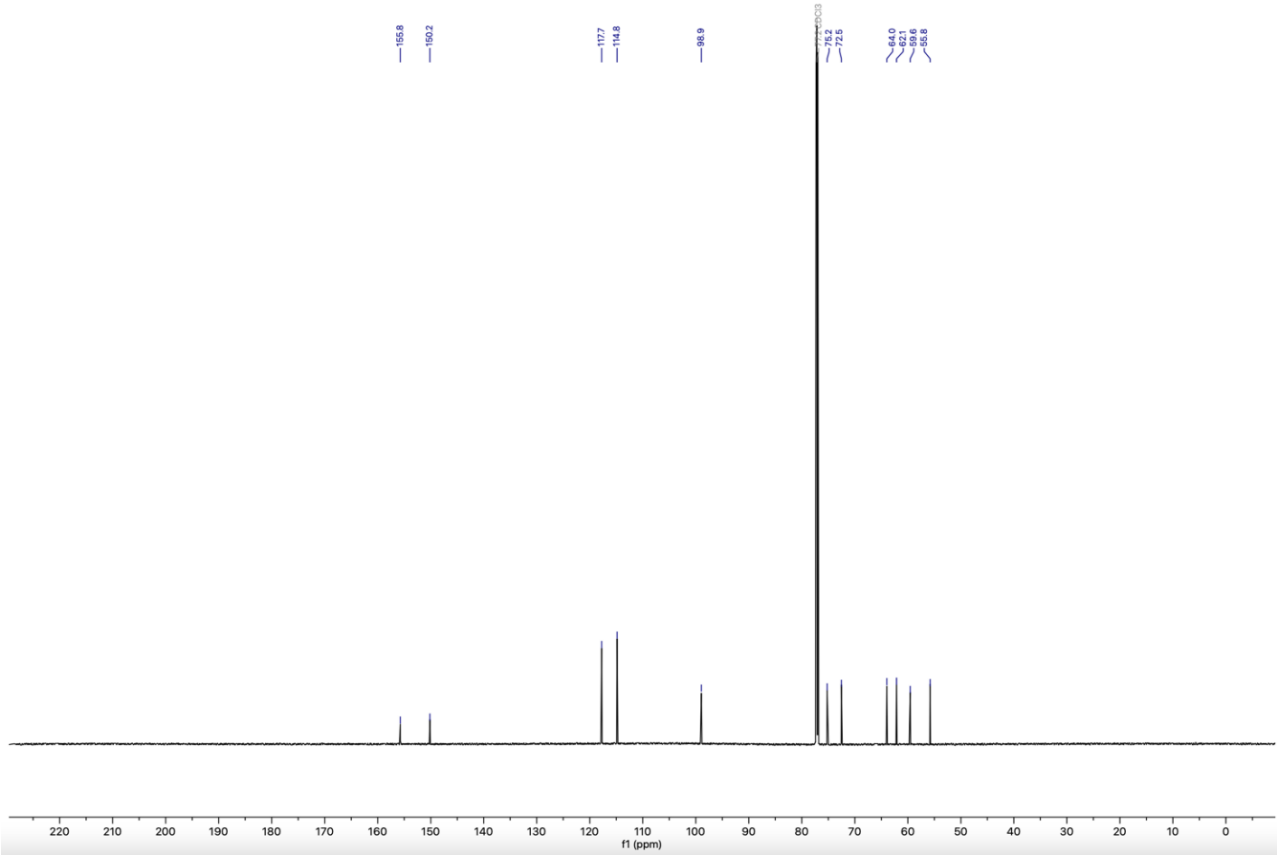
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-2,4-diacetamido-2,4-dideoxy-β-D-mannopyranoside (**18**) in CD_3OD



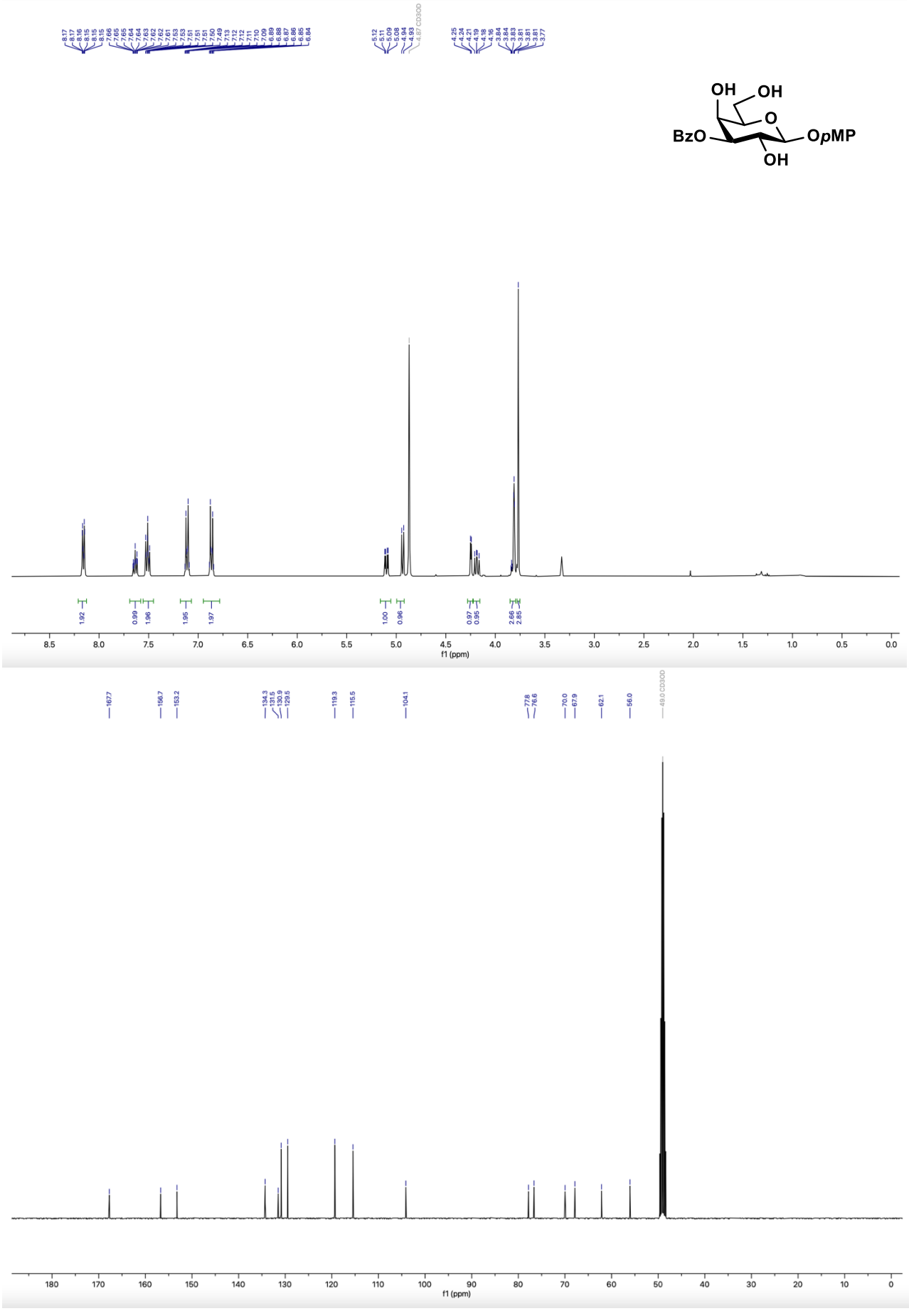


800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-2,4-di-azido-2,4-dideoxy-β-D-mannopyranoside (**19**) in $CDCl_3$

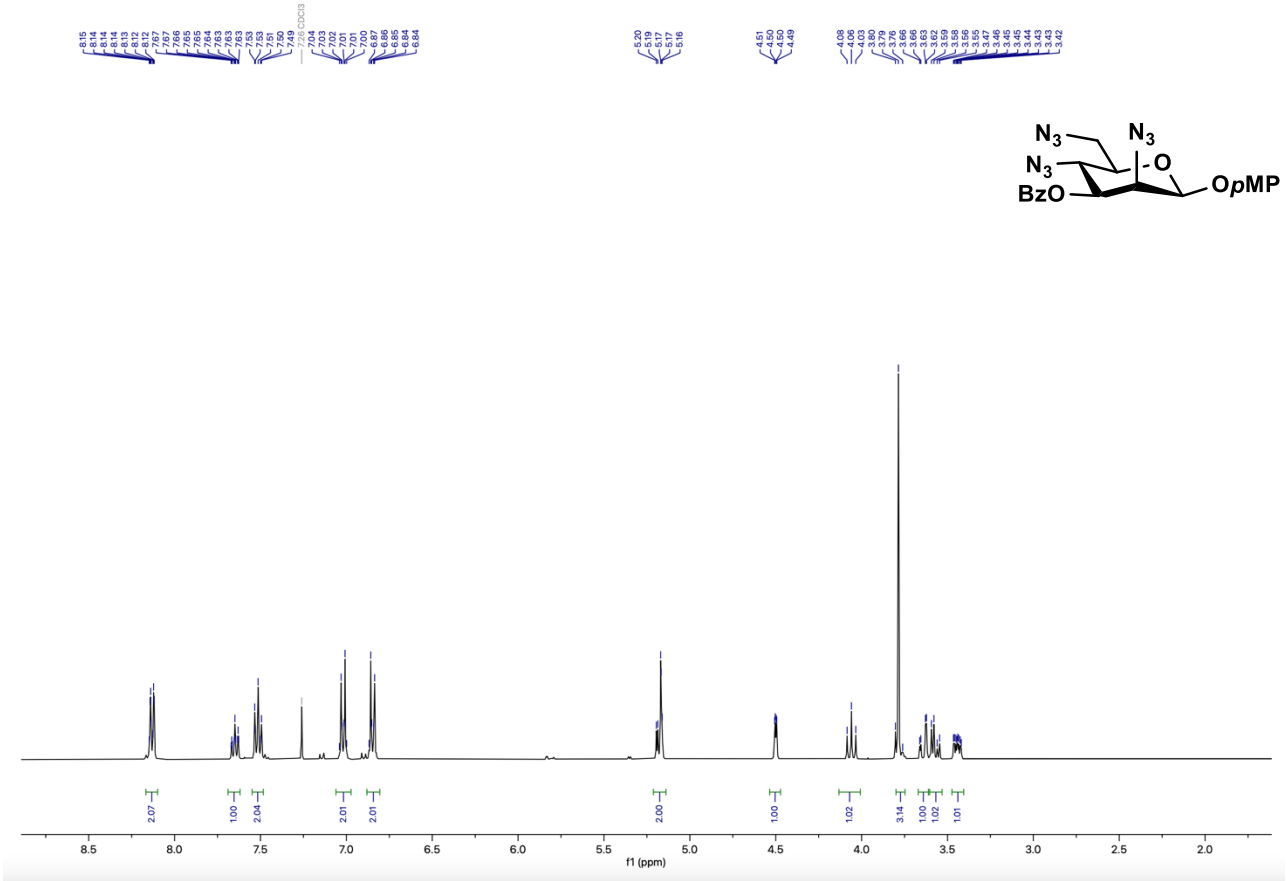


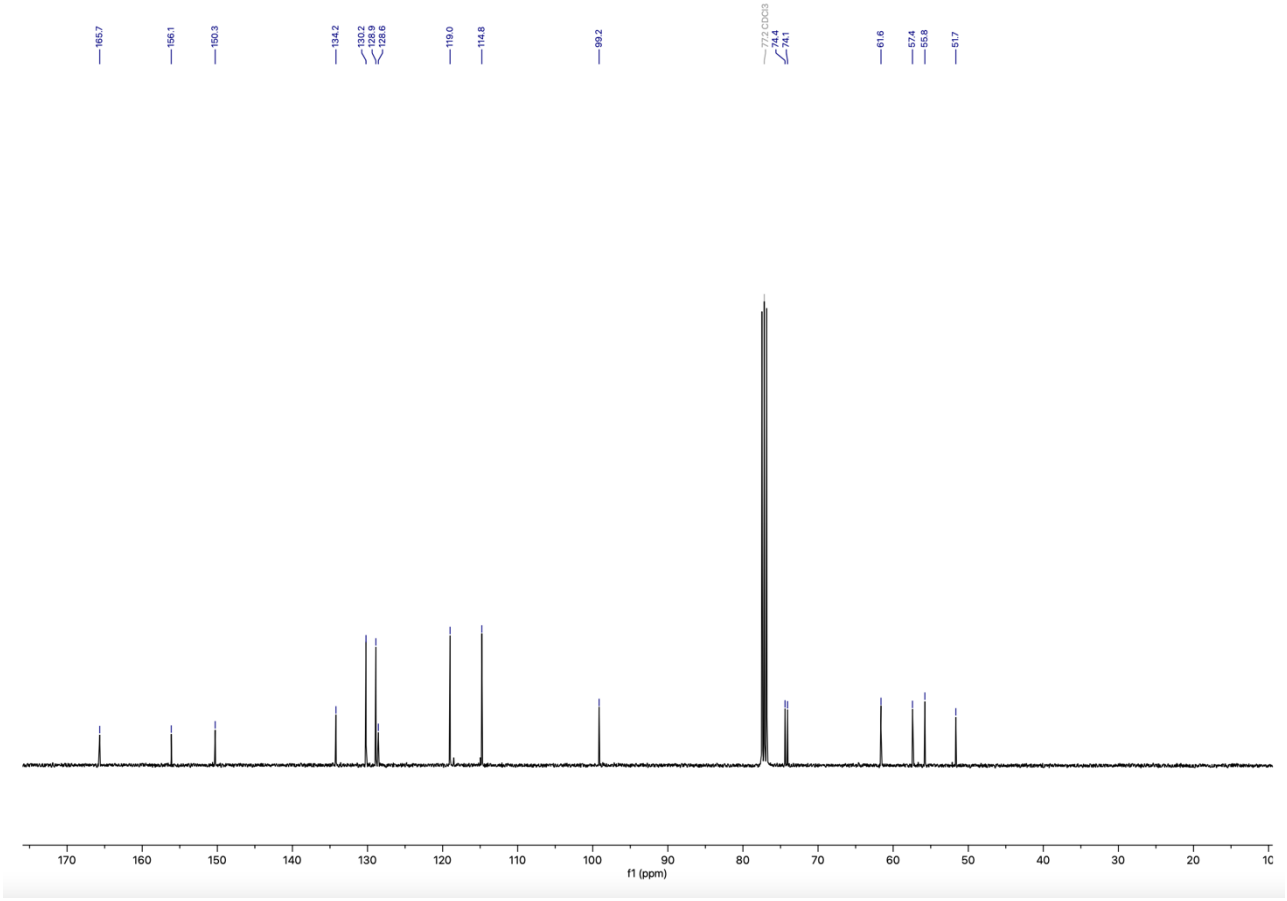


400 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-3-benzoyl-β-D-galactopyranoside (**20**) in CD_3OD

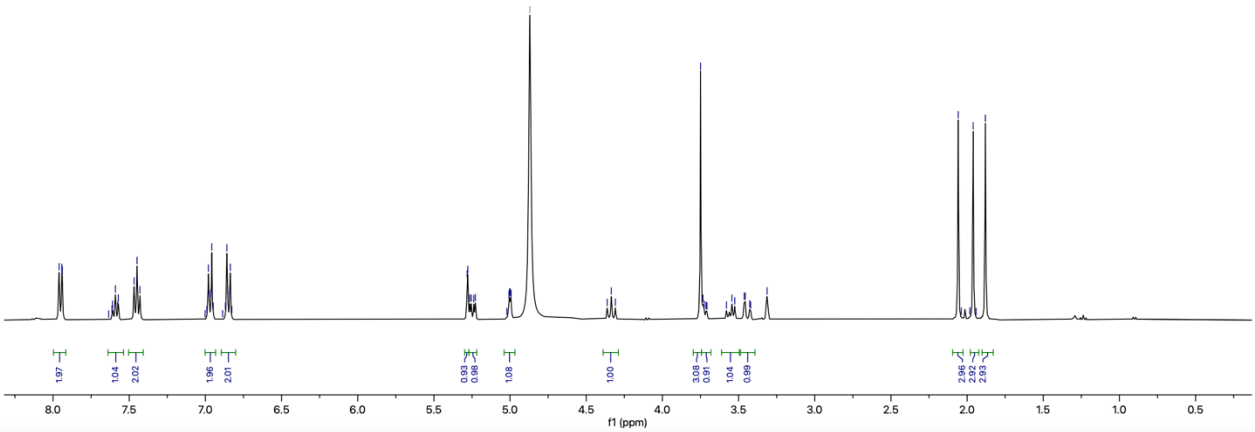


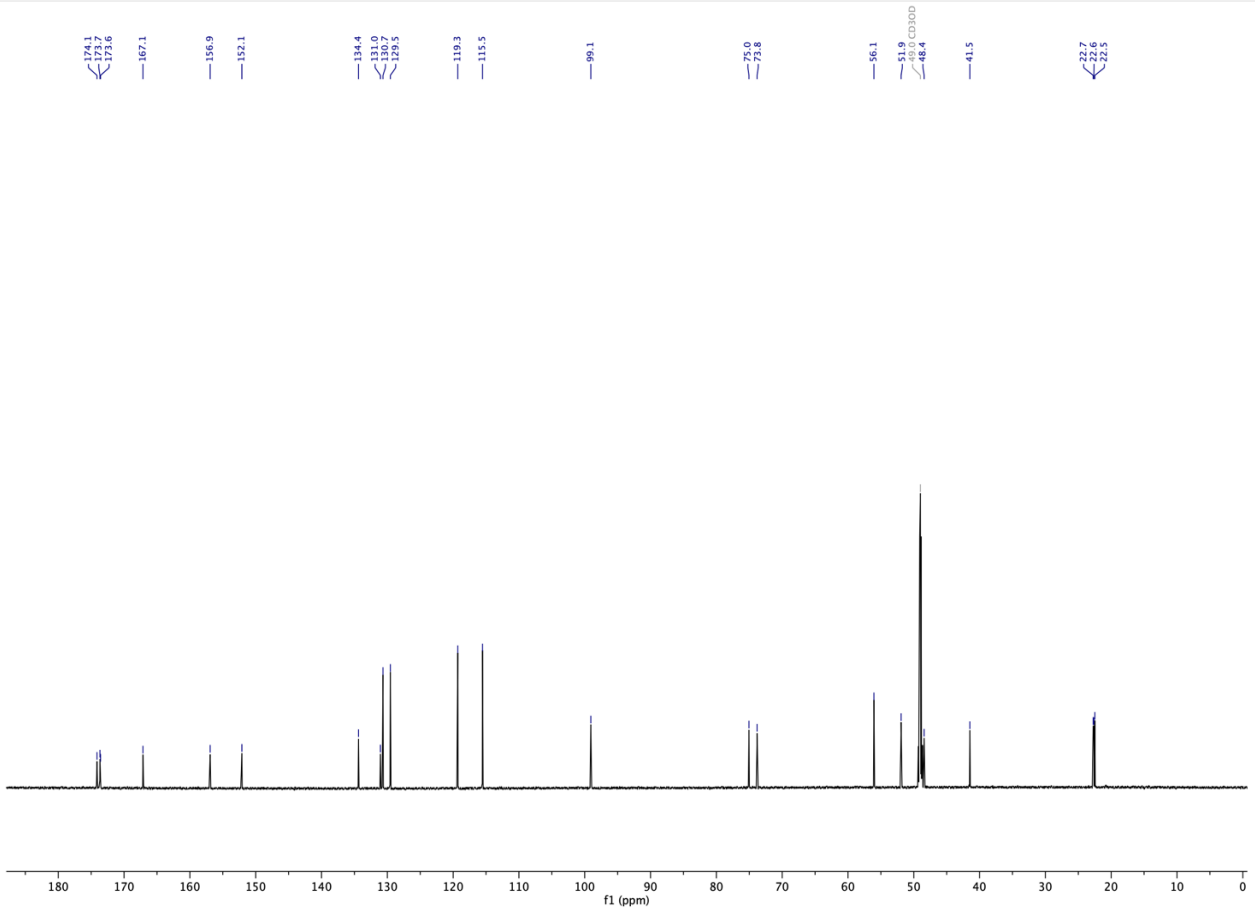
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-2,4,6-triazido-3-benzoyl-2,4,6-trideoxy-β-D-mannopyranoside (**21**) in $CDCl_3$



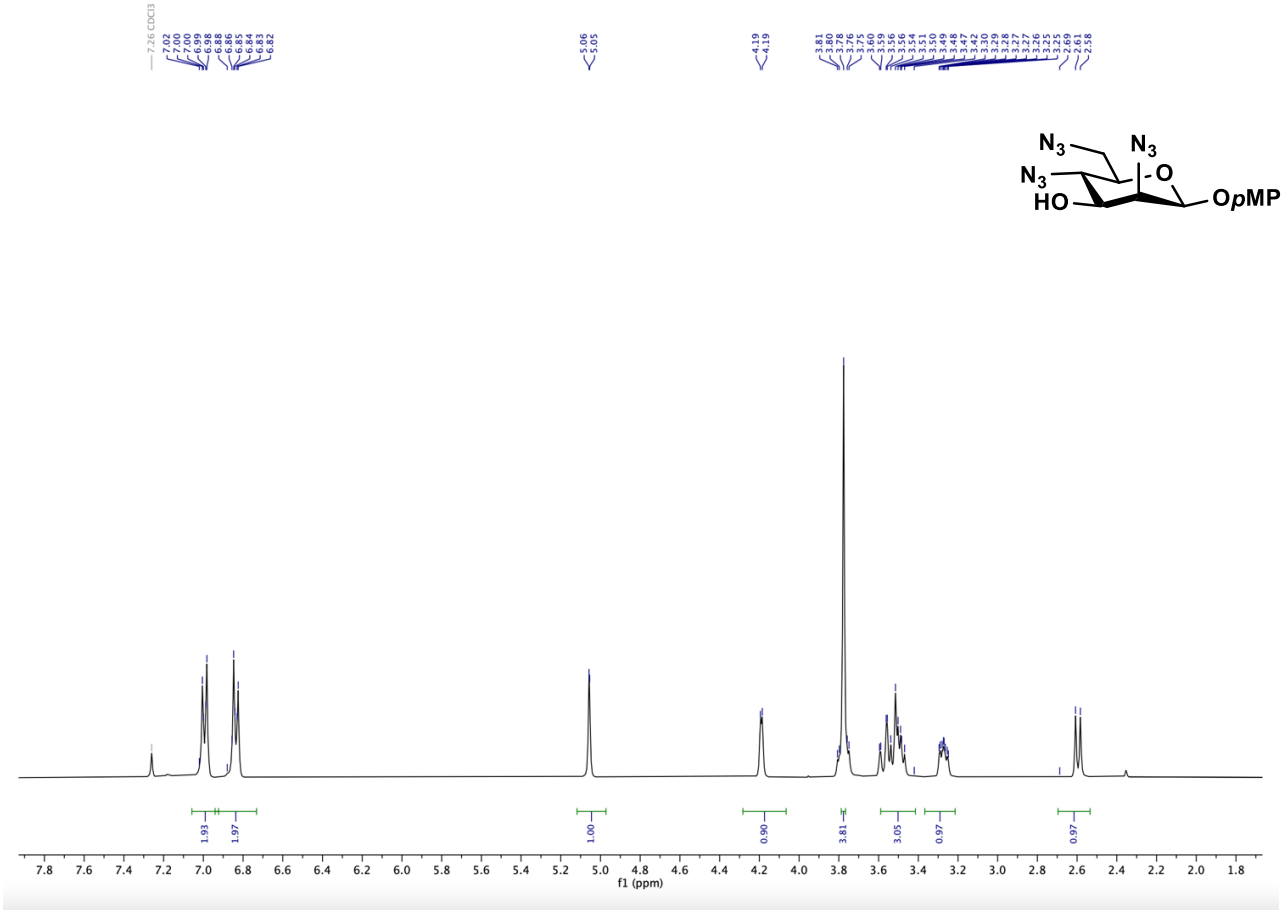


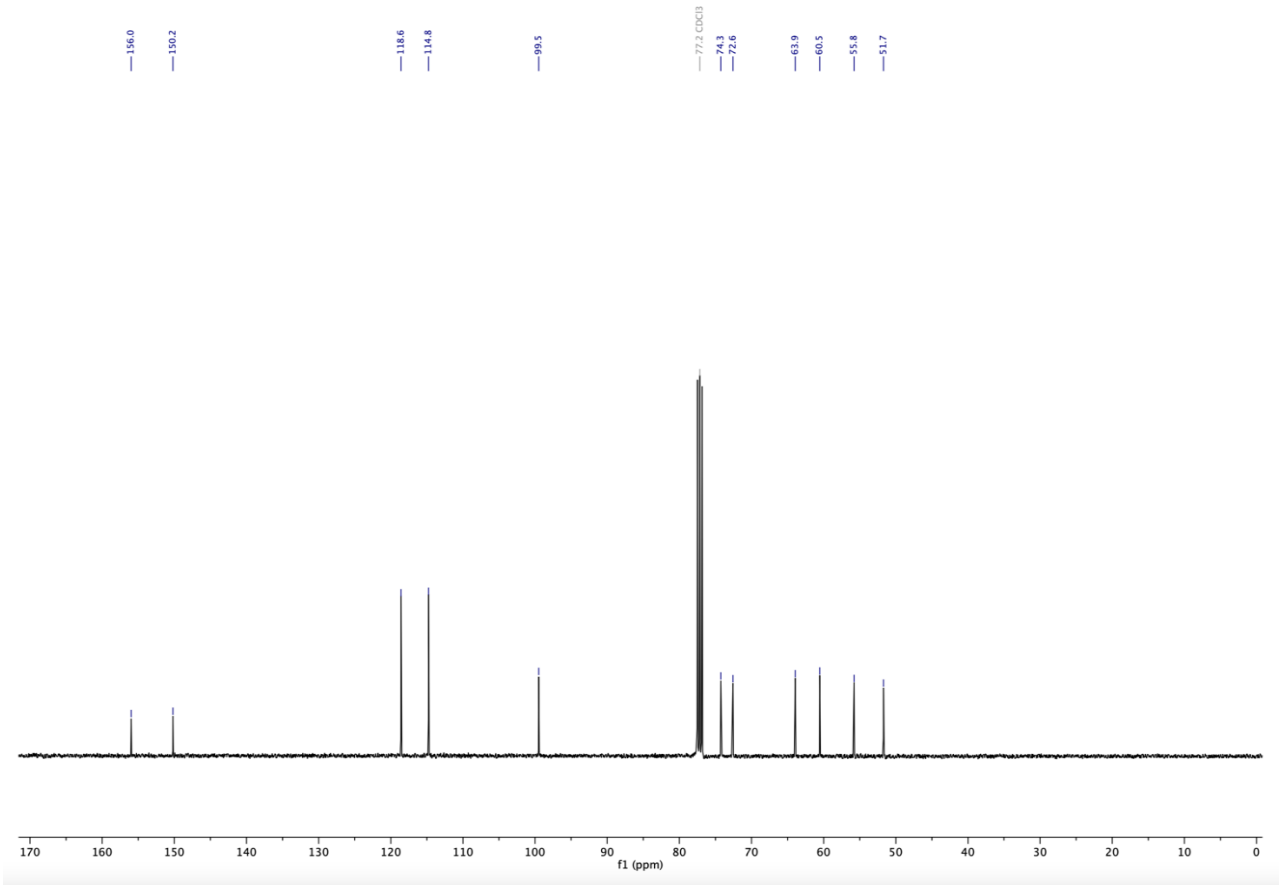
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxy phenyl-2,4,6-triacetamido-3-benzoyl-2,4,6-trideoxy-β-D-mannopyranoside (**22**) in CD_3OD



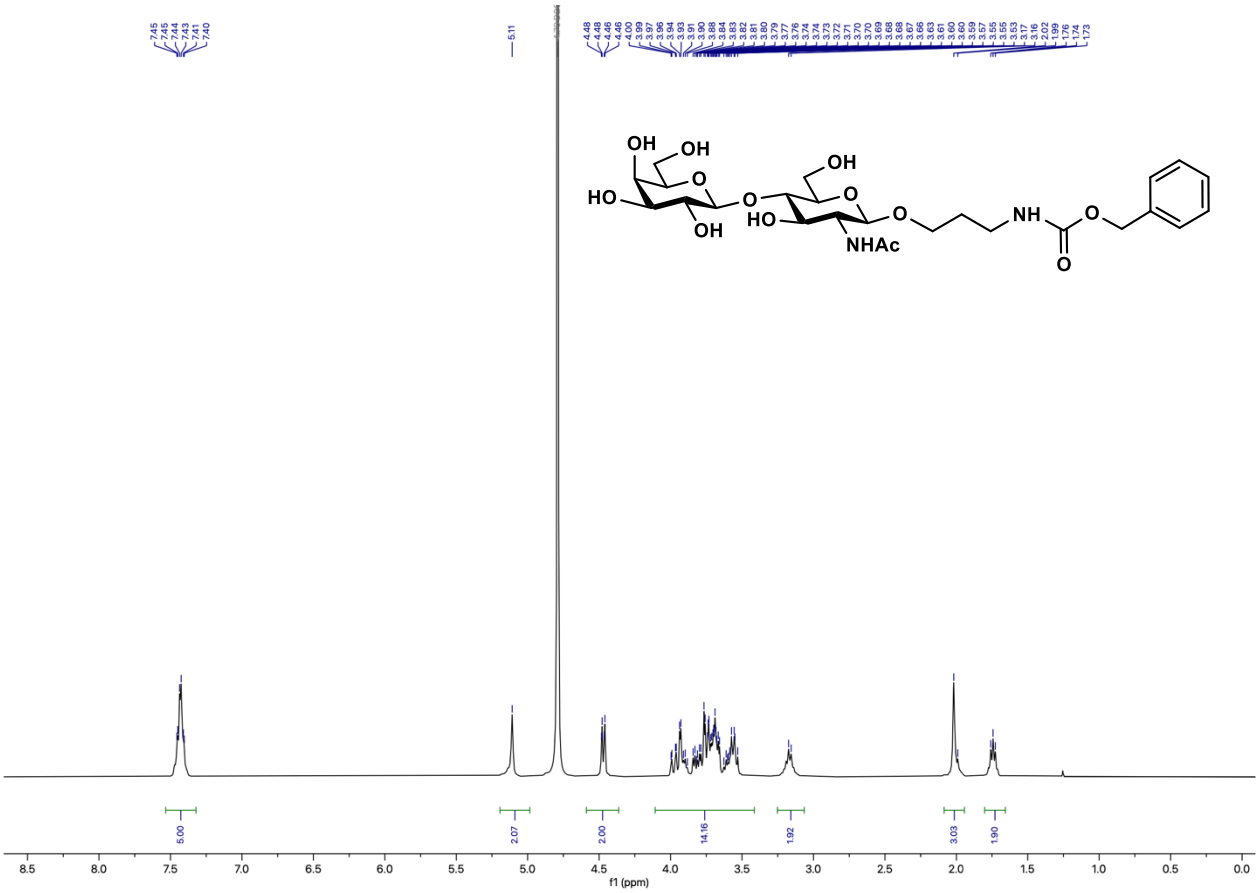


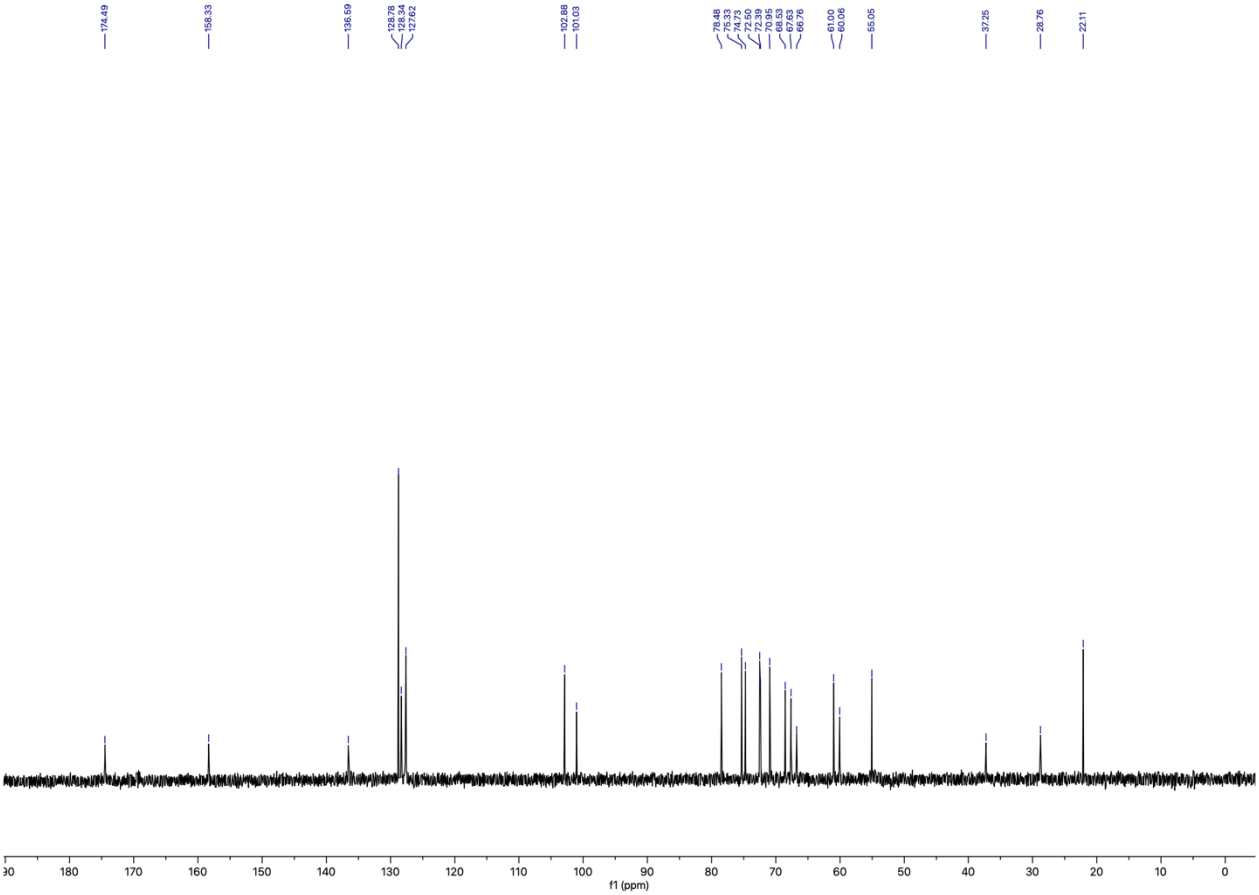
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of *p*-methoxyphenyl-2,4,6-triazido-2,4,6-trideoxy-β-D-mannopyranoside (**23**) in $CDCl_3$



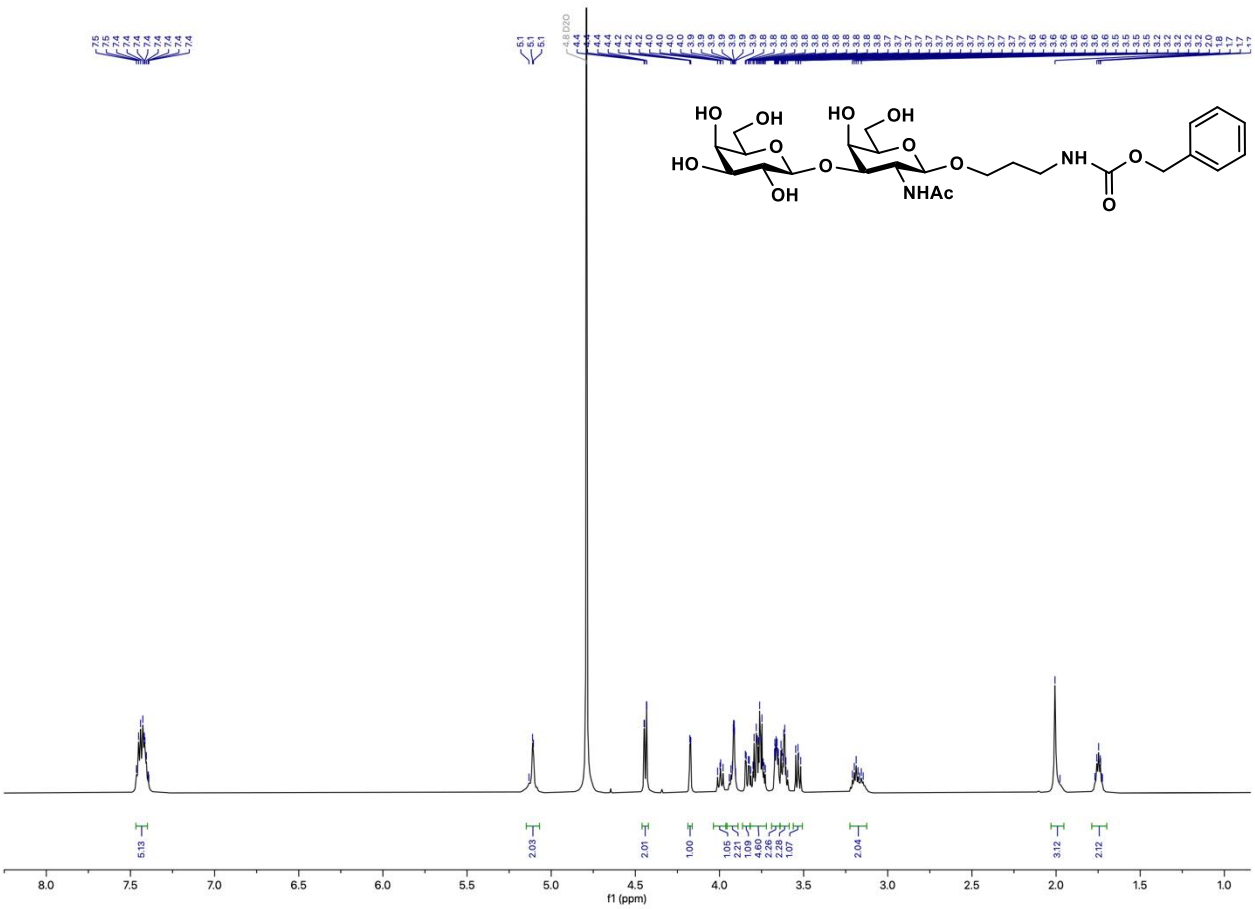


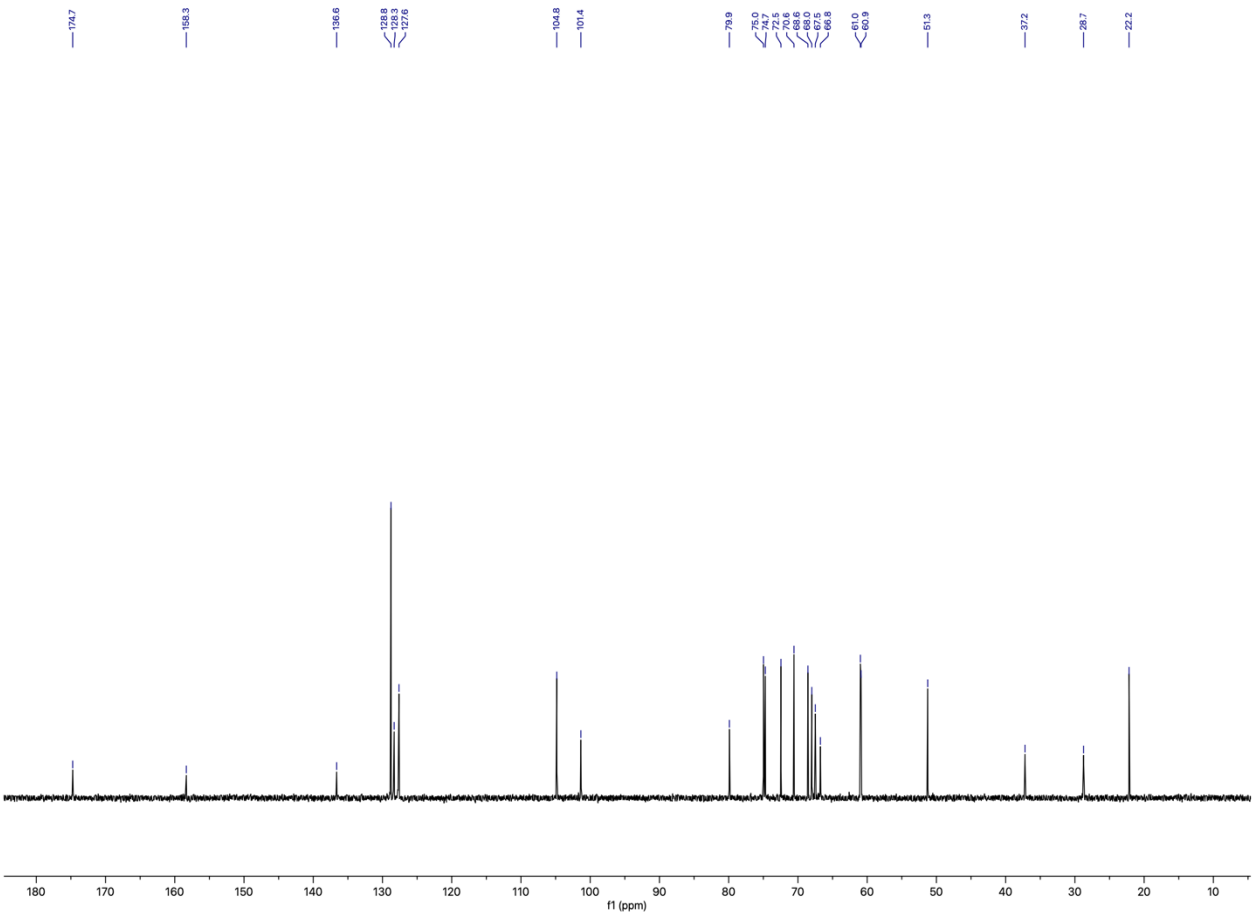
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of LacNAcβProNHCbz (**25**) in D_2O



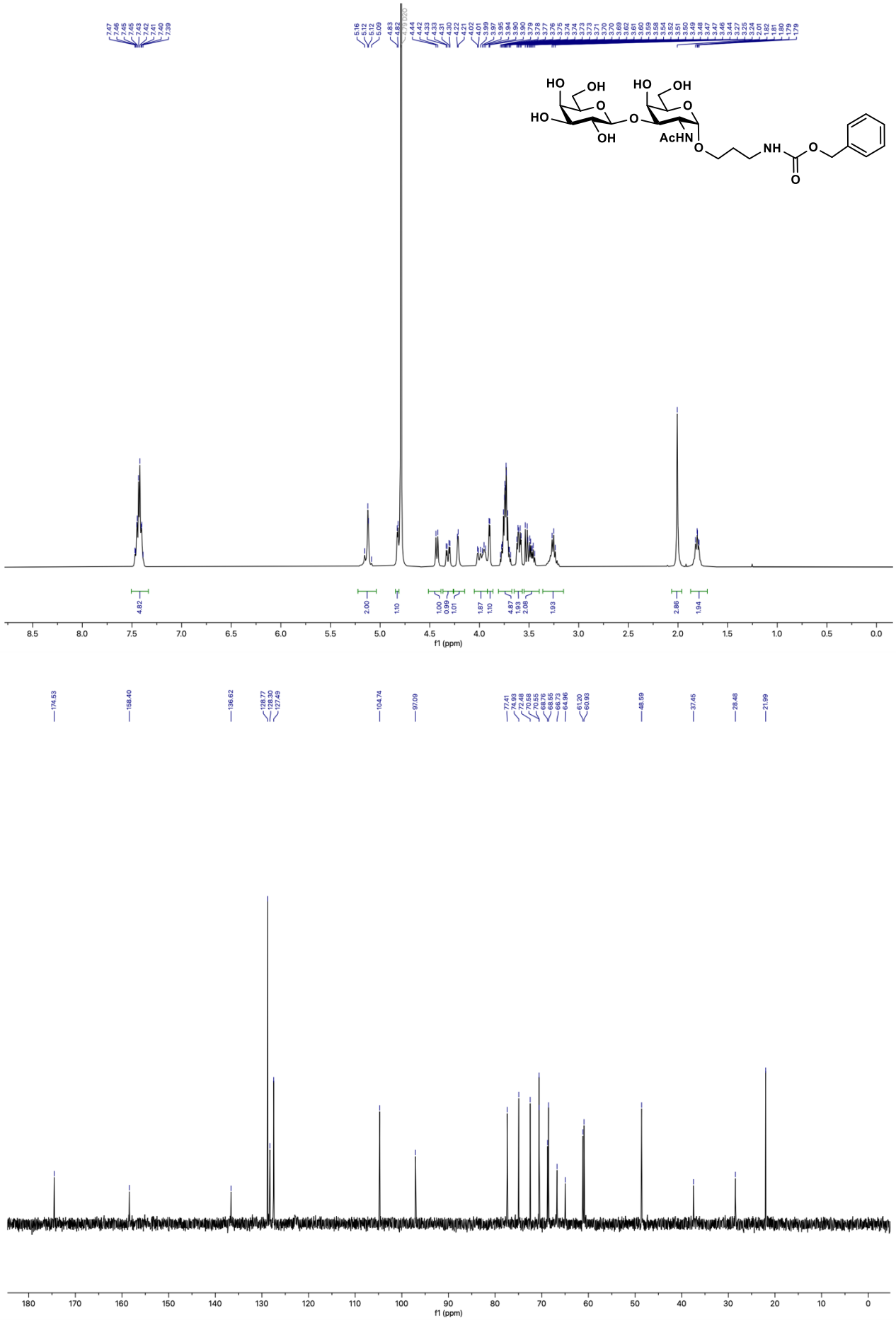


800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Galβ1–3GalNAcβProNHCbz (**26**) in D_2O

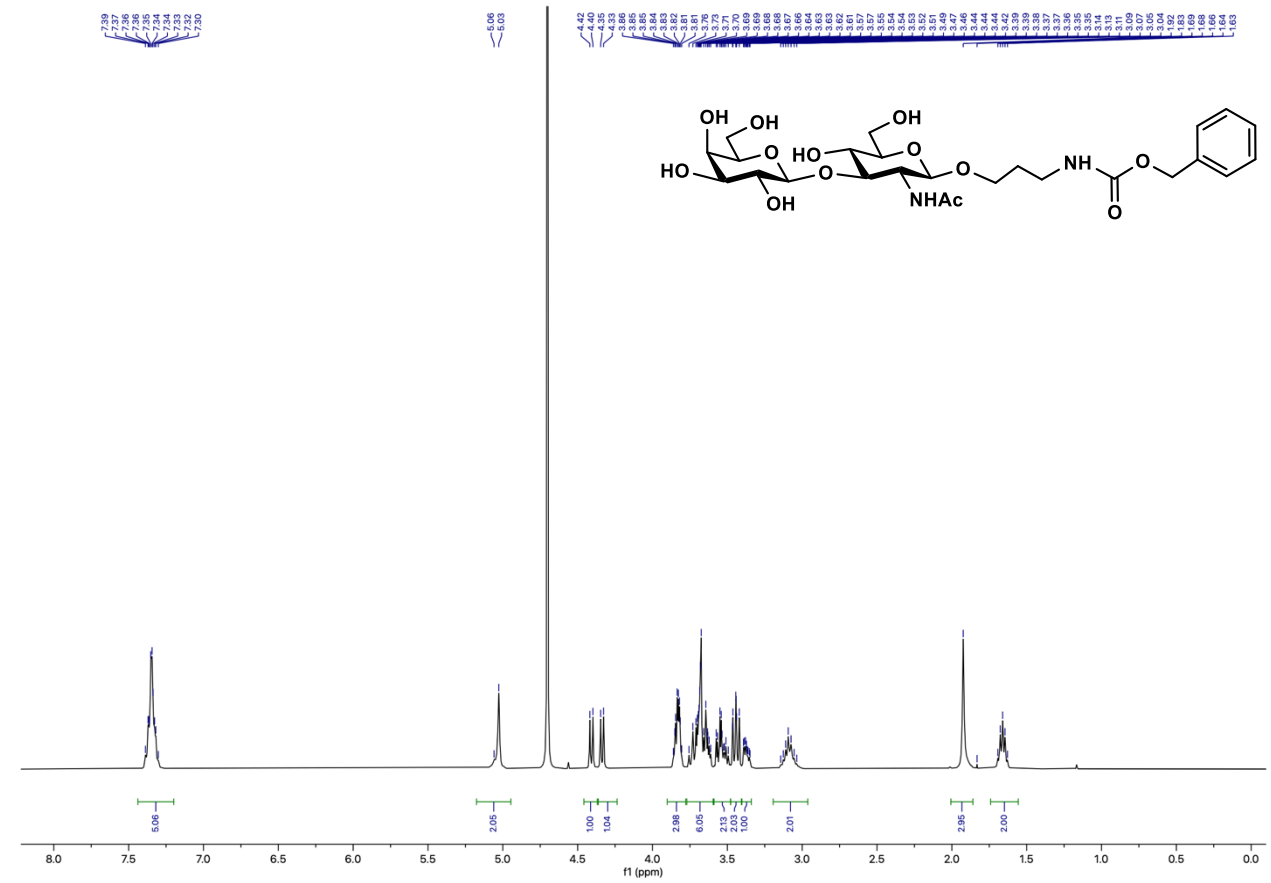


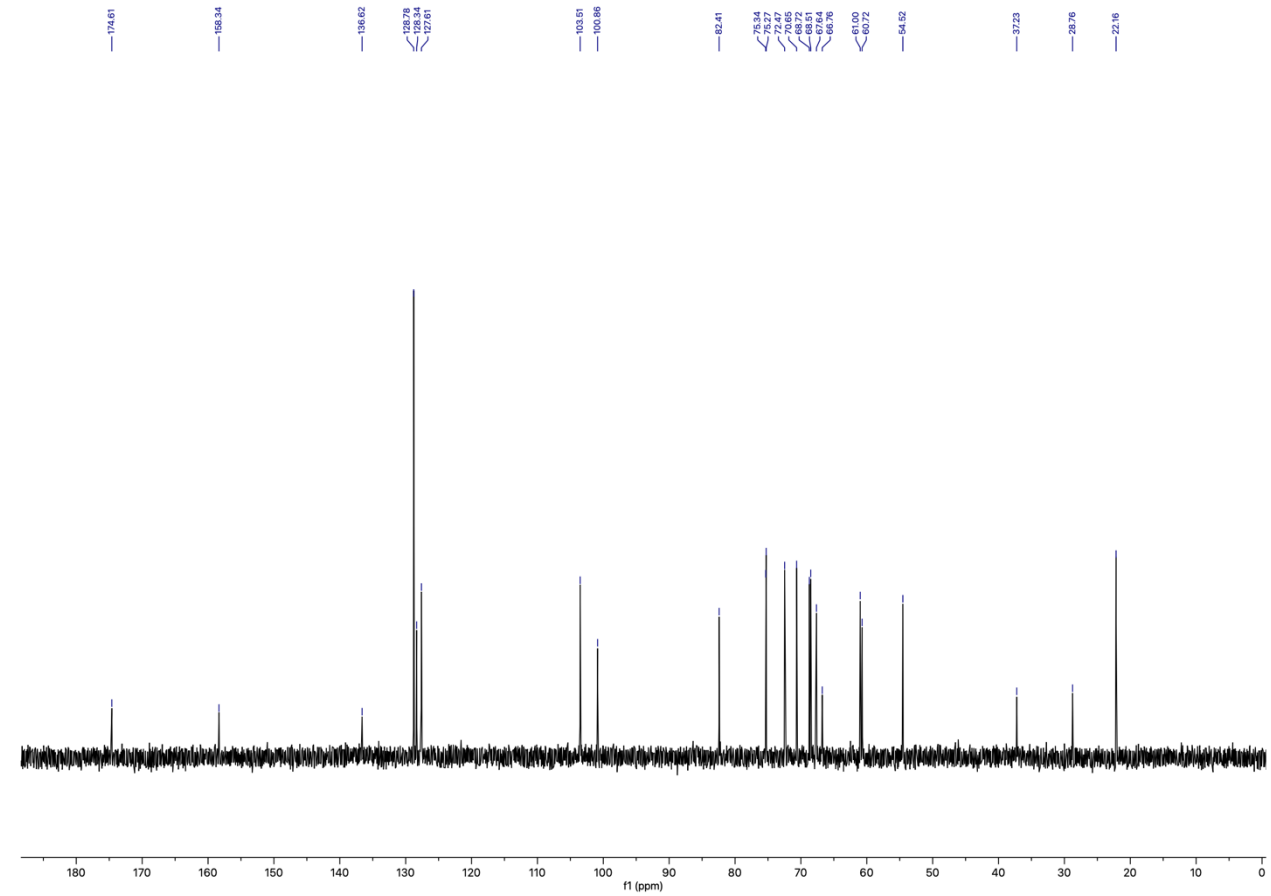


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Galβ1–3GalNAcαProNHCbz (**27**) in D_2O

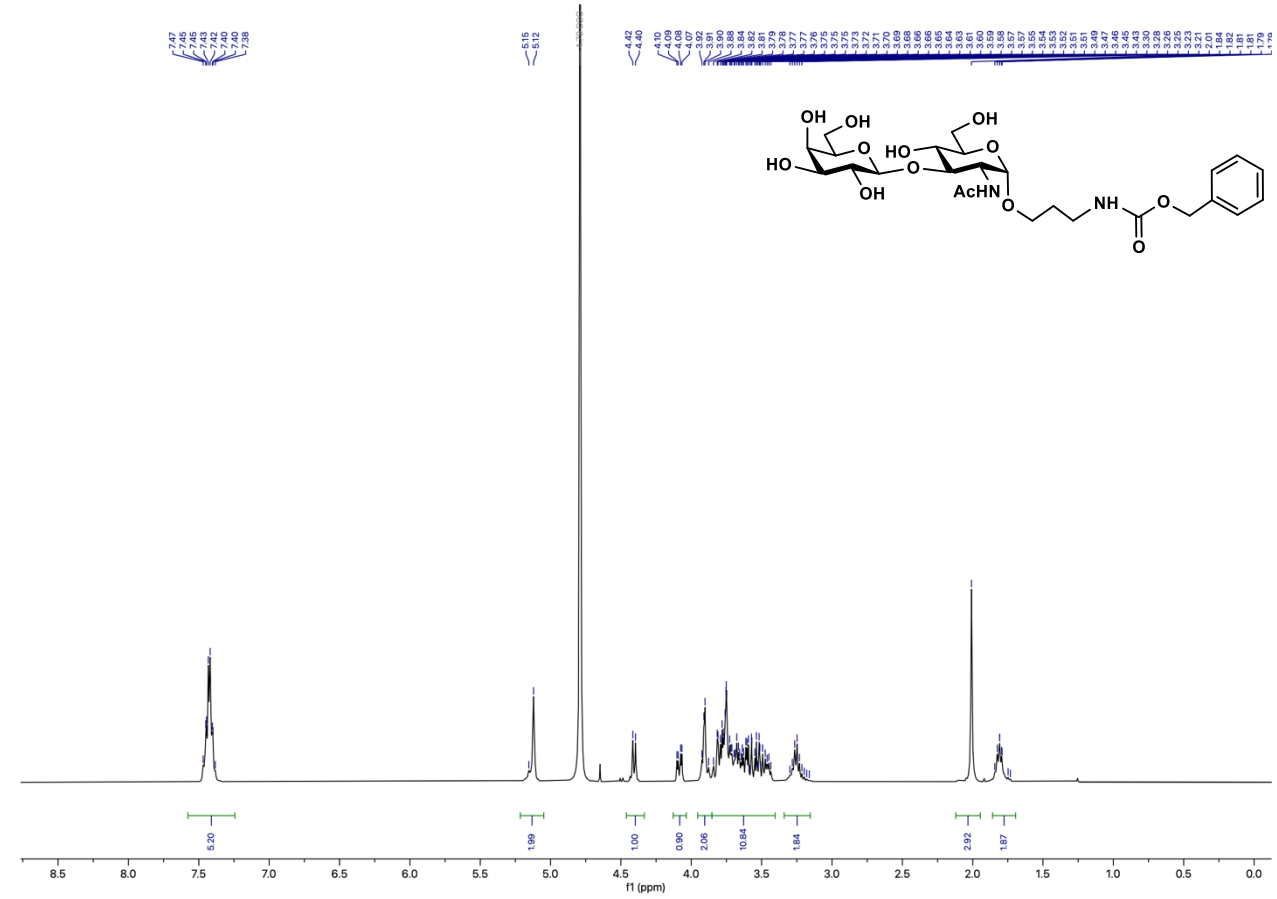


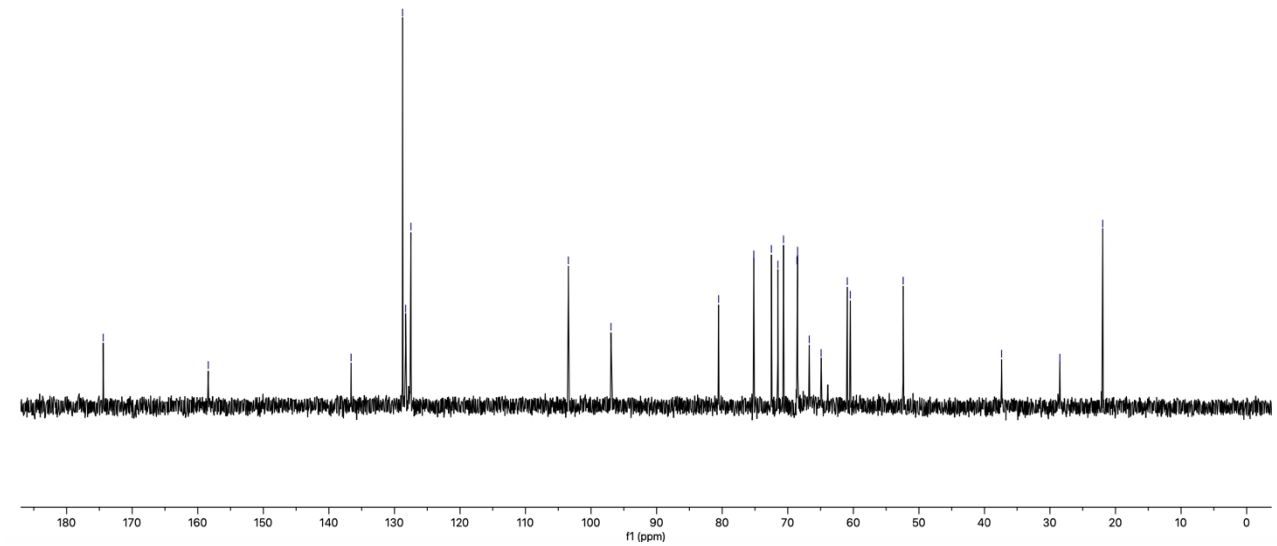
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Galβ1−3GlcNAcβProNHCbz (**28**) in D_2O



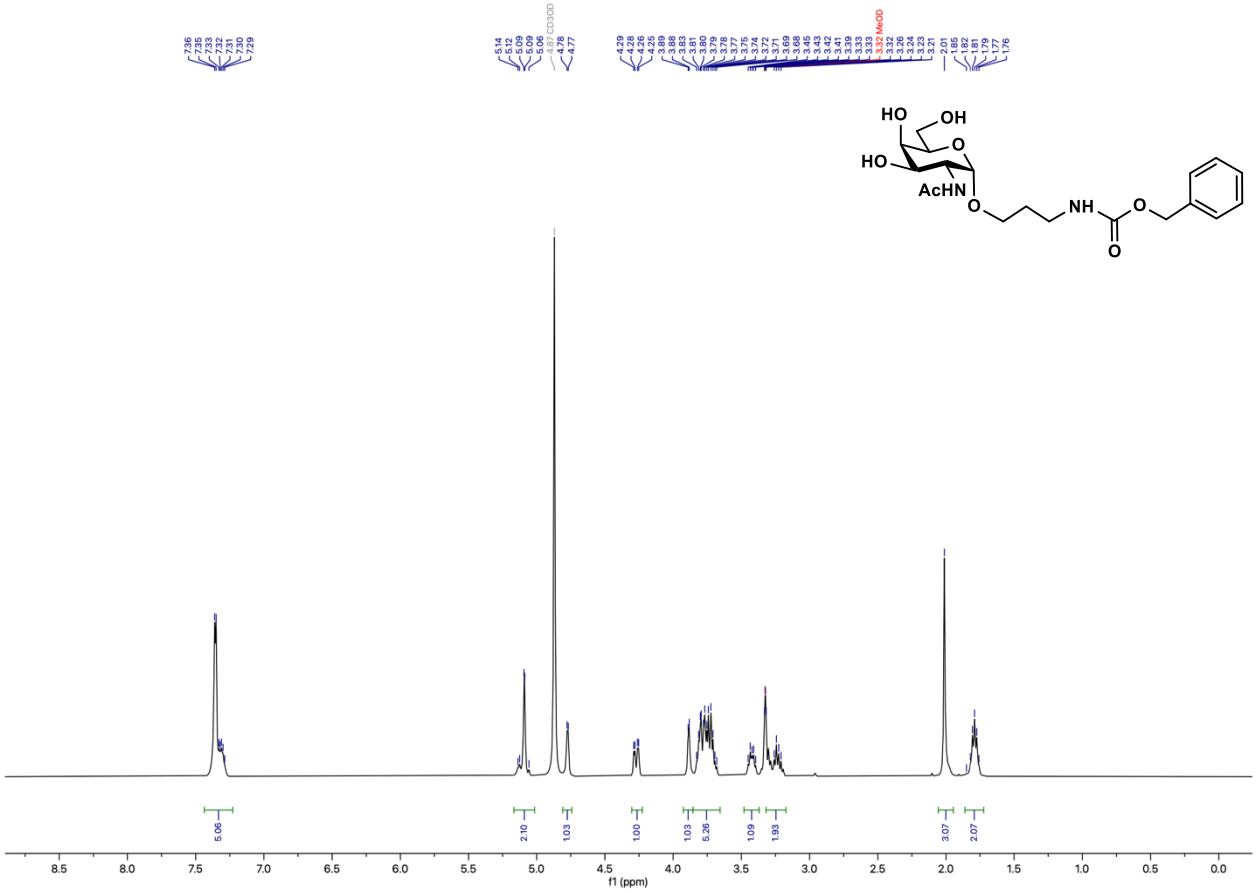


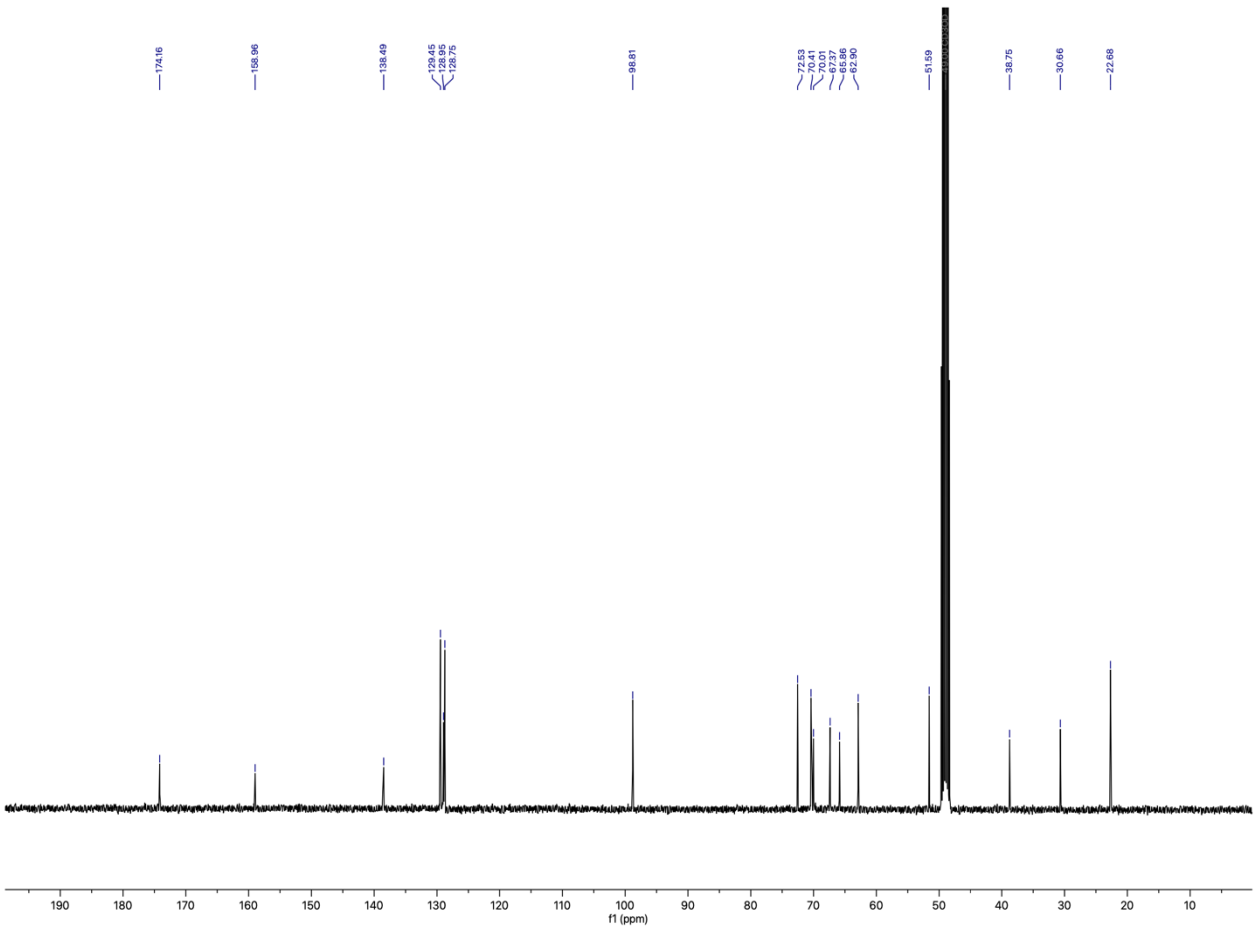
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Galβ1–3GlcNAcαProNHCbz (**29**) in D_2O



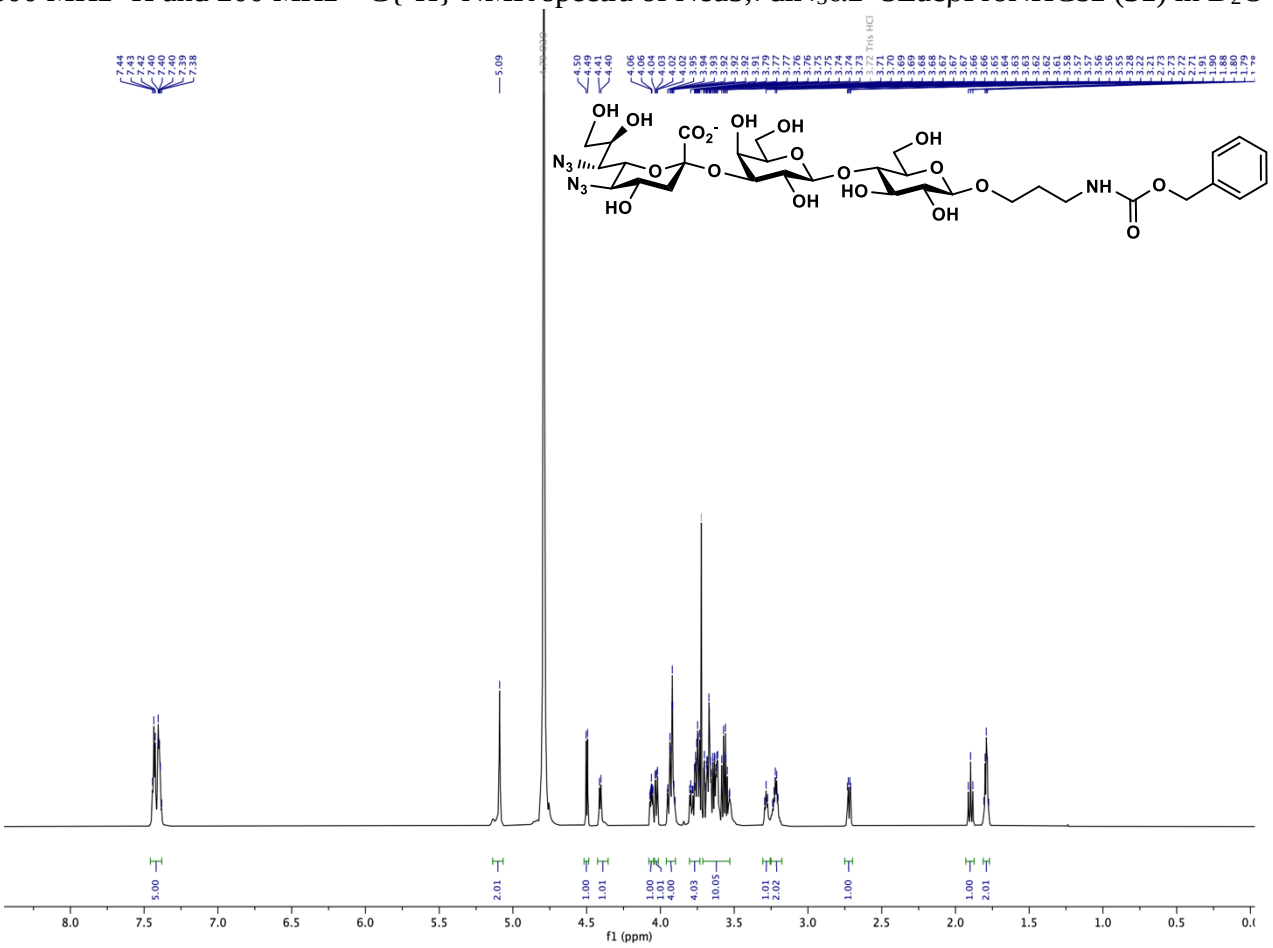


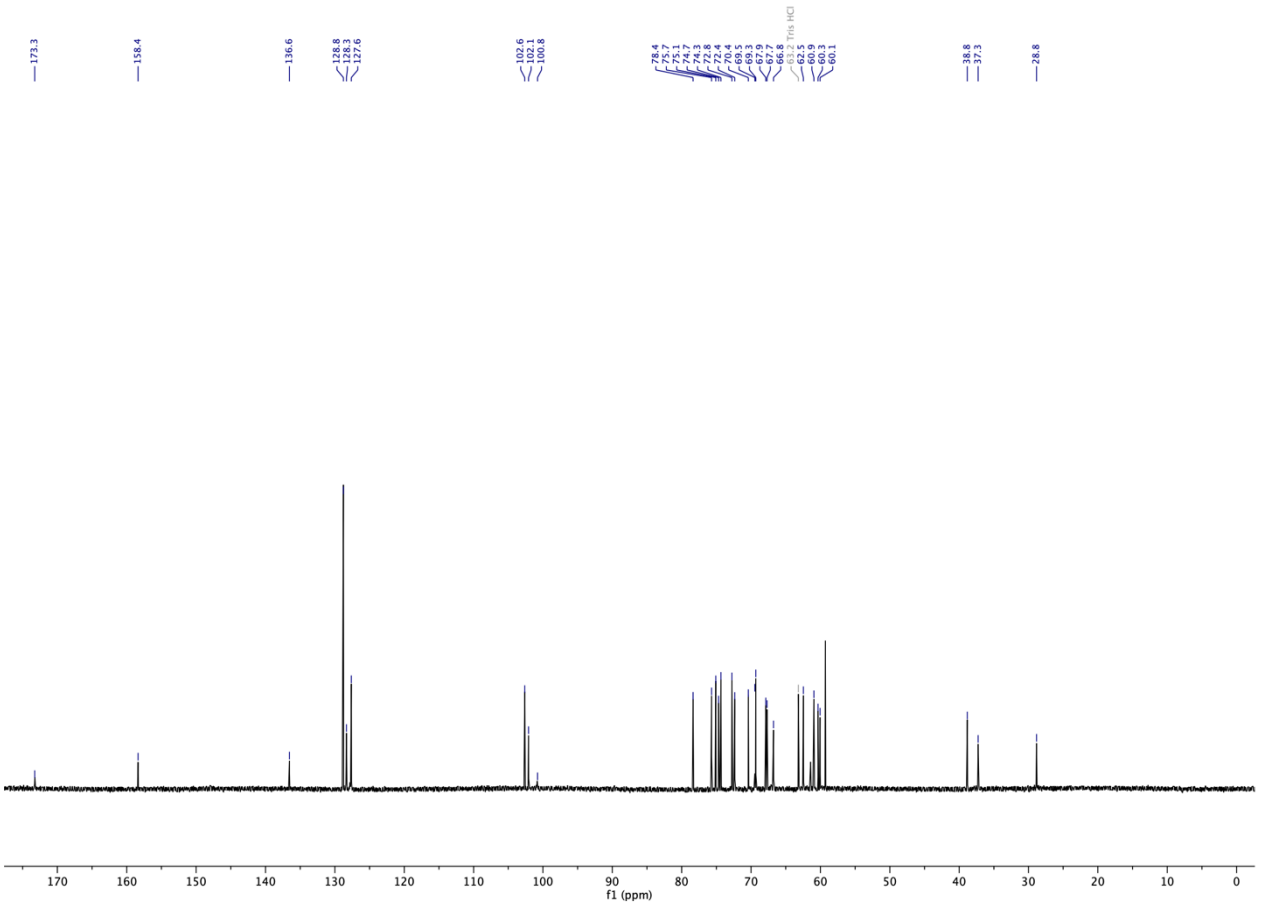
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of GalNAcαProNHCbz (**30**) in CD_3OD



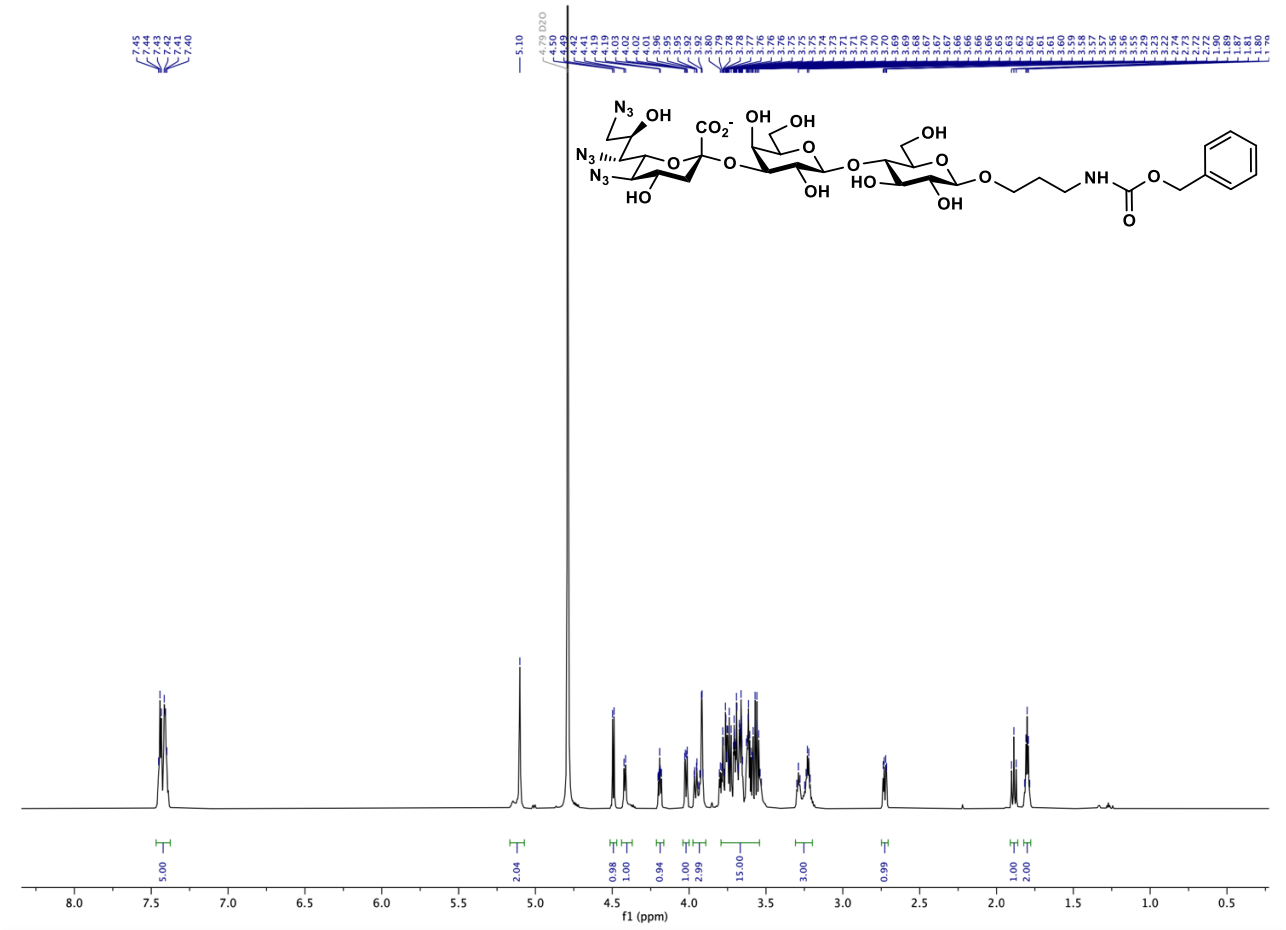


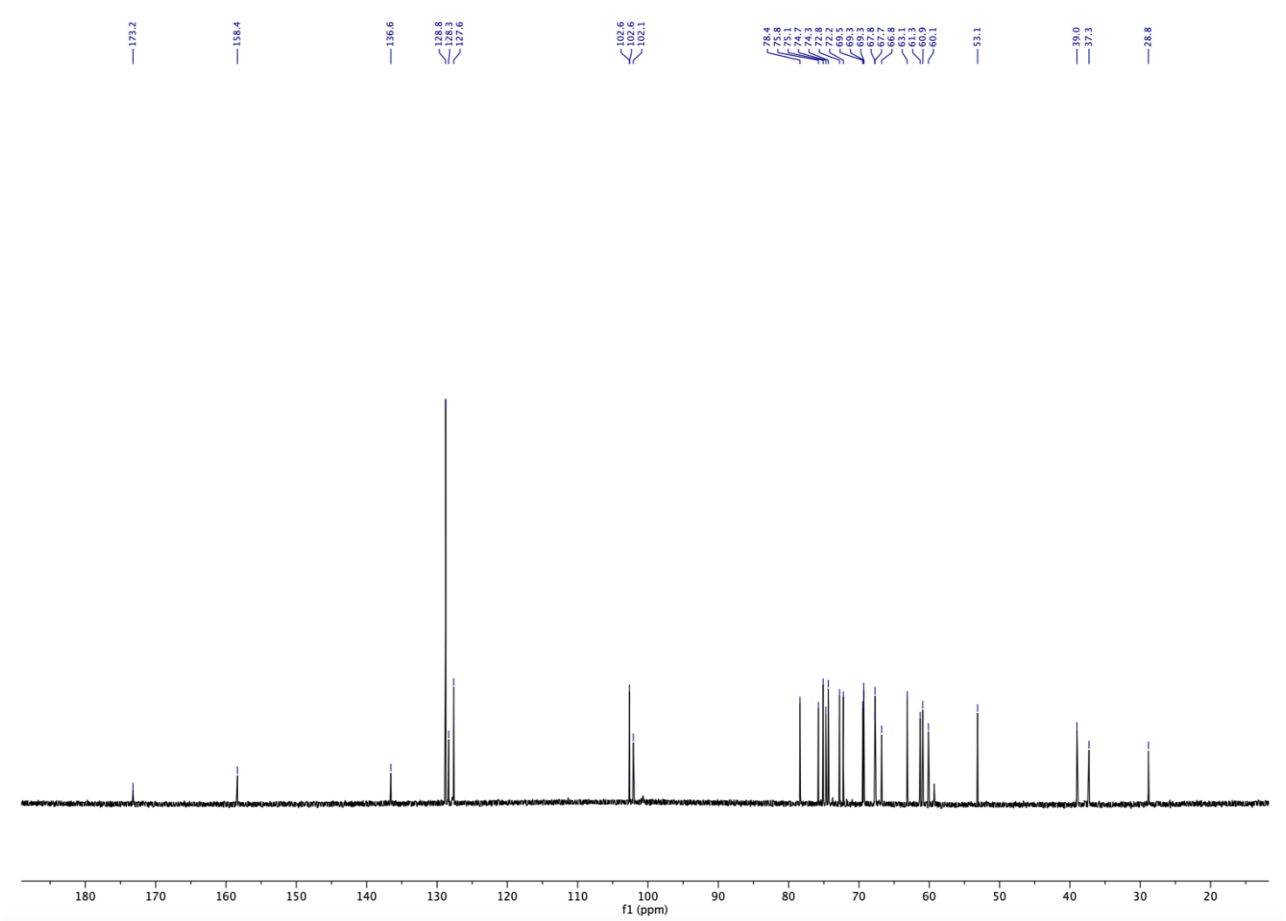
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN_3α2–3LacβProNHCbz (**31**) in D_2O



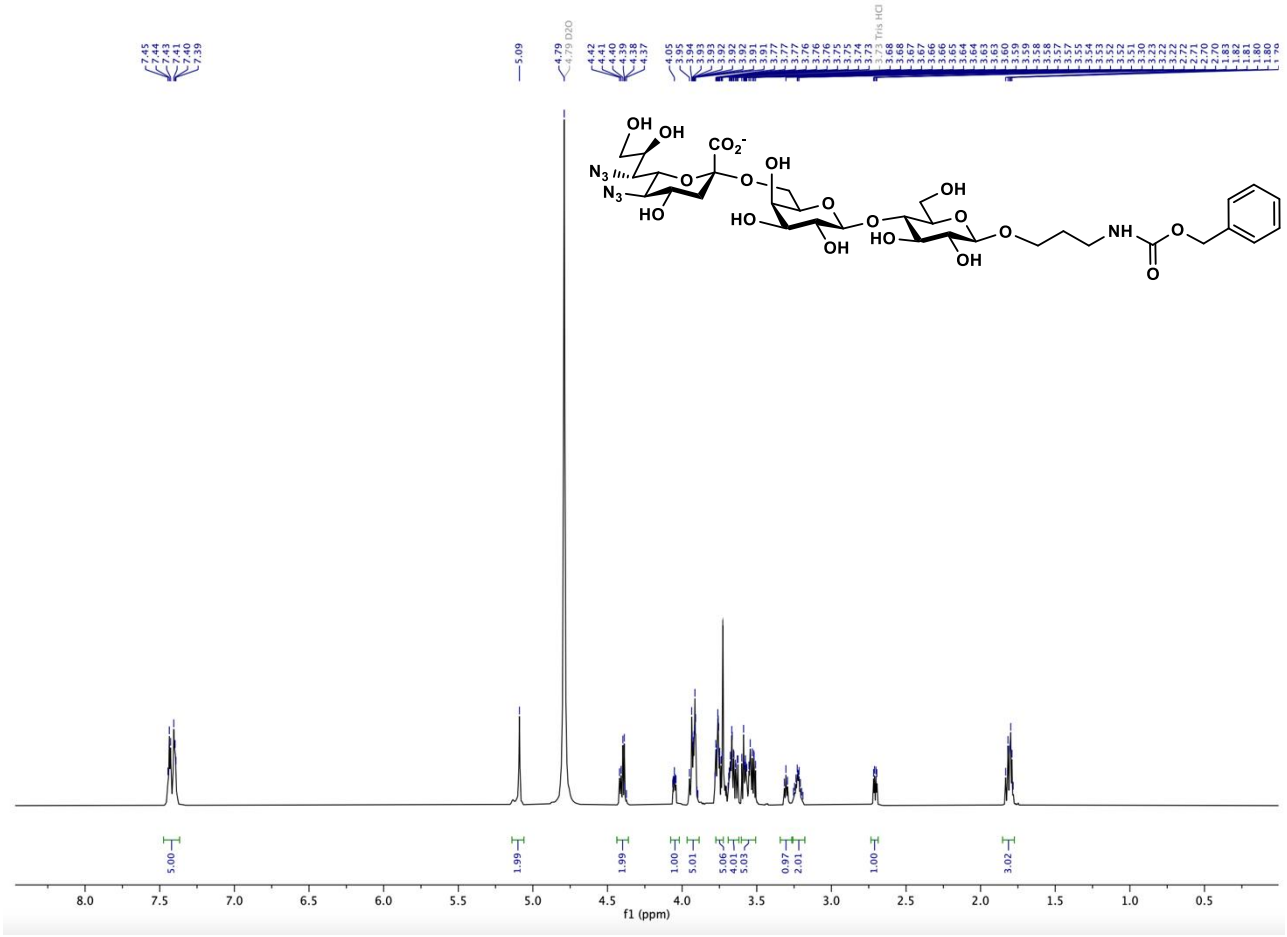


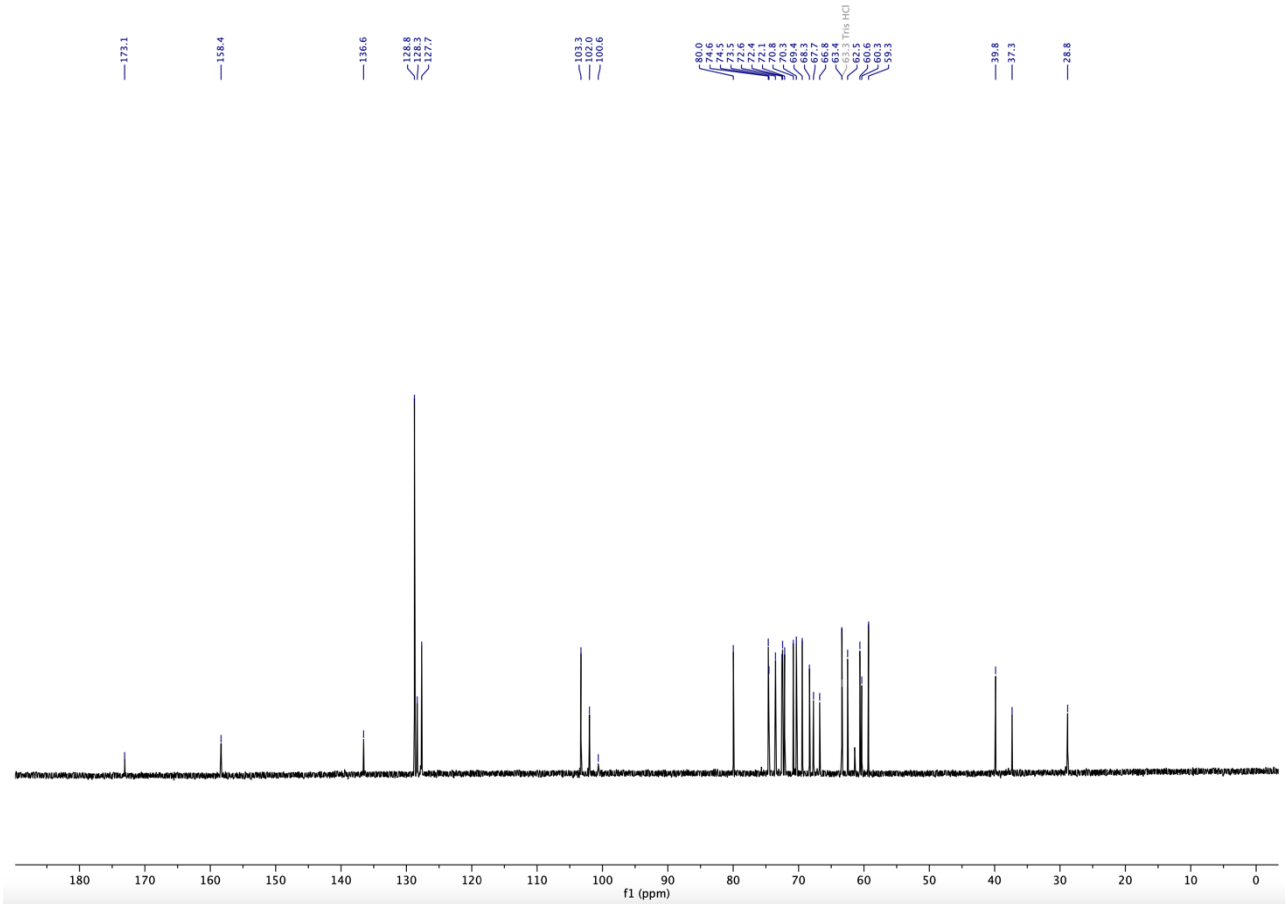
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN$_3$α2–3LacβProNHCbz (**32**) in D_2O



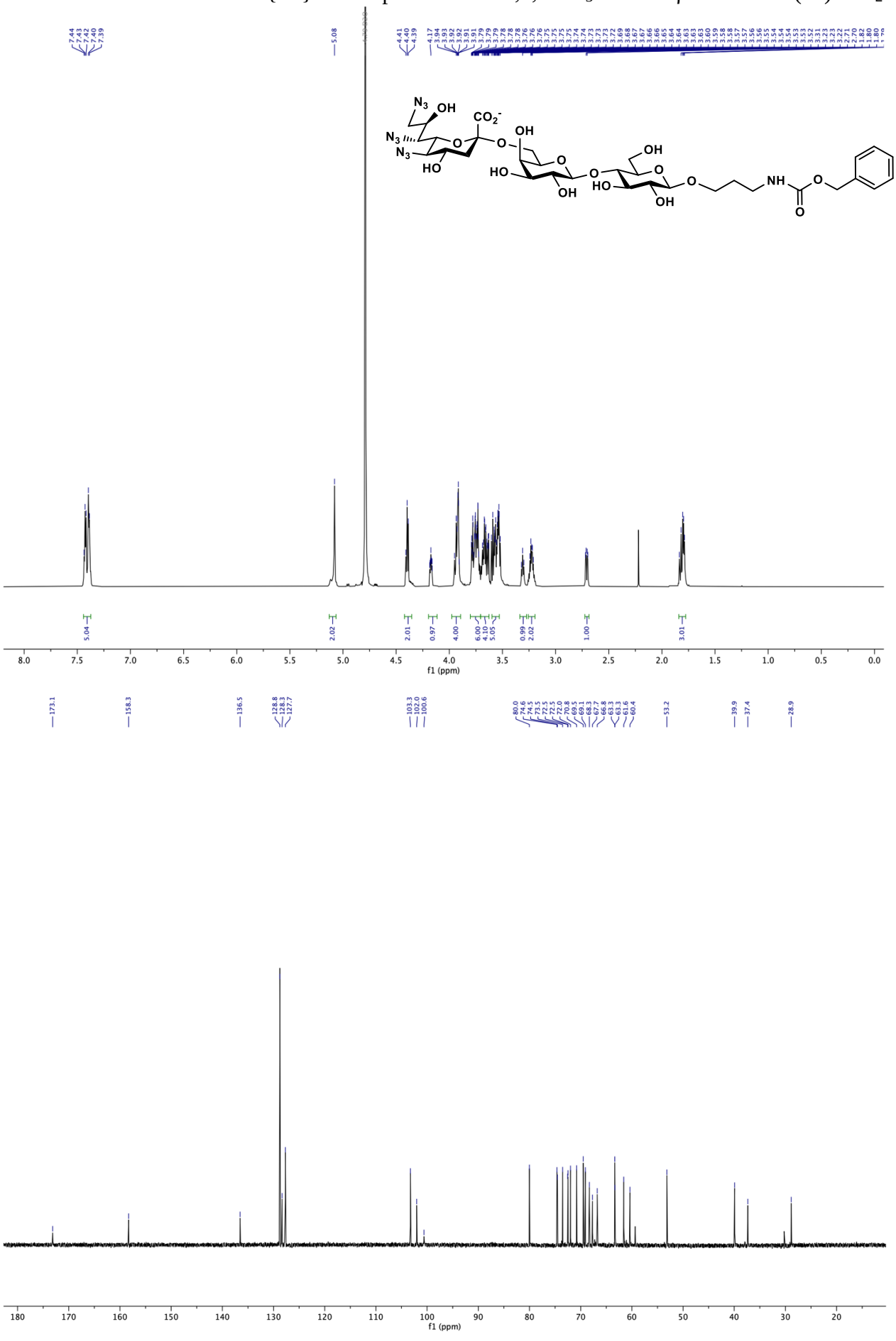


800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN_3α2–6LacβProNHCbz (**33**) in D_2O

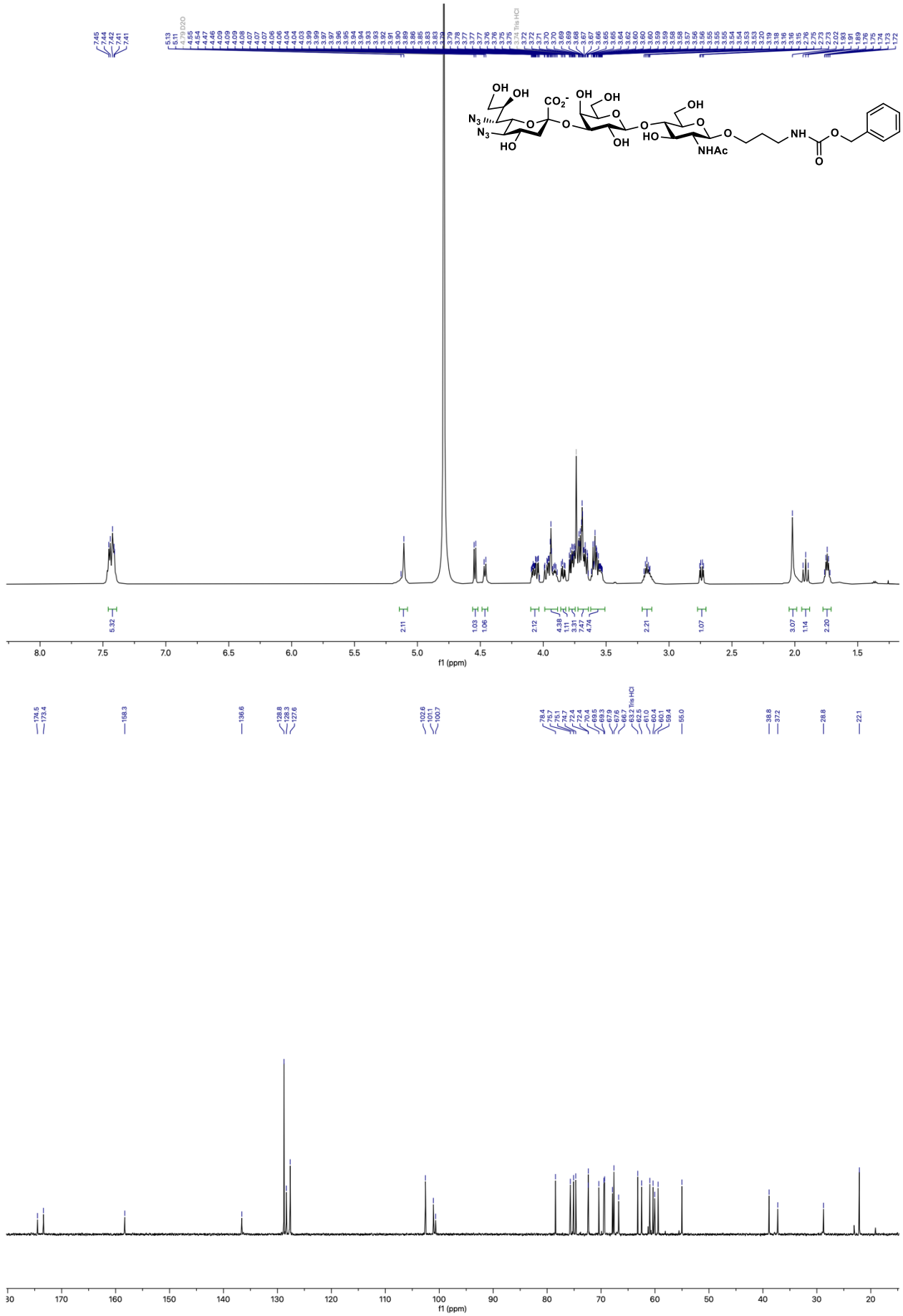




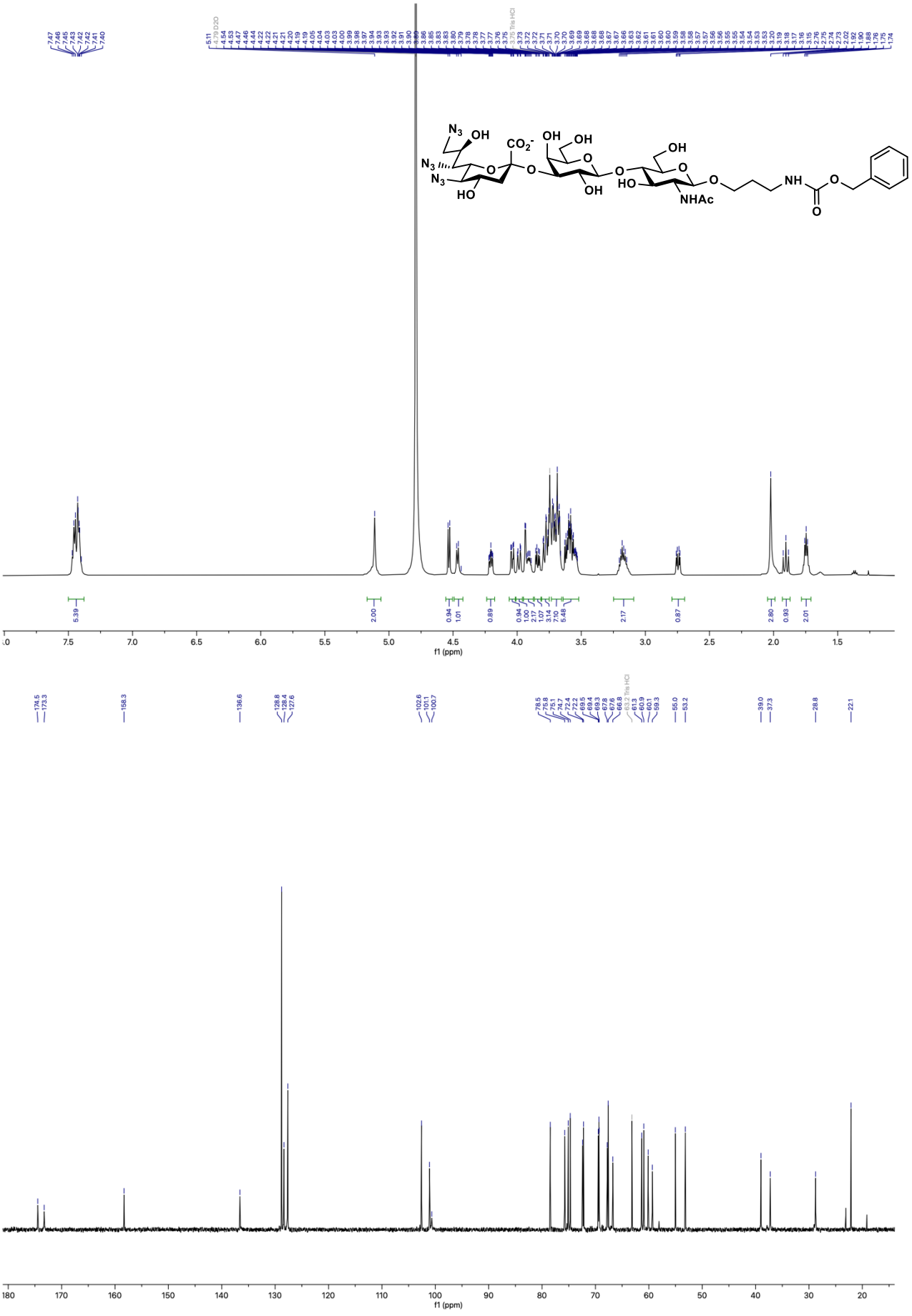
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN$_3$α2–6LacβProNHCbz (**34**) in D_2O



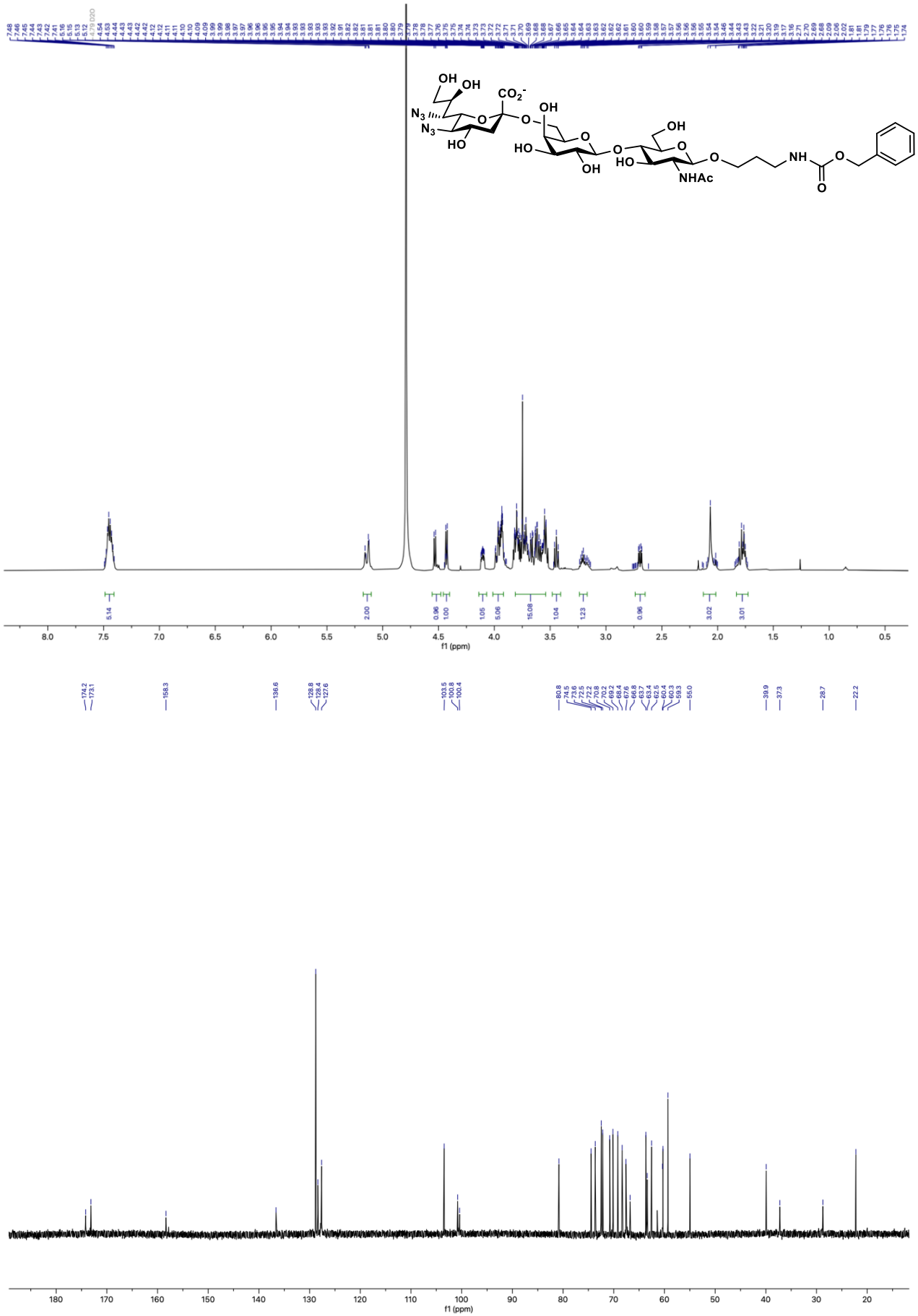
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–3LacNAcβProNHCbz (**35**) in D_2O



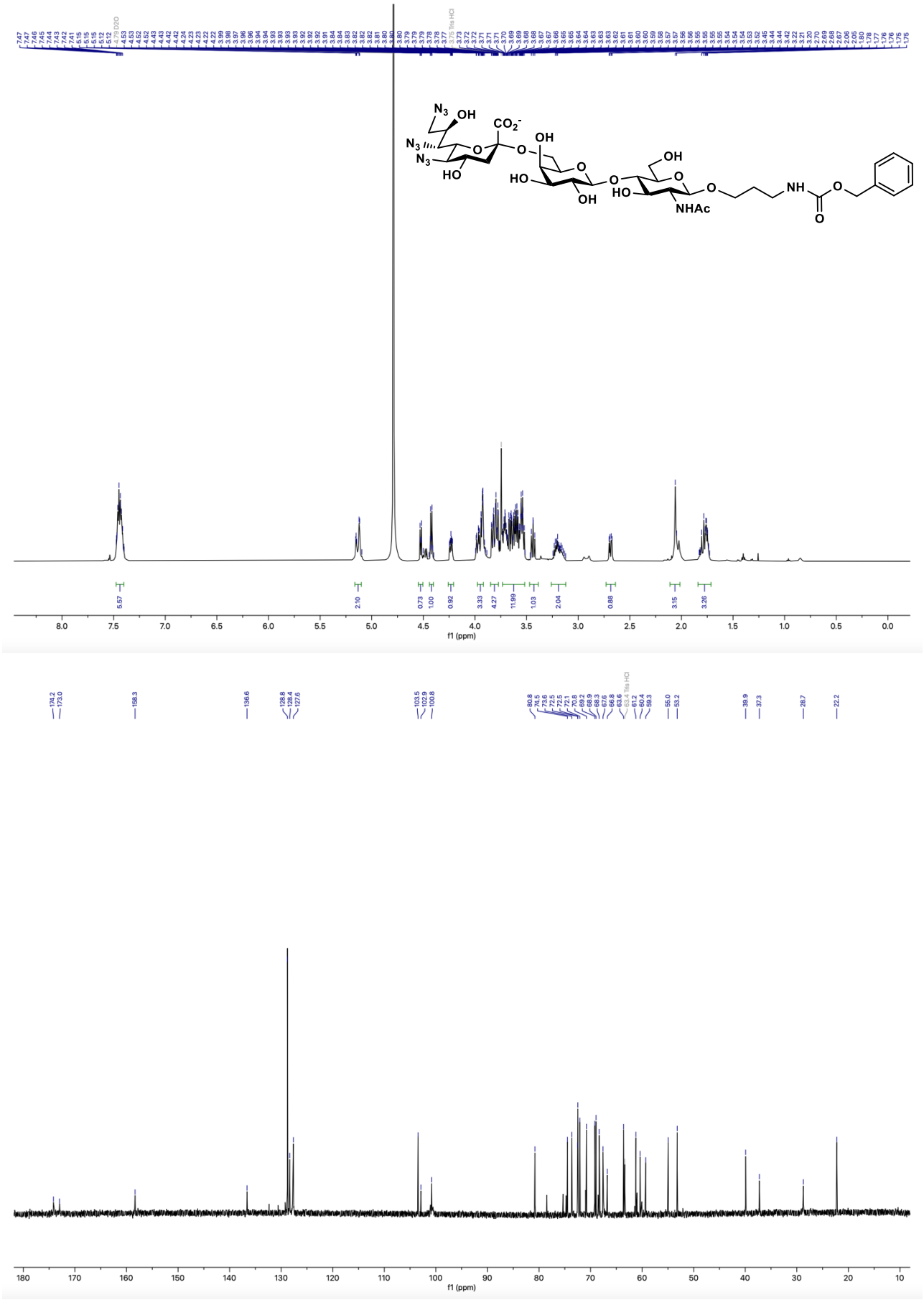
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN$_3$α2–3LacNAcβProNHCbz (**36**) in D_2O



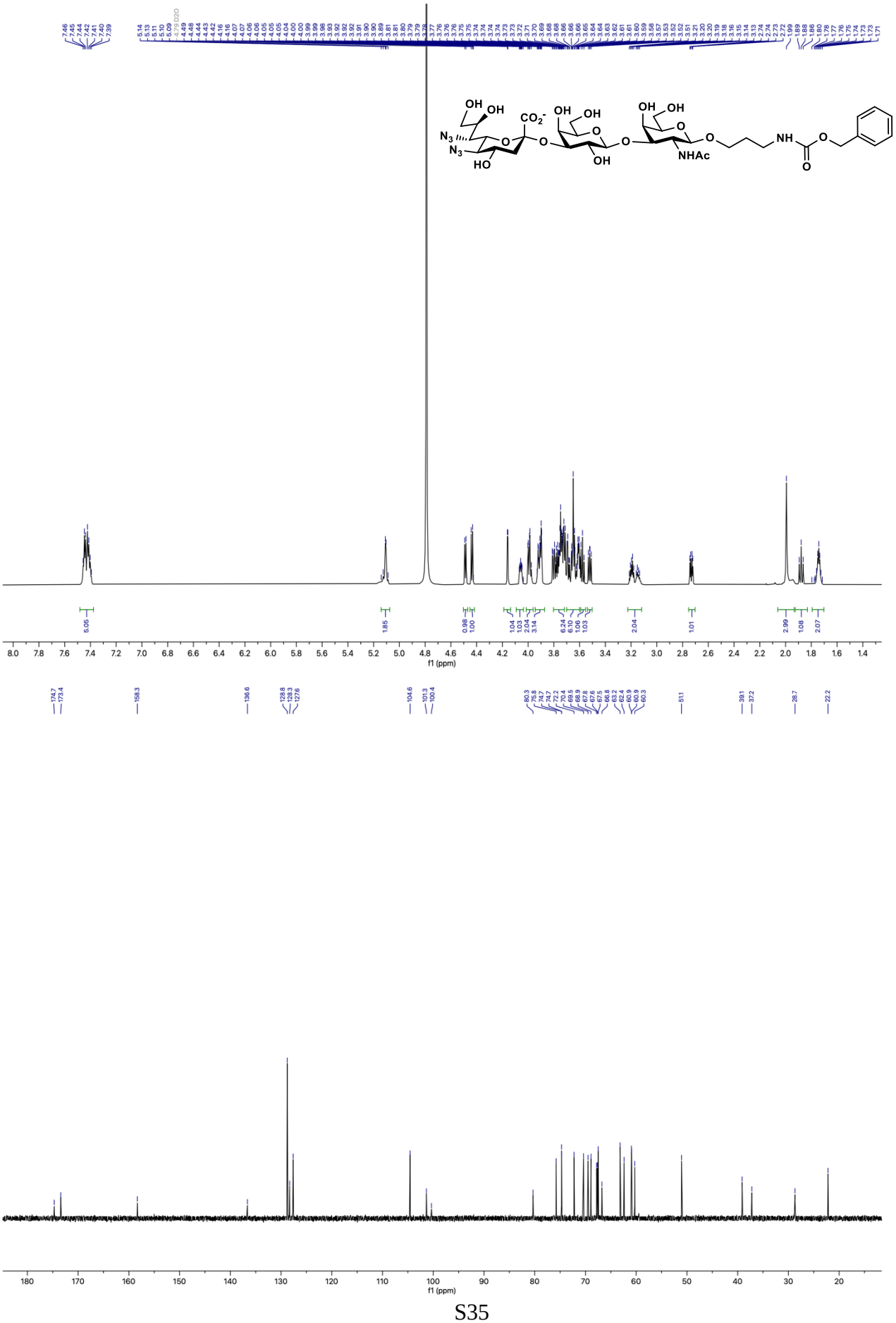
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN_3α2–6LacNAcβProNHCbz (**37**) in D_2O



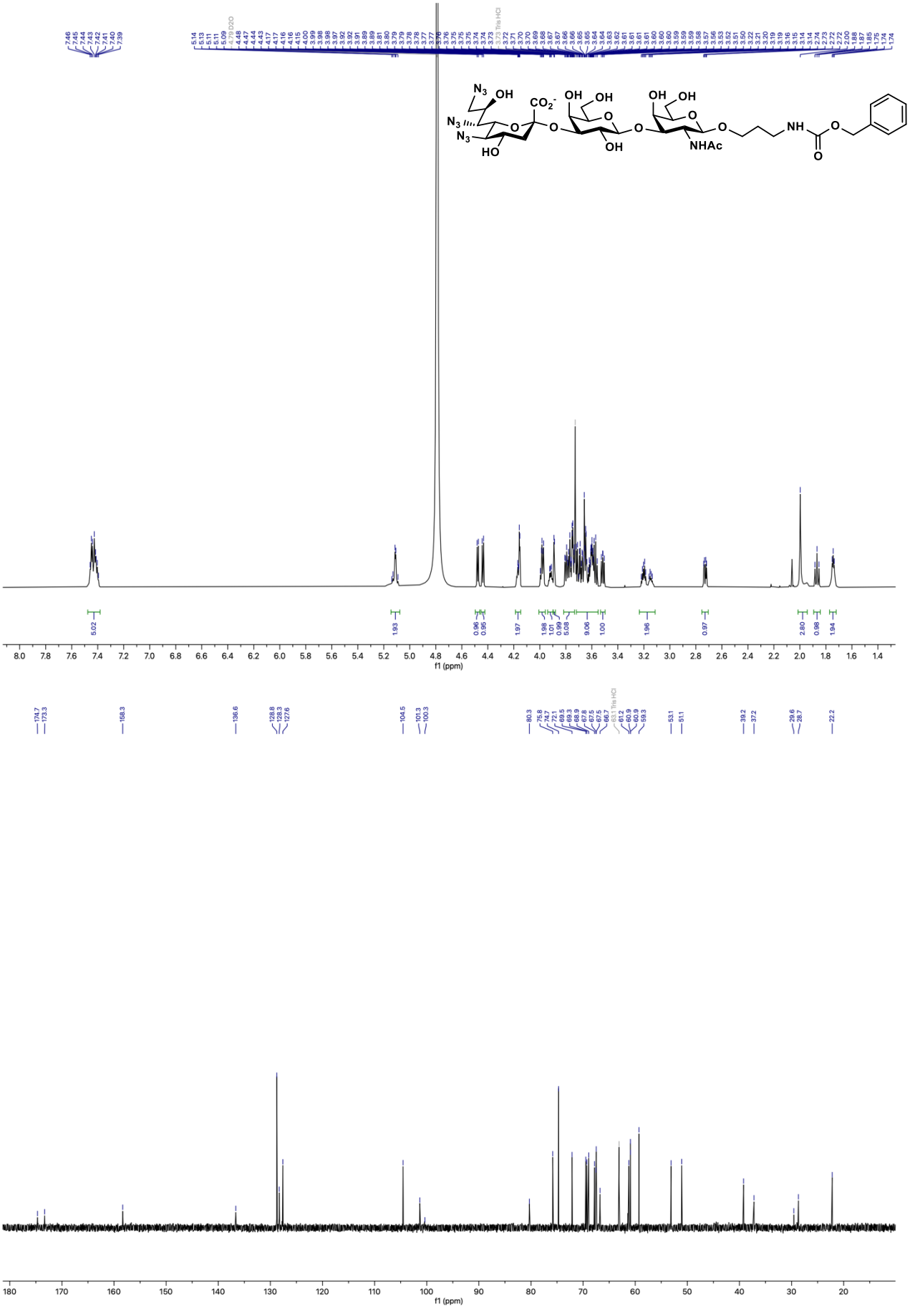
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN$_3$α2–6LacNAcβProNHCbz (**38**) in D_2O



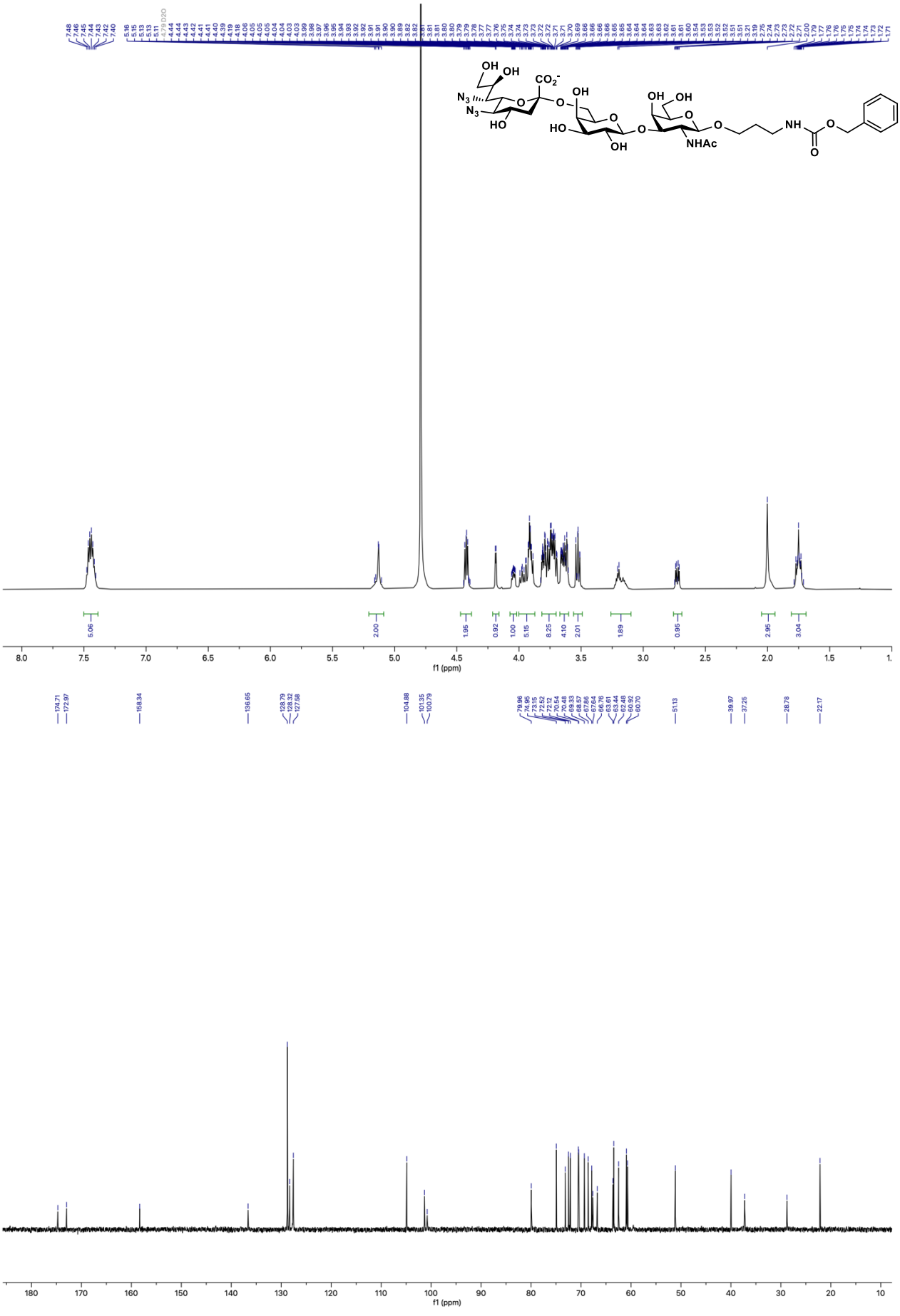
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–3Galβ1–3GalNAcβProNHCbz (**39**) in D_2O



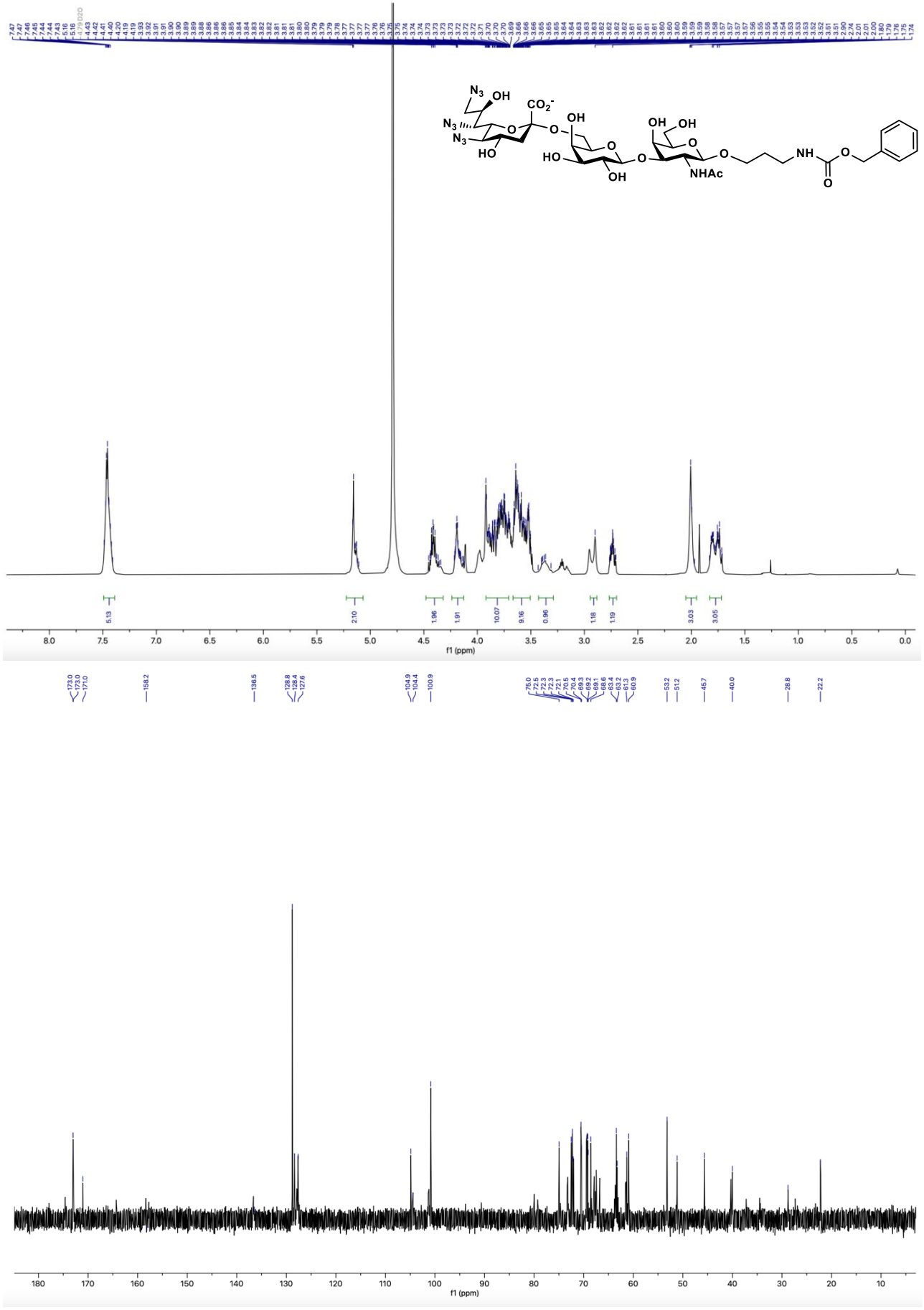
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–3Galβ1–3GalNAcβProNHCbz (**40**) in D_2O



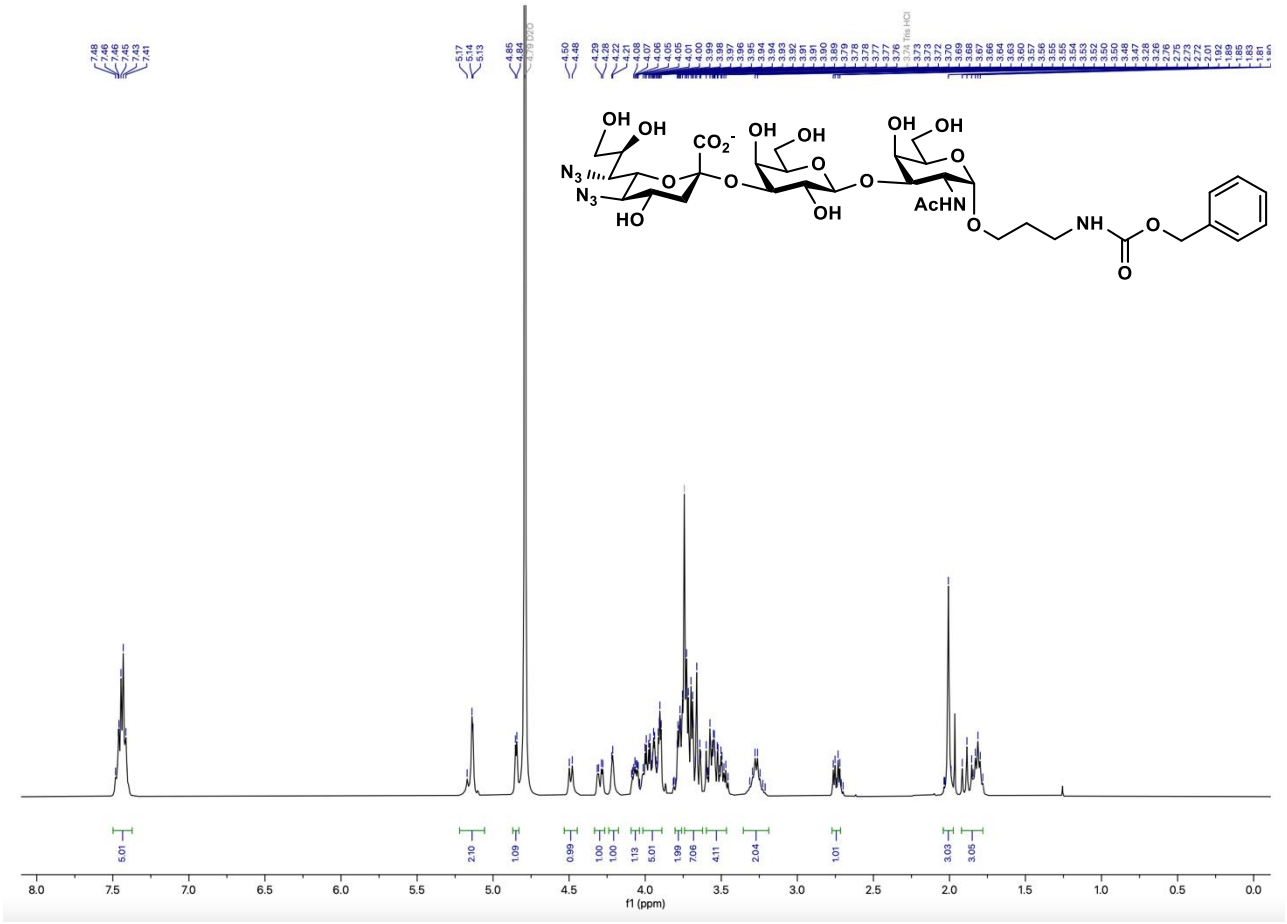
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–6Galβ1–3GalNAcβProNHCbz (**41**) in D_2O

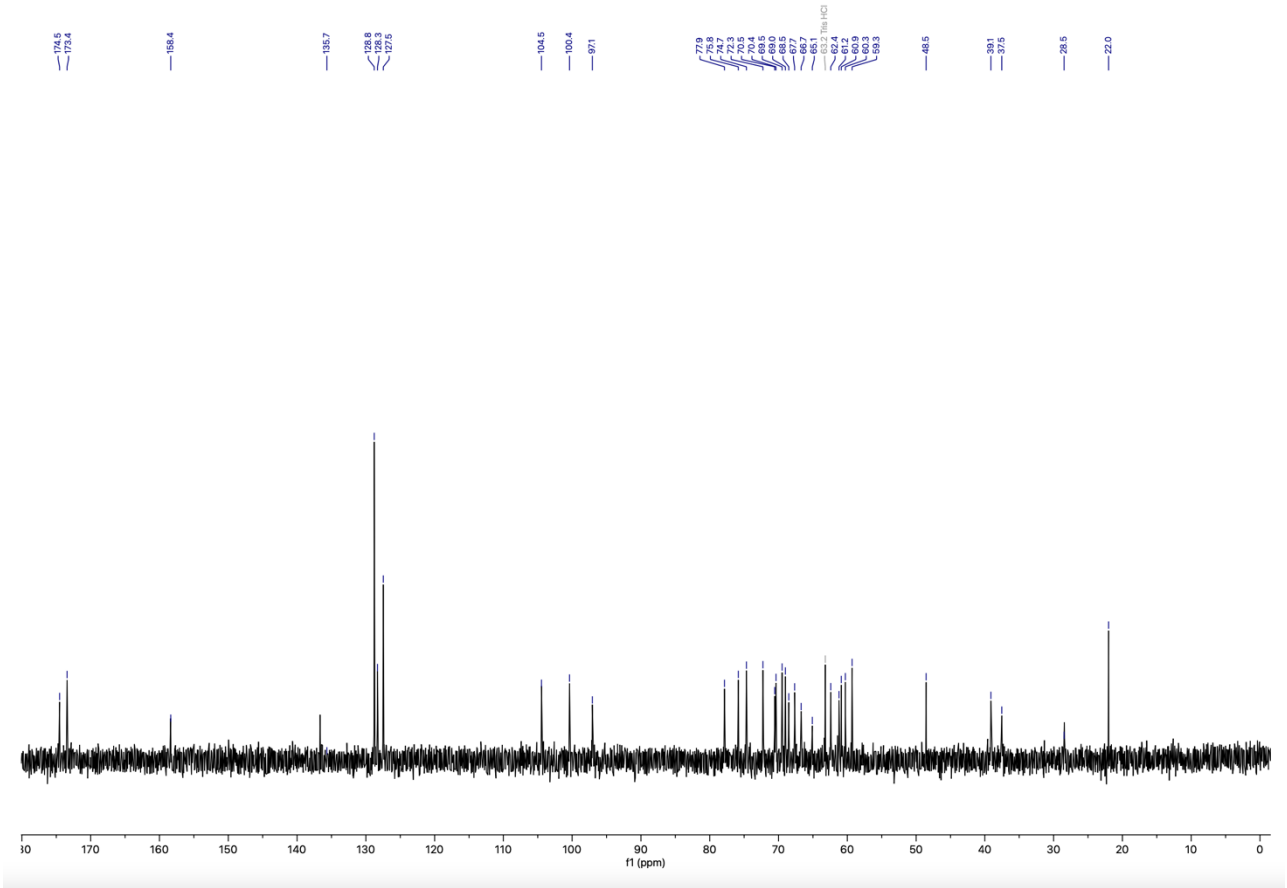


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–6Galβ1–3GalNAcβProNHCbz (**42**) in D_2O

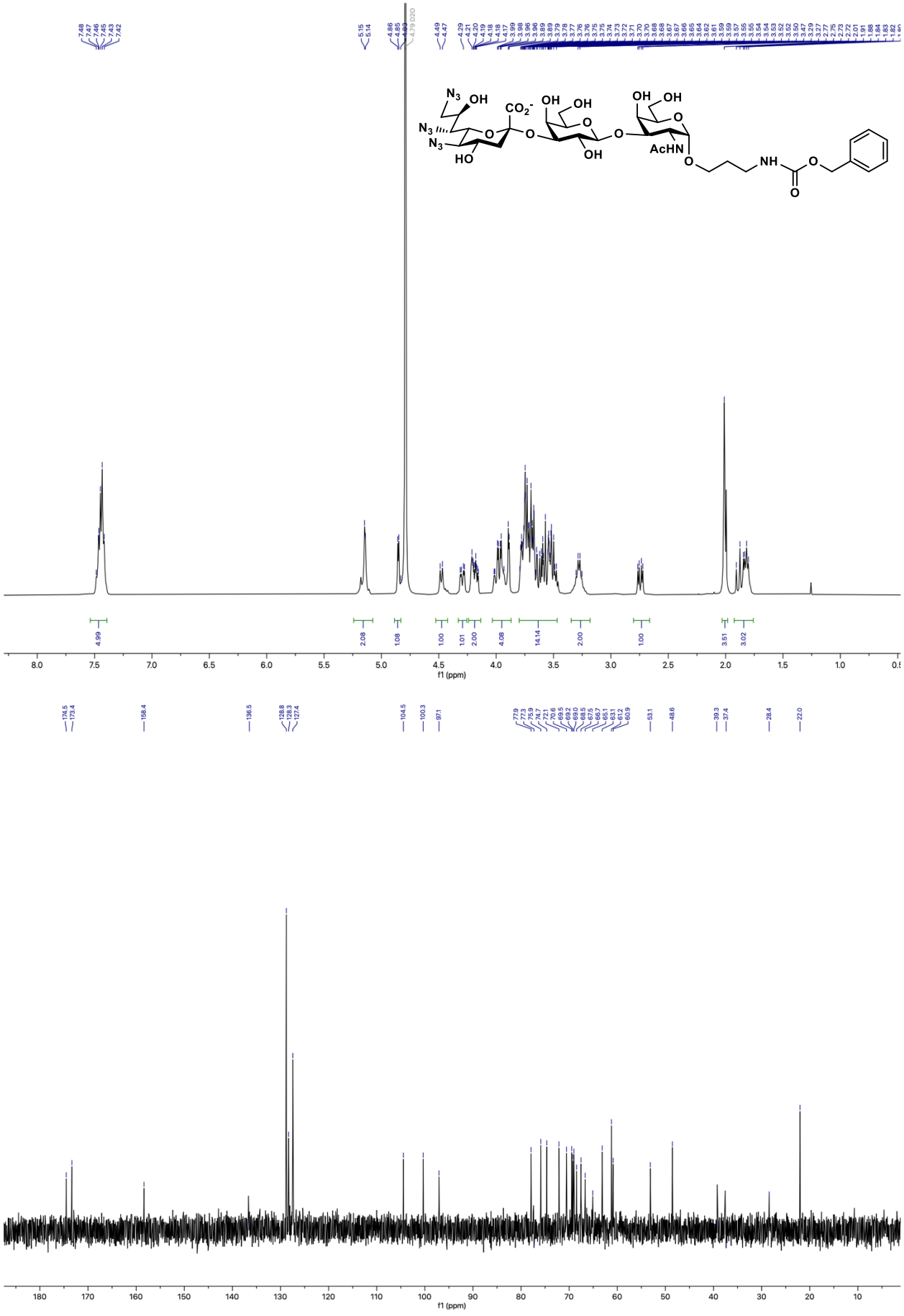


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–3Galβ1–3GalNAcαProNHCbz (**43**) in D_2O

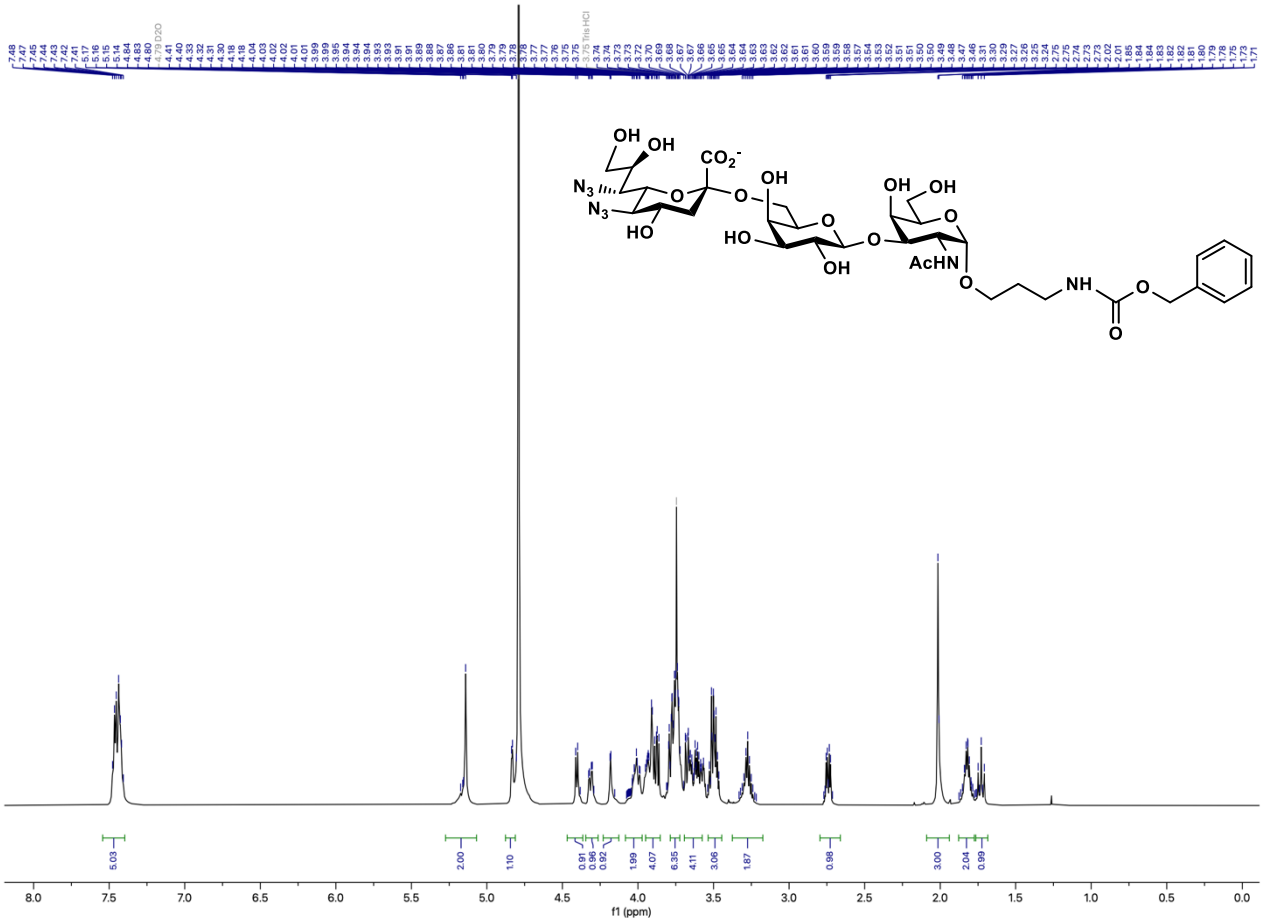


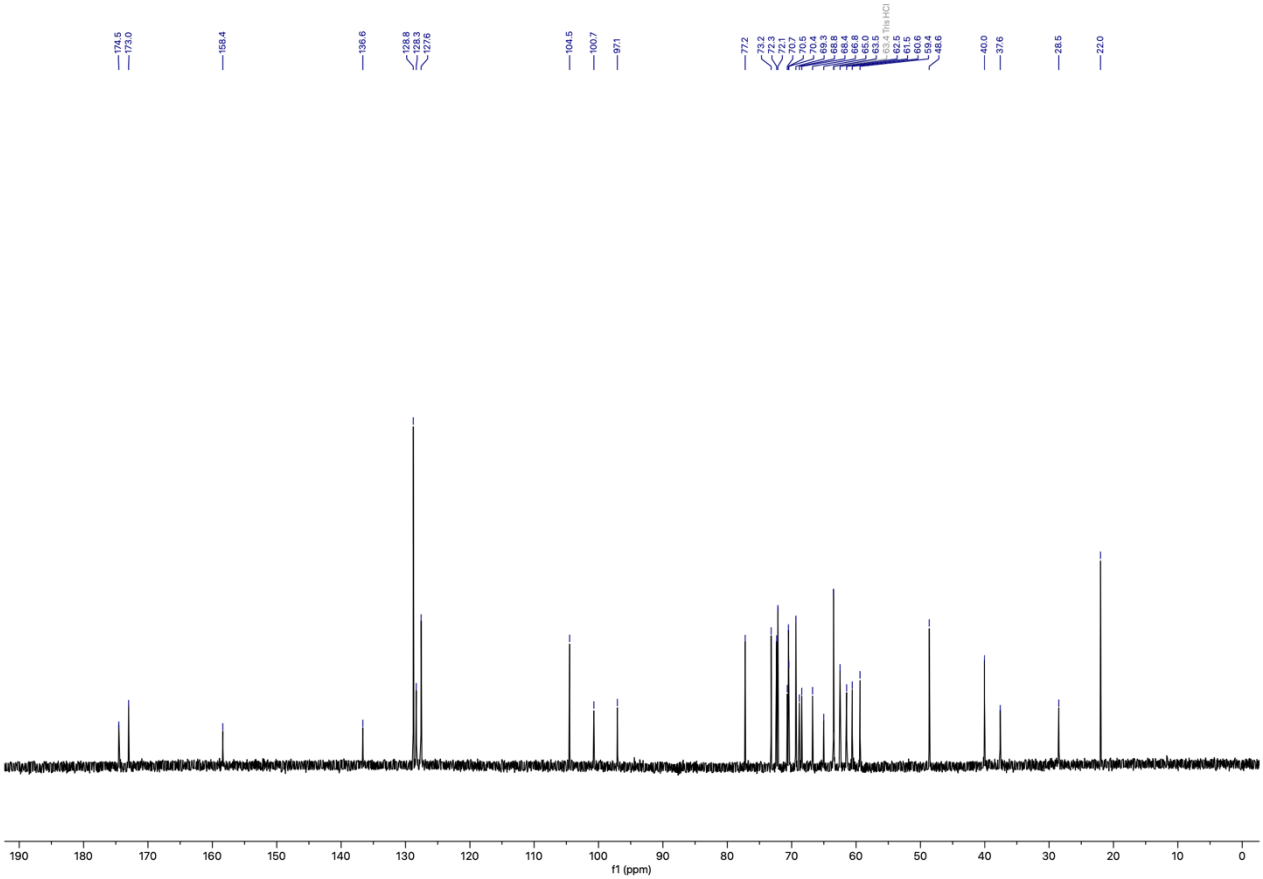


400 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–3Galβ1–3GalNAcαProNHCbz (**44**) in D_2O

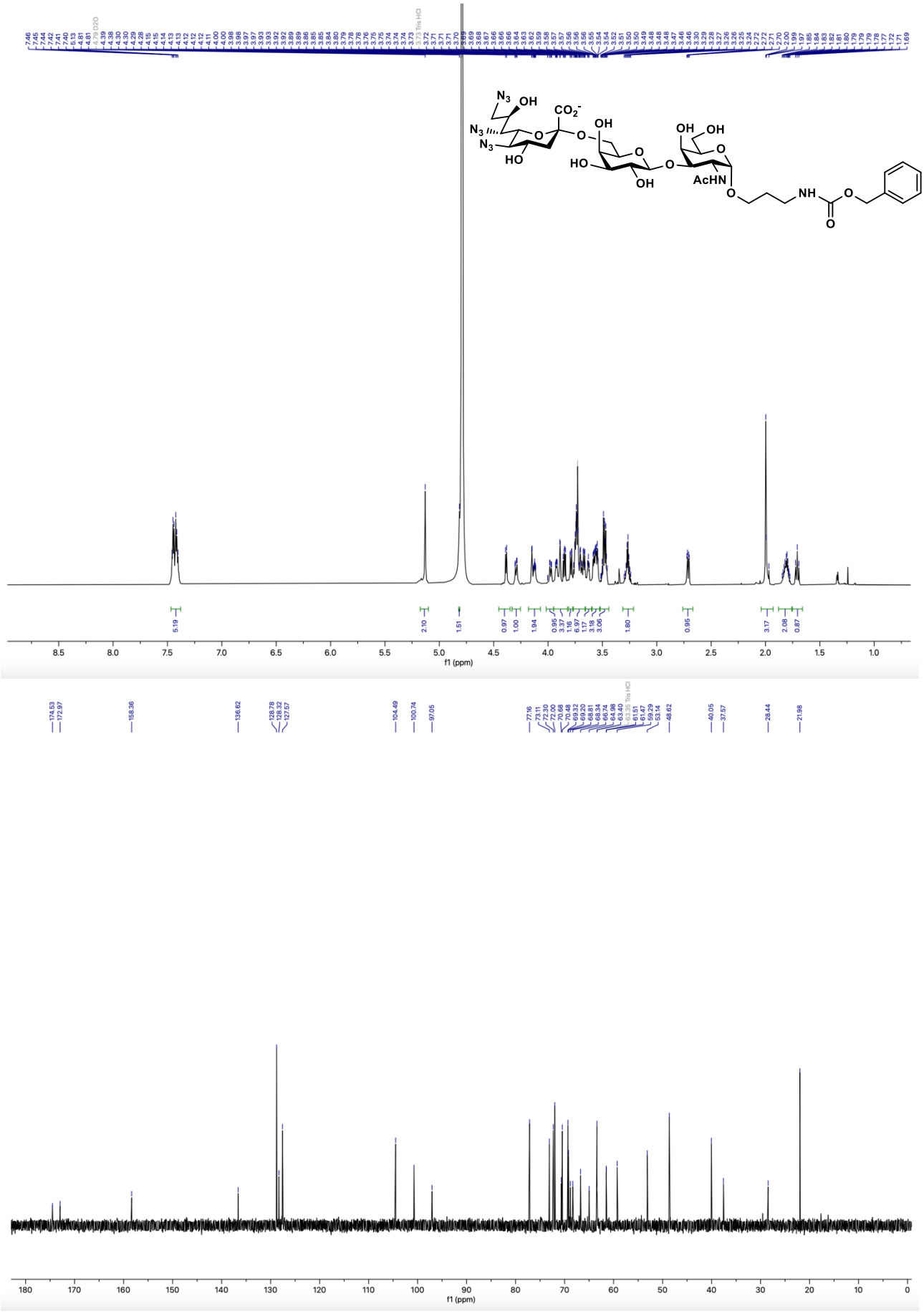


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–6Galβ1–3GalNAcαProNHCbz (**45**) in D_2O

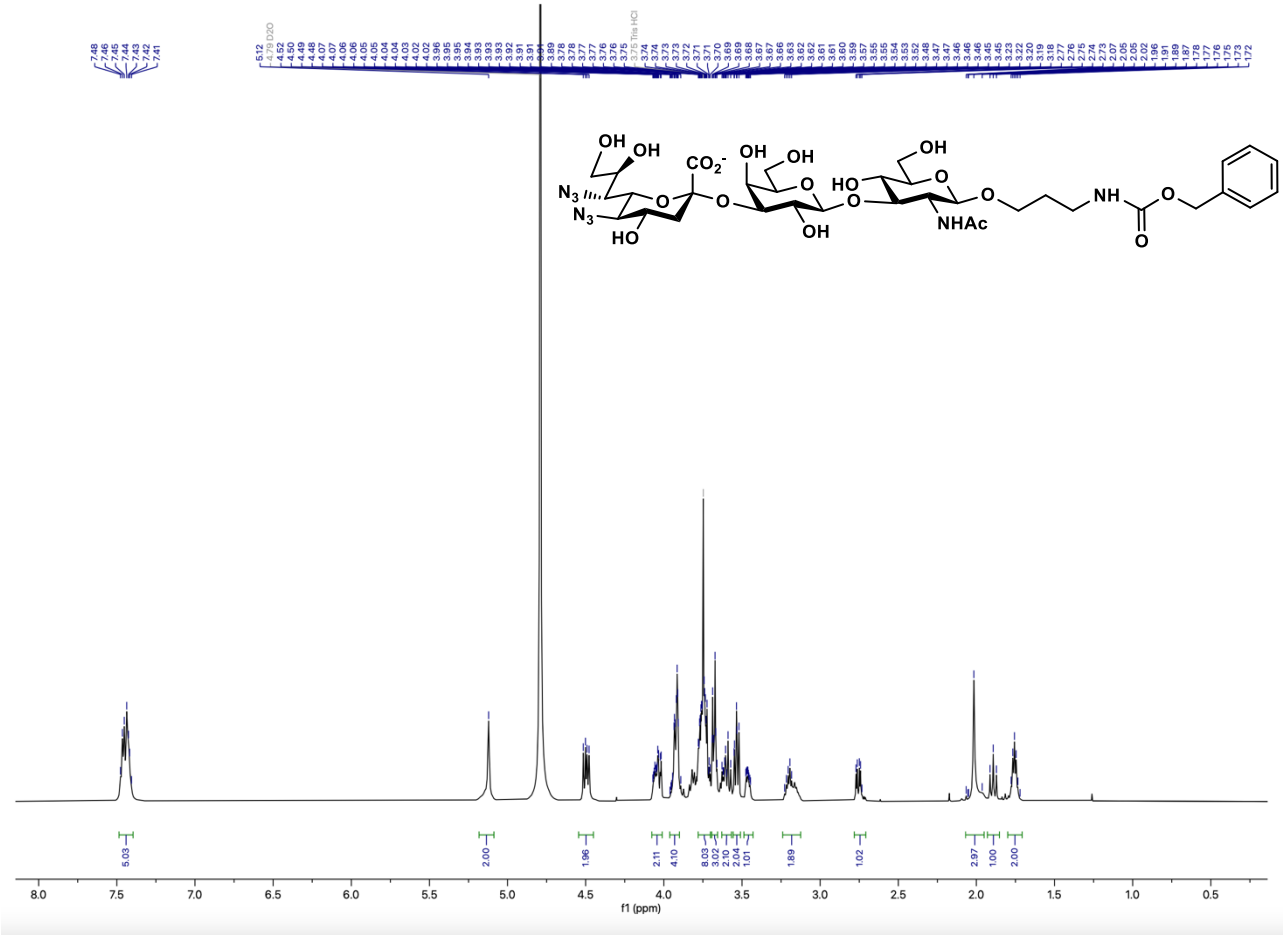


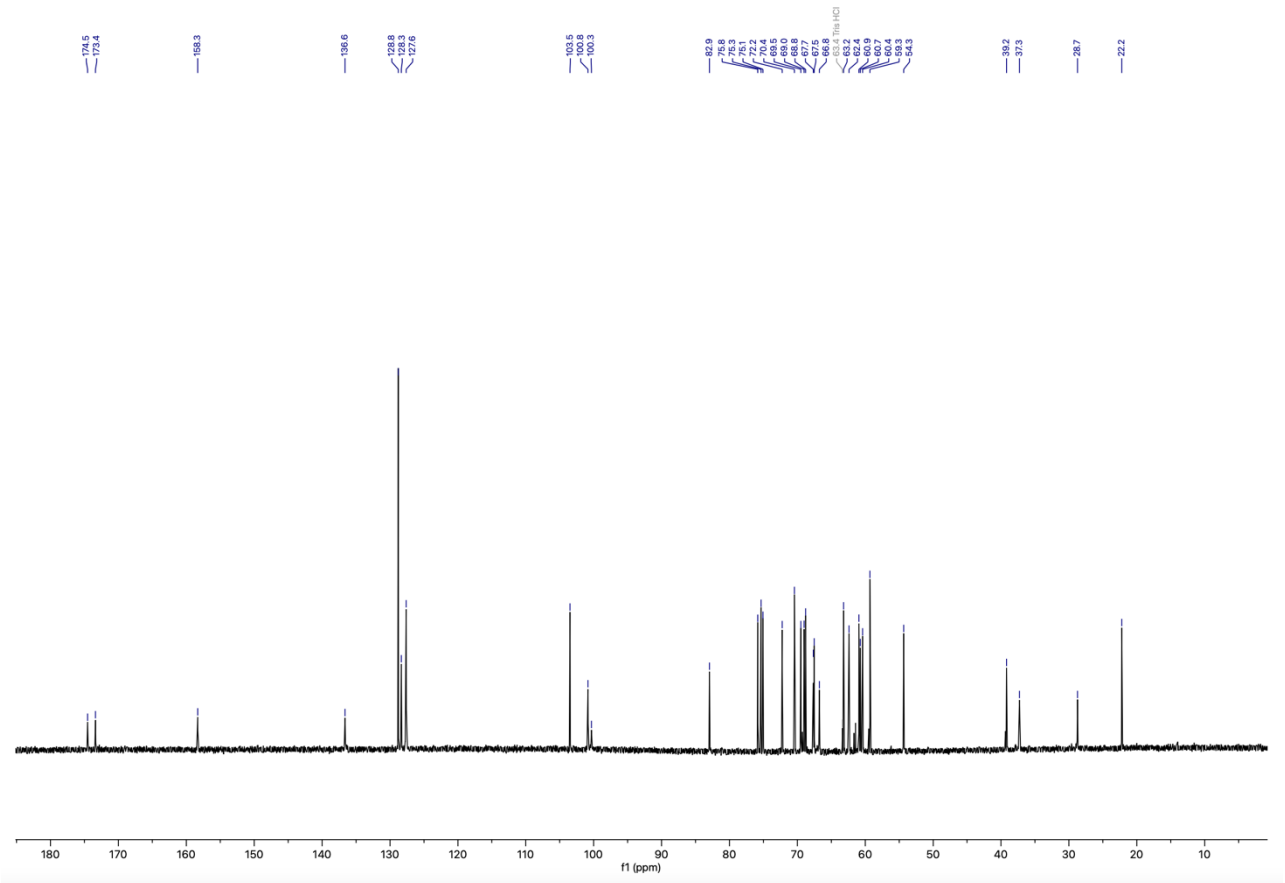


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–6Galβ1–3GalNAcαProNHCbz (**46**) in D_2O

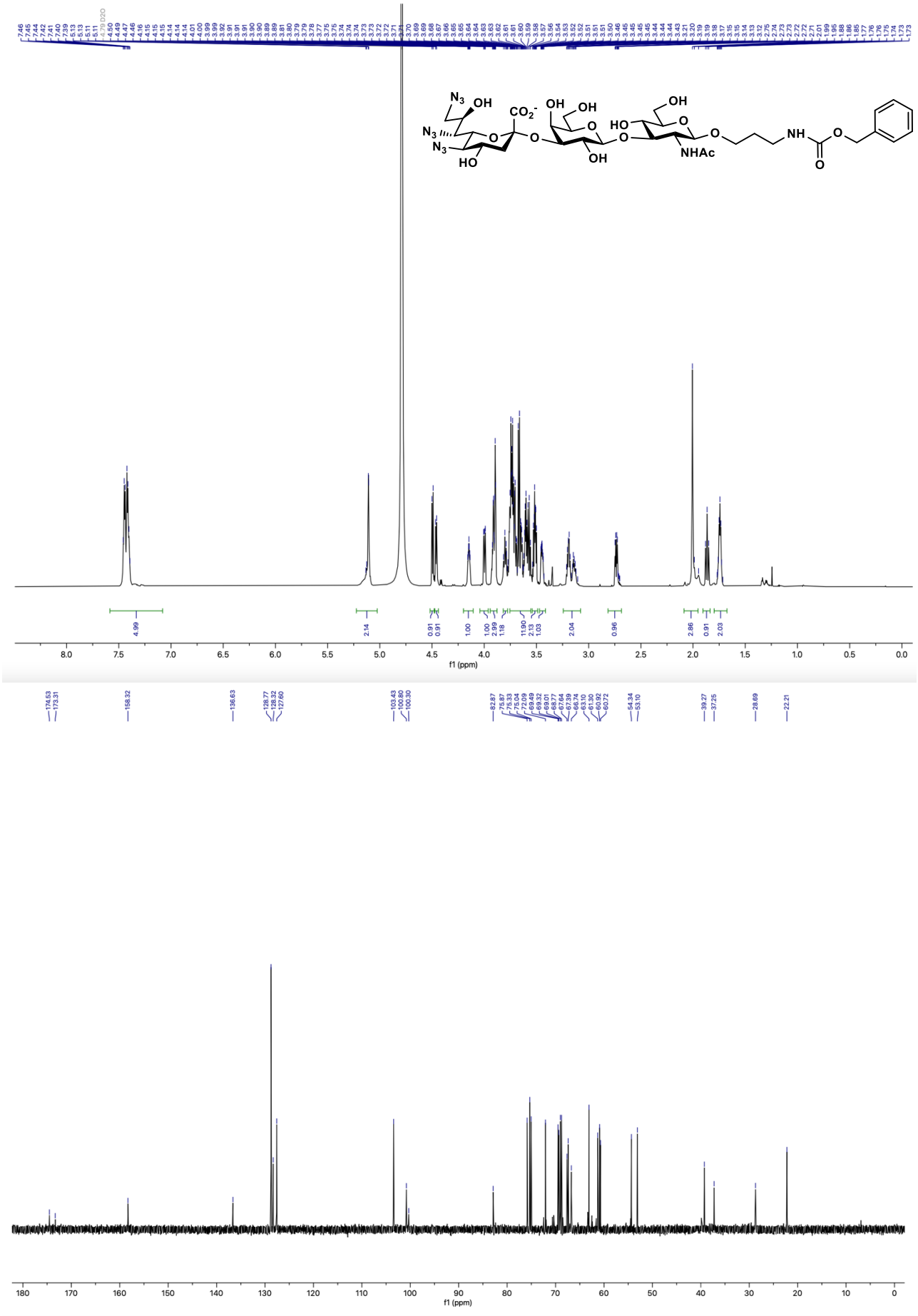


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–3Galβ1–3GlcNAcβProNHCbz (**47**) in D_2O

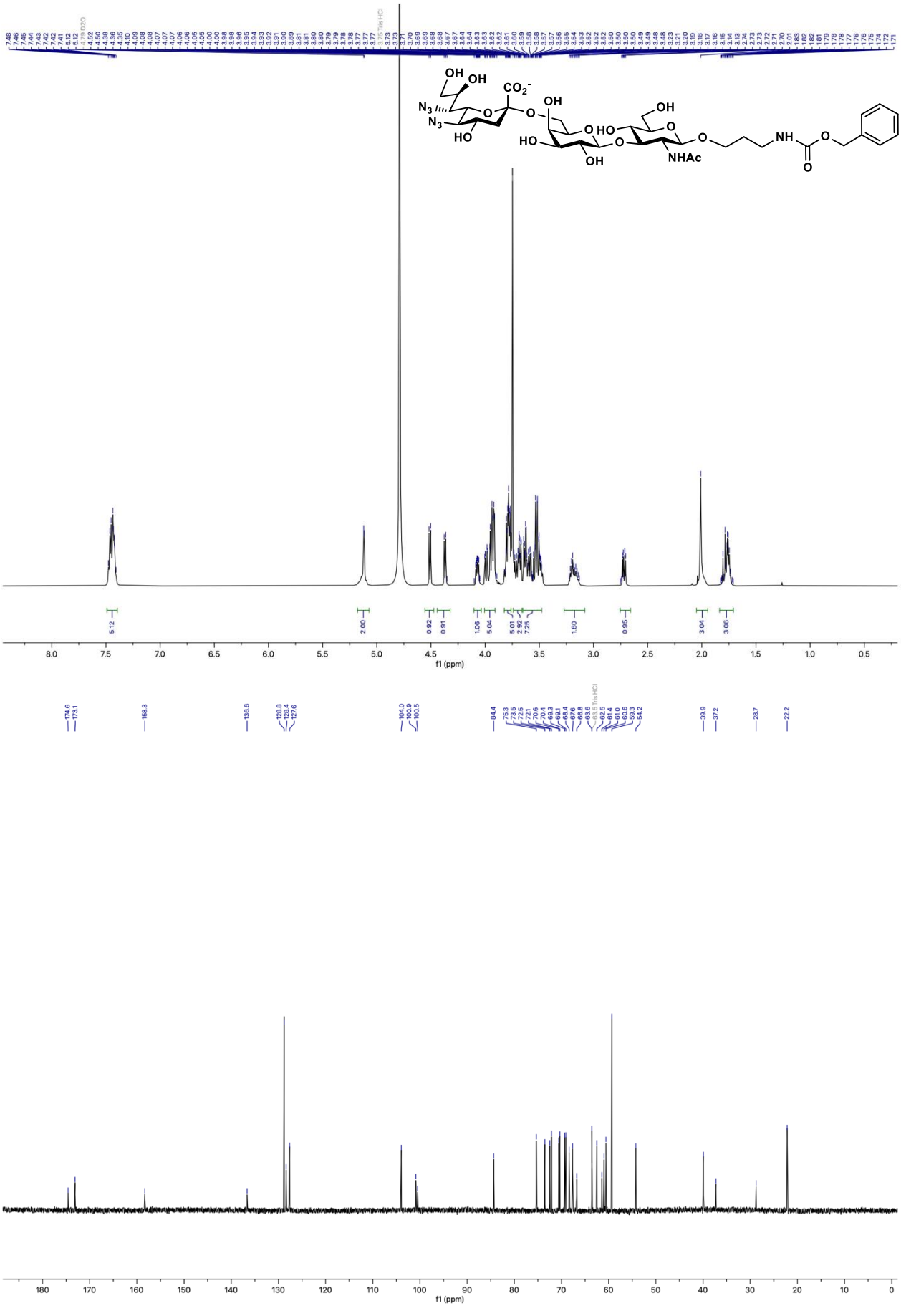




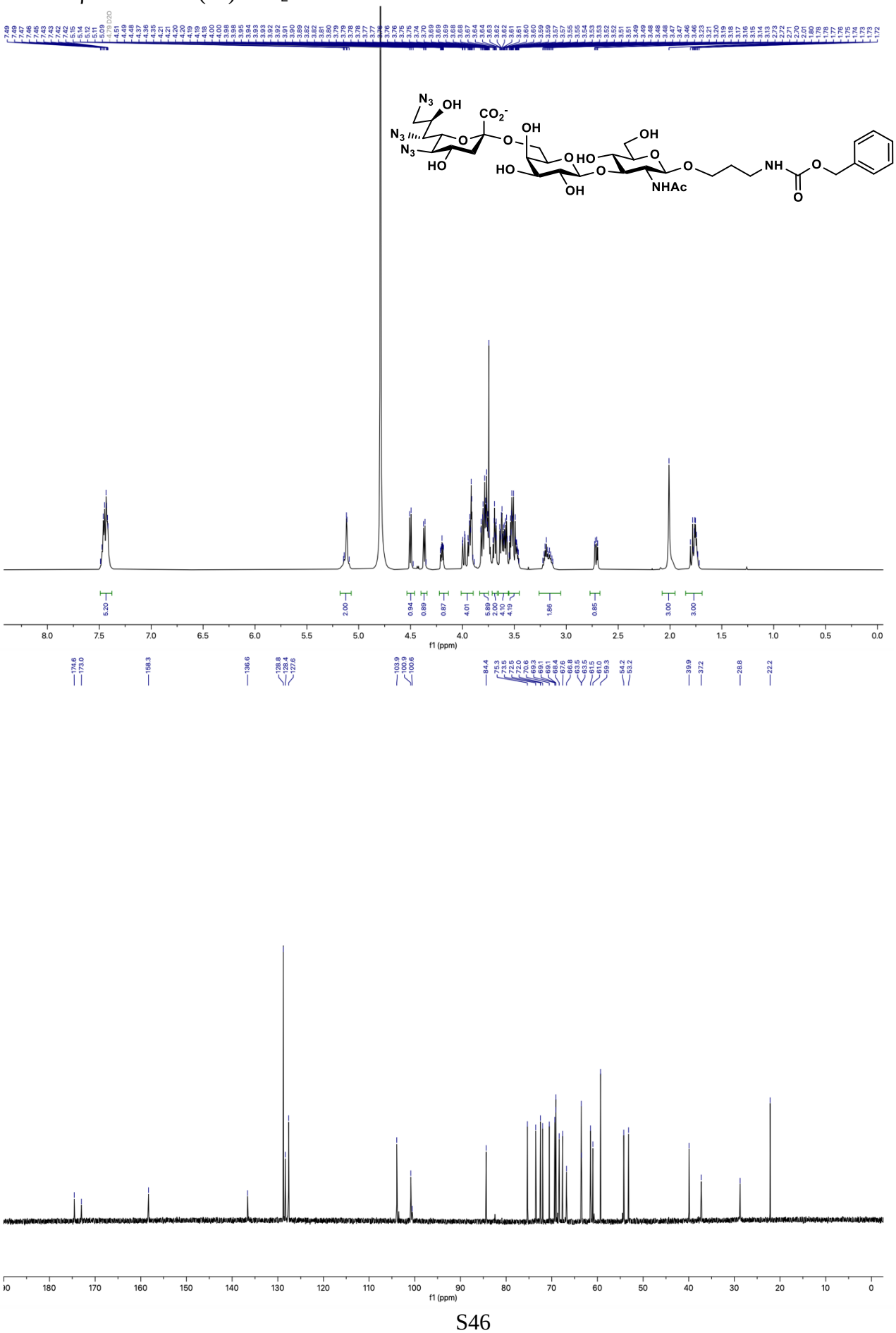
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–3Galβ1–3GlcNAcβProNHCbz (**48**) in D_2O



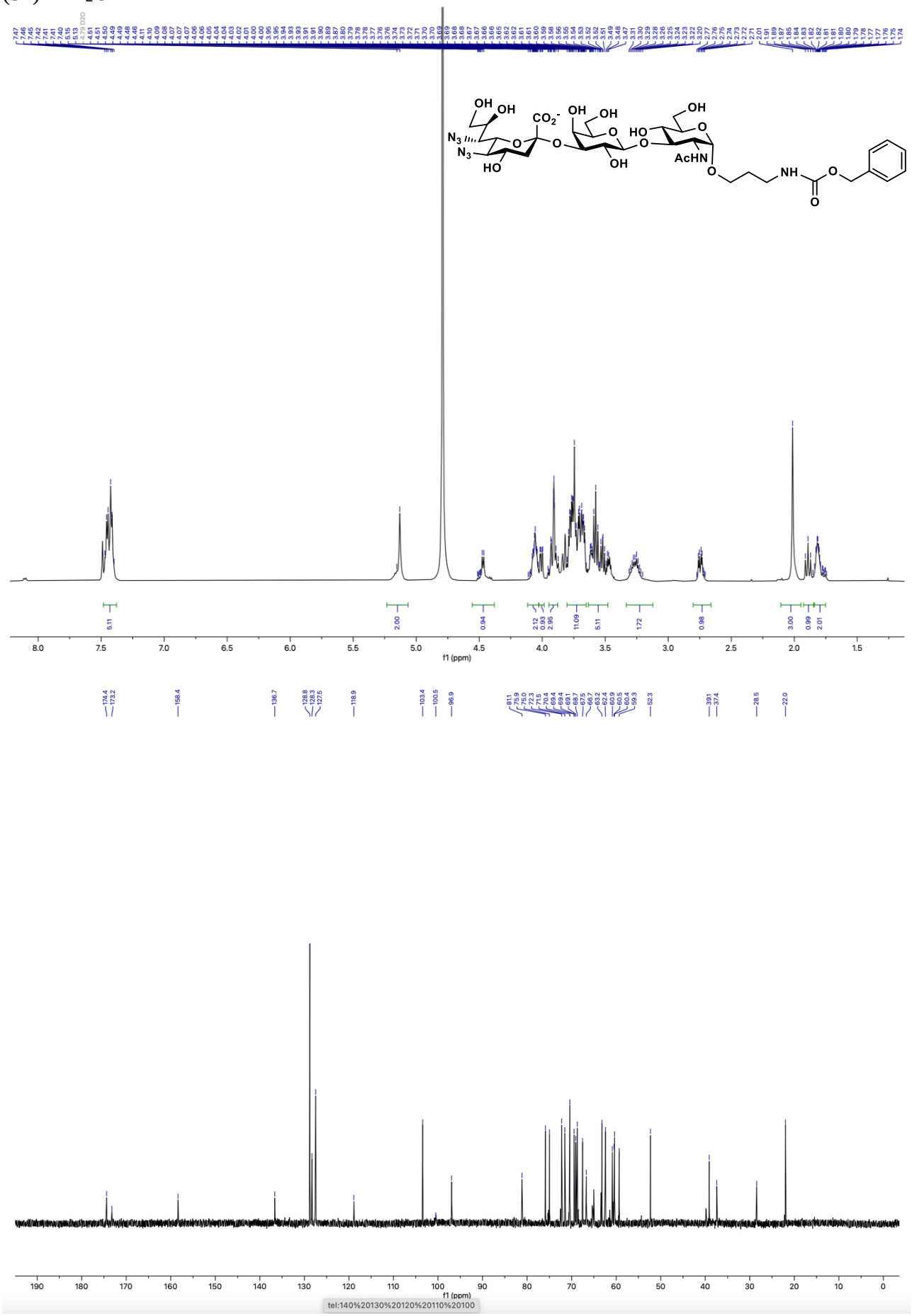
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–6Galβ1–3GlcNAcβProNHCbz (**49**) in D_2O



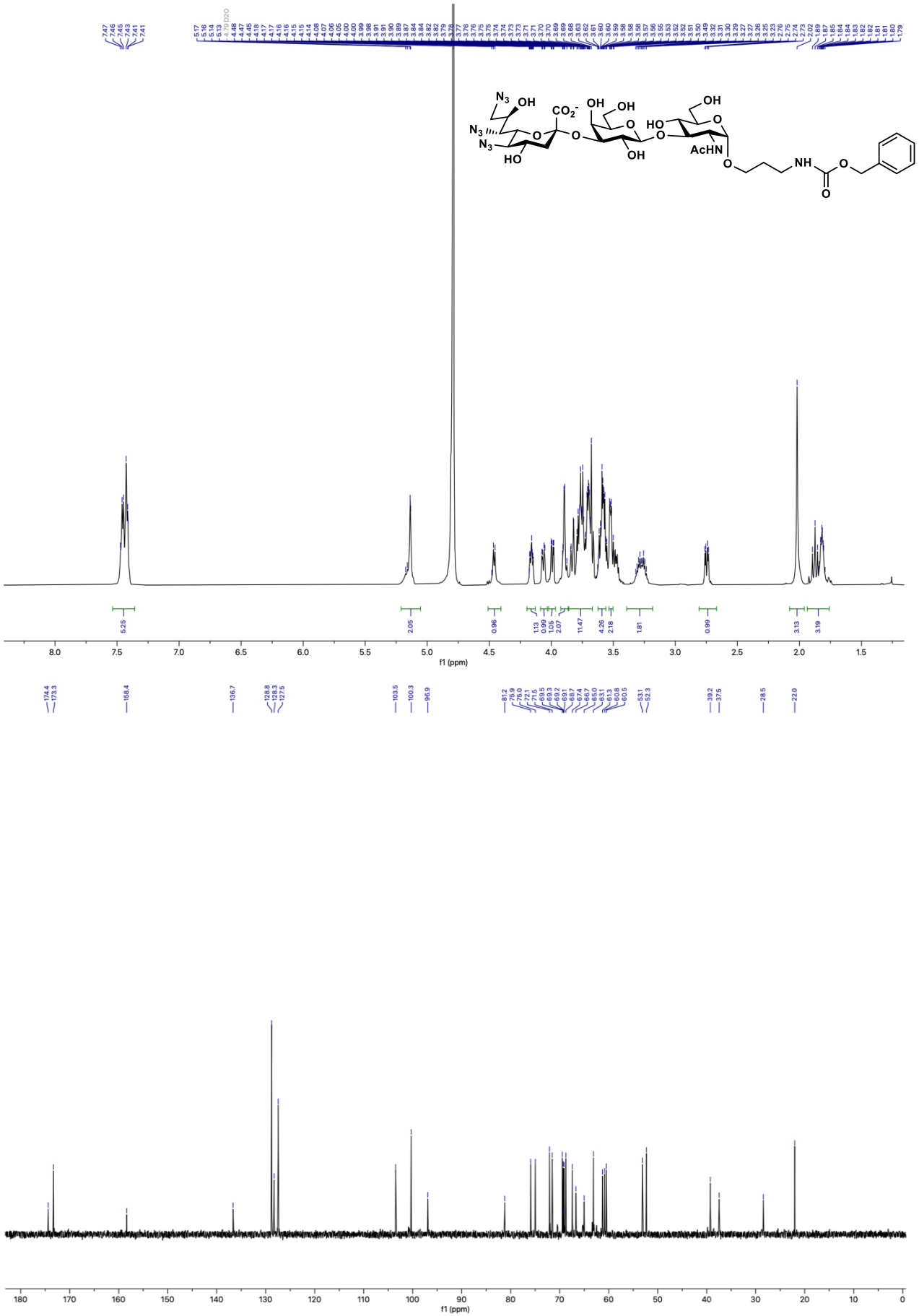
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–6Galβ1–3GlcNAcβProNHCbz (**50**) in D_2O



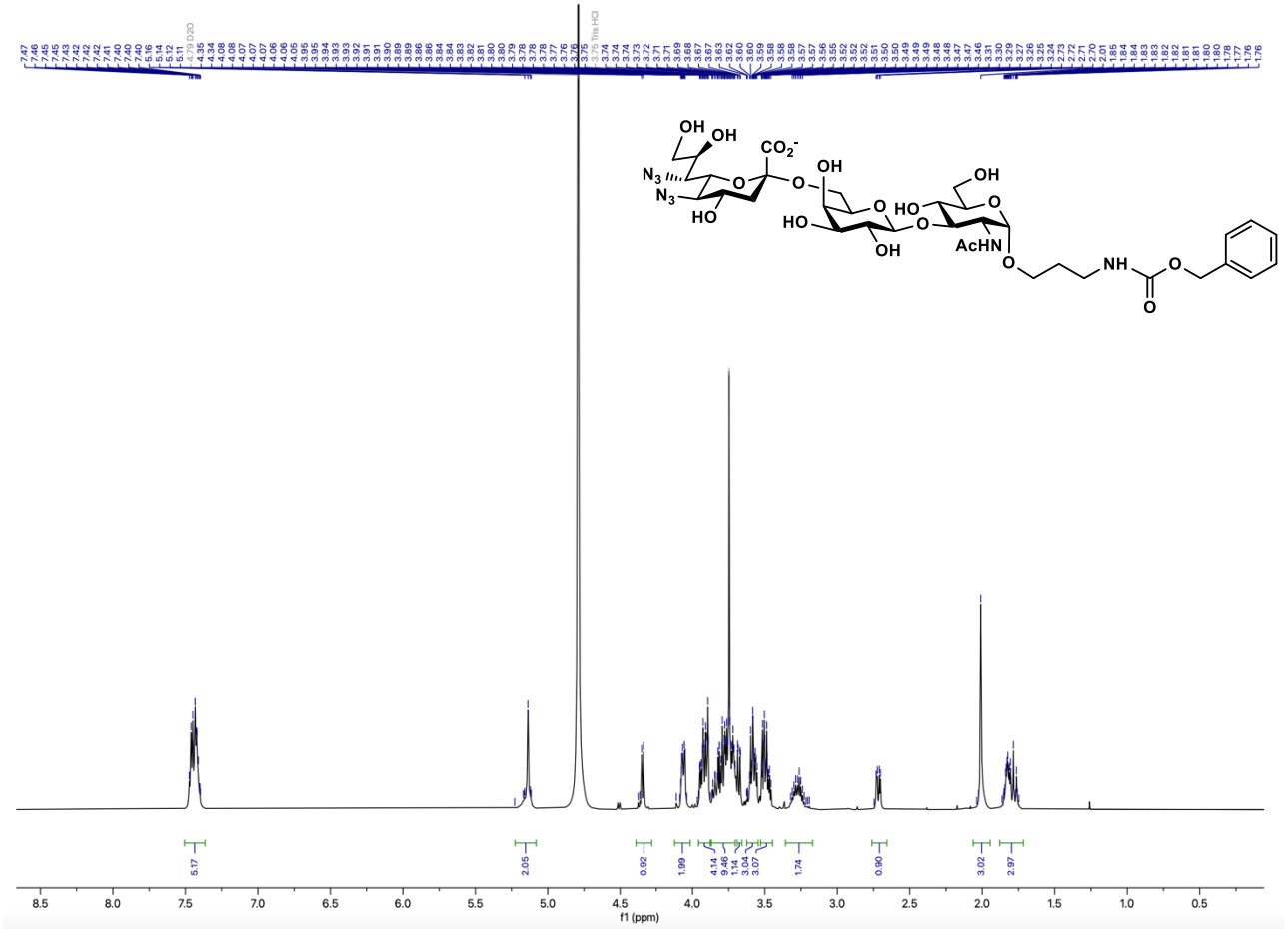
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–3Galβ1–3GlcNAcαProNHCbz (**51**) in D_2O

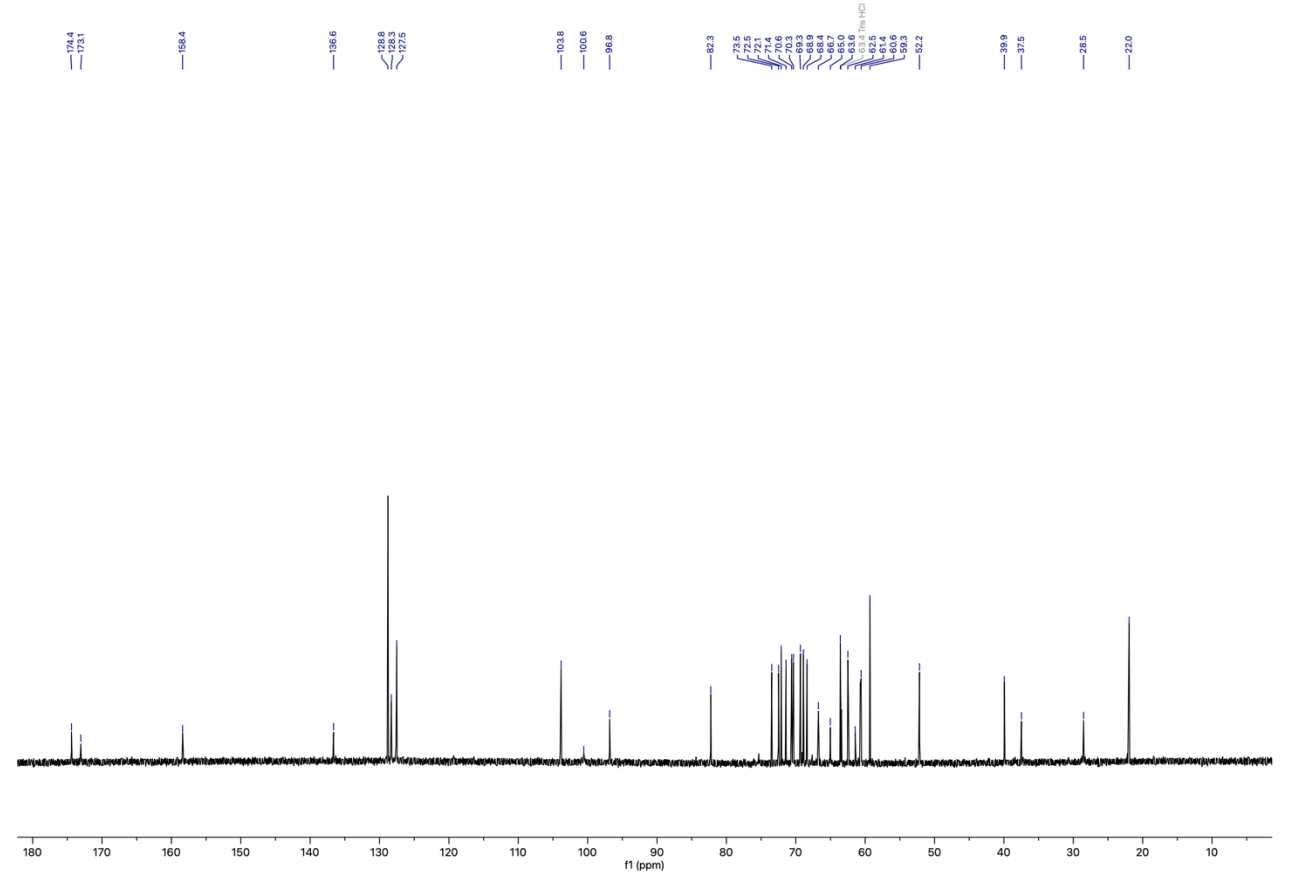


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN_3α2–3Galβ1–3GlcNAcαProNHCbz (**52**) in D_2O

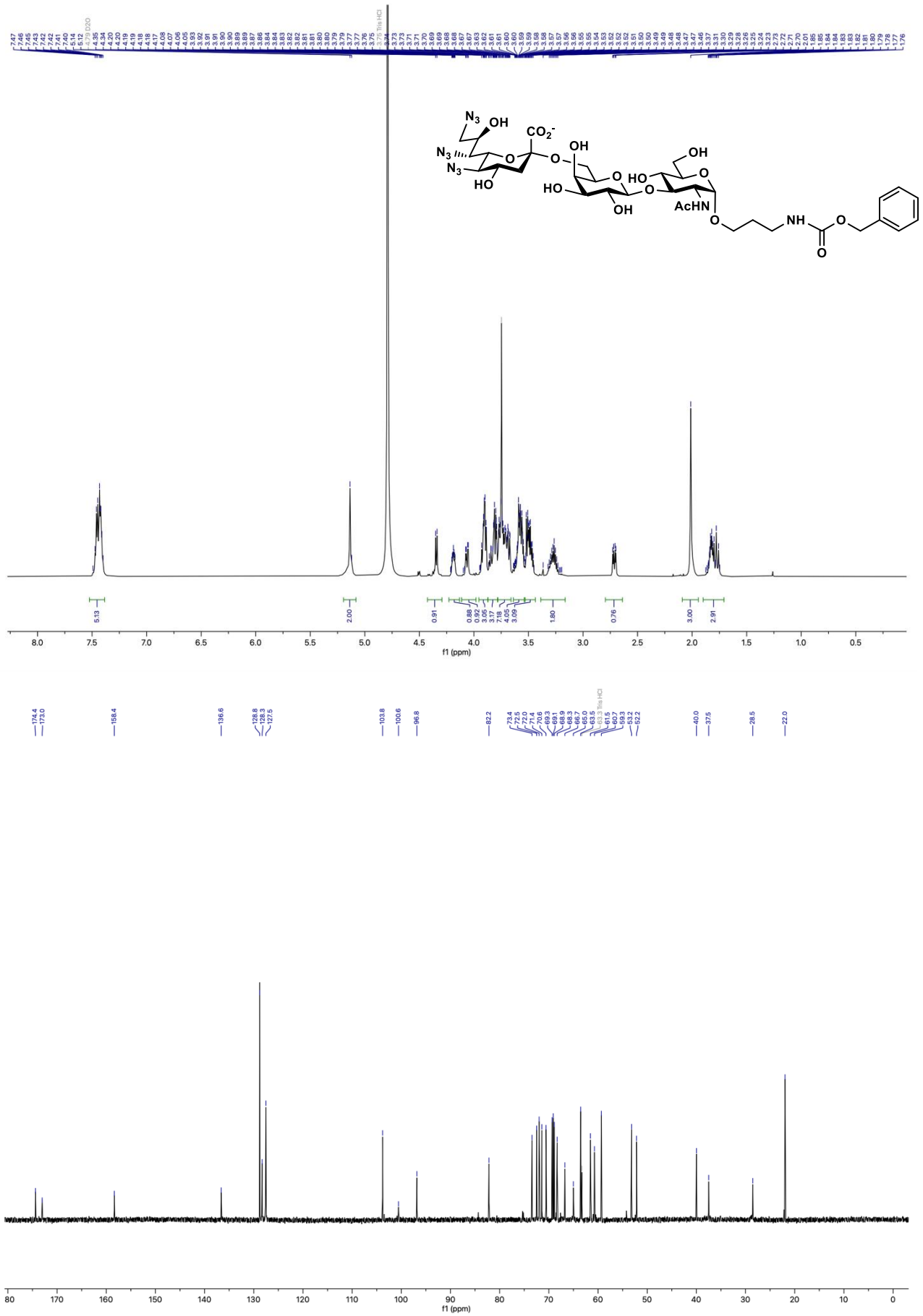


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN$_3$α2–6Galβ1–3GlcNAcαProNHCbz (**53**) in D_2O

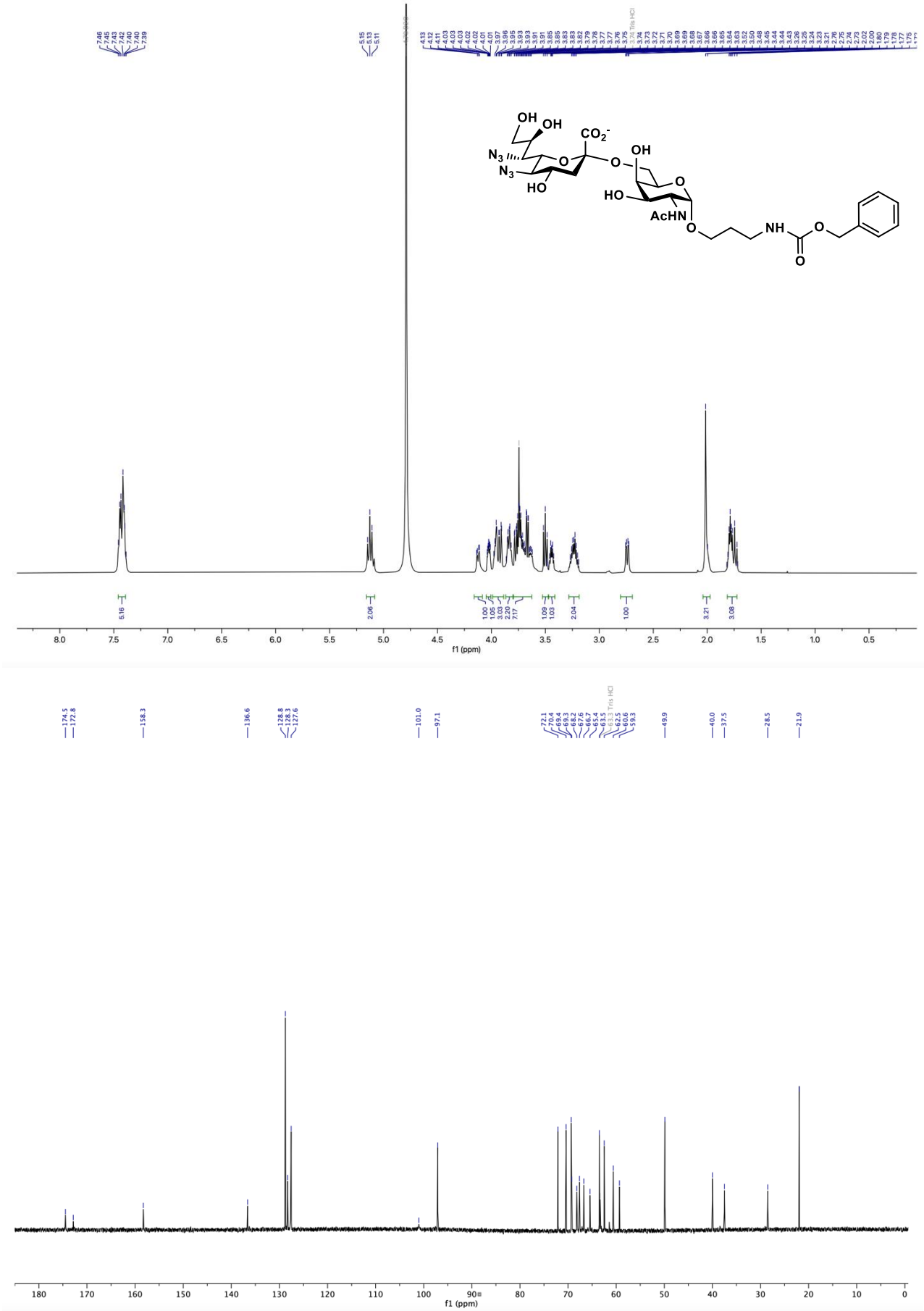




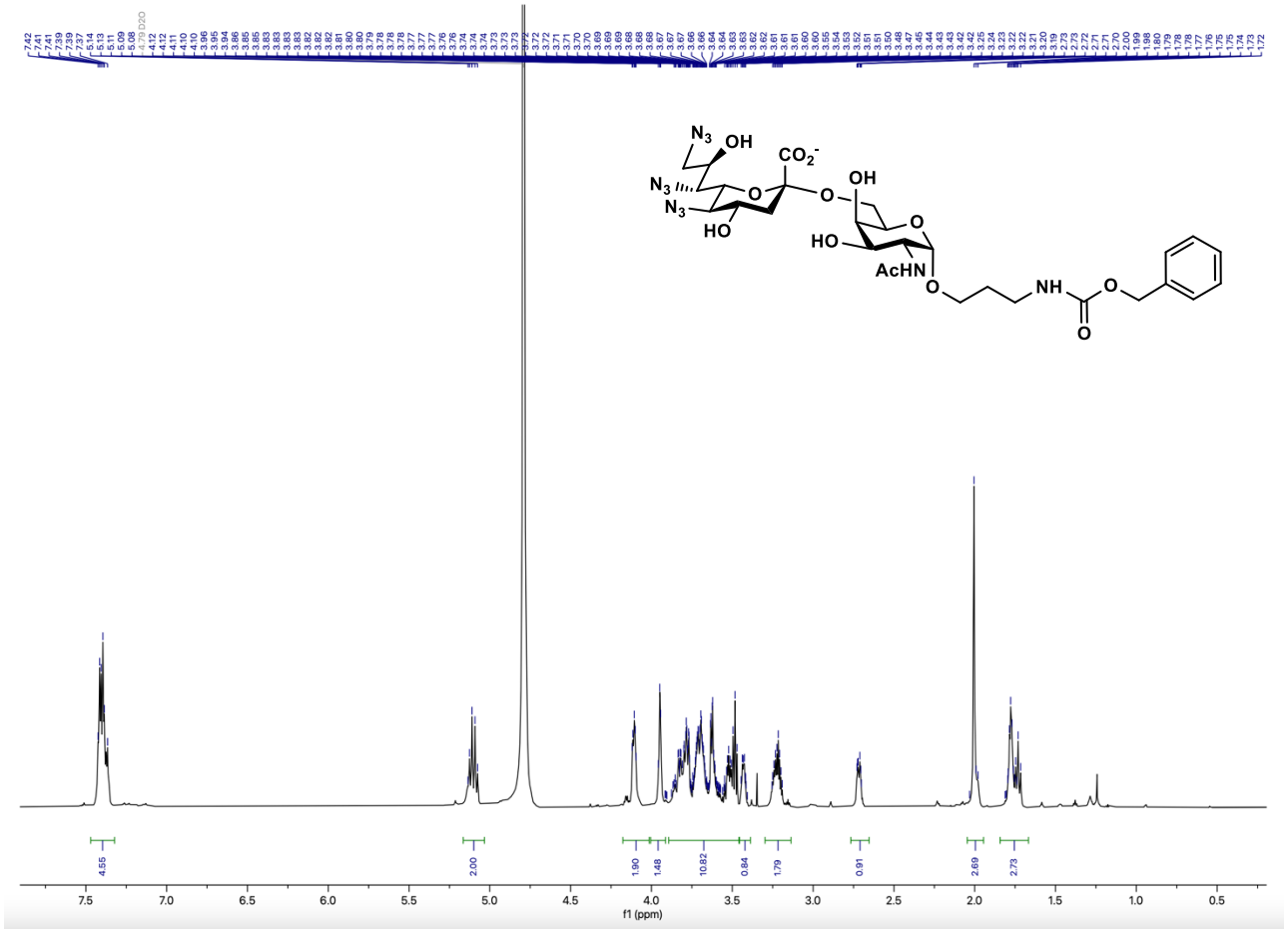
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN$_3$α2–6Galβ1–3GlcNAcαProNHCbz (**54**) in D_2O

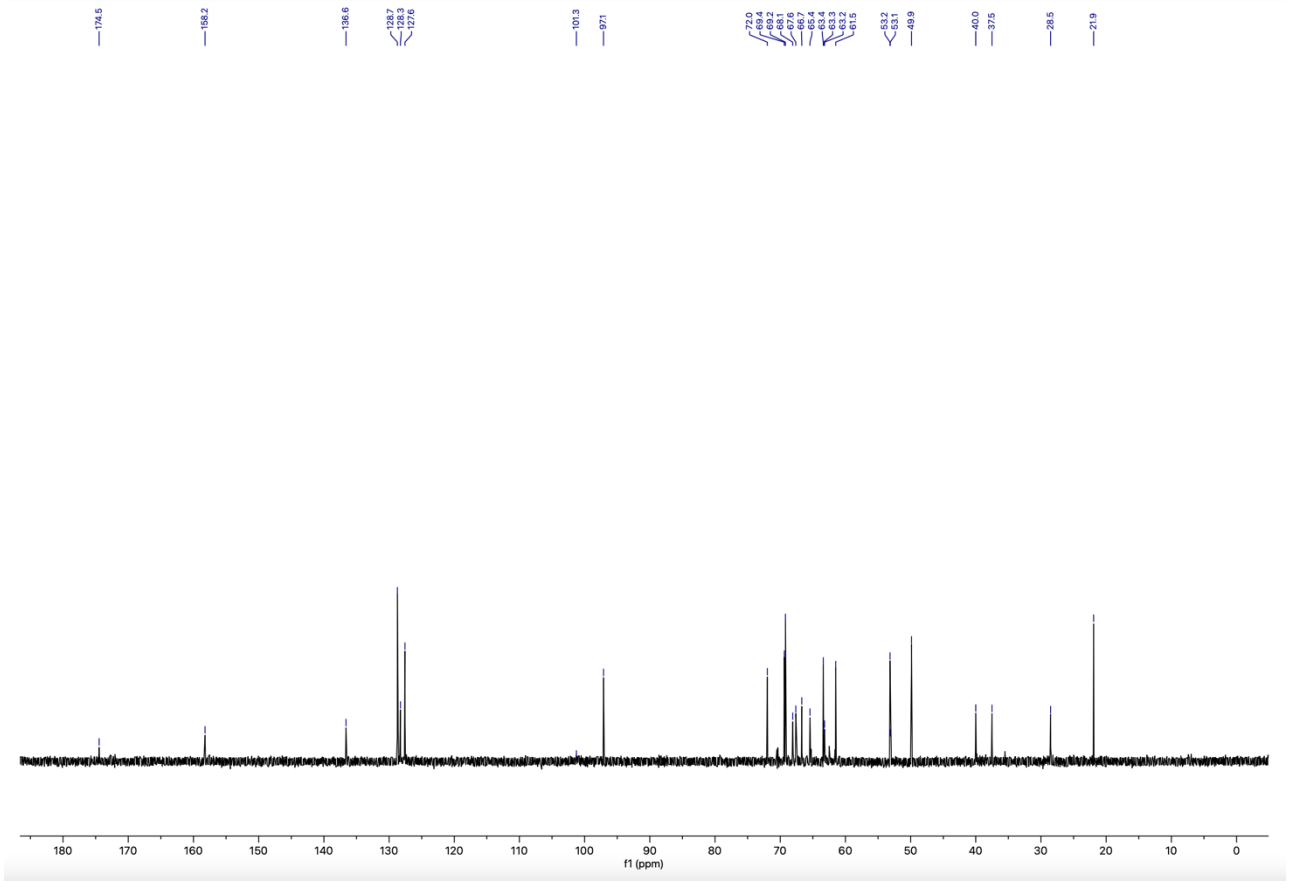


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7diN_3α2–6GalNAcαProNHCbz (**55**) in D_2O

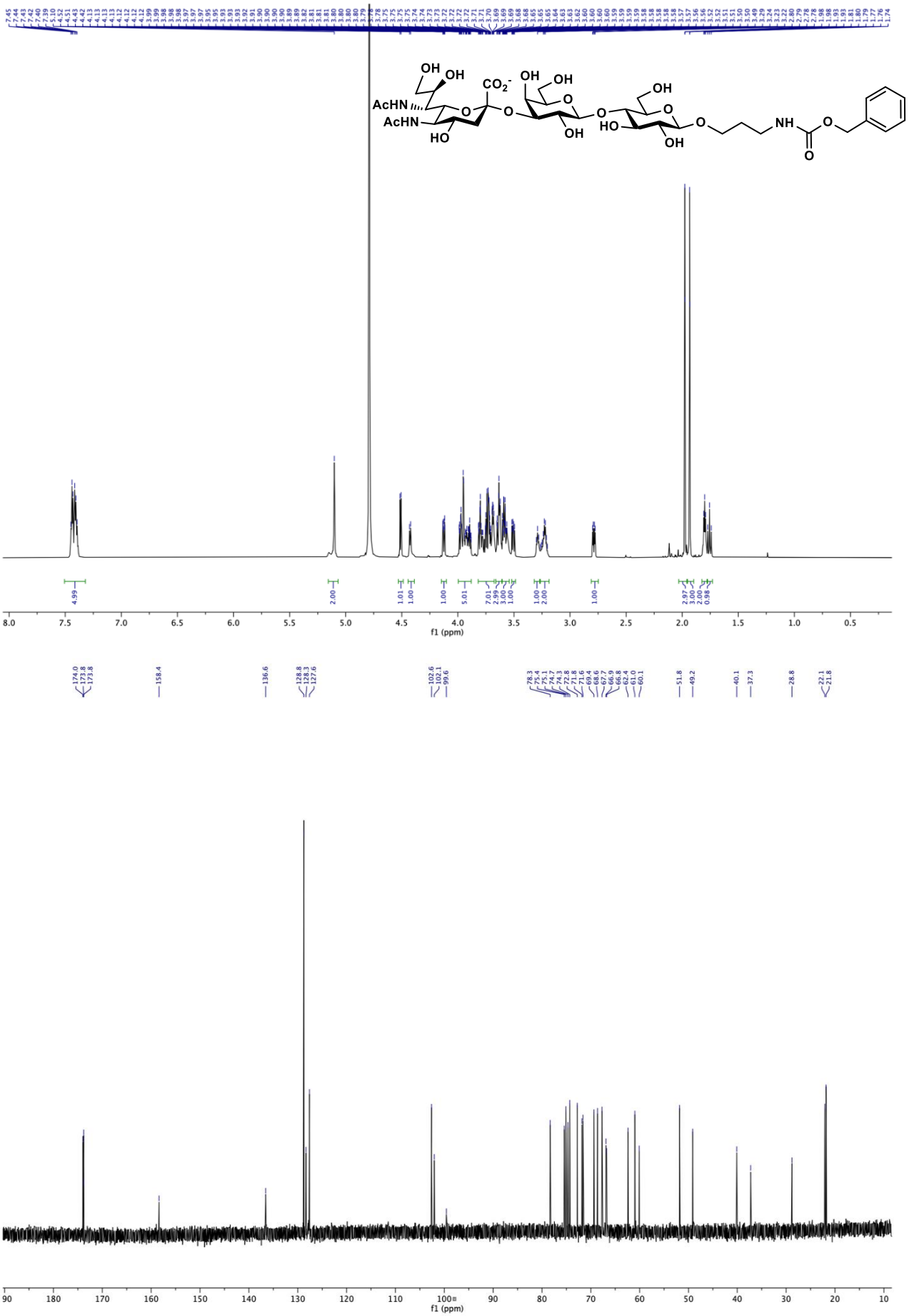


800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5,7,9triN$_3$α2–6GalNAcαProNHCbz (**56**) in D_2O

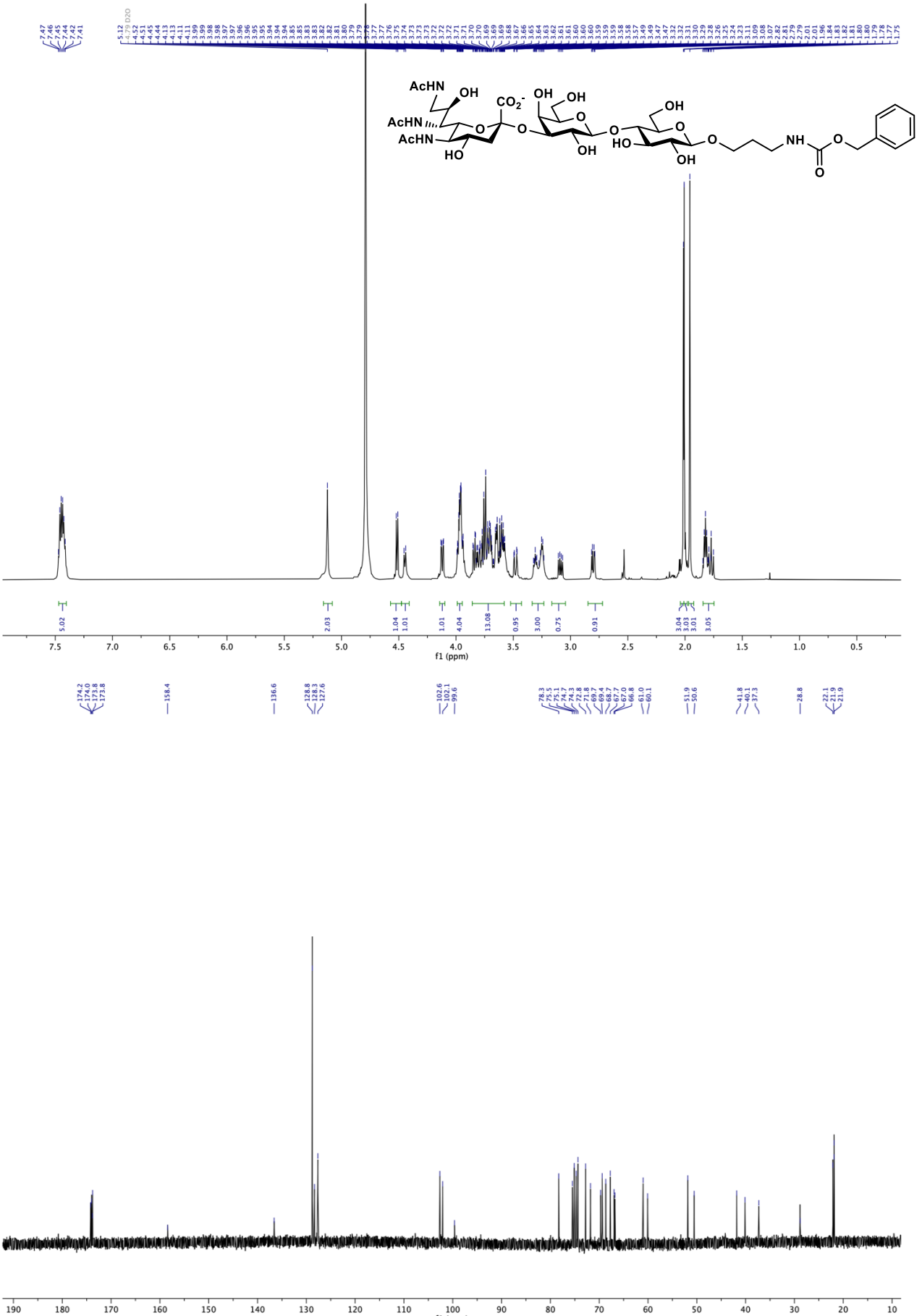




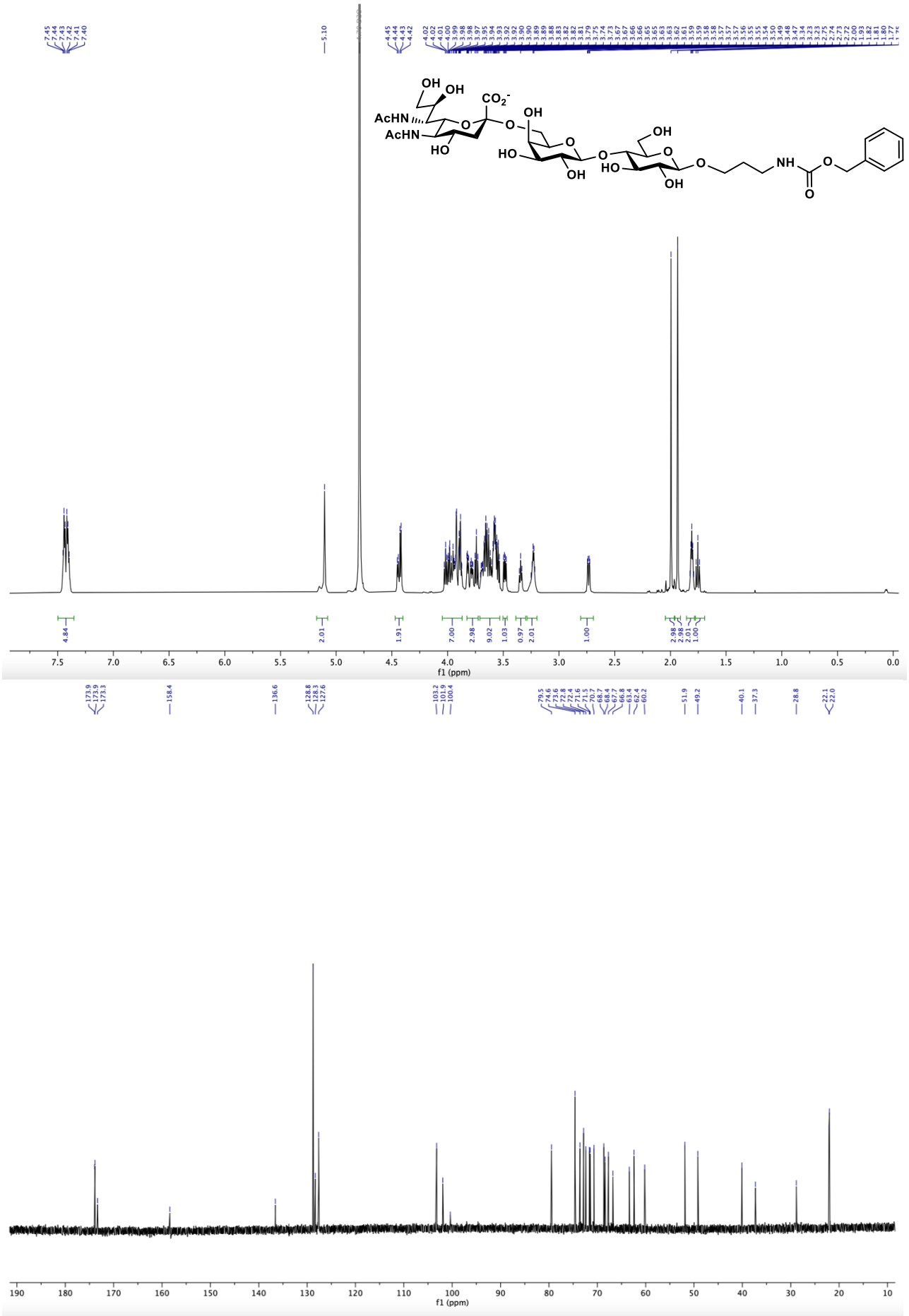
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–3LacβProNHCbz (**57**) in D_2O



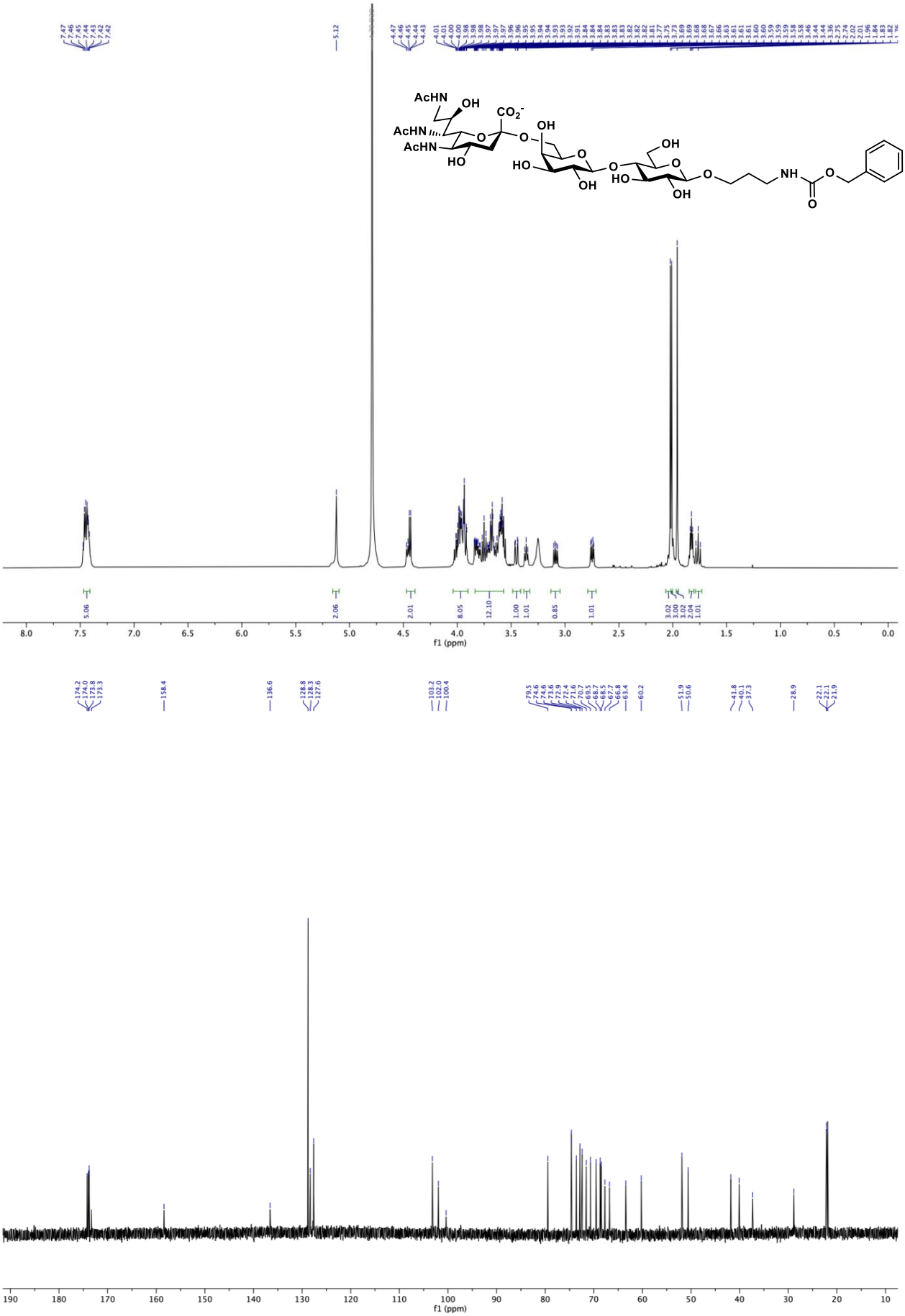
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2−3LacβProNHCbz (**58**) in D_2O



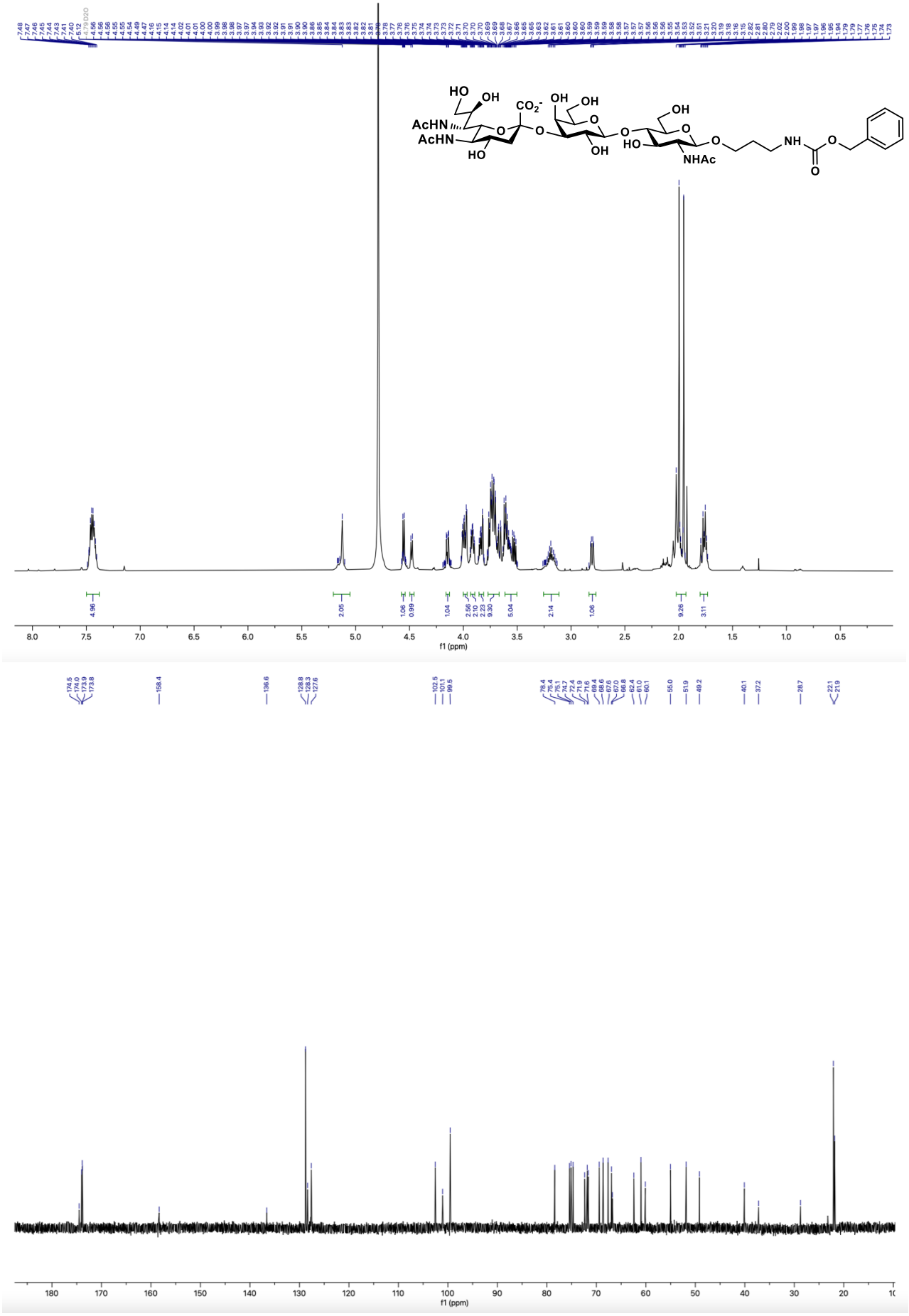
800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–6LacβProNHCbz (**59**) in D_2O



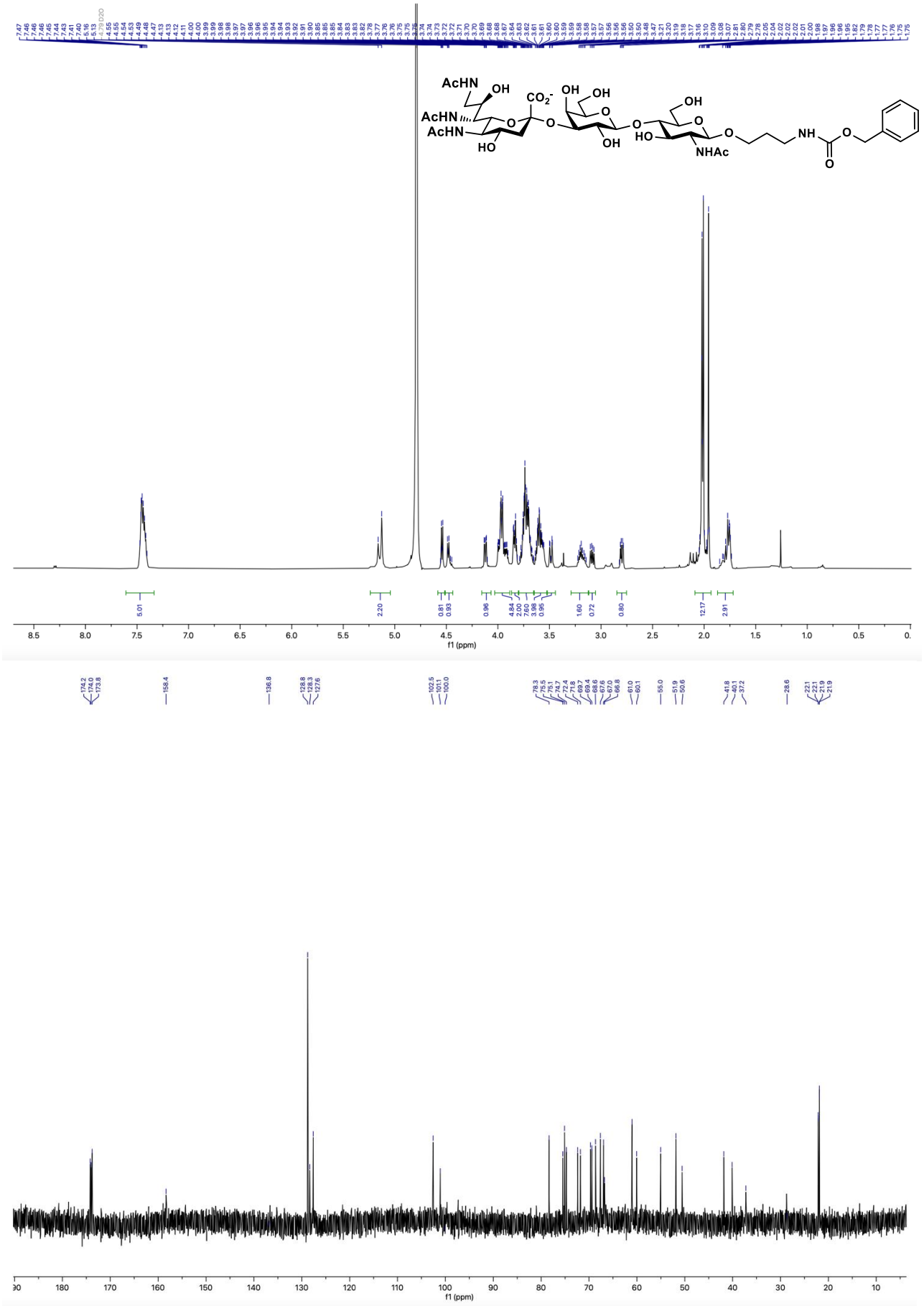
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2−6LacβProNHCbz (**60**) in D_2O



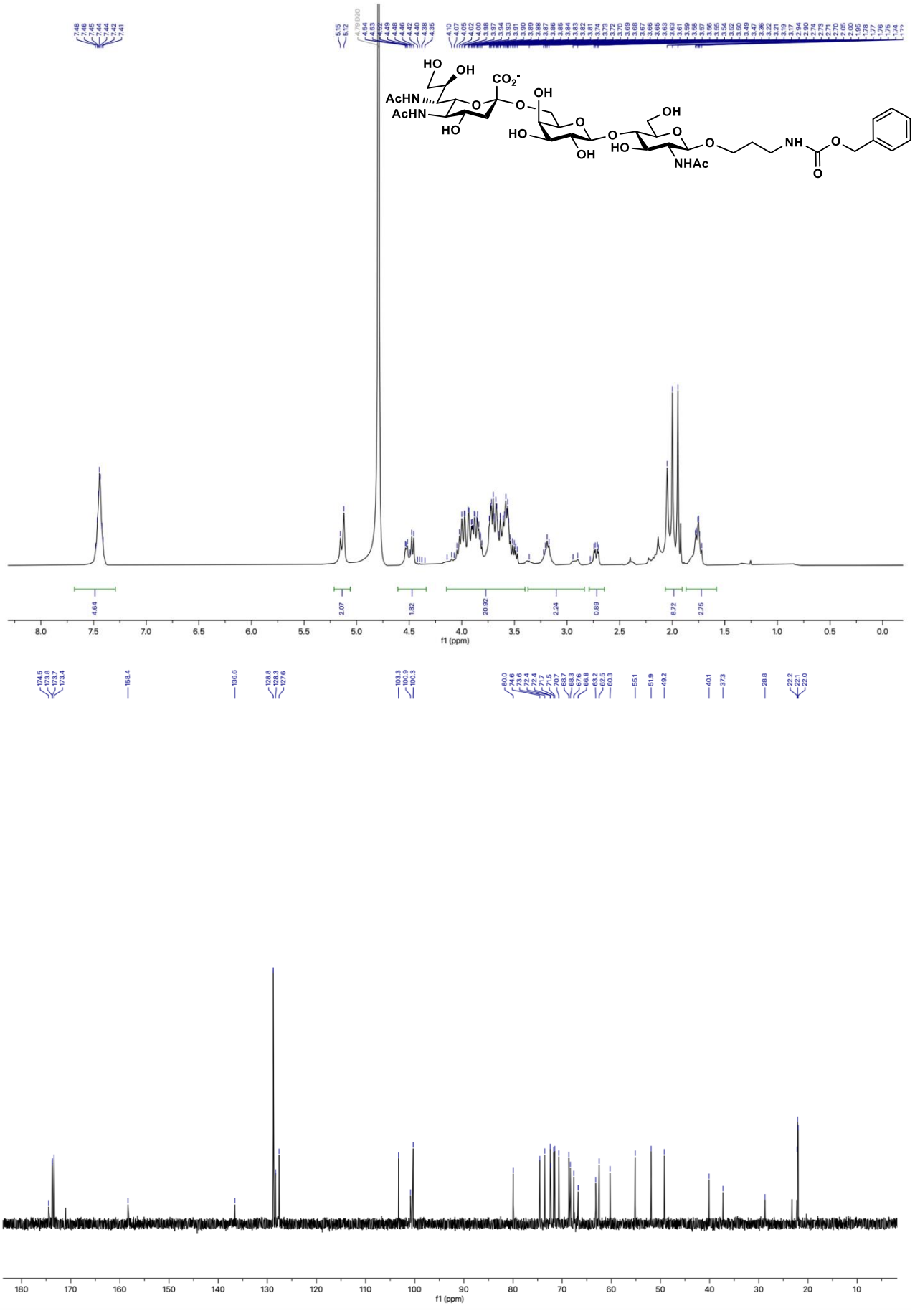
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–3LacNAcβProNHCbz (**61**) in D_2O



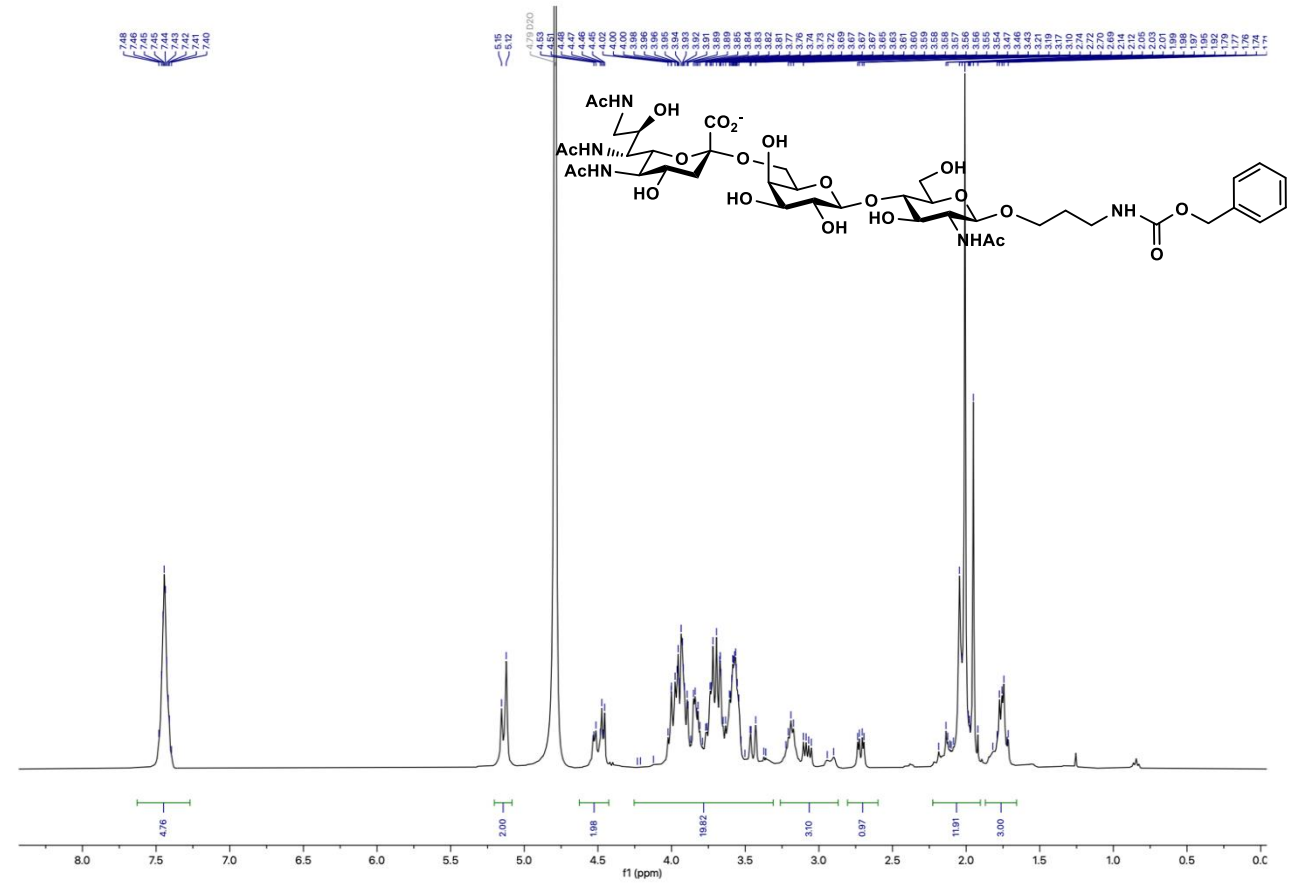
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–3LacNAcβProNHCbz (**62**) in D_2O

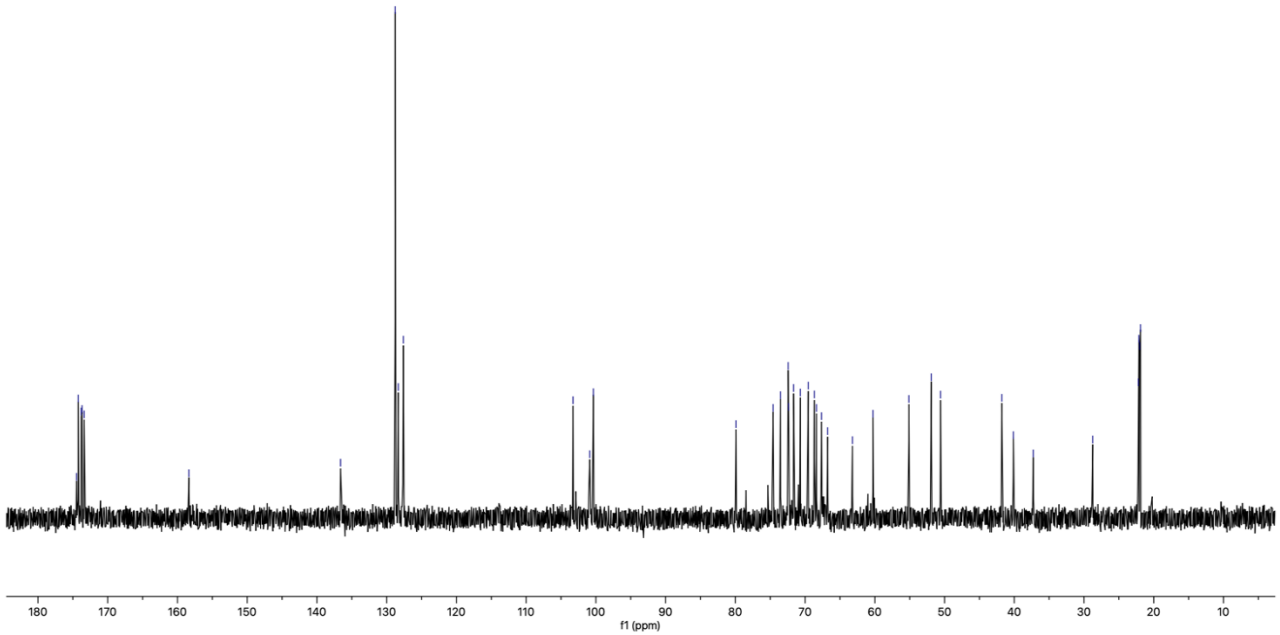


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–6LacNAcβProNHCbz (**63**) in D_2O

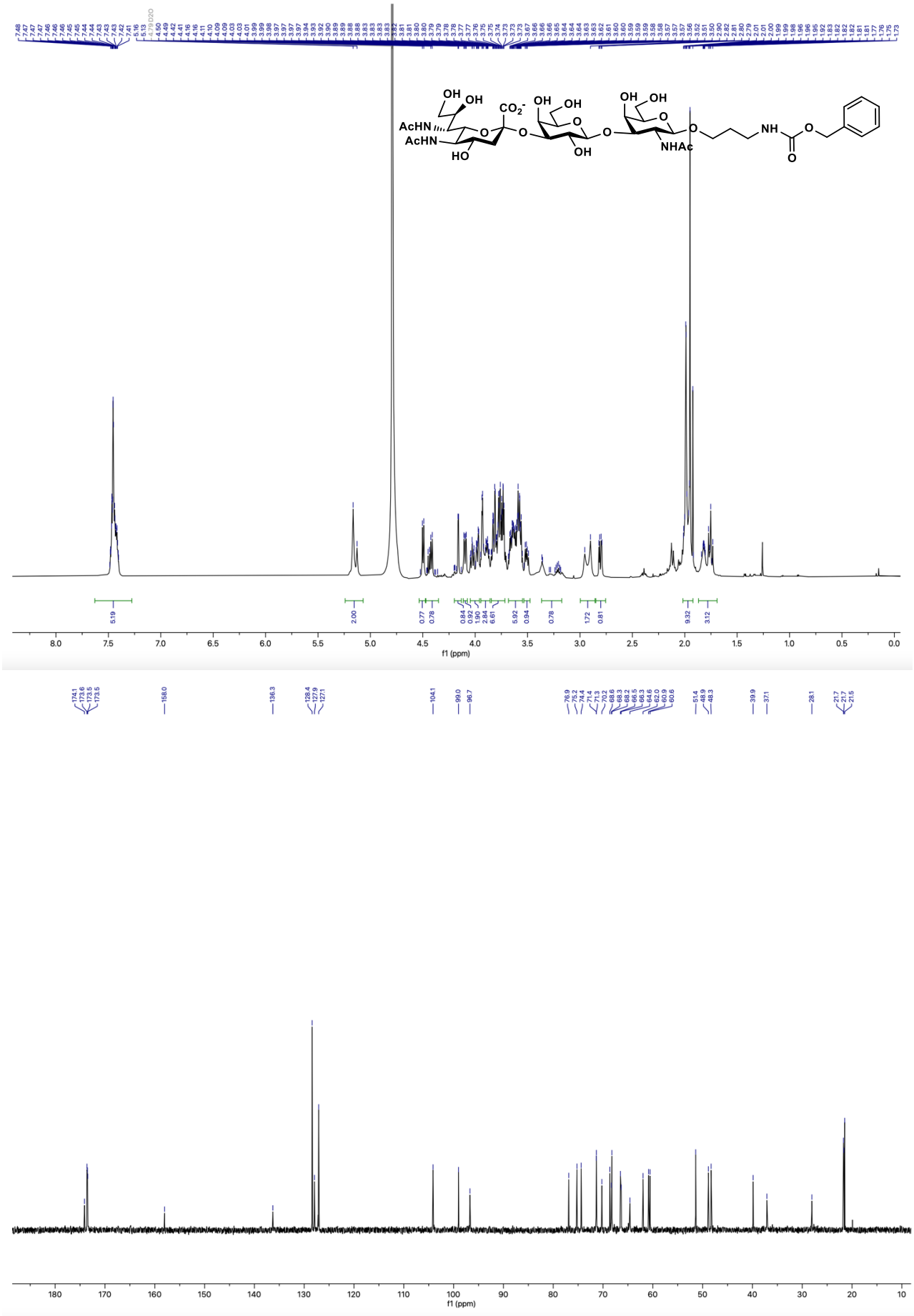


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–6LacNAcβProNHCbz (**64**) in D_2O

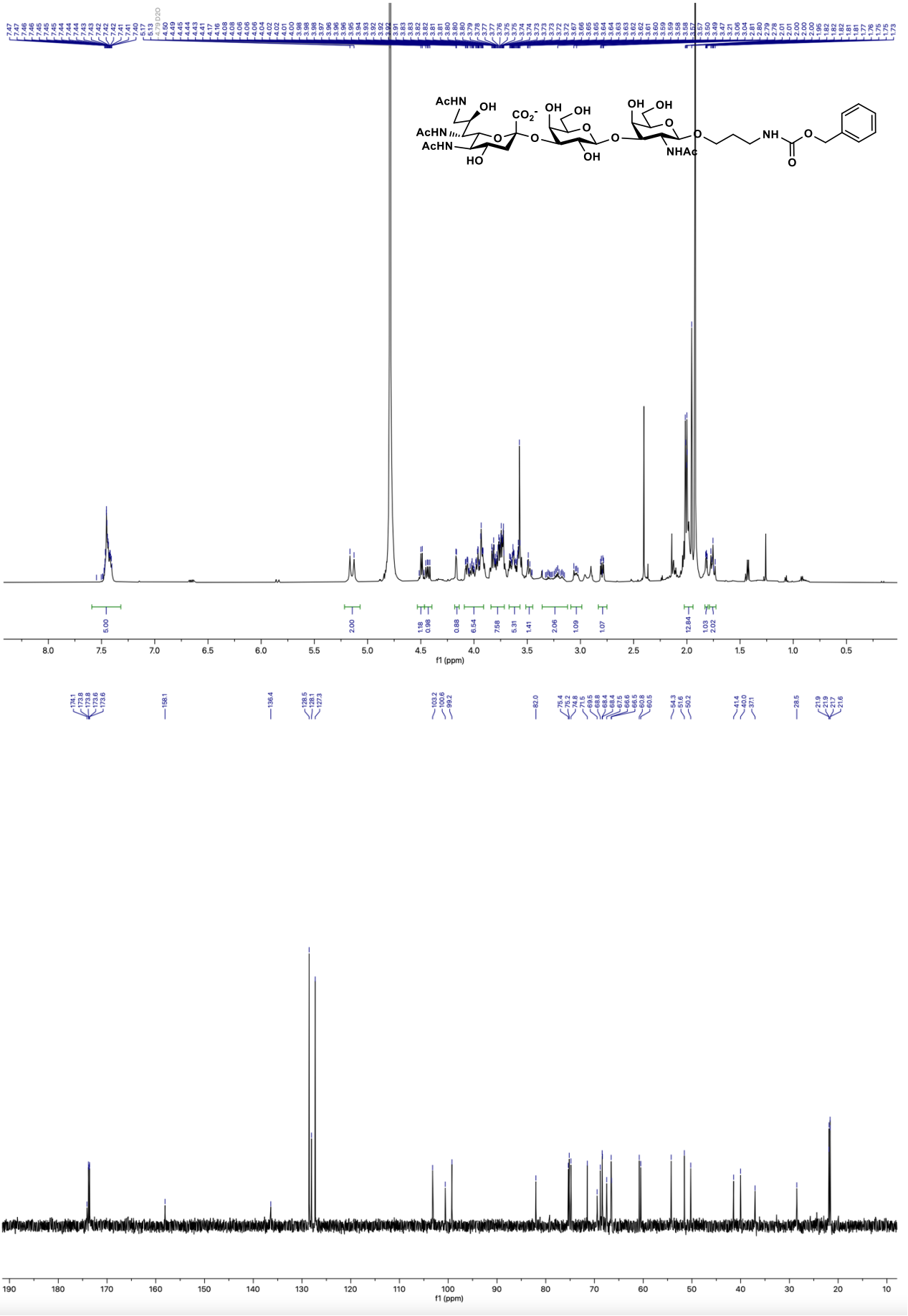




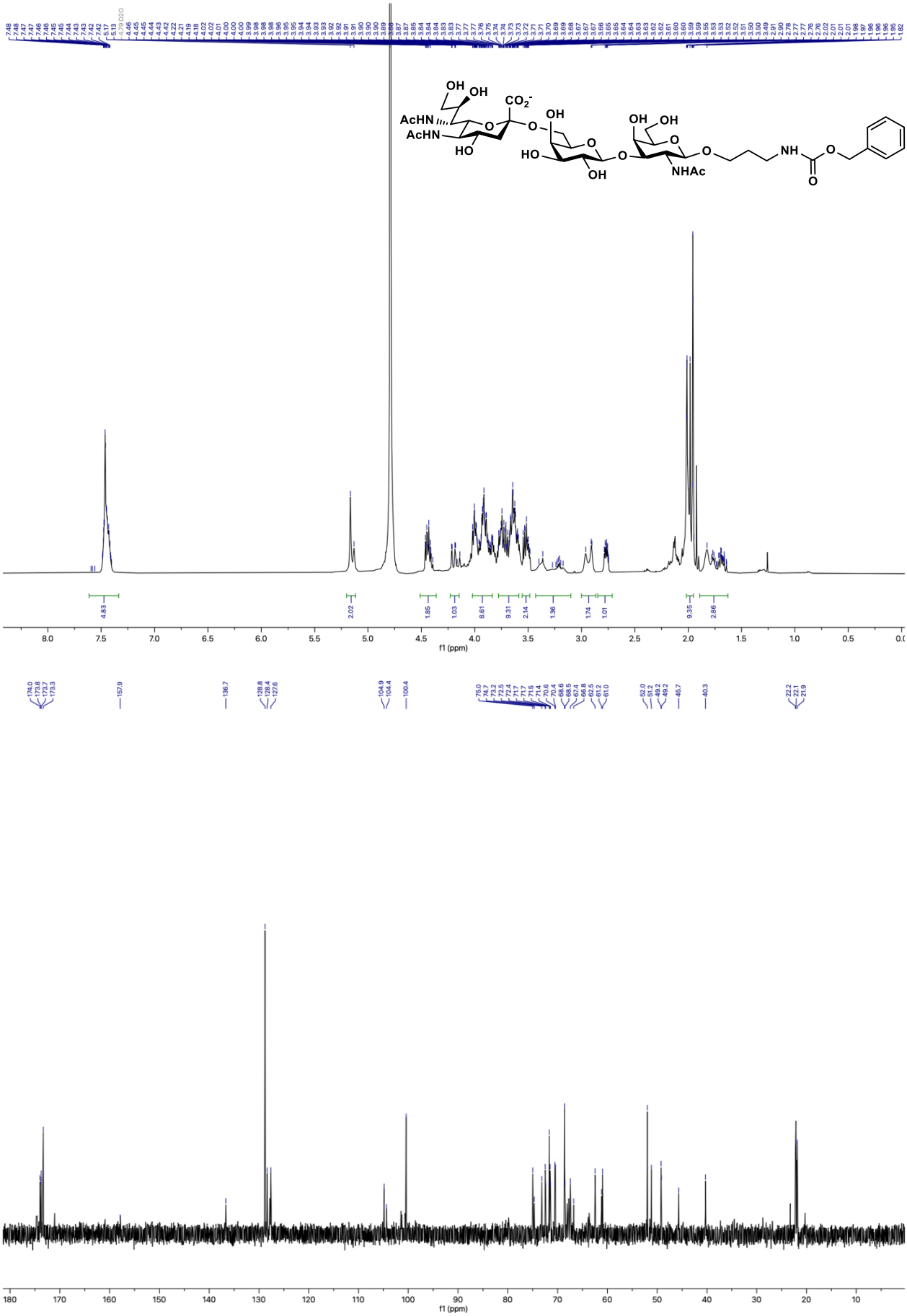
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–3Galβ1–3GalNAcβProNHCbz (**65**) in D_2O



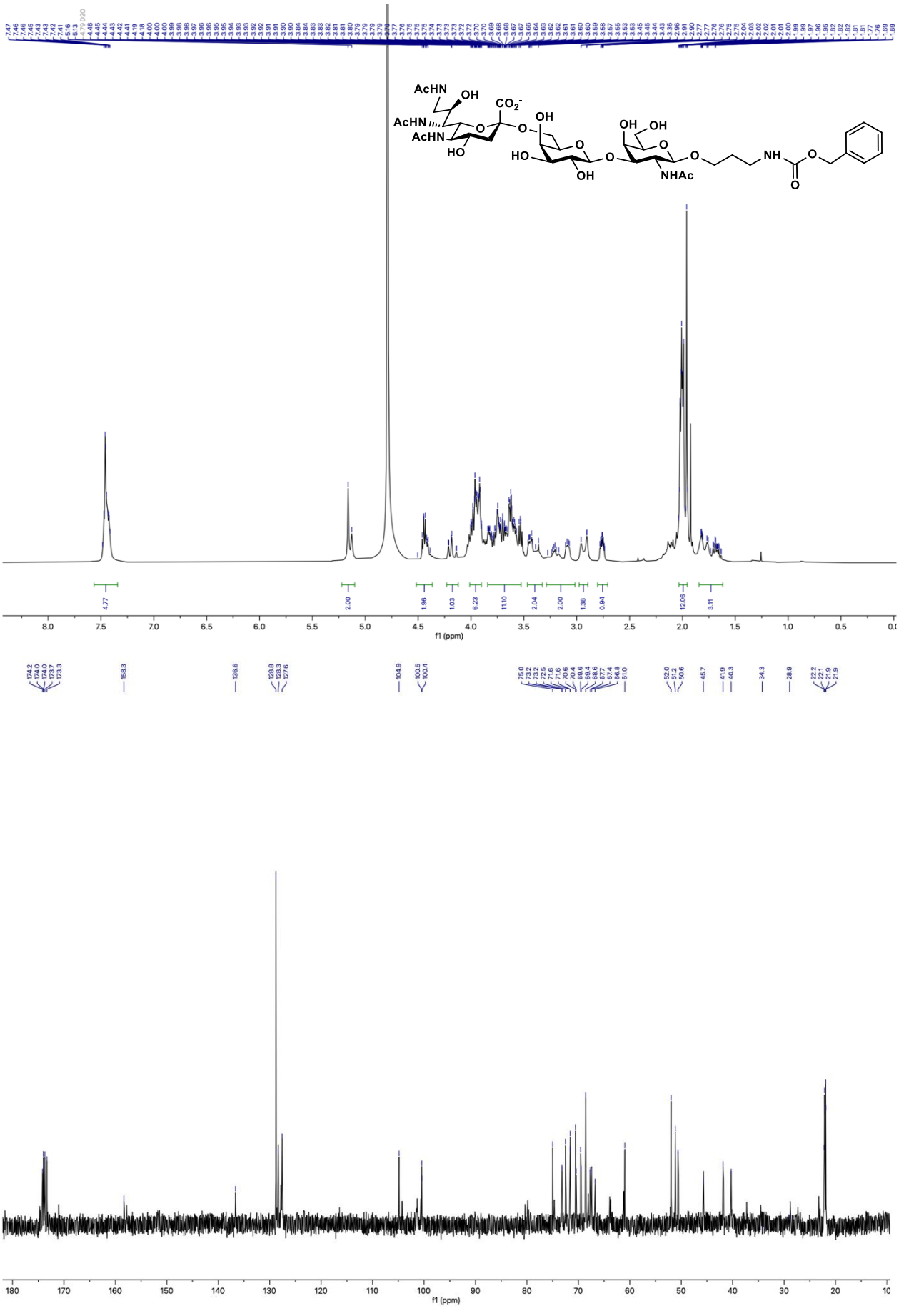
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–3Galβ1–3GalNAcβProNHCbz (**66**) in D_2O



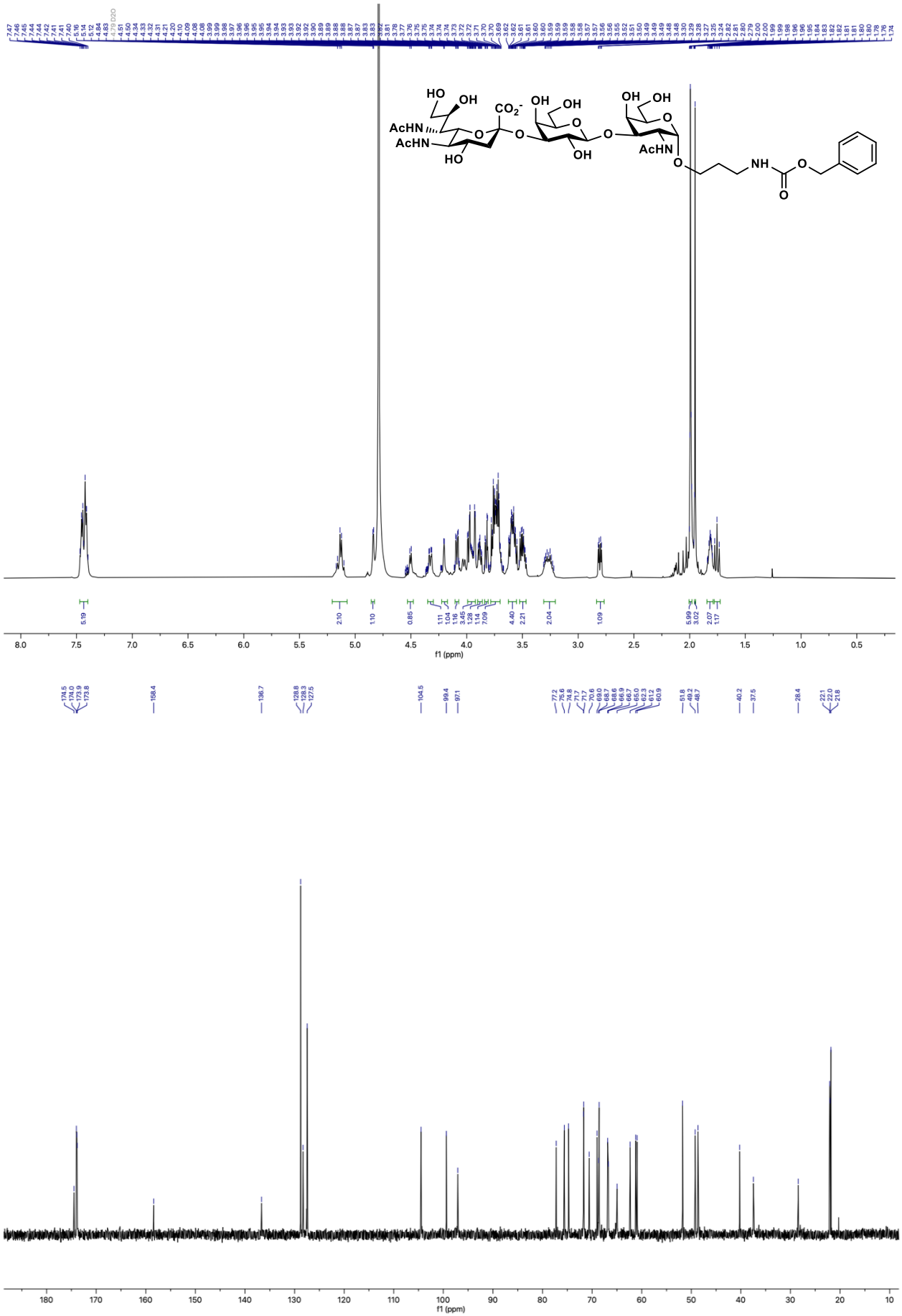
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–6Galβ1–3GalNAcβProNHCbz (**67**) in D_2O



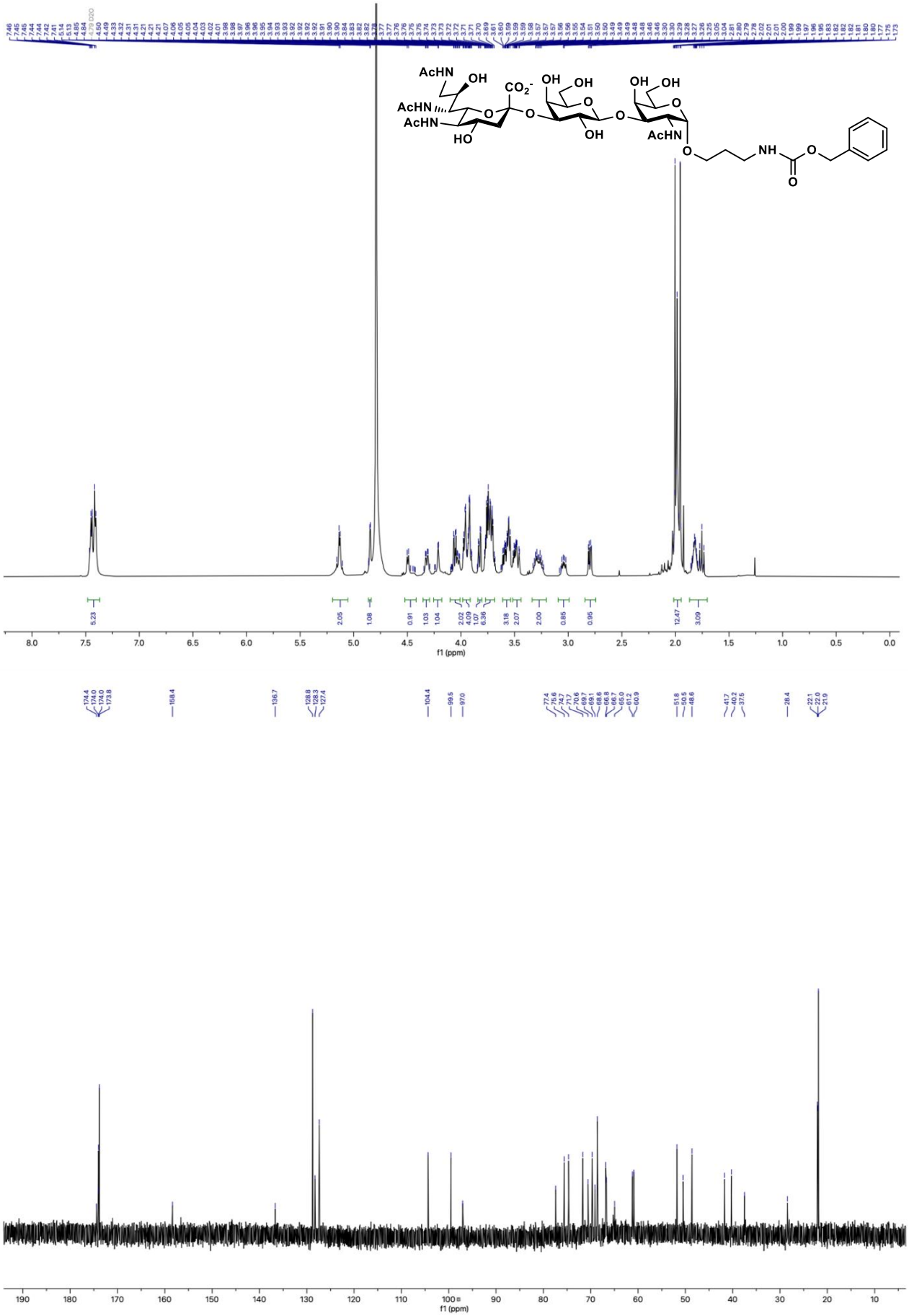
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–6Galβ1–3GalNAcβProNHCbz (**68**) in D_2O



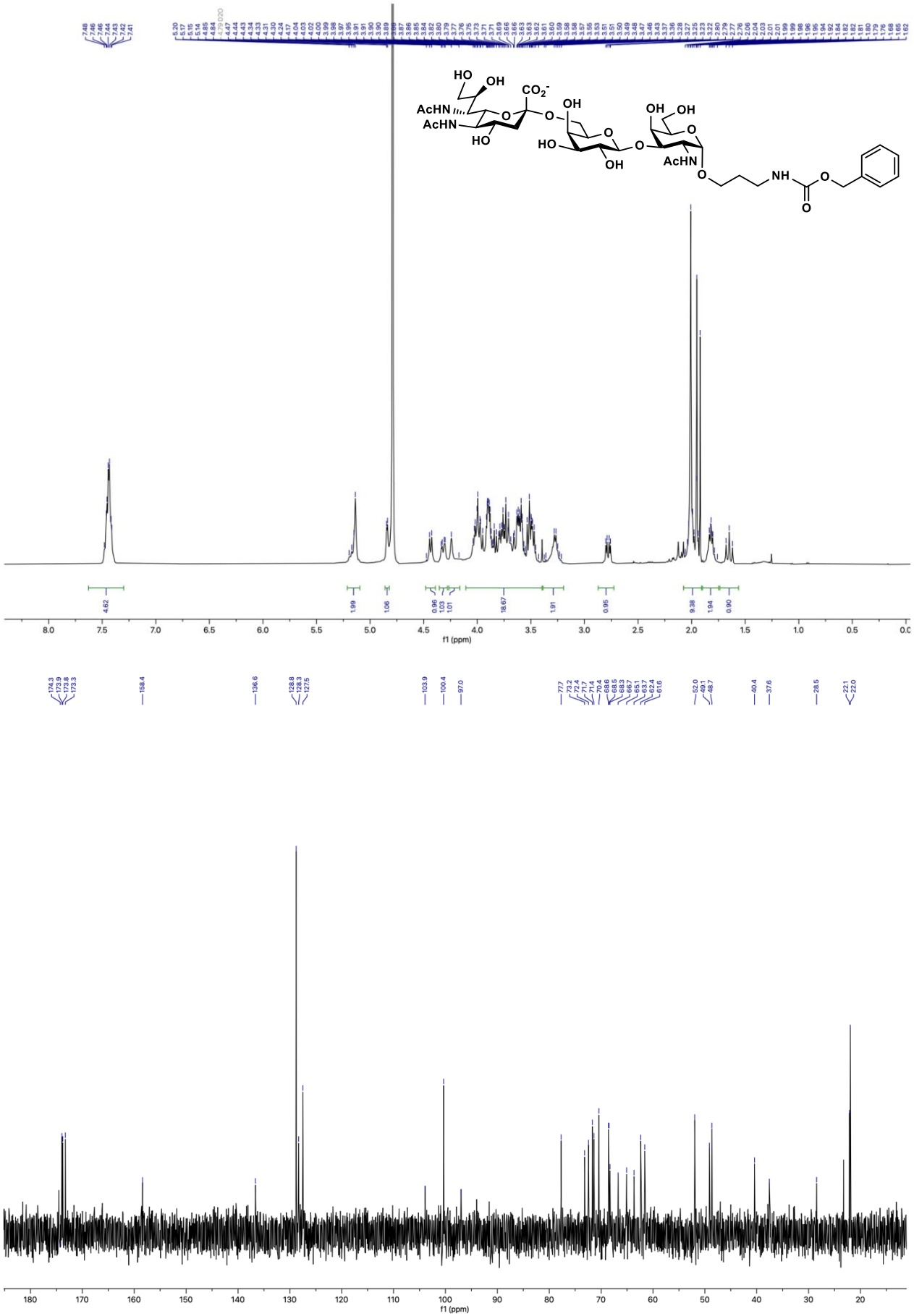
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–3Galβ1–3GalNAcαProNHCbz (**69**) in D_2O



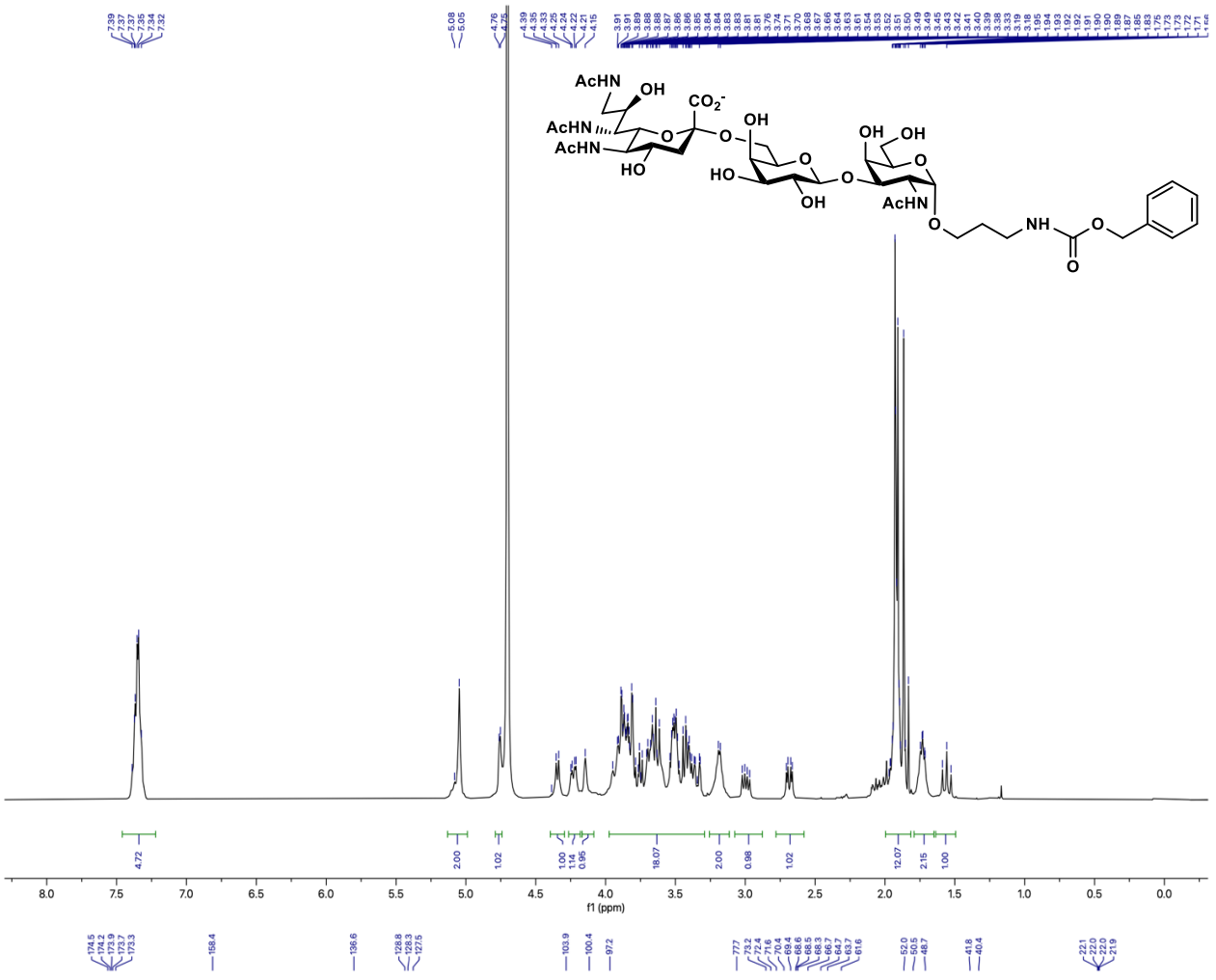
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–3Galβ1–3GalNAcαProNHCbz (**70**) in D_2O

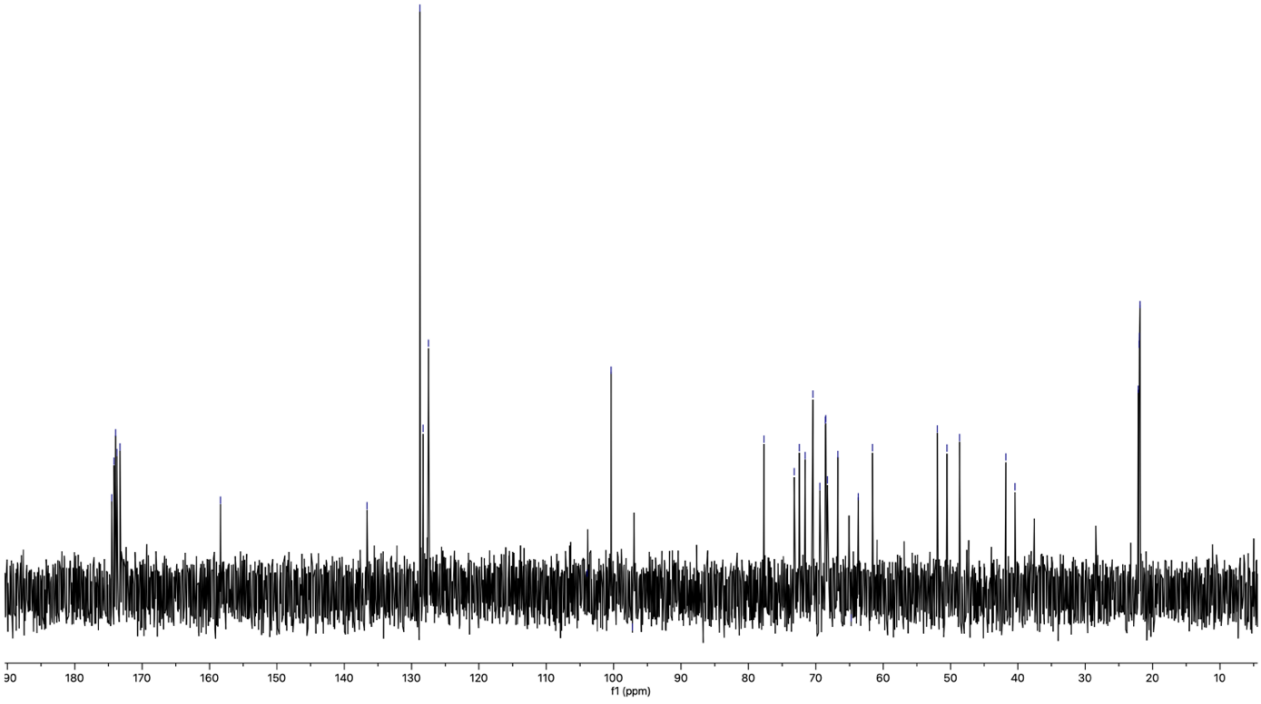


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–6Galβ1–3GalNAcαProNHCbz (**71**) in D_2O

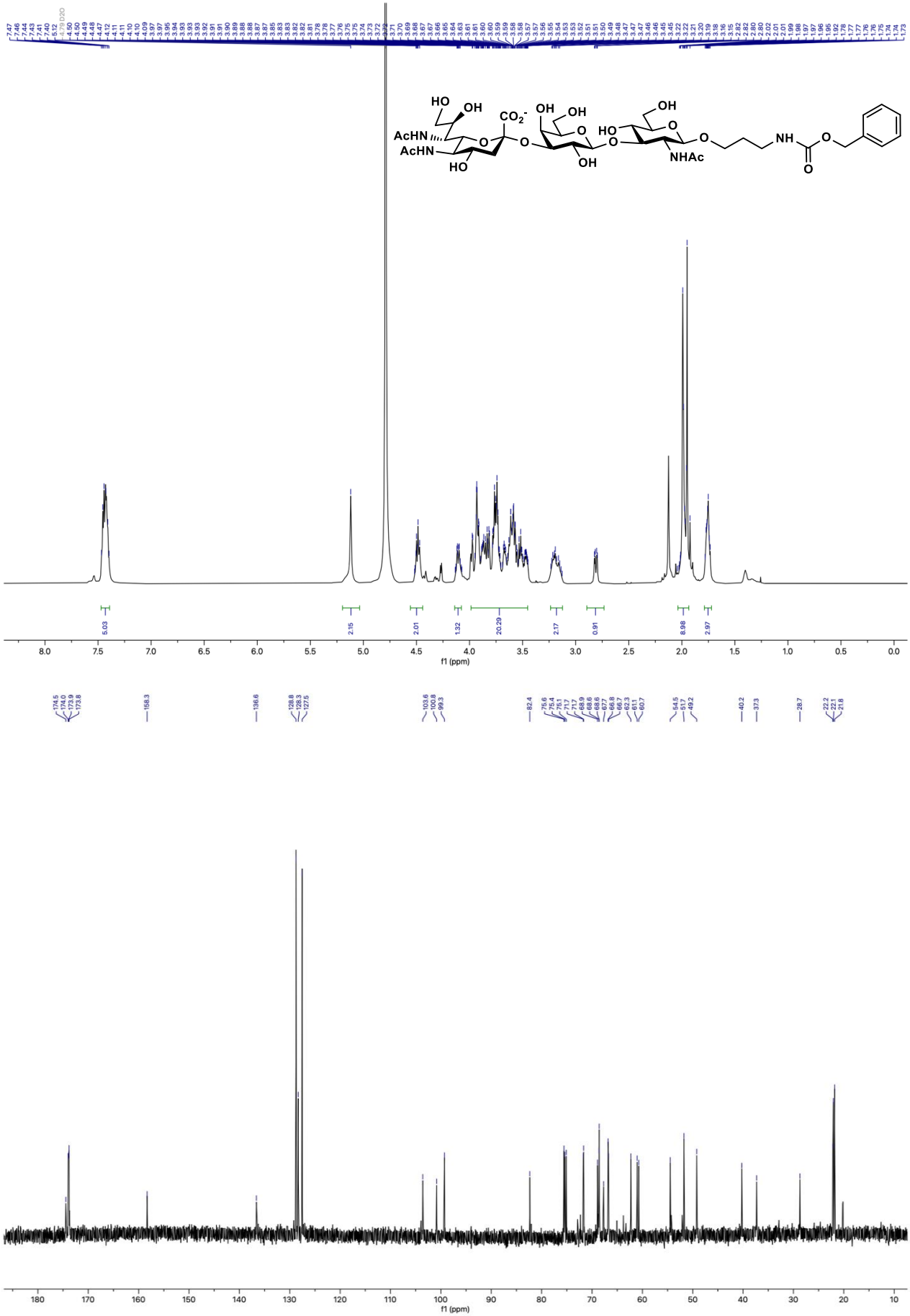


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–6Galβ1–3GalNAcαProNHCbz (**72**) in D_2O

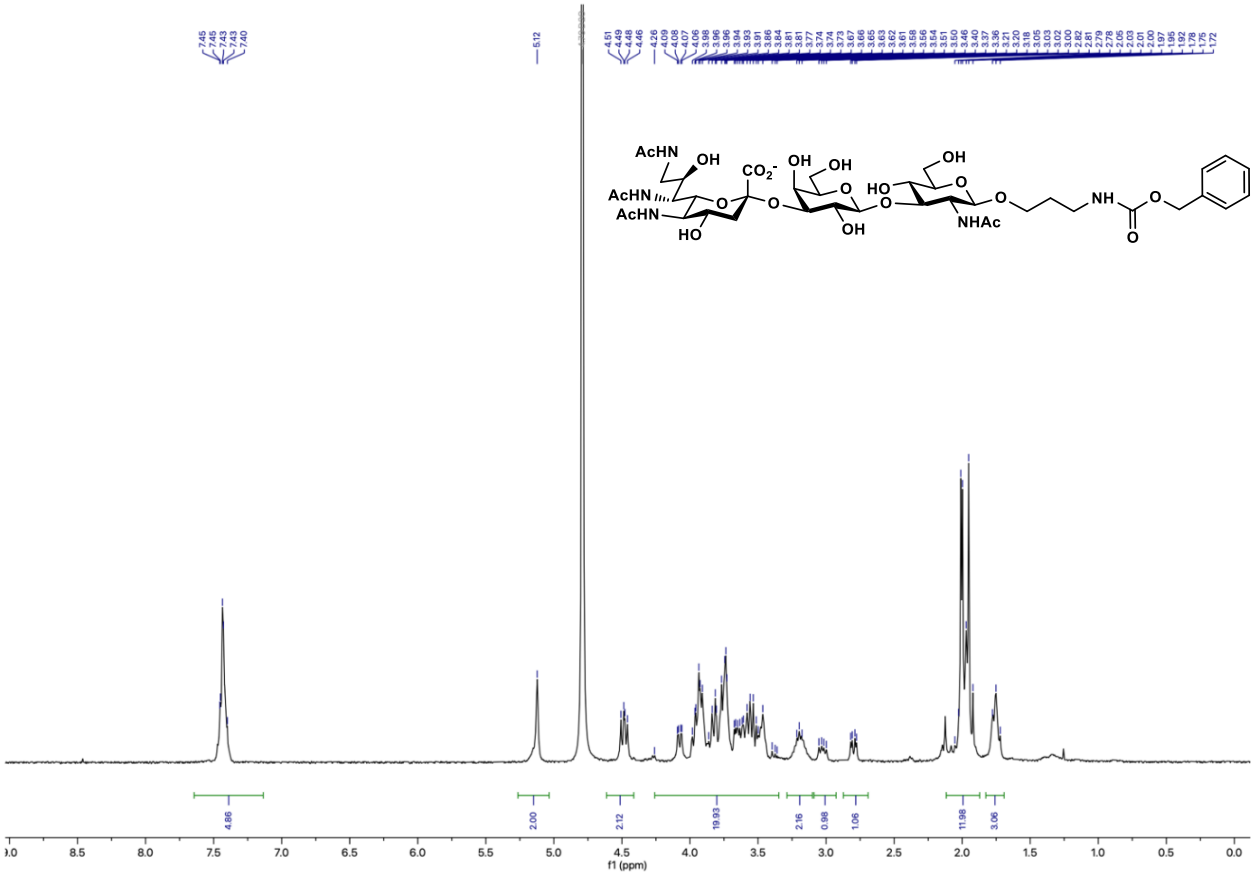


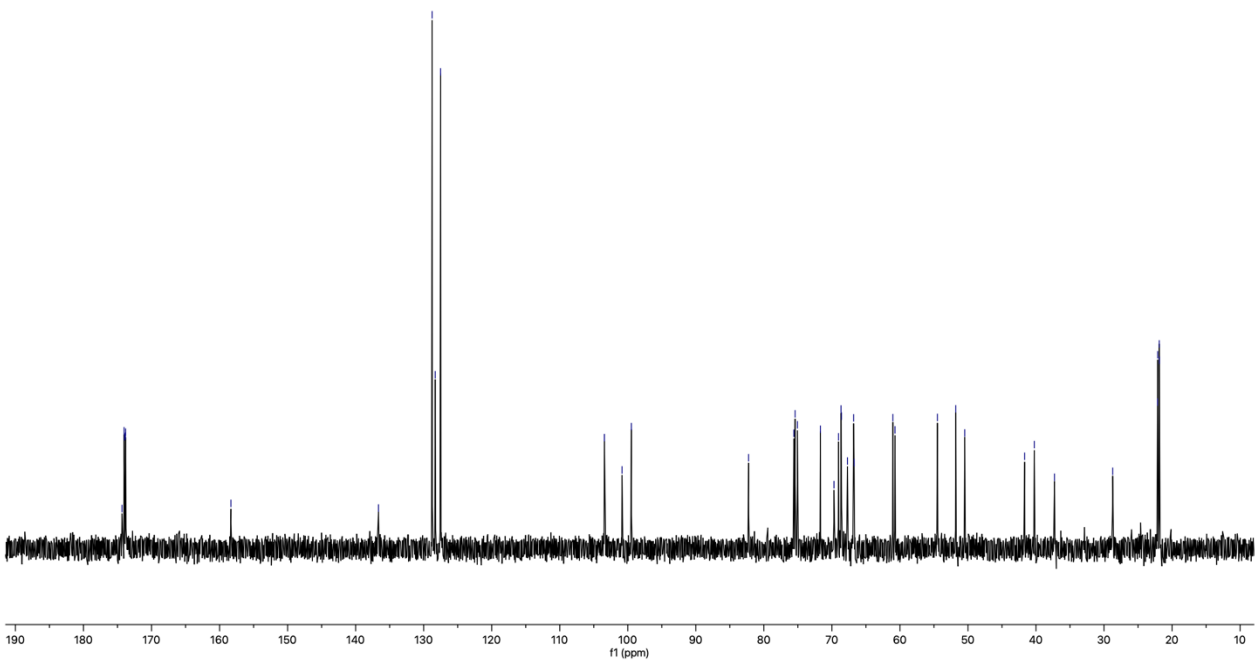


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–3Galβ1–3GlcNAcβProNHCbz (**73**) in D_2O

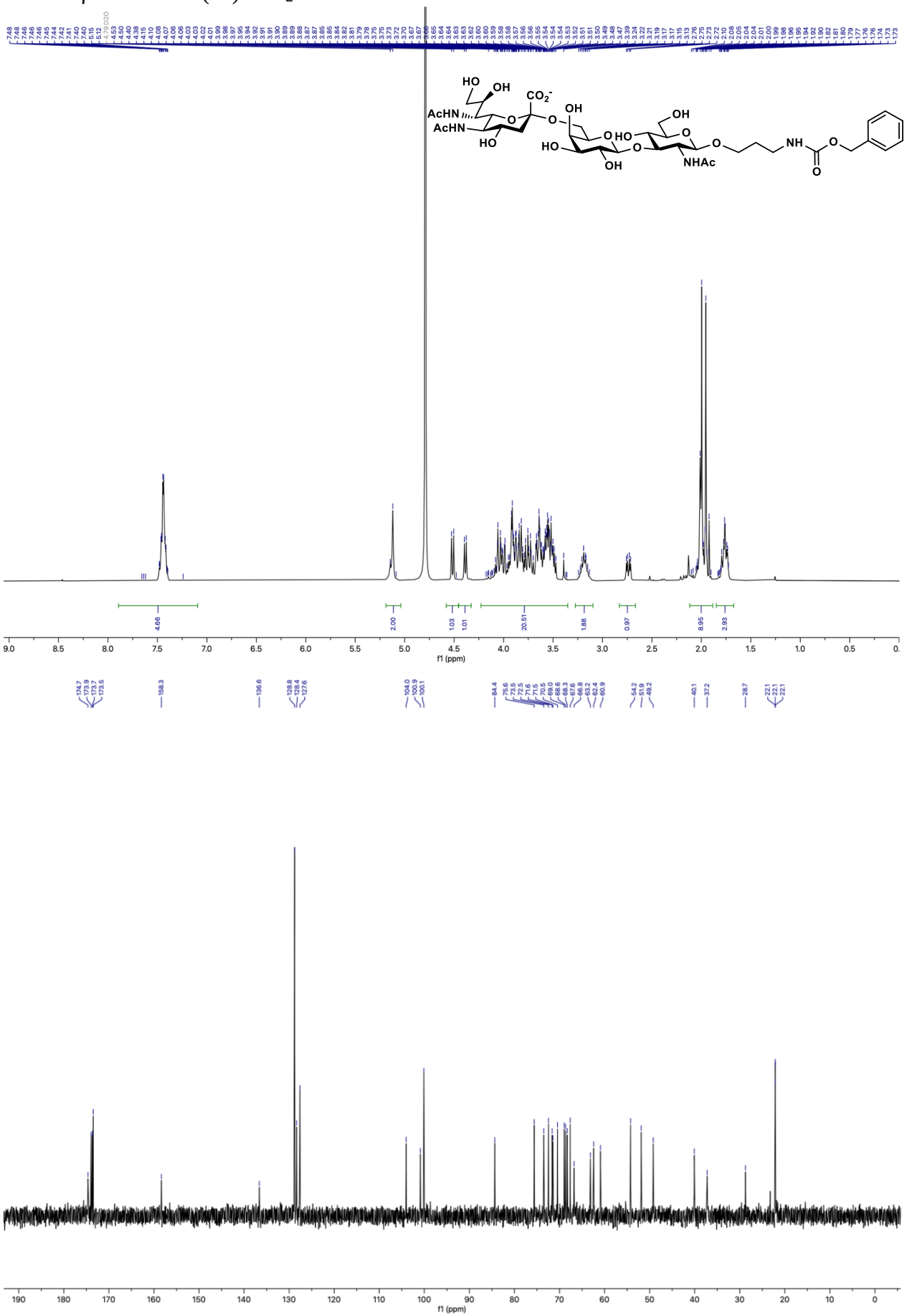


400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–3Galβ1–3GlcNAcβProNHCbz (**74**) in D_2O

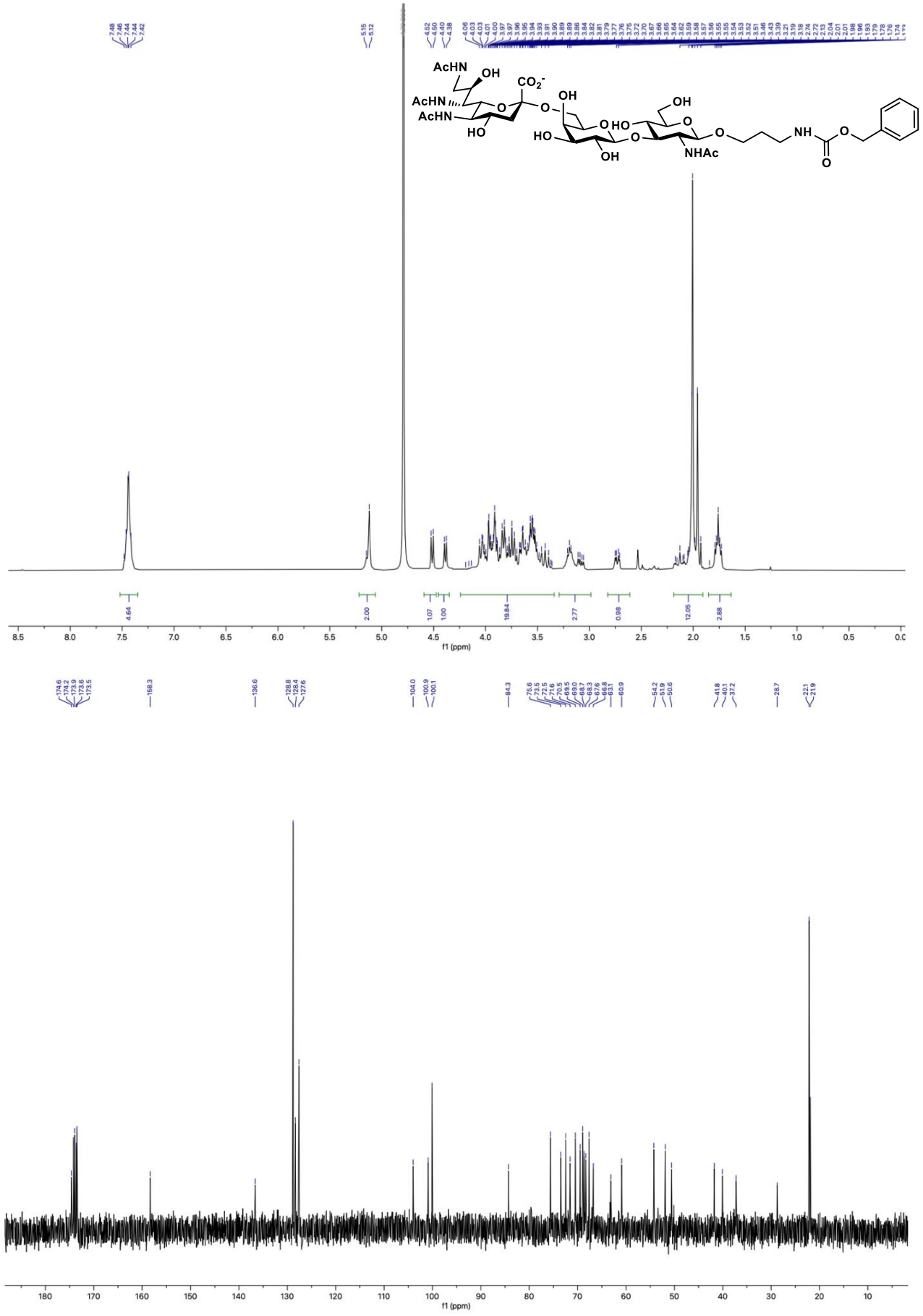




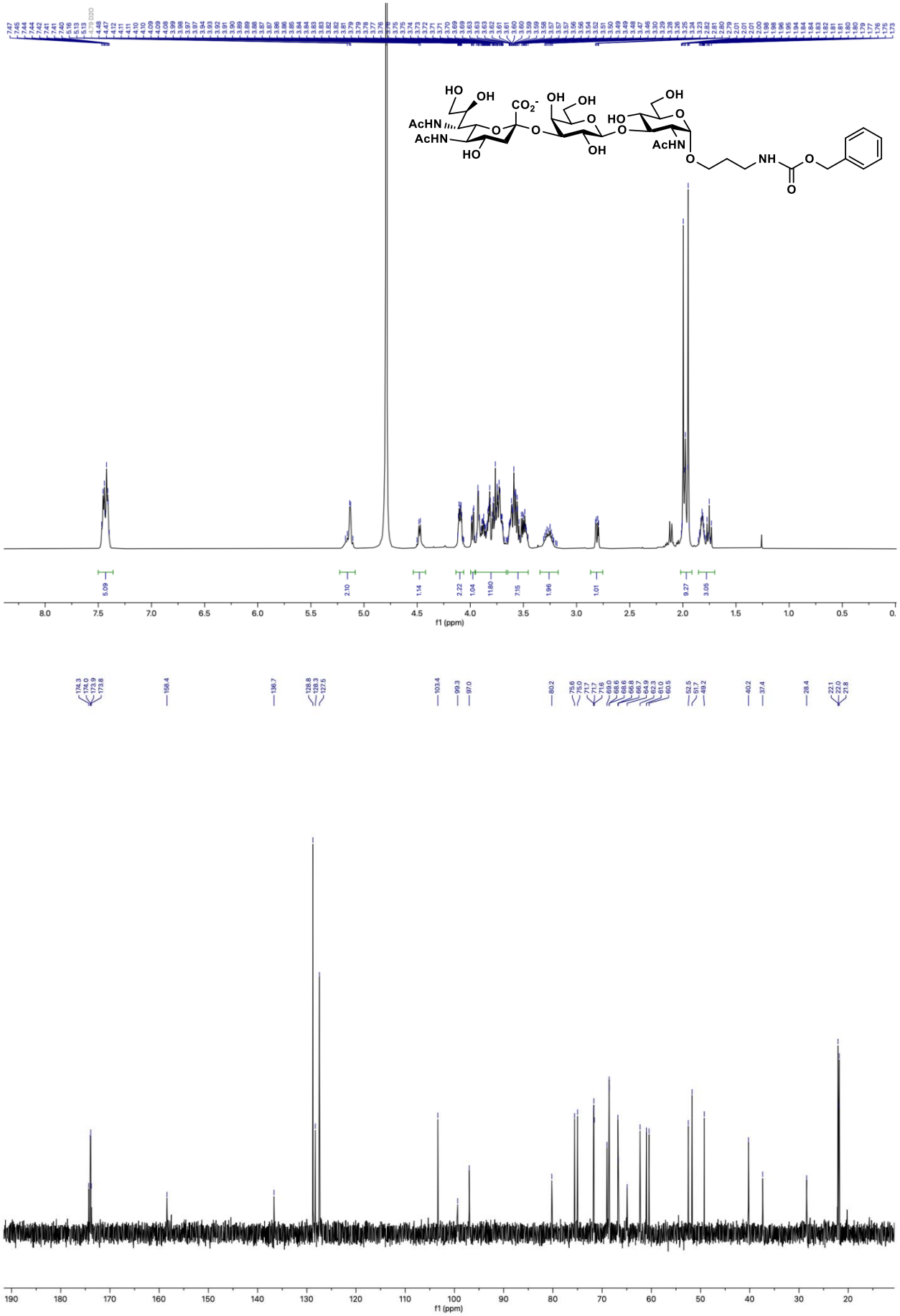
400 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–6Galβ1–3GlcNAcβProNHCbz (**75**) in D_2O



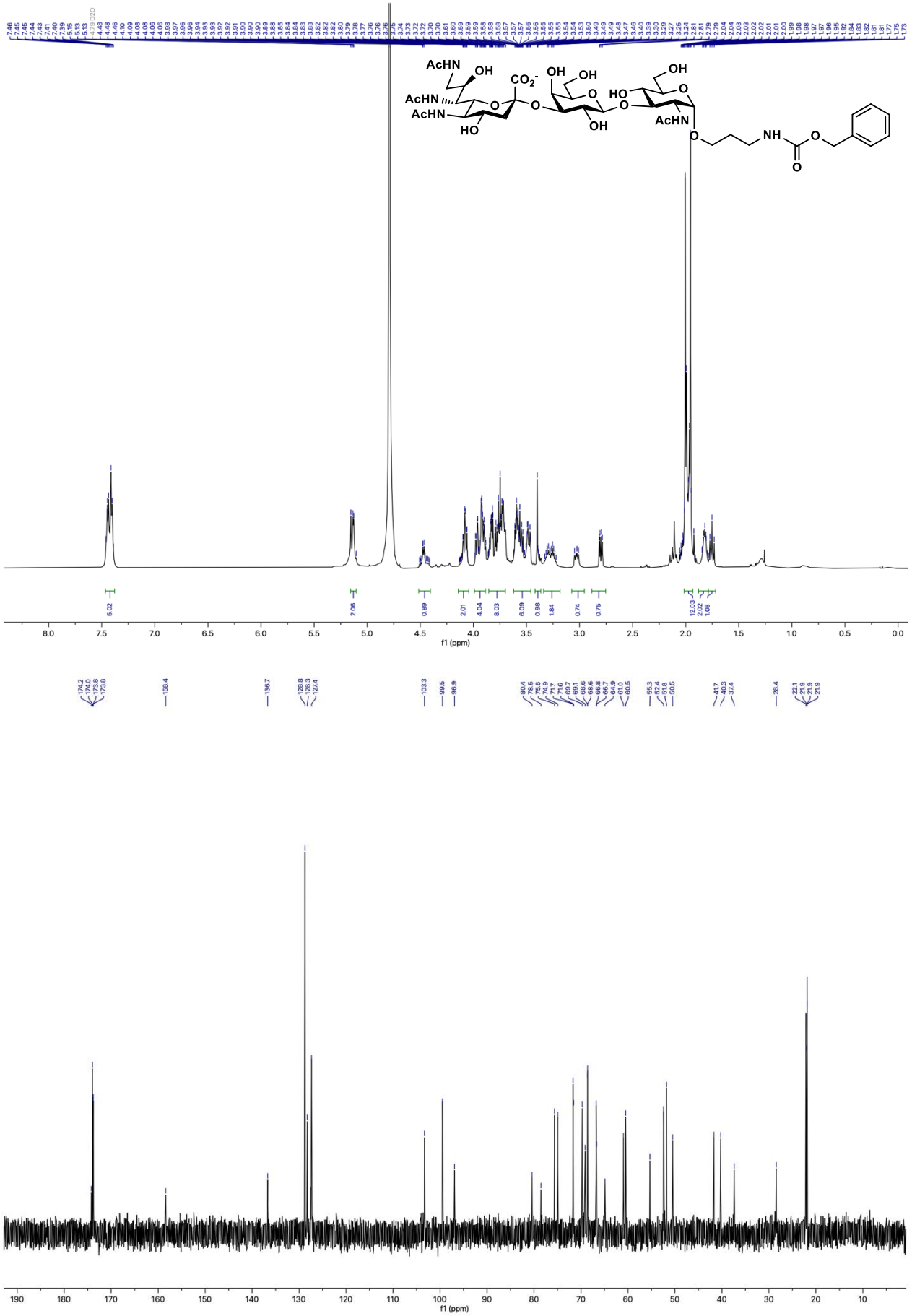
400 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–6Galβ1–3GlcNAcβProNHCbz (**76**) in D_2O



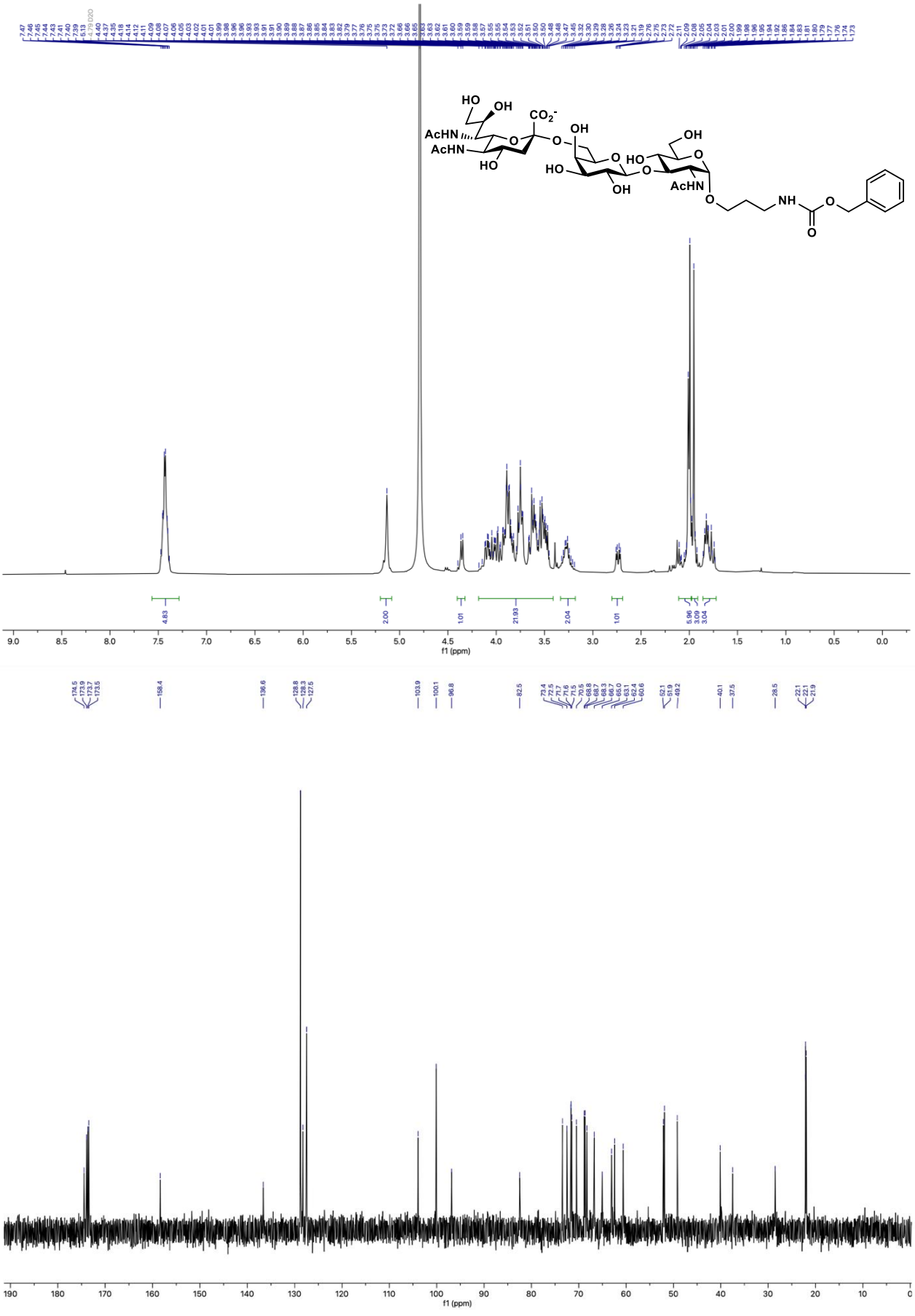
600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–3Galβ1–3GlcNAcαProNHCbz (**77**) in D_2O



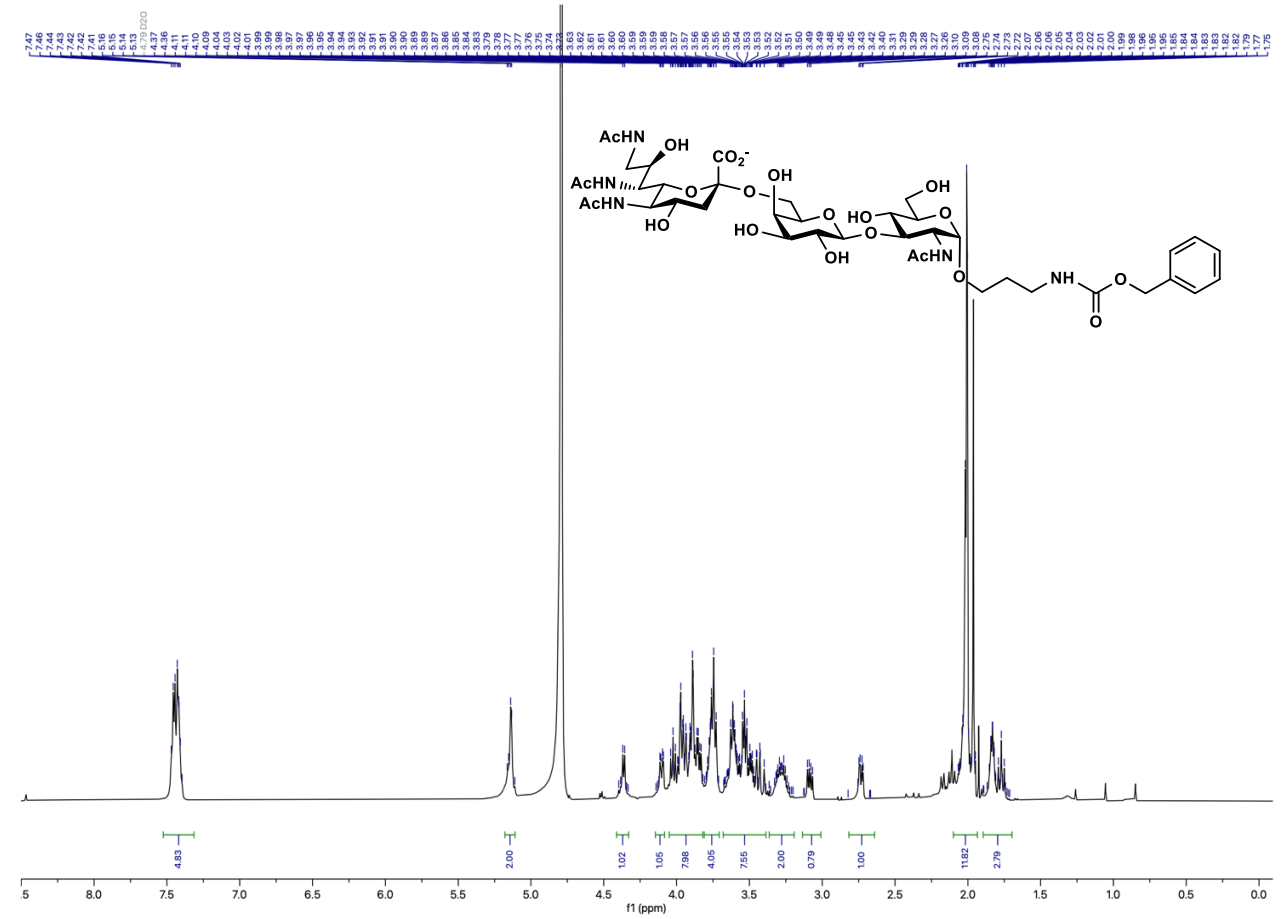
400 MHz ^{1}H and 100 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–3Galβ1–3GlcNAcαProNHCbz (**78**) in D_2O

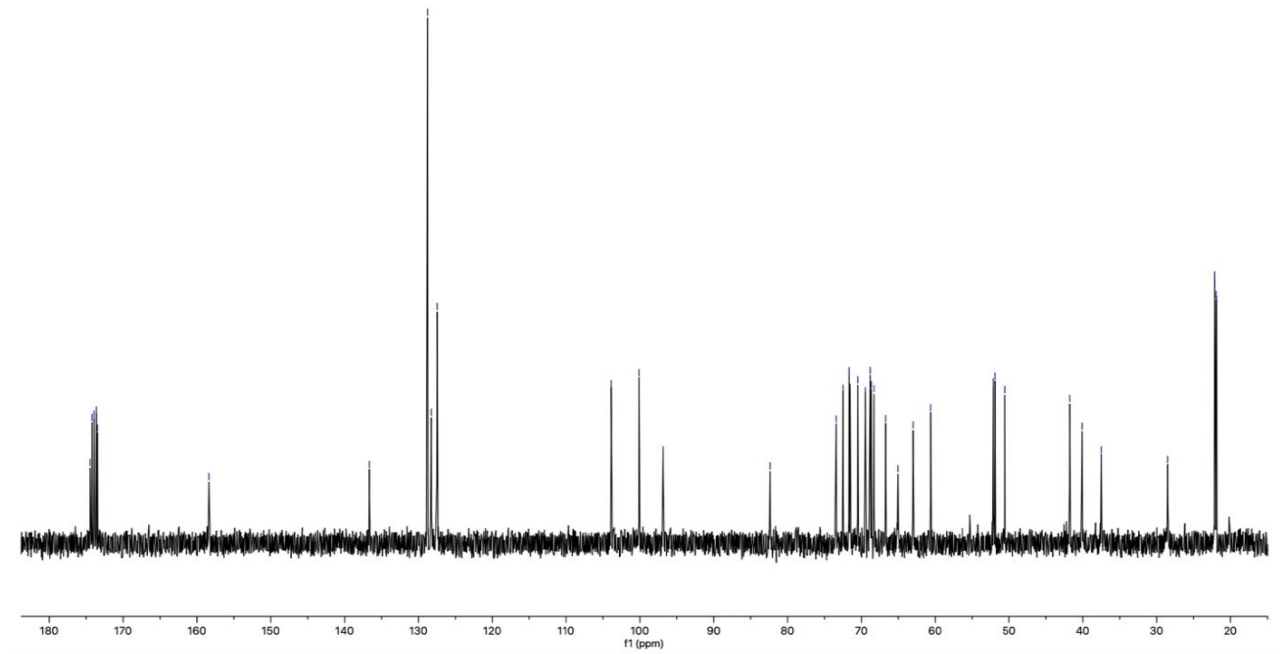


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2–6Galβ1–3GlcNAcαProNHCbz (**79**) in D_2O

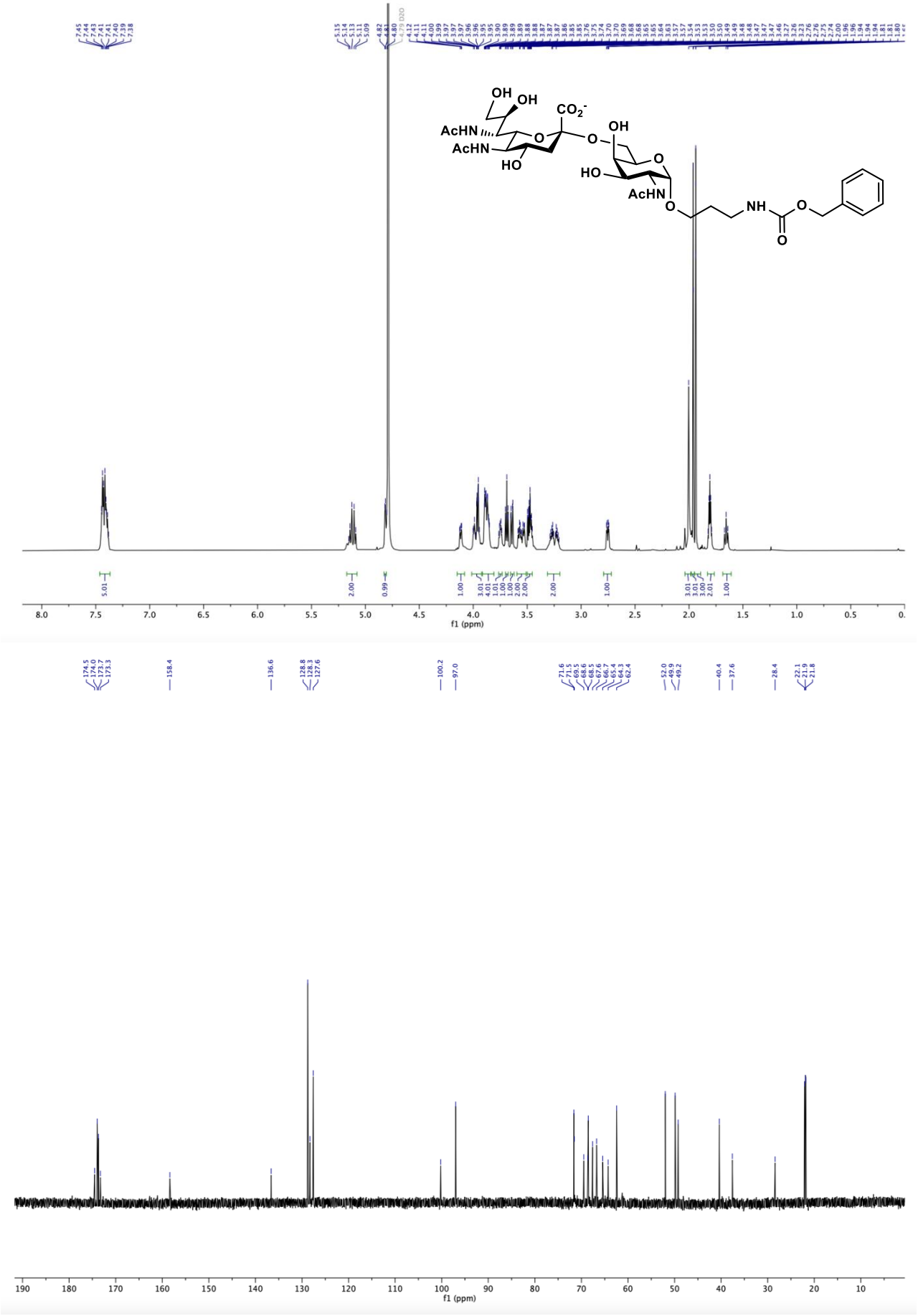


600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–6Galβ1–3GlcNAcαProNHCbz (**80**) in D_2O





800 MHz ^{1}H and 200 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7NAcα2−6GalNAcαProNHCbz (**81**) in D_2O



600 MHz ^{1}H and 150 MHz $^{13}C\{^{1}H\}$ NMR spectra of Neu5Ac7,9diNAcα2–6GalNAcαProNHCbz (**82**) in D_2O