

## Supplementary Information

### Exploitation of new structurally diverse D-glucuronamide-containing N-glycosyl compounds: synthesis and anticancer potential

Nuno M. Xavier,<sup>a\*</sup> Alexandre Porcheron,<sup>a</sup> Daniela Batista,<sup>a</sup> Radek Jorda,<sup>b</sup> Eva Řezníčková,<sup>b</sup> Vladimír Kryštof,<sup>b</sup> M. Conceição Oliveira<sup>c</sup>

<sup>a</sup> Centro de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Ed. C8, 5º Piso, Campo Grande, 1749-016 Lisboa, Portugal

<sup>b</sup> Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University & Institute of Experimental Botany AS CR, Šlechtitelů 27, 78371 Olomouc, Czech Republic

<sup>c</sup> Centro de Química Estrutural (CQE), Instituto Superior Técnico, Universidade de Lisboa, Av Rovisco Pais, 1049-001 Lisboa, Portugal

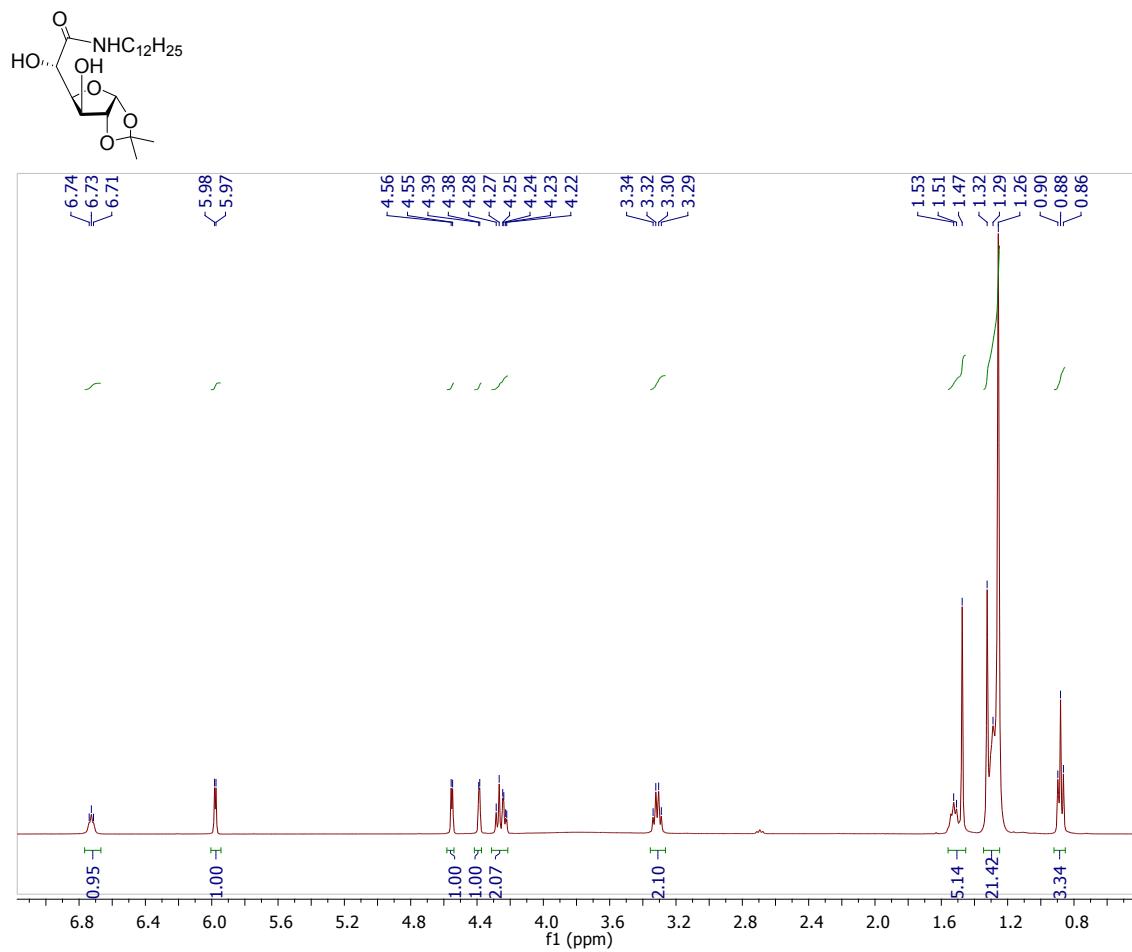
\*corresponding author, e-mail: nmxavier@fc.ul.pt

### TABLE OF CONTENTS

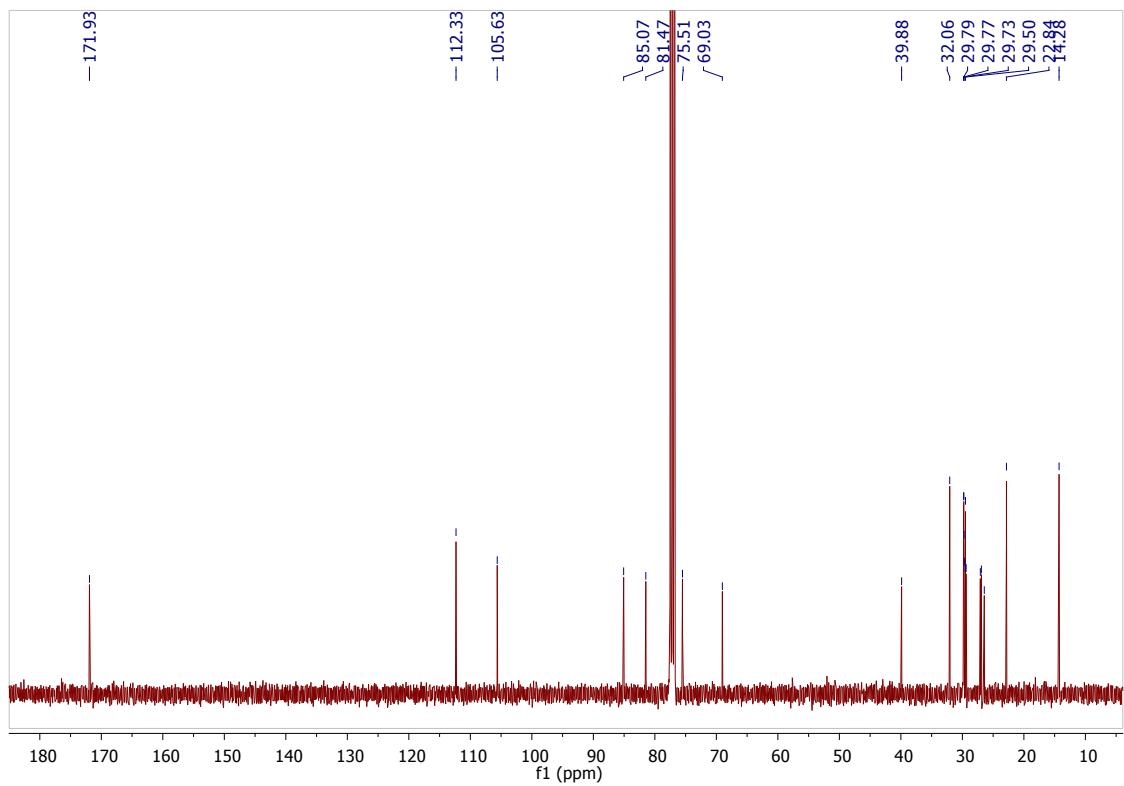
<b>Figure S1 A.</b>	<sup>1</sup> H NMR Spectrum of compound <b>4</b> .....	S4
<b>Figure S1 B.</b>	<sup>13</sup> C NMR Spectrum of compound <b>4</b> .....	S4
<b>Figure S2 A.</b>	<sup>1</sup> H NMR Spectrum of compound <b>7</b> .....	S5
<b>Figure S2 B.</b>	<sup>13</sup> C NMR Spectrum of compound <b>7</b> .....	S5
<b>Figure S3 A.</b>	<sup>1</sup> H NMR Spectrum of compound <b>8</b> .....	S6
<b>Figure S3 B.</b>	<sup>13</sup> C NMR Spectrum of compound <b>8</b> .....	S6
<b>Figure S4 A.</b>	<sup>1</sup> H NMR Spectrum of compound <b>11</b> .....	S7
<b>Figure S4 B.</b>	<sup>13</sup> C NMR Spectrum of compound <b>11</b> .....	S7
<b>Figure S5 A.</b>	<sup>1</sup> H NMR Spectrum of compound <b>9</b> .....	S8
<b>Figure S5 B.</b>	<sup>13</sup> C NMR Spectrum of compound <b>9</b> .....	S8

<b>Figure S6 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>10</b> .....	S9
<b>Figure S6 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>10</b> .....	S9
<b>Figure S7 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>13</b> .....	S10
<b>Figure S7 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>13</b> .....	S10
<b>Figure S8 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>14</b> .....	S11
<b>Figure S8 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>14</b> .....	S11
<b>Figure S9 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>17</b> .....	S12
<b>Figure S9 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>17</b> .....	S12
<b>Figure S10 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>18</b> .....	S13
<b>Figure S10 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>18</b> .....	S13
<b>Figure S11 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>19</b> .....	S14
<b>Figure S11 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>19</b> .....	S14
<b>Figure S12 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>20</b> .....	S15
<b>Figure S12 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>20</b> .....	S15
<b>Figure S13 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>21</b> .....	S16
<b>Figure S13 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>21</b> .....	S16
<b>Figure S14 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>22</b> .....	S17
<b>Figure S14 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>22</b> .....	S17
<b>Figure S15 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>23</b> .....	S18
<b>Figure S15 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>23</b> .....	S18
<b>Figure S16 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>24</b> .....	S19
<b>Figure S16 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>24</b> .....	S19
<b>Figure S17 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>25</b> .....	S20
<b>Figure S17 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>25</b> .....	S20
<b>Figure S18 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>26</b> .....	S21

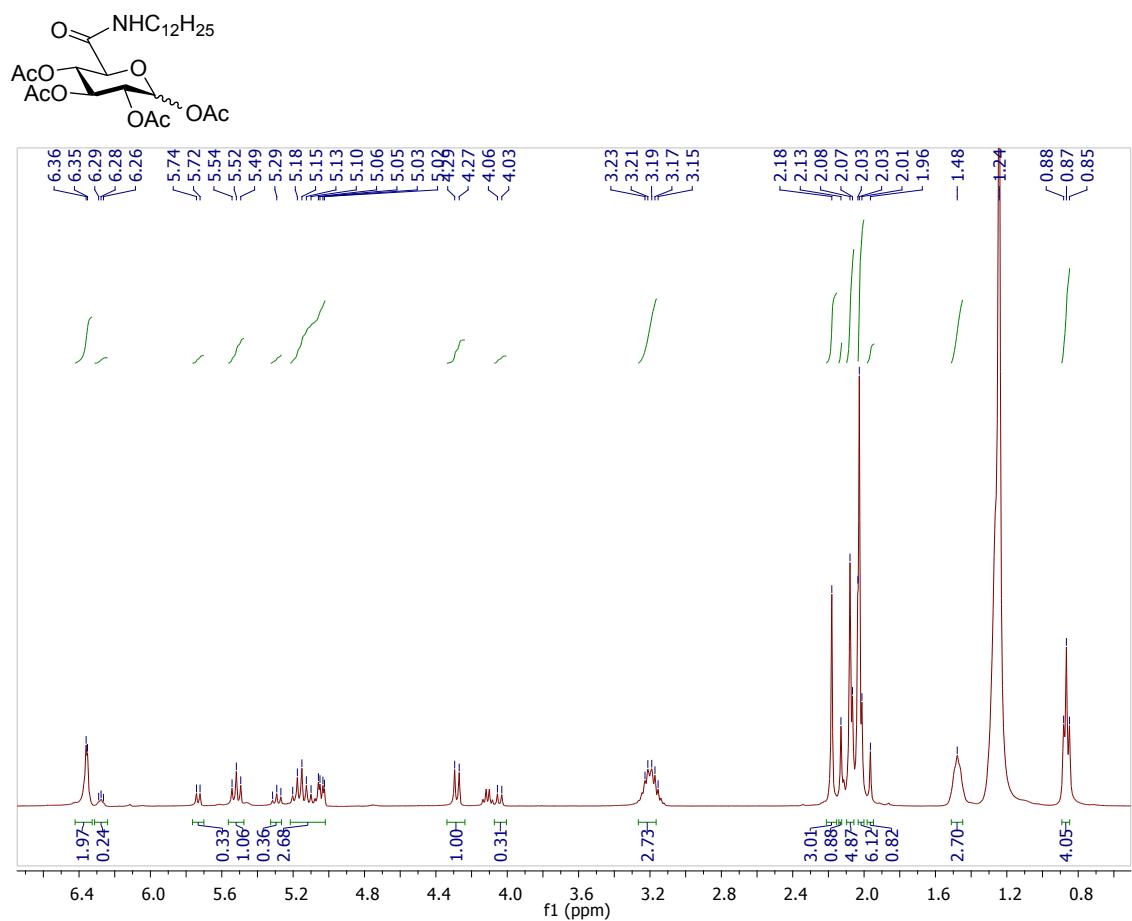
<b>Figure S18 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>26</b> .....	S21
<b>Figure S19 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>27</b> .....	S22
<b>Figure S19 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>27</b> .....	S22
<b>Figure S20 A.</b>	$^1\text{H}$ NMR Spectrum of compound <b>28</b> .....	S23
<b>Figure S20 B.</b>	$^{13}\text{C}$ NMR Spectrum of compound <b>28</b> .....	S23



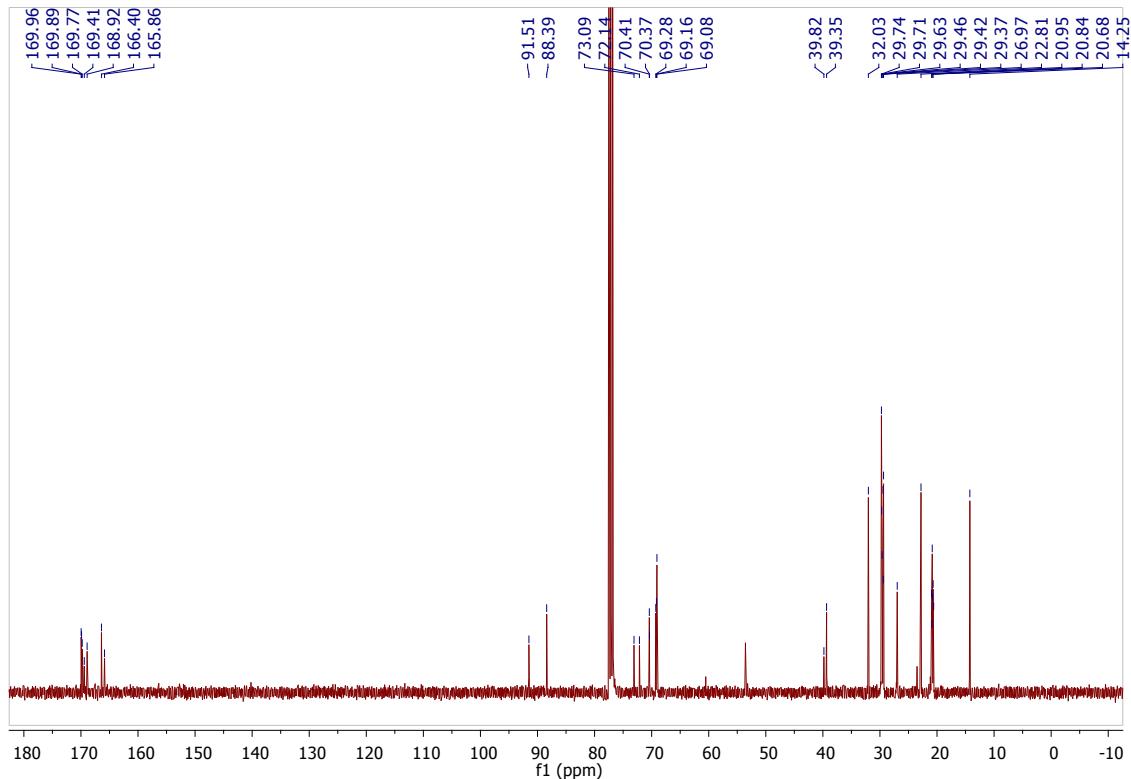
**Figure S1 A.**  $^1\text{H}$  NMR Spectrum of compound 4.



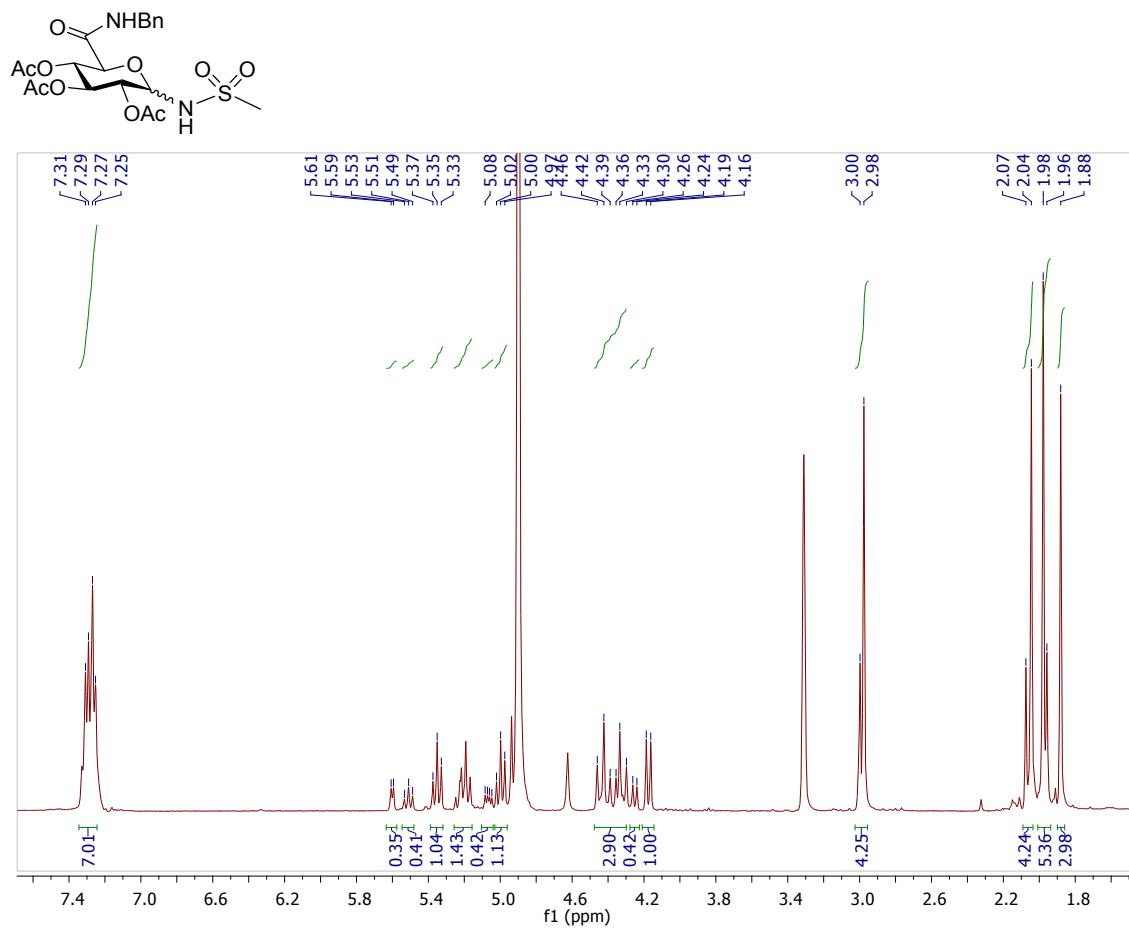
**Figure S1 B.**  $^{13}\text{C}$  NMR Spectrum of compound 4.



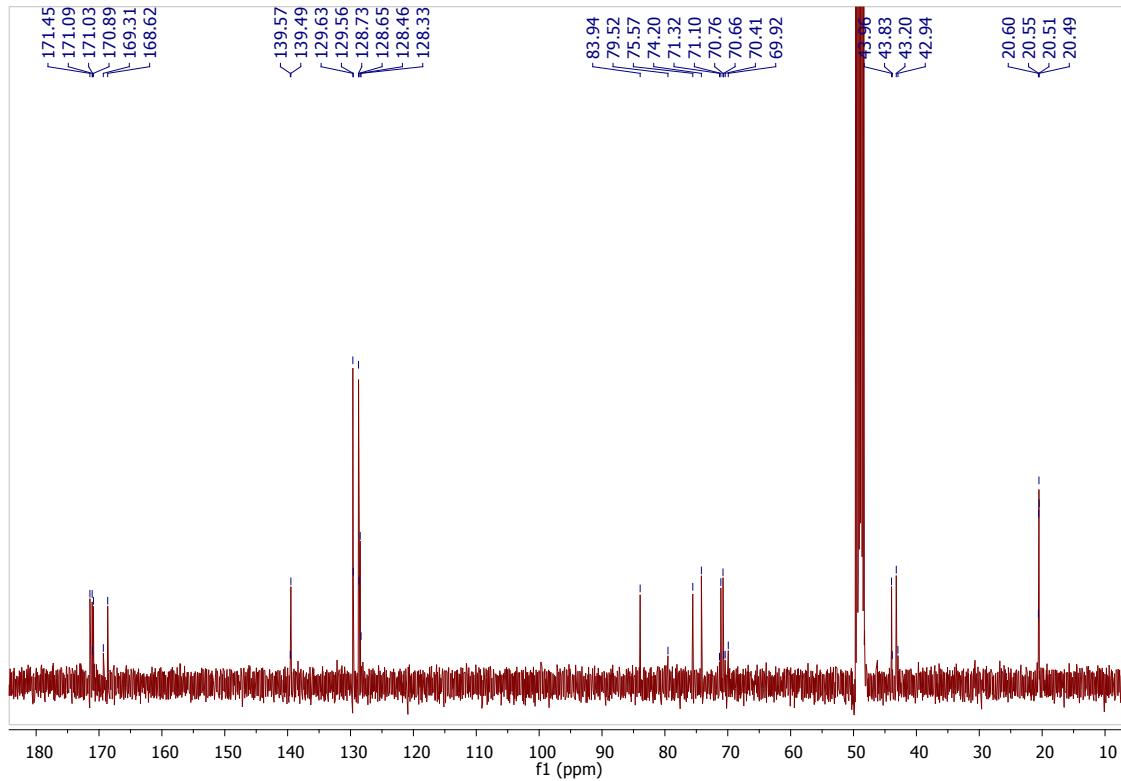
**Figure S2 A.** <sup>1</sup>H NMR Spectrum of compound 7.



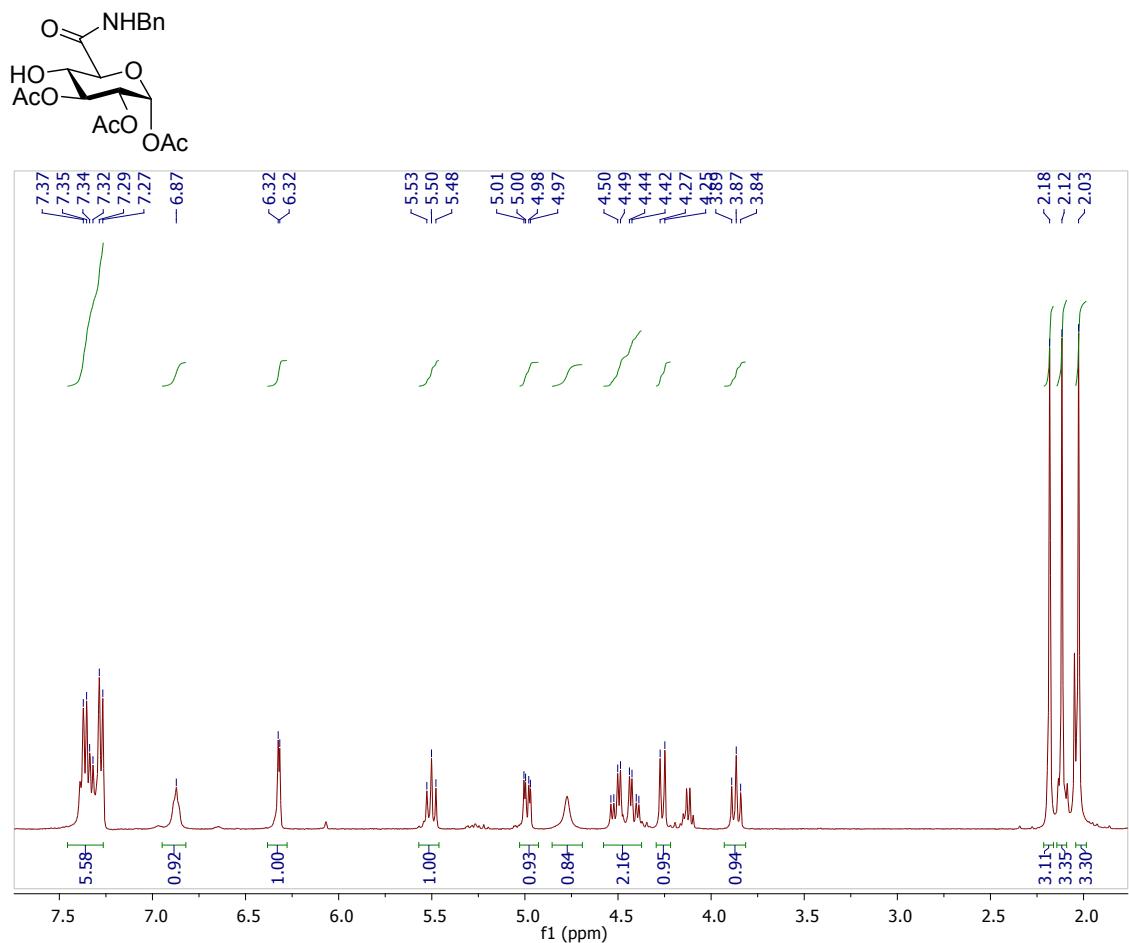
**Figure S2 B.** <sup>13</sup>C NMR Spectrum of compound 7.



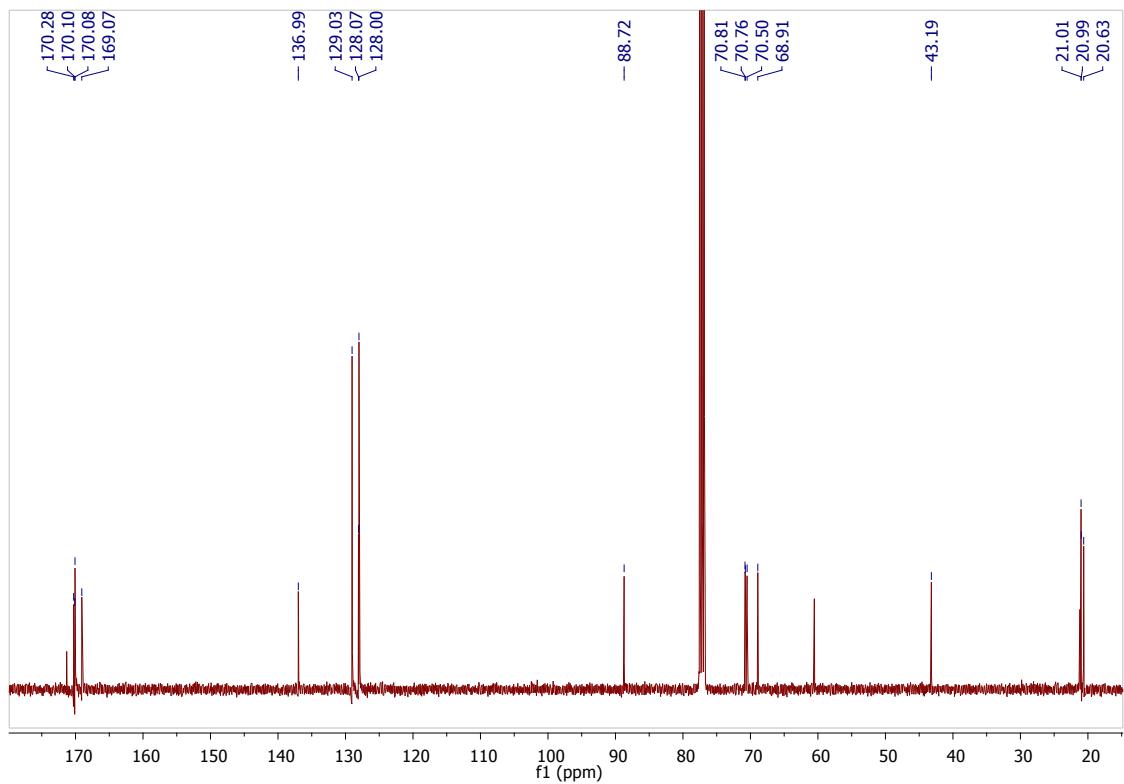
**Figure S3 A.**  $^1\text{H}$  NMR Spectrum of compound 8.



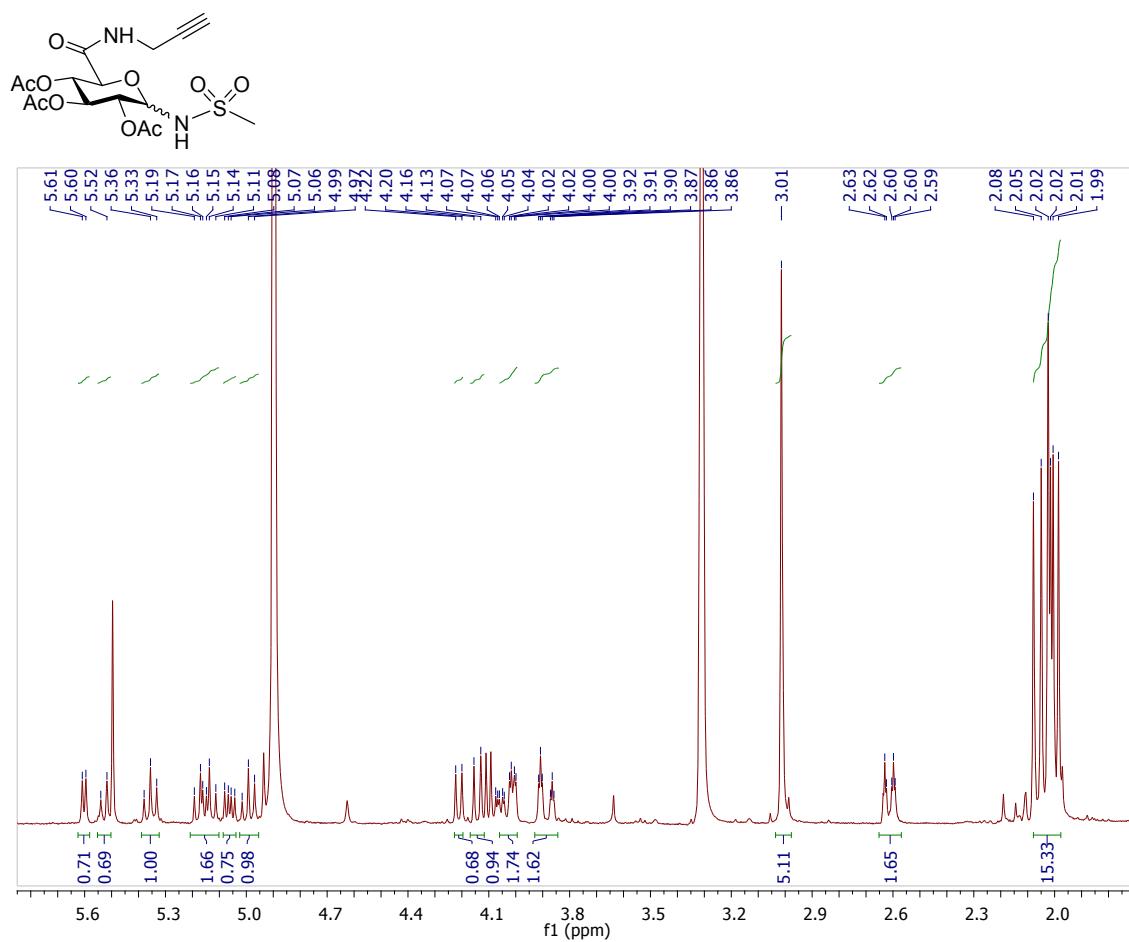
**Figure S3 B.**  $^{13}\text{C}$  NMR Spectrum of compound 8.



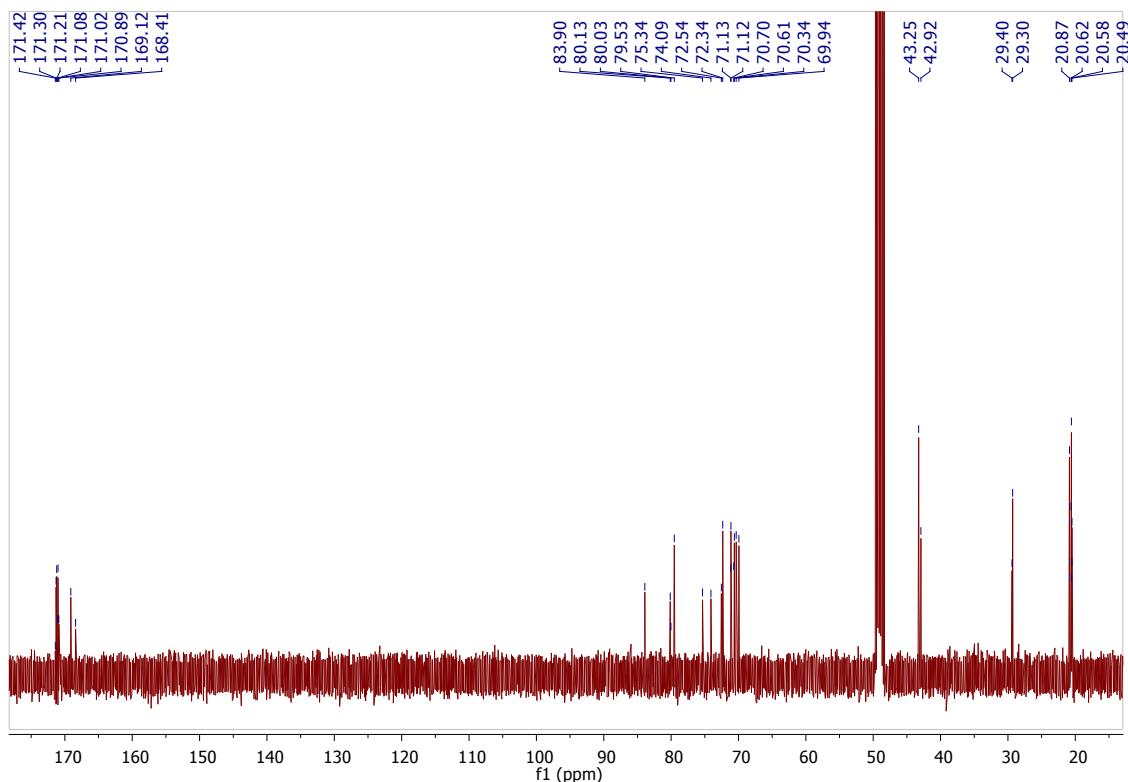
**Figure S4 A.** <sup>1</sup>H NMR Spectrum of compound 11.



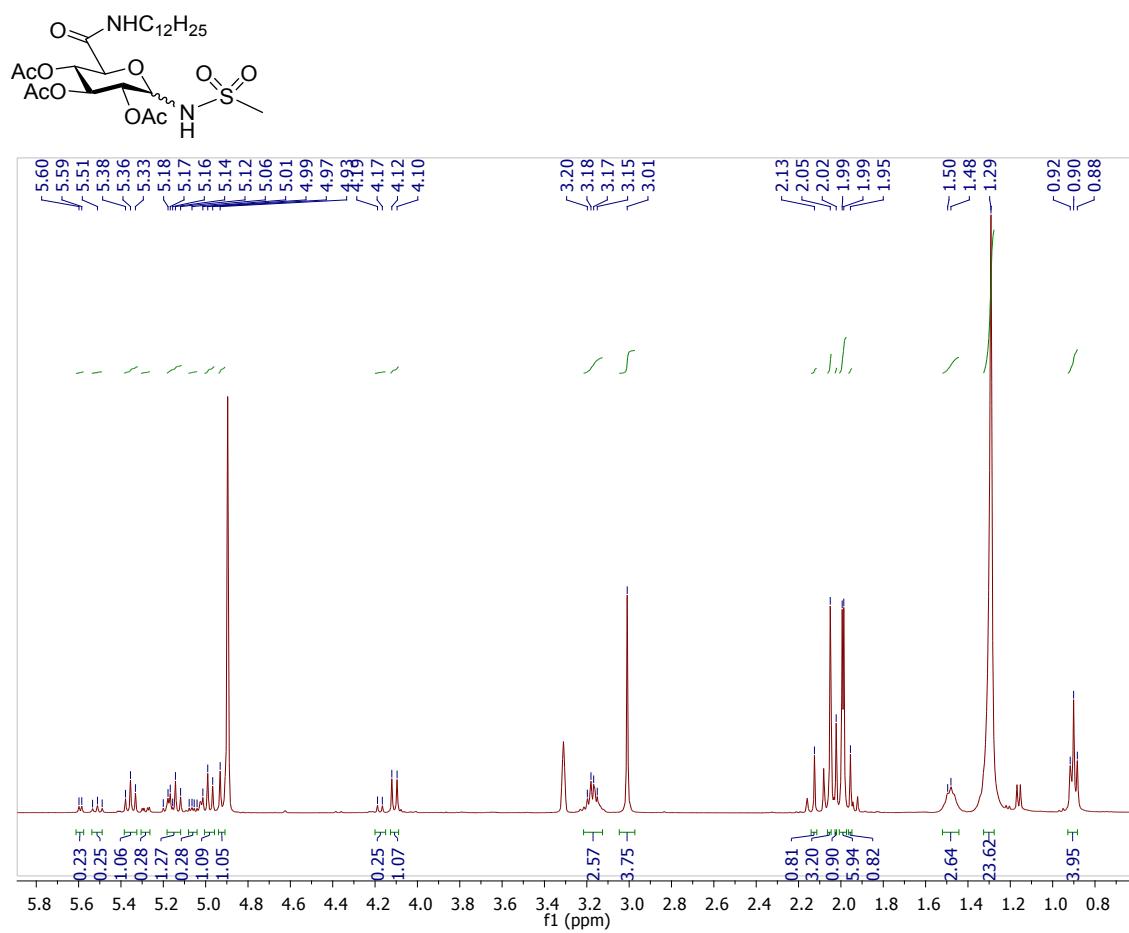
**Figure S4 B.** <sup>13</sup>C NMR Spectrum of compound 11.



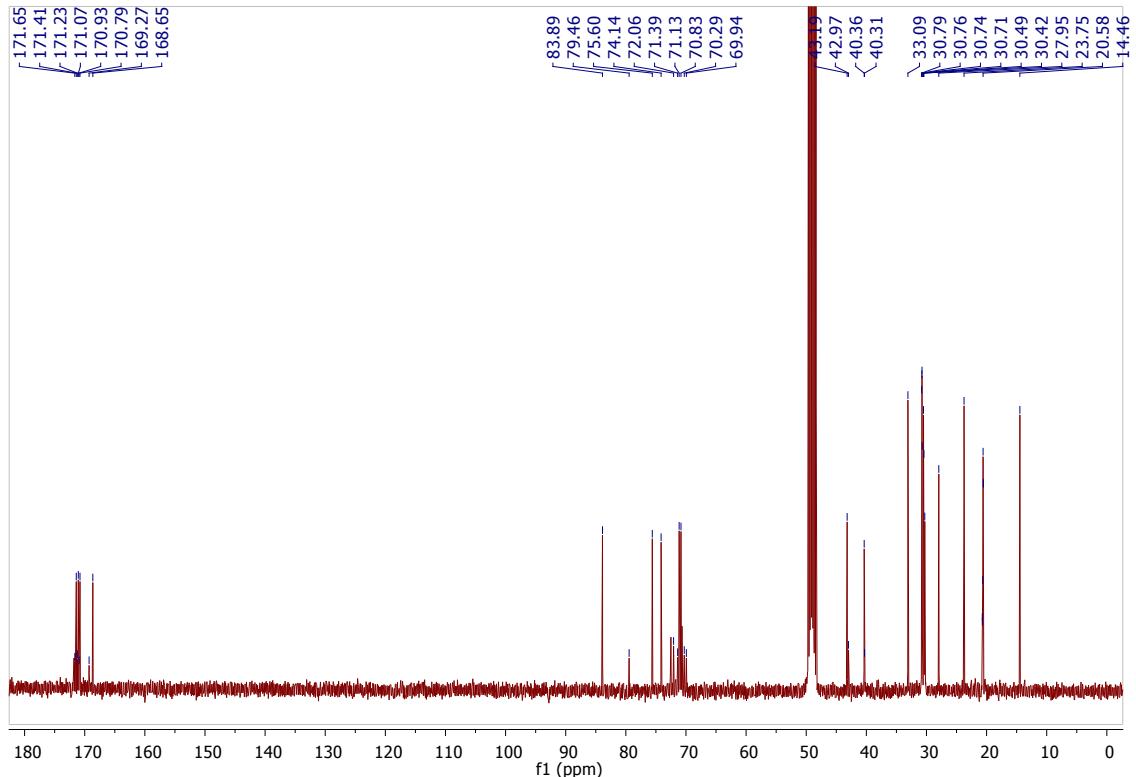
**Figure S5 A.** <sup>1</sup>H NMR Spectrum of compound 9.



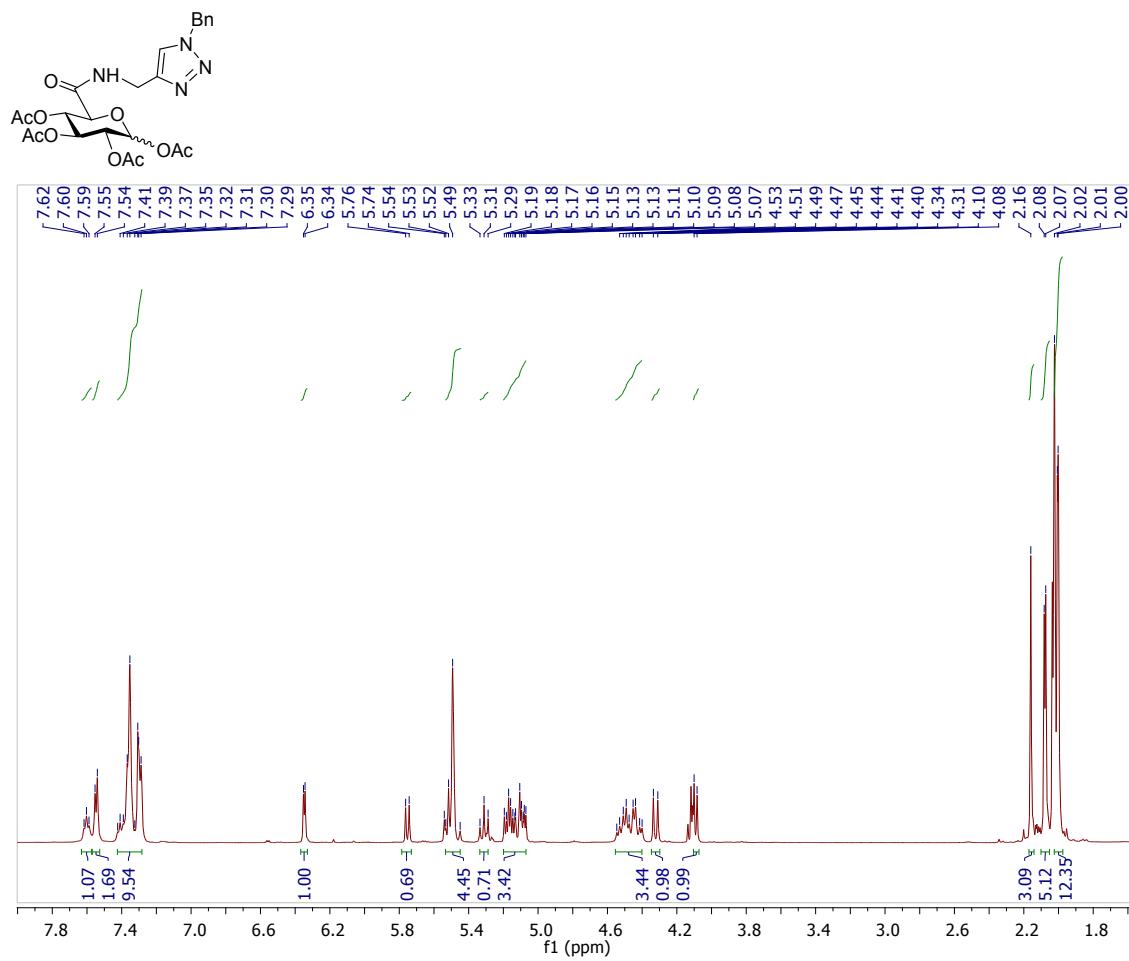
**Figure S5 B.** <sup>13</sup>C NMR Spectrum of compound 9.



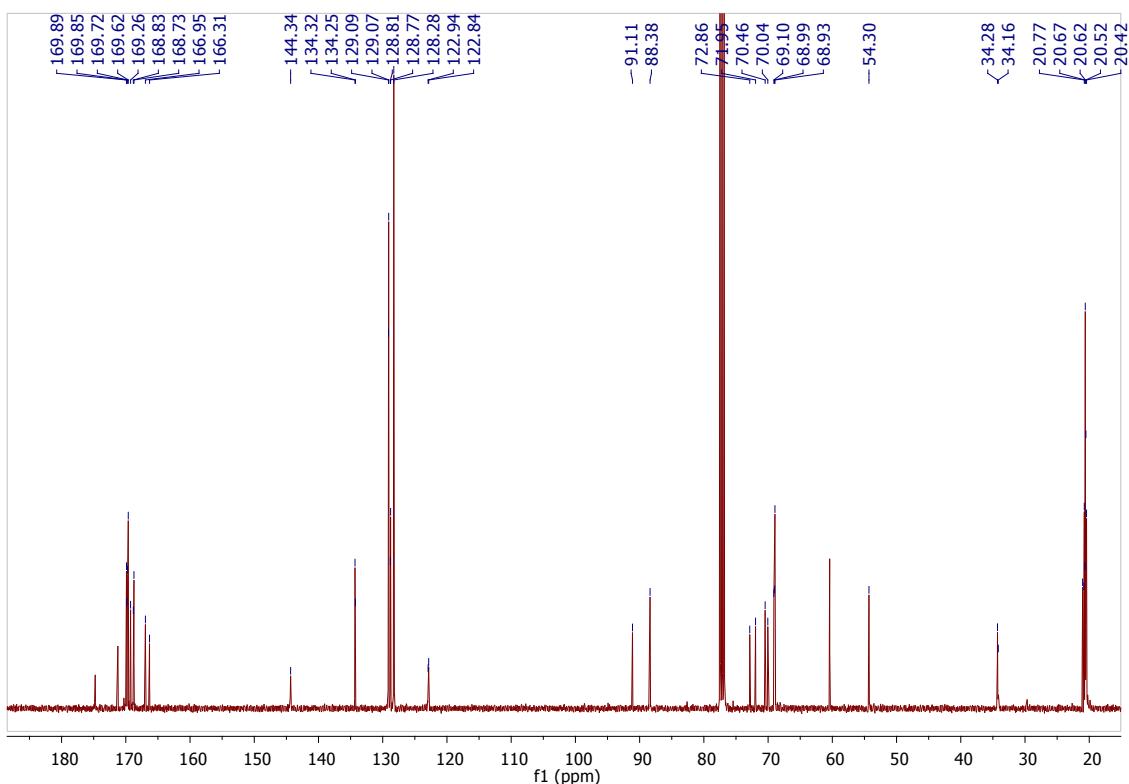
**Figure S6 A.** <sup>1</sup>H NMR Spectrum of compound 10.



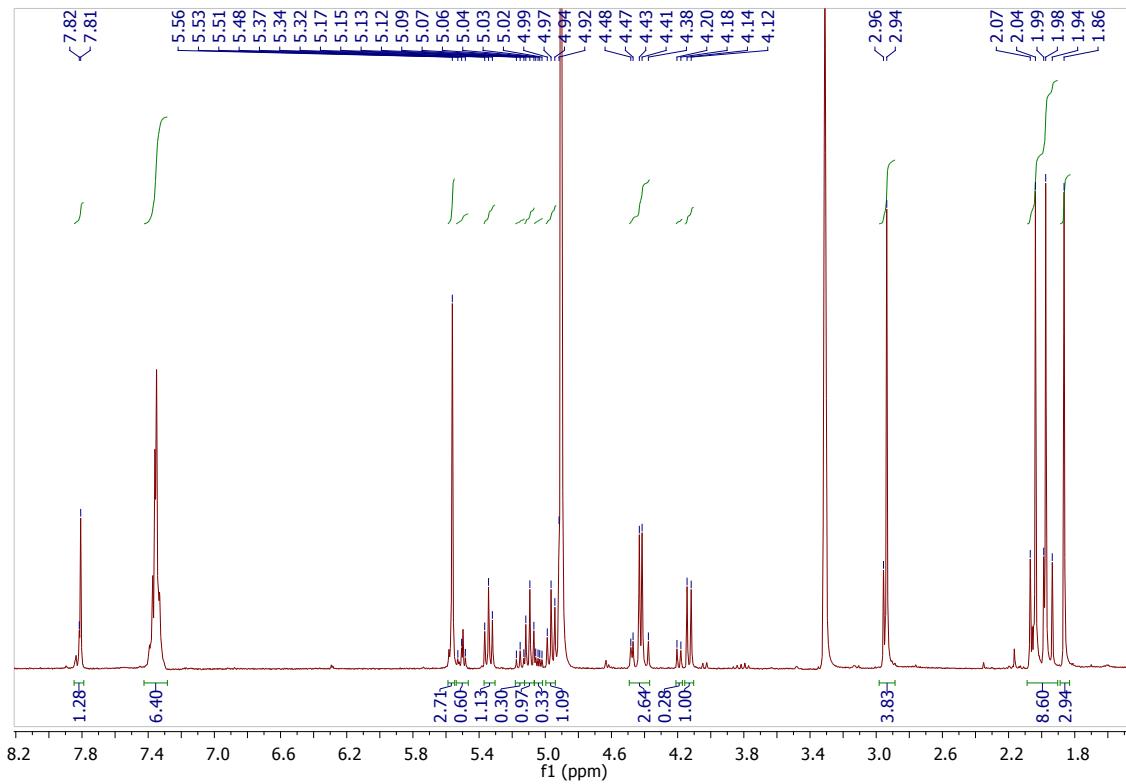
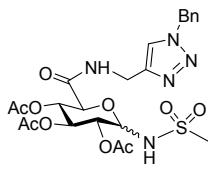
**Figure S6 B.** <sup>13</sup>C NMR Spectrum of compound 10.



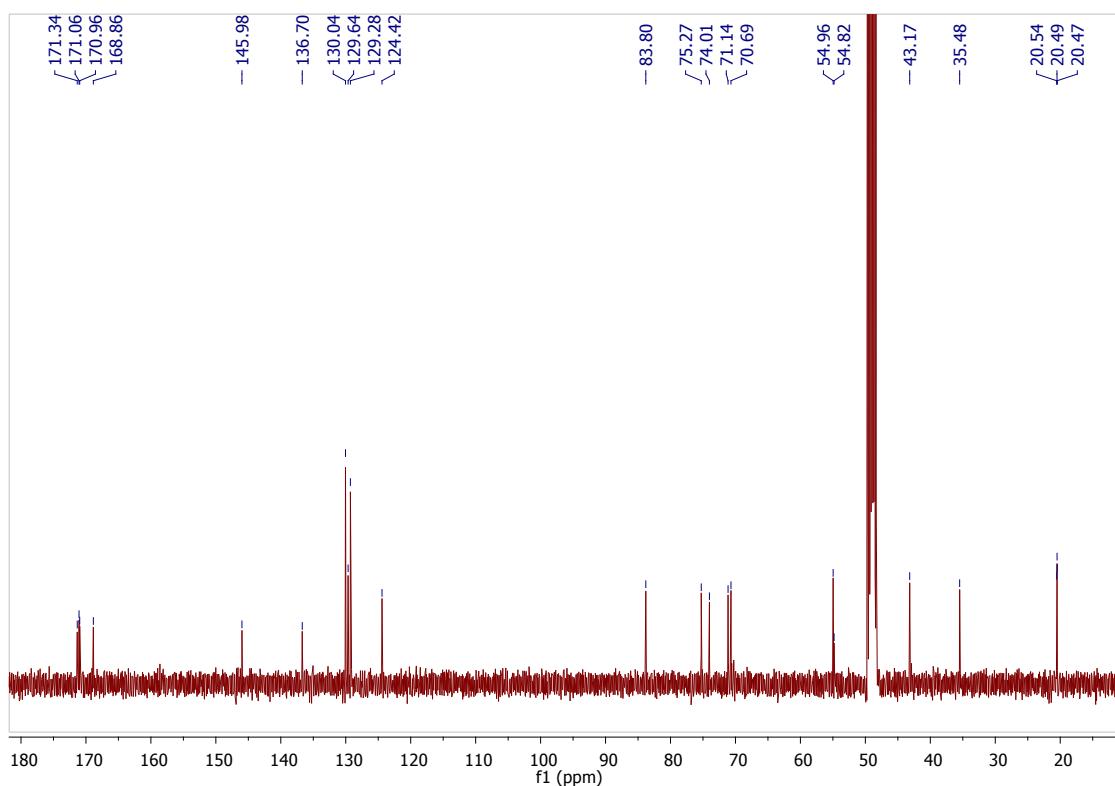
**Figure S7 A.**  $^1\text{H}$  NMR Spectrum of compound **13**.



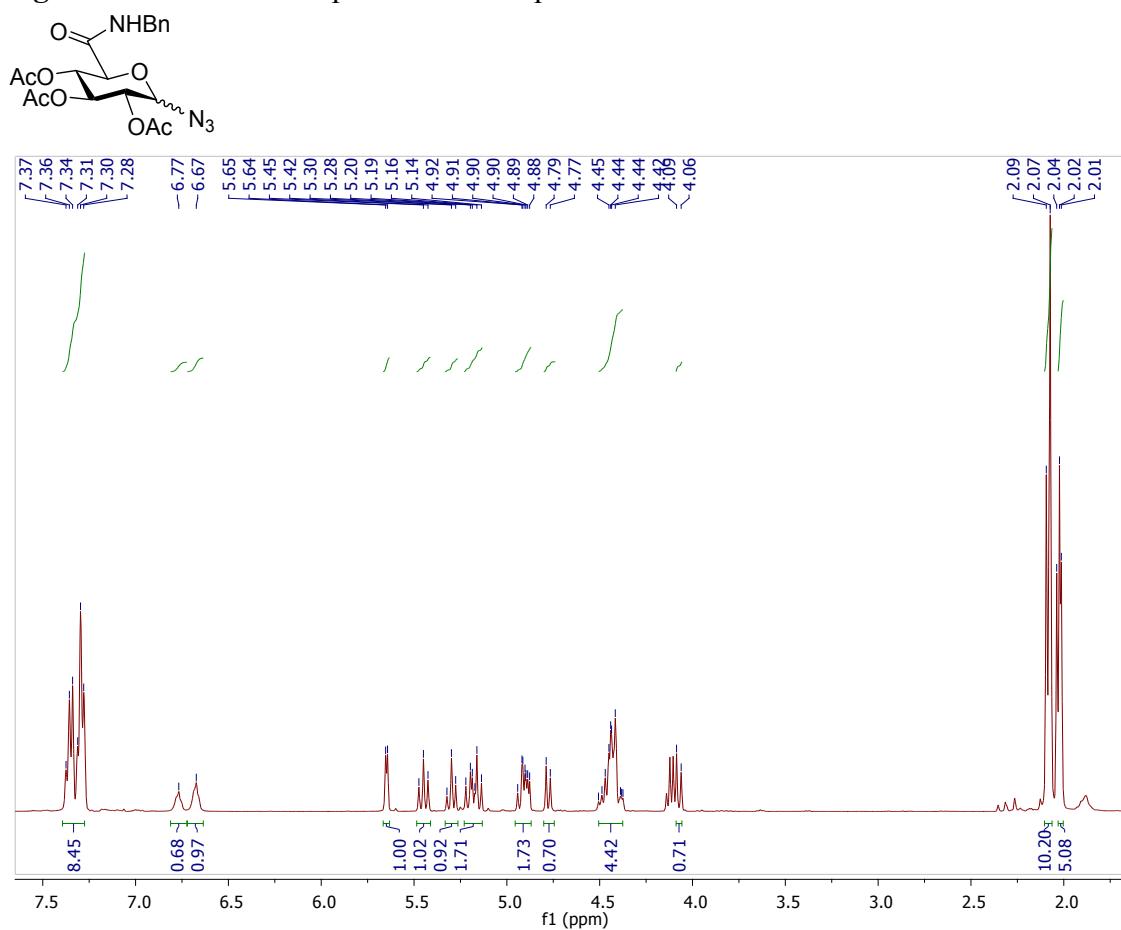
**Figure S7 B.**  $^{13}\text{C}$  NMR Spectrum of compound 13.



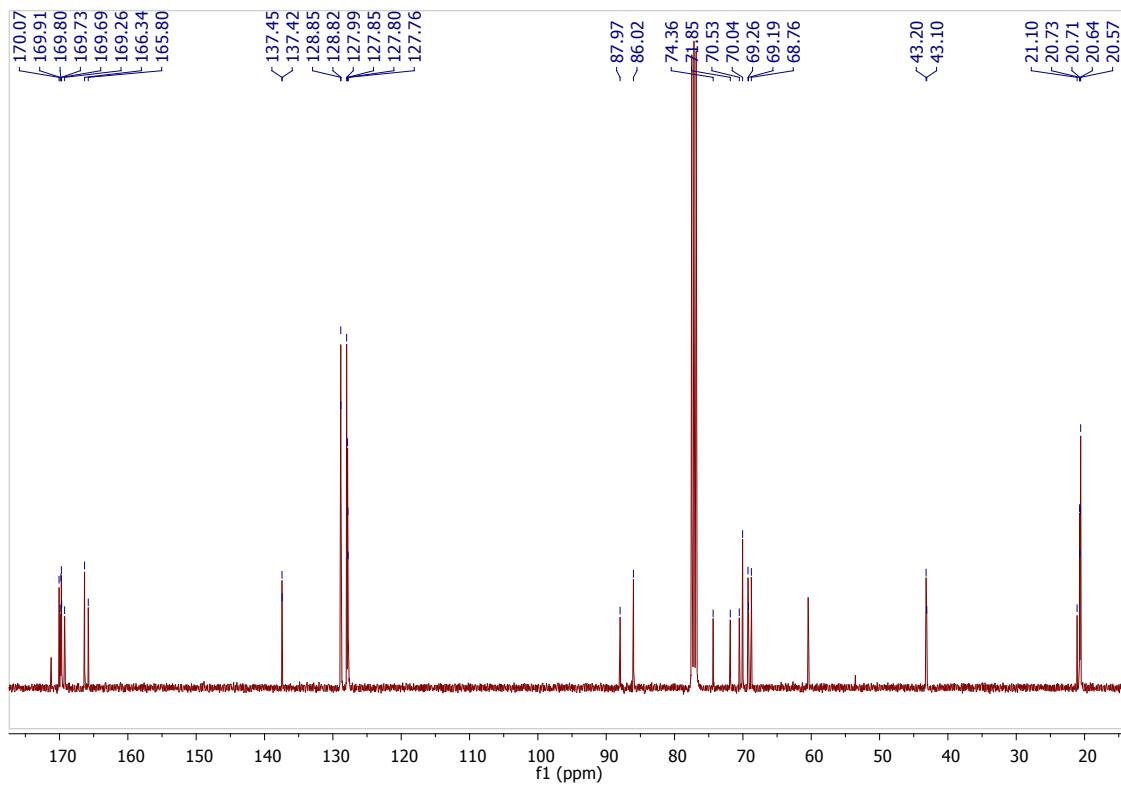
**Figure S8 A.**  $^1\text{H}$  NMR Spectrum of compound **14**.



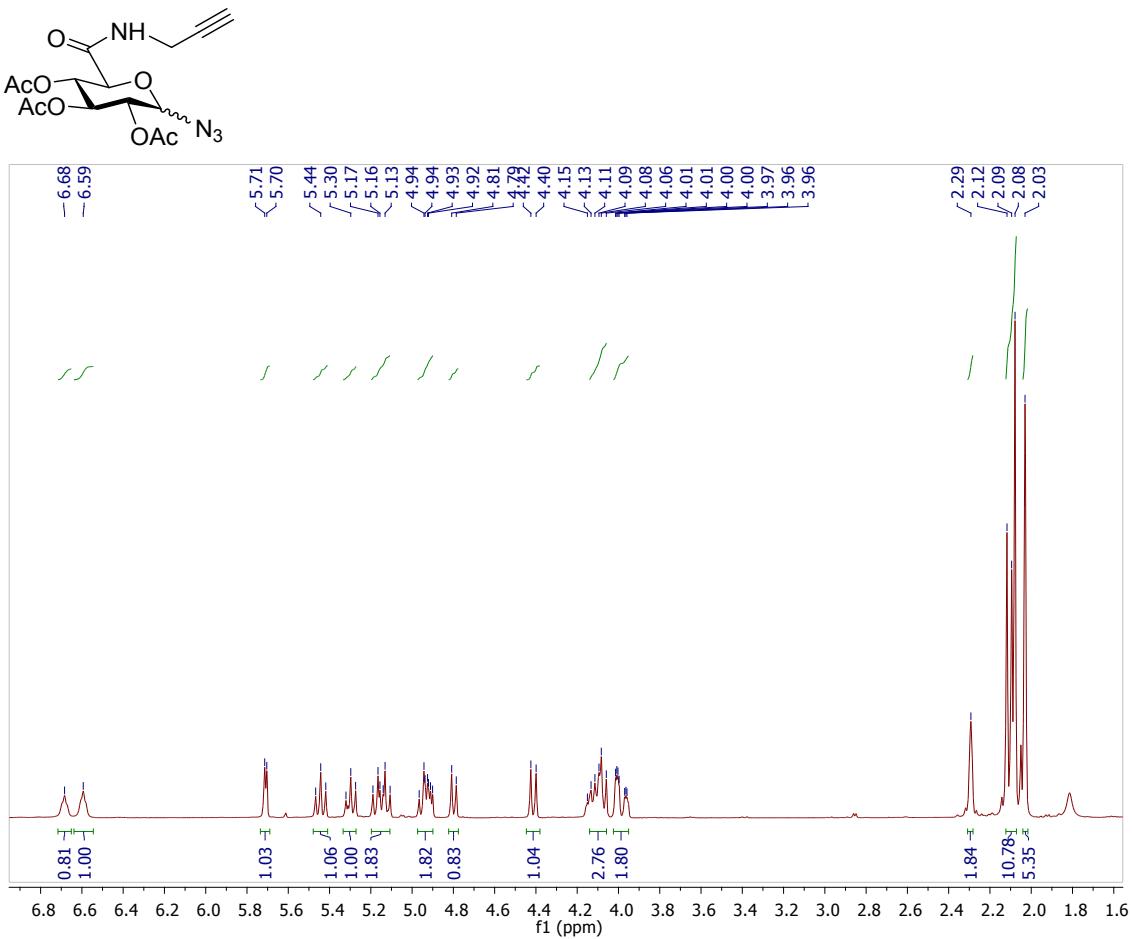
**Figure S8 B.**  $^{13}\text{C}$  NMR Spectrum of compound 14.



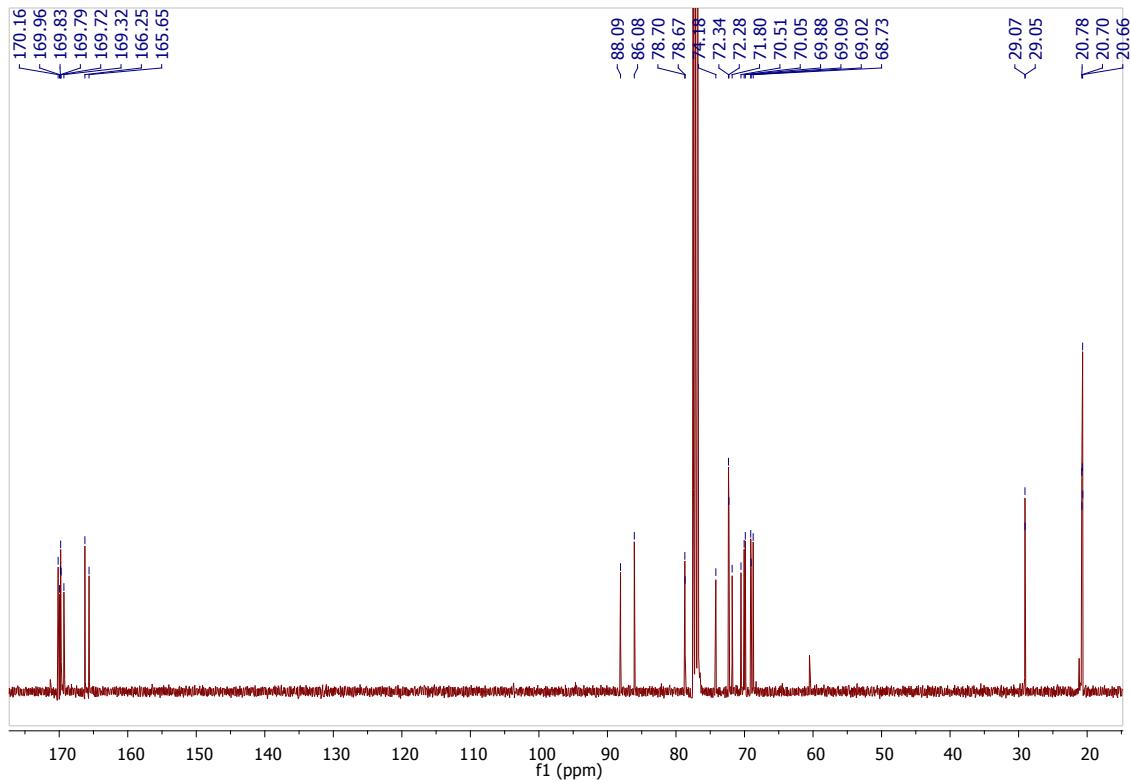
**Figure S9 A.**  $^1\text{H}$  NMR Spectrum of compound 17.



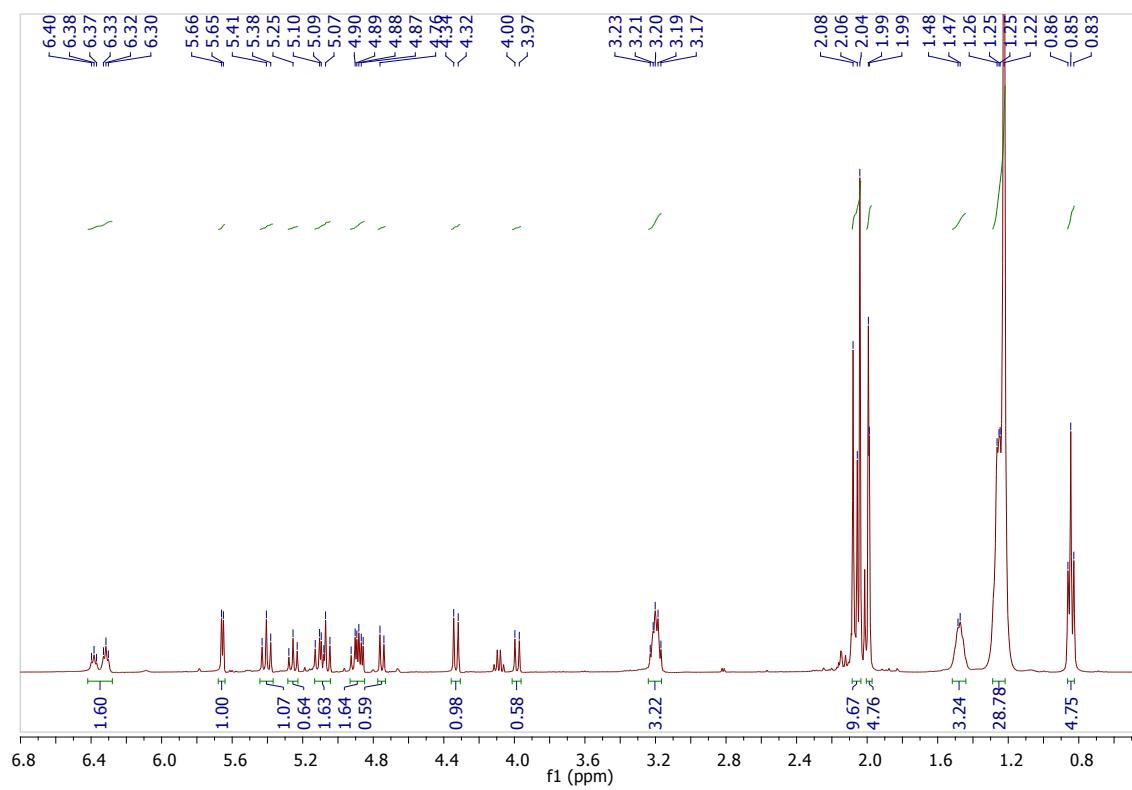
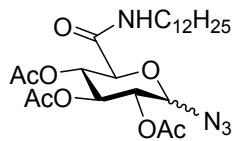
**Figure S9 B.**  $^{13}\text{C}$  NMR Spectrum of compound 17.



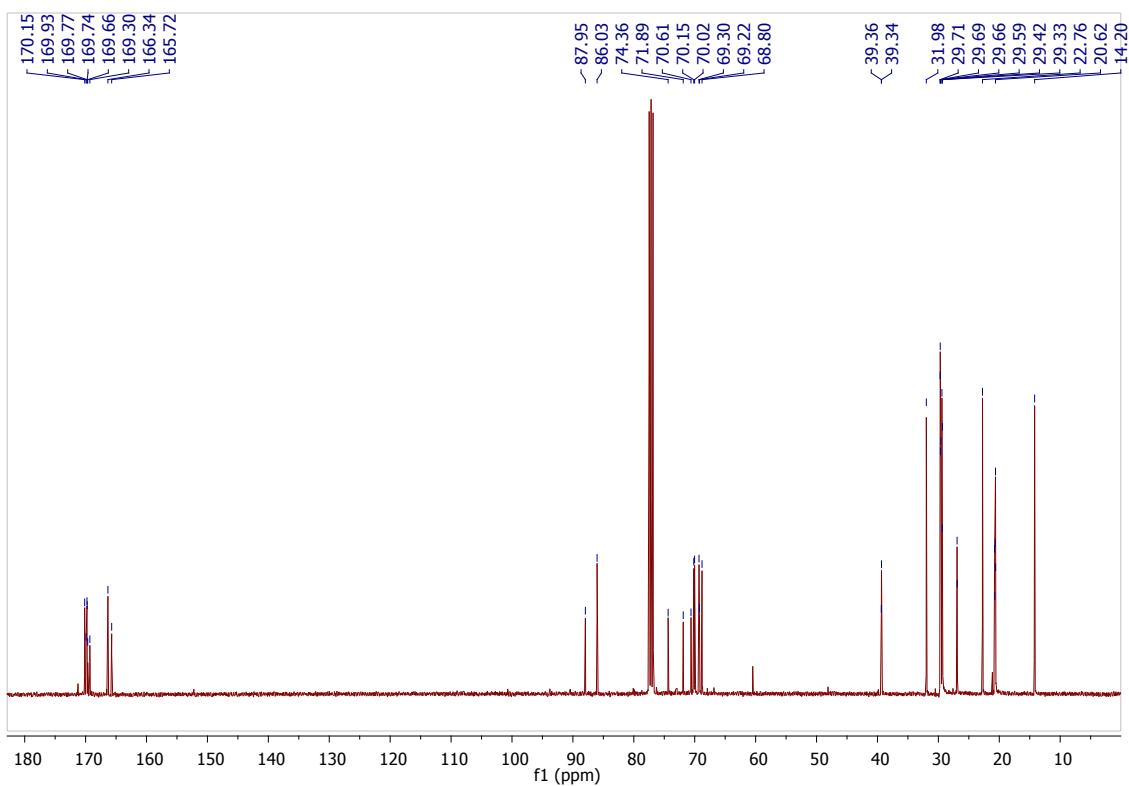
**Figure S10 A.**  $^1\text{H}$  NMR Spectrum of compound **18**.



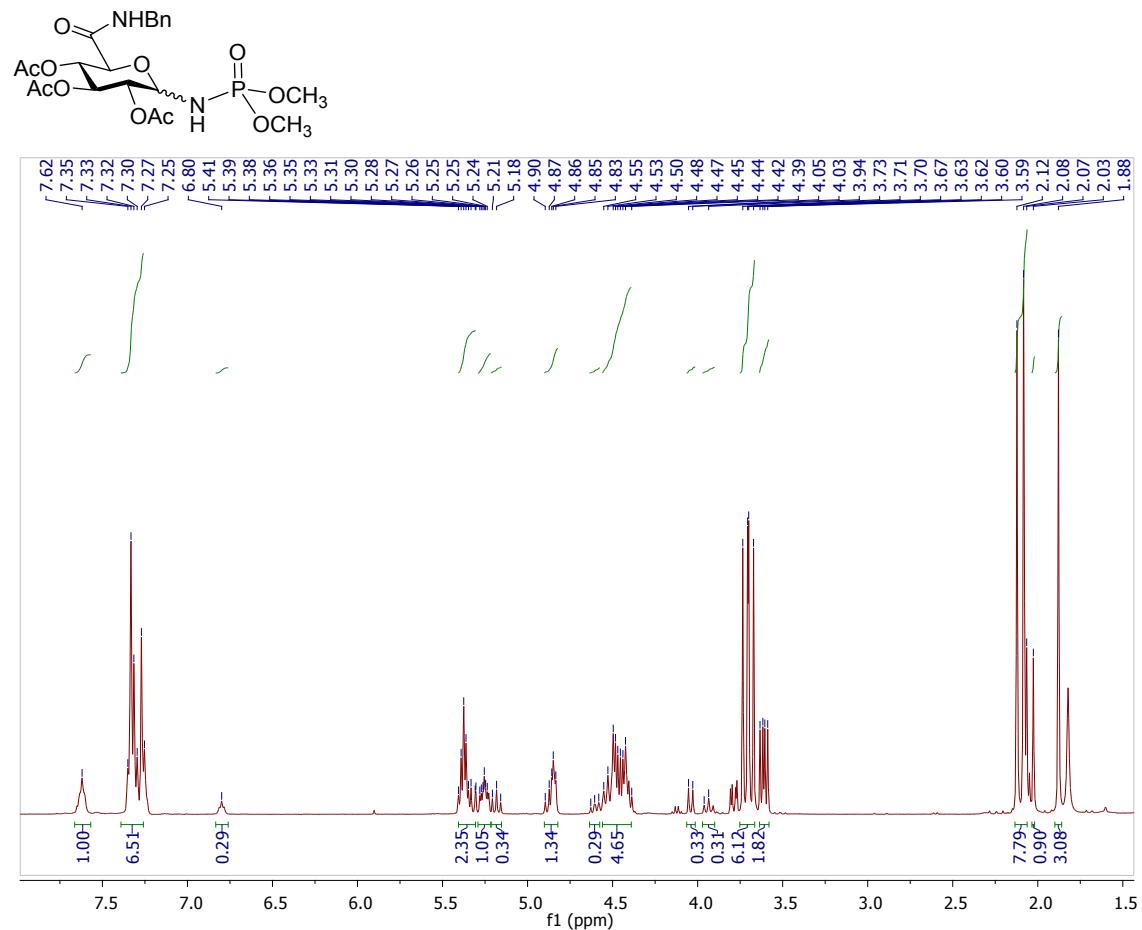
**Figure S10 B.**  $^{13}\text{C}$  NMR Spectrum of compound **18**.



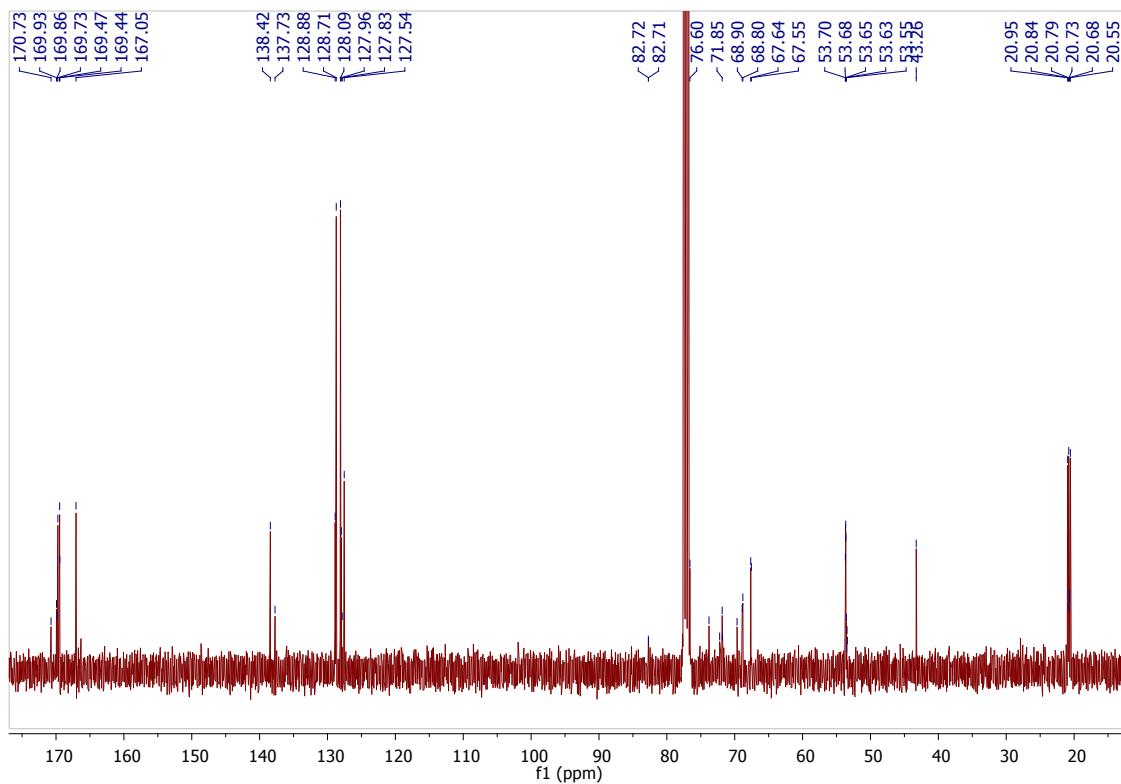
**Figure S11 A.**  $^1\text{H}$  NMR Spectrum of compound **19**.



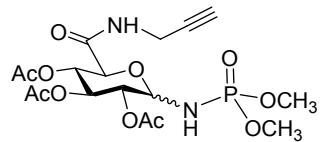
**Figure S11 B.**  $^{13}\text{C}$  NMR Spectrum of compound **19**.

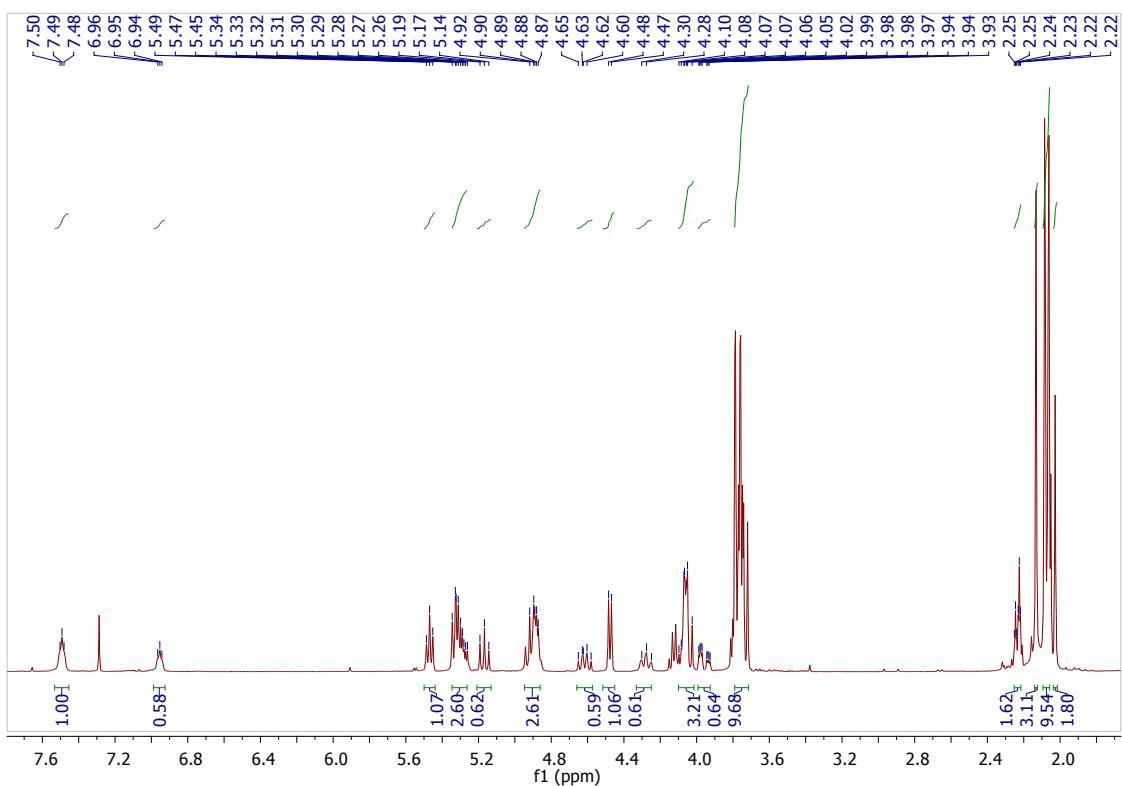


**Figure S12 A.**  $^1\text{H}$  NMR Spectrum of compound **20**.

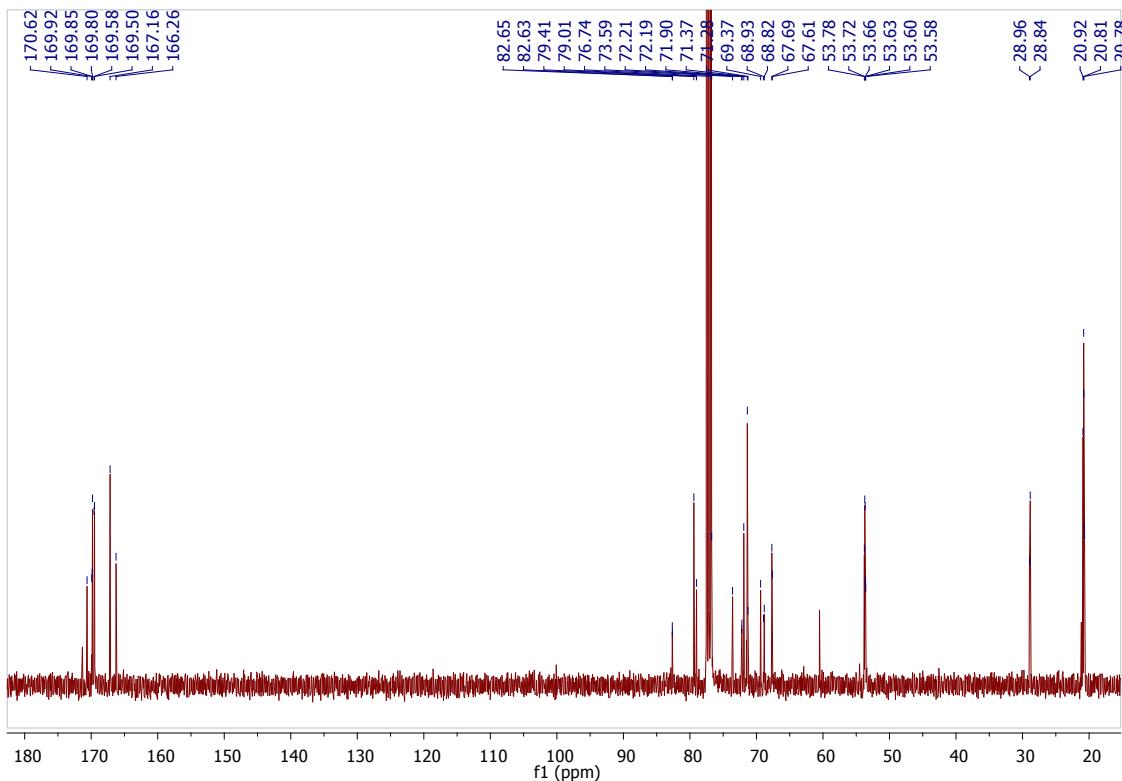


**Figure S12 B.**  $^{13}\text{C}$  NMR Spectrum of compound **20**.

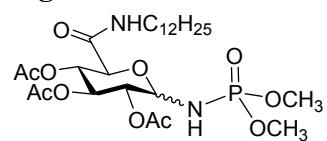


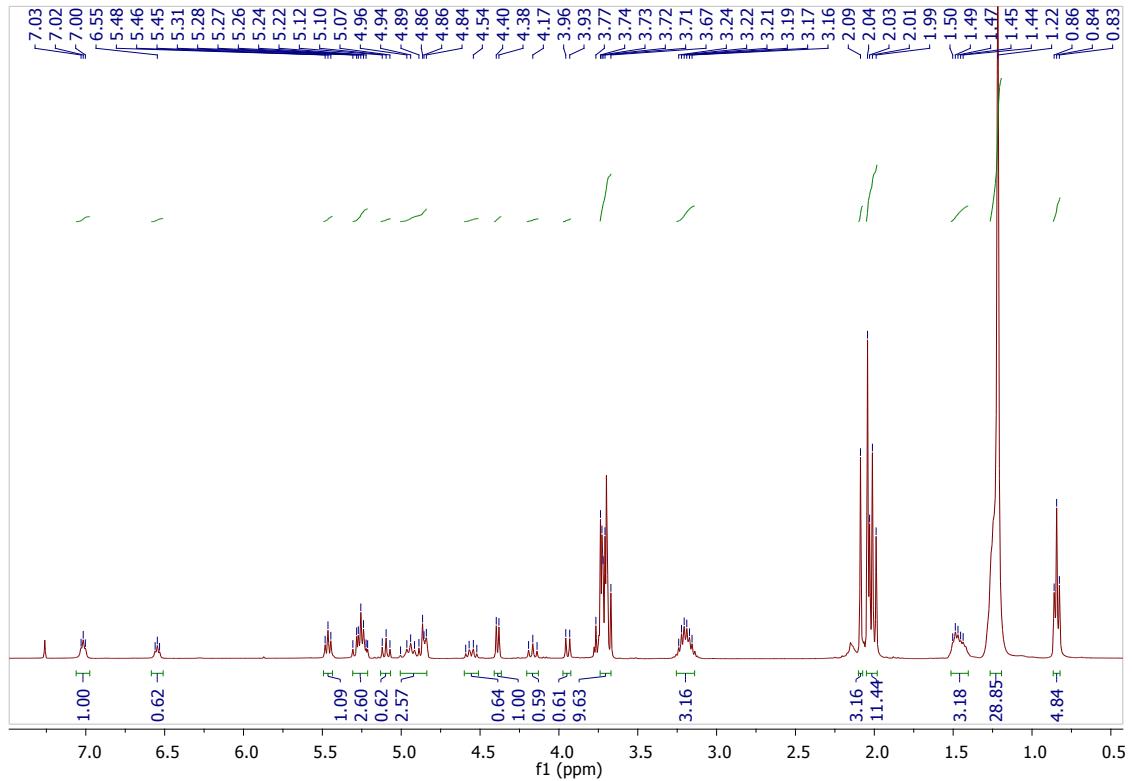


**Figure S13 A.**  $^1\text{H}$  NMR Spectrum of compound **21**.

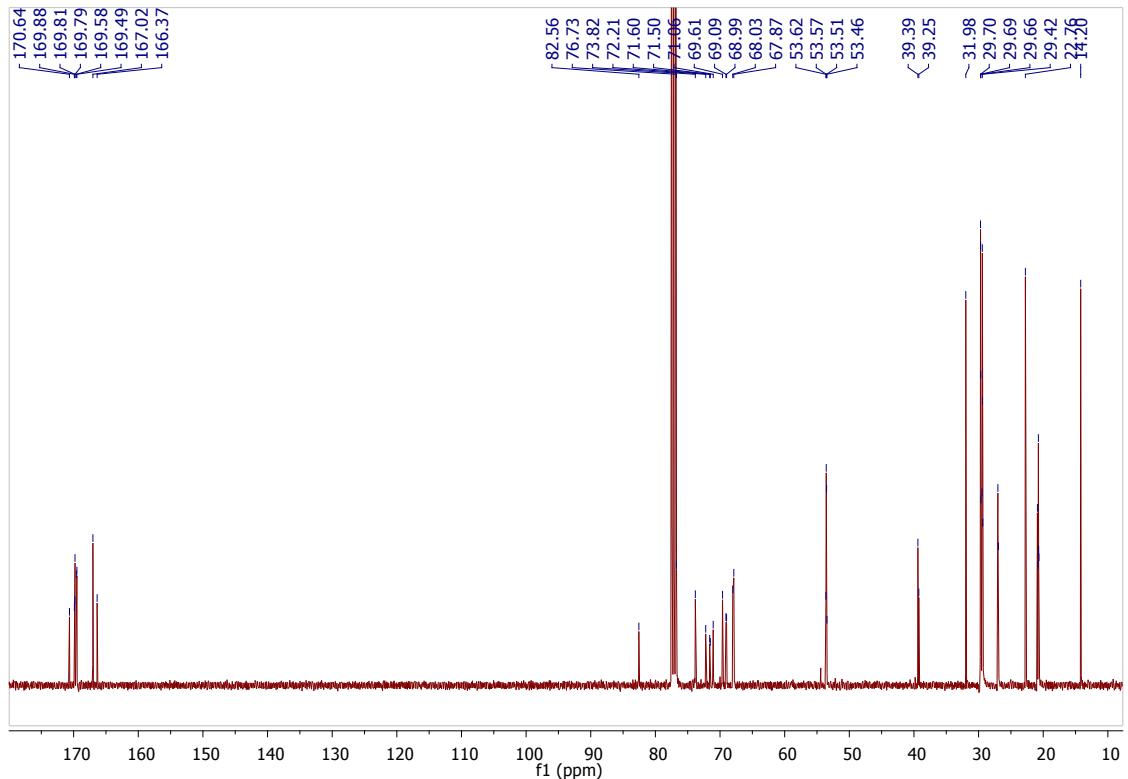


**Figure S13 B.**  $^{13}\text{C}$  NMR Spectrum of compound **21**.

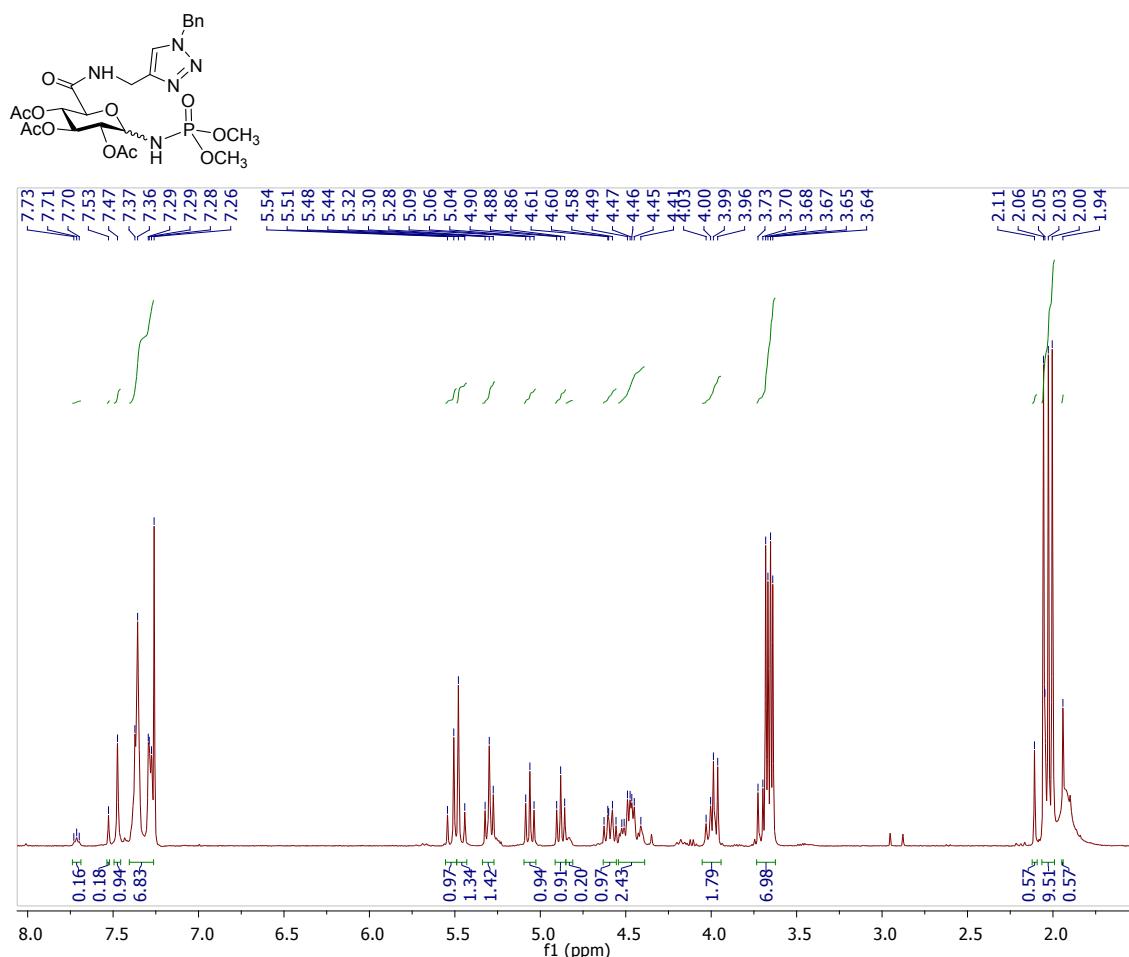




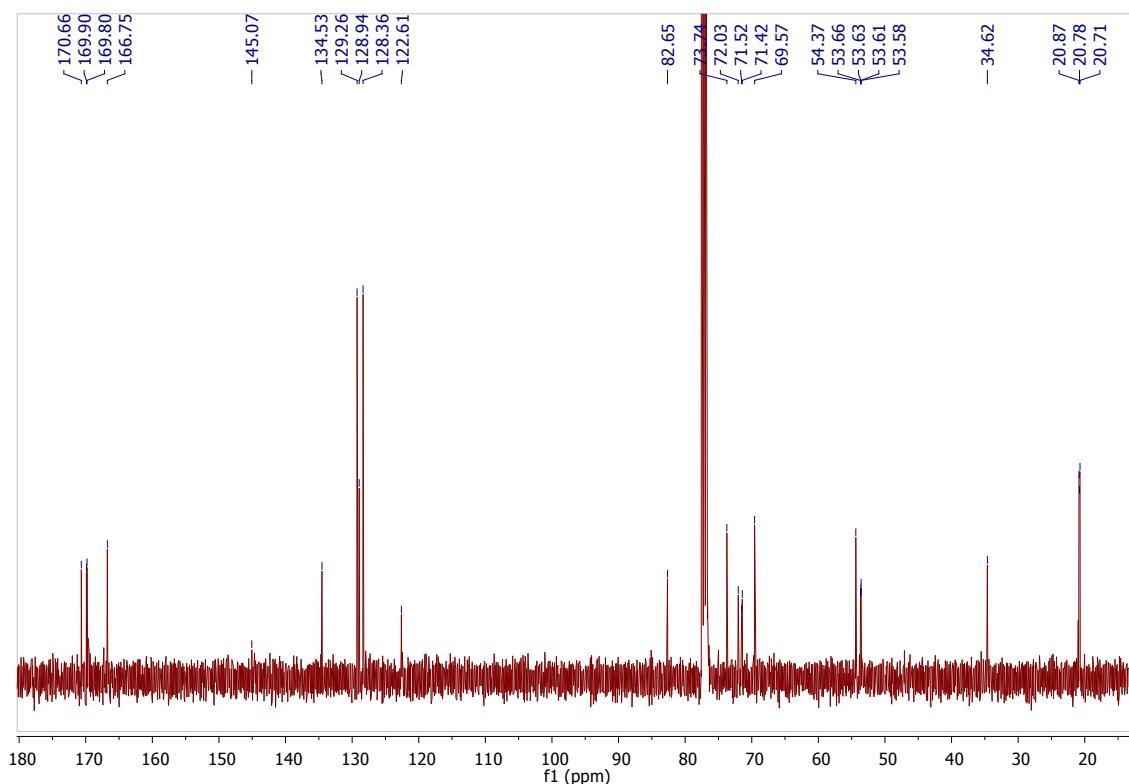
**Figure S14 A.** <sup>1</sup>H NMR Spectrum of compound 22.



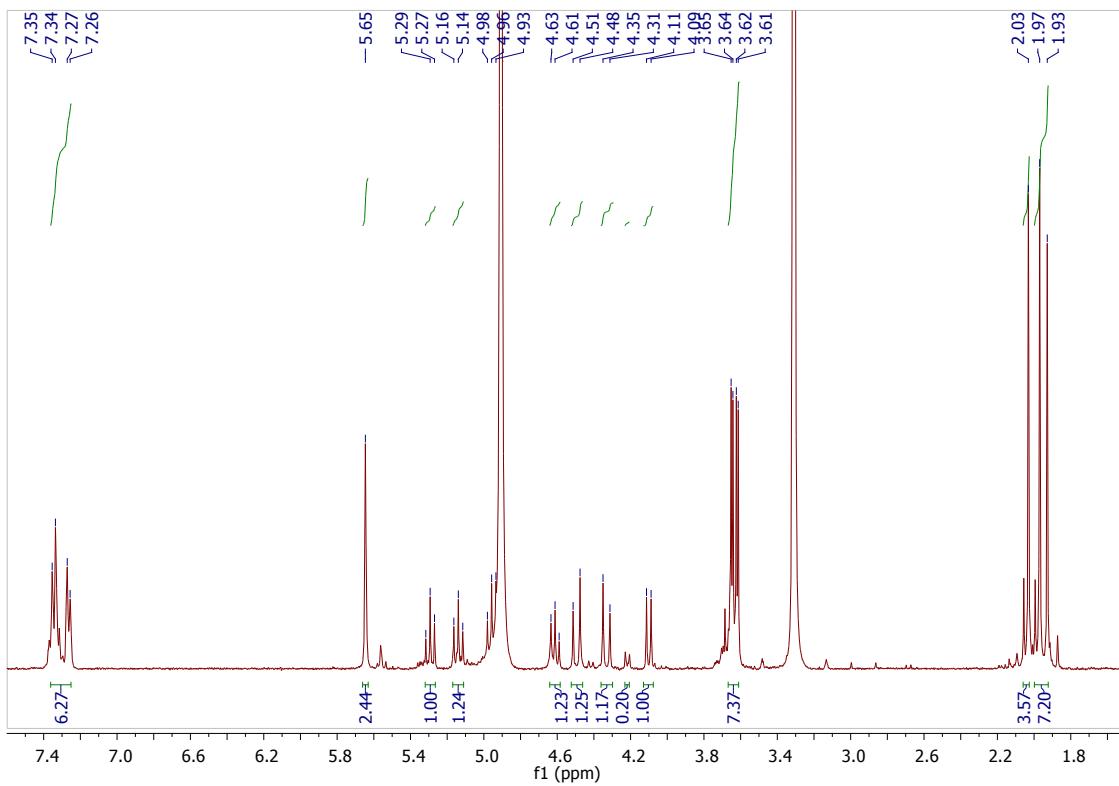
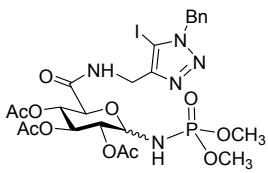
**Figure S14 B.** <sup>13</sup>C NMR Spectrum of compound 22.



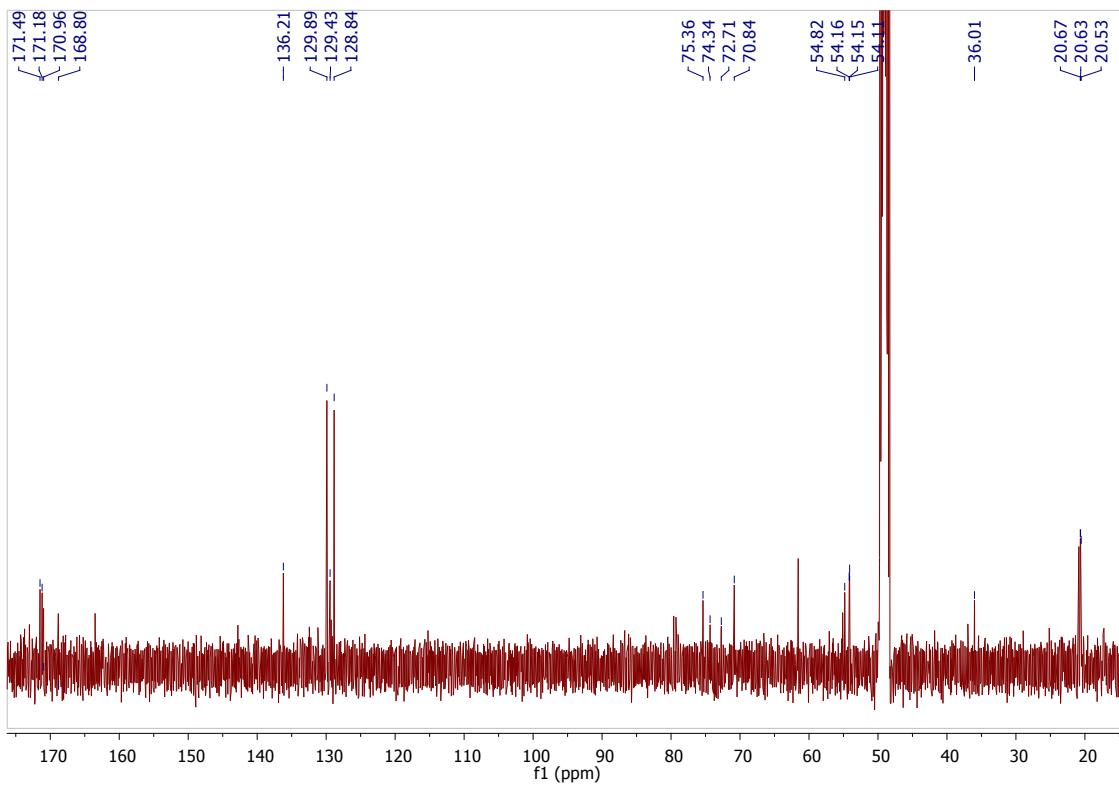
**Figure S15 A.**  $^1\text{H}$  NMR Spectrum of compound 23.



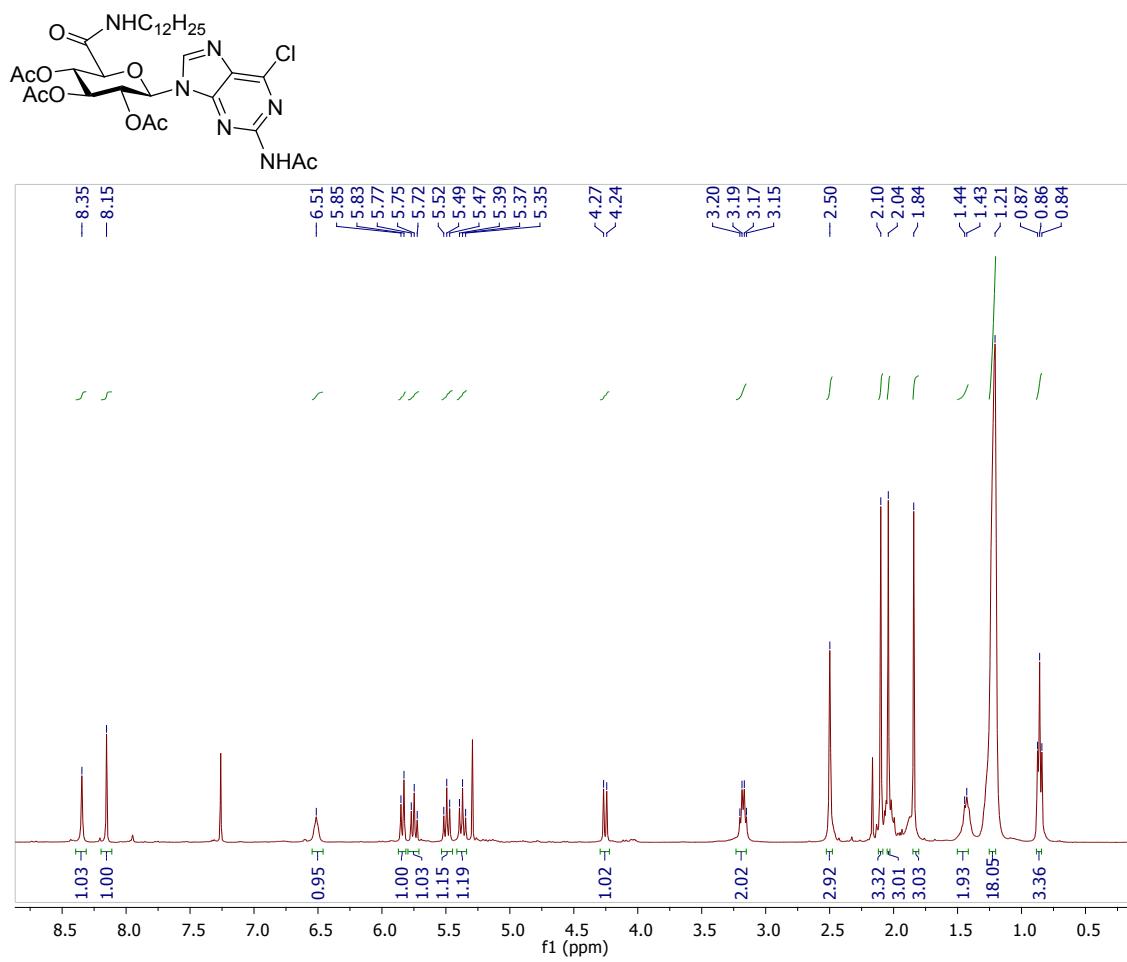
**Figure S15 B.**  $^{13}\text{C}$  NMR Spectrum of compound 23.



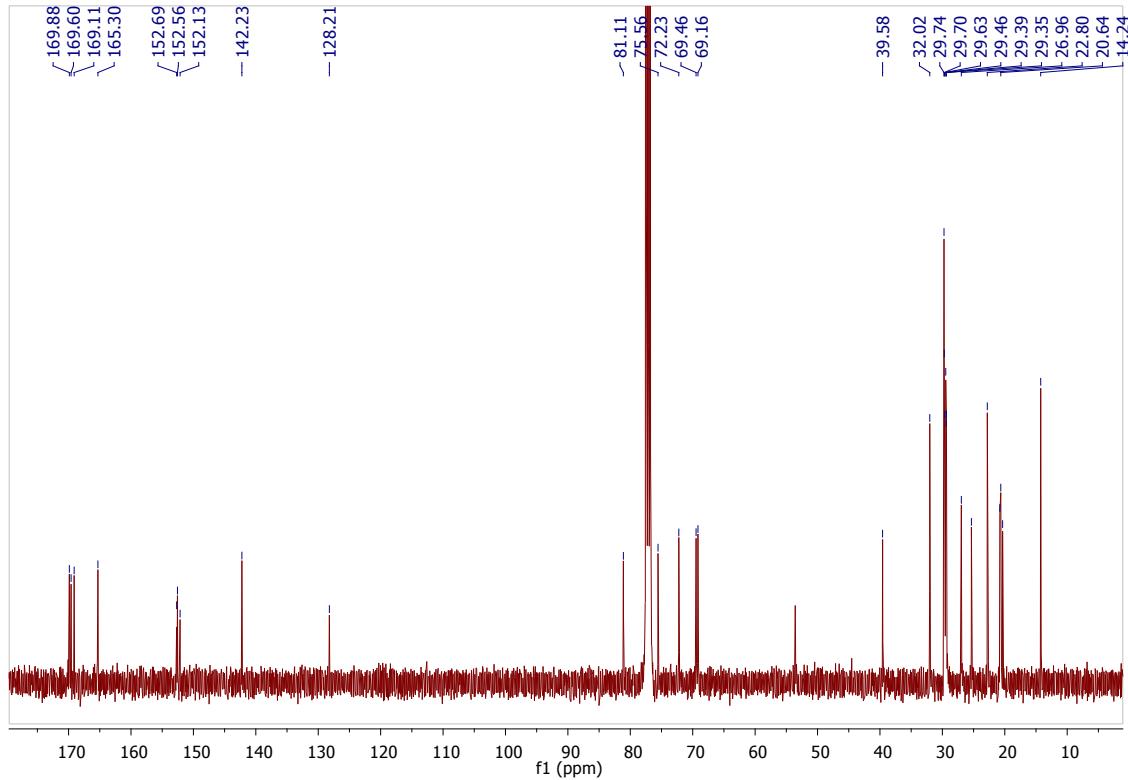
**Figure S16 A.**  $^1\text{H}$  NMR Spectrum of compound 24.



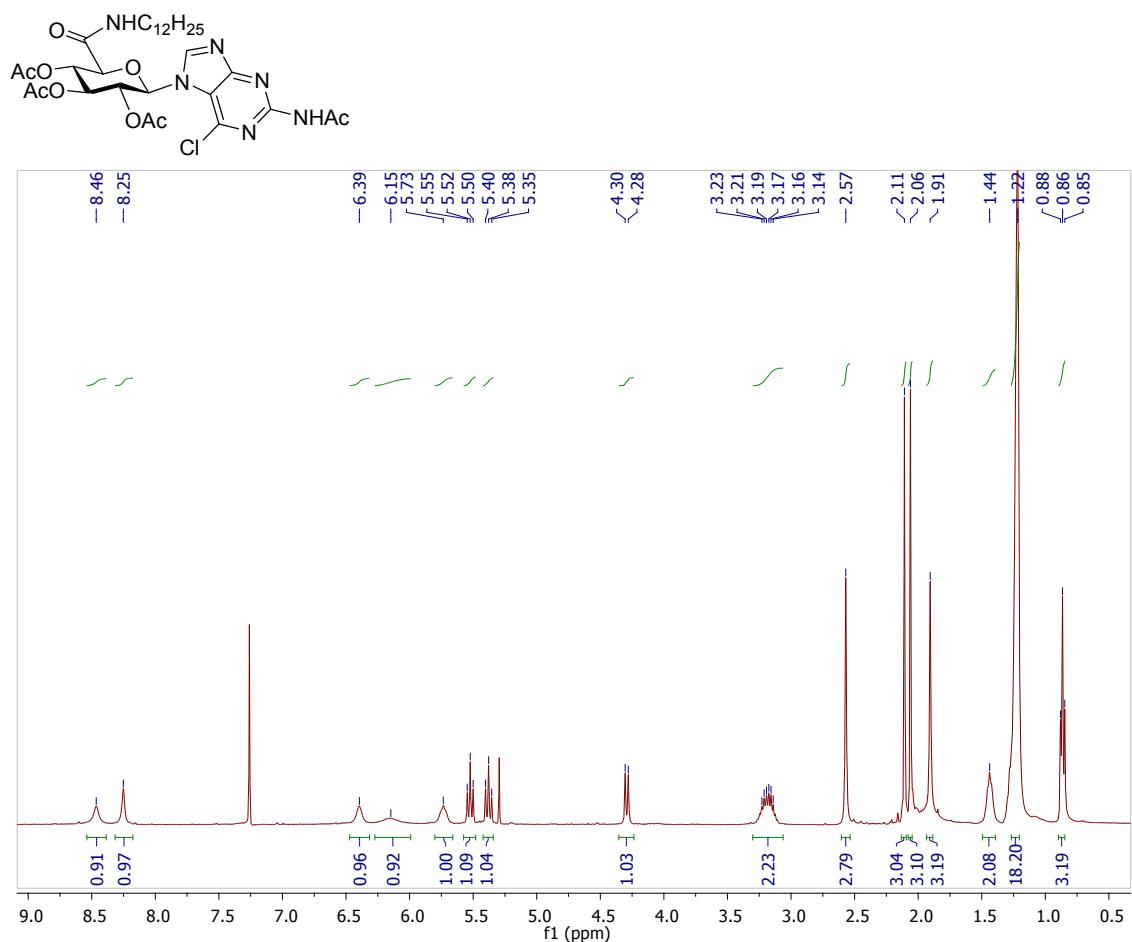
**Figure S16 B.**  $^{13}\text{C}$  NMR Spectrum of compound 24.



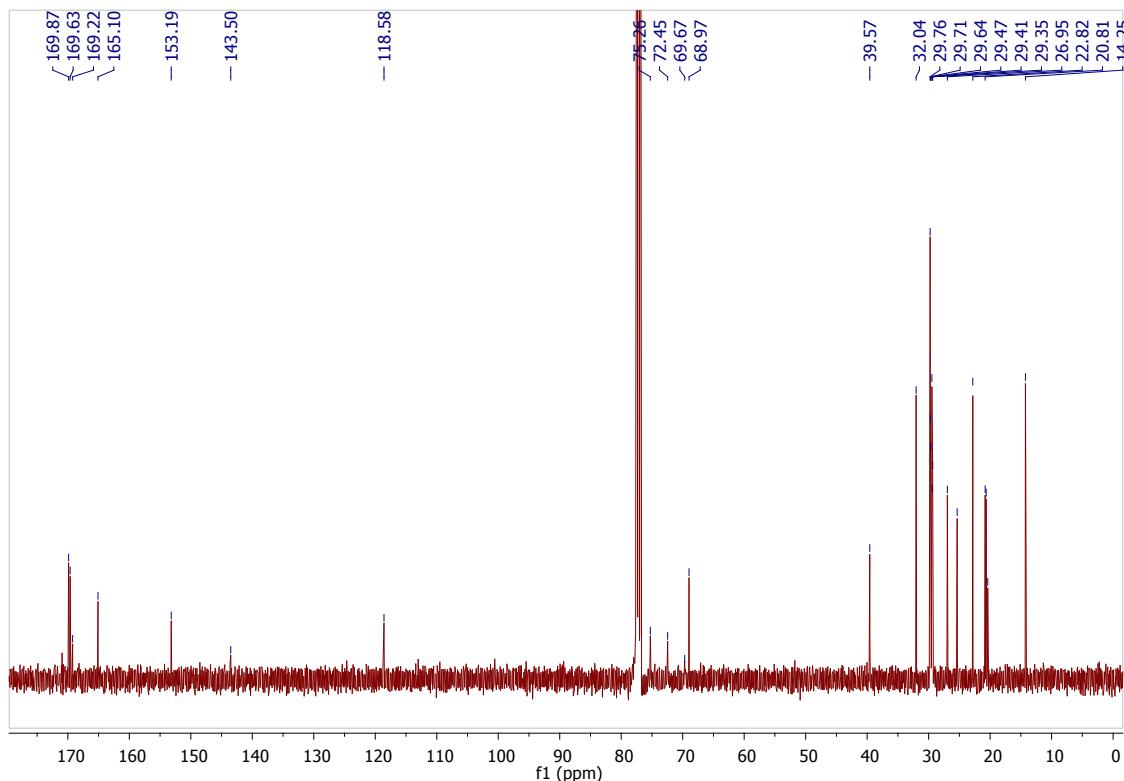
**Figure S17 A.** <sup>1</sup>H NMR Spectrum of compound 25.



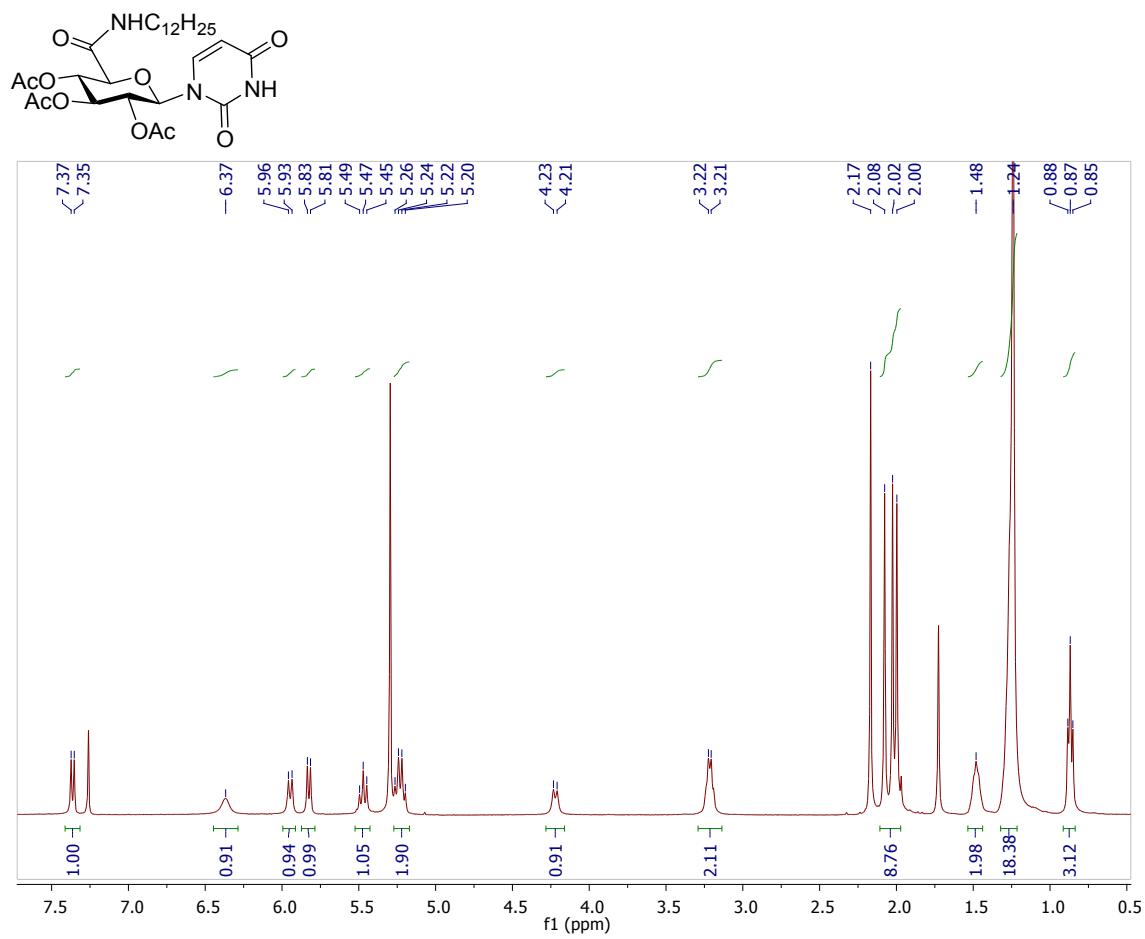
**Figure S17 B.** <sup>13</sup>C NMR Spectrum of compound 25.



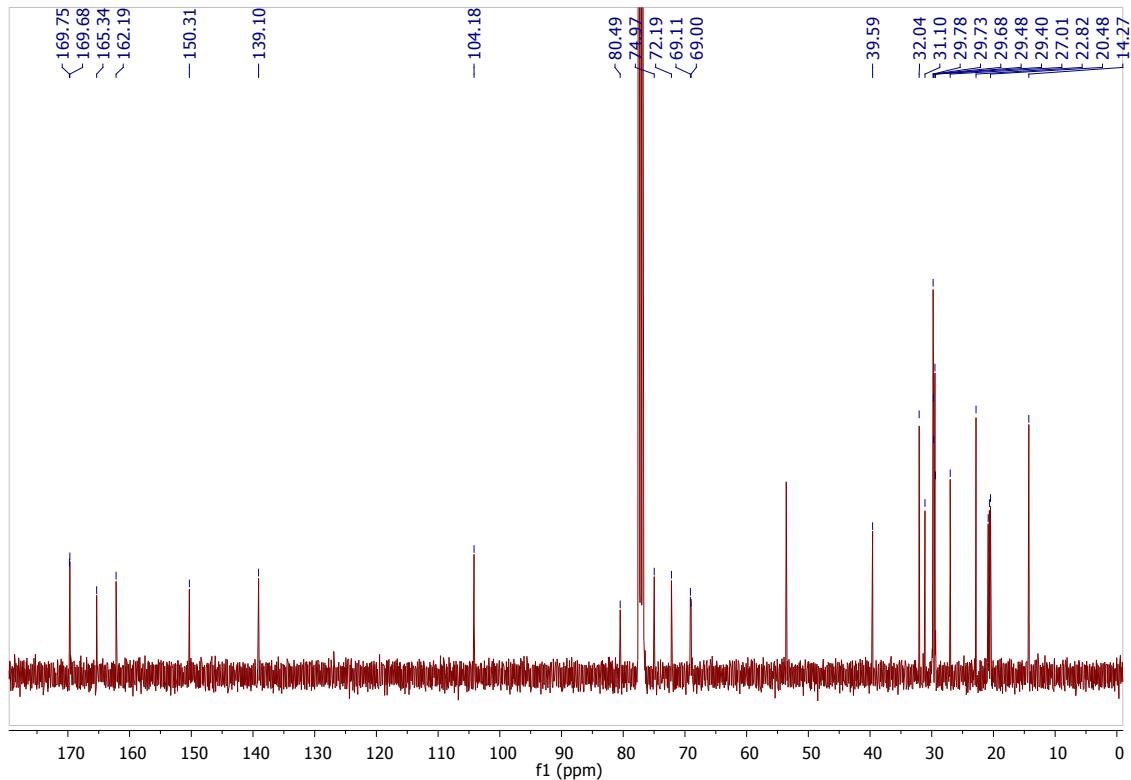
**Figure S18 A.** <sup>1</sup>H NMR Spectrum of compound 26.



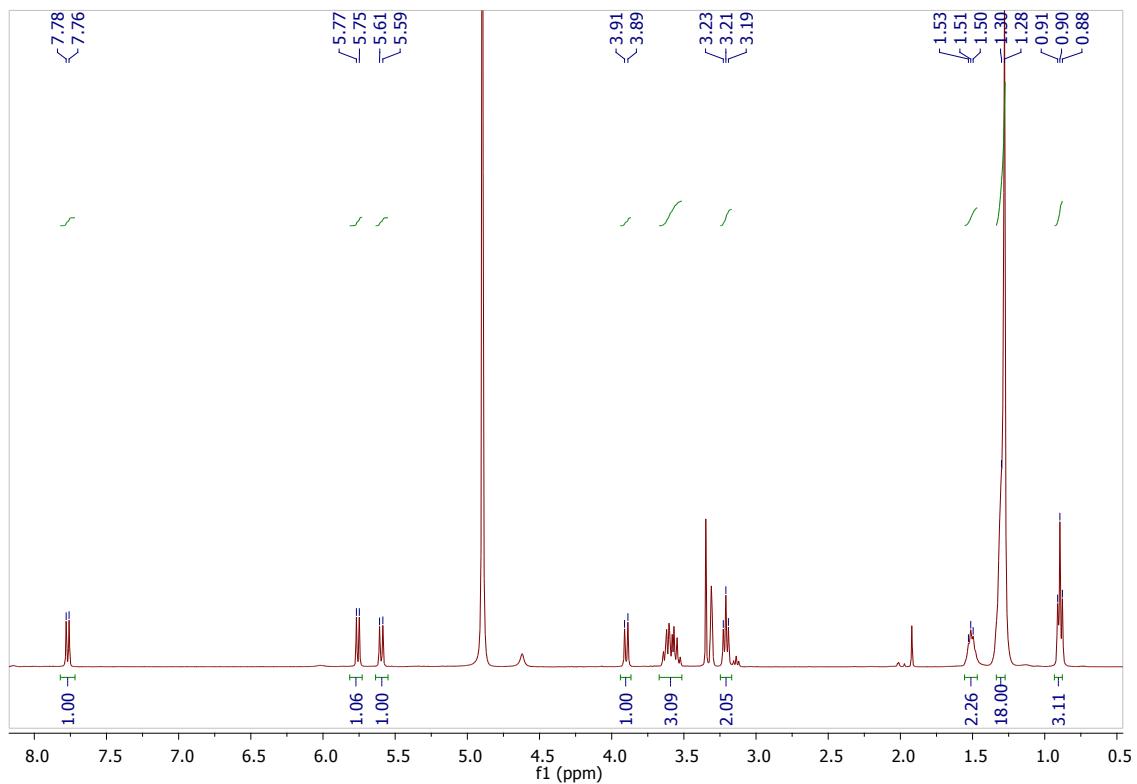
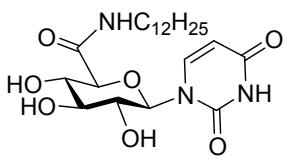
**Figure S18 B.** <sup>13</sup>C NMR Spectrum of compound 26.



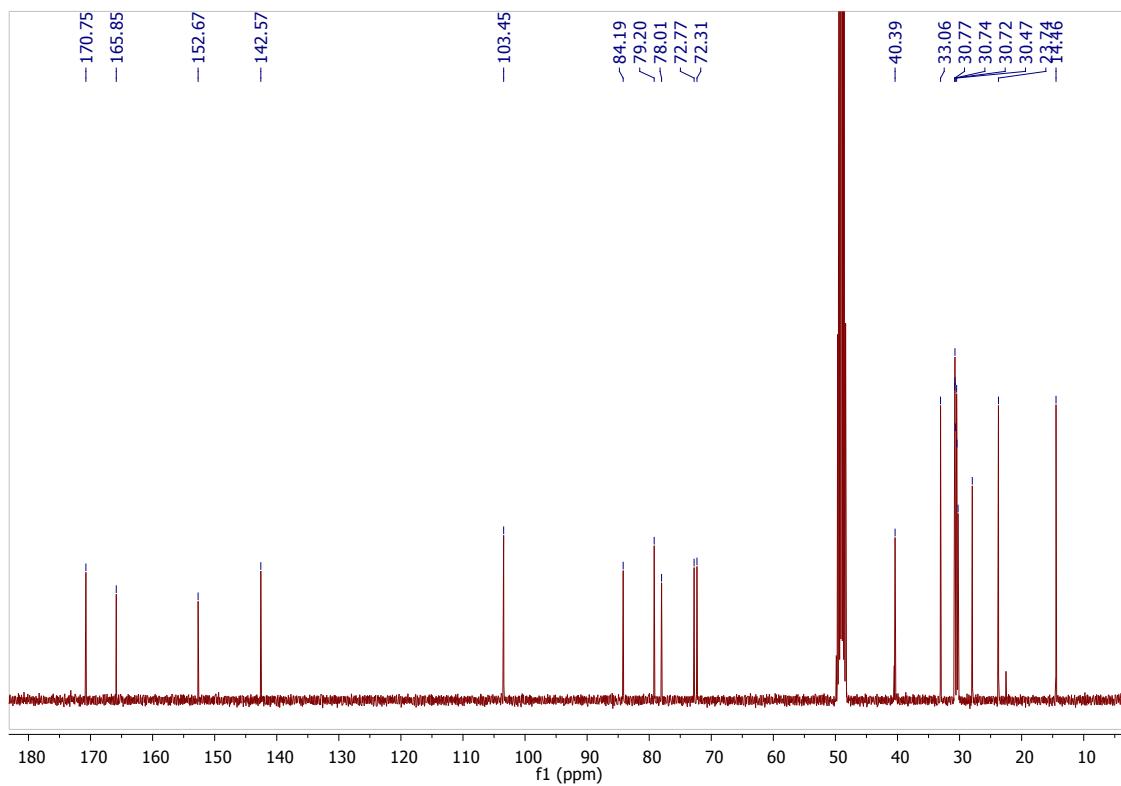
**Figure S19 A.** <sup>1</sup>H NMR Spectrum of compound 27.



**Figure S19 B.** <sup>13</sup>C NMR Spectrum of compound 27.



**Figure S20A.**  $^1\text{H}$  NMR Spectrum of compound **28**.



**Figure S20 B.**  $^{13}\text{C}$  NMR Spectrum of compound **28**.