

# Design and synthesis of various 5'-deoxy-5'-(4-substituted-1,2,3-triazol-1-yl)uridine analogues as inhibitors of *Mycobacterium tuberculosis* Mur-ligases

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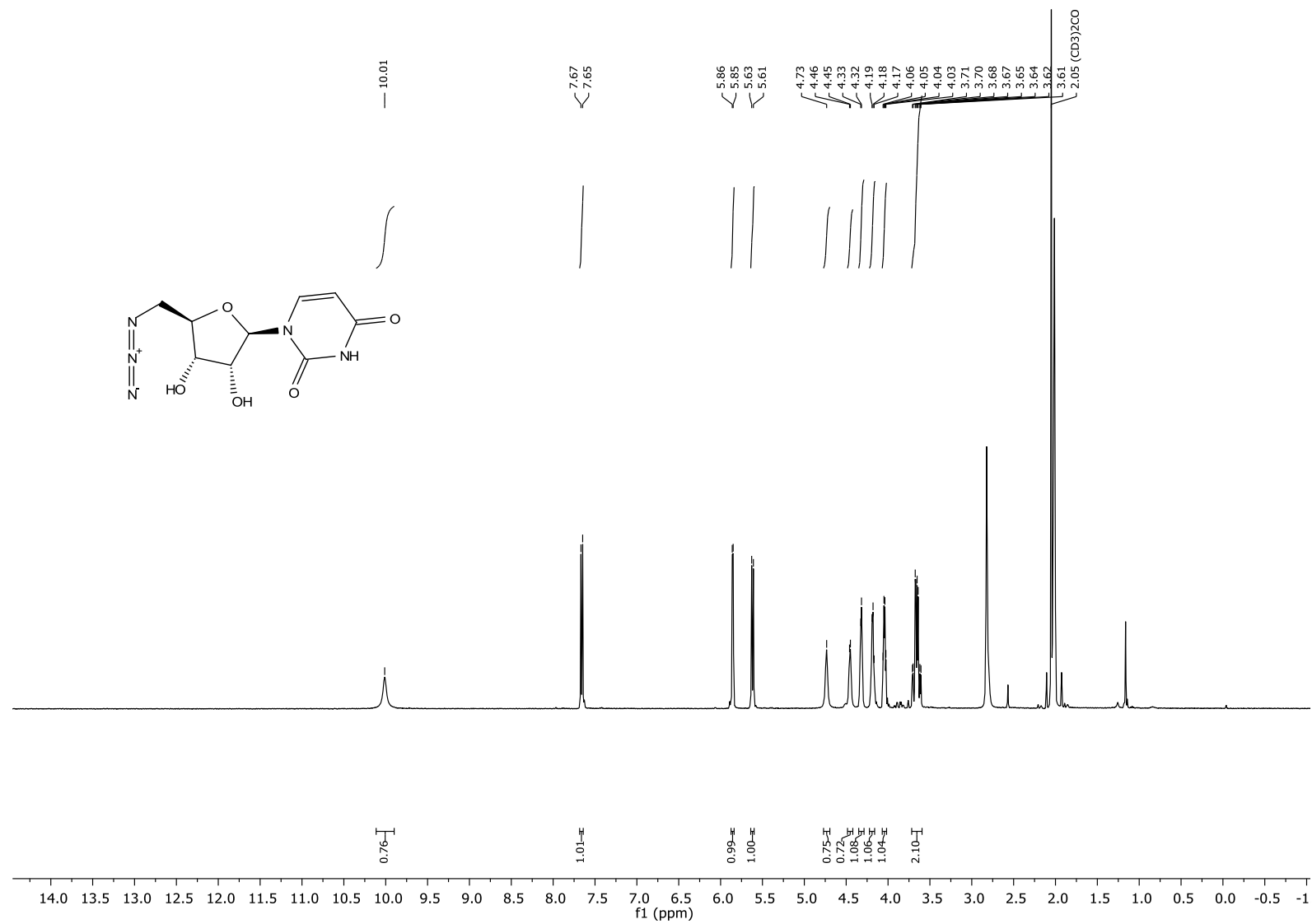
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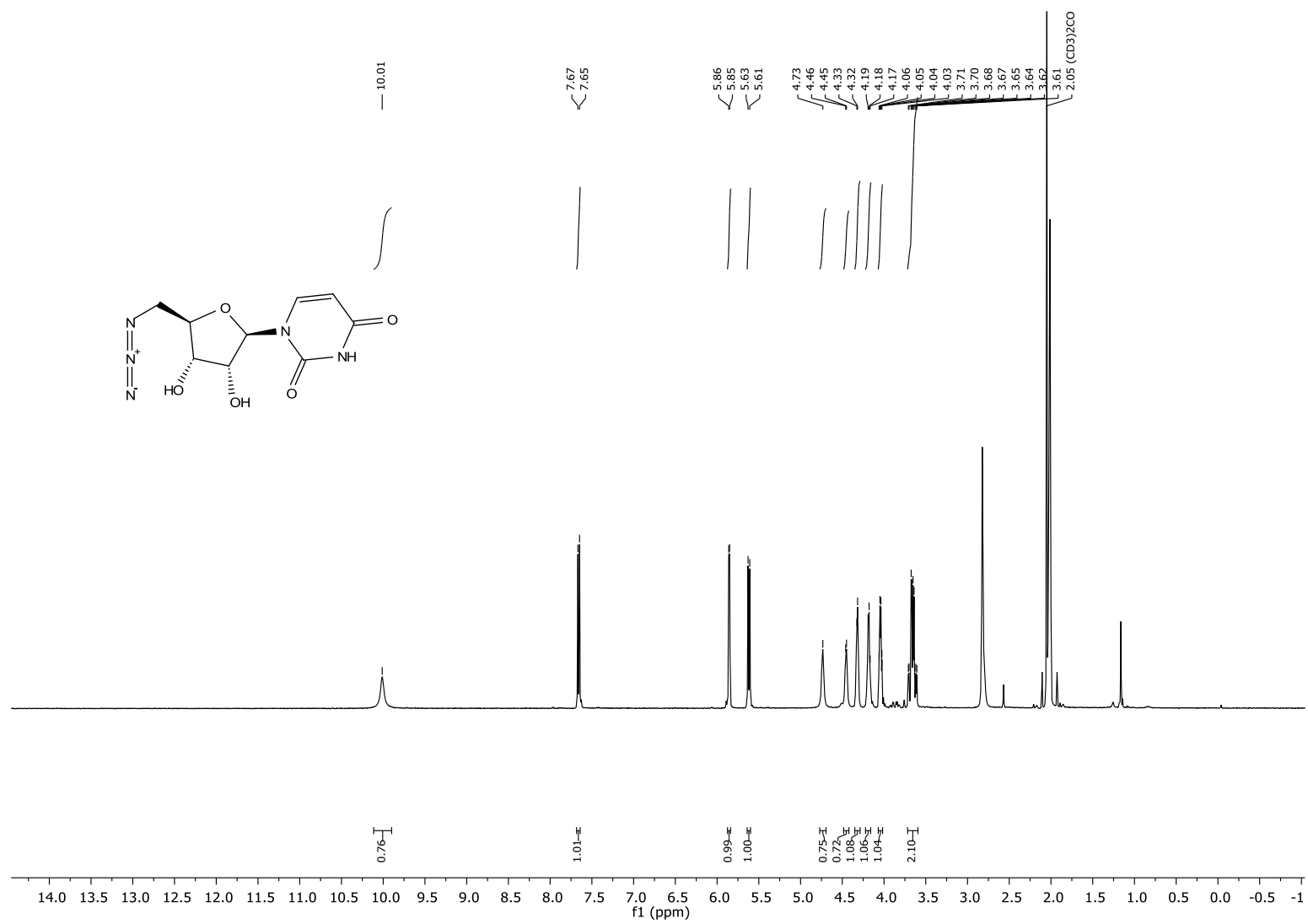
## Supplementary Informations

Copies of <sup>1</sup>H-, <sup>13</sup>C- and <sup>1</sup>H-<sup>13</sup>C HMBC NMR spectra of representative molecules

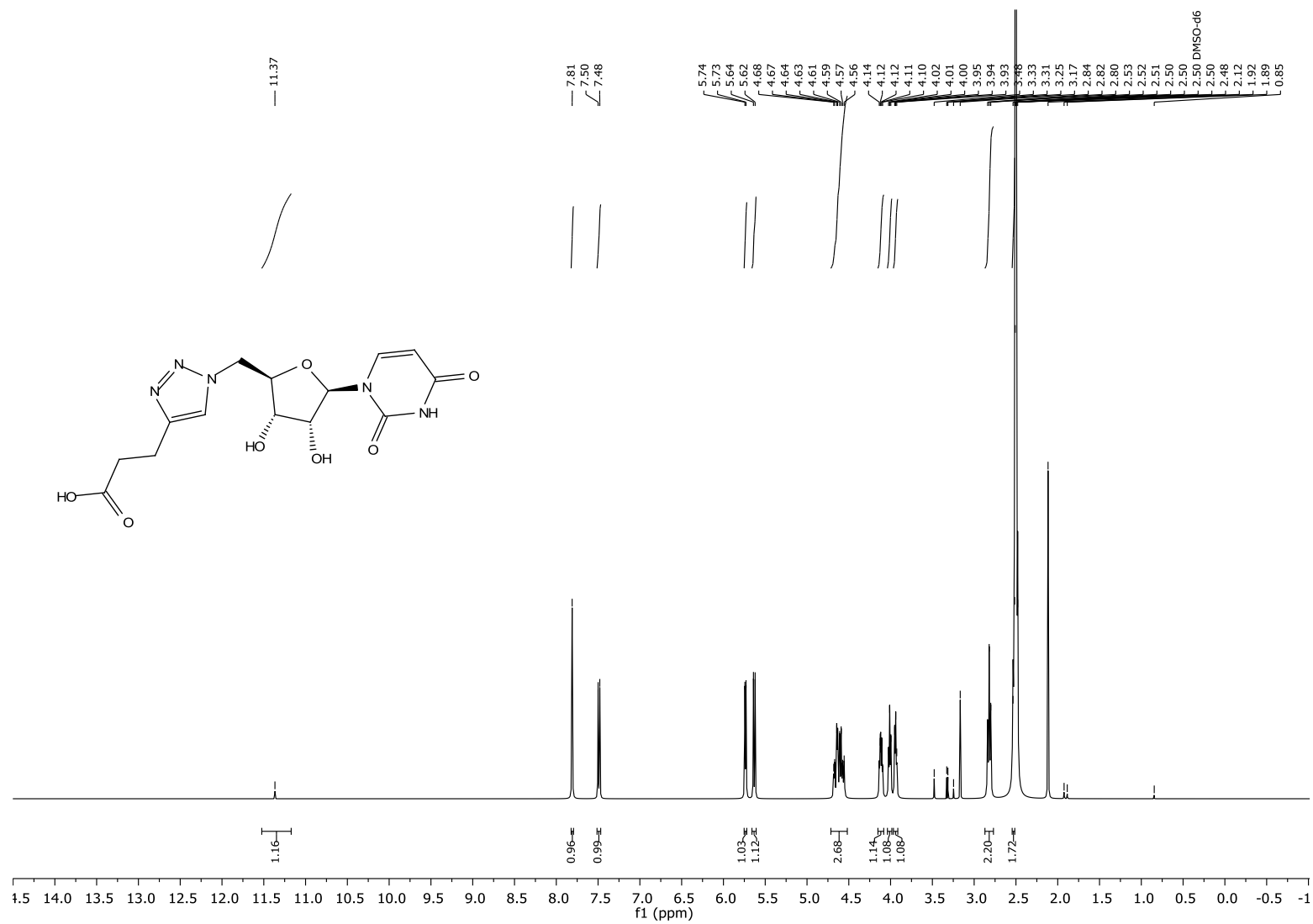
<sup>1</sup>H NMR (DMSO-d6) of compound 2



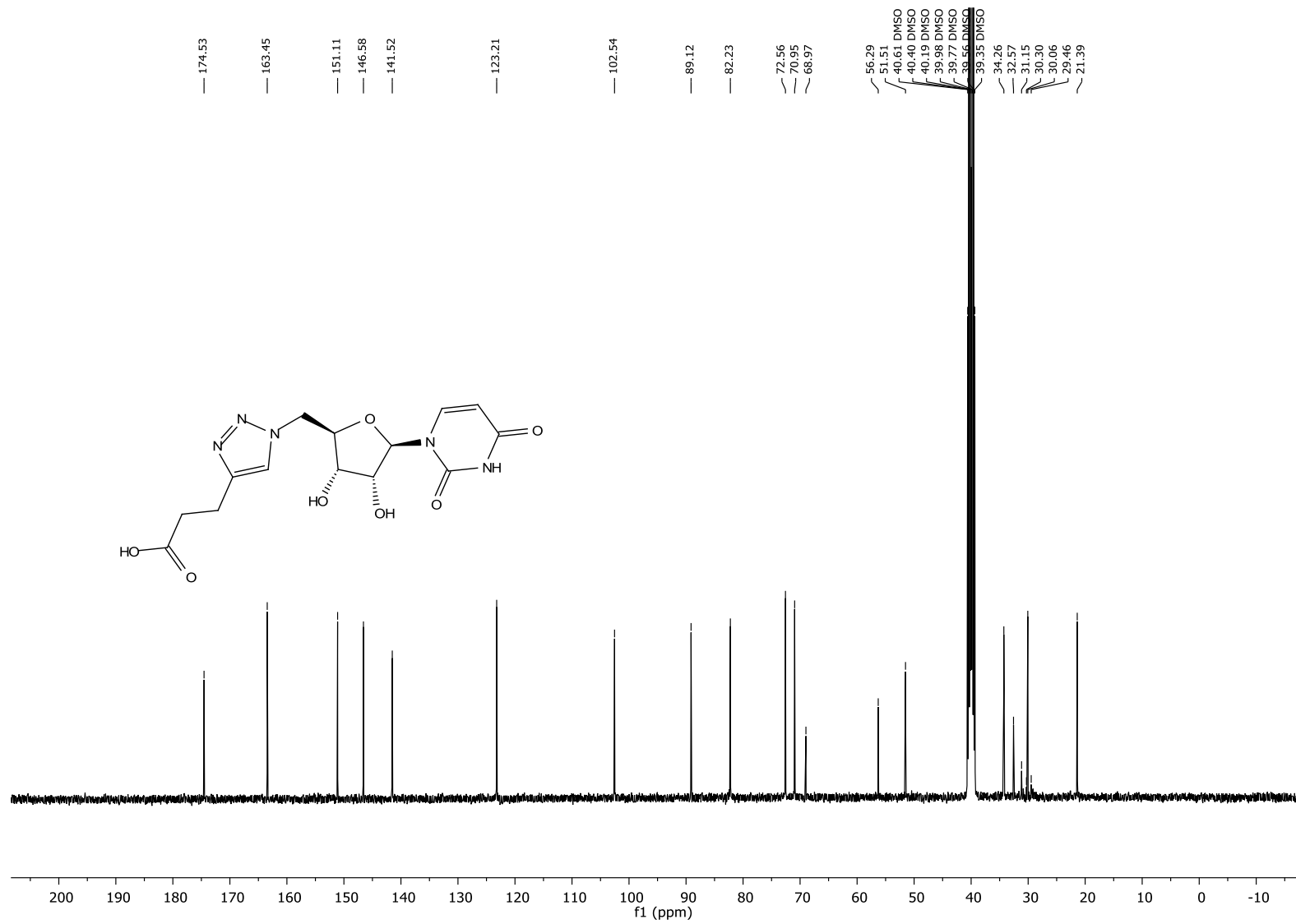
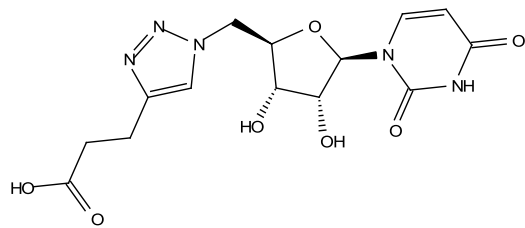
<sup>13</sup>C NMR (DMSO-d6) of compound 2



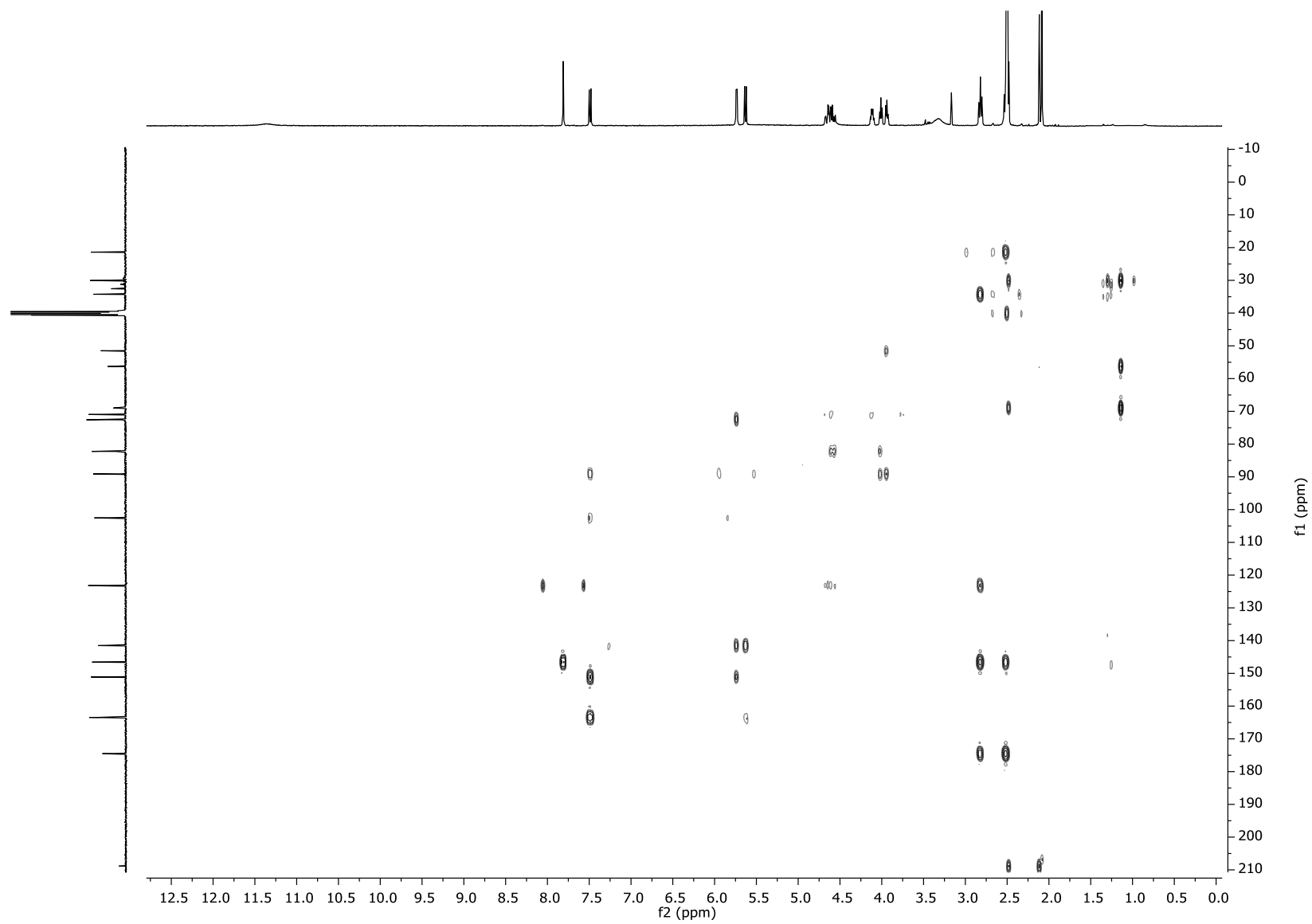
<sup>1</sup>H NMR (DMSO-d6) of compound 3a



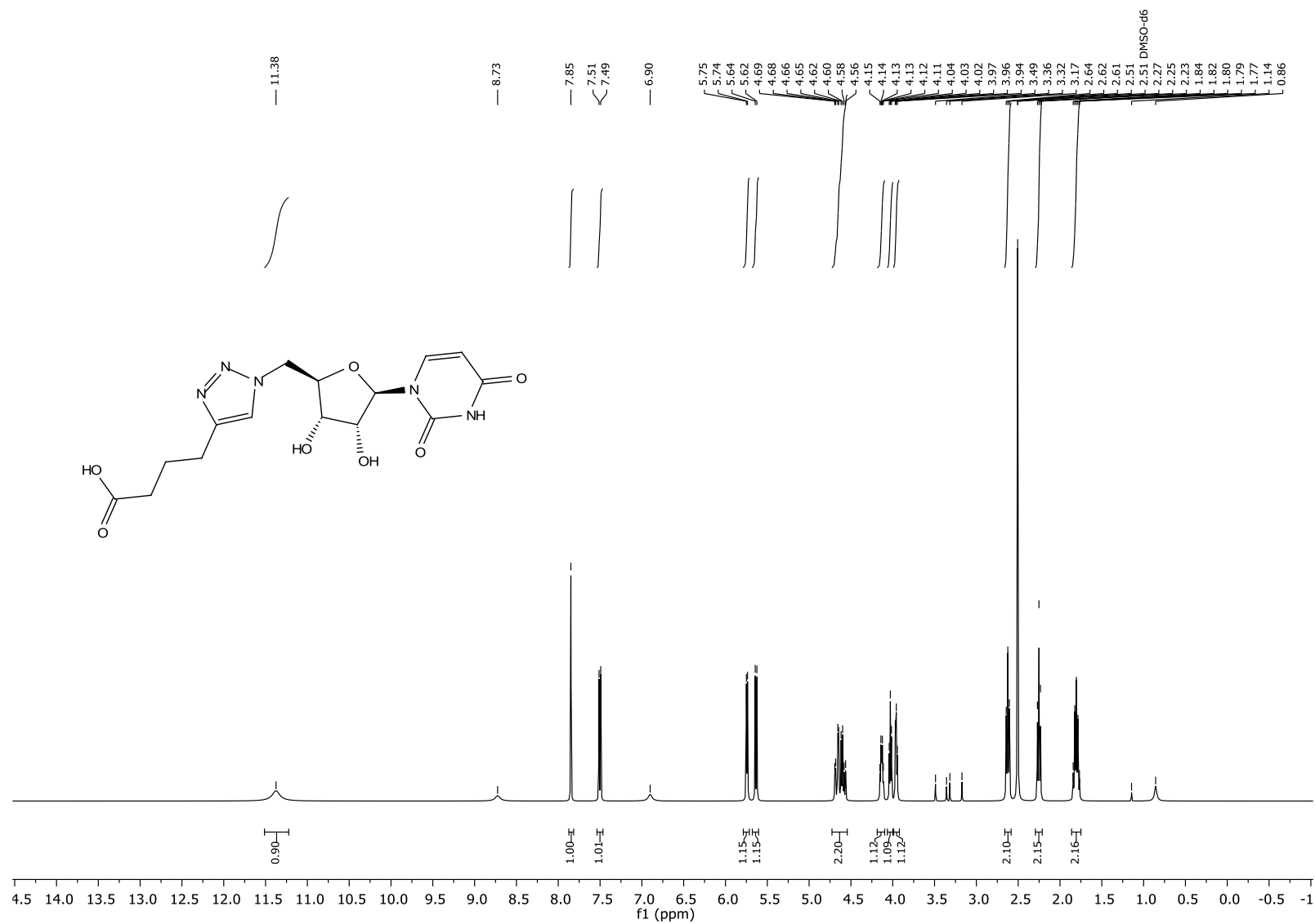
$^{13}\text{C}$  NMR (DMSO- $d_6$ ) of compound **3a**



$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3a**

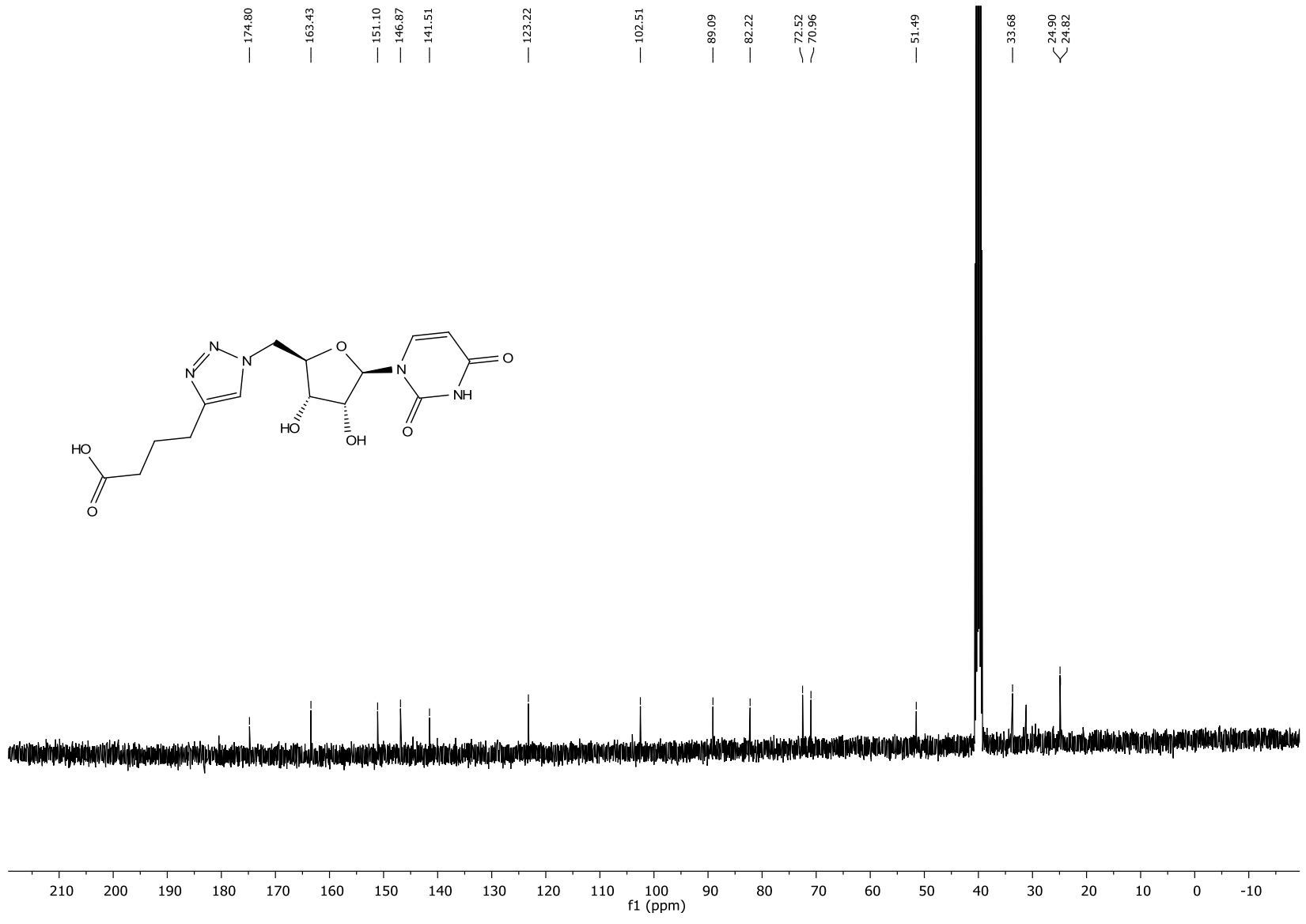
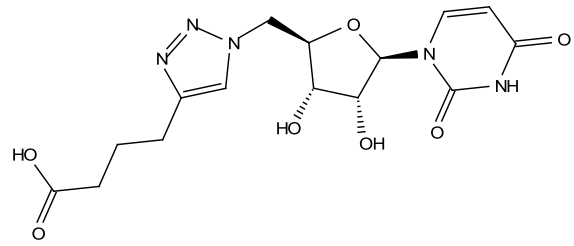


$^1\text{H}$  NMR ( $\text{DMSO-d}_6$ ) of compound **3b**

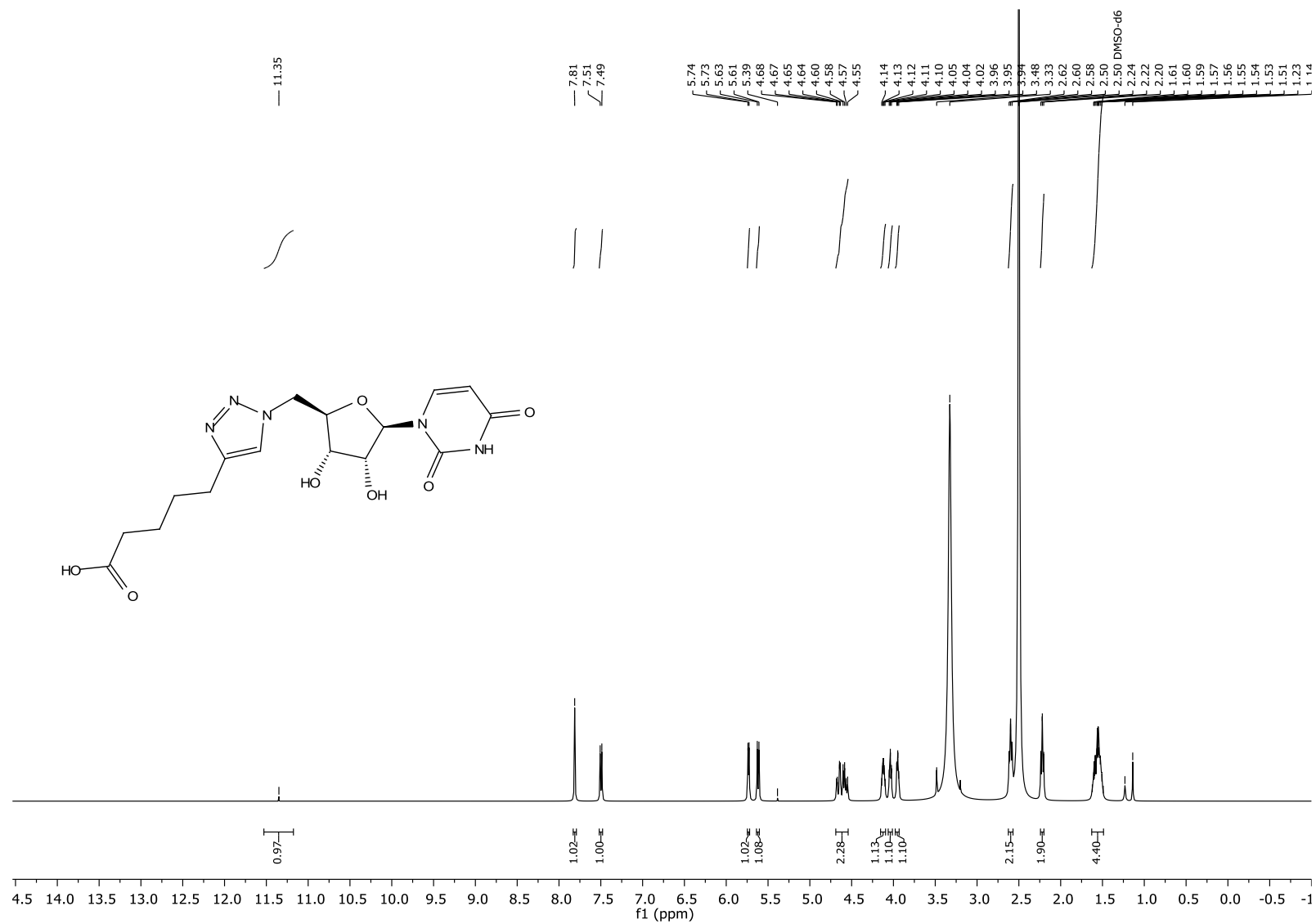


<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound **3b**

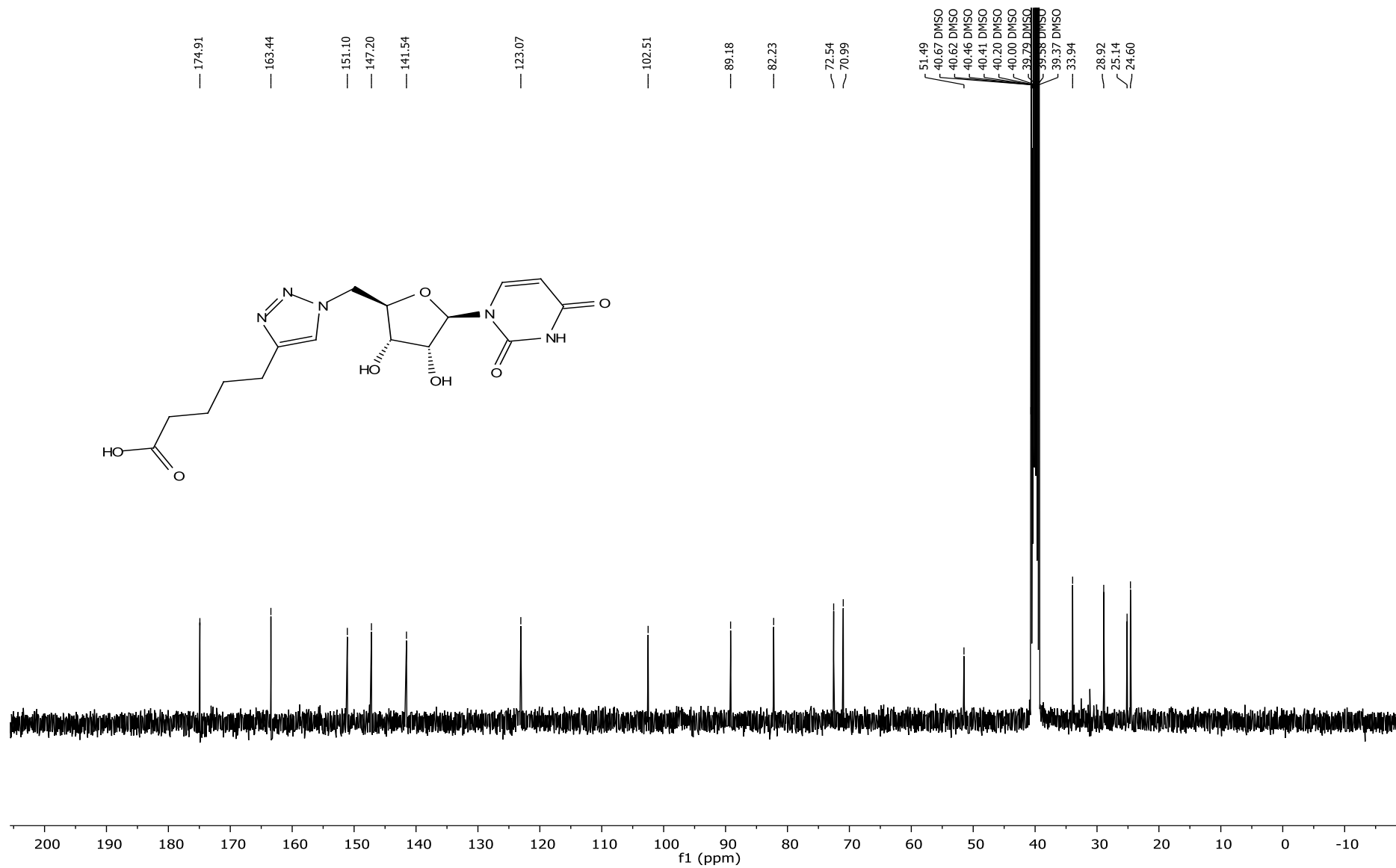
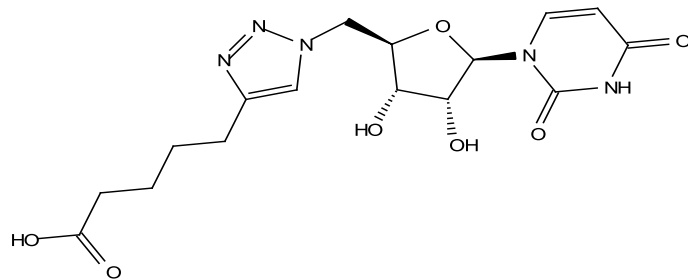




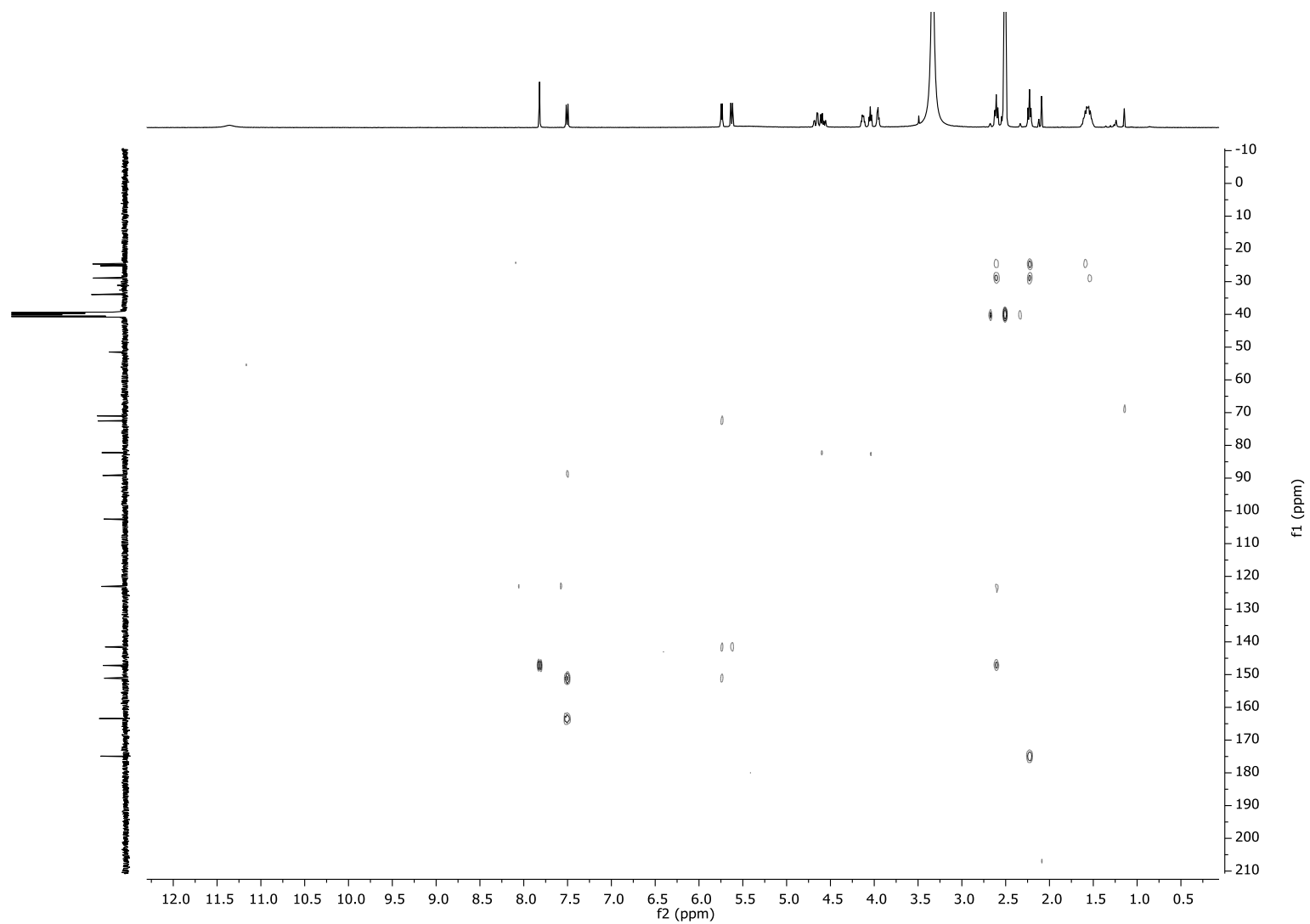
<sup>1</sup>H NMR (DMSO-d6) of compound 3c



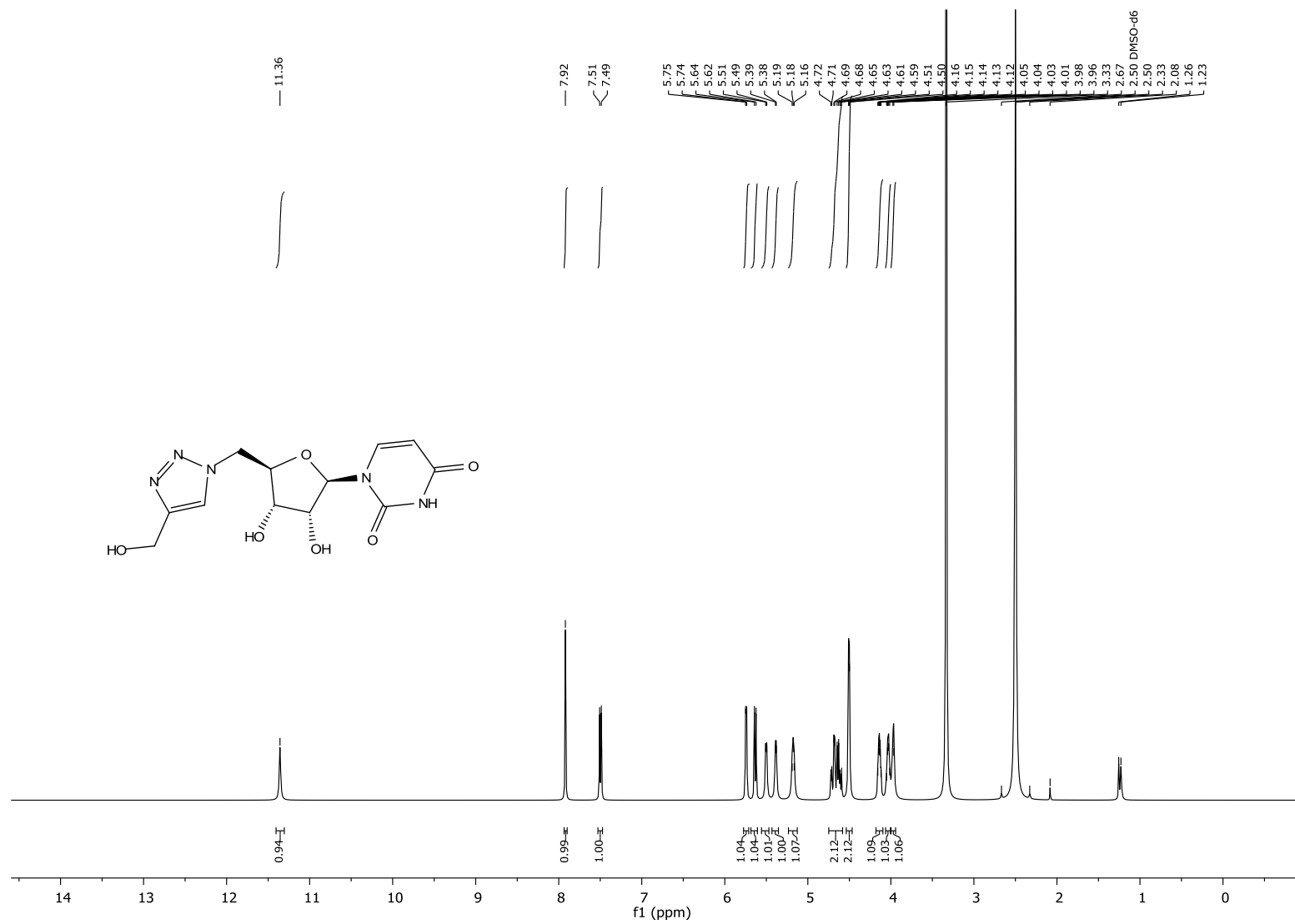
$^{13}\text{C}$  NMR (DMSO- $d_6$ ) of compound **3c**



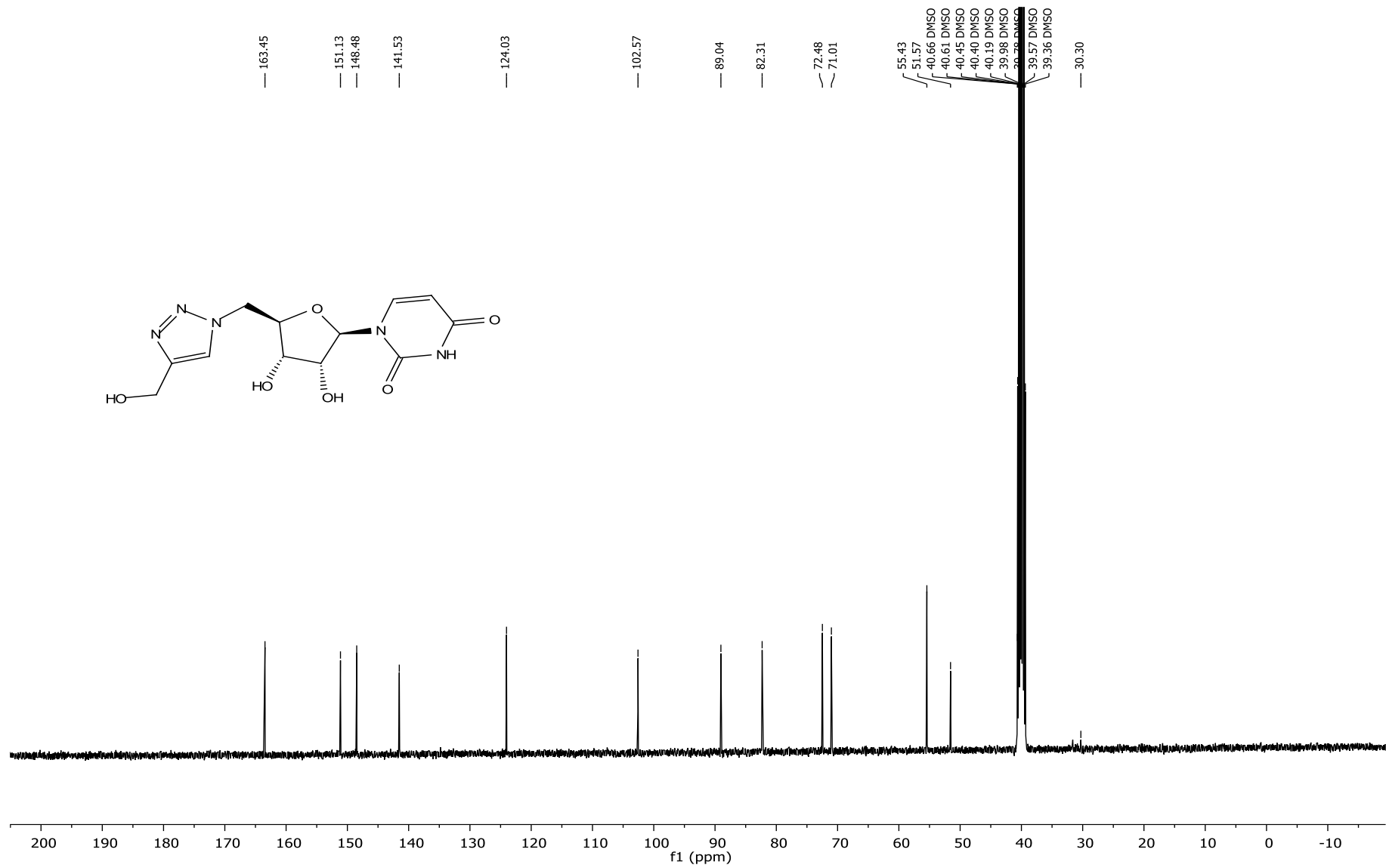
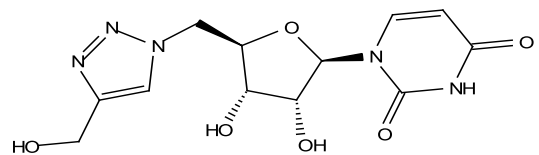
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3c**



<sup>1</sup>H NMR (DMSO-d6) of compound 3d

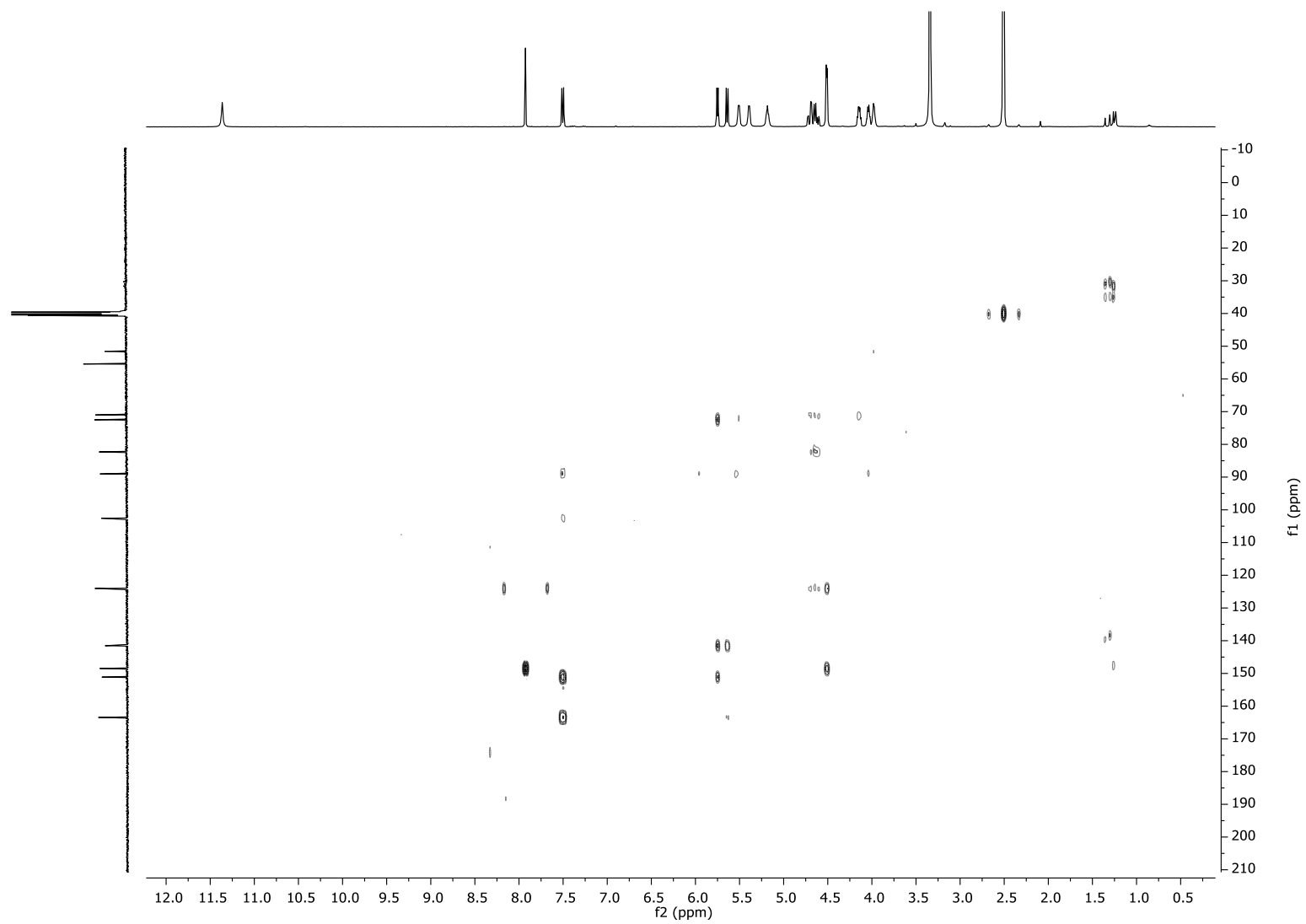


$^{13}\text{C}$  NMR (DMSO- $d_6$ ) of compound **3d**

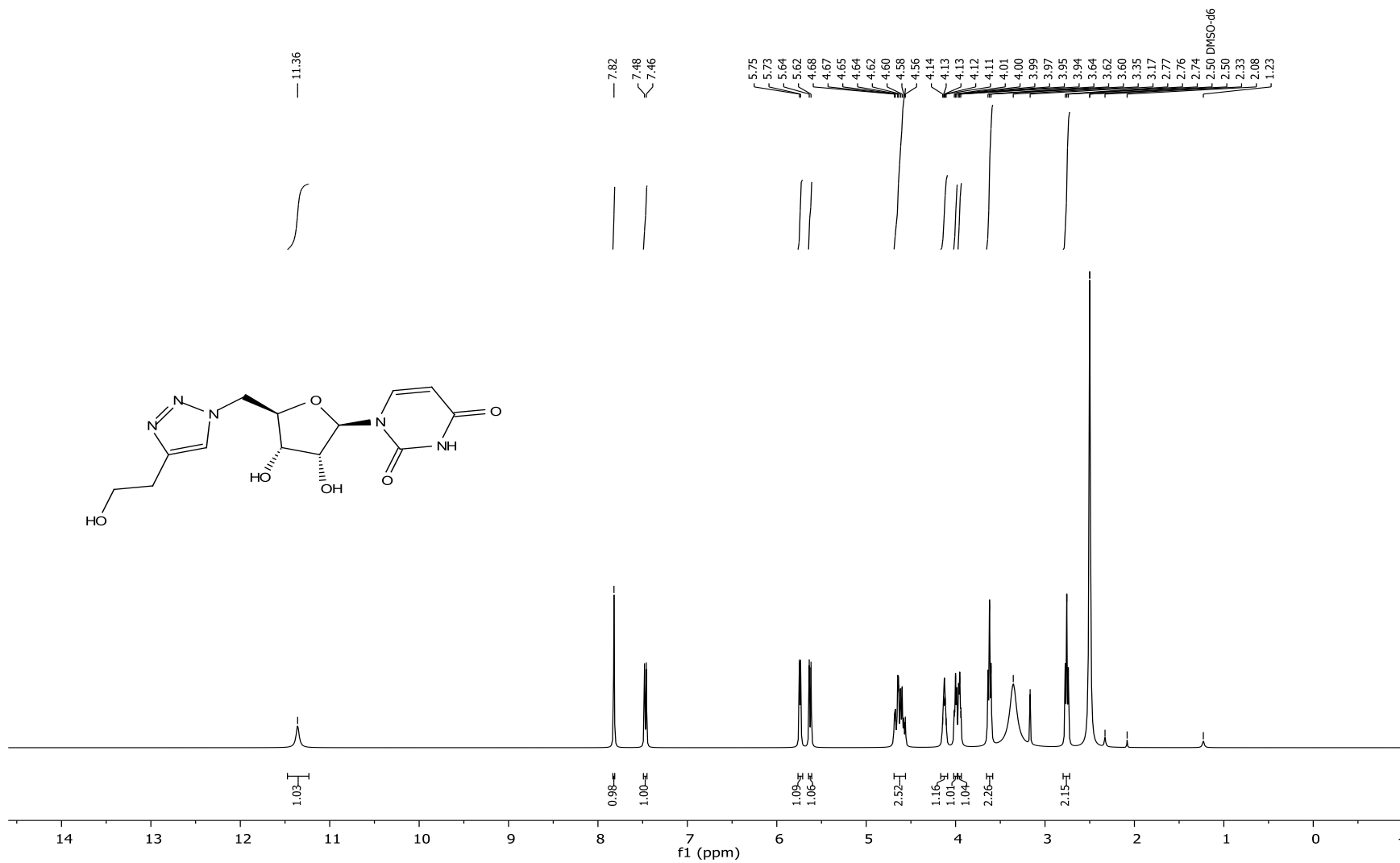


$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3d**

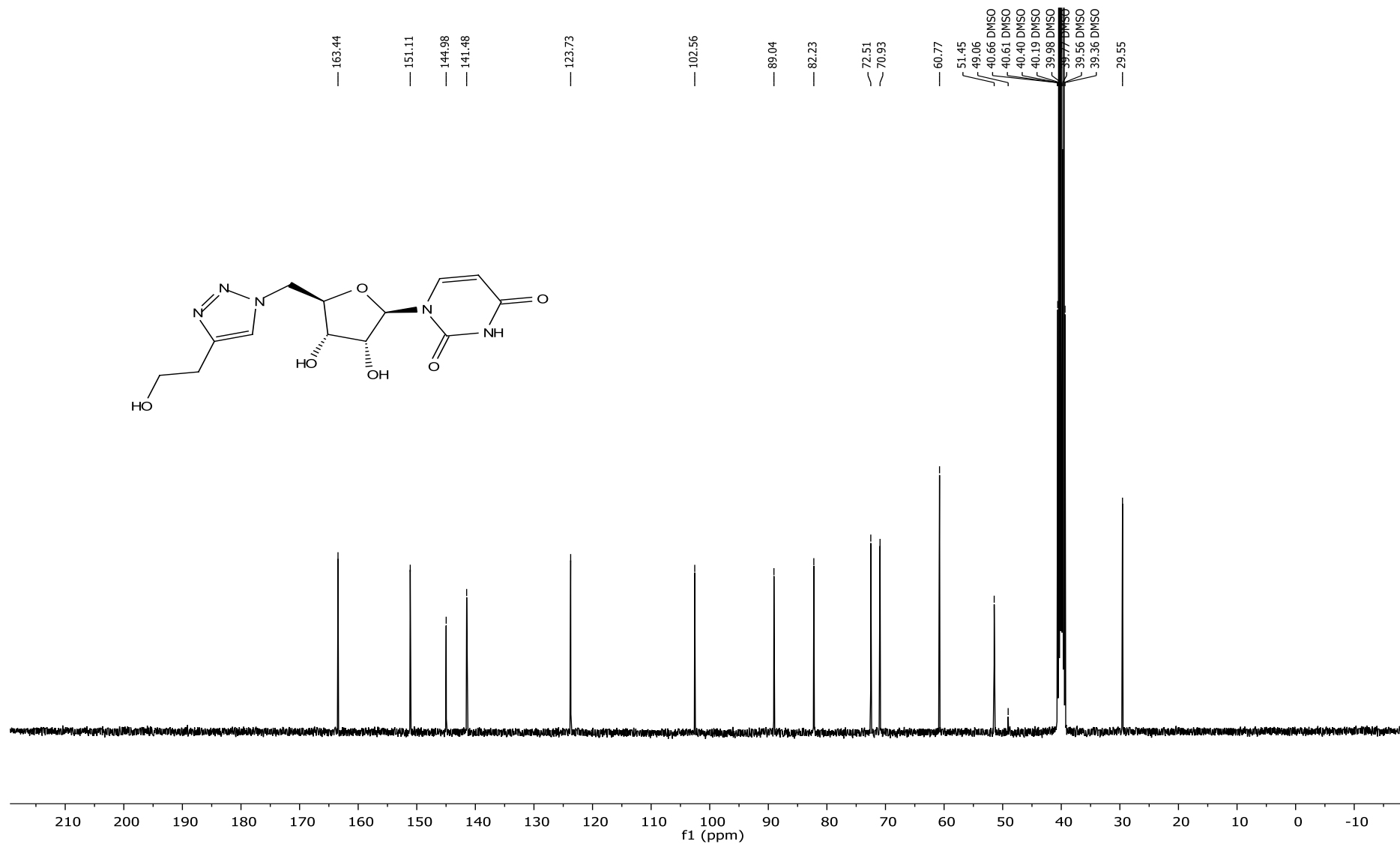
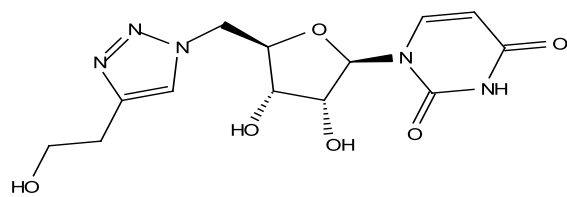




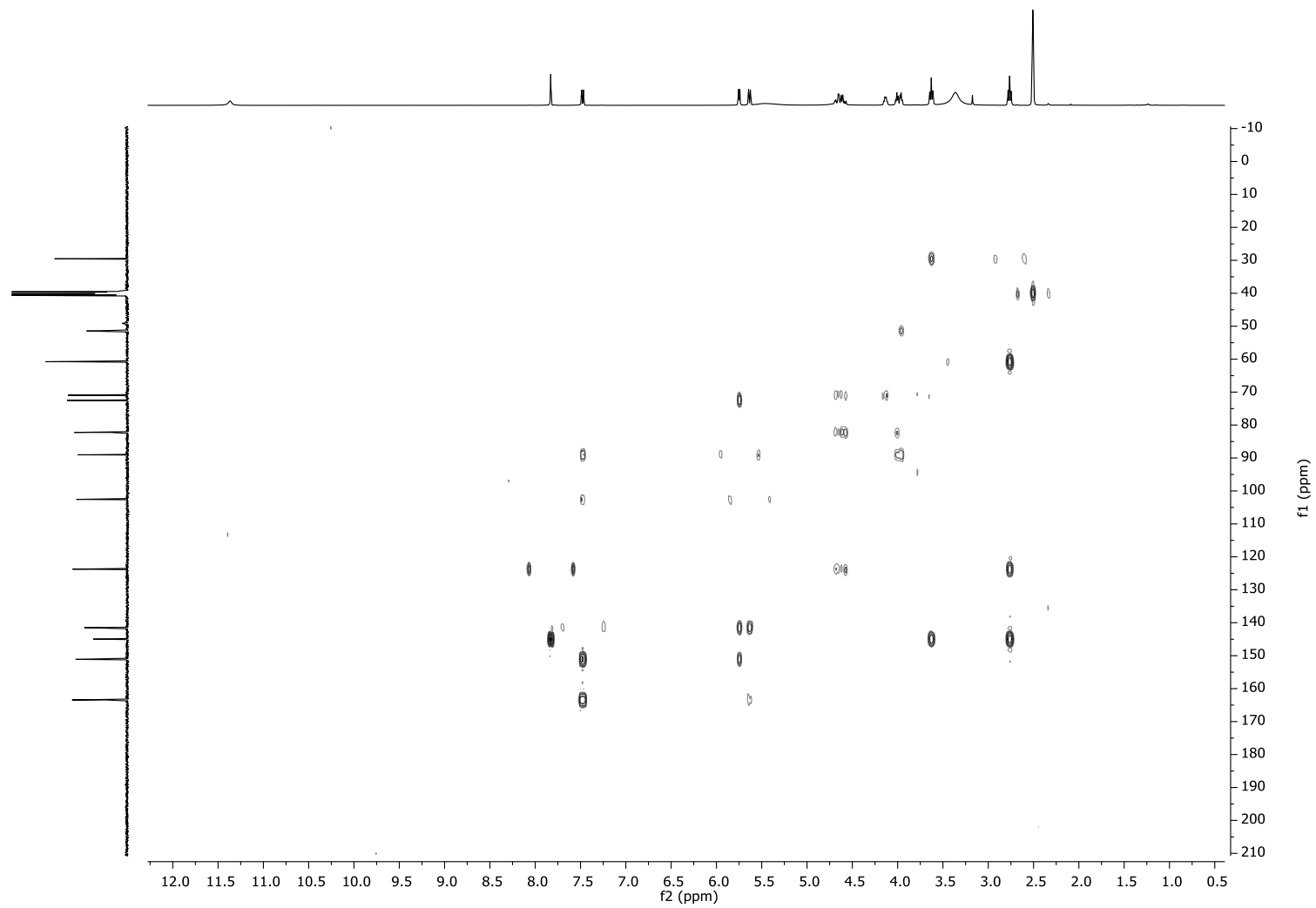
$^1\text{H}$  NMR ( $\text{DMSO-d}_6$ ) of compound **3e**



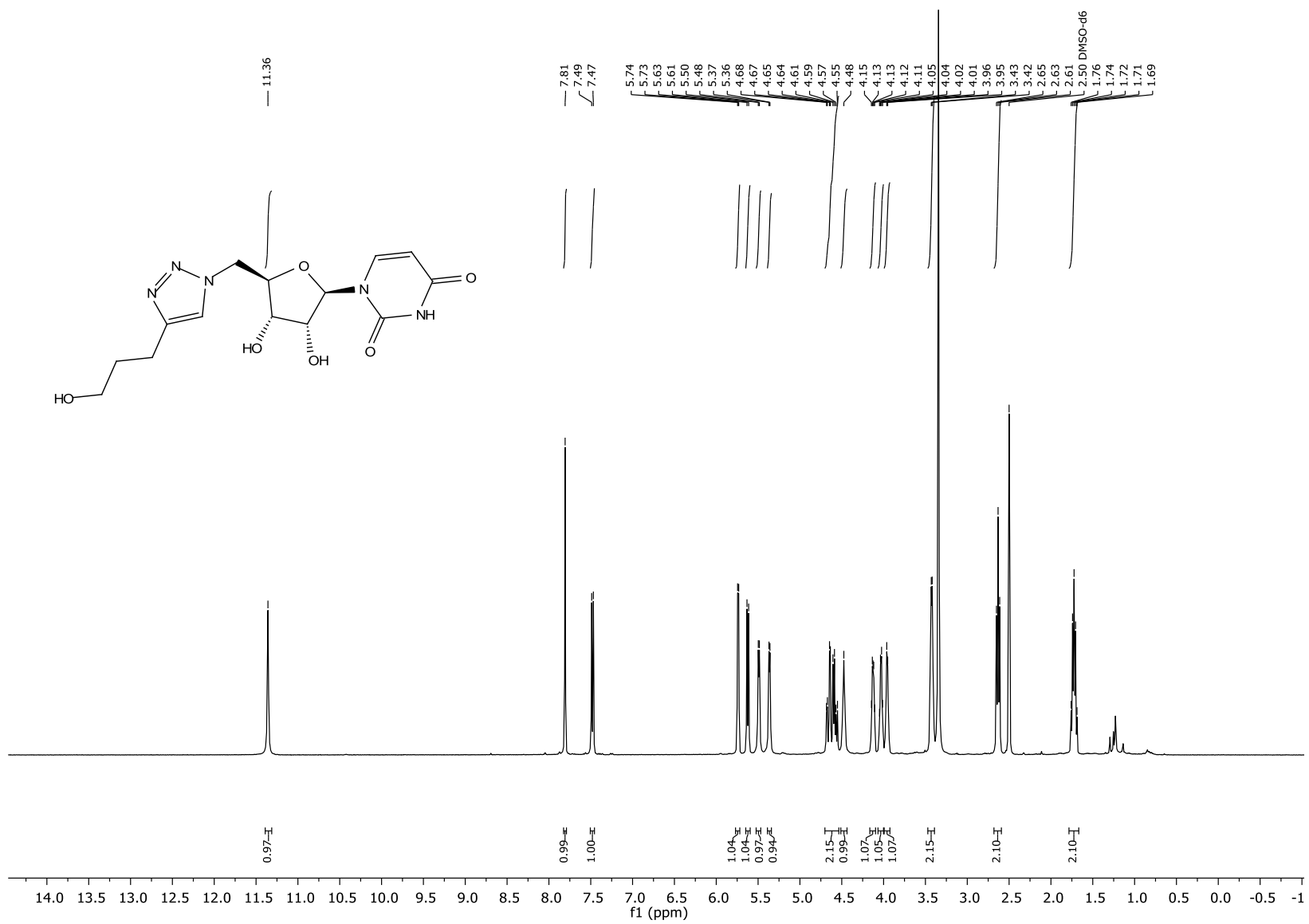
<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound 3e



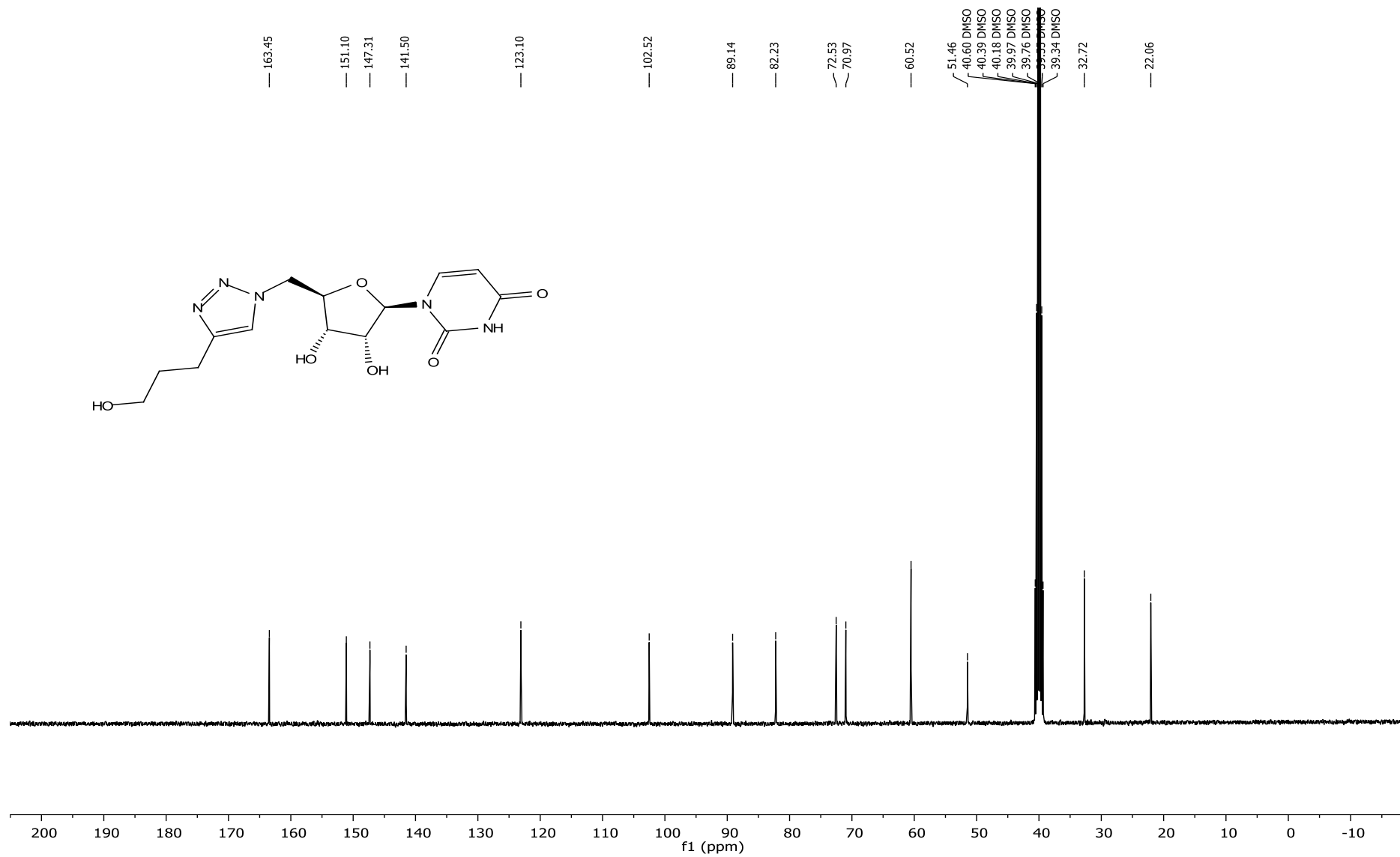
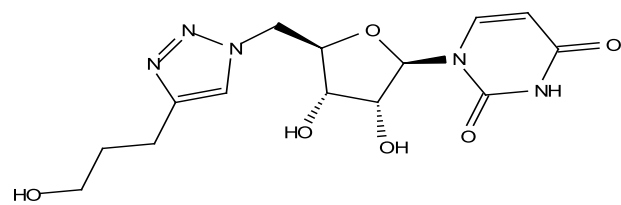
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3e**



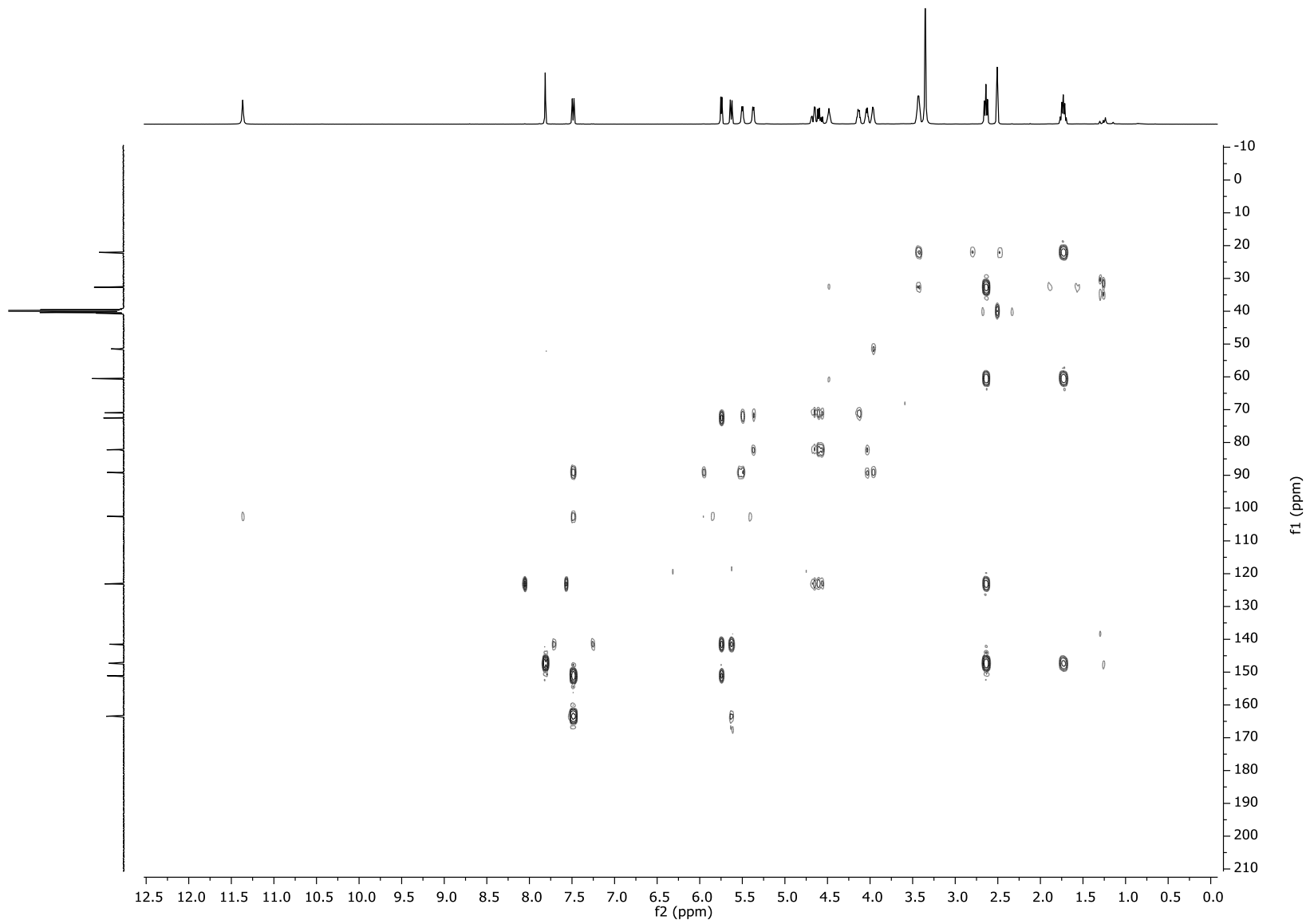
<sup>1</sup>H NMR (DMSO-d<sub>6</sub>) of compound **3f**



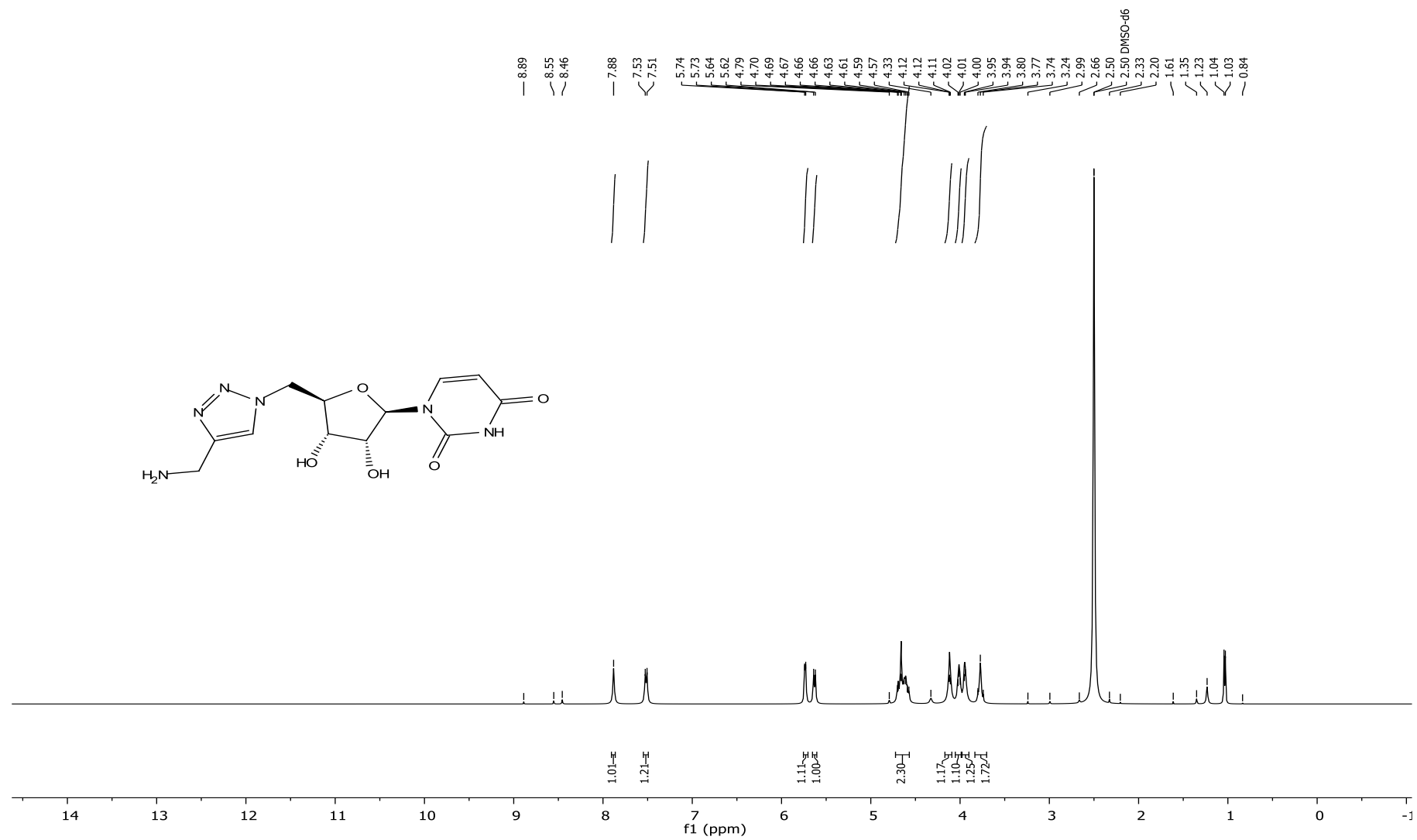
<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound **3f**



$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound 3f

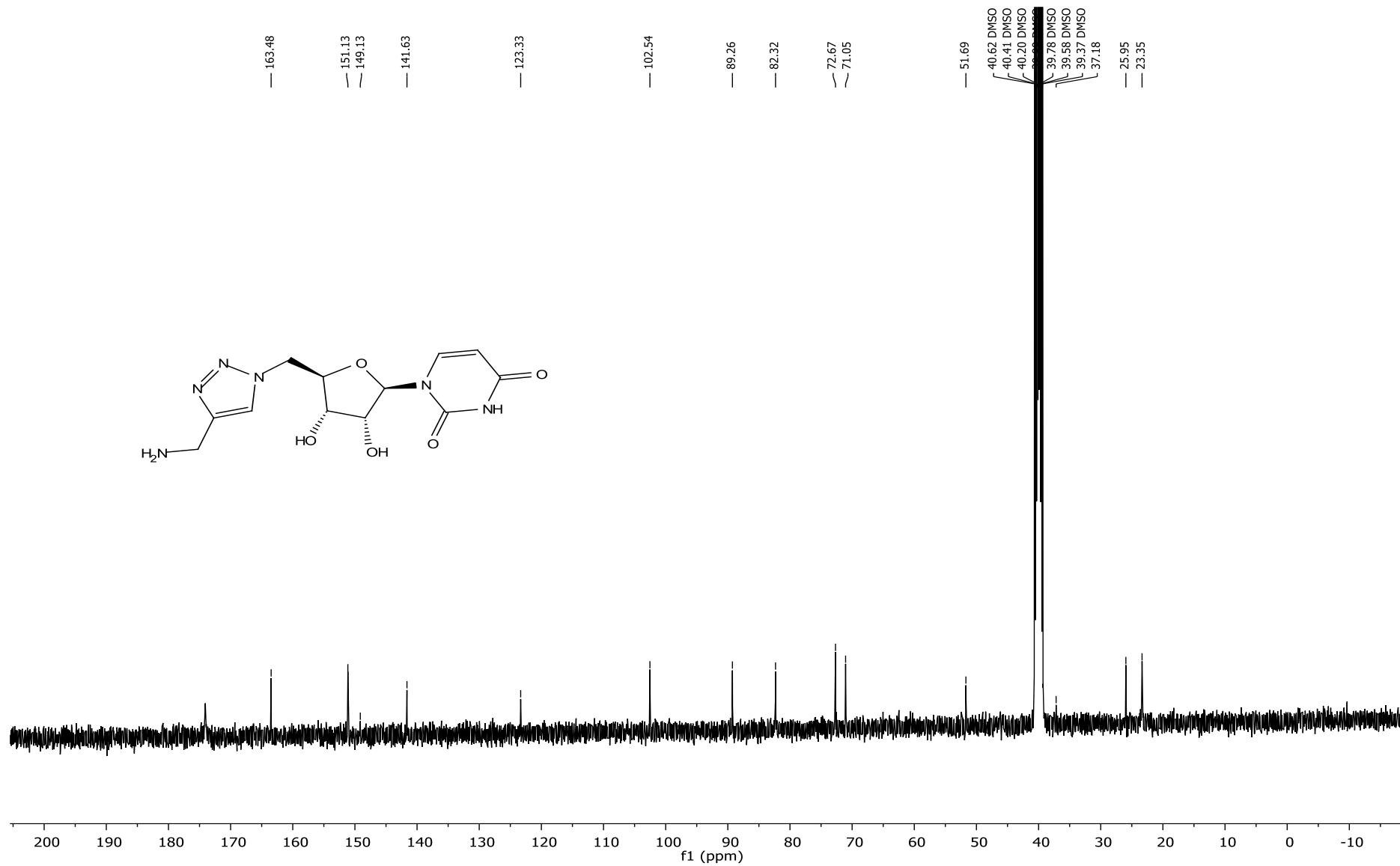
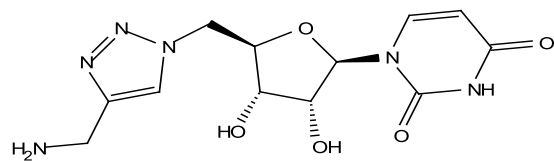


<sup>1</sup>H NMR (DMSO-d6) of compound **3g**

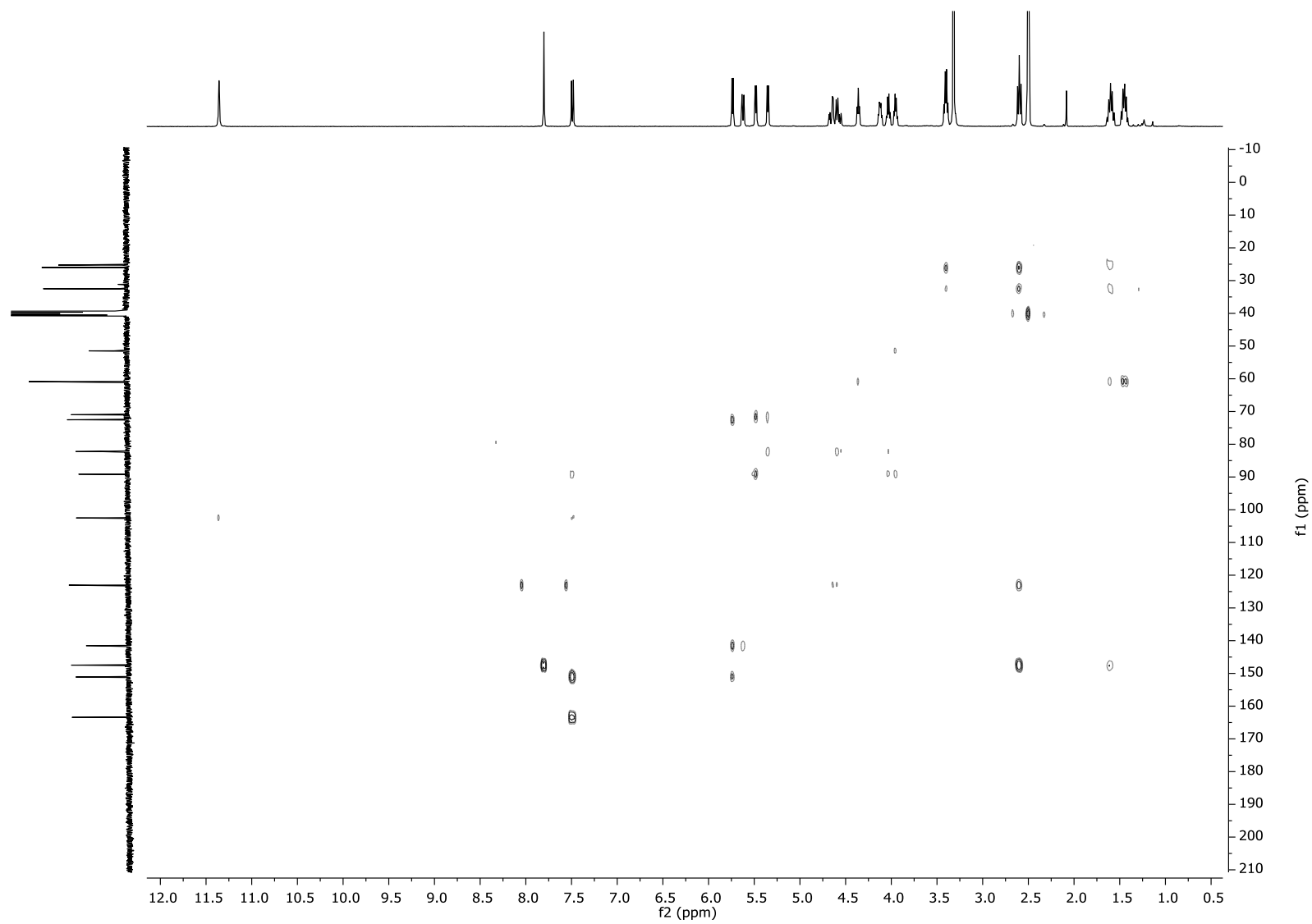


<sup>13</sup>C NMR (DMSO-d6) of compound **3g**

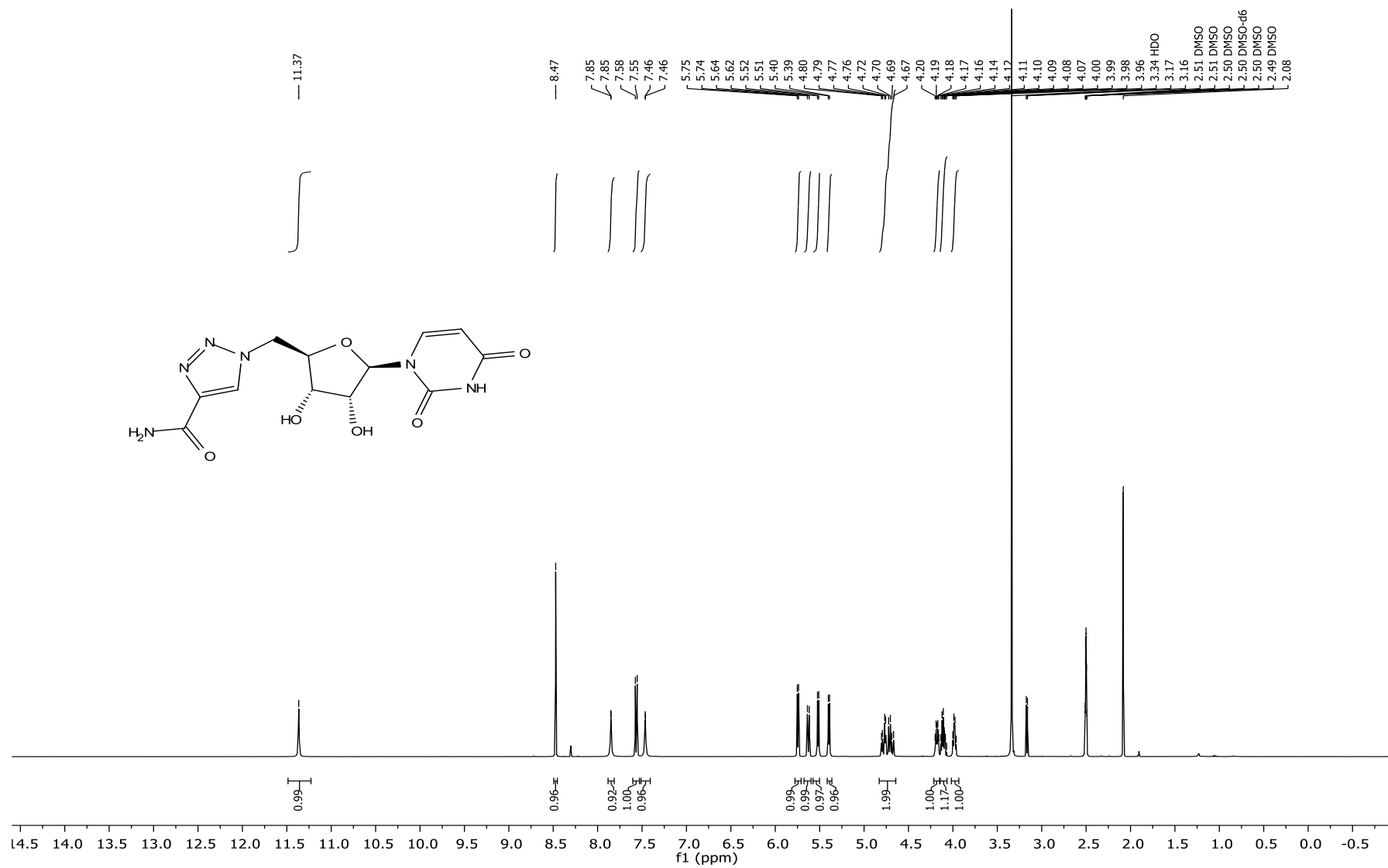




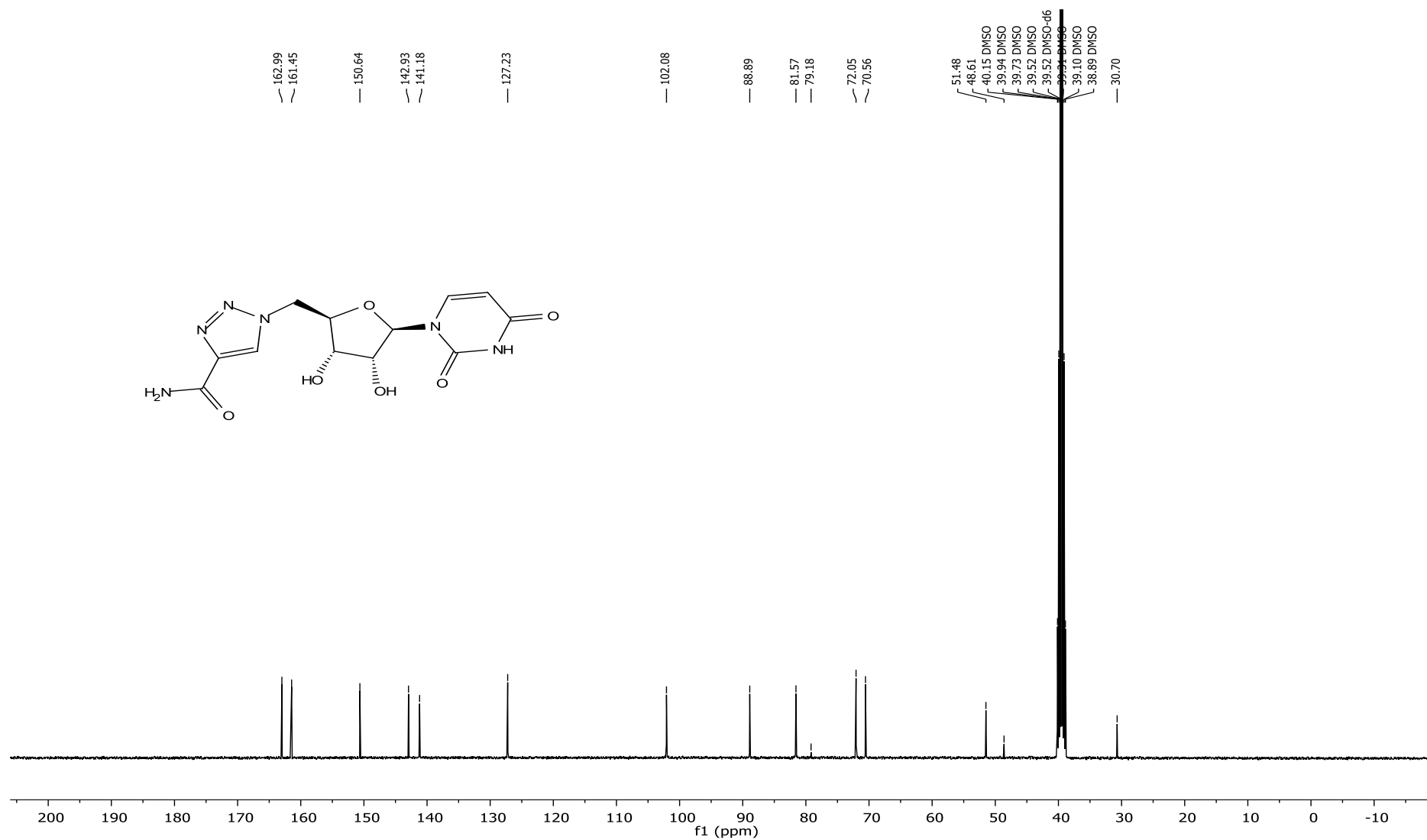
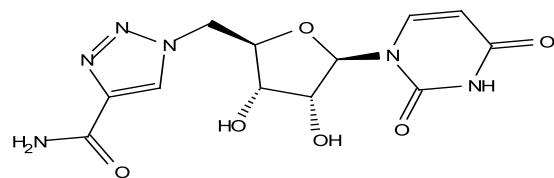
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3g**



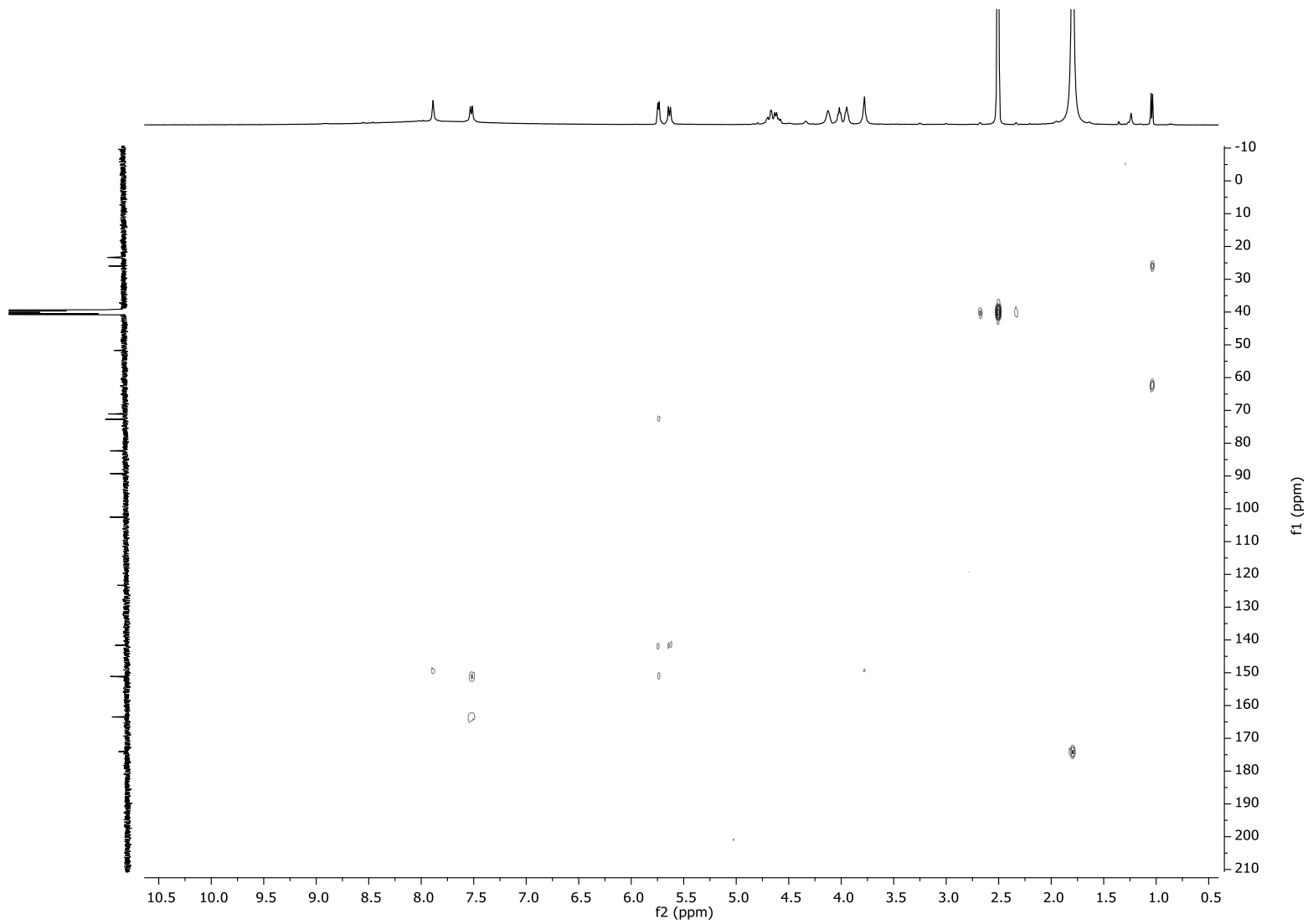
<sup>1</sup>H NMR (DMSO-d6) of compound **3h**



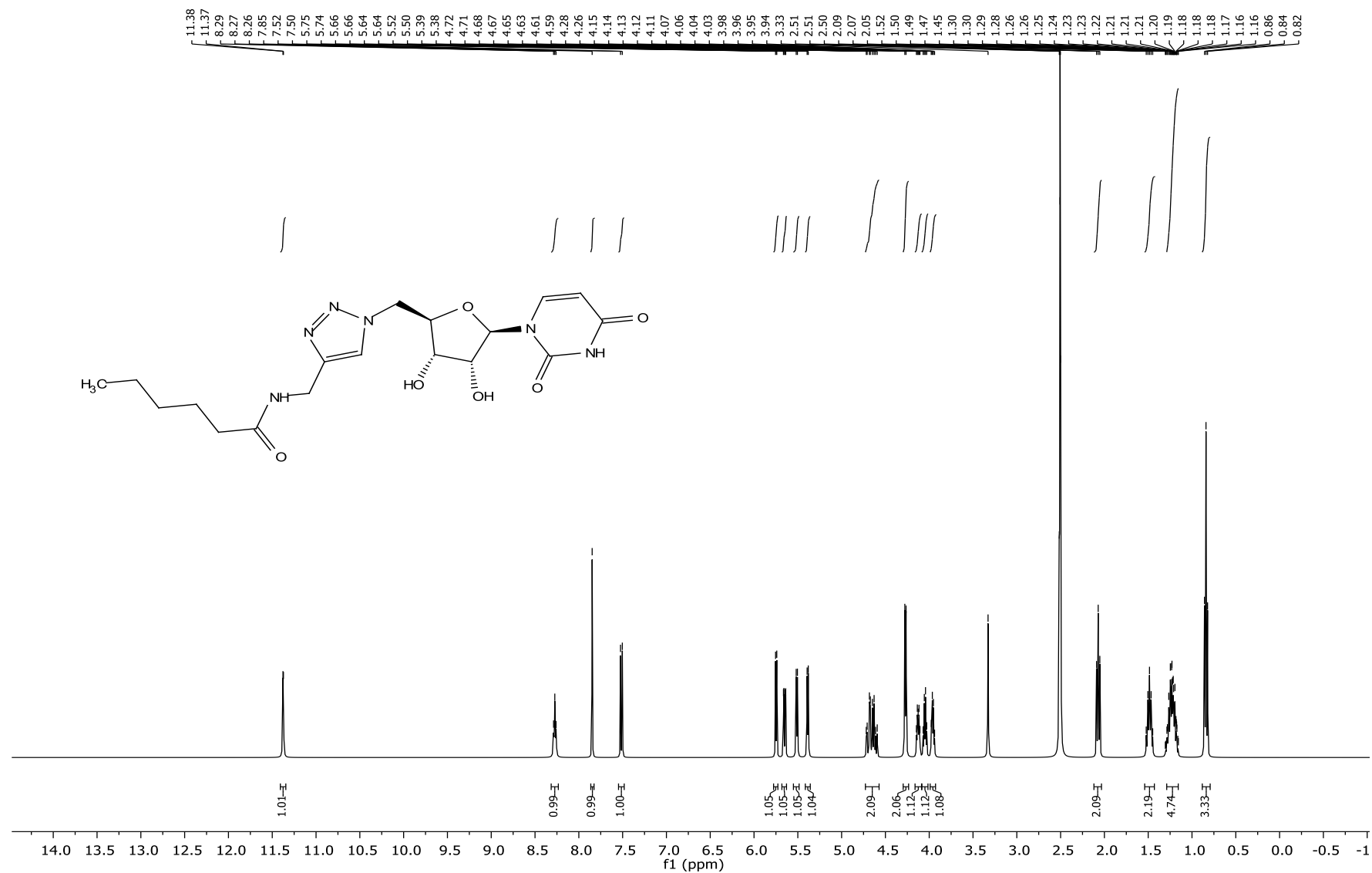
$^{13}\text{C}$  NMR (DMSO-d<sub>6</sub>) of compound **3h**



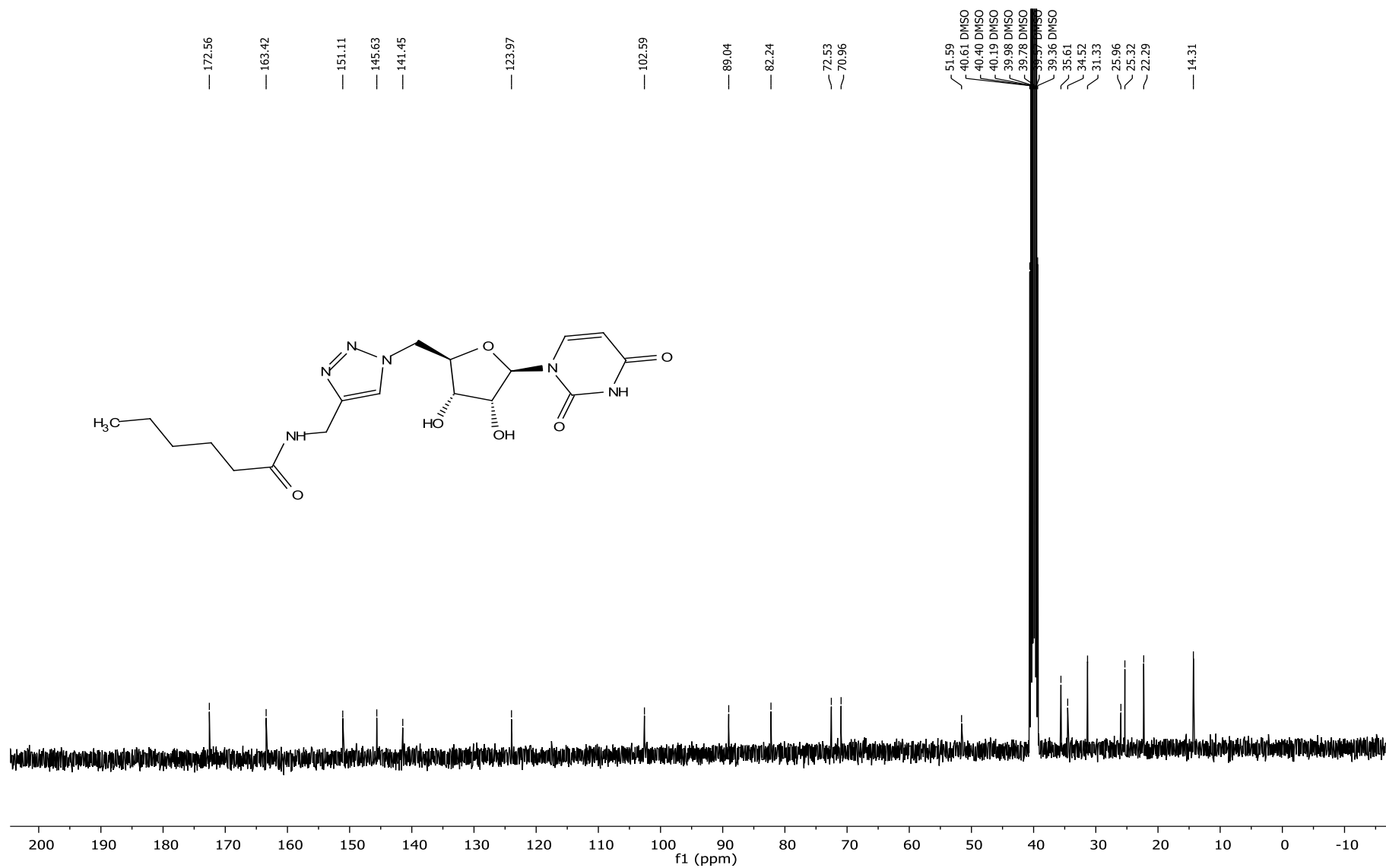
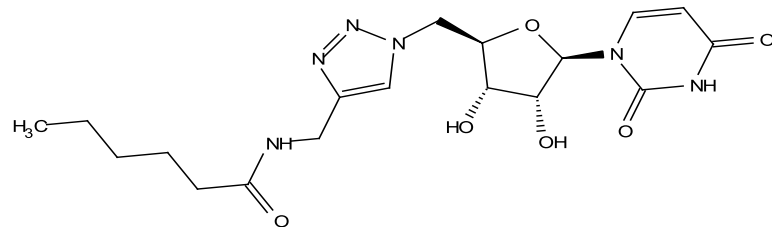
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3h**



<sup>1</sup>H NMR (DMSO-d<sub>6</sub>) of compound **3i**

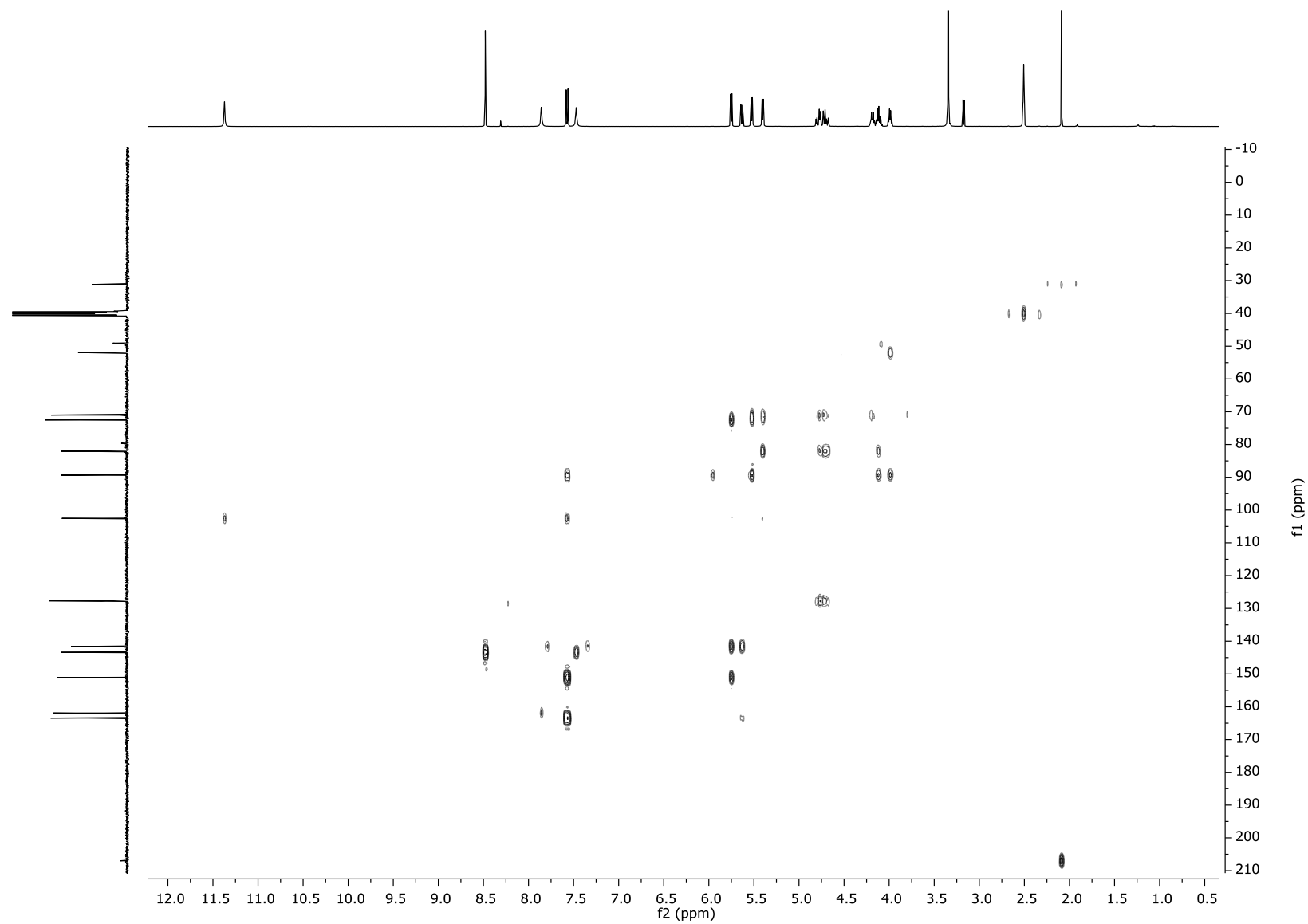


<sup>13</sup>C NMR (DMSO-d6) of compound **3i**

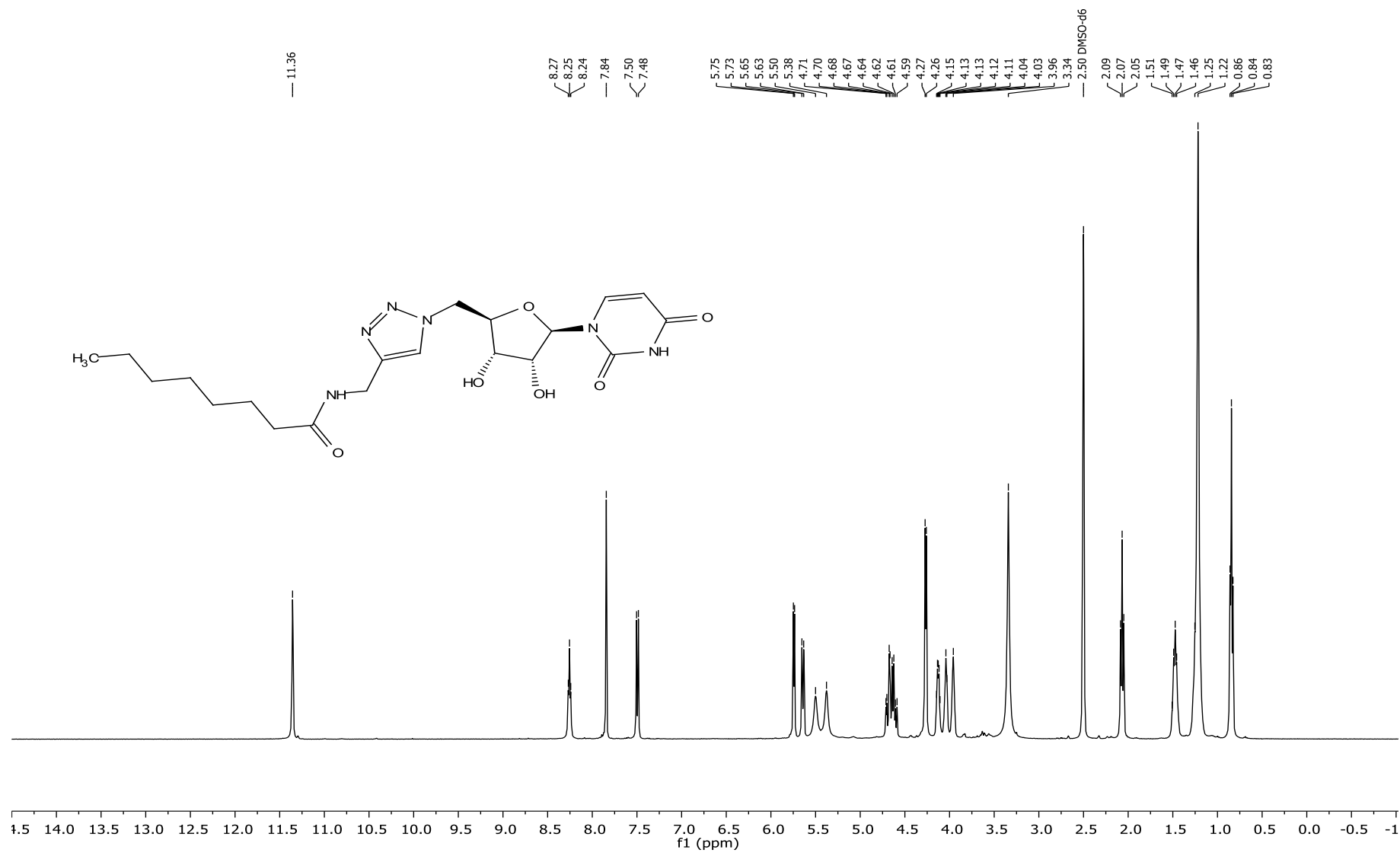




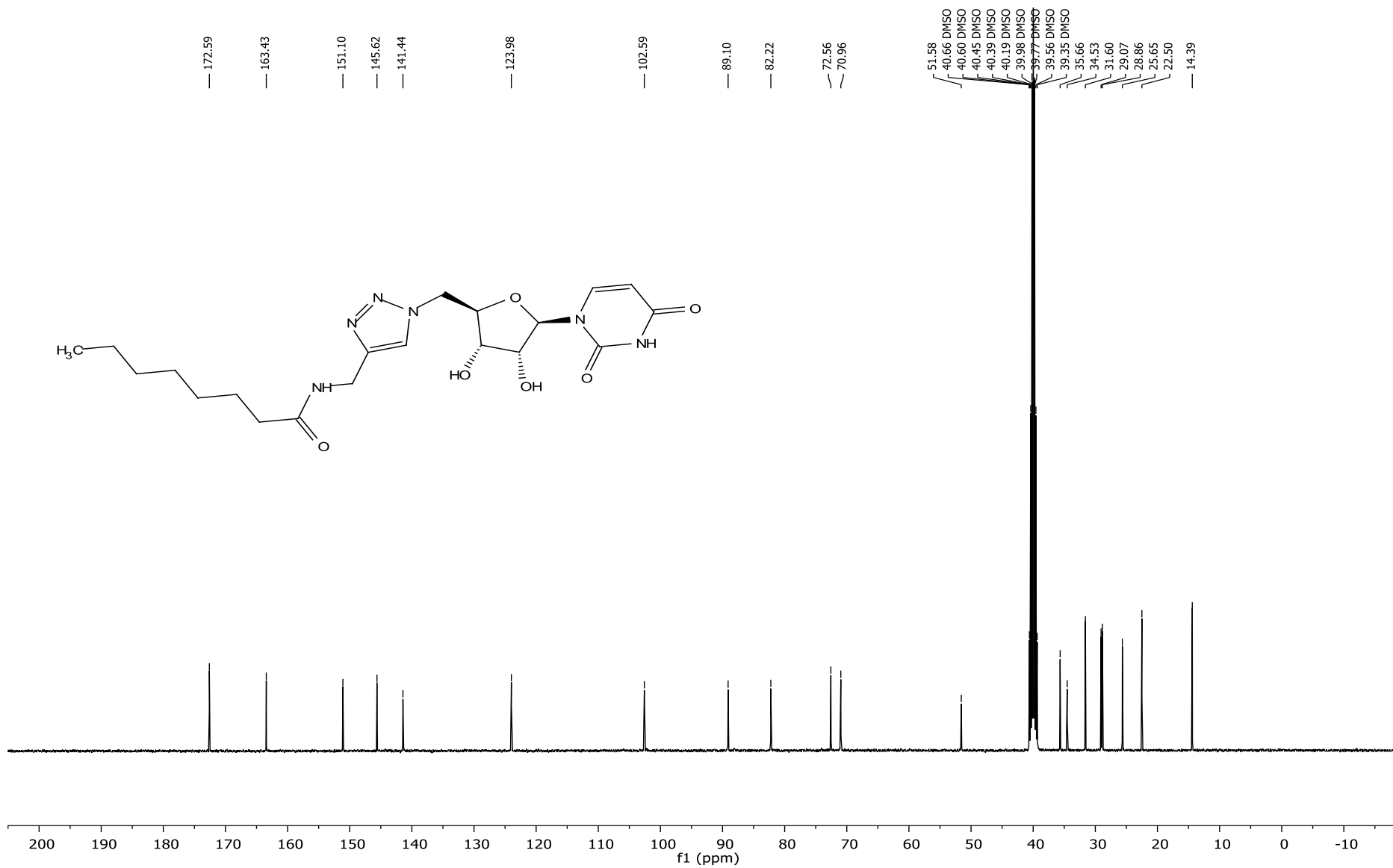
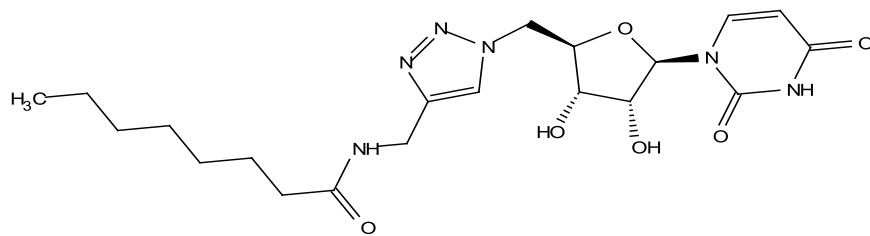
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3i**



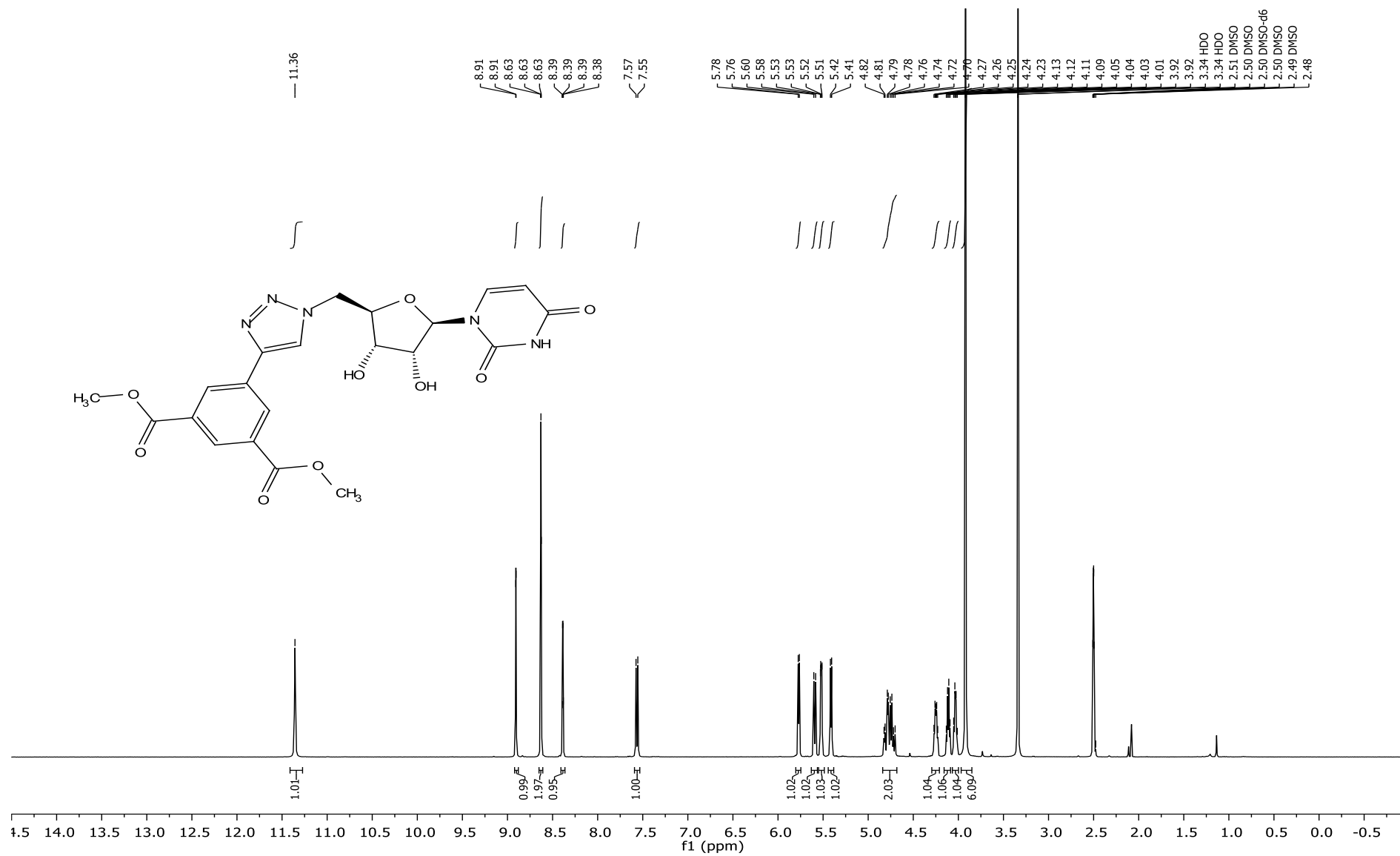
<sup>1</sup>H NMR (DMSO-d6) of compound 3j



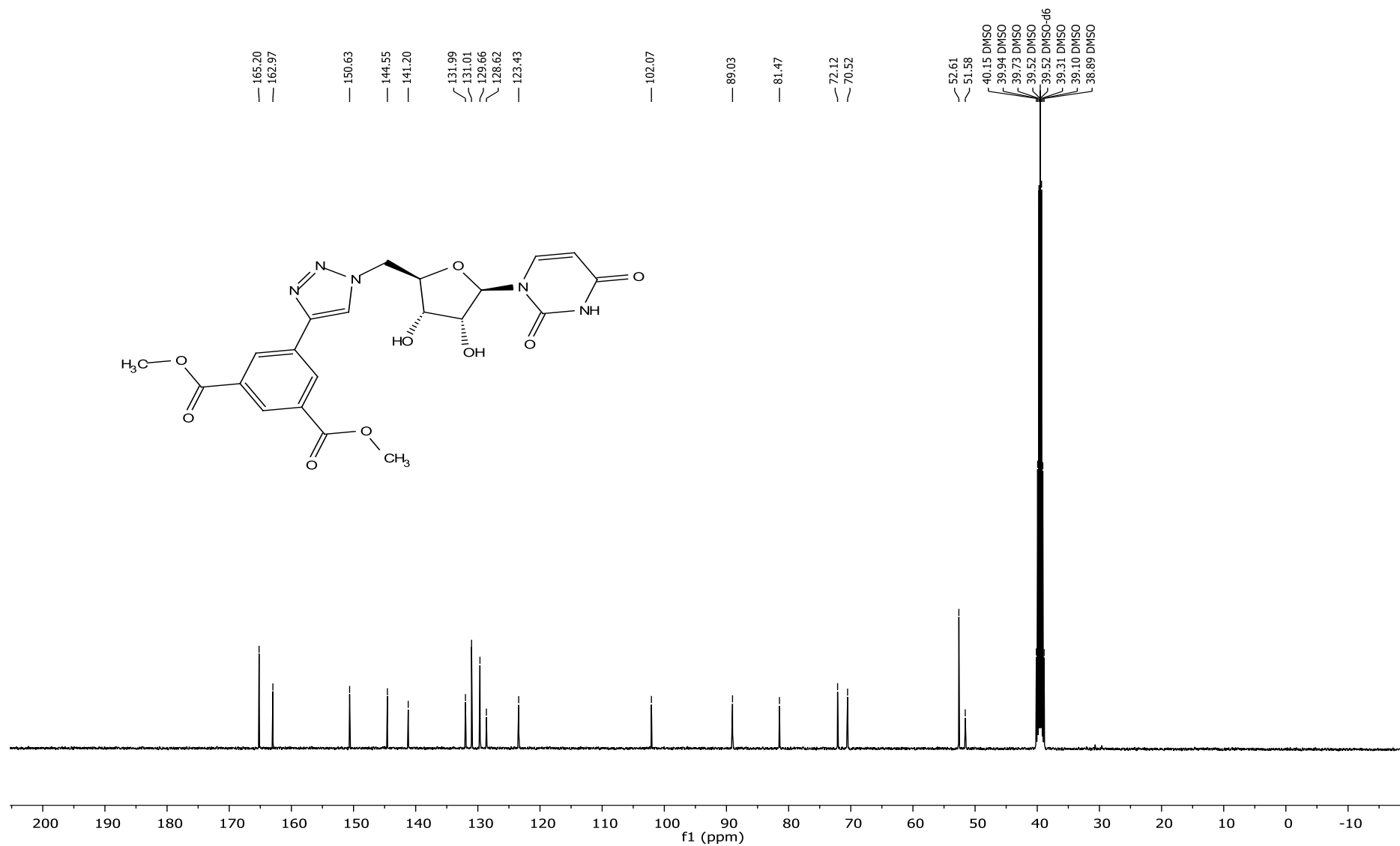
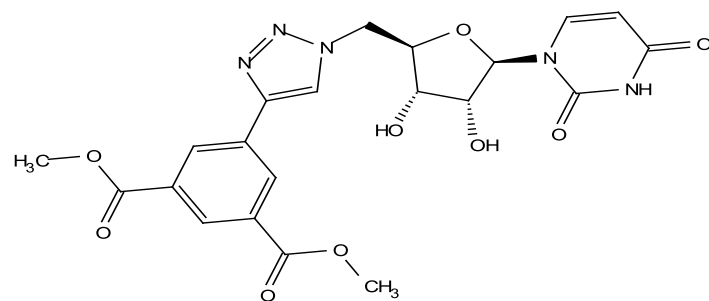
$^{13}\text{C}$  NMR (DMSO- $d_6$ ) of compound **3j**



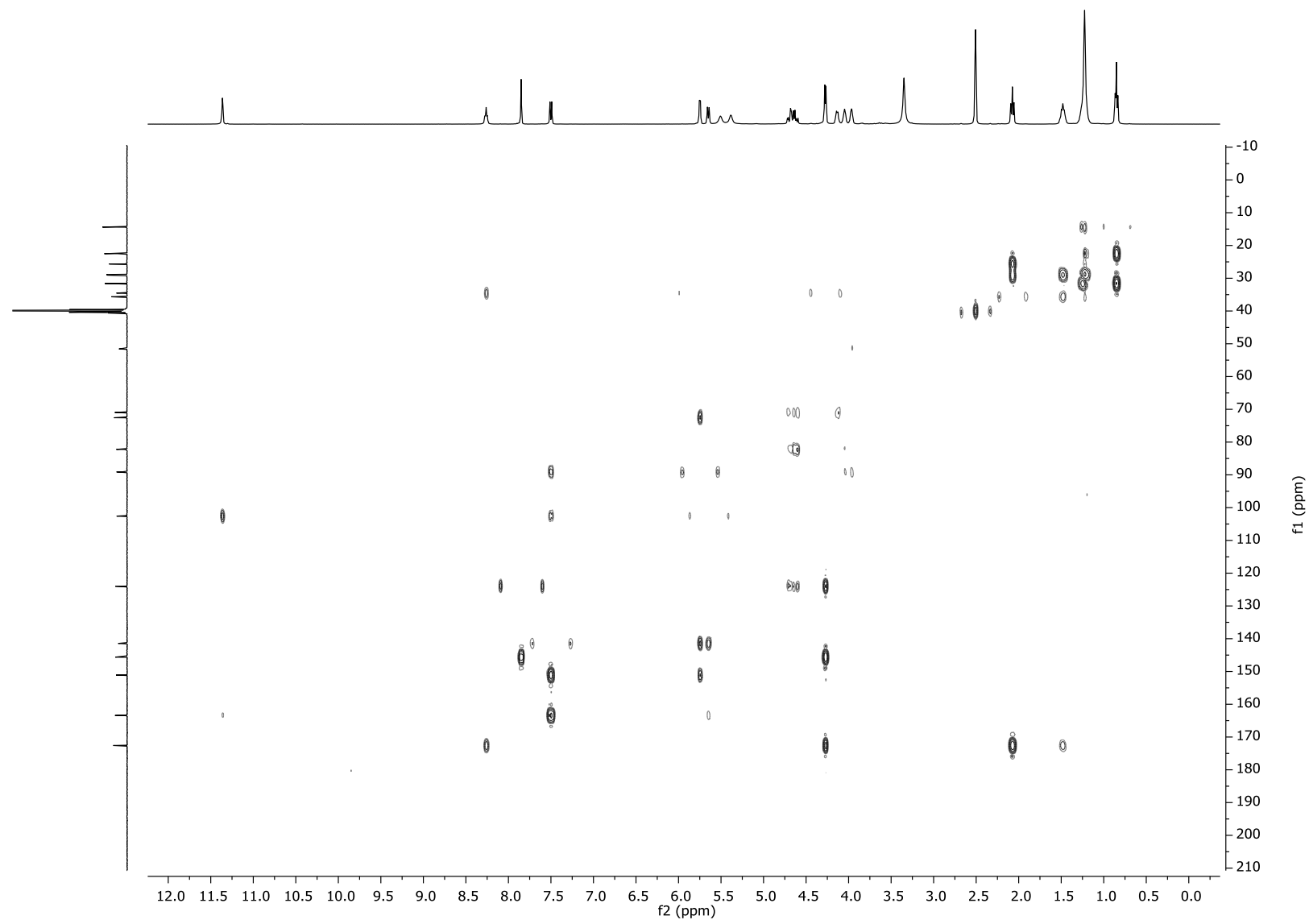
<sup>1</sup>H NMR (DMSO-d6) of compound **3k**



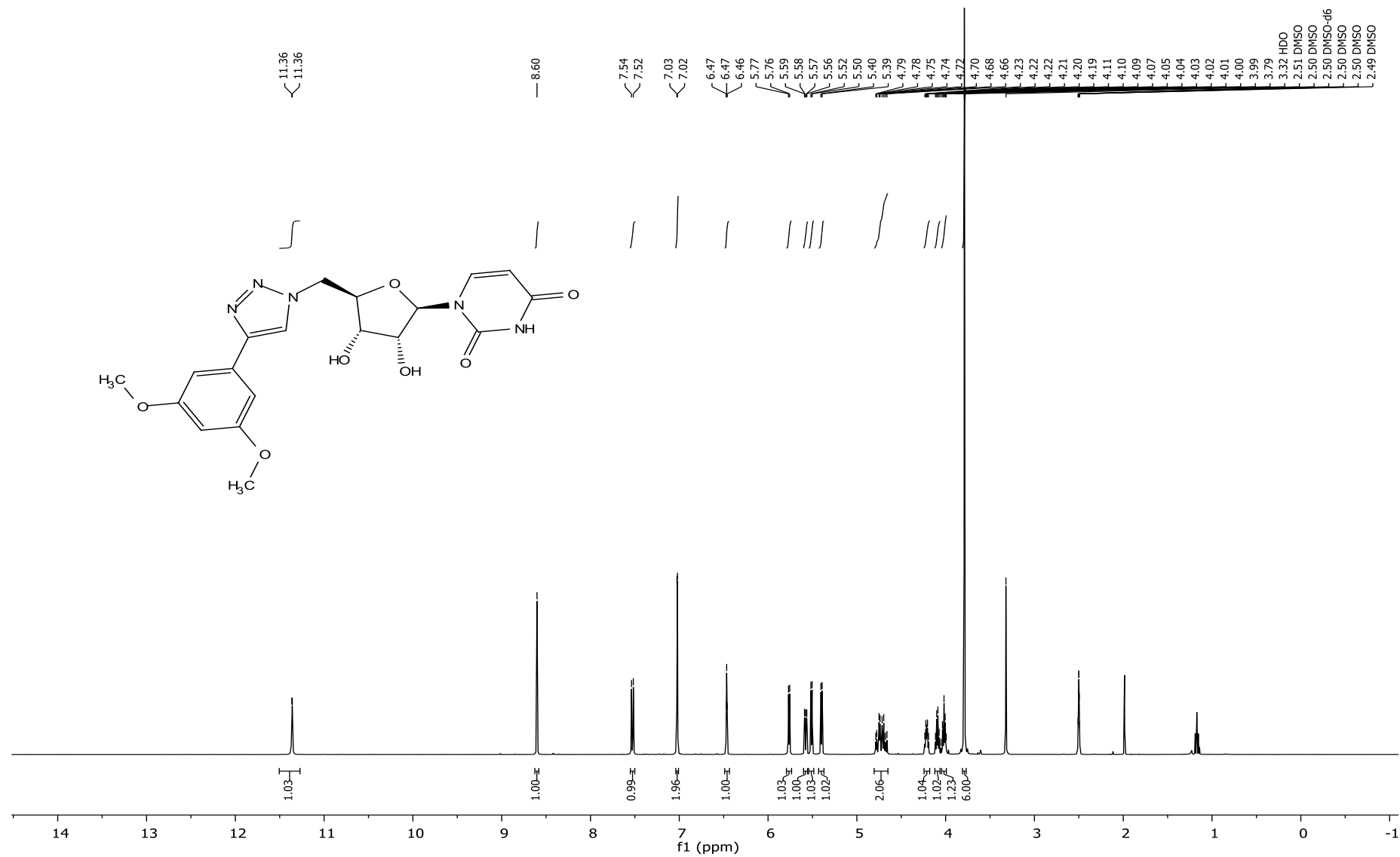
<sup>13</sup>C NMR (DMSO-d6) of compound **3k**



$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3k**

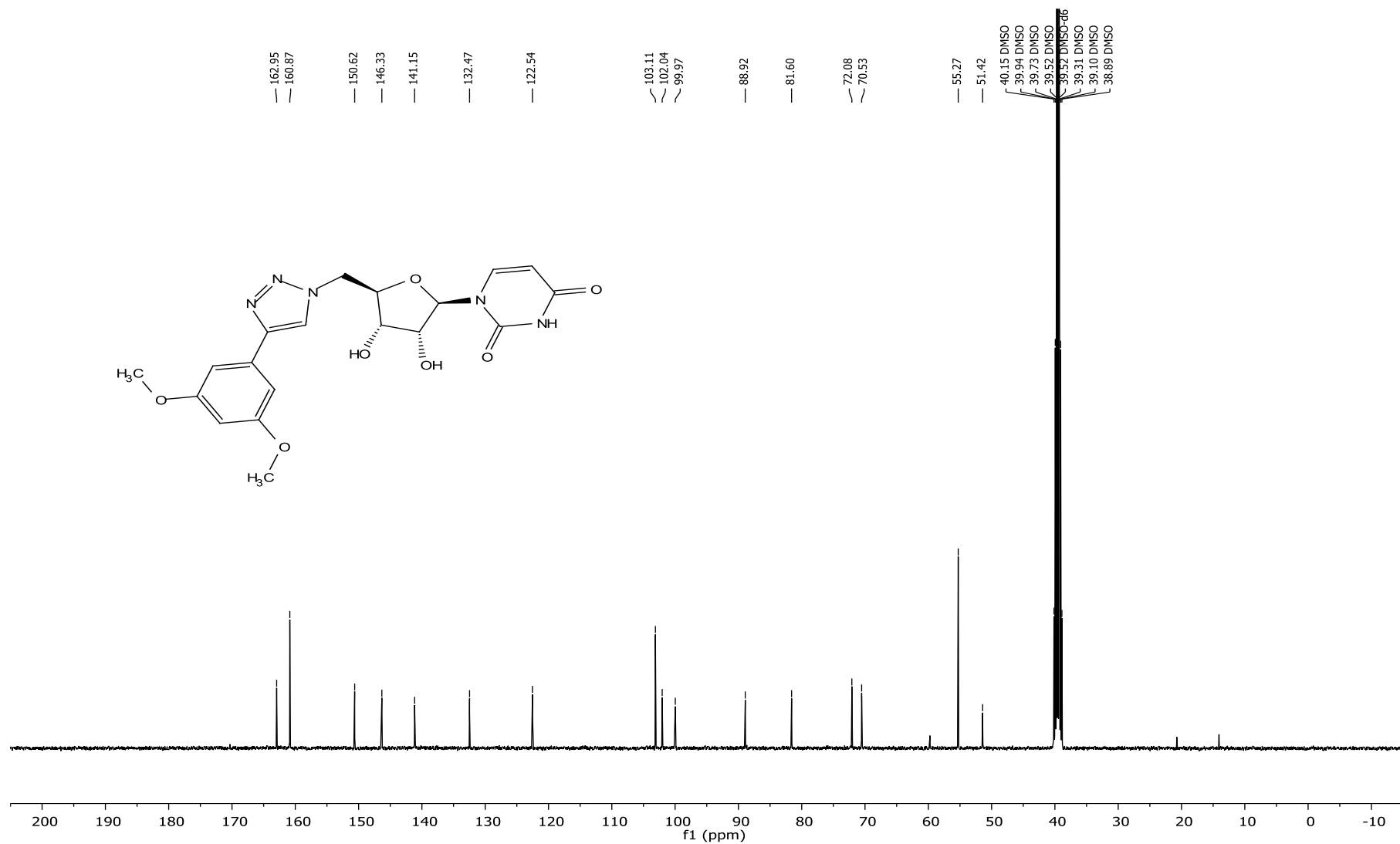


<sup>1</sup>H NMR (DMSO-d6) of compound 31

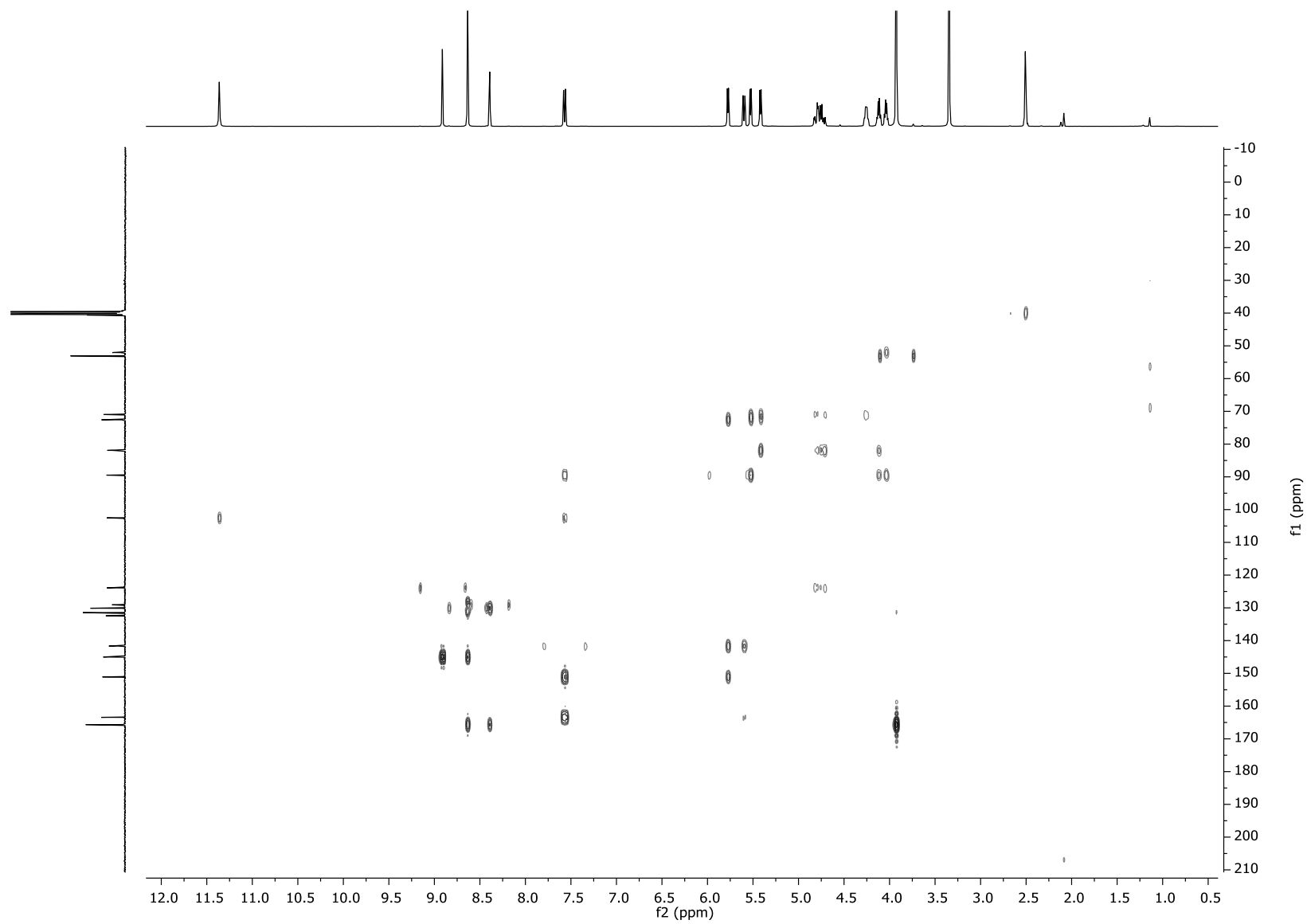




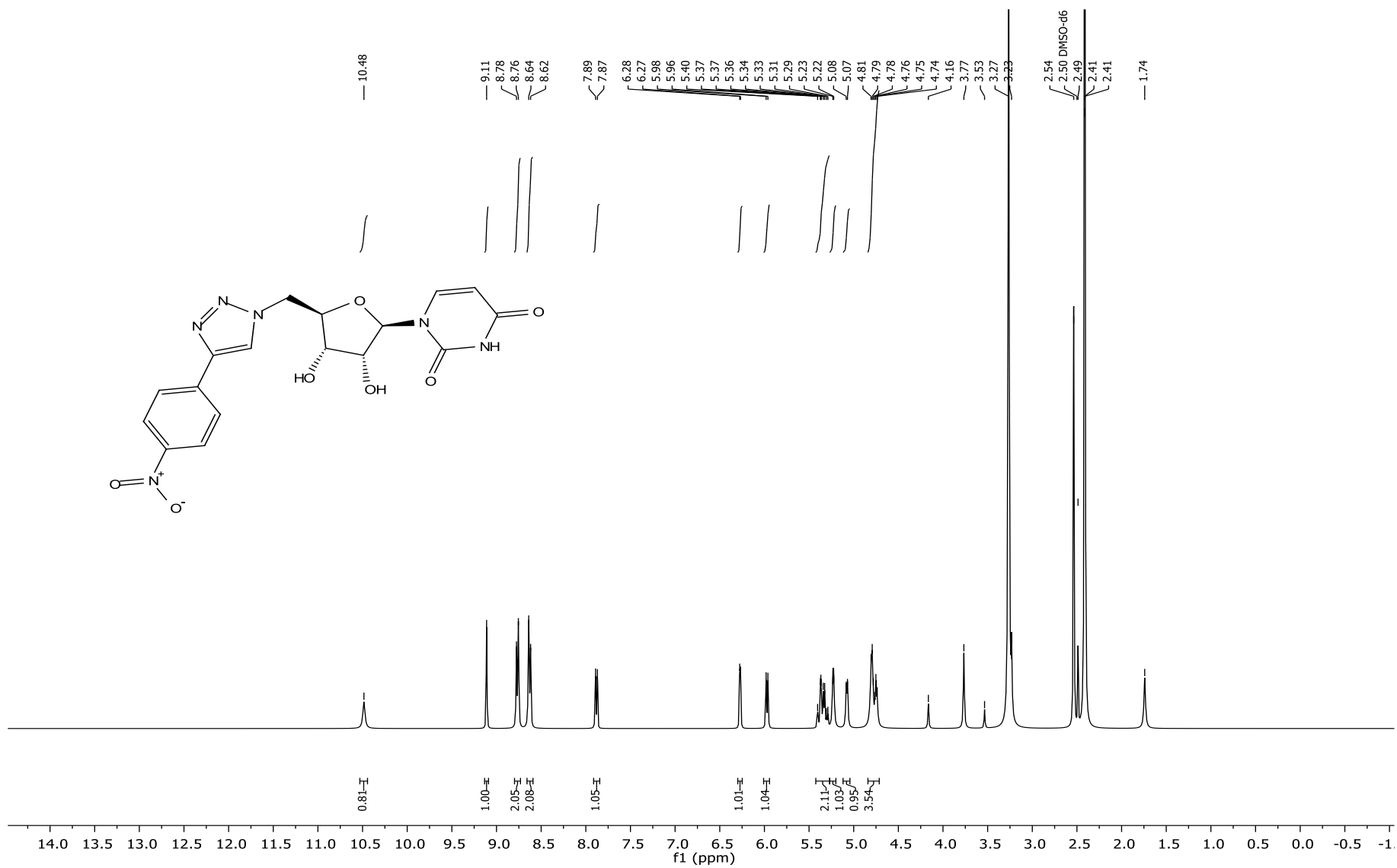
<sup>13</sup>C NMR (DMSO-d6) of compound **31**



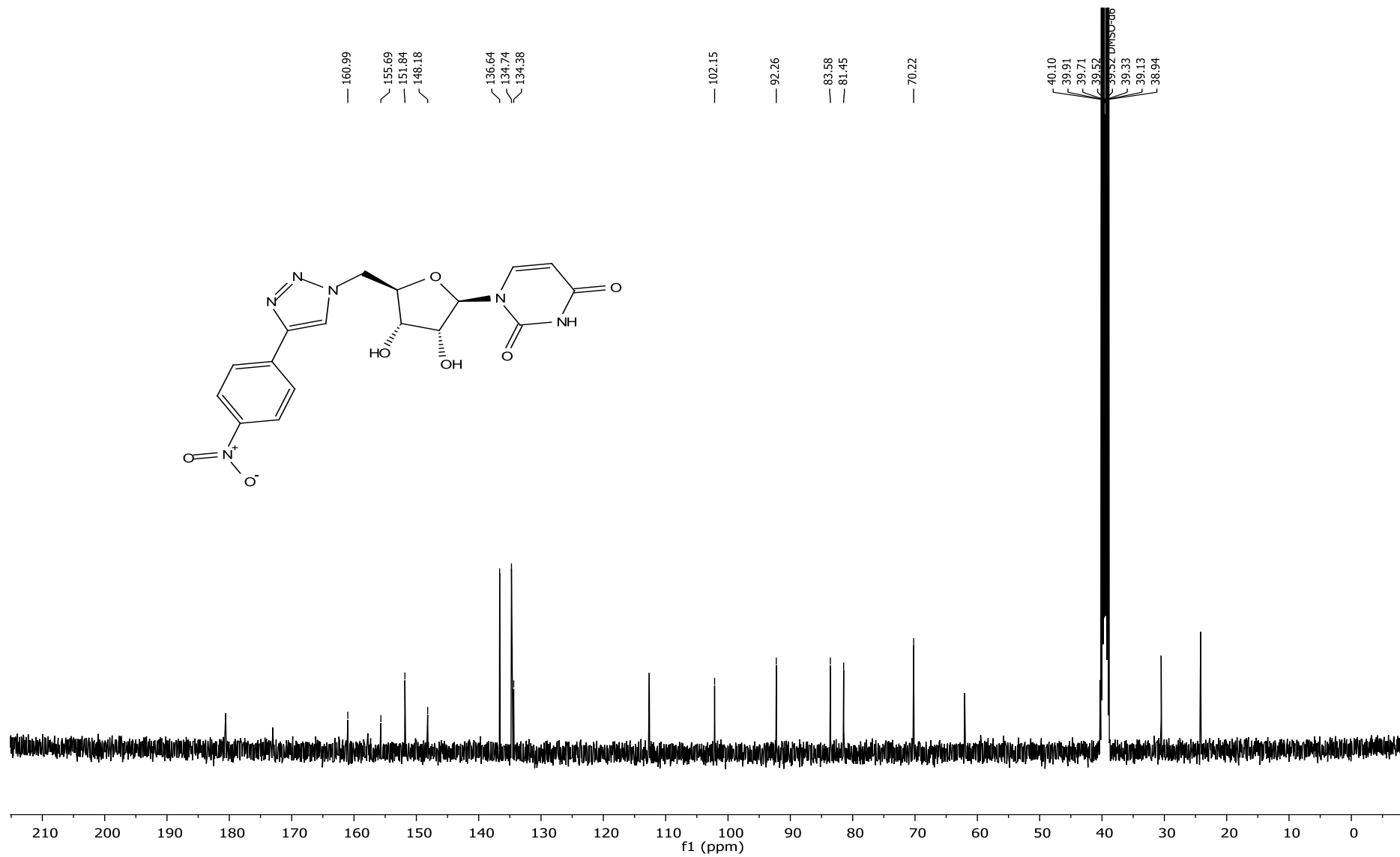
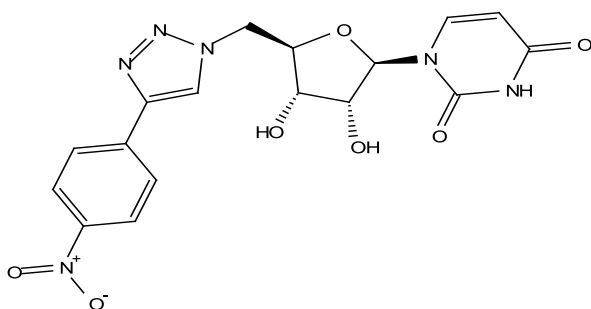
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **31**



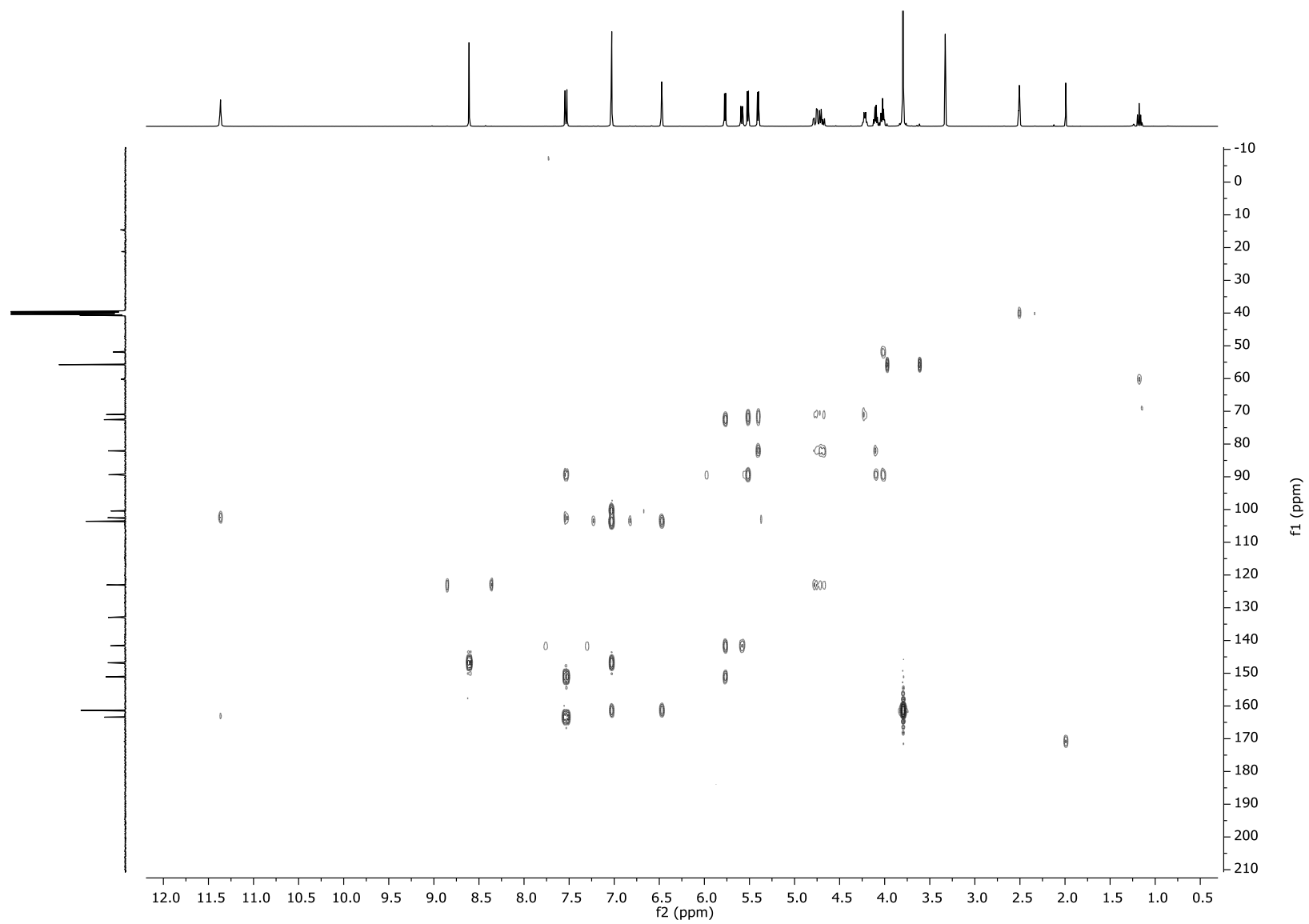
$^1\text{H}$  NMR ( $\text{DMSO-d}_6$ ) of compound **3m**



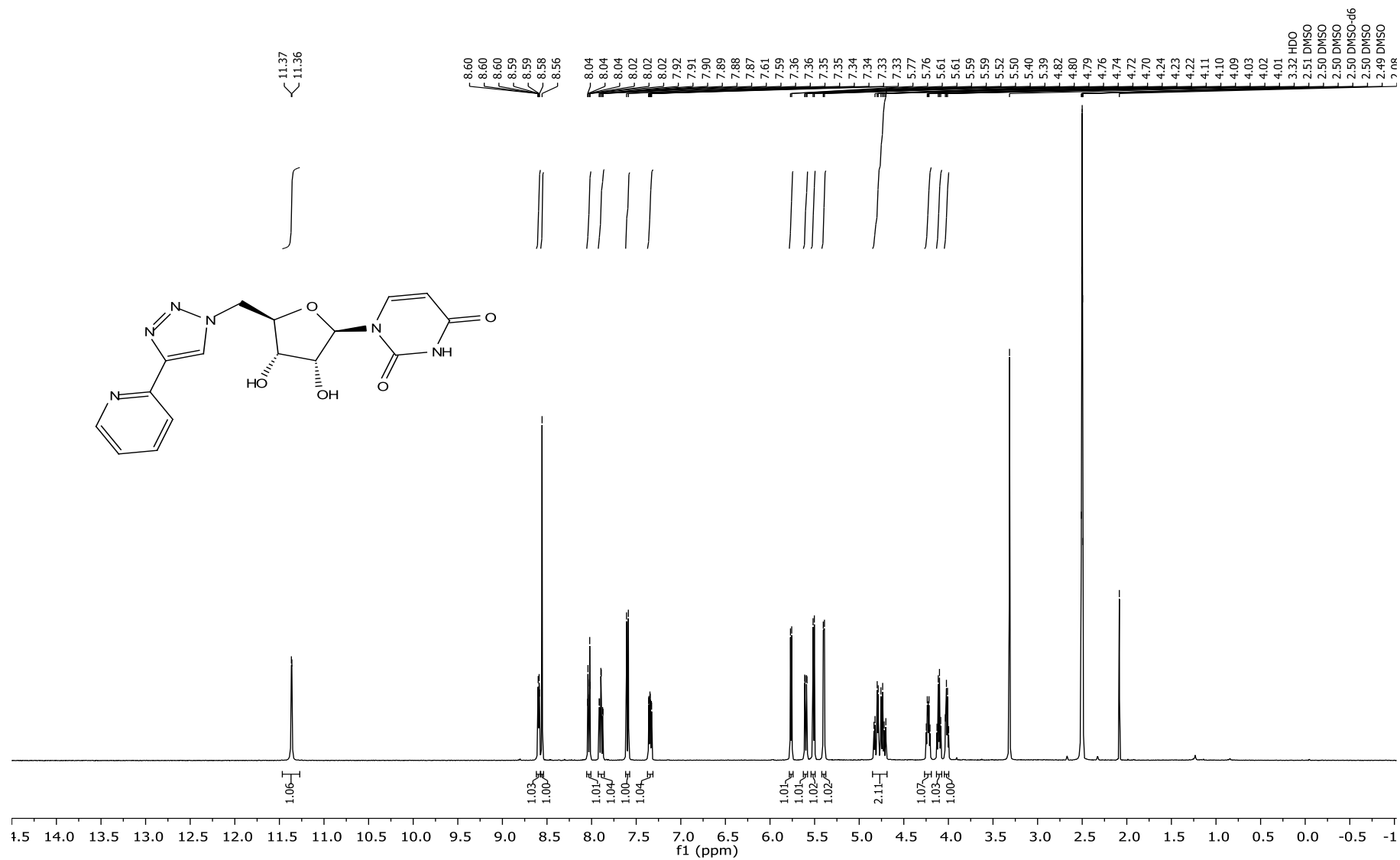
<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound **3m**



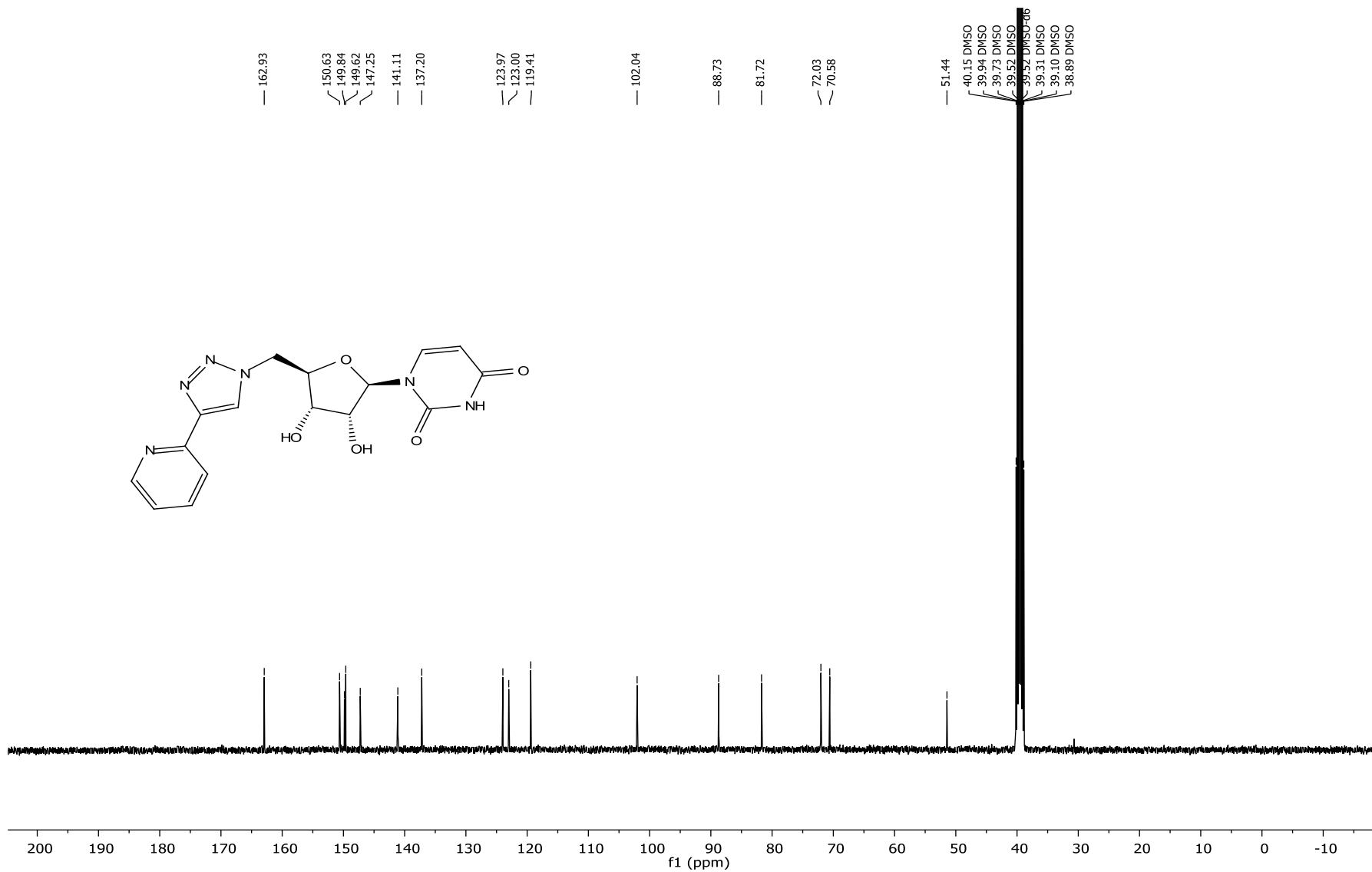
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3m**



<sup>1</sup>H NMR (DMSO-d<sub>6</sub>) of compound **3n**

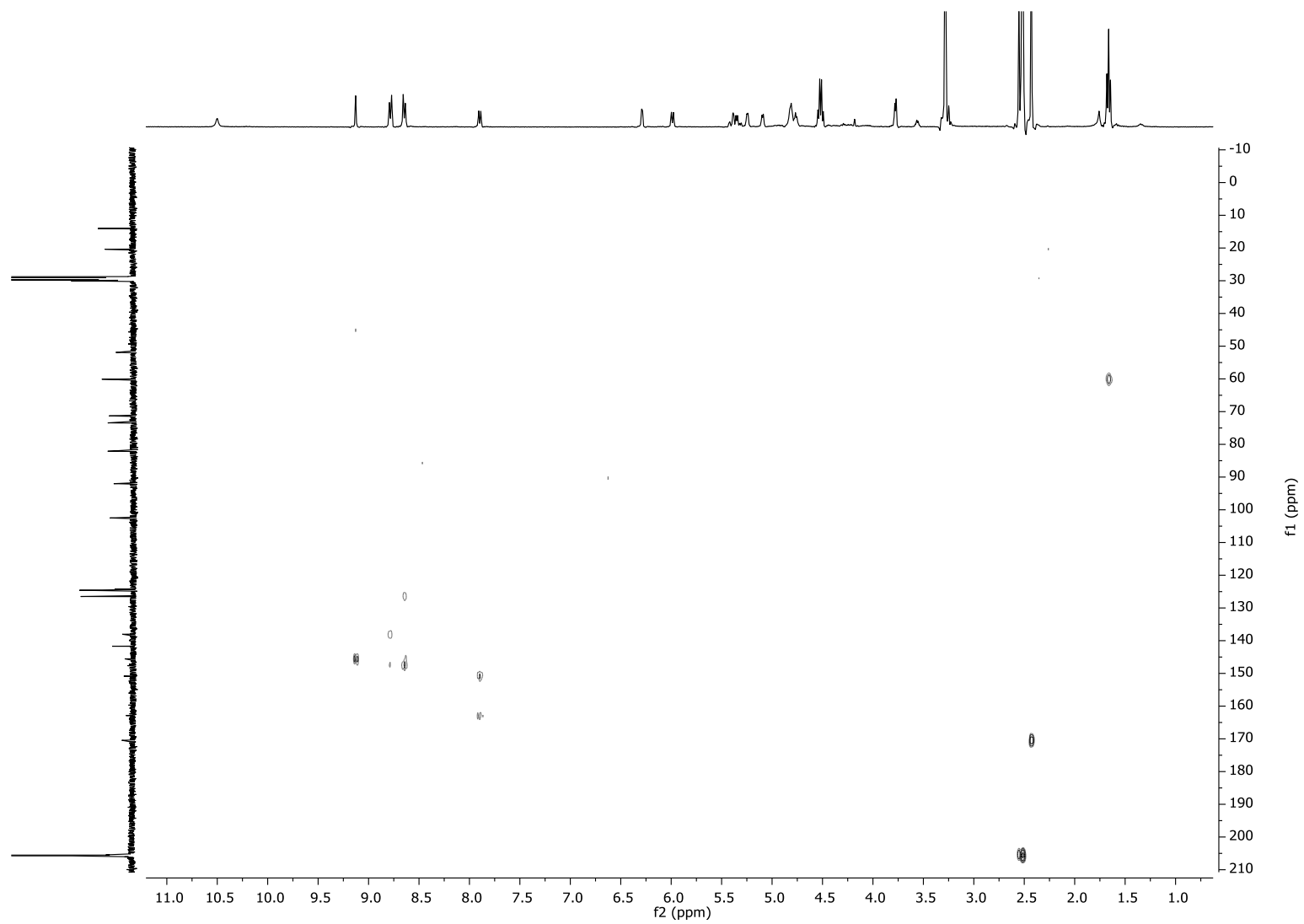


<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound **3n**

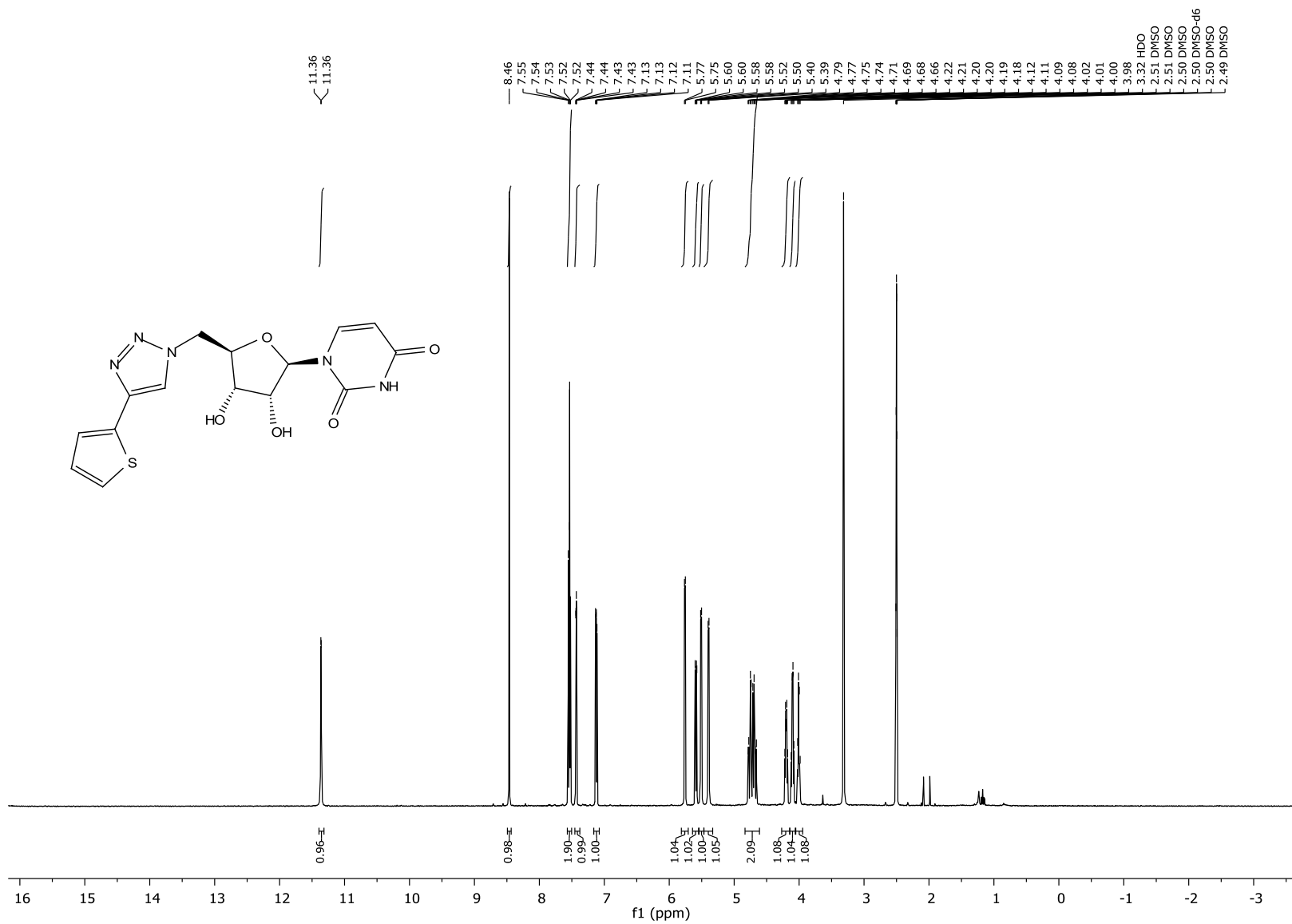


$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3n**

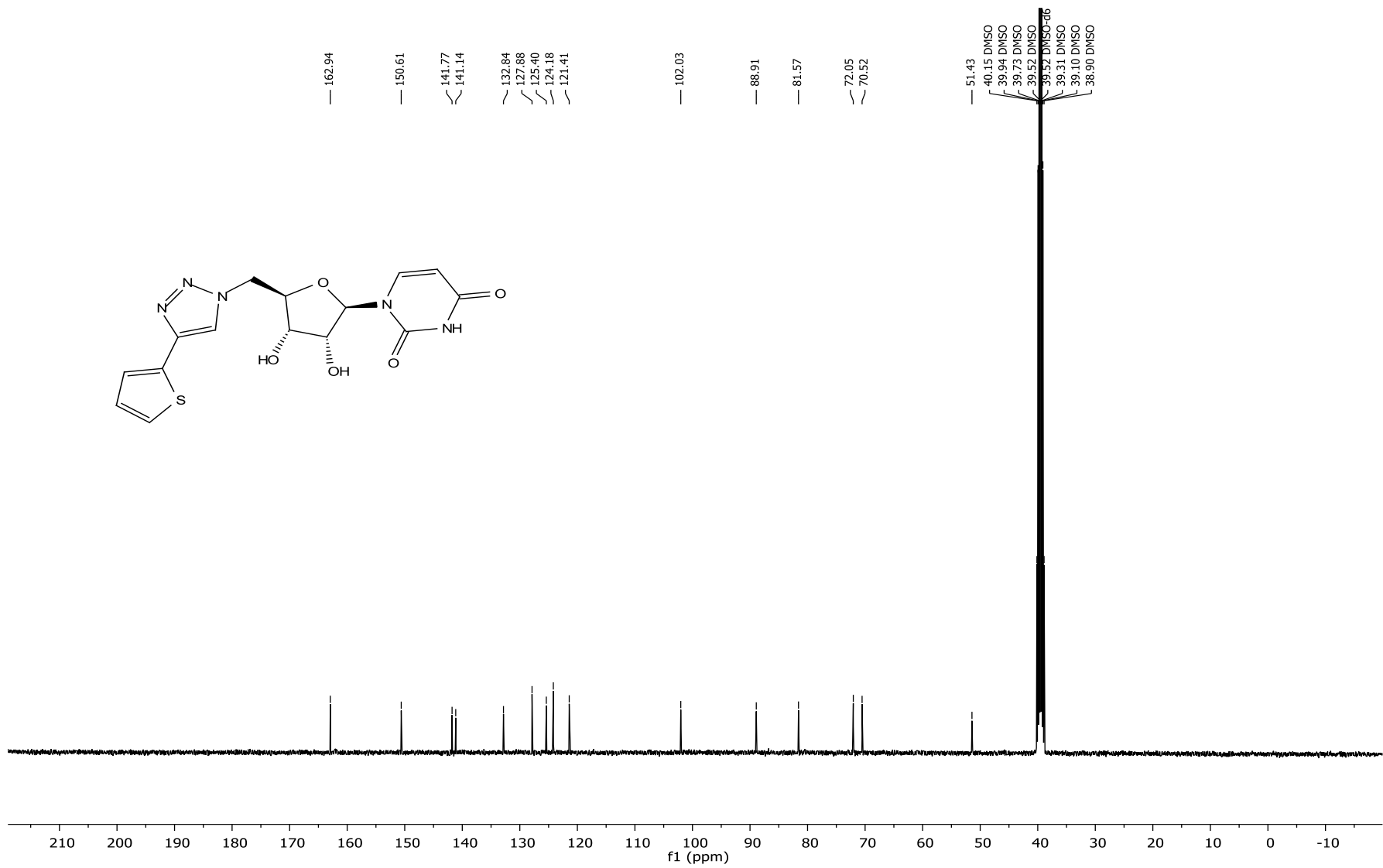
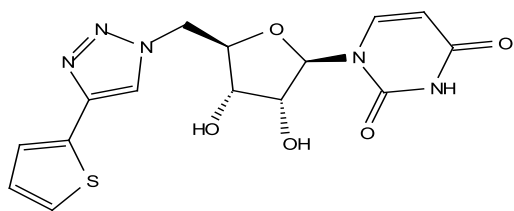




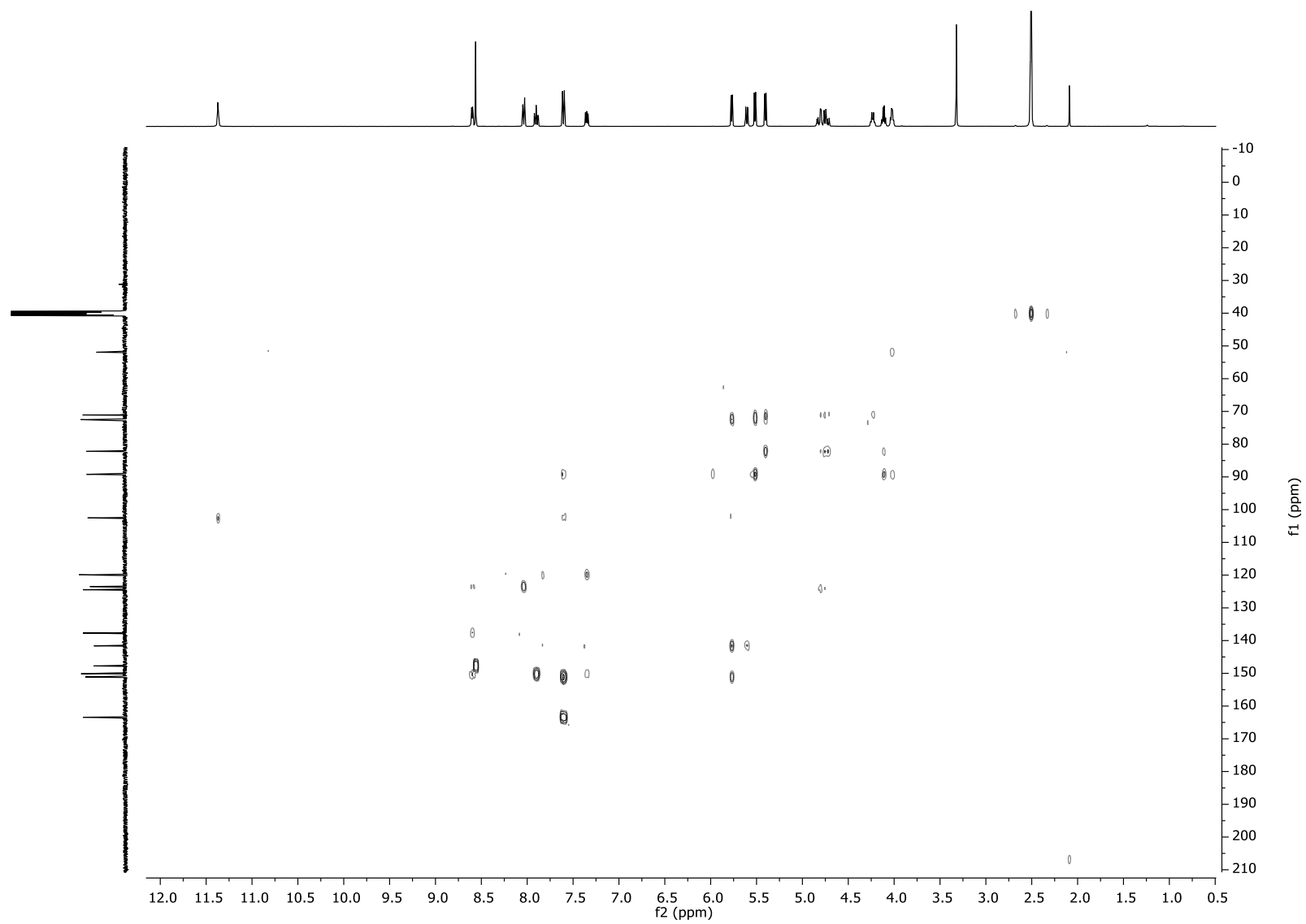
$^1\text{H}$  NMR ( $\text{DMSO-d}_6$ ) of compound **3o**



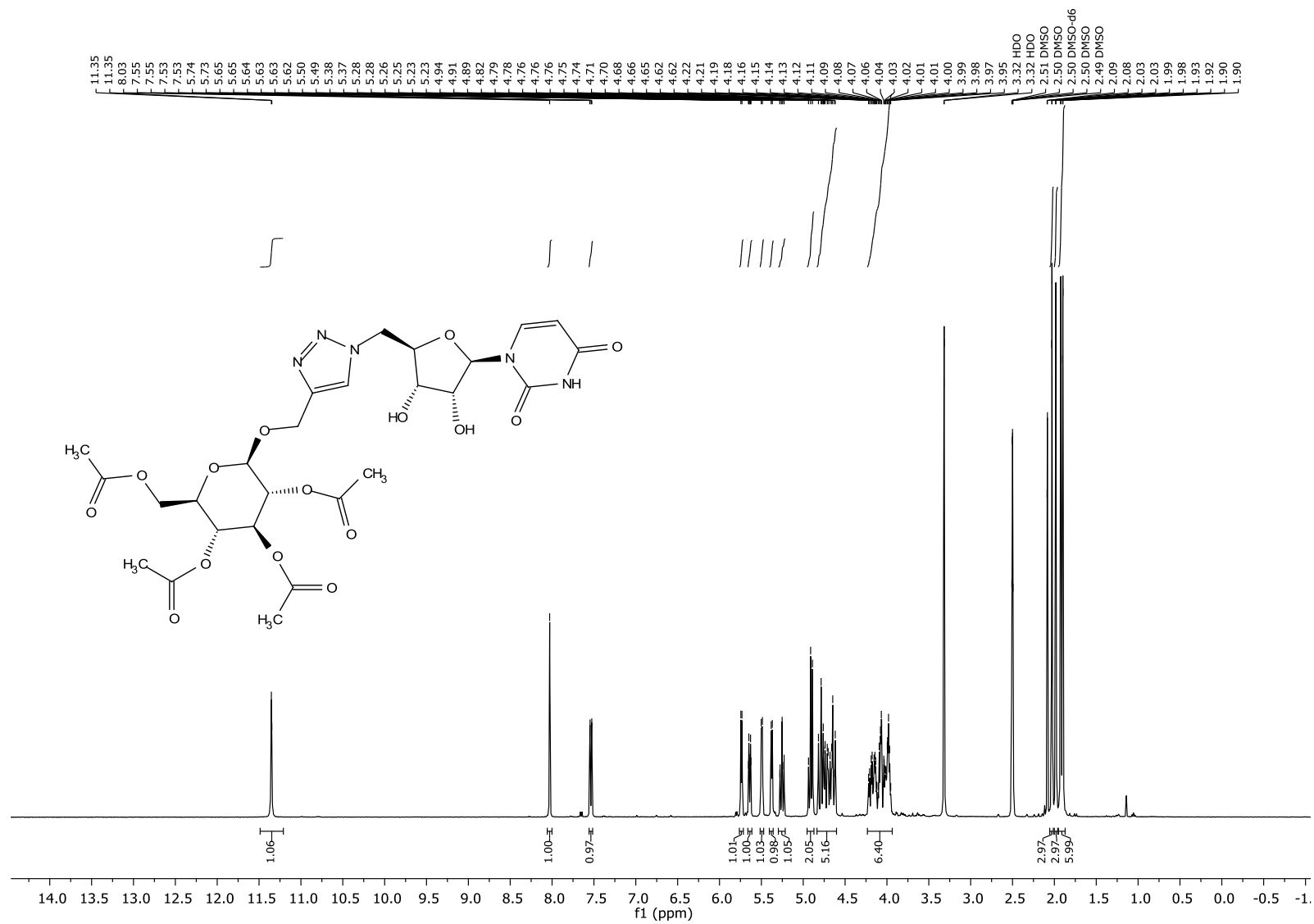
$^{13}\text{C}$  NMR (DMSO- $d_6$ ) of compound **3o**



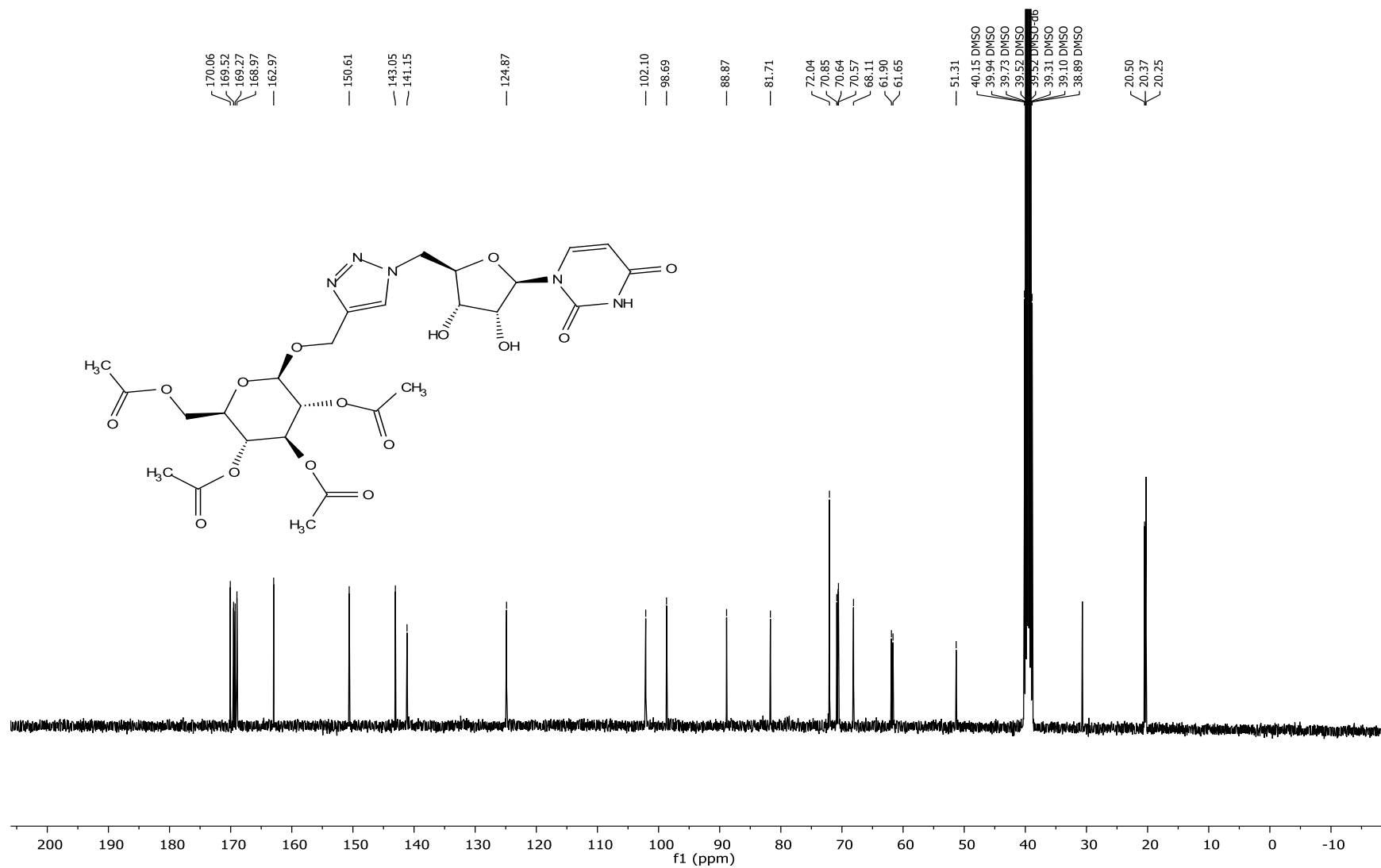
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **3o**



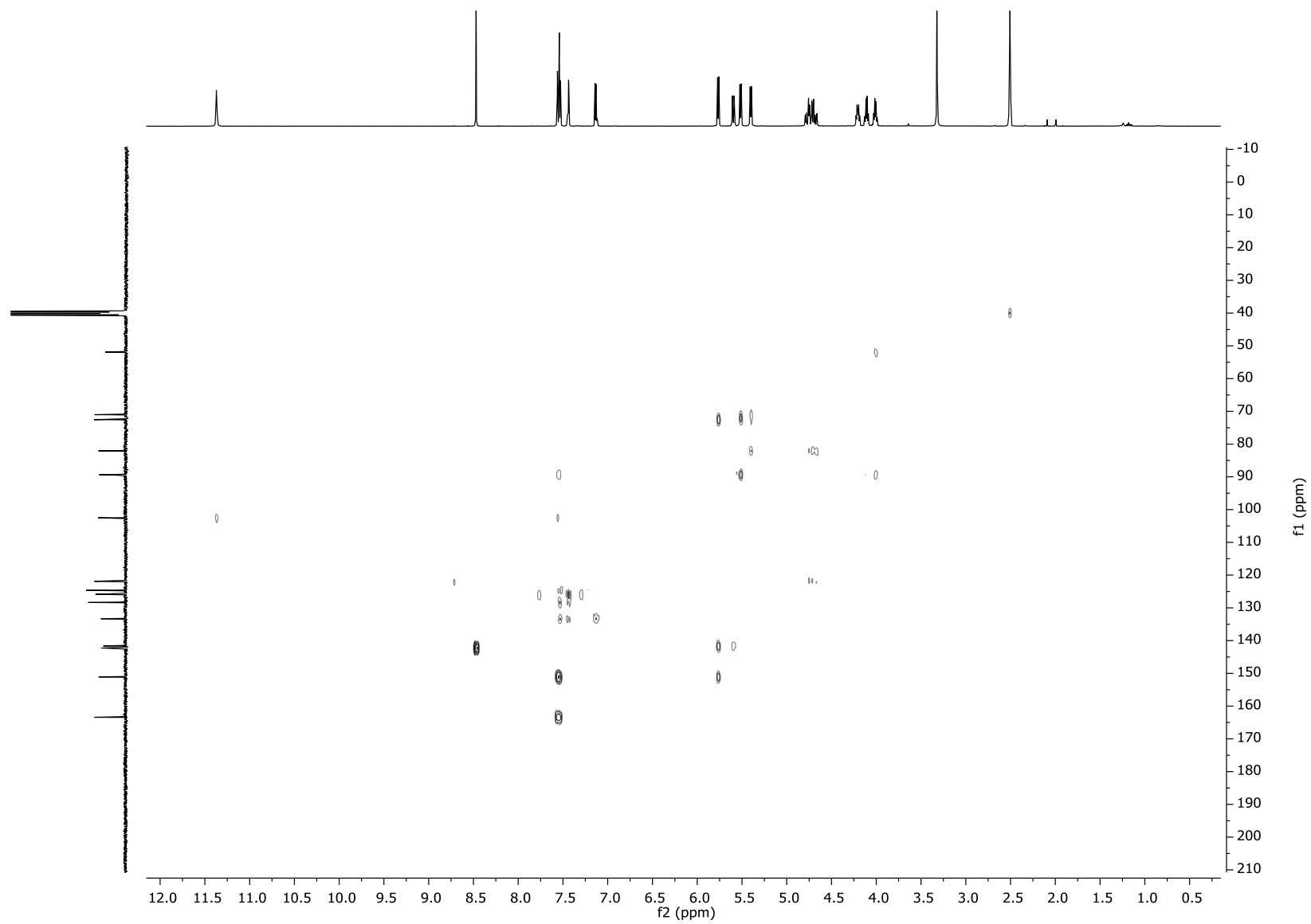
$^1\text{H}$  NMR ( $\text{DMSO-d}_6$ ) of compound **3p**



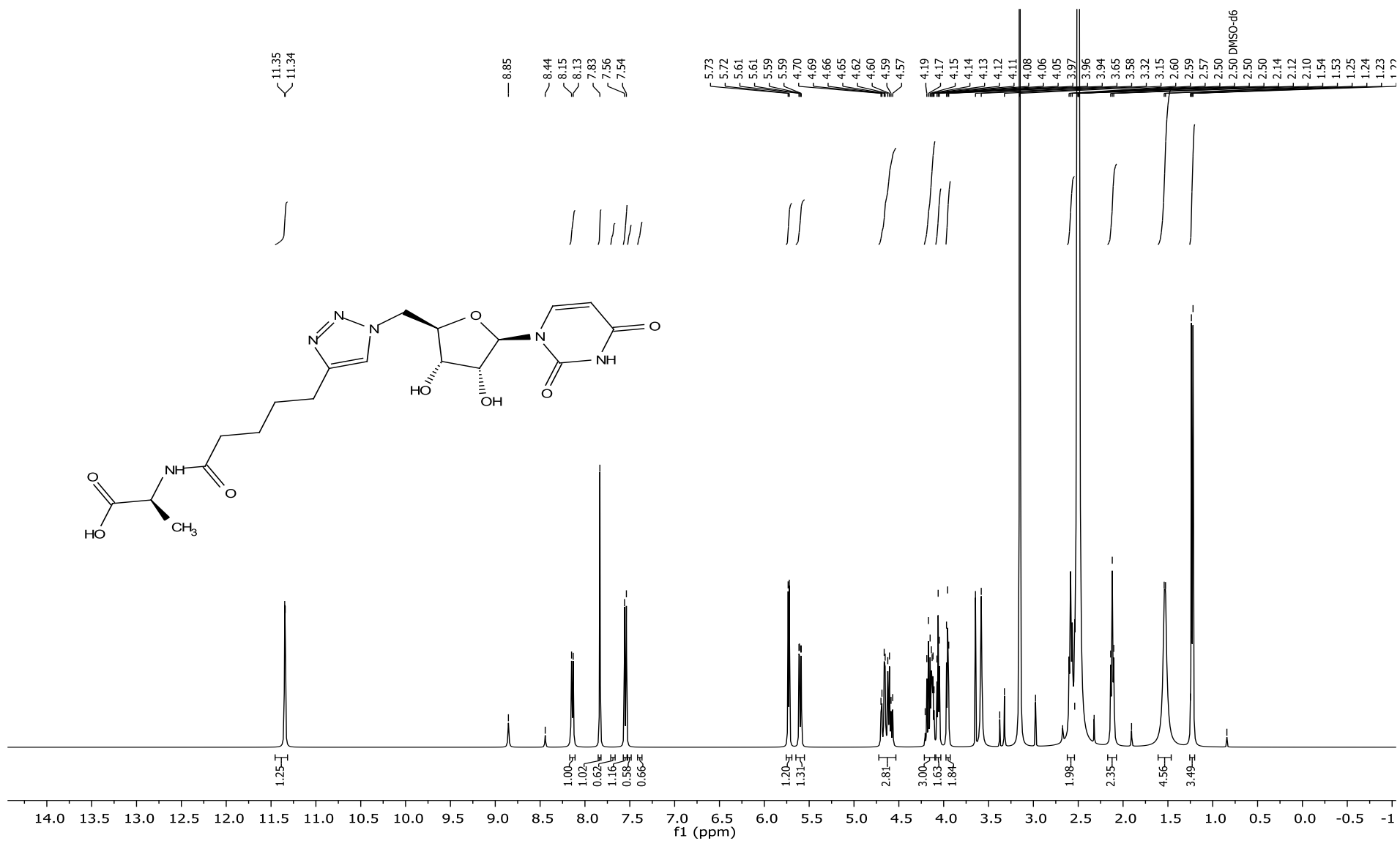
<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound **3p**



$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound 3p

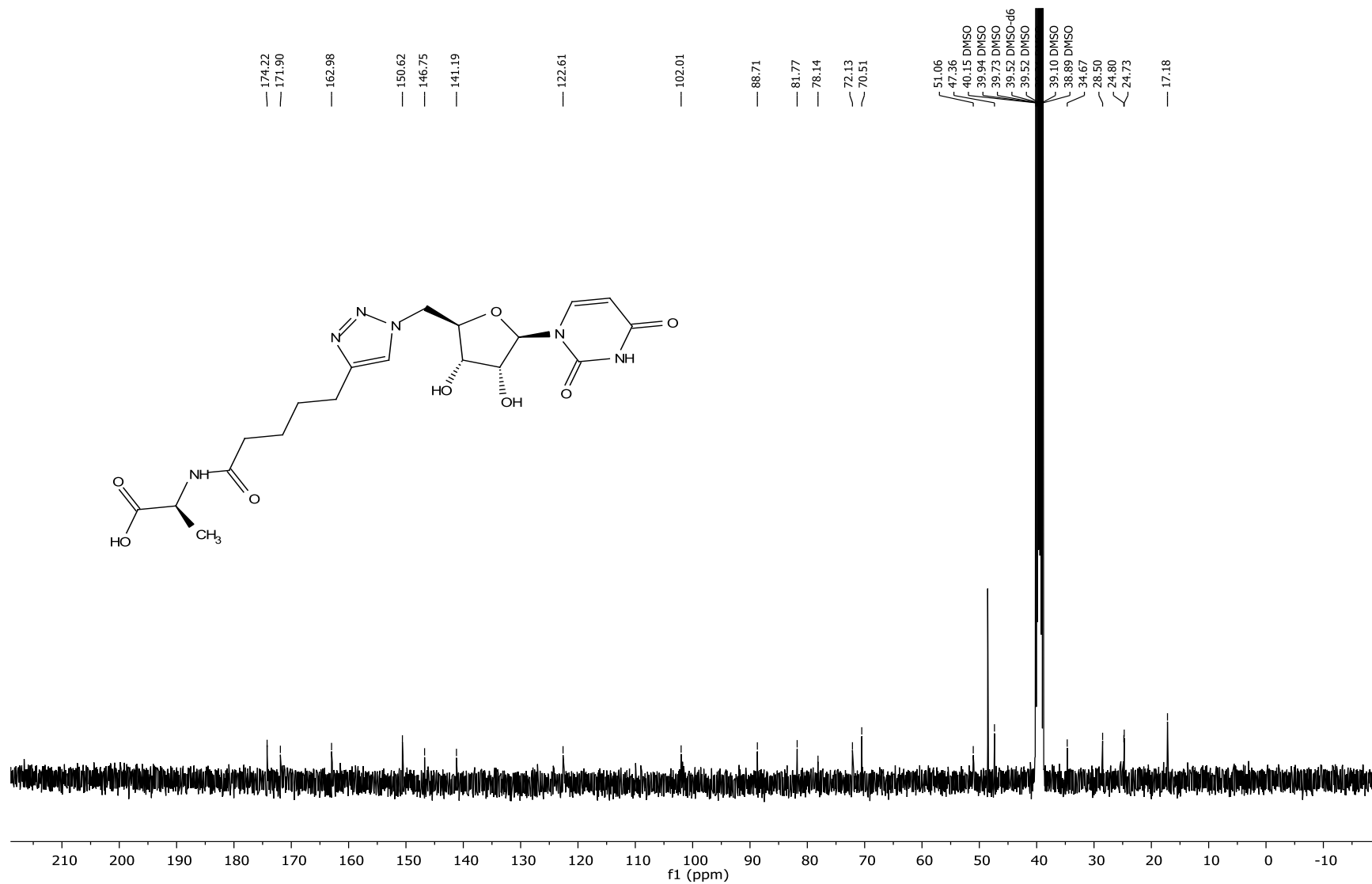
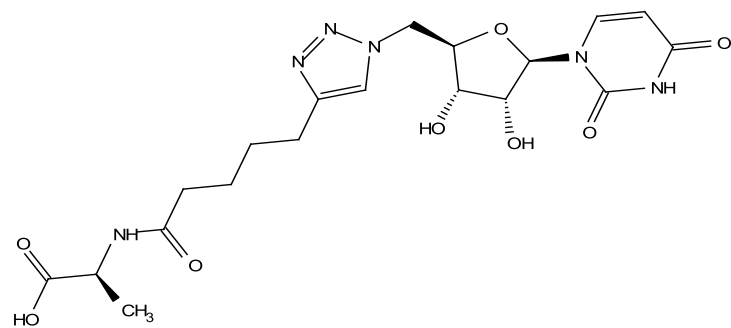


$^1\text{H}$  NMR (DMSO-d6) of compound 4

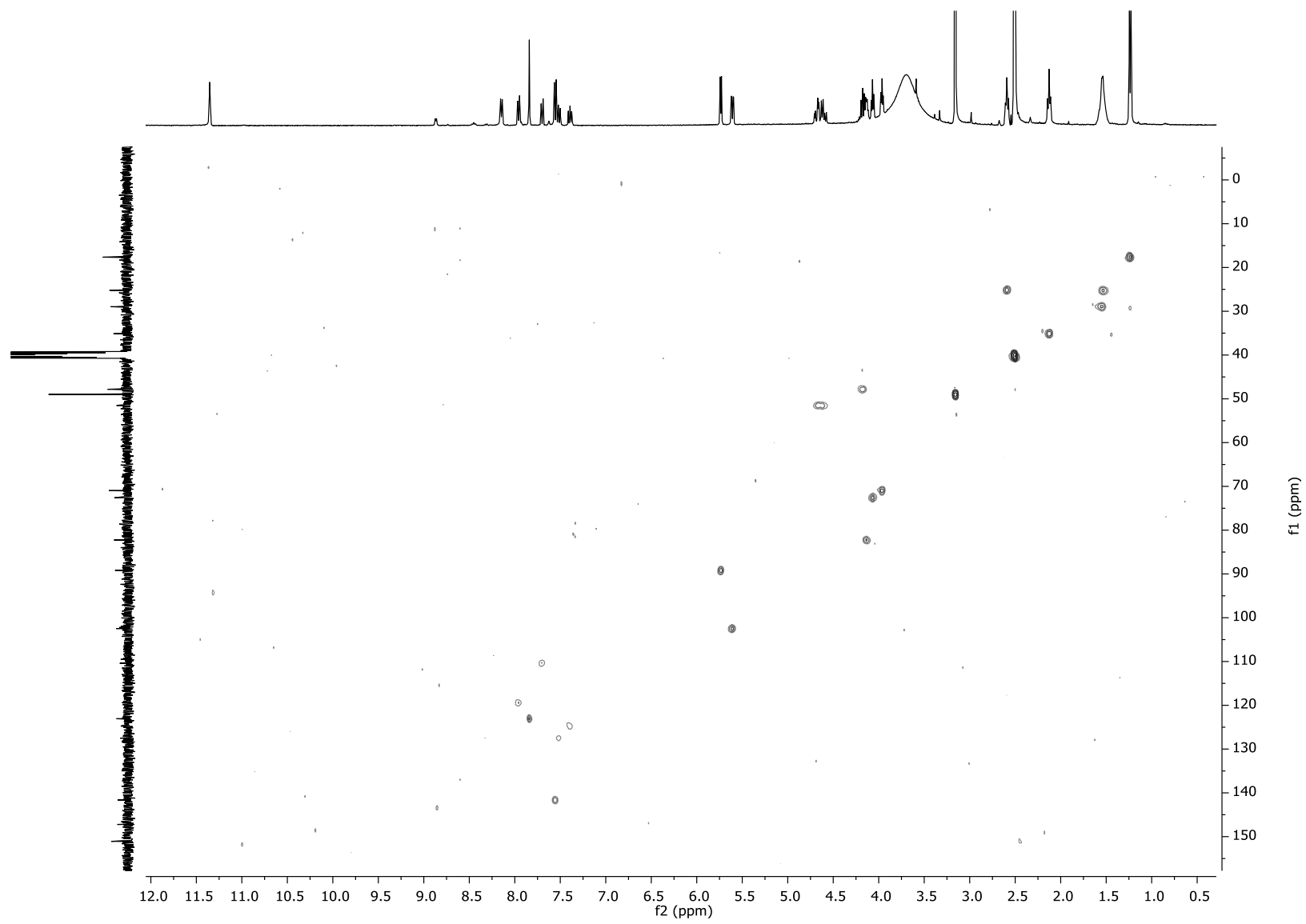


<sup>13</sup>C NMR (DMSO-d<sub>6</sub>) of compound 4

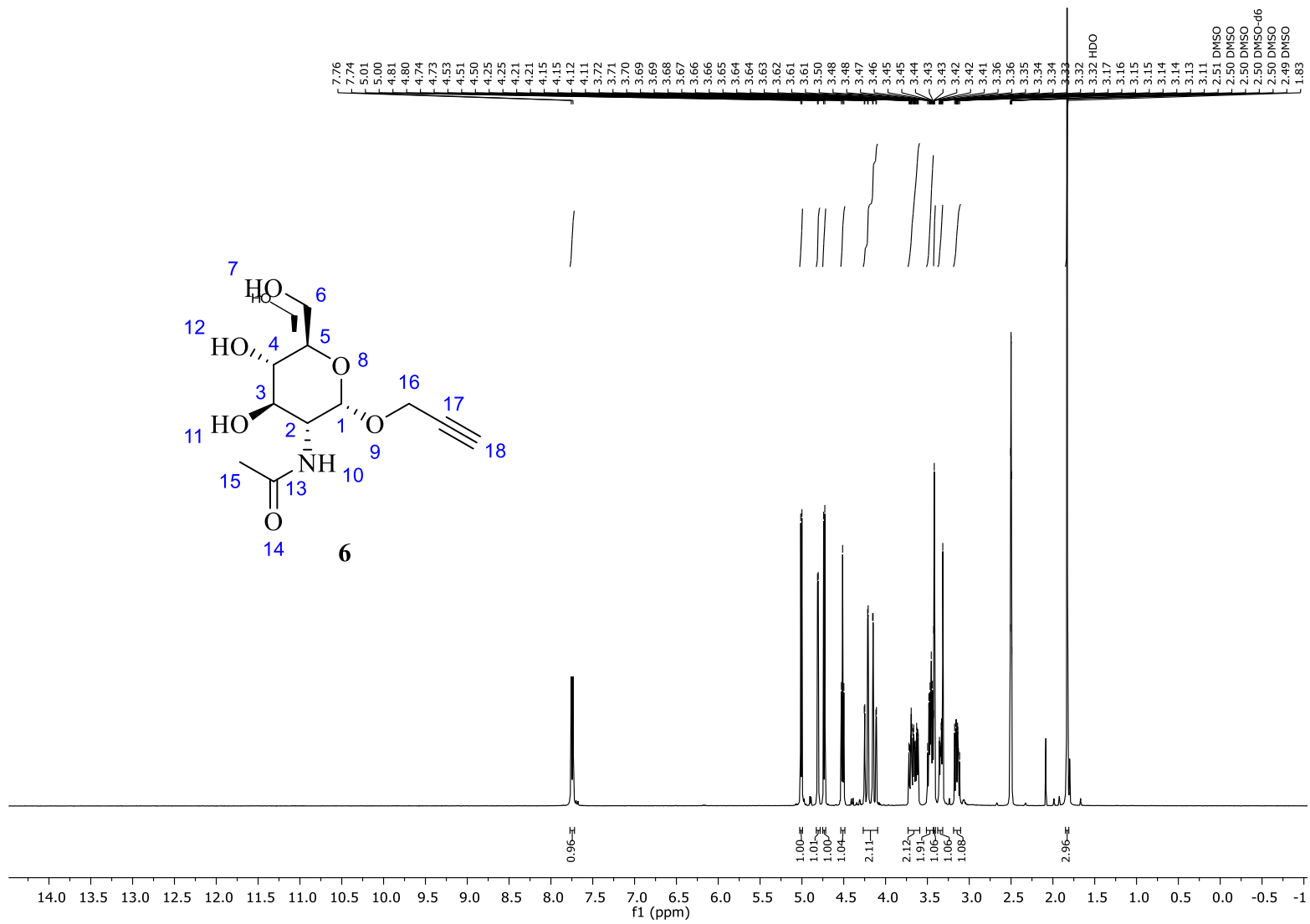




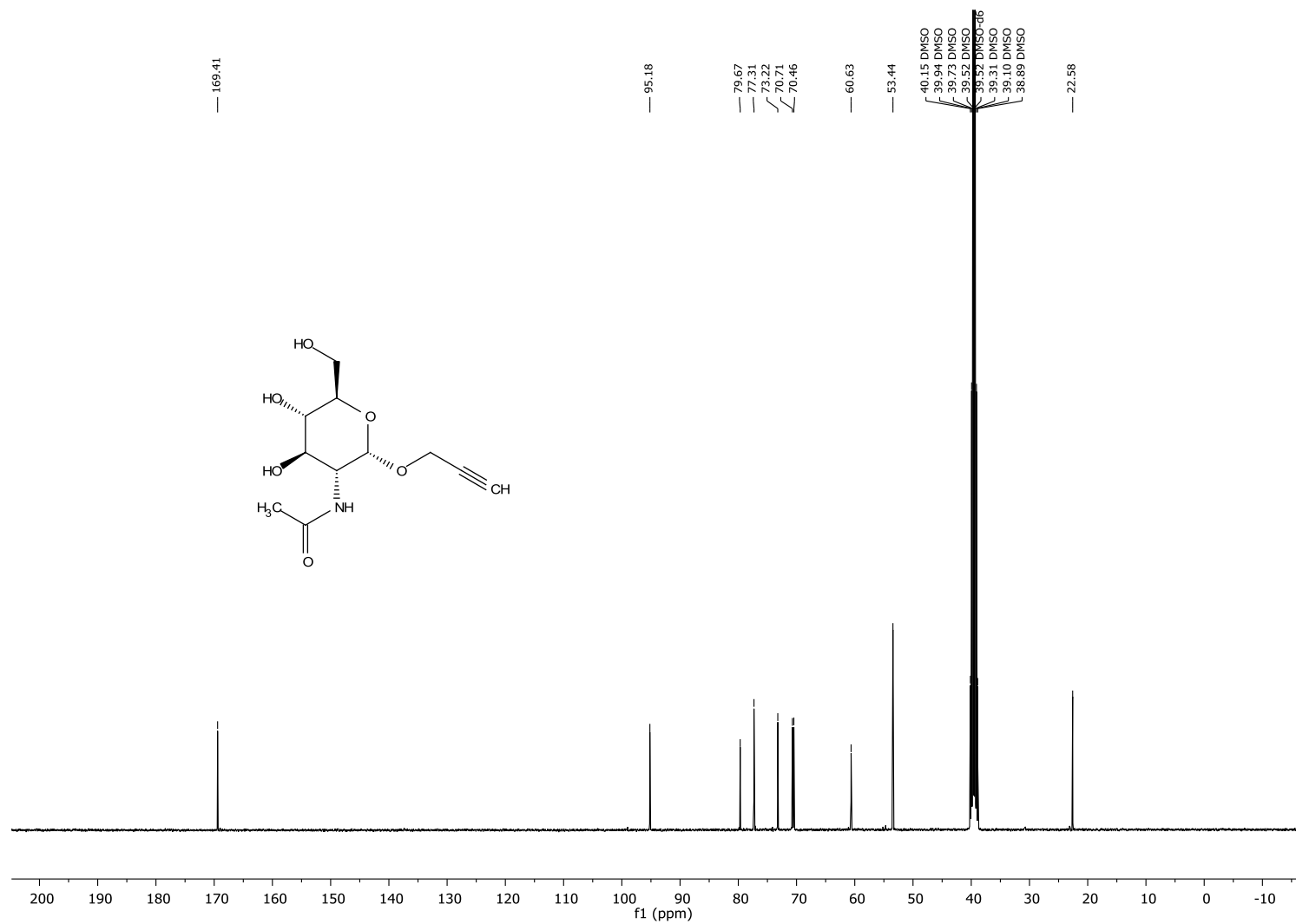
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound 4



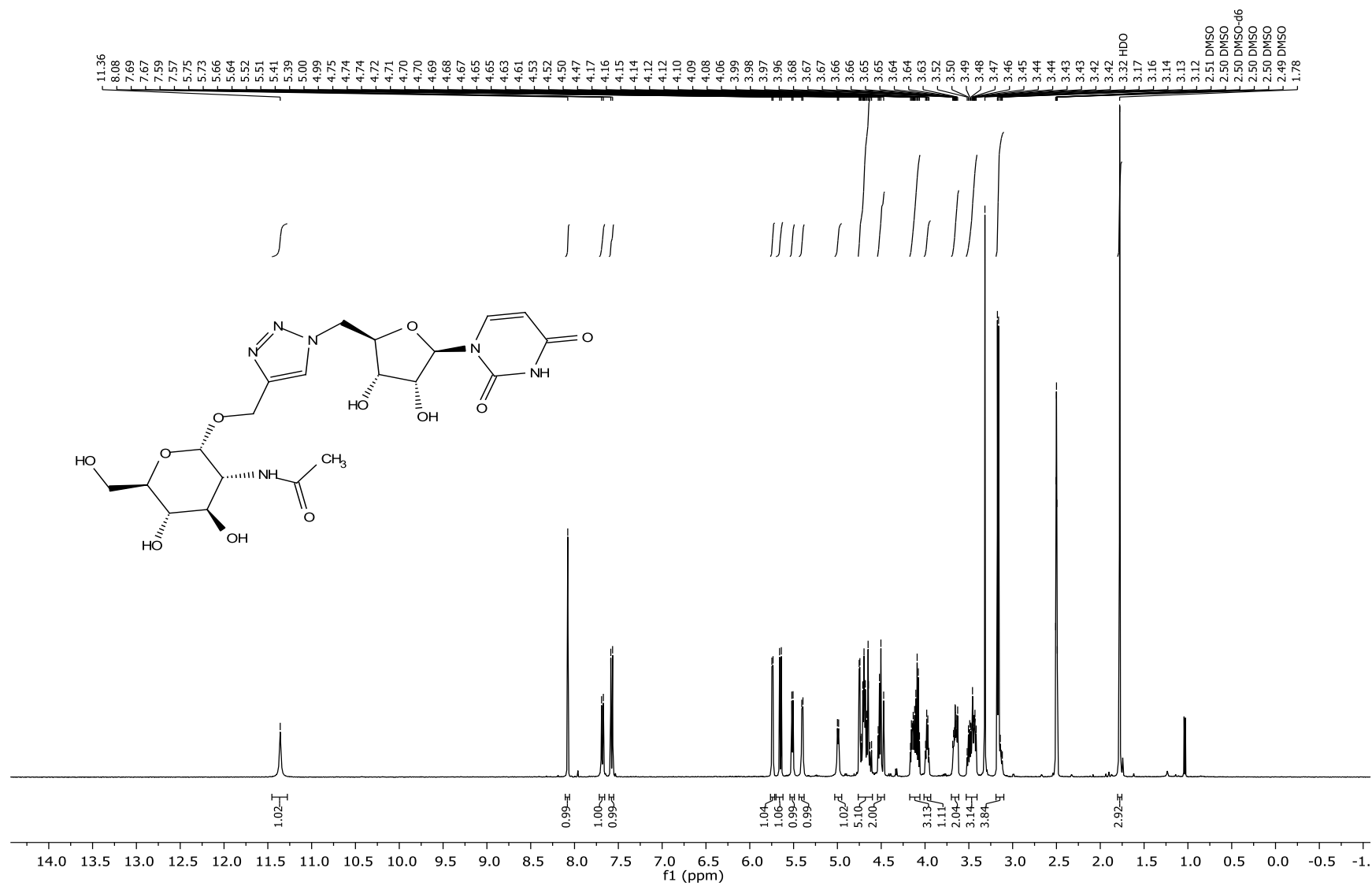
$^1\text{H}$  NMR (DMSO- $d_6$ ) of compound 6



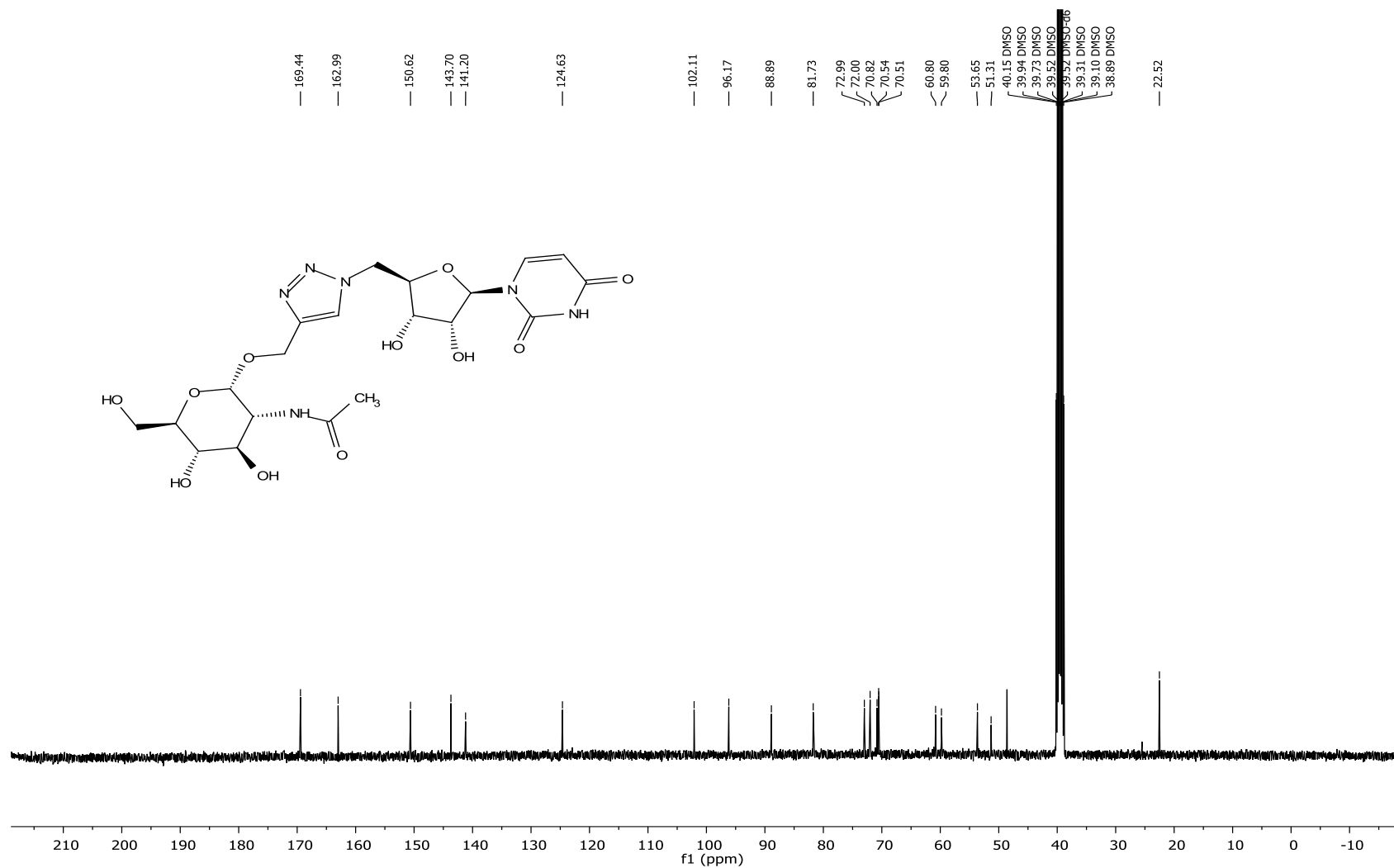
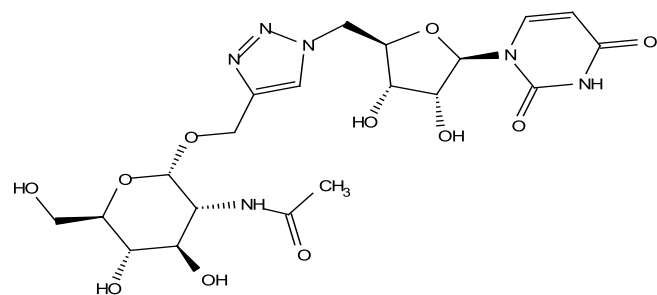
<sup>13</sup>C NMR (DMSO-d6) of compound 6



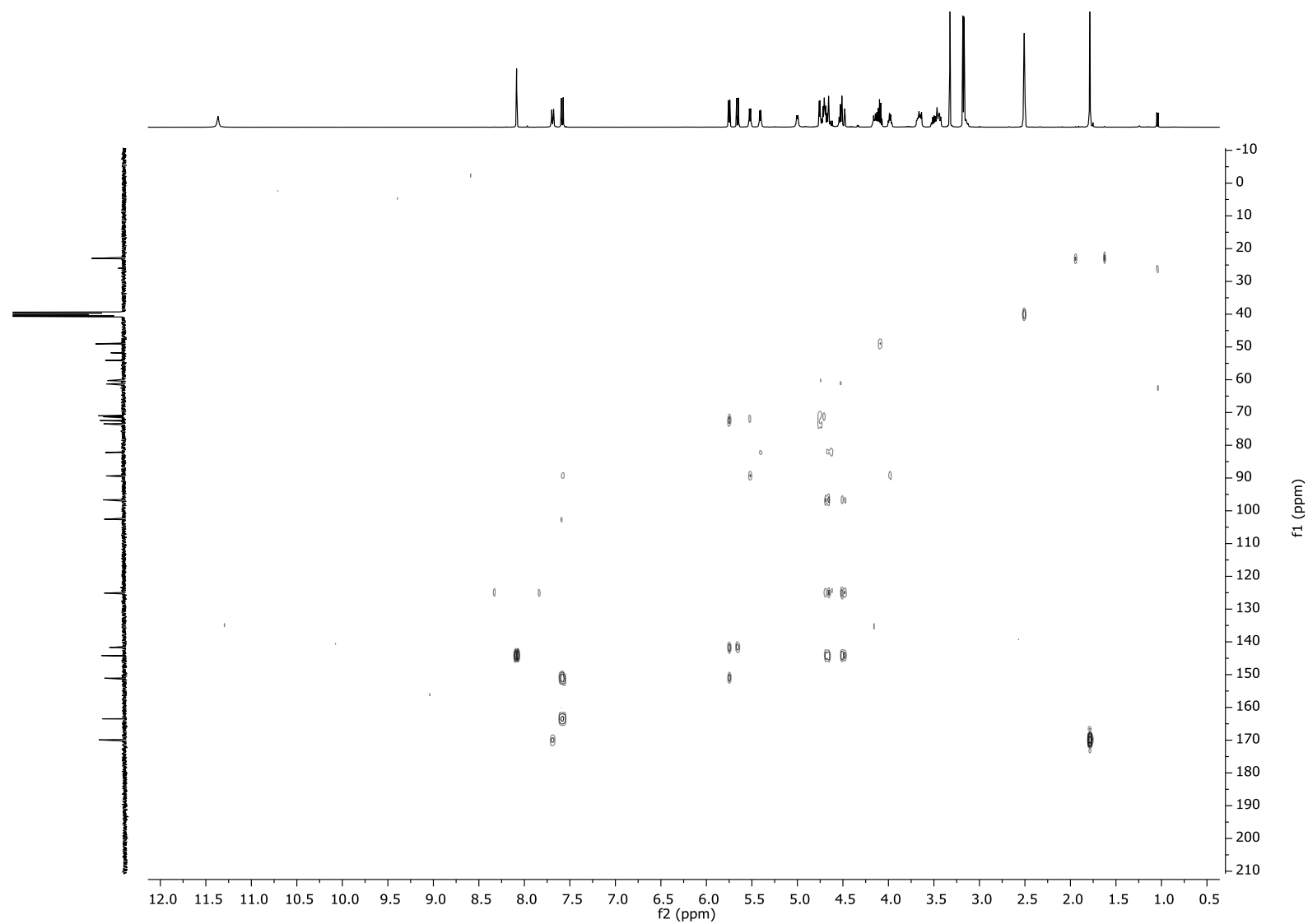
<sup>1</sup>H NMR (DMSO-d6) of compound 7



<sup>13</sup>C NMR (DMSO-d6) of compound 7

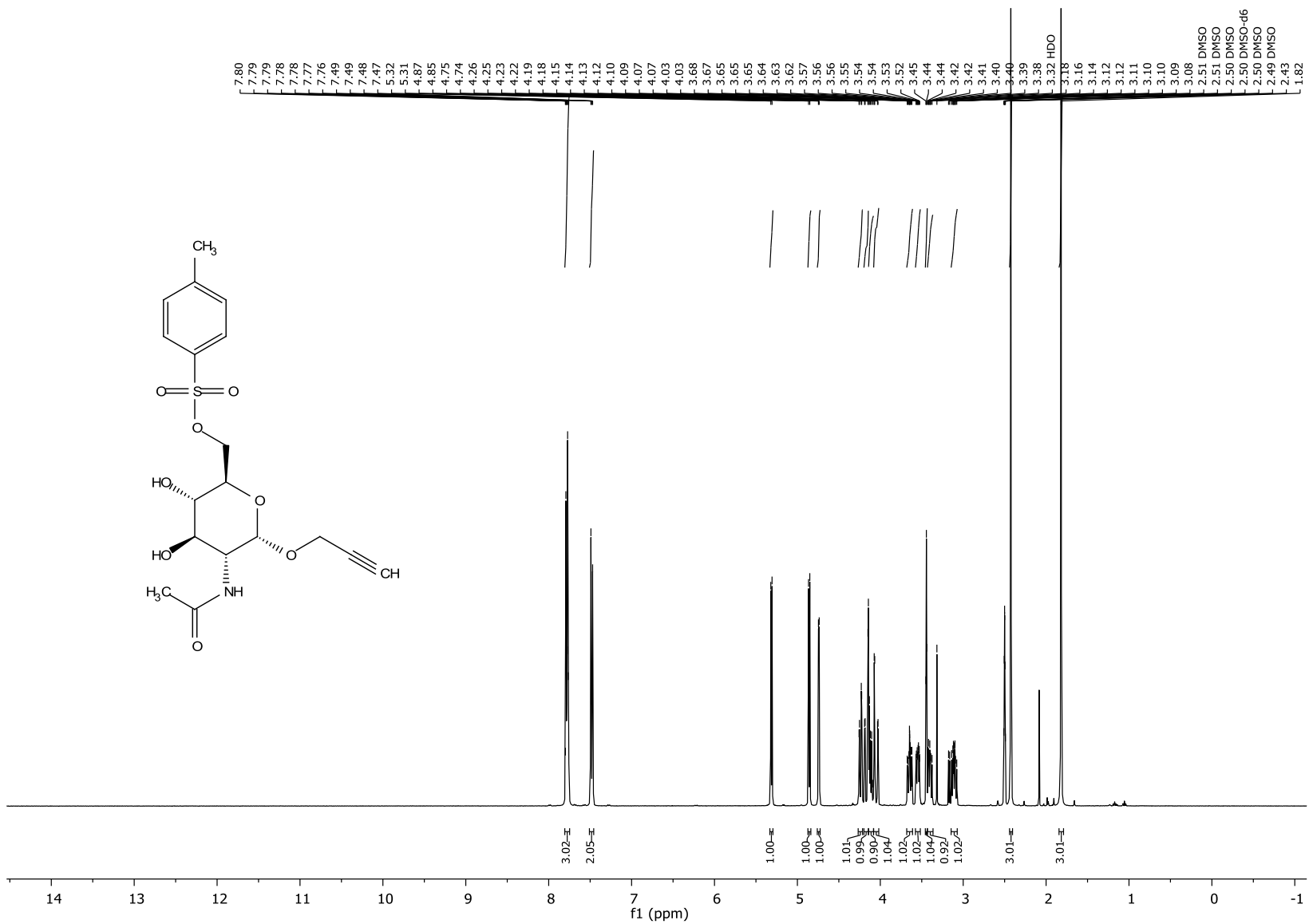
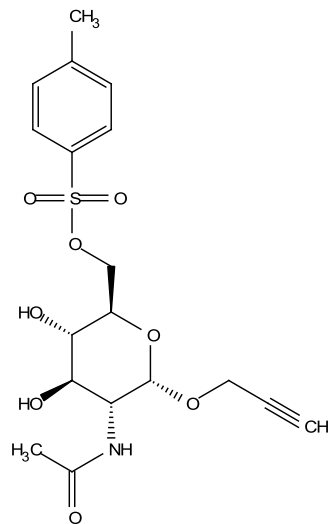


$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound 7

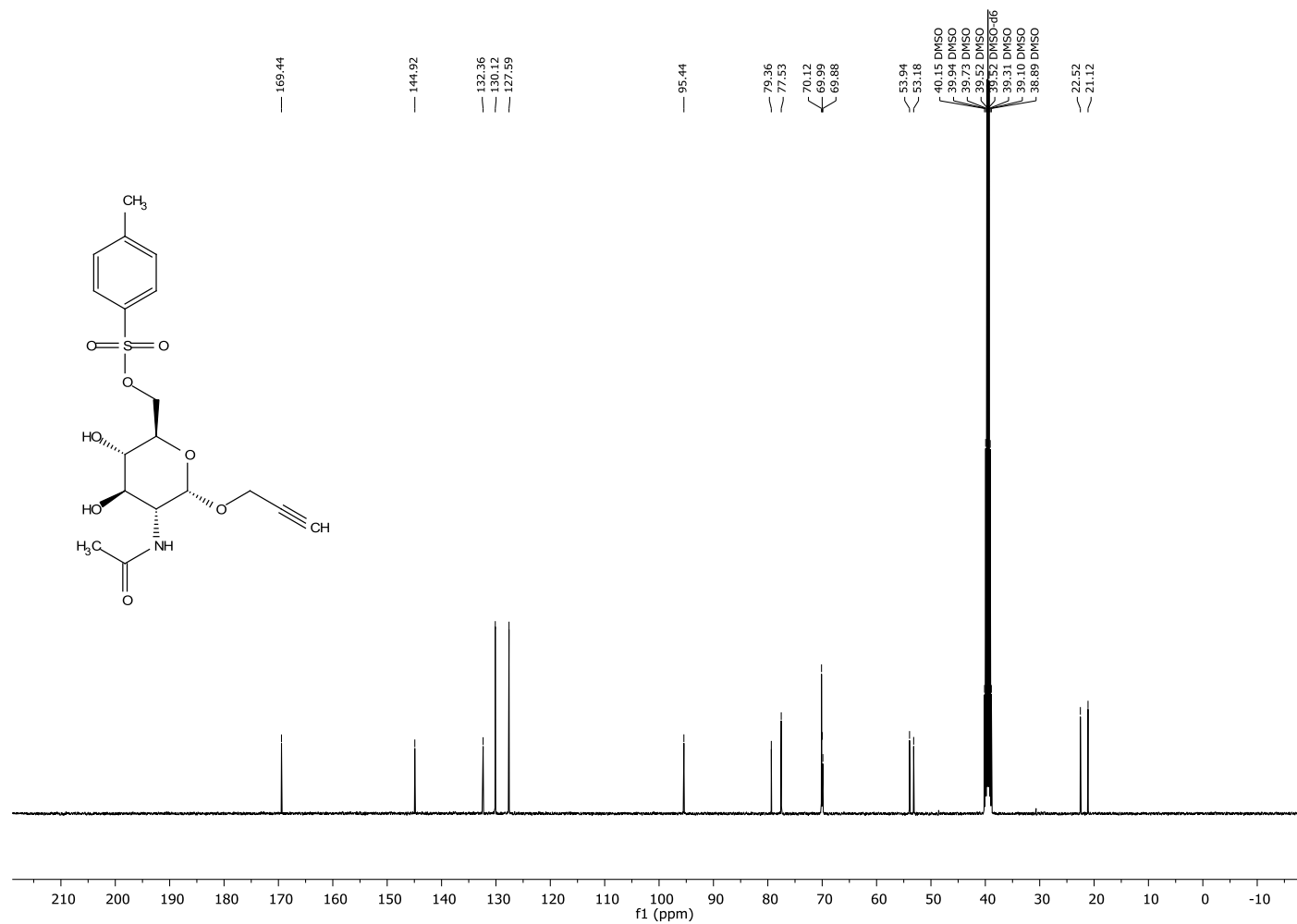


$^1\text{H}$  NMR (DMSO- $d_6$ ) of compound **8**

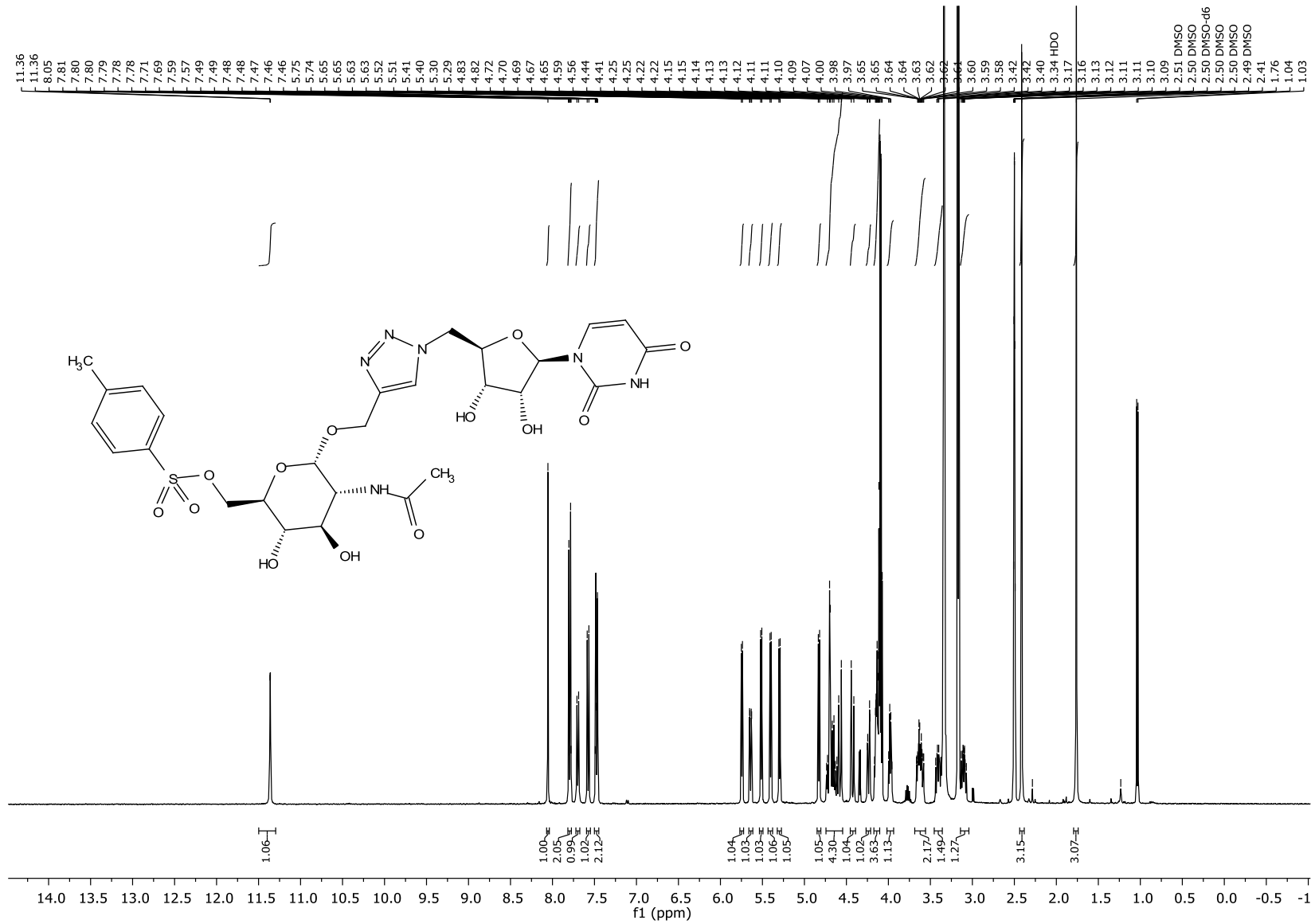




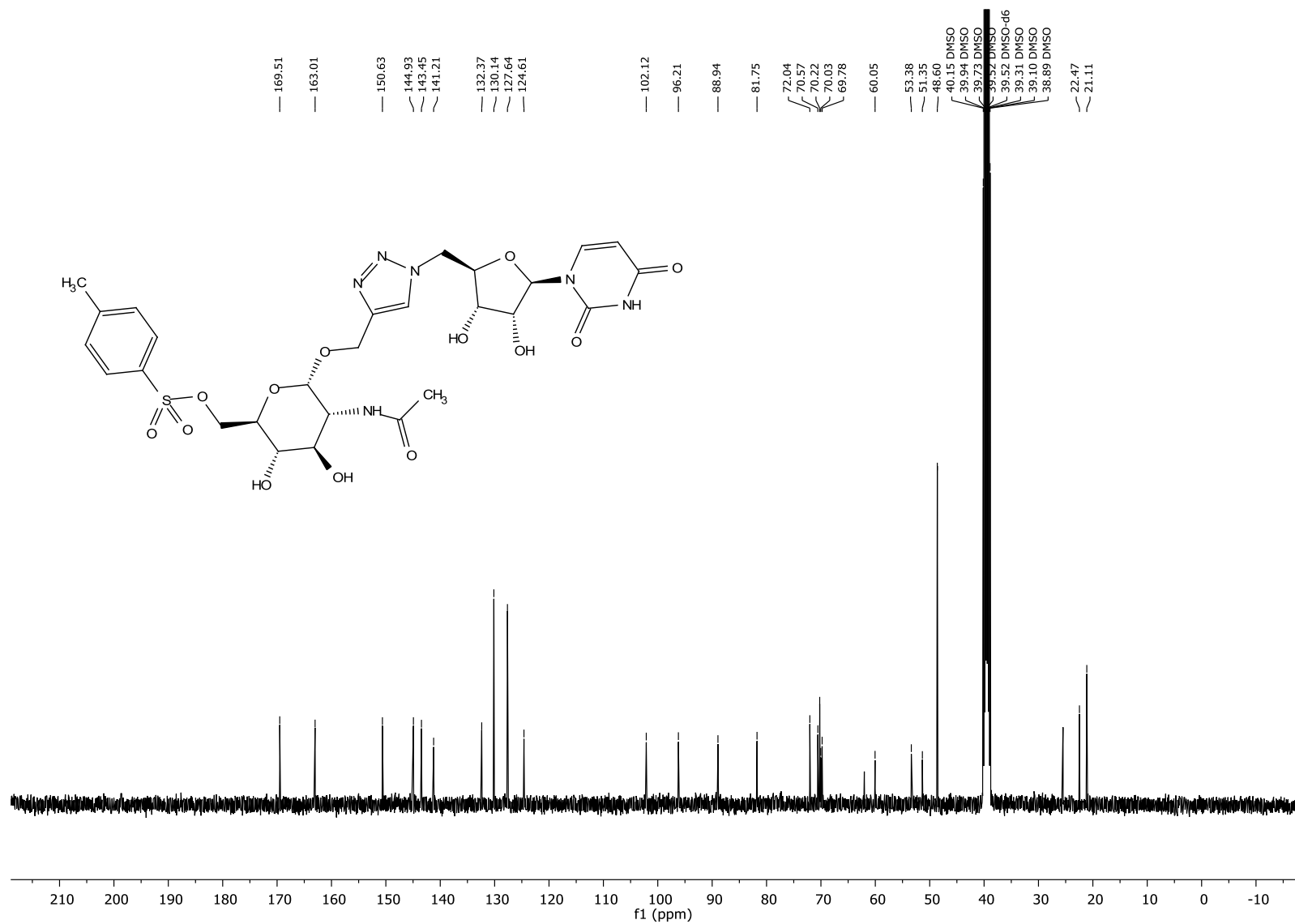
<sup>13</sup>C NMR (DMSO-d6) of compound 8



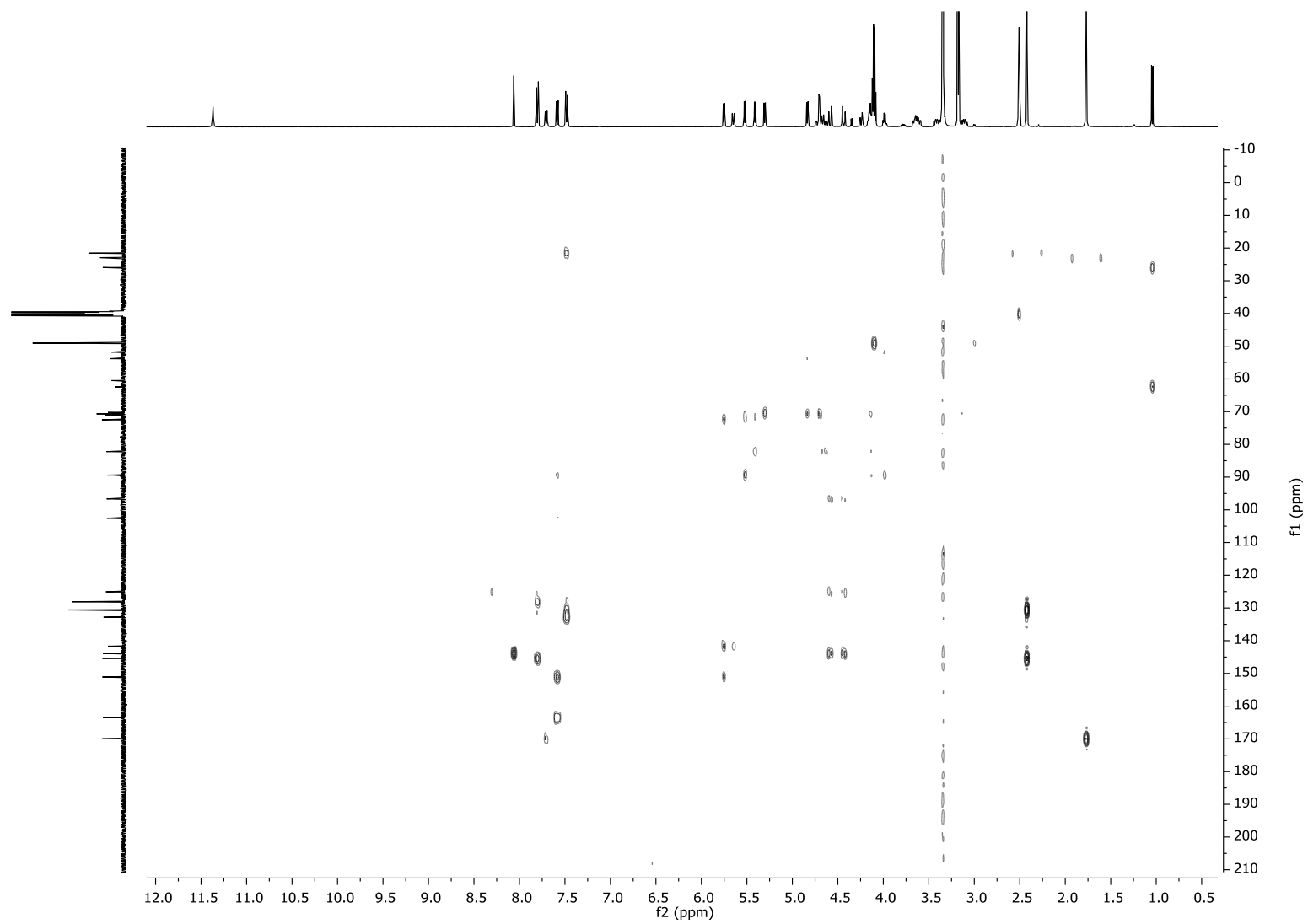
$^1\text{H}$  NMR (DMSO- $d_6$ ) of compound **9**



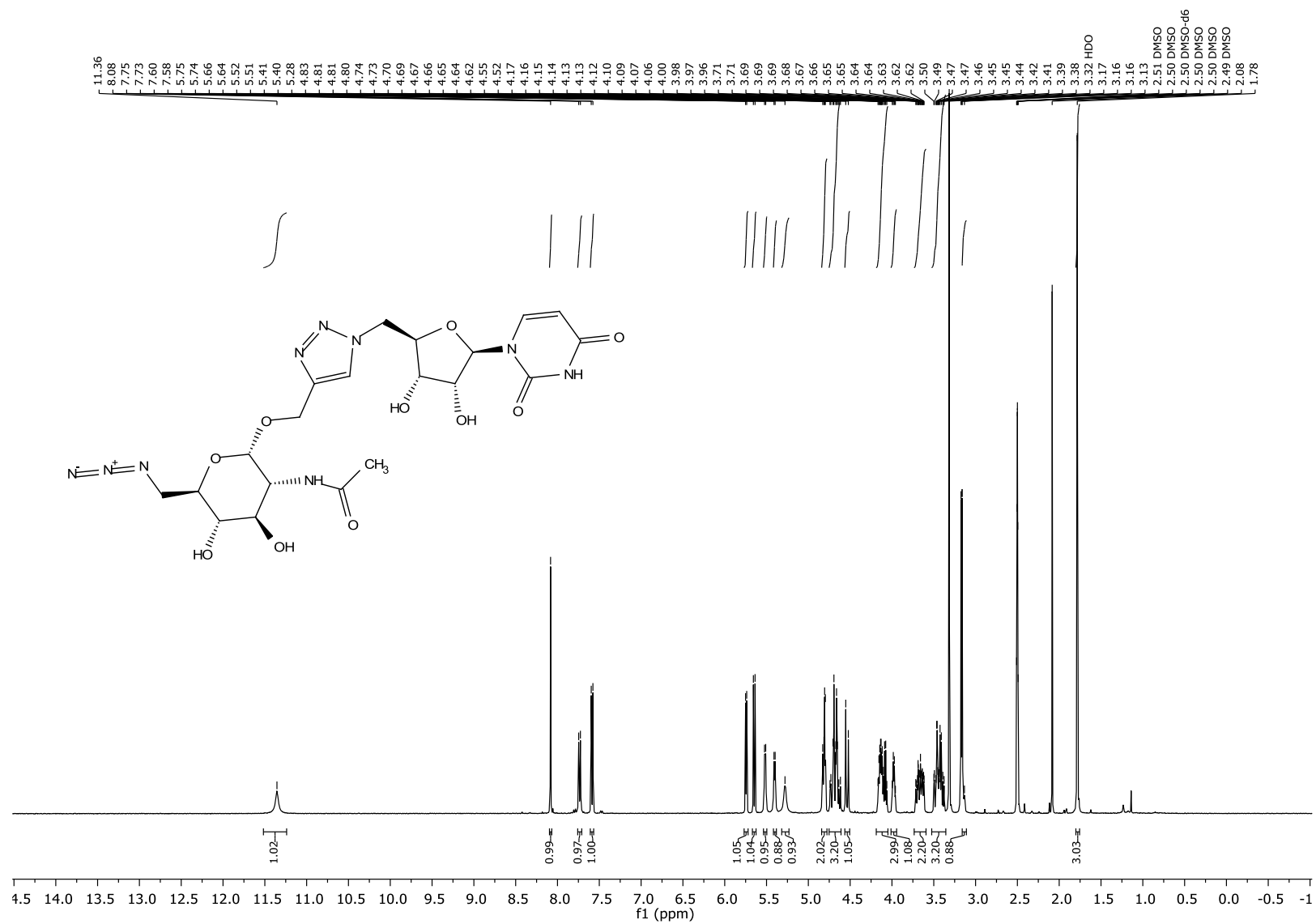
<sup>13</sup>C NMR (DMSO-d6) of compound 9



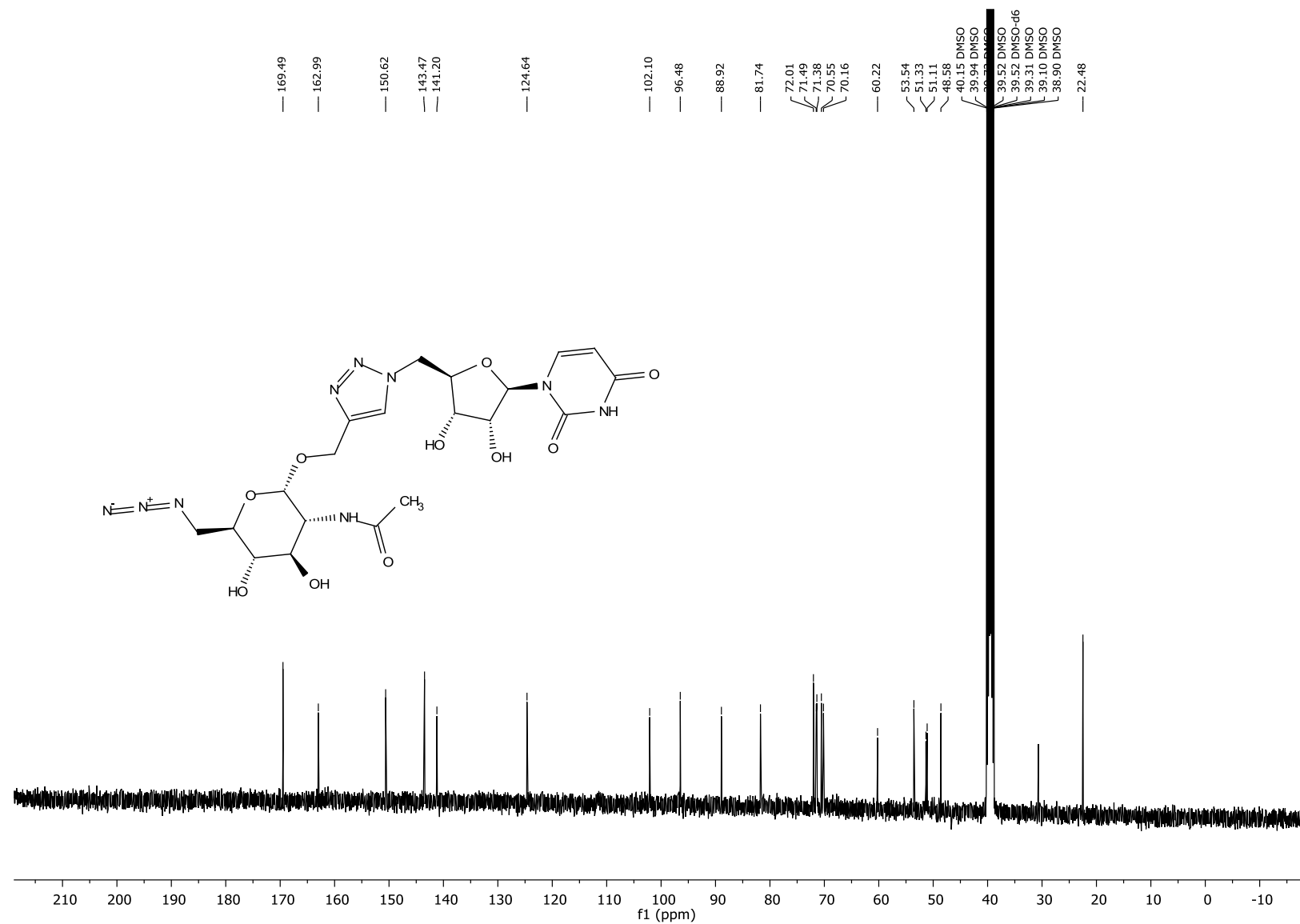
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **9**



<sup>1</sup>H NMR (DMSO-d6) of compound 10

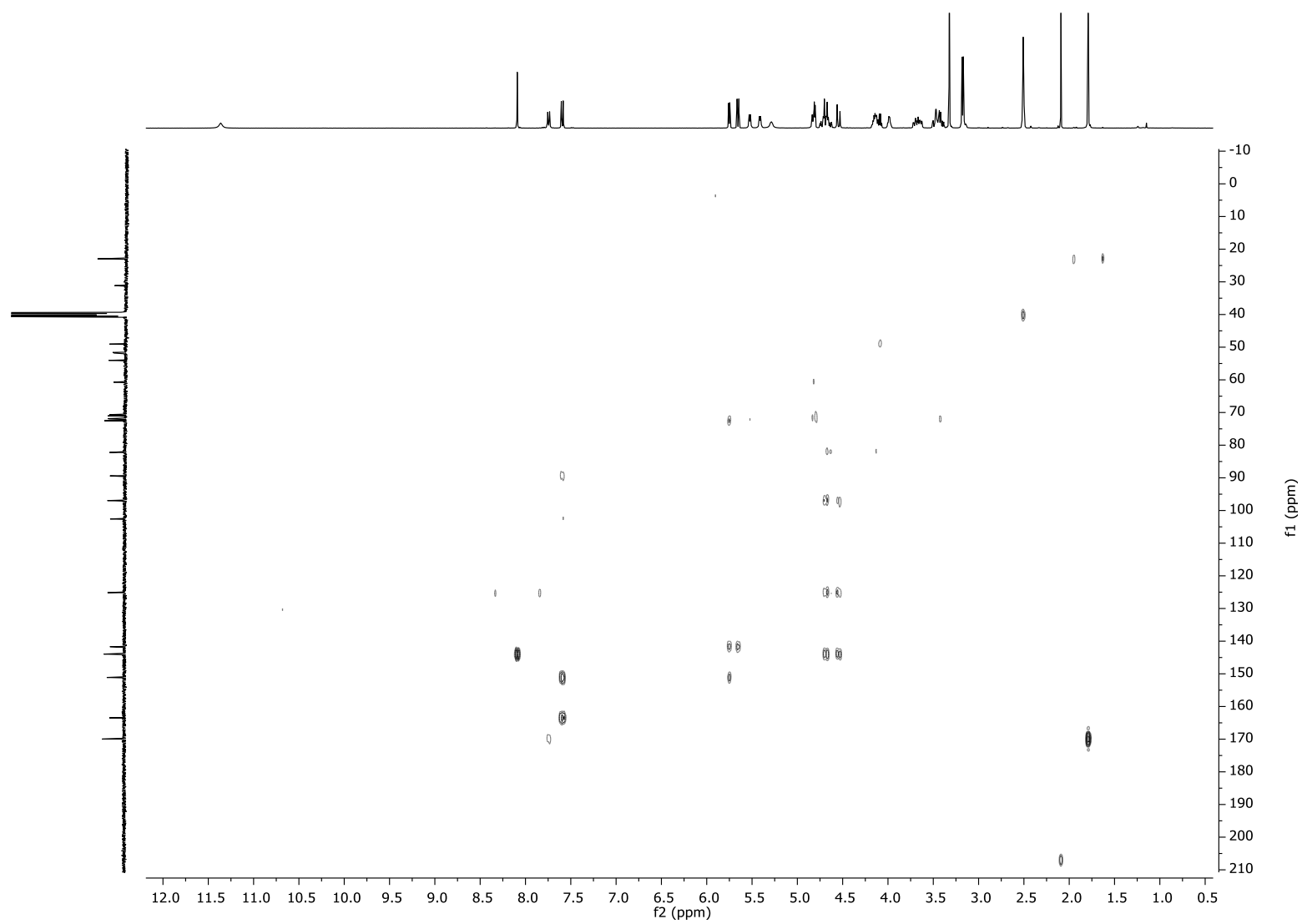


<sup>13</sup>C HMBC NMR (DMSO-d6) of compound 10

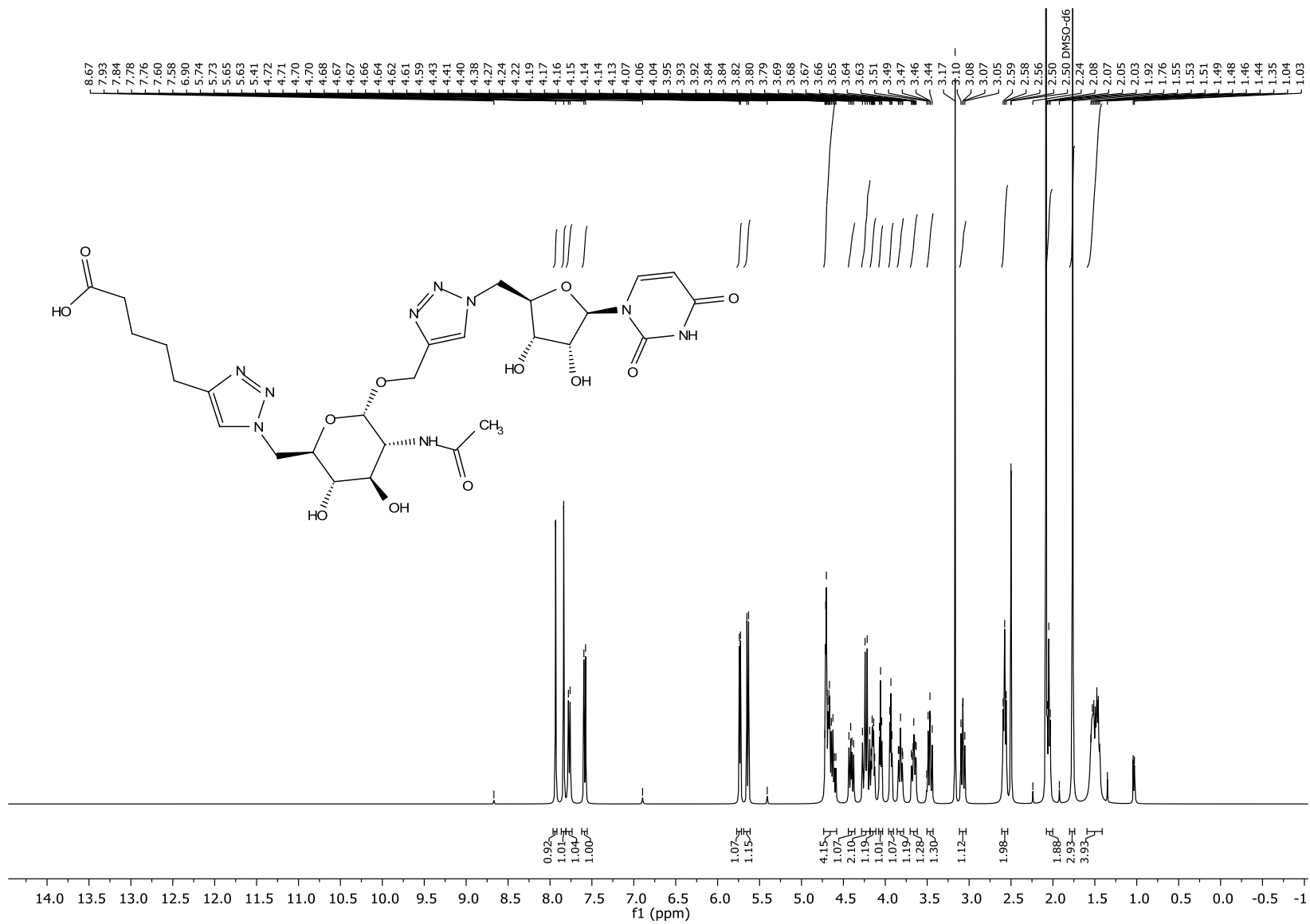




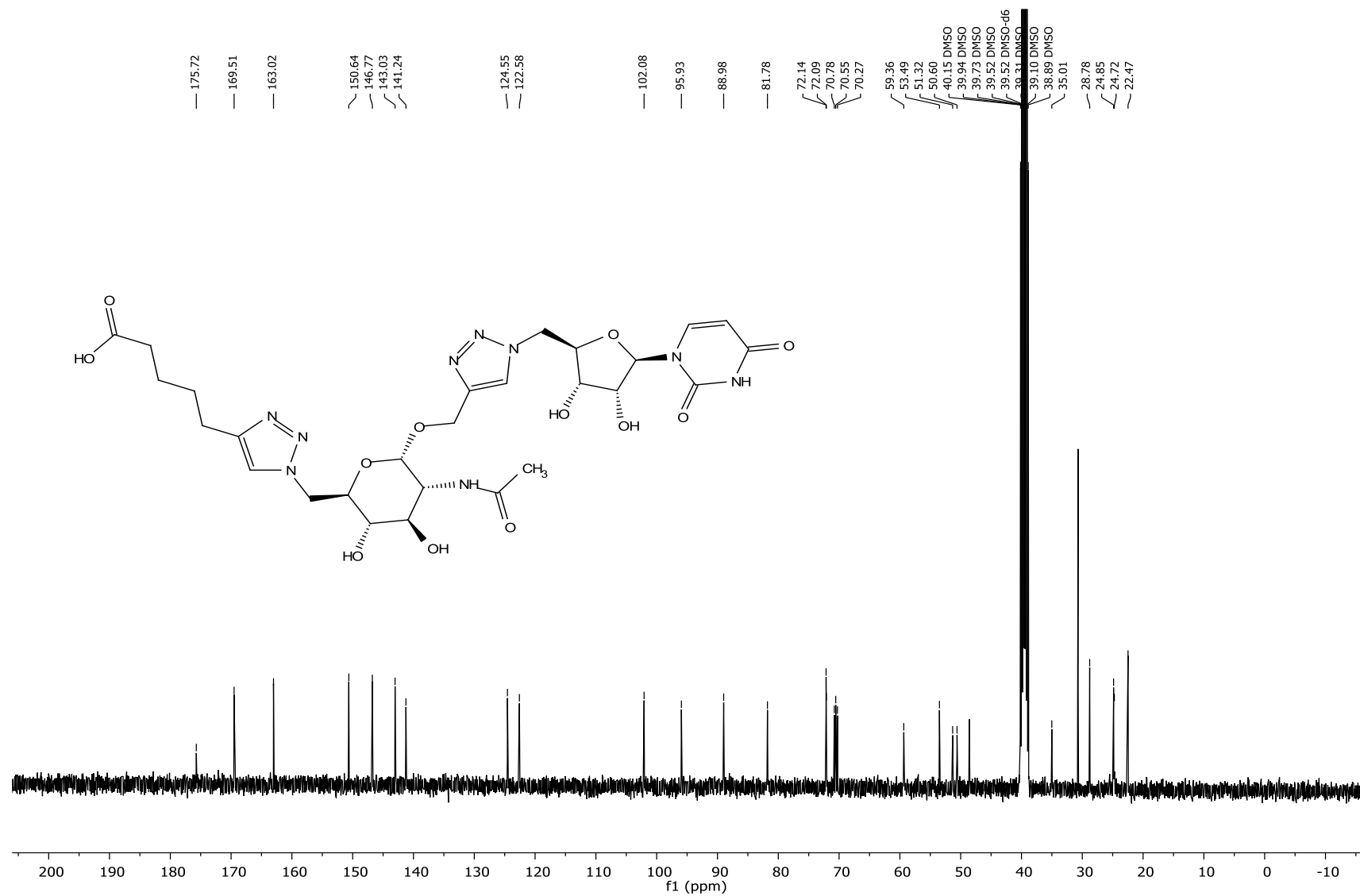
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **10**



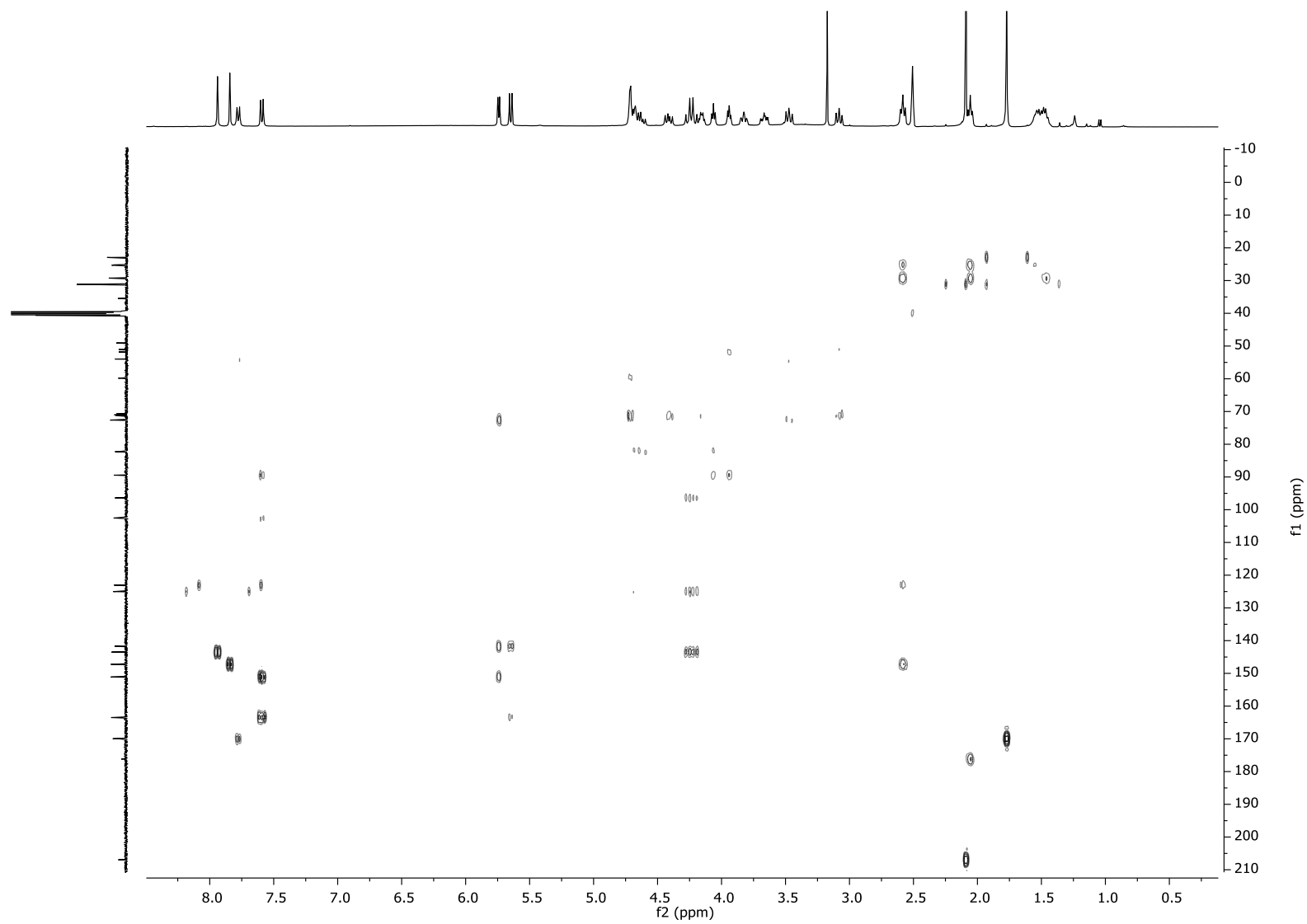
$^1\text{H}$  NMR (DMSO- $d_6$ ) of compound **11a**



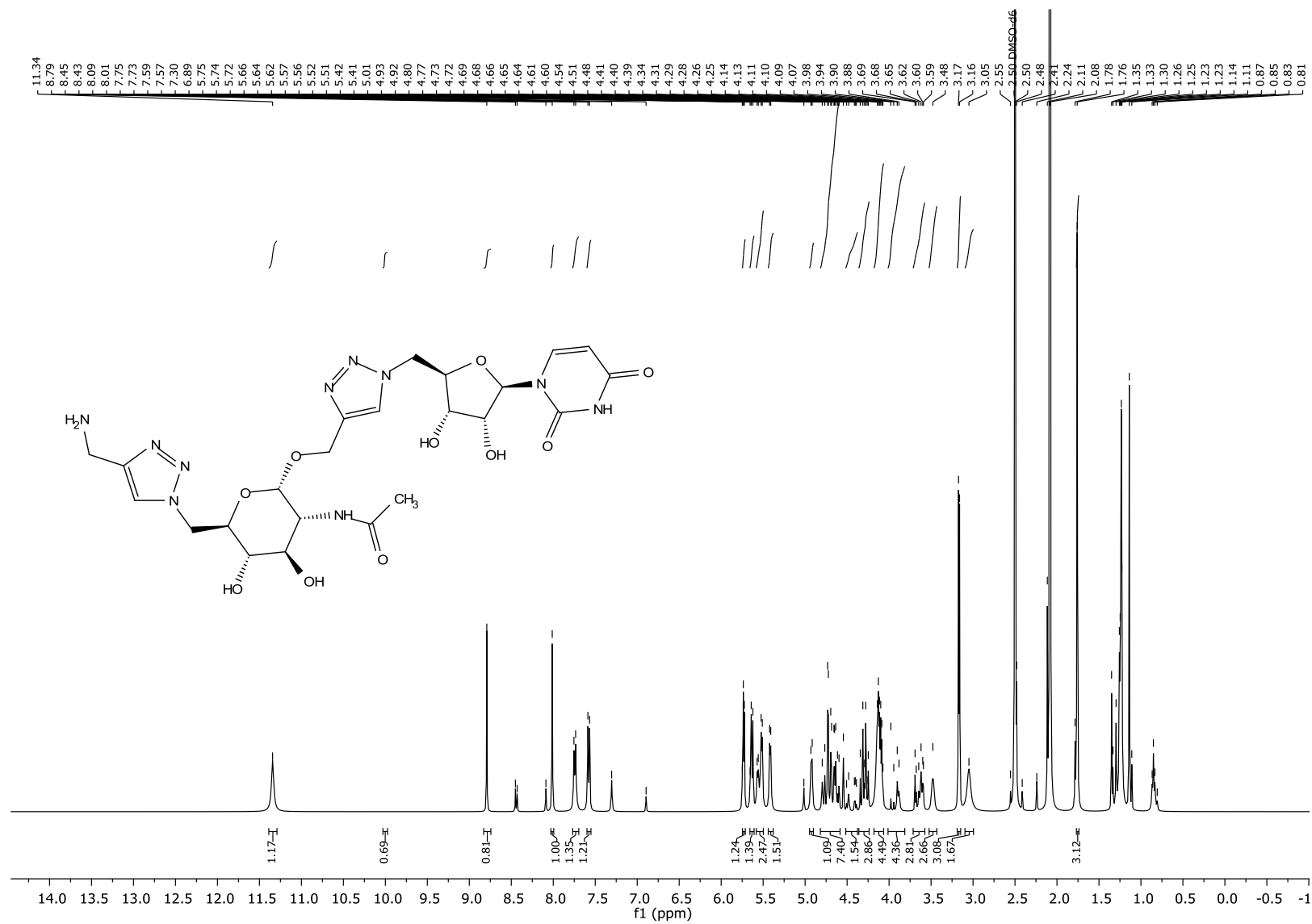
<sup>13</sup>C NMR (DMSO-d6) of compound **11a**



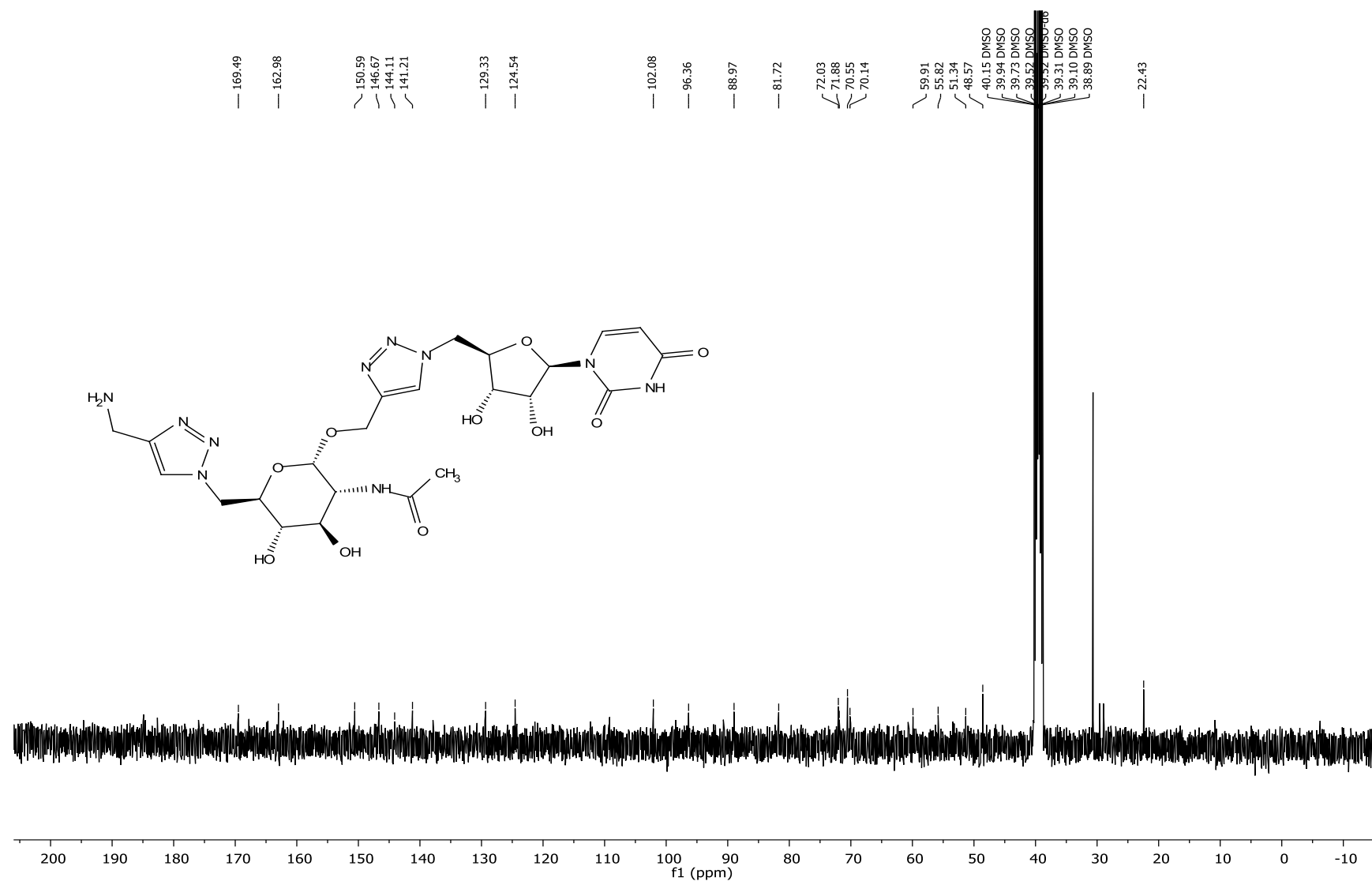
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **11a**



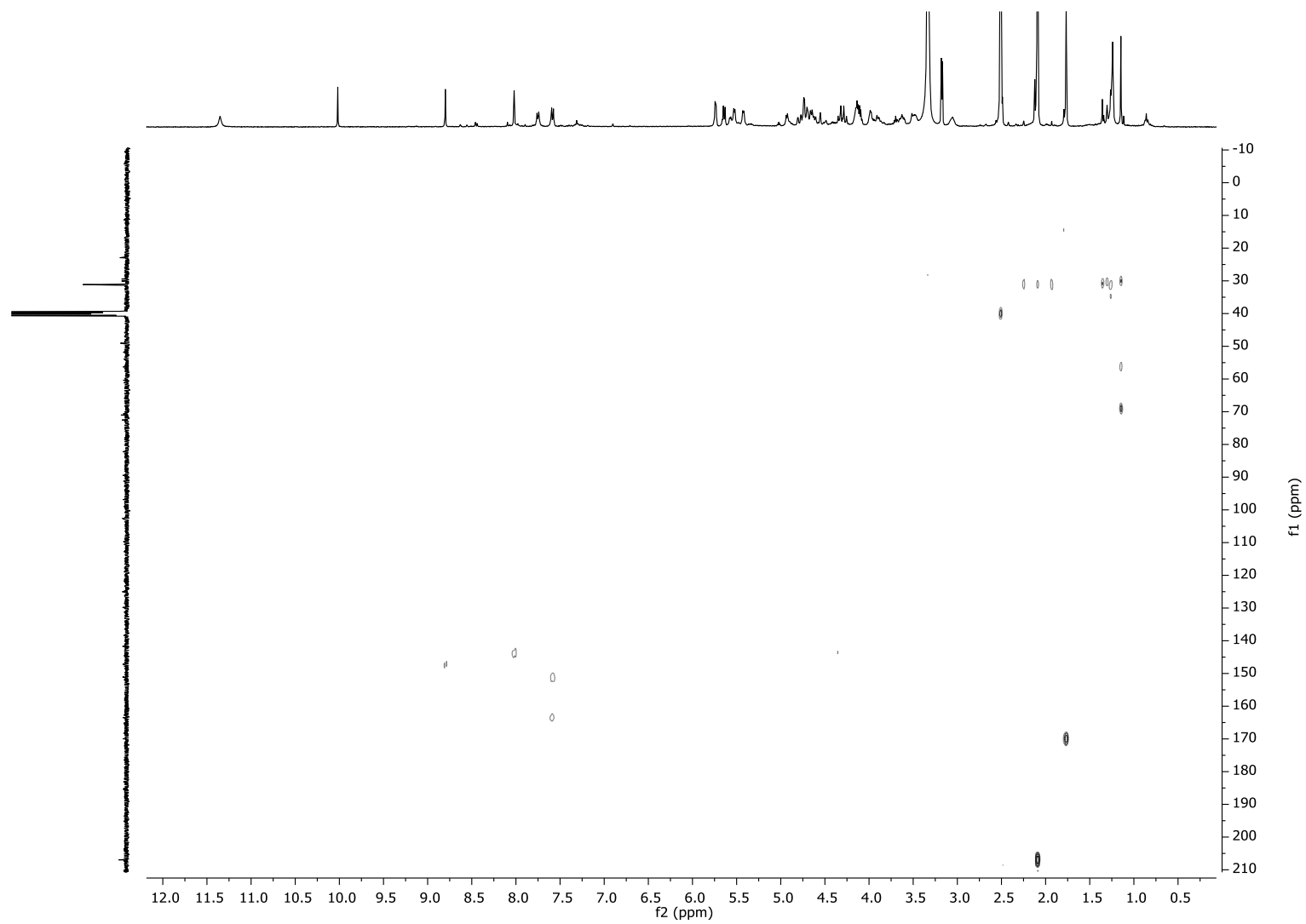
<sup>1</sup>H NMR (DMSO-d6) of compound **11b**



<sup>13</sup>C NMR (DMSO-d6) of compound **11b**

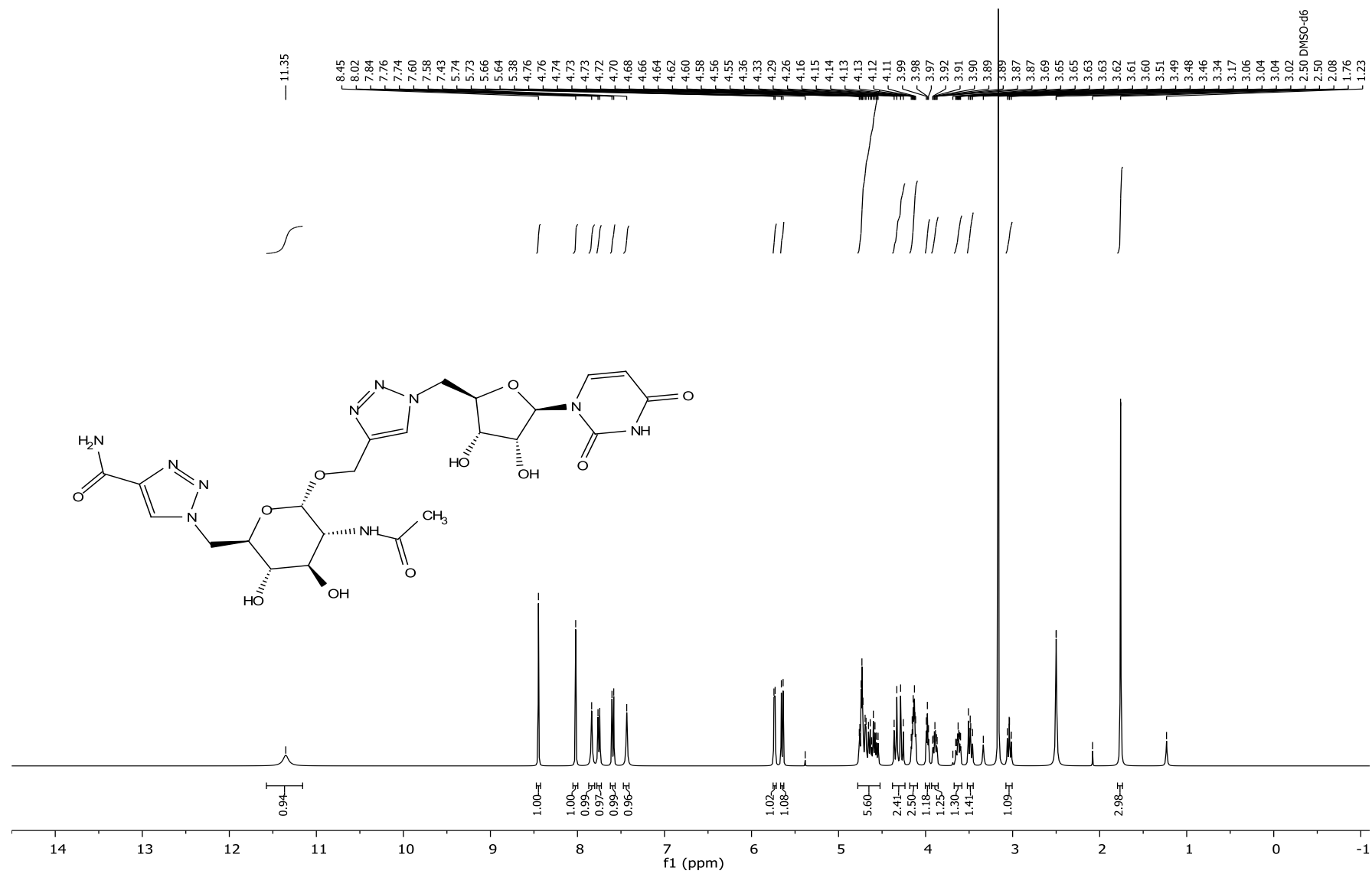


$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **11b**

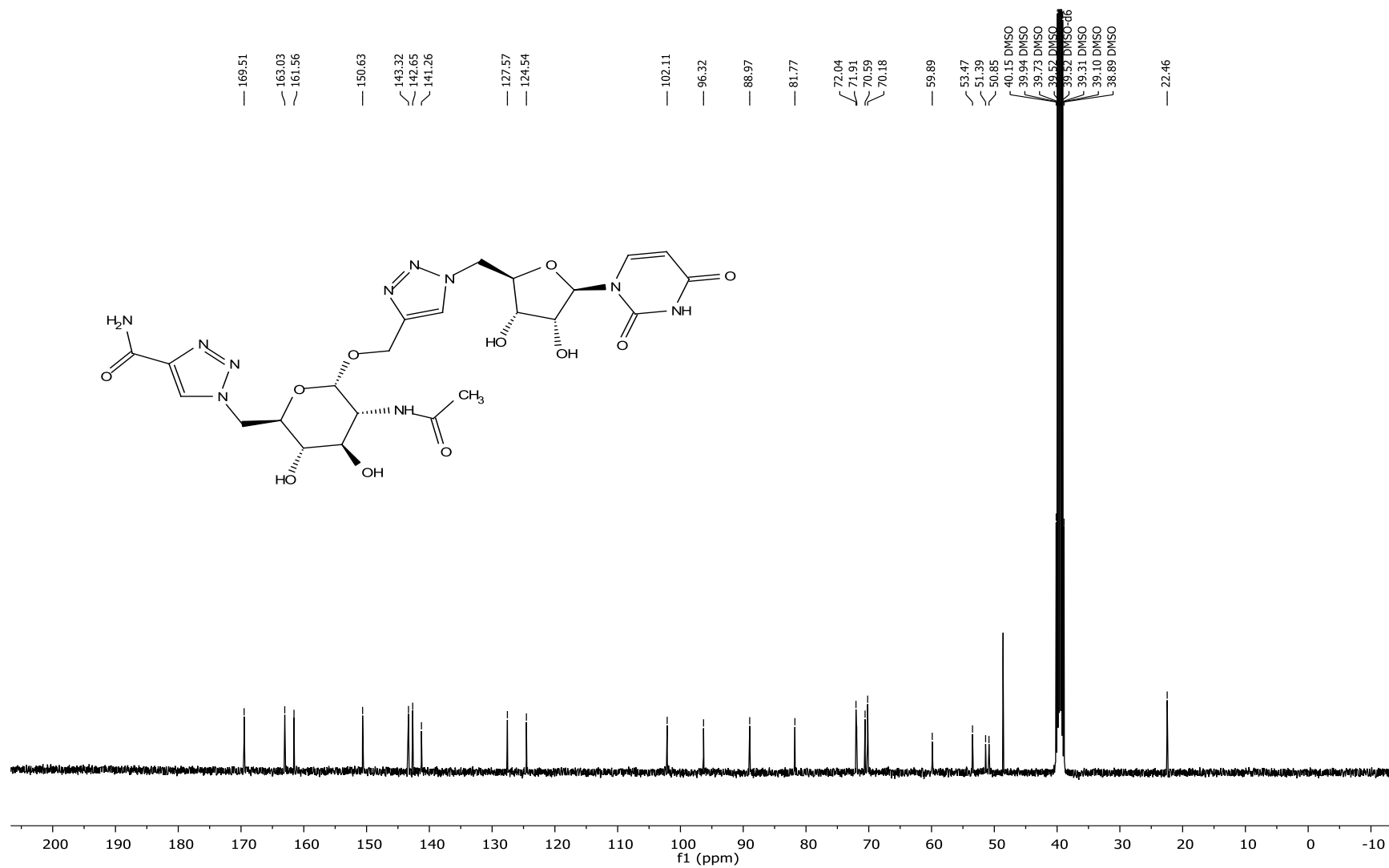




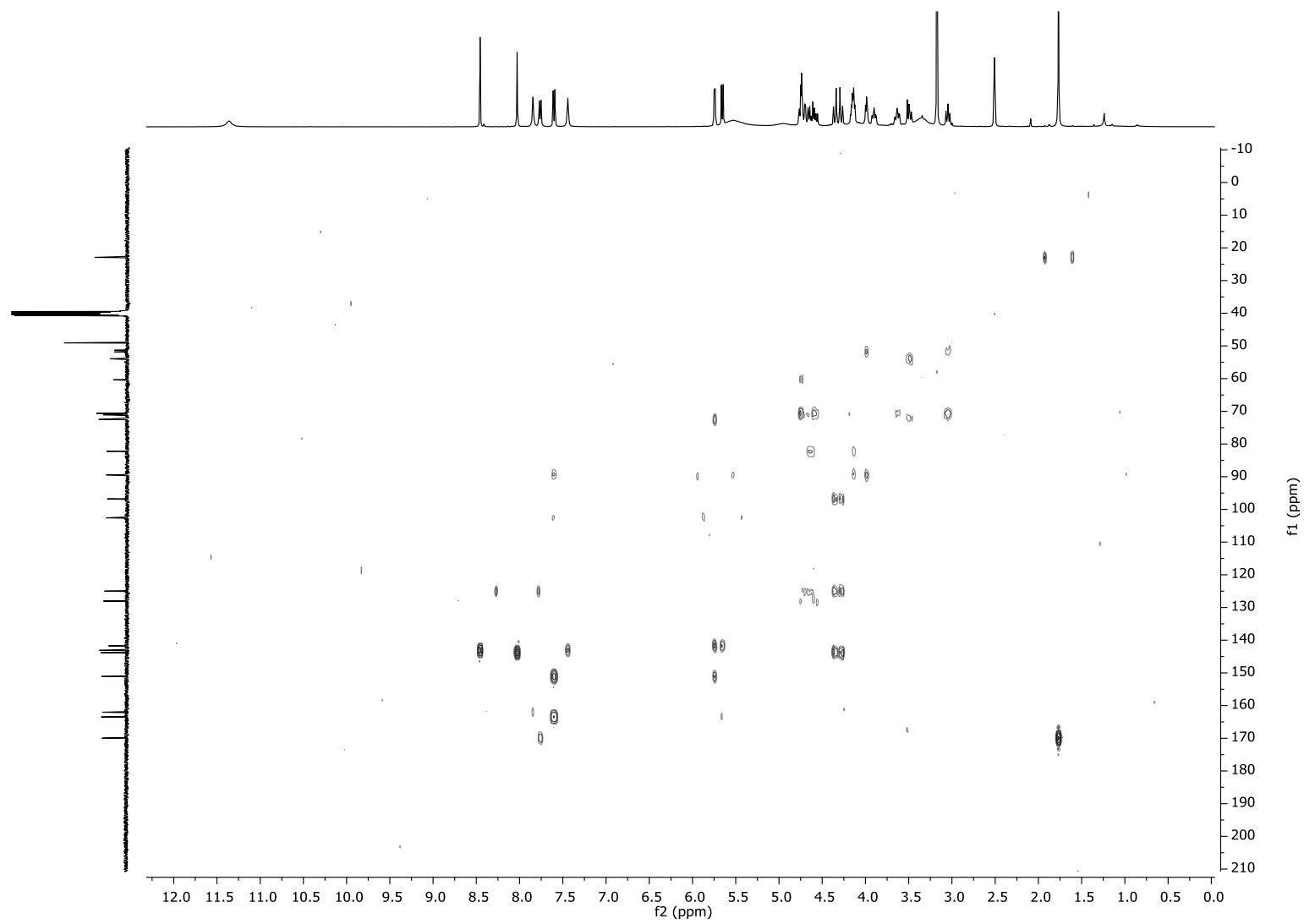
<sup>1</sup>H NMR (DMSO-d6) of compound **11c**



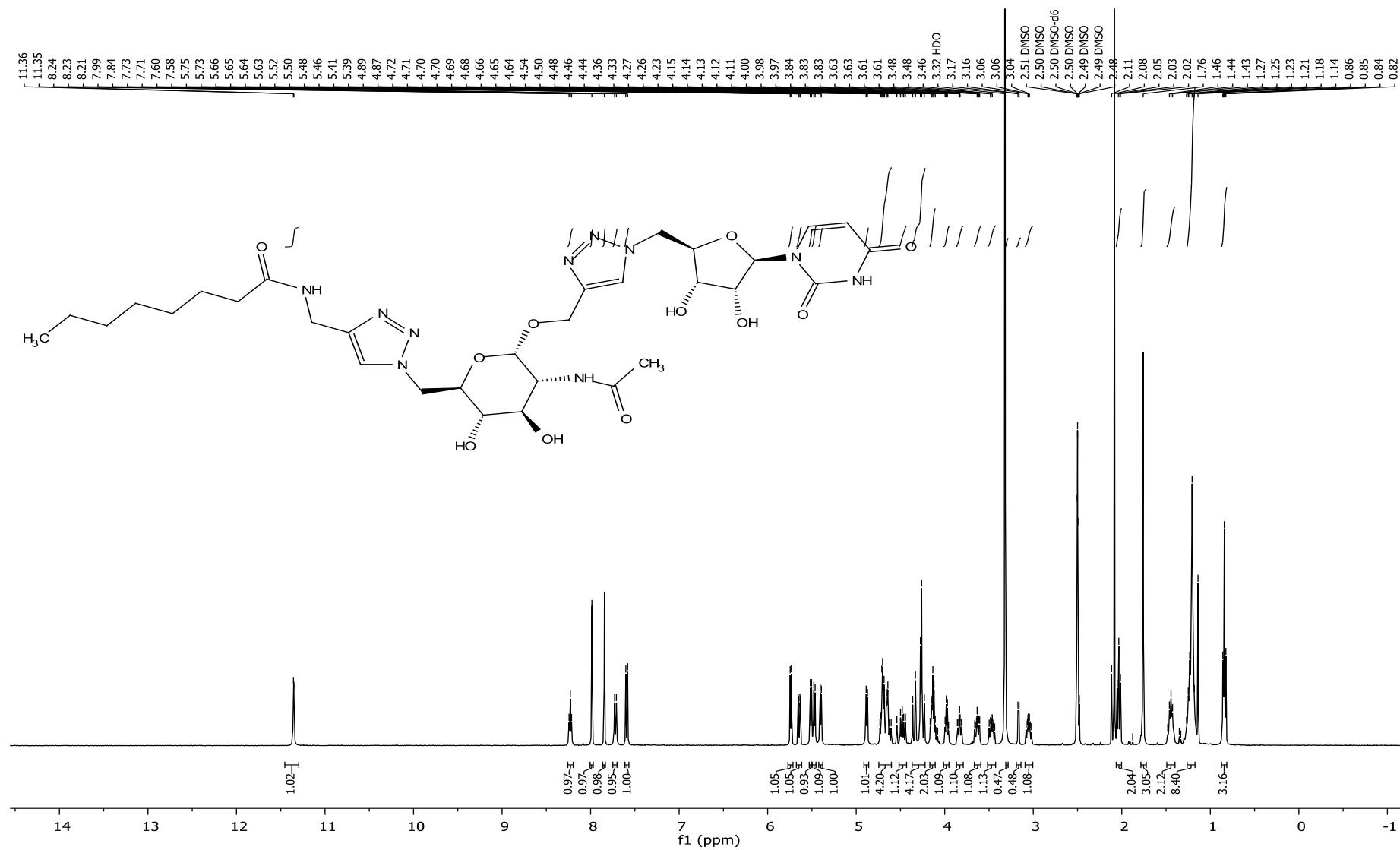
<sup>13</sup>C NMR (DMSO-d6) of compound **11c**



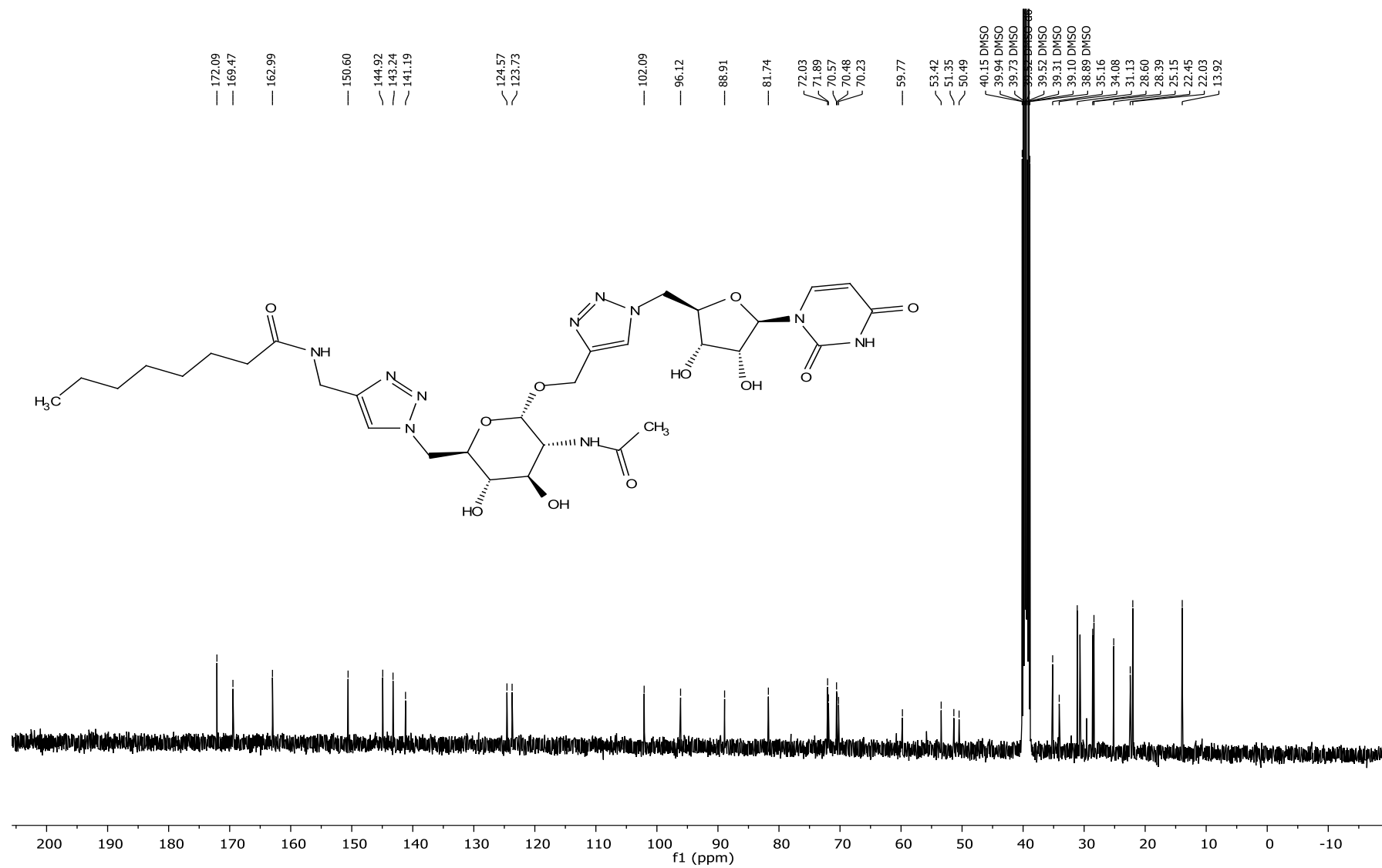
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **11c**



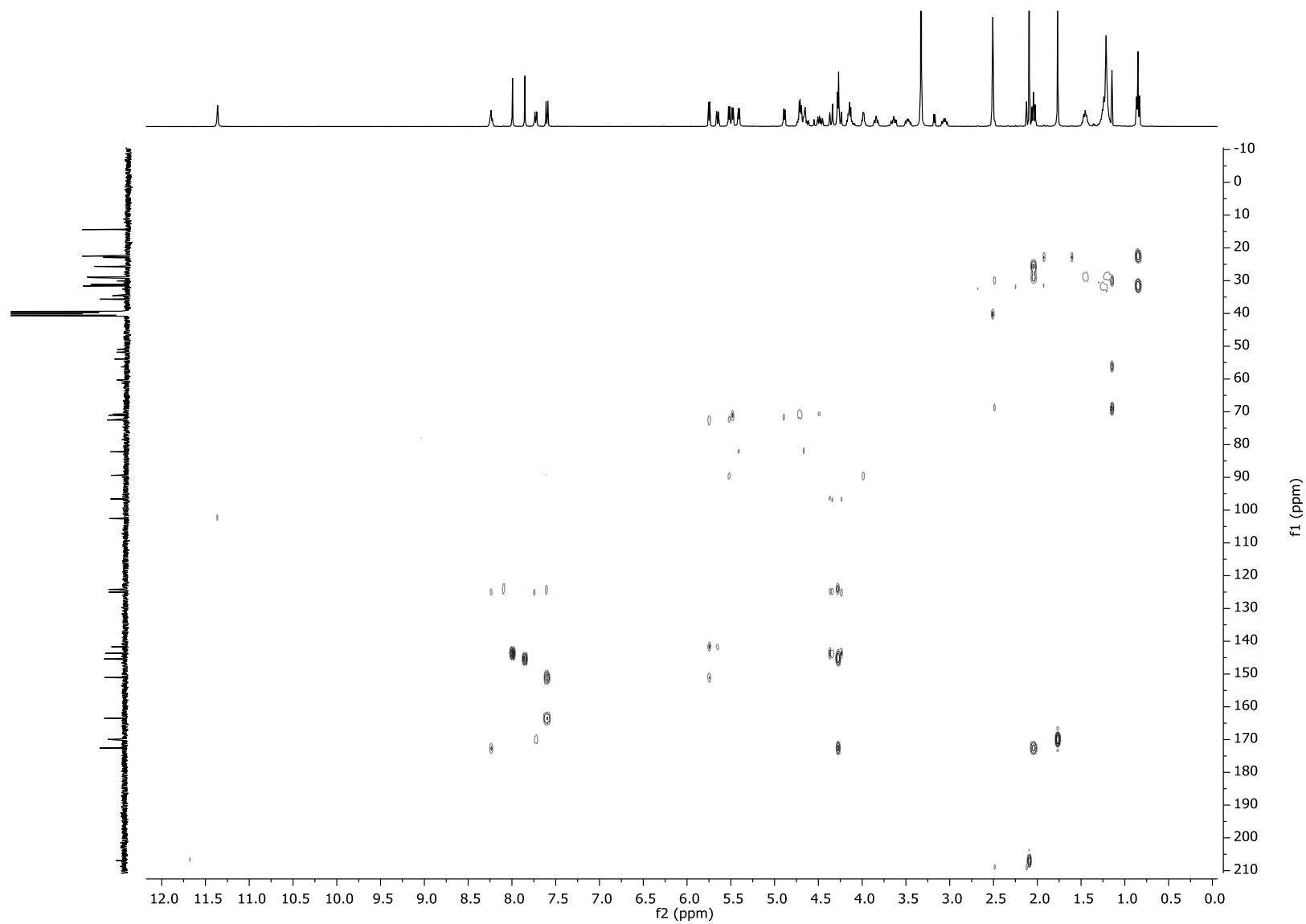
<sup>1</sup>H NMR (DMSO-d6) of compound **11d**



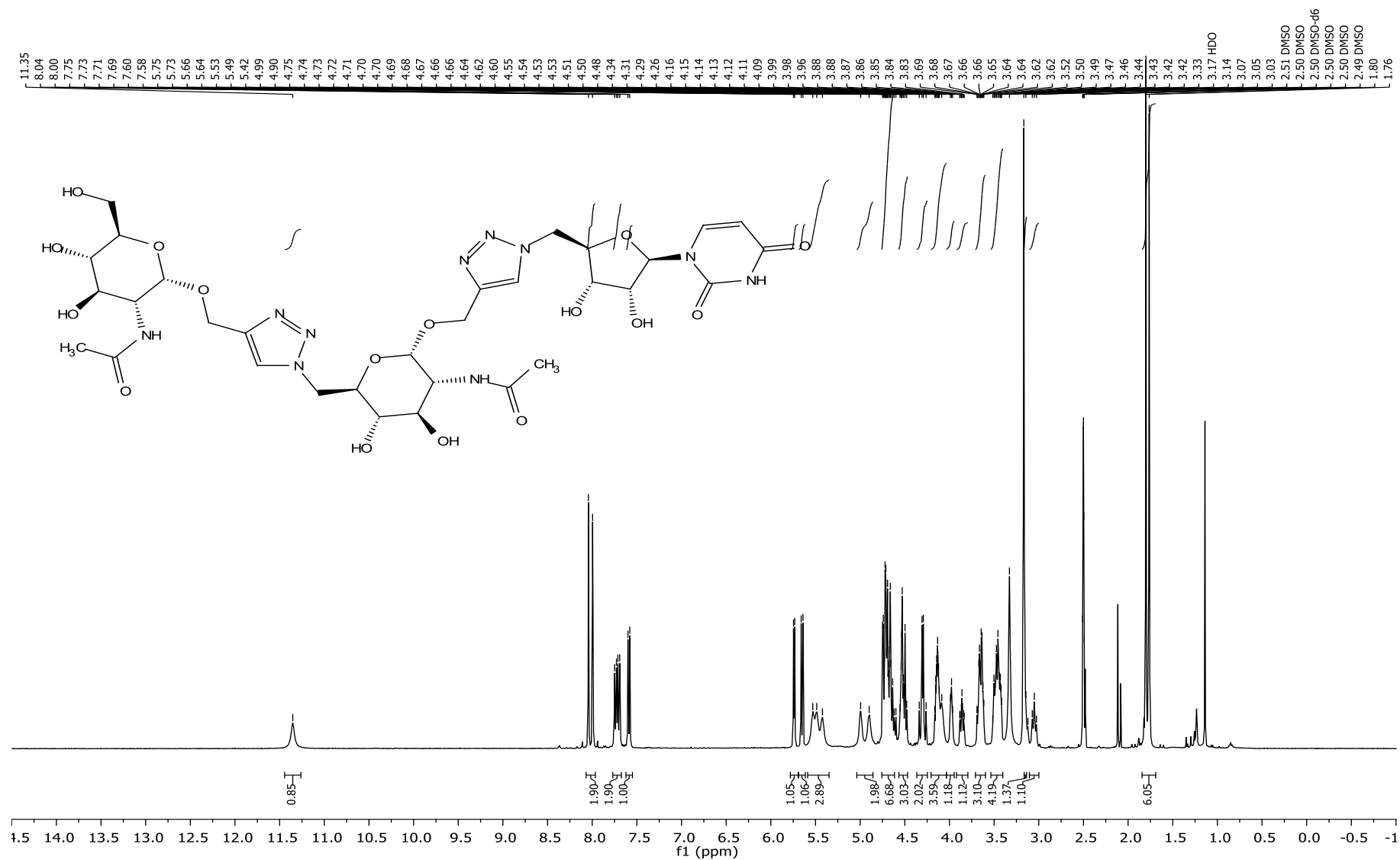
<sup>13</sup>C NMR (DMSO-d6) of compound **11d**



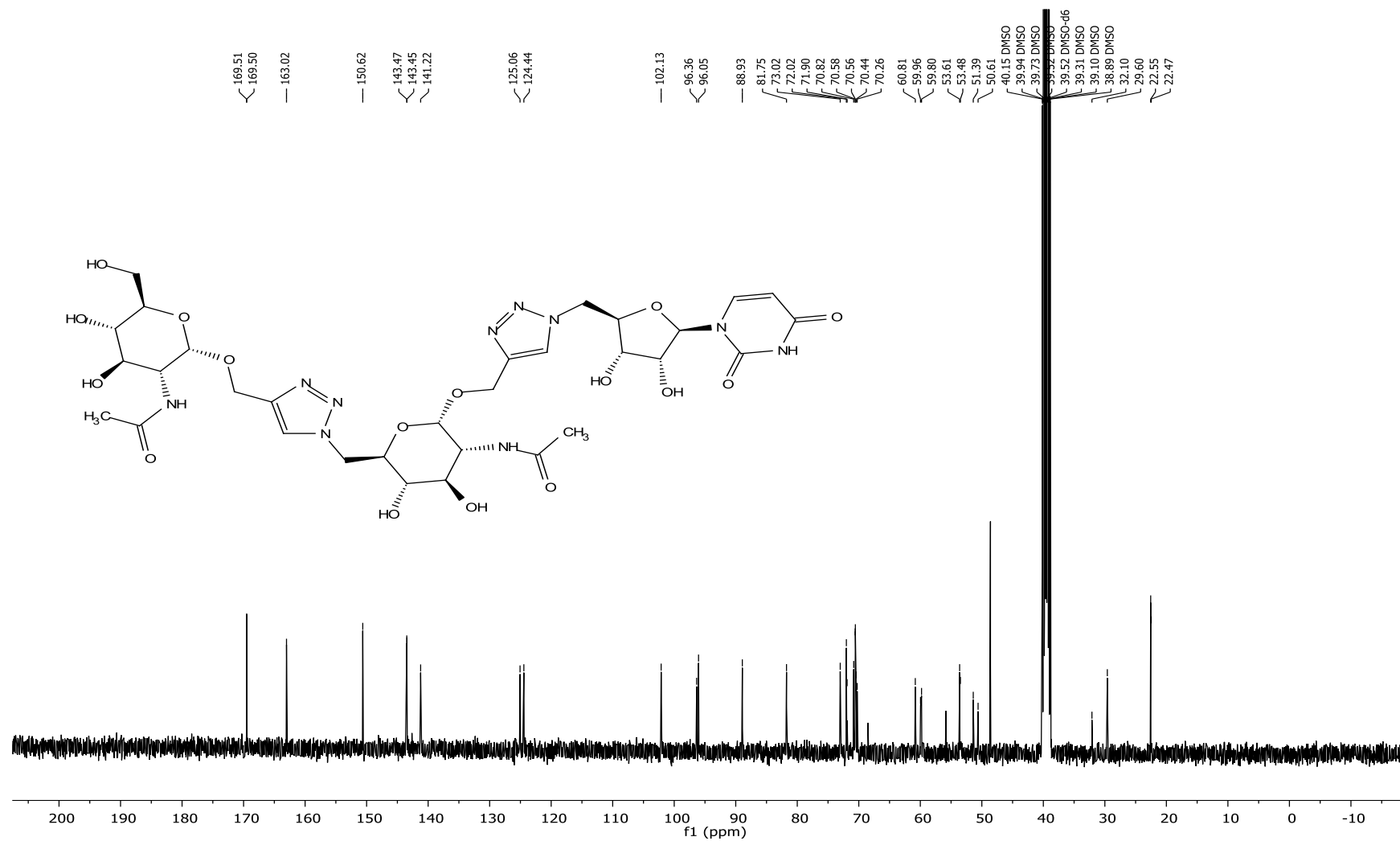
$^1\text{H}$ - $^{13}\text{C}$  HMBC NMR (DMSO- $d_6$ ) of compound **11d**



<sup>1</sup>H NMR (DMSO-d6) of compound **11e**



<sup>13</sup>C NMR (DMSO-d6) of compound 11e





H-<sup>13</sup>C HMBC NMR (DMSO-d<sub>6</sub>) of compound **11e**

