

SUPPORTING INFORMATION

# **Biginelli Reaction Synthesis of Novel Multitarget-Directed Ligands with Ca<sup>2+</sup> Channel Blocking Ability, Cholinesterase Inhibition, Antioxidant Capacity, and Nrf2 Activation**

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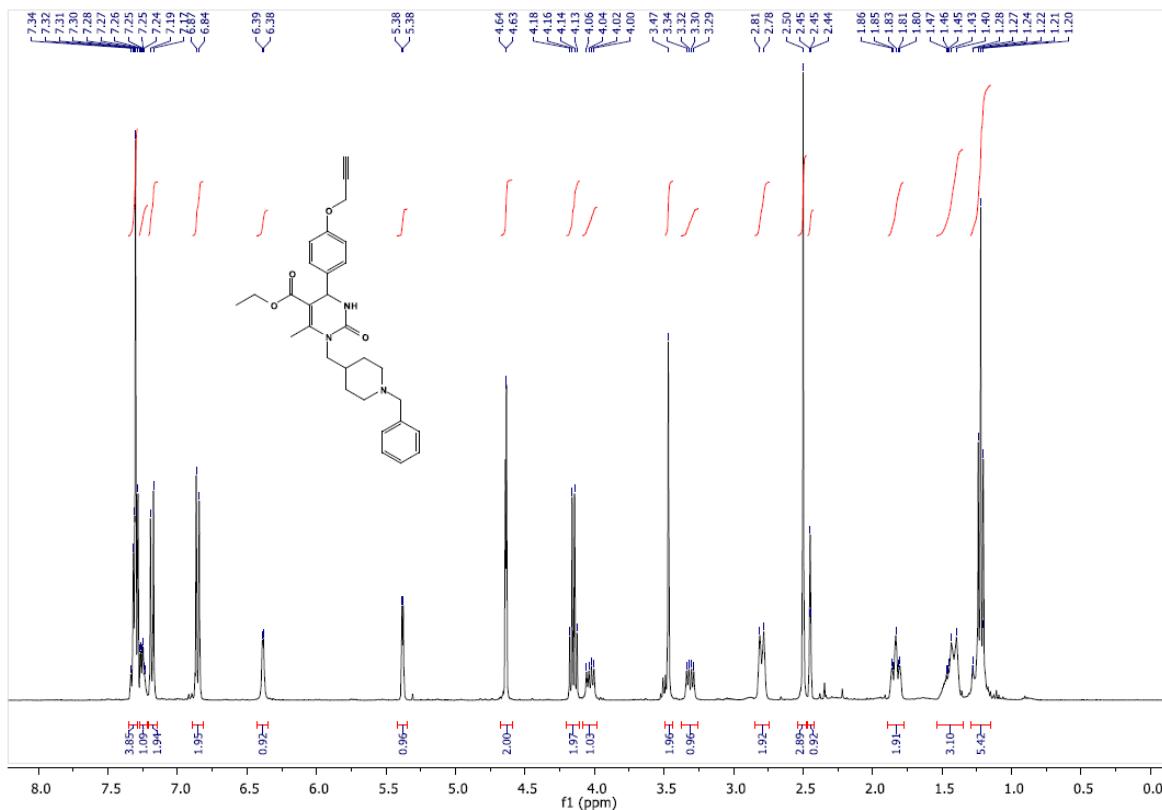
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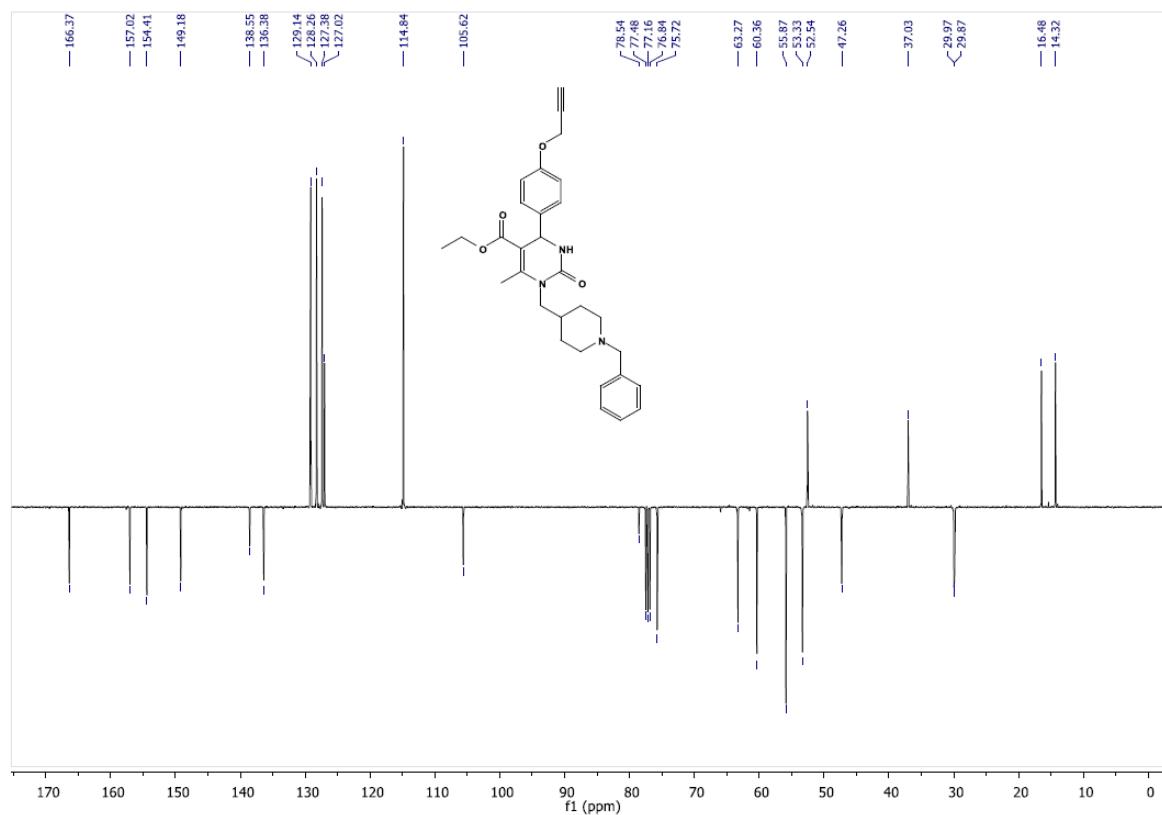
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### **Spectroscopic data of compounds 4a-d and 5a-d.**

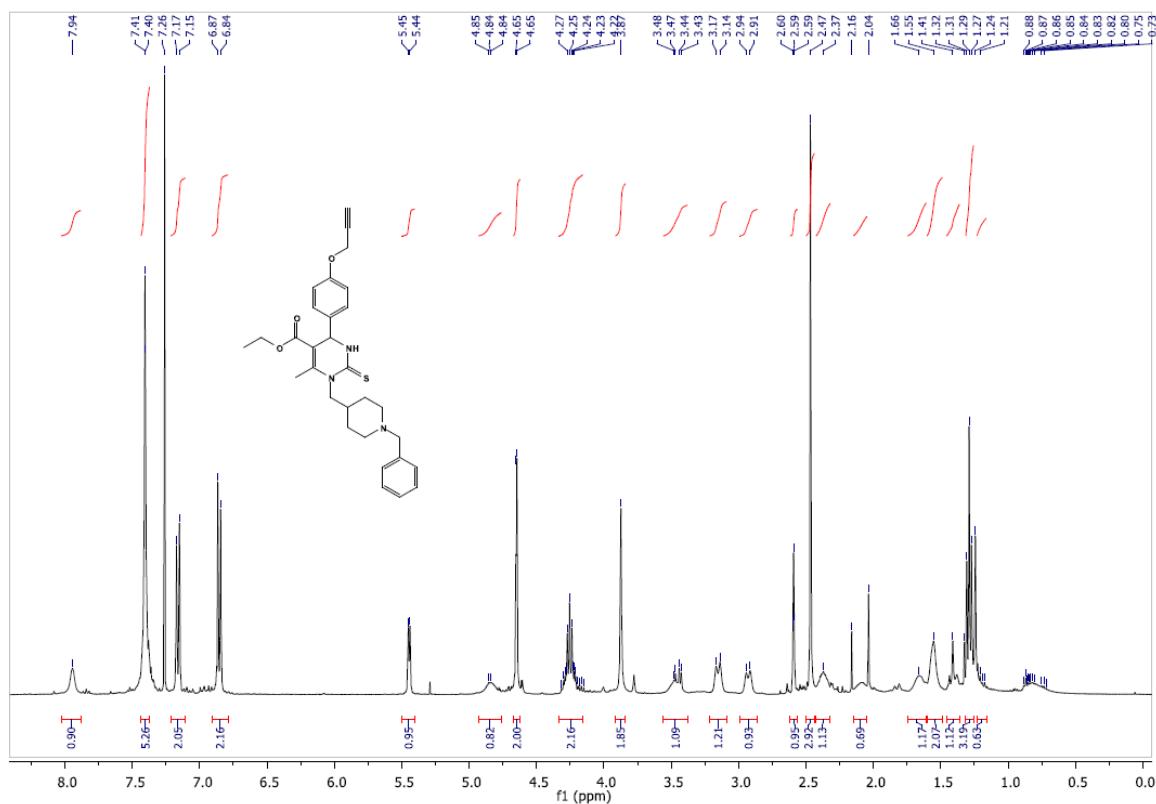
**Figure S1: <sup>1</sup>H NMR spectrum of compound 4a**



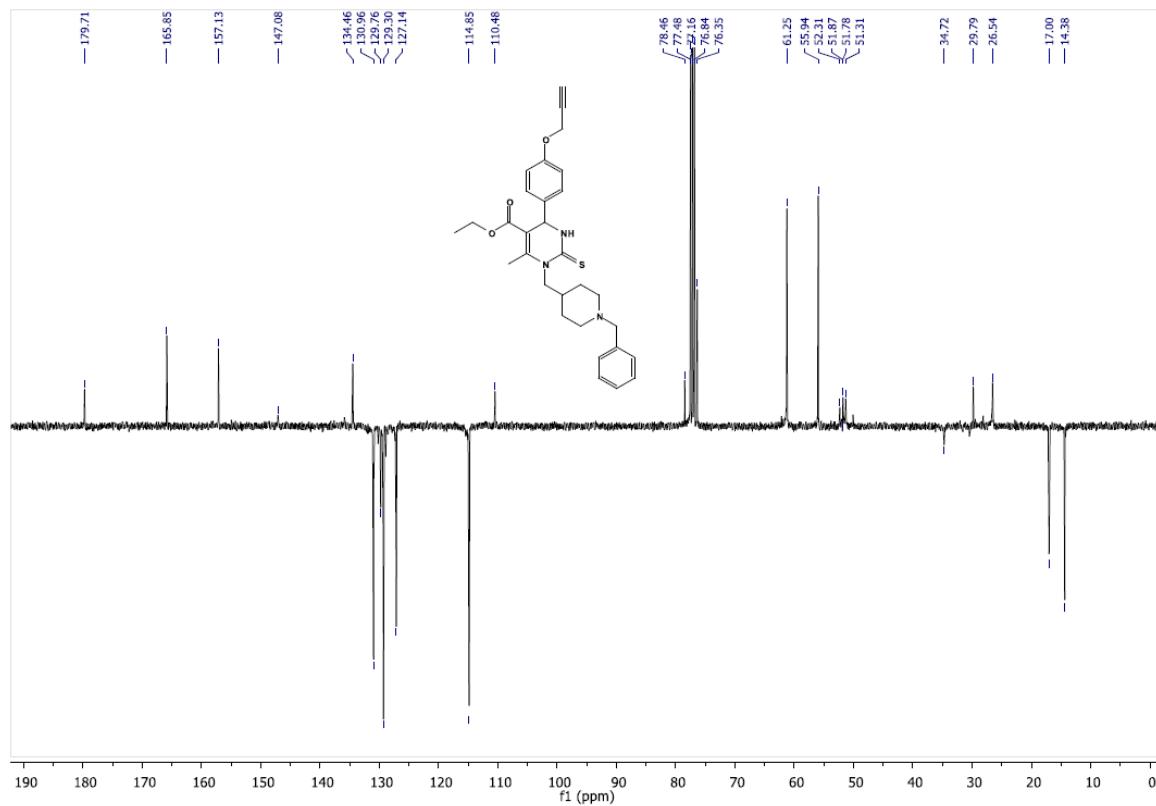
**Figure S2:**  $^{13}\text{C}$  NMR spectrum of compound 4a



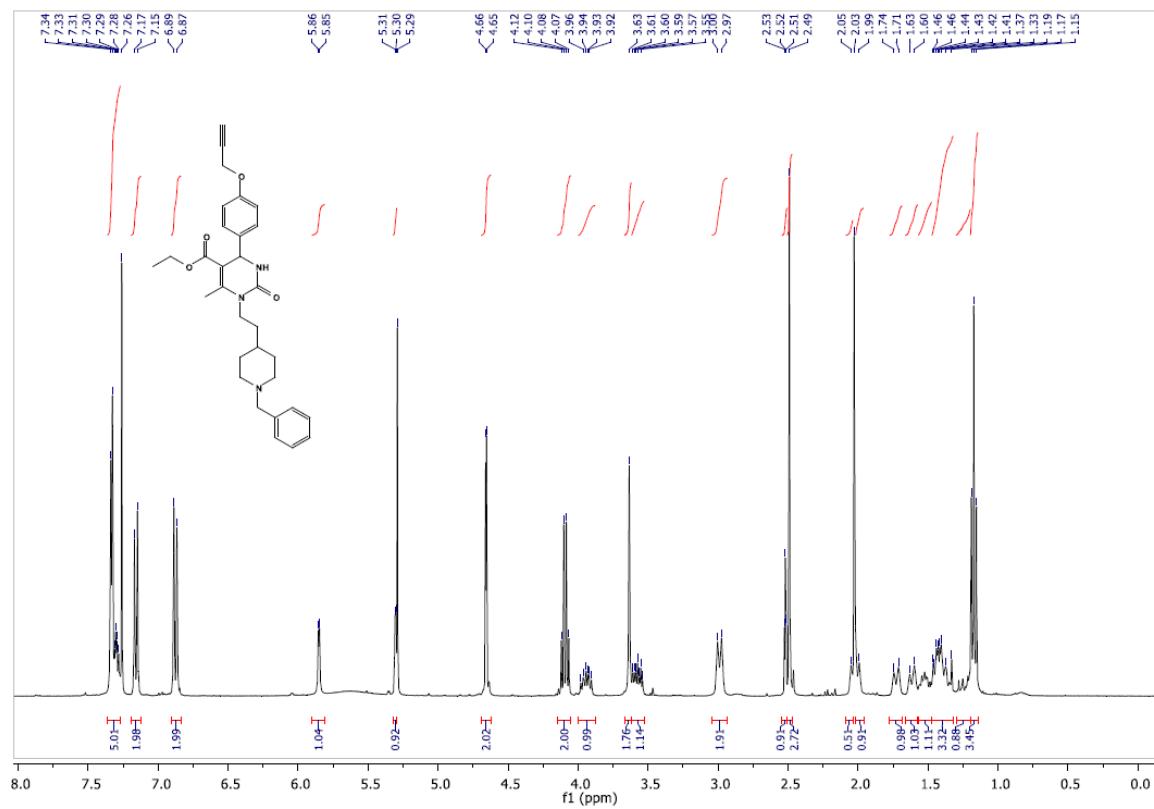
**Figure S3:  $^1\text{H}$  NMR spectrum of compound 5a**



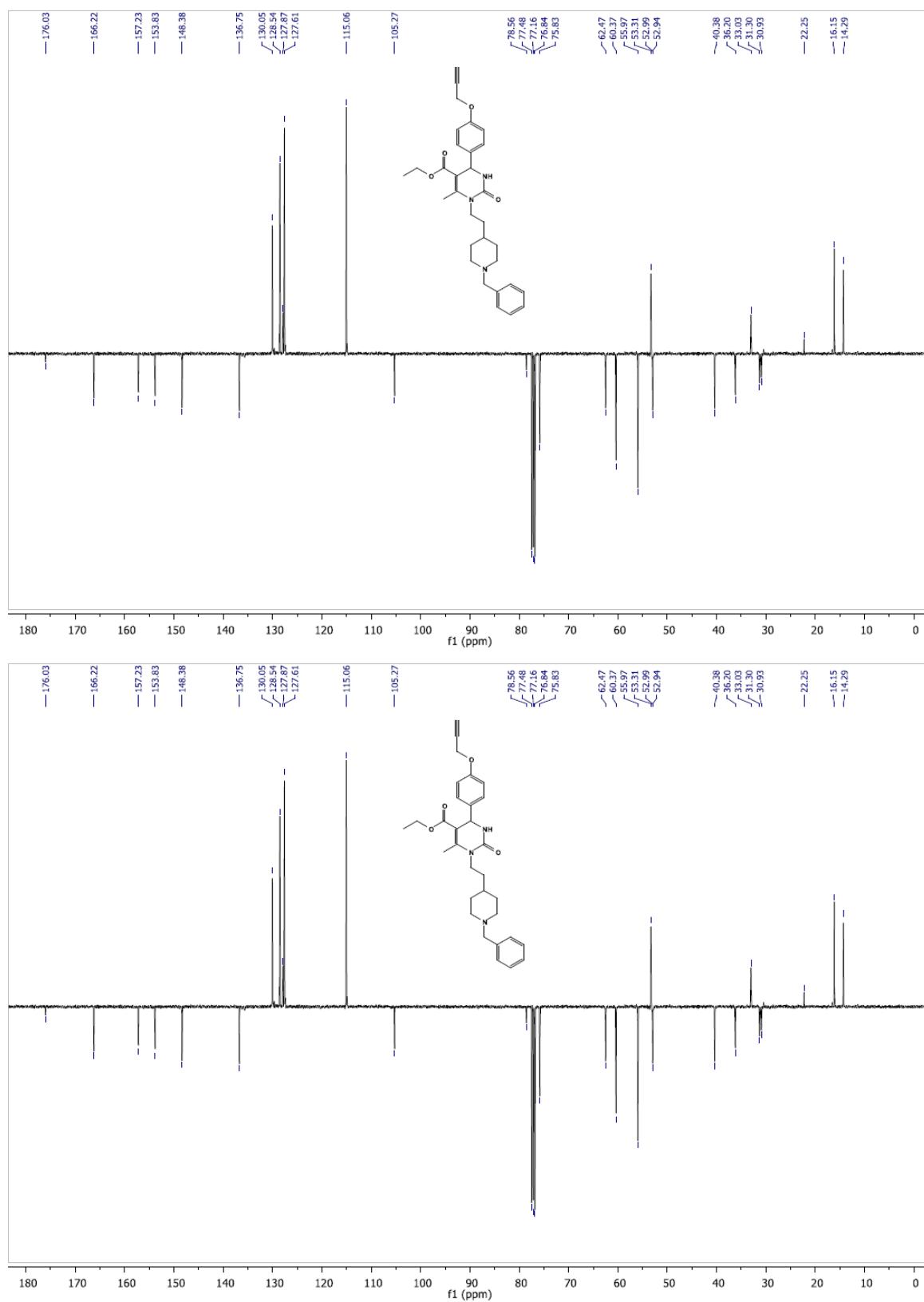
**Figure S4:  $^{13}\text{C}$  NMR spectrum of compound 5a**



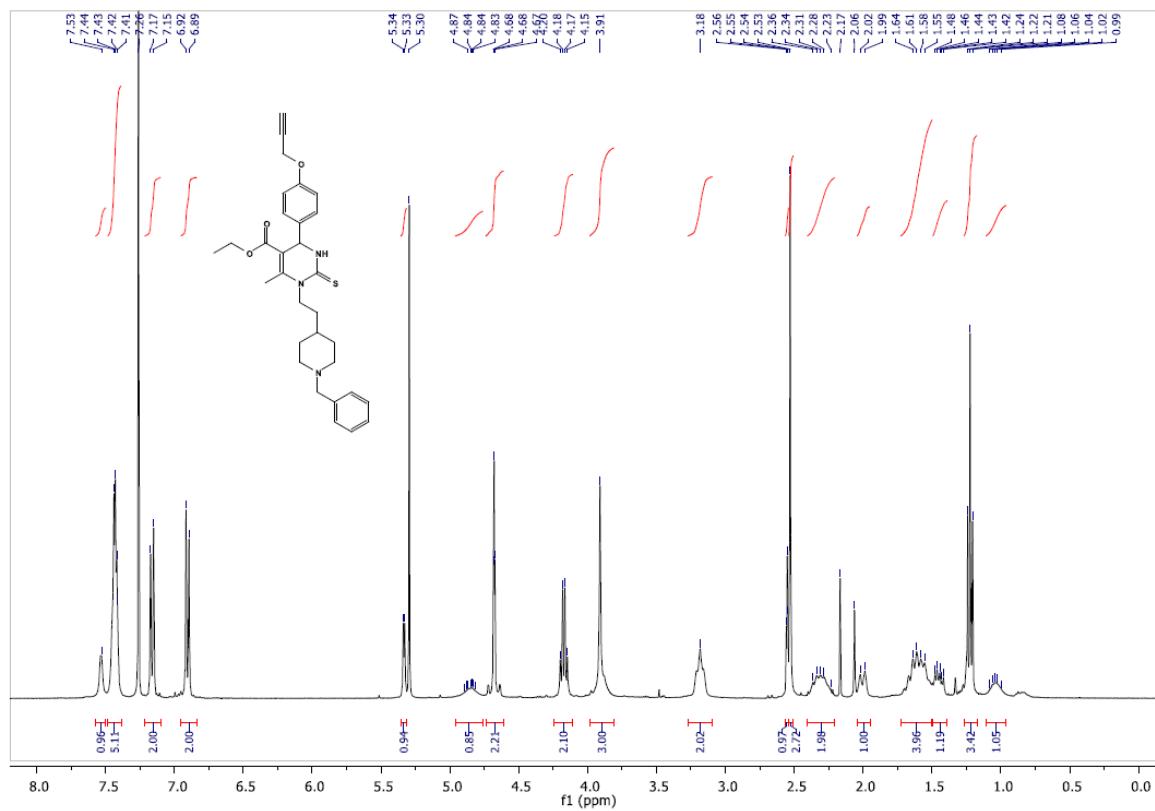
**Figure S5:**  $^1\text{H}$  NMR spectrum of compound 4b



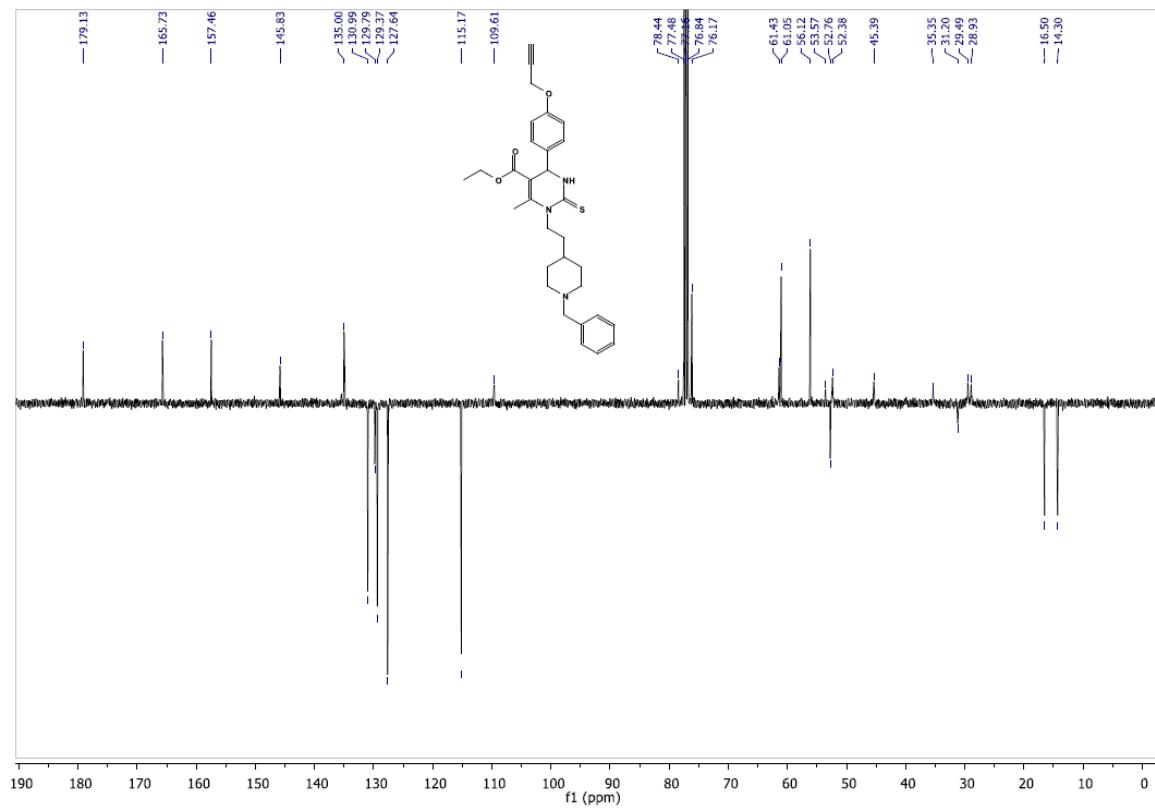
**Figure S6:**  $^{13}\text{C}$  NMR spectrum of compound 4b



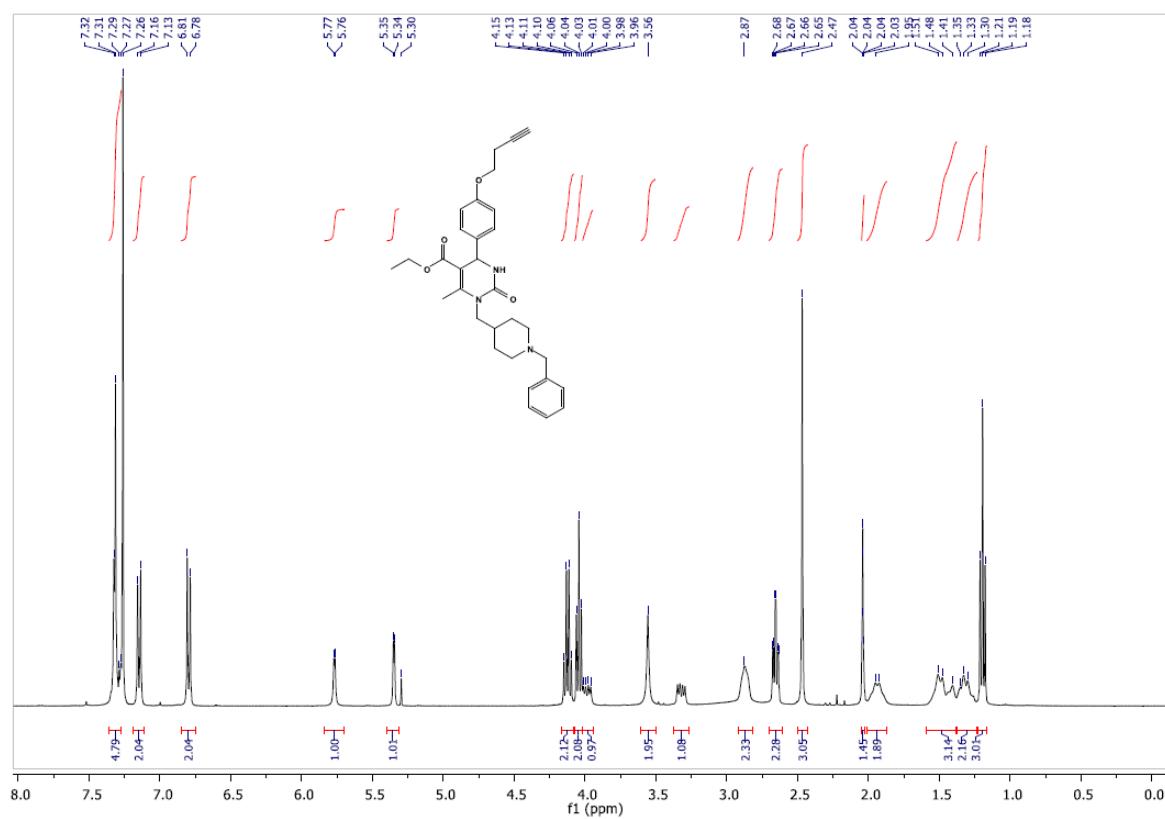
**Figure S7:**  $^1\text{H}$  NMR spectrum of compound 5b



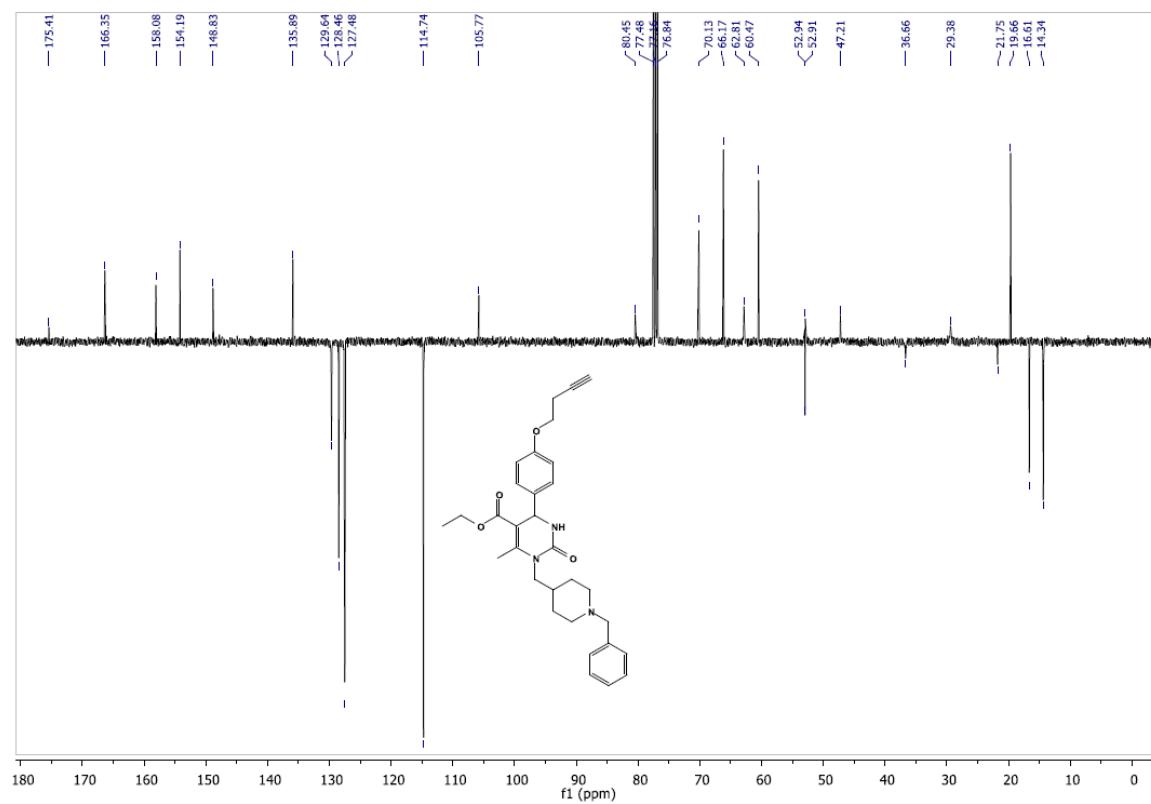
**Figure S8:**  $^{13}\text{C}$  NMR spectrum of compound 5b



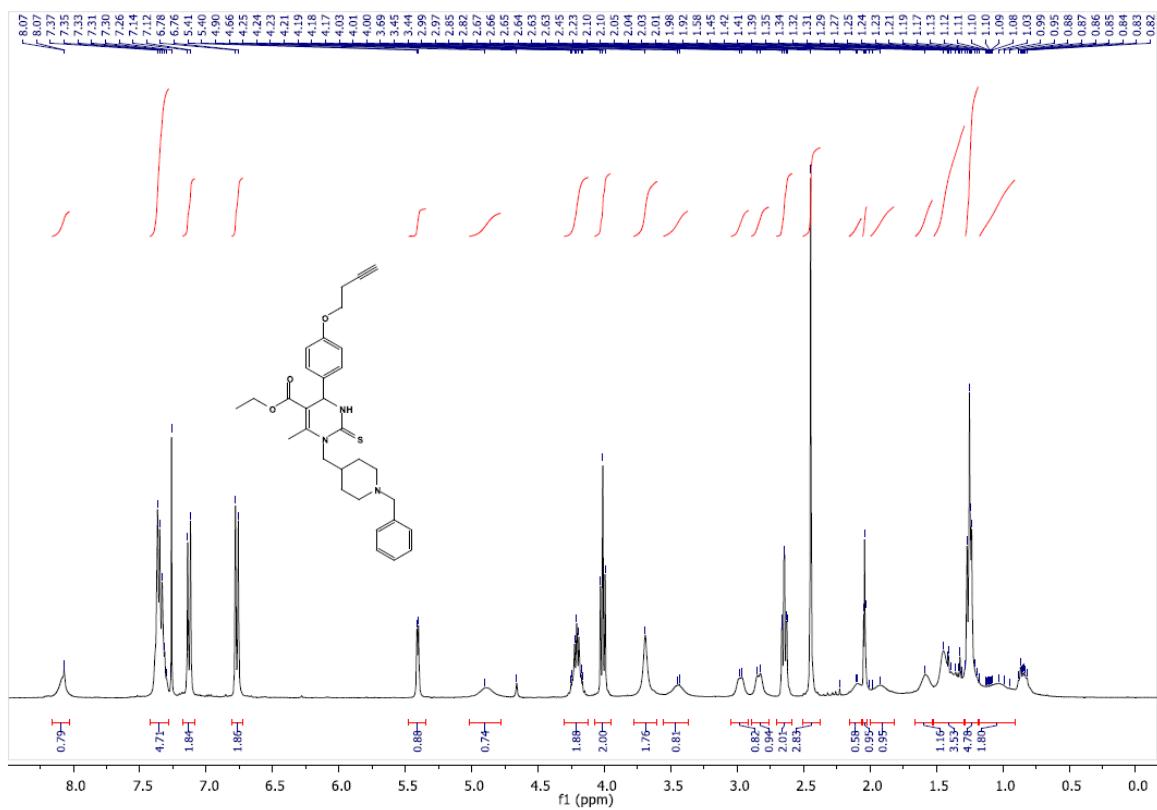
**Figure S9:**  $^1\text{H}$  NMR spectrum of compound 4c



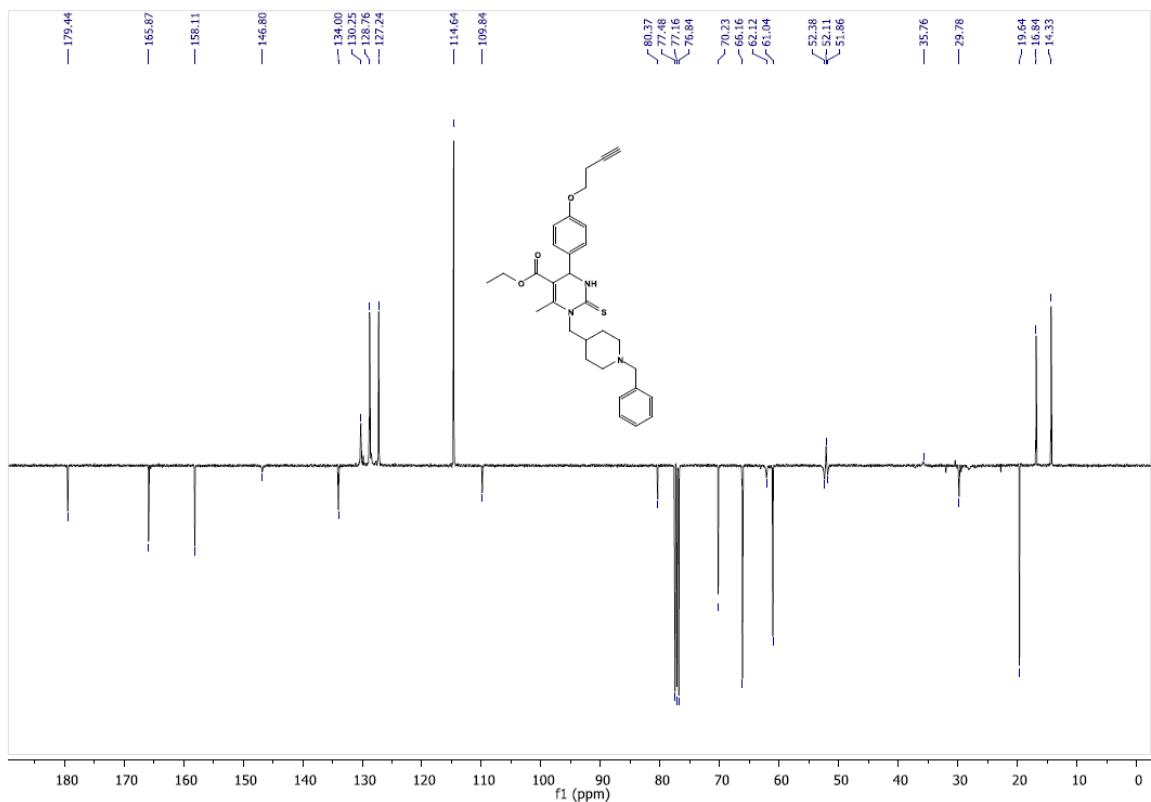
**Figure S10:**  $^{13}\text{C}$  NMR spectrum of compound 4c



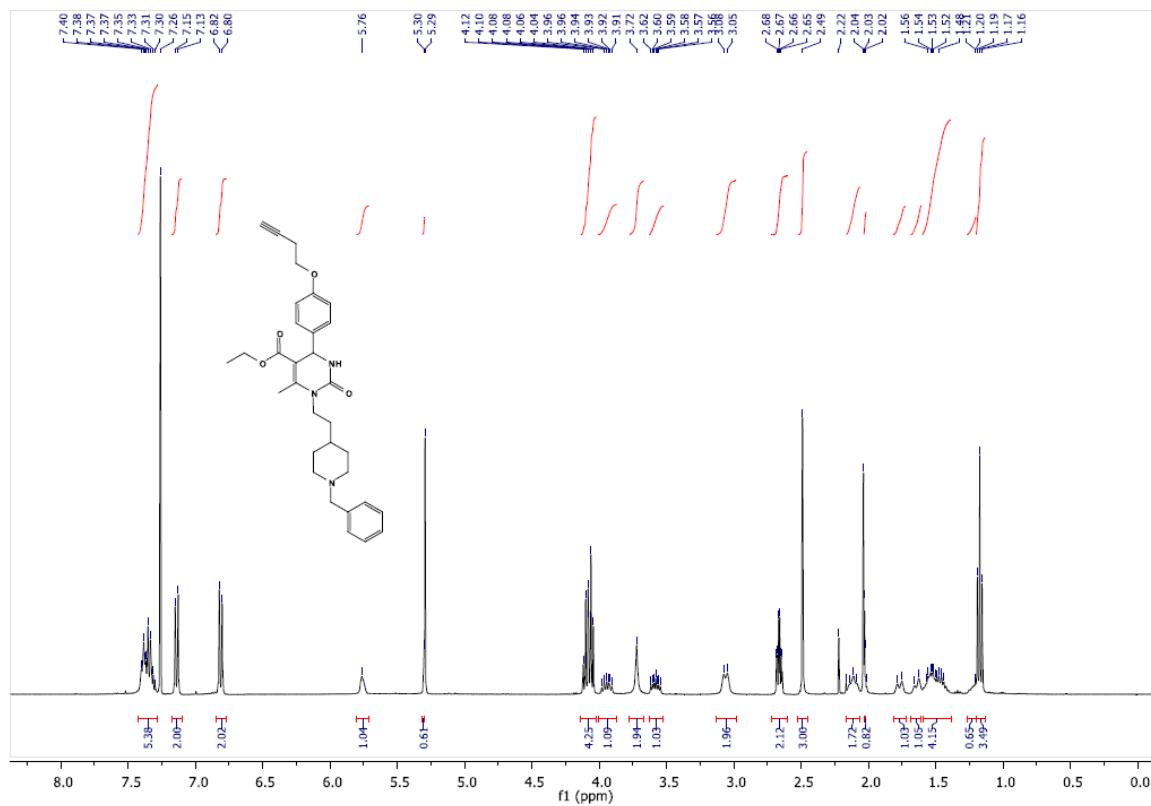
**Figure S11:  $^1\text{H}$  NMR spectrum of compound 5c**



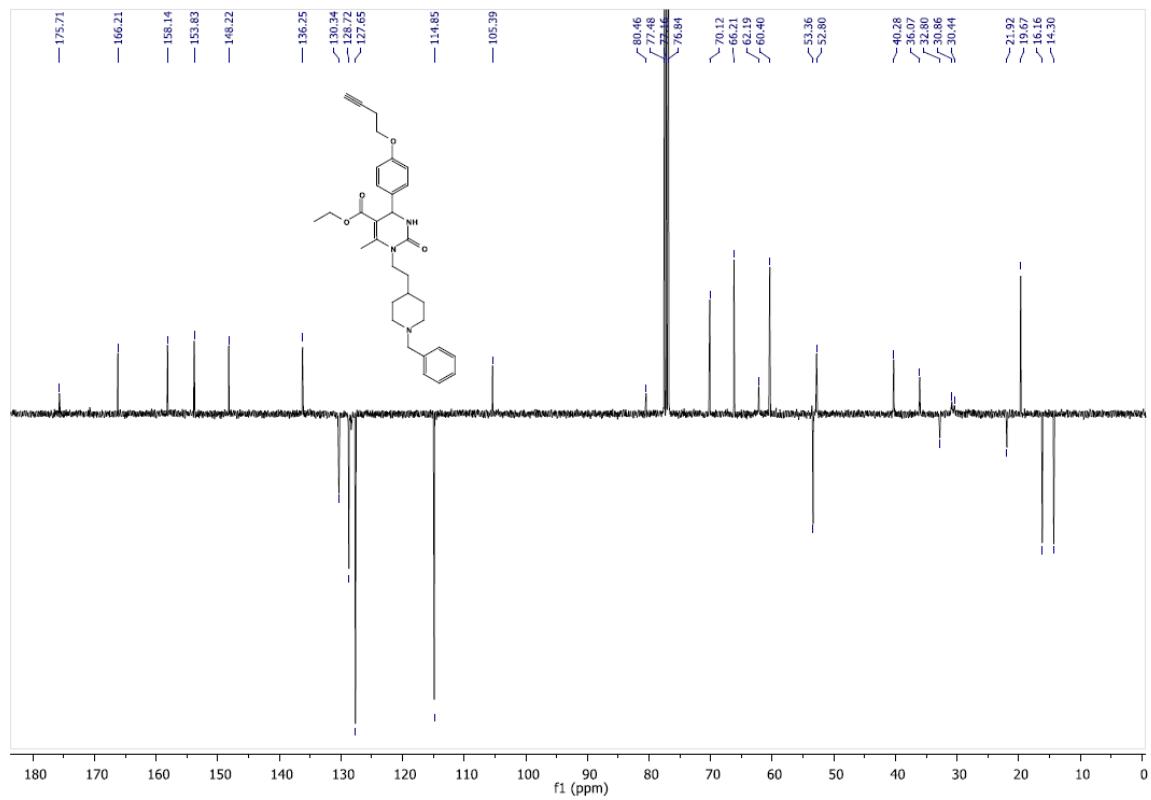
**Figure S12:  $^{13}\text{C}$  NMR spectrum of compound 5c**



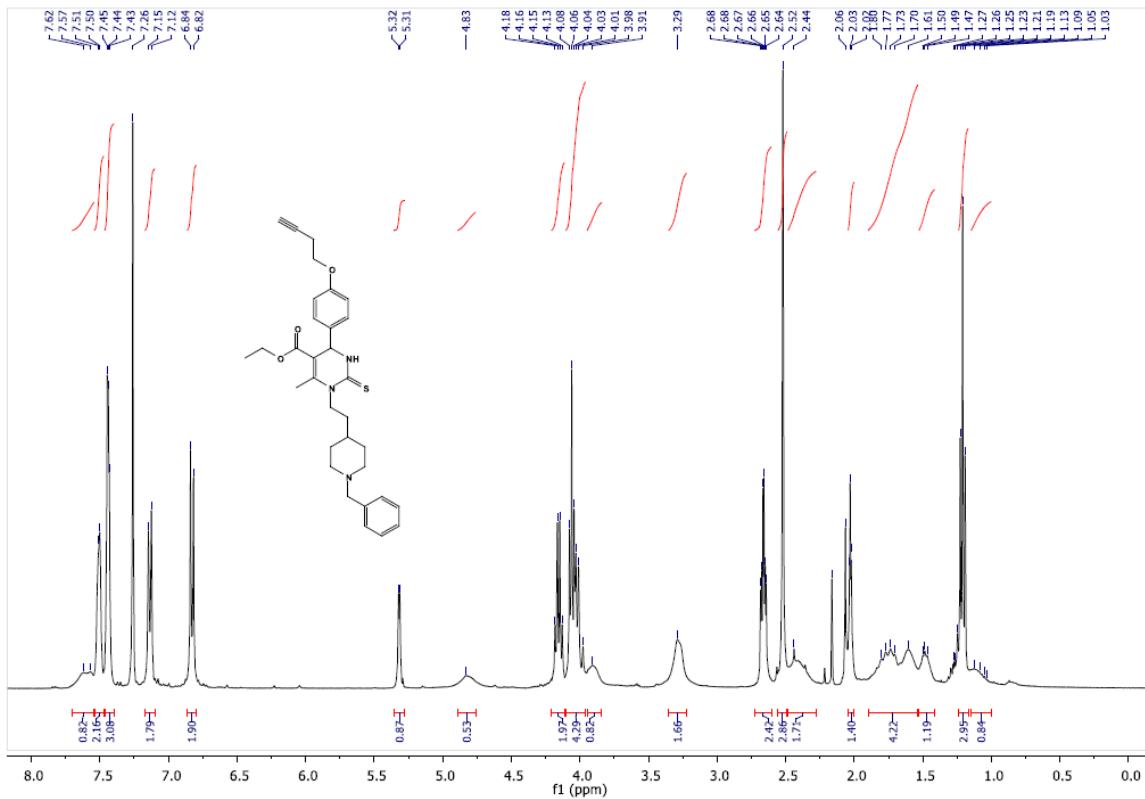
**Figure S13:  $^1\text{H}$  NMR spectrum of compound 4d**



**Figure S14:  $^{13}\text{C}$  NMR spectrum of compound 4d**



**Figure S15:**  $^1\text{H}$  NMR spectrum of compound 5d



**Figure S16:**  $^{13}\text{C}$  NMR spectrum of compound 5d

