



# Synthesis of oseltamivir derivatives designed for multivalent influenza A inhibition

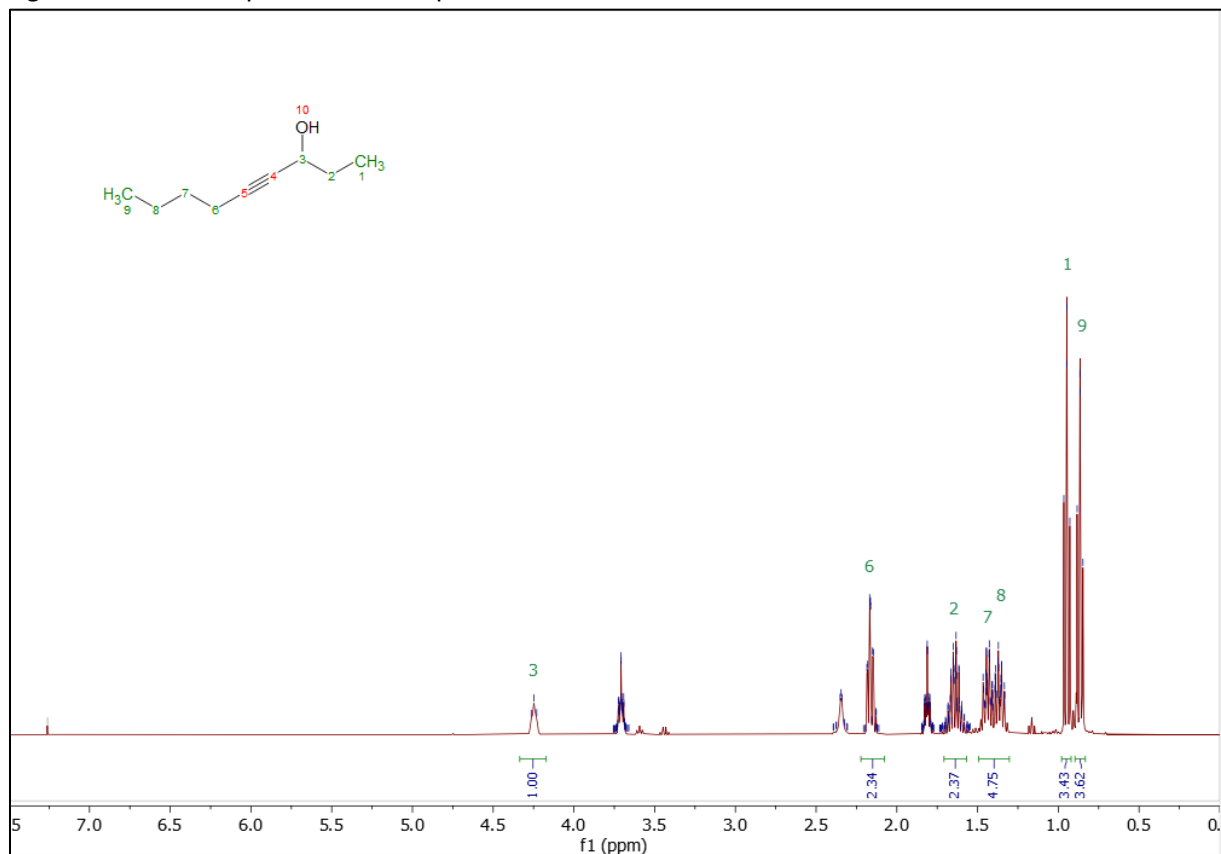
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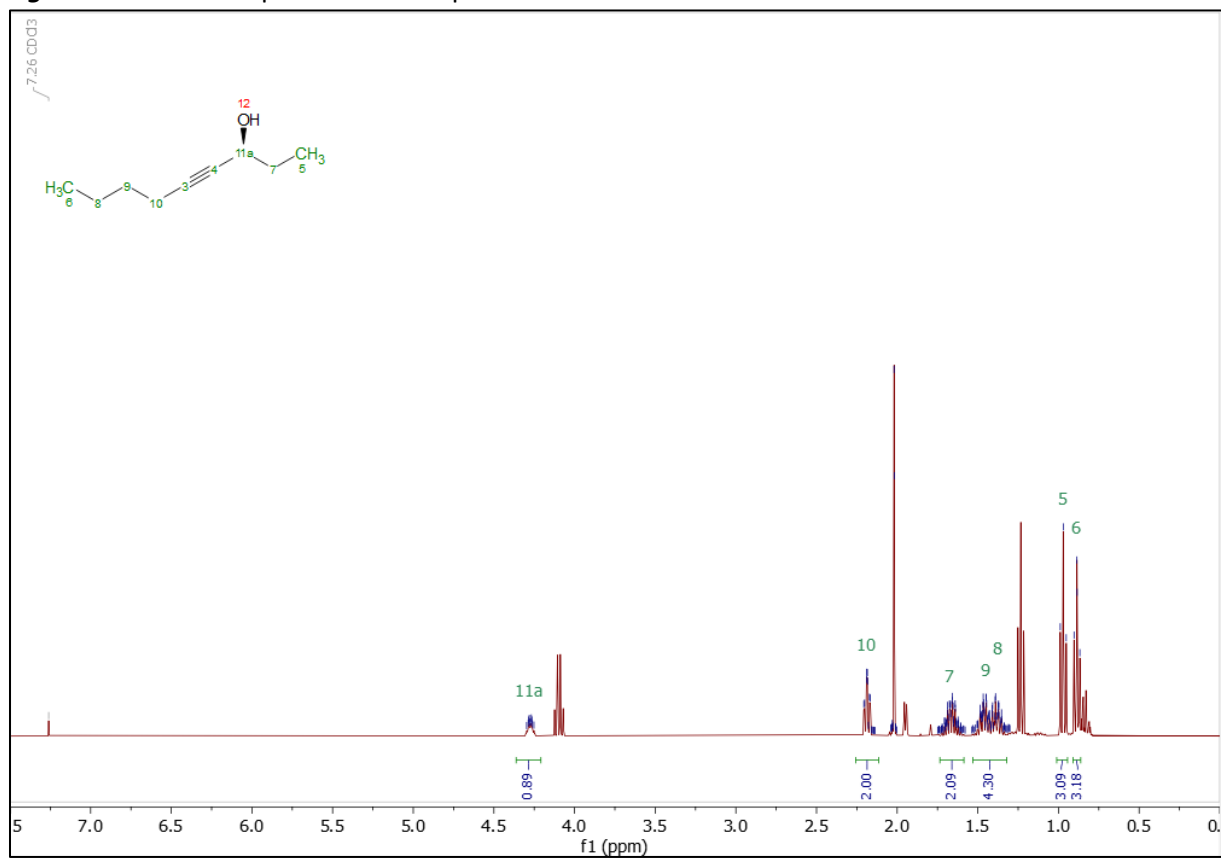
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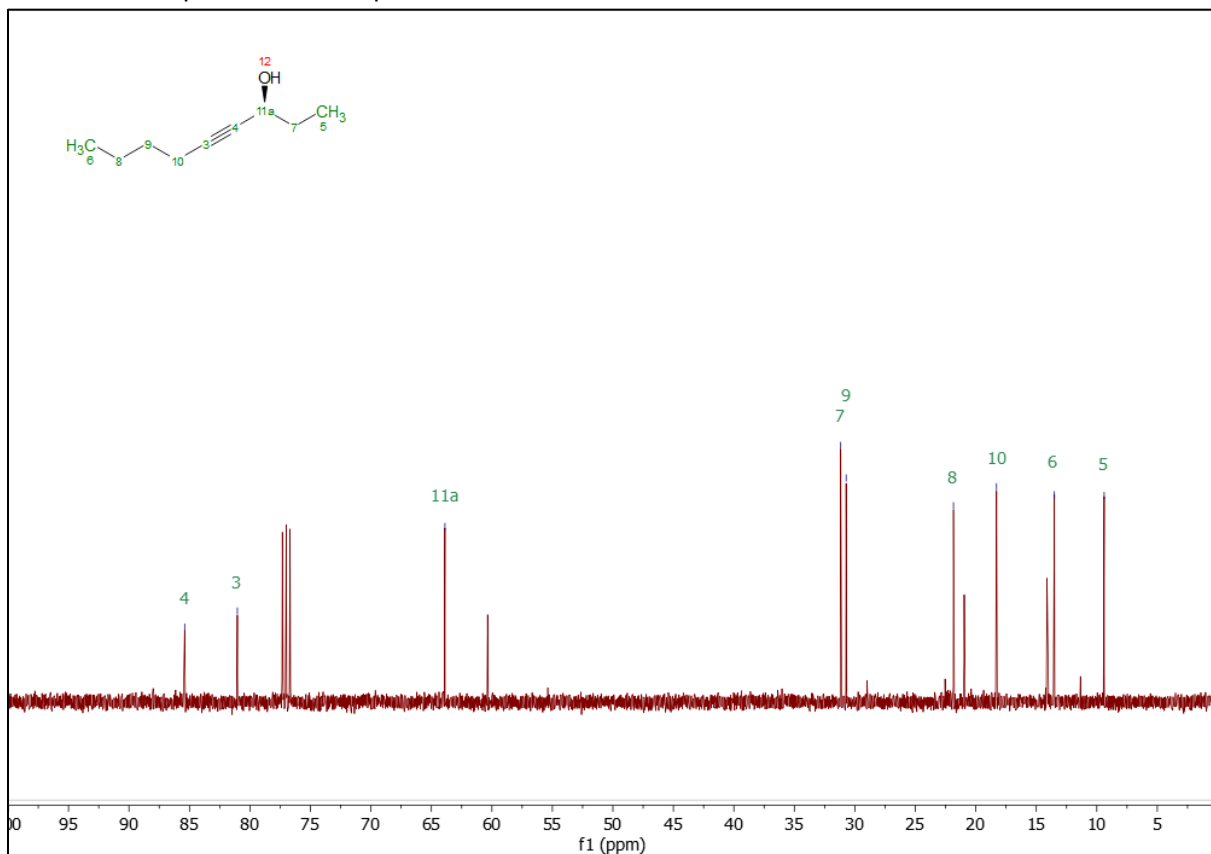
**Figure S1:**  $^1\text{H}$  NMR spectrum of compound **1-*rac***



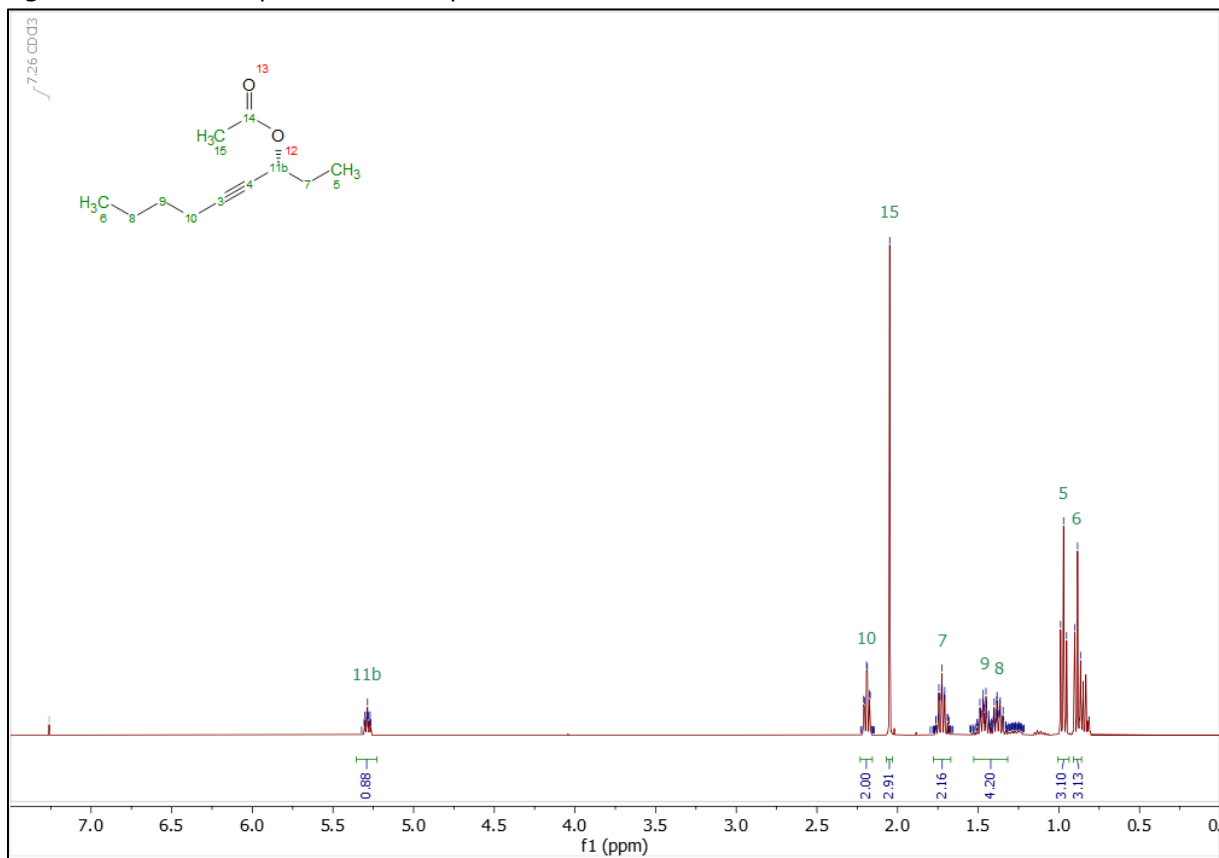
**Figure S2a:**  $^1\text{H}$  NMR spectrum of compound **1-S**



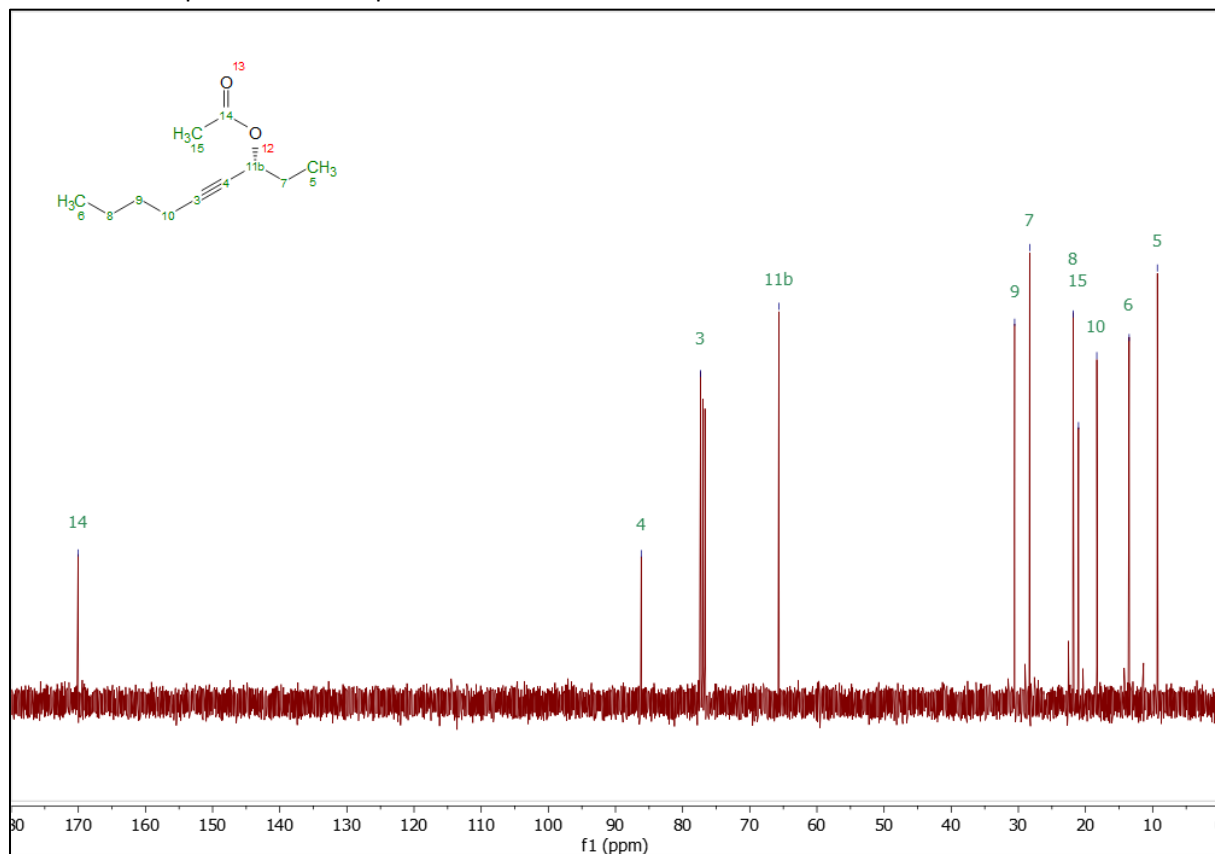
**S2b:**  $^{13}\text{C}$  NMR spectrum of compound **1-S**



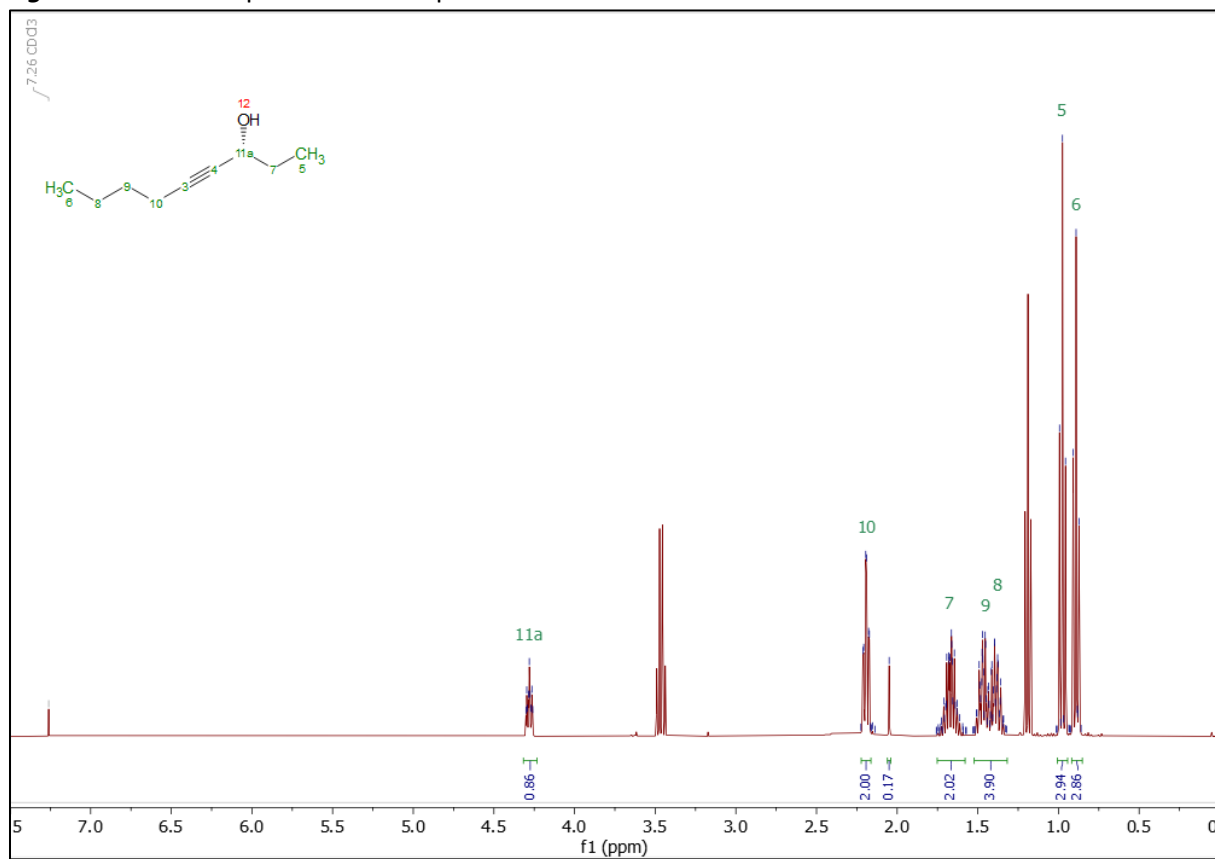
**Figure S3a:**  $^1\text{H}$  NMR spectrum of compound **3**



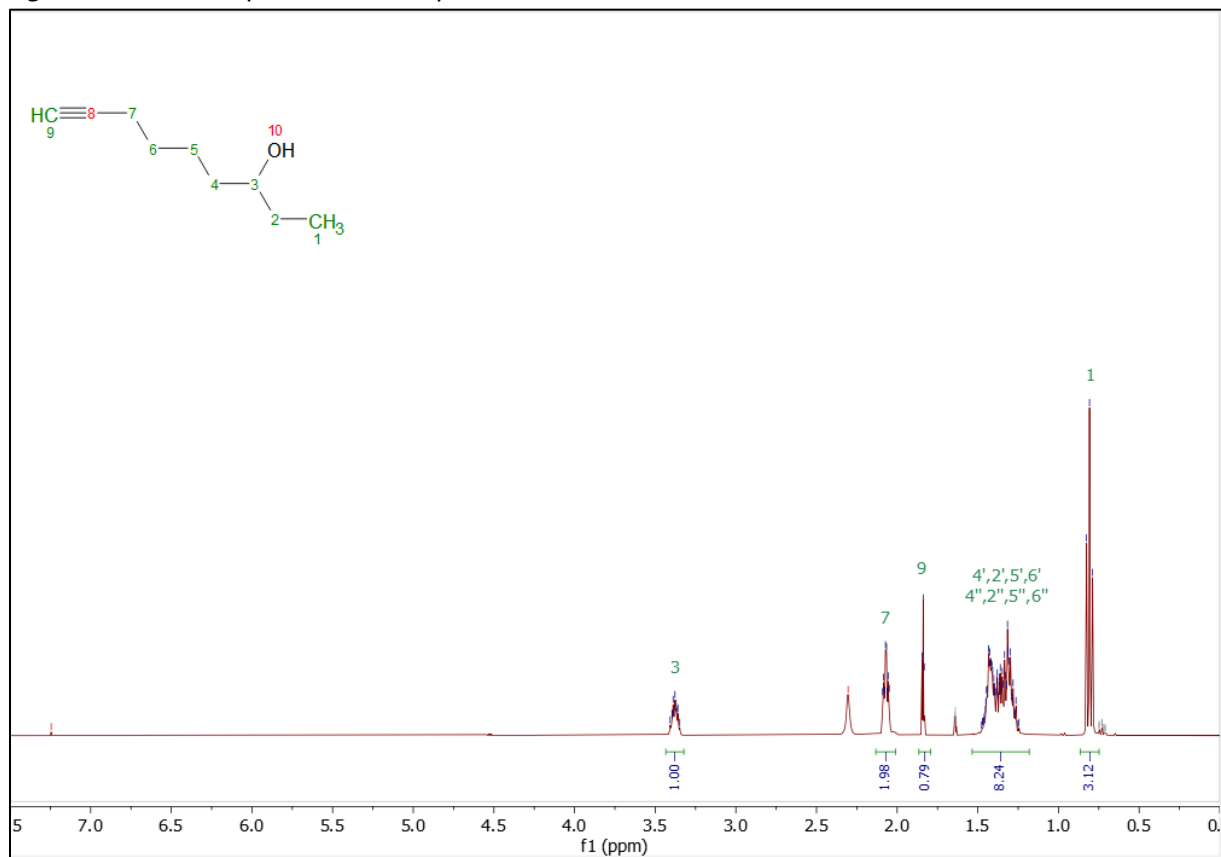
**S3b:**  $^{13}\text{C}$  NMR spectrum of compound **3**



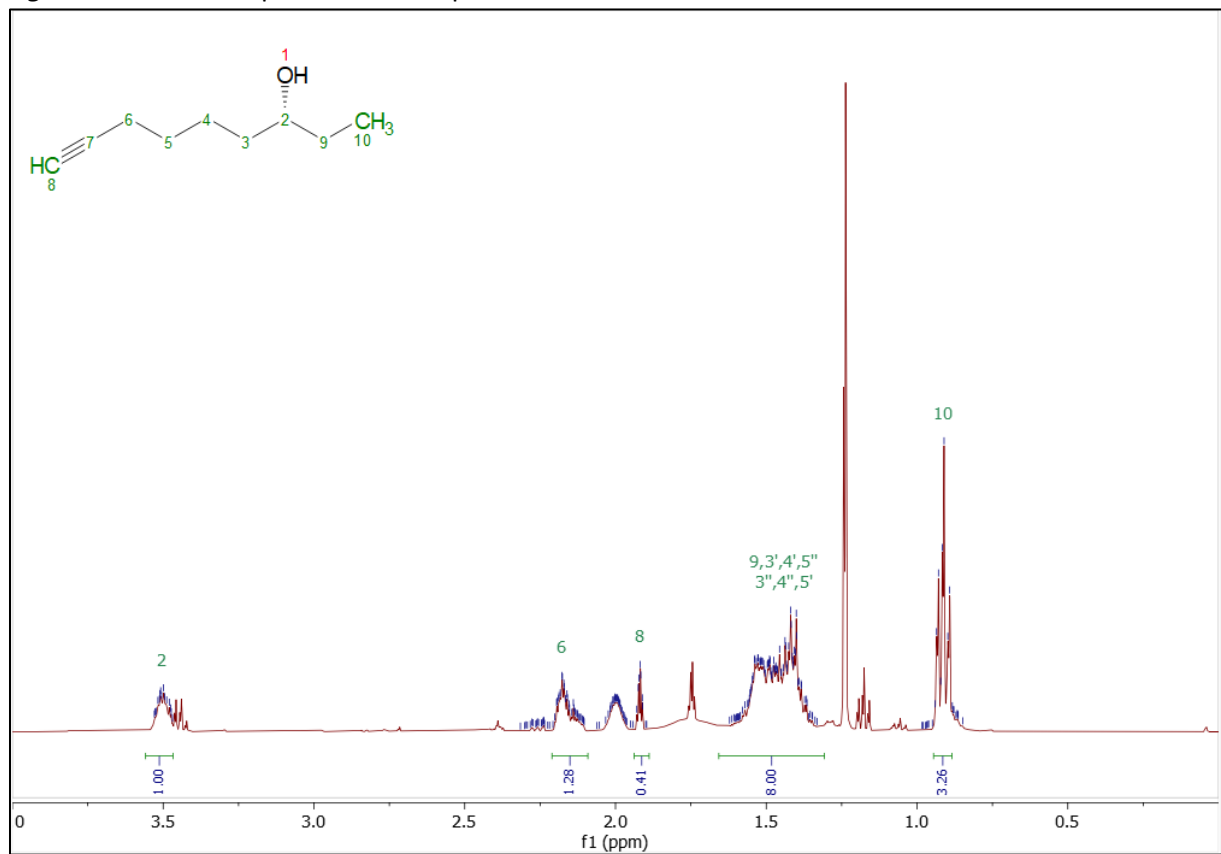
**Figure S4:**  $^1\text{H}$  NMR spectrum of compound **1-R**



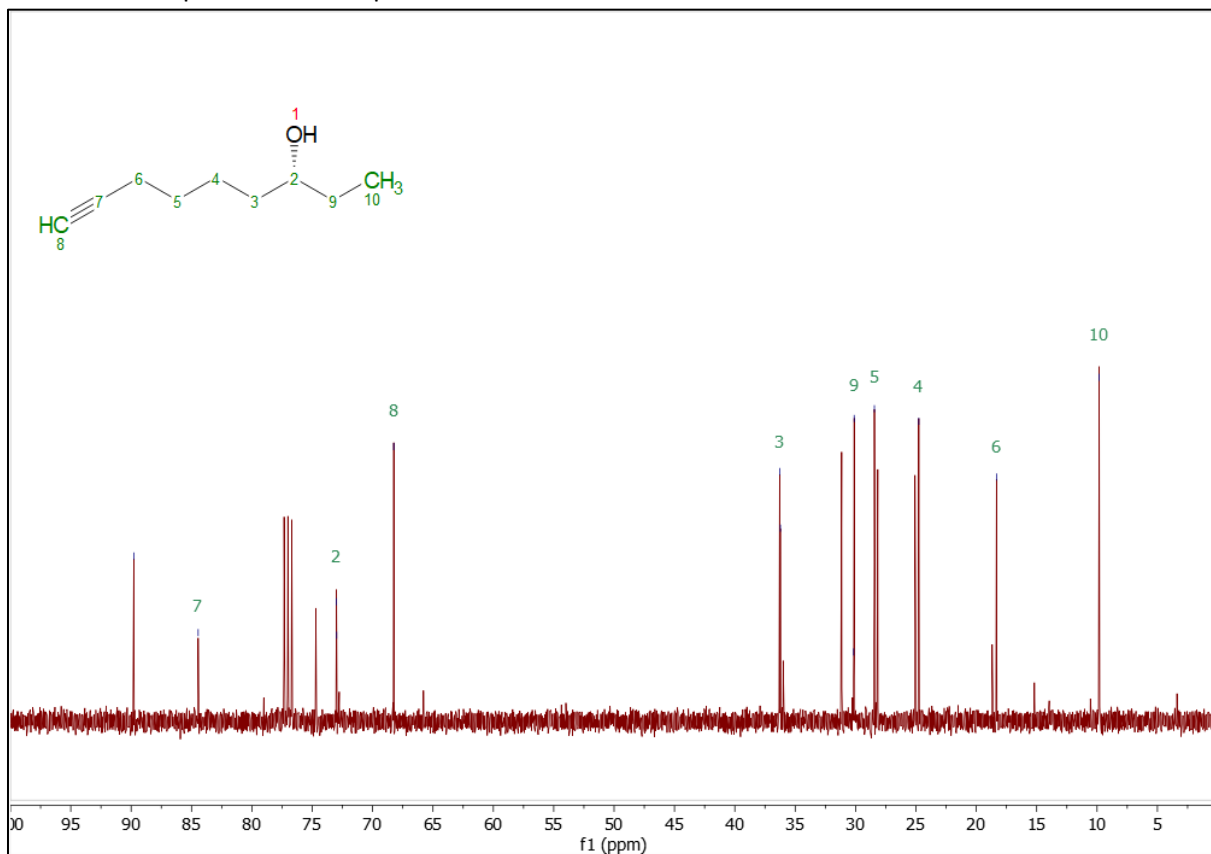
**Figure S5:**  $^1\text{H}$  NMR spectrum of compound **2-rac**



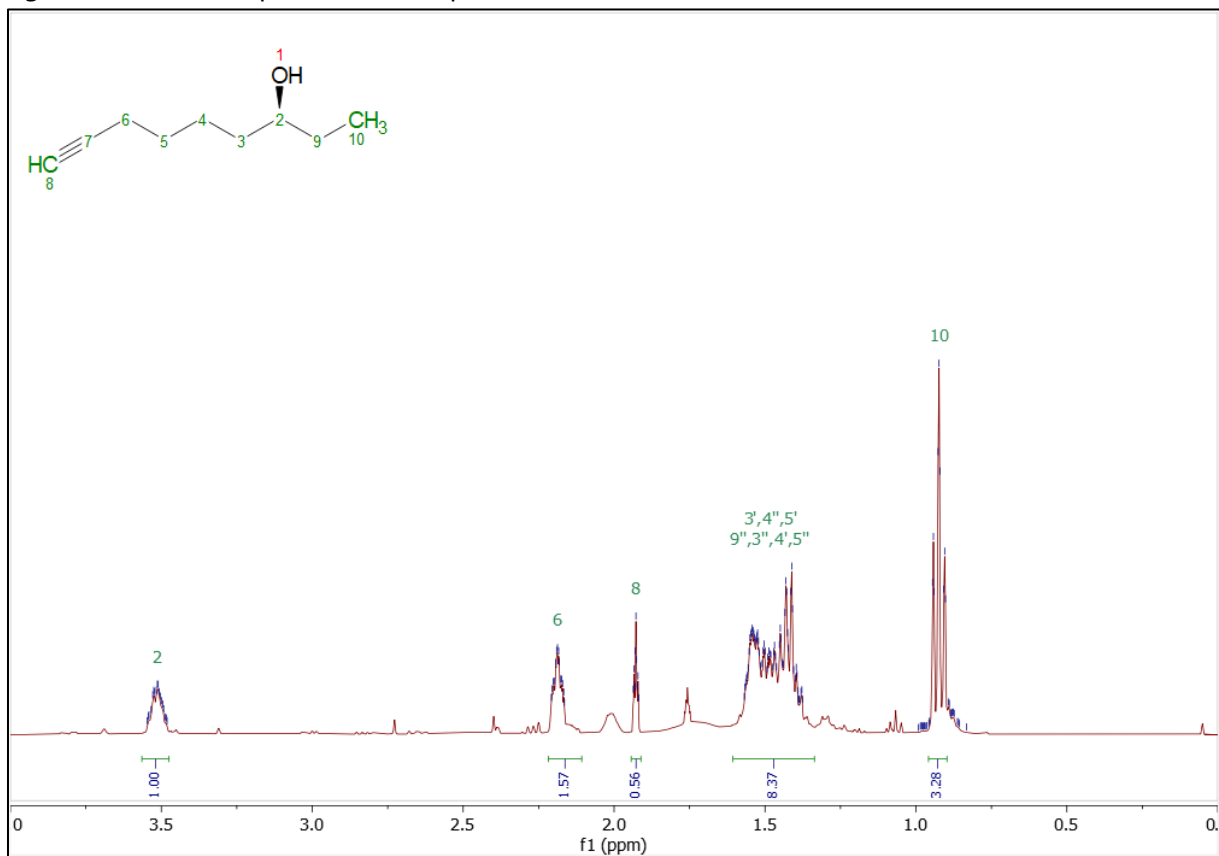
**Figure S6a:**  $^1\text{H}$  NMR spectrum of compound **2-R**



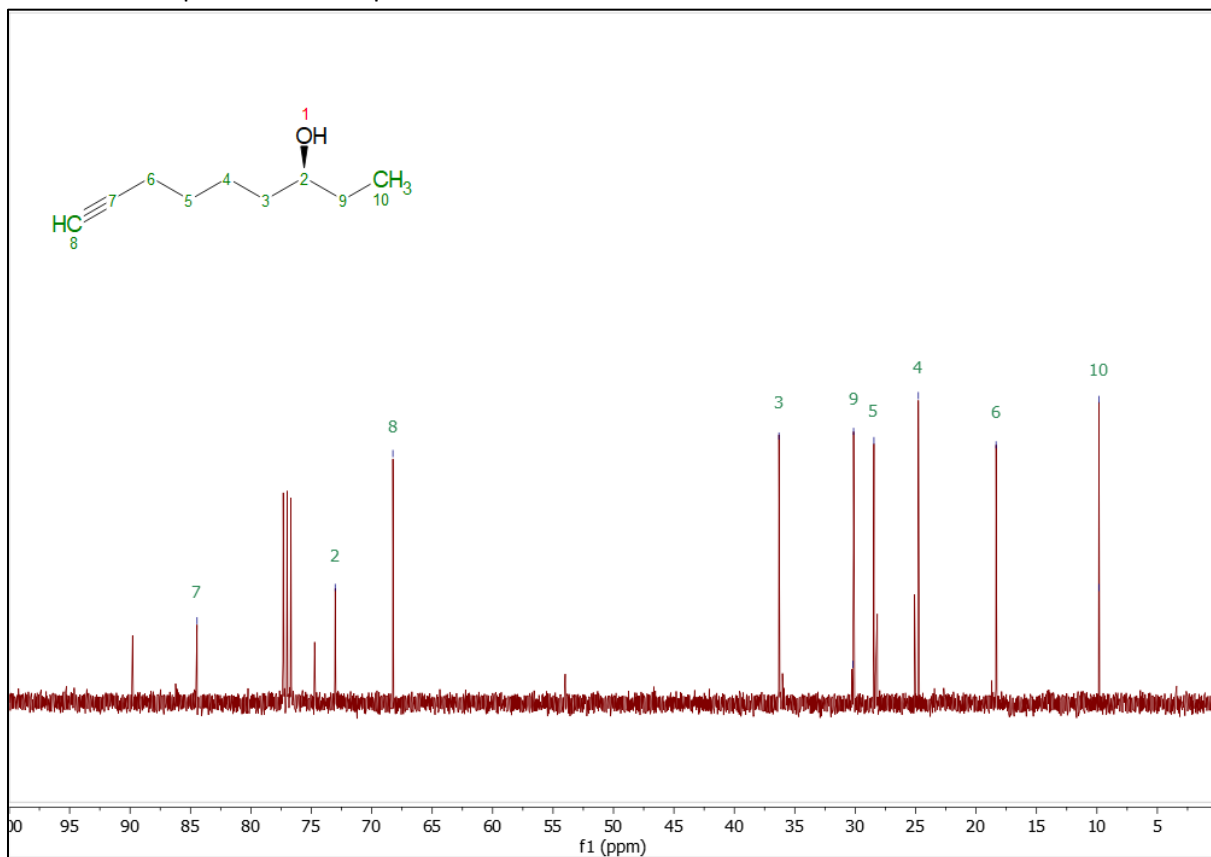
**S6b:**  $^{13}\text{C}$  NMR spectrum of compound **2-R**



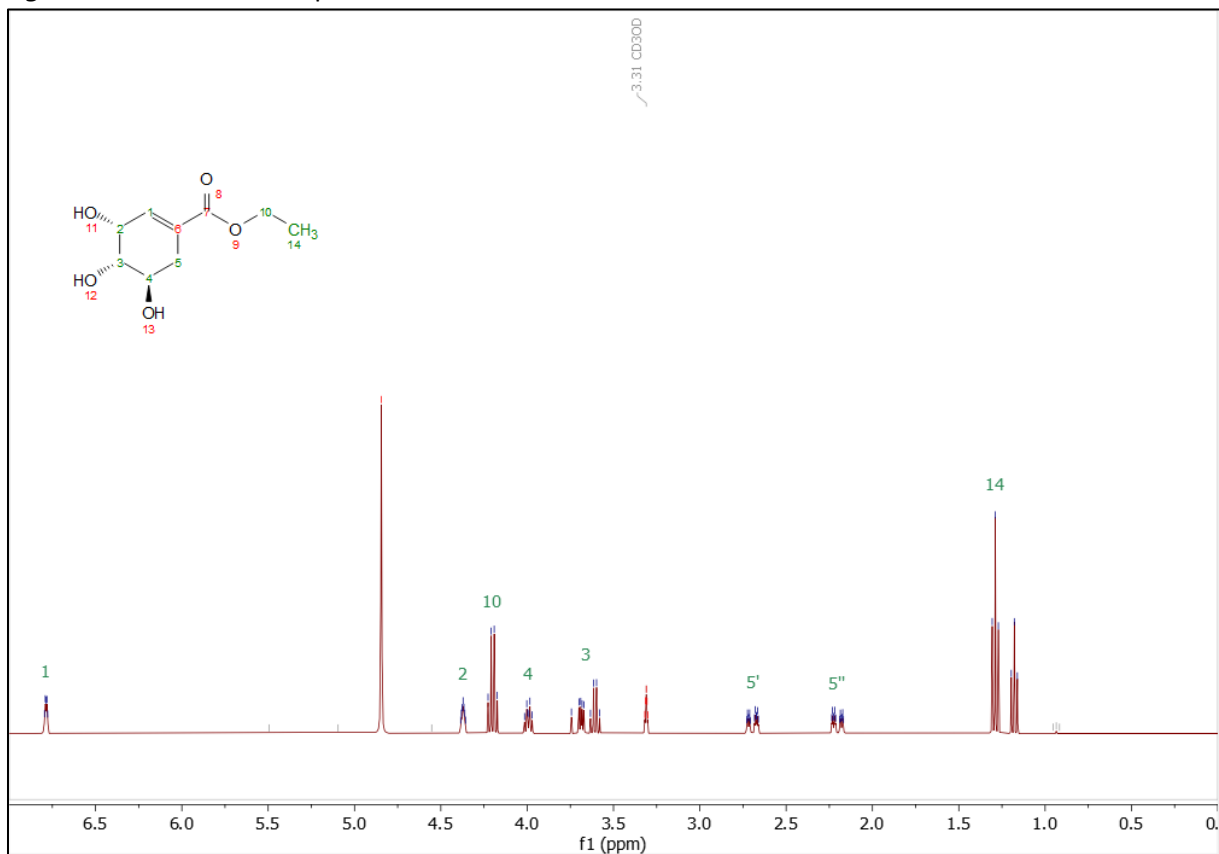
**Figure S7a:**  $^1\text{H}$  NMR spectrum of compound **2-S**



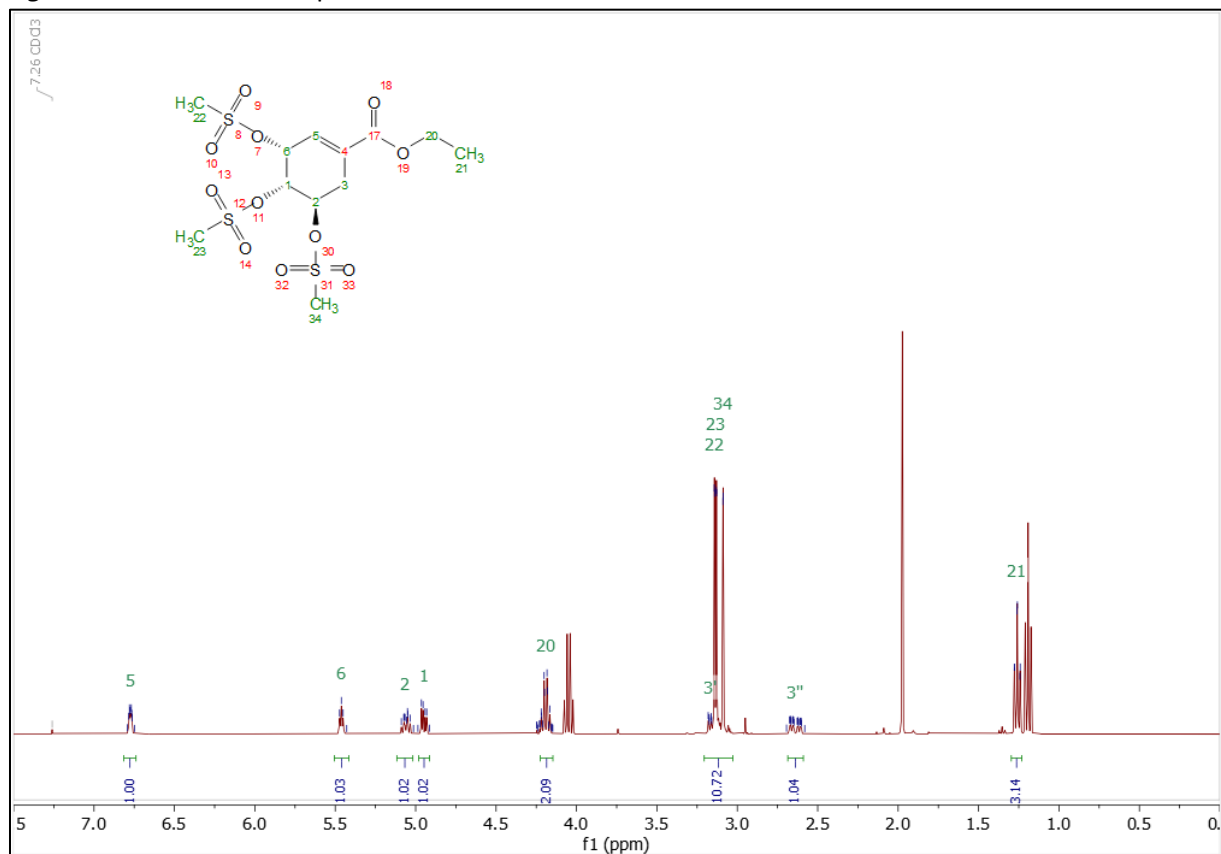
**S7b:**  $^{13}\text{C}$  NMR spectrum of compound 2-S



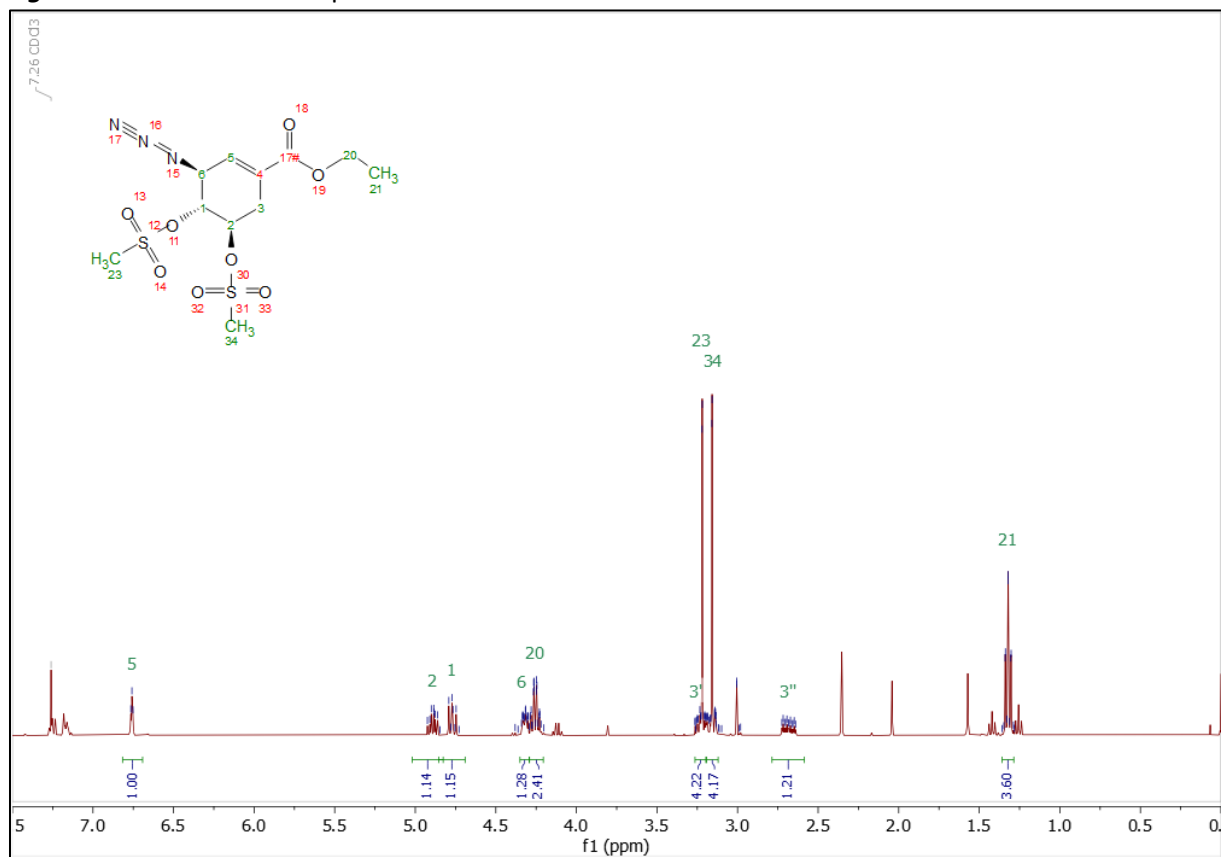
**Figure S8:**  $^1\text{H}$  NMR of compound 4



**Figure S9:**  $^1\text{H}$  NMR of compound 5

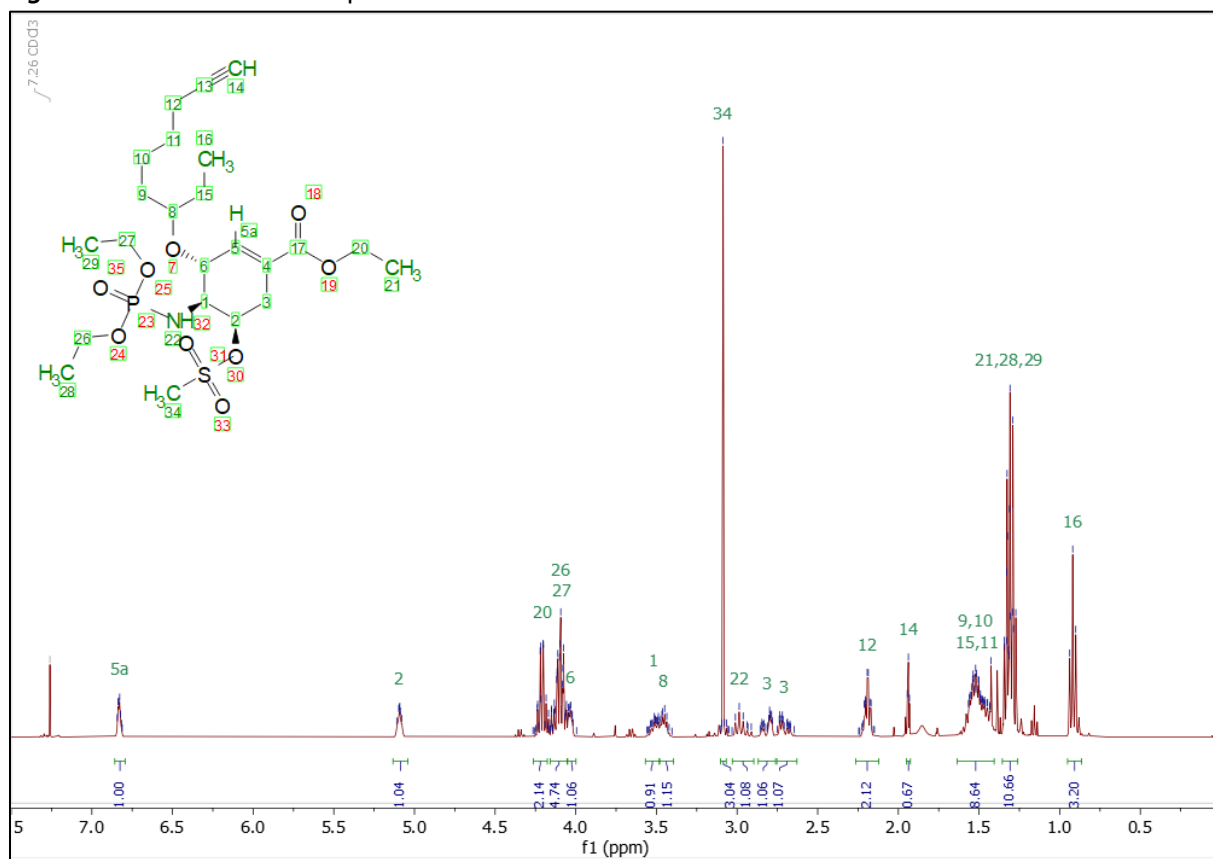


**Figure S10:**  $^1\text{H}$  NMR of compound 6

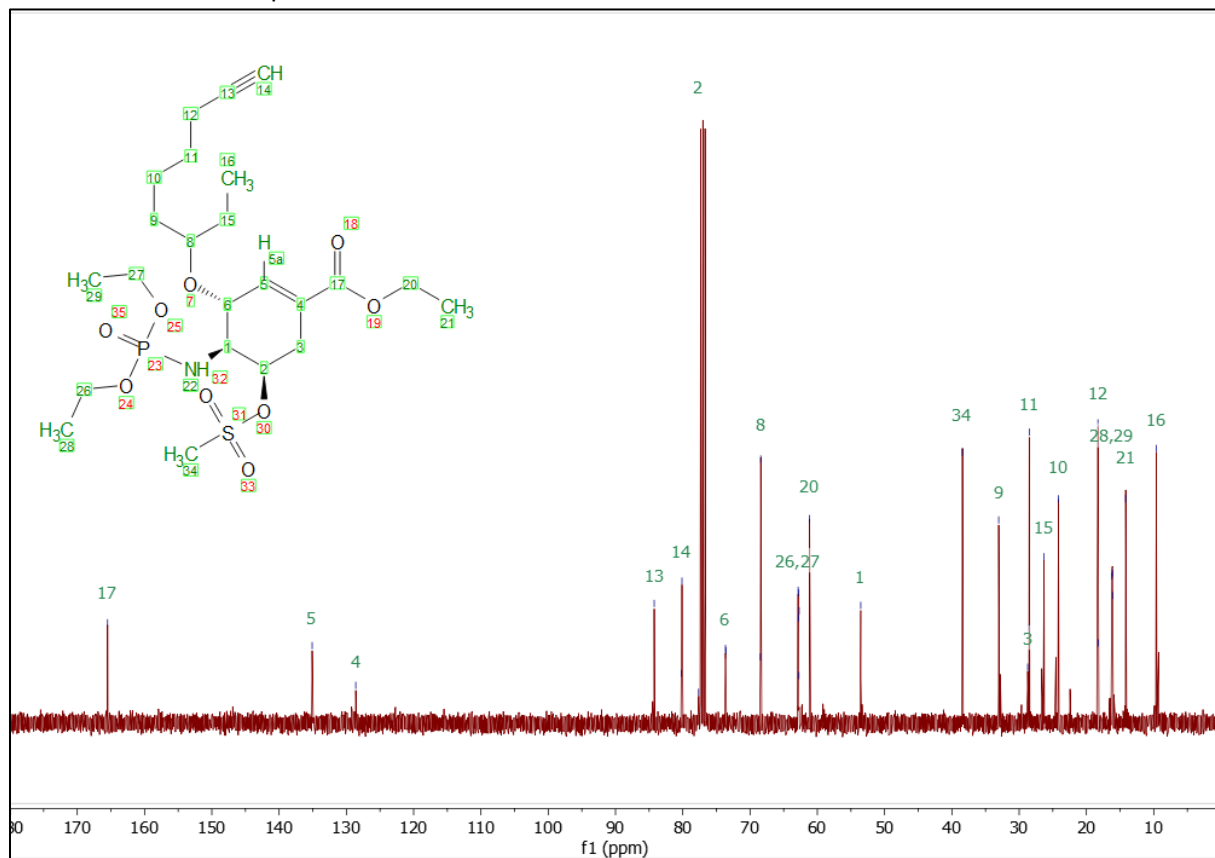




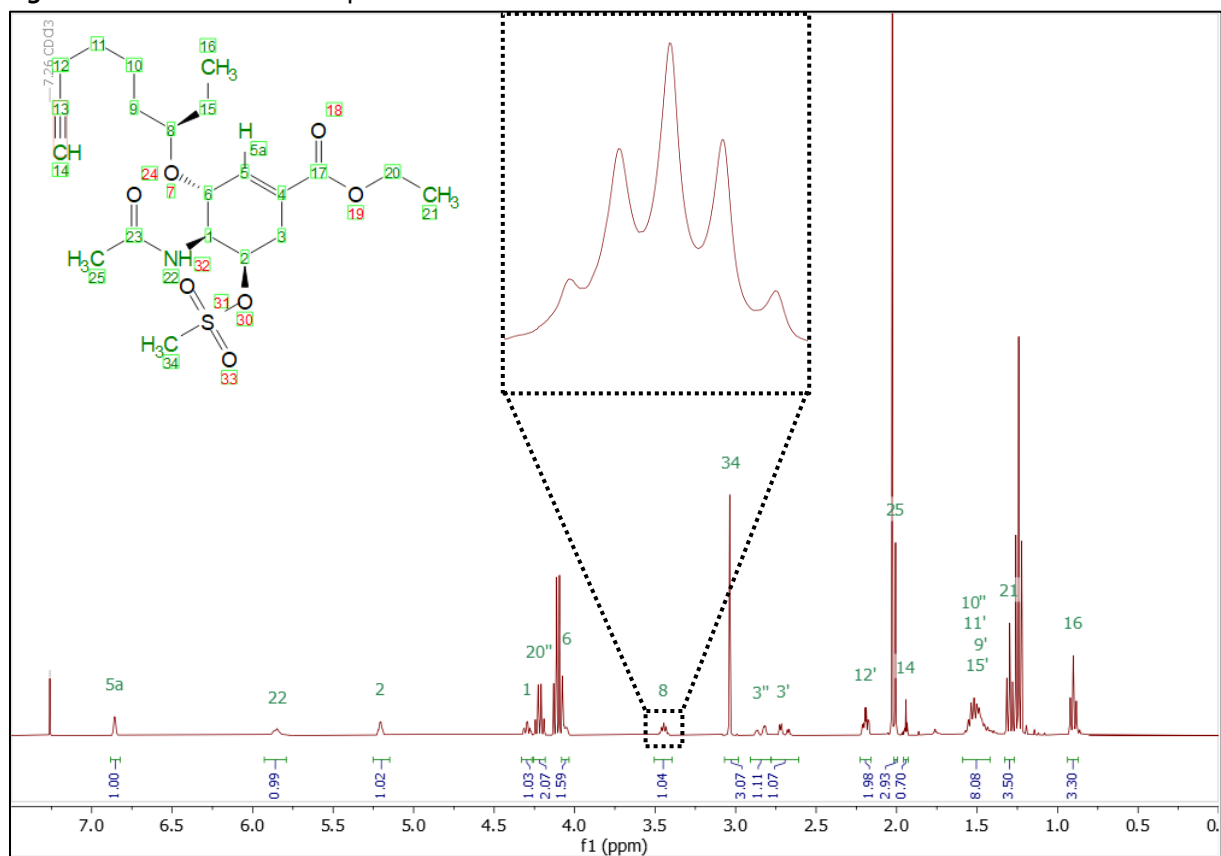
**Figure S11a:**  $^1\text{H}$  NMR of compound **7-mix**



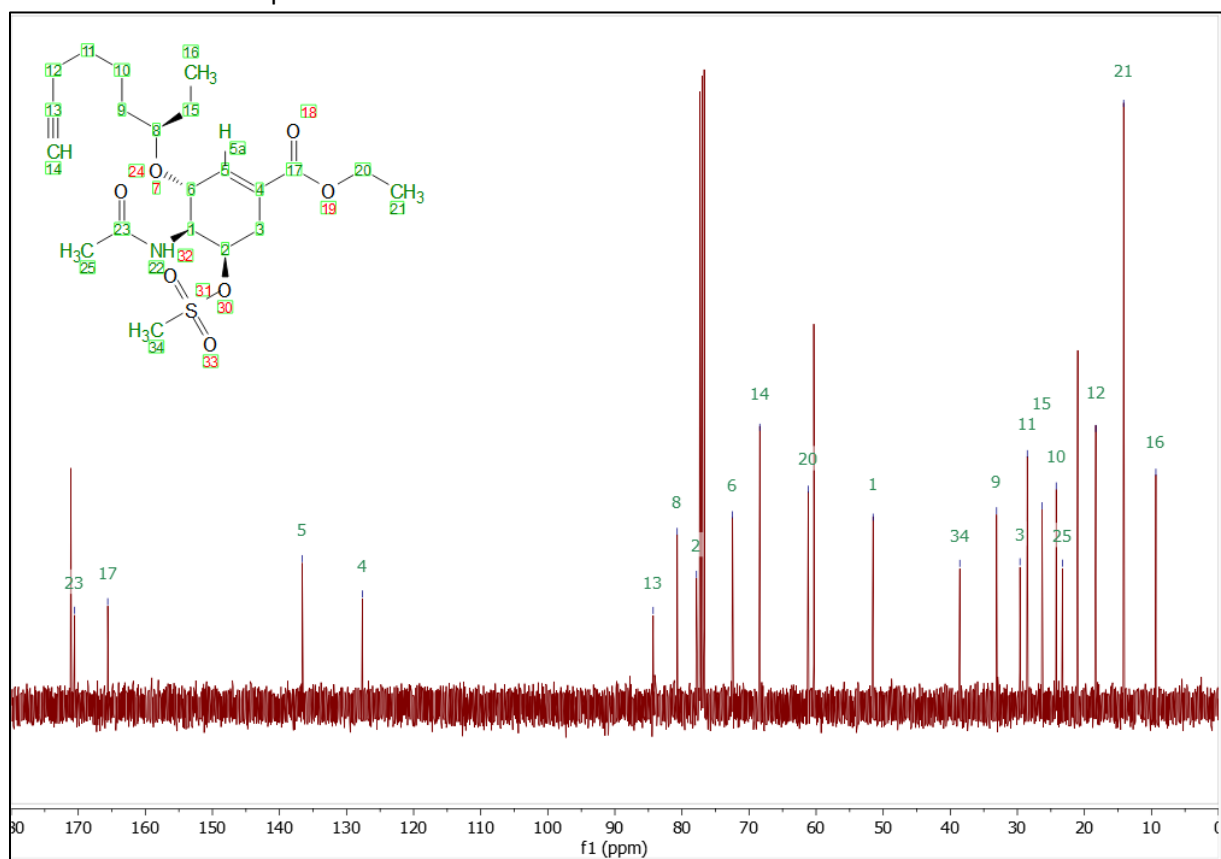
**S11b:**  $^{13}\text{C}$  NMR of compound **7-mix**



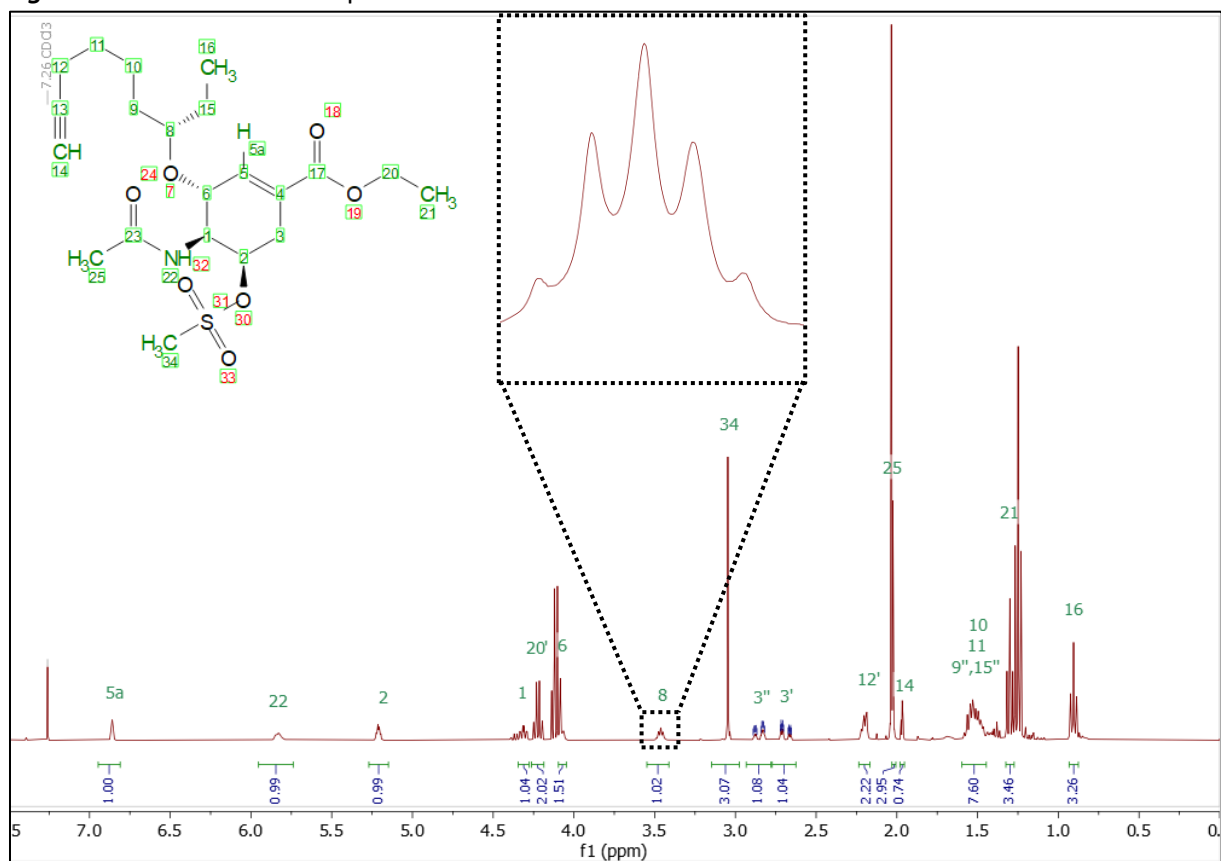
**Figure S12a:**  $^1\text{H}$  NMR of compound **8-R**



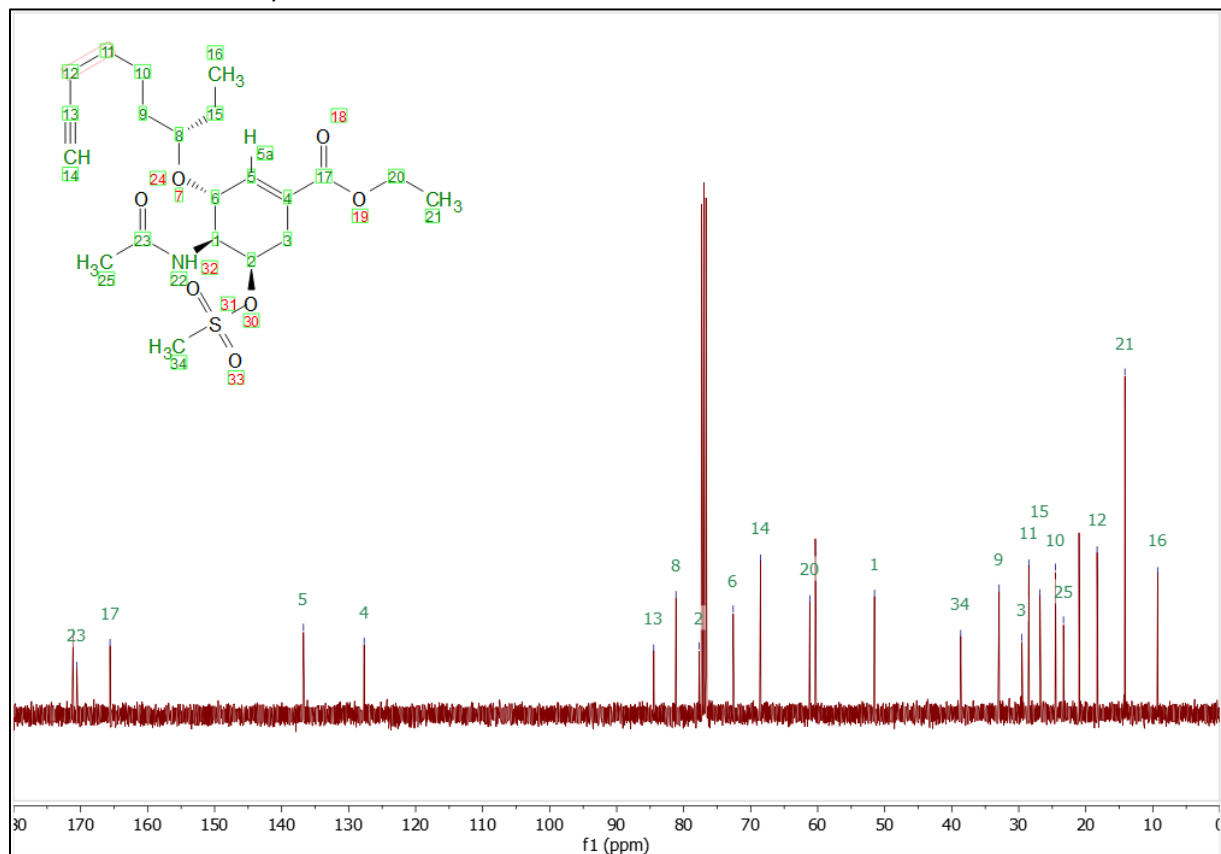
**S12b:**  $^{13}\text{C}$  NMR of compound **8-R**



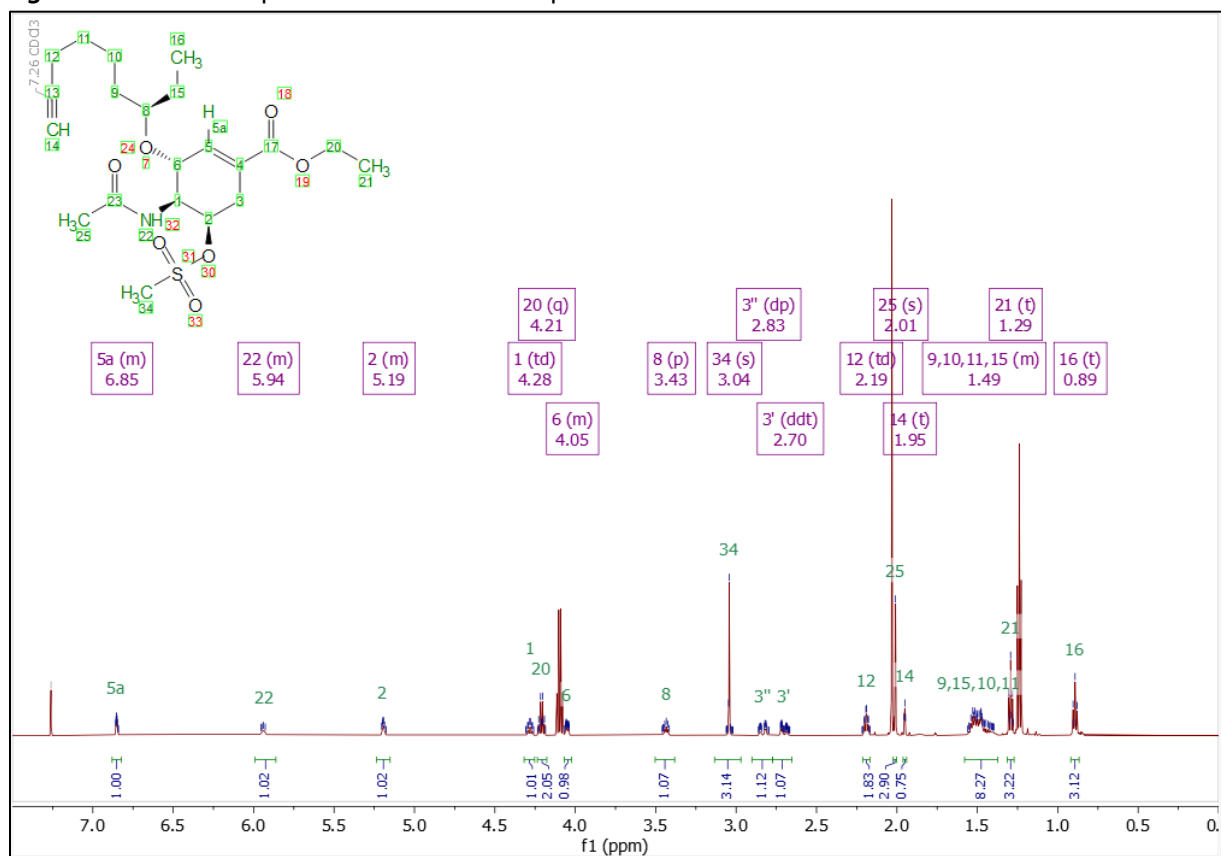
**Figure S13a:**  $^1\text{H}$  NMR of compound **8-S**



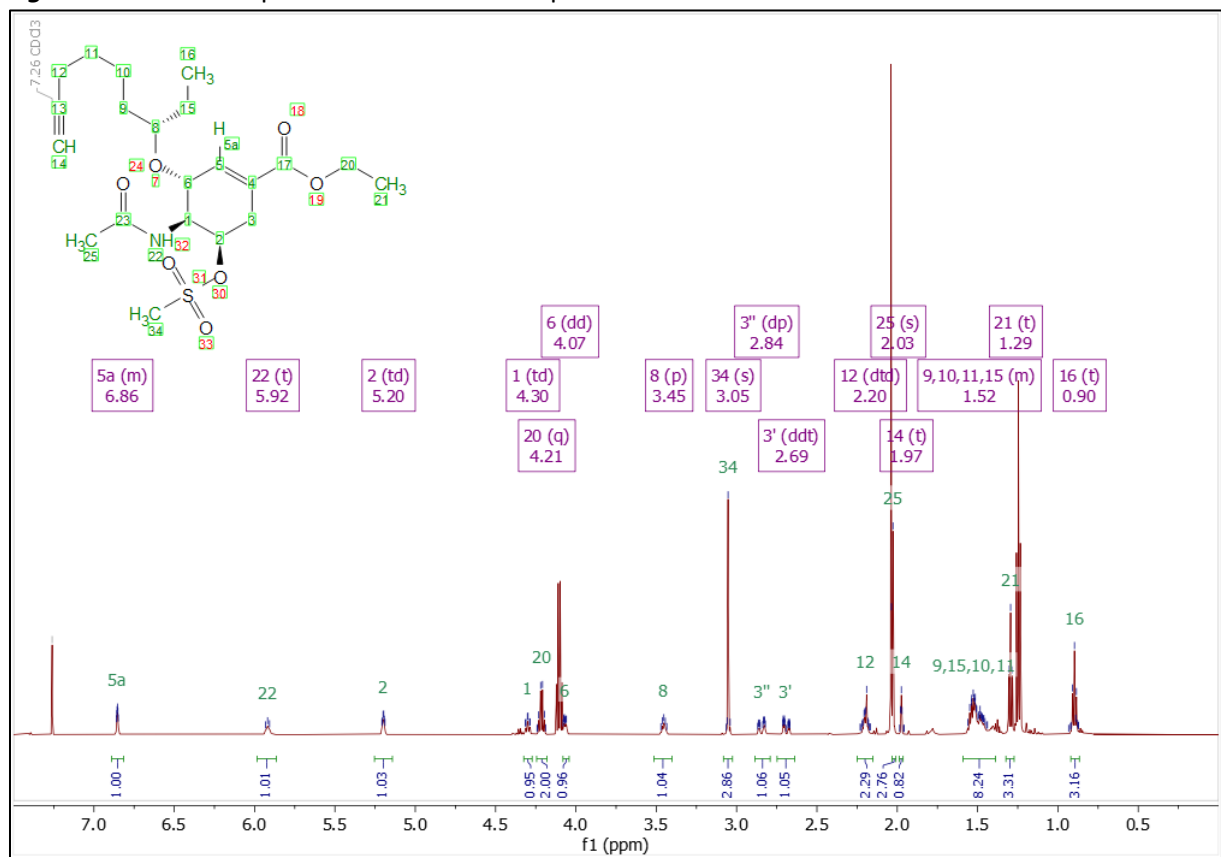
**S13b:**  $^{13}\text{C}$  NMR of compound **8-S**



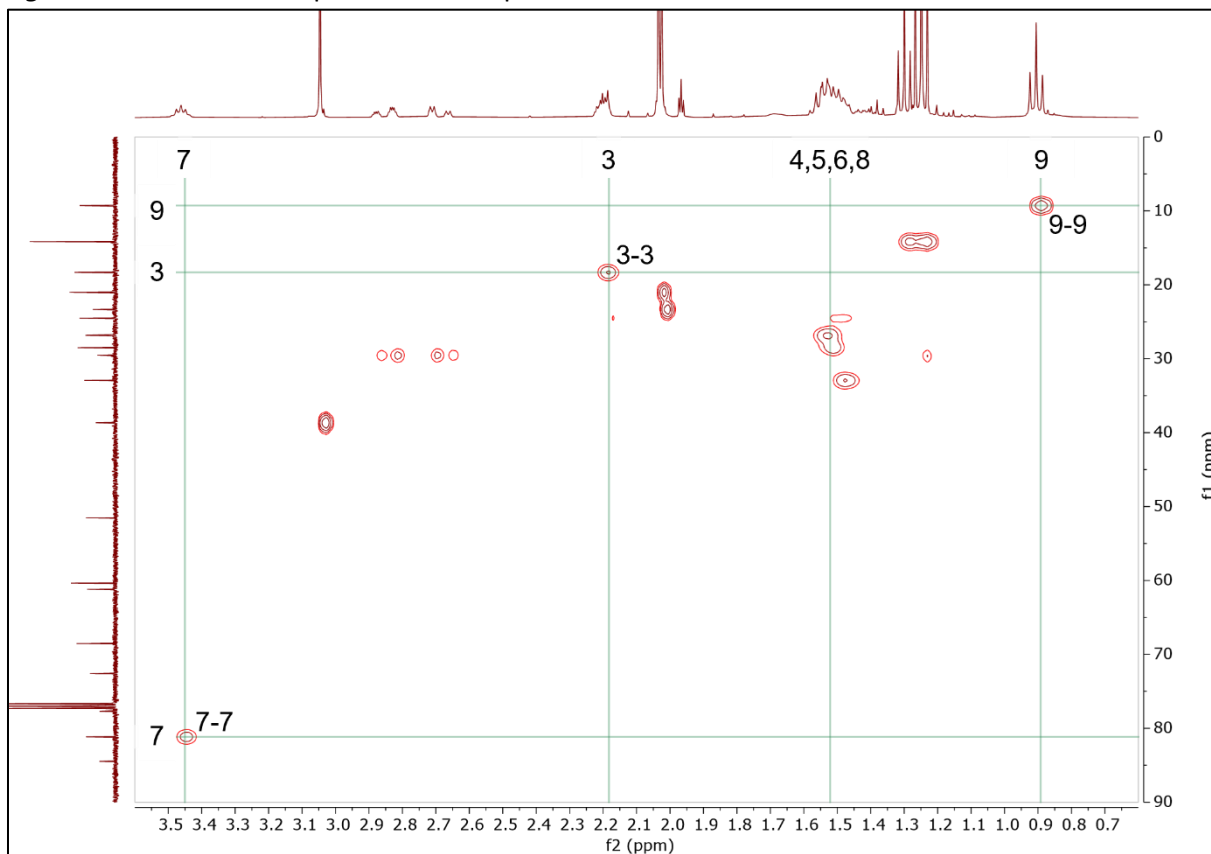
**Figure S14:**  $^1\text{H}$  NMR spectrum at 10 °C of compound **8-R**



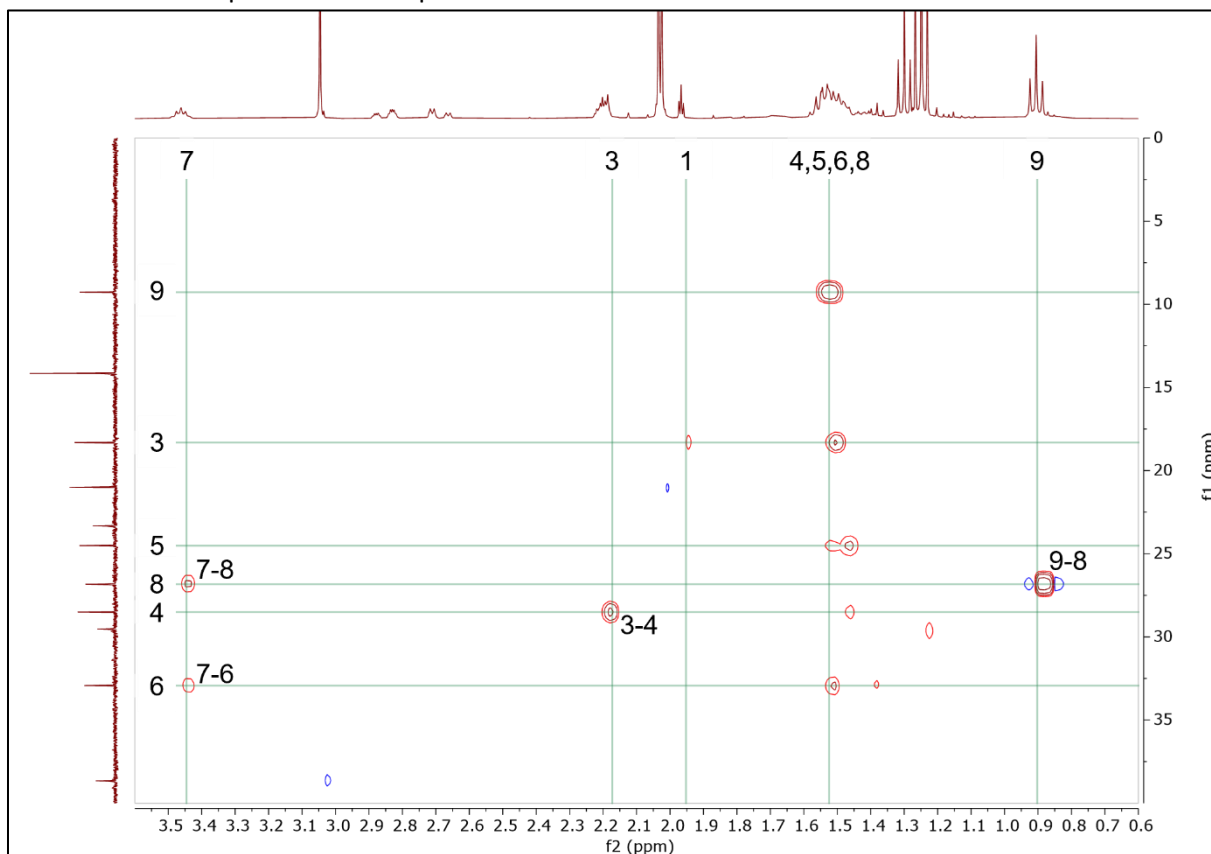
**Figure S15:**  $^1\text{H}$  NMR spectrum at 10 °C of compound **8-S**



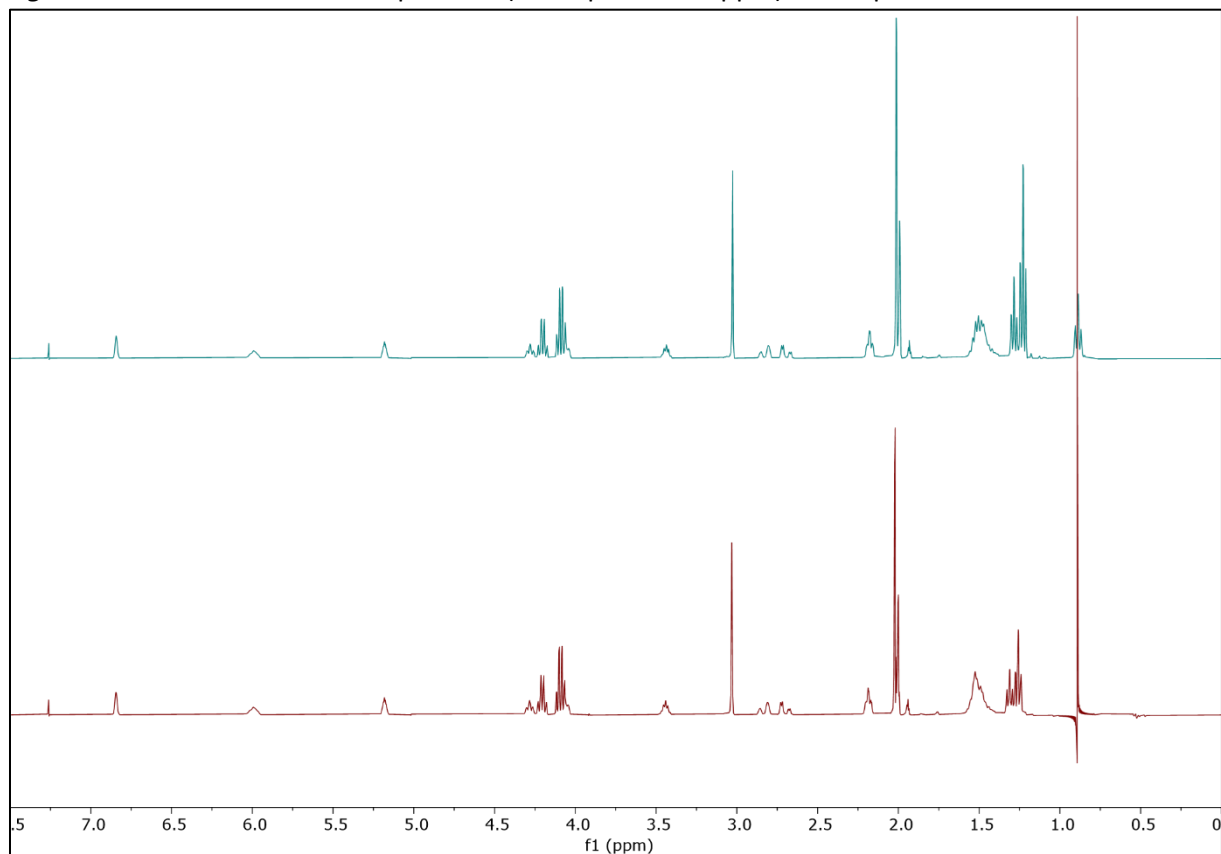
**Figure S16a:** HSQC NMR spectrum of compound **8-S**



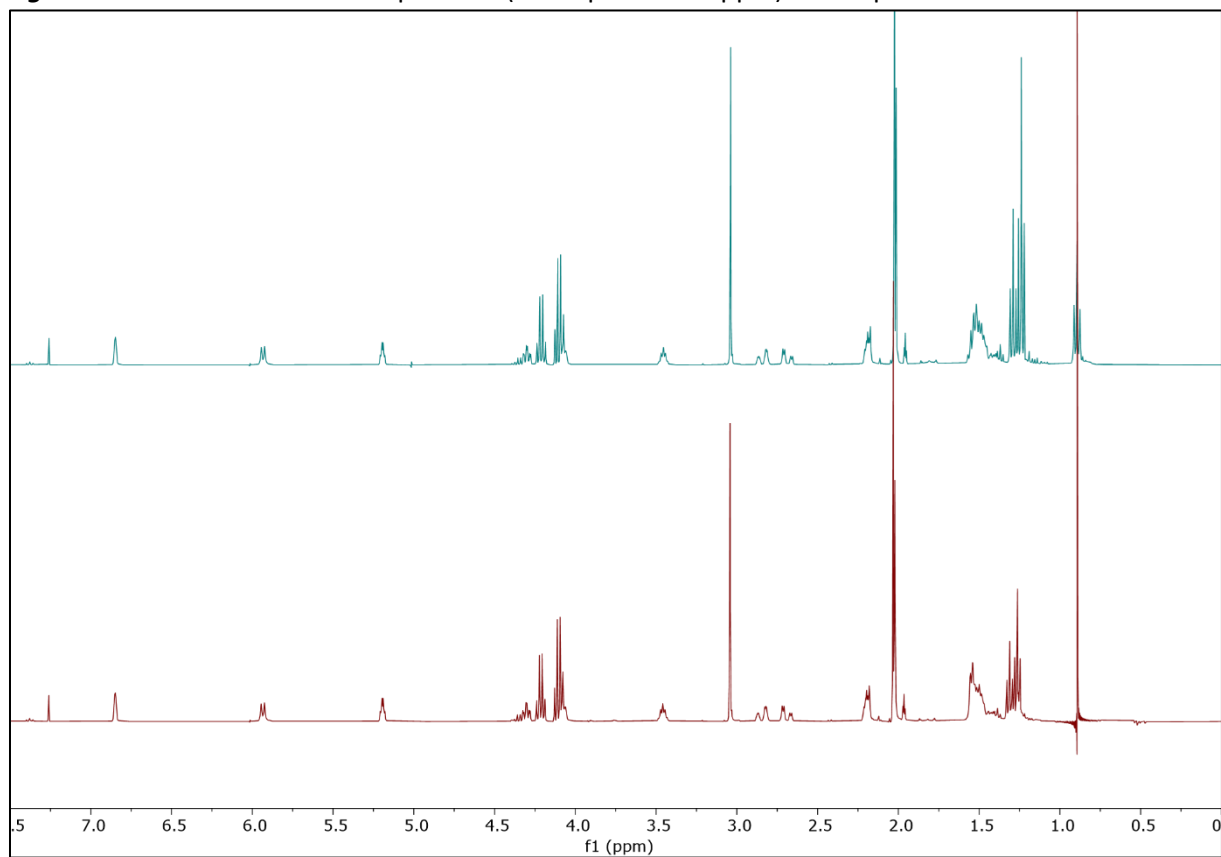
**S16b:** H2BC NMR spectrum of compound **8-S**



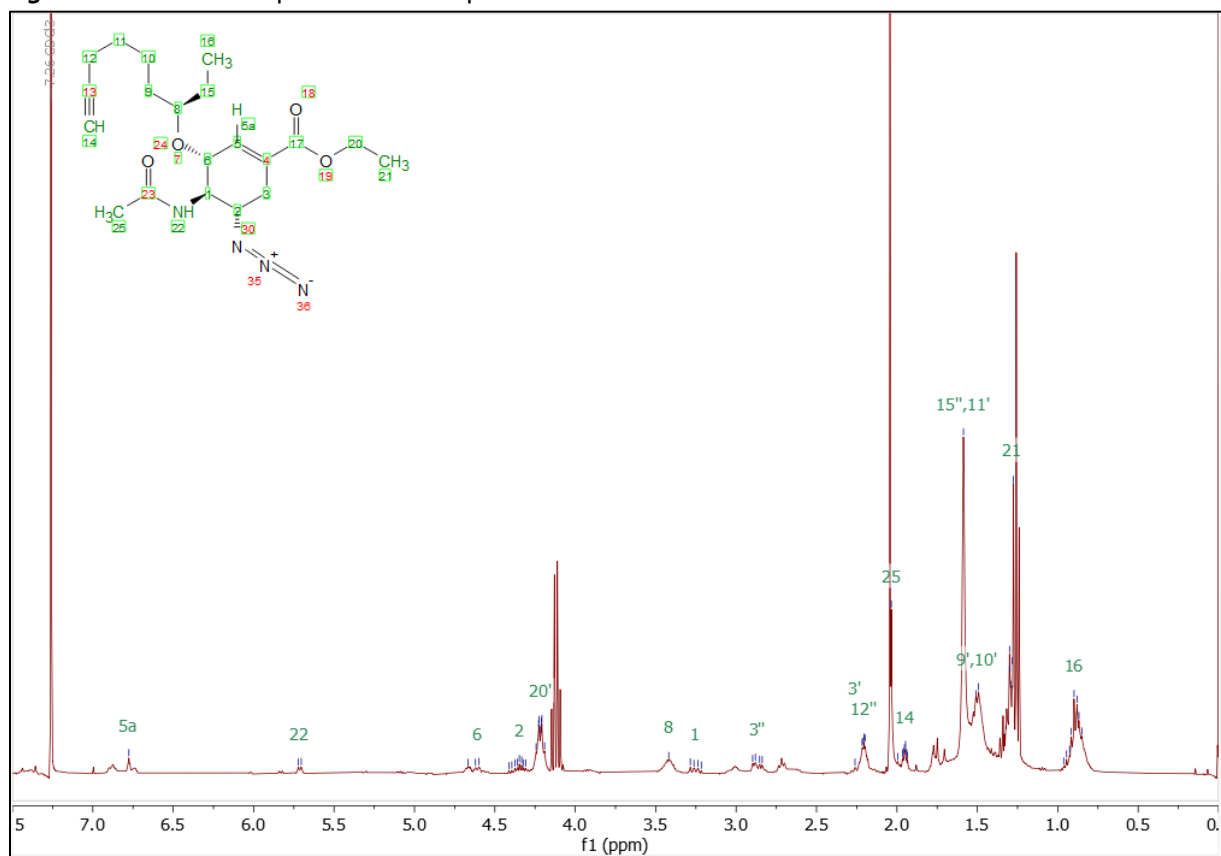
**Figure S17:**  $^1\text{H}$  HOMODEC NMR spectrum (decoupled at 0.9 ppm) of compound **8-R**



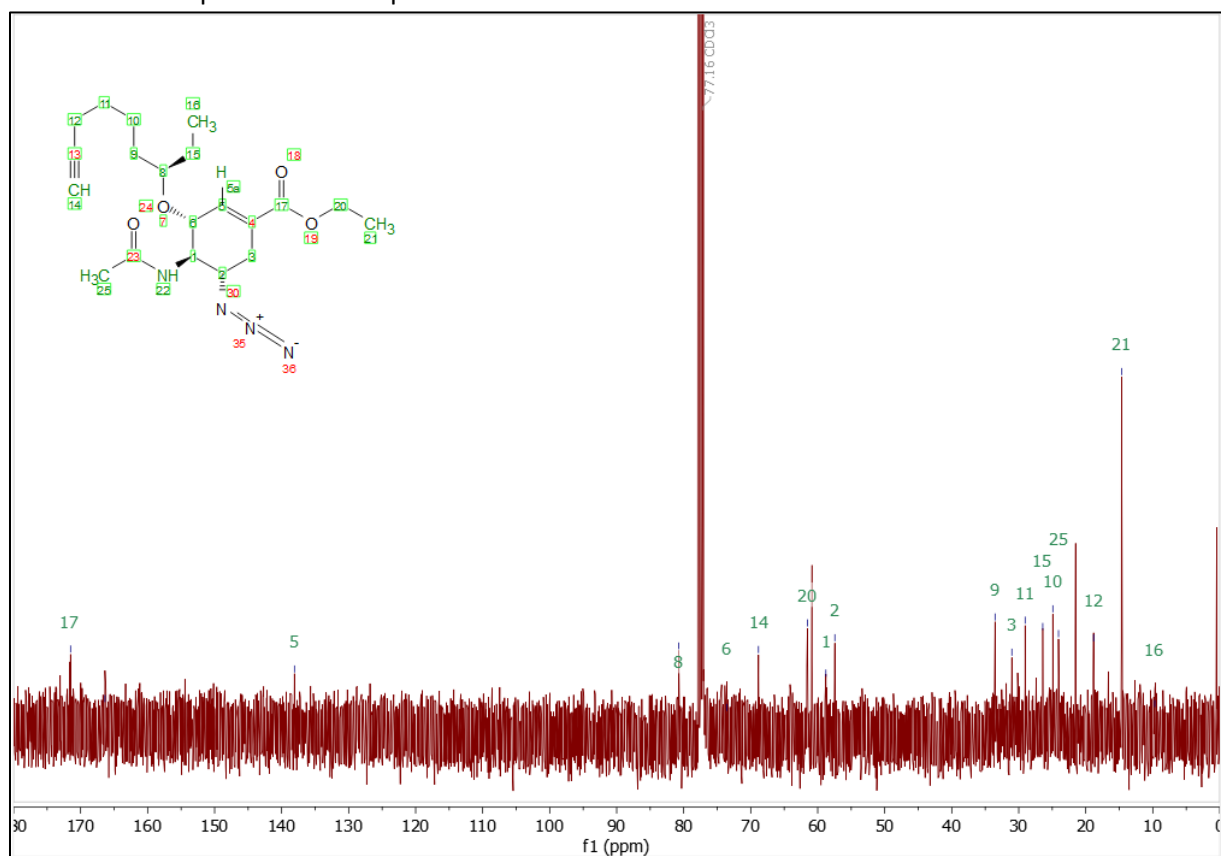
**Figure S18:**  $^1\text{H}$  HOMODEC NMR spectrum (decoupled at 0.9 ppm) of compound **8-S**



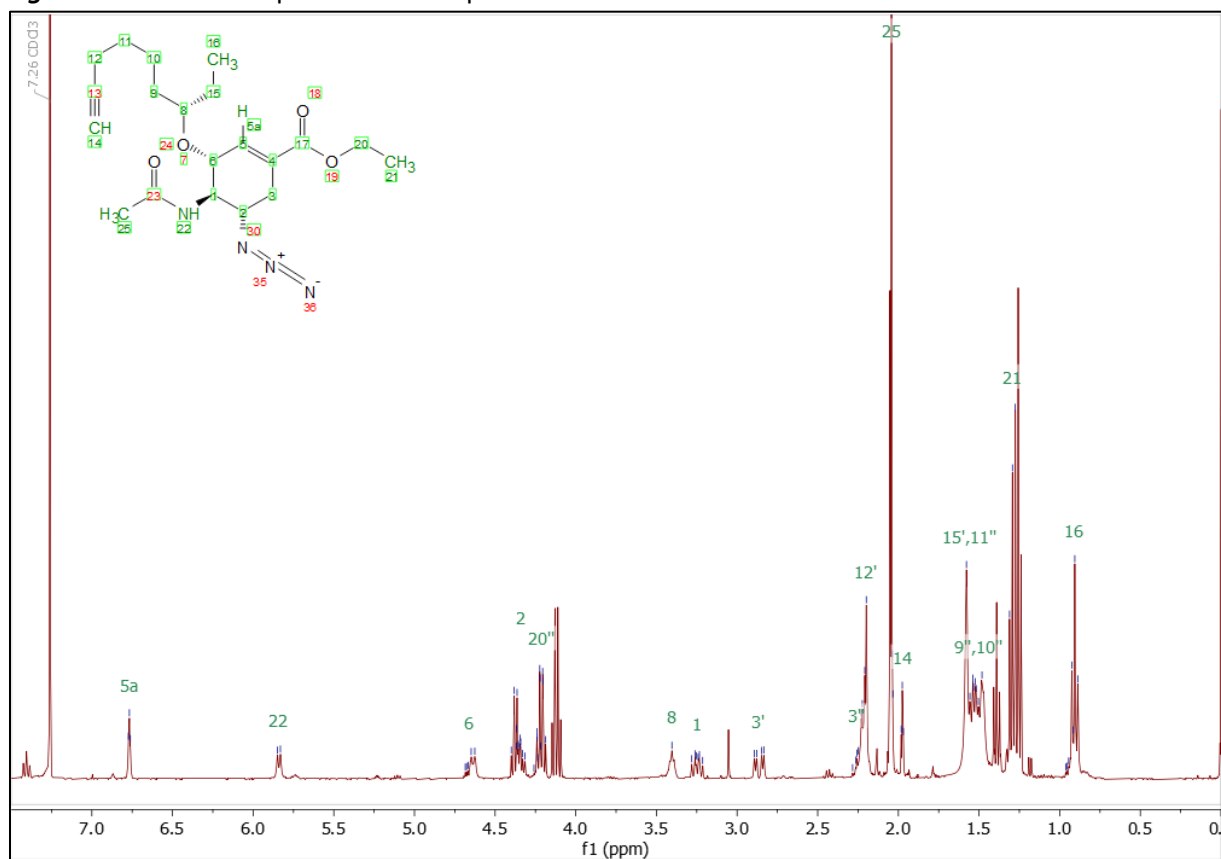
**Figure S19a:**  $^1\text{H}$  NMR spectrum of compound **9-R**



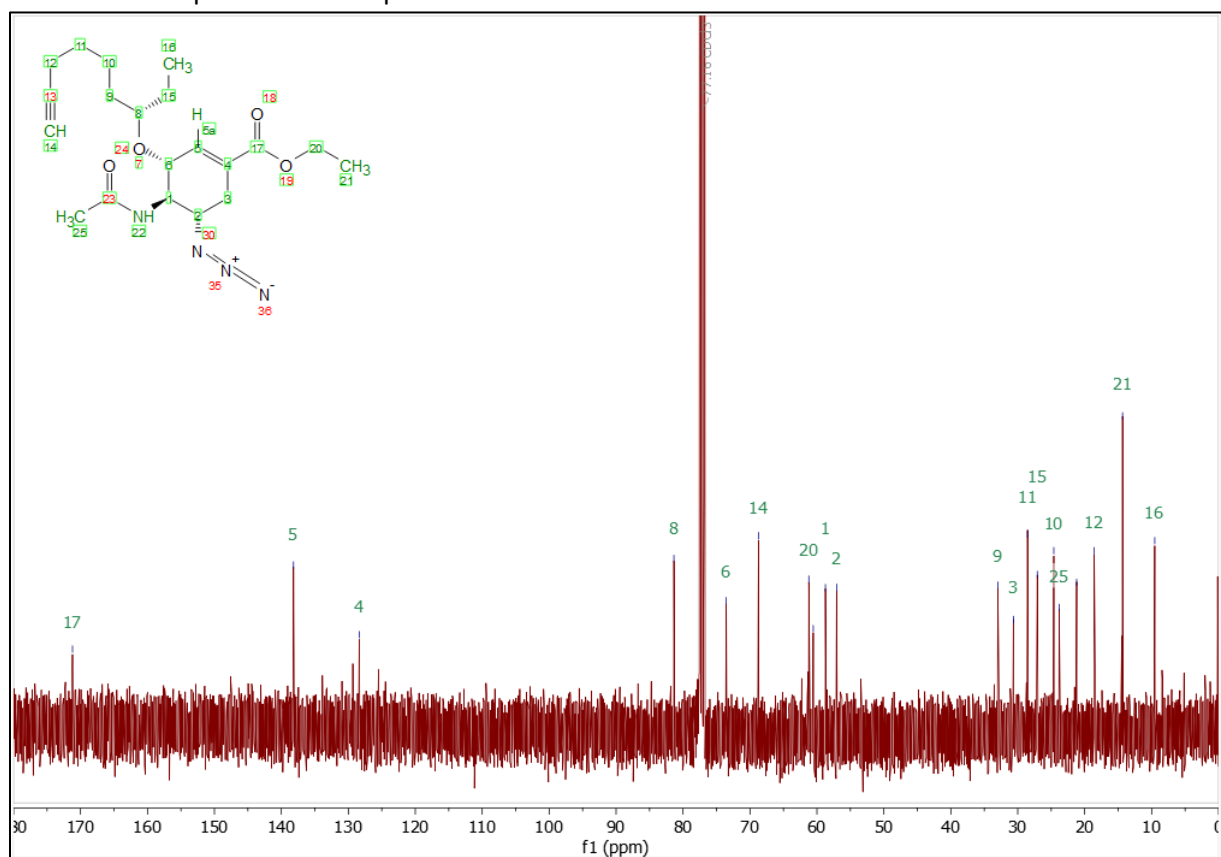
**S19b:**  $^{13}\text{C}$  NMR spectrum of compound **9-R**



**Figure S20a:**  $^1\text{H}$  NMR spectrum of compound **9-S**

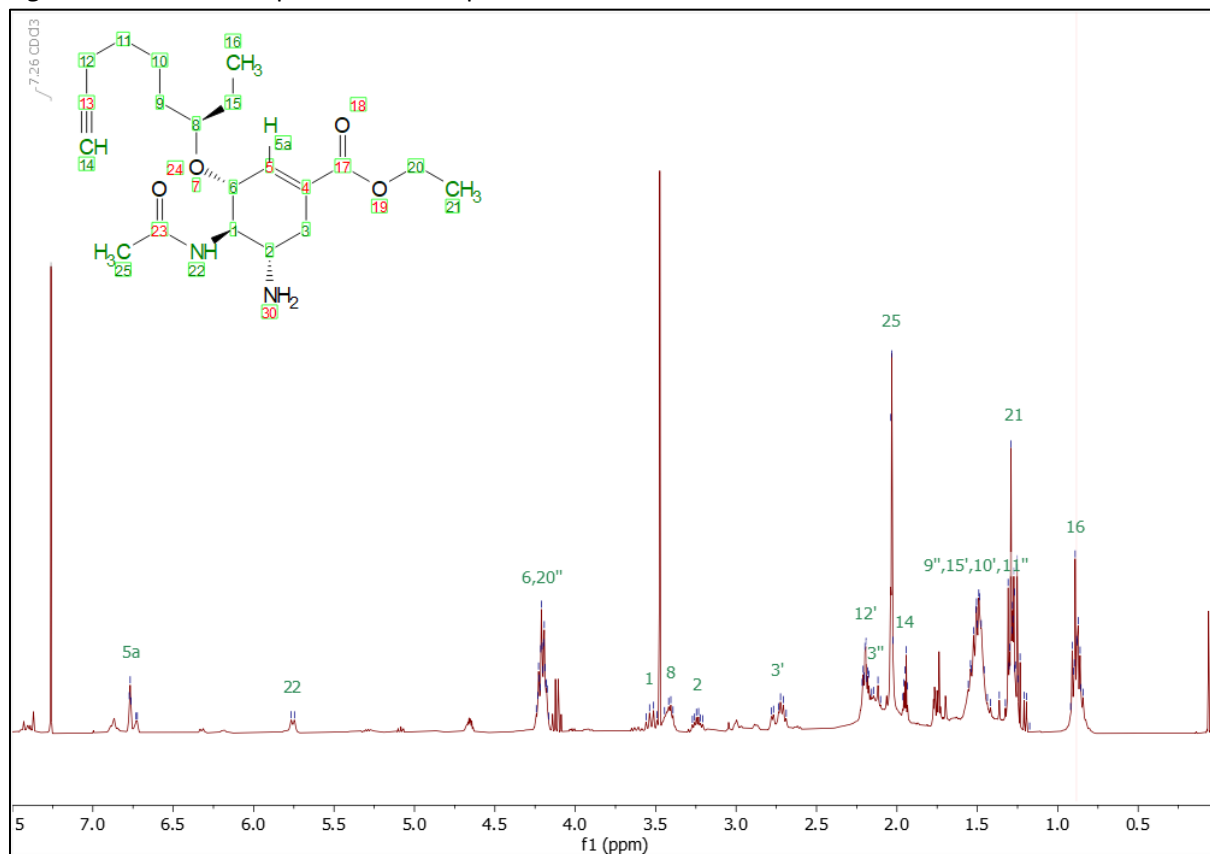


**S20b:**  $^1\text{H}$  NMR spectrum of compound **9-S**

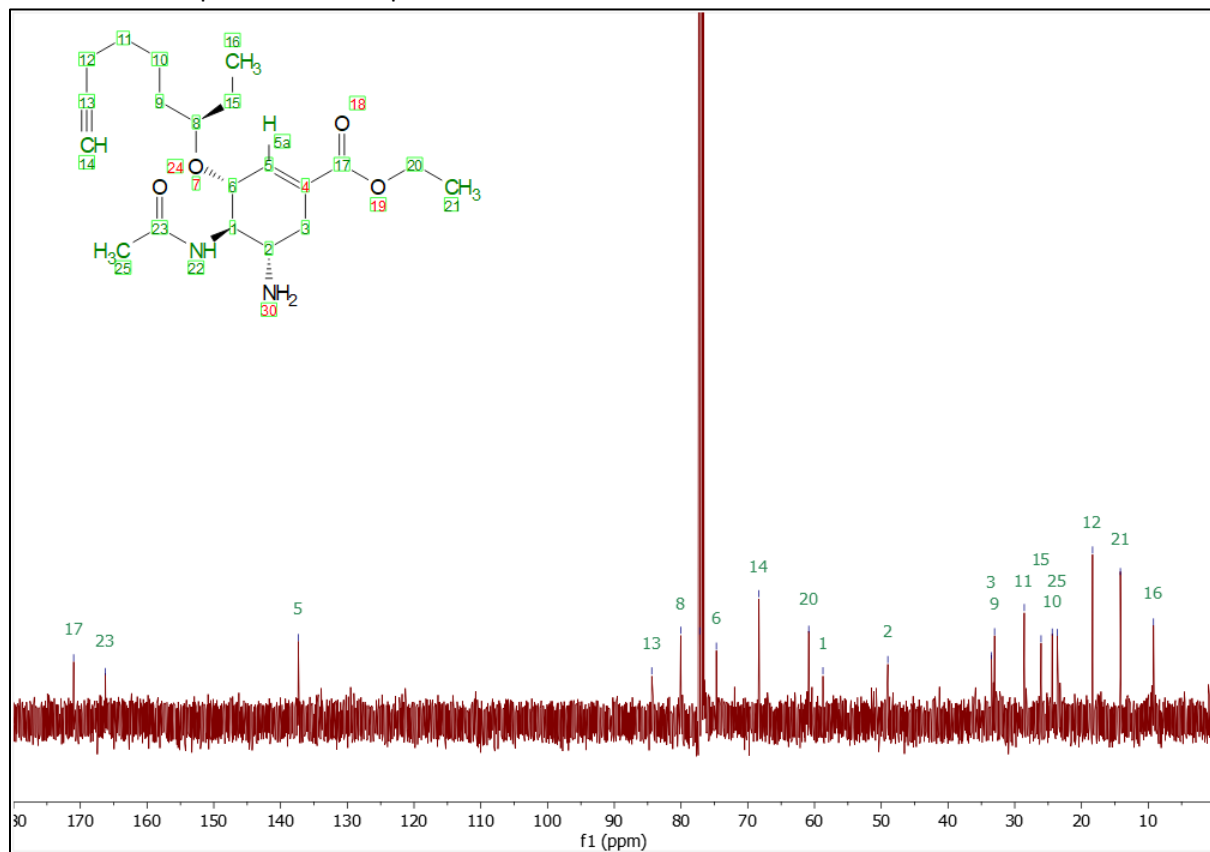




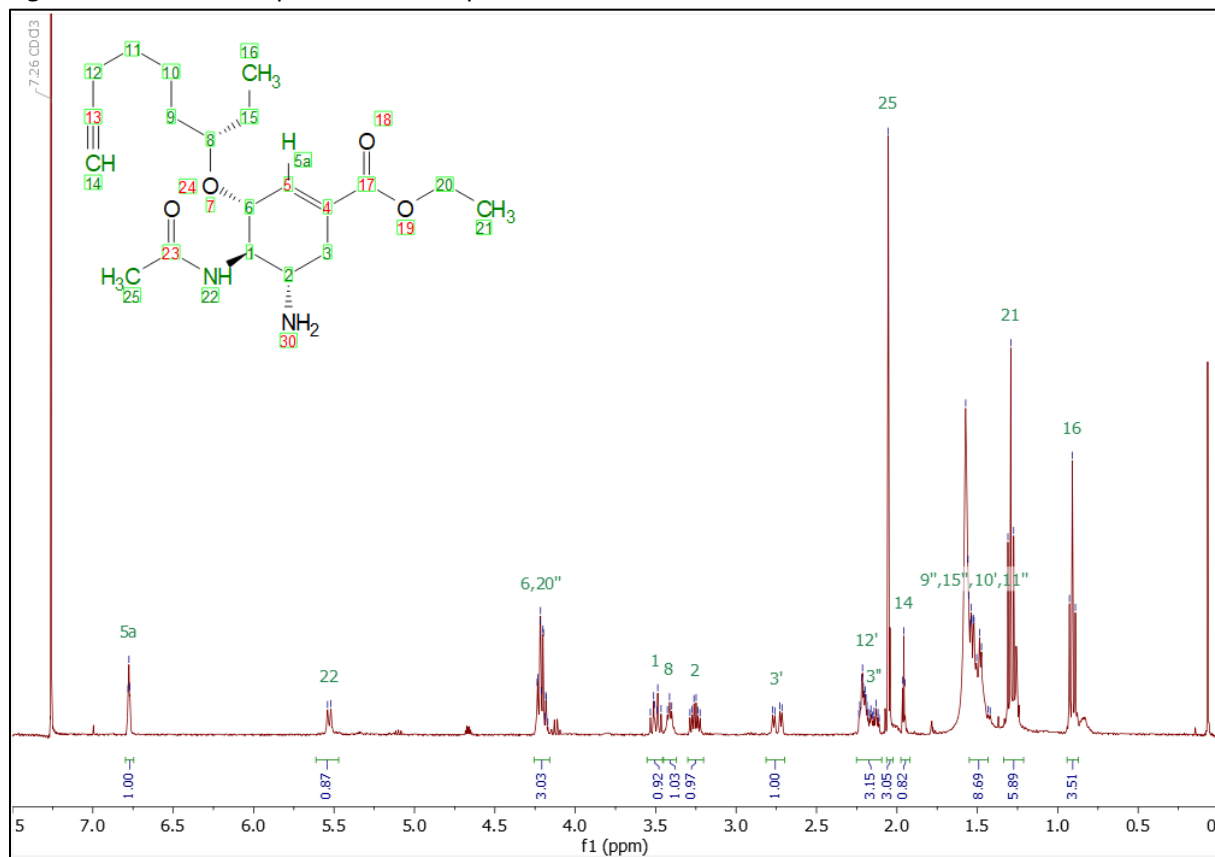
**Figure S21a:**  $^1\text{H}$  NMR spectrum of compound **10-R**



**S21b:**  $^{13}\text{C}$  NMR spectrum of compound **10-R**



**Figure S22a:**  $^1\text{H}$  NMR spectrum of compound **10-S**



**S22b:**  $^{13}\text{C}$  NMR spectrum of compound **10-S**

