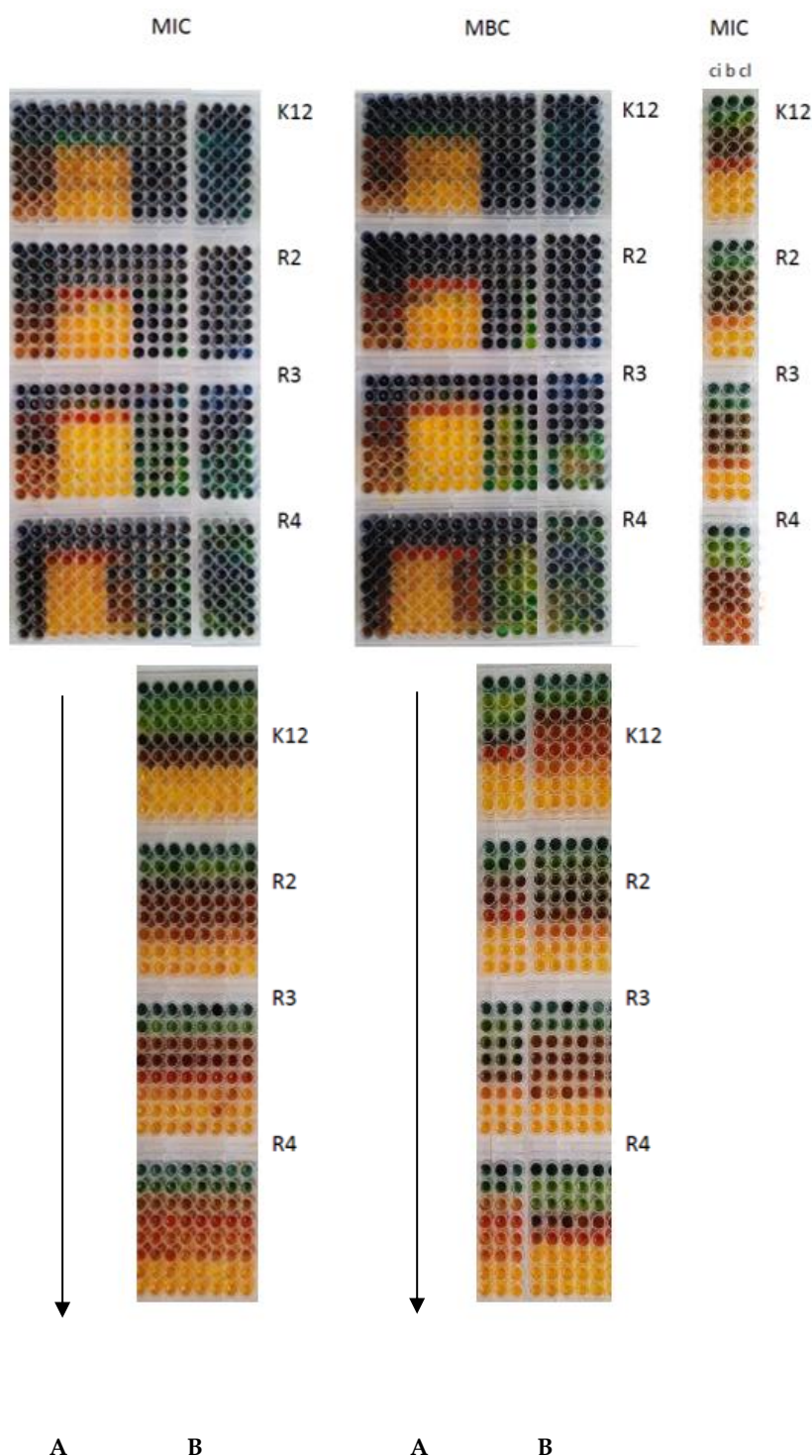
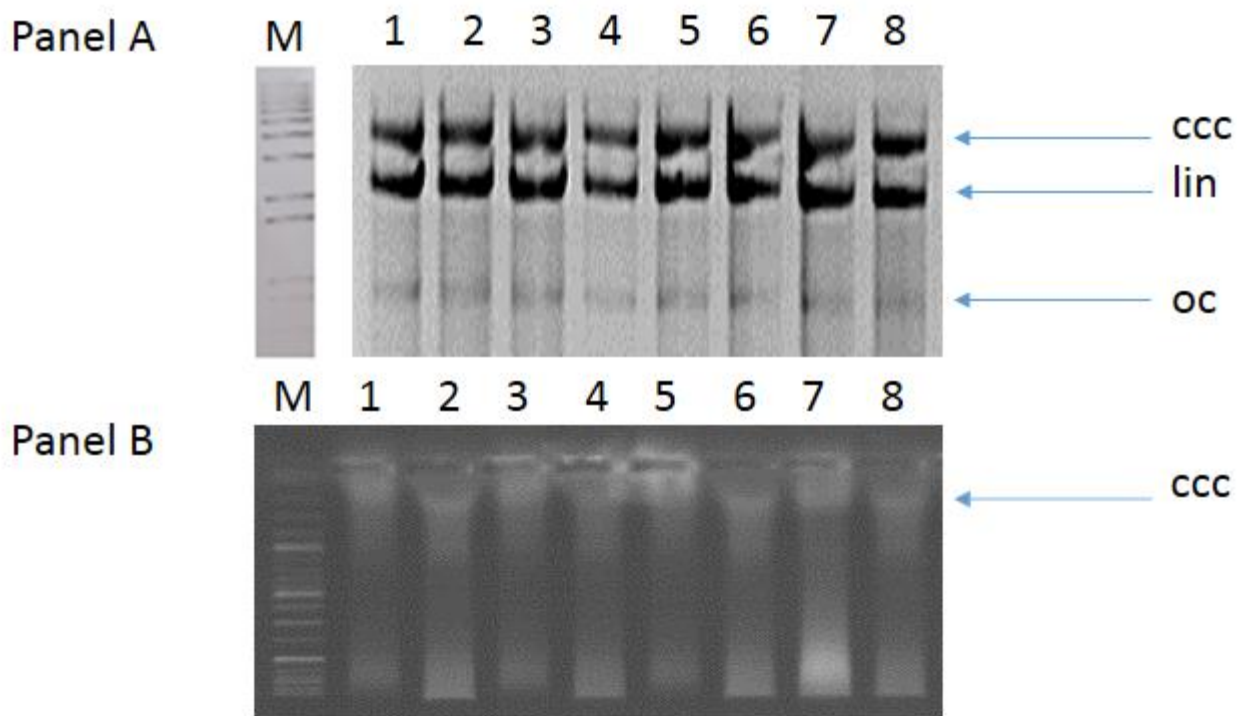


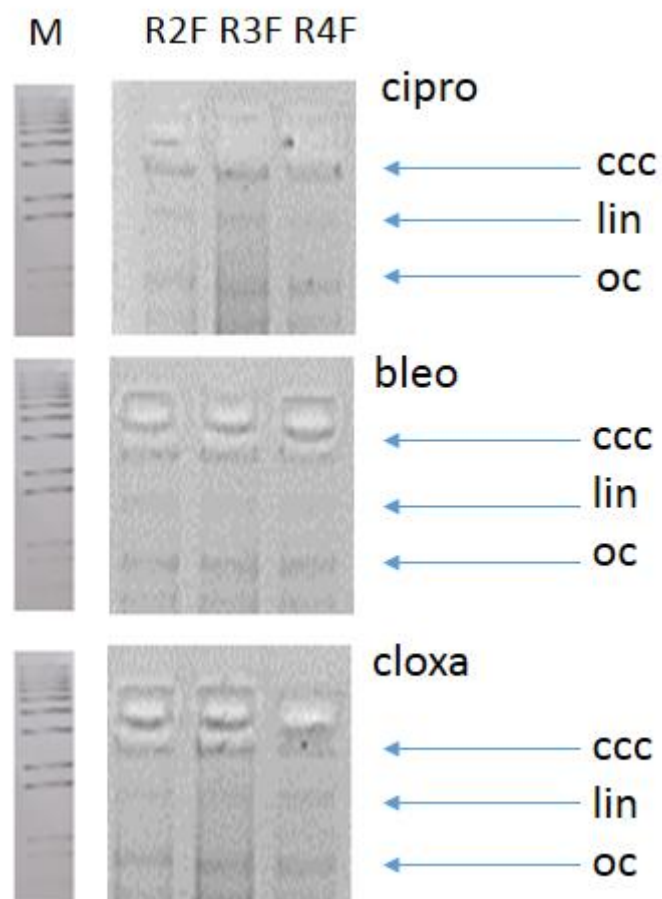
# Supplementary materials



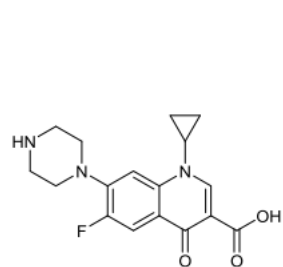
**Figure S1.** Examples of MIC and MBC on microplates with different concentration of studied compounds ( $\mu\text{g/mL}^{-1}$ ). Resazurin was added as an indicator of microbial growth with K12, R2, R3, and R4 strains with tested 16 compounds. **A panel indicated by black arrows MIC dilution 8 times for first 8 compounds with CI, B panel MIC dilution 16 times for another one 8 compounds without CI** Additionally, examples of MIC with different strains K12, R2, R3, and R4 of studied antibiotics with ciprofloxacin (ci), bleomycin (b), and cloxacillin (cl) in ( $\mu\text{g/mL}^{-1}$ ).



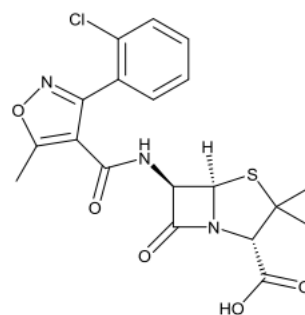
**FigureS2.** An example of an agarose gel electrophoresis separation of isolated plasmids DNA on R4 strains modified with selected coumarin derivatives (Panel A) from 8 selected compounds, as shown in Figure 3, and digested with repair Fpg protein (Panel B). M = marker.



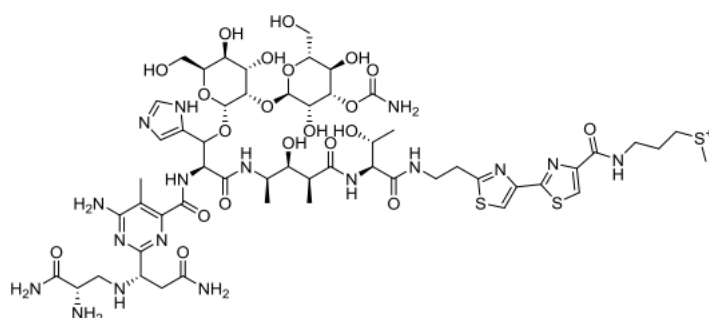
**Figure S3.** Example of an agarose gel electrophoresis separation of isolated plasmids DNA from R2-R4 strains modified with antibiotics: bleomycin, ciprofloxacin, and cloxacillin digested with repair enzymes Fpg. M = marker.



Ciprofloxacin



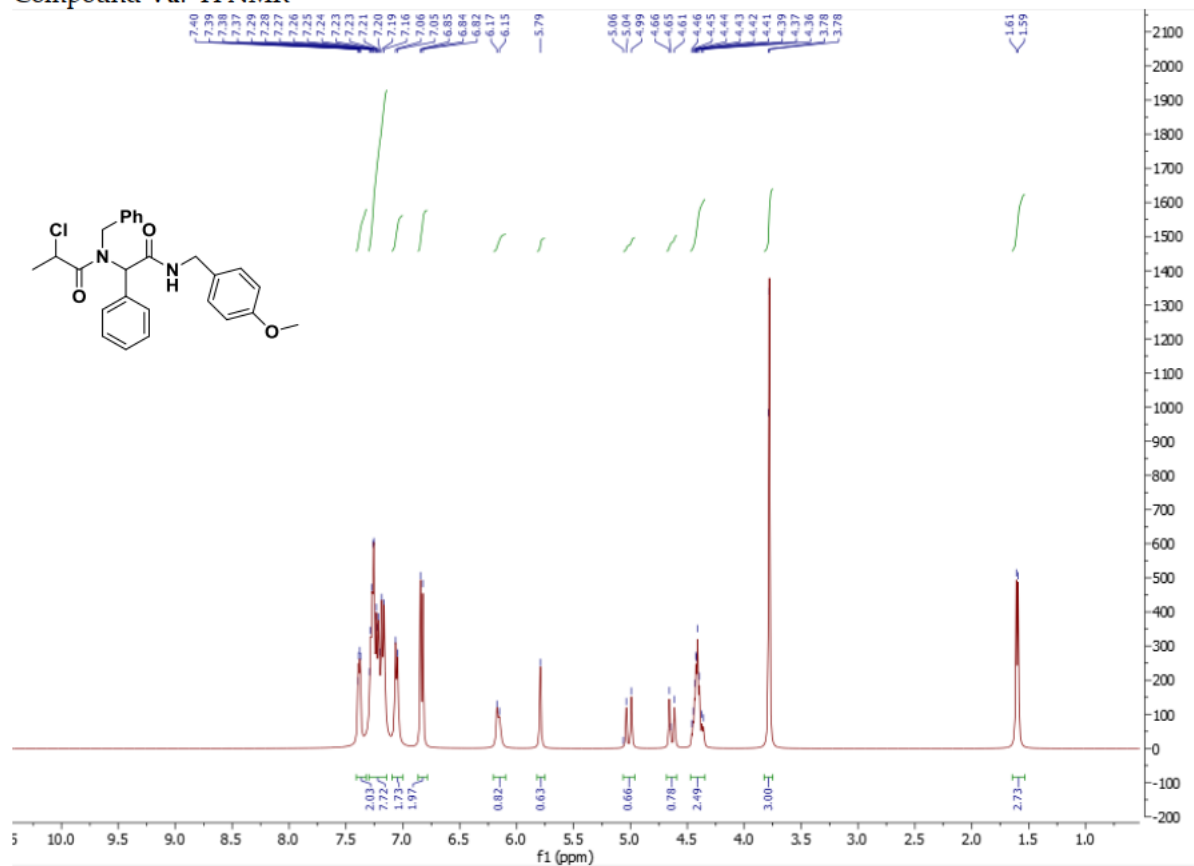
Cloxacillin



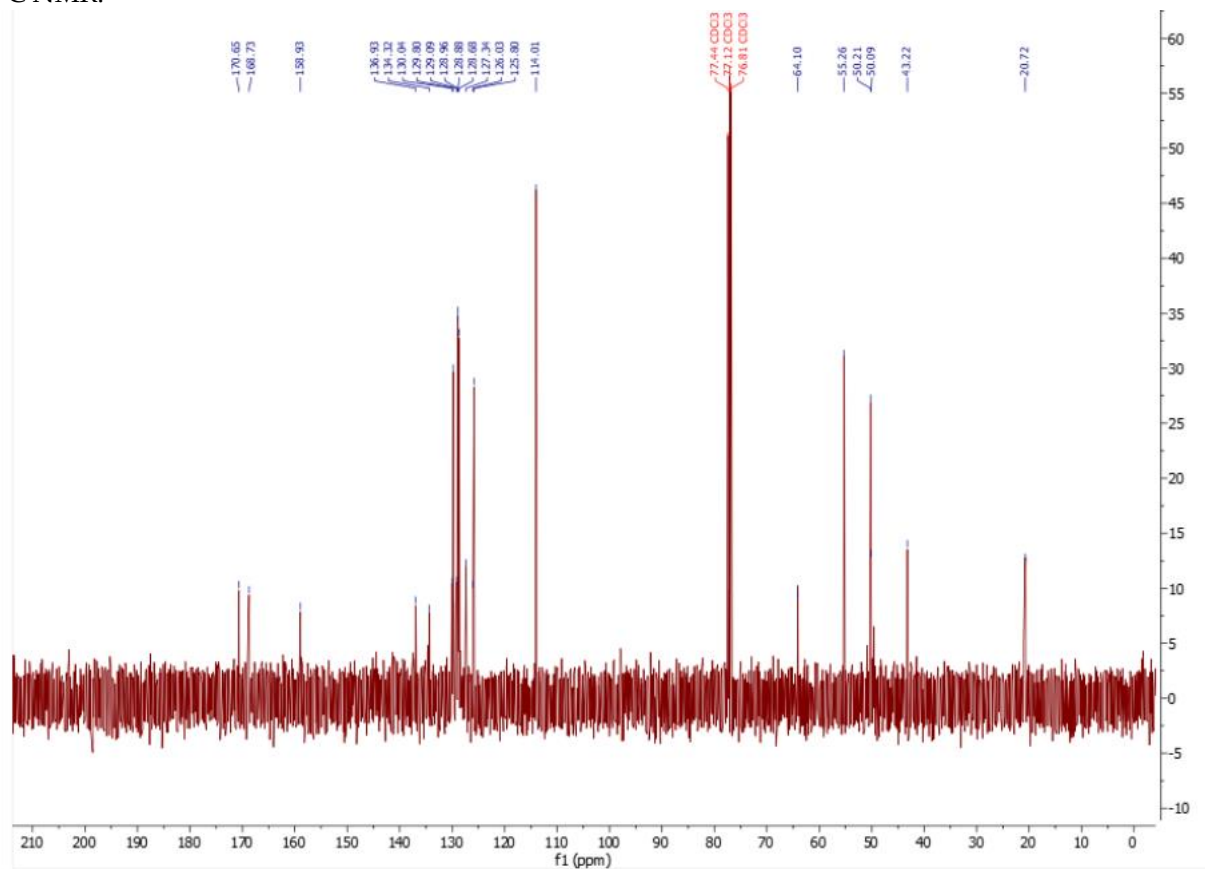
Bleomycin

Figure S4: Structure of studied antibiotics

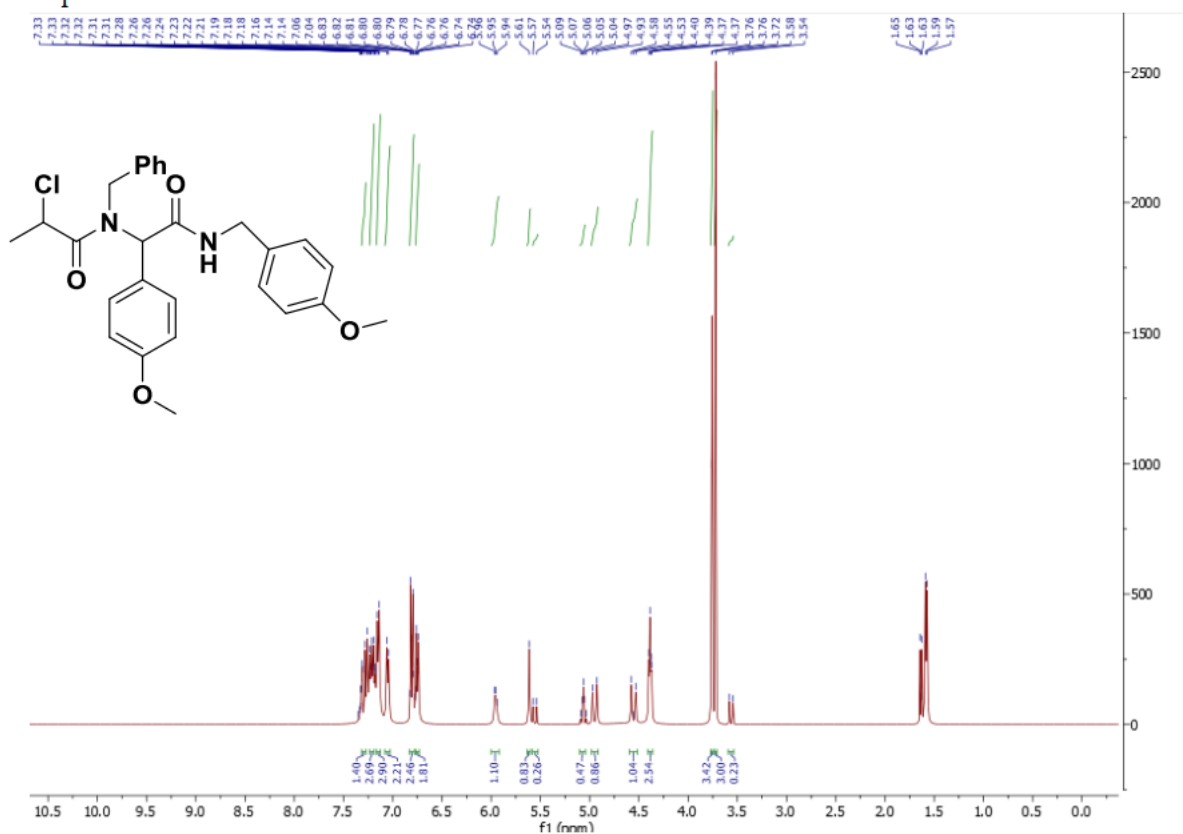
Compound Va:  $^1\text{H}$  NMR



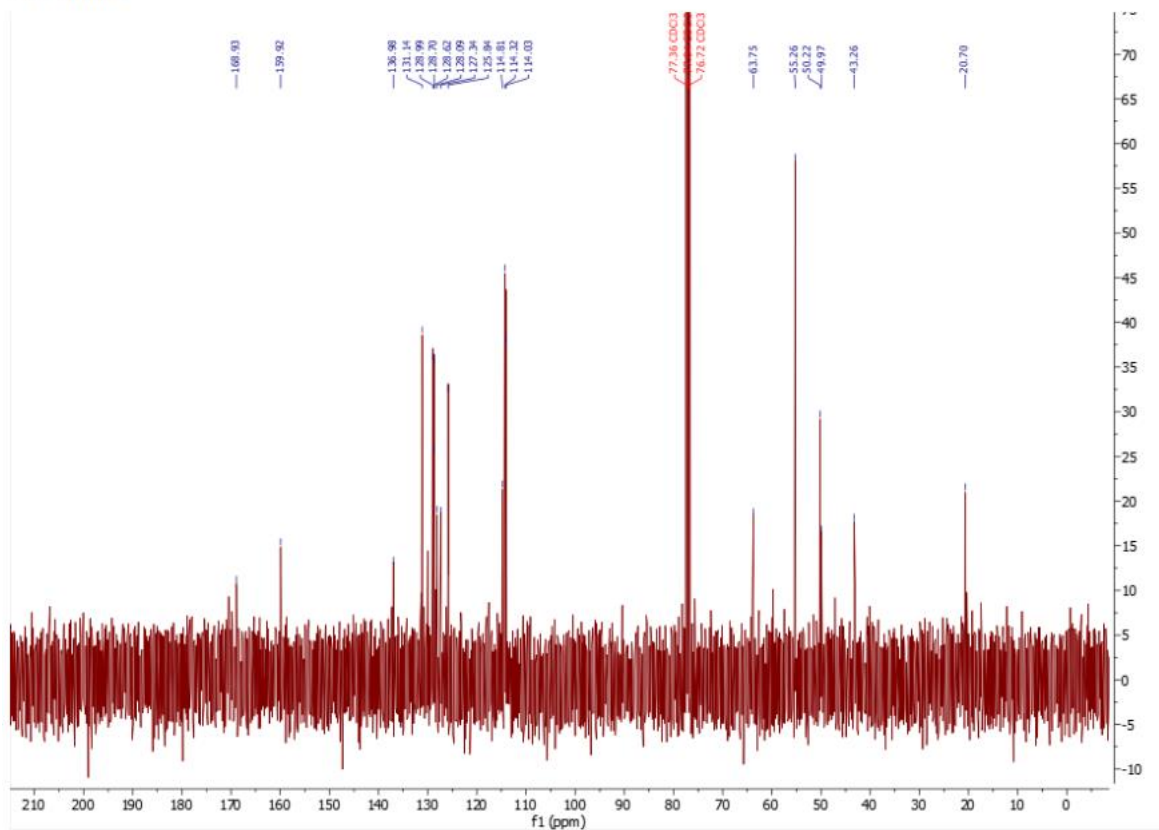
$^{13}\text{C}$  NMR:



Compound Vb:  $^1\text{H}$  NMR

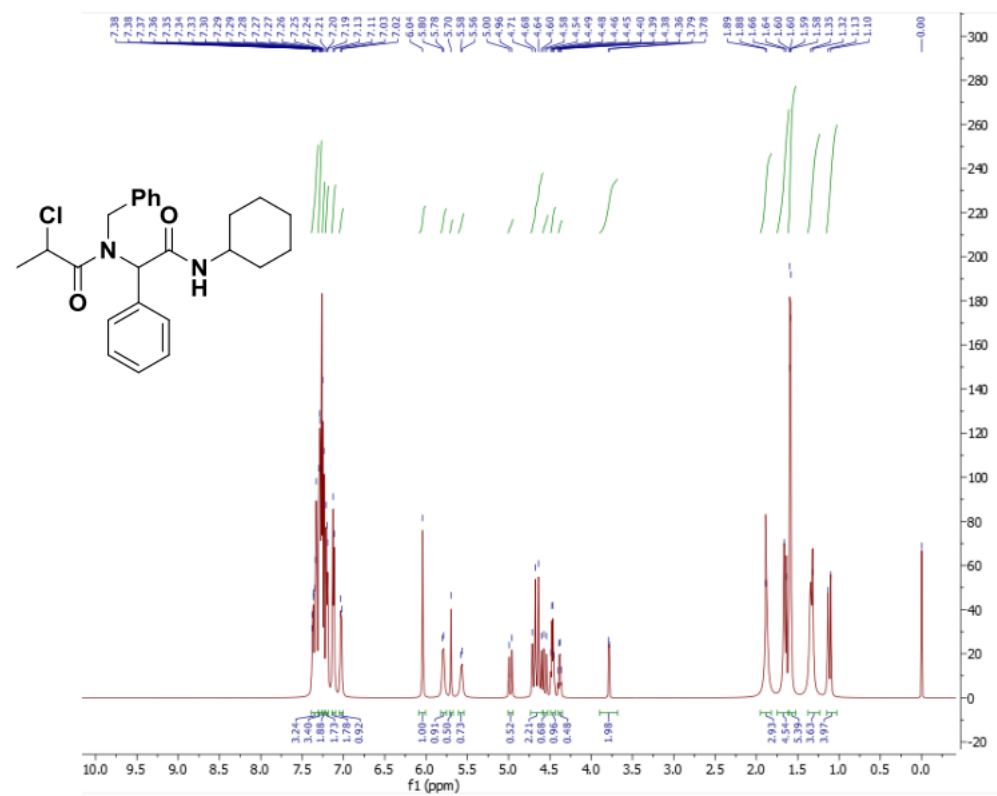


$^{13}\text{C}$  NMR:

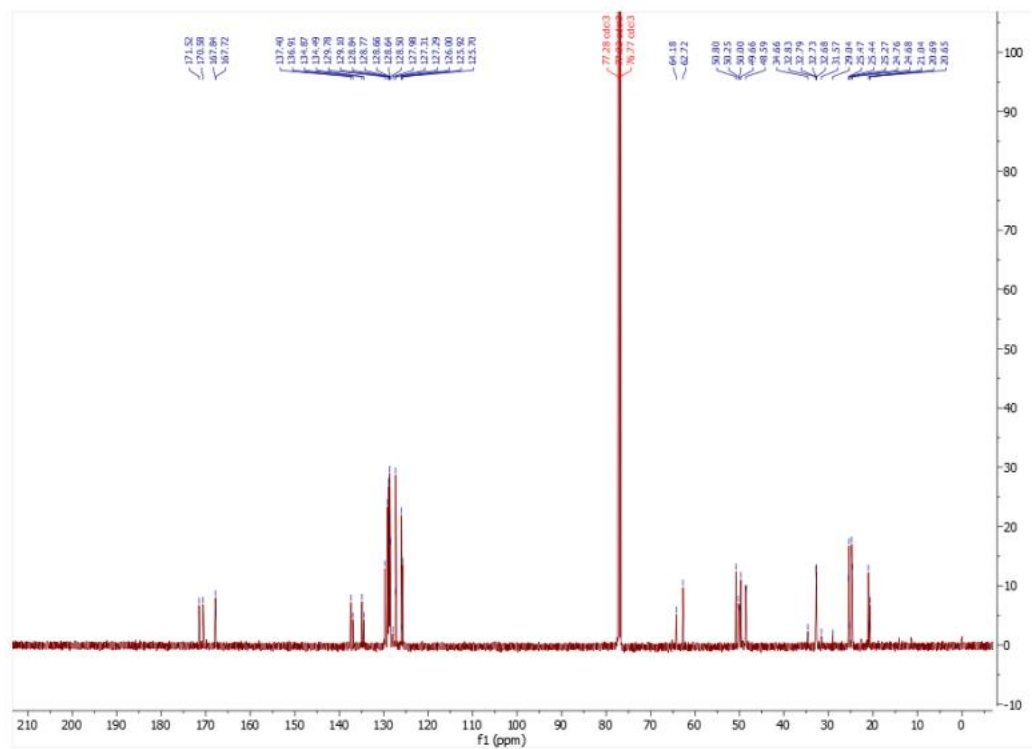


Compound Vc:

$^1\text{H}$  NMR:

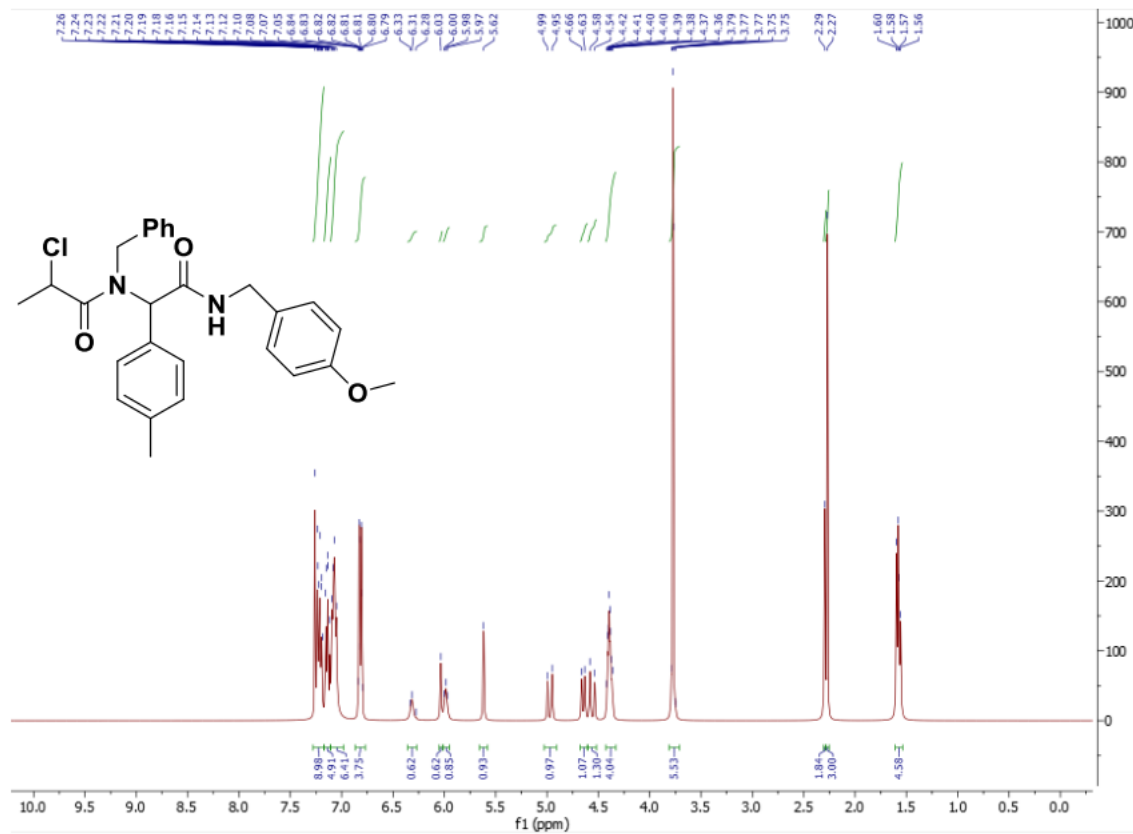


$^{13}\text{C}$  NMR:

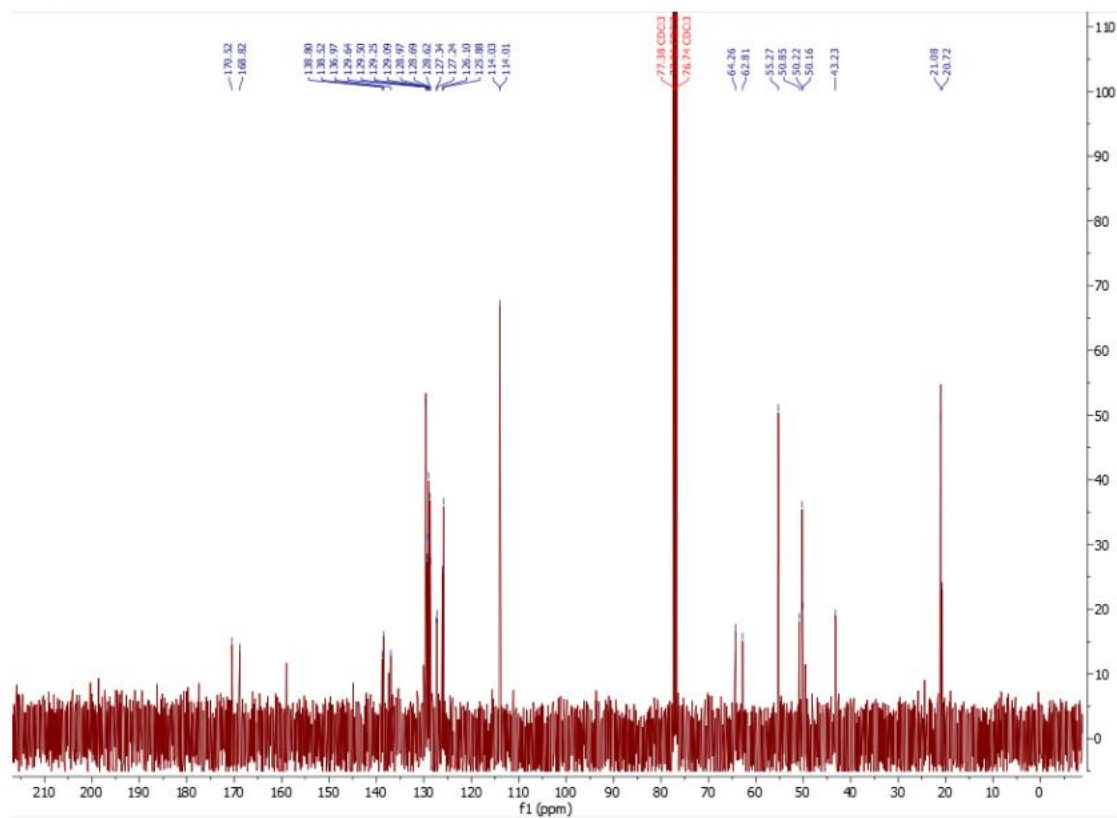


Compound Vd:

$^1\text{H}$  NMR:

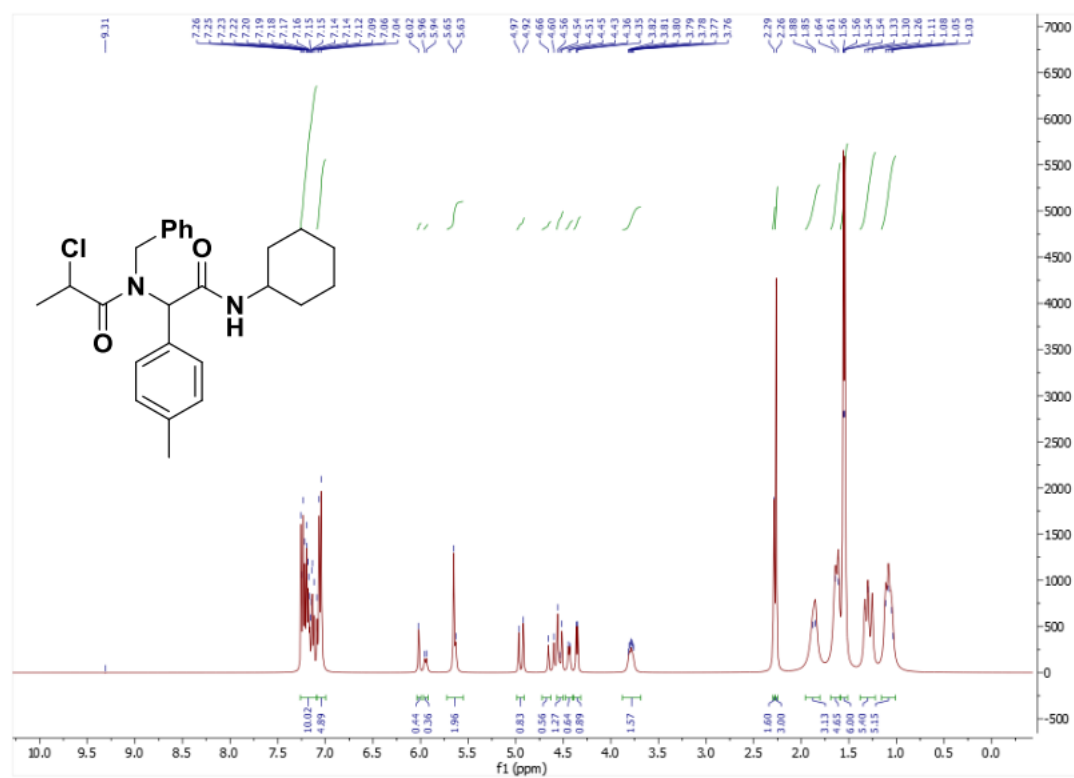


$^{13}\text{C}$  NMR:



Compound Ve:

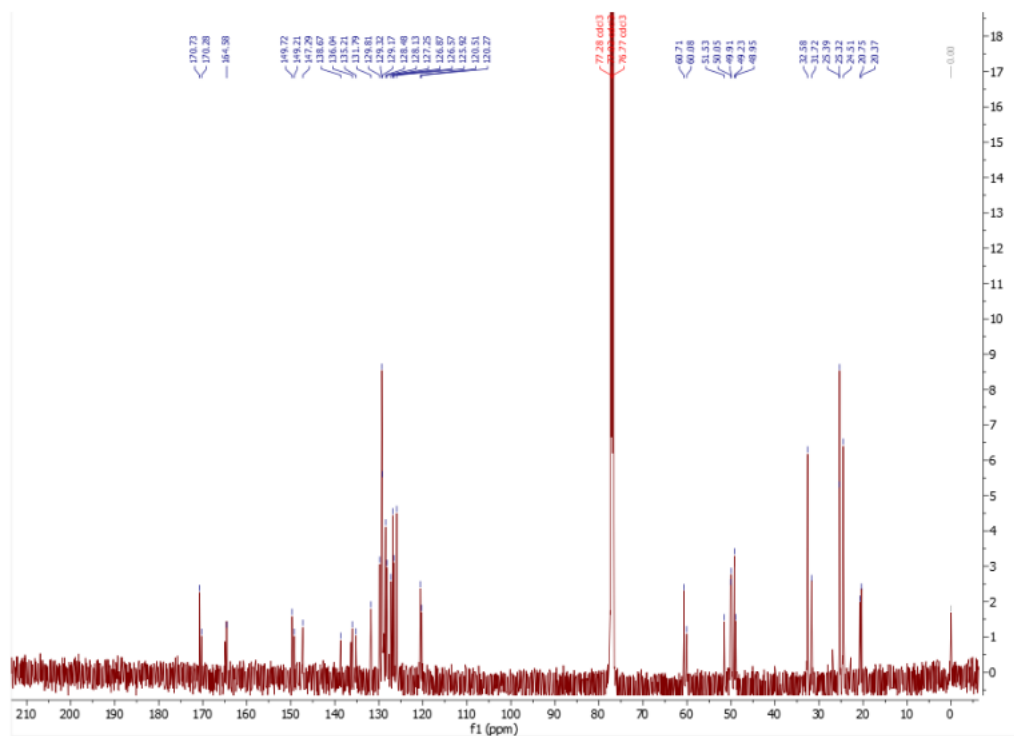
$^1\text{H}$  NMR:





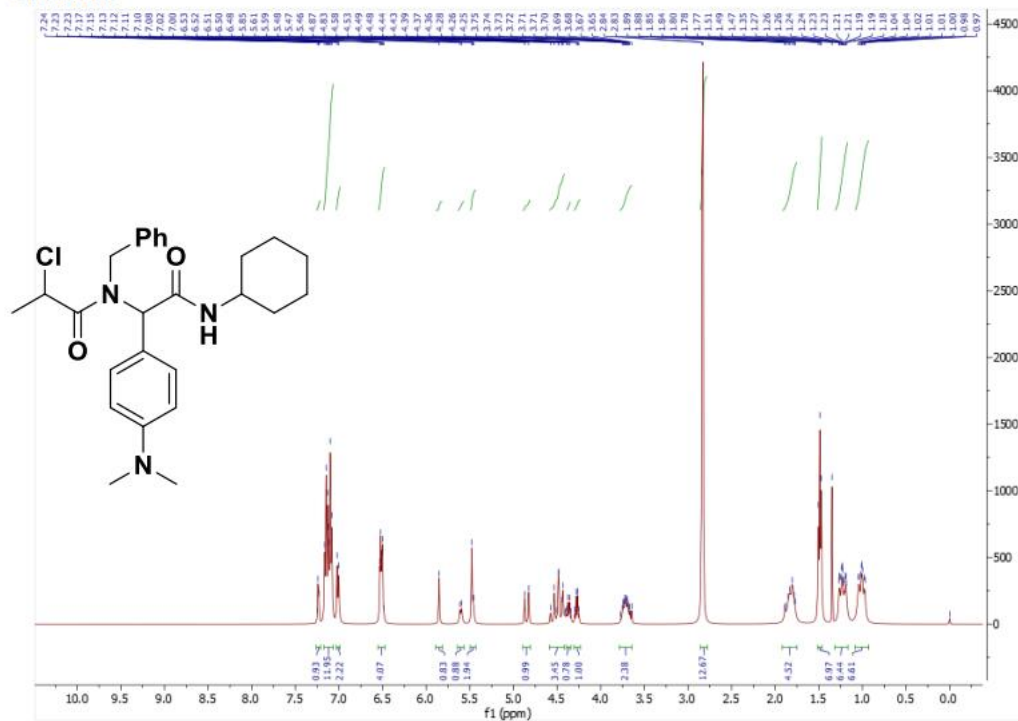
<sup>1</sup>H NMR:

$^{13}\text{C}$  NMR:

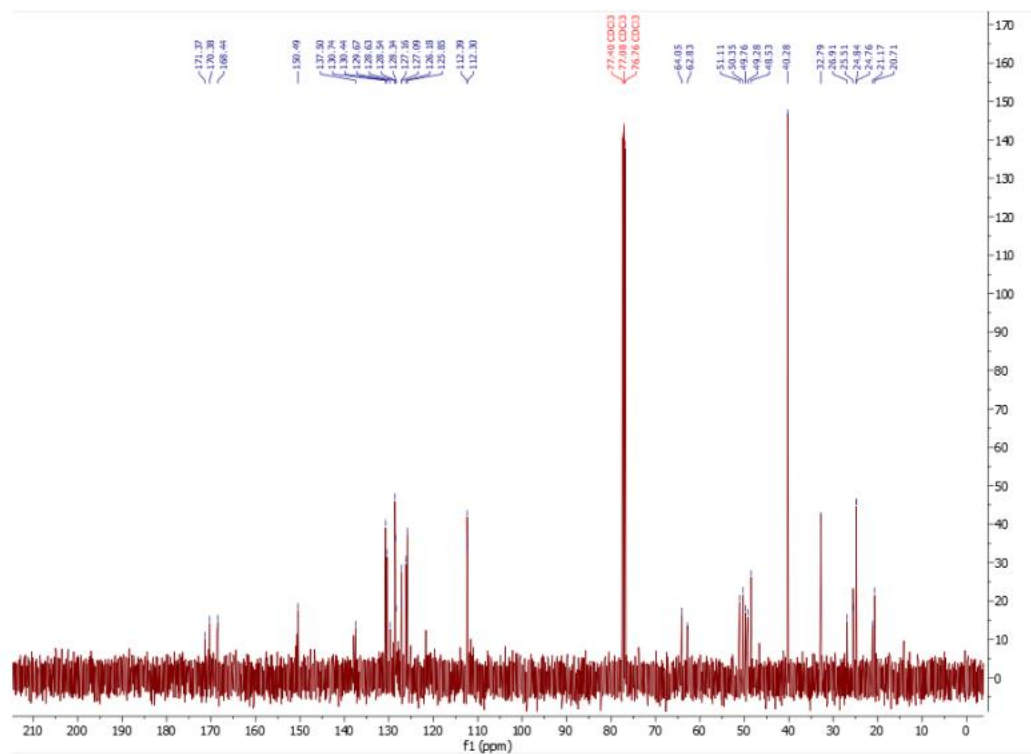


Compound Vg:

$^1\text{H}$  NMR:

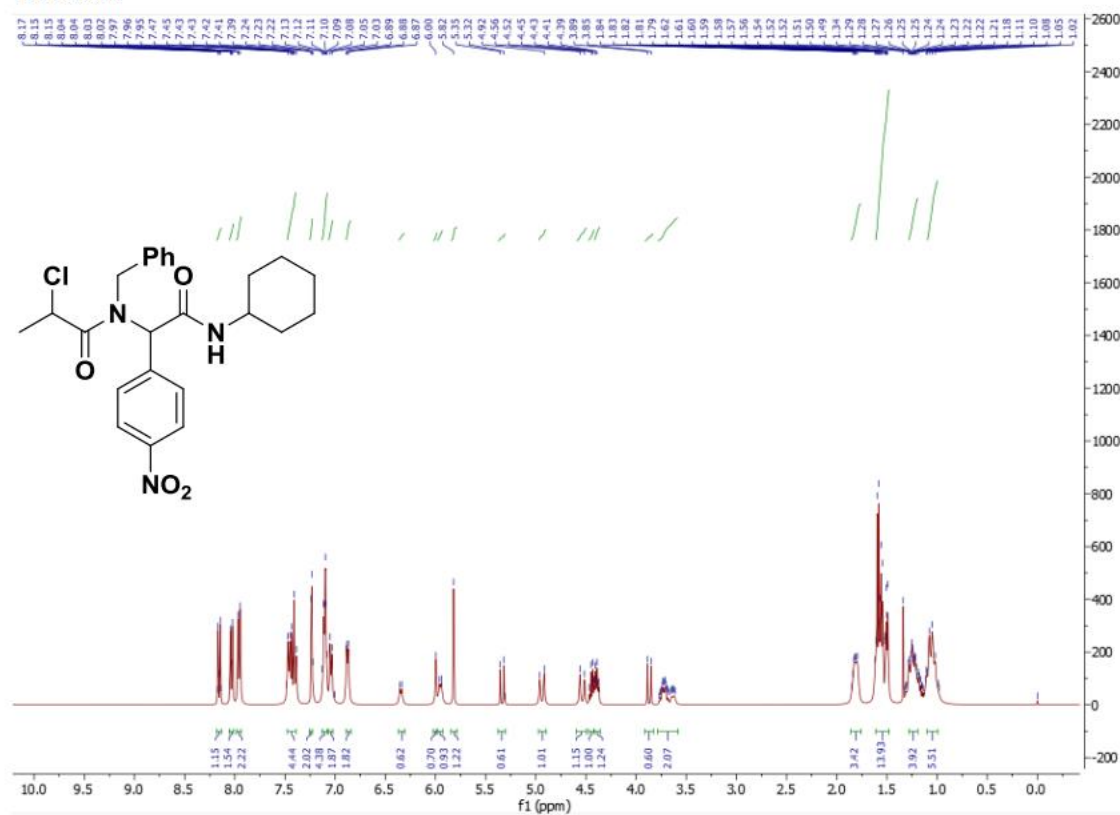


$^{13}\text{C}$  NMR:

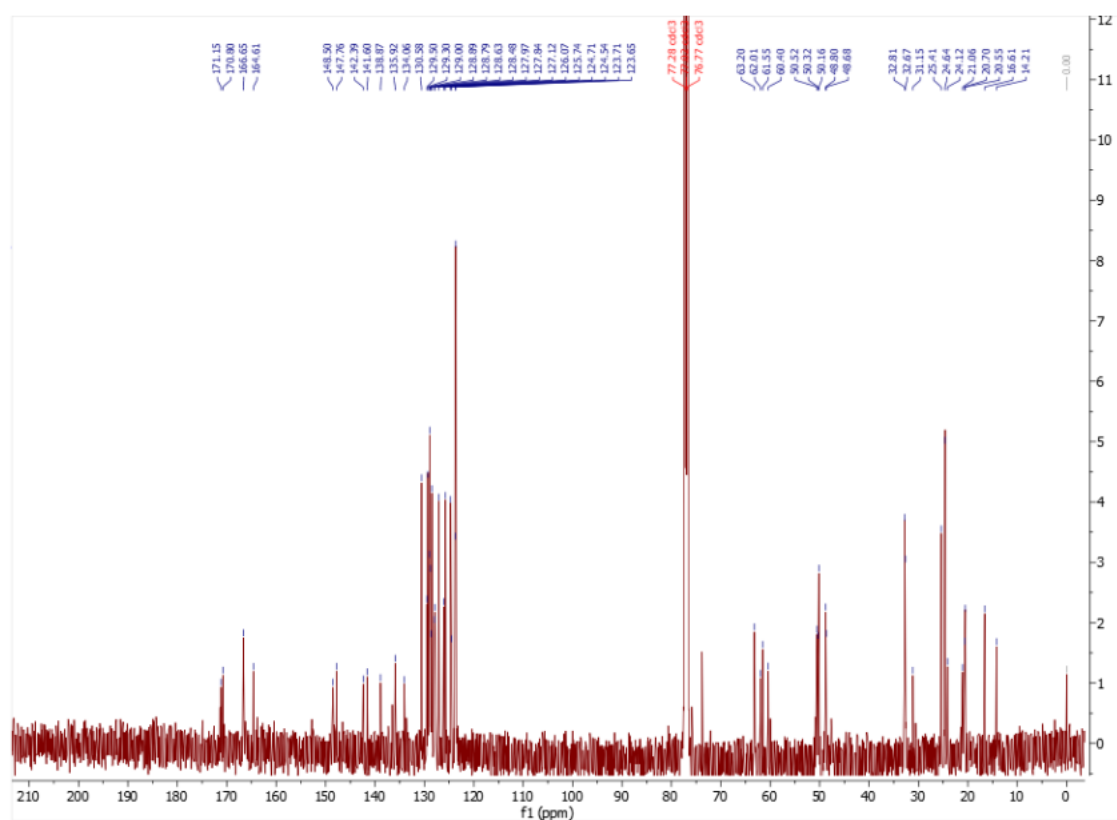


Compound Vh:

$^1\text{H}$  NMR:

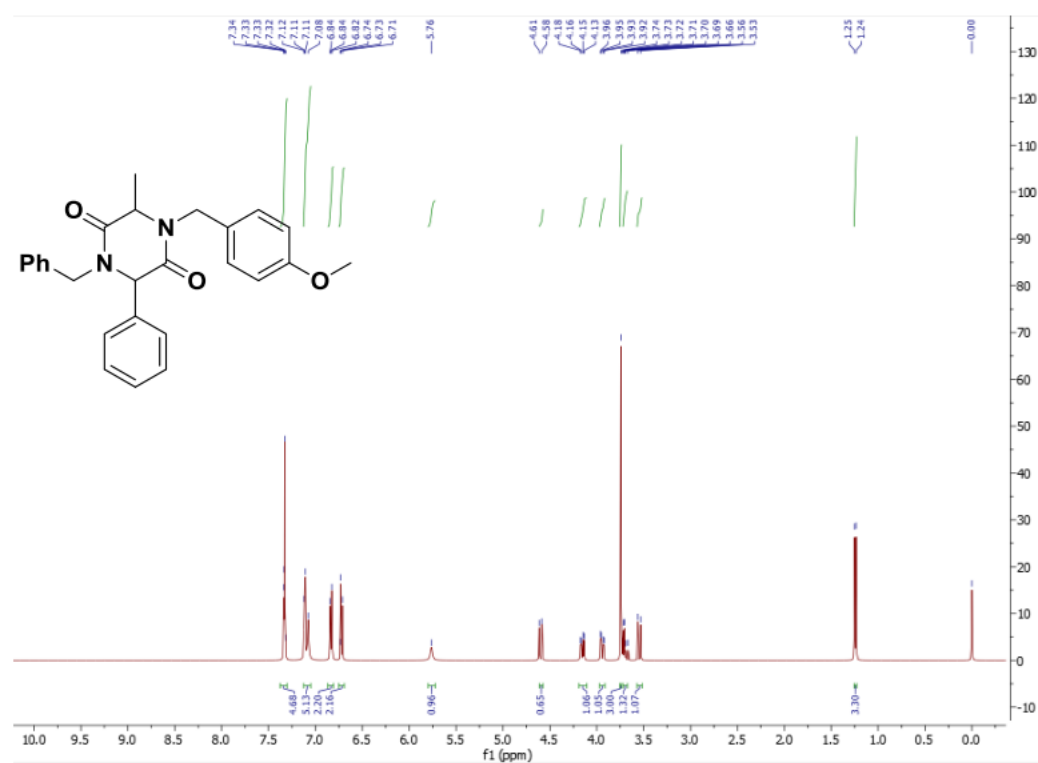


$^{13}\text{C}$  NMR:

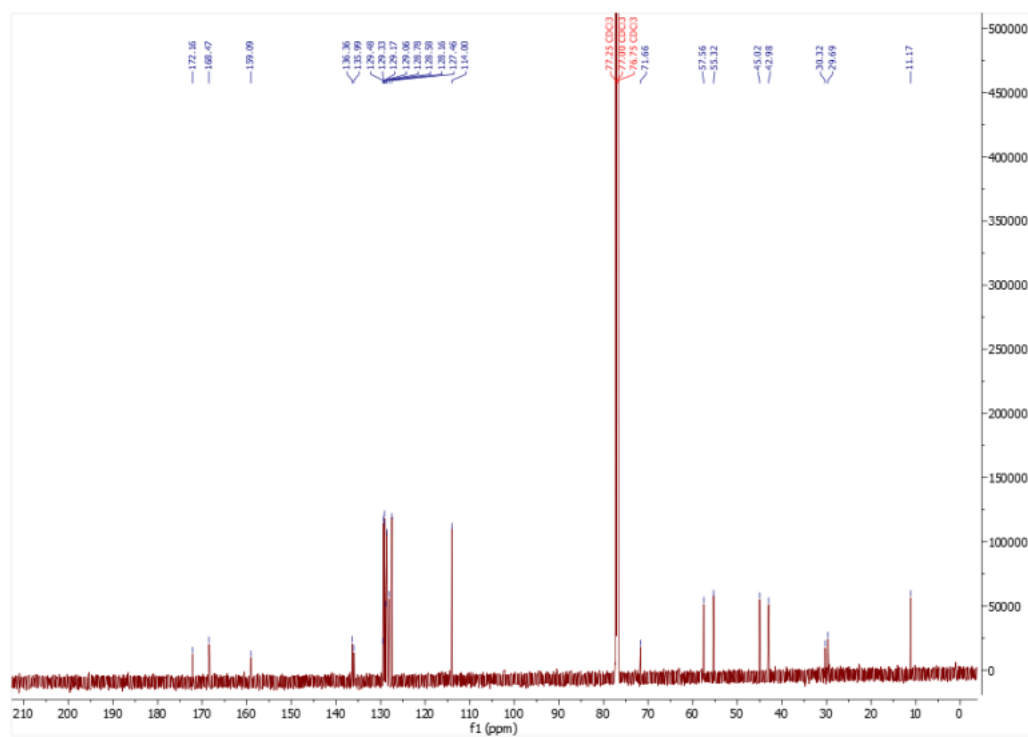


Compound VIa:

$^1\text{H}$  NMR:

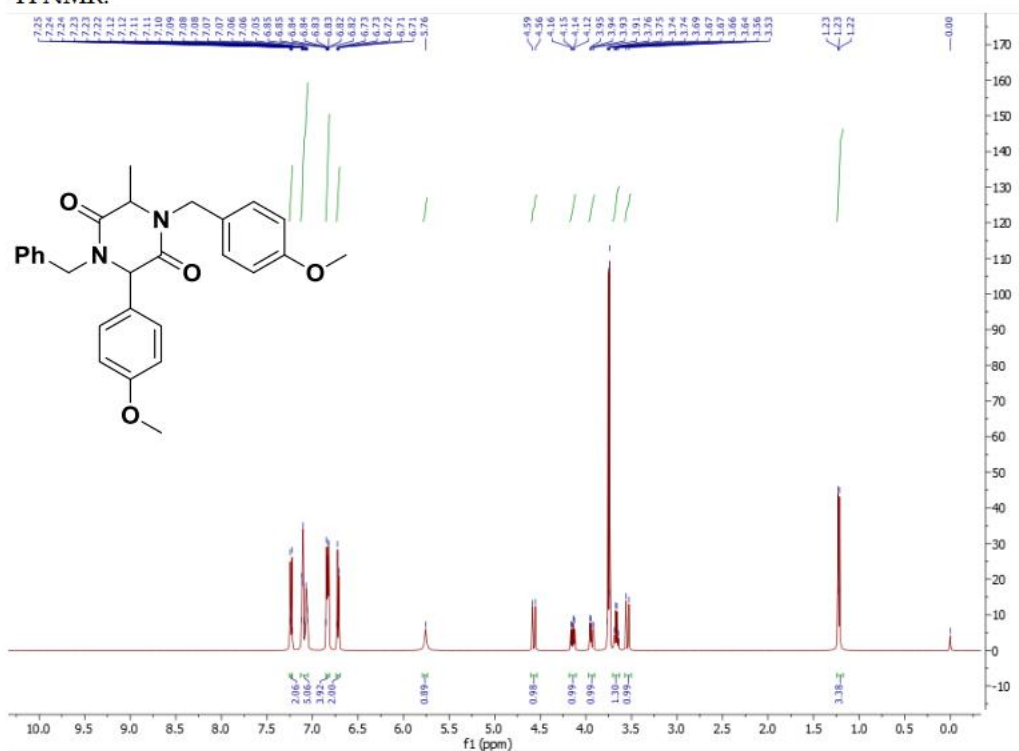


$^{13}\text{C}$  NMR:

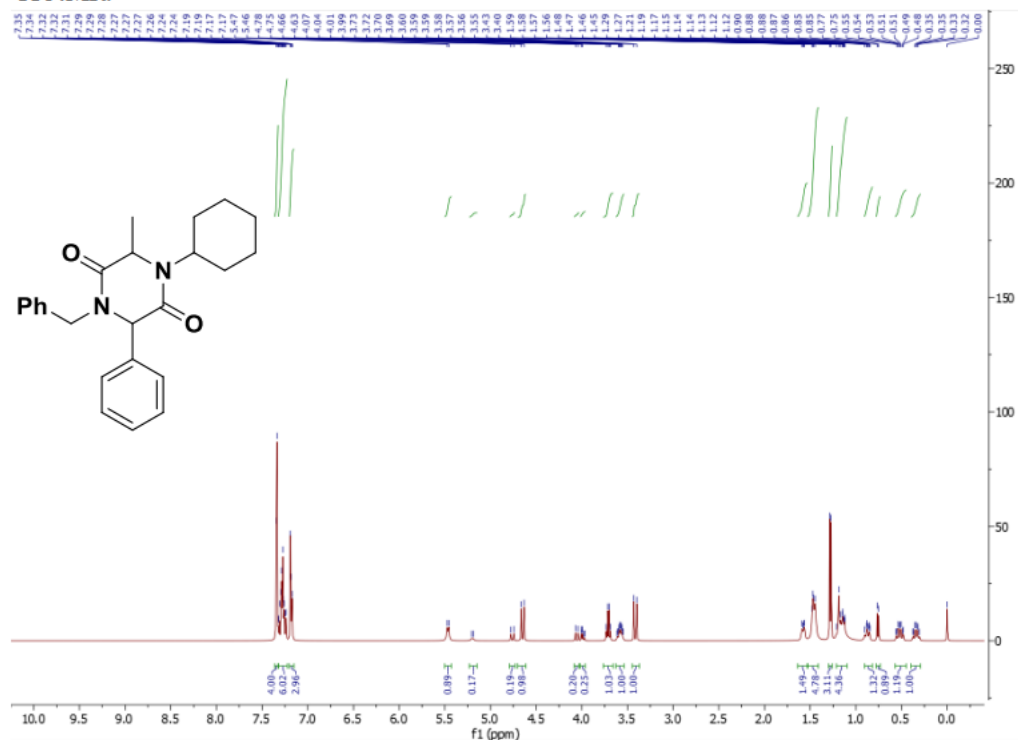


Compound VIb:

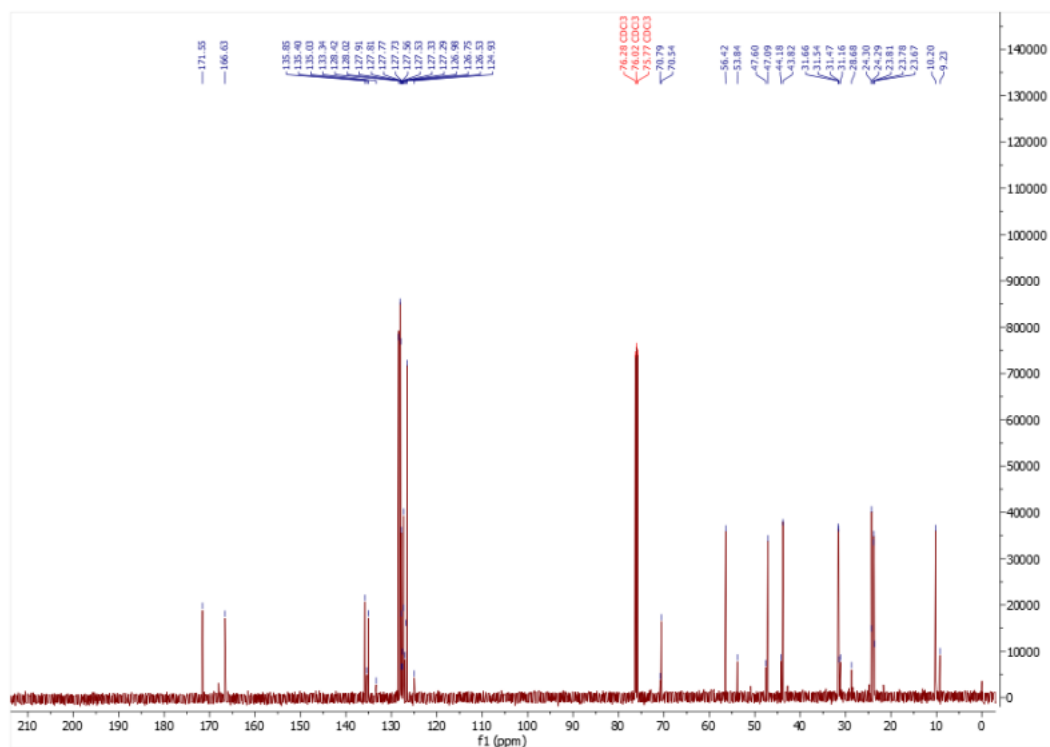
$^1\text{H}$  NMR:



13C NMR spectrum of compound 10. The x-axis is chemical shift in ppm (f1) from 210 to 0. The y-axis is intensity from -5000 to 75000. The spectrum shows several peaks, with the most intense at 77.25 ppm (CDCl3). Other labeled peaks include 172.21, 169.71, 159.76, 159.66, 136.42, 129.80, 129.32, 129.14, 128.80, 128.59, 128.37, 127.71, 114.38, 113.98, 77.25 (CDCl3), 77.00 (CDCl3), 76.75 (CDCl3), 71.33, 57.47, 55.36, 53.30, 44.86, 42.95, and 11.13.

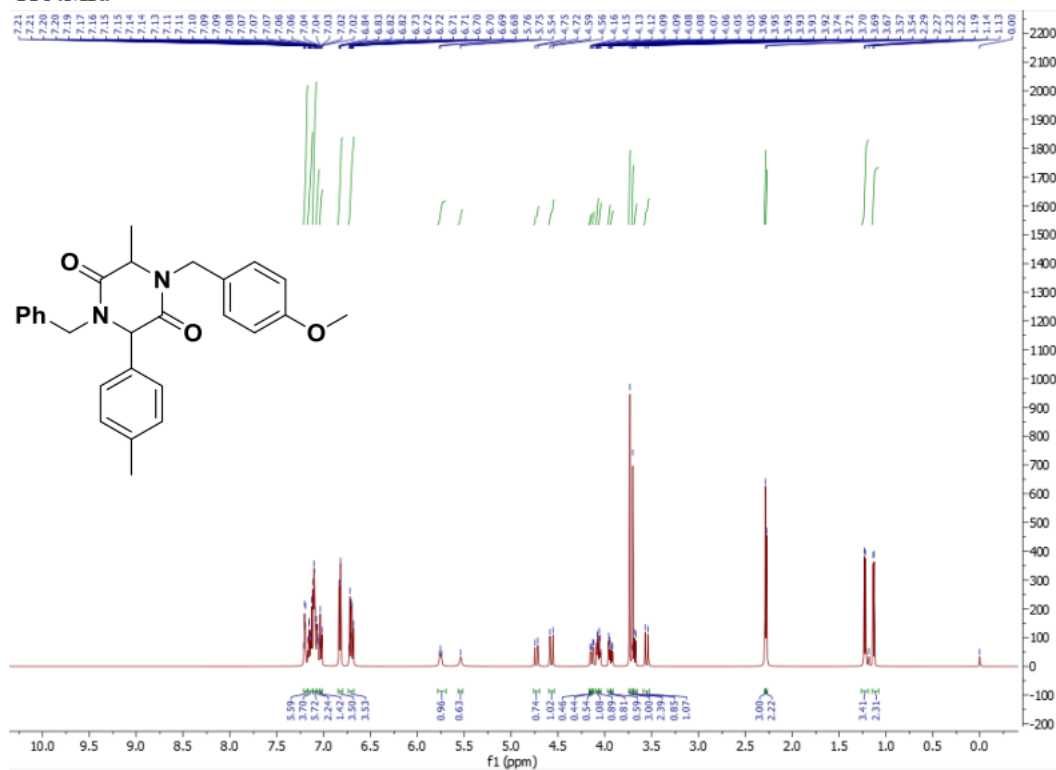
<sup>1</sup>H NMR:

$^{13}\text{C}$  NMR:

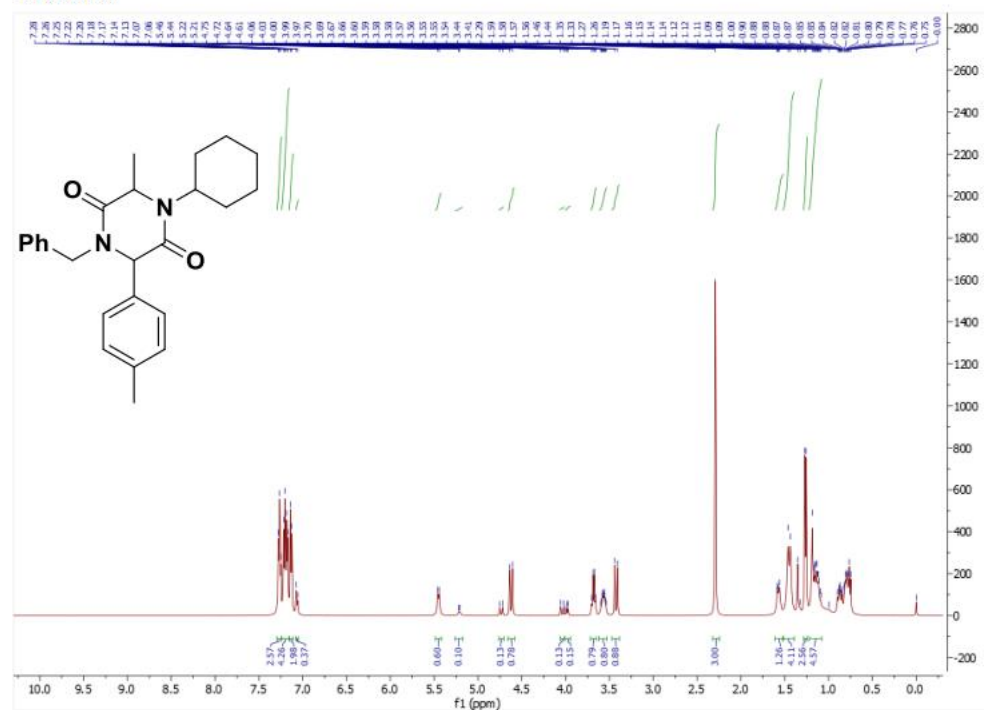


Compound VIc:

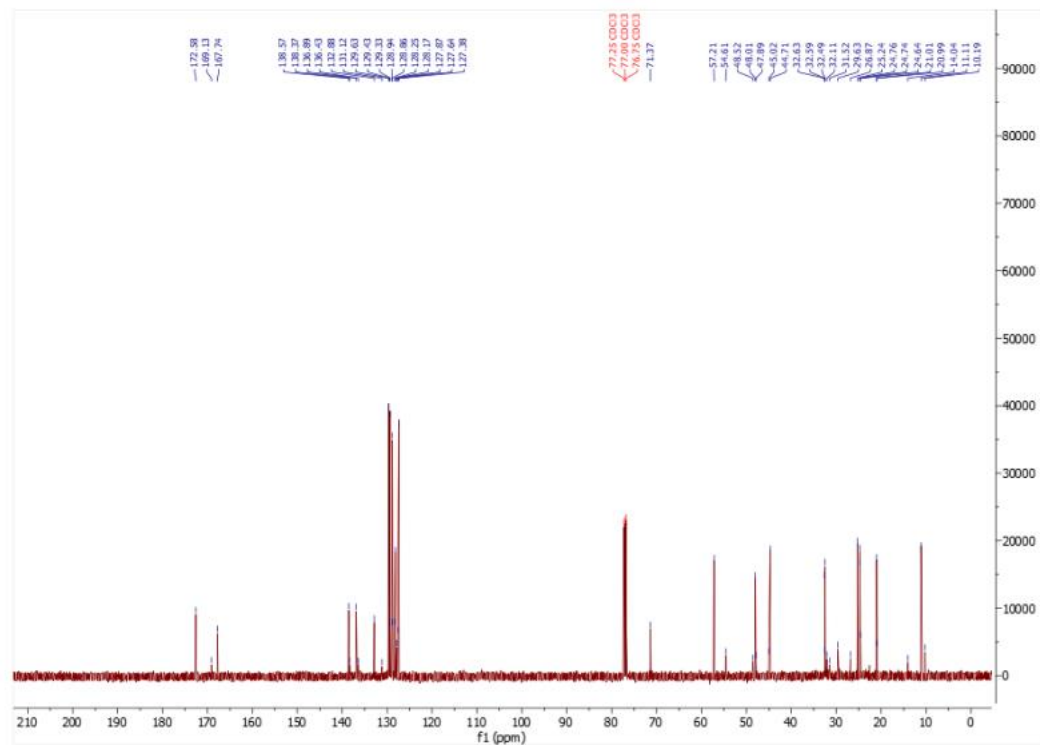
$^1\text{H}$  NMR:



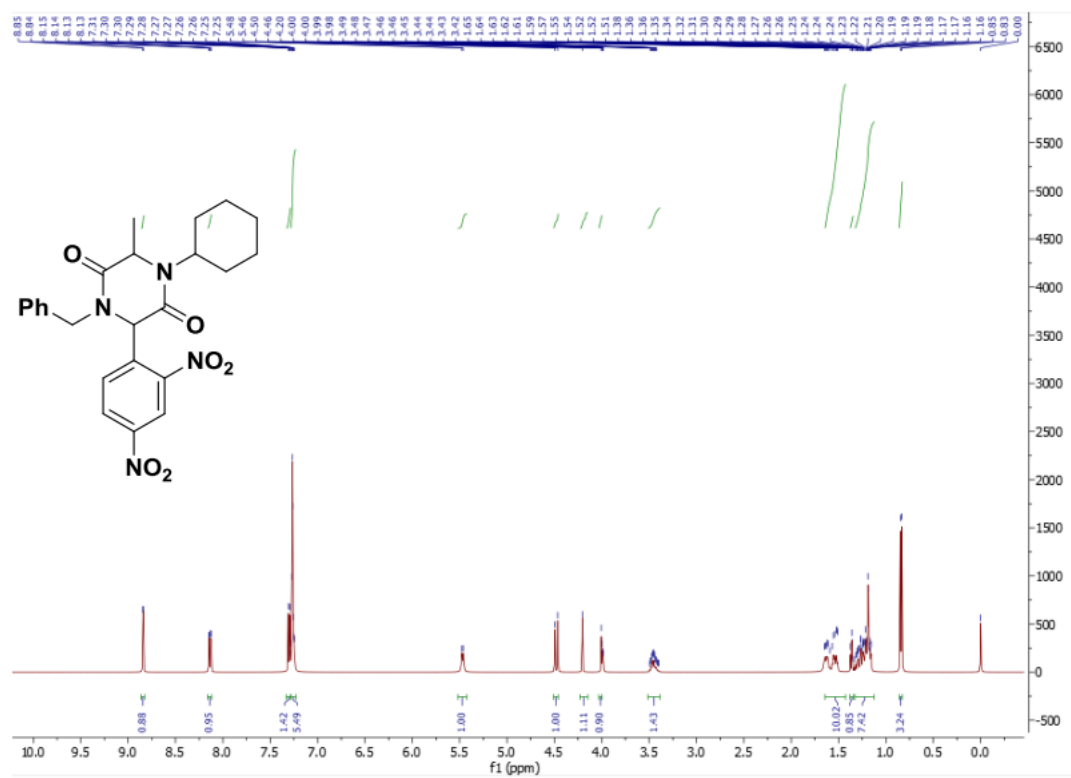
<sup>13</sup>C NMR spectrum (CDCl<sub>3</sub>) of compound 10b. The x-axis represents the chemical shift (f1) in ppm, ranging from 210 to 0. The y-axis represents the intensity, ranging from 0 to 150,000. The spectrum shows several peaks, with the most prominent ones around 130 ppm and a very large peak at 77.25 ppm (CDCl<sub>3</sub>). Other labeled peaks include 172.32, 172.22, 169.85, 169.62, 159.06, 138.68, 138.53, 136.44, 136.05, 132.97, 132.11, 129.69, 129.53, 129.52, 129.30, 129.16, 129.11, 128.85, 128.72, 128.56, 128.06, 127.84, 127.52, 127.36, 114.01, 113.97, 77.25 (CDCl<sub>3</sub>), 77.15 (CDCl<sub>3</sub>), 77.05 (CDCl<sub>3</sub>), 76.95 (CDCl<sub>3</sub>), 71.52, 71.48, 64.38, 57.35, 55.29, 55.26, 54.33, 45.17, 44.64, 43.39, 42.93, 25.35, 21.04, 21.02, 11.11, and 10.30.

<sup>1</sup>H NMR:

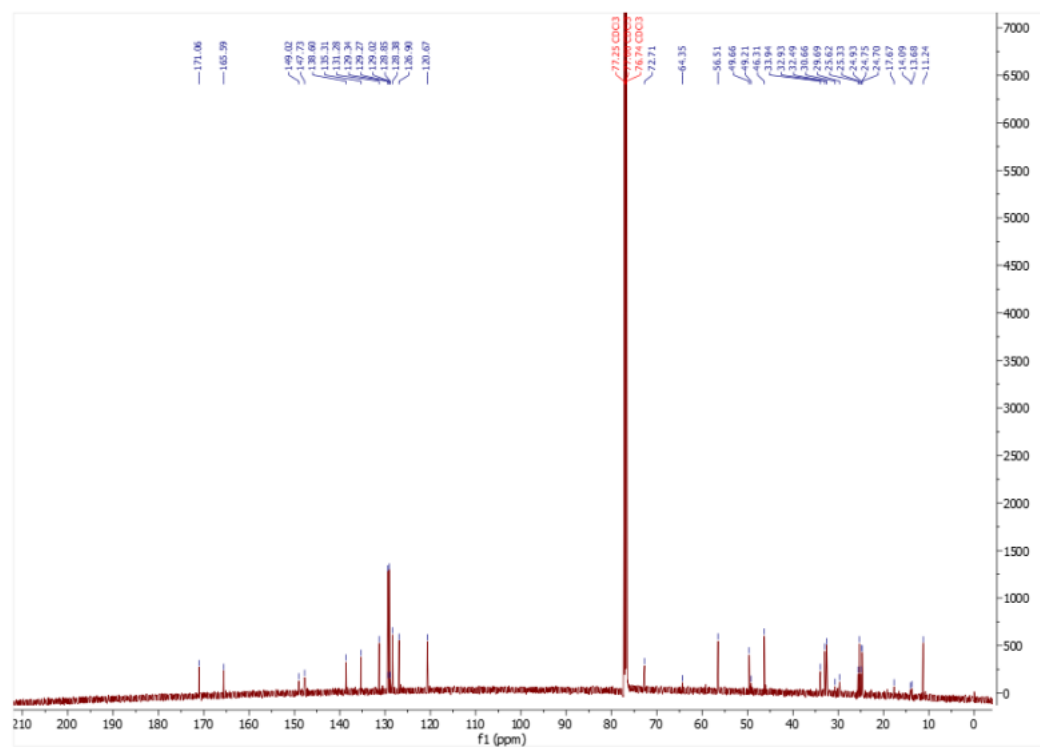


<sup>13</sup>C NMR:

Compound VI f:

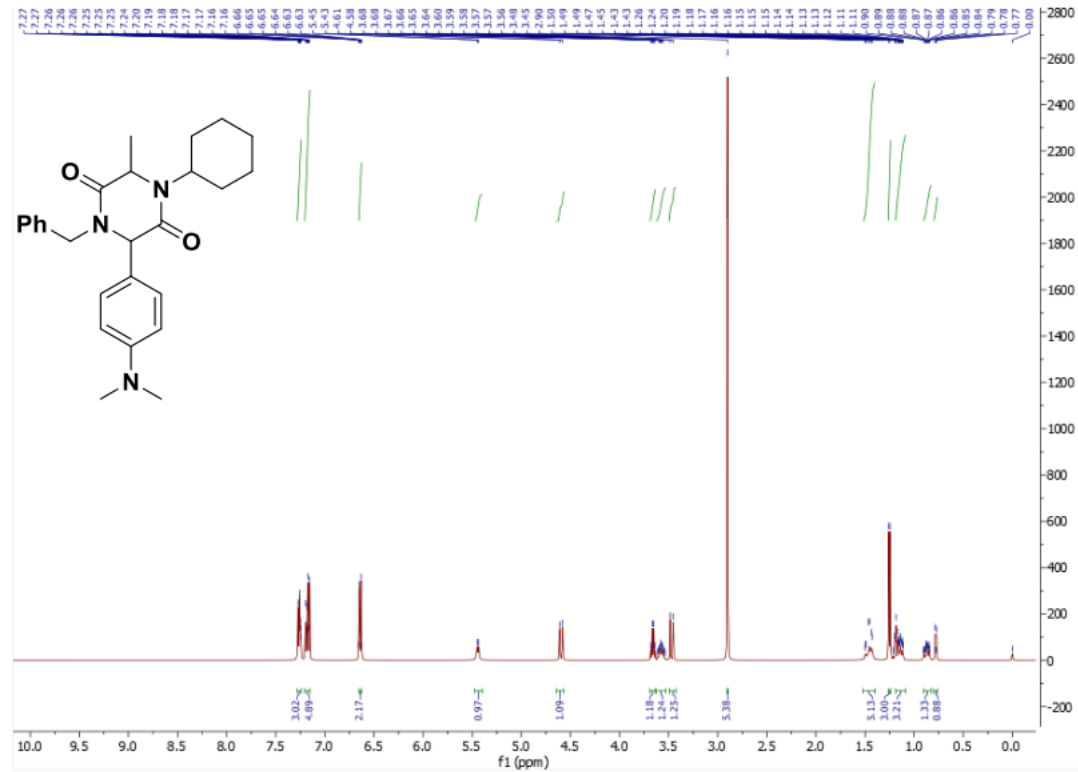
<sup>1</sup>H NMR:

$^{13}\text{C}$  NMR:

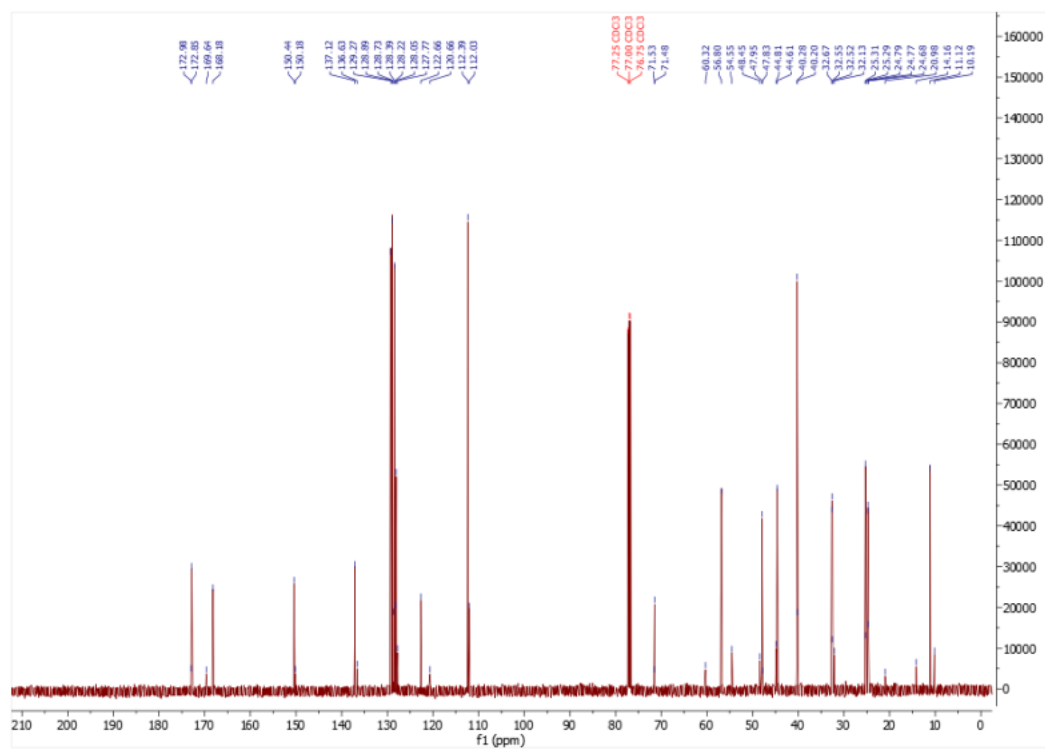


Compound VIg:

$^1\text{H}$  NMR:

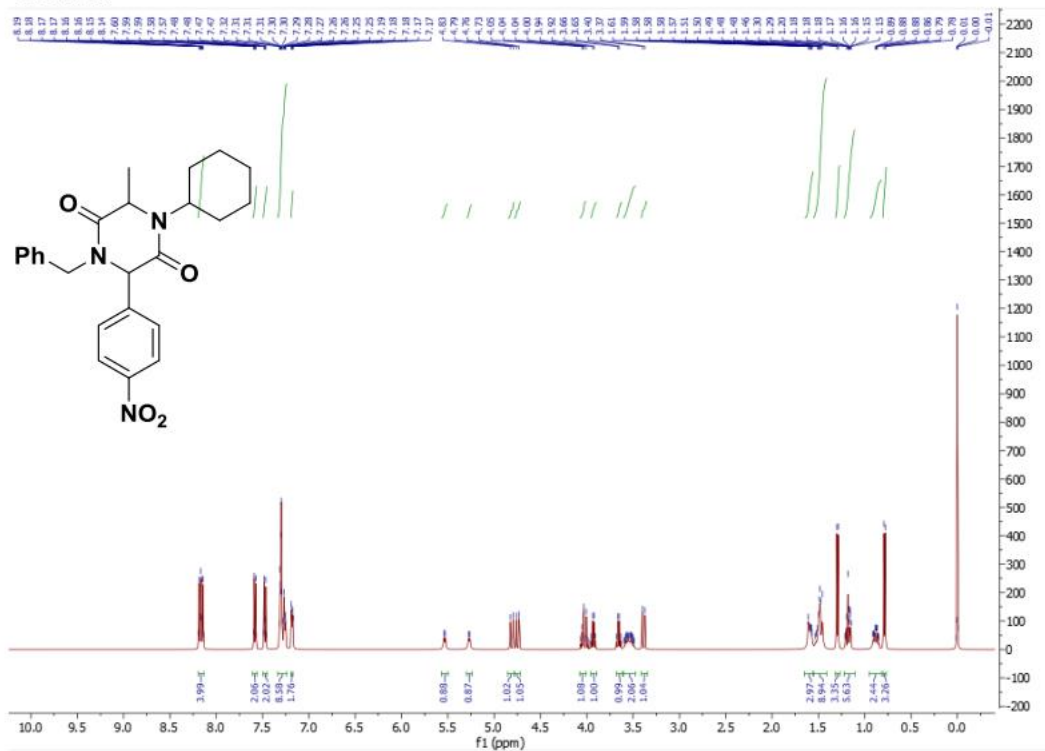


$^{13}\text{C}$  NMR:



Compound VIIh:

$^1\text{H}$  NMR:



$^{13}\text{C}$  NMR:

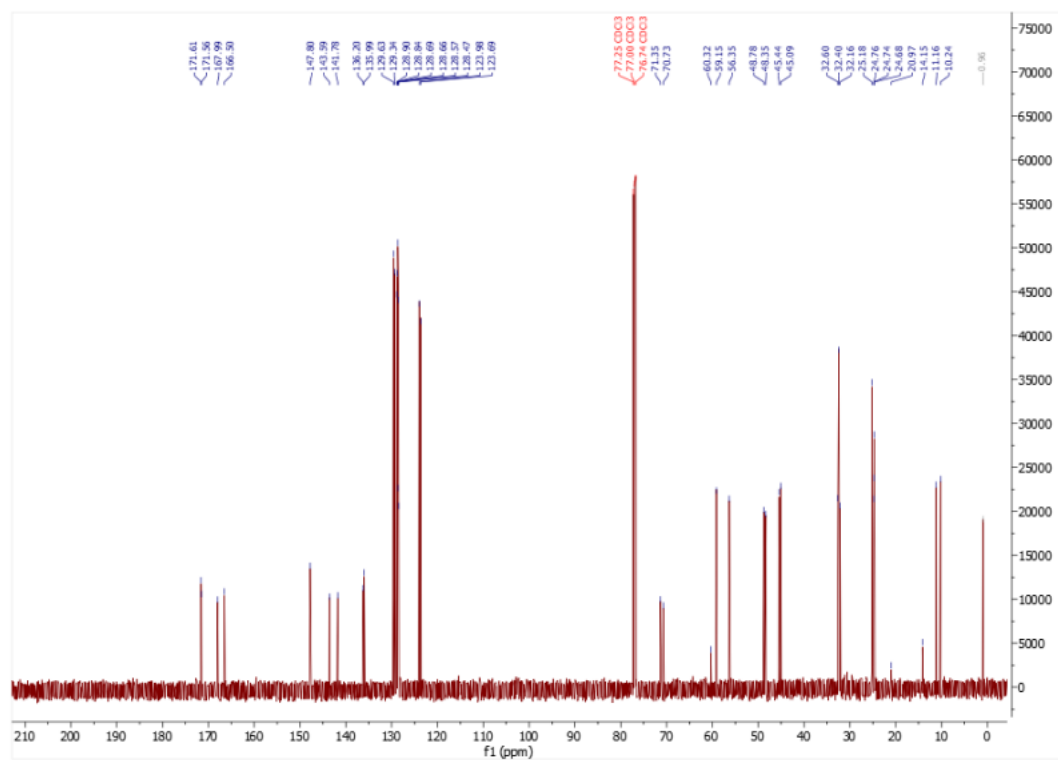


Figure S5. NMR spectra of synthesised compound Va-Vh & VIa-VIh