

**Antimicrobial and antioxidant secondary metabolites from  
*Trifolium baccarinii* Chiov. (Fabaceae) and their mechanisms of  
antibacterial action**

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*Supplementary Material*

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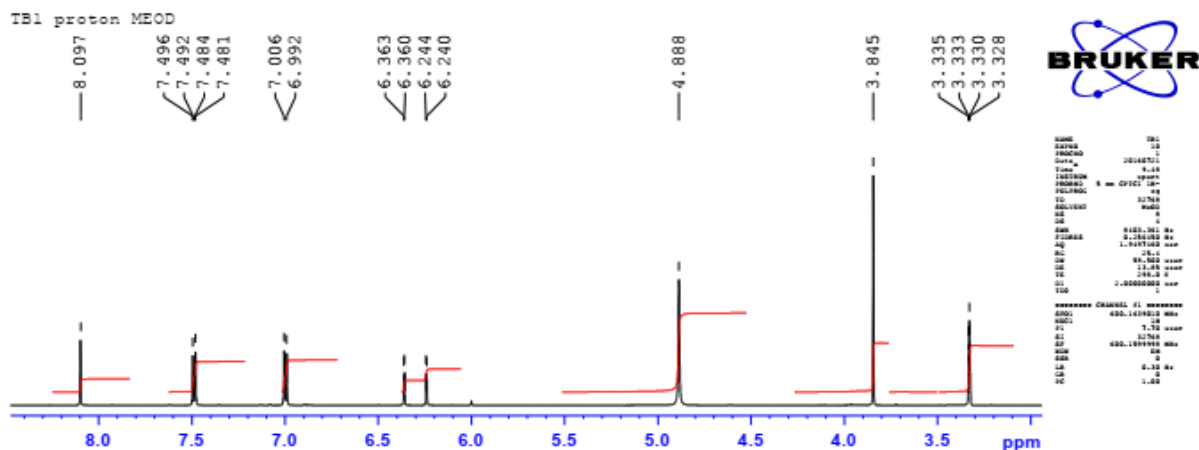


FIGURE S1:  $^1\text{H}$  NMR Spectrum of Compound 1

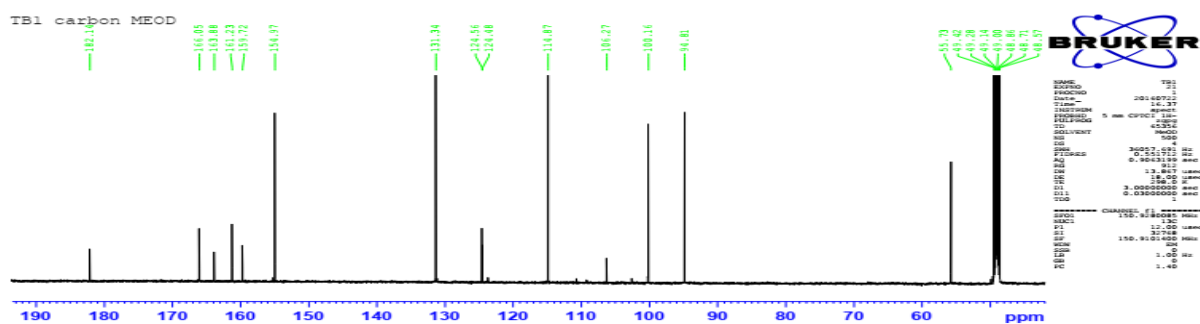


FIGURE S2.  $^{13}\text{C}$  NMR Spectrum of Compound 1

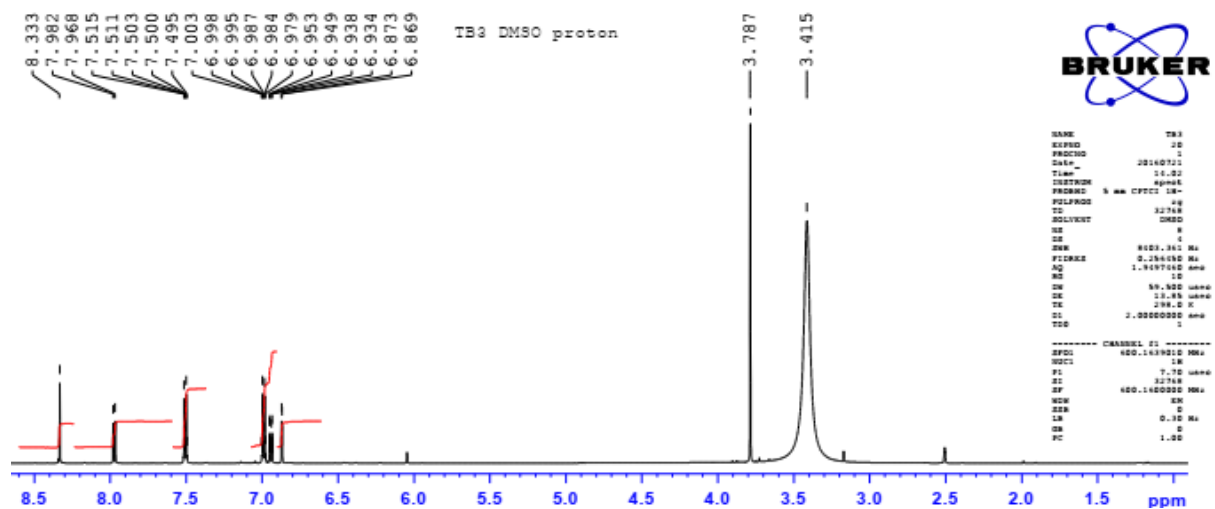


FIGURE S3:  $^1\text{H}$ -NMR Spectrum of Compound 2

TB3 DMSO carbon

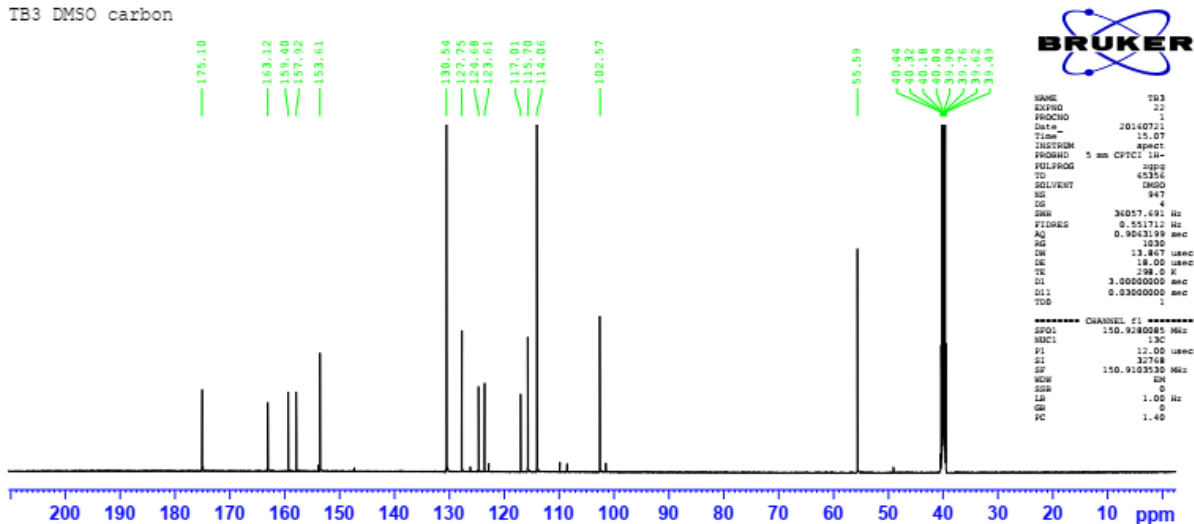


FIGURE S4:  $^{13}\text{C}$ -NMR Spectrum of Compound 2

TB3 Hsqc

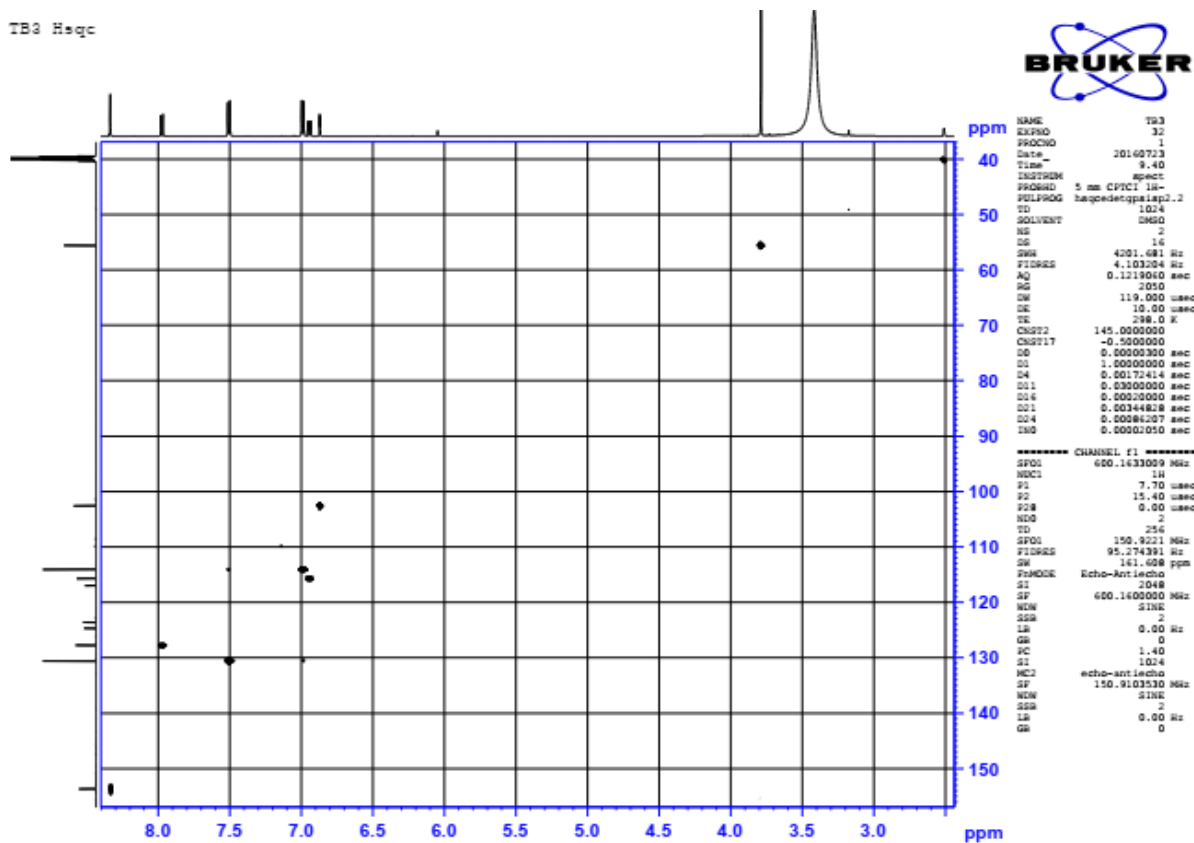


FIGURE S5: HSQC Spectrum of Compound 2

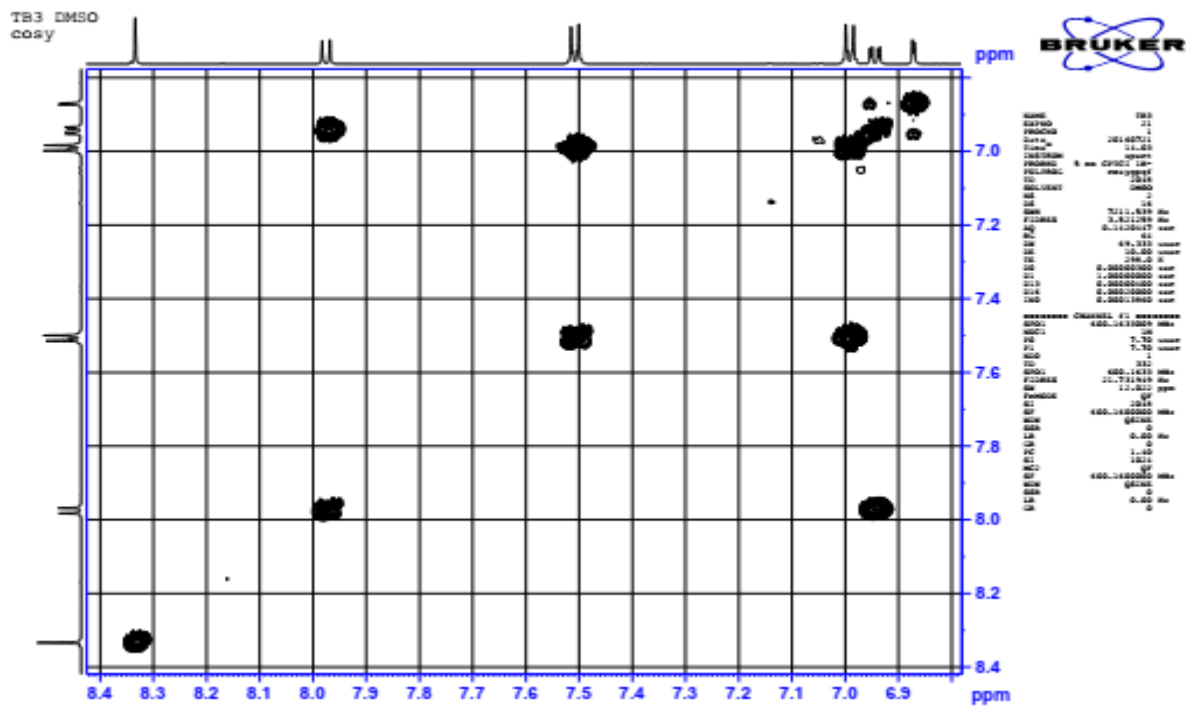


FIGURE S6 : <sup>1</sup>H-<sup>1</sup>H COSY Spectrum of Compound 2

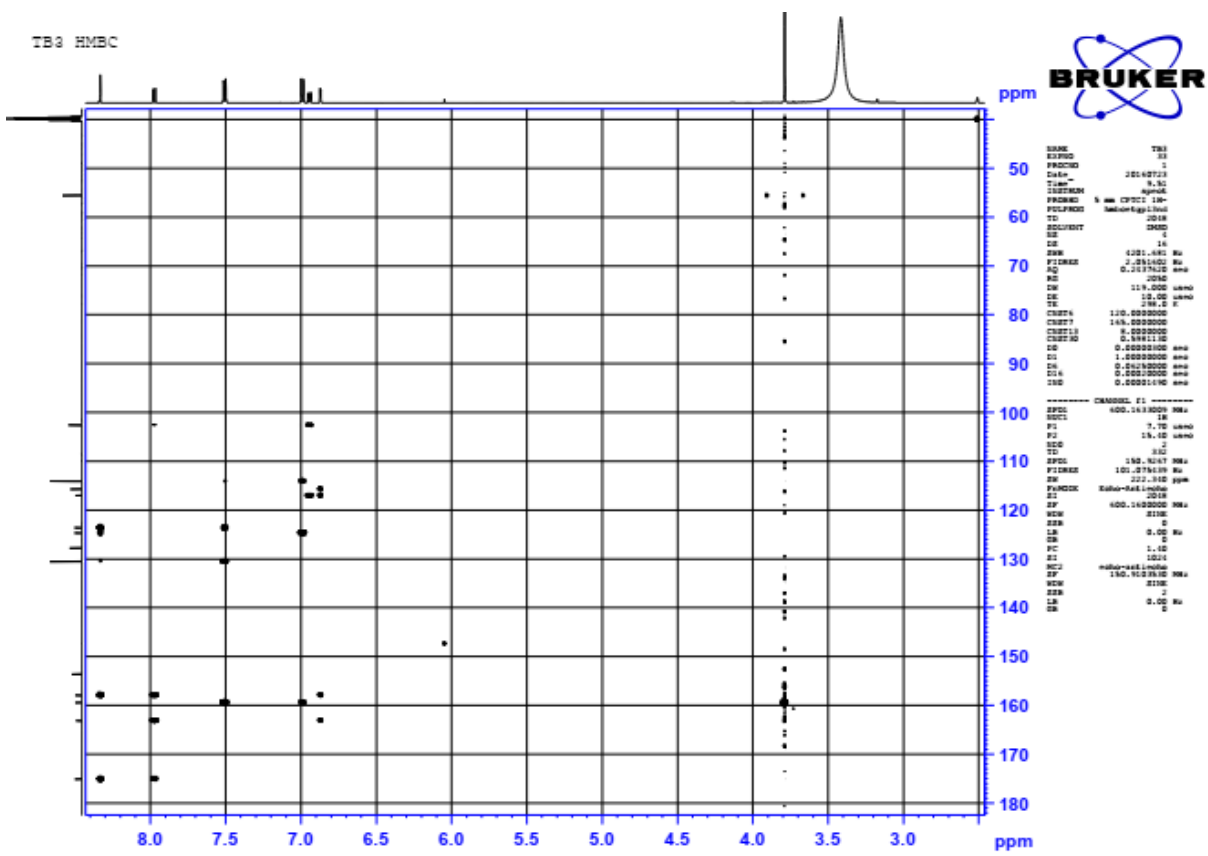


FIGURE S7: HMBC Spectrum of Compound 2

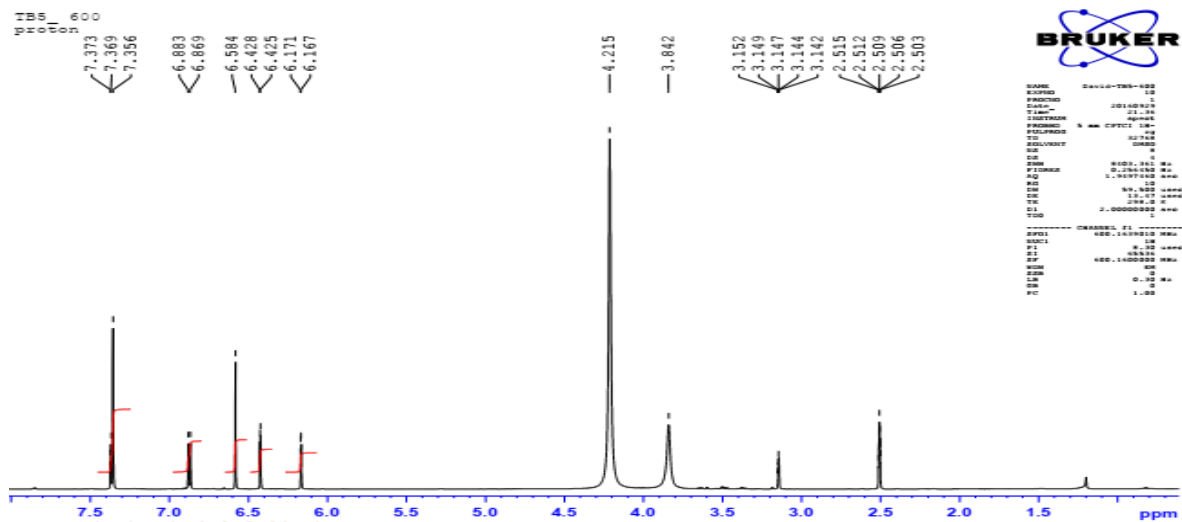


FIGURE S8 :  $^1\text{H}$ -NMR Spectrum of Compound 3

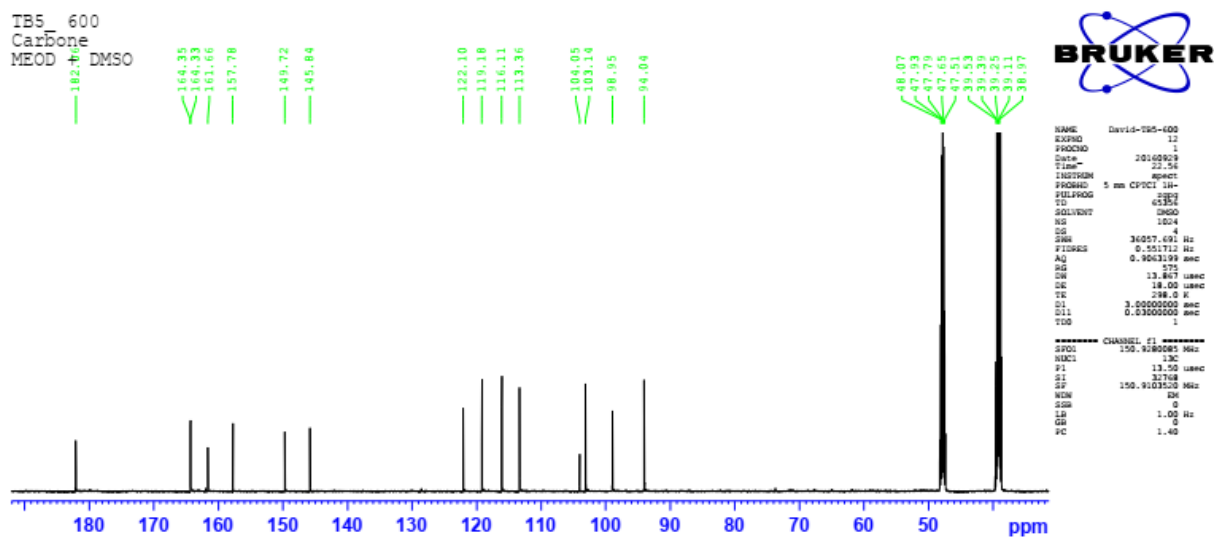


FIGURE S9 :  $^{13}\text{C}$ -NMR Spectrum of Compound 3





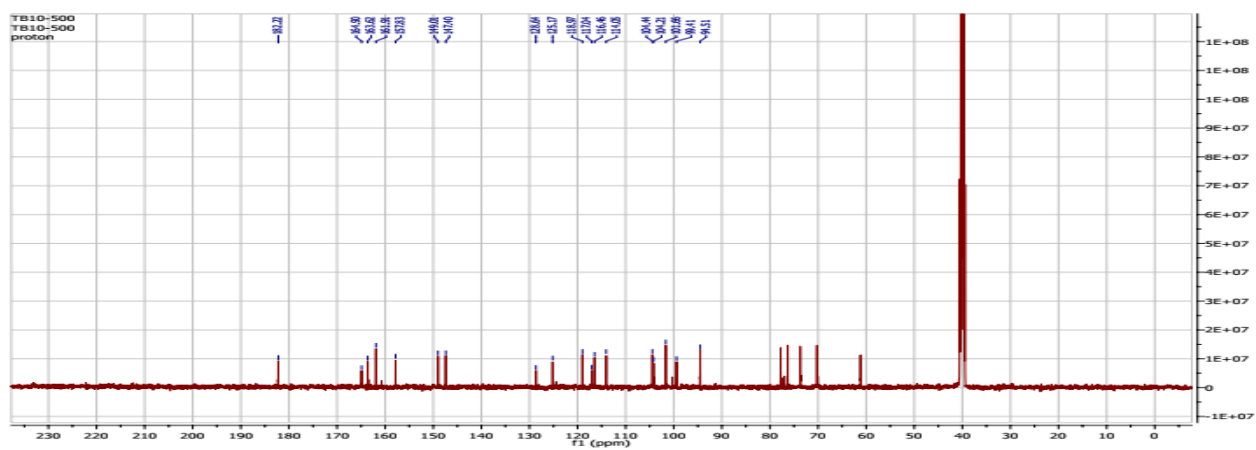


FIGURE S12 :  $^{13}\text{C}$ -NMR Spectrum of Compound 4

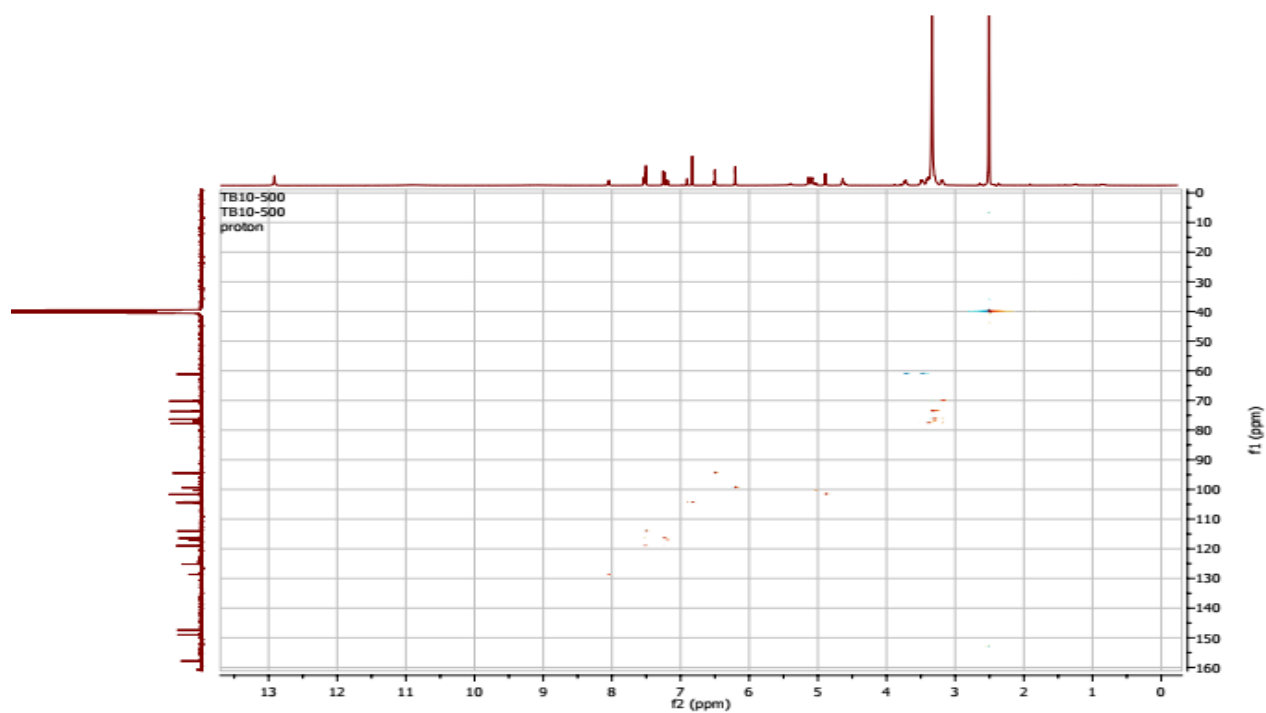


FIGURE S13 : HSQC Spectrum of Compound 4

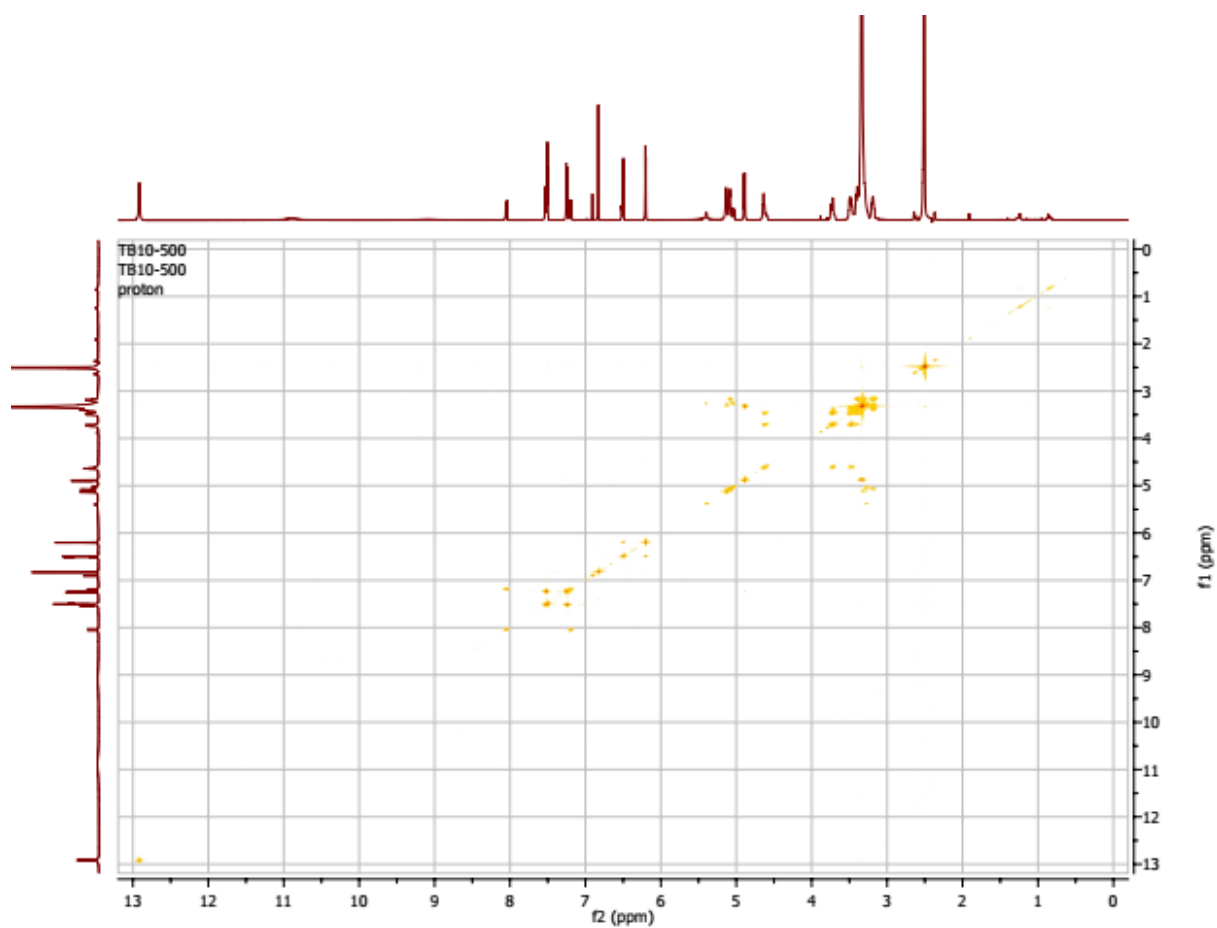


FIGURE S14 :  $^1\text{H}$ - $^1\text{H}$  COSY Spectrum of Compound 4

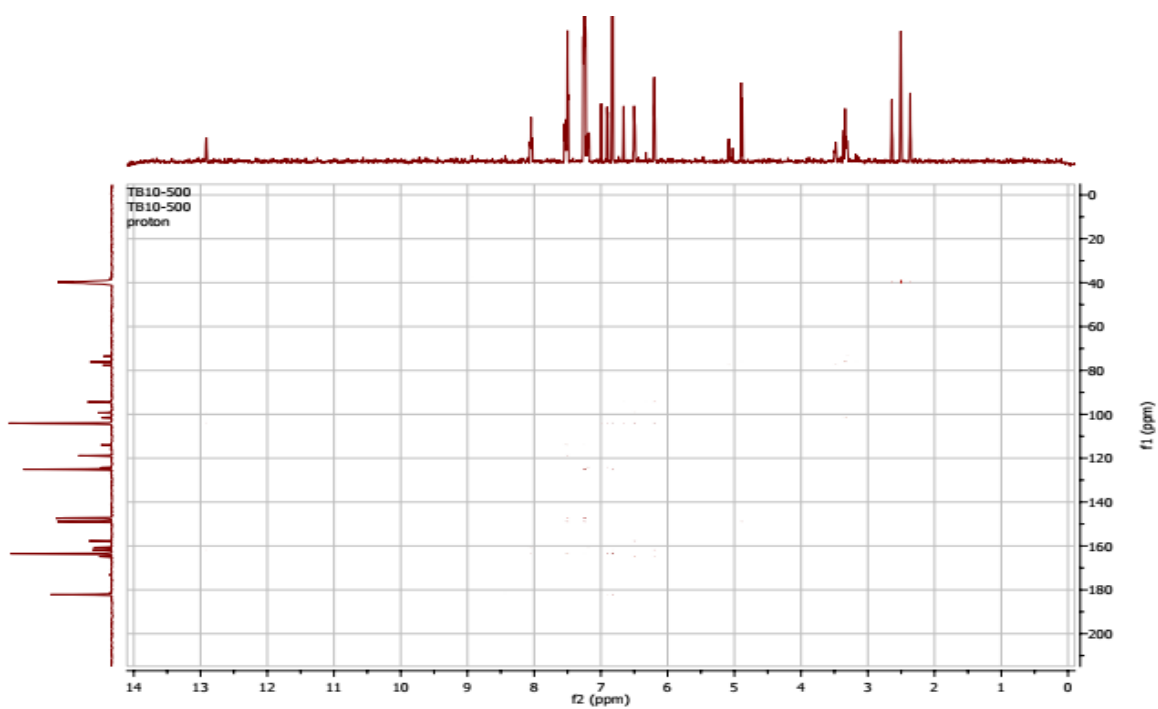


FIGURE S15 : HMBC Spectrum of Compound 4

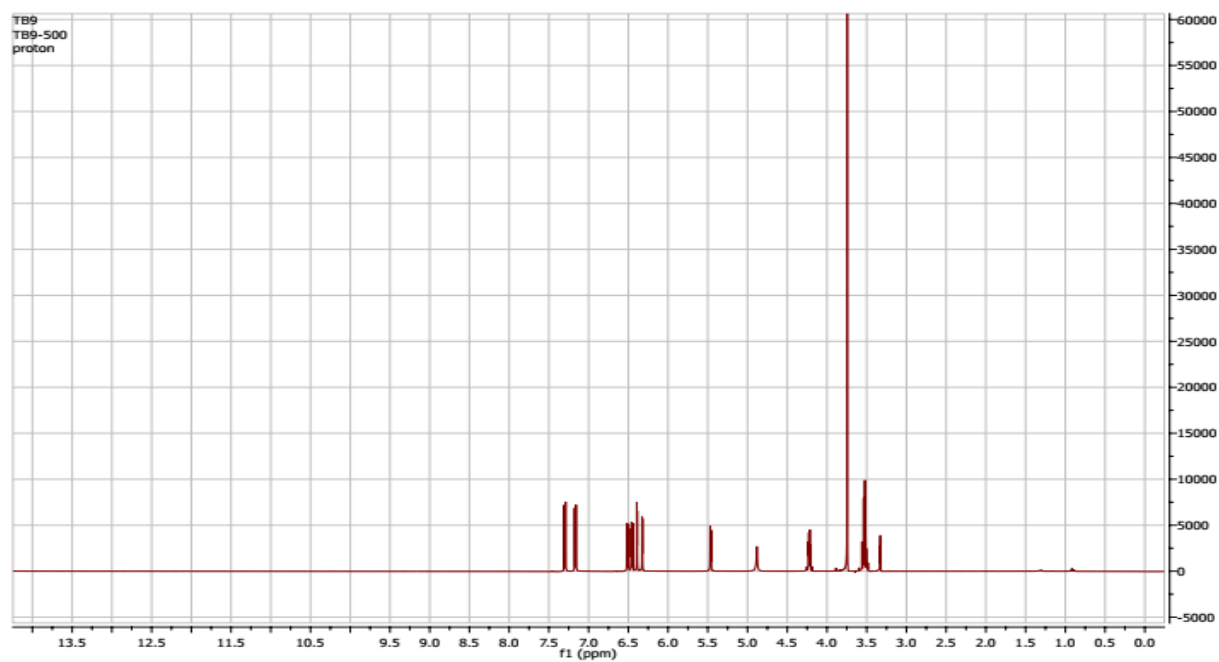


FIGURE S16 :  $^1\text{H-NMR}$  Spectrum of Compound 5

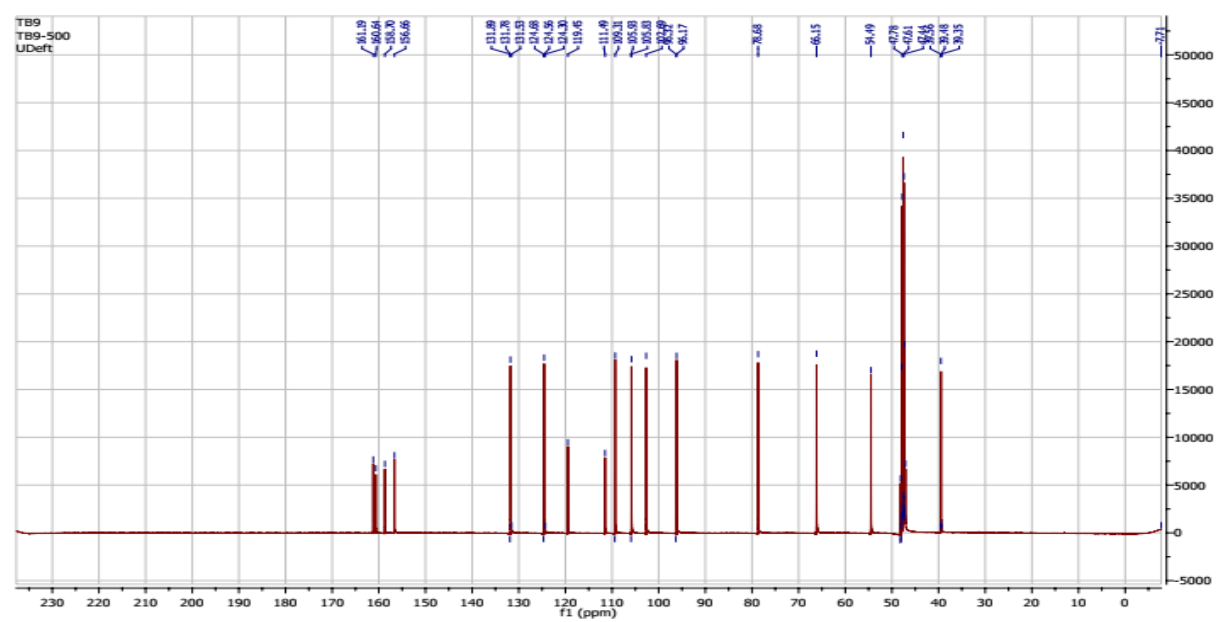


FIGURE S17 :  $^{13}\text{C-NMR}$  Spectrum of Compound 5

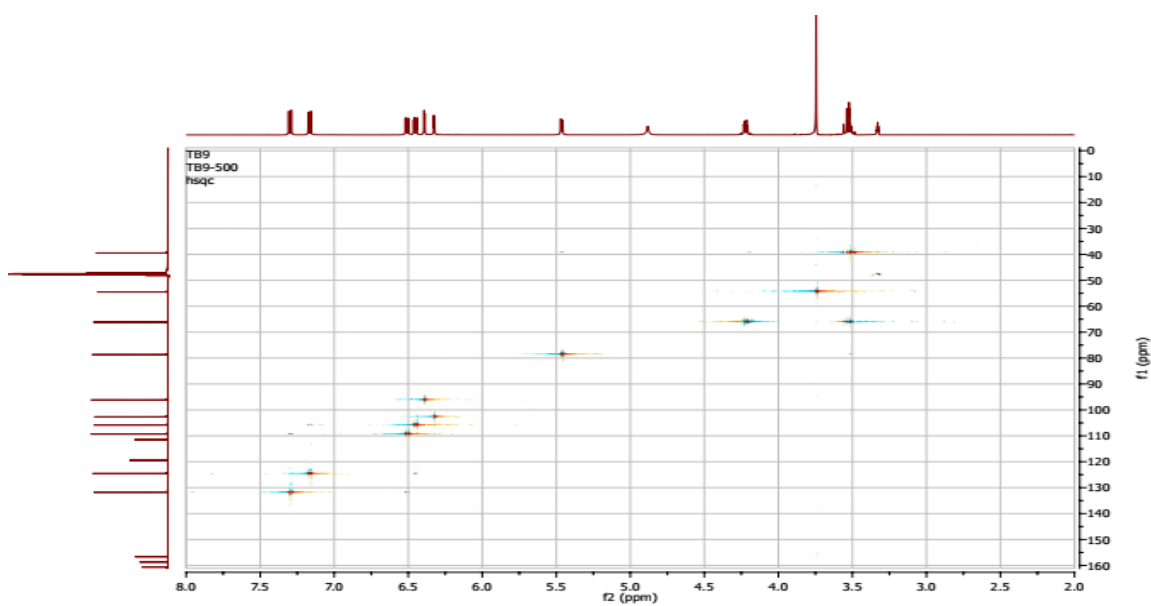


FIGURE S18 : HSQC Spectrum of Compound **5**

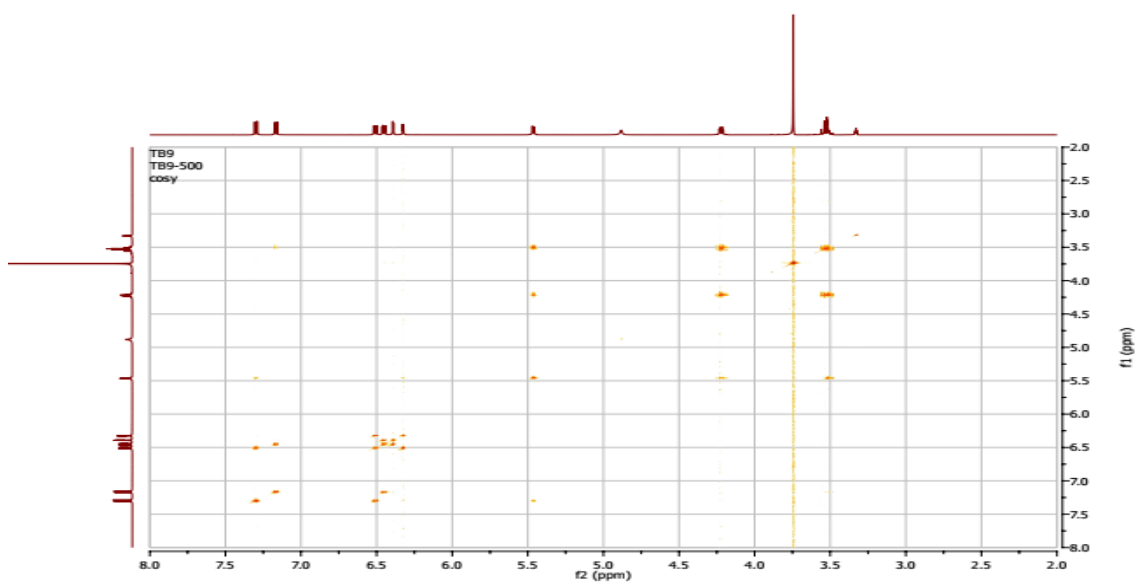


FIGURE S19 :  $^1\text{H}$ - $^1\text{H}$  COSY Spectrum of Compound **5**

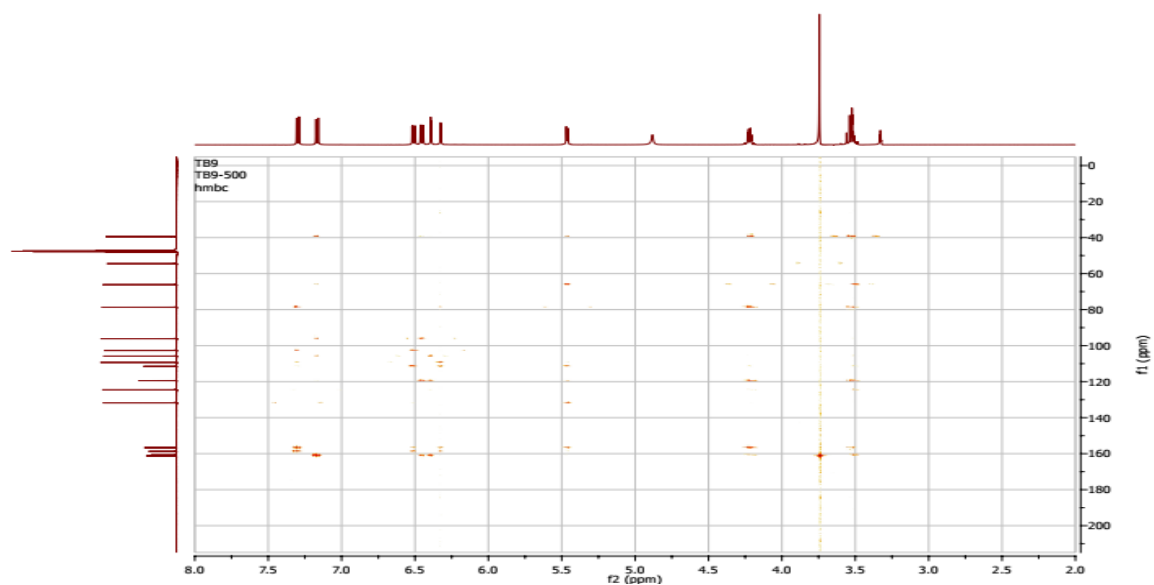


FIGURE S20 : HMBC Spectrum of Compound 5

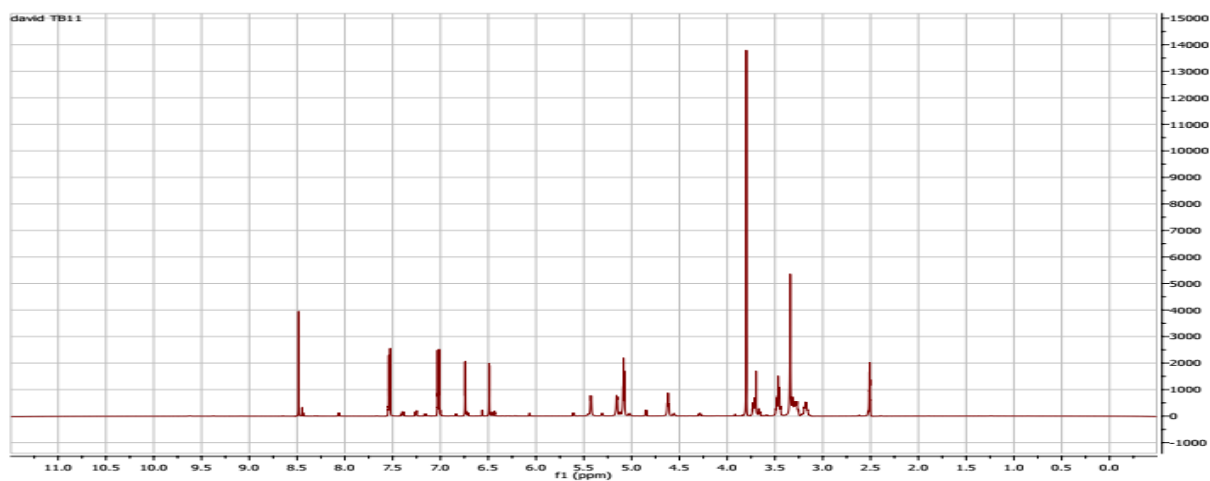


FIGURE S21 :  $^1\text{H}$ -NMR Spectrum

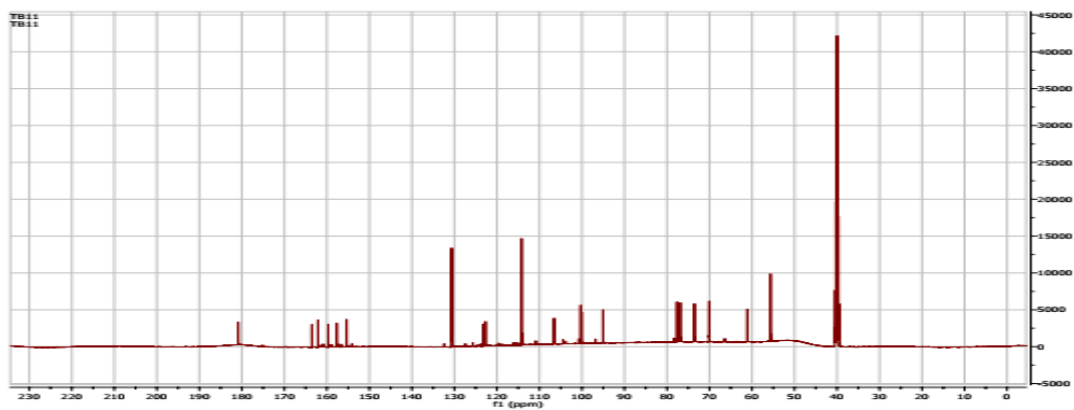


FIGURE S22 :  $^{13}\text{C}$ -NMR Spectrum of Compound 6

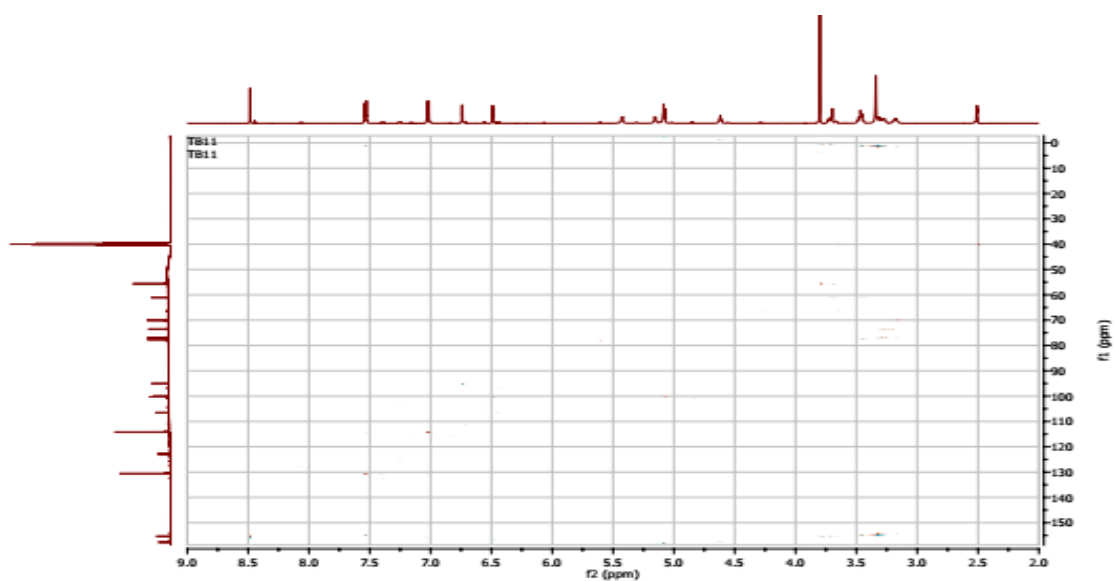


FIGURE S23 : HSQC Spectrum of Compound 6

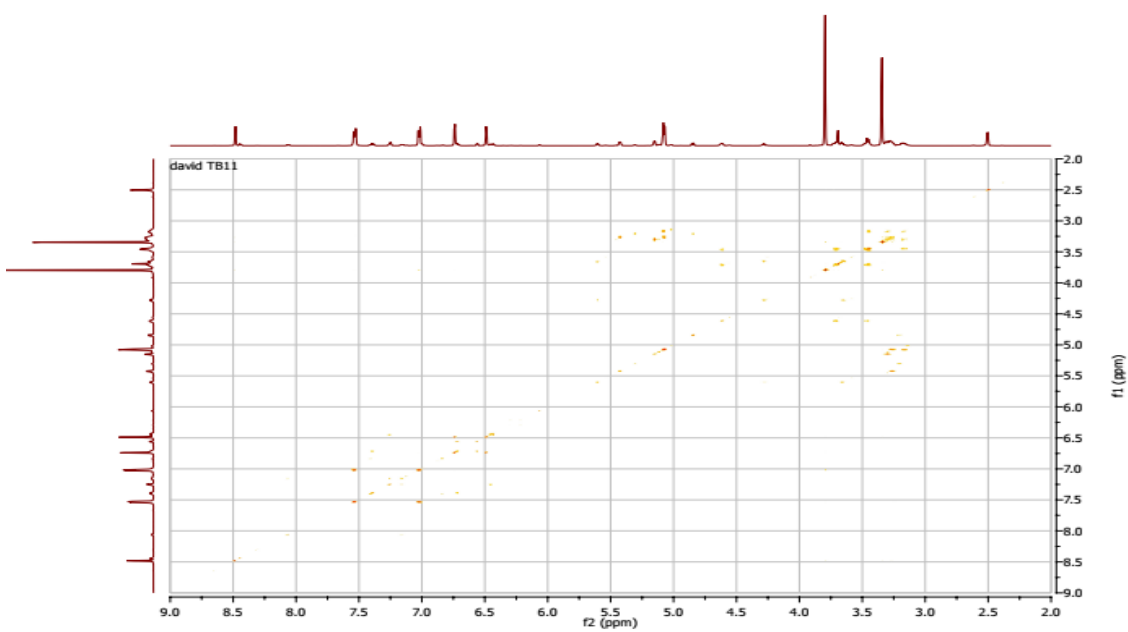


FIGURE S24 :  $^1\text{H}$ - $^1\text{H}$  COSY Spectrum of Compound 6

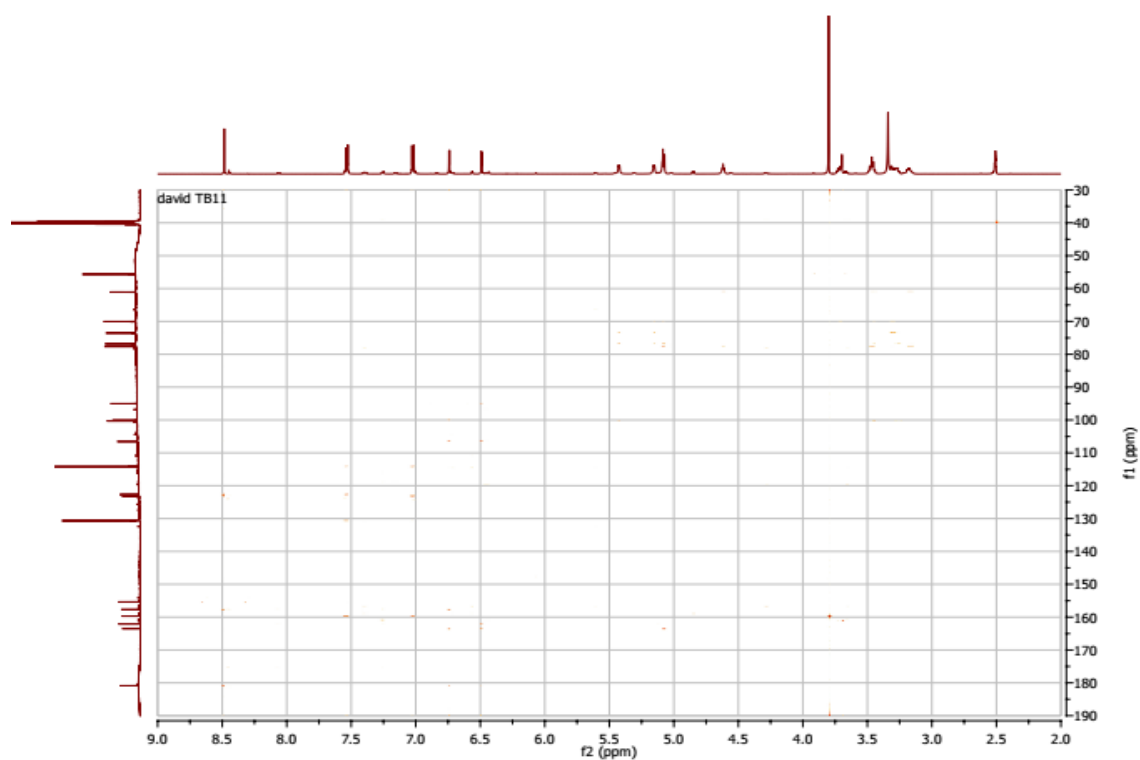


FIGURE S25 : HMBC Spectrum of Compound 6

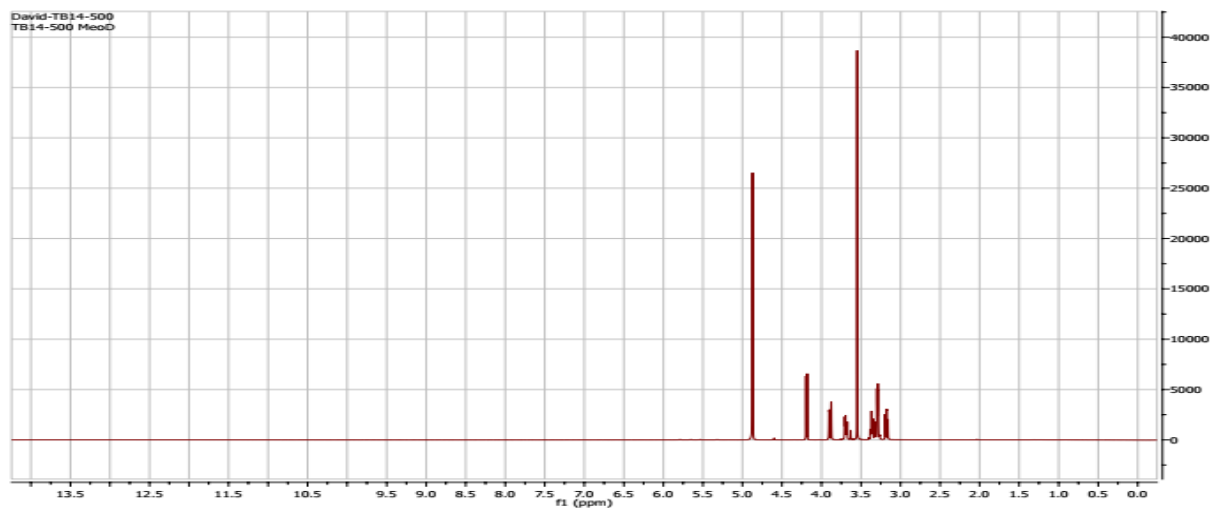


FIGURE S26 : <sup>1</sup>H-NMR Spectrum of Compound 7

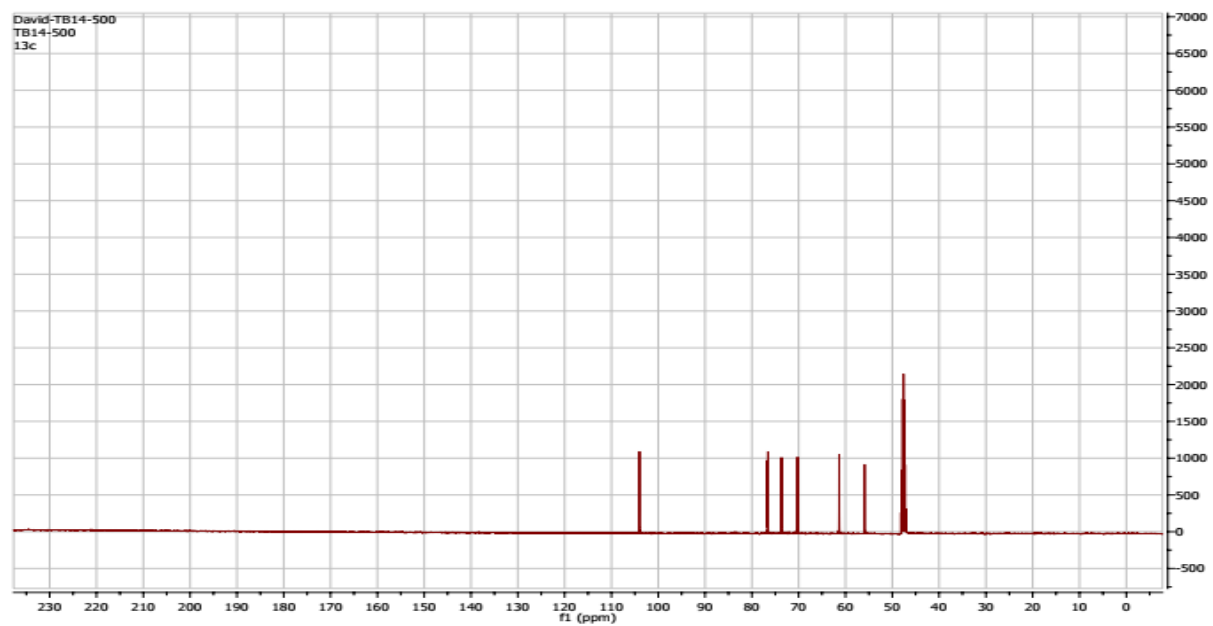


FIGURE S27 :  $^{13}\text{C}$ -NMR Spectrum of Compound 7

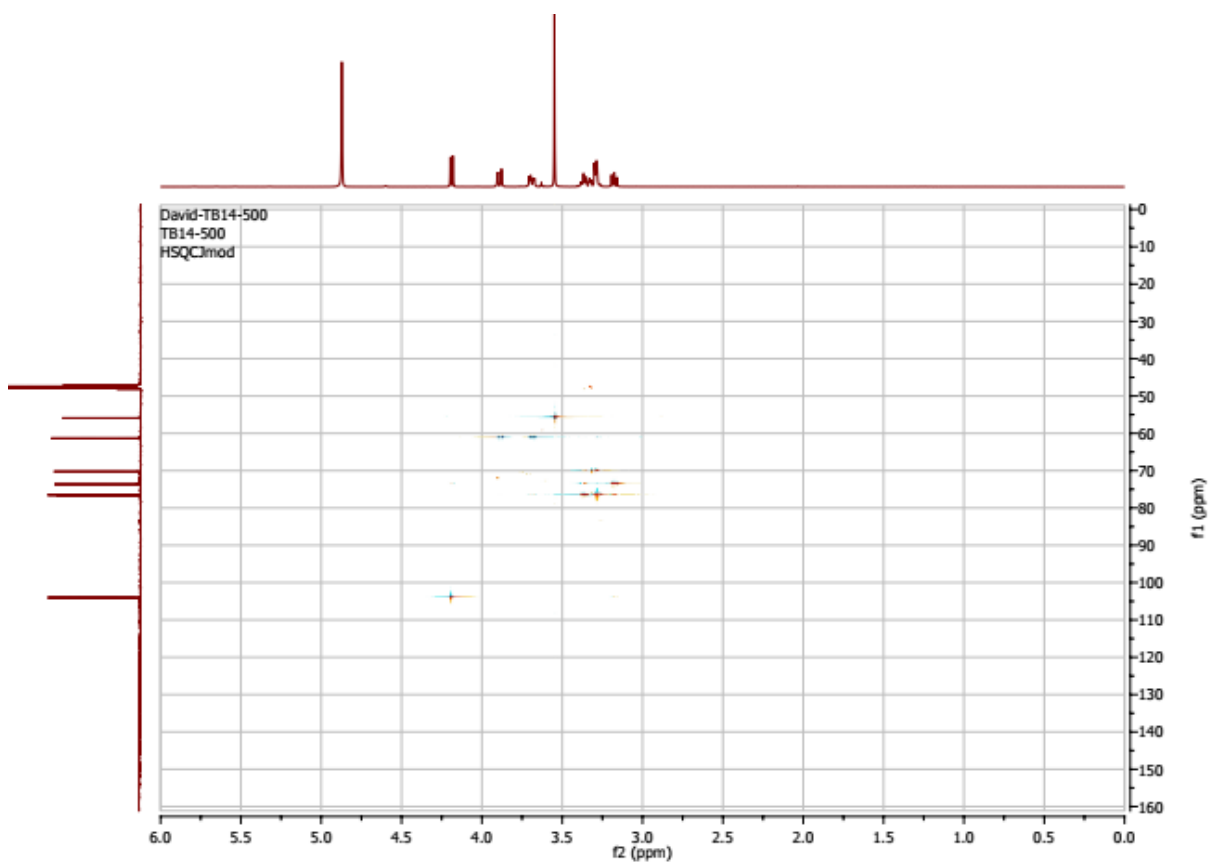


FIGURE S28 : HSQC Spectrum of Compound 7



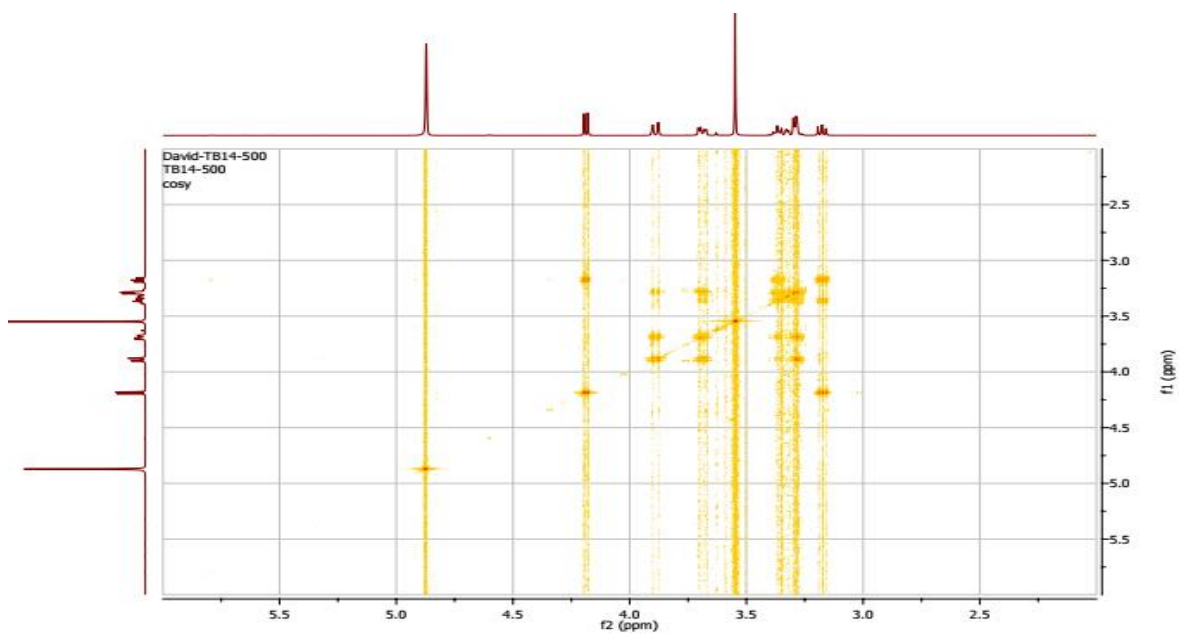


FIGURE S29 :  $^1\text{H}$ - $^1\text{H}$  COSY Spectrum of Compound 7

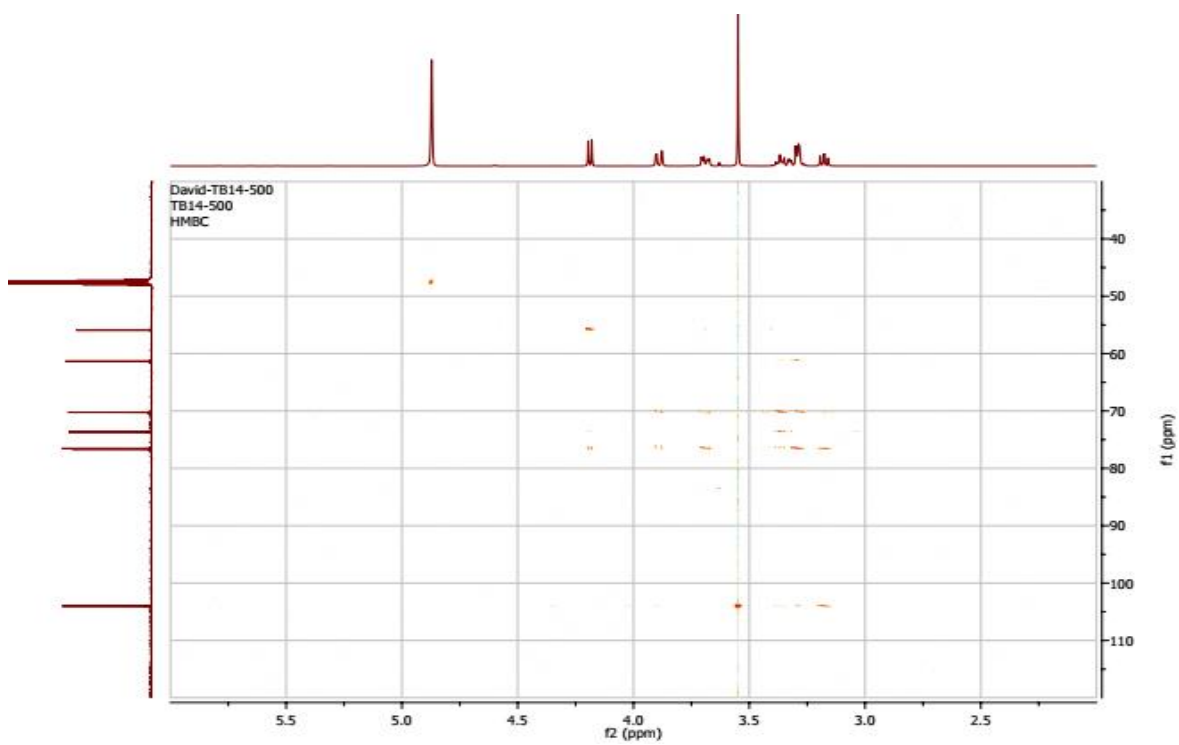


FIGURE S30 : HMBC Spectrum of Compound 7

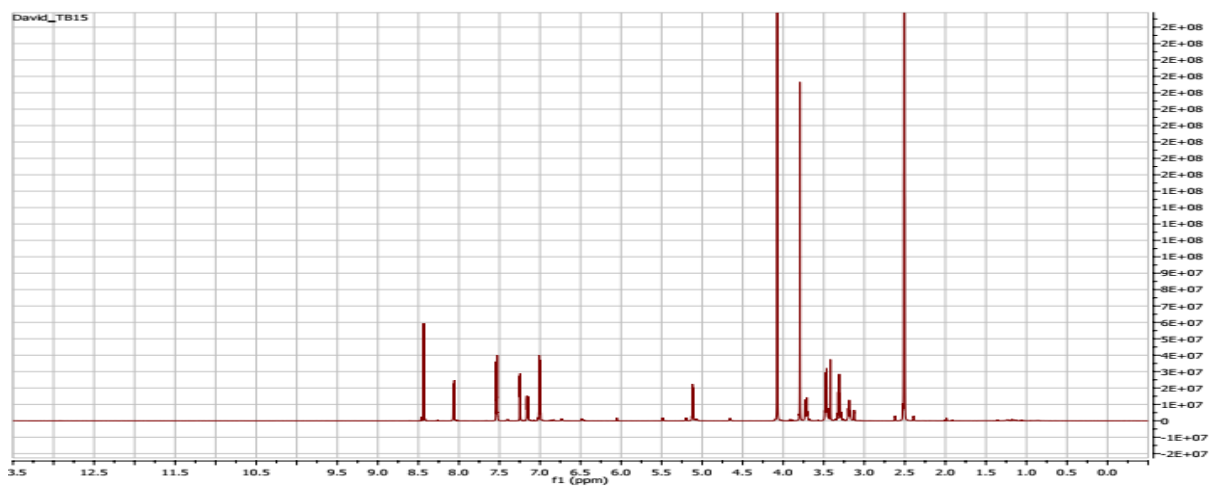


FIGURE S31 :  $^1\text{H-NMR}$  Spectrum of Compound 8

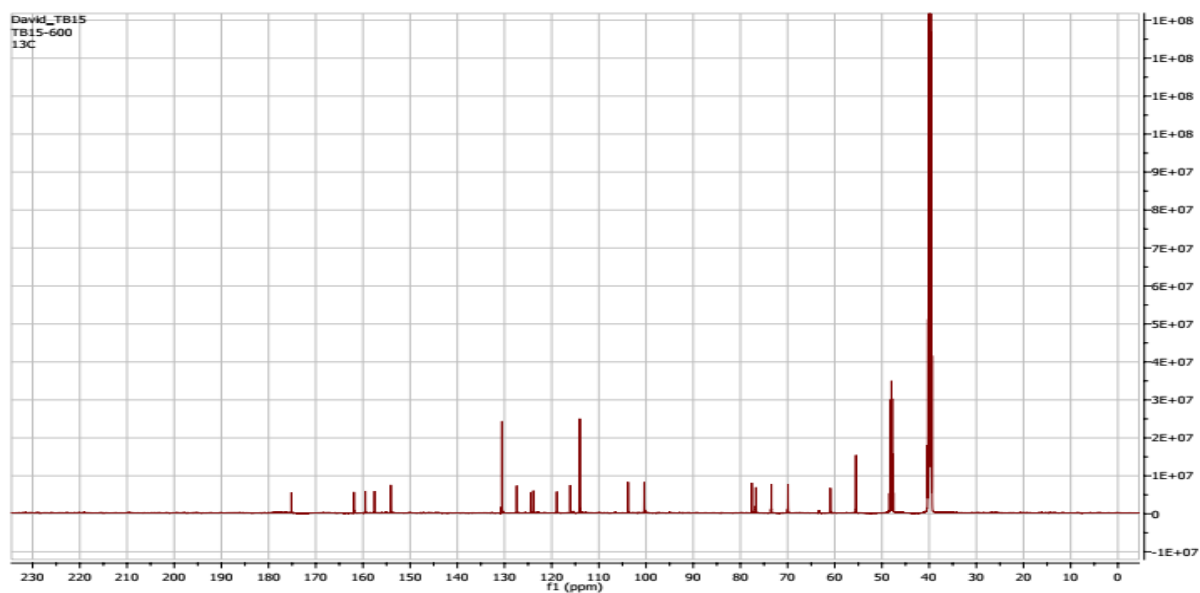


FIGURE S32 :  $^{13}\text{C-NMR}$  Spectrum of Compound 8

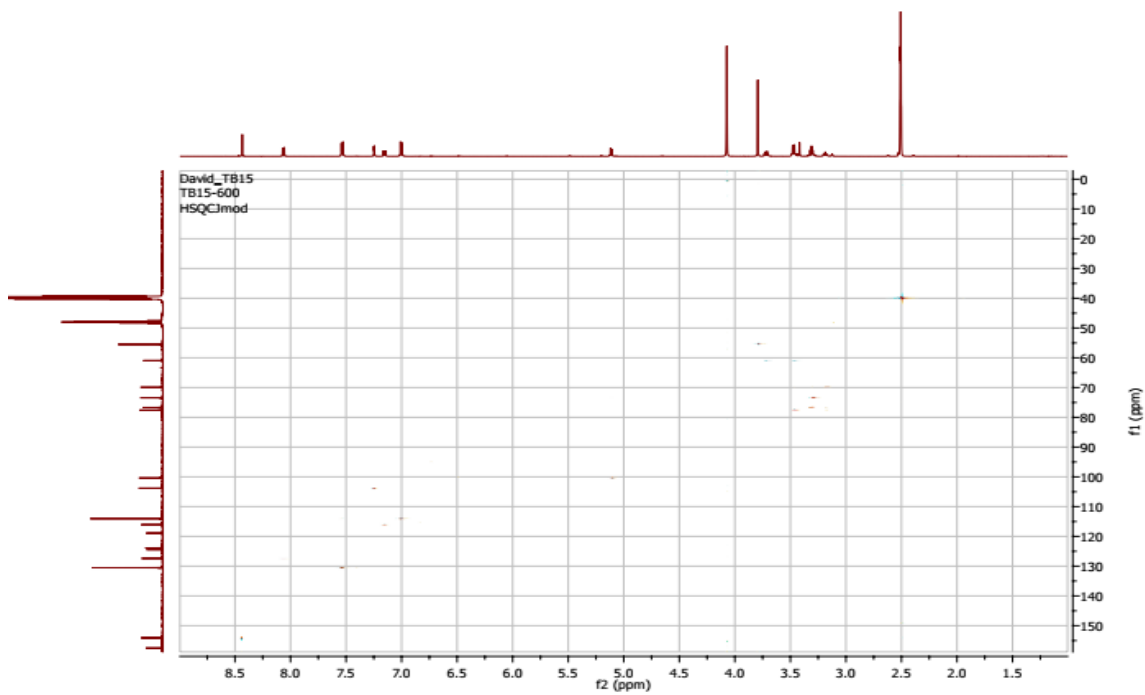


FIGURE S33 : HSQC Spectrum of Compound **8**

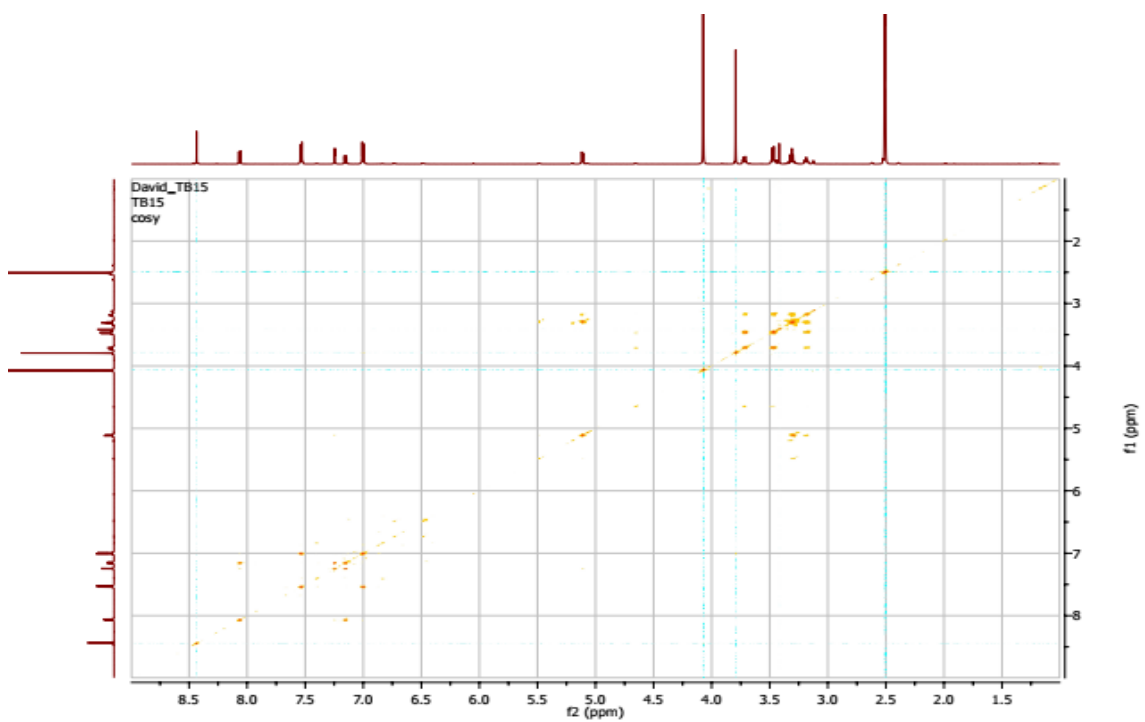


FIGURE S34 :  $^1\text{H}$ - $^1\text{H}$  COSY Spectrum of Compound **8**

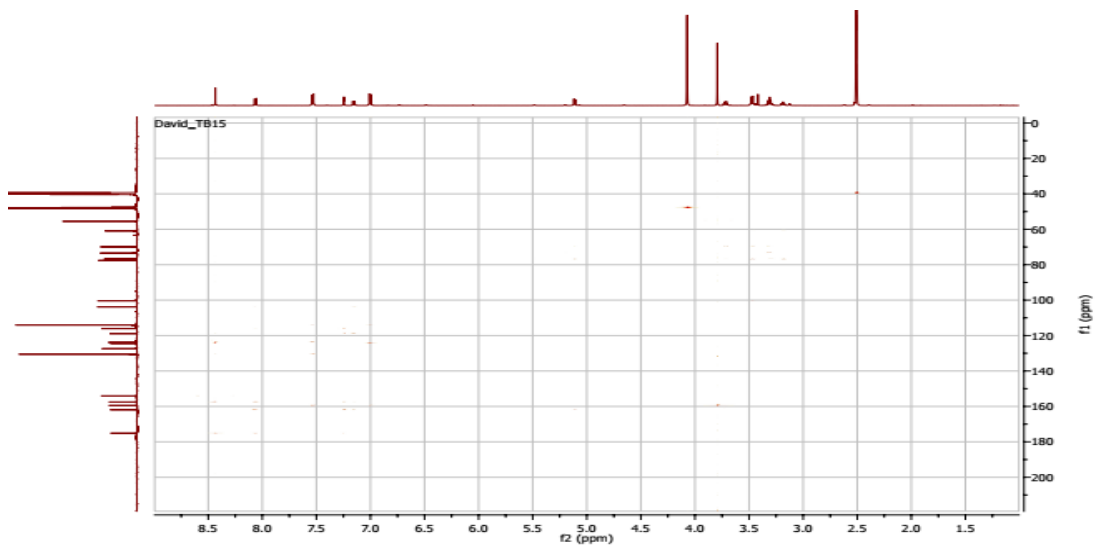


FIGURE S35 : HMBC Spectrum of Compound **8**

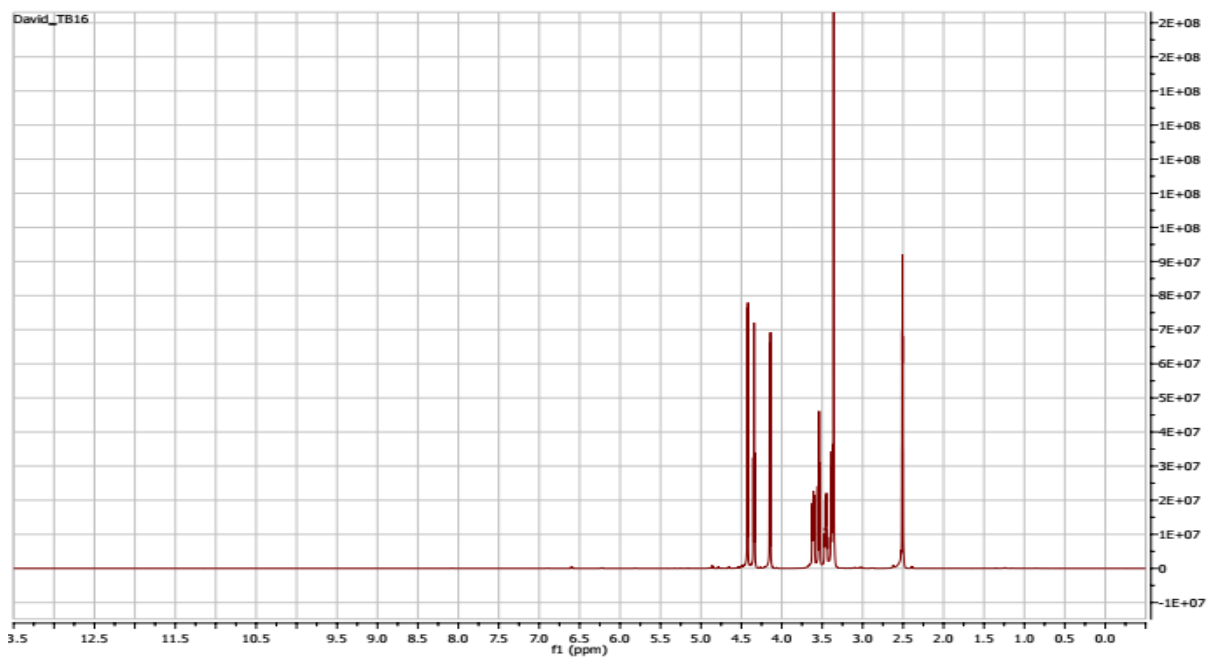


FIGURE S36 :  $^1\text{H}$ -NMR Spectrum of Compound **9**

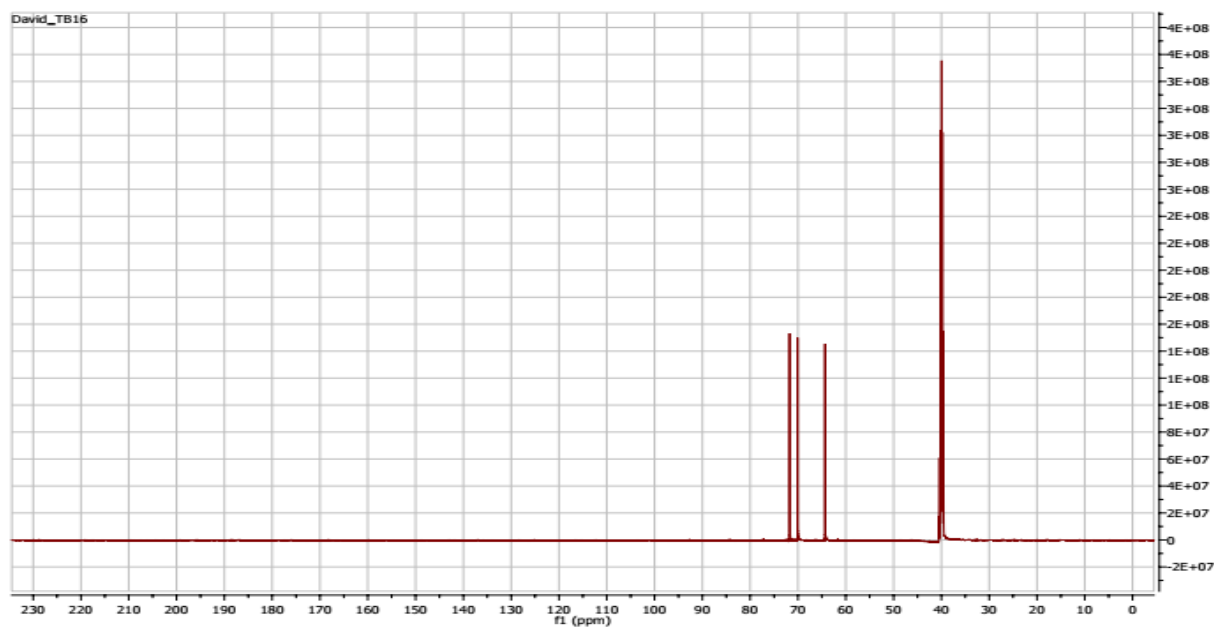


FIGURE S37 :  $^{13}\text{C}$ -NMR Spectrum of Compound 9

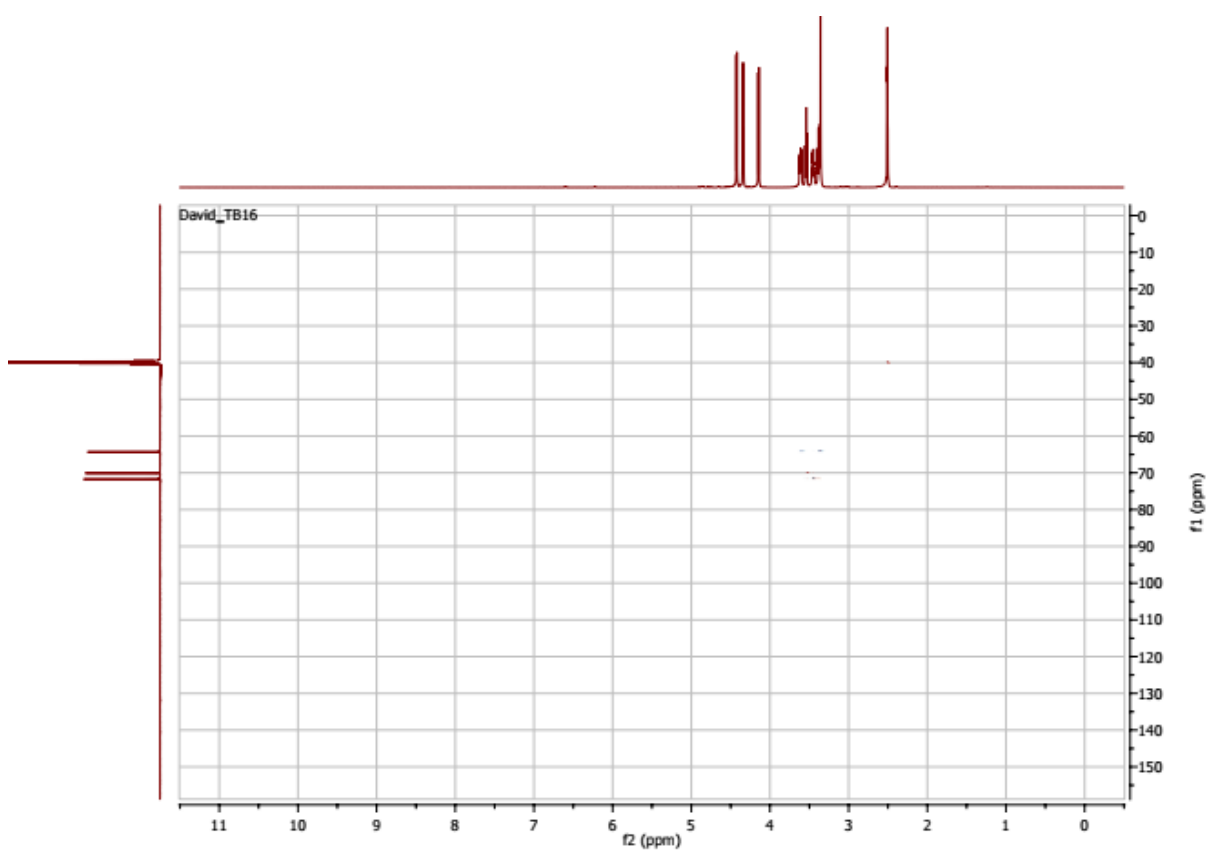


FIGURE S38 : HSQC Spectrum of Compound 9

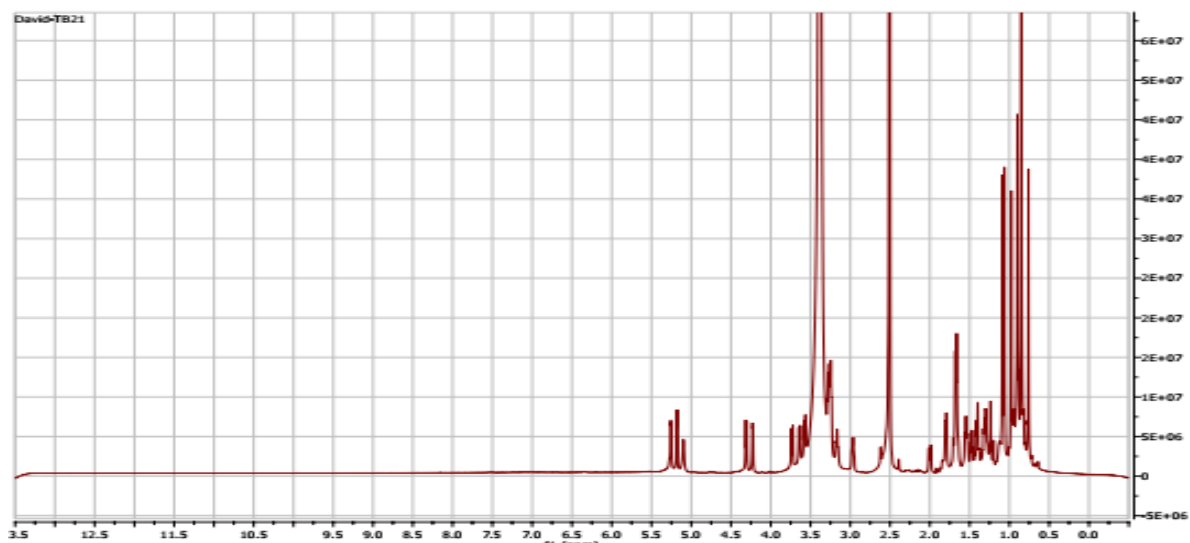


FIGURE S39 :  $^1\text{H}$ -NMR Spectrum of Compound **10**

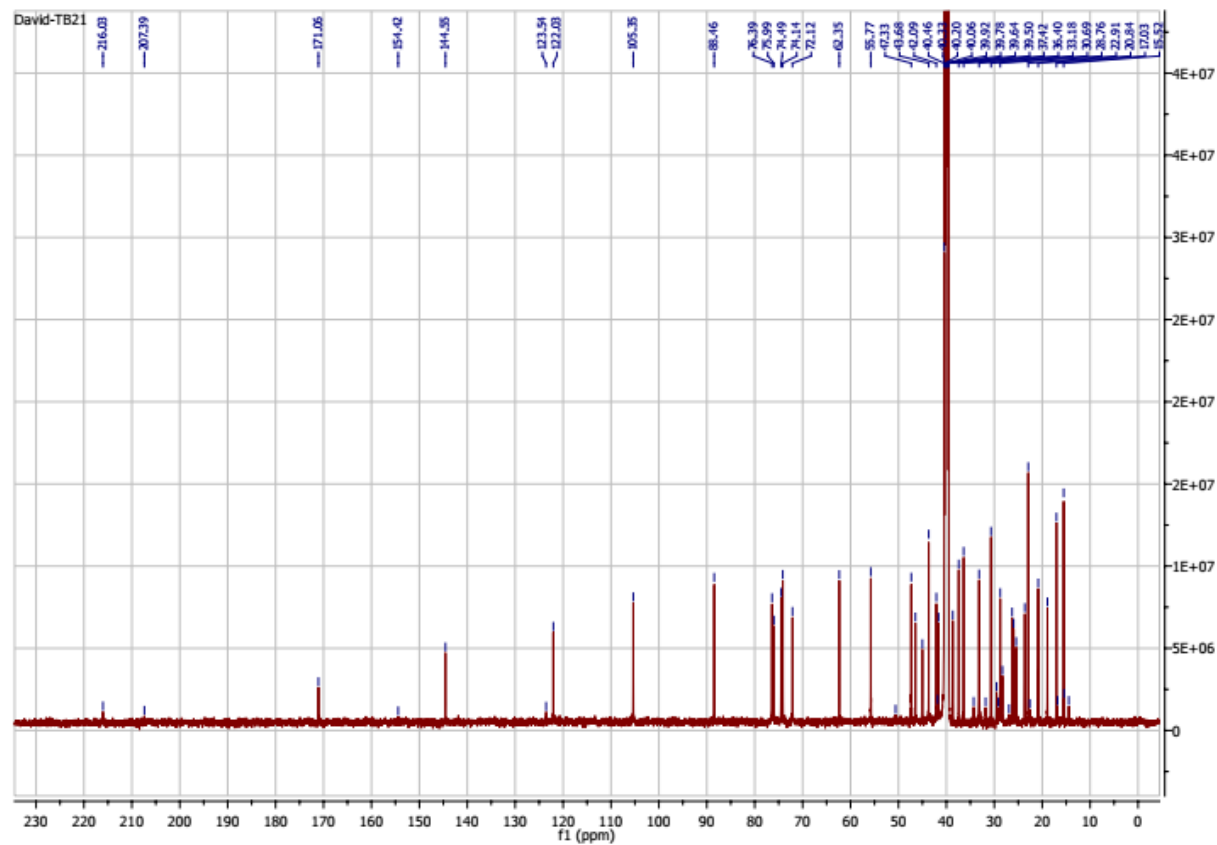


FIGURE S40 :  $^{13}\text{C}$ -NMR Spectrum of Compound **10**

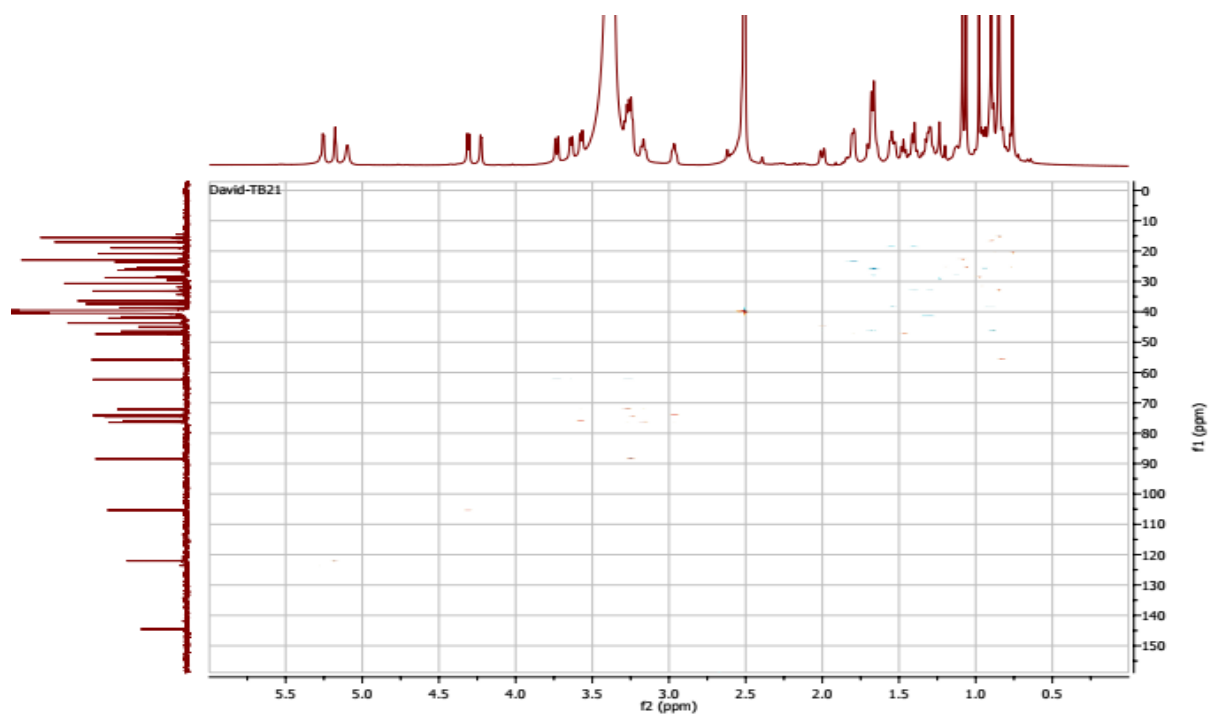


FIGURE S41 : HSQC Spectrum of Compound **10**

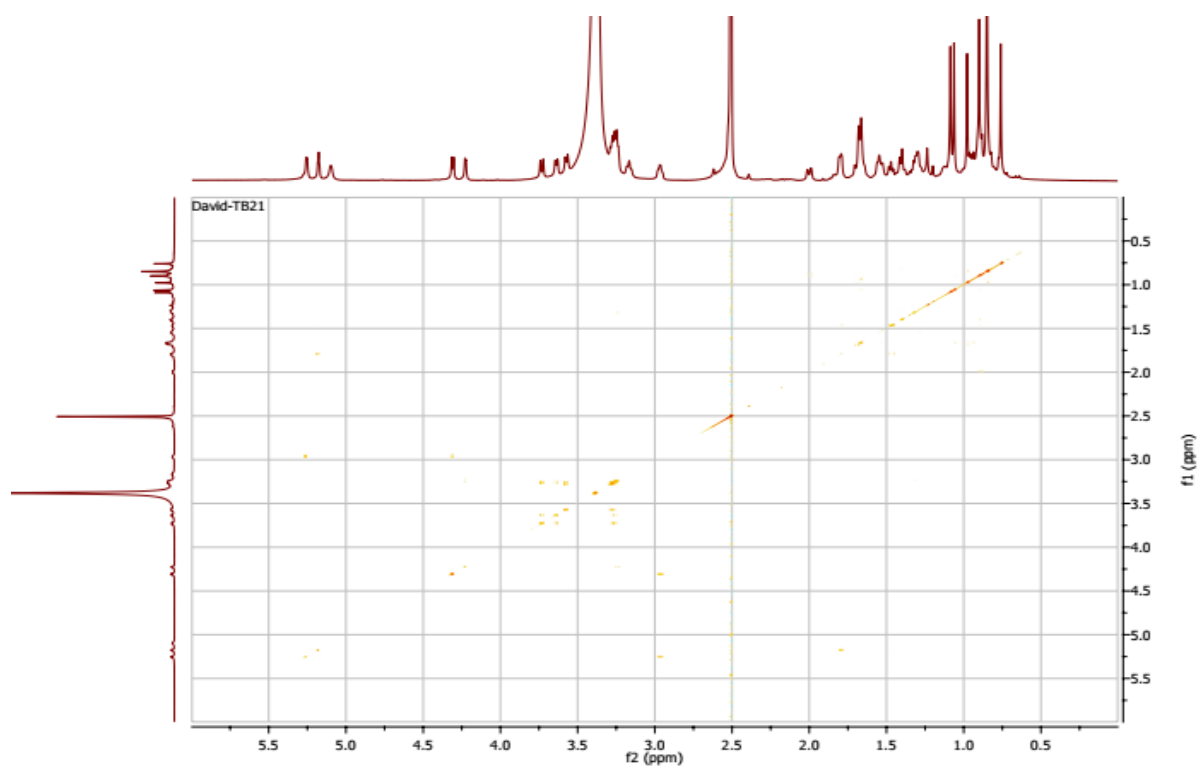


FIGURE S42 :  $^1\text{H}$ - $^1\text{H}$  COSY Spectrum of Compound **10**

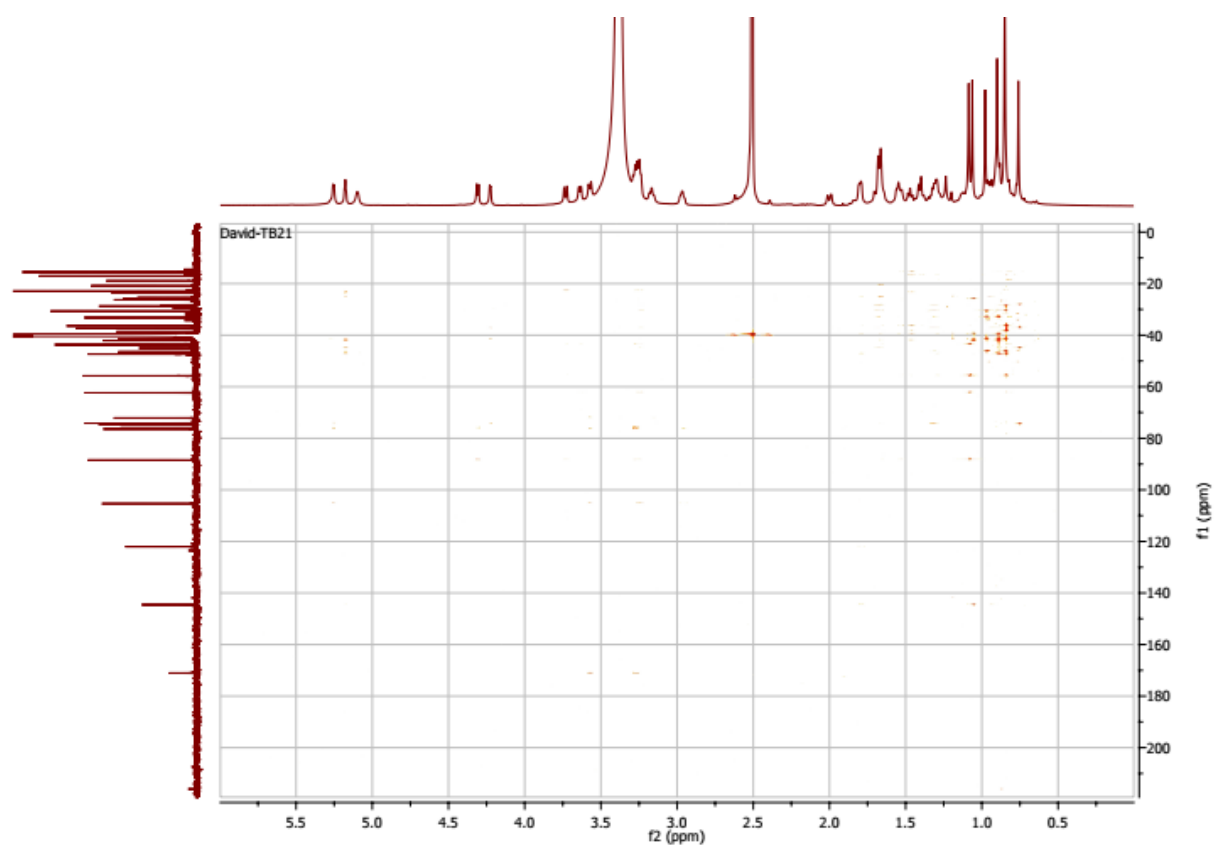


FIGURE S43 : HMBC Spectrum of Compound **10**