

## Supplementary Information

### Syntheses, Experimental and Theoretical Studies on Absorption/Emission Properties of Pyrazoline-Containing Aryl/Methoxynaphthyl Substituents

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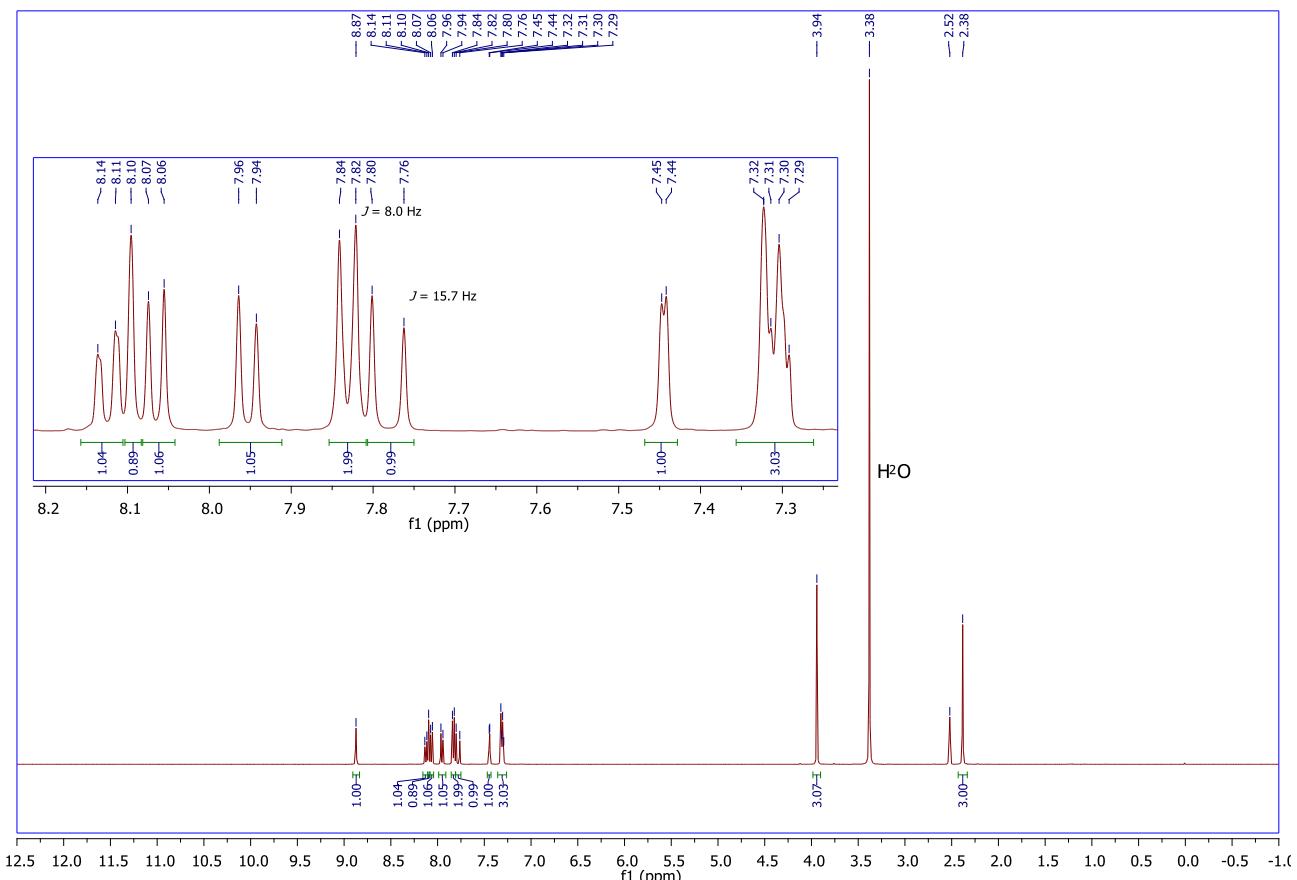
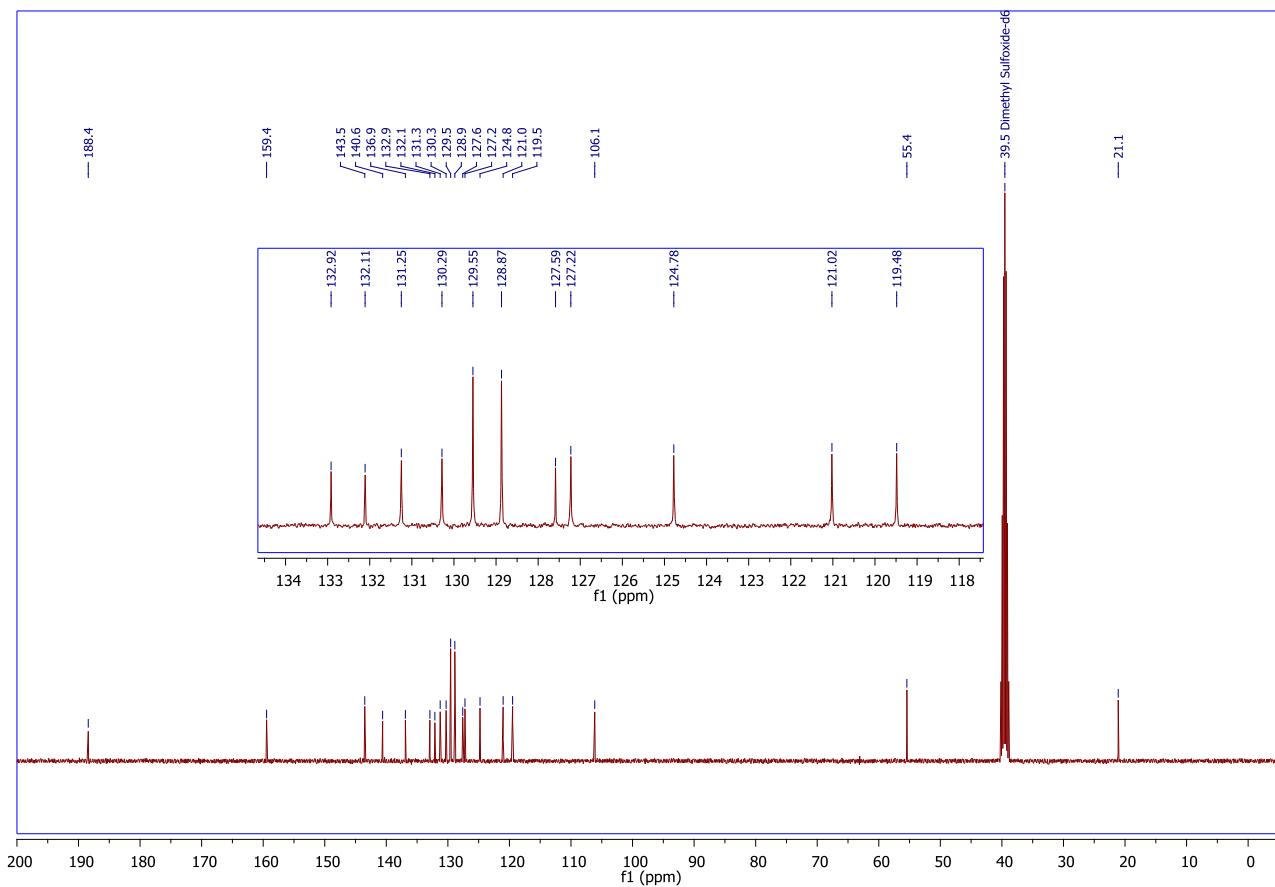
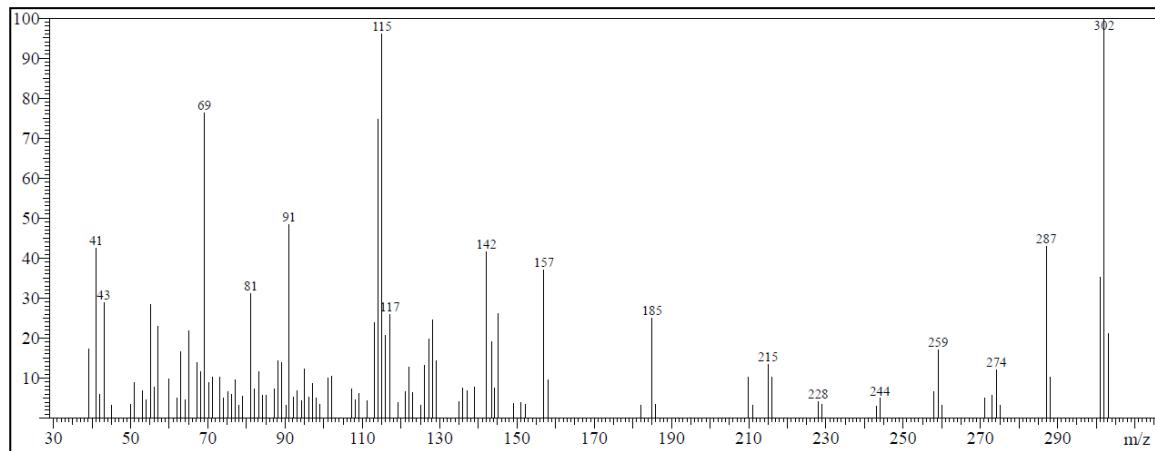


Figure S1.  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound 3a.

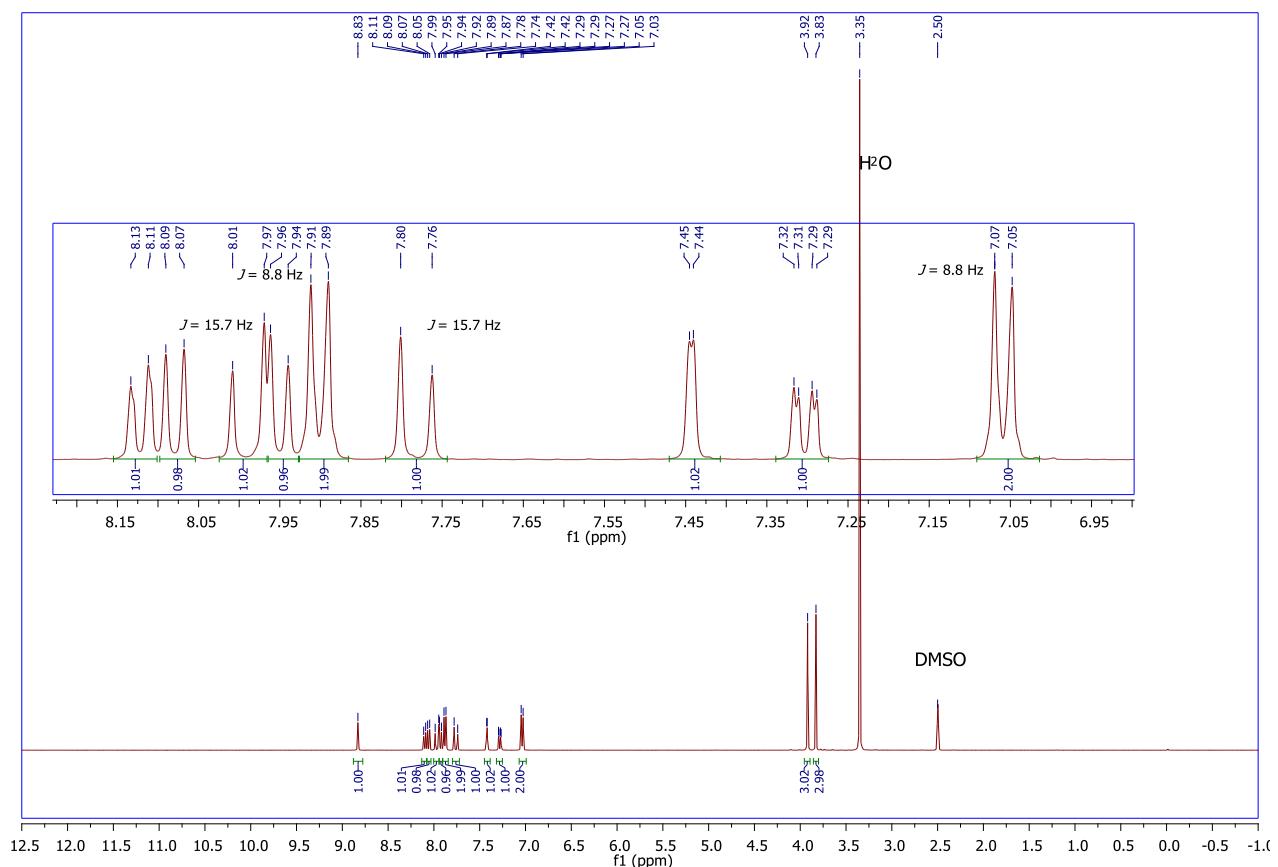
\*e-mail: jorgetrilleras@mail.uniatlantico.edu.co



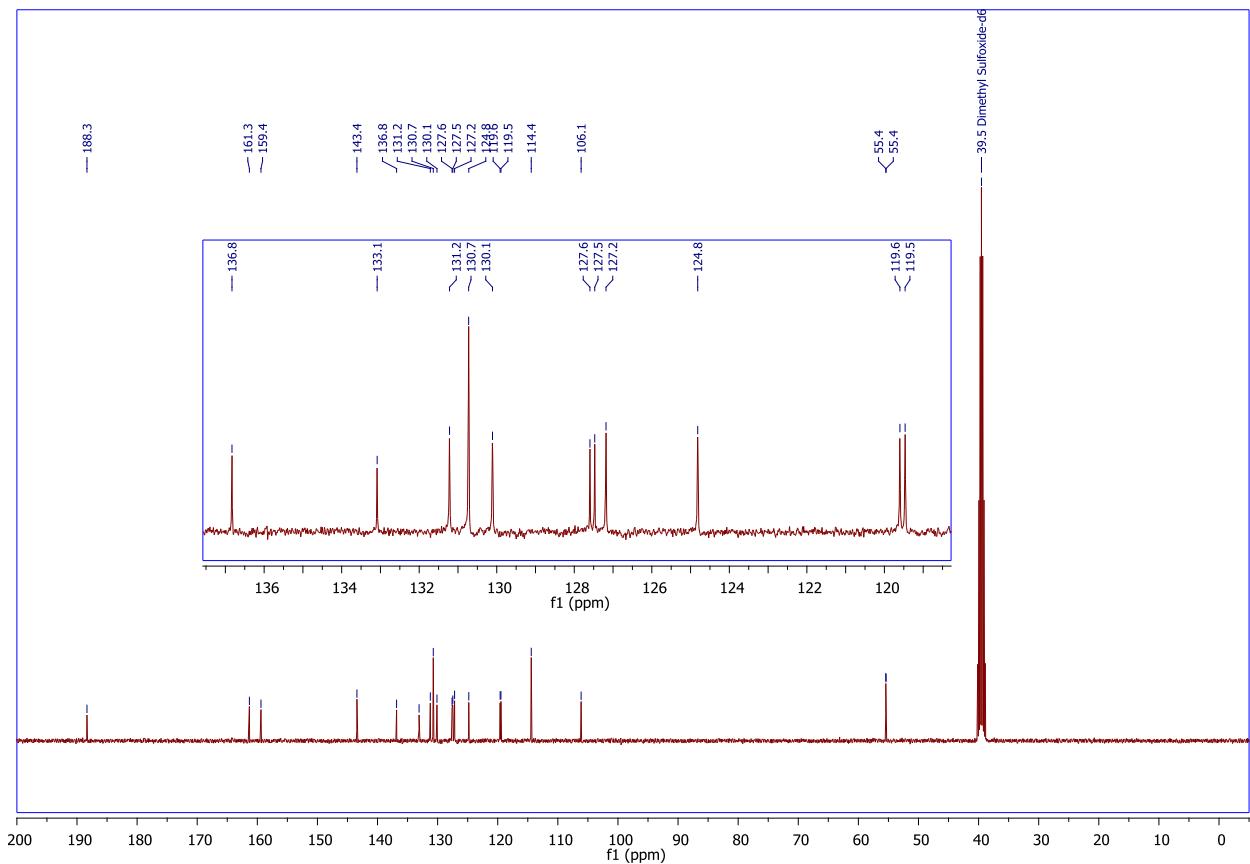
**Figure S2.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **3a**.



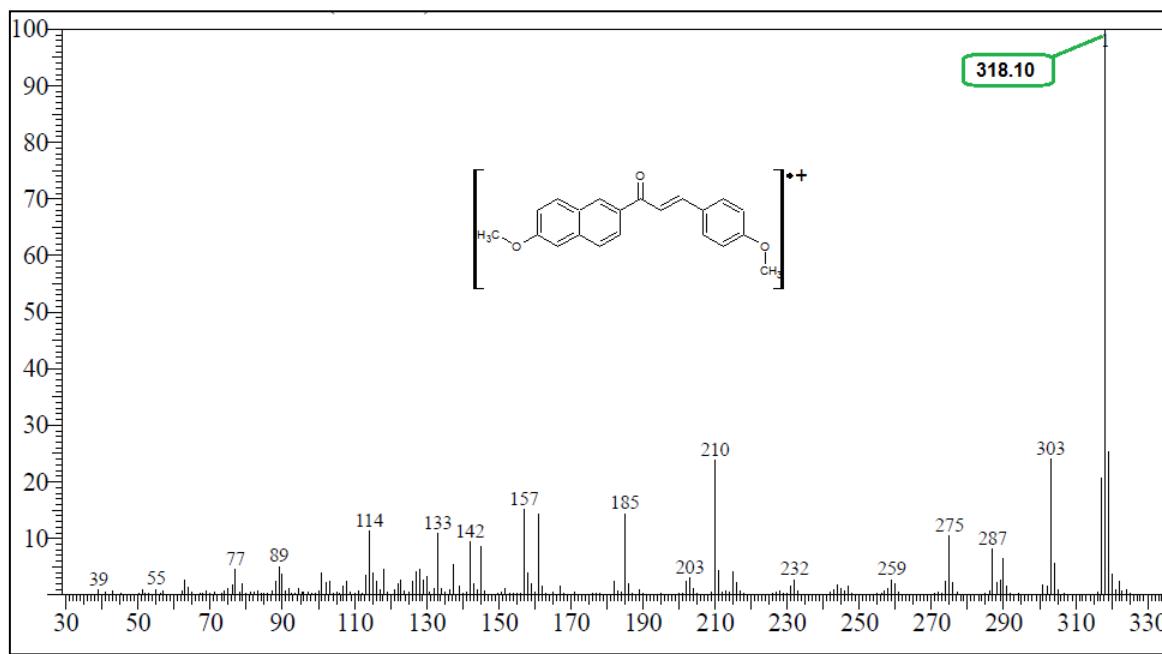
**Figure S3.** Mass spectrum of compound **3a**.



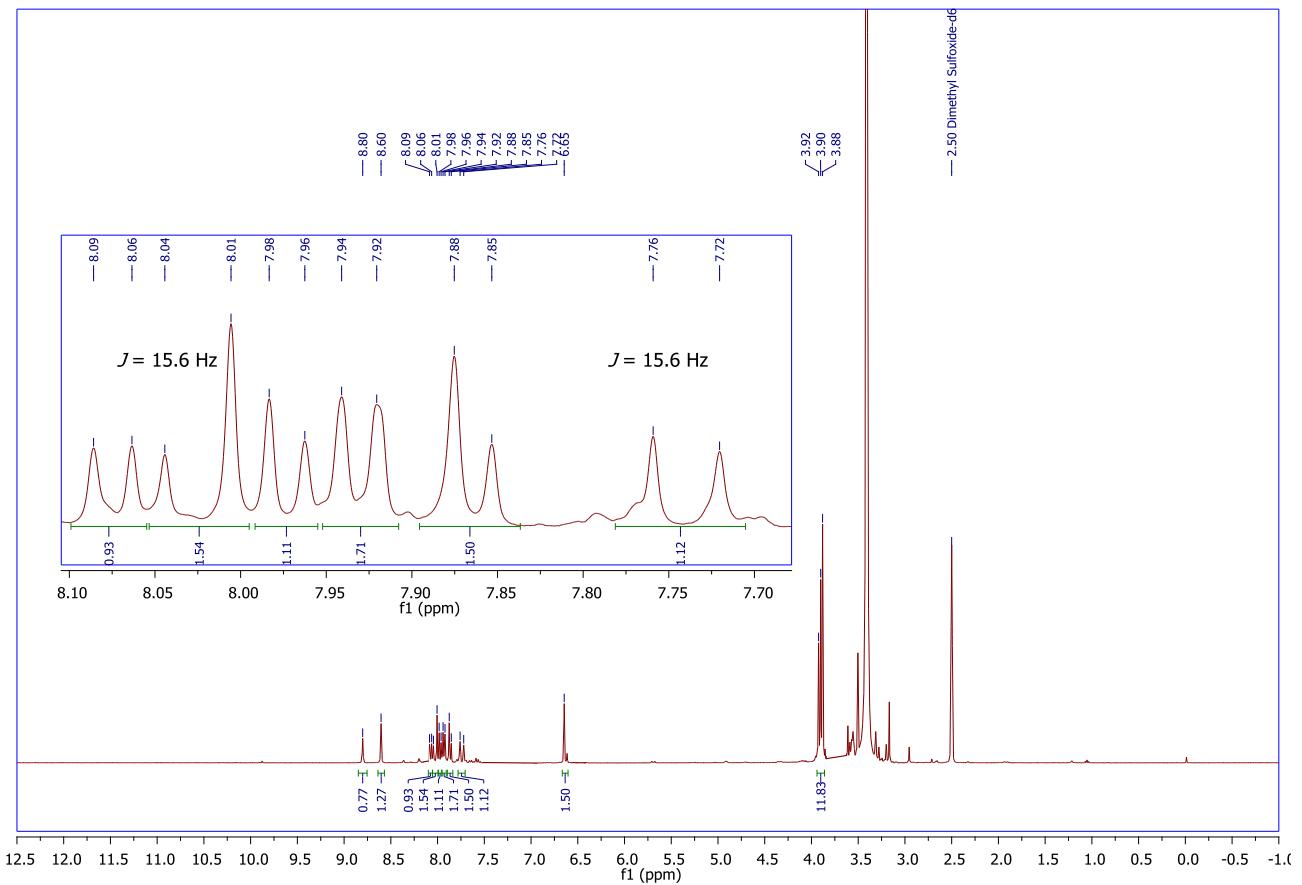
**Figure S4.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **3b**.



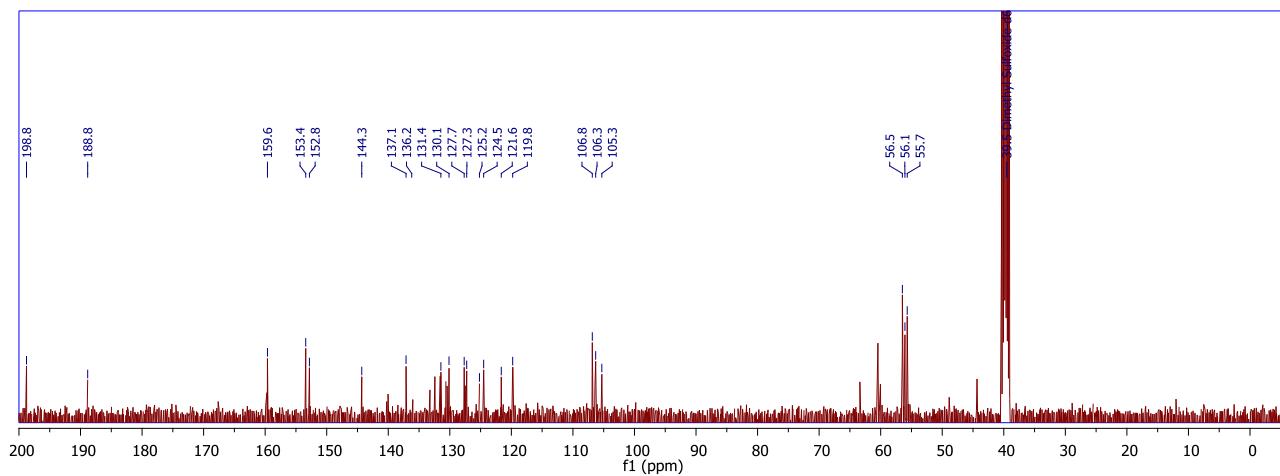
**Figure S5.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **3b**.



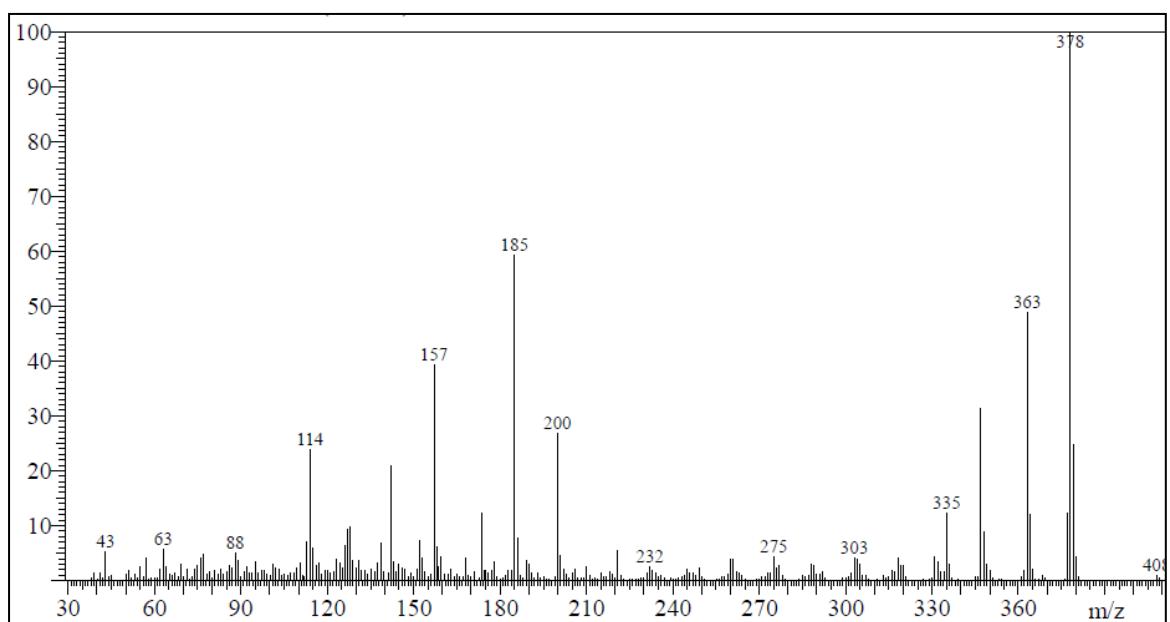
**Figure S6.** Mass spectrum of compound **3b**.



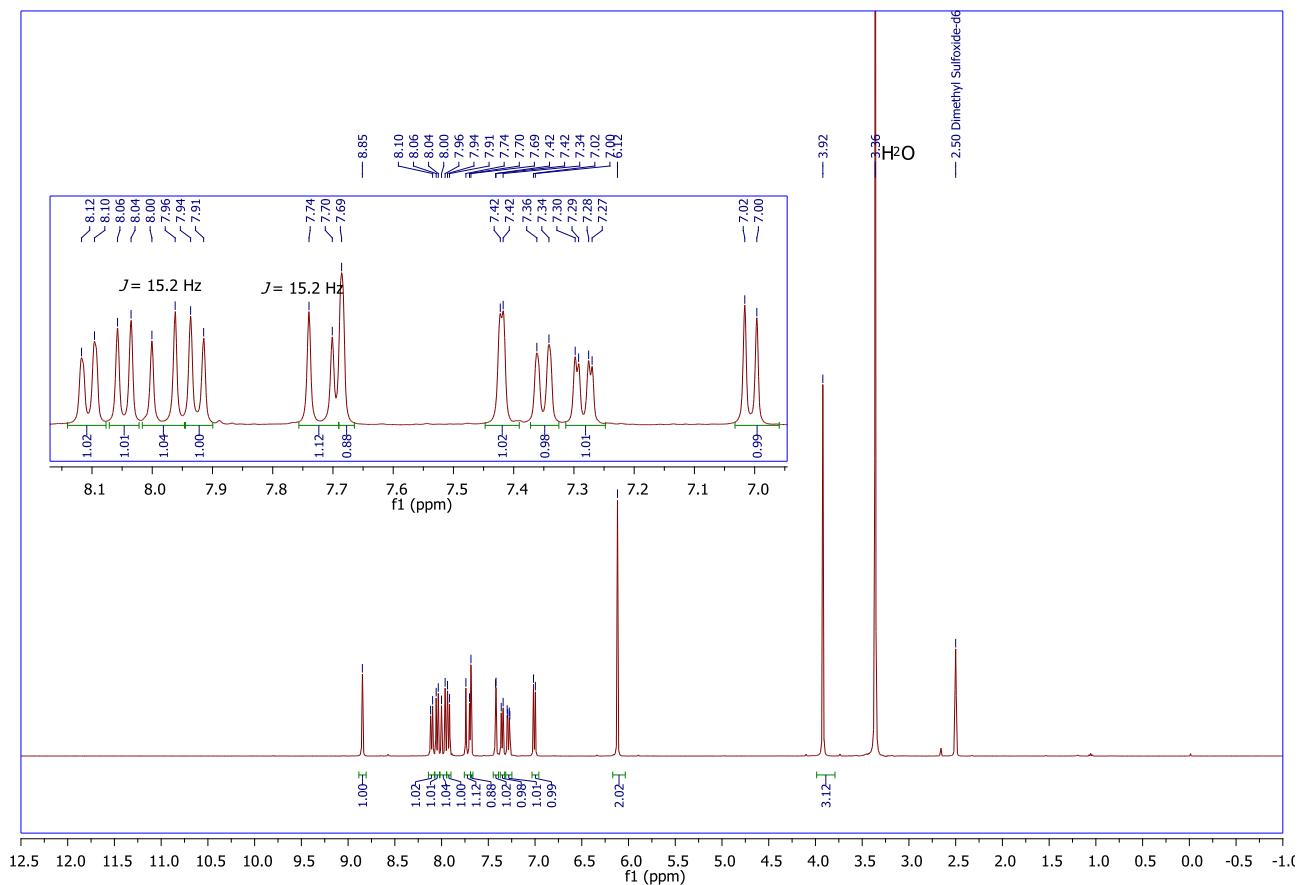
**Figure S7.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **3c**.



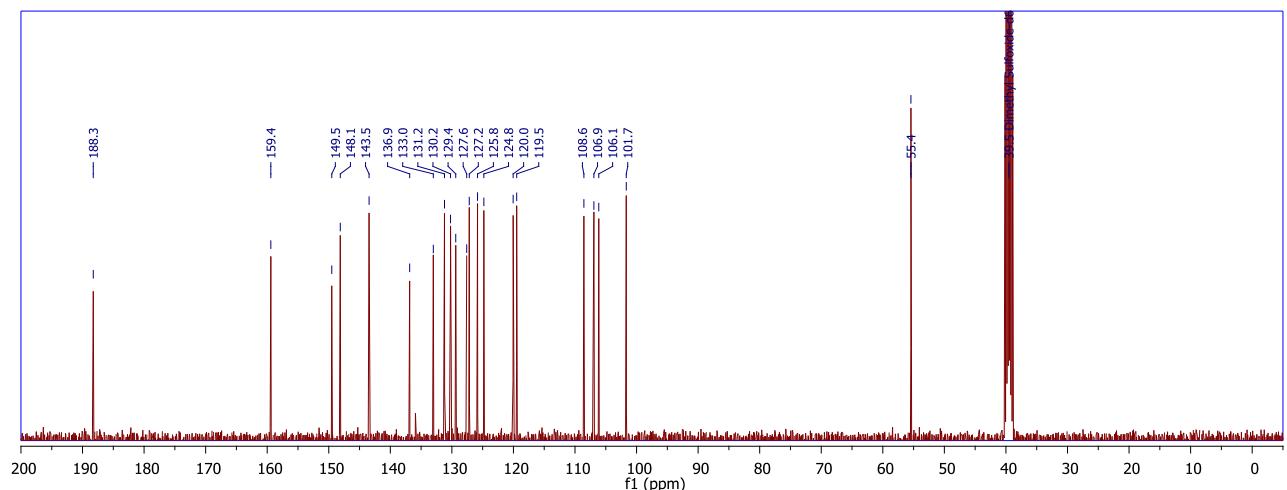
**Figure S8.** <sup>13</sup>C NMR spectrum (100 MHz, DMSO-*d*<sub>6</sub>) of compound 3c.



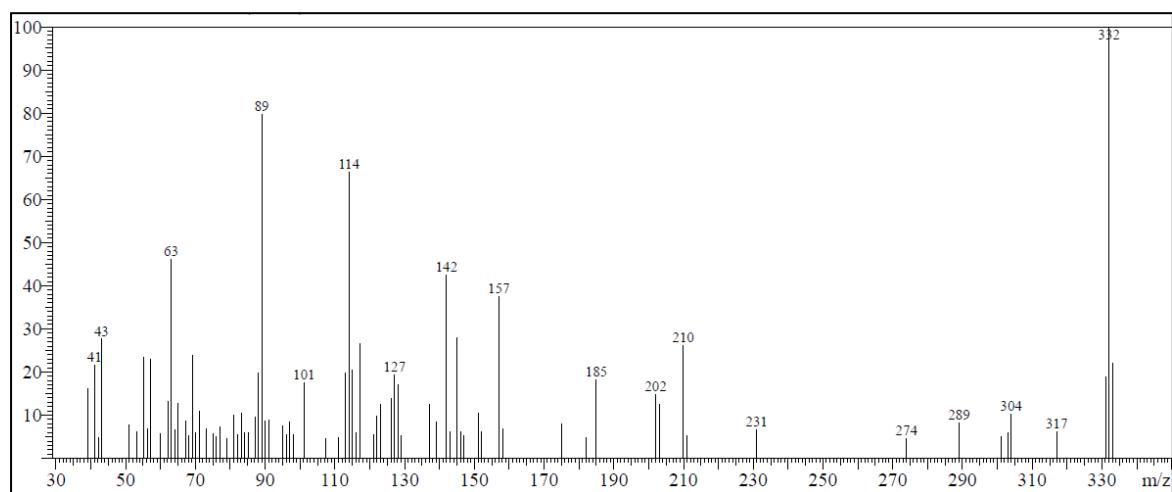
**Figure S9.** Mass spectrum of compound 3c.



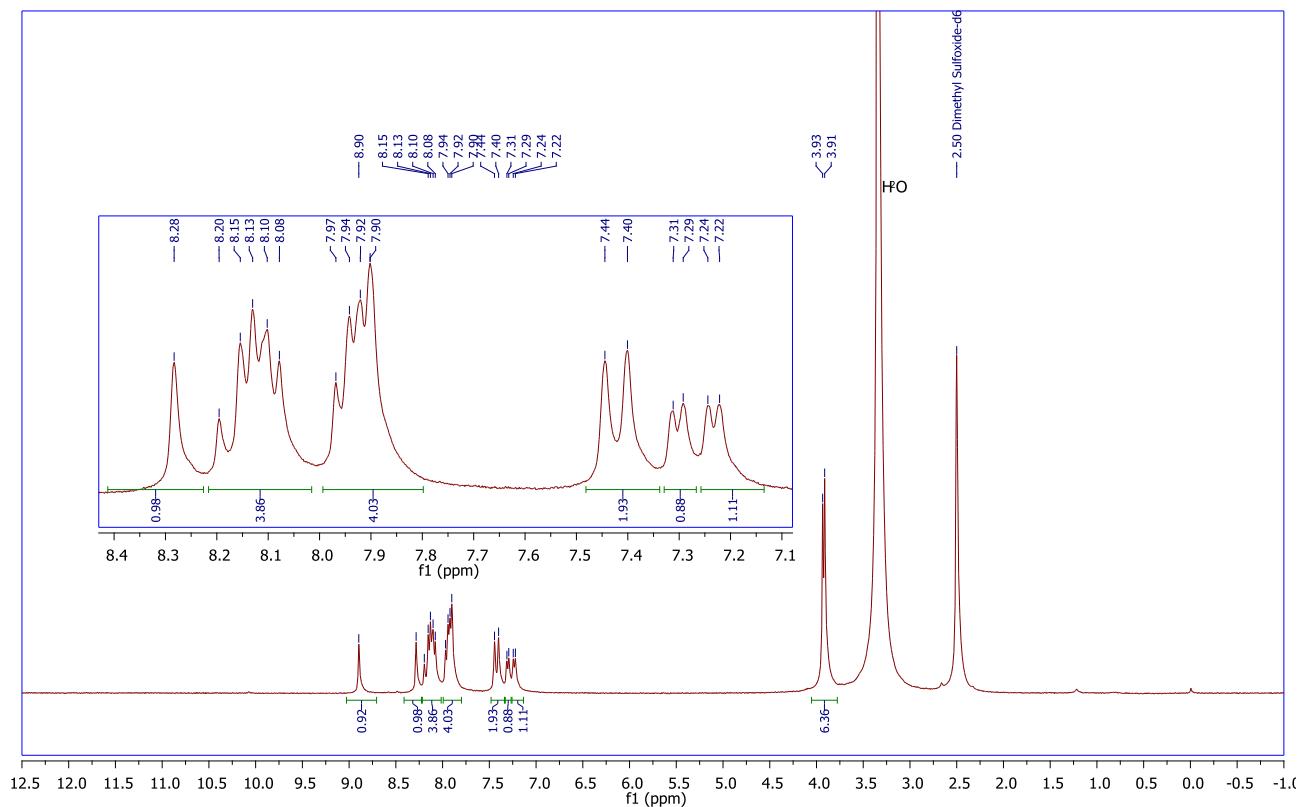
**Figure S10.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **3d**.



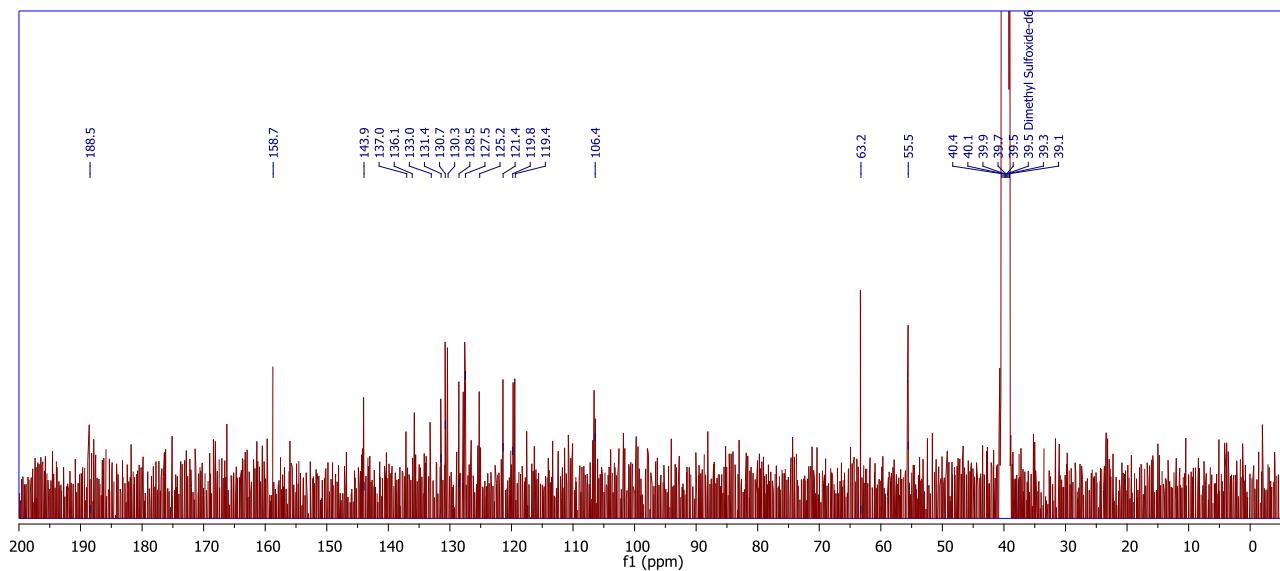
**Figure S11.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **3d**.



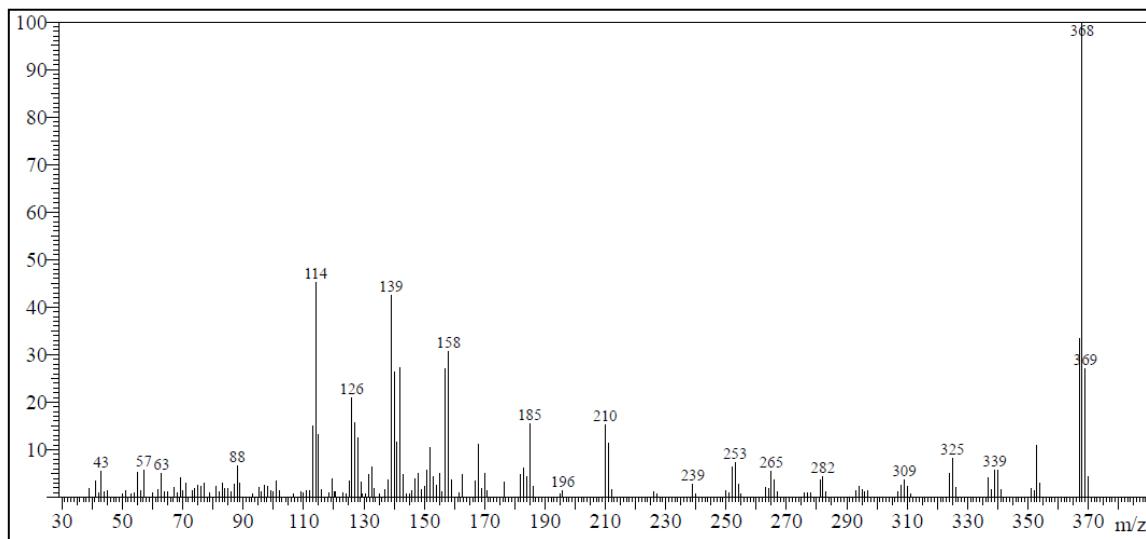
**Figure S12.** Mass spectrum of compound **3d**.



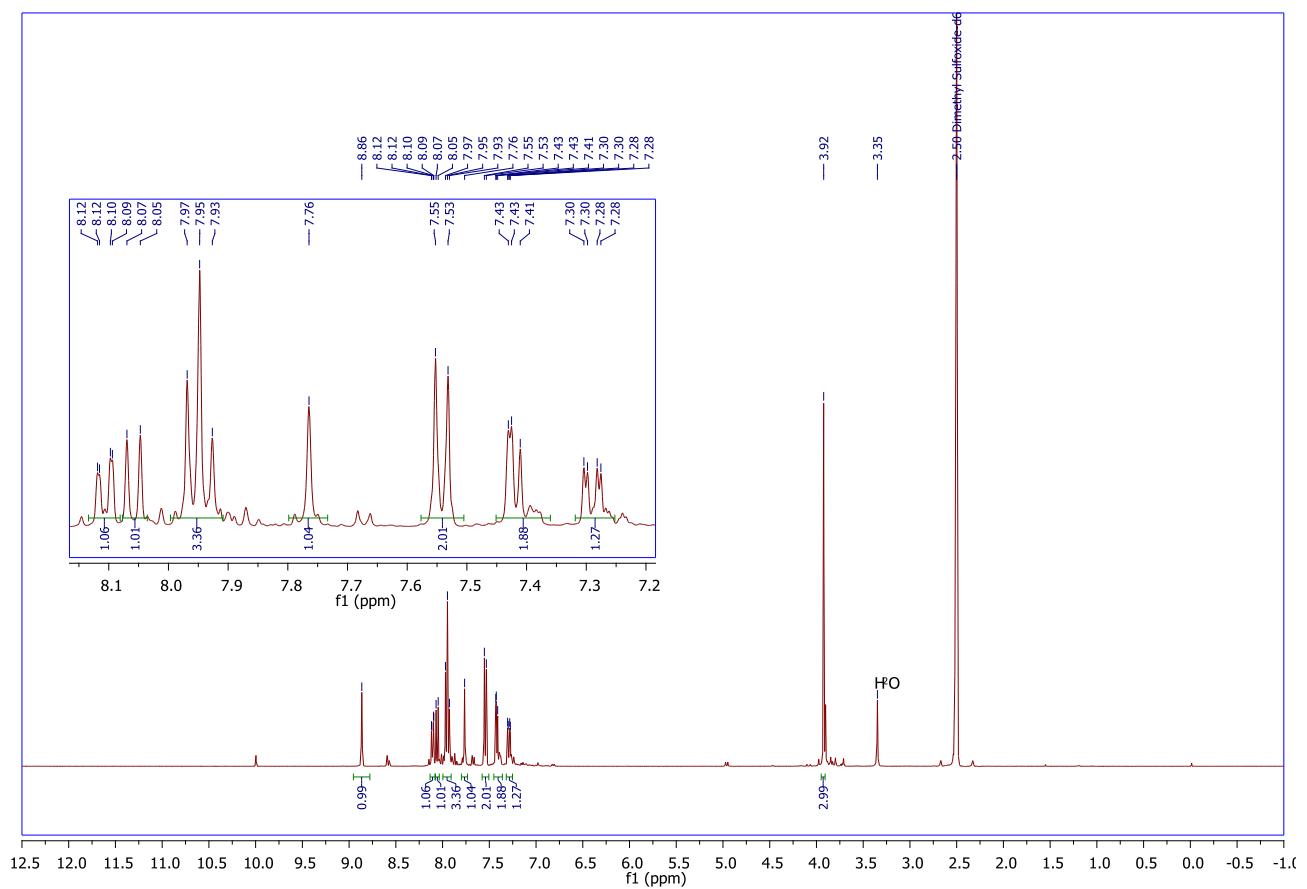
**Figure S13.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **3e**.



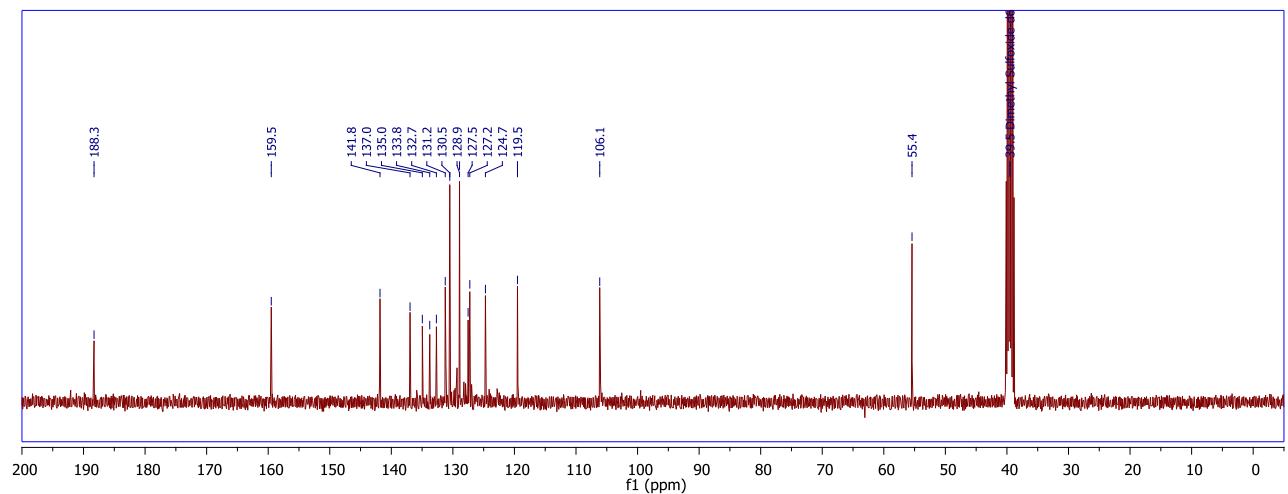
**Figure S14.**  $^{13}\text{C}$  NMR spectrum (100 MHz, DMSO- $d_6$ ) of compound 3e.



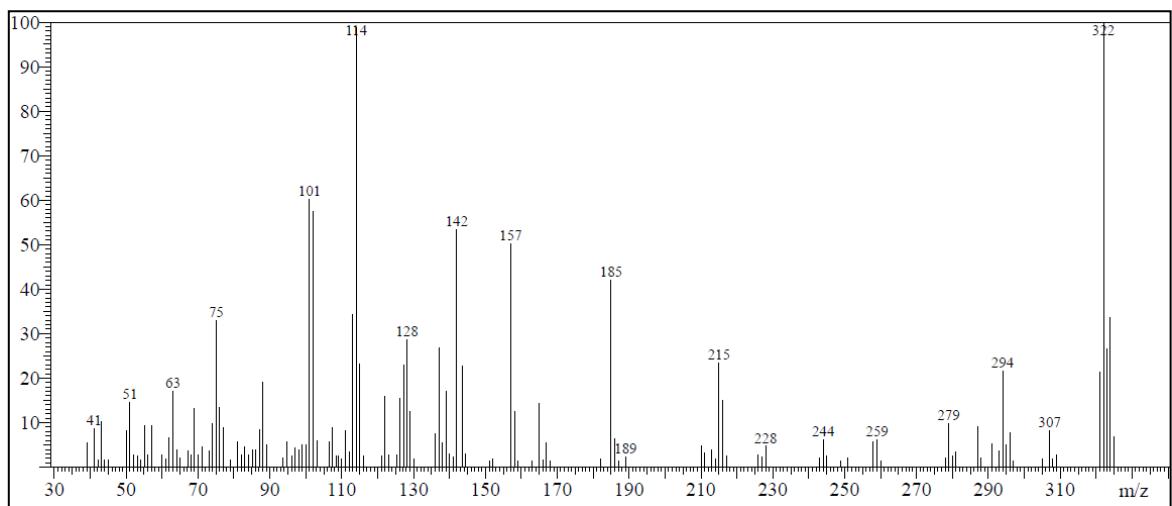
**Figure S15.** Mass spectrum of compound 3e.



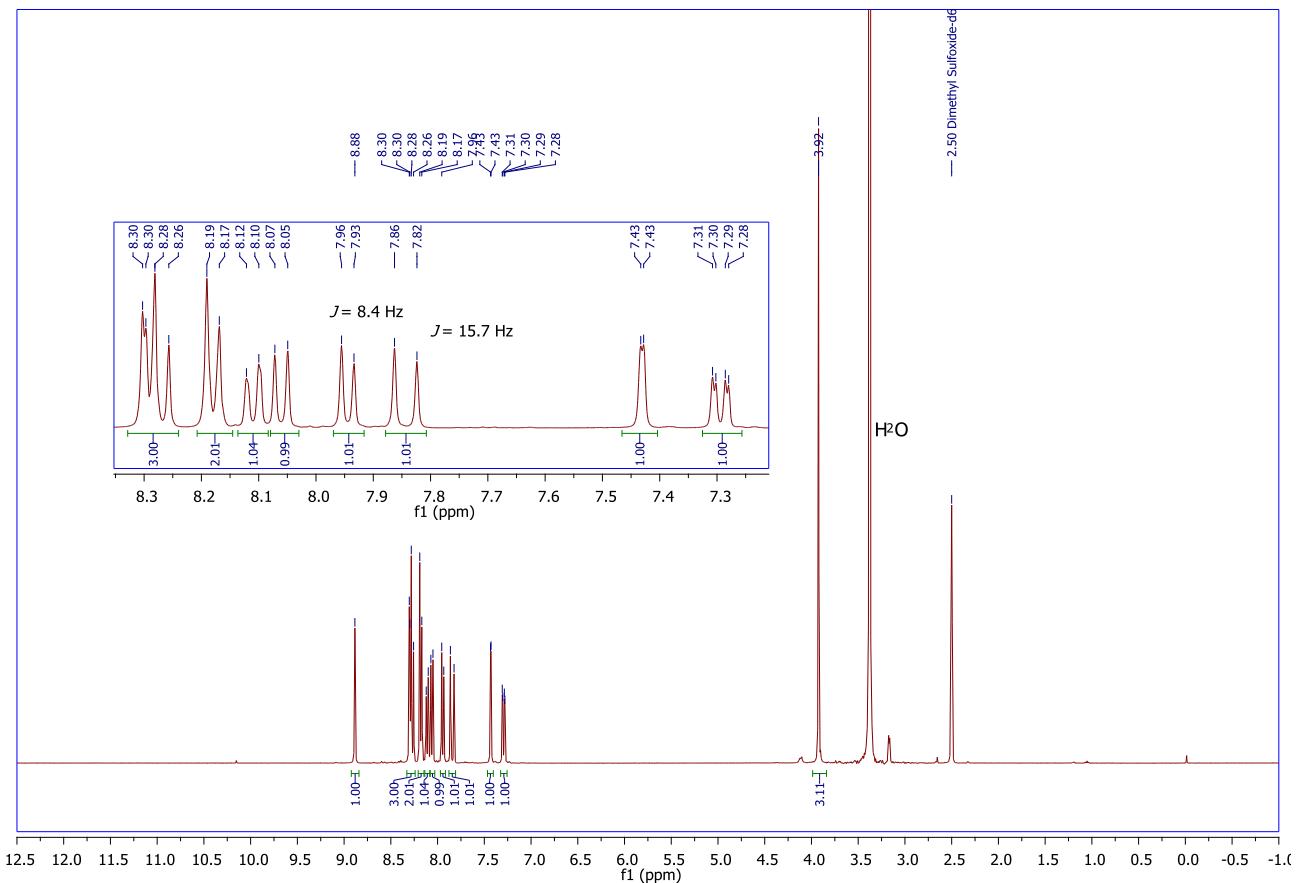
**Figure S16.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **3f**.



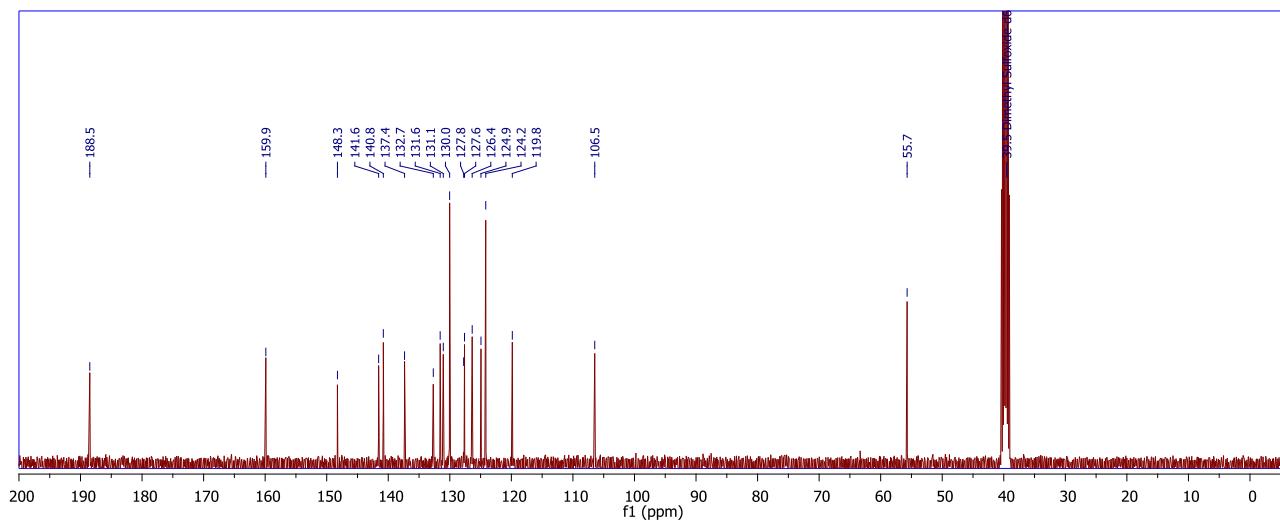
**Figure S17.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **3f**.



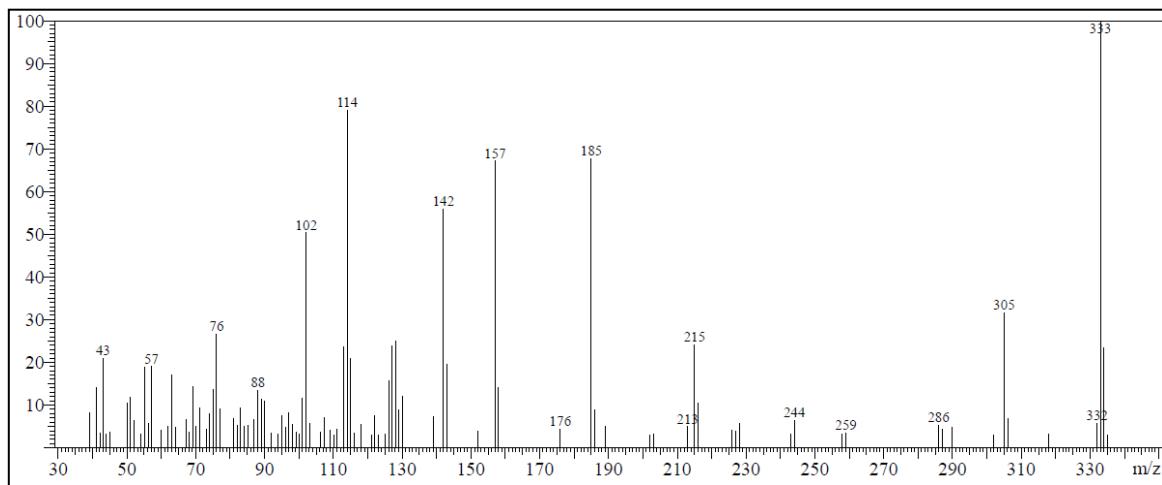
**Figure S18.** Mass spectrum of compound **3f**.



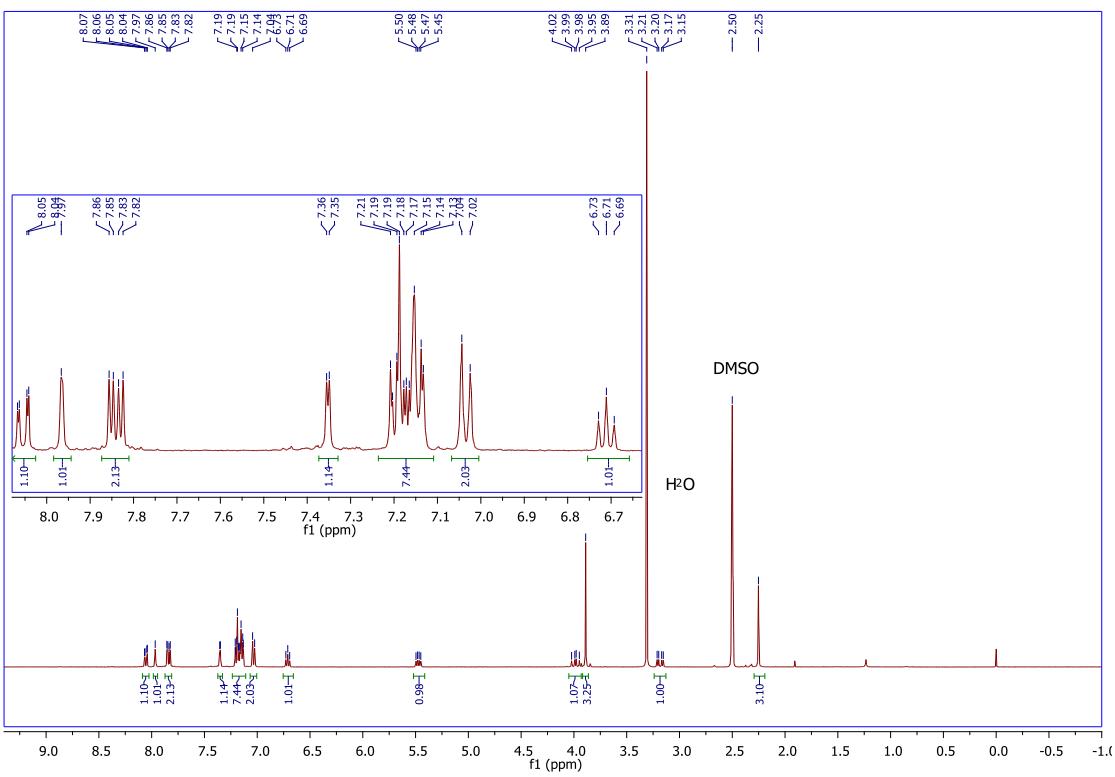
**Figure S19.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **3g**.



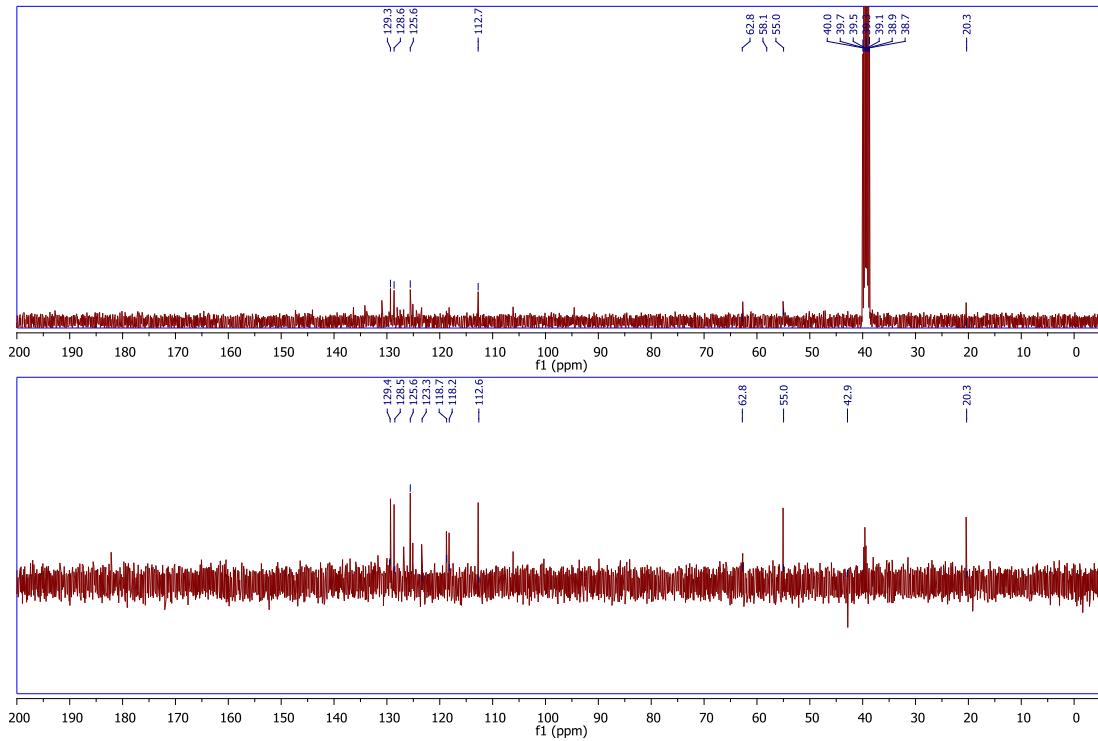
**Figure S20.** <sup>13</sup>C NMR spectrum (100 MHz, DMSO-*d*<sub>6</sub>) of compound 3g.



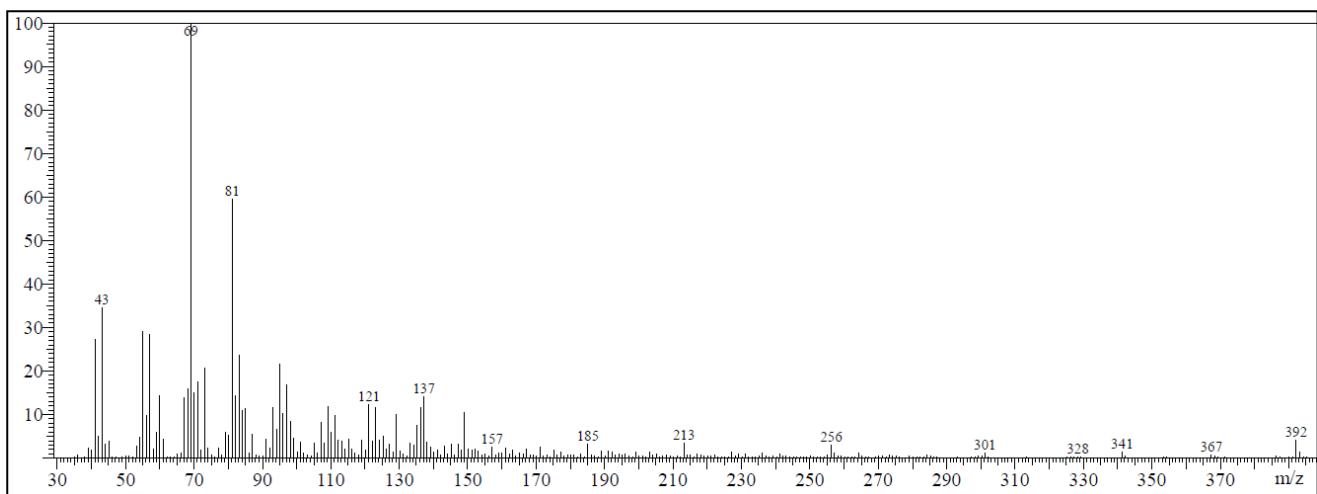
**Figure S21.** Mass spectrum of compound 3g.



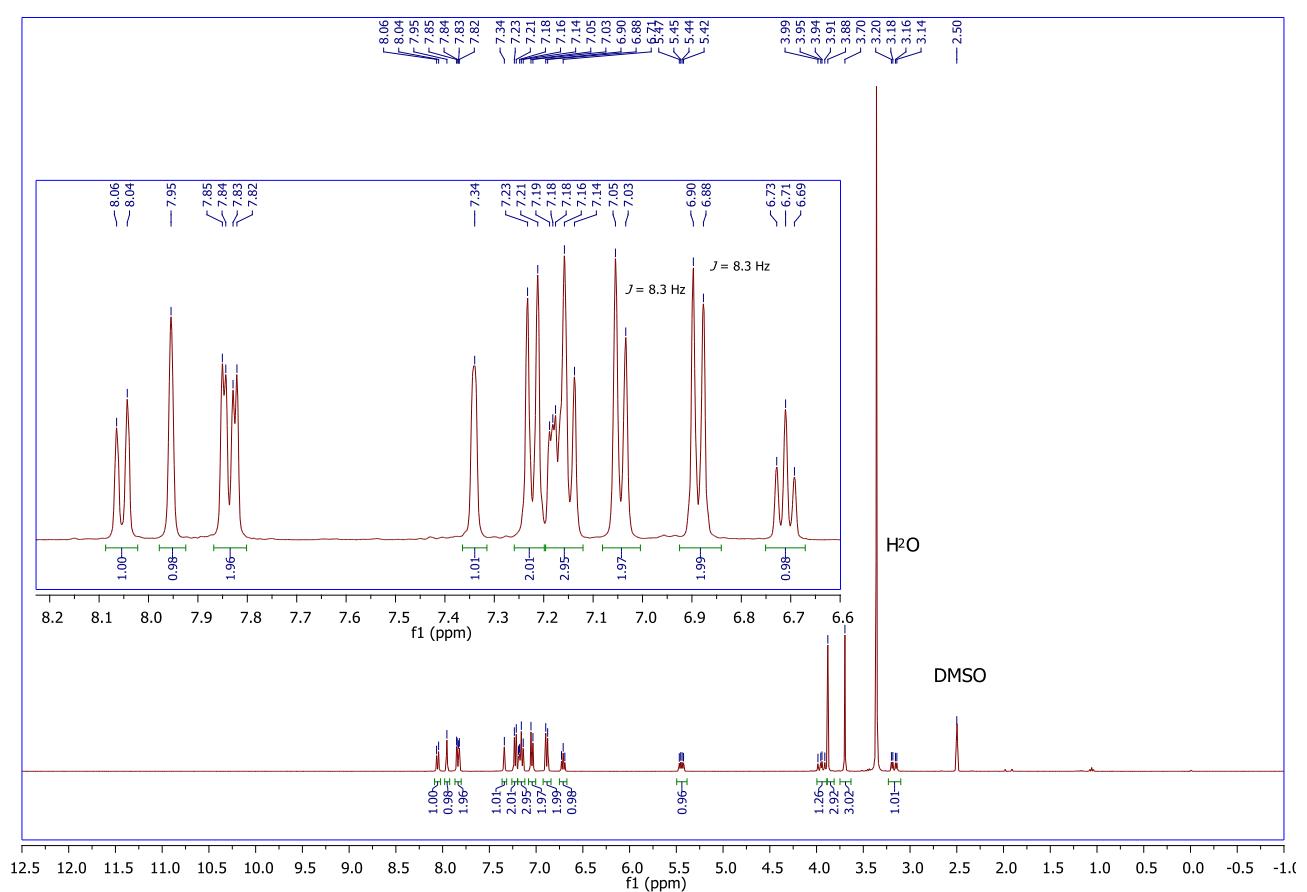
**Figure S22.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **4a**.



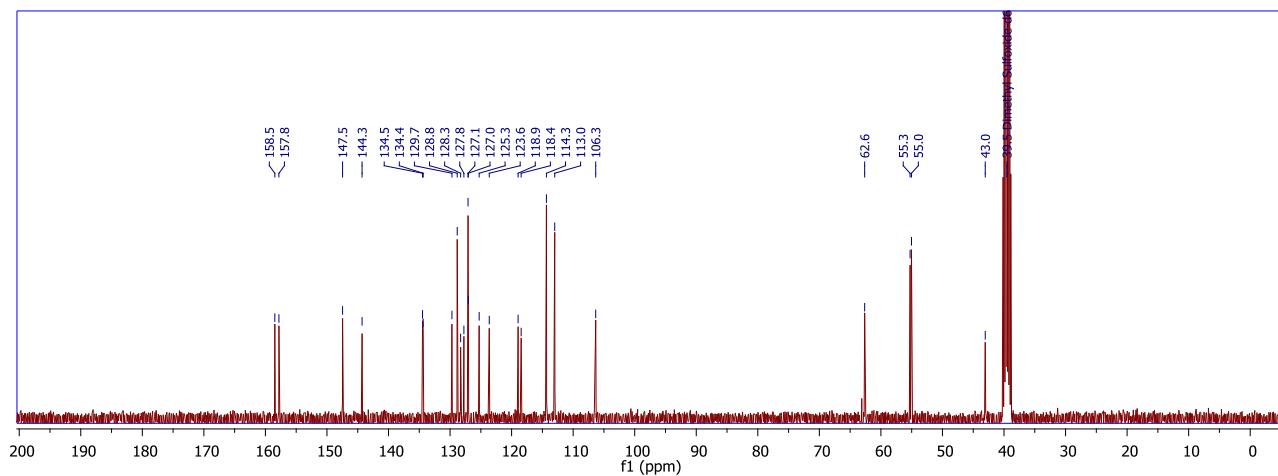
**Figure S23.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4a**.



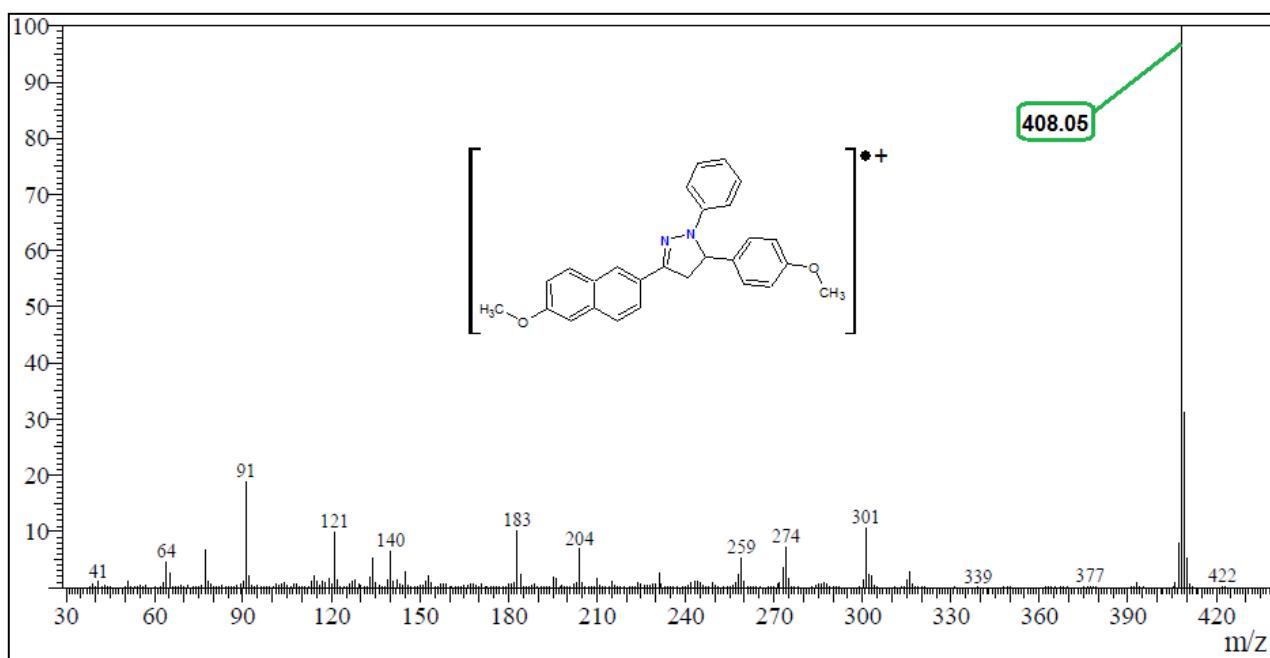
**Figure S24.** Mass spectrum of compound **4a**.



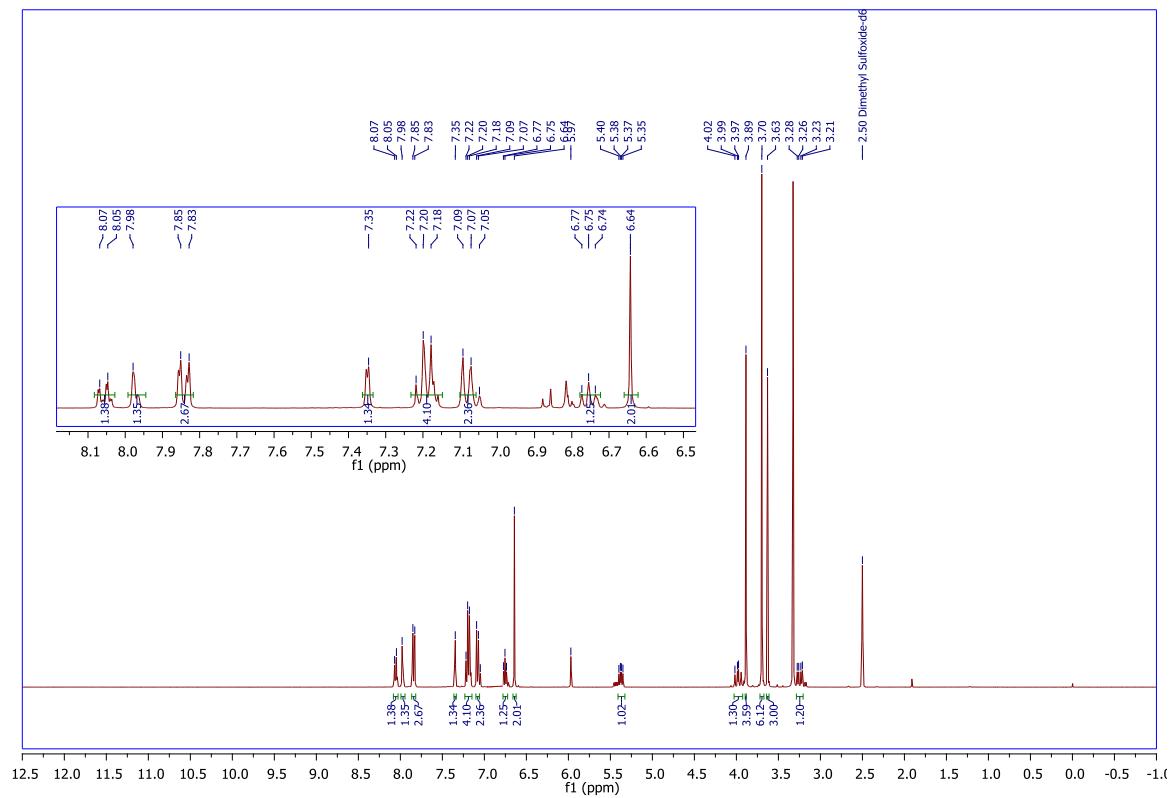
**Figure S25.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **4b**.



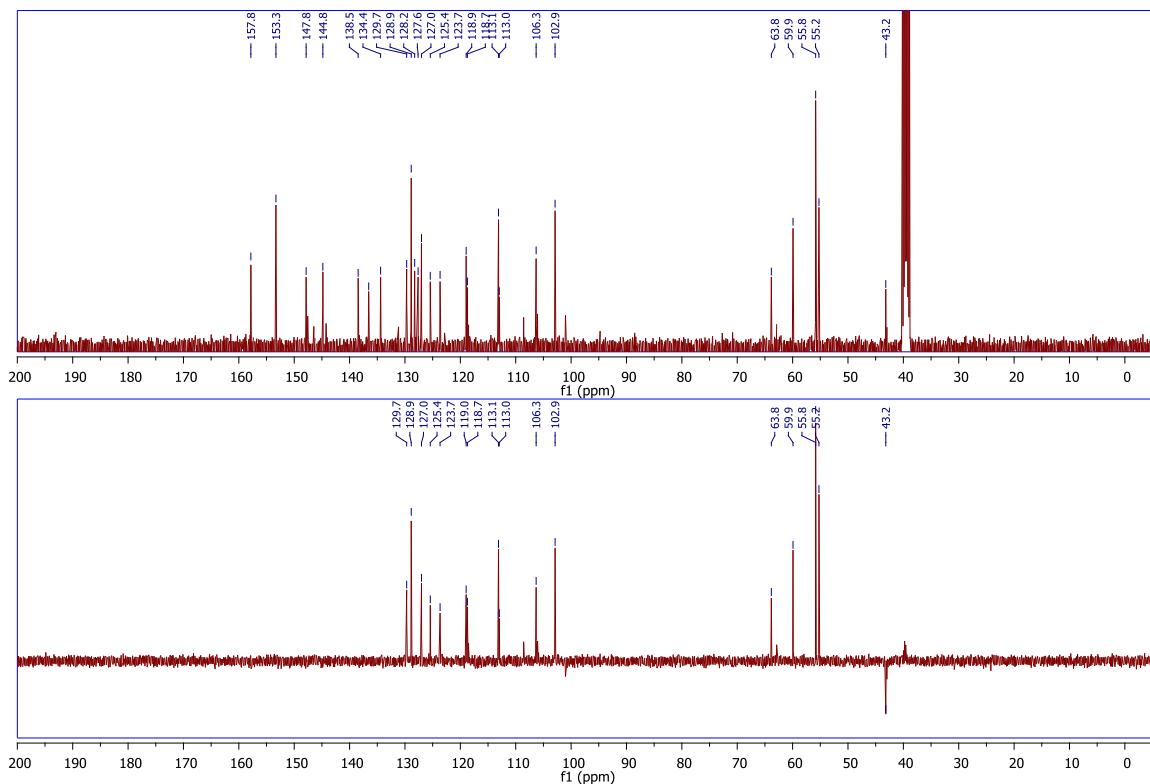
**Figure S26.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4b**.



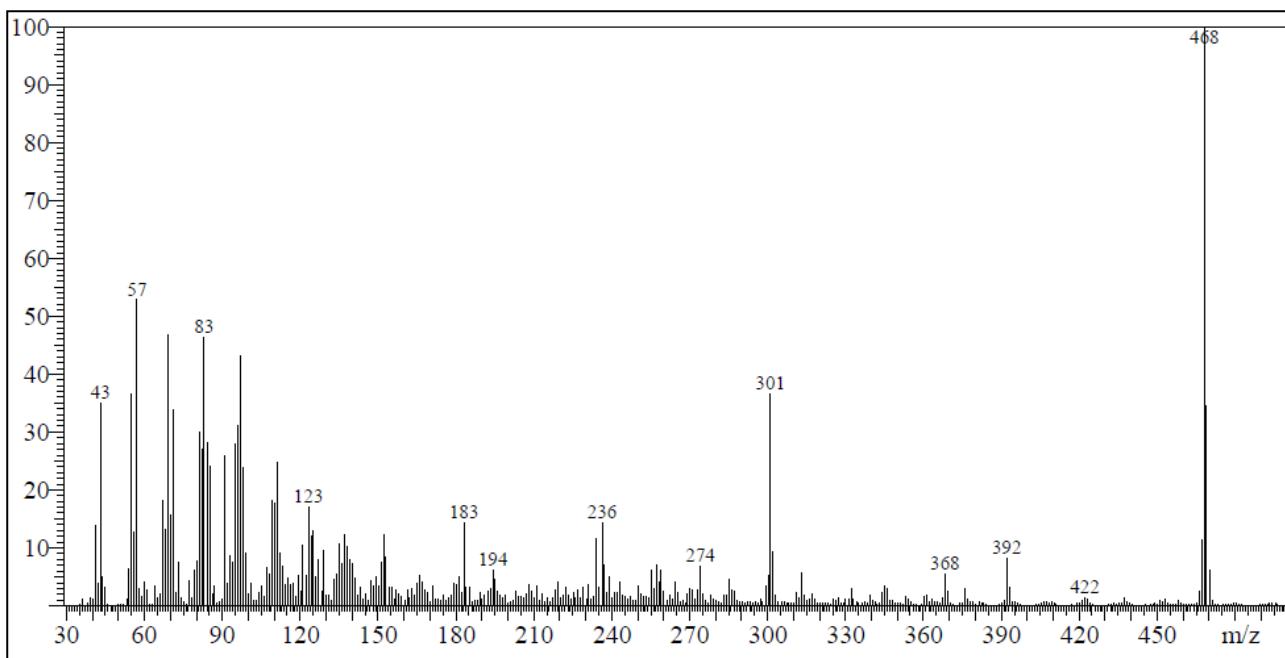
**Figure S27.** Mass spectrum of compound **4b**.



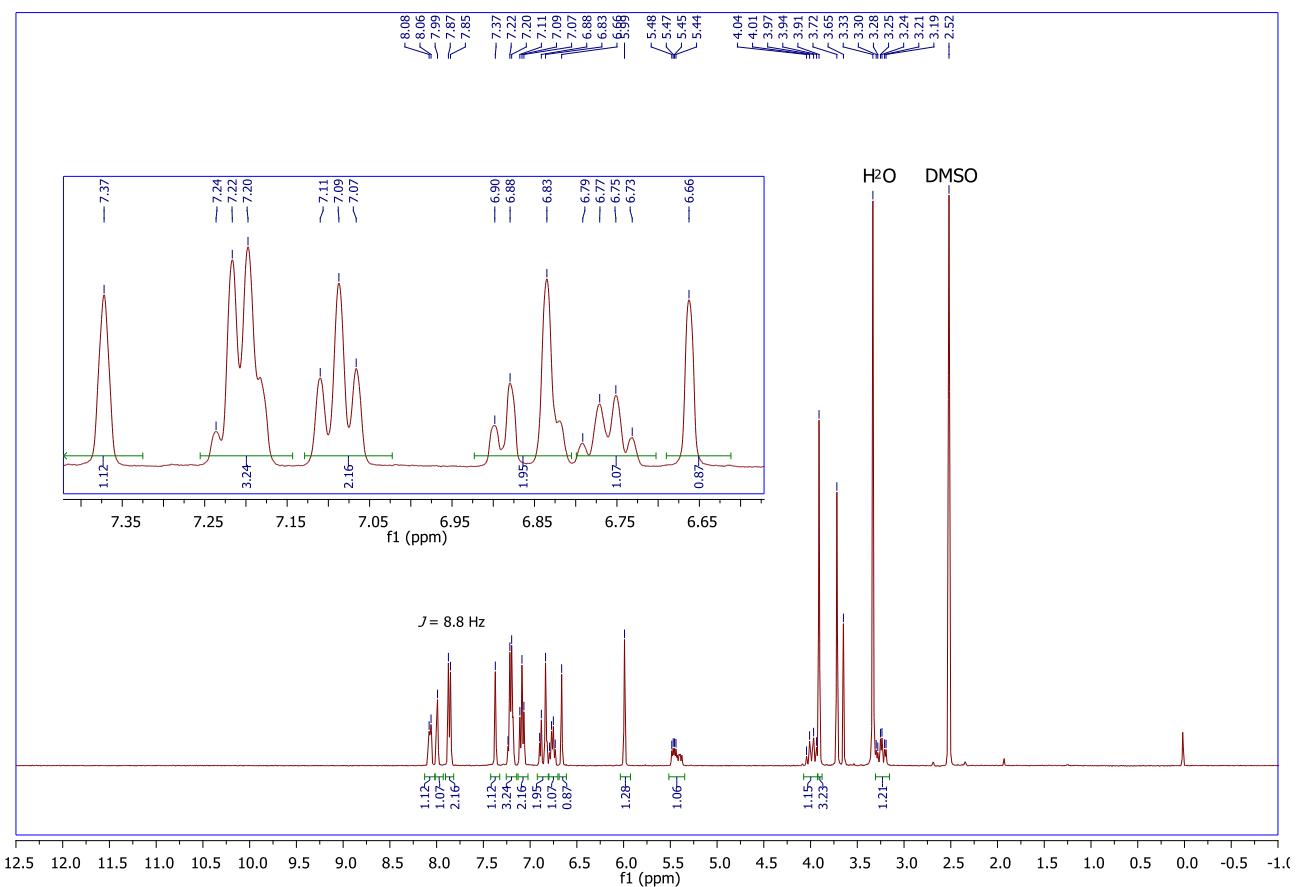
**Figure S28.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **4c**.



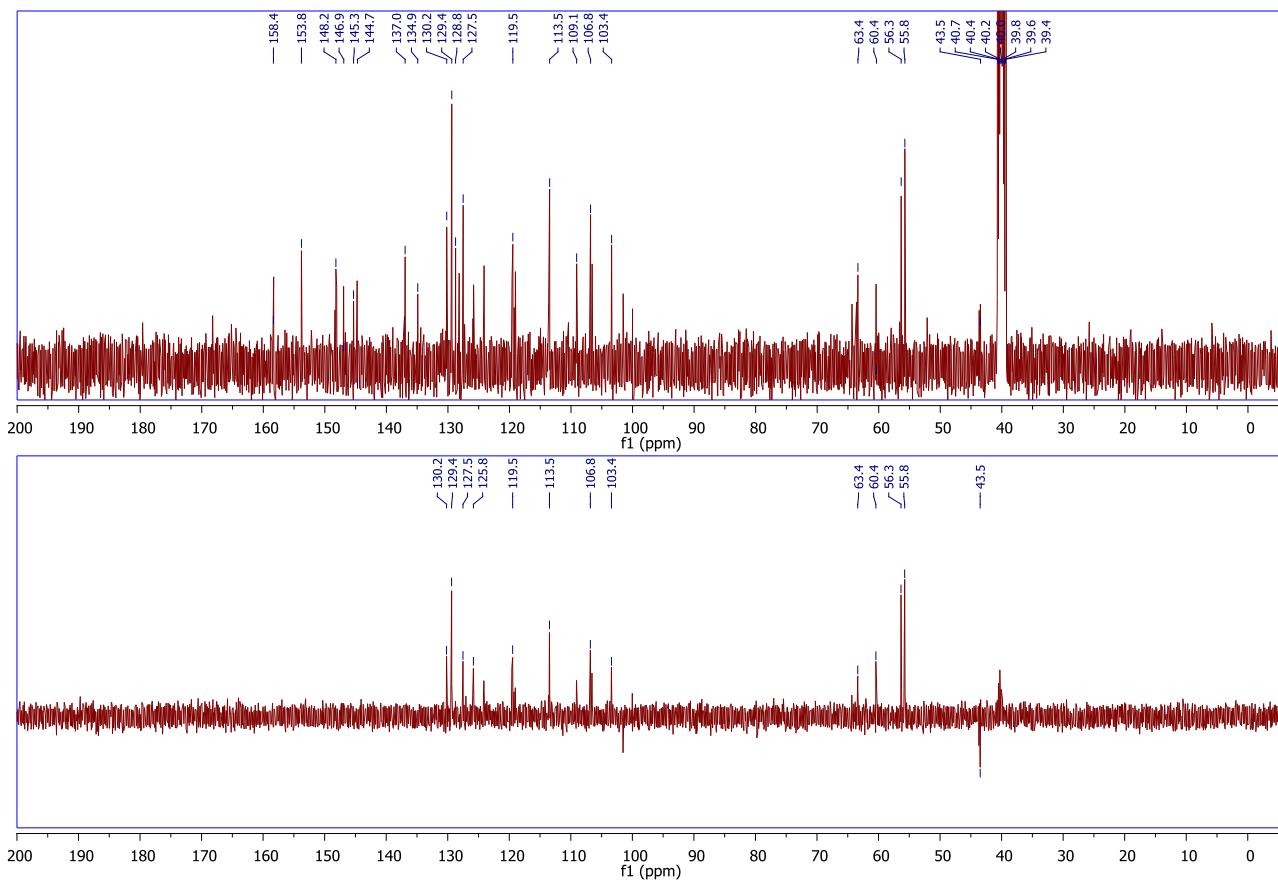
**Figure S29.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4c**.



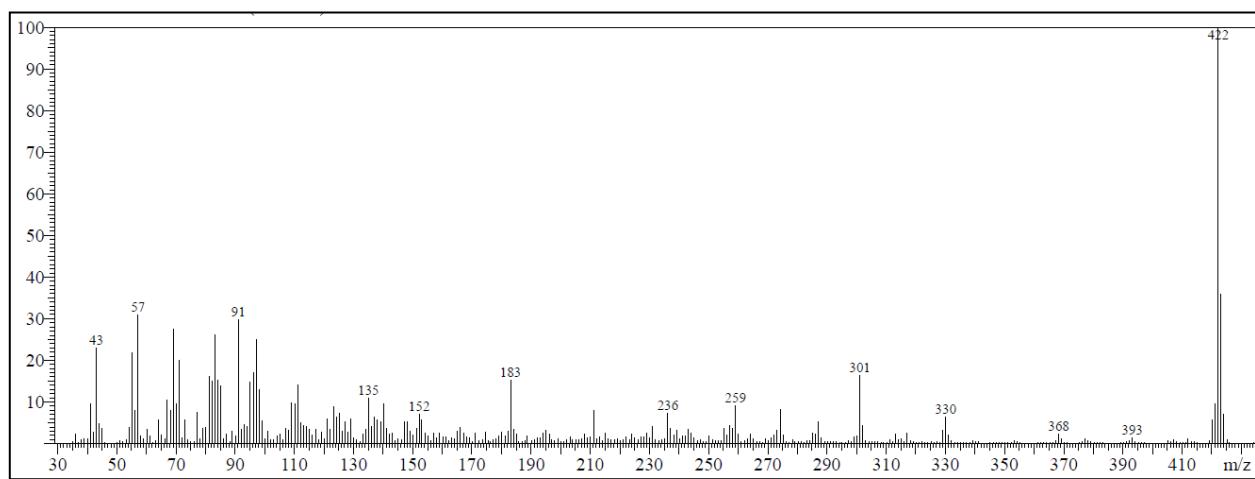
**Figure S30.** Mass spectrum of compound **4c**.



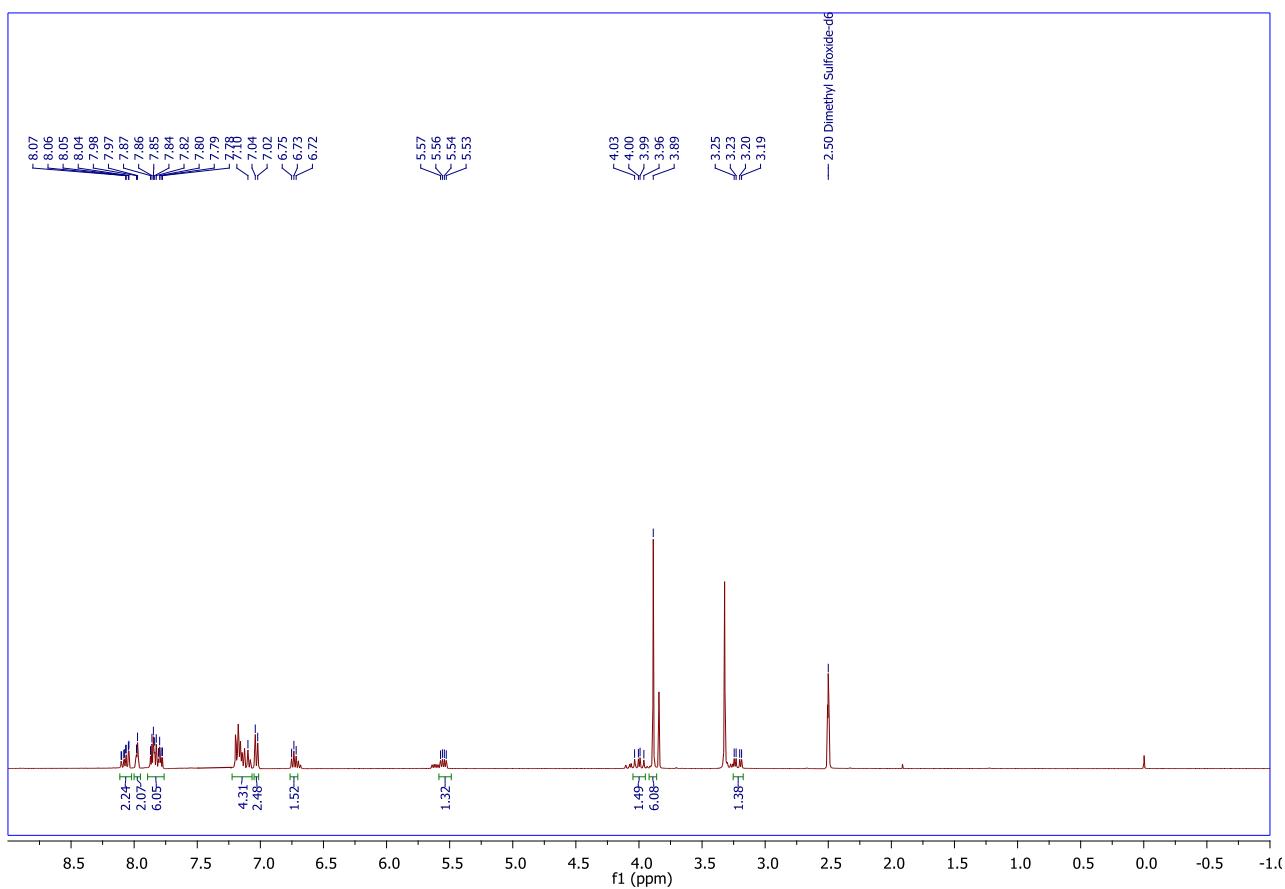
**Figure S31.** <sup>1</sup>H NMR spectrum (400 MHz, DMSO-*d*<sub>6</sub>) of compound **4d**.



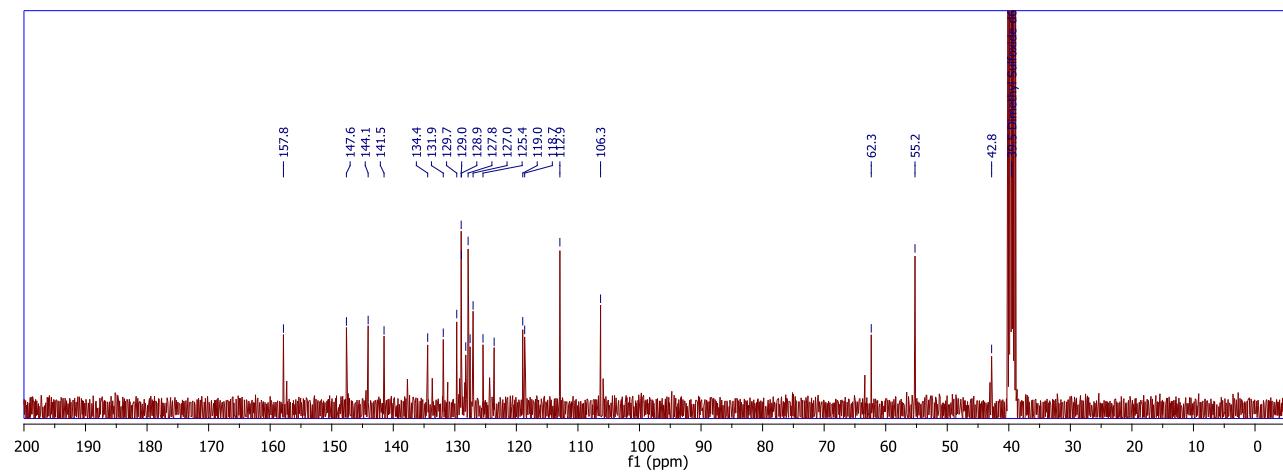
**Figure S32.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4d**.



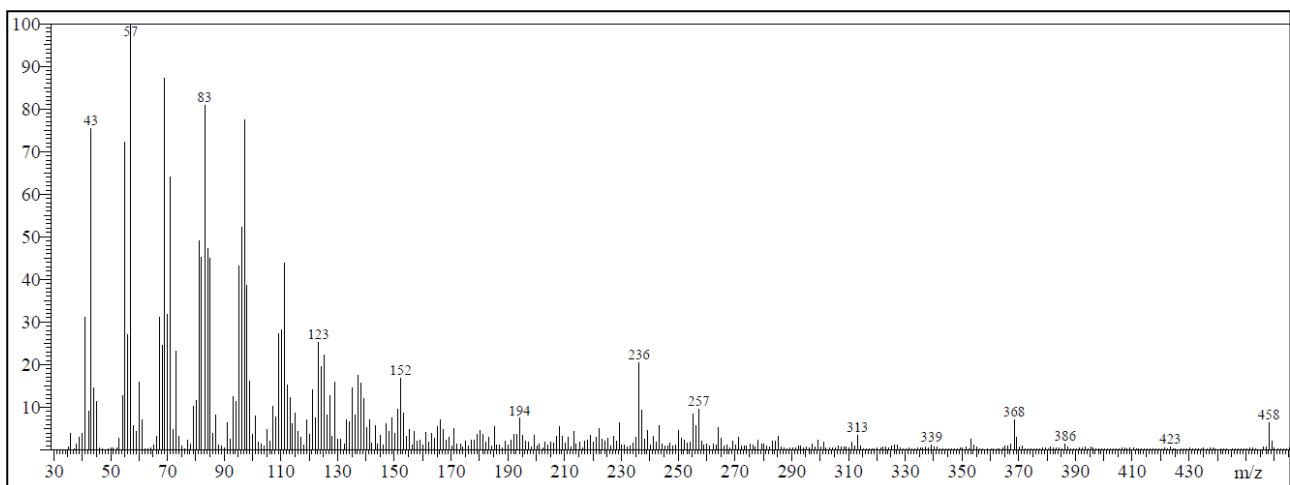
**Figure S33.** Mass spectrum of compound **4d**.



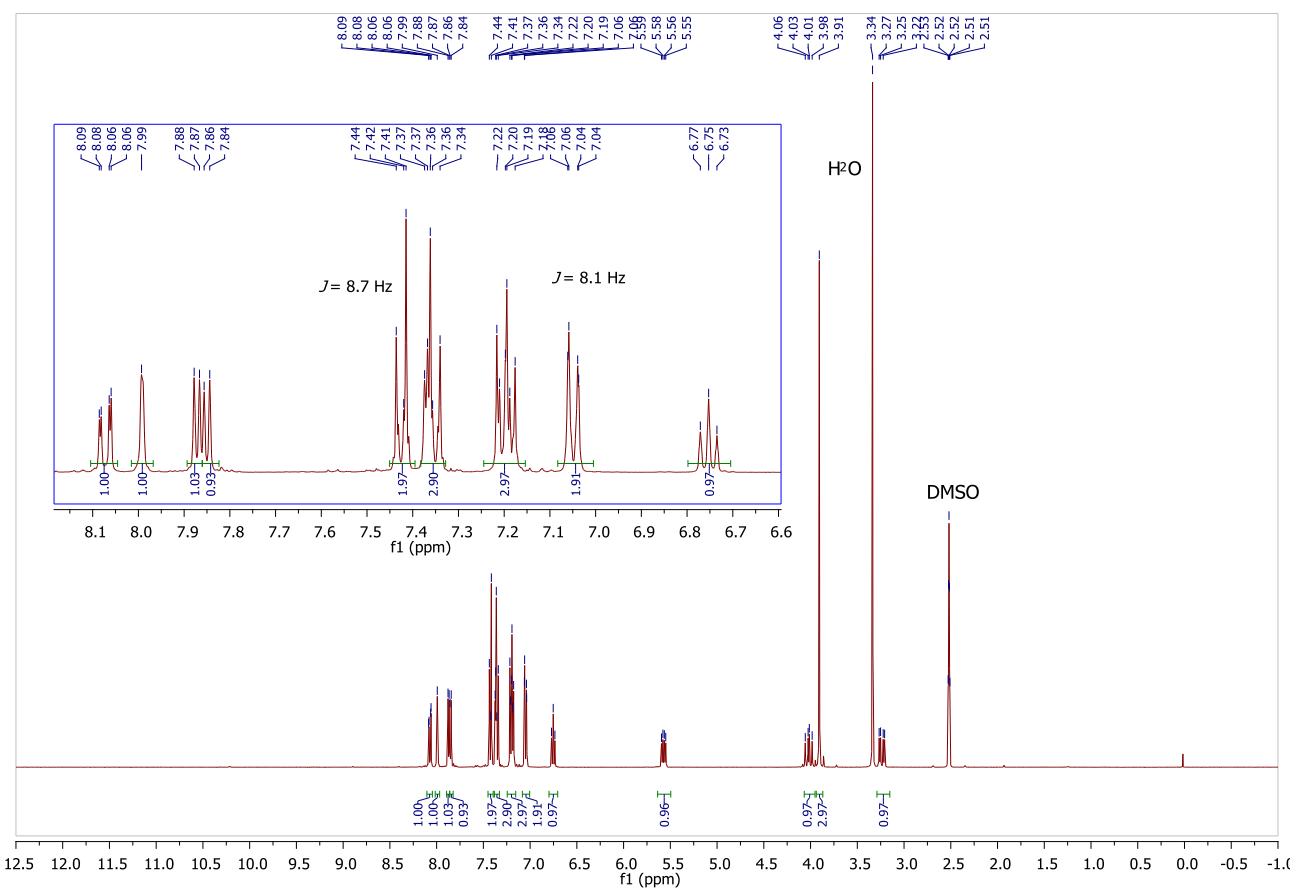
**Figure S34.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **4e**.



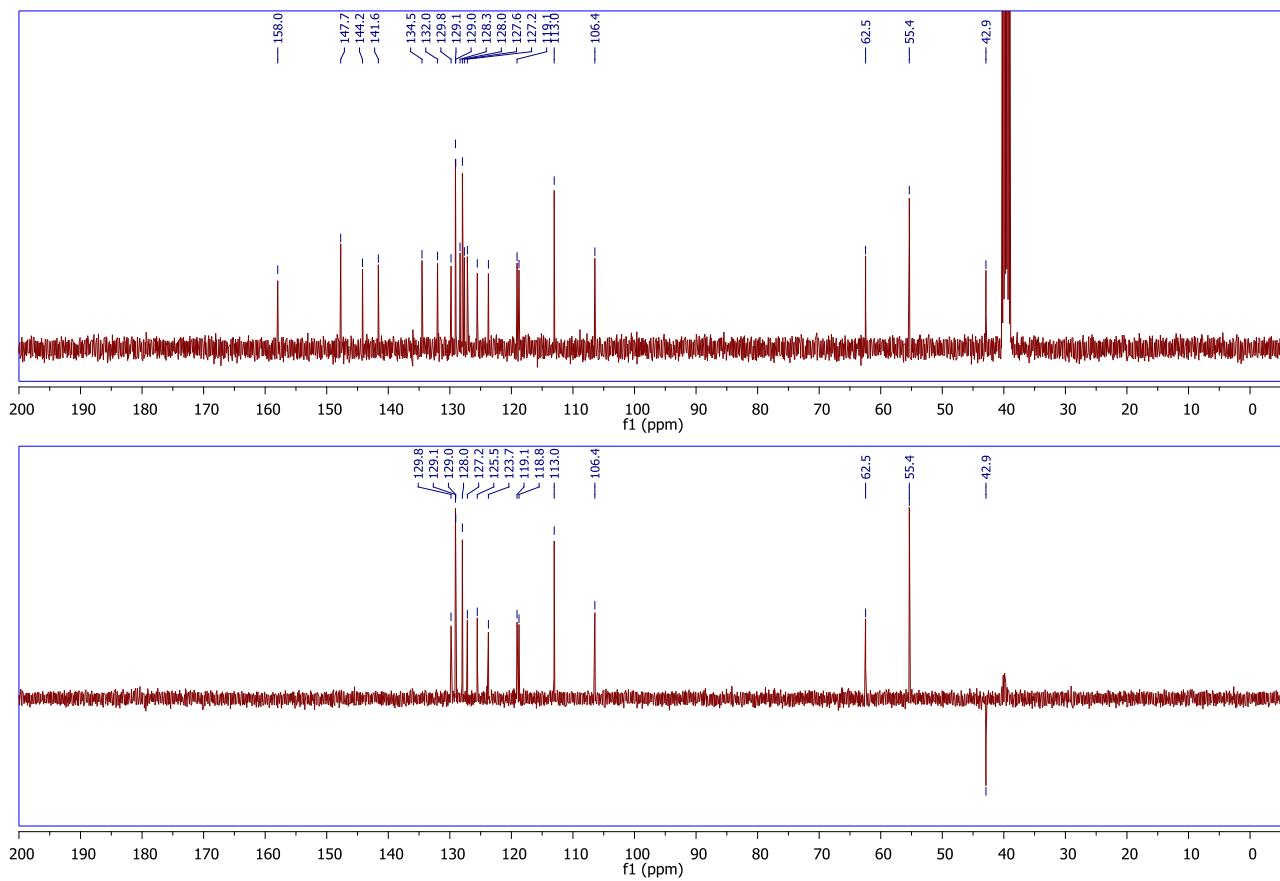
**Figure S35.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4e**.



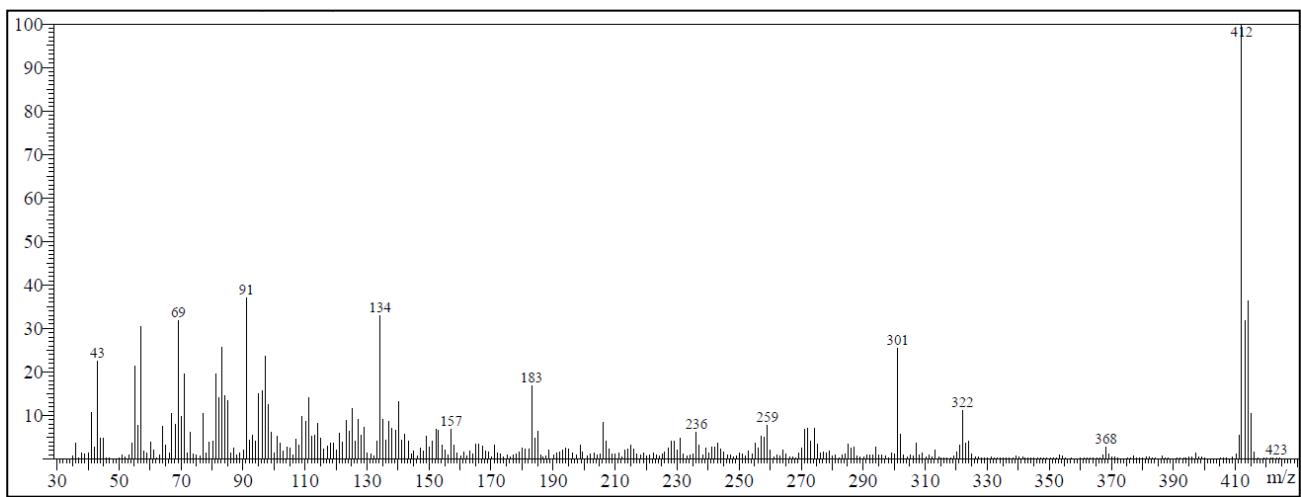
**Figure S36.** Mass spectrum of compound **4e**.



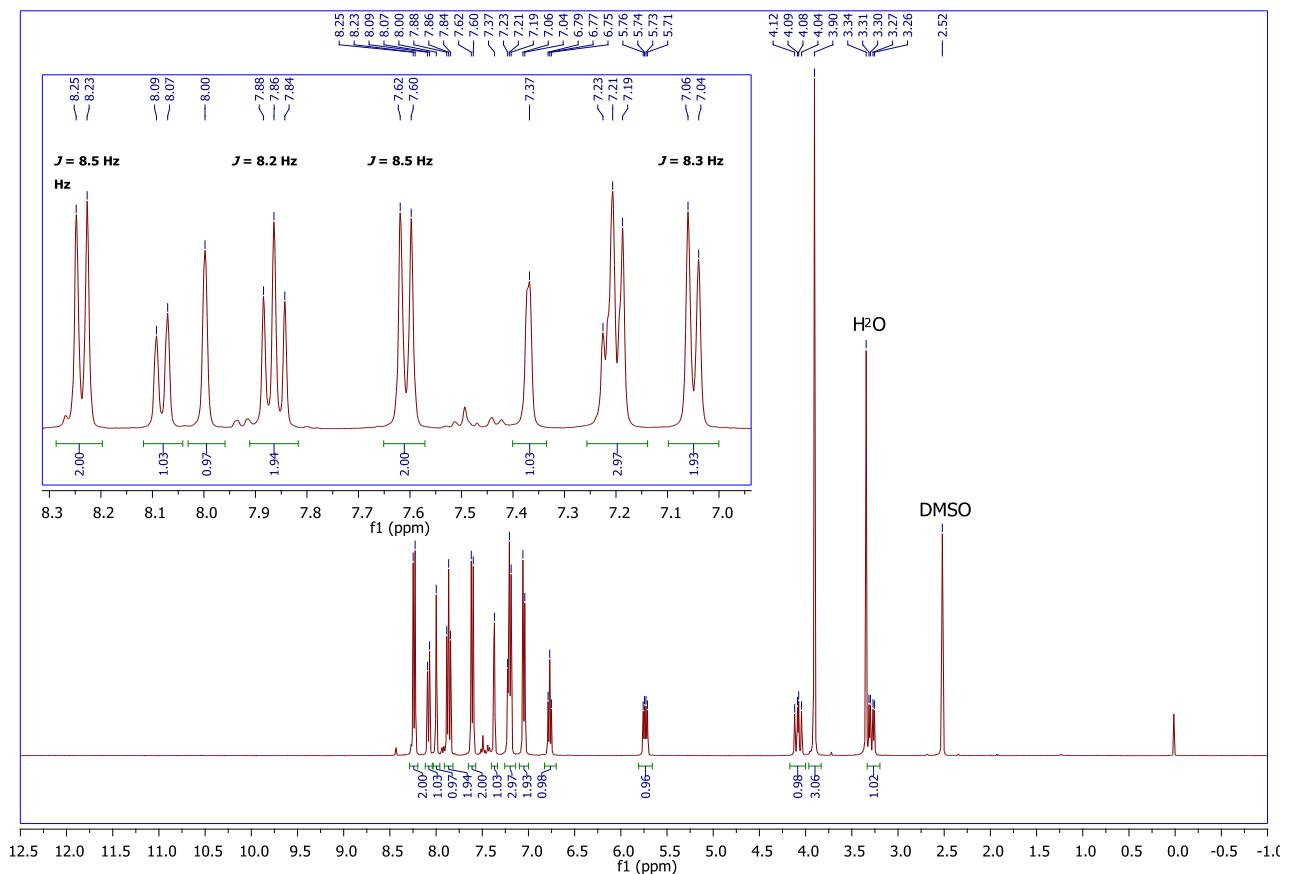
**Figure S37.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **4f**.



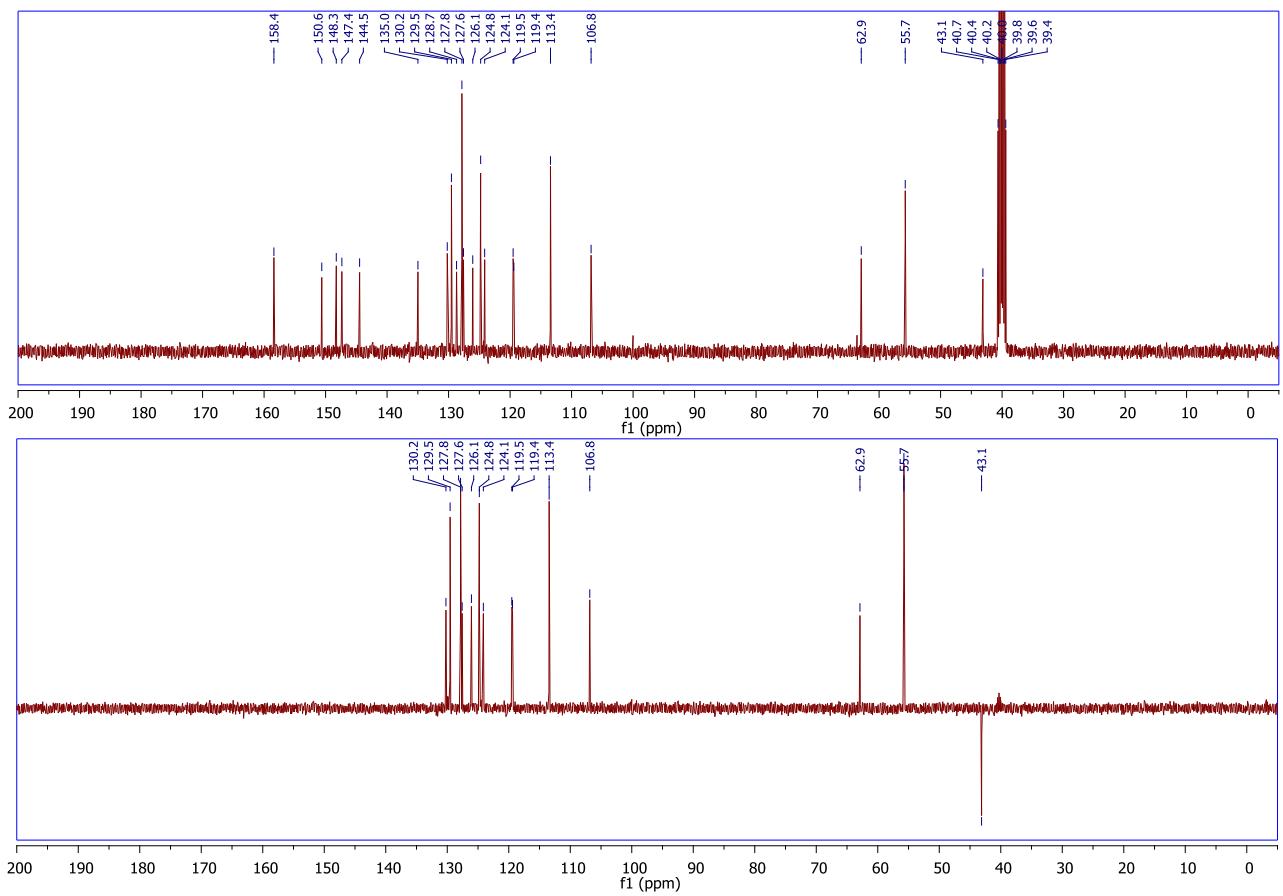
**Figure S38.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4f**.



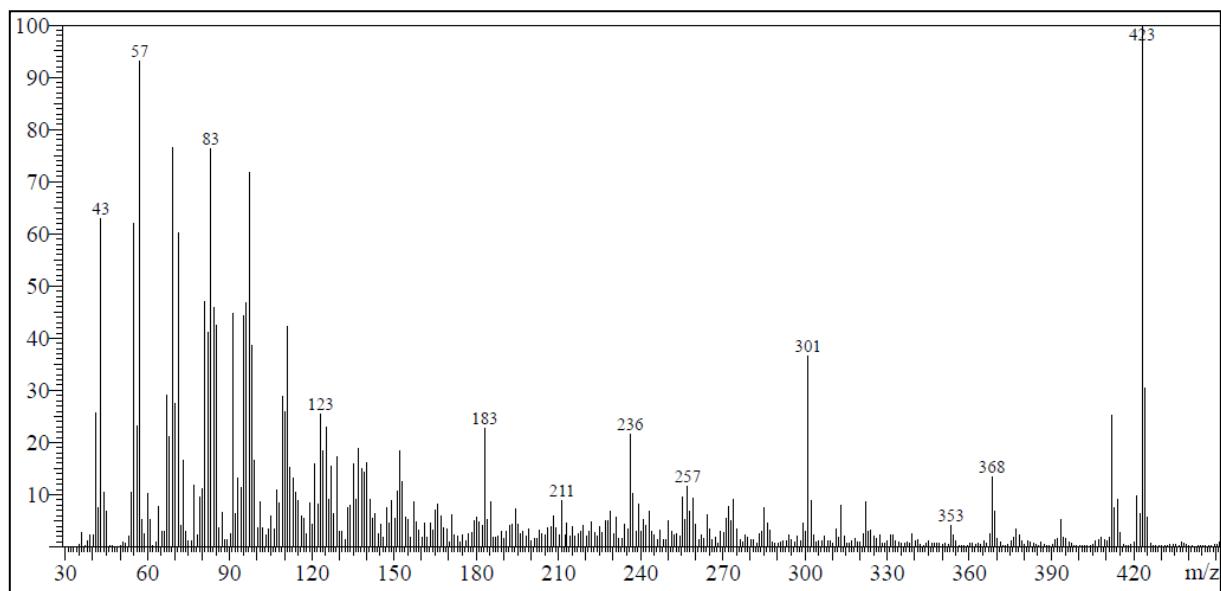
**Figure S39.** Mass spectrum of compound **4f**.



**Figure S40.**  $^1\text{H}$  NMR spectrum (400 MHz,  $\text{DMSO}-d_6$ ) of compound **4g**.



**Figure S41.**  $^{13}\text{C}$  NMR spectrum (100 MHz,  $\text{DMSO}-d_6$ ) of compound **4g**.



**Figure S42.** Mass spectrum of compound 4g.