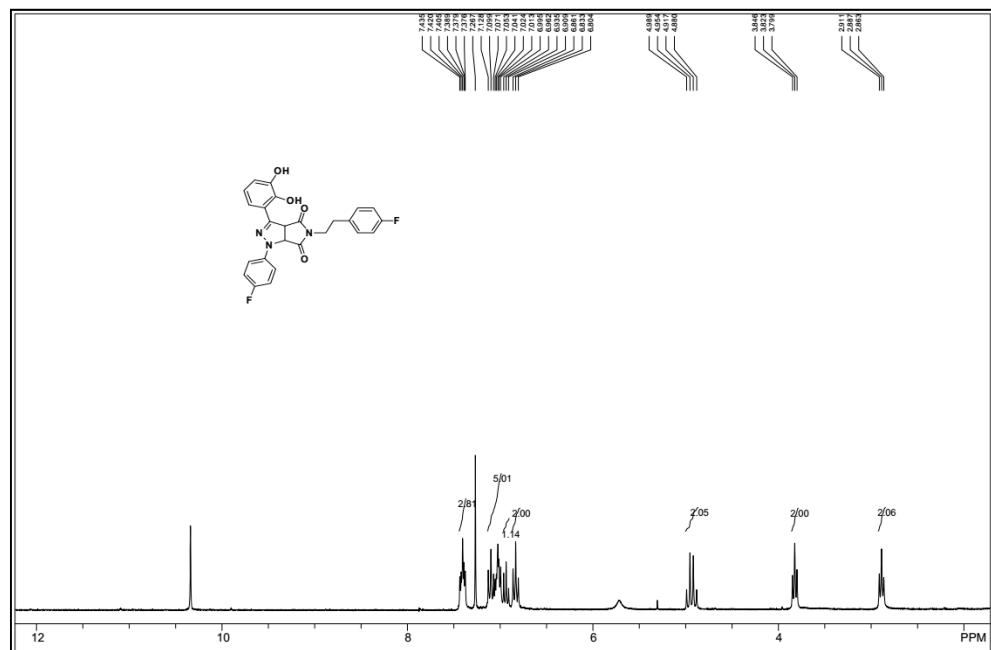


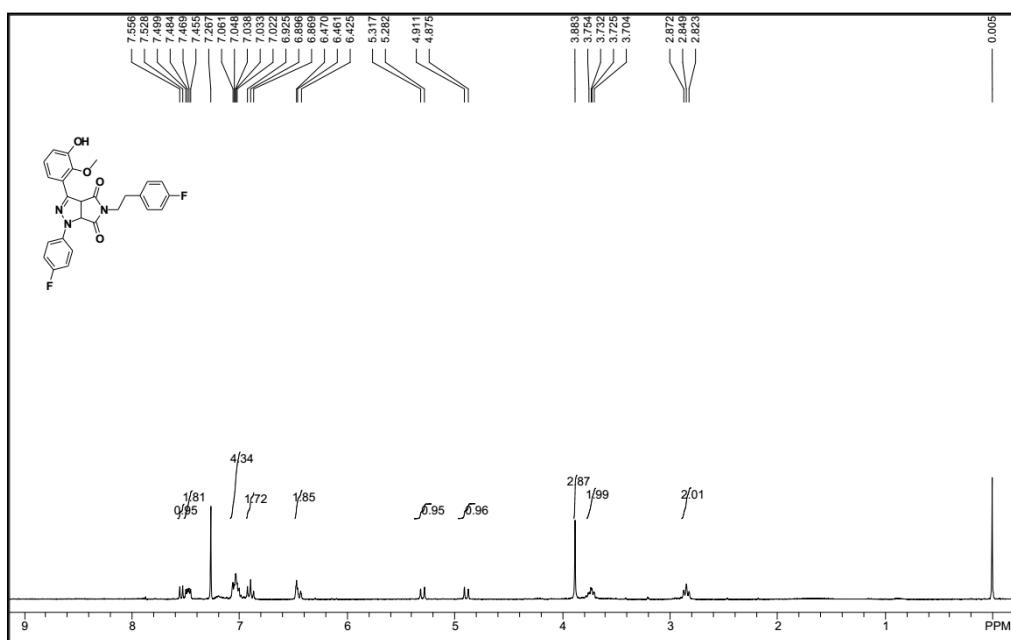
# Supplementary Materials: Synthesis and Anti-HIV-1 Activity Evaluation for Novel 3a,6a-Dihydro-1*H*-pyrrolo[3,4-*c*]pyrazole-4,6-dione Derivatives

Guan-Nan Liu, Rong-Hua Luo, Yu Zhou, Xing-Jie Zhang, Jian Li, Liu-Meng Yang, Yong-Tang Zheng and Hong Liu

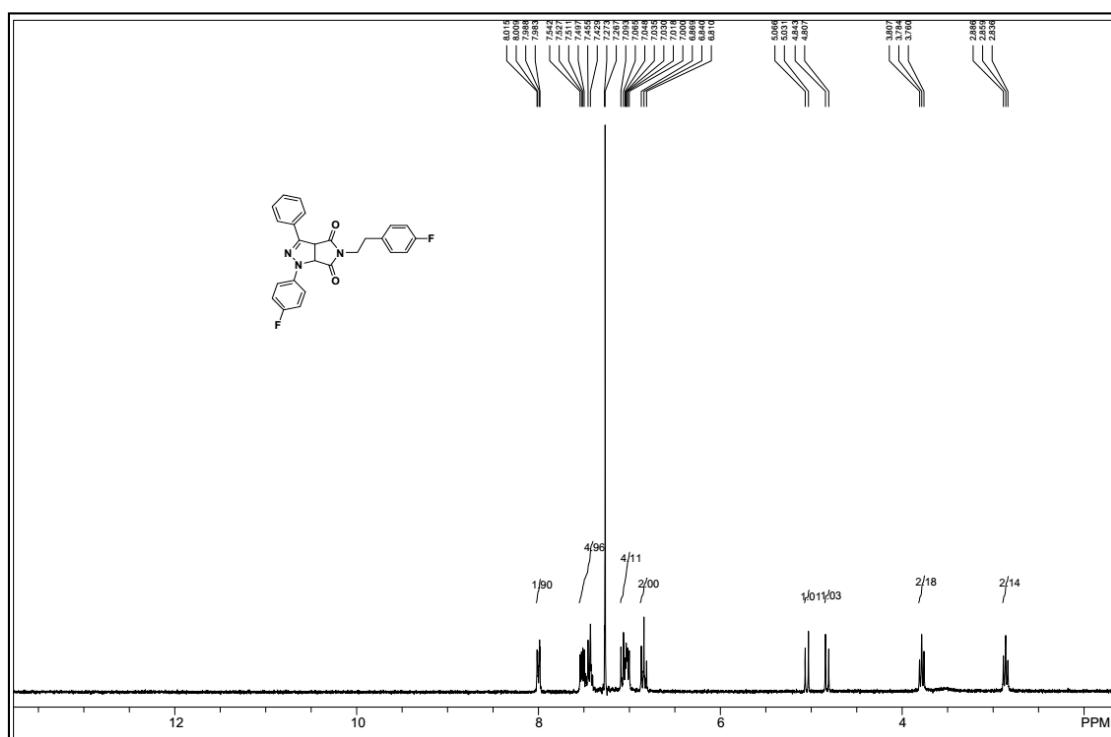
<sup>1</sup>H-NMR spectra of compounds 6–16:



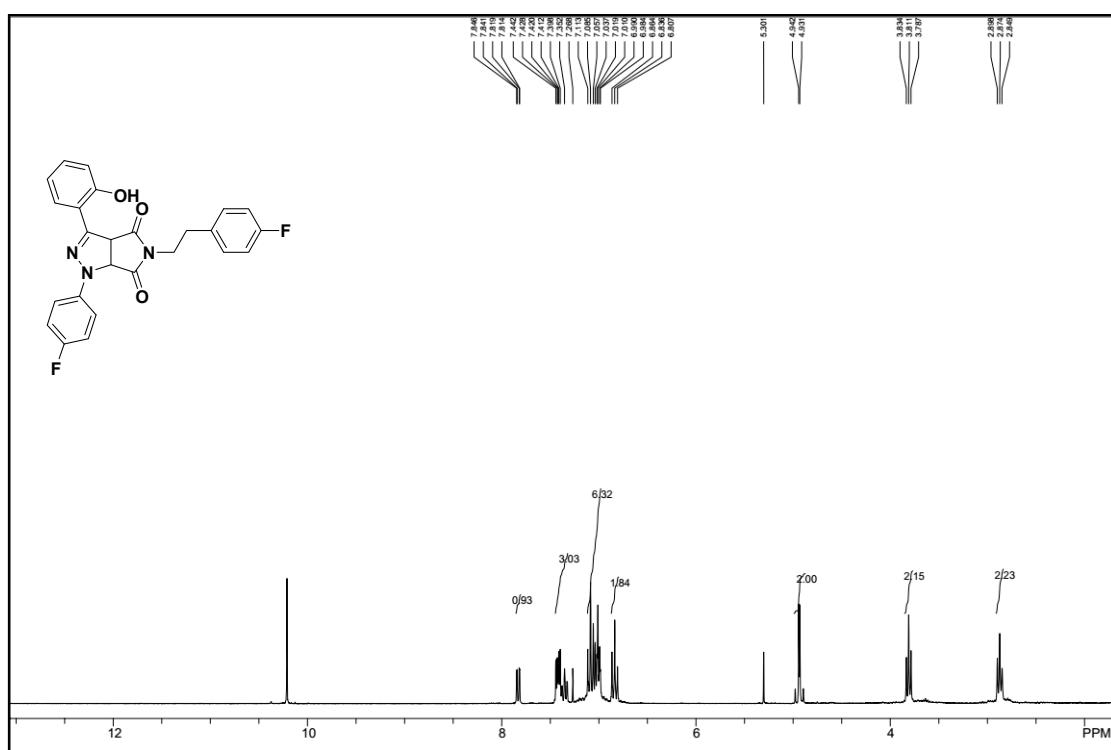
**Figure S1.** <sup>1</sup>H-NMR spectrum of compound 6 in CDCl<sub>3</sub>.



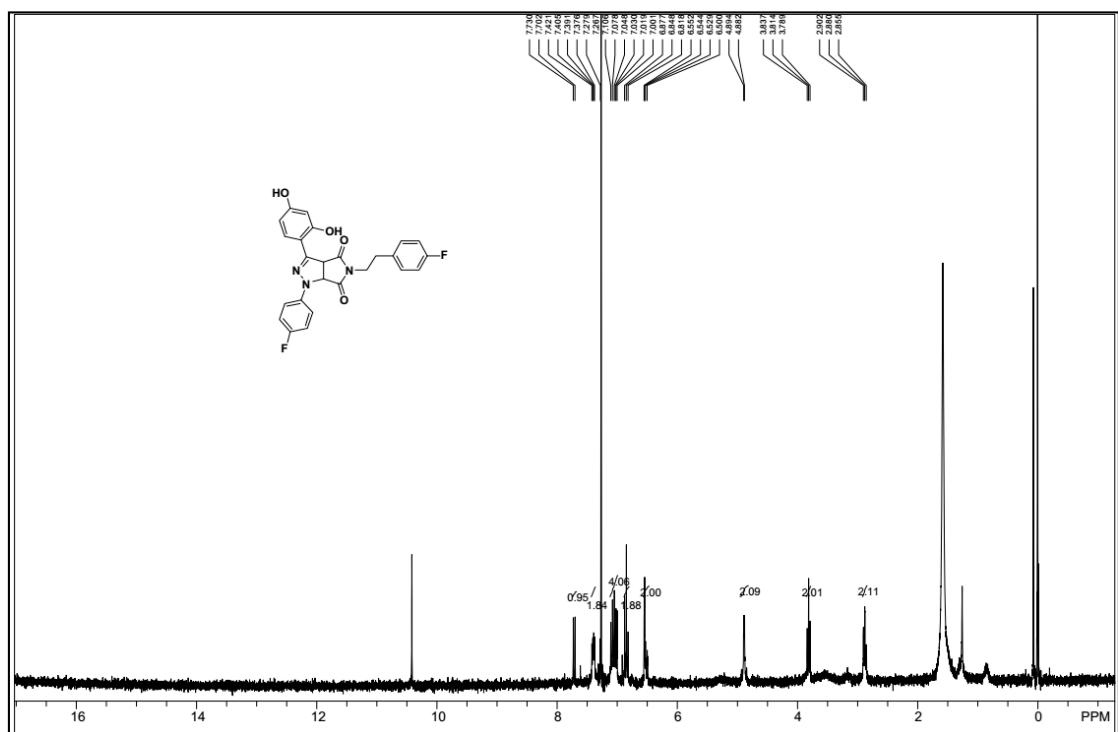
**Figure S2.** <sup>1</sup>H-NMR spectrum of compound 7a in CDCl<sub>3</sub>.



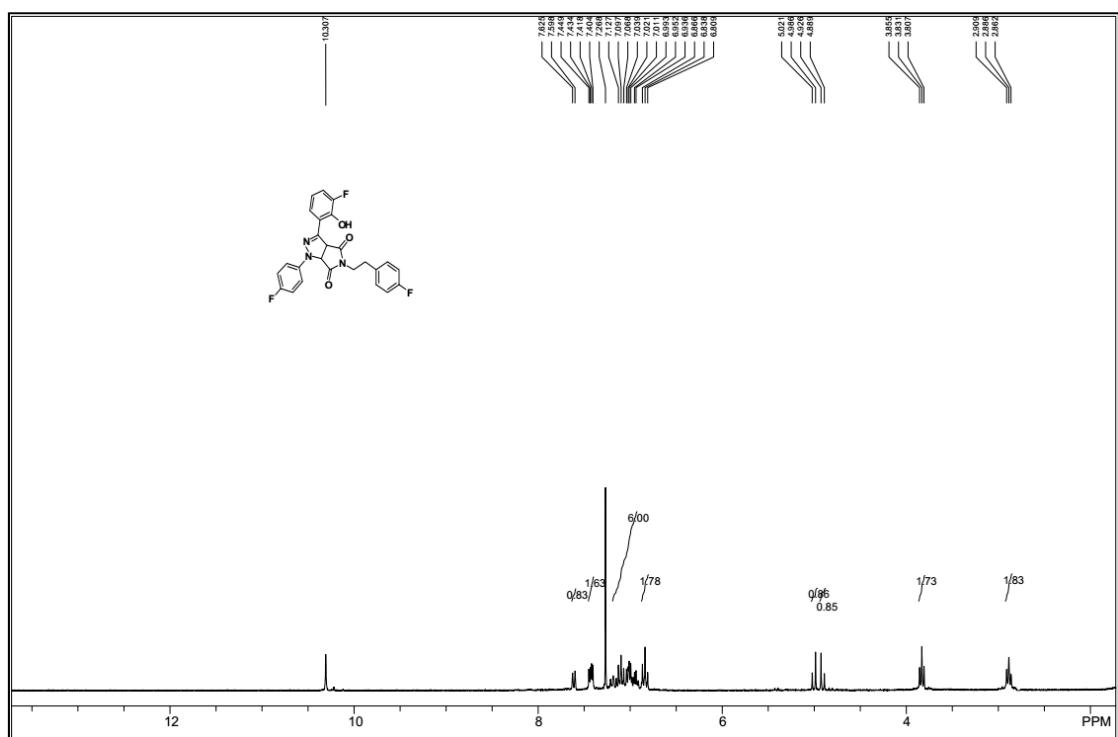
**Figure S3.**  $^1\text{H}$ -NMR spectrum of compound **7b** in  $\text{CDCl}_3$ .



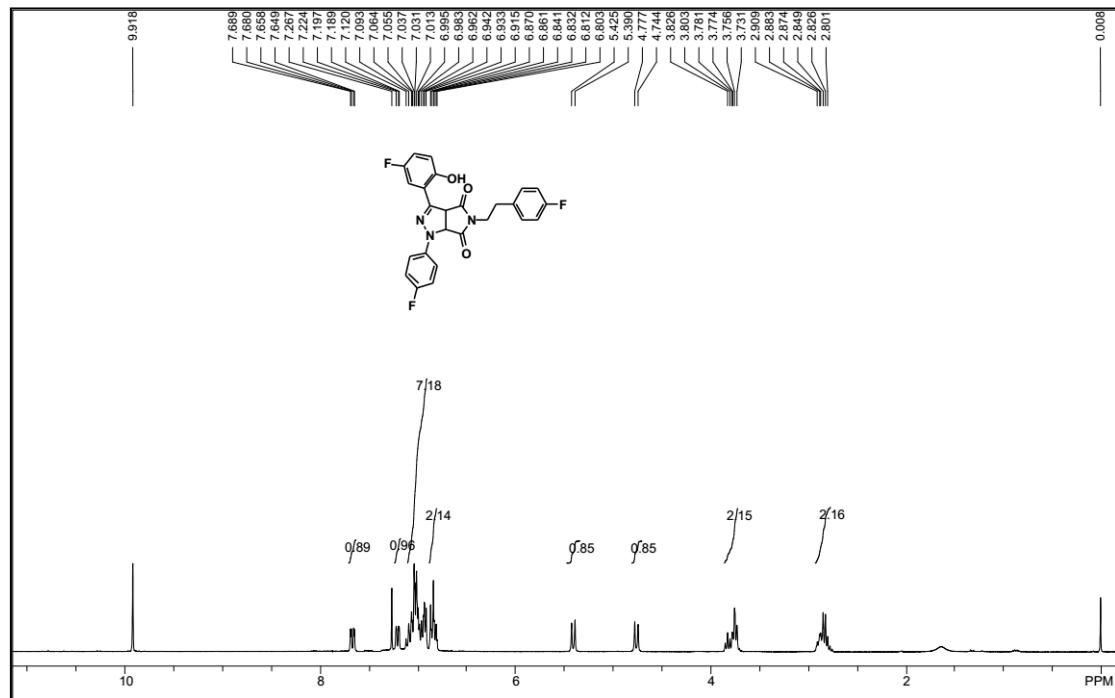
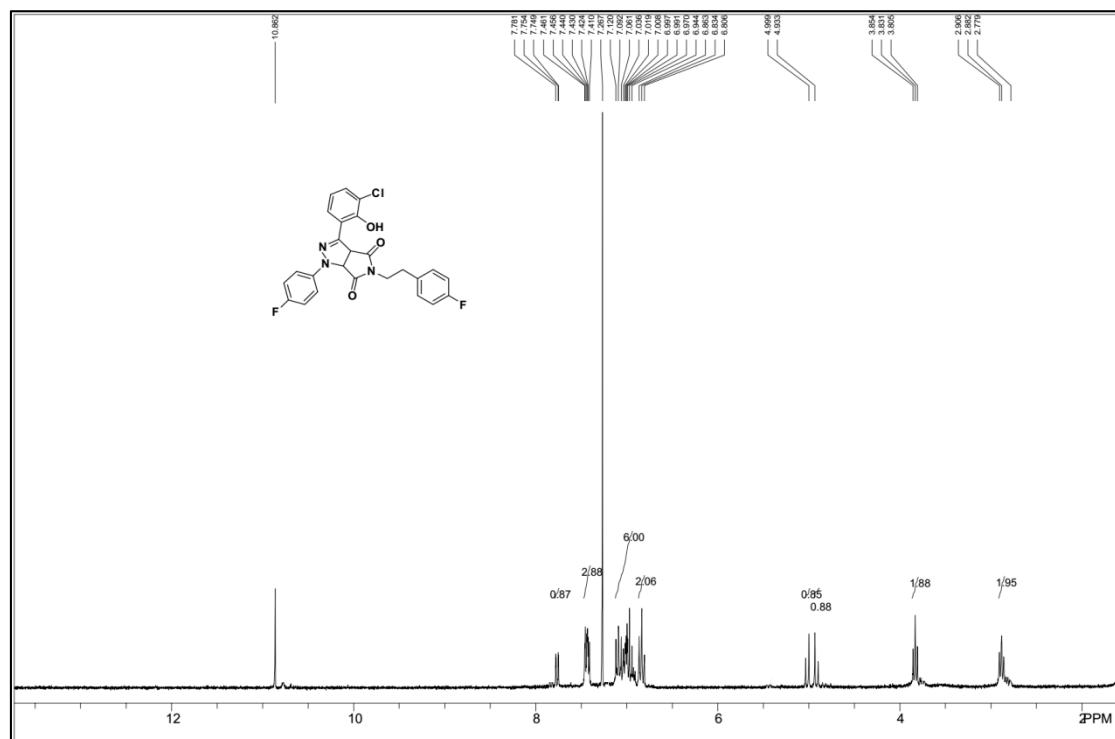
**Figure S4.**  $^1\text{H}$ -NMR spectrum of compound 8 in  $\text{CDCl}_3$ .

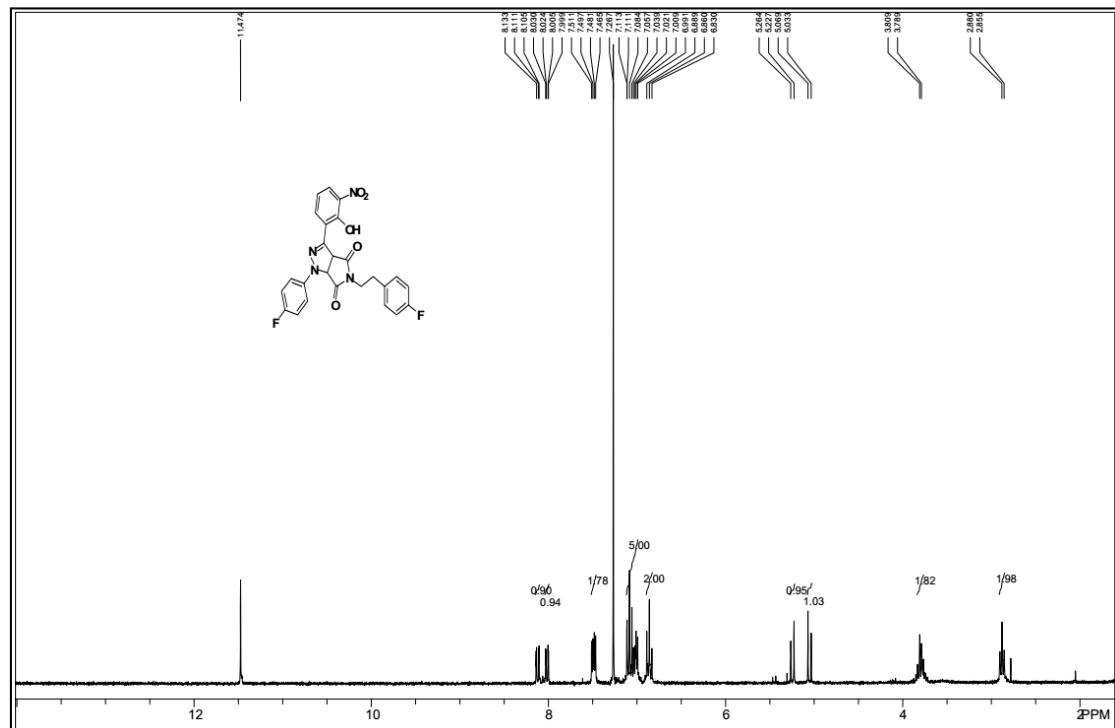
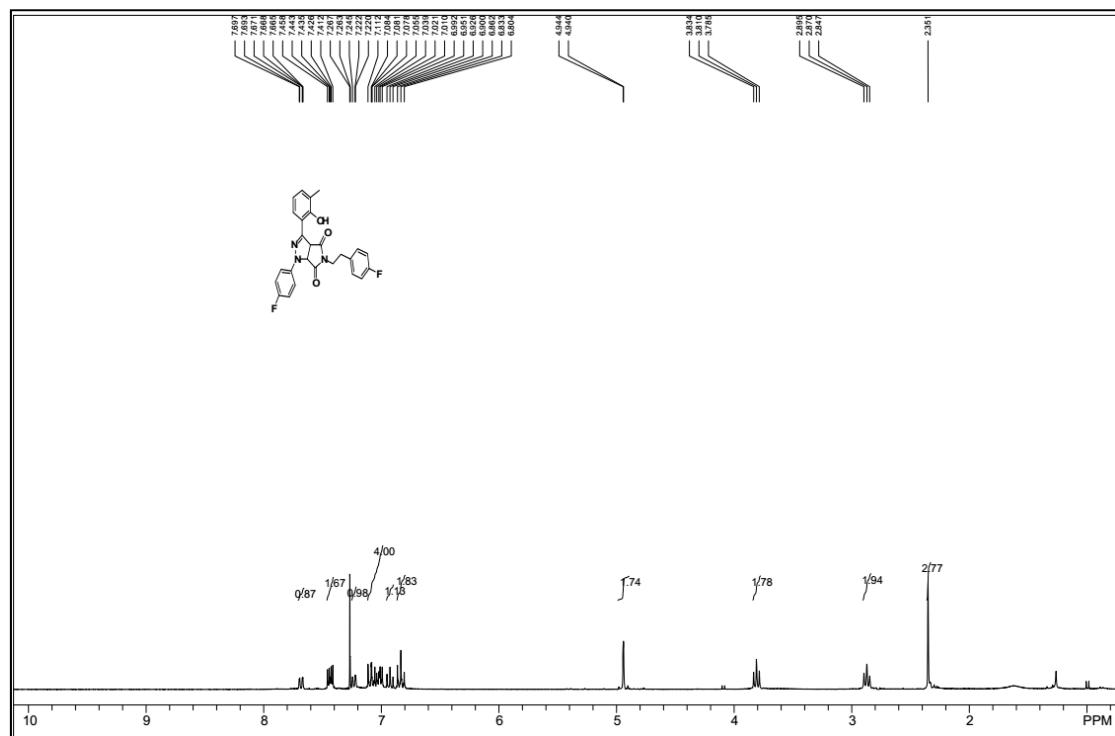


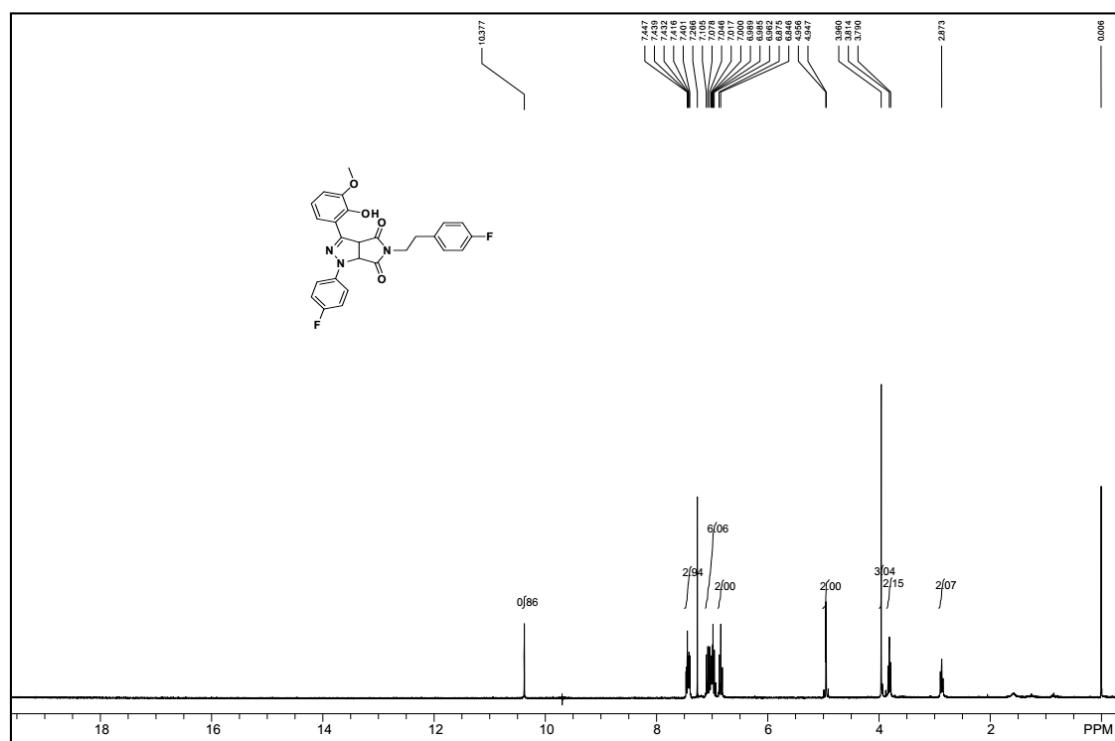
**Figure S5.**  $^1\text{H}$ -NMR spectrum of compound **9a** in  $\text{CDCl}_3$ .



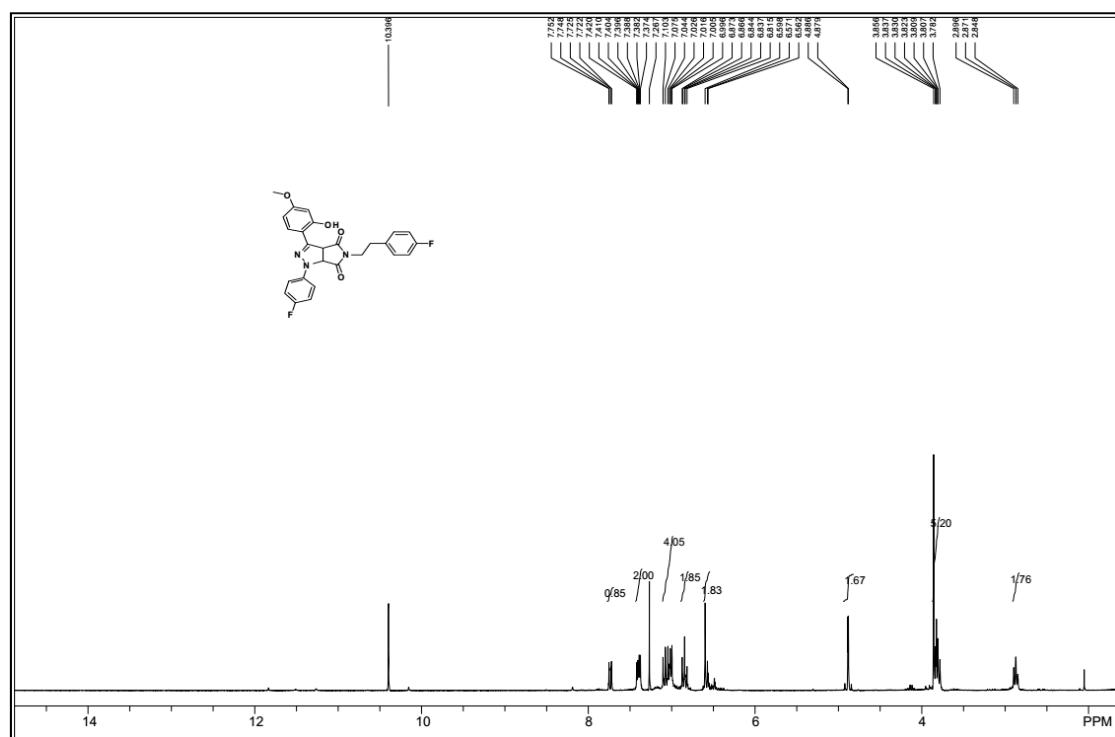
**Figure S6.**  $^1\text{H}$ -NMR spectrum of compound **9b** in  $\text{CDCl}_3$ .

**Figure S7.**  $^1\text{H}$ -NMR spectrum of compound **9c** in  $\text{CDCl}_3$ .**Figure S8.**  $^1\text{H}$ -NMR spectrum of compound **9d** in  $\text{CDCl}_3$ .

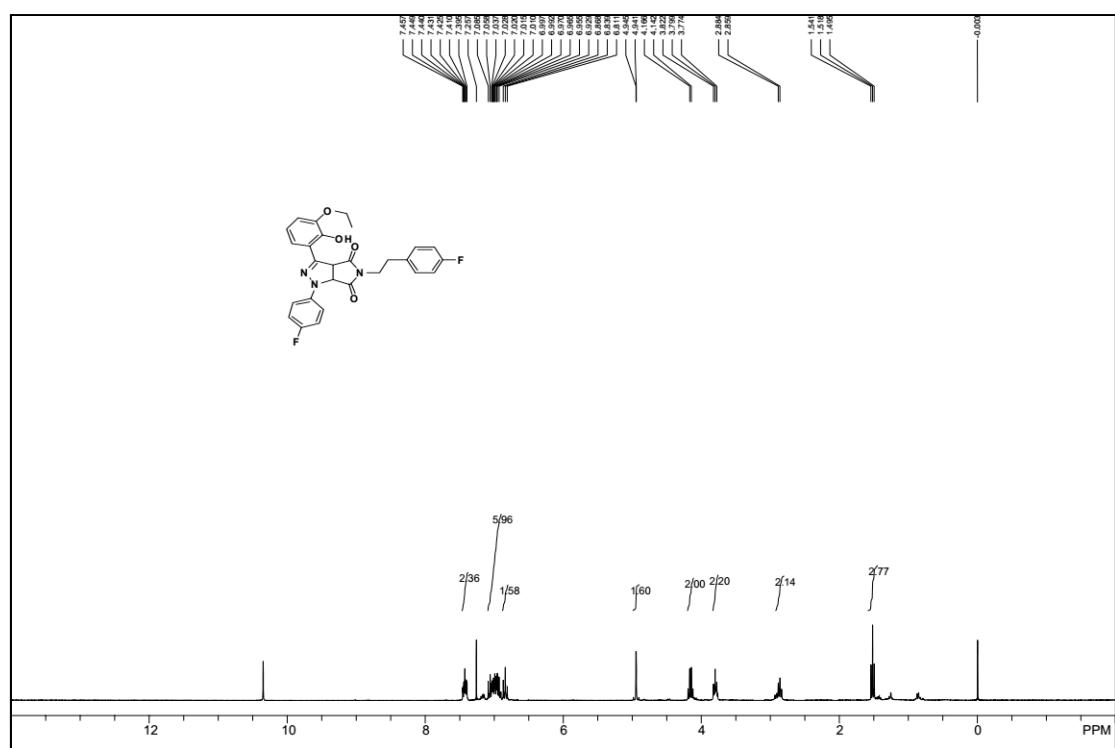
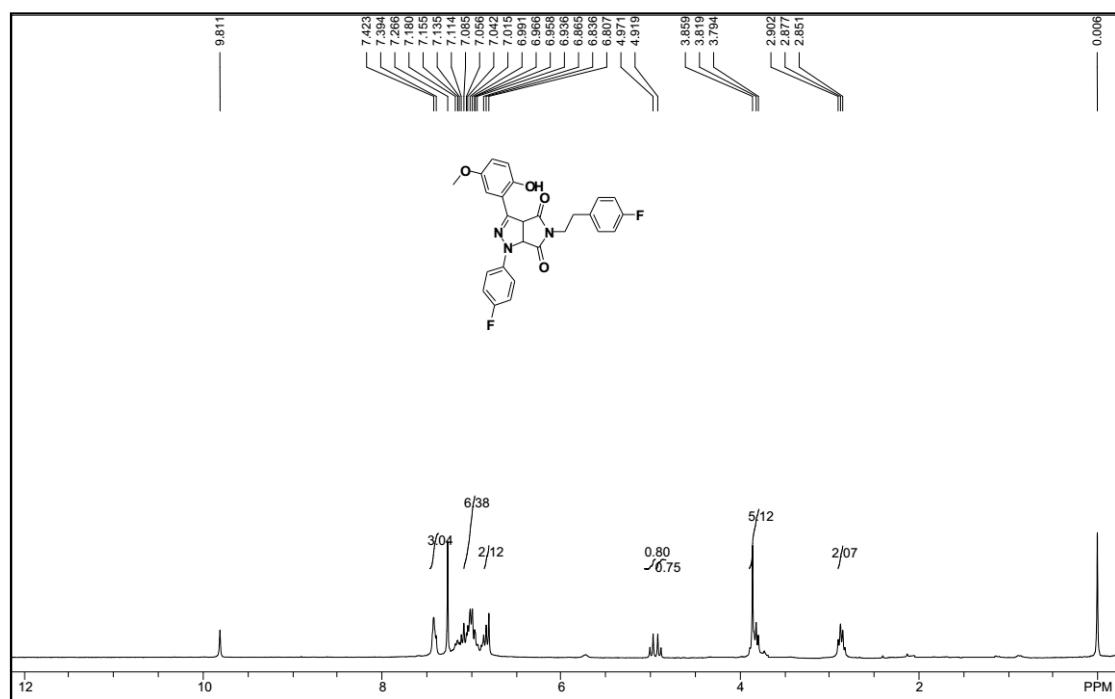
**Figure S9.**  $^1\text{H}$ -NMR spectrum of compound **9e** in  $\text{CDCl}_3$ .**Figure S10.**  $^1\text{H}$ -NMR spectrum of compound **9f** in  $\text{CDCl}_3$ .

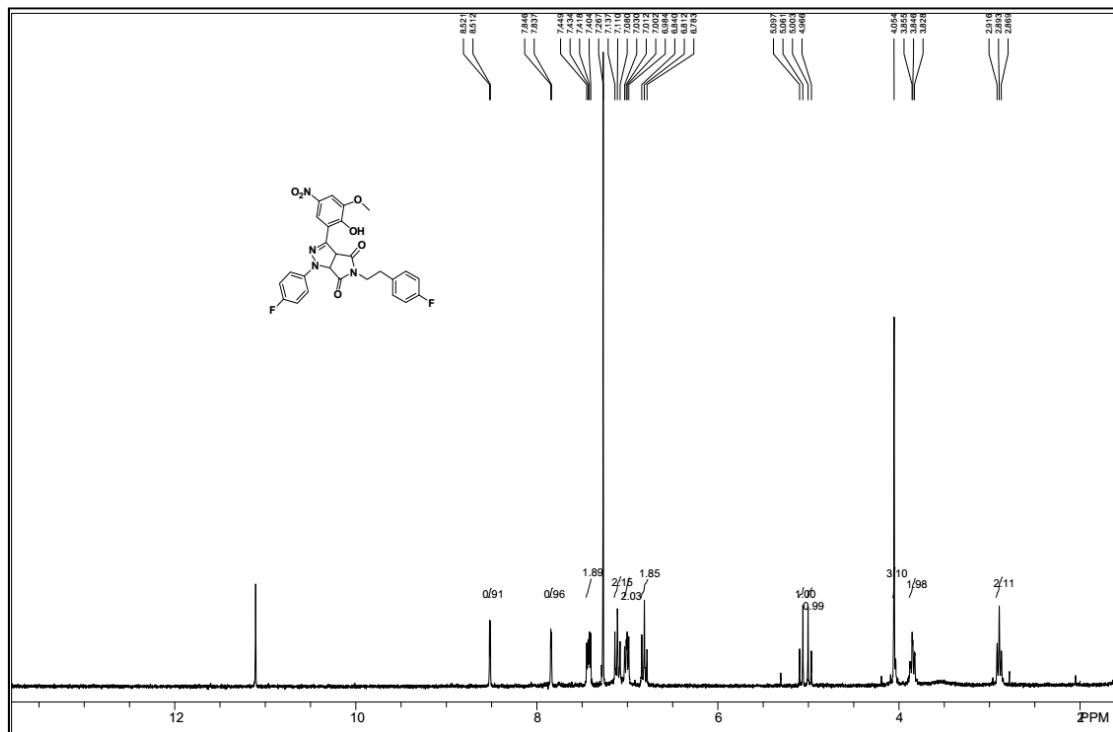
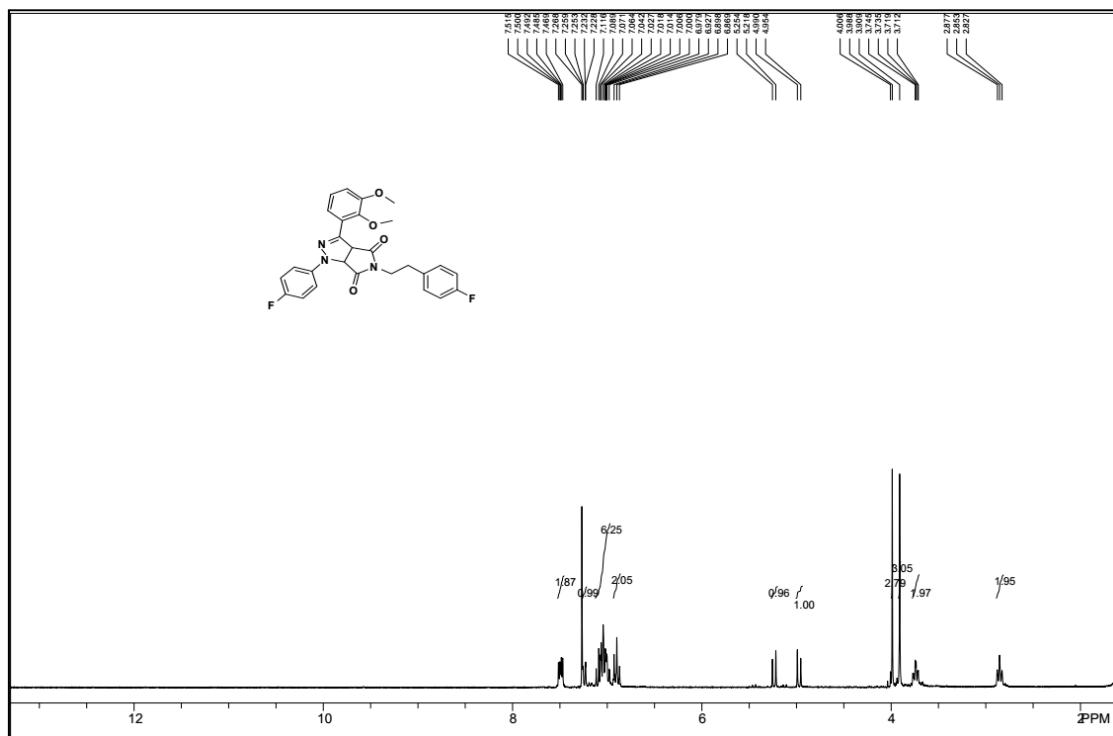


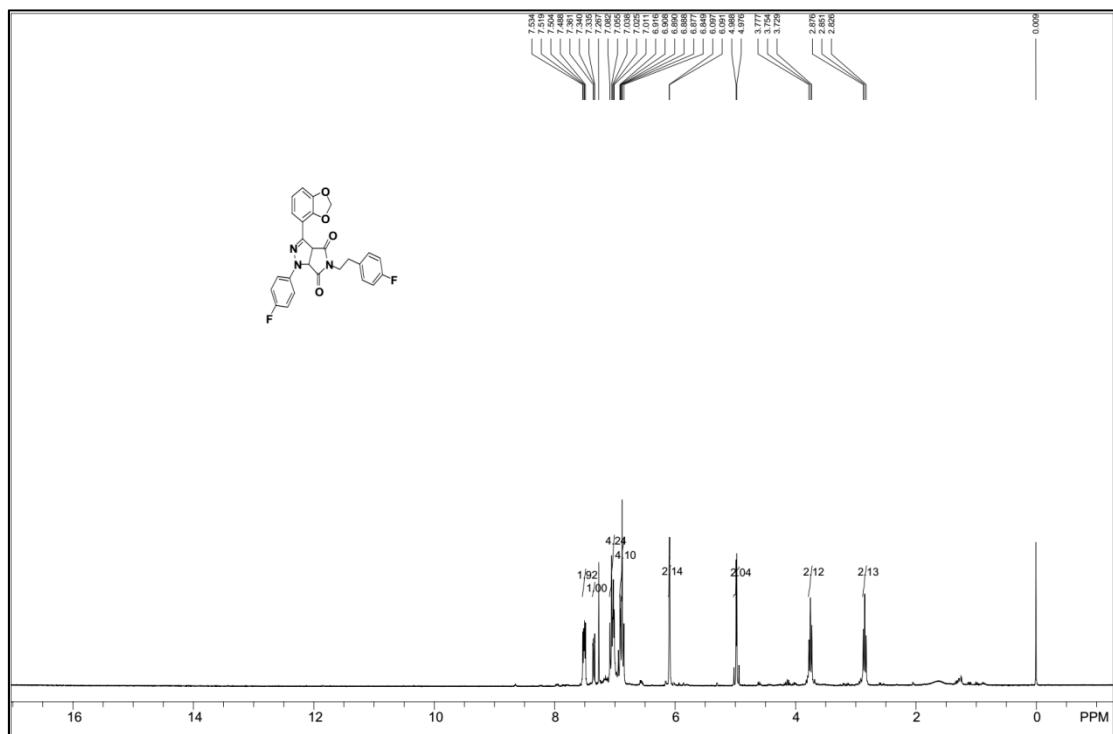
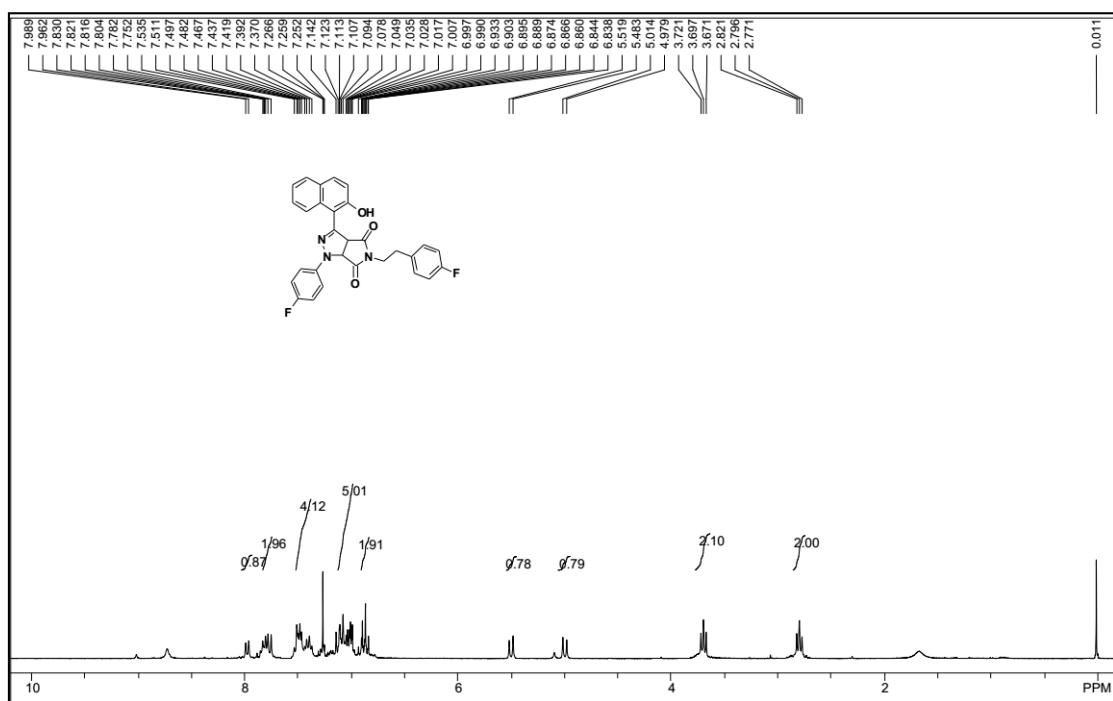
**Figure S11.**  $^1\text{H}$ -NMR spectrum of compound **9g** in  $\text{CDCl}_3$ .

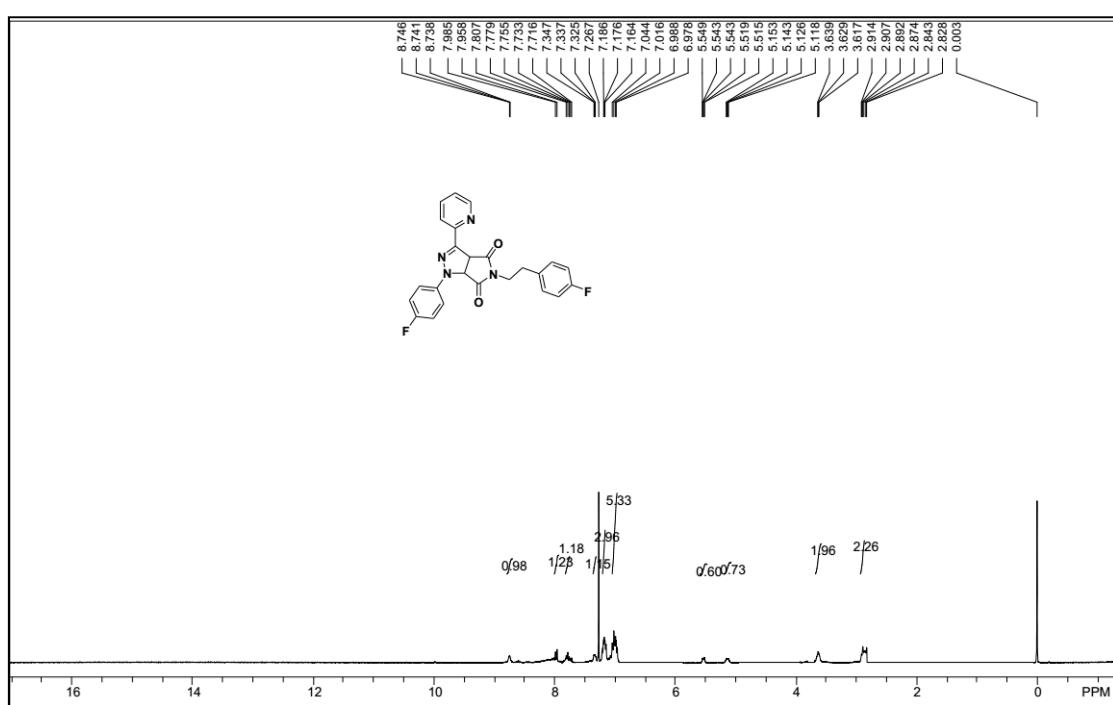
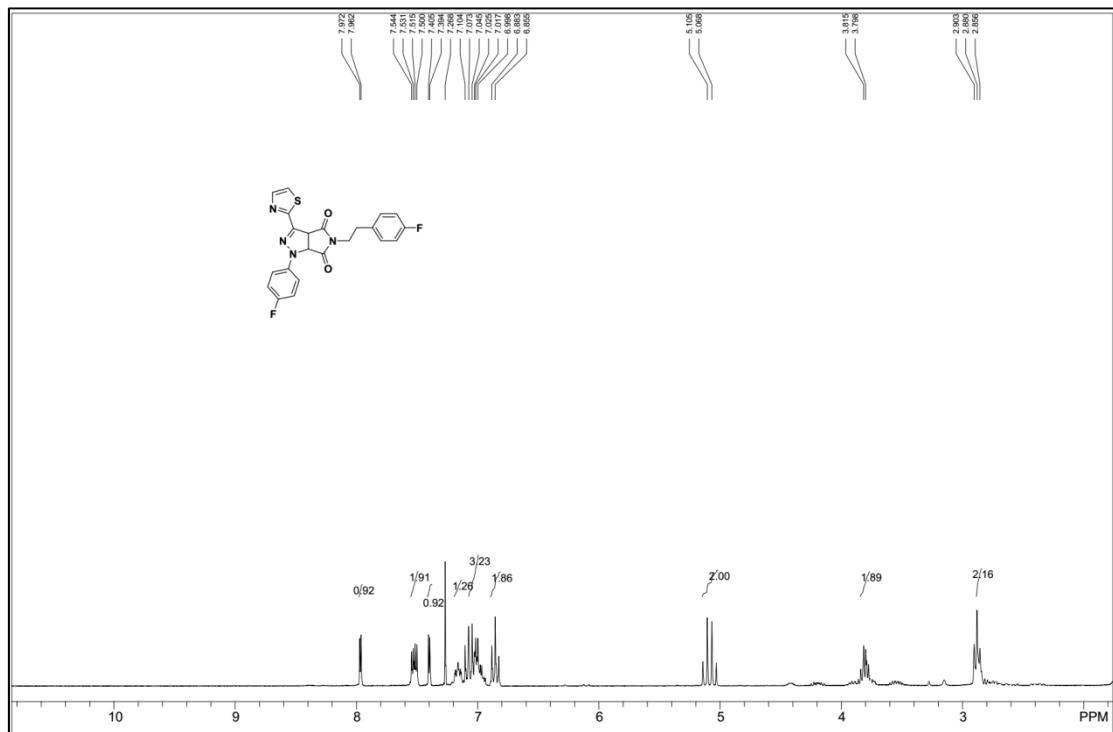


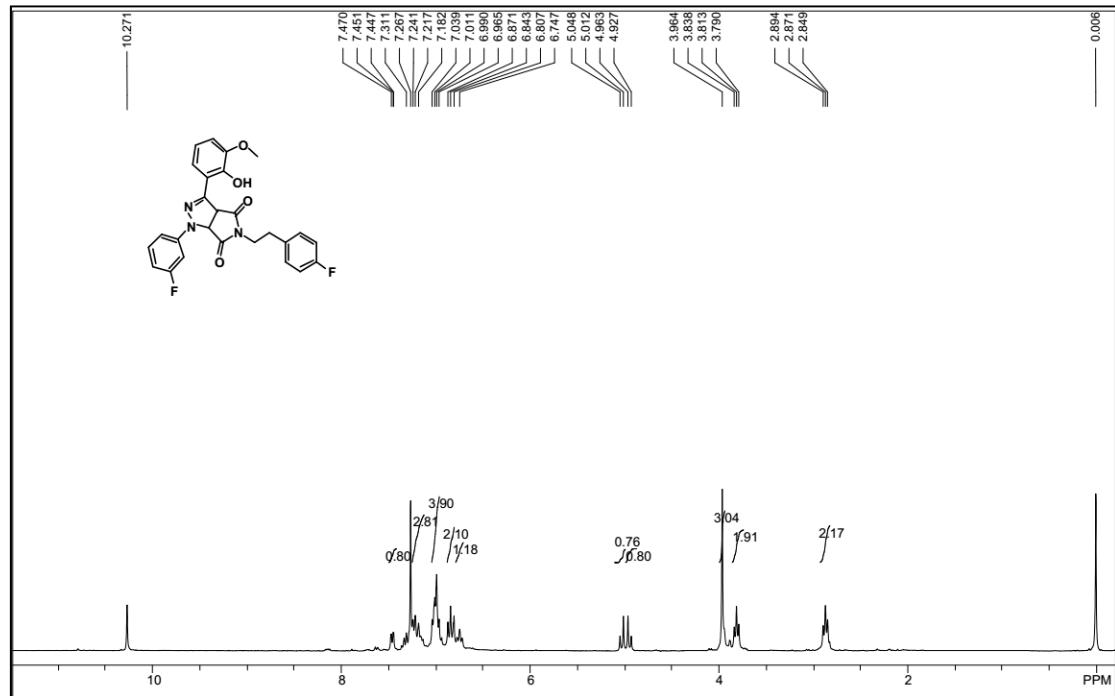
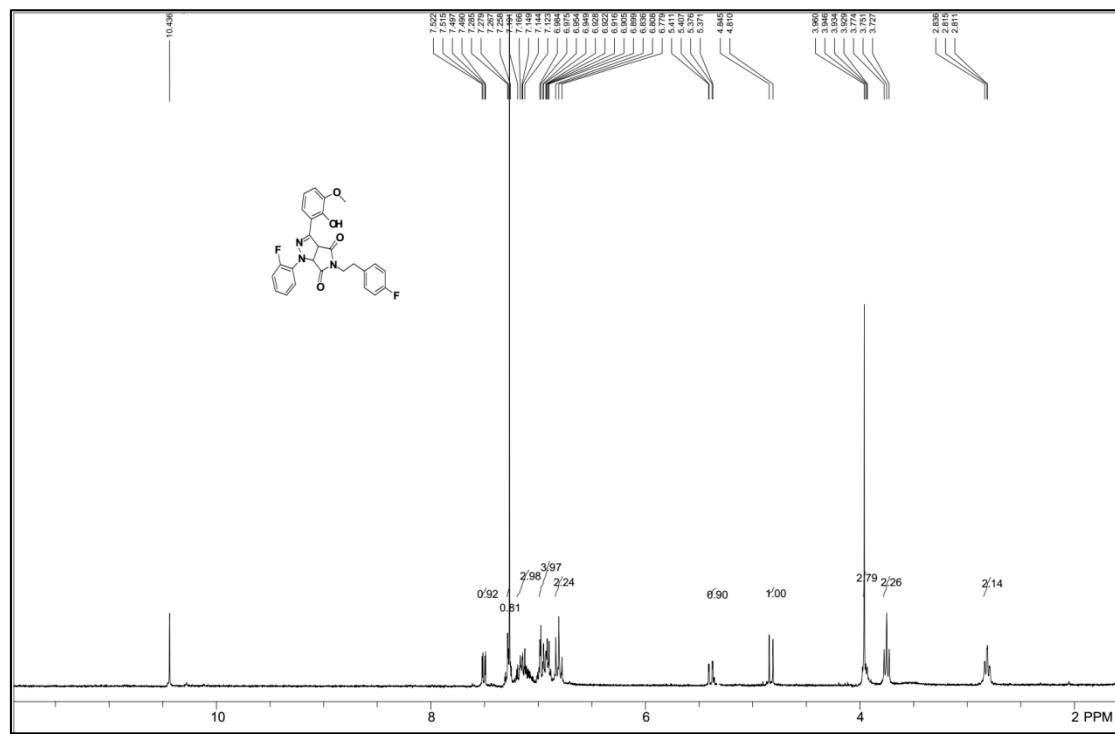
**Figure S12.**  $^1\text{H}$ -NMR spectrum of compound **10a** in  $\text{CDCl}_3$ .

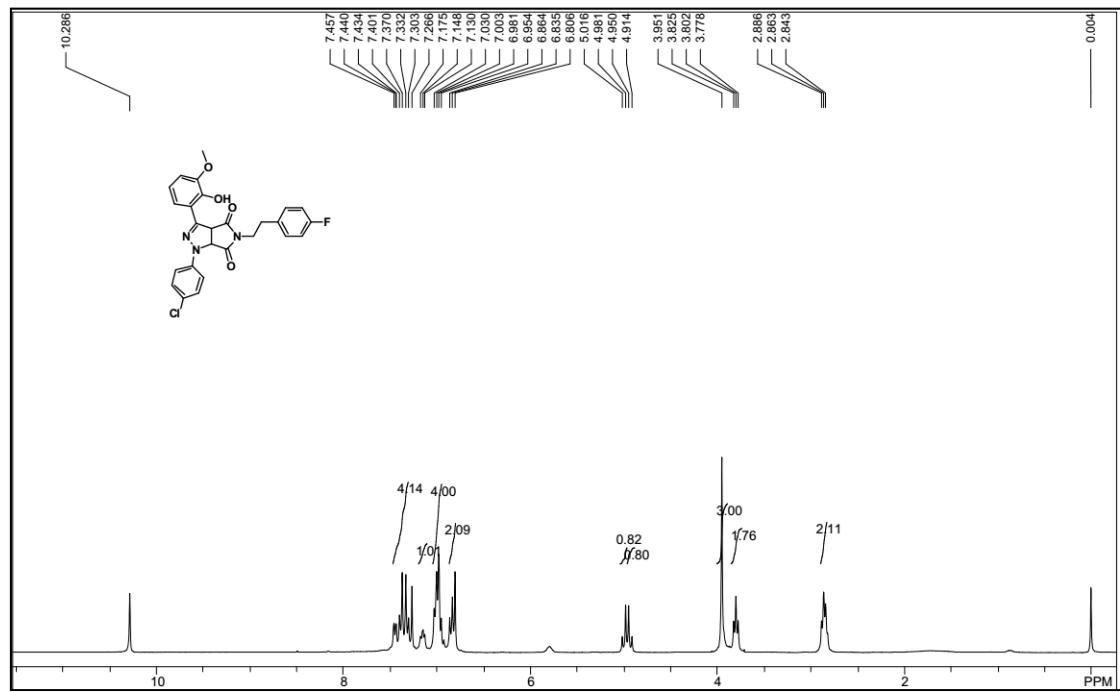
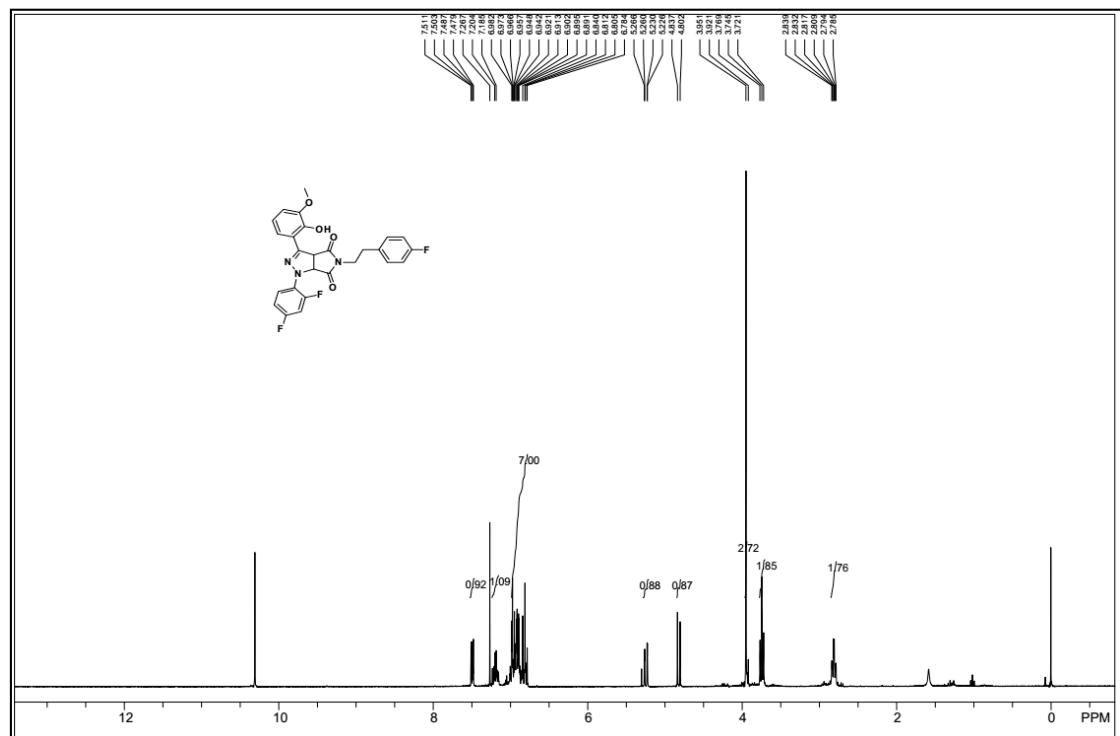


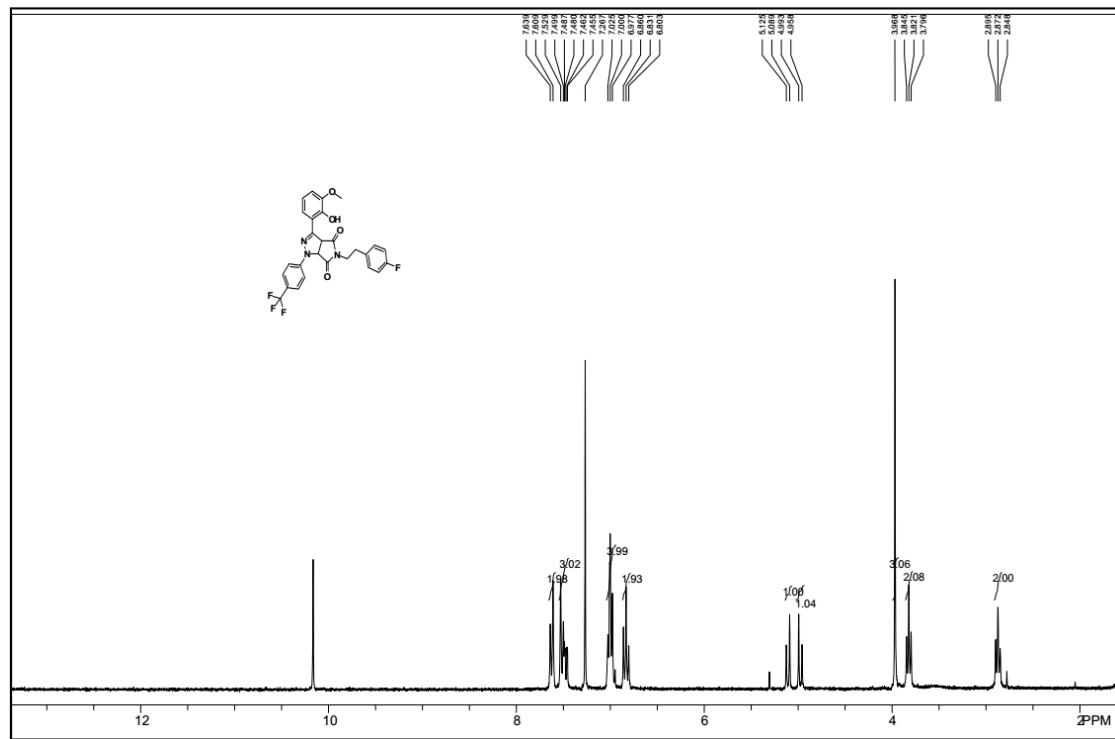
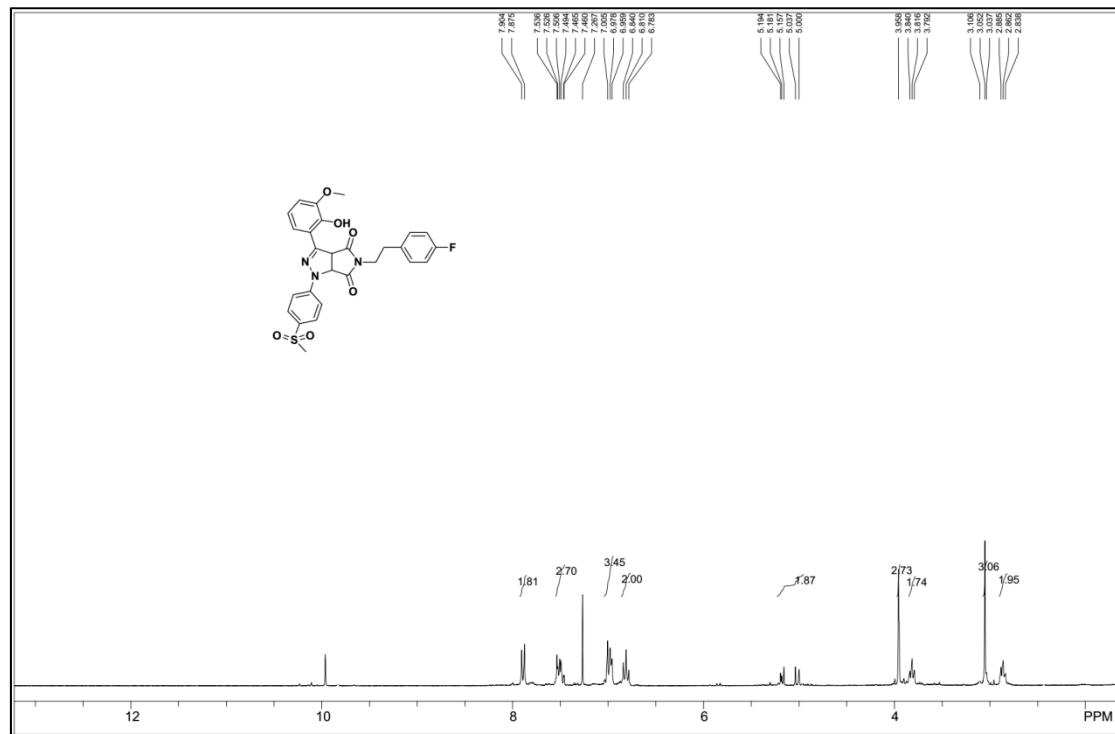
**Figure S15.**  $^1\text{H}$ -NMR spectrum of compound **11** in  $\text{CDCl}_3$ .**Figure S16.**  $^1\text{H}$ -NMR spectrum of compound **12a** in  $\text{CDCl}_3$ .

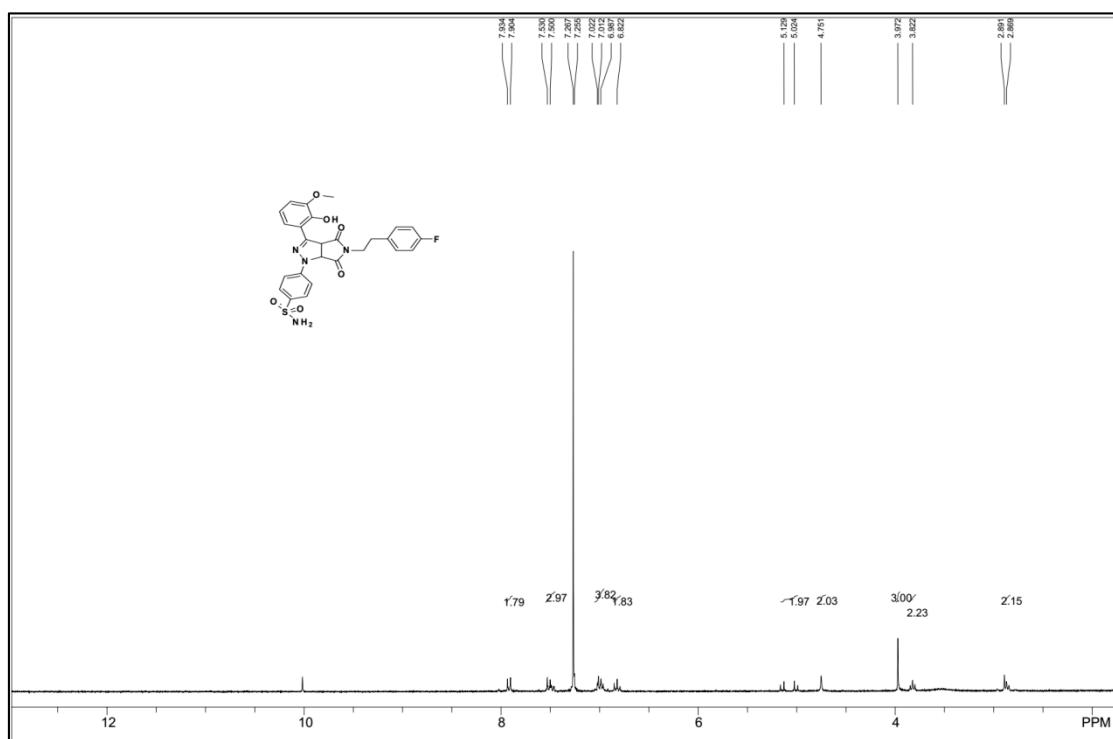
**Figure S17.**  $^1\text{H}$ -NMR spectrum of compound **12b** in  $\text{CDCl}_3$ .**Figure S18.**  $^1\text{H}$ -NMR spectrum of compound **13** in  $\text{CDCl}_3$ .



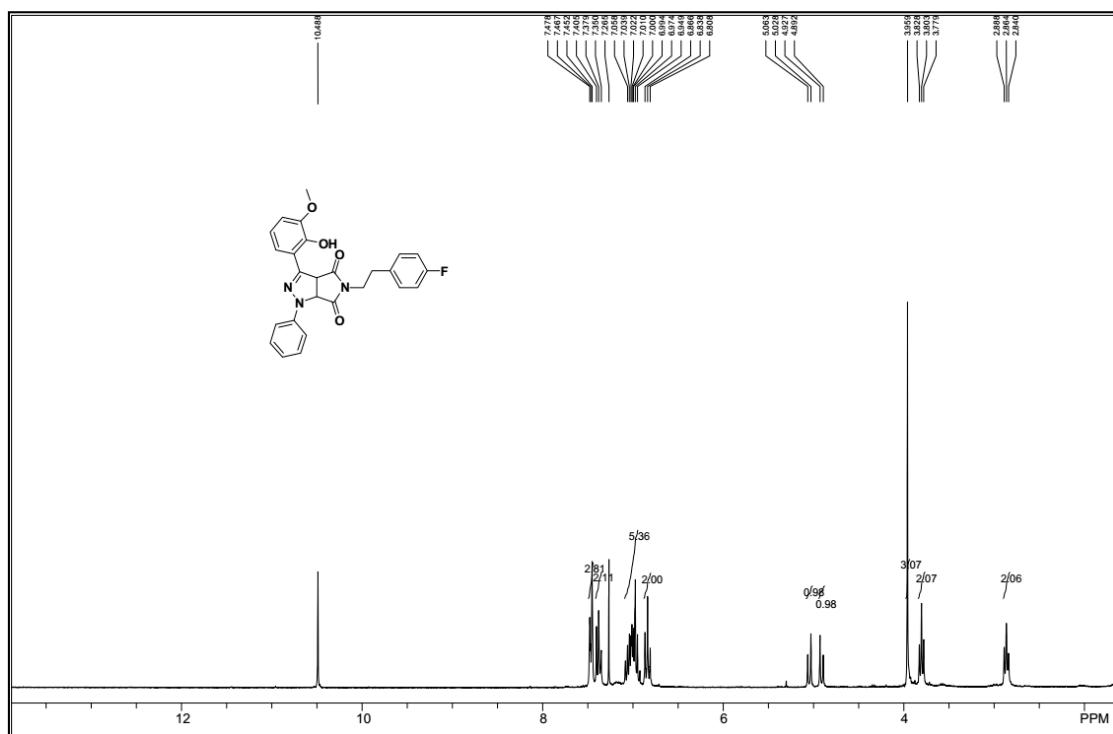
**Figure S21.**  $^1\text{H}$ -NMR spectrum of compound **15a** in  $\text{CDCl}_3$ .**Figure S22.**  $^1\text{H}$ -NMR spectrum of compound **15b** in  $\text{CDCl}_3$ .

**Figure S23.**  $^1\text{H}$ -NMR spectrum of compound **15c** in  $\text{CDCl}_3$ .**Figure S24.**  $^1\text{H}$ -NMR spectrum of compound **15d** in  $\text{CDCl}_3$ .

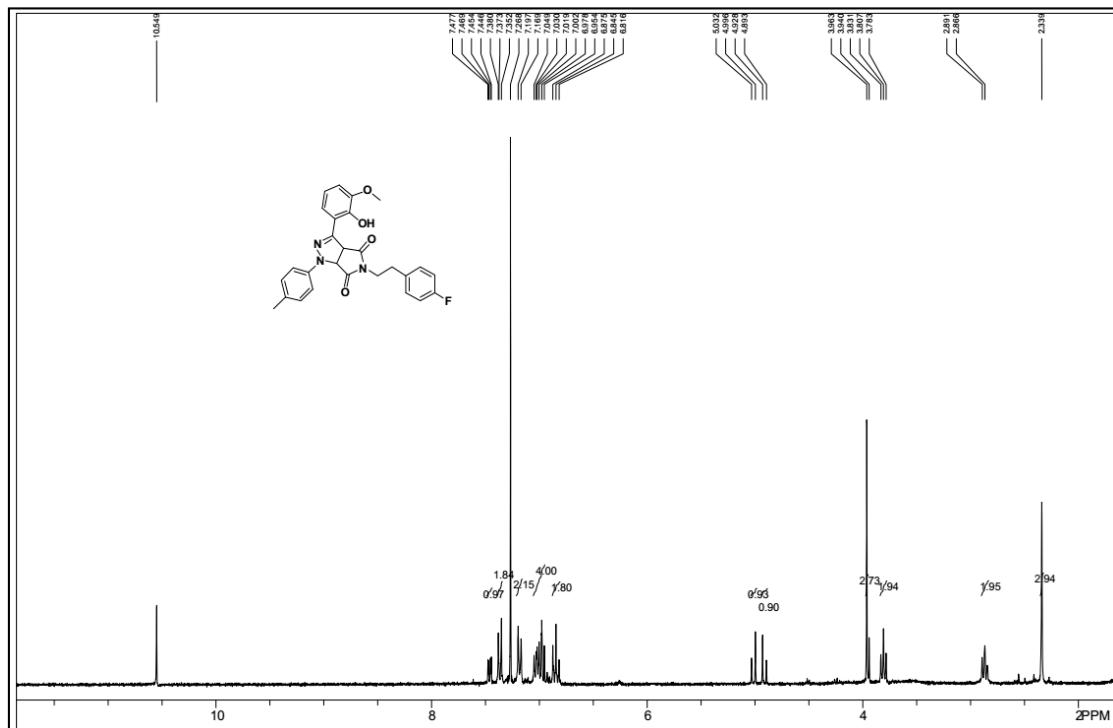
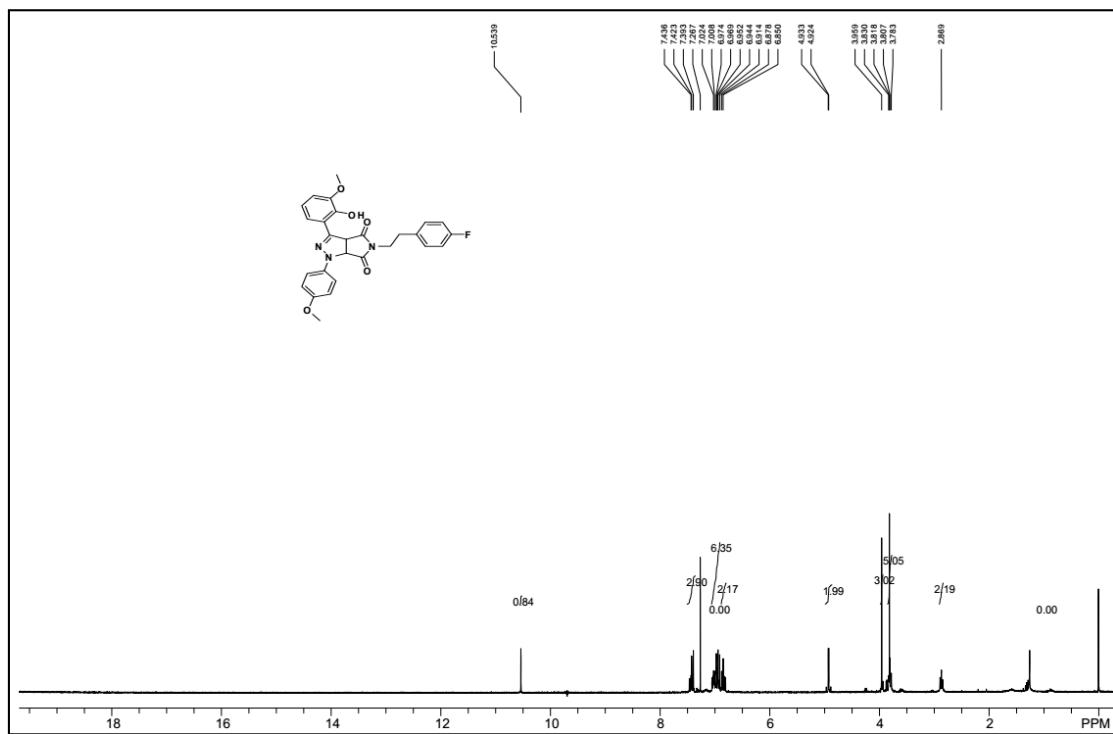
**Figure S25.**  $^1\text{H}$ -NMR spectrum of compound **15e** in  $\text{CDCl}_3$ .**Figure S26.**  $^1\text{H}$ -NMR spectrum of compound **15f** in  $\text{CDCl}_3$ .

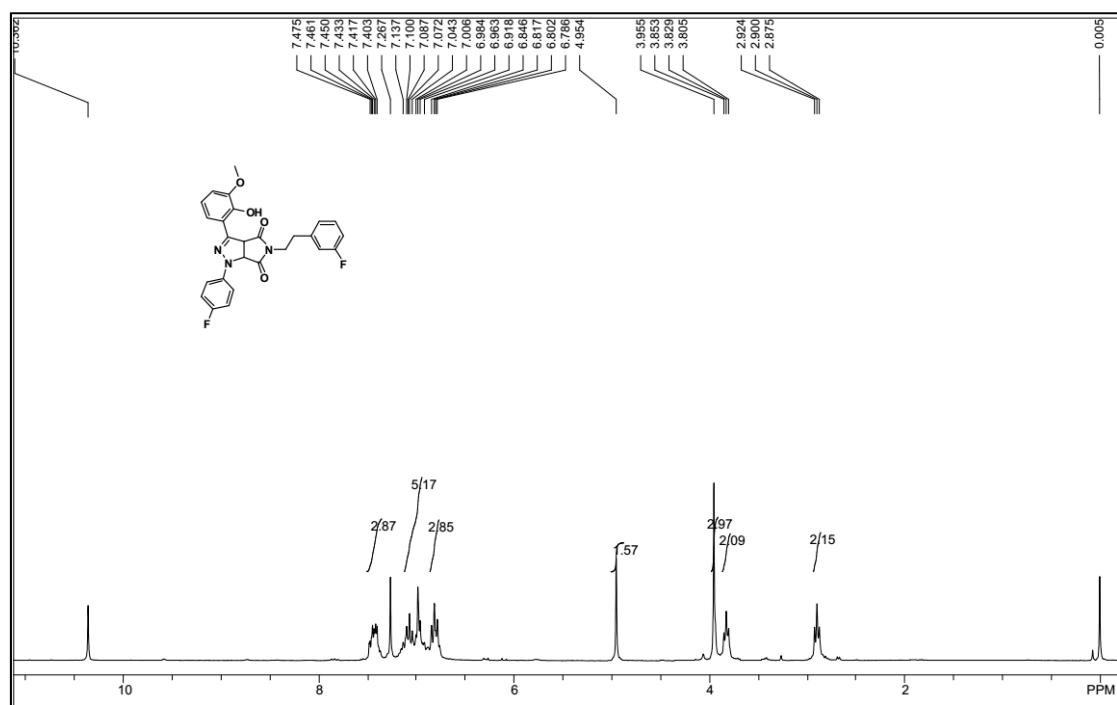
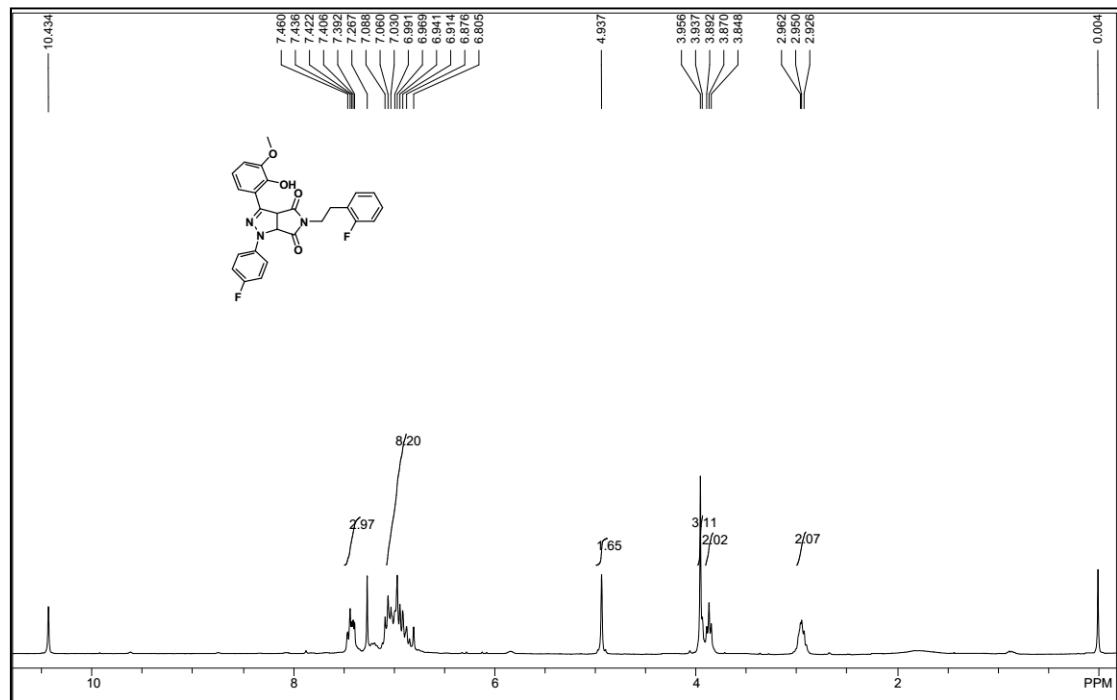


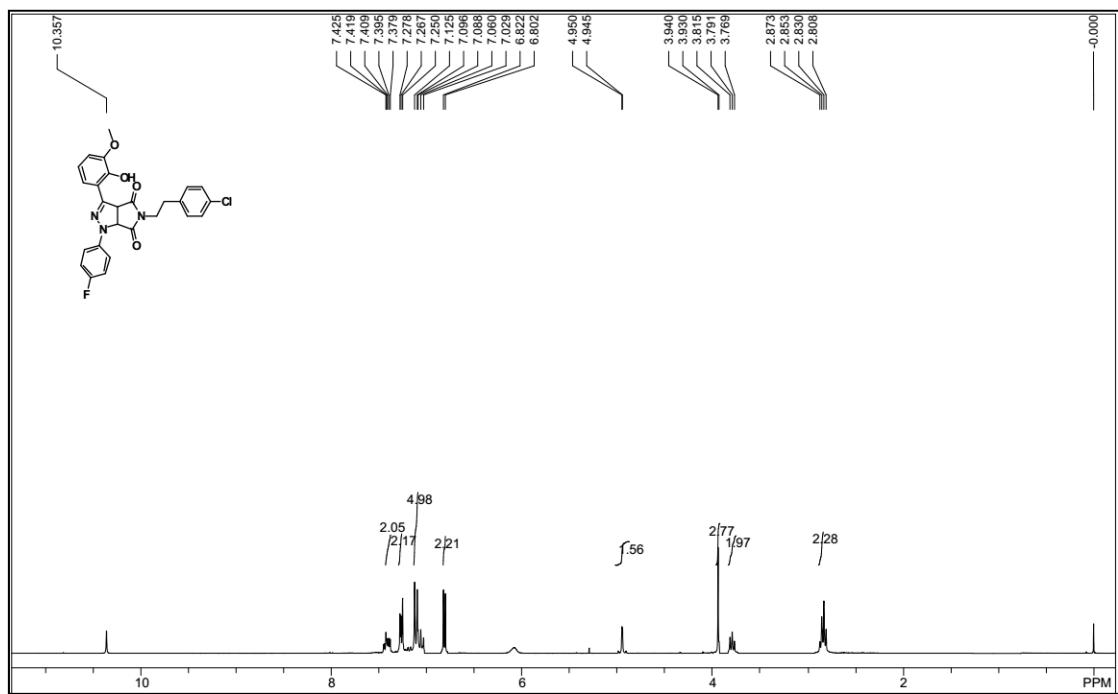
**Figure S27.**  $^1\text{H}$ -NMR spectrum of compound **15g** in  $\text{CDCl}_3$ .



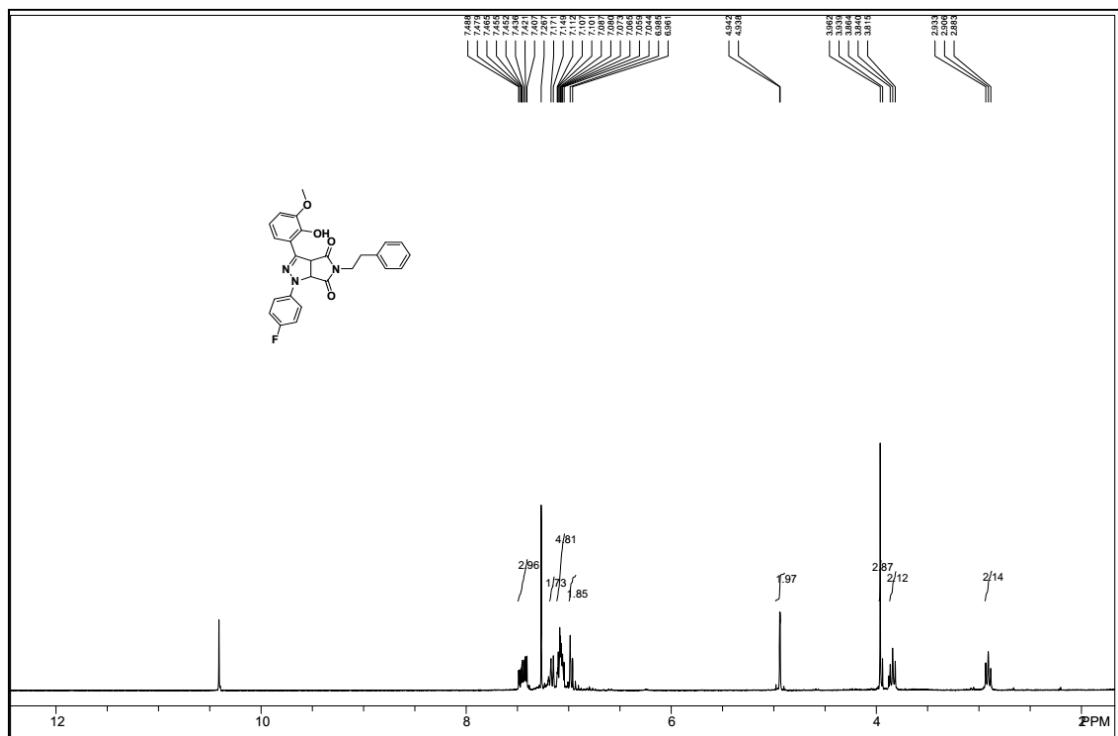
**Figure S28.**  $^1\text{H}$ -NMR spectrum of compound **15h** in  $\text{CDCl}_3$ .

**Figure S29.**  $^1\text{H}$ -NMR spectrum of compound **15i** in  $\text{CDCl}_3$ .**Figure S30.**  $^1\text{H}$ -NMR spectrum of compound **15j** in  $\text{CDCl}_3$ .

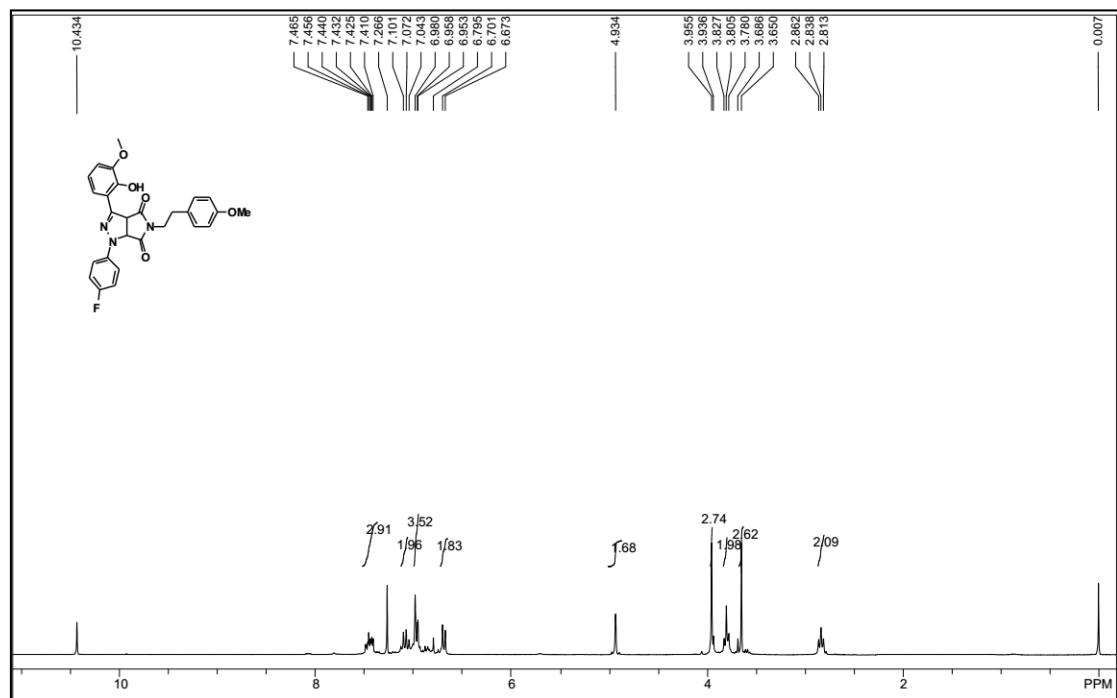




**Figure S33.**  $^1\text{H}$ -NMR spectrum of compound **16c** in  $\text{CDCl}_3$ .



**Figure S34.**  $^1\text{H}$ -NMR spectrum of compound **16d** in  $\text{CDCl}_3$ .



**Figure S35.** <sup>1</sup>H-NMR spectrum of compound **16e** in CDCl<sub>3</sub>.