

## Electronic Supplementary Information (ESI)

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### Facile one-pot multicomponent synthesis of peptoid based gelators as novel scaffolds for drug incorporation and pH-sensitive release

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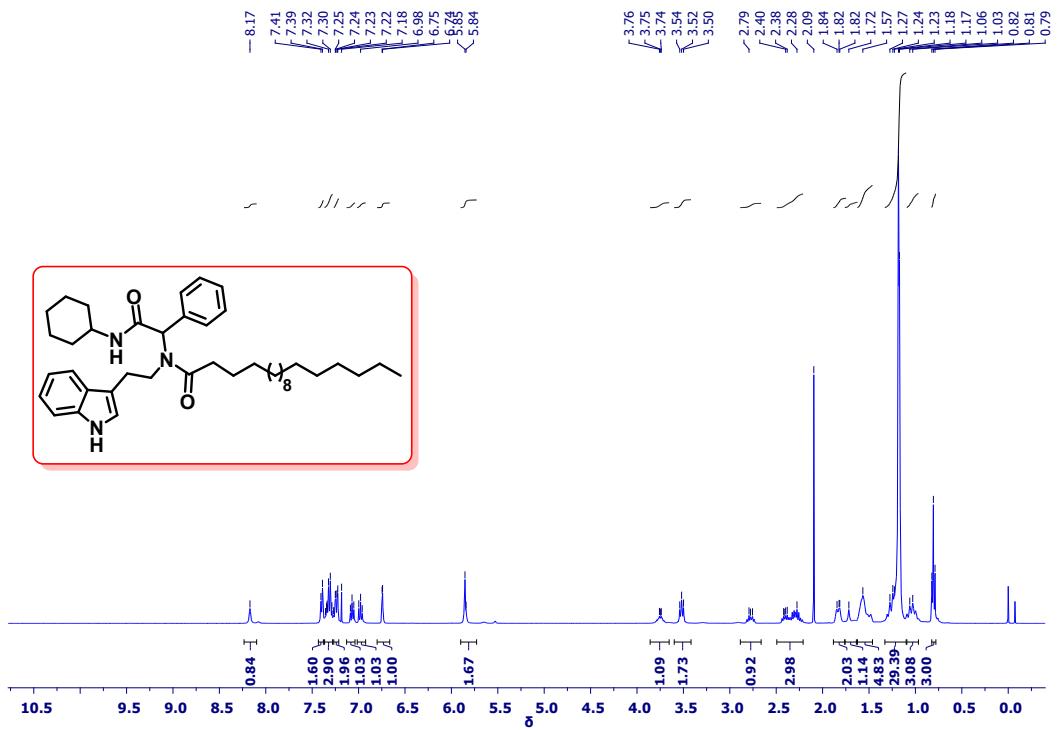
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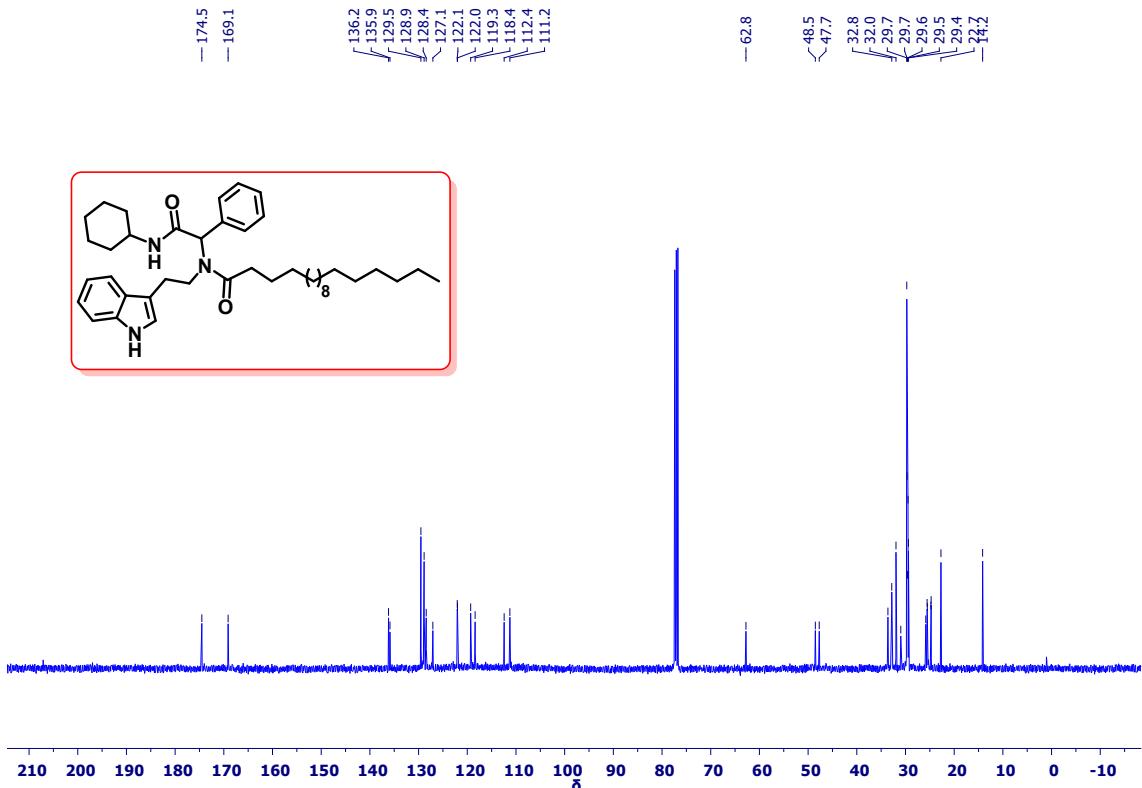
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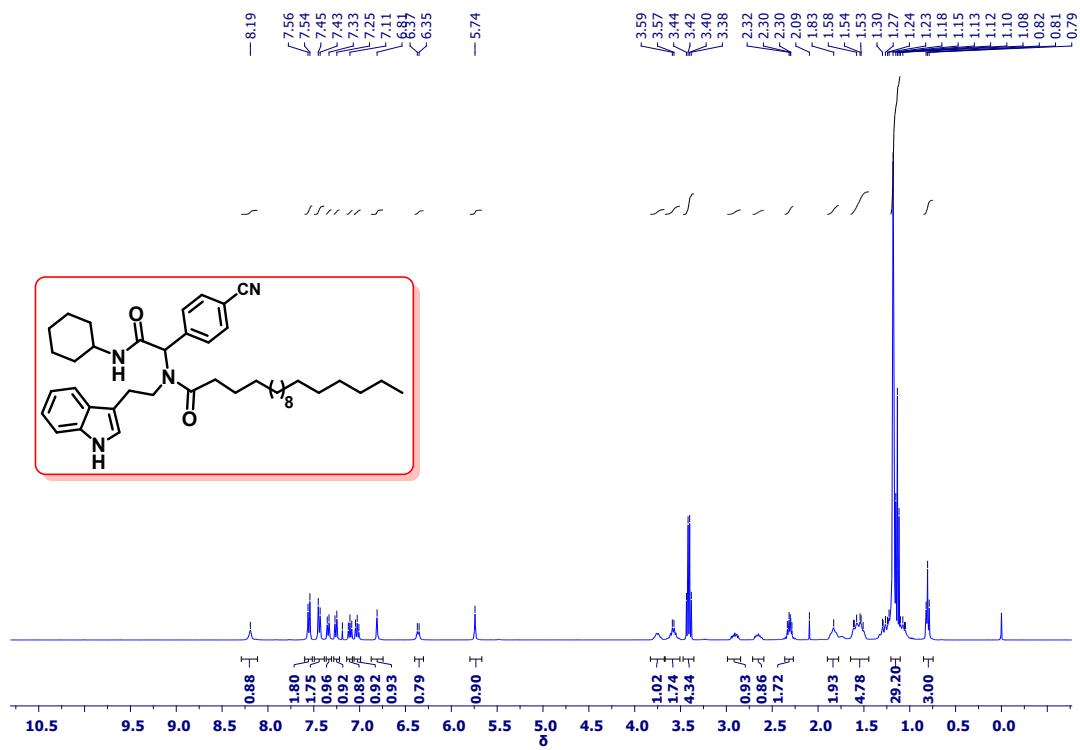
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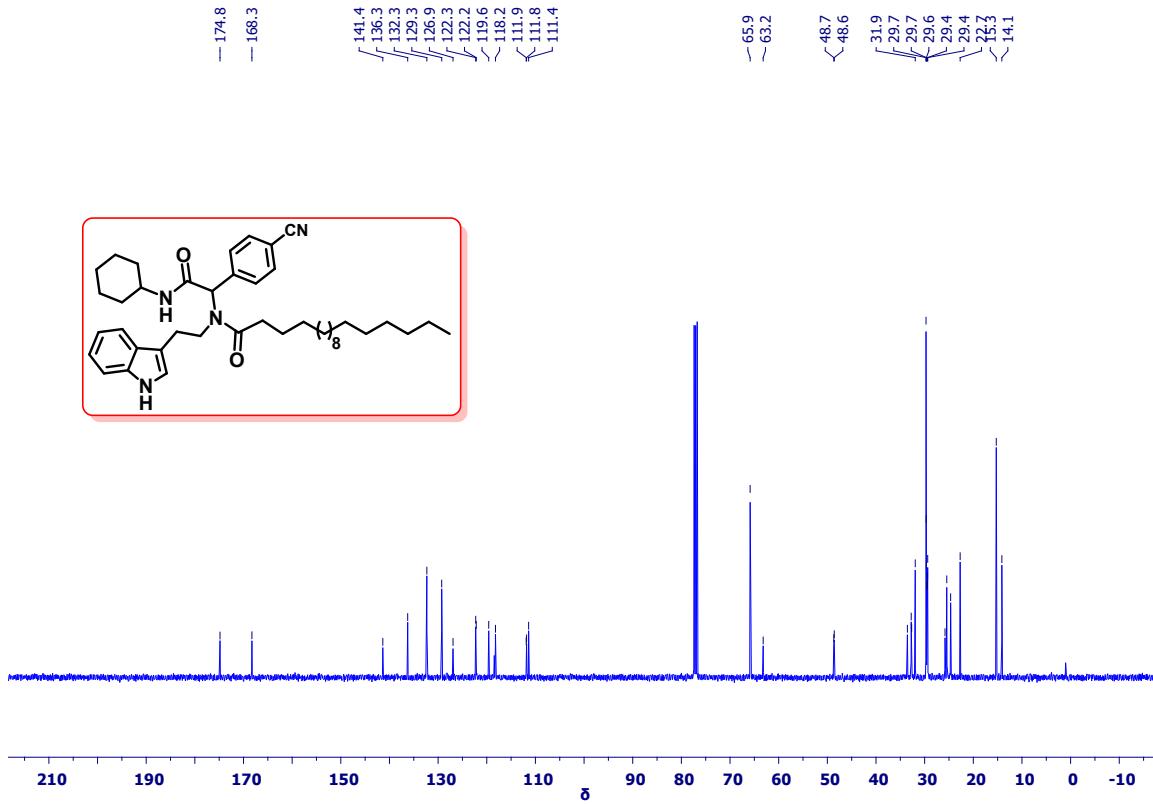
**Fig. S1**  $^1\text{H}$  NMR spectrum of compound 5a



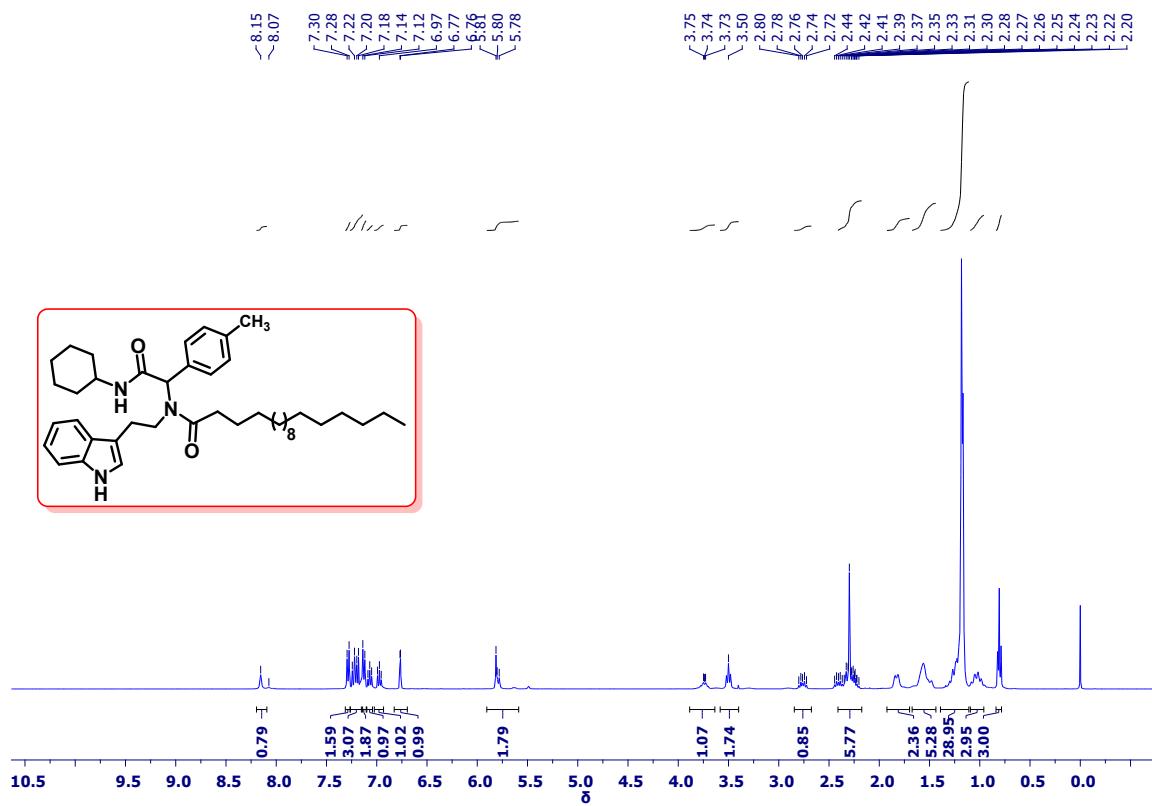
**Fig. S2**  $^{13}\text{C}$  NMR spectrum of compound 5a



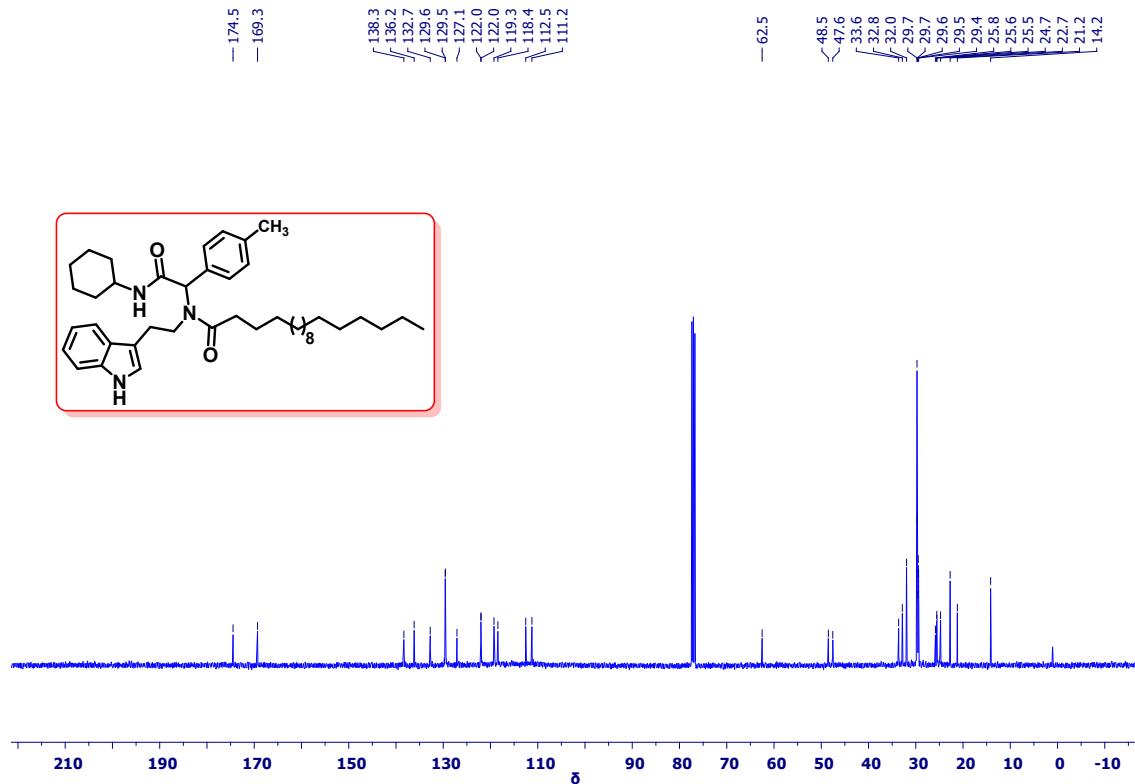
**Fig. S3**  $^1\text{H}$  NMR spectrum of compound 5b



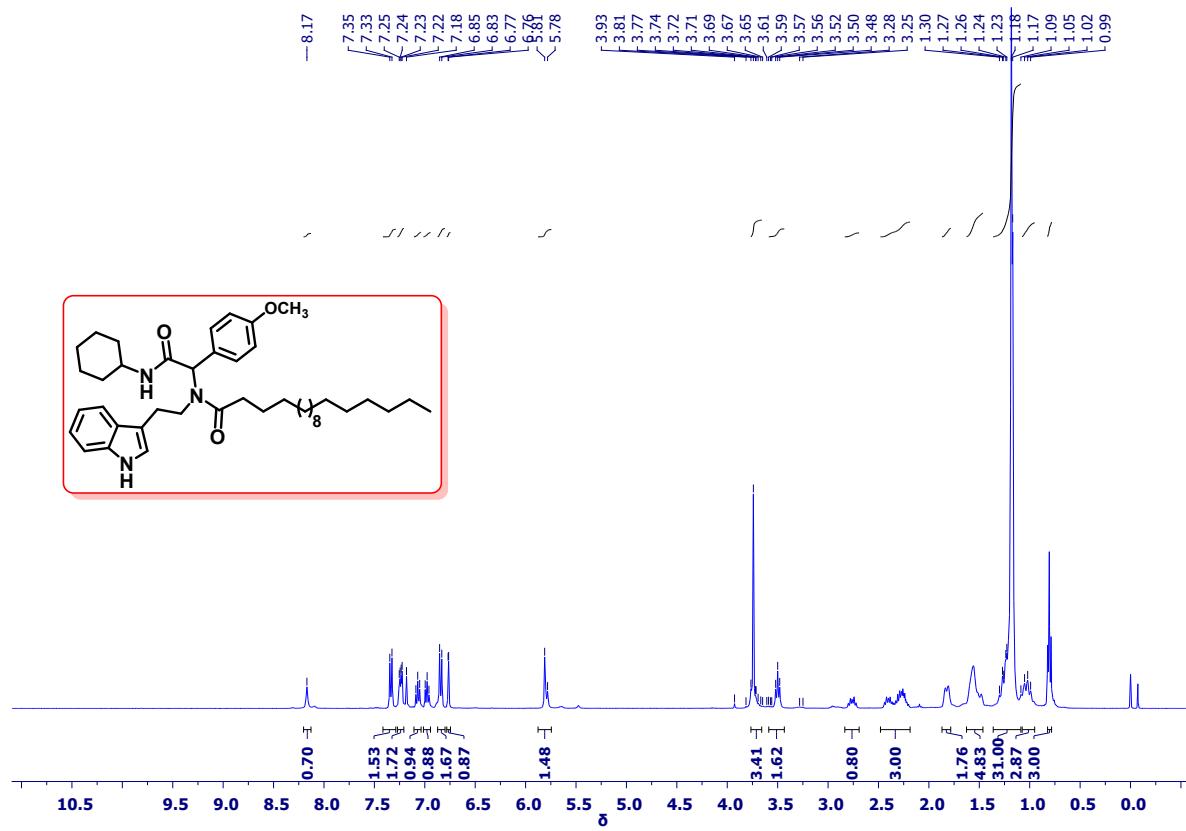
**Fig. S4**  $^{13}\text{C}$  NMR spectrum of compound 5b



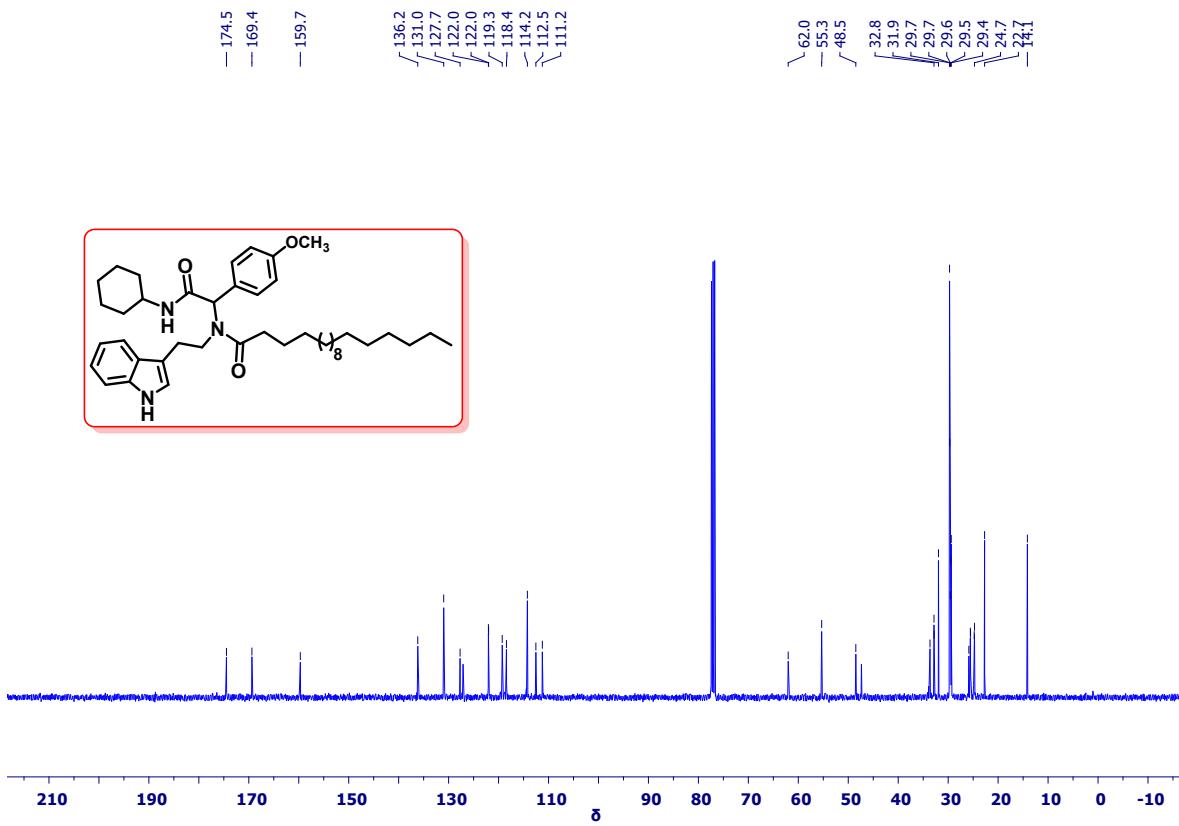
**Fig. S5**  $^1\text{H}$  NMR spectrum of compound **5c**



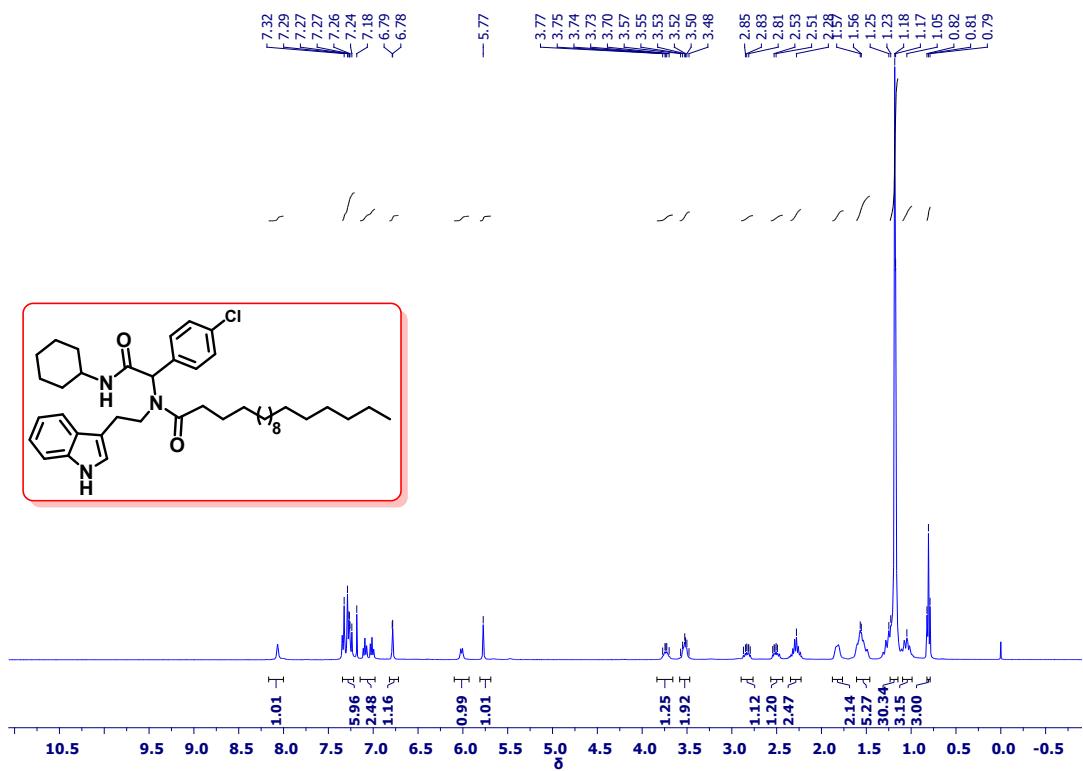
**Fig. S6**  $^{13}\text{C}$  NMR spectrum of compound **5c**



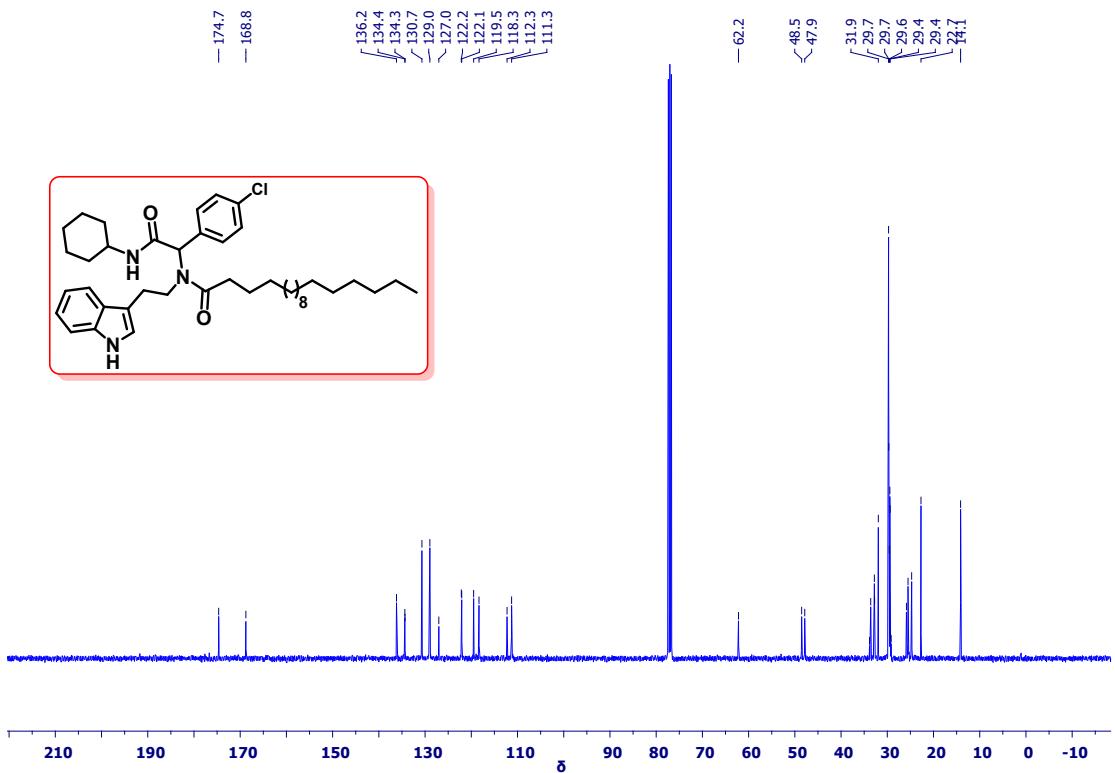
**Fig. S7** <sup>1</sup>H NMR spectrum of compound 5d



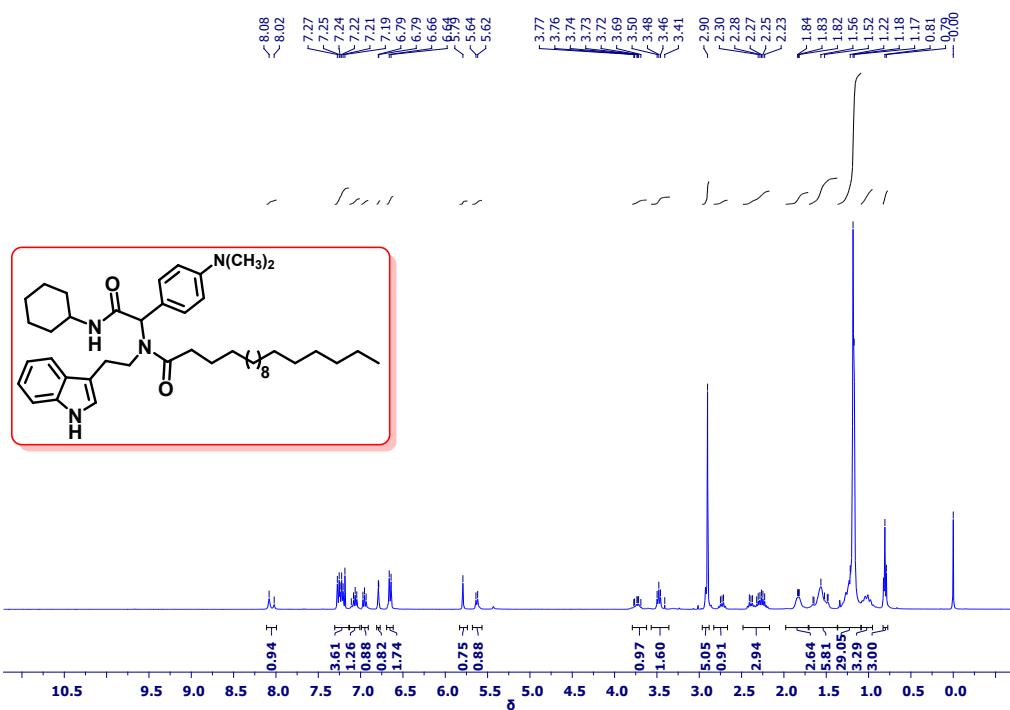
**Fig. S8** <sup>13</sup>C NMR spectrum of compound 5d



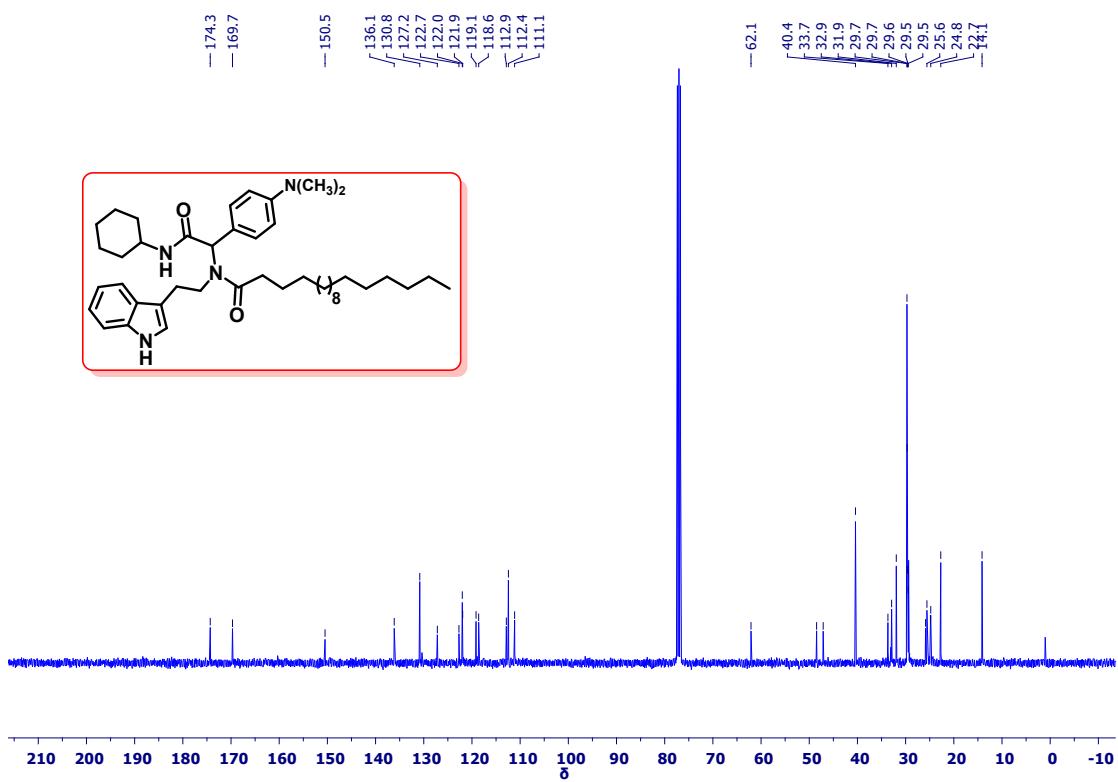
**Fig. S9** <sup>1</sup>H NMR spectrum of compound 5e



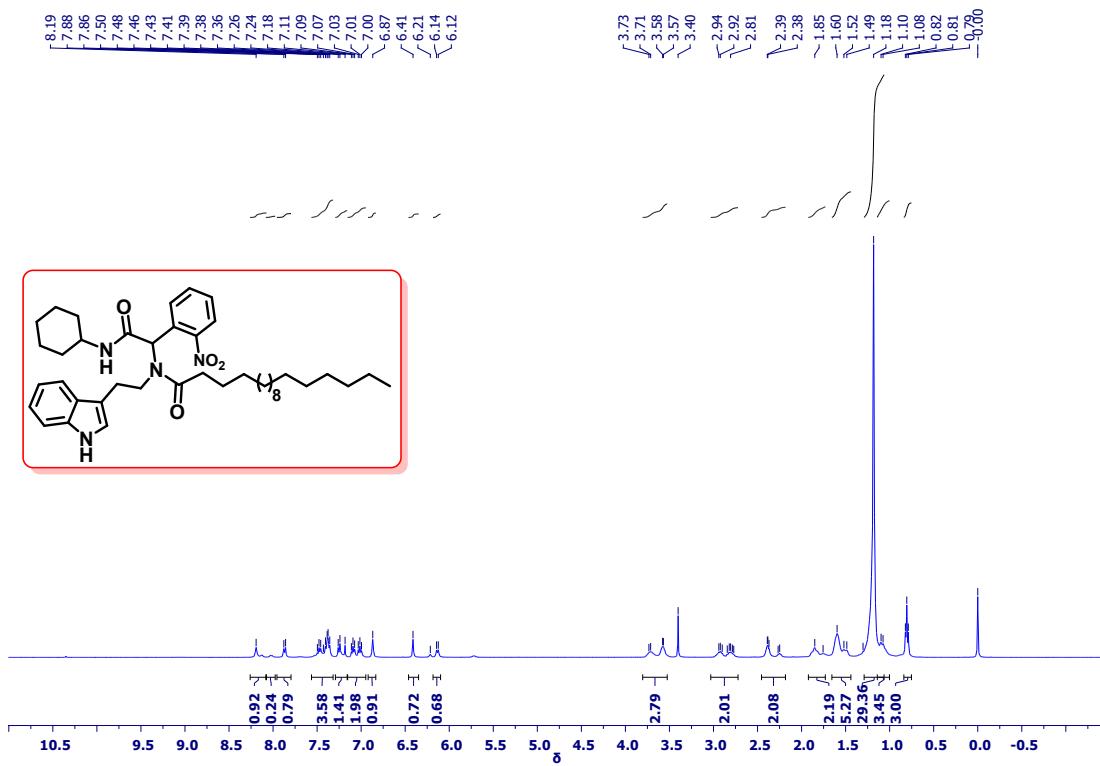
**Fig. S10** <sup>1</sup>H NMR spectrum of compound 5e



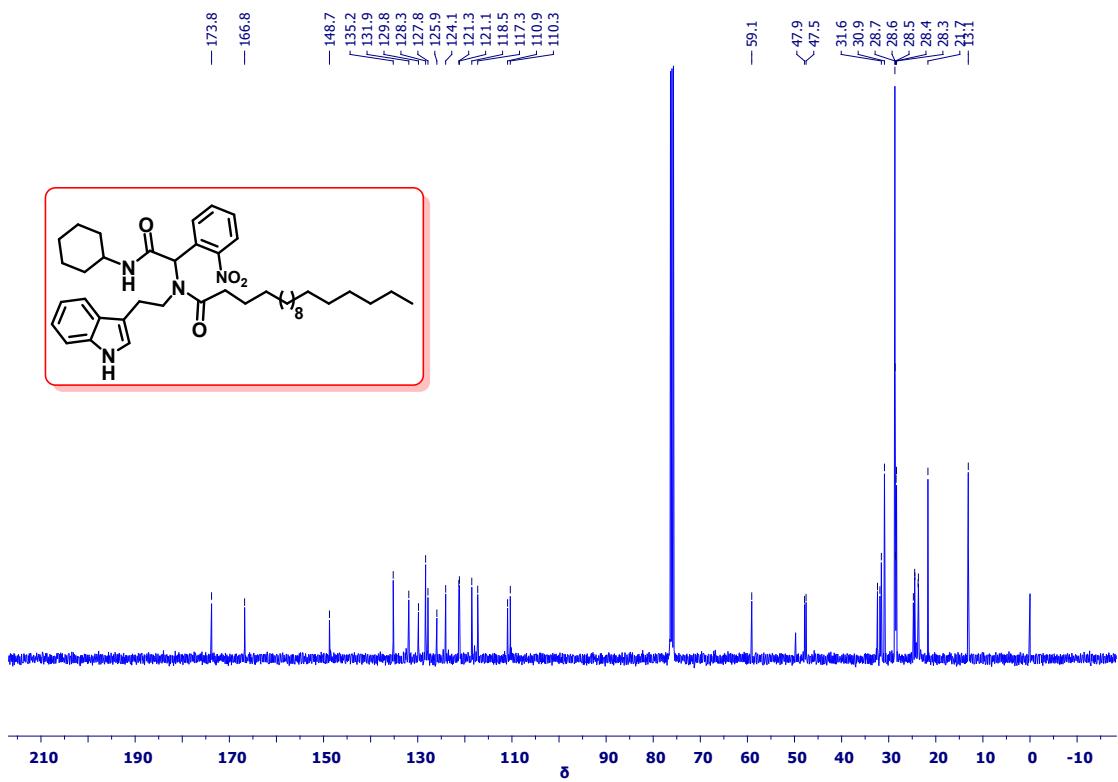
**Fig. S11** <sup>1</sup>H NMR spectrum of compound 5f



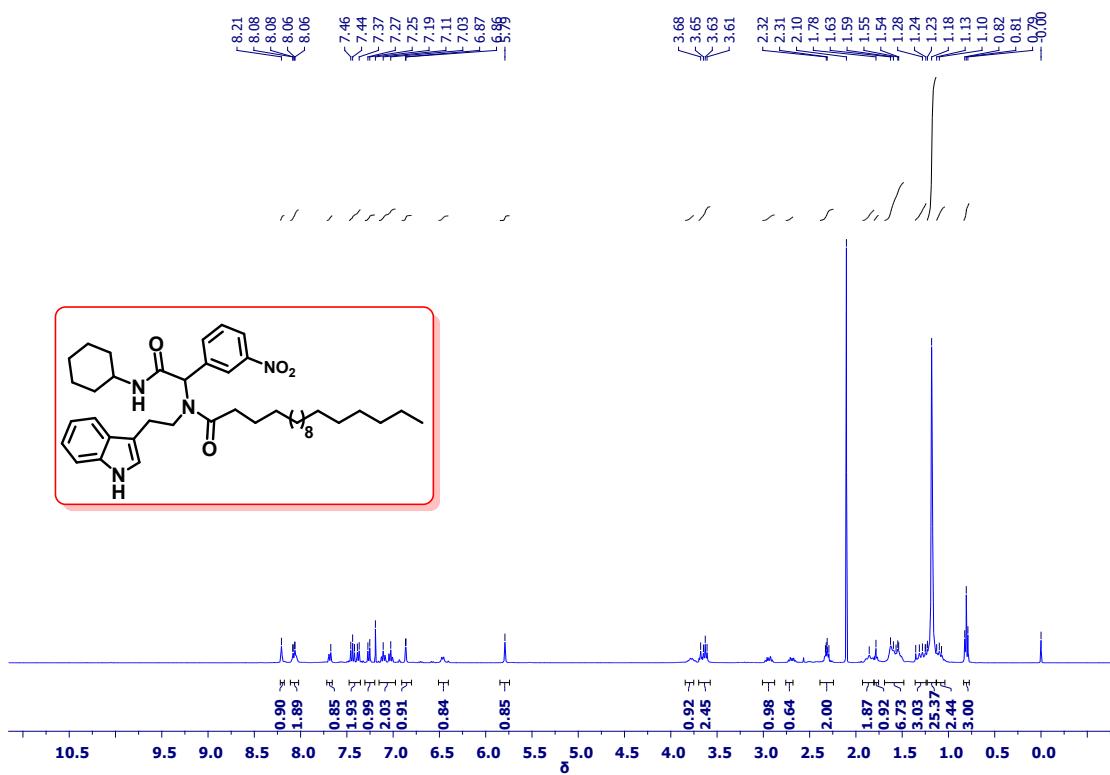
**Fig. S12** <sup>13</sup>C NMR spectrum of compound 5f



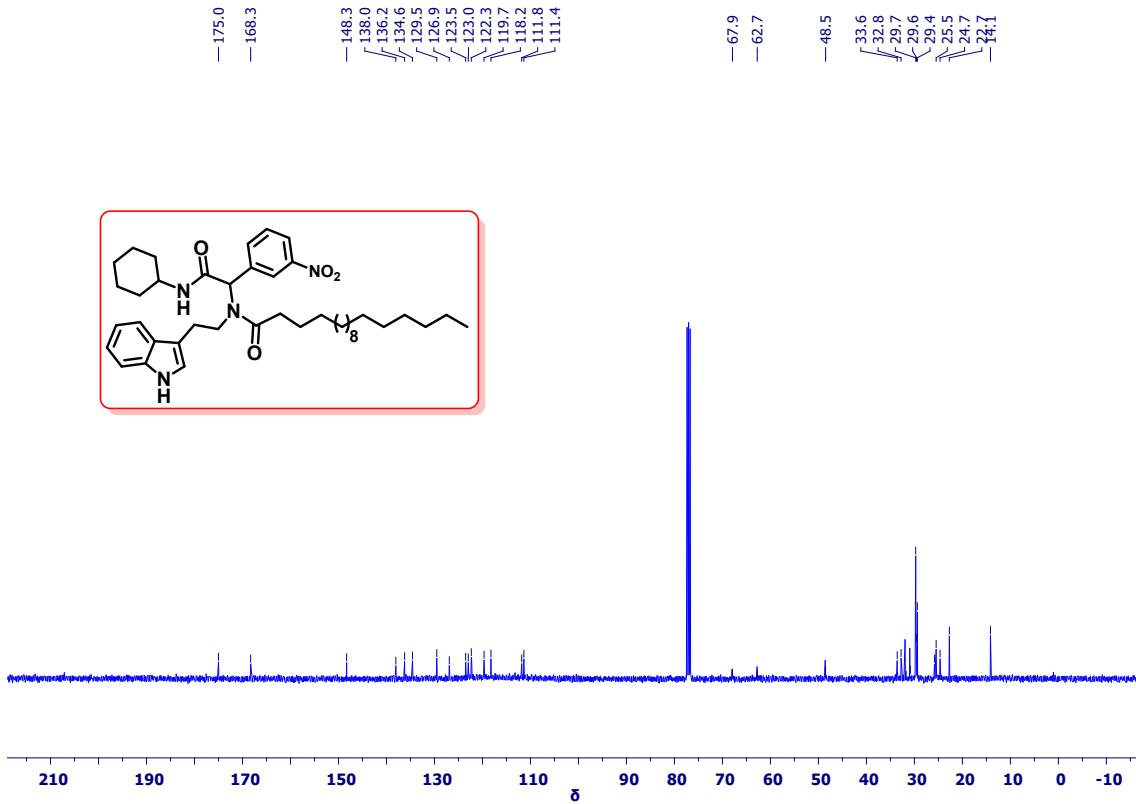
**Fig. S13** <sup>1</sup>H NMR spectrum of compound 5g



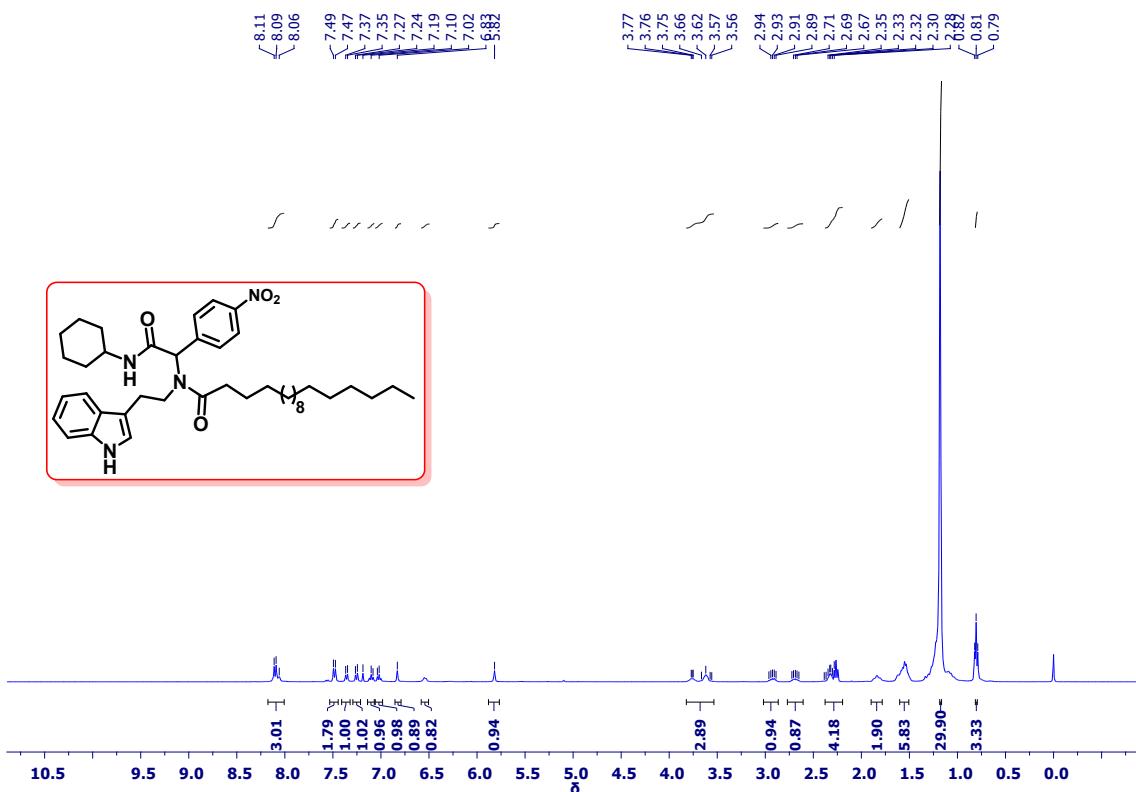
**Fig. S14** <sup>13</sup>C NMR spectrum of compound 5g



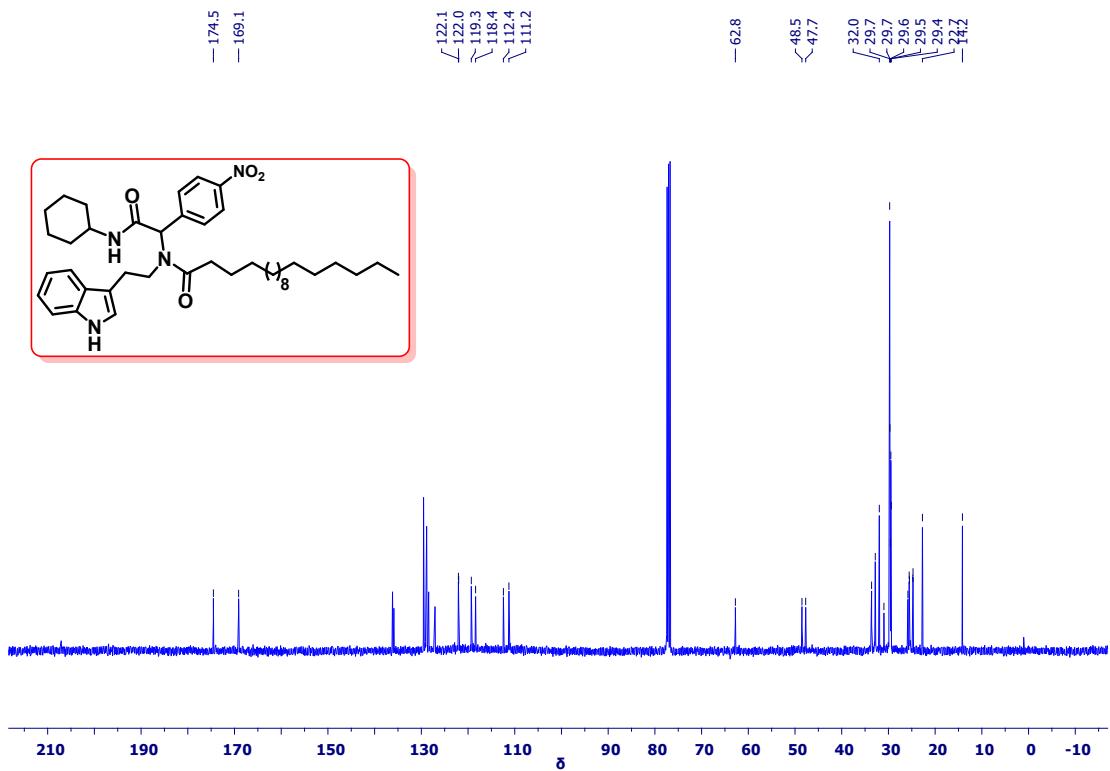
**Fig. S15** <sup>1</sup>H NMR spectrum of compound 5h



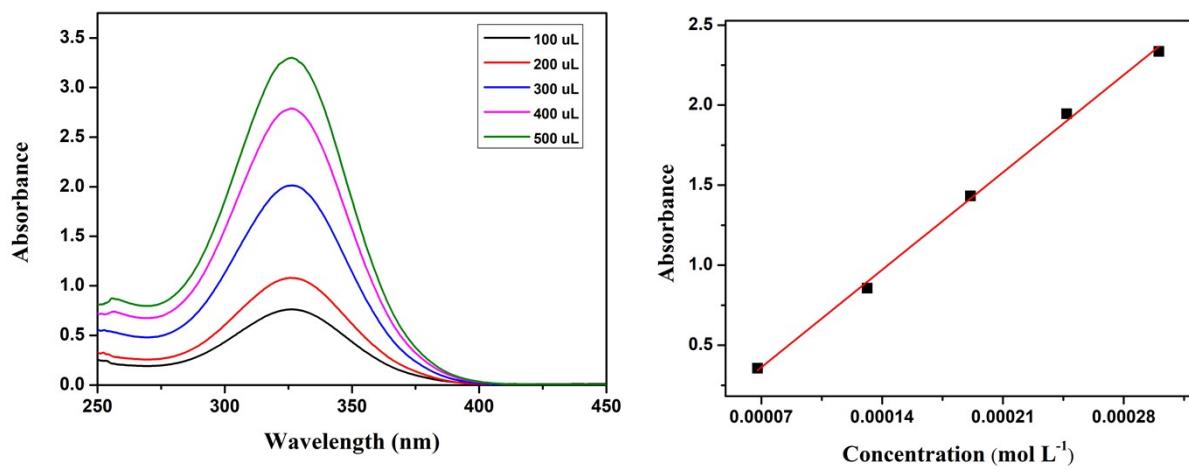
**Fig. S16** <sup>13</sup>C NMR spectrum of compound 5h



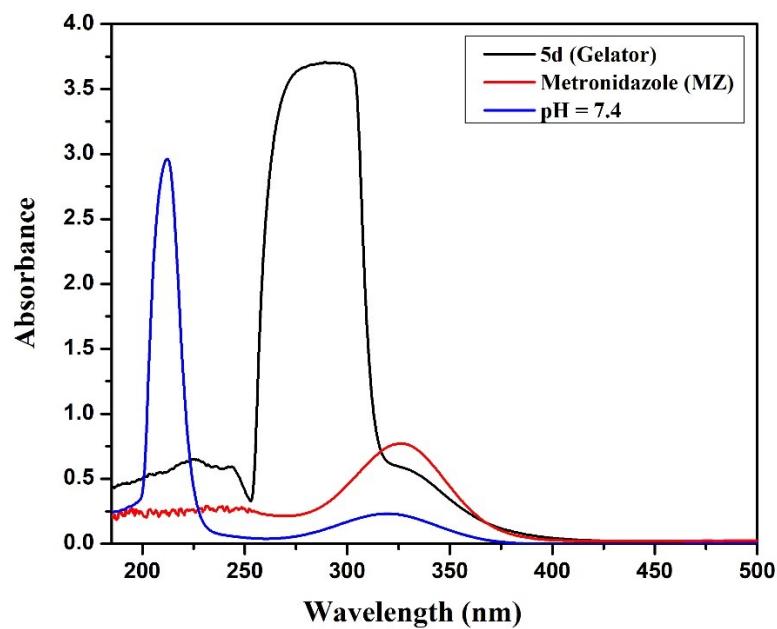
**Fig. S17** <sup>1</sup>H NMR spectrum of compound 5i



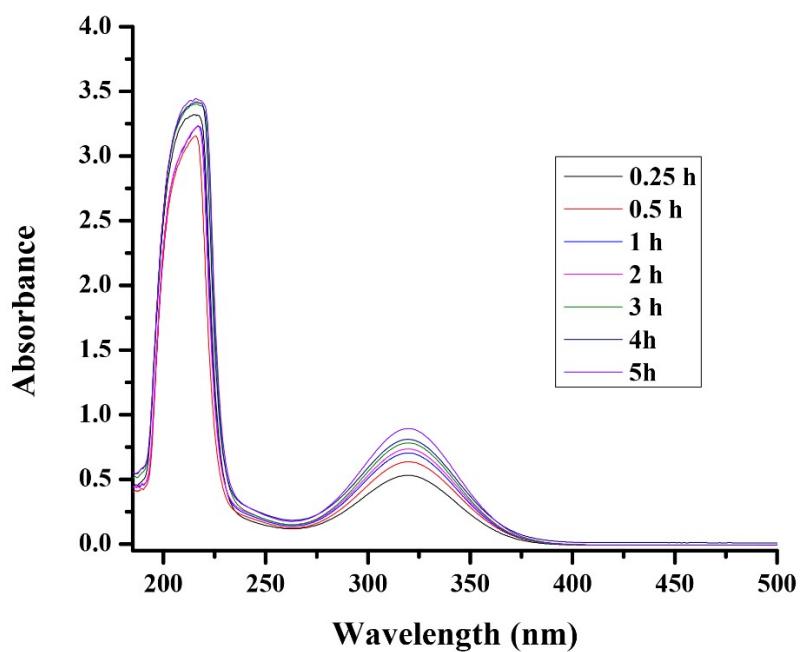
**Fig. S18** <sup>1</sup>H NMR spectrum of compound 5i



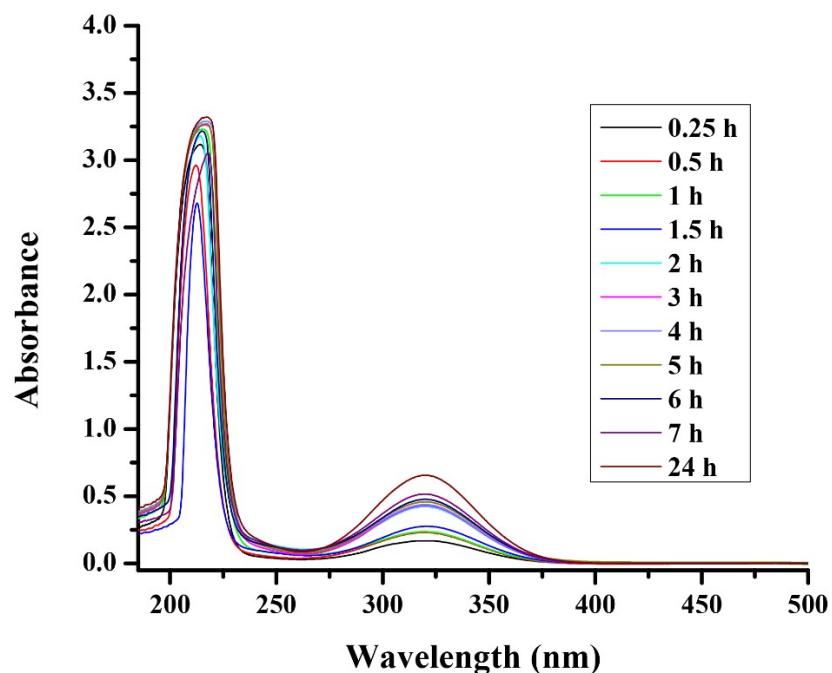
**Fig. S19** UV-Vis spectra collected for Metronidazole (**MZ**) solutions at different concentrations (left), highlighting the **MZ** band at 319 nm used to establish the calibration curve (right) for calculating cumulative drug release



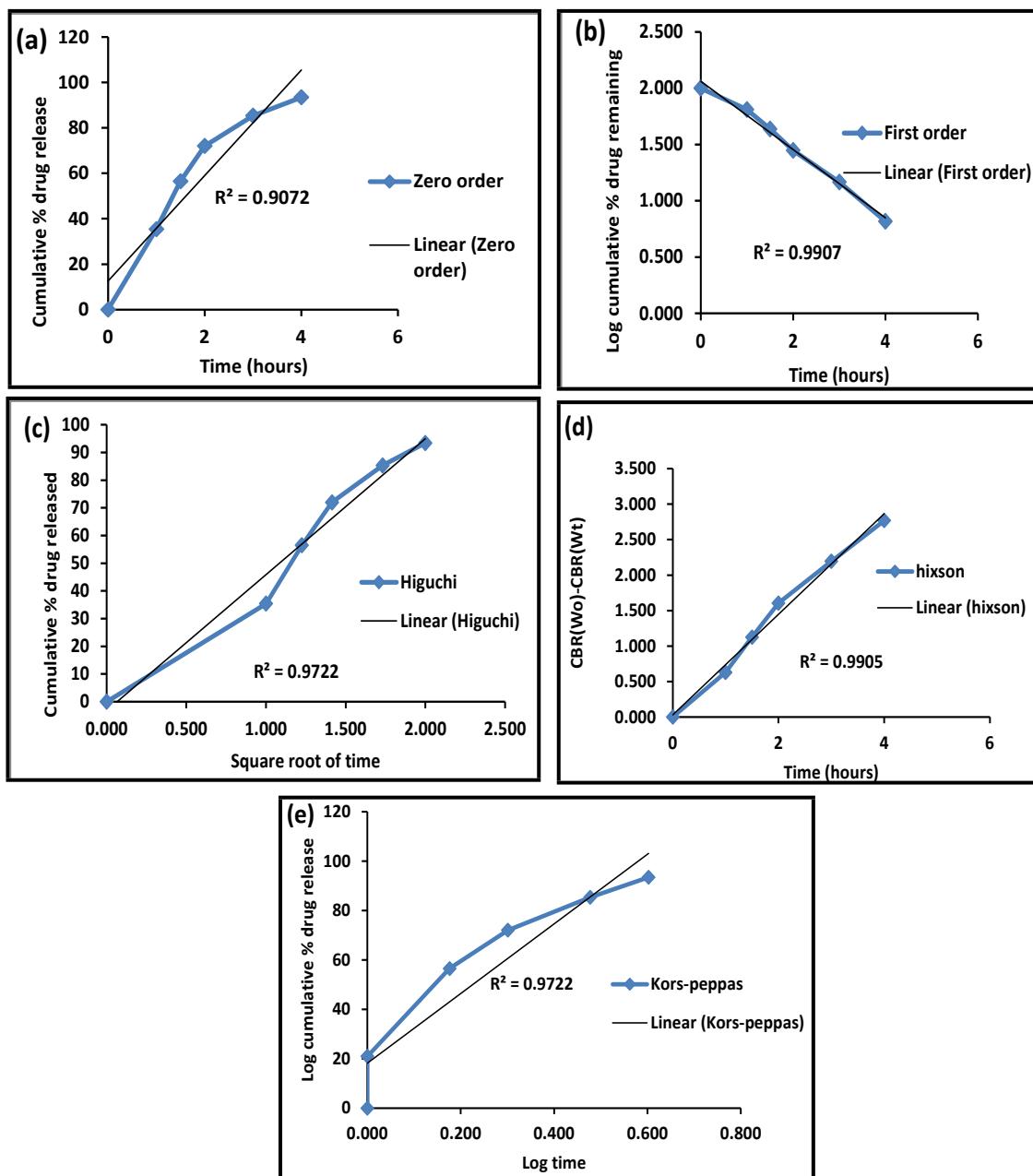
**Fig. S20** UV-Vis spectra of gelator (**5d**), drug metronidazole (**MZ**), and release of **MZ** at pH 7.4 from drug loaded gel



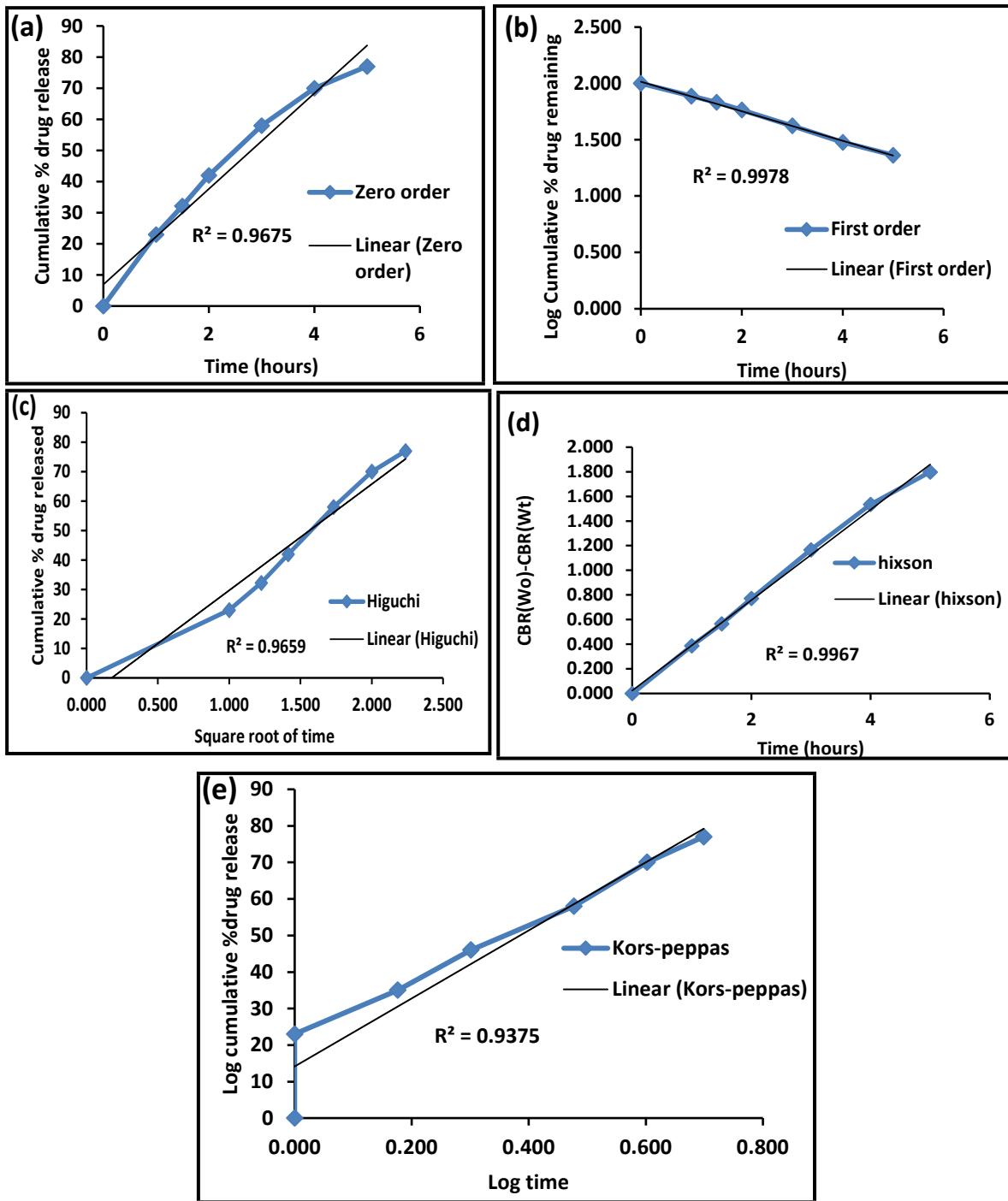
**Fig. S21** UV-Vis spectra of kinetic degradation of drug composite organo/hydrogel at pH 5.5



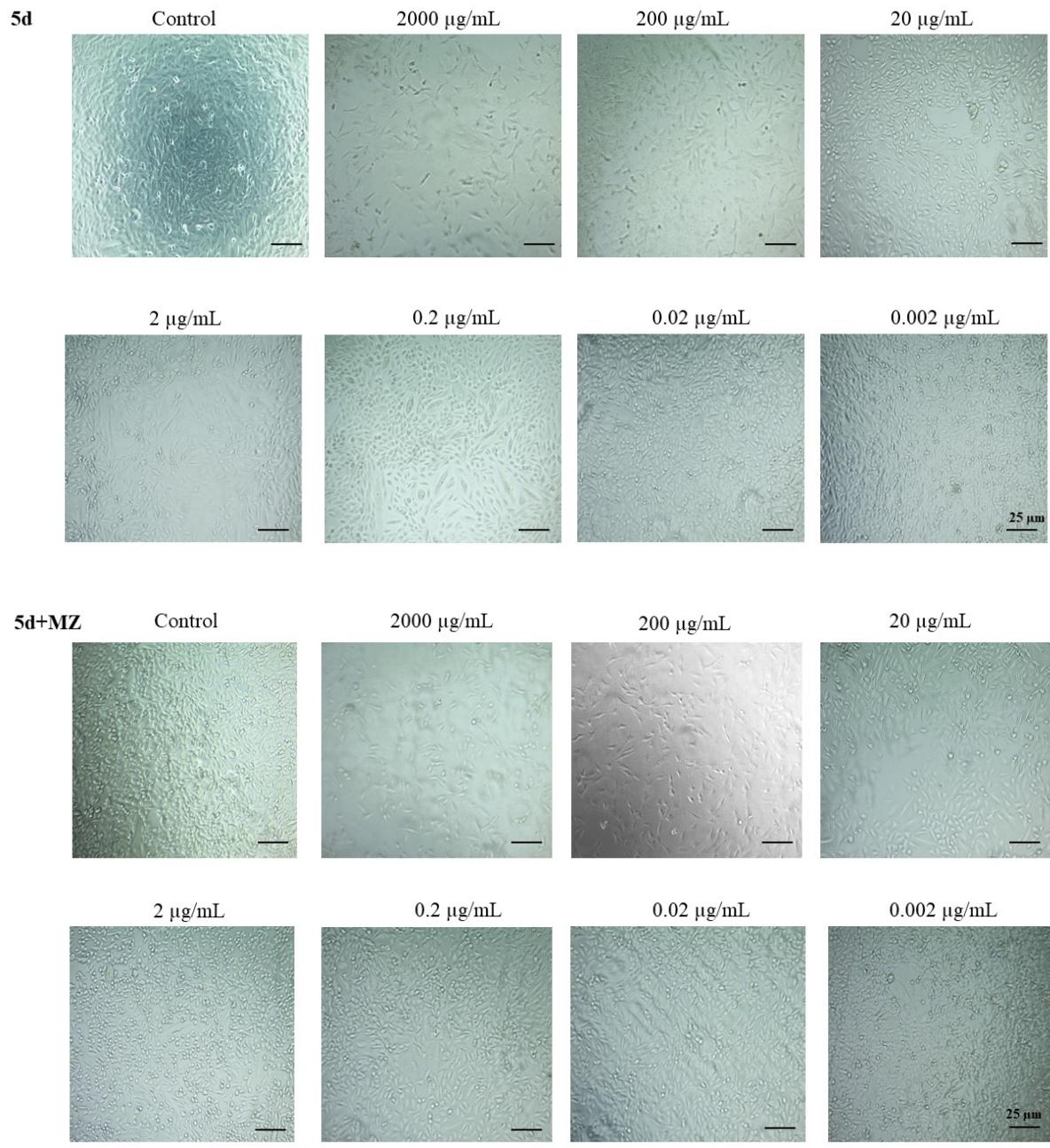
**Fig. S22** UV-Vis spectra of kinetic degradation of drug composite organo/hydrogel at pH 7.4



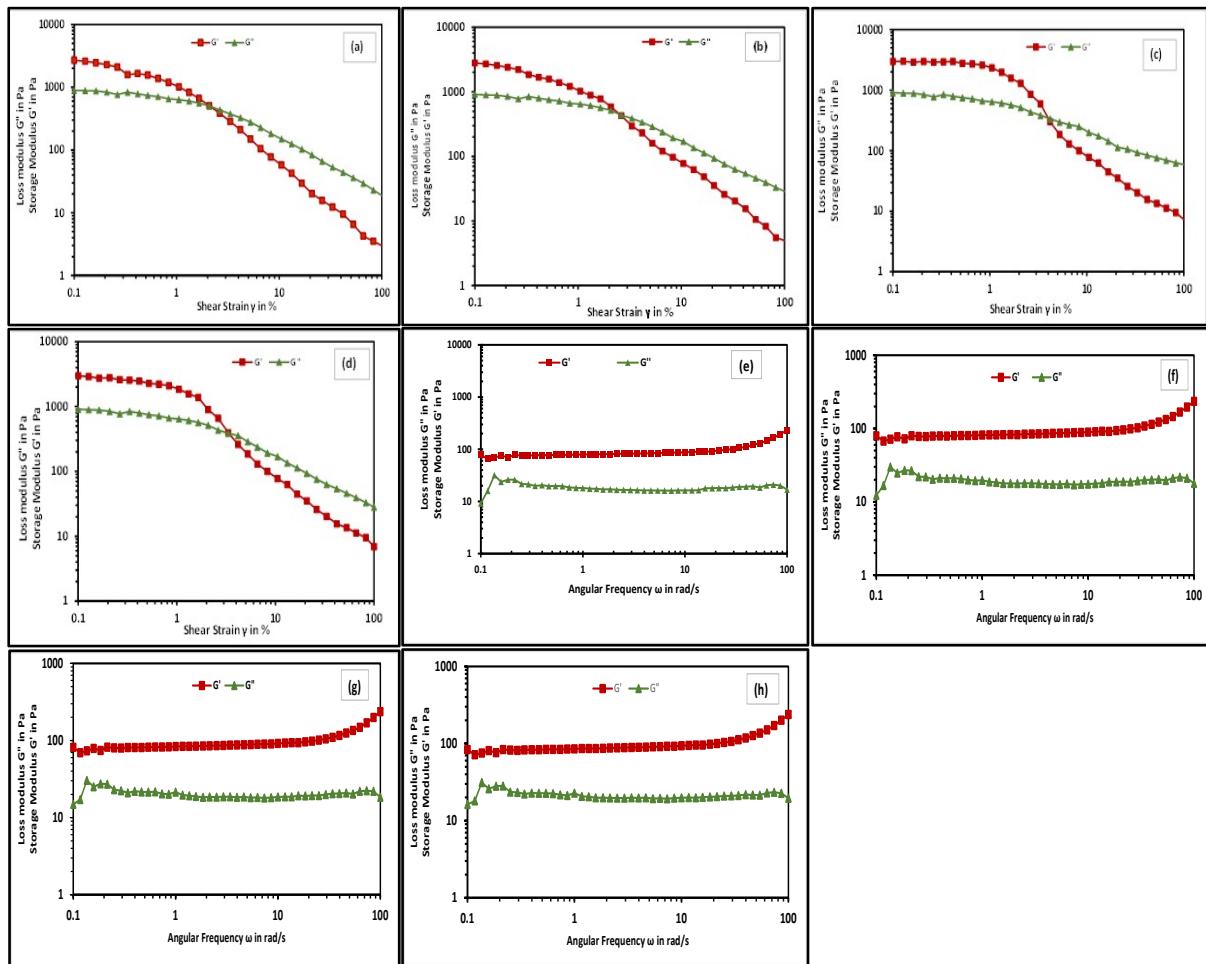
**Fig. S23** Drug release kinetics plots for drug loaded organo/hydrogels at pH 5.5 (a): zero-order; (b): first-order; (c): Higuchi; (d): Korsmeyer-Peppas; (e): Hixson-Crowell models



**Fig. S24** Drug release kinetics plots for drug loaded organo/hydrogels at pH 7.4 (a); zero-order (b); first-order (c); Higuchi (d); Korsmeyer-Peppas (e); Hixson-Crowell models



**Fig. S25** Cell viability images at different concentrations (2000  $\mu\text{g/mL}$ , 200  $\mu\text{g/mL}$ , 20  $\mu\text{g/mL}$ , 2  $\mu\text{g/mL}$ , 0.2  $\mu\text{g/mL}$ , 0.02  $\mu\text{g/mL}$ , 0.002  $\mu\text{g/mL}$ ) in comparison with the control (0.000  $\mu\text{g/mL}$ ) condition of **5d** and **5d+MZ**



**Fig. S26** The strain amplitude rheological experiment for **5d** in DMSO/water at constant frequency 1 Hz; a) 15 mg; (b) 18 mg; (c) 21 mg; (d) 24 mg. The Frequency sweep rheological experiment for **5d** DMSO/water at constant strain of 1%; (e) 15 mg; (f) 18 mg; (g) 21 mg; (h) 24 mg