

Electronic Supporting Information

Ferrocenyl methylene units and copper(II) phenanthroline complex units anchored on branched poly(ethyleneimine) – DNA binding, antimicrobial and anticancer activity†

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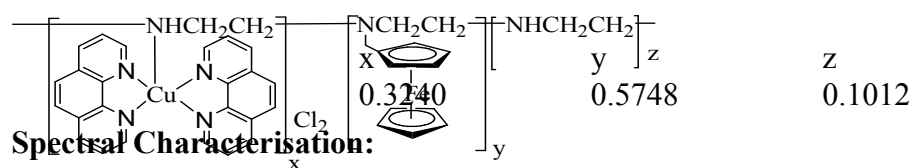
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Degree of coordination

We analysed the Cu and Fe weight percentages at ppm level various concentration solutions of the polymer conjugates by the Atomic absorption spectroscopy. We have calculated the concentration of Cu(II) complex units and Ferrocene units.

From the concentration we calculated the degree of coordination



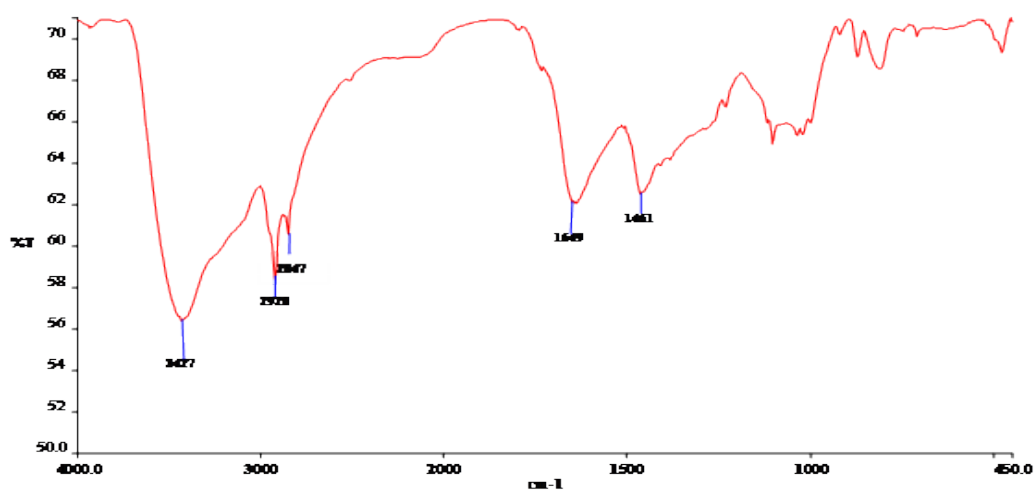


Fig. S1. IR spectrum of the Polymer conjugate

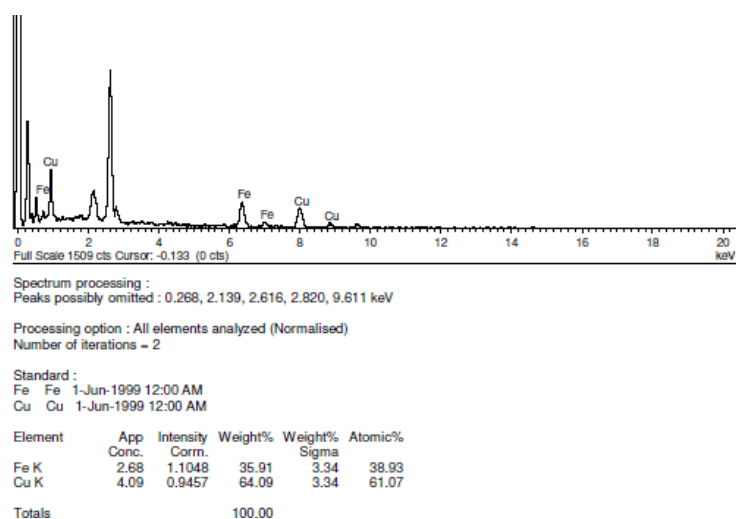


Fig. S2. Edax spectrum of the polymer conjugate.

Edax spectrum shows the Cu and Fe weight percentages it concludes both metals present in the polymer conjugates.

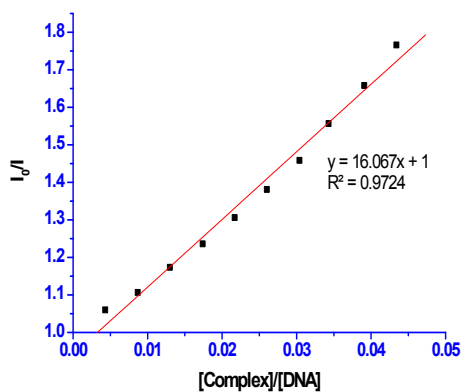


Fig. S3. Plot of I/I_0 against $[\text{Complex}]/[\text{DNA}]$ using fluorescence results for the K_{sv} of the Cu(II) complex in polymer conjugates with CT-DNA.

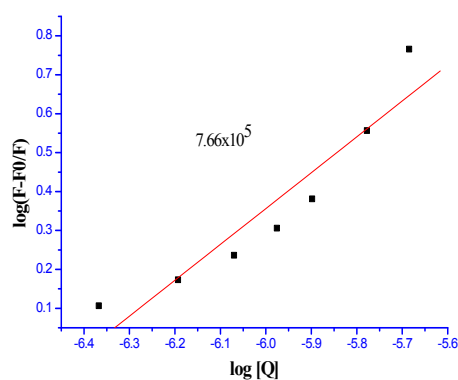


Fig. S4. Plot of $\log[Q]$ against $\log(F-F_0/F)$ using fluorescence results for the binding constant of the Cu(II) complex in polymer conjugates with CT-DNA.

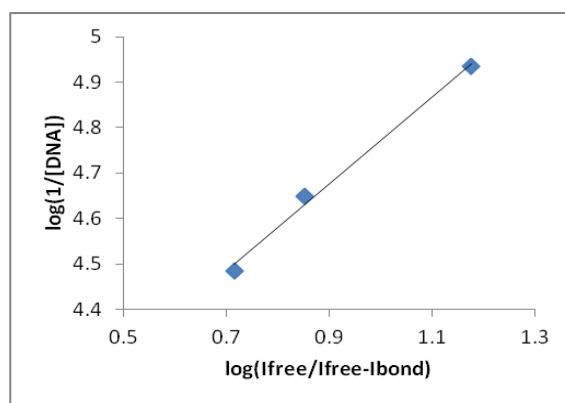


Fig. S5. Plot of $\log(1/[\text{DNA}])$ against $\log(I_{\text{Free}}/(I_{\text{Free}} - I_{\text{bond}}))$ using DPV results for the binding constant of Cu(II) complex in polymer conjugates with CT-DNA.

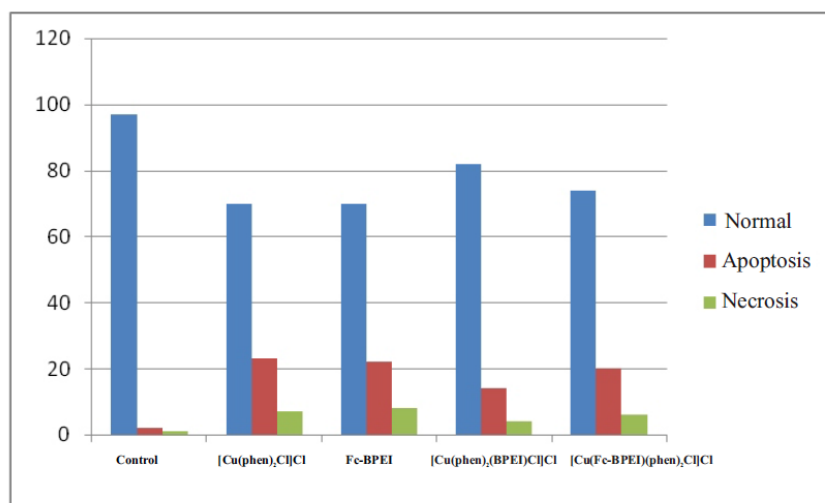


Fig. S6. Cytological changes diagram.

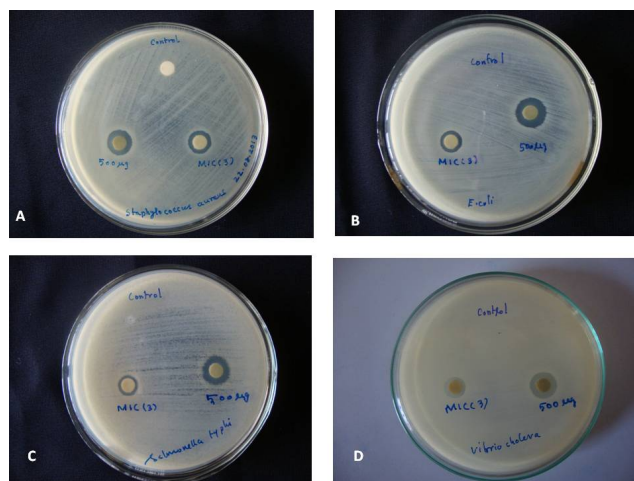


Fig. S7. *in vitro* Antimicrobial studies of selected four pathogens.