

Supporting Information

Multifunctional ATRP based pH Responsive Polymeric Nanoparticles for Improved Doxorubicin Chemotherapy in Breast Cancer by Proton Sponge Effect/Endo-Lysosomal Escape

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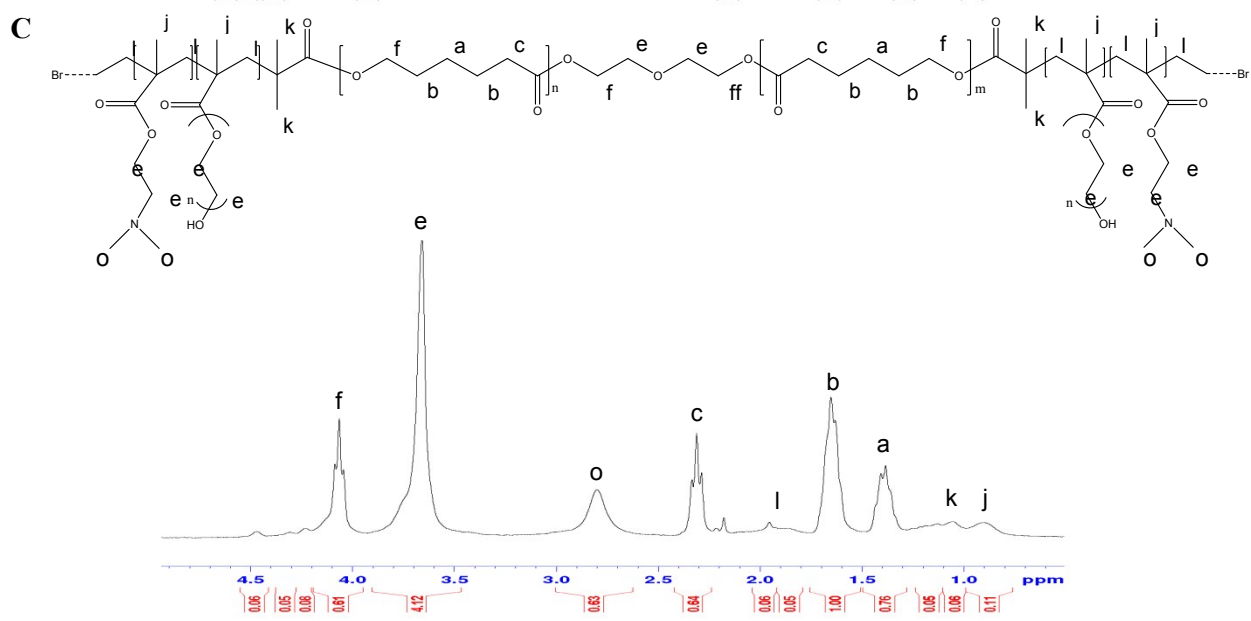
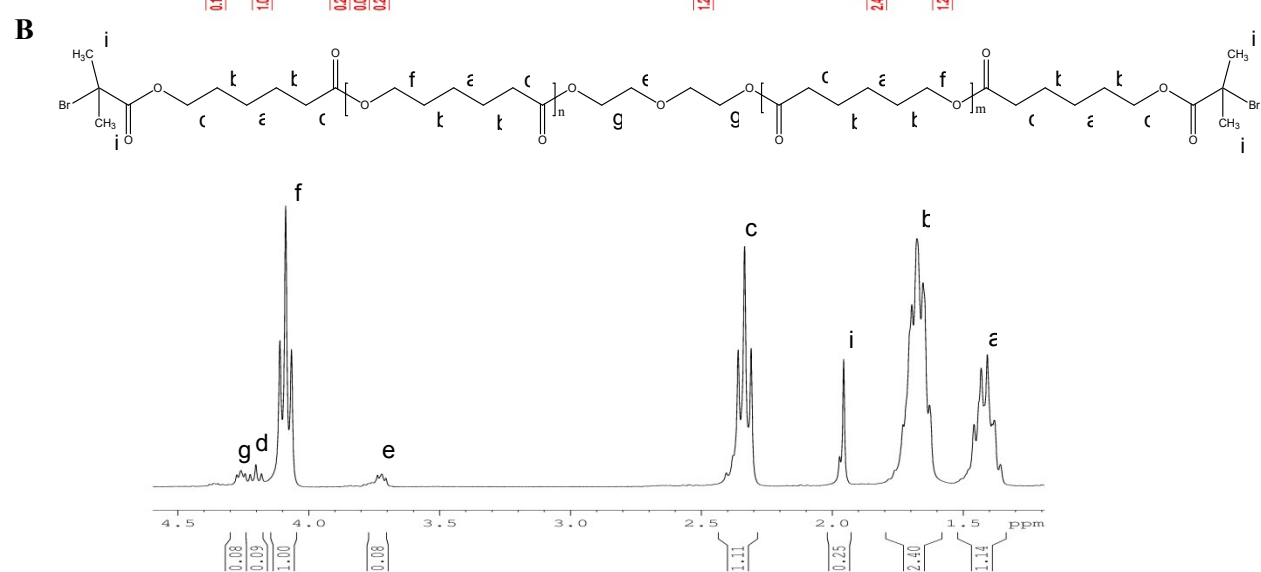
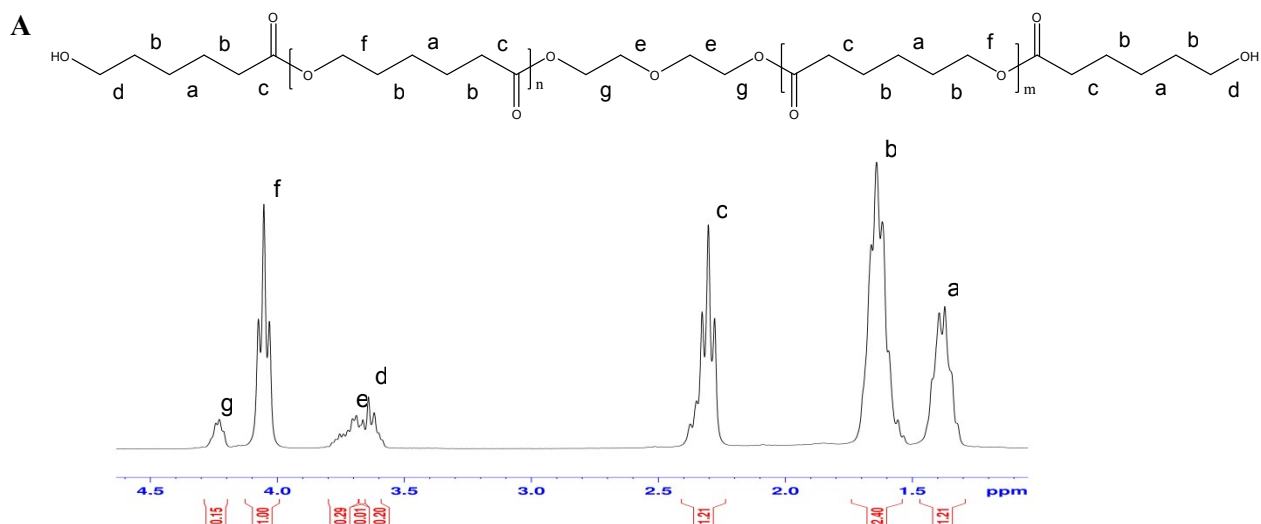
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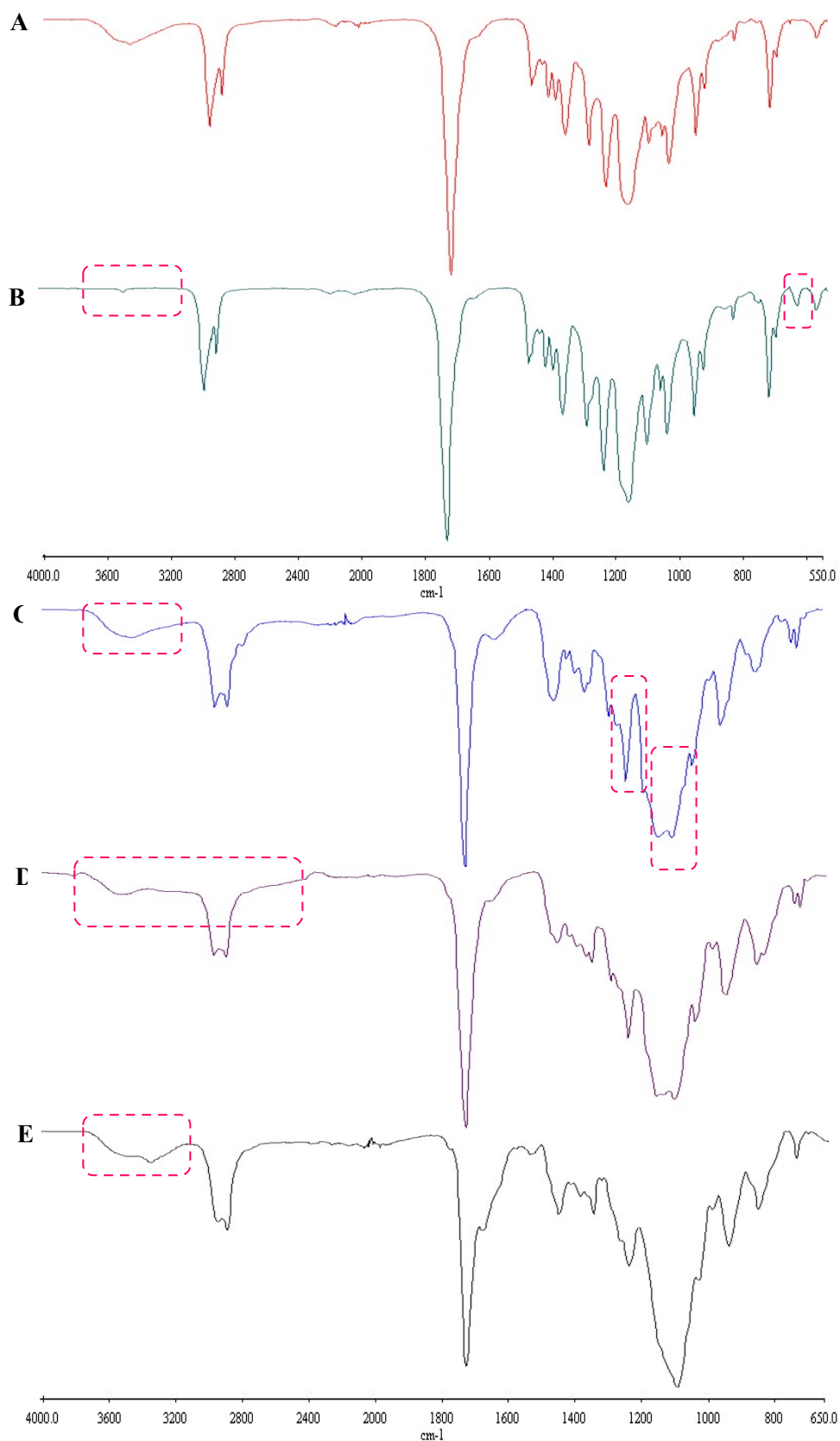
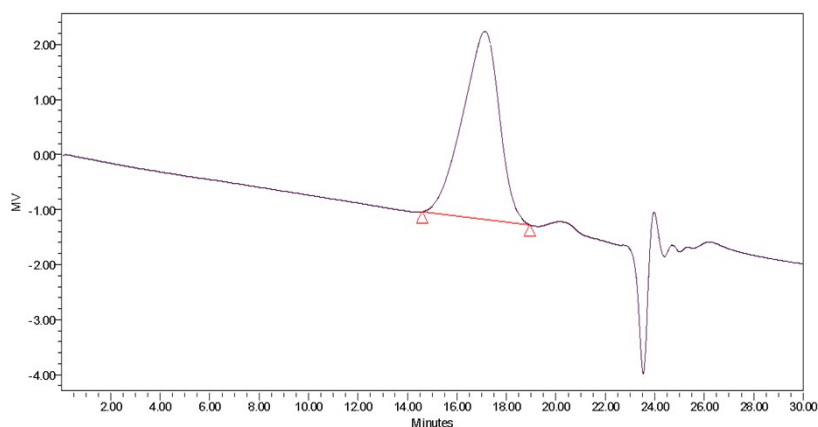


Fig. S2. ATR-FTIR spectra of synthesized polymers (A) Polycaprolactone diol, (B) Polycaprolactone macroinitiator, (C) PDMAEMA-PPEGMA-PCL-PPEGMA-PDMAEMA pentablock copolymer, (D) Pent-COOH polymer, and (E) Pent-CONHNH₂ polymer.



GPC Results										
Dist Name	Elution Volume (ml)	Retention Time (min)	Adjusted RT (min)	Mn	Mw	MP	Mz	Mz+1	Mz/Mw	Mz+1/Mw
1	17.126	17.126	17.126	6786	8006	6549	9551	11416	1.193018	1.425909

Fig. S3. GPC spectra of PDMAEMA-PPEGMA-PCL-PPEGMA-PDMAEMA pentablock copolymer depicting M_n 6796 Da and M_w 8006 Da with polydispersity index of 1.179.

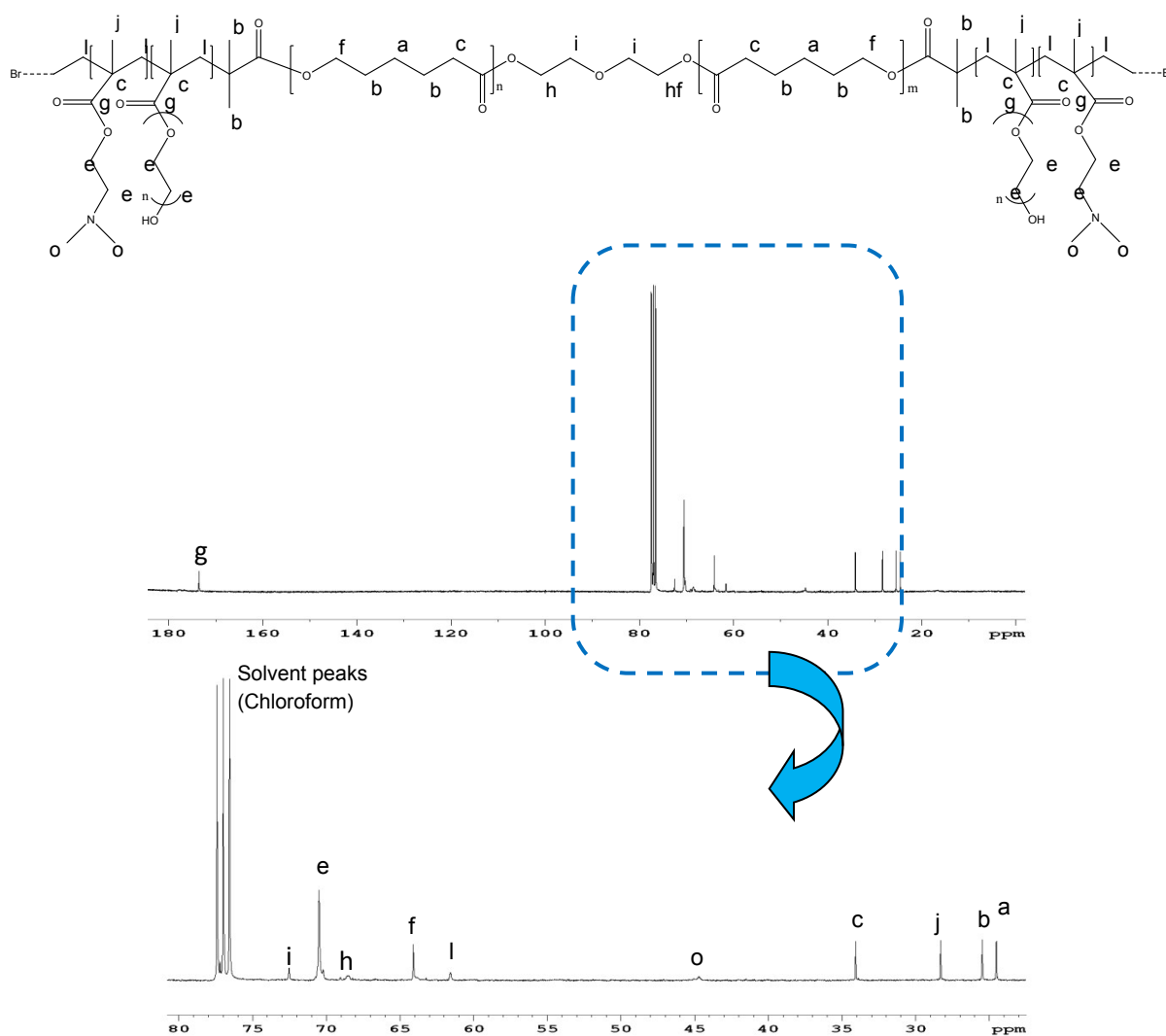


Fig. S4. ^{13}C -NMR spectra of PDMAEMA-PPEGMA-PCL-PPEGMA-PDMAEMA copolymer

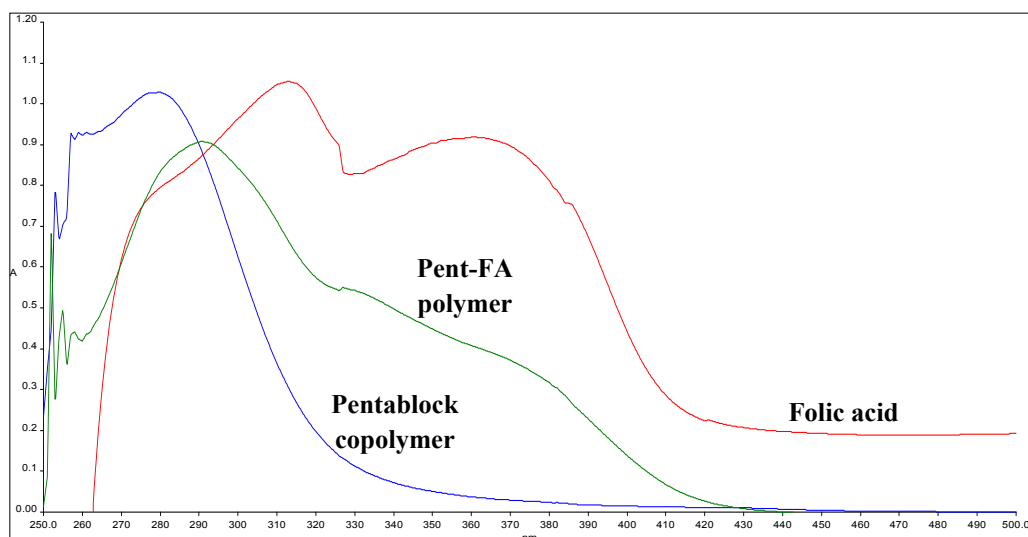


Fig. S5. UV-Visible spectra of PDMAEMA-PPEGMA-PCL-PPEGMA-PDMAEMA pentablock copolymer, folic acid and folate conjugated pentablock polymer (Pent-FA) showing change in absorption spectrum of folic acid with blue shift in $\lambda_{\max}$ of folic acid indicating successful folate conjugation with pentablock polymer.

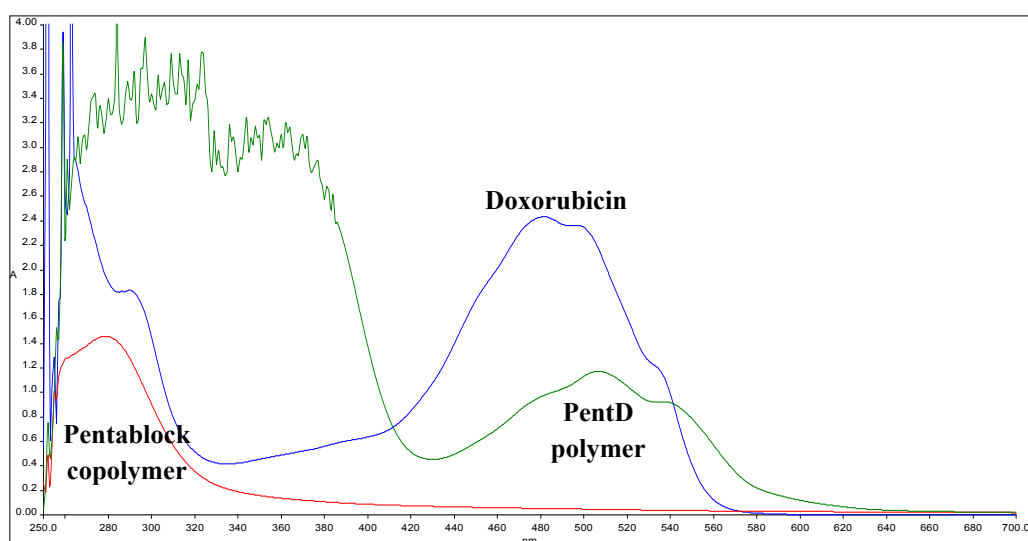


Fig. S6. UV-Visible spectra of PDMAEMA-PPEGMA-PCL-PPEGMA-PDMAEMA pentablock copolymer, doxorubicin and doxorubicin conjugated pentablock polymer (PentD) showing change in absorption spectrum of doxorubicin with red shift in $\lambda_{\max}$ of doxorubicin indicating successful doxorubicin conjugation with pentablock polymer.

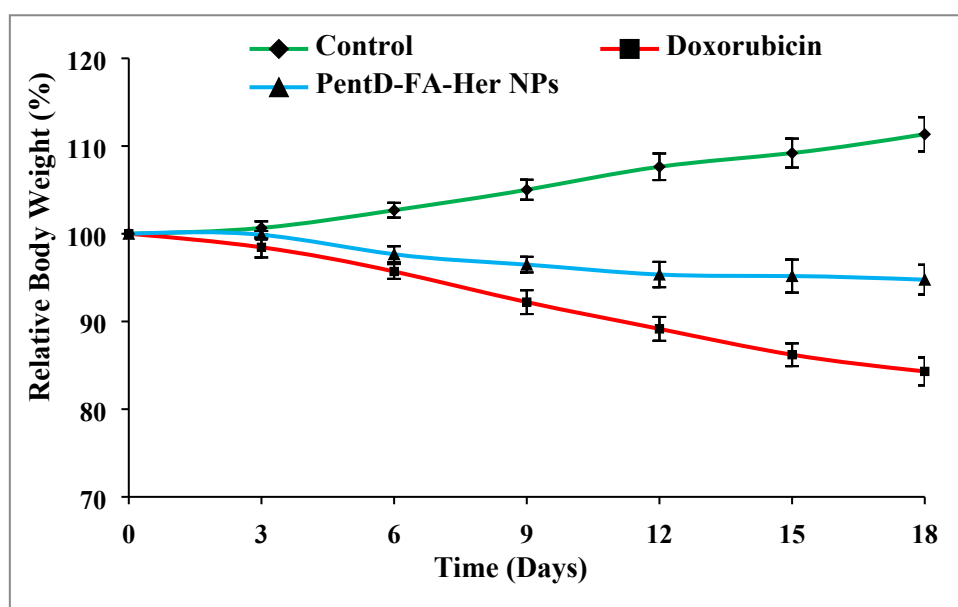


Fig. S7. Relative body weight study of Ehrlich ascites tumor bearing Swiss albino mice treated with control (PBS), free doxorubicin and PentD-FA-Her NPs. (mean $\pm$ SEM, n=6)