Covalent immobilization of doxorubicin in glycine functionalized hydroxyapatite nanoparticles for pH-responsive release


aChemistry Division, bRadiation Biology and Health Sciences Division,
Bhabha Atomic Research Centre, Mumbai-400085, India

*Corresponding author: Tel: + 91-22-25590288, E-mail: gunjanv@barc.gov.in

Fig. S1. FESEM micrograph of Gly-HANPs.

Fig. S2. FTIR spectra of Glut-Gly-HANPs and Glutaraldehyde. Inset shows photograph of Glut-Gly-HANPs nanoparticles (a) dispersed in water (b) after treating with Schiff’s reagent.
Fig. S3. Colloidal stability assay of Glut-Gly-HANPs in (a) 10% FCS and (b) 10% BSA with respect to time by measuring normalized intensity of scattered light ($I_t/I_0$, where $I_t = \text{Intensity at time 't'}$ and $I_0 = \text{intensity at t = 0}$) at 90° using light scattering instrument.

Fig. S4. PXRD pattern of DOX-Glut-Gly-HANPs after releasing the drug at pH-7.4.
Fig. S5. Fluorescence spectra of pure DOX and DOX released in (A) FCS (10%) (B) BSA (10%) at different time intervals. Inset shows photographs of (a) FCS/BSA (10% solution in PBS), (b) DOX (30µg/mL) in FCS/BSA, (c) DOX-Glut-Gly-HANPs dispersed in FCS/BSA (10%) and (d) DOX released after incubating DOX-Glut-Gly-HANPs in FCS/BSA for 24h.