Supporting Information

Redox and pH dual sensitive bone targeting nanoparticle to treat breast cancer bone metastases and inhibit bone resorption

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Legends:

SFig.1 The synthetic route of ALN-HA-PASP conjugate.

SFig.2 ^{1}H NMR spectrum of HA-PASP conjugate (panel A) and ALN-HA-PASP conjugate (panel B).

SFig.3 The X-ray photoelectric spectroscopy (XPS) spectra of DOX@HA-PASP, DOX@ALN-HA-PASP and DOX@ALN-$(HA\text{-}PASP)_{CL}$.

SFig.4 Stability of DOX@ALN-HA-PASP and DOX@ALN-$(HA\text{-}PASP)_{CL}$ in pH7.4 PBS medium (panel A) and in pH5.0 PBS medium (panel B) at room temperature.

SFig.5 The hemolytic rate of HA-PASP blank nanoparticle, ALN-HA-PASP blank nanoparticle and ALN-$(HA\text{-}PASP)_{CL}$ blank nanoparticle on red blood cell. Data are mean±SD, n=5.

SFig.6 ALN release from ALN-HA-PASP and ALN-$(HA\text{-}PASP)_{CL}$ in pH5.0 PBS medium. Data are mean±SD, n=5.

SFig.7 Cellular uptake of DOX@ALN-$(HA\text{-}PASP)_{CL}$, DOX@ALN-HA-PASP, DOX@HA-PASP and free DOX on MDA-MB-231 cells in pH7.4 detected by flow cytometry. Data are mean±SD, n=5. *P<0.05 vs DOX@HA-PASP.

SFig.8 The cytotoxicity of HA-PASP blank nanoparticle, ALN-HA-PASP blank nanoparticle and ALN-$(HA\text{-}PASP)_{CL}$ blank nanoparticle on MDA-MB-231 cells in 24 h. Data are mean±SD, n=5.