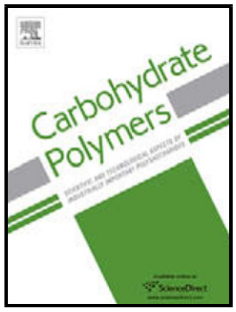

Title: Bio-stimuli-responsive multi-scale hyaluronic acid nanoparticles for deepened tumor penetration and enhanced therapy

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Highlights

1) Multi-scale HA nanoparticles encapsulated with PAMAM dendrimers were developed.

2) The fine bio-stimuli-responsive properties of HA/PAMAM nanoparticles was verified.

3) The *in vitro* tumor spheroids deeply penetration of HA/PAMAM-FITC was confirmed.

3) HA/PAMAM-FITC showed prolonged systematic circulation in mice bearing H22 tumor.

4) HA/PAMAM-MTX demonstrated higher antitumor activity in H22 sarcoma mice.