Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Responsive porous hydrogel particles-based delivery system for oncotherapy

Yuanyuan Wen,[a,b,†] Yuxiao Liu,[c,†] Han Zhang,[c] Minhan Zou,[c] Dan Yan,[a*]

Dingding Chen,[b*] and Yuanjin Zhao[a,c*]

[a] Department of Pharmacy, Jiangsu Cancer Hospital & Jiangsu Institute of Cancer Research & The Affiliated Cancer Hospital of Nanjing Medical University, Nanjing 210009, China.

[b] Department of Clinical Pharmacy, School of Basic Medicine and Clinical Pharmacy, China Pharmaceutical University, Nanjing 211198, China.

[c] State Key Laboratory of Bioelectronics, School of Biological Science and Medical Engineering, Southeast University, Nanjing, 210096, China.

† These authors contributed equally to this work.

Email: yandan1980@njmu.edu.cn (D.Y.); chdd@cpu.edu.cn (D.D.C.) ;

yjzhao@seu.edu.cn (Y.J.Z.)

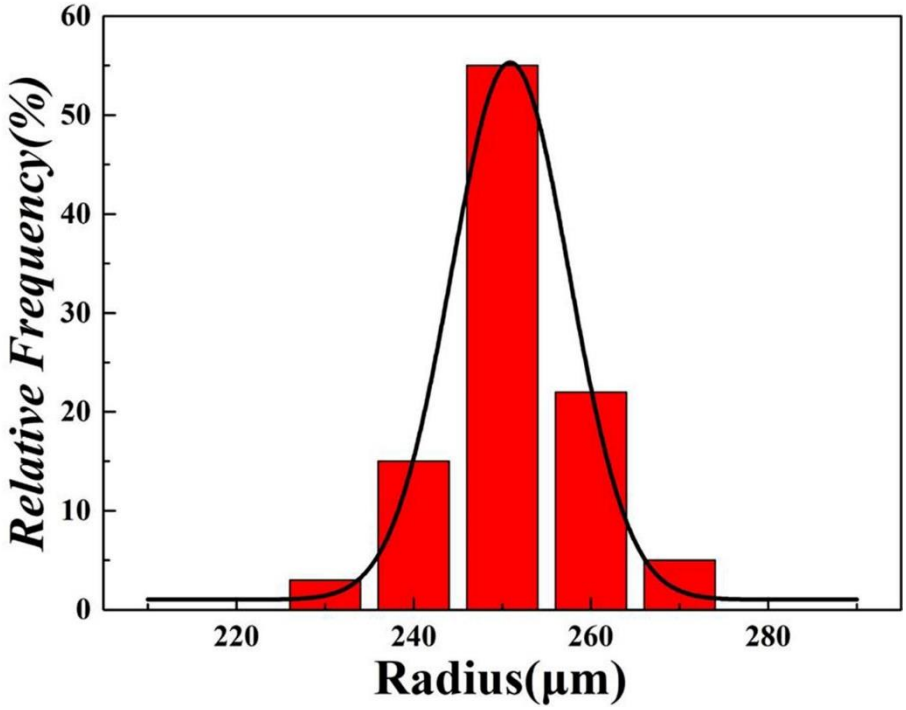

Fig. S1 The statistical size distribution histogram of the SCCBs. The coefficient of variation (CV) was calculated to be 4.89%.

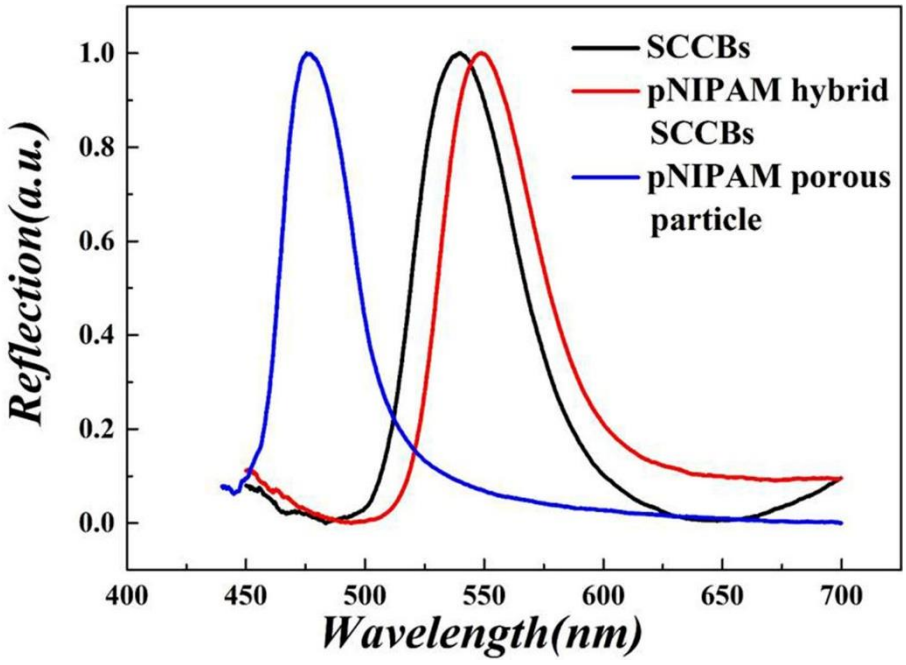

Fig. S2 The reflection spectra of template SCCBs, pNIPAM hybrid SCCBs and pNIPAM porous particles.

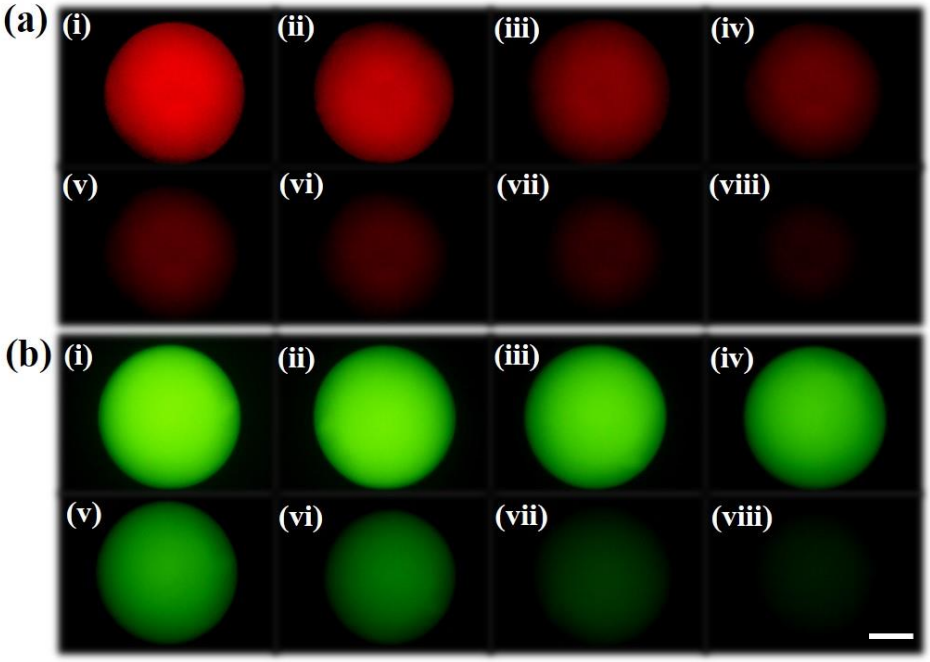

Fig. S3 The fluorescent images of particles loaded with rhodamine b (a) and FITC (b) after drug releasing for 0 day (ⅰ), 1 day (ⅱ), 2 days (ⅲ), 3 days (ⅳ), 4 days (ⅴ), 5 days (ⅵ), 6 days (ⅶ) and 7 days (ⅷ). (Because metformin and 5-fluorouracil have no fluorescent, they were replaced by rhodamine b and FITC, respectively.) The scale bar is 100 μm.

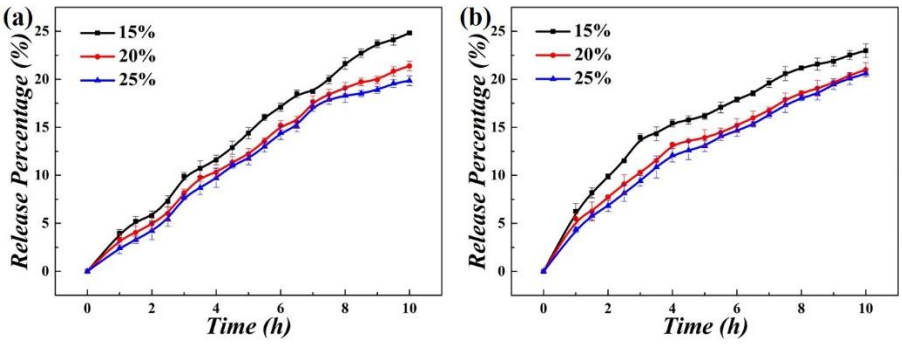

Fig. S4 The releasing curves of metformin (a) and 5-fluorouracil (b) at the room temperature during 10 hours.

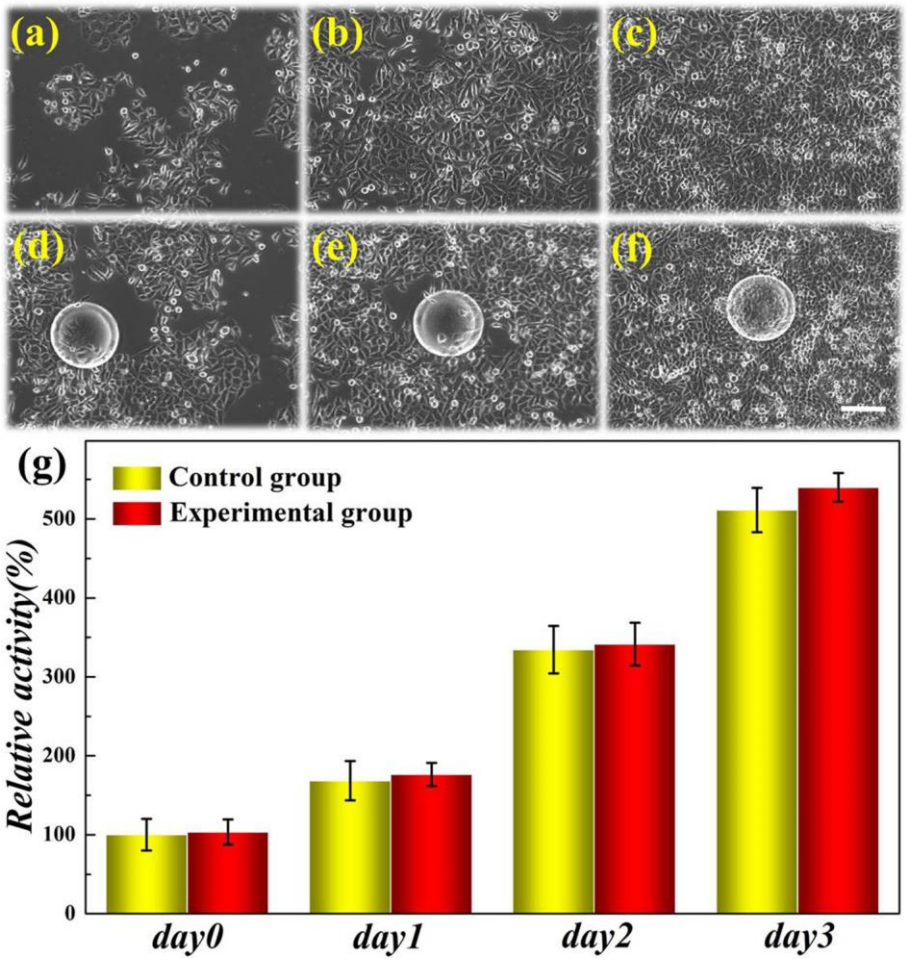

Fig. S5 (a-c) The images of HepG2 cells cultured after different time points (1, 2 and 3 day) respectively. (d-f) The images of HepG2 cells cultured with pNIPAM hydrogel particles after different time points (1, 2 and 3 day) respectively. The scale bar is 200 μm. (g) The MTT results of the cells cultured in different groups.

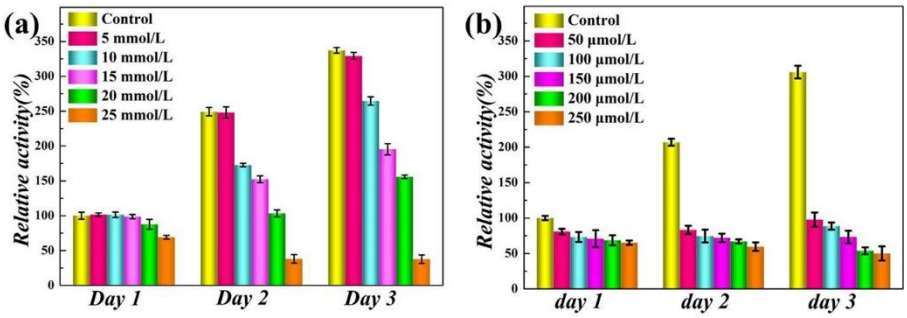

Fig. S6 (a) The MTT results of different concentrations of metformin on HepG2 cells;

(b) The MTT results of different concentrations of 5-fluorouracil on HepG2 cells.