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SUPPORTING INFORMATION

Sub-10 nm $BaLaF_5$:Mn/Yb/Er nanoprobes for dual-modal synergistic *in vivo* upconversion luminescent and X-ray bioimaging

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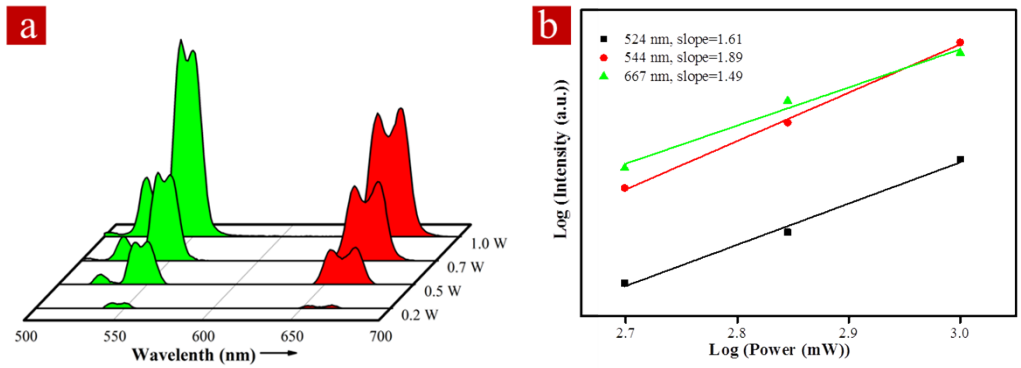

Fig. S1 (a) Upconversion luminescence under different pump power, (b) The log-log plots of the UC luminescence intensity versus excitation power.

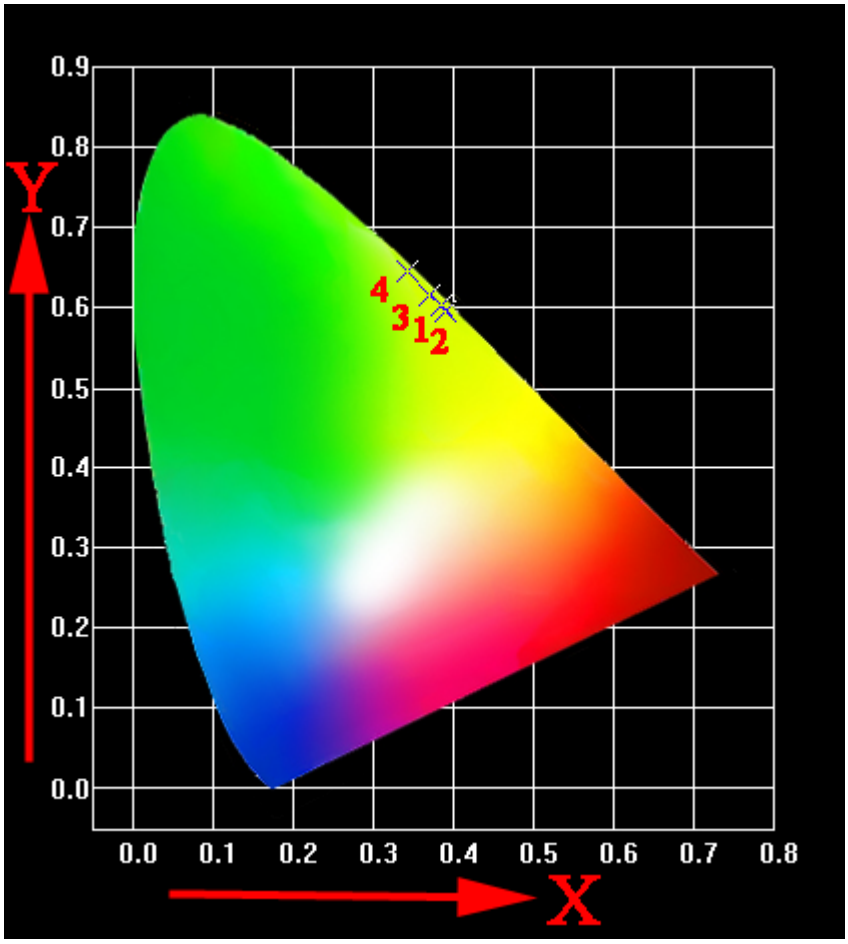

Fig. S2 The coordinates of CIE chromaticity diagram of UCNPs doped with 0% (1: 0.386, 0.604), 5% (2: 0.391, 0.595), 10% (3: 0.370, 0.616) and 20% Mn (4: 0.342, 0.645).

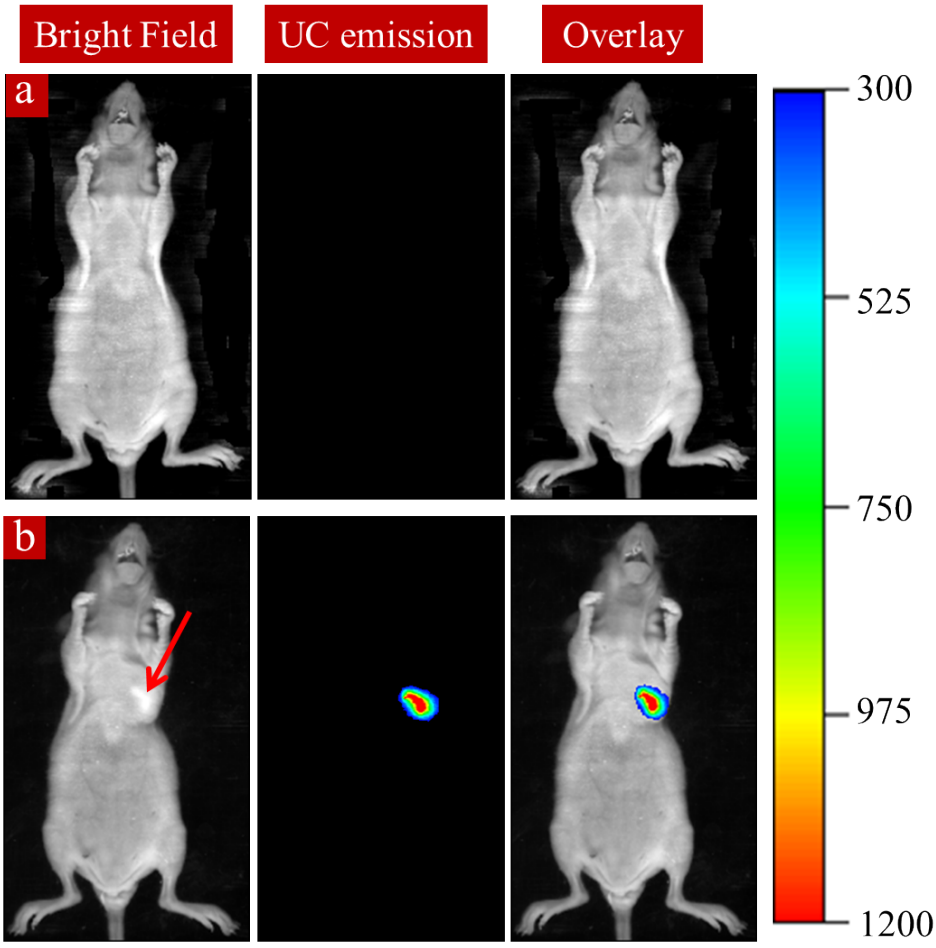

Fig. S3 In vivo upconversion luminescent bioimaging of a nude mouse: (a) without subcutaneous injection of $BaLaF_5$:20%Mn^{2+} UCNPs, (b) with subcutaneous injection of the UCNPs.