Supporting Information

CT/MR Dual-Modality Imaging Tracking of Mesenchymal Stem Cells Labeled with a Au/GdNC@SiO_2 Nanotracer in Pulmonary Fibrosis

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Table S1. The molar concentrations of Au and Gd in aqueous solution of Au/GdNC determined by ICP-MS.

$HAuCl_4$ to $GdCl_3$ (molar ratio)	Au in Au/GdNC (mM)	Gd in Au/GdNC (mM)	Au to Gd in Au/GdNC (molar ratio)
1:0.5	2.56	1.92	1:0.75
1:1	2.45	3.46	1:1.4
1:1.5	2.69	5.38	1:2
1:2	2.01	6.03	1:3
1:2.5	1.97	5.91	1:3

Table S2. The concentrations of Au and Gd in aqueous solution of Au/GdNC@SiO_2 dialyzed for different time points.

Dialysis Time (Day)	Au in Au/GdNC@SiO_2 (mM)	Gd in Au/GdNC@SiO_2 (mM)
1	0.89	1.79
3	0.86	1.76
5	0.84	1.76
7	0.88	1.78

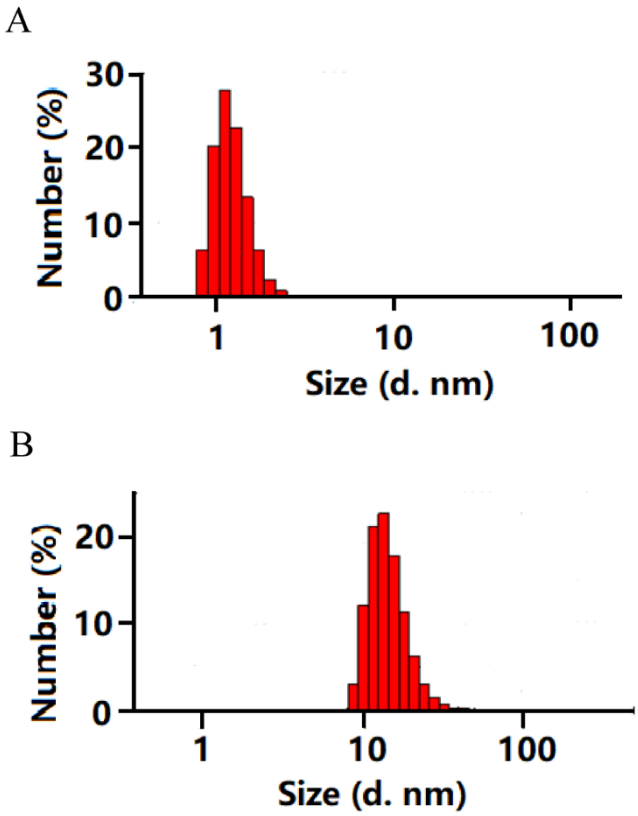

Figure S1. Dynamic light scattering data of (A) AuNC and (B) Au/GdNC in aqueous solution.

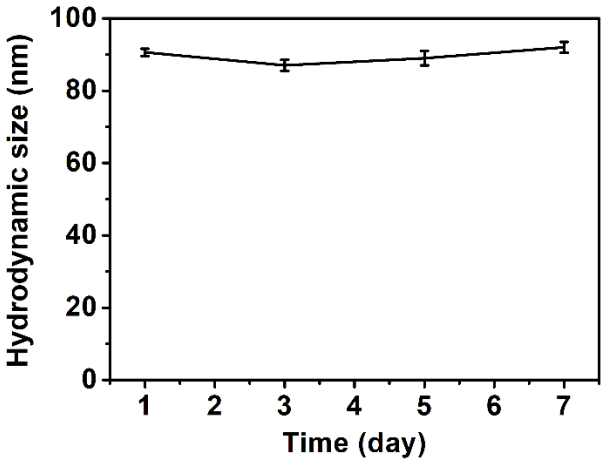

Figure S2. Dynamic light scattering data of Au/GdNC@SiO_2 in aqueous solution at different time intervals.

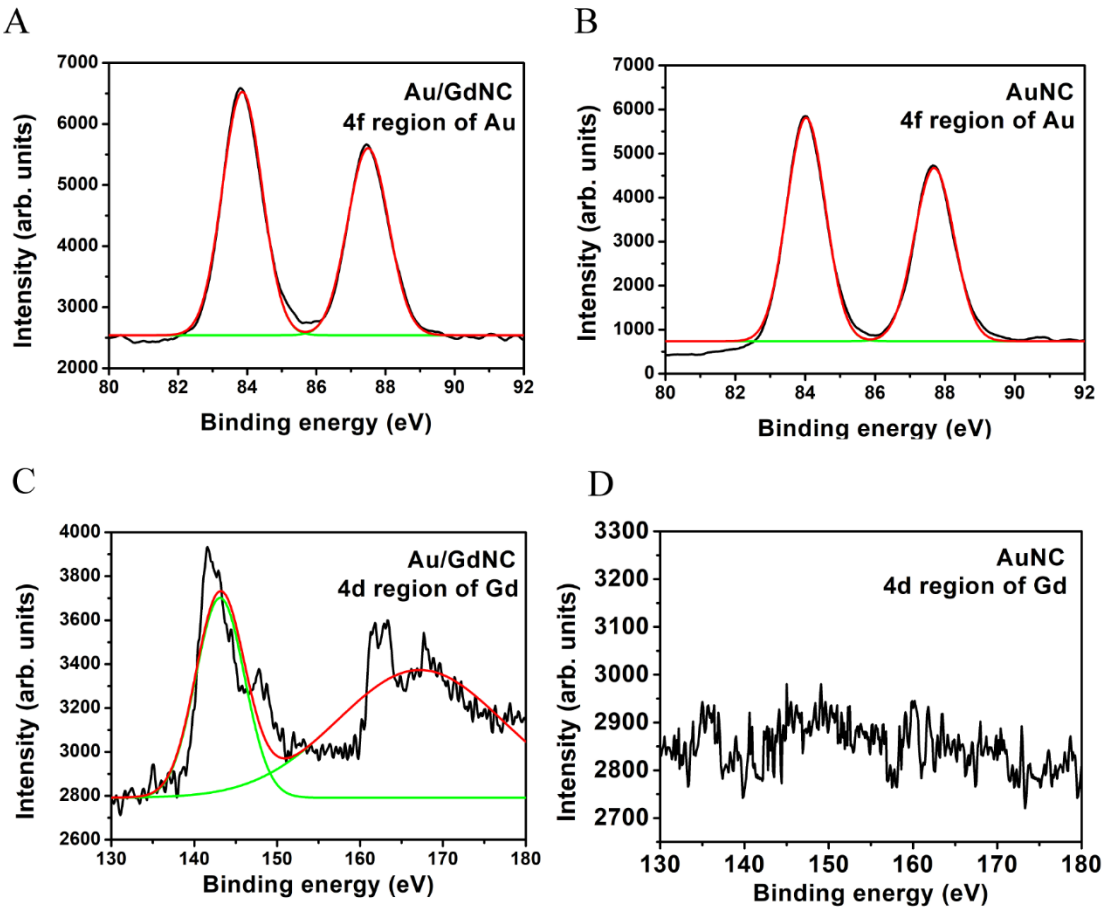

Figure S3. X-ray photoelectron spectroscopy spectra of 4f region of Au for (A) Au/GdNC and (B) AuNC, and 4d region of Gd for (C) Au/GdNC, and (D) AuNC, respectively.

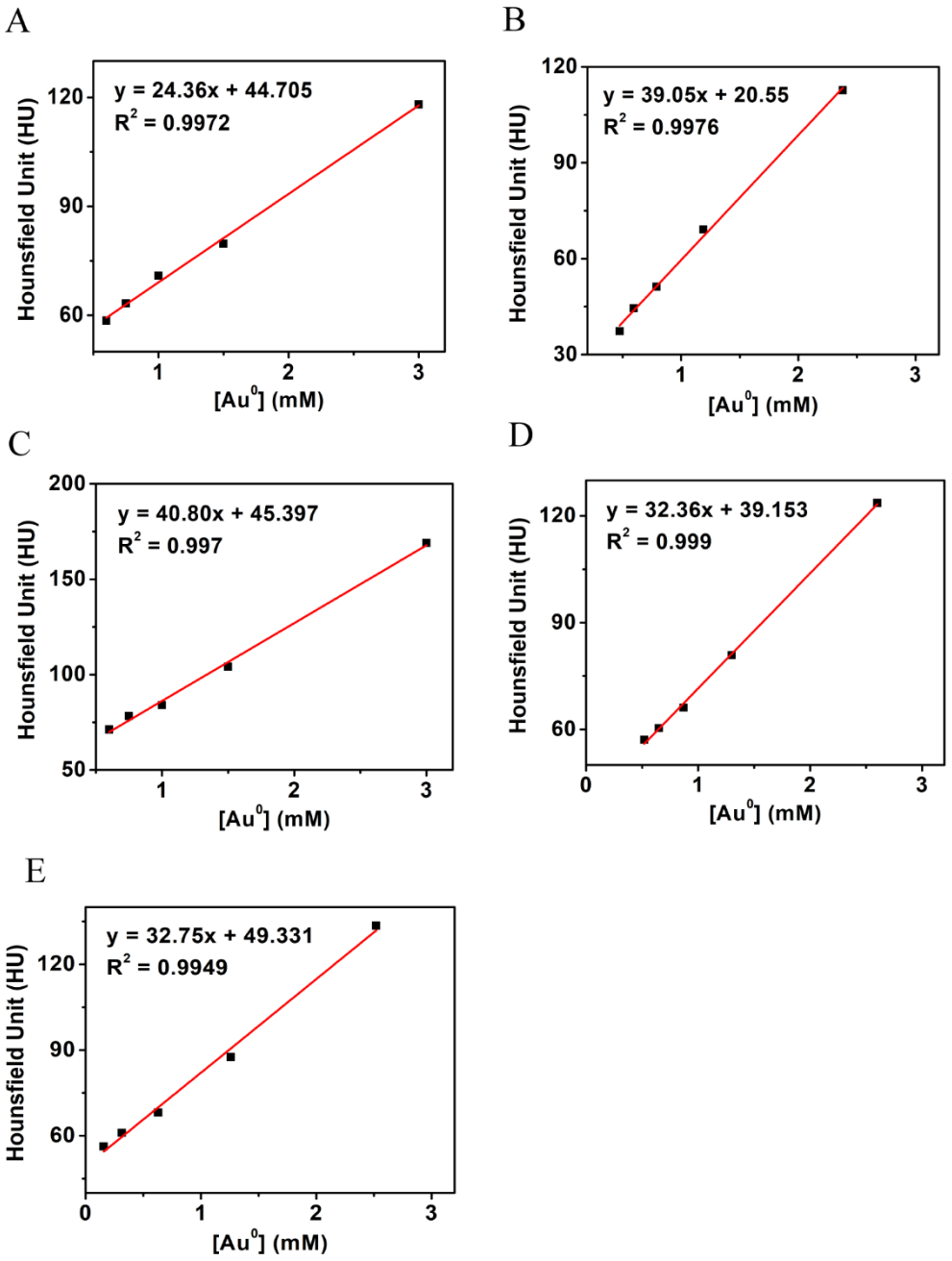

Figure S4. Plot of calculated HU values of Au/GdNC with different feeding ratio of $HAuCl_4$ to $GdCl_3$ at (A) 1:0.5, (B) 1:1, (C) 1:1.5, (D) 1:2, and (E) 1:2.5 as a function of the Au concentration, respectively.

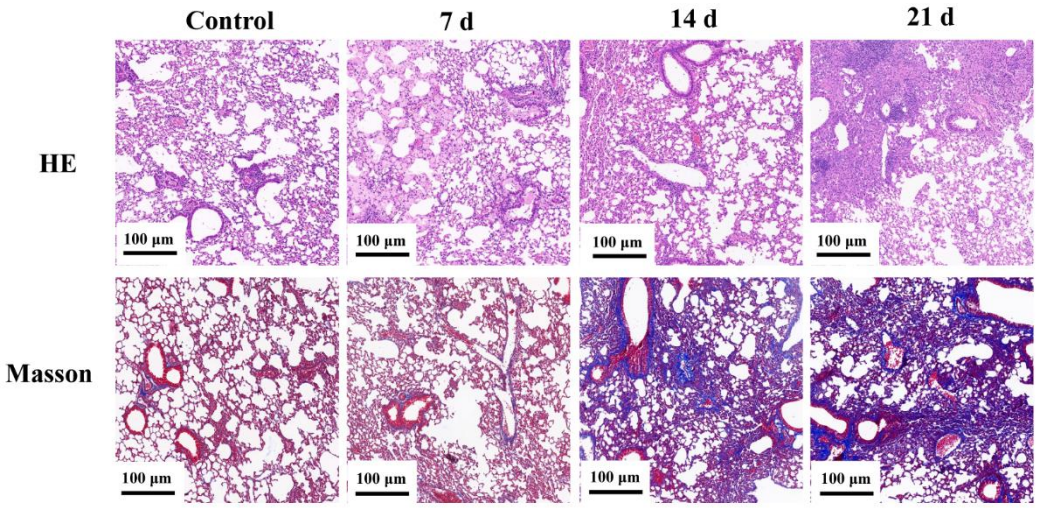

Figure S5. HE and Masson's trichrome staining results of the bleomycin-induced pulmonary fibrosis. The mice lungs were harvested after administration of bleomycin in the next 7, 14, and 21 days. Saline-treated (control) or bleomycin-treated lung sections were stained with HE and Masson's trichrome stain.

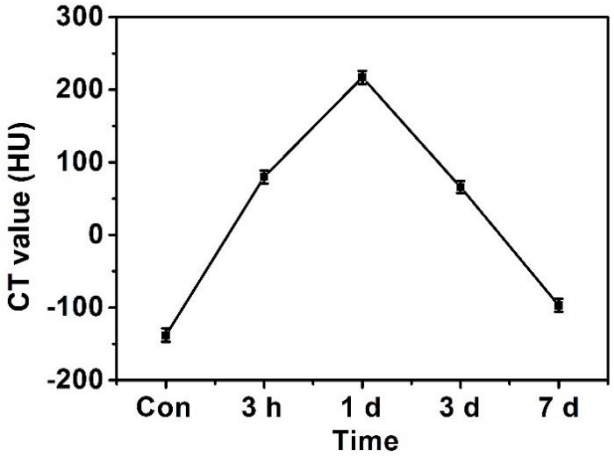

Figure S6. The CT values of the Au/GdNC@SiO_2 labeled hMSCs before and after transplantation into the lung at 3 h, 1 d, 3 d and 7 d, respectively.

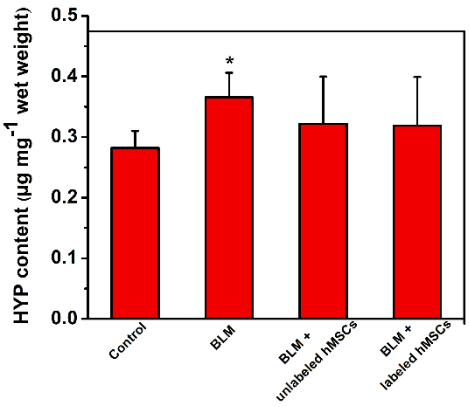

Figure S7. Hydroxyproline content in the lung of the BLM-induced PF mouse without and with the unlabeled and labeled hMSCs transplantation. The mice treated with saline were set as control.