Supplementary Materials: Improving Payload Capacity and Anti-Tumor Efficacy of Mesenchymal Stem Cells Using TAT Peptide Functionalized Polymeric Nanoparticles

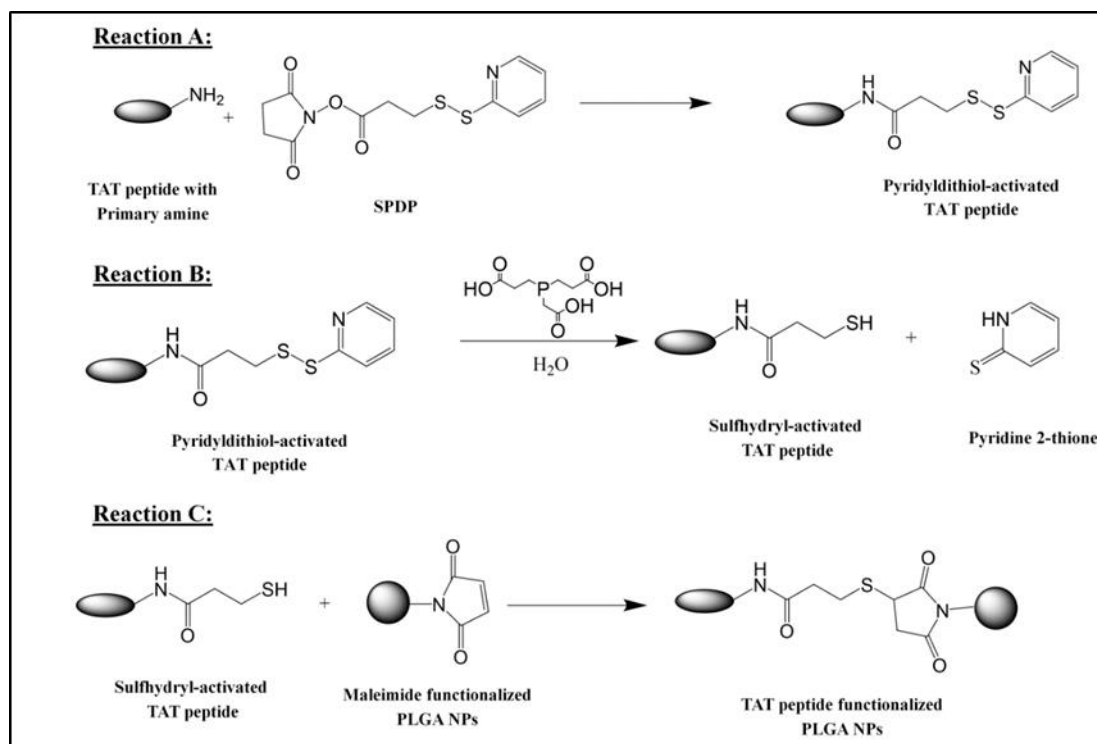**Gopikrishna Moku, Buddhadev Layek, Lana Trautman, Samuel Putnam, Jayanth Panyam, and Swayam Prabha**

Figure S1. Preparation of TAT functionalized PLGA nanoparticles.

Table S1. Effects of different treatments on complete blood count. Data represents mean ± SD ($n = 4$).

Parameters	Saline		MSCs + TAT NP		TAT PTX NP		MSCs + TAT PTX NP	
	Day 7	Day 18	Day 7	Day 18	Day 7	Day 18	Day 7	Day 18
WBC (×10³ cells/µL)	5.0 ± 1.4	6.3 ± 0.5	4.9 ± 0.8	5.0 ± 0.6	5.3 ± 0.6	4.4 ± 0.2	5.6 ± 1.2	4.7 ± 0.7
NE (%)	16.3 ± 2.2	16.1 ± 3.3	14.1 ± 2.8	16.2 ± 5.2	13.4 ± 1.2	10.9 ± 4.1	11.7 ± 0.2	9.0 ± 1.7
LY (%)	77.7 ± 2.2	78.5 ± 3.1	80.7 ± 2.3	81.3 ± 5.9	81.5 ± 1.8	87.0 ± 6.0	82.3 ± 2.1	88.2 ± 3.2
MO (%)	1.5 ± 0.3	2.1 ± 0.3	1.7 ± 0.4	0.3 ± 0.6	1.5 ± 0.2	1.0 ± 0.7	1.7 ± 0.3	0.7 ± 0.5
EO (%)	2.9 ± 0.2	2.2 ± 1.1	2.3 ± 0.9	1.9 ± 1.7	2.1 ± 1.2	0.7 ± 1.0	3.1 ± 1.8	1.6 ± 1.0
BA (%)	0.3 ± 0.1	0.2 ± 0.1	0.2 ± 0.1	0.1 ± 0.1	0.3 ± 0.1	0.1 ± 0.1	0.2 ± 0.1	0.1 ± 0.1
LUC (%)	1.3 ± 0.2	0.9 ± 0.1	1.0 ± 0.2	0.2 ± 0.4	1.2 ± 0.3	0.3 ± 0.4	1.0 ± 0.3	0.4 ± 0.4
RBC (×10⁶ cells/µL)	9.8 ± 0.3	9.7 ± 0.3	9.8 ± 0.2	9.5 ± 0.3	9.8 ± 0.1	9.1 ± 0.3	9.7 ± 0.2	9.1 ± 0.1
HGB (g/dL)	15.4 ± 0.4	15.5 ± 0.6	15.3 ± 0.3	15.0 ± 0.5	15.6 ± 0.2	14.8 ± 0.3	15.1 ± 0.3	14.3 ± 0.3
HCT (%)	50.9 ± 1.1	49.2 ± 1.7	50.2 ± 1.0	46.5 ± 1.6	51.4 ± 0.7	46.1 ± 1.5	49.5 ± 0.9	45.6 ± 0.9
MCV (fL)	51.9 ± 0.5	51.0 ± 0.2	51.2 ± 0.3	49.1 ± 0.3	52.4 ± 0.8	50.5 ± 0.5	51.3 ± 0.6	49.9 ± 1.0
MCH (pg)	15.8 ± 0.2	16.0 ± 0.1	15.6 ± 0.2	15.8 ± 0.2	15.9 ± 0.3	16.2 ± 0.3	15.6 ± 0.2	15.7 ± 0.2
MCHC (g/dL)	30.3 ± 0.1	31.4 ± 0.1	30.5 ± 0.2	32.2 ± 0.5	30.3 ± 0.1	32.2 ± 0.5	30.6 ± 0.1	31.4 ± 1.0
RDW (%)	13.8 ± 0.5	14.7 ± 0.5	13.7 ± 0.3	13.9 ± 0.5	14.6 ± 0.4	14.8 ± 0.3	13.5 ± 0.9	14.3 ± 0.5
PLT (×10³ cells/µL)	840 ± 26	977 ± 50	1106 ± 224	1248 ± 131	914 ± 60	1060 ± 103	1349 ± 238	1234 ± 147
MPV (fL)	6.5 ± 0.2	7.8 ± 0.9	6.6 ± 0.4	6.8 ± 0.4	7.1 ± 0.5	7.1 ± 0.2	6.5 ± 0.3	6.6 ± 0.6

WBC: White Blood Cell; NE: Neutrophil; LY: Lymphocyte; MO: Monocyte; EO: Eosinophil; BA: Basophil; LUC: Large Unstained Cells; RBC: Red Blood Cell; HGB: Hemoglobin Concentration; HCT: Hematocrit; MCV: Mean Corpuscular

Volume; MCH: Mean Corpuscular Hemoglobin; MCHC: Mean Corpuscular Hemoglobin Concentration; RDW: RBC Distribution Width; PLT: Platelet count; MPV: Mean Platelet Volume.