Supporting Information

NIR-II FL/PA Dual-modal Imaging Long-term Tracking of Human Umbilical Cord-derived Mesenchymal Stem Cells Labeled with Melanin Nanoparticles and Visible HUMSCs-based Liver Regeneration for Acute Liver Failure

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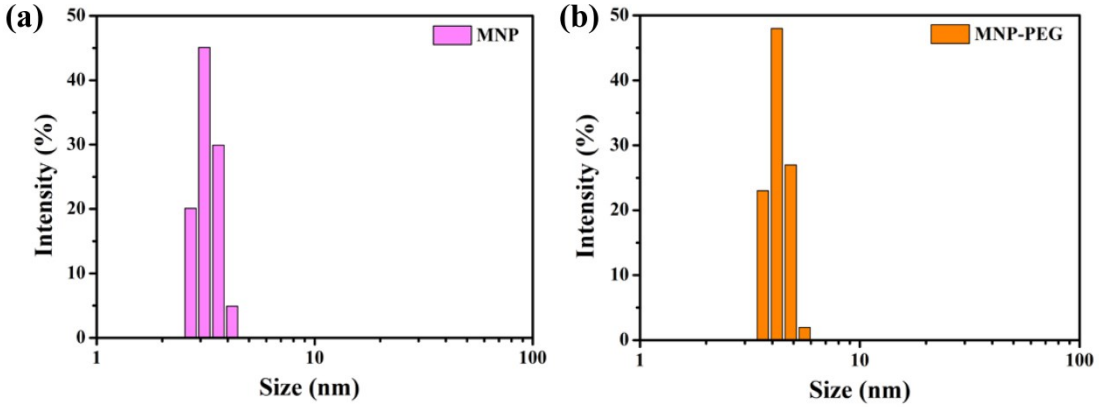

Figure S1. Hydrodynamic size distribution of MNP and MNP-PEG determined by DLS.

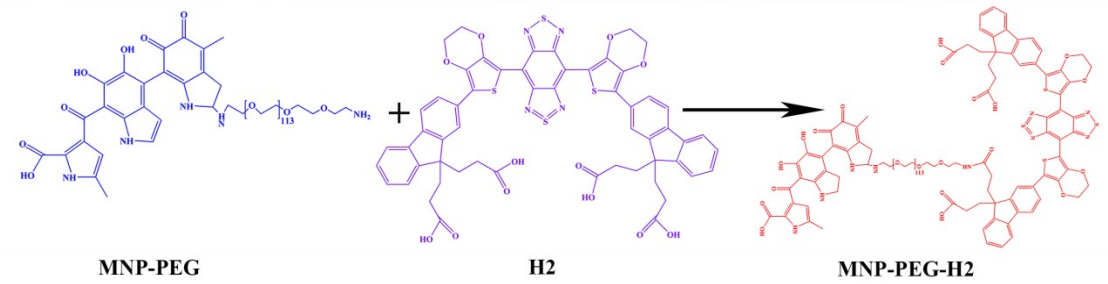

Figure S2. Synthetic route of MNP-PEG-H2.

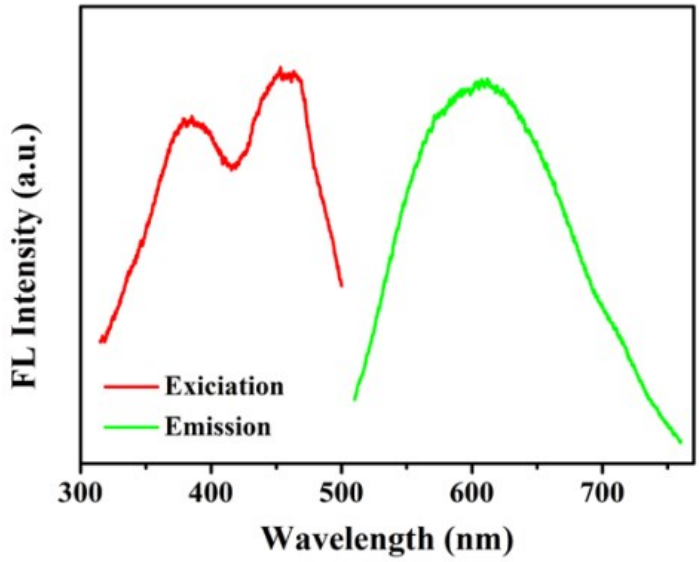

Figure S3. The fluorescence excitation and emission spectra of MNP-PEG-H2 in visible region.

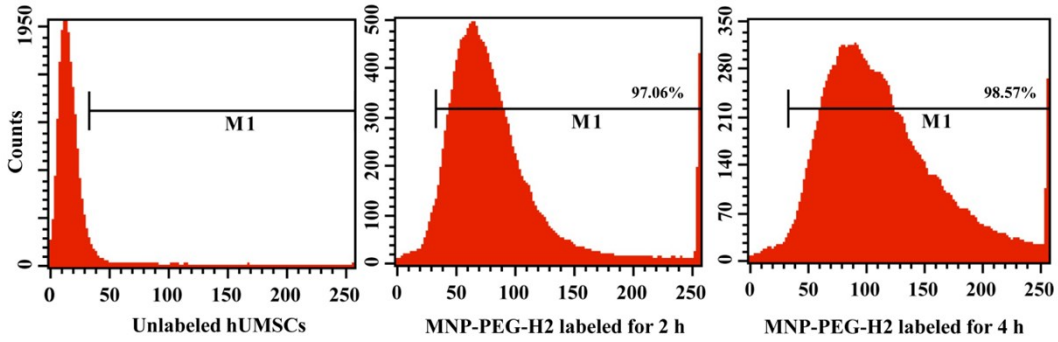

Figure S4. Flow cytometry quantitative analysis of unlabeled, MNP-PEG-H2 labeled hUMSCs for 2 h and 4 h.

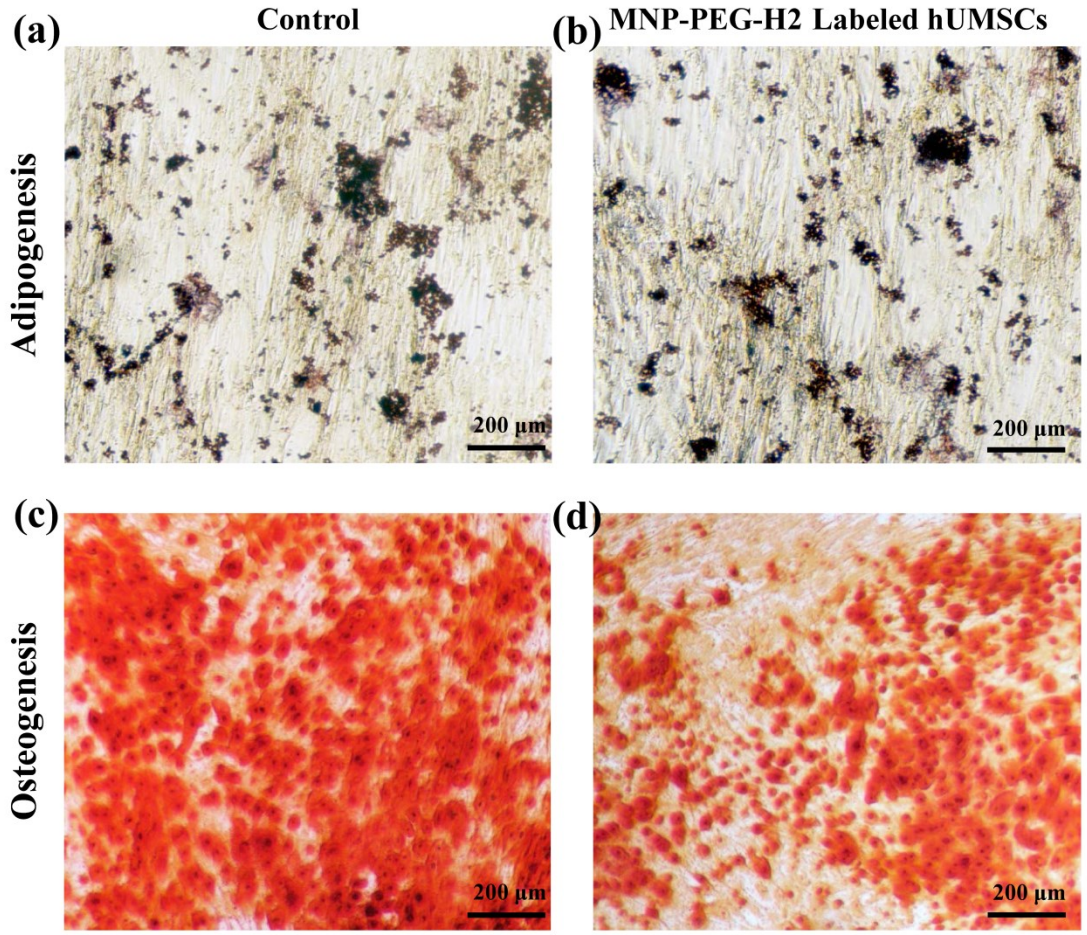

Figure S5. Assessment of adipogenic and osteogenesis differentiation potential of control and MNP-PEG-H2 labeled hUMSCs.

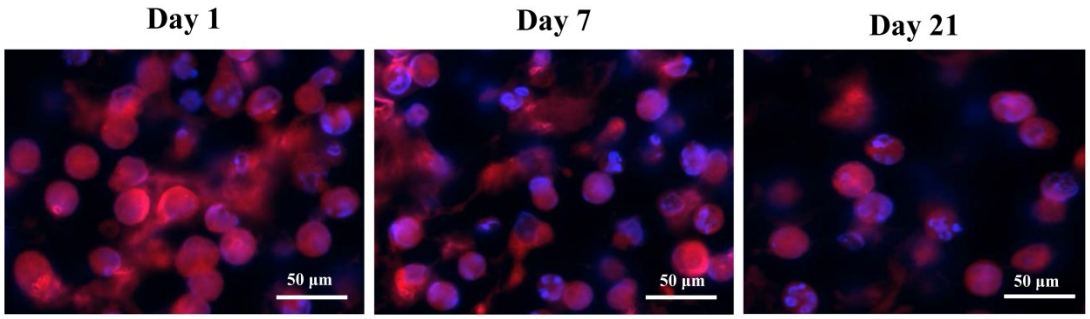

Figure S6. Histological staining of the MNP-PEG-H2 labeled hUMSCs at day 1, 7 and 21 after subcutaneous transplantation in vivo. The nuclei are stained in blue, and the MNP-PEG-H2 signal was red.

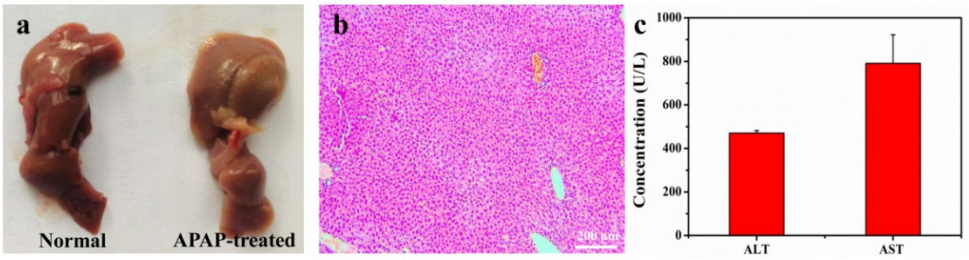

Figure S7. Assessment of APAP-induced ALF. (a) The morphology of normal and APAP-treated livers. (b) The H&E staining of APAP-treated liver. (c) The serum ALT and AST levels of APAP-treated mice.

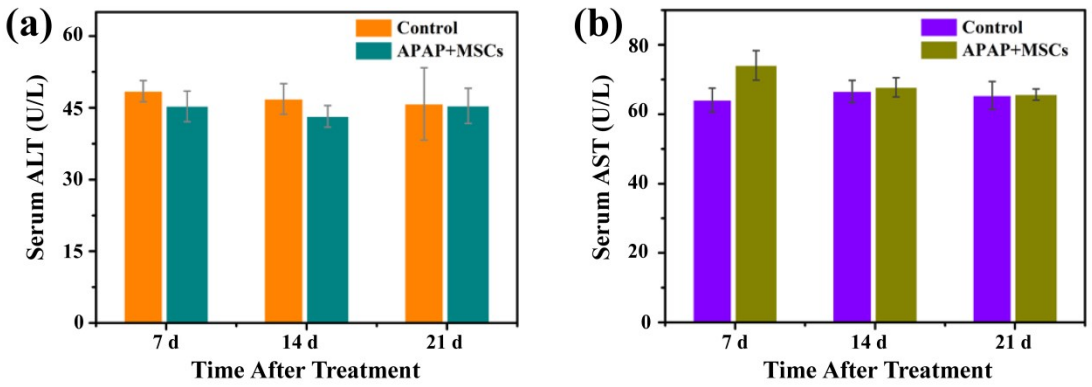

Figure S8. The long-term hepatic function of MNP-PEG-H2-labeled hUMSCs for mice with ALF. The levels of ALT (a) and AST (b) in the blood serum in healthy mice (control) and ALF mice with hUMSCs transplantation.