

Supporting Information

Mesoporous silica nanoparticles induced hepatotoxicity via NLRP3 inflammasome activation and caspase-1-dependent pyroptosis

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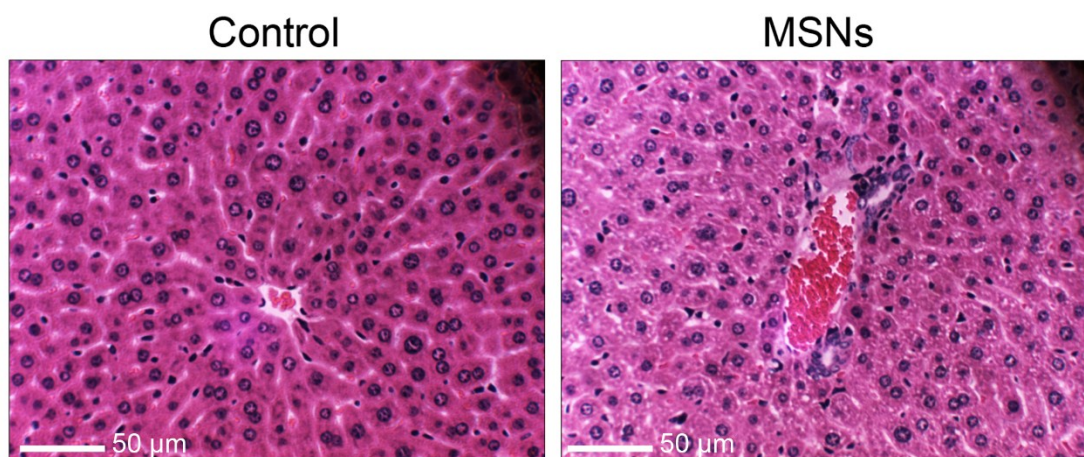


Figure S1. Hematoxylin and eosin staining of liver sections after MSNs administration.

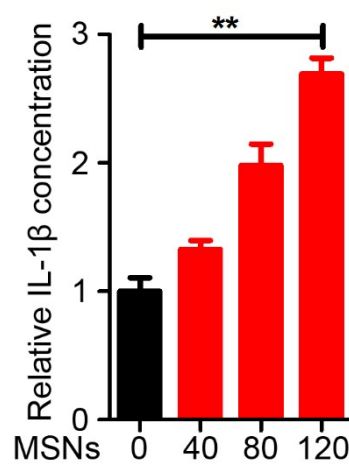


Figure S2. MSNs induced IL-1 β secretion in the cell culture medium of hepatic cells.

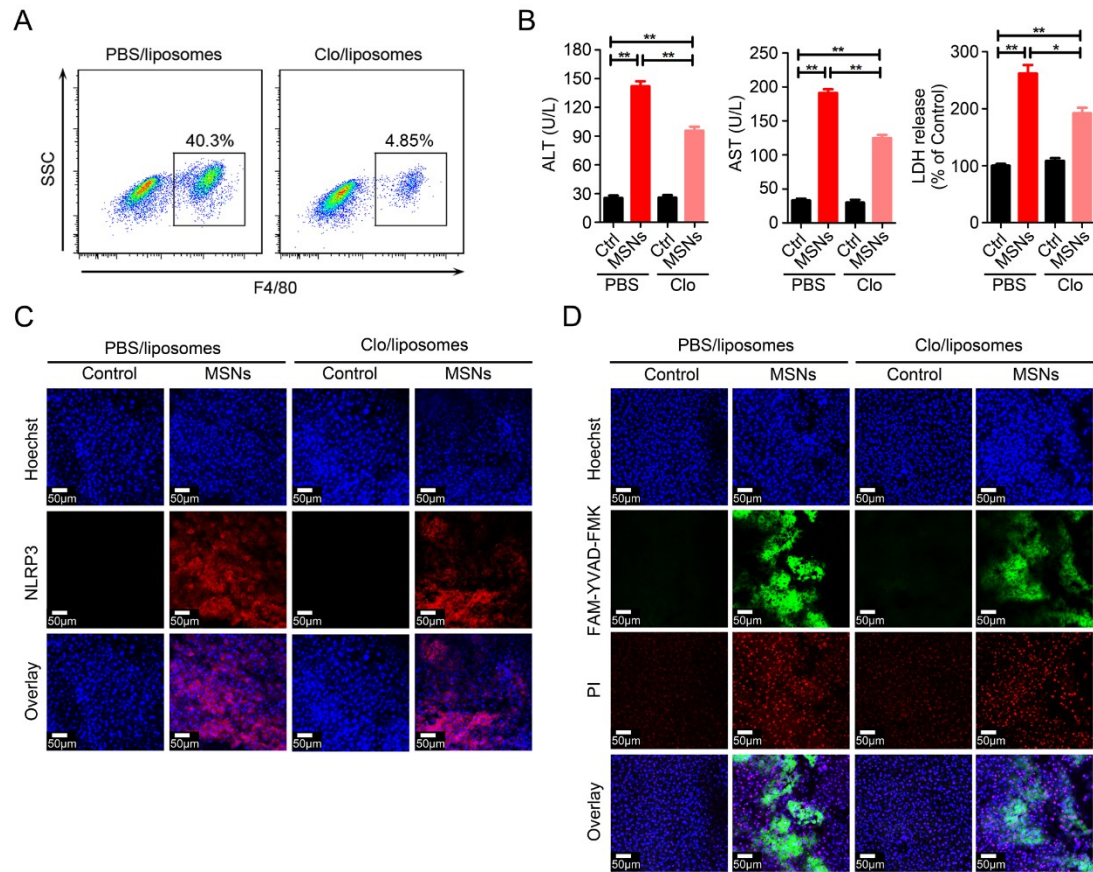


Figure S3. Kupffer cells depletion could partially alleviate MSNs-induced hepatotoxicity. To deplete Kupffer cells, WT BALB/c mice were intravenously injected twice a week with 200 μ L clodronate liposomes (FormuMax Scientific, Sunnyvale, CA, USA). PBS liposomes were used as a control. The first injection was performed 24 hours before beginning MSNs administration. (A) Depletion efficiency was verified by flow cytometry. (B) Serum levels of AST, ALT and LDH. (C) Liver immunofluorescence staining with anti-NLRP3 antibody. (D) Co-staining of liver tissues with FAM-YVAD-FMK and PI displayed that MSNs-elicited pyroptosis. Clo/liposomes and PBS/liposomes represented clodronate liposomes and PBS liposomes, respectively. Values in B were shown as mean \pm SD and $n = 3$. (* $p < 0.05$, ** $p < 0.01$ versus the relevant control).

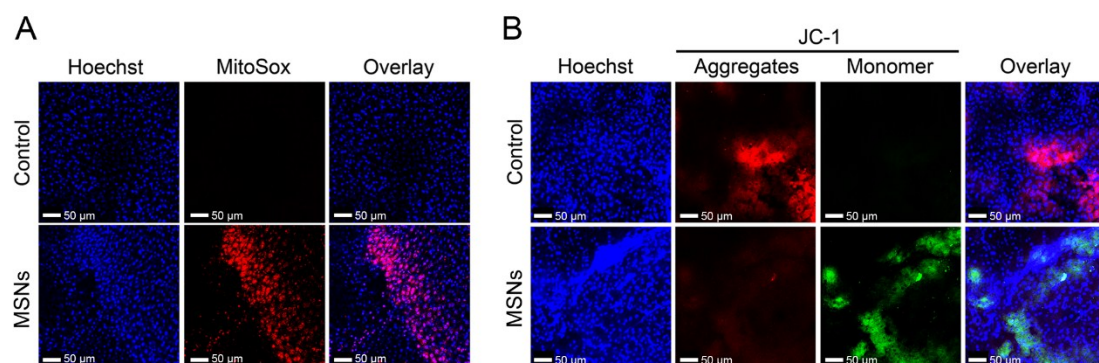


Figure S4. ROS generation (A) and mitochondrial membrane potential dysfunction (B) in the liver after MSNs treatment.

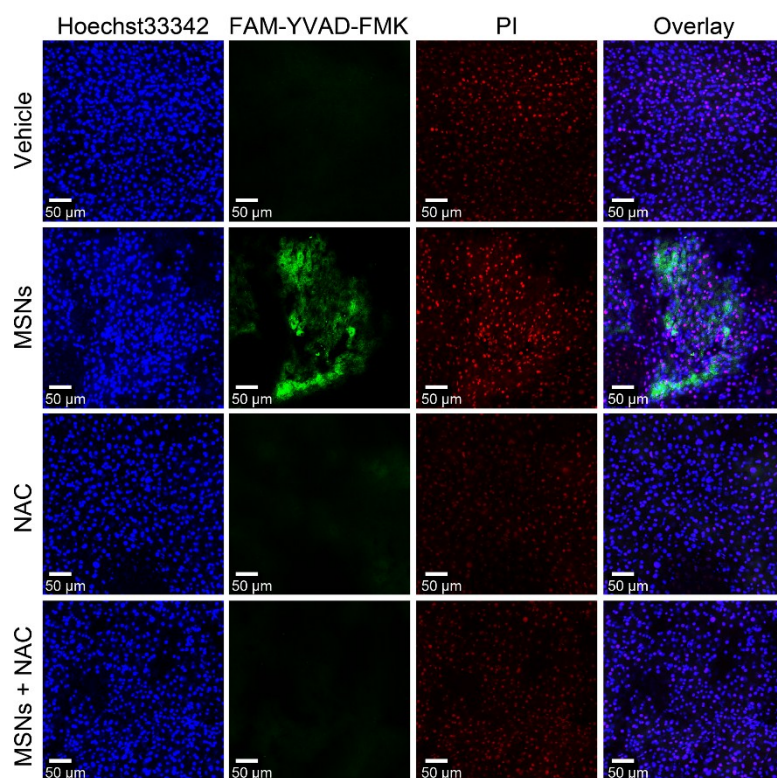


Figure S5. ROS scavenger abolishes increased pyroptosis caused by MSNs in the liver.