

Supporting Information

A neutrophil-mimetic magnetic nanoprobe for molecular magnetic resonance imaging of stroke-induced neuroinflammation

Chunming Tang^{† a}, Qianqian Wang^{† a}, Kaiming Li^a, Xiuqi Li^a, Cong Wang^a, Lingjing Xue^a, Caoyun Ju^{* a}, Can Zhang^{* a}

^aState Key Laboratory of Natural Medicines, Jiangsu Key Laboratory of Drug Discovery for Metabolic Diseases, Center of Advanced Pharmaceuticals and Biomaterials, China Pharmaceutical University, Nanjing 210009, P.R. China

* Correspondence to:

Can Zhang, Ph.D., State Key Laboratory of Natural Medicines, Jiangsu Key Laboratory of Drug Discovery for Metabolic Diseases, Center of Advanced Pharmaceuticals and Biomaterials, China Pharmaceutical University, Nanjing, P.R. China

E-mail: zhangcan@cpu.edu.cn

Caoyun Ju, Ph.D., State Key Laboratory of Natural Medicines, Jiangsu Key Laboratory of Drug Discovery for Metabolic Diseases, Center of Advanced Pharmaceuticals and Biomaterials, China Pharmaceutical University, Nanjing, P.R. China

E-mail: jucaoyun@cpu.edu.cn

[†] Authors contributed equally to this work.

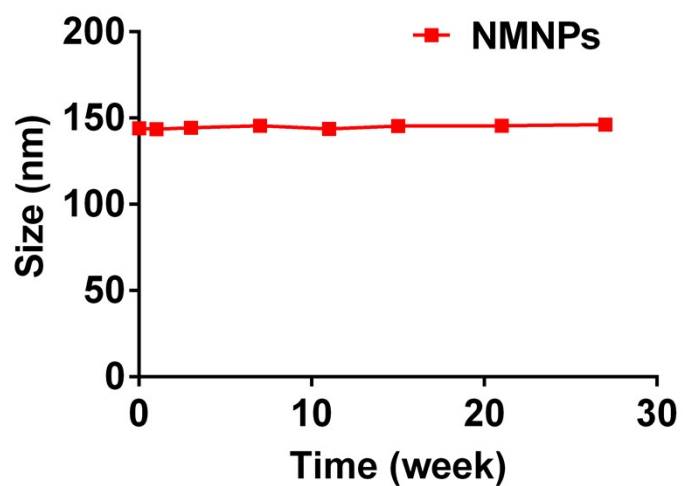


Figure S1. Stability of MNPs in aqueous solution monitored by dynamic light scattering at 4 °C. All values are expressed as mean \pm SD (n = 3).

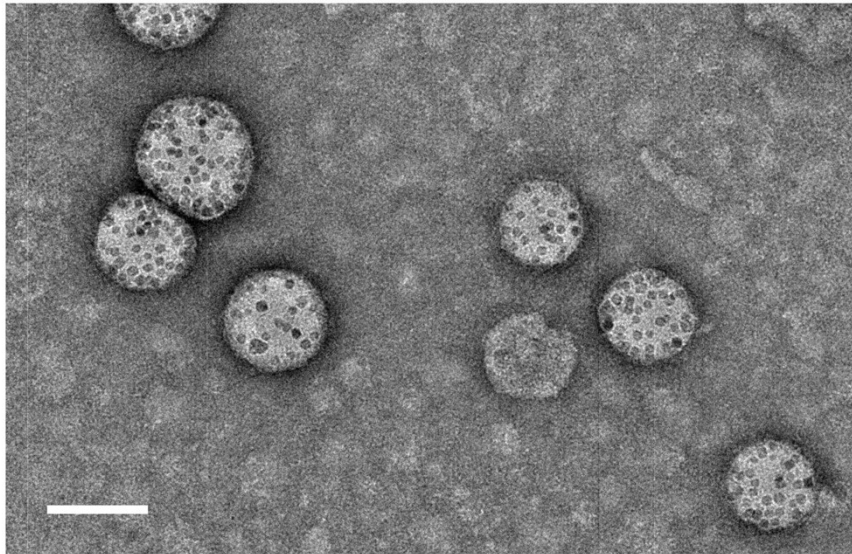


Figure S2. TEM image of MNPs. Scale bar = 100 nm.

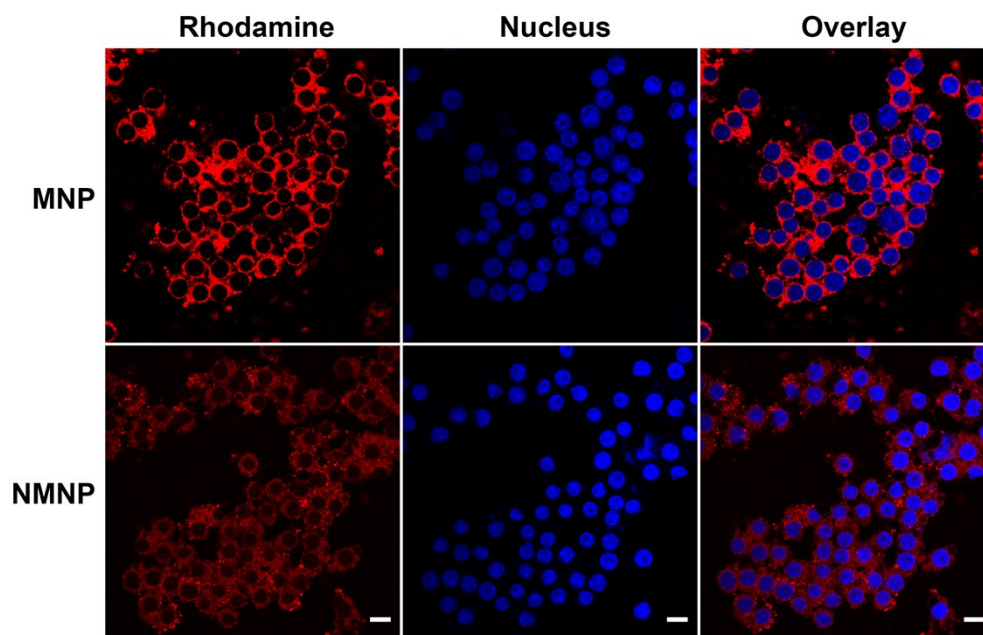


Figure S3. Intracellular uptake of MNPs and NMNPs by RAW264.7 cells after 1 h incubation. The nucleus was stained with Hoechst 33342 (blue). The MNPs and NMNPs were labelled with rhodamine (red). Scale bars, 5 μm .

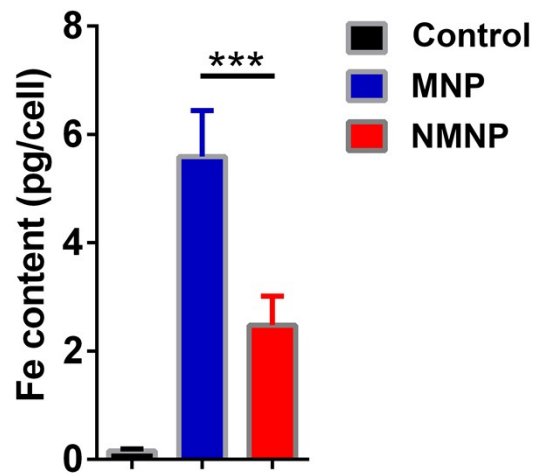


Figure S4. Quantitative analysis of the macrophage uptake of MNPs and NMNPs at $100 \mu\text{g Fe mL}^{-1}$ concentration concentrations for 4 h incubation. All values are expressed as mean \pm SD (n = 6). *** $P < 0.001$ (two-tailed Student's *t*-test).

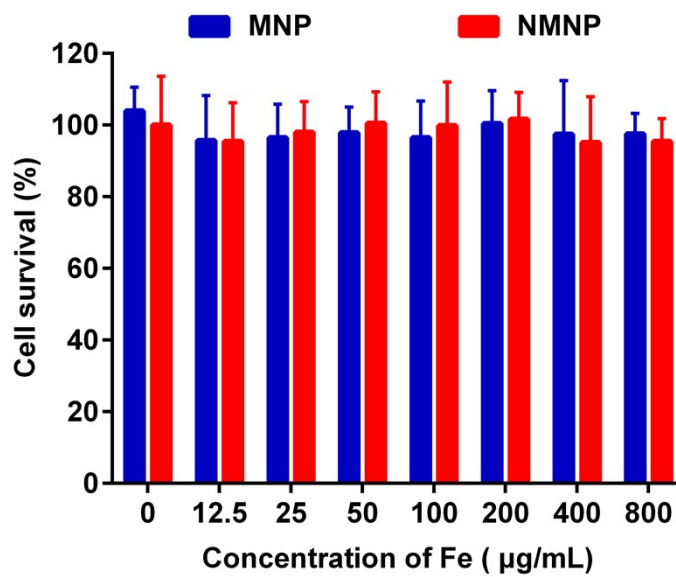


Figure S5. HUVEC viability after incubation with MNPs and NMNPs at different concentrations. All values are expressed as mean \pm SD (n = 6).

Table S1. The content of SPIO, PLGA, and neutrophil membrane in MNPs and NMNPs.

Formulations	SPIO (%)	PLGA (%)	neutrophil membrane (%)
MNPs	38.84	61.16	0
NMNPs	28.67	45.15	26.18