Electronic Supplementary Material (ESI) for Biomaterials Science. This journal is © The Royal Society of Chemistry 2024

Supporting Information

(Replaces the original version published on 20 Dec 2021 – Fig. S2 and

Fig. S3 updated)

Clodronate-nintedanib-loaded exosome-liposome hybridization enhances liver fibrosis therapy by inhibiting Kupffer cell activity

Keqin Ji^a, Mingrui Fan^a, Dong Huang^a, Lingna Sun^a, Bingqin Li^a, Ruoting Xu^a, Jiajing Zhang^a, Xuan Shao^a, Yanzuo Chen* a, b

^aShanghai Key Laboratory of Functional Materials Chemistry, East China University of Science and Technology, Shanghai 200237, China. E-mail: chenyz@ecust.edu.cn

^bEngineering Research Centre of Pharmaceutical Process Chemistry, Ministry of Education, Shanghai Key Laboratory of New Drug Design, School of Pharmacy, East China University of Science and Technology, Shanghai 200237, China.

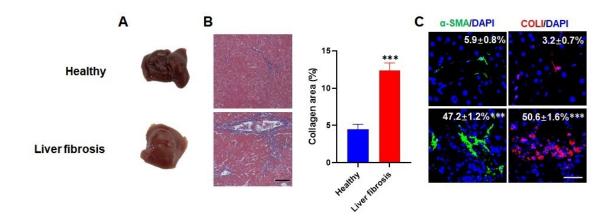


Fig. S1 Liver fibrosis model was successfully established in mice. (A) Representative photos of livers of healthy mice and in mice with liver fibrosis. (B) Masson-stained of liver sections and quantification of the presence of collagen. *P < 0.05, **P < 0.01, ***P < 0.001. (C) Immunofluorescent staining of α-SMA and collagen I. Data are mean ± SD, n = 3; *P < 0.05, **P < 0.01, ***P < 0.001, compared to healthy mice. Scale bar = 50 μm.

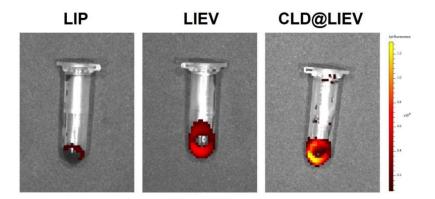


Fig. S2 Fluorescence images of blood samples 4 h after intravenous injection of DiD labeled liposomes in healthy mice.

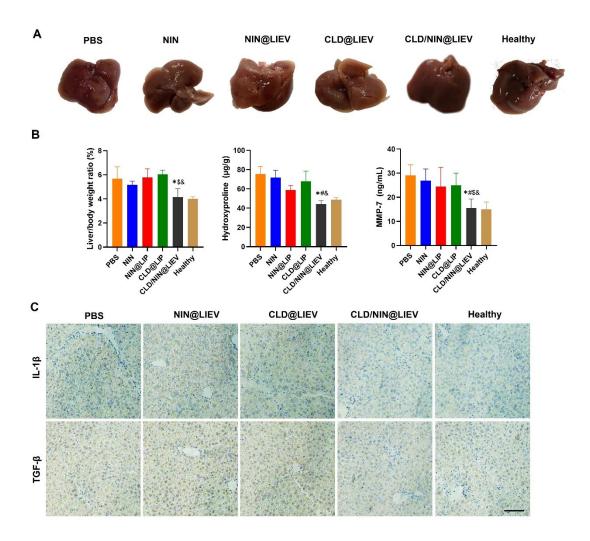


Fig. S3 Anti-fibrosis efficacy of CLD/NIN@LIEV. (A) Representative photos of mouse livers. (B) The liver weight-to-body weight ratio, hydroxyproline content, and MMP-7 expression after treatment. *P < 0.05, *P < 0.05, *P < 0.05, *P < 0.05, and TGF-β immunohistochemistry. Data are mean ± SD, n = 3. Scale bar = 50 μm.

Table S1. Antibodies used in the study.

Antibody	Company	Catalog	Application
Anti-F4/80	Servicebio	GB11027	IF
Anti-α-SMA	Servicebio	GB13044	IF
Anti-CD31	Servicebio	GB11063-1	IF
Anti-HNF-4α	Abcam	ab201460	IF
Anti-Collagen I	Servicebio	GB11022-3	IF
Anti-CD86	Abcam	ab238468	IF
Anti-CD163	Servicebio	GB11340-1	IF
Anti-IL-1β	Servicebio	GB11113	IHC
Anti-TGF-β	Servicebio	GB13028	IHC