Electronic Supplementary Material

Early initiation of ARBs without blood pressure risk via neutrophil membrane-fused pH-sensitive liposomes to reduce cardiomyocyte apoptosis after acute myocardial infarction

Jinfeng Gao [1,2,§], Wusiman Yakufu [1,2,§], Hongbo Yang [1,2,§], Yanan Song [1,2], Qiaozi Wang [1,2], Qiyu Li [1,2], Haipeng Tan [1,2], Jing Chen [1,2], Dili Sun [1,2], Zhengmin Wang [1,2], Jinyan Zhang [1,2], Xueyi Weng [1,2], Juying Qian [1,2], Zhiqing Pang [4], Qibing Wang [1,2] (✉), Zheyong Huang [1,2] (✉), and Junbo Ge [1,2,3] (✉)

[1] *Department of Cardiology, Zhongshan Hospital, Fudan University. Shanghai Institute of Cardiovascular Diseases, Shanghai 200032, China*
[2] *National Clinical Research Center for Interventional Medicine& Shanghai Clinical Research Center for Interventional Medicine, 180 Feng Lin Road, Shanghai 200032, China*
[3] *Institute of Biomedical Sciences, Fudan University, Shanghai 200032, China*
[4] *School of Pharmacy, Fudan University, Key Laboratory of Smart Drug Delivery, Ministry of Education, 826 Zhangheng Road, Shanghai 200032, China*
[§] *Jinfeng Gao, Wusiman Yakufu, and Hongbo Yang contributed equally to this work.*

Supporting information to https://doi.org/10.1007/s12274-023-5846-0

Address correspondence to Qibing Wang, wang.qibing@zs-hospital.sh.cn; Zheyong Huang, zheyonghuang@126.com; Junbo Ge, junboge@126.com

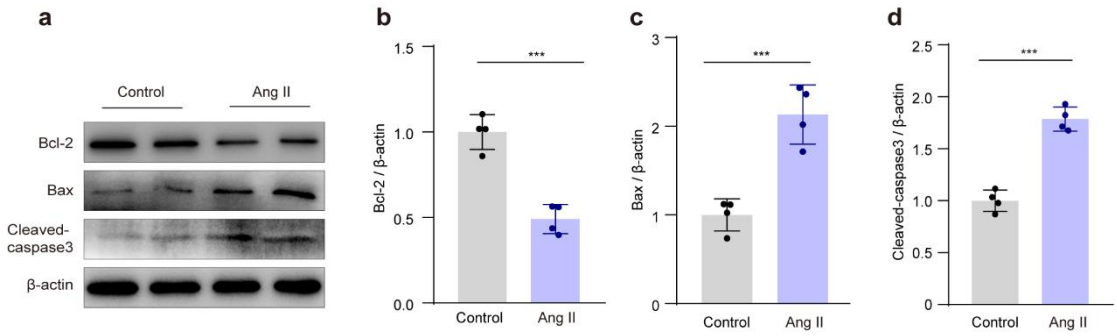


Figure S1 Ang II induced cardiomyocyte apoptosis. (a)–(d) Western blotting analysis and quantification of Bcl-2, BAX and Cleaved-caspase 3 in adult cardiomyocytes treated with Ang II (n = 4). Results are presented as mean ± SD. ***P < 0.001.

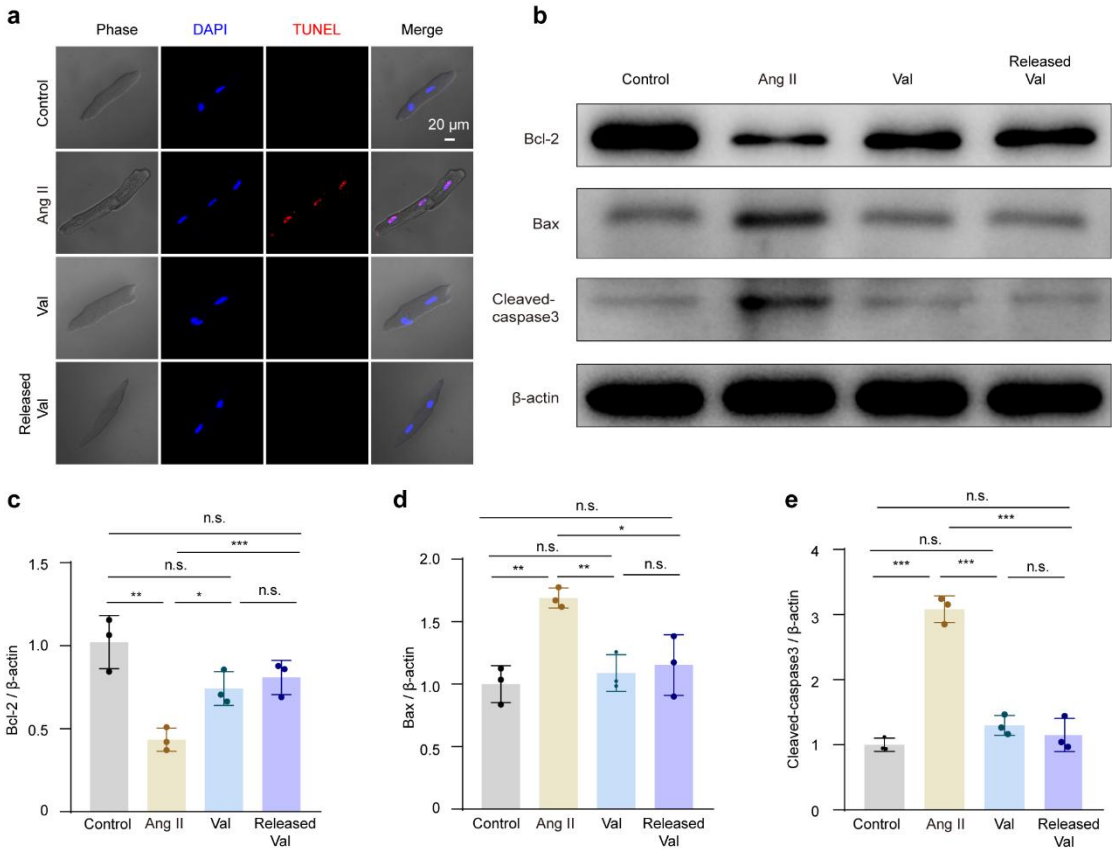


Figure S2 NSLP-Val reduced cardiomyocyte apoptosis *in vitro*. (a) Representative images of TUNEL staining of adult cardiomyocytes treated with Ang Ⅱ, Val and Released Val. (b)–(d) Western blotting analysis and quantification of Bcl-2, BAX and Cleaved-caspase 3 in HUVECs after treatment with Ang Ⅱ, Val and released Val. *β*-actin was used as loading control ($n = 3$). Results are presented as mean ± SD. n.s. indicates not significant, $P > 0.05$, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$.

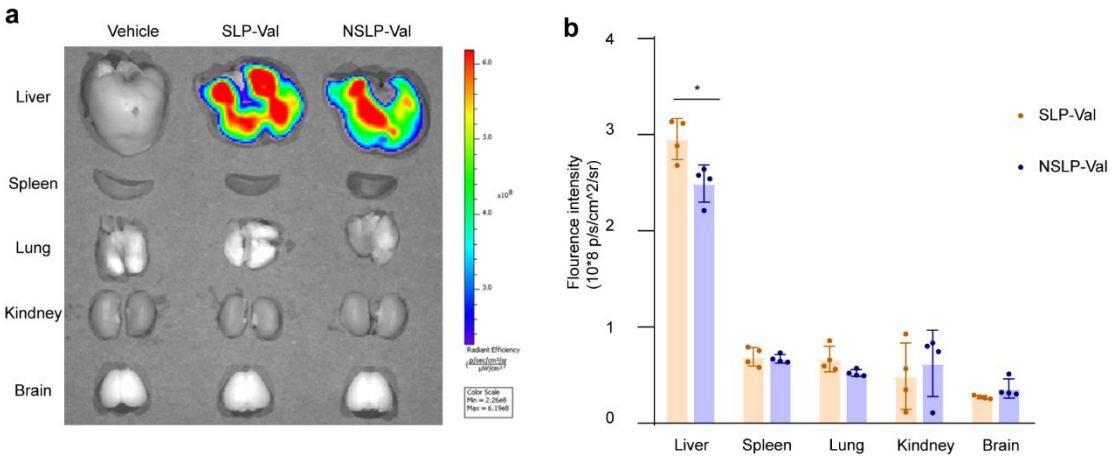


Figure S3 Targeting profile of NSLP-Val in other major organs. (a) Representative *ex vivo* images of other major organs (Liver, spleen, lung, kidney and brain) at different time points after intravenous injection of Vehicle, SLP-Val and NSLP-Val. (b) Quantification of nanoparticles accumulation in major organs (liver, spleen, brain, lung, kidney) after intravenous injection of nanoparticles (n = 4). Results are presented as mean ± SD. n.s. indicates not significant, $P > 0.05$, *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$.

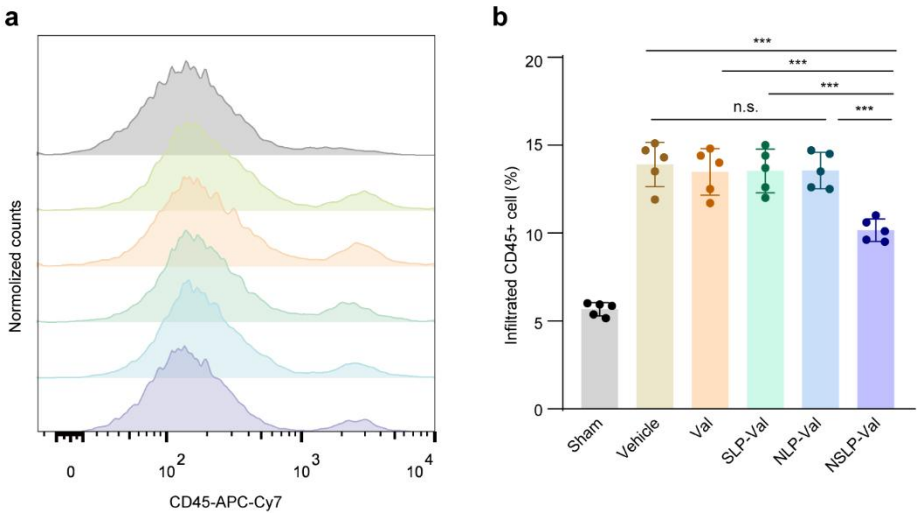


Figure S4 NSLP-Val reduced leukocytes infiltrate after AMI. (a)–(b) Representative images of infiltrated WBC by flow cytometry and the quantitative assay (n = 5). Results are presented as mean ± SD. n.s. indicates not significant, $P > 0.05$, $^{*}P < 0.05$, $^{**}P < 0.01$, $^{***}P < 0.001$.