Supporting Information for

ORIGINAL ARTICLE

Boosting 5-ALA-based photodynamic therapy by a liposomal nanomedicine through intracellular iron ion regulation

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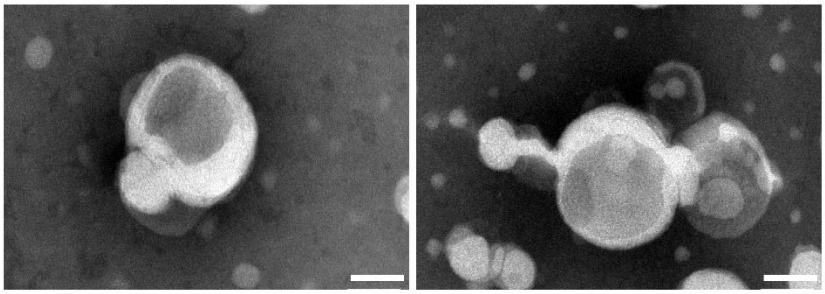

Figure S1 The transmission electron microscope of MFLs. Scale bar = 50 nm.

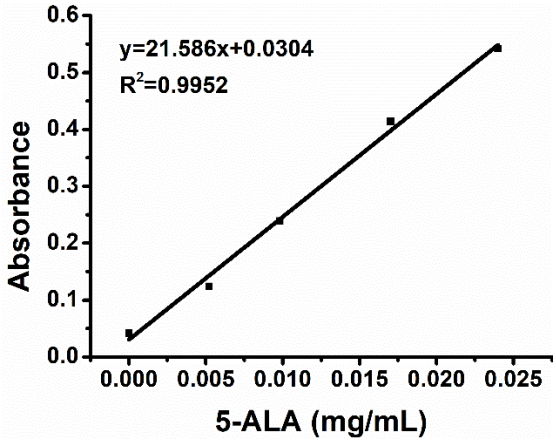

Figure S2 The standard curve of 5-ALA.

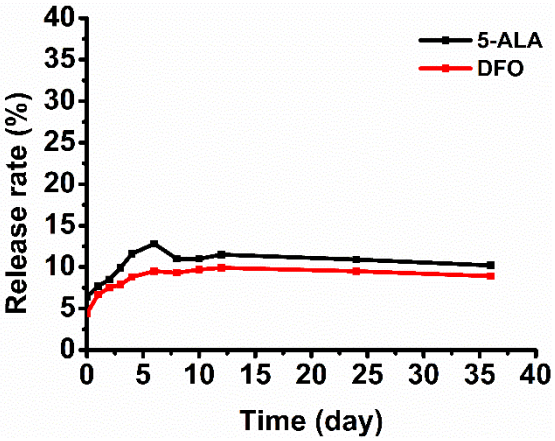

Figure S3 The release profiles of 5-ALA and DFO from MFLs.

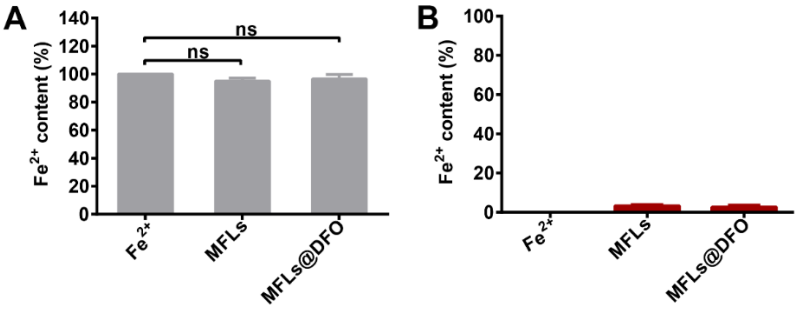

Figure S4 The content of iron in supernatant (A) and MFLs, MFLs@DFO (B). Data are presented as means ± SD (n = 3). ns, not significant.

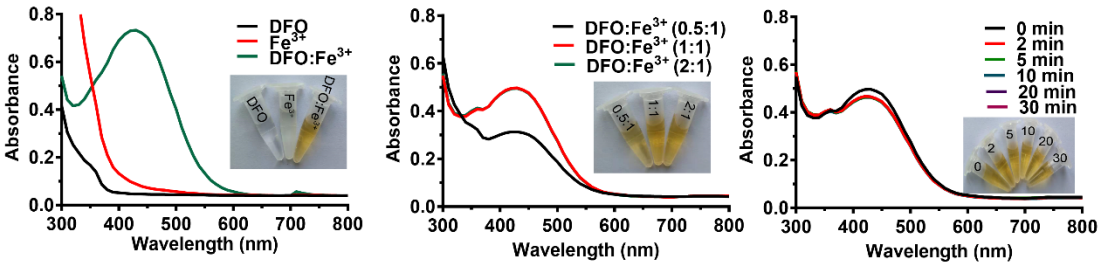

Figure S5 The UV–Vis spectra of DFO complex Fe^{3+} at 430 nm and picture of complexing appearance (the inset).

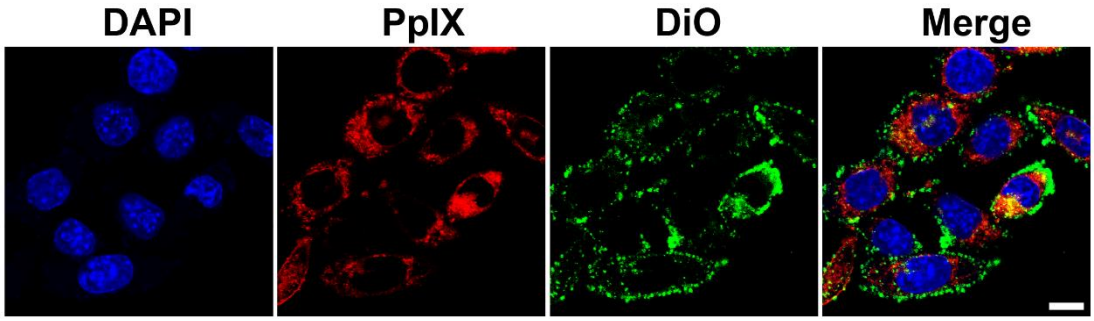

Figure S6 The distribution of MFLs@5-ALA/DFO labeled with DiO in B16-F10 cells by CLSM. Scale bar = 10 μm.

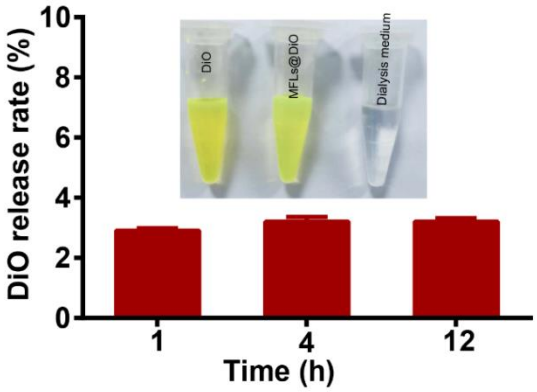

Figure S7 The release rate of DiO from MFLS@DiO at 12 h and the appearance picture (the inset). Data are presented as means ± SD (n = 3).

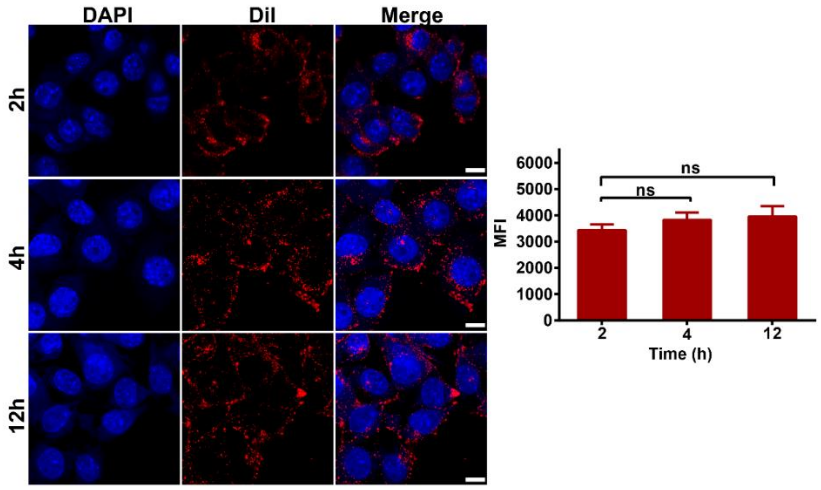

Figure S8 The stability and semi-quantitative analysis of DiI-labeled cell membrane. Scale bar = 10 μm. Data are presented as means ± SD (n = 3). ns, not significant.

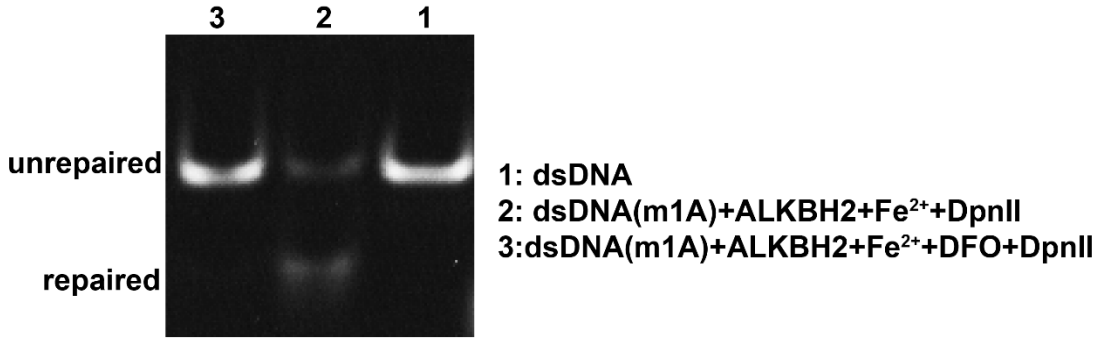

Figure S9 DFO inhibits ALKBH2 repair of m1A in dsDNA by using the DpnII digestion assay.

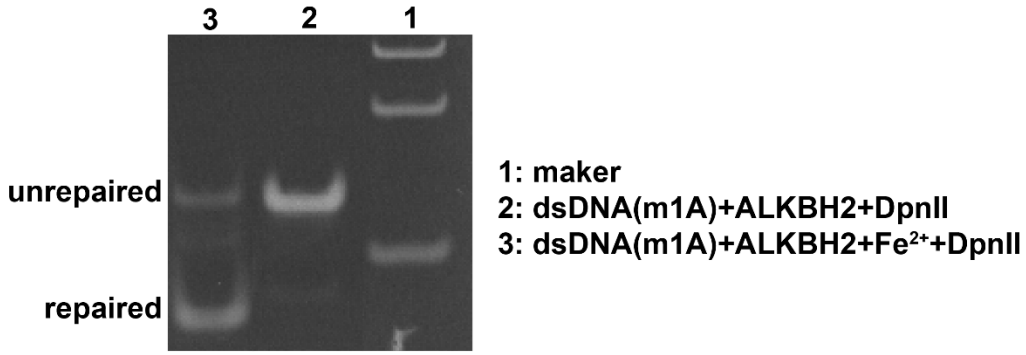

Figure S10 The confirmation of Fe^{2+} dependent ALKBH2 repair of m1A in dsDNA by using the DpnII digestion assay.

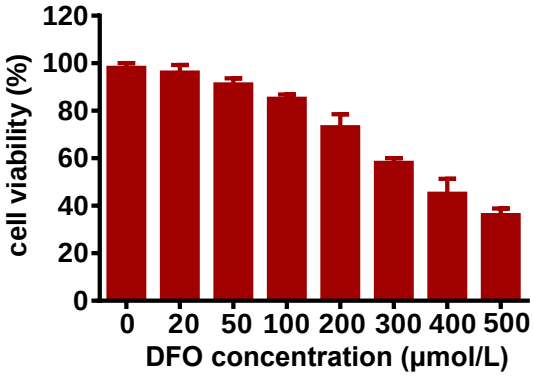

Figure S11 The cell viability of DFO after incubated with B16-F10 cells. Data are presented as means ± SD (n = 3).

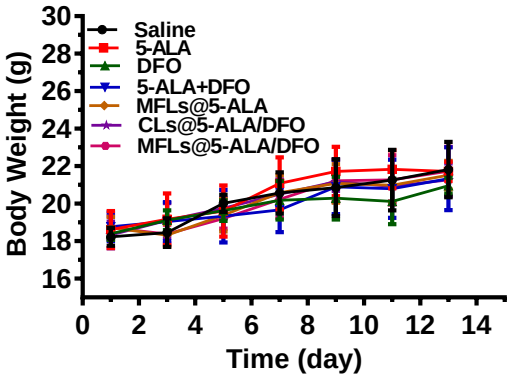

Figure S12 The weight of tumor-bearing mice after treated 14 days with different Preparations. Data are presented as means ± SD (n = 6).

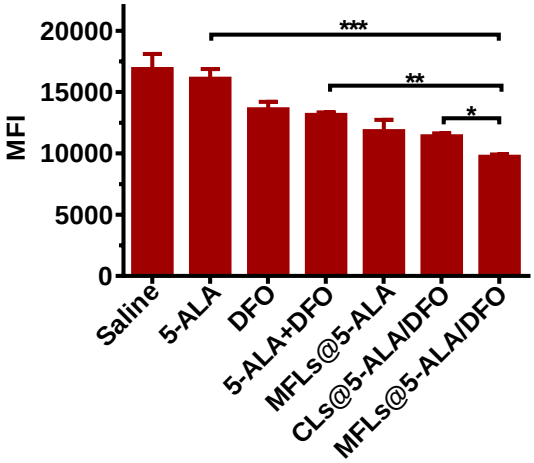

Figure S13 The semi-quantitative analysis of Fe^{2+} in tumor tissues after treated 14 days with different preparations. Data are presented as means ± SD (n = 3). ***P < 0.001, **P < 0.01, *P < 0.05.

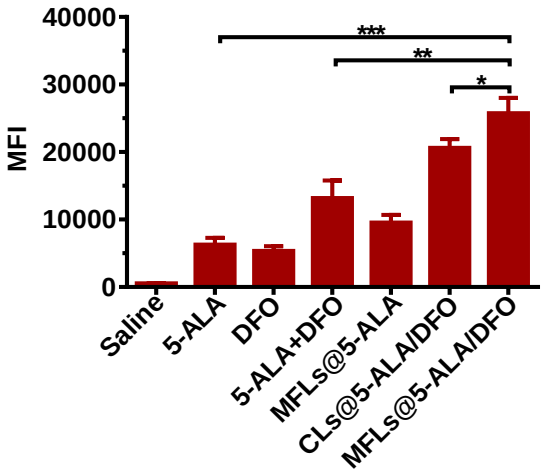

Figure S14 The semi-quantitative analysis of PpIX in tumor tissues after treated 14 days with different preparations. Data are presented as means ± SD (n = 3). ***P < 0.001, **P < 0.01, *P < 0.05.

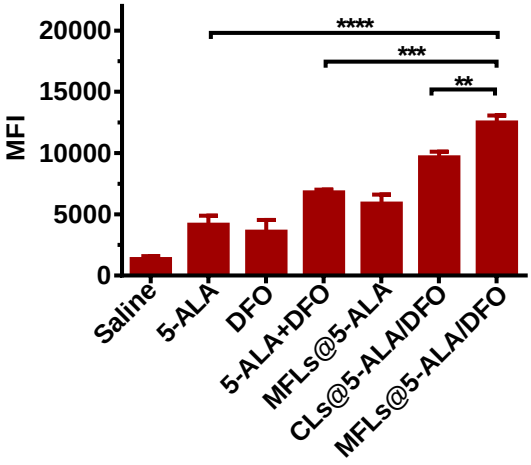

Figure S15 The semi-quantitative analysis of ROS in tumor tissues. Data are presented as means ± SD (n = 3). ****P < 0.0001, ***P < 0.001, **P < 0.01.

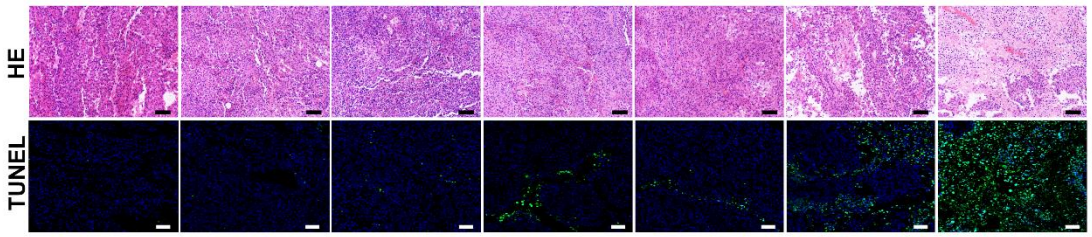

Figure S16 H&E staining and TUNEL staining of tumor tissues. The tumor tissues were exfoliated from different groups after treated 14 days with different preparations. Scale bar = 50 μm.

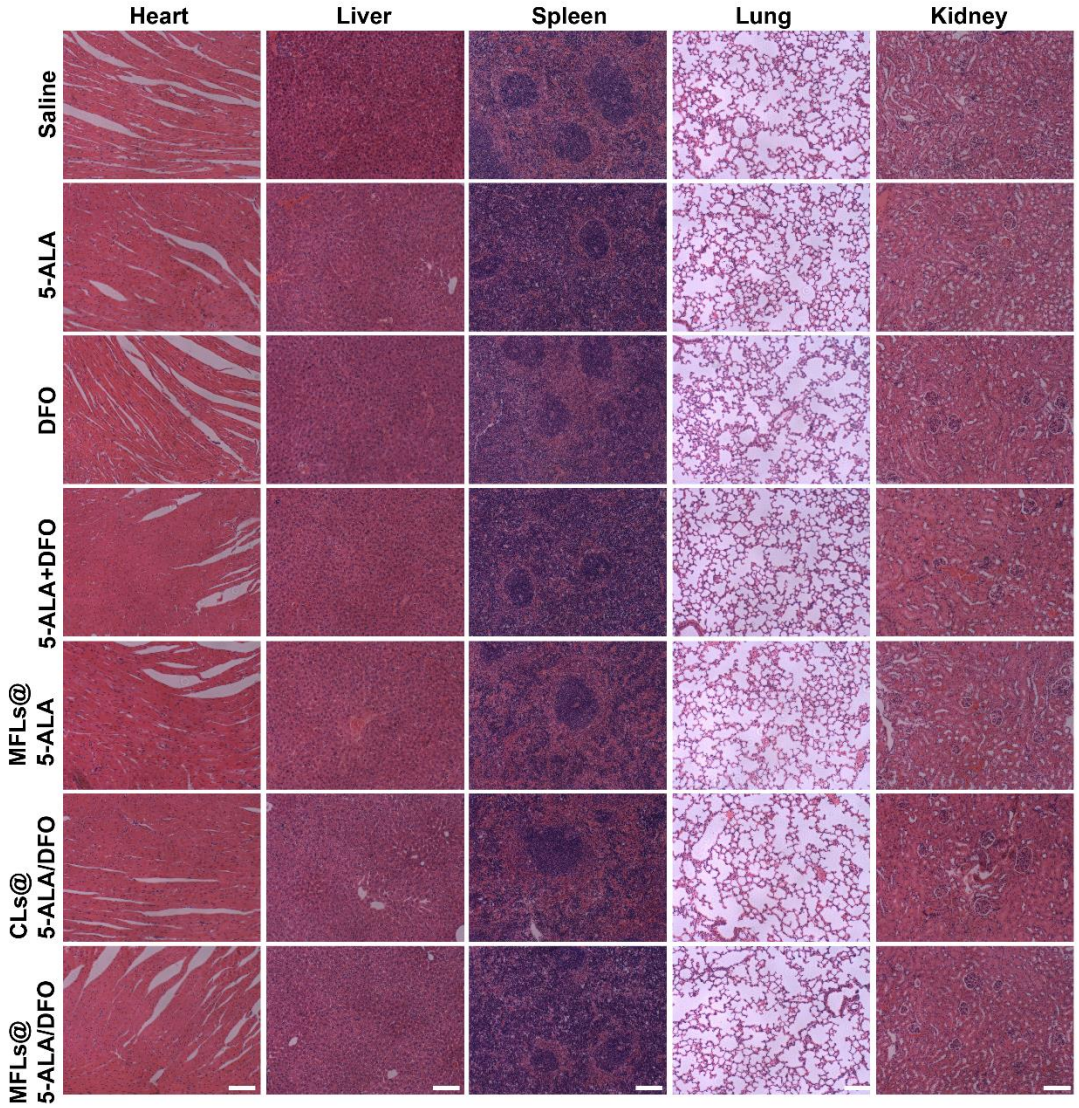

Figure S17 The histologic assessments of major organs with H&E staining. Scale bar = 200 μm.