Light-responsive Hyaluronic Acid Nanomicelles Coloaded with IDO Inhibitor Focus Targeted Photoimmunotherapy Against "Immune Cold" Cancer

Chunhui Wu [a, #, *], Jiming Xu [a, #], Zhengxin Xie [a], Honglin Huang [a], Ningxi Li [a], Xiaodan Wei [a], Tingting Li [a], Hong Yang [a], Shun Li [a], Xiang Qin [a], Yiyao Liu [a,b,*]

[a] *Department of Biophysics, School of Life Science and Technology, University of Electronic Science and Technology of China, Chengdu 610054, China*

[b] *TCM Regulating Metabolic Diseases Key Laboratory of Sichuan Province, Hospital of Chengdu University of Traditional Chinese Medicine, Chengdu 610072, China*

[#] The authors contribute equally.

[*]**Corresponding authors:** wuchunhui@uestc.edu.cn or liuyiyao@uestc.edu.cn

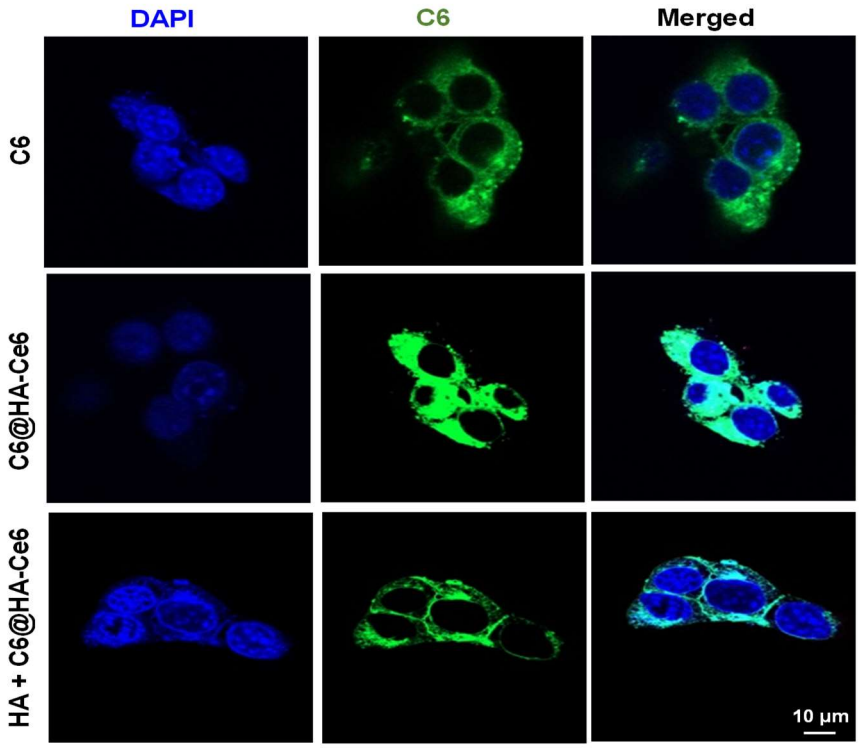

Fig. S1. Confocal fluorescence microscopic images of 4T1 cells incubated with C6 and C6@HA-Ce6 in the absence and presence of HA for 6 h.

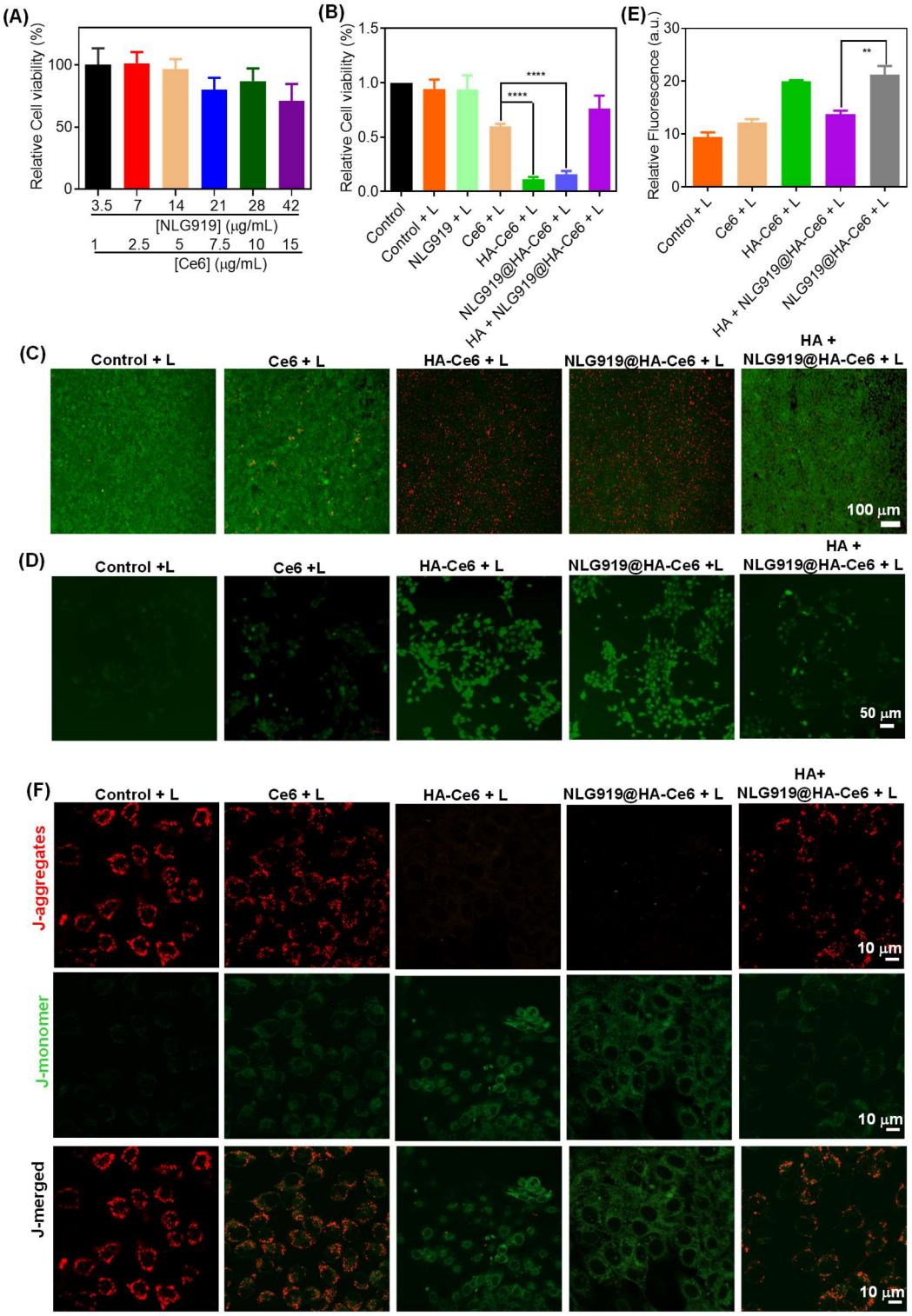

Fig. S2. The relative cell viability of EMT-6 cells incubated with free Ce6, HA-Ce6 and NLG919@HA-Ce6 (A) in dark and (B) under irradiation with a laser (660 nm, 1.0 W/cm^2, 8 min); (C) The fluorescence microscopic images of 4T1 cells with different treatments and stained with Calcein acetoxymethyl ester (Calcein-AM) and Propidium Iodide (PI); (D) The fluorescence microscopic images of 4T1 cells incubated with DCF-DA and various nanoformulations; (E)

Quantitative comparison of the DCF-DA fluorescence for each group; (F) Confocal microscopic images of 4T1 cells stained with JC-1 after treatment with medium, Ce6, HA-Ce6 and NLG919@HA-Ce6 for 6 h and then irradiated with a laser (660 nm, 1.0 W/cm^2, 8 min). Letter L denotes as laser.

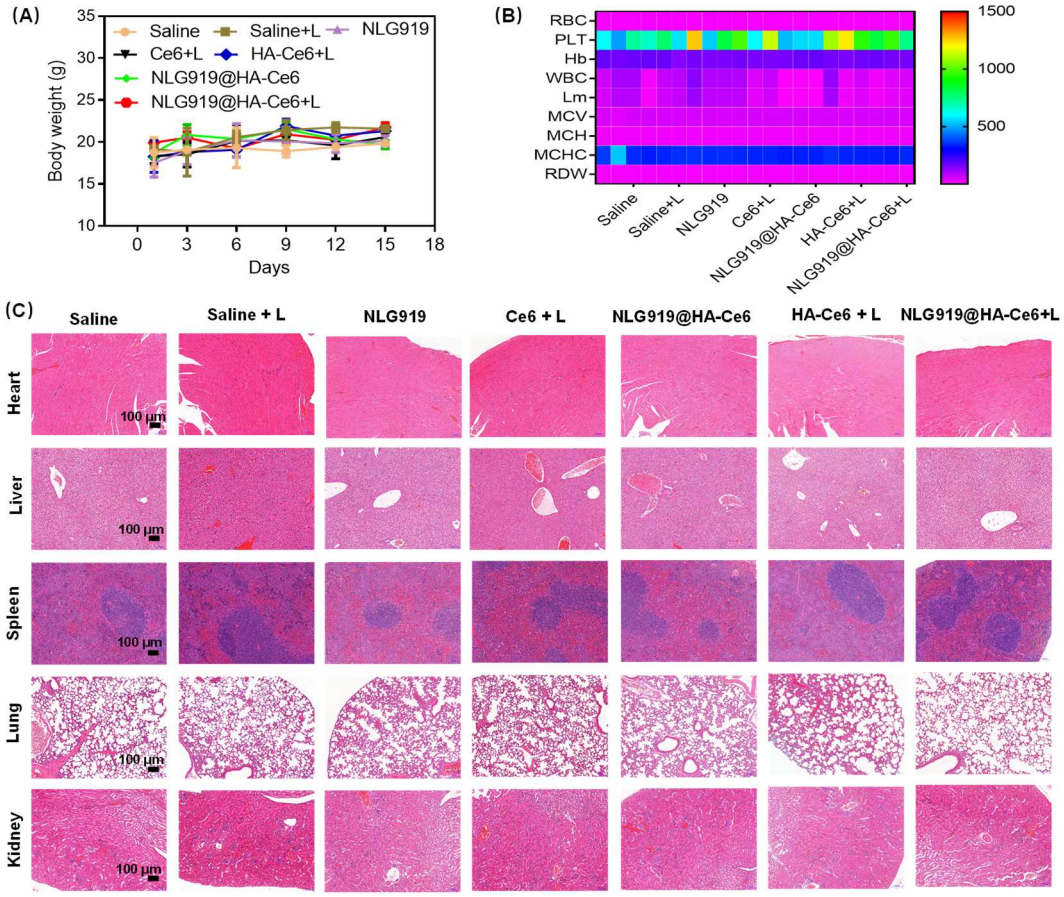

Fig. S3. Biosafety Analysis. (A) body weight of mice bearing 4T1 tumors treated with different formulations, (B) the hematological parameters and (C) H&E staining of the normal organs of the mice after various treatments. Letter L denotes as laser.