Supplementary Information (SI) for Nanoscale.

Encapsulated mitochondria to reprogram the metabolism of M2-type macrophages for anti-tumor therapy

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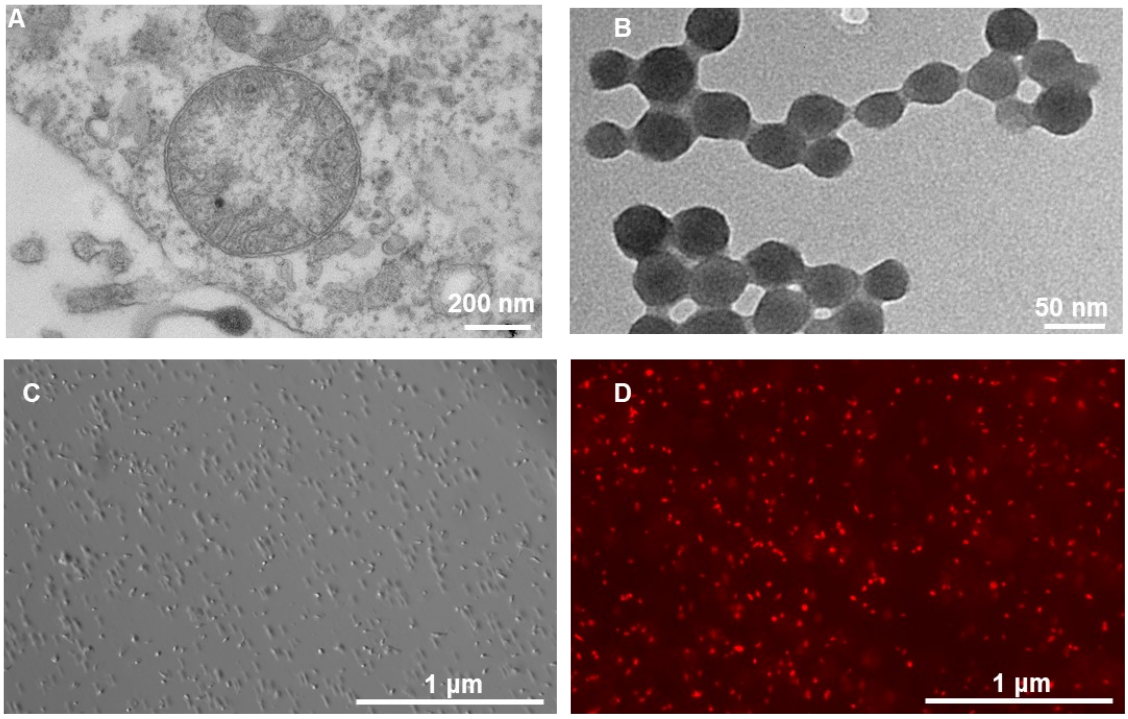

Figure S1: TEM images of individual free mitochondria and ZiF-8 nanoparticles, and the morphology of free Mito under fluorescence microscope. (A): TEM image of isolated mitochondria; (B) TEM image of blank ZiF-8; (C): Brightfield image of free mitochondria; (D) Fluorescence image of free mitochondria.

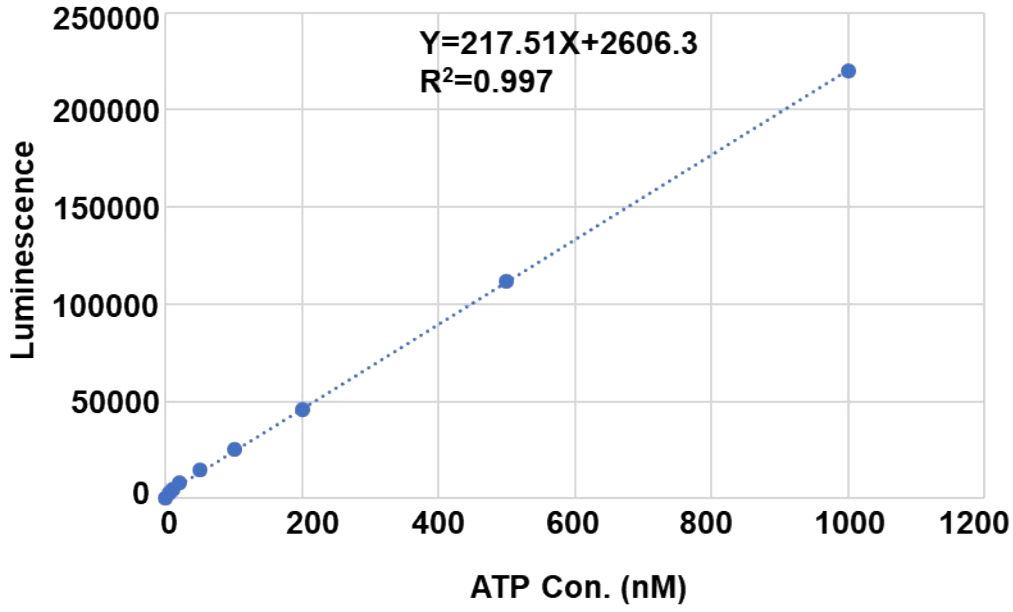

Figure S2: Standard curve of ATP productive

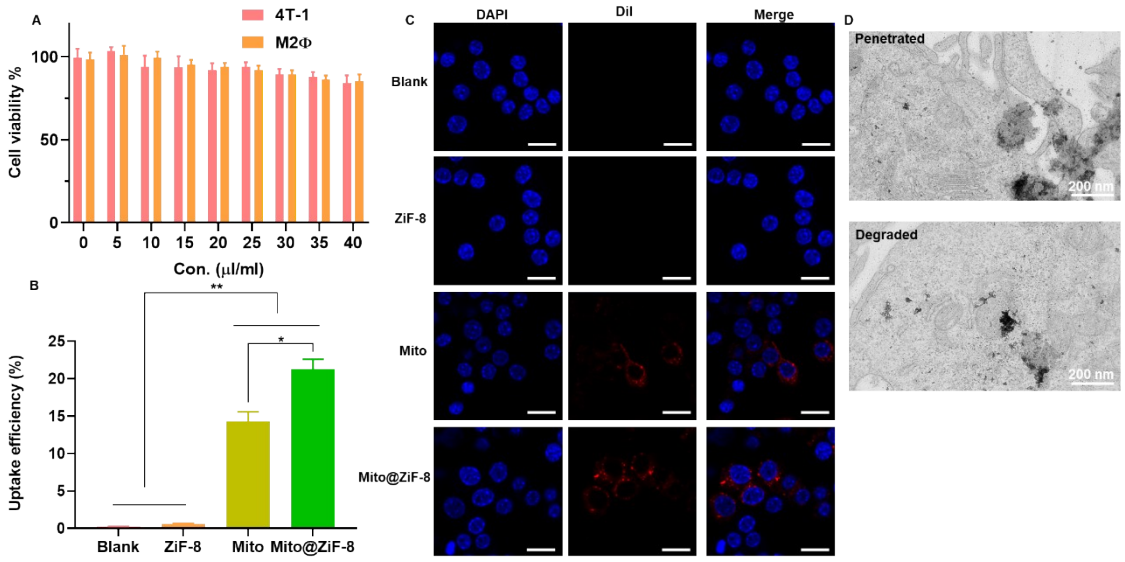

Figure S3: Toxicity of pure ZiF-8 nanoparticles and results of M2Φ uptake with four groups. (A): Toxicity of blank ZiF-8 to 4T-1 cells and M2Φ; (B) Flow cytometric analysis of M2Φ uptake; (C) Uptake results of M2Φ after CellTracker™ CM-DiI membrane dye labeling (scale bar: 1 μm); (D) M2Φ uptake process of Mito@ZiF-8 under TEM.

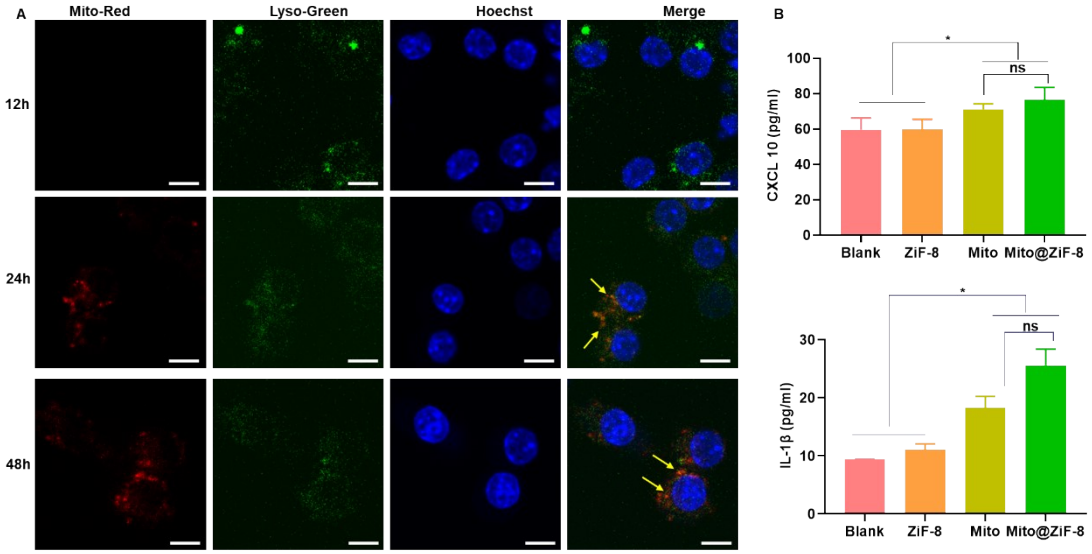

Figure S4: Regulation of M2Φ Secretory Functions by Mito@ZiF-8. (A): Lysosome escapes of Mito@ZiF-8 at different time points (scale bar: 1 μm); (B): Mito@ZiF-8

regulated M2Φ secretion of CXCL 10 and IL-1β after 5 days incubation.

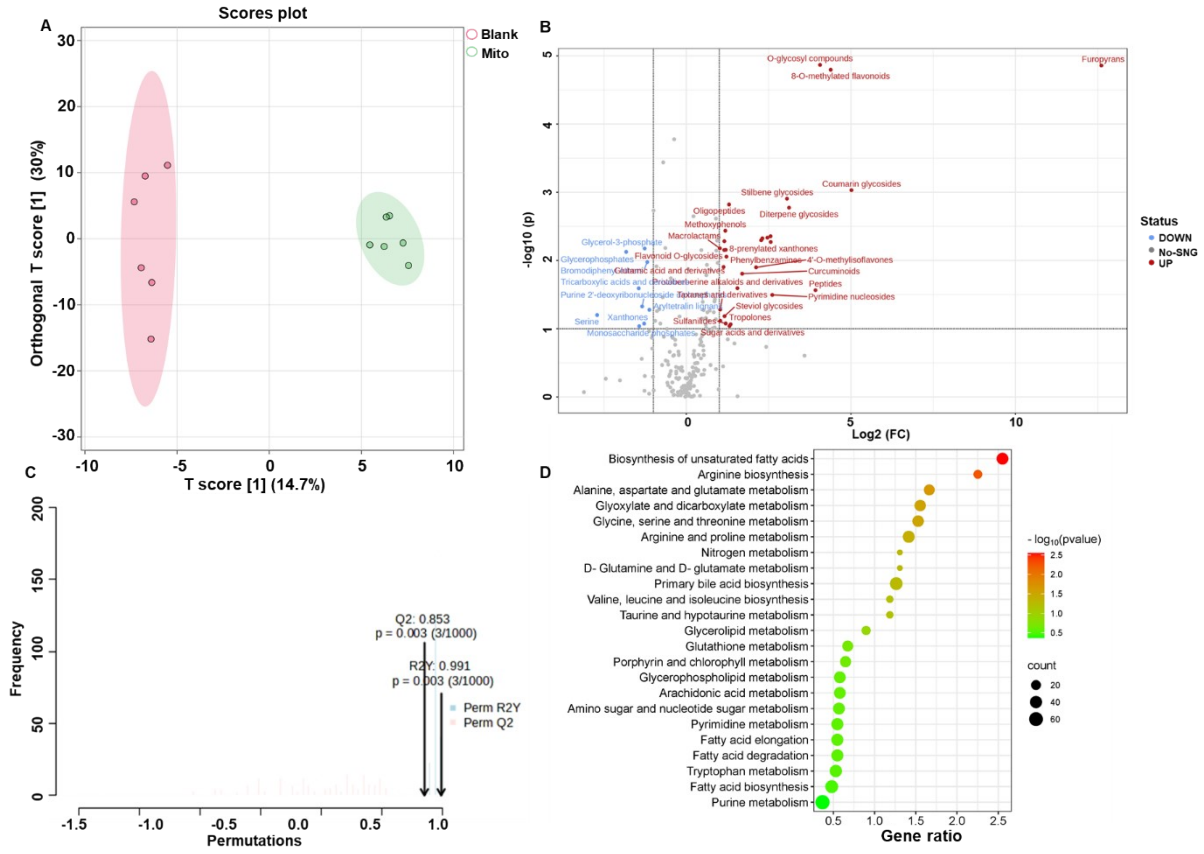

Figure S5: Differences in metabolic intermediates between Blank group and Mito group. (A) OPLS-DA analysis between Blank and Mito; (B) Volcano results between Blank and Mito; (C) Predictive analysis of metabolic models for Mito group; (D) The regulation of metabolic pathways in M2Φ after delivery to Mito was analyzed by bubble chart.

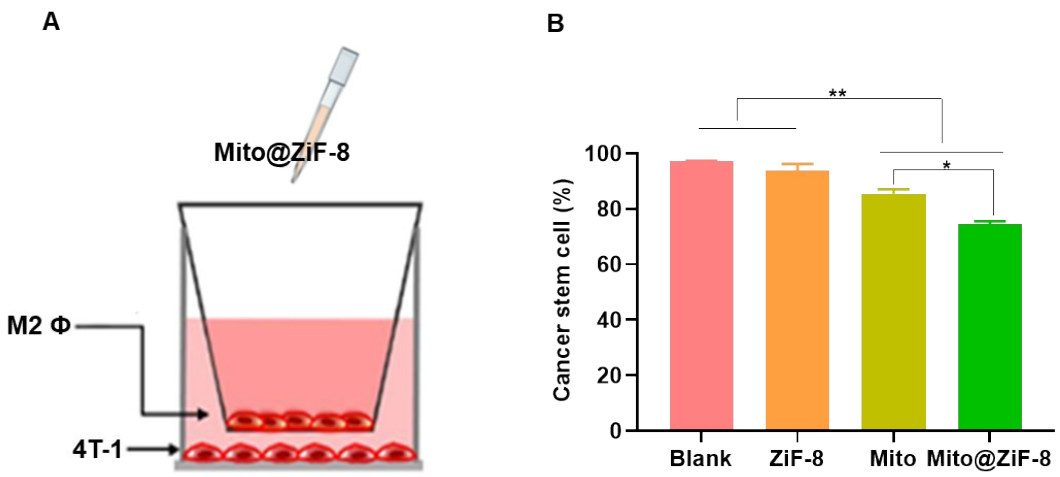

Figure S6: The structure of the Tranwells model and the statistical results of cancer cell stemness. (A) Transwell model; (B) Statistics analysis of cancer stem cell population.