

**Supporting Information to:**

**Engineering microglia as intraoperative optical imaging agent  
vehicles potentially for fluorescence-guided surgery in gliomas**

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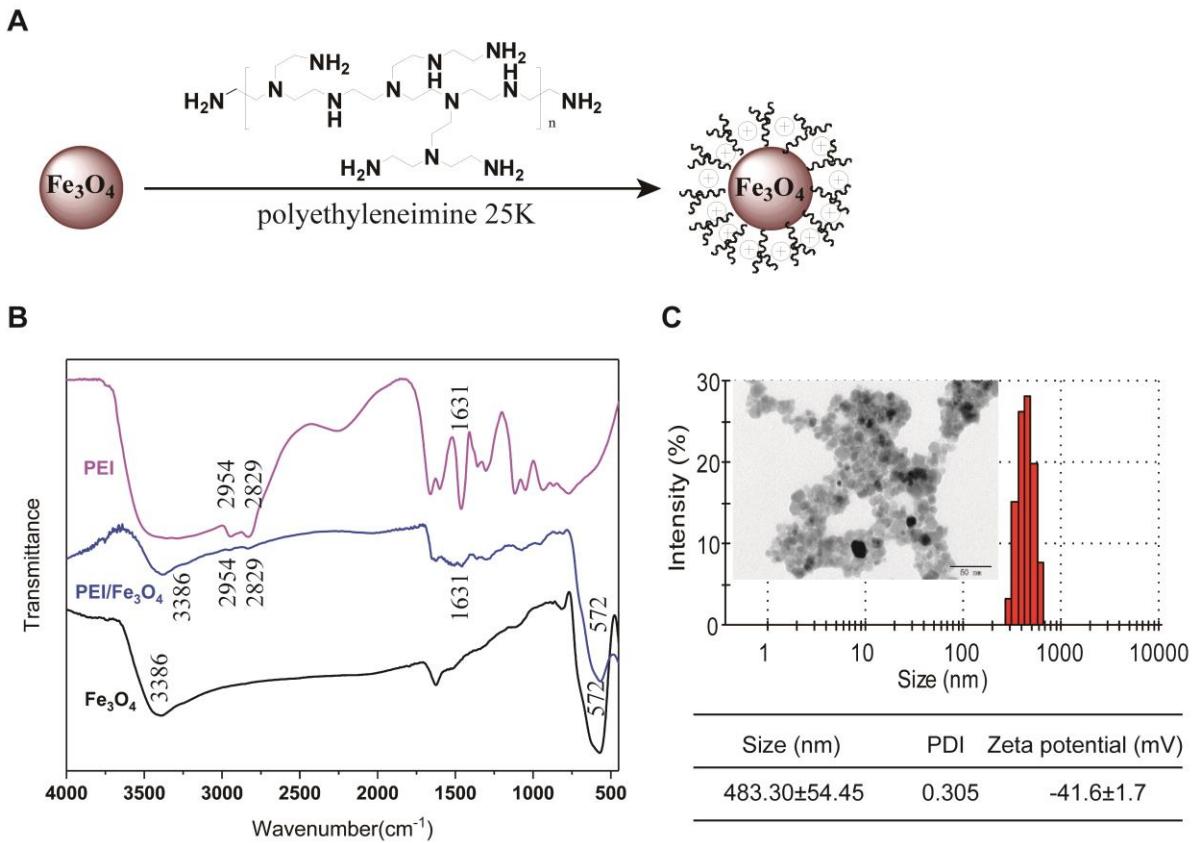
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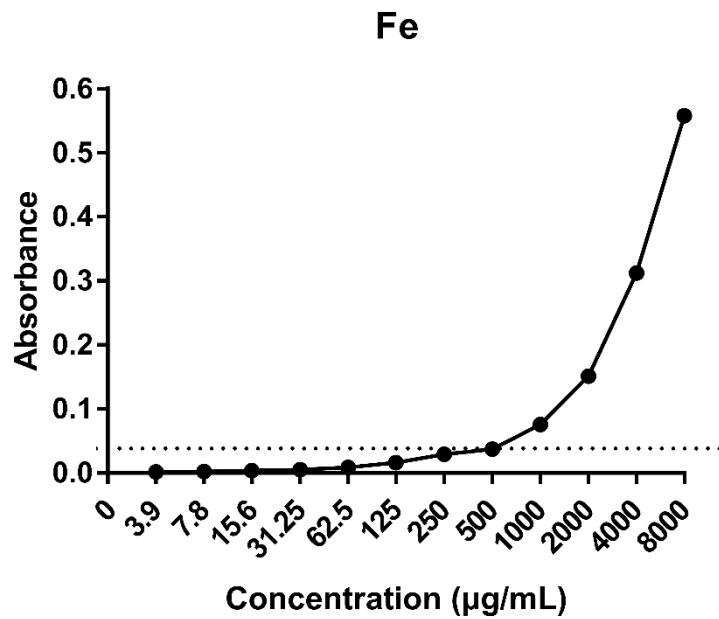
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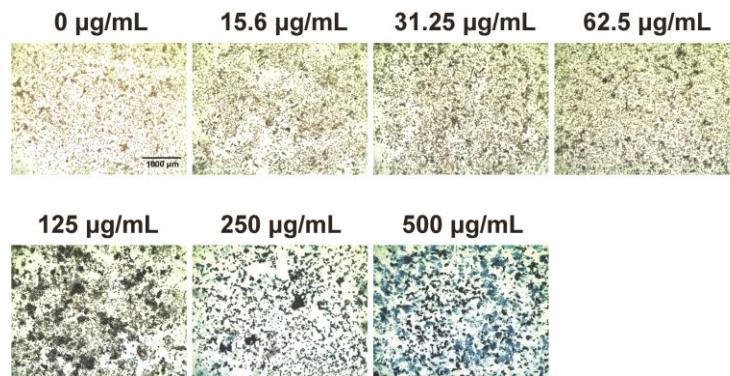
Email address: wangcf6@mail.sysu.edu.cn and fengmin@mail.sysu.edu.cn



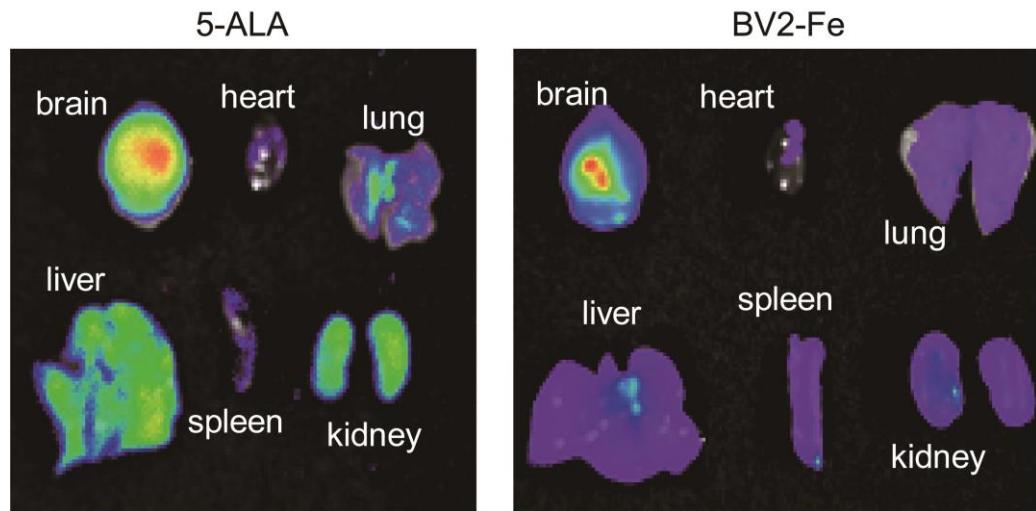
**Figure S1.** Characterization of polyethylenimine 25K coated iron oxide nanoparticles (PEI/Fe<sub>3</sub>O<sub>4</sub>). (A) Schematic depiction of the preparation of PEI/Fe<sub>3</sub>O<sub>4</sub>. (B) FTIR spectra of Fe<sub>3</sub>O<sub>4</sub>, PEI and PEI/Fe<sub>3</sub>O<sub>4</sub>. The three peaks characteristic of PEI (2954 cm<sup>-1</sup>, 2829 cm<sup>-1</sup>, 1631 cm<sup>-1</sup>) indicate immobilization of the PEI on the Fe<sub>3</sub>O<sub>4</sub> surface. (C) DLS size distribution and zeta potential of PEI/Fe<sub>3</sub>O<sub>4</sub>. The TEM micrograph shown on the figure inset. Scale bar: 50 nm.



**Figure S2.** The variation in absorbance of CIONPs.



**Figure S3.** Intracellular CIONPs nanoparticles visualized by Prussian blue staining at 48 h.



**Figure S4.** *Ex vivo* DiD fluorescence images of excised organs, including GBM-bearing brains, from mice sacrificed at 8 h after oral administration of 5-ALA or after internal carotid artery injection of BV2-Fe.