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> **Supporting Information** 1 2 3 Effective Tumor Vessel Barrier Disruption Mediated by Perfluoro-N-(4-4 methylcyclohexyl) Piperidine Nanoparticles to Enhance the Efficacy of 5 **Photodynamic Therapy** 6 7 Wei Xiong<sup>1</sup>, Lin Qi<sup>-1</sup>, Deli Si<sup>2,3</sup>, Xin Jiang<sup>1</sup>, Yu Liu<sup>2,3</sup>, Chunjuan Zheng<sup>2,3</sup>, Yuan 8 Li<sup>1,4,\*</sup>, Jianliang Shen<sup>2,3,\*</sup>, Zaigang Zhou<sup>1,2,\*</sup> 9 10 1 Department of Urology, Xiangya Hospital, Central South University, Changsha 11 410008, China. 12 2 State Key Laboratory of Ophthalmology, Optometry and Vision Science, School of 13 Ophthalmology and Optometry, School of Biomedical Engineering, Wenzhou 14 Medical University, Wenzhou 325027, China. 15 3 Wenzhou Institute, University of Chinese Academy of Sciences, Wenzhou 325001, 16 China. 17 4 Department of Urology, The Second Xiangya Hospital, Central South University, 18 Changsha 410011, China 19 \* Corresponding to: 20 zhouzaigang1990@163.com (Zaigang Zhou), shenjl@wiucas.ac.cn (Jianliang Shen), 21 22 yuanlixy@csu.edu.cn (Yuan Li) 23





25 Figure S1: Diameters of ICG@Lip diameters detected via dynamic light scattering.



28 Figure S2: Zeta potential of free liposome, ICG and ICG@Lip.



- 31 Figure S3: UV-VIS spectra of free Lip, ICG and ICG@Lip in deionized water.





**Figure S4:** Body weight curves of C57BL6 mice (n=5).