

Supplementary Information

A comprehensive *in vitro* and *in vivo* study of ZnO nanoparticles toxicity

Tae-Keun Hong,^{a,+} Nirmalya Tripathy,^{b,+} Hyun-Jin Son,^c Ki-Tae Ha,^a Han-Sol Jeong^{a,*} and Yoon-Bong Hahn^{b,*}

^aSchool of Korean Medicine, Division of Applied Medicine, Pusan National University, 3-3 Beomeo-ri, Yangsan-si 626-870 (Korea). E-mail: jhsol33@pusan.ac.kr

^bDept. of BIN Fusion Technology, School of Semiconductor and Chemical Engineering, Chonbuk National University, 567 Baekje-daero, Deokjin-gu, Jeonju 561-756 (Korea). E-mail: ybhahn@chonbuk.ac.kr

^cDept. of Pathology, Eulji University School of Medicine, 143-5 Yongdu-dong, Jung-gu, Daejeon 301-746 (Korea).

⁺TKH and NT contributed equally to this work.

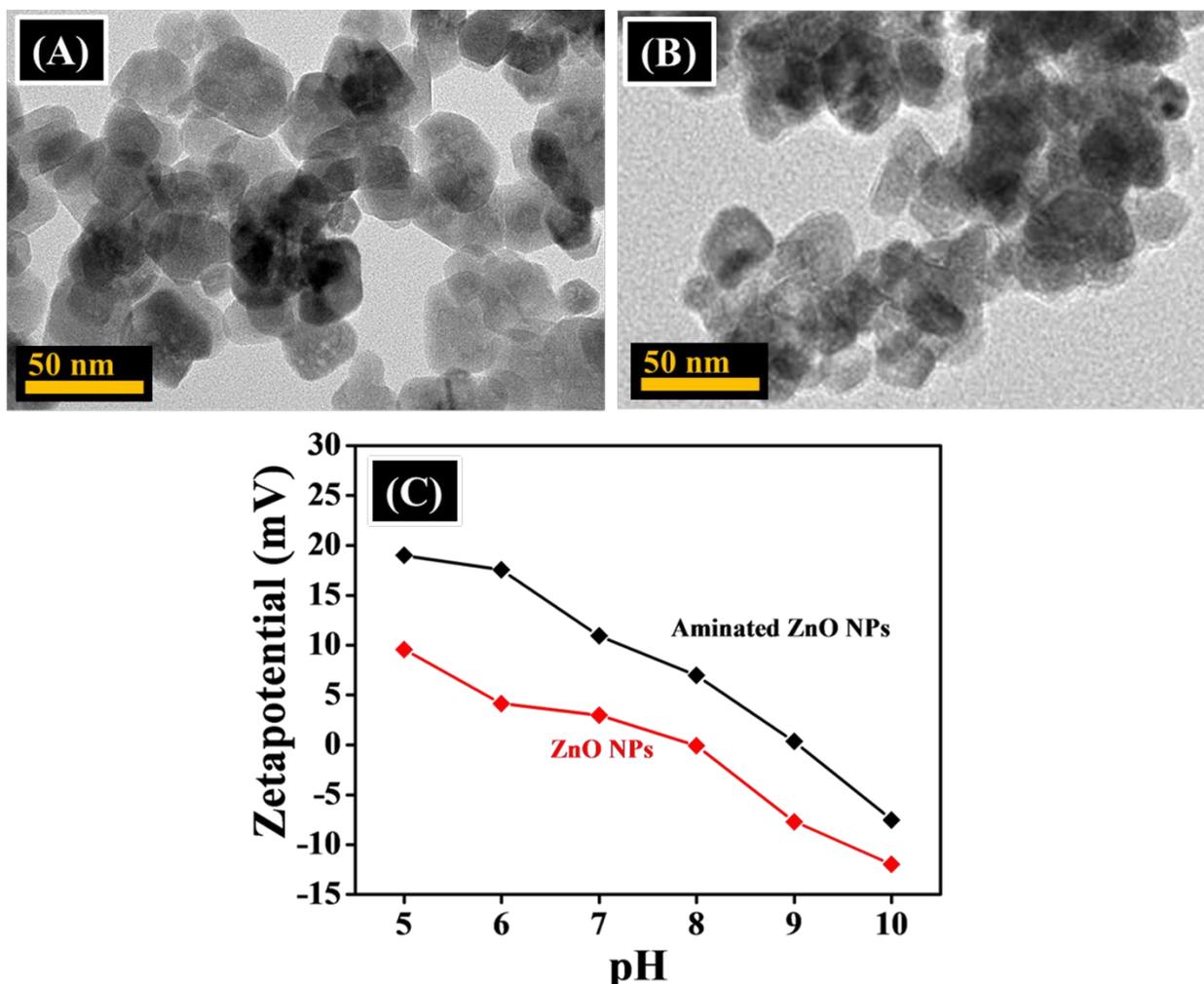


Fig. S1 TEM images of (A) bare ZnO NPs, (B) aminated ZnO NPs showing a thin film coated on the ZnO surfaces and (C) the surface charges of the bare and aminated ZnO NPs in aqueous solution at different pH measured by zeta potentiometer.

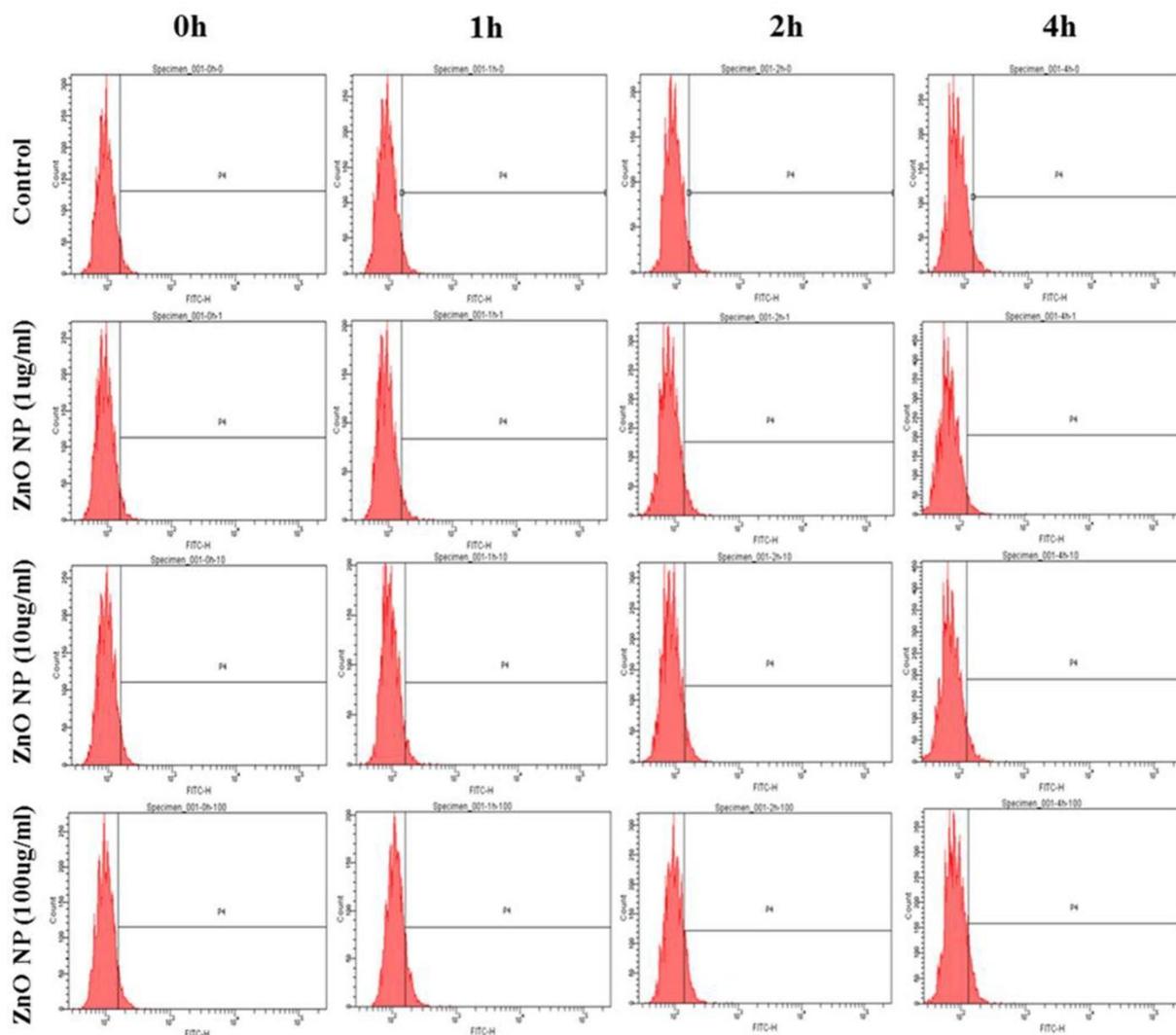


Fig. S2 Cellular uptake behavior of ZnO NPs. FACS analysis showing untreated and treated RAW264.7 murine macrophages with 1, 10, 100 $\mu\text{g}/\text{mL}$ of FITC-ZnO NPs for 1, 2, 3 and 4 hours.

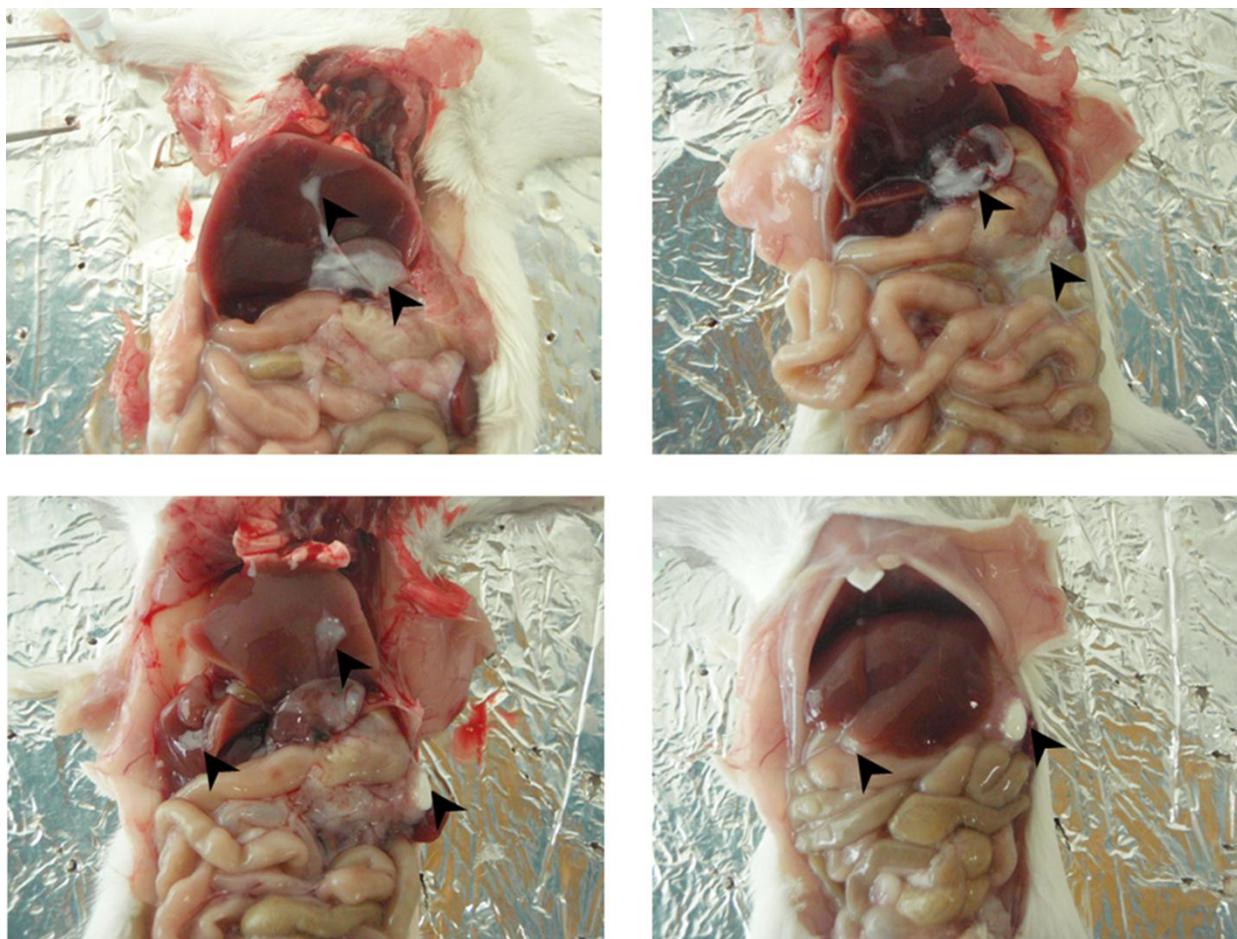


Fig. S3 Gross observation of mice after intraperitoneal administration with 100 µg/mL ZnO nanoparticles.