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, *

a School of Korean Medicine, Division of Applied Medicine, Pusan National University, 3-3 Beomeo-ri, Yangsan-si 626-870 (Korea). E-mail: jhso133@pusan.ac.kr

b Dept. 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

c Dept. 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 μg/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.