

Supplementary Information

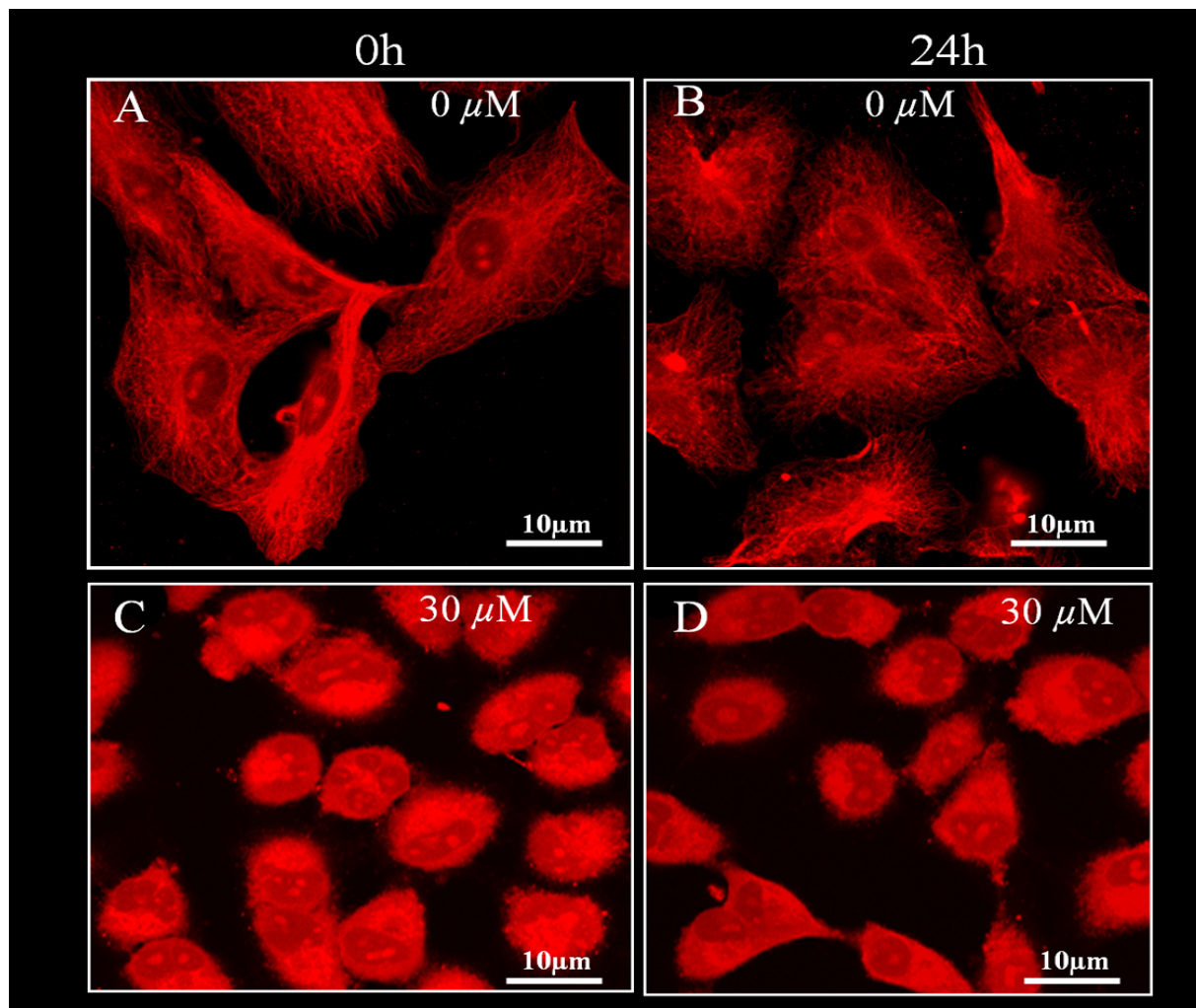


Figure S1. Irreversible disruption of microtubule network in AcQ -treated lung epithelial cells. Cultured A549 cells were treated with 30 μM AcQ with appropriate control sets (untreated cells). After 24 h of incubation the media containing AcQ was replaced with the fresh normal medium without AcQ as discussed in the methods. Microtubule images of A549 cells treated with 0 μM AcQ (A-B), and 30 μM AcQ (C-D) taken under the Ziess confocal microscope by using anti- α -

tubulin (mouse monoclonal) antibody, and corresponding rhodamine conjugated (red) secondary antibody. Images of the cellular microtubules were captured immediately after 0 h of incubation (A and C) and after 24 h of incubation (B and C) in the fresh medium. The results represent the best of data collected from three experiments with similar results (n=3).

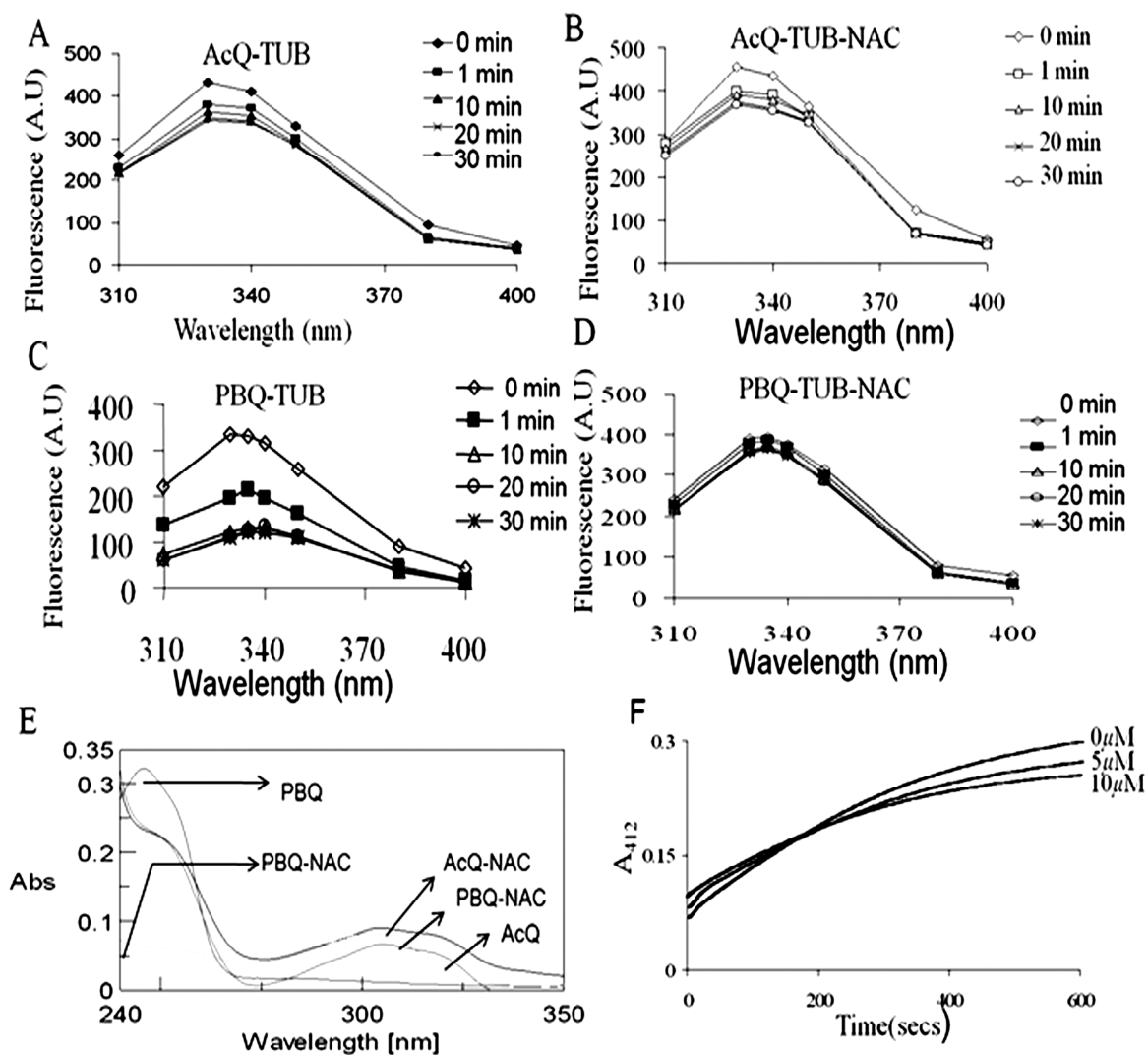


Figure S2: Effect of N-acetyl cysteine (NAC) on PBQ and AcQ-induced conformational change in the tubulin structure. Effect of N-acetyl cysteine (NAC) on PBQ and AcQ-induced

conformational change in the tubulin structure. (A) Time-dependent quenching of the tubulin tryptophan fluorescence by AcQ. Tubulin (2 μM) was incubated with 5 μM AcQ for 30 min, and fluorescence was measured after 1min, 10 min, 20 min, and 30 min. intervals, until the reaction became saturated. (B) Tubulin (2 μM) was incubated with 5 μM AcQ, in the presence of 50 μM NAC, and fluorescence was measured after the indicated time intervals. (C) Time-dependent quenching of the tubulin tryptophan fluorescence by AcQ. Tubulin (2 μM) was incubated with 10 μM PBQ for 30 min, and fluorescence was measured after 1min, 10 min, 20 min, and 30 min. intervals, until the reaction became saturated. (D) Tubulin (2 μM) was incubated with 10 μM PBQ, in the presence of 50 μM NAC, and fluorescence was measured after the indicated time intervals. (E) Wavelength spectrums of PBQ, AcQ, PBQ and NAC, and AcQ and NAC. (F) Effect of AcQ on the reactive cysteine residues of tubulin. Tubulin (1 μM) was incubated with different concentrations of AcQ (0-10 μM) for 30 min and the reactive cysteine residues were measured by the DTNB titration.