**Supplementary Figure Legends**

**Supplementary Figure S1.** Cell cycle and apoptosis detection in A549 cells. Cell cycle (A) and apoptosis (B) analyses of A549 cells treated with PAA-AgNPs determined by flow cytometry shown as percentage of cells after 24 h exposure with defined extracellular concentrations of nanoparticles. Cell distribution in the phases of the cell cycle shown for 5 μg/ml PAA-AgNPs concentration (C). Early apoptosis detection using annexin V shown in cells treated with 5 μg/ml PAA-AgNPs (D). The data are given as means±SEM from the three independent experiments. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 vs. non-exposed control

**Supplementary Figure S2.** Cell cycle and apoptosis detection in HEL299 cells. Cell cycle analysis (A) and apoptosis (B) of HEL299 cells treated with PAA-AgNPs determined by flow cytometry shown as percentage of cells after 24 h exposure with defined extracellular concentrations of nanoparticles. Cell distribution in the phases of the cell cycle shown for 5 μg/ml PAA-AgNPs concentration (C). Early apoptosis detection using annexin V shown in cells treated with 5 μg/ml PAA-AgNPs (D). The data are given as means±SEM from the three independent experiments. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 vs. non-exposed control