

# Supplementary Materials: Inhaled Cadmium Oxide Nanoparticles: Their *in Vivo* Fate and Effect on Target Organs

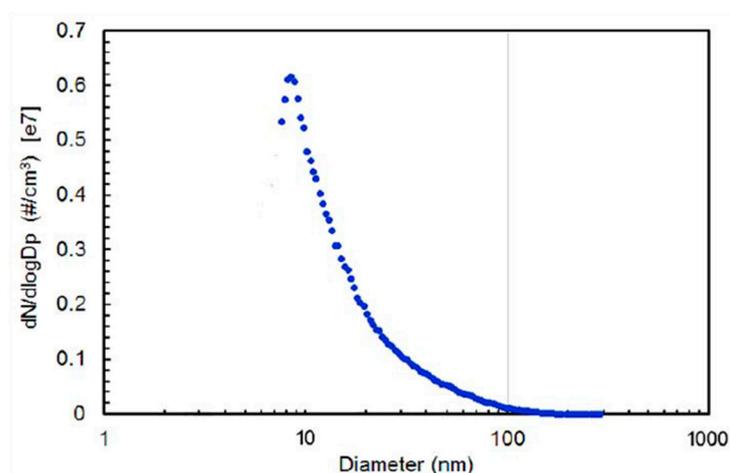
Jana Dumkova, Lucie Vrlikova, Zbynek Vecera, Barbora Putnova, Bohumil Docekal, Pavel Mikuska, Petr Fictum, Ales Hampel and Marcela Buchtova

The estimation of deposited dose was calculated based on previously published methodology [17,18] and based on the average mass concentration of CdO nanoparticles ( $31.7 \mu\text{g CdO/m}^3$ ).

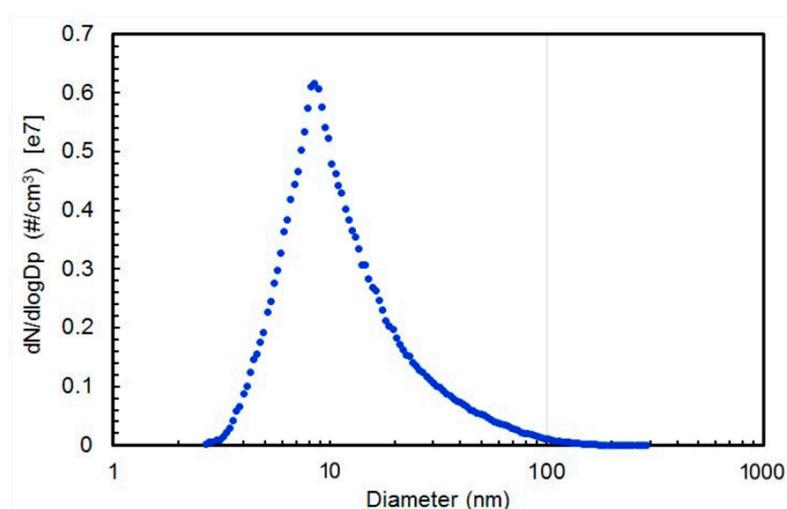
$$\text{Deposited dose} = (C \times \text{RMV} \times T \times \text{DF})/\text{BW}$$

where  $C$  is average concentration in the exposure atmosphere  $31.7 \mu\text{g CdO/m}^3$ . RMV is respiratory minute volume ( $\text{RMV} = 0.499 \times \text{BW} \times 0.809 \text{ L/min}$  [17]).  $T$  is exposure time (min) = 60,480 ( $6 \times 7 \times 24 \times 60$ ). DF is pulmonary deposition fraction (10%), therefore 0.1 [19]. BW is average body weight (g) = 24 g. Final deposited =  $52 \mu\text{g/g}$ .

Estimated dose of CdO was  $52 \mu\text{g}$  per gram of mouse body weight over the 6 weeks inhalation period.



**Figure S1.** The size distribution of CdO nanoparticles in the size range 7.64–229.6 nm (measured in inhaled air with the SMPS, model 3936L72).



**Figure S2.** The combined size distribution of CdO nanoparticles in the size range 2.02–229.6 nm (measured in inhaled air with the SMPS, DMA model 3081 + nanoDMA model 3085).

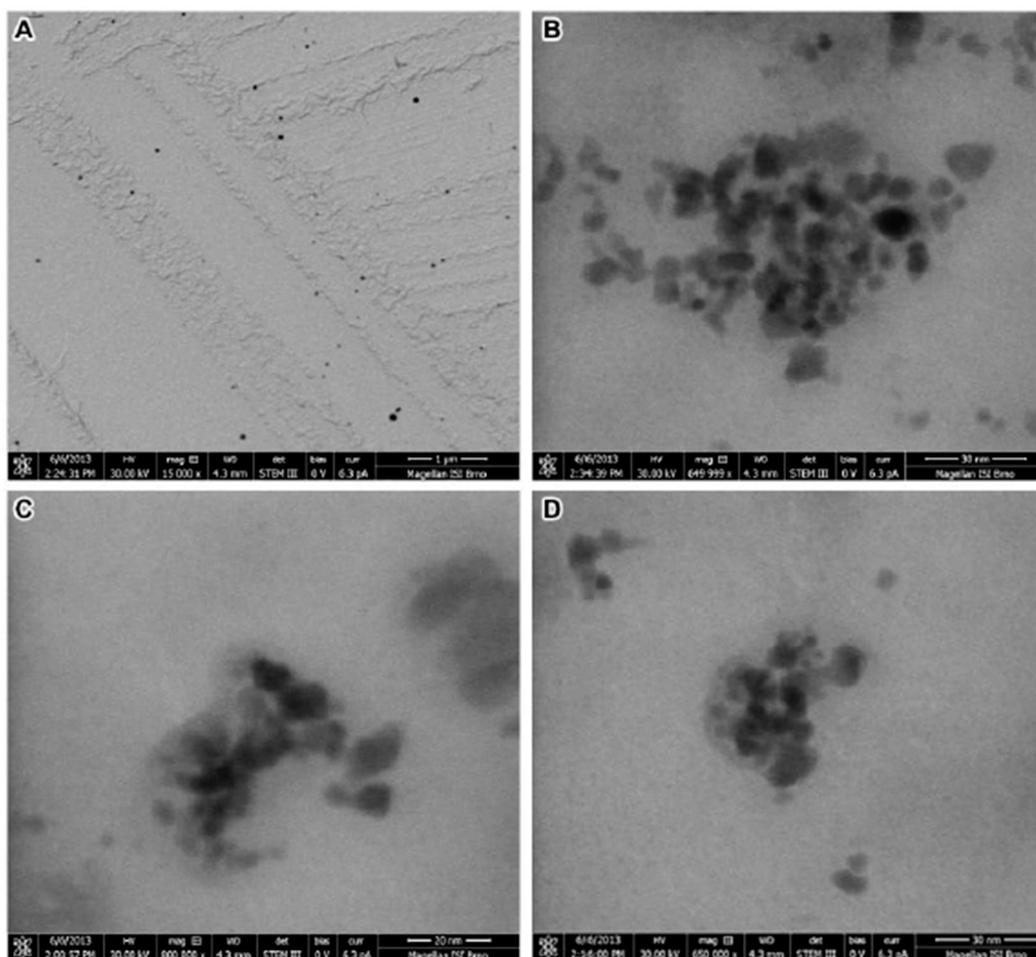


Figure S3. CdO nanoparticles in electron microscope (A–D).