

Title page:

Intranasal Delivery of Copper Oxide Nanoparticles Induces Pulmonary Toxicity and Fibrosis in C57BL/6 mice

Xiaofeng Lai^{1†}, Hu Zhao^{2†}, Yong Zhang^{3†}, Kai Guo⁴, Yuqiao Xu⁵, Suning Chen^{6*}, Jian Zhang^{1*}

*Correspondence to: Jian Zhang, State Key Laboratory of Cancer Biology,

†These authors contributed equally to this work.

¹State Key Laboratory of Cancer Biology, Department of Biochemistry and Molecular Biology, the Fourth Military Medical University, Xi'an 710032, P.R. China.

²Fujian Provincial Key Laboratory of Transplant Biology, Fuzhou General Hospital, Xiamen University, Fuzhou, Fujian 350025, P.R. China.

³Department of Respiratory Medicine, Xijing Hospital, the Fourth Military Medical University, Xi'an 710032, P.R. China.

⁴Department of Orthopedics, Xijing Hospital, the Fourth Military Medical University, Xi'an, Shaanxi, 710032, P.R. China.

⁵State Key Laboratory of Cancer Biology, Department of Pathology, the Fourth Military Medical University, Xi'an 710032, P.R. China.

⁶Department of Pharmacy, Xijing Hospital, the Fourth Military Medical University, Xi'an, Shaanxi, 710032, P.R. China.

Correspondence: **Jian Zhang** and **Sunning Chen**, the Fourth Military Medical University, Changle Western Road 169, Xi'an 710032, P.R. China. E-mail: biozhangj@fmmu.edu.cn and Chensning@163.com.

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Figure S1 Percent body weight change after different CuO NPs treatment over time. Saline group mice gained weight while three other group loss

weight over the duration of CuO NPs treatment until d10. Significant differences in body weight between saline and CuO NPs treated mice are indicated by * ($p < 0.05$).

Figure S2 HE staining of lung tissues after 5 mg/kg CuO NPs treatment for different time.

Figure S3 Cell viability assessment of CuO NPs treatment (24h) in BEAS-2B and A549 cells by ATP assay (a-b) and colony forming ability assay(c-d). Student's t-test. $n=3$, * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.0001$.

Figure S4 Comparative cytotoxicity analysis of Cu^{2+} ions and CuO NPs treatment in BEAS-2B and A549 cells for 24 h.

Figure S5 TGF beta activated SMA in human fetal lung fibroblasts MRC-5 cells.

Table S1 Characteristics of CuO NPs used in this study (10 $\mu\text{g/ml}$).

Table S2 Particle size characterized by Desla Nano.

Figure S1

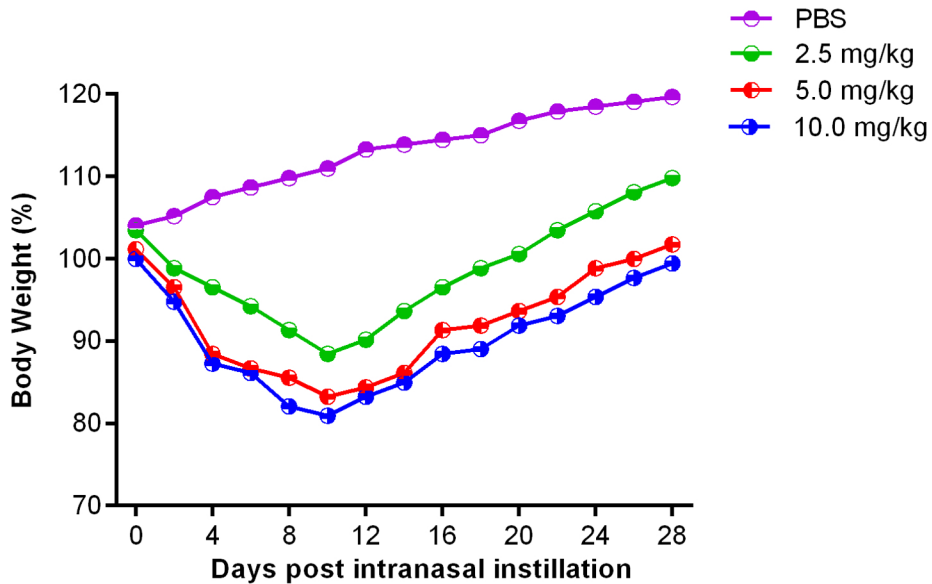


Figure S2

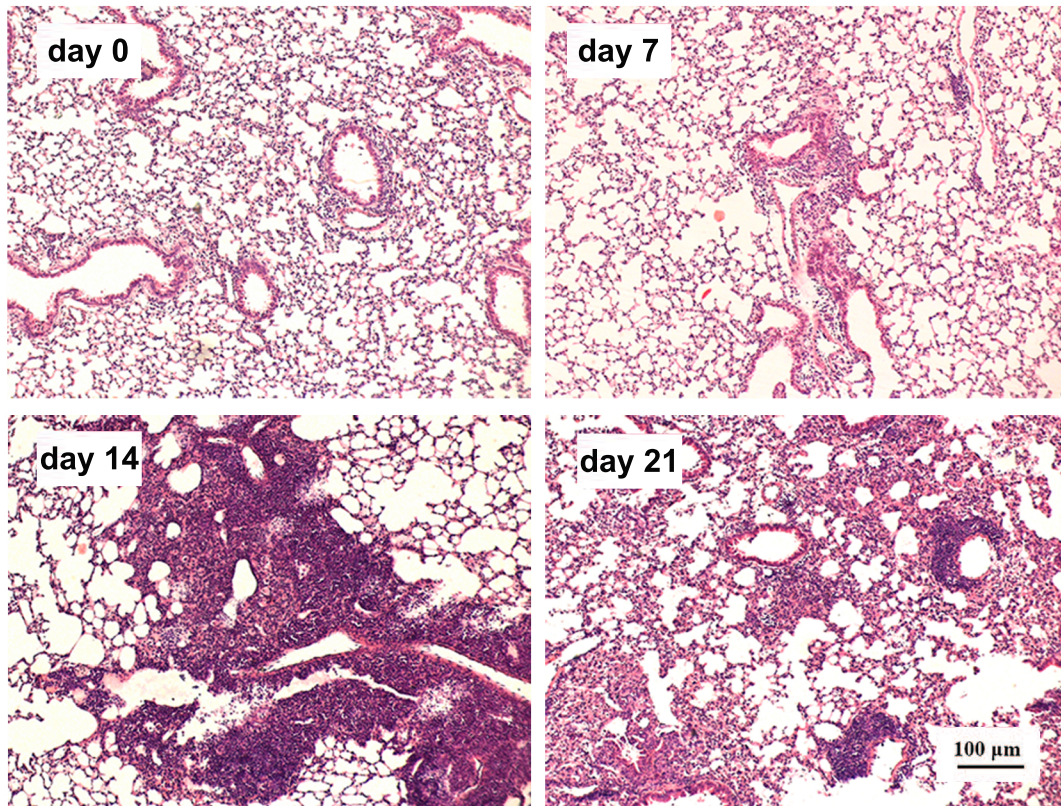
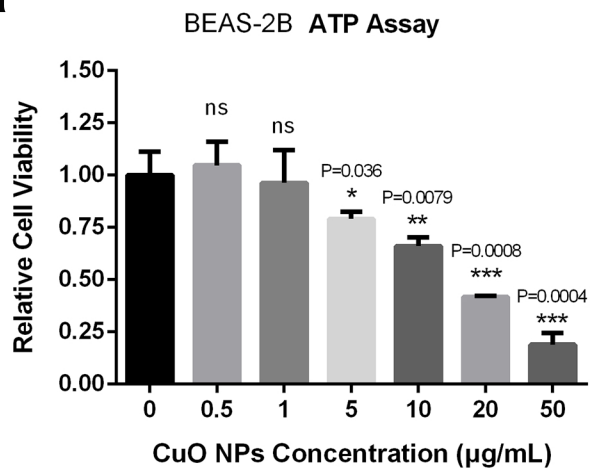
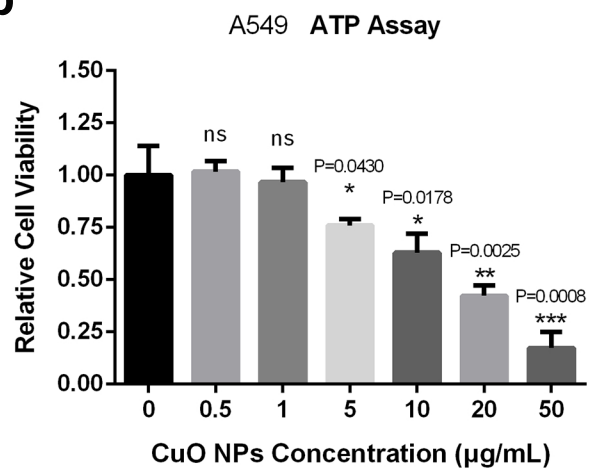


Figure S3

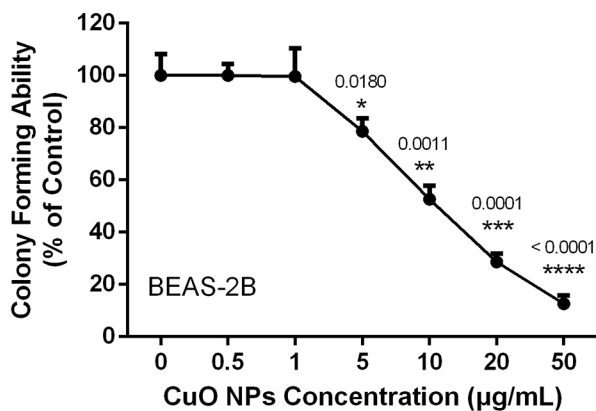
a



b



c



d

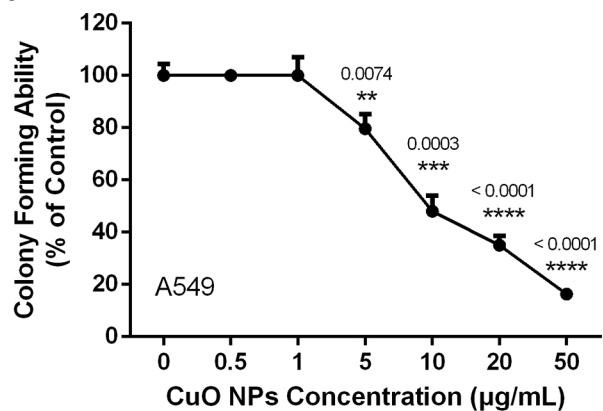


Figure S4

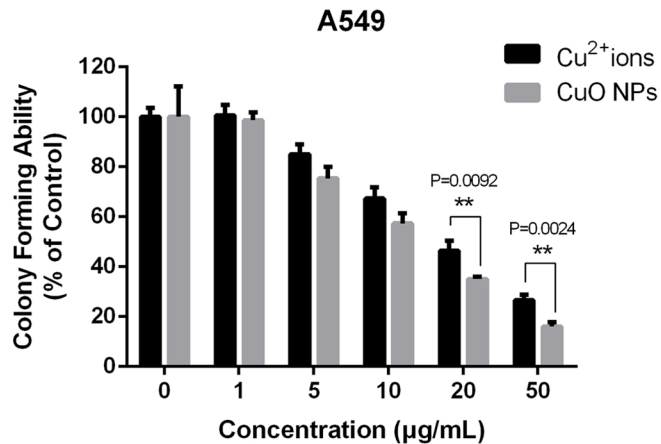
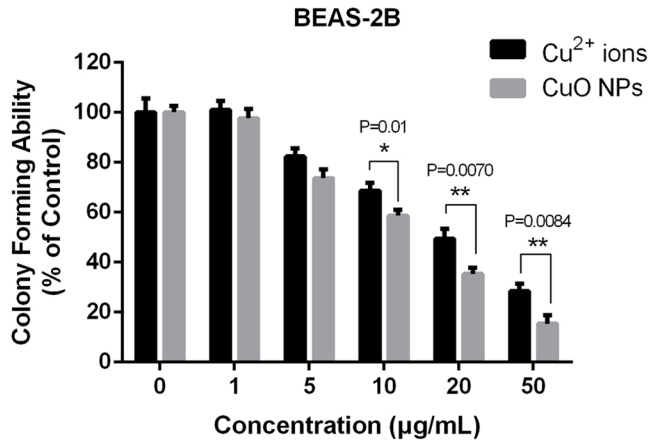


Figure S5

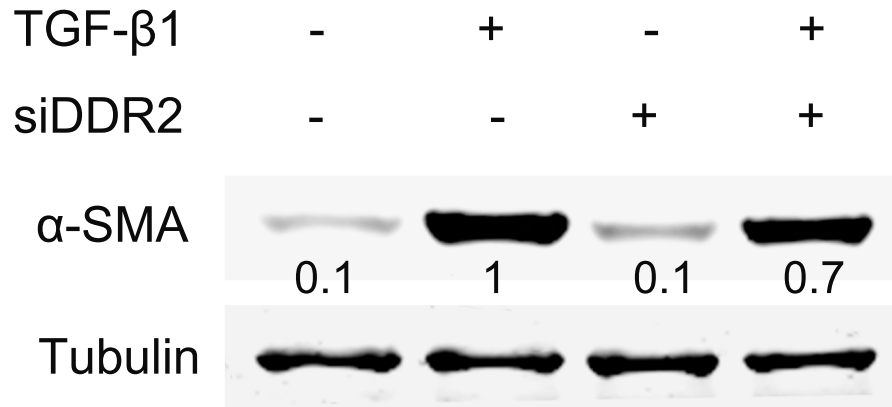


Table S1

Characteristics of CuO NPs used in the study (10 $\mu\text{g/ml}$)

Data from manufacture		TEM analysis	
Average diameter in TEM(nm)	Specific surface area(m /g)	Average size(nm)	Morphology
<50	29	46.5	Nearly spherical

Table S2

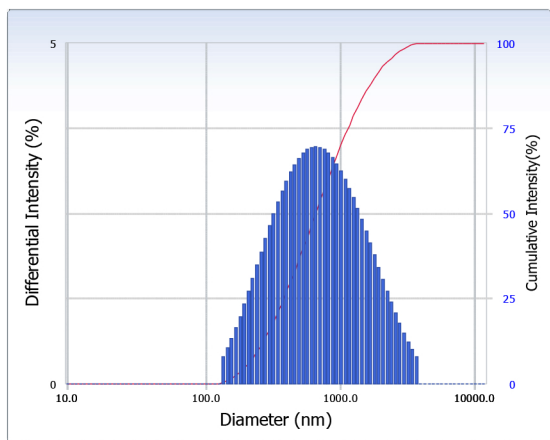
Intensity Distribution

S/N : 142412

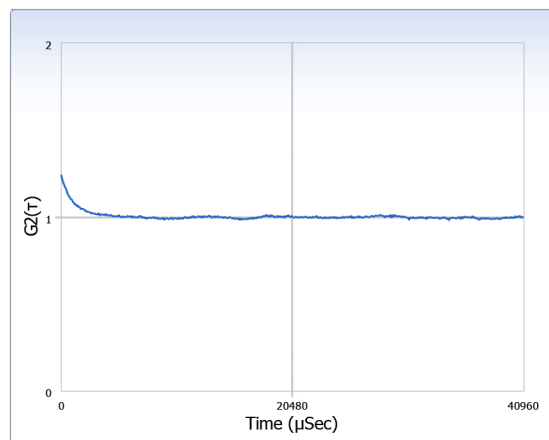
User	: Common	Group	: CuO	Repetition	: 1/1
Date	: 11/8/2017	File Name	: QYB		
Time	: 10:07:06	Sample Information	: 20171108 lxf H2O		
SOP Name	: YHL			Security	: No Security

Version 3.73 / 2.30

Intensity Distribution



ACF



Distribution Results (Contin)

Peak	Diameter (nm)	Std. Dev.
1	914.6	696.8
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
Average	914.6	696.8
Residual	: 3.199e-003	(O.K)

Cumulants Results

Diameter (d)	: 590.9	(nm)
Polydispersity Index (P.I.)	: 0.302	
Diffusion Const. (D)	: 8.325e-009	(cm ² /sec)
Molecular Weight	: 1.201e+007	
Measurement Condition		
Temperature	: 25.0	(°C)
Diluent Name	: WATER	
Refractive Index	: 1.3328	
Viscosity	: 0.8878	(cP)
Scattering Intensity	: 23864	(cps)
Attenuator 1	: 12.61	(%)

Original Datasets

Figure 4C supplementary data

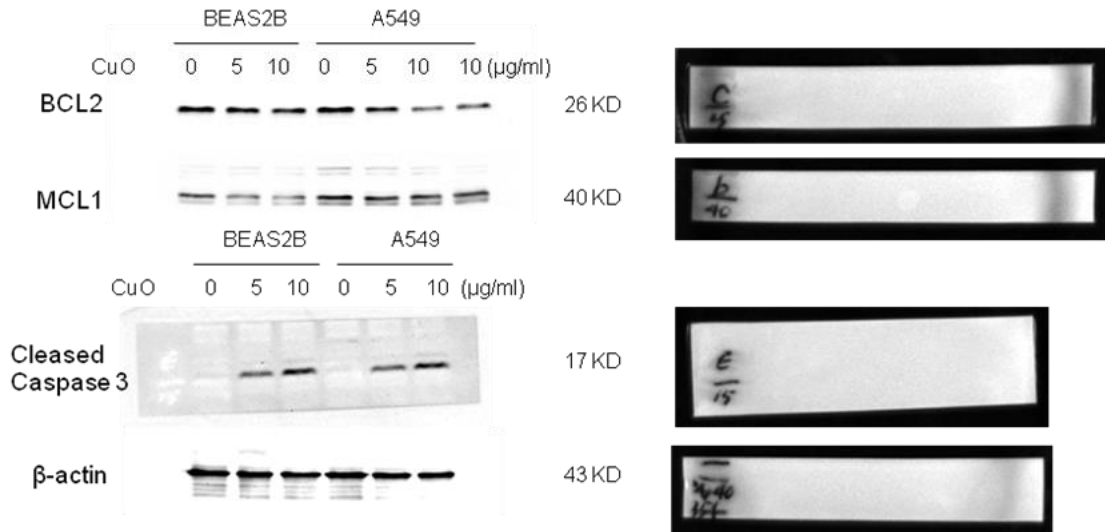
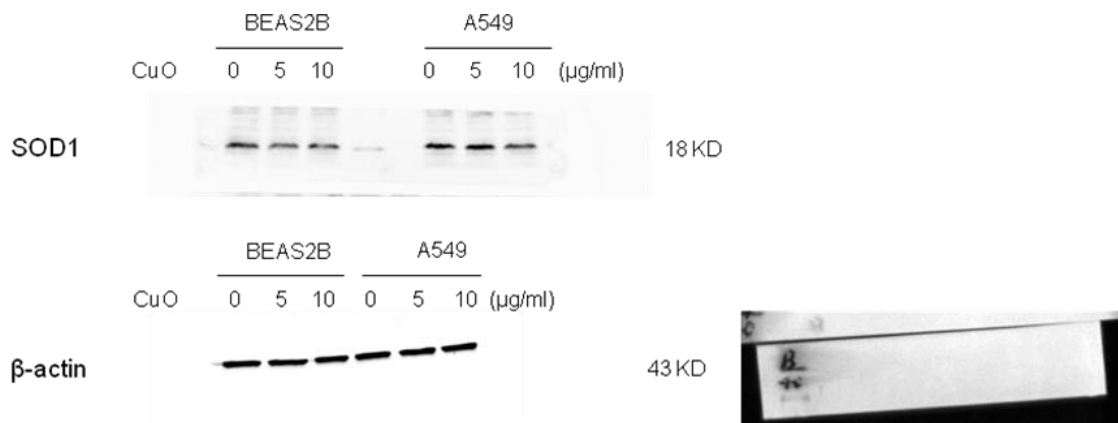
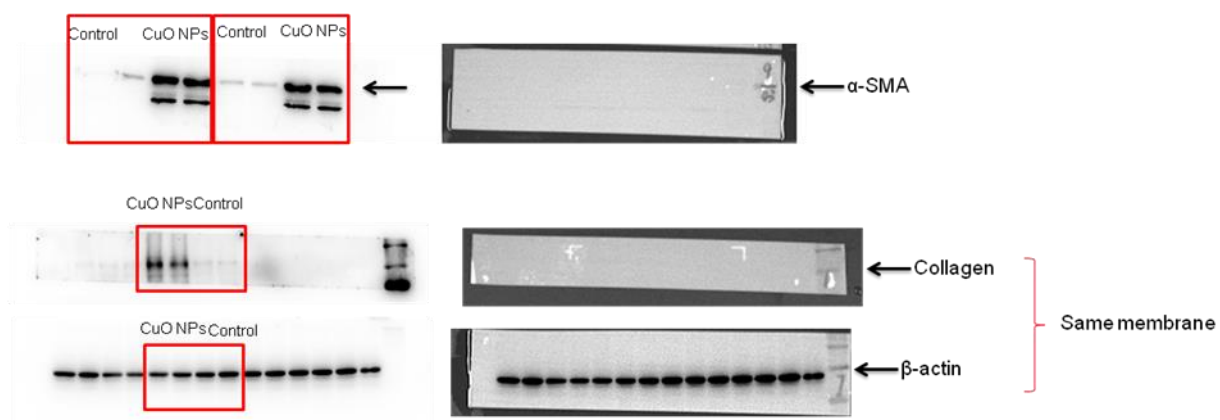


Figure 5C supplementary data



We forgot to capture the bright field of SOD1 membrane.

Figure 6C supplementary data



(Upper) samples were loaded twice on membrane.

(Lower) Other samples were loaded on this membrane, lanes 7-10 were our target.