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Erratum

Mitochondrial Transplantation Attenuates Airway Hyperresponsiveness by Inhibition of Cholinergic Hyperactivity: Erratum

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In our paper [1], the following corrections should be provided.

1. (corrected) page 1252, left column, line 4-7 from the bottom:

status (7.87 ± 0.10 vs. 8.74 ± 0.10 Hz, $p < 0.05$). In addition, after 5 min administration of 30 mg/ml Ach, the CBF was significantly decreased in both CS/LPS (6.76 ± 0.12 Hz) and control groups (7.47 ± 0.22 Hz).

2. (corrected) Figure 3 legend:

Figure 3. Mitochondria in the regulation of airway responsiveness in rats. A. The airway responsiveness in control, CS/LPS exposed and CS/LPS exposed rats delivered with exogenous mitochondria prepared from control rats (n=11-17, * $p < 0.05$ *vs.* control, some data in Fig 1A were re-presented for comparison). **B-C** Electron micrographs showing long spindle mitochondria with clear cristae in ciliated airway epithelium in control rats (*left*, **B,** control) and in normal rats for mitochondrial preparation (*middle*, **B,** mito), round mitochondria with swelling, unclear cristae in airway epithelium in CS/LPS exposed rats (*middle*, **B,** CS/LPS), and mixture of two types of mitochondria with distinct morphology in ciliated airway epithelium in CS/LPS exposed rats after delivery of exogenous mitochondria prepared from control rats (*right*, **B,** CS/LPS+mito) and quantitative comparisons of two shapes of mitochondria (**C**). Quantitative analysis was obtained from 204, 187, 184 and 211 mitochondria of 11-17 separate ciliated airway epithelial cells from 5, 4, 6 and 7 rats, respectively for control, mito, CS/LPS and CS/LPS+mito rats respectively. The mitochondria in each cell were counted from six fields randomly chosen each with an area of 5.25 μm². For comparison, the control group in Figure 2**I** was included here. **D-F** The tissue of tracheal epithelium was freshly stripped from the airway of rats after an administration of APEX-labeled mitochondria. The subsequent electronic microscopy examination identified the localization of the APEX-labeled, exogenous mitochondria mainly within the ciliated epithelial cells (**D**), occasionally within the goblet cells (**E**) and basal cells (**F**). The results were consistent in 4 tissues from 3 individual rats. endo mito:

endogenous mitochondria (white arrow); exo mito: exogenous mitochondria (black arrow). white star filled: ciliated epithelial cells; white star open: goblet cells; black star: basal cells.

3. (corrected) Figure 4 legend:

Figure 4. Mitochondria in the regulation of CBF. A: The effects of M receptor inhibitor, ipratropium bromide (IB) on CBF in rats without any treatment (blank) and acetylcholine (Ach)-induced decline in CBF in rat right inferior lobar bronchus in control and CS/LPS exposed rats (n=10-13, * $p < 0.05$). The waveform graph of cilia beating last for 1000 millisecond was drawn and columns represented Mean±SEM of CBF. **B:** The quantitative analysis of Ach level in BALF of CS/LPS-exposed rats (n=6 or 4 for control or CS/LPS, respectively, $p > 0.05$). **C:** The quantitative analysis of Ach in supernatant of cultured RAECs treated by CSE/LPS (n=5 for each, $p > 0.05$). **D:** Time-dependent decline in CBF of cultured RAECs exposed to LPS plus cigarette smoking extract (CSE/LPS) (n=5 for each, * $p < 0.05$). **E:** IB and mitochondrial transplantation on 3 hour exposure of CSE/LPS-induced decline in CBF of cultured RAECs and the effects of M receptor enhancer, win62577 (WIN) (n=4-8, * $p < 0.05$).

4. (corrected) Figure 5**C** and Figure 5 legend:

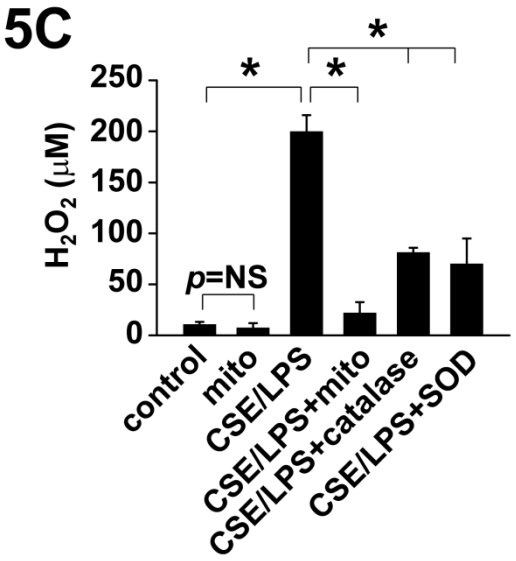

Figure 5. Mitochondria in the regulation cholinergic sensitivity and oxidant stress in cultured RAECs. A: Evaluation of cholinergic sensitivity by secreted level of LTB4 from RAECs and the effects of CSE/LPS exposure. **B:** Mitochondria transplantation on CSE/LPS-enhanced cholinergic sensitivity in RAECs. For comparison, the control group and CSE/LPS group in **A** were included here. **C:** Mitochondrial transplantation on CSE/LPS-stimulated oxidant stress in RAECs. **D**. Oxidant stress on the regulation of CSE/LPS-enhanced cholinergic sensitivity in RAECs. **E-F:** Representative fluorescence of JC-1 showing CSE/LPS-induced alterations in mitochondria membrane potential and ratio of red against green fluorescence (n=4, * $p < 0.05$ for each).

5. (corrected) page 1255, right column, the bottom line:

the significantly increased mean linear intercept

6. (corrected) Figure S6.legend:

Figure S6. The dose-dependent effects of ipratropium bromide on CBF of airway epithelial cells. The effects of M receptor inhibitor, ipratropium bromide (IB) in 0, 25, 75, 125 and 250 μg/mL on the ciliary beating frequency (CBF) of cultured rat airway epithelial cells (n=4, R=0.9476, $p < 0.0001$).

References

[1] Su Y, Zhu L, Yu X, Cai L, Lu Y, Zhang J, Li T, Li J, Xia J, Xu F, Hu Q. Mitochondrial Transplantation Attenuates Airway Hyperresponsiveness by Inhibition of Cholinergic Hyperactivity. Theranostics. 2016; 6(8):1244-60. doi: 10.7150/thno.13804