

References

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Figure legends

Fig. 1. Curcumin exposure upregulated antioxidant gene expression in mouse alveolar macrophages *in vitro*. Mouse alveolar macrophages were exposed to curcumin for 6 h. (A) HO-1 mRNA. (B) GCLC mRNA. (C) GCLM mRNA. (D) GSR mRNA. The data are shown as means \pm SE of three experiments ($n = 3$, each sample was pooled from three mice). Values are corrected for β_2 -microglobulin and expressed as fold increases against the value of the non-treatment controls. * $p < 0.05$ compared with the non-treatment control.

Fig. 2. Curcumin treatment upregulated antioxidant gene expression in the lung at 6 h after PPE treatment. HO-1 mRNA (A), GCLC mRNA (B), GCLM mRNA (C), and GSR mRNA (D) in the lung of VS group (oral vehicle + intratracheal saline), VE group (oral vehicle + intratracheal PPE), and CE group (oral curcumin + intratracheal PPE) are shown. The data are shown as means \pm SE ($n = 5 - 6$). Values are corrected for β_2 -microglobulin and expressed as fold increases against the value of VS group. * $p < 0.05$ compared with the VS group and † $p < 0.05$ compared with the VE group.

Fig. 3. Curcumin treatment attenuated PPE-induced pulmonary inflammation. The numbers of total cells (A), neutrophils (B), and macrophages (C) in the BAL fluid of naive mice and the VS, the VE, and the CE groups are shown. The data are shown as means \pm

SE (n = 4 - 6). *p < 0.05 compared with the VS group and †p < 0.05 compared with the VE group at each time point.

Fig. 4. Curcumin treatment attenuated PPE-induced increase of myeloperoxidase (MPO) activity in the lungs. MPO activity in the lung tissue at 6 h and on Day 1 after PPE treatment is shown. The data are shown as means \pm SE (n = 5 - 6). *p < 0.05 compared with the VS group and †p < 0.05 compared with the VE group at each time point.

Fig. 5. Effect of curcumin treatment on chemokine gene expression in the lung after PPE treatment. (A) KC mRNA. (B) MIP-2 mRNA. (C) TNF- α mRNA. (D) IL-1 β mRNA. The data are shown as means \pm SE (n = 4 - 6). Values are corrected for β_2 -microglobulin and expressed as fold increases against the value of the VS group. *p < 0.05 compared with the VS group at each time point.

Fig. 6. Curcumin treatment attenuated PPE-induced pulmonary emphysema. Representative photomicrographs of the lungs of the VS (A), the VE (B), and the CE (C) groups on Day 21 after PPE treatment. Original magnification, x200. (D) Mean linear intercepts of alveoli on Day 21. The data are shown as means \pm SE (n = 5). *p < 0.05 compared with the VS group and †p < 0.05 compared with the VE group.

Fig. 7. Curcumin treatment attenuated CS-induced pulmonary inflammation. The numbers

of total cells (A), neutrophils (B), and macrophages (C) in the BAL fluid of naive, CS-exposed, and CS-exposed and curcumin-treated mice are shown. The data are shown as means \pm SE (n = 6). *p < 0.05 compared with the naive mice and †p < 0.05 compared with the CS-exposed mice.

Fig. 8. Curcumin treatment attenuated CS-induced oxidative stress in BAL fluid. (A) Total carbonyl levels. Values are corrected for total protein concentration. (B) 68-kDa carbonylated protein levels. Values are corrected for albumin concentration. The data are shown as means \pm SE (n = 6). *p < 0.05 compared with the naive mice and †p < 0.05 compared with the CS-exposed mice.

Fig. 9. Curcumin treatment attenuated CS-induced pulmonary emphysema. Representative photomicrographs of the lungs of air-exposed (A), CS-exposed (B), and CS-exposed and curcumin-treated (C) mice 12 weeks after CS exposure. Original magnification, $\times 200$. (D) Mean linear intercepts of alveoli at 12 weeks. The data are shown as means \pm SE (n = 5). *p < 0.05 compared with the air-exposed mice and †p < 0.05 compared with the CS-exposed mice.

Figure 1

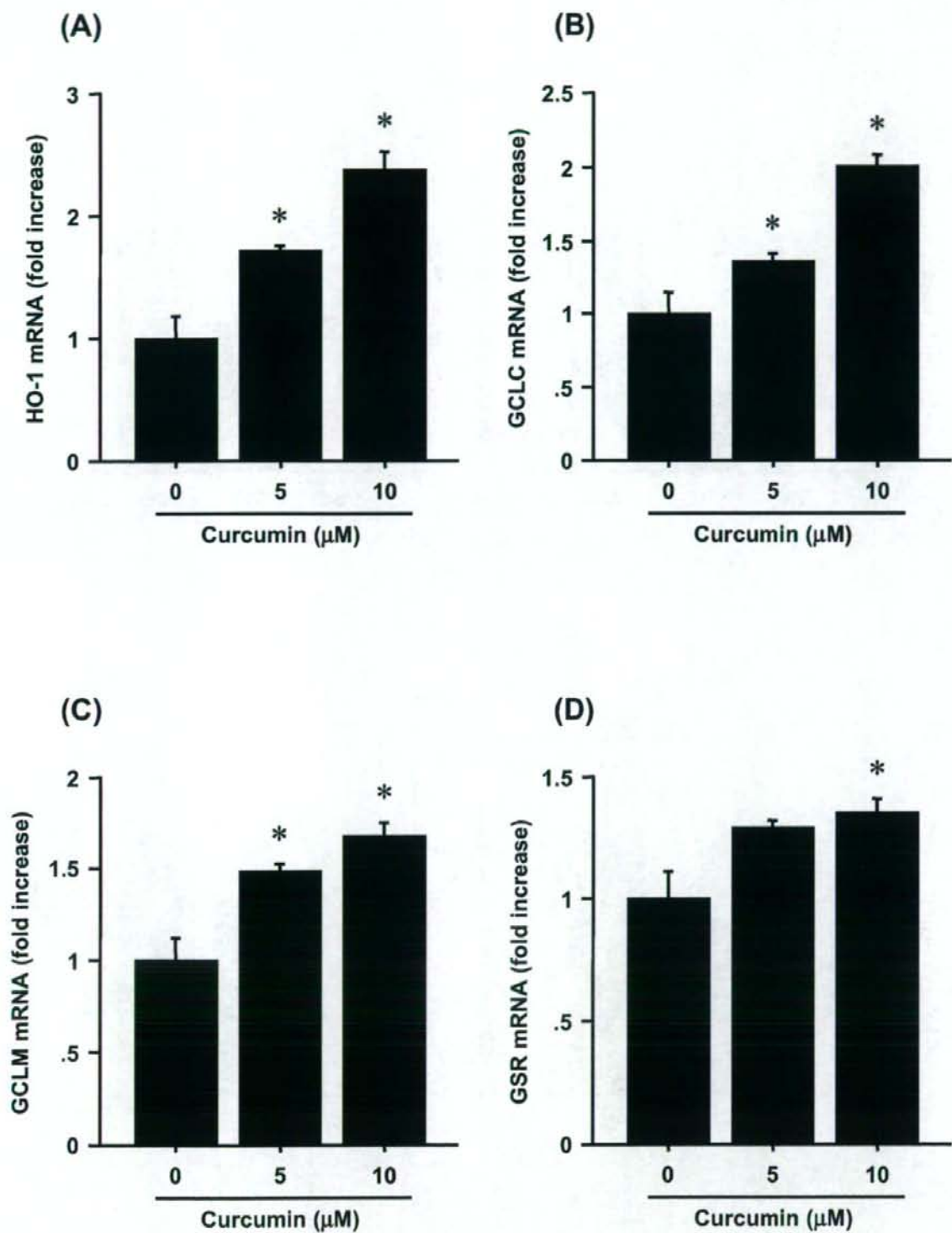


Figure 2

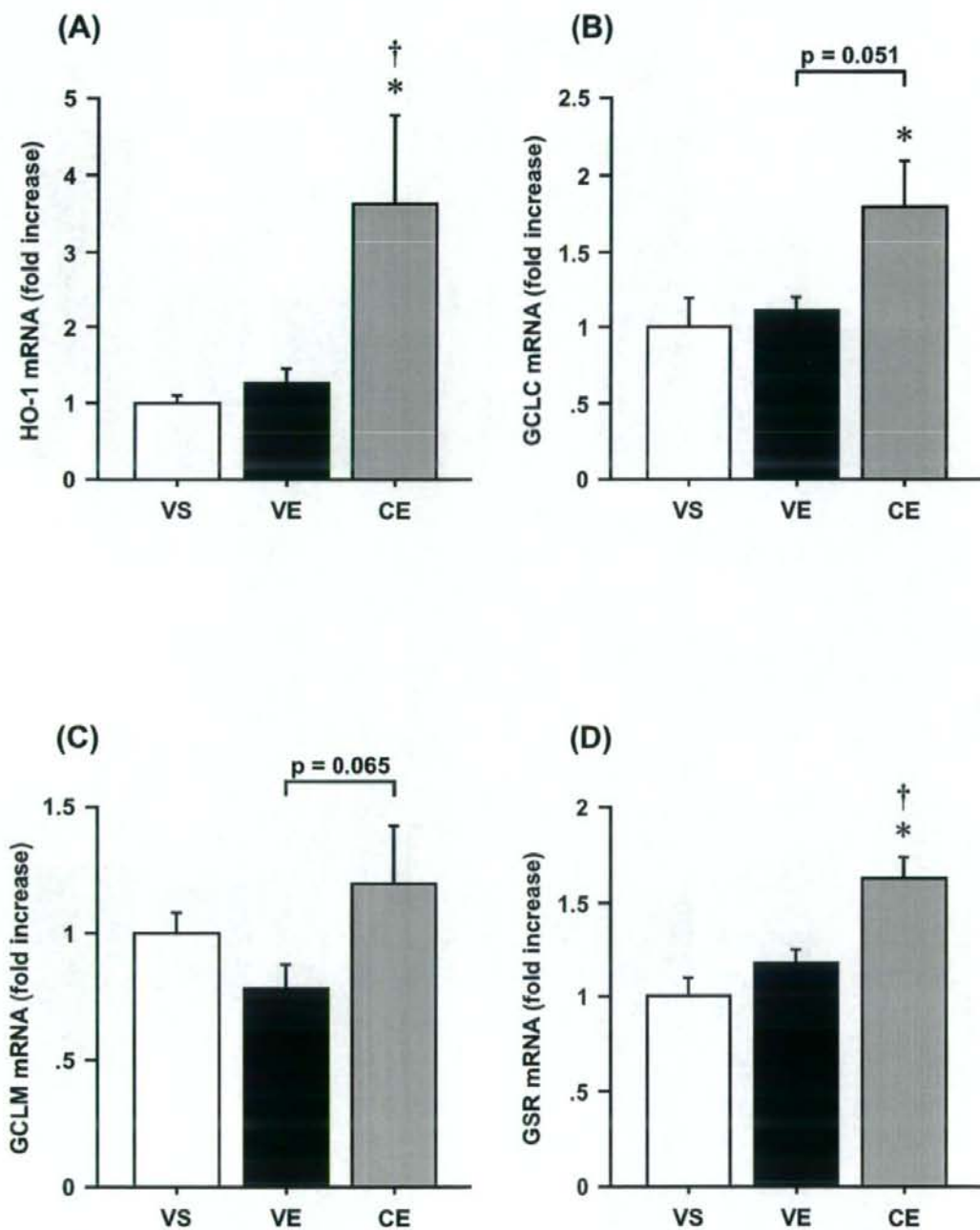
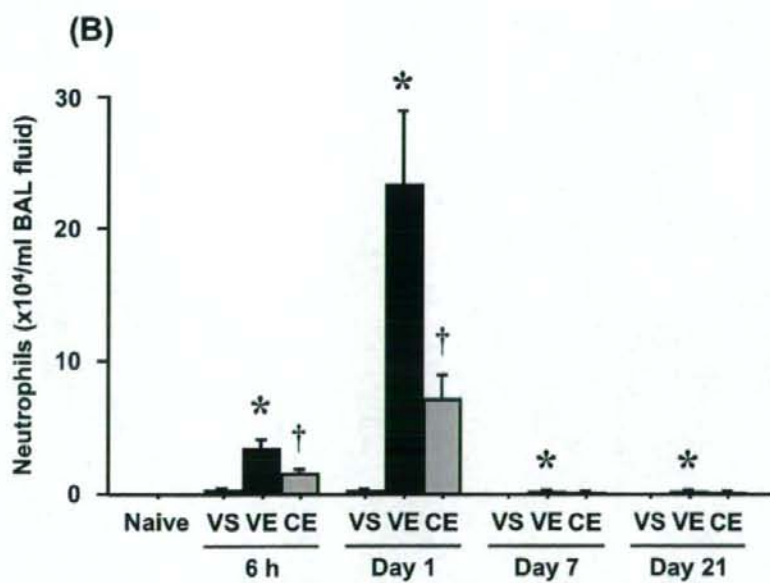
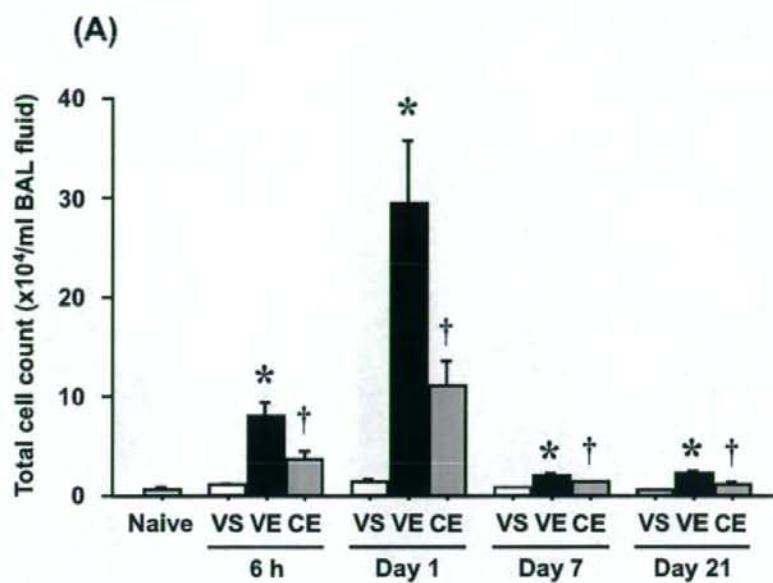


Figure 3



(C)

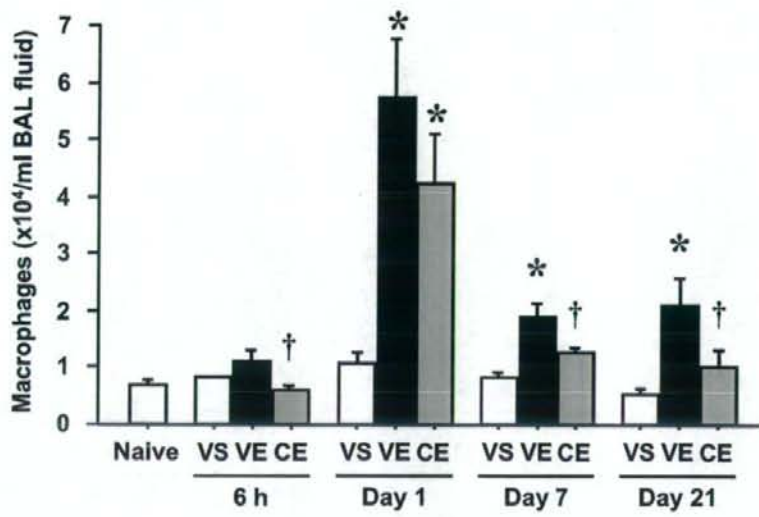


Figure 4

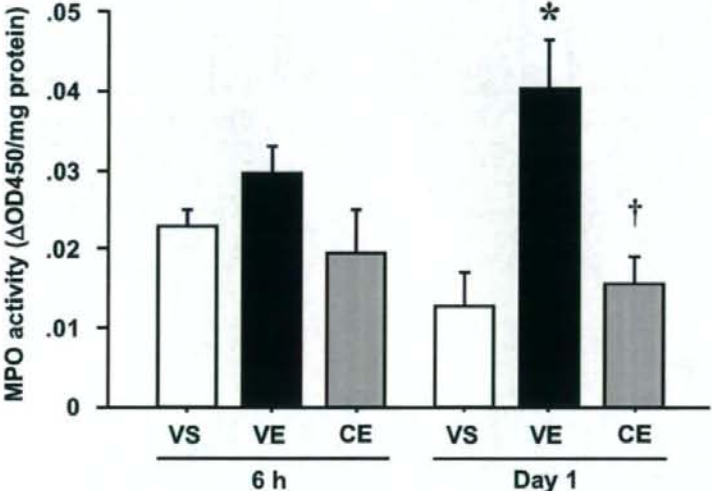


Figure 5

