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LETTER TO THE EDITOR

Response to: Hsp27 and Hsp70 in chronic obstructive pulmonary disease

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Dear Editor,

We would like to thank the journal for giving us the opportunity to respond to a Letter to the Editor written by Cappello et al. (2015) concerning our recent study (Cui et al. 2015). We also thank Dr. Cappello and his colleagues for raising these important issues concerning the plasma levels of Hsp27 in people with chronic obstructive pulmonary disease (COPD).

In our study, we found that plasma Hsp27 levels in COPD patients with or without pneumoconiosis were lower than those in the controls (Cui et al. 2015), which was not in agreement with the study by Dr. Cappello and his colleagues (2011). They found no difference in the histological levels of Hsp27 when comparing COPD patients with control patients. When they combined all COPD patients (mild/moderate COPD and severe/very severe COPD) together, they observed that Hsp27 levels in bronchial mucosa of all COPD patients were higher than those of non-smoker controls.

Several reasons might contribute to the difference between our results and conclusions and those of Dr. Cappello and his colleagues (2011). Firstly, all COPD patients and controls in our study were coal mine workers. Long-time exposure to coal mine dust could affect plasma Hsp27 levels before the onset of COPD. This view is supported by the finding that plasma Hsp27 levels in healthy coal mine workers were significantly higher than those in healthy (non-coal mine) workers (Wang et al. 2010). It may be that high Hsp27 plasma levels in coal mine exposed workers decreased after the onset of COPD. Secondly, our study determined Hsp27 plasma levels reflecting systemic circulating levels, while Cappello et al. (2011) measured Hsp27 in bronchial mucosa representing local airway levels. Thirdly, the participants in our study did not undergo a wash-out period of therapy. The biopsies of patients in the study of Cappello et al. (2011) were taken after a wash-out period from corticosteroid therapy of 30 days.

Although there were differences between the two studies (Cappello et al. 2011; Cui et al. 2015), we agreed with the opinion of Dr. Cappello and his colleagues that research about Hsp27 and Hsp70 in COPD might bring new progress in understanding this disease. COPD continues to be a major cause of morbidity and mortality worldwide (Mannino and Buist 2007). Researches on disease or stress sensitive protein levels in blood, i.e., biomarkers, will improve our understanding of early disease onset and development, and may lead to therapies for chronic diseases such as COPD.

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