3-P-080

Poster Sessions

The effects of dasatinib on corticosteroid insensitive airway inflammation induced by lipopolysaccharide

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Corticosteroid resistance is observed in some patients of COPD and severe asthma, resulting in difficult to control of airway inflammation. We previously reported that repeated dosed lipopolysaccharide (LPS) induced corticosteroid insensitive airway inflammation in mice. And recently, some groups reported that Src was important to inflammatory responses in COPD and asthma models of mice. Thus, we determined the effects of dasatinib, a src inhibitor, on repeated dosed LPS-induced airway inflammation in mice.

A/J mice were intranasally exposed to LPS twice daily for 3 days, and intranasally treated with dasatinib 2 hr before each LPS exposure. One day after the last LPS exposure, bronchoalveolar lavage fluid (BALF) was collected. The number of inflammatory cells and cytokines expression levels in BALF were measured by flow cytometry and ELISA, respectively.

LPS increased the number of total cells, macrophages, and neutrophils, and CXCL1 and TNF- α levels. Dasatinib significantly reduced BALF cells and the CXCL1 level. Dasatinib also reduce the TNF- α level. These results suggested that src was involved in airway inflammation and dasatinib will provide a new therapeutic agent for corticosteroid insensitive airway inflammation.