ImmunoTools *multiplex* Award 2014

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Global analysis of human bronchoalveolar lavage samples after allergen challenge – new insights in acute bronchial asthma.

Allergic asthma is a chronic inflammtatory disease of the airways. The underlying pathogenesis remains unclear. In order to get better understanding of acute asthma and to reveal new potential targets for treatment of acute asthma after allergen challenge, we had established our HUMAN model of acute asthma. In this model we challenge asthmatic patients with their specific antigens by instillation of the antigen in the patient's lung. In addition, as negative control we challenge the second lung with saline.

We lavage the patients 10 minutes and 24 hours after allergen challenge and saline sham challenge, respectively and get samples of bronchoalveolar lavage fluid (BALF). Thereby we get samples which reflect the typical asthmatic early and late response of the lungs and additionally the corresponding negative controls.

We are looking for a global experimental approach by investigation of these BALF samples. For such global analysis the ImmunoTools multiplex array for human cytokines and different CD markers is a powerful tool. I am planning to carry out such an analysis of BALF by the multiplex array.

This comparison of the allergen challenged and saline control challenged BALF samples should reveal if there are changes in the proportion of cytokines as well as different cell types. These following new insights in acute bronchial asthma could provide new potential targets for asthma treatment.

ImmunoTools *multiplex* AWARD for **Michael Küpper**

includes free analysis of samples on several antibody arrays with large range of antibodies against human CDs, human cytokines, and others.