

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 5350  
**Publication Number:** P1886

**Abstract Group:** 10.1. Respiratory Infections

**Keyword 1:** Asthma - mechanism **Keyword 2:** Viruses **Keyword 3:** Infections

**Title:** Identification of viral species in asthma patients with and without aspirin hypersensitivity

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**Body:** We have shown previously that even in patients with well-controlled asthma the presence of HRV can be detected in bronchial tissue. This phenomenon is more common in aspirin-exacerbated respiratory disease (AERD) but less frequent in subjects without asthma. We suspected that presence of chronic viral infection can sustain inflammation and may be responsible for bronchial symptoms. In the current study we aimed to screen for and identify viruses present in the airways of asthmatic subjects. The study groups comprised of 50 AERD and 50 asthmatics tolerant to aspirin. The control group consisted of 40 healthy subjects. Biological specimens included induced sputum, nasal washings and bronchoalveolar lavages. The samples were examined for the presence of several viruses (HCoV-229E, -NL63, -HKU1, influenza A, B, parainfluenza 1, 2, 3, bocavirus, RSV, adenovirus, echovirus 9) using a validated (RT)-PCR technique. In cases where there no known pathogen is found, the material will be tested using VIDISCA and HexaPrime method in order to search for new pathogens. Our results revealed that in samples from subjects with severe asthma, even in the period without exacerbations, the number of detectable various viral species was increased, as compared to patients with mild-to moderate asthma. We also found more viral species in nasal washings than in induced sputum collected from the same patient. In order to reliably determine the impact of viral infection on the course of the disease a prospective study is ongoing to acquire specimen several times on an annual basis and during exacerbations. Acknowledgement: PSPB-072/2010 from Switzerland through the Swiss Contribution to the enlarged European Union.