

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 43

**Publication Number:** P3789

**Abstract Group:** 1.5. Diffuse Parenchymal Lung Disease

**Keyword 1:** Interstitial lung disease **Keyword 2:** Inflammation **Keyword 3:** Chronic disease

**Title:** Interleukin 4 receptor, interleukin 17 and clinical presentation of chronic EAA

Dr. Martina 376 Sterclova martinasafrankova@seznam.cz MD <sup>1</sup>, Martina 377 Vasakova martina.vasakova@ftn.cz <sup>1</sup>, Radoslav 378 Matej radoslav.matej@ftn.cz <sup>2</sup> and Petra 379 Mandakova petra.mandakova@fnm.cz <sup>3</sup>. <sup>1</sup> Department of Respiratory Diseases, Thomayer Hospital, Prague, Czech Republic, 140 00 ; <sup>2</sup> Department of Pathology and Molecular Medicine, Thomayer Hospital, Prague, Czech Republic, 140 00 and <sup>3</sup> Department of Pathology and Molecular Medicine, Motol University Hospital, Prague, Czech Republic, 150 00 .

**Body:** Objectives: Chronic EAA is presented by dominant fibrotic changes with small proportion of active inflammation. Soluble IL-4R was found to play an important role in lung fibrogenesis, mostly in patients with IPF. IL-17 was found to regulate both inflammation and fibrogenesis in EAA. Aim: To find a possible role of soluble IL-4R and IL-17 on clinical presentation of chronic EAA, documented by correlation of BALF cell differential counts, pulmonary function tests and radiologic pattern of the disease. Material and methods: Fourteen chronic EAA patients were enrolled into the study. All of them underwent detailed history assessment, laboratory test, pulmonary function tests, chest HRCT (interstitial and alveolar score assessed), bronchoscopy with BAL and transbronchial biopsy. Concentrations of IL-4R, IL-17 and in BALF were determined with ELISA method. Concentrations of total protein were examined by colorimetry. Results: Positive correlations between IL-4R/total protein in BALF and HRCT interstitial score were found ( $p<0,01$ ), as well as positive correlations of BALF IL-4/total protein ratio and FVC, FEV1 and Dlco ( $p<0,01$ ). Positive correlation between BALF IL-17/total protein and HRCT alveolar score was observed ( $p<0,05$ ). No correlations between analyte concentrations and BALF differential cell counts were documented. Conclusions: Correlation between extent of fibrosis, pulmonary function tests and soluble IL-4R in BALF suggest its role in fibrosis development, further potentiating similar pathogenetic mechanisms between chronic EAA and IPF. IL-17 seems to take part on inflammatory changes in chronic EAA patients, its contribution to fibroproliferation should be further elucidated in humans.