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Title: BAL protein profiles specific of different interstitial lung diseases

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Body: Interstitial lung diseases (ILD) are an heterogeneous group of lung disorders with different etiopathogenesis, clinical courses and prognosis. In the last ten years our group of research is focusing on the proteomic analysis of BAL in different interstitial lung diseases. Aims of this proteomic study were to compare protein profiles of Sarcoidosis (S), Idiopathic Pulmonary Fibrosis (IPF), Langerhans cell Histiocytosis (PLCH), pulmonary fibrosis associated with Systemic sclerosis (SSc) patients in order to identify proteins of interest involved in specific pathogenetic networks or potential biomarkers with clinical value. Methods: Population of patients was composed by 9 S, 7 IPF, 9 PLCH, 7 SSc. Proteomic analysis was performed by 2D-electrophoresis. Image analysis was done by Image Master Platinum 7.0 software. Protein identification was performed by mass spectrometry. Results: Image analysis revealed distinct expression profiles for each ILD. Among the proteins differently expressed in our ILD samples there were Complement C3, complement factor B, complement factor I, antithrombin III, angiotensinogen, vitamin D binding protein, Leucin-rich alpha-2-glycoprotein, 14-3-3 protein epsilon, calcyphosin, kininogen N-term, alpha-2-HS-glycoprotein. Conclusion: The proteomic analysis of BAL confirmed the possibility to use 2D-electrophoresis to highlight different protein profiles among specific ILDs.