

Pulmonary Fibrosis Immunology

Research in the area of pulmonary fibrosis immunology reported from School of Medicine

2008 APR 19 - (NewsRx.com) -- A new study, 'A role for the receptor for advanced glycation end products in idiopathic pulmonary fibrosis,' is now available. "Idiopathic pulmonary fibrosis (IPF) is a severely debilitating disease associated with a dismal prognosis. There are currently no effective therapies for IPF, thus the identification of novel therapeutic targets is greatly needed," investigators in the United States report.

"The receptor for advanced glycation end products (RAGE) is a member of the immunoglobulin superfamily of cell surface receptors whose activation has been linked to various pathologies. In healthy adult animals, RAGE is expressed at the highest levels in the lung compared to other tissues. To investigate the hypothesis that RAGE is involved in IPF pathogenesis, we have examined its expression in two mouse models of pulmonary fibrosis and in human tissue from IPF patients. In each instance we observed a depletion of membrane RAGE and its soluble (decoy) isoform, sRAGE, in fibrotic lungs. In contrast to other diseases in which RAGE signaling promotes pathology, immunohistochemical and hydroxyproline quantification studies on aged RAGE-null mice indicate that these mice spontaneously develop pulmonary fibrosis-like alterations. Furthermore, when subjected to a model of pulmonary fibrosis, RAGE-null mice developed more severe fibrosis, as measured by hydroxyproline assay and histological scoring, than wild-type controls," wrote J.M. Englert and colleagues, School of Medicine.

The researchers concluded: "Combined with data from other studies on mouse models of pulmonary fibrosis and human IPF tissues indicate that loss of RAGE contributes to IPF pathogenesis."

Englert and colleagues published their study in *American Journal of Pathology* (A role for the receptor for advanced glycation end products in idiopathic pulmonary fibrosis. *American Journal of Pathology*, 2008;172(3):583-91).

For additional information, contact J.M. Englert, Pittsburgh, Dept. of Pathology, University of Pittsburgh School of Medicine, Pennsylvania USA..

The publisher of the *American Journal of Pathology* can be contacted at: American Society Investigative Pathology, Inc., 9650 Rockville Pike, Bethesda, MD 20814-3993, USA.

Keywords: United States, Pittsburgh, Pulmonary Fibrosis Immunology, Hepatology, Idiopathic Pulmonary Fibrosis, Immunology, Infectious Disease, Pathology, Pulmonary Fibrosis, Pulmonology, Respiratory Distress Syndrome, Respiratory Infection, Respiriology, Therapy, Treatment.

This article was prepared by Obesity, Fitness & Wellness Week editors from staff and other reports. Copyright 2008, Obesity, Fitness & Wellness Week via NewsRx.com.

