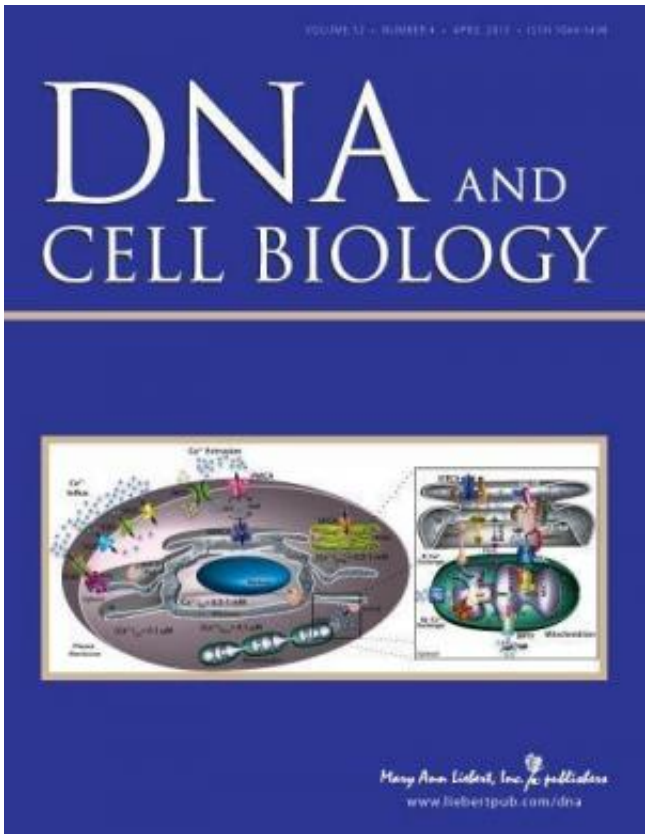
Mast cells have critical role in initializing pulmonary fibrosis

11 April 2013



Pulmonary fibrosis is a chronic, deadly disease that affects five million people worldwide. It is irreversible, its cause is poorly understood, and it has a median survival of only about 3 years. A new study that implicates mast cells—an immune cell involved in allergic asthma—in the development of idiopathic pulmonary fibrosis could lead to new, more effective therapies. The study is published in *DNA and Cell Biology*.

In the article "Mast Cells: A Pivotal Role in Pulmonary Fibrosis," A. Veerappan and colleagues from Weill Cornell Medical College, New York, NY, showed that in mice unable to produce mast cells, a chemical trigger known to cause pulmonary fibrosis does not result in disease. However, when the researchers introduced mast cells into the lungs of these mice, disease protection was reversed and the mice developed pulmonary fibrosis. The authors identify a role for two key compounds produced by mast cells—histamine and renin—and propose that they promote fibrogenesis when mast cells are activated early in the course of the disease.

Editor-in-Chief Carol Shoshkes Reiss, PhD, Departments of Biology and Neural Science, New York University, NY says, "Randi Silver's lab has shown, in this compelling paper, that mast cells contribute to the pathogenesis of pulmonary fibrosis. These observations are important and may lead to the development of new therapeutic modalities to prevent deterioration of lung function."

More information: The article is available free on the *DNA and Cell Biology* website at http://www.liebertpub.com/dna.

Provided by Mary Ann Liebert, Inc