

New understanding of chronic lung inflammatory diseases unfolding

March 23 2017



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Researchers studying chronic inflammation that can lead to the development of lung diseases such as asthma, pulmonary fibrosis, and cancer, are focusing on the role cytokines play in regulating the behavior of fibroblast cells and the extracellular matrix. The most recent evidence on cytokine regulation of inflammatory disease in the lung is presented in a comprehensive review article published in *Journal of Interferon & Cytokine Research*.

In the article entitled "Innate Immune Cytokines, Fibroblast Phenotypes, and Regulation of Extracellular Matrix in Lung," Carl Richards, PhD, McMaster University, Hamilton, Canada, examines the scientific evidence suggesting that cytokines stimulated by the innate immune system can directly control fibroblast behavior. Fibroblasts are major contributors to extracellular remodeling and regulate the accumulation of inflammatory cells, which can lead to [chronic inflammation](#) and ultimately to organ dysfunction. Dr. Richards discusses the potential of metabolic changes, age, and epigenetic mechanisms to affect the activity of fibroblasts and immune system cell populations through impact on [cytokine](#)-mediated signaling pathways.

"Dr. Richards has made major contributions to our understanding of cytokine mediated effects on inflammatory disorders mediated through interactions between the immune system and resident fibroblasts," says *Journal of Interferon & Cytokine Research* Co-Editor-in-Chief Thomas Hamilton, Department of Immunology, Cleveland Clinic Foundation, Cleveland, OH. "This review provides a highly relevant discussion of these issues and is particularly timely as our ability to use this knowledge is enabling new therapeutic strategies to treat inflammation-related chronic disease."

More information: Carl D. Richards, Innate Immune Cytokines, Fibroblast Phenotypes, and Regulation of Extracellular Matrix in Lung, *Journal of Interferon & Cytokine Research* (2017). [DOI:](#)

[10.1089/jir.2016.0112](https://doi.org/10.1089/jir.2016.0112)

Provided by Mary Ann Liebert, Inc

Citation: New understanding of chronic lung inflammatory diseases unfolding (2017, March 23)
retrieved 3 May 2024 from

<https://medicalxpress.com/news/2017-03-chronic-lung-inflammatory-diseases-unfolding.html>

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