Review Series—Inflammation & Fibrosis

Introduction

S.C. DONNELLY

From the Department of Medicine, St Vincent’s University Hospital, Elm Park, Dublin 4, Ireland

Address correspondence to Prof S.C. Donnelly, Department of Medicine, St Vincent’s University Hospital, Dublin 4, Ireland. email: seamas.donnelly@ucd.ie

Those working at the clinical interface are often deeply frustrated by the lack of specific therapies for patients with progressive end-organ fibrosis. While significant research work has been undertaken over recent years in this field, this work has focused on translating to specific fibrotic end-organs such as the lung or the liver. In this review series, we wish to highlight what we can learn from this focused work that has applicability to a broader general systemic fibrotic process.

The normal reparative process following tissue injury represents a key protective biological function in vivo. When it becomes dysregulated, progressive fibrosis ensues. The role of inflammation in fibrosis has engendered some debate. We would support the conjecture that aberrant remodeling and repair represents a key part within the overall continuum of inflammation.

In the current issue of the Journal, our initial review focuses on the important mesenchymal progenitor cell, the fibrocyte and its importance in evolving fibrosis. Professor Bucala, who initially described this novel cell type, highlights the importance of this cell type in diseases characterized by chronic inflammation and excessive collagen deposition.

Further reviews will highlight fibrosis in the classical regenerative organ, namely the liver, in potentially hostile acidic and hypoxic microenvironments of the kidney and lung, the increasing importance of fibrosis in cardiac diseases and finally, with regards to clinical trial design in fibrotic disease—what can we learn from previous historical trials in clinical fibrosis.

The overall purpose of this review series on Inflammation and Fibrosis is to highlight work in specific organs that potentially may translate to systemic fibrosis. We wish to foster and encourage debate among clinical scientists and encourage ‘out-of-the-box’ or ‘out-of-the-organ’ thinking with the ultimate aim of identifying novel pan-fibrotic systemic therapies for our patients.