Editorial

Antiangiogenesis in Chronic Inflammation

This issue of "Current Drug Targets – Inflammation & Allergy" is dedicated to the topic of "Antiangiogenesis in chronic inflammation".

Interest in angiogenesis research remains strong in recent years: many laboratories worldwide are actively involved in the study of several aspects of this field and the literature on angiogenesis increases exponentially.

The growth of new microvessels from resting vessels is the outcome of a fine balance between molecules that are either positive or negative regulators of angiogenesis (the so called "angiogenic switch").

The explosion of clinical research in angiogenesis is a result of the realization that in many diseases characterized by persistent, unregulated angiogenesis, as cancer, atherosclerosis, rheumatoid arthritis and diabetic neuropathy, a common underlying pathogenetic aspect is a derangement in angiogenesis.

Suppressors of angiogenesis have potential clinical applications in conditions where abnormal proliferation of blood vessels is related to the disease progression.

In this issue several leading investigators report new findings about antiangiogenesis in chronic inflammation. The role of angiogenesis in chronic inflammation is analyzed and the effect of inflammatory mediators on angiogenesis is reviewed, where possible we have tried to indicate the areas of each process that are poorly understood in order to prvide directions for future research.

Dr. Naldini and Carraro present an overview on the relevance of both physiological and pathological inflammatory processes in angiogenesis, with particular regards to microenvironment. Dr. Crivellato and myself summarize the most recent acquisition concerning mast cells involvement in angiogenic processes and chronic inflammatory processes. Dr. Ranieri and co-workers review recent studies on the vasculature targeting strategies for the treatment of chronic inflammatory diseases. Dr. Strieter and co-workers discuss the biology of the angiogenic and angiostatic CXC chemokines and their disparate angiogenic activity in the context of a variety of chronic fibroproliferative disorders. Dr. Roccaro and co-workers present recent data about the use of antiangiogenesis as a therapeutic tool in the treatment of rheumatoid arthritis. Finally, Dr. Monnier and co-workers review the most recent advances in understanding the mechanisms by which non-steroidal anti-inflammatory drugs and inhibitors of cyclooxygenase suppress angiogenesis and discuss their potential clinical use as antiangiogenic drugs.

Domenico Ribatti
Department of Human Anatomy and Histology
University of Bari Medical School
Piazza G. Cesare, 11
Policlinico
I-70124 Bari
Italy
E-mail: ribatti@anatomia.uniba.it