

RECOMBINANT HUMAN CYTOKINE THERAPY FOR CHRONIC INFLAMMATORY DISEASES

Technology Offer

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Branch

drug development, drug therapy,
chronic inflammatory disease

Patent Situation

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Offer

license or co-development

Key Words

N-modified interleukin,
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Introduction

Most chronic inflammatory diseases, including autoimmune conditions, neurodegeneration and metabolic diseases, are multifactorial and involve complex immune dysfunction. Current therapy is mainly directed towards inhibition of pro-inflammatory protein cytokines, such as IL-1 β or TNF α . Inhibitors of these mediators are either non-specific and/or cause general immunosuppression with increased incidence of infections. Interest, therefore, has grown in potential pharmacological enhancement of endogenous anti-inflammatory processes, for instance with modulatory cytokines.

Invention

The discovery of an N-modified interleukin (N-mod IL-X) as an endogenous antagonist of several proinflammatory cytokine receptors opens up a new approach to therapy of chronic inflammatory diseases. The invention comprises a recombinant form of N-mod IL-X which is suitable for therapeutic administration. Because of its antagonist action at multiple cytokine receptors, it represents a single drug candidate which targets various inflammatory processes with corresponding broad therapeutic activity.

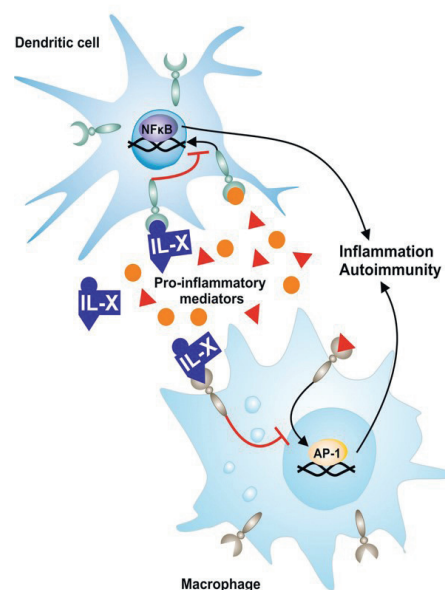
Market Potential

The invention provides therapeutic opportunities in:

- inflammatory autoimmune diseases such as rheumatoid arthritis or lupus
- low level chronic inflammation, as in obesity or atherosclerosis
- neurodegenerative diseases such as multiple sclerosis

Development Status

The concept has been demonstrated in gene knockout studies at a cellular level and is currently under investigation in animal experiments.



IL-X inhibits the activation by inflammatory mediators of NFKB in dendritic cells and AP-1 in macrophages and thereby ameliorates inflammation.