

Novel biologics to treat T cell mediated inflammatory disease

Biologic therapeutic approach to modulating T cell inflammatory diseases by expressing isolated or recombinant combinations of WSX-1 or gp130 polypeptide with interacting proteins (such as p28, EB13, Il-27) to inhibit pathological T cell development.

Inventor

[Christopher Hunter](#)

STAGE OF DEVELOPMENT

Preclinical proof of concept

INTELLECTUAL PROPERTY

Pending applications in US, Canada, European Union; issued Mexican patent

REFERENCE MEDIA

Immunity. [2003 Nov; 19\(5\):645-55.](#)

DESIRED PARTNERSHIPS

- Licensing
- Co-development

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Problem

The interleukin-27 receptor (WSX -1) is a heterodimeric type I cytokine receptor for interleukin-27 comprising the WSX-1 (alpha subunit) and glycoprotein 130 and is essential for initiation of Th1 cell differentiation.

Solution

Dr. Christopher Hunter discovered that WSX-1 signaling has a negative effect on T cell responses. In fact a WSX-1 fusion protein or soluble p28 (Il-30) is able to enhance the ability of Il-27 to inhibit T cell production of Il-2 and IFN γ as well as the T cell subset of Il-17 producing T cells, which is a major pathological T cell subset. Penn has pending proprietary rights to various polypeptide compositions which encompass this technology.