

Immunology

Methods for treating inflammation and autoimmune disease.

Brief Description of Technology

Methods for treating inflammation and autoimmune disease.

TECHNOLOGY ID

2018-1102

BUSINESS OPPORTUNITY

Exclusive License or Sponsored
Research

TECHNOLOGY TYPE

Antibody

PATENT INFORMATION

PCT Filed

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Technology Overview

The cytokine IL-1beta plays a key role in the systemic inflammation characteristic of autoimmune diseases such as Inflammatory bowel disease, multiple sclerosis and type I diabetes. Controlling this type of inflammation has been challenging because IL-1beta also plays a vital role in responding to infectious diseases. Researchers at Cincinnati Children's have identified a novel cross-talk mechanism—independent of the immune response to invading pathogens—that can be targeted to reduce IL-1beta production during autoimmune inflammation without diminishing the immune response to foreign invaders.

Applications

Inflammation cytokine storms induced by CAR T cell therapy or Immune checkpoint therapy induced adverse events.

Autoimmune diseases like Inflammatory bowel disease, multiple sclerosis and type I diabetes

Advantages

Unlike other innovations in this field, this research targets a novel mechanism that reduces the production of IL-1beta, mitigating damaging inflammation without reducing antimicrobial immune response.

Market Overview

Autoimmune diseases such as Inflammatory bowel disease, Multiple Sclerosis and Type I Diabetes affect more than 3000 million people worldwide.

Global therapeutics market for autoimmune diseases was \$54 billion (2021)

Inflammation is a driver of many autoimmune disease disorders

Investigator Overview

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