

Macrophage Programming for Immunotherapy

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BACKGROUND

Immunotherapy is one of the most important areas in modern medicine. Using antibodies, proteins, and cells, physicians are now able to target a range of conditions with specificity. UC San Diego researchers have recently developed a new process for engineering macrophages to possess a broad range of sensing and programed actions for directed therapeutics.

TECHNOLOGY DESCRIPTION

UC San Diego researchers have developed methods and processes for engineering macrophages to carry both response elements and effector modules that can provide directed immunotherapy. By modulating the cellular response profile, macrophages can now target cells that would otherwise evade detection and clearance. By relying on the natural phagocytic process, the therapeutic potential of this technology is enhanced and the off-target risks may be minimized.

APPLICATIONS

Potential use in directed therapeutics for immunotherapy.

ADVANTAGES

By relying on the natural phagocytic process, the therapeutic potential of this technology is enhanced and the off-target risks may be minimized.

INTELLECTUAL PROPERTY INFO

A provisional patent has been submitted.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	0140834-A1	05/07/2020	2017-142
Patent Cooperation Treaty	Published Application	2019014419	01/17/2019	2017-142

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OTHER INFORMATION

KEYWORDS

Cell therapy, Immunotherapy,
macrophage, precision medicine,
natural phagocytosis

CATEGORIZED AS

- [Medical](#)
- [Therapeutics](#)

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