AXL-CAR-T for the Treatment of Renal Cell Carcinoma

Overview

Drug Name	AXL-CAR-T
Description	AXL-CAR-T is a cancer immunotherapy consisting of modified autologous CAR-T cells in early clinical development for the treatment of renal cell carcinoma.
Target	AXL
Drug Modality	CAR-T Cells
Indication	Renal Cell Carcinoma
Product Category	Cancer Immunotherapy
Mechanism of Action	Targeting AXL to Kill the Cancer Cells
Status	Clinical Trial
Patent	Granted

Seeking Global Cooperation

Protheragen Inc. is actively seeking partnership for AXL-CAR-T. Potential collaboration can be strategic alliance, licensing, or marketing agreement.
We look forward to hearing from you.

Target

Tyrosine-Protein Kinase Receptor UFO (AXL)

The protein encoded by this gene is a member of the Tyro3-Axl-Mer (TAM) receptor tyrosine kinase subfamily. The encoded protein possesses an extracellular domain which is composed of two immunoglobulin-like motifs at the N-terminal, followed by two fibronectin type-III motifs. It transduces signals from the extracellular matrix into the cytoplasm by binding to the vitamin K-dependent protein growth arrest-specific 6 (Gas6). This gene may be involved in several cellular functions including growth, migration, aggregation and anti-inflammation in

multiple cell types.

Indication

Renal Cell Carcinoma (RCC)

Renal cell carcinoma (RCC), which originates in the renal parenchyma, is the most common form of kidney cancer affecting adult populations in Western countries. Epidemiology studies confirm that renal cell carcinoma is increasing steadily in both incidence and mortality, particularly in more developed countries and regions. This increase in incidence is the result of the rising prevalence of important risk factors such as cigarette smoking, overweight and obesity, hypertension and advanced kidney disease. In spite of improvements in early diagnosis, approximately one-third of patients continue to have locally advanced or metastatic disease at the time of diagnosis, with the result that mortality rates remain high.

Renal cell carcinoma accounts for approximately 90% of all kidney cancers as well as 2-3% of all adult malignancies, and continues to increase in incidence. According to the International Agency for Research on Cancer (IARC)'s Globocan data for 2018, the global incidence of kidney cancer was 403,262 and the five-year global prevalence was 1,025,730. The number of deaths due to kidney cancer was 175,098 in 2018. Potential treatment options for renal cell carcinoma include surgery, radiotherapy, chemotherapy, and immunotherapy.

Mechanism of Action

Targeting AXL to Kill the Cancer Cells

Molecular Mechanism	T cells transduced with a lentiviral vector encoding a chimeric antigen receptor (CAR) targeting receptor tyrosine-protein kinase receptor UFO (AXL)

Status

The Status of AXL-CAR-T

The international patent applications under the PCT have been granted.

	Discovery/Optimization	Preclinical	Clinical
AXL-CAR-T			

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