
Late-Stage Preclinical Study of CAR-T Memory Stem Cells Targeting PSMA (P-PSMA-101) for the Treatment of Castrate-Resistant Metastatic Prostate Cancer

Grant Award Details

Late-Stage Preclinical Study of CAR-T Memory Stem Cells Targeting PSMA (P-PSMA-101) for the Treatment of Castrate-Resistant Metastatic Prostate Cancer

Grant Type: Late Stage Preclinical Projects

Grant Number: CLIN1-10999

Project Objective: Manufacturing and IND enabling toxicity and specificity studies to support a phase 1 trial of CAR-T Memory Stem Cells Targeting PSMA (P-PSMA-101) for the Treatment of Castrate-Resistant Metastatic Prostate Cancer

Investigator:

Name:	Devon Shedlock
Institution:	Poseida Therapeutics, Inc.
Type:	PI

Disease Focus: Cancer, Prostate Cancer, Solid Tumors

Human Stem Cell Use: Adult Stem Cell

Cell Line Generation: Adult Stem Cell

Award Value: \$3,992,090

Status: Closed

Progress Reports

Reporting Period: Final Operational Milestone #3

[View Report](#)

Grant Application Details

Application Title: Late-Stage Preclinical Study of CAR-T Memory Stem Cells Targeting PSMA (P-PSMA-101) for the Treatment of Castrate-Resistant Metastatic Prostate Cancer

Public Abstract:**Therapeutic Candidate or Device**

Genetically engineered, Centyrin-based, CAR- or CARTyrin-T memory stem cells

Indication

Castrate-resistant metastatic prostate cancer

Therapeutic Mechanism

The Centyrin-based chimeric antigen receptor (CARTyrin) cells are cells that are removed from a patient's body and genetically engineered to express a receptor that binds to PSMA that is selectively found on prostate cancer cells, triggering the CARTyrin T cells to specifically kill the prostate cancer cells. Because the CARTyrin T cells are stem cell memory, they can give rise to many CAR-T effector cells and persist for long periods and kill residual PSMA+ cancer cells or recurrences.

Unmet Medical Need

Other than skin cancer, prostate cancer is the most common cancer among men in the US. In the US, 172,258 men were diagnosed in 2014. Early stage prostate cancer is often managed by surgery, radiation and/or hormone suppression, however, metastatic CRPC is eventually fatal despite current treatments

Project Objective

IND submission and clinical trial start-up

Major Proposed Activities

- Manufacturing of P-PSMA-101 tox material for IND-enabling study
- Completion of nonclinical IND-enabling studies
- Preparation and submission of IND

Statement of Benefit to California:

Metastatic CRPC is is the most common cancer among men in the US and is eventually fatal despite current treatments. Being stem cell memory CAR-T cells, this treatment could cure or control mCRPC with low toxicity, directly benefiting patients, their relatives and friends who are citizens of California. A durable, low-toxicity, one-time treatment could also reduce costs to Californians both directly and in terms of state and federal taxes by decreasing the need for subsequent medical care

Source URL: <https://www.cirm.ca.gov/our-progress/awards/late-stage-preclinical-study-car-t-memory-stem-cells-targeting-psma-p-psma-101>