Clinical Study of T stem cell memory (Tscm)-based CAR-T cells in Patients with Multiple Myeloma

Grant Award Details

Clinical Study of T stem cell memory (Tscm)-based CAR-T cells in Patients with Multiple Myeloma

Grant Type: Clinical Trial Stage Projects
Grant Number: CLIN2-10395
Project Objective: Clinical Study of T stem cell memory (Tscm)-based CAR-T cells in Patients with Multiple Myeloma

Investigator:

<table>
<thead>
<tr>
<th>Name</th>
<th>Matthew Spear</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution</td>
<td>Poseida Therapeutics, Inc.</td>
</tr>
<tr>
<td>Type</td>
<td>PI</td>
</tr>
</tbody>
</table>

Disease Focus: Blood Cancer, Cancer, Multiple Myeloma

Human Stem Cell Use: Adult Stem Cell

Award Value: $19,813,407

Status: Active

Grant Application Details

Application Title: Clinical Study of T stem cell memory (Tscm)-based CAR-T cells in Patients with Multiple Myeloma
**Public Abstract:**

**Therapeutic Candidate or Device**

Genetically engineered, Centyrin-based, stem cell memory CAR-T cells (CARTyrin T cells)

**Indication**

Multiple Myeloma

**Therapeutic Mechanism**

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

**Unmet Medical Need**

Multiple myeloma is generally an incurable and fatal disease, running a course of multiple relapses and recurrences. Current therapies rarely produce long-term control in relapsed/refractory patients. Being stem cell memory CAR-T cells, the treatment could potentially produce long-term control.

**Project Objective**

Phase 1 trial completed

**Major Proposed Activities**

- Manufacturing of products for the proposed trial
- Enrollment, treatment and follow-up of patients to assess safety and efficacy of the therapy, followed by analysis and reporting of the results
- Completion of nonclinical safety studies

**Statement of Benefit to California:**

Multiple myeloma is generally a fatal disease, running a course of multiple recurrences despite current therapies. Being stem cell memory CAR-T cells, this treatment could cure or control myeloma 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/clinical-study-t-stem-cell-memory-tscm-based-car-t-cells-patients-multiple