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## Stem Cell-Based iNKT Cell Therapy for Cancer

### Grant Award Details

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Stem Cell-Based iNKT Cell Therapy for Cancer

**Grant Type:** Therapeutic Translational Research Projects

**Grant Number:** TRAN1-08533

**Project Objective:** Pre-IND meeting

**Investigator:**

<b>Name:</b>	Lili Yang
<b>Institution:</b>	University of California, Los Angeles
<b>Type:</b>	PI

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**Disease Focus:** Blood Cancer, Cancer, Multiple Myeloma

**Human Stem Cell Use:** Adult Stem Cell

**Award Value:** \$6,956,775

**Status:** Active

### Progress Reports

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**Reporting Period:** Final Operational Milestone #3

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### Grant Application Details

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**Application Title:** Stem Cell-Based iNKT Cell Therapy for Cancer

**Public Abstract:****Translational Candidate**

Lenti/iNKT-sr39TK Modified Autologous Human CD34+ Hematopoietic Stem Cells (HSCs)

**Area of Impact**

The targeted area of impact for the candidate is cancer therapy, in particular cancers that are lacking existing effective treatments.

**Mechanism of Action**

The proposed candidate will generate therapeutic levels of invariant natural killer T (iNKT) cells in cancer patients, helping them to battle their deadly diseases. These iNKT cells can both directly kill tumor cells, and activate other immune cells like natural killer (NK) cells and cytotoxic T cells (CTLs) to eradicate tumor.

**Unmet Medical Need**

Despite the existing therapies, cancer patients still suffer from the ineffectiveness of these treatments, their toxicities, and the risk of relapse. Our proposed Stem Cell-Based iNKT Cell Therapy represents a novel therapy for cancer that can potentially help many cancer patients.

**Project Objective**

Pre-IND meeting

**Major Proposed Activities**

- Conduction of Preclinical Studies
- Development of a Clinical Trial Protocol
- Preparation for and Conduction of a Pre-IND Meeting with the FDA

**Statement of Benefit to California:**

Cancer is a leading threat to public health in the United States and in the State of California. In 2015, it is estimated that over 160,000 Californians can be diagnosed with cancer. Cancer is the second leading cause of death in California, and also brings devastating economic impacts to the State. Our proposed Stem Cell-Based iNKT Cell Therapy, if successful, has the potential to save the lives of Californians and reduce the economic burden for cancer treatment.

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**Source URL:** <https://www.cirm.ca.gov/our-progress/awards/stem-cell-based-inkt-cell-therapy-cancer>