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IMMUNO-CELL THERAPY FOR BLOOD DISORDERS WITH NOVEL TARGETS

THERAPEUTICS

Composition and methods for enhancing anti-tumor effector functioning of CAR T cells for cancer immunotherapy.

TECHNOLOGY TYPE

Oncology
Cell Therapy
Biologics
Antibody
Immunotherapy
Combination Therapy
Platform Method
Multiple Myeloma

STAGE OF DEVELOPMENT

- Preclinical.

- Safety and efficacy have been demonstrated in animal models.

IP PROTECTION

Nationalized PCT Pending in the United States, Korea, Europe, Canada, and China

CD229 CAR T Cells and
Methods of Use Thereof
WO2018017708A1
CN109641947A

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TECHNOLOGY SUMMARY

Multiple Myeloma (MM) is an incurable plasma cell malignancy with significant morbidity and mortality. While proteasome inhibitors and immunomodulatory agents have improved treatment outcomes, most patients eventually relapse.

The Cancer Immunotherapy program at Huntsman Cancer Institute has established a comprehensive portfolio of novel immuno-oncology therapeutic candidates for hematologic malignancies and solid tumors. The proprietary biologics discovery platform includes a fully human antibody phage display library with a diversity of greater than 1010 clones. A number of monoclonal antibodies and CAR T cells against surface antigens, blocking antibodies against cytokines, and immune checkpoints are being advanced. The lead immunotherapy candidate is a monoclonal antibody and CAR T cell therapy targeting a novel surface receptor CD229. CD229 is selectively expressed on MM chemotherapy resistant precursor cells making it attractive for clinical development as a potential cure for MM. Extended applications include B-cell malignancies.

FEATURES AND BENEFITS

- Targets refractory population extending response without relapse.
- Expect broader response rate across MM patient population.
- Potential for combination therapy to minimize toxicity related to cytokine release syndrome.
- Reduces neural toxicity.

RECENT PUBLICATIONS

Radhakrishnan, S.V., Miles, A., Atanackovic, D., Luetkens, T. (2017). A novel high throughput process for generation and characterization of chimeric antigen receptor (CAR) T cells. *Clinical Lymphoma, Myeloma, and Leukemia*. 17(2):S381-S382. doi: [10.1016/j.clml.2017.07.229](https://doi.org/10.1016/j.clml.2017.07.229)

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