Novel Anti-HLA-Pan-DP CAR-T cells for Targeted Cancer Immunotherapy

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TECHNOLOGY DESCRIPTION

Introducing a transformative innovation in immunotherapy for hematological malignancies, including B-cell lymphomas, multiple myeloma, and blastic plasmacytoid dendritic cell neoplasm. Our cutting-edge CAR T-cell therapy targets HLA-DP, a novel and consistently expressed molecule across various stages of B-cell maturation, addressing the challenges of antigen downregulation that often lead to relapse in CD19- and BCMA-targeted therapies. Featuring a proprietary CAR construct with a single-chain variable fragment (scFv) that binds selectively to HLA-DP, this therapy activates T-cell cytotoxic functions to eliminate cancer cells. Preclinical studies demonstrate potent and specific killing of HLA-DP-expressing cancer cells without off-target effects, along with robust efficacy in vivo in lymphoma and multiple myeloma models. Designed to bridge patients to hematopoietic stem cell transplantation, this innovative CAR T-cell therapy offers hope for improved long-term outcomes in therapy-resistant hematological malignancies.

STAGE OF DEVELOPMENT

Pre-clinical proof of concept.

RELATED MATERIALS

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

Hematological Malignancies, B Cell Lymphoma, Multiple Myeloma, Blastic Plasmacytoid Dendritic Cell Neoplasm, HLA-DP, CAR T, Lymphoma

CATEGORIZED AS

- Medical
  - Disease: Cancer
  - Therapeutics

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