Next-generation allogeneic CAR T cells to treat B-cell mediated autoimmune disease

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TRACK 2

SUMMARY

Current therapies for autoimmune diseases fail to provide long-term remission and have side effects. Chimeric Antigen Receptor (CAR) T cell represent a promising immunotherapy approach to target autoimmune diseases.

Here, a next-generation non-viral gene editing technology using a base editor system will be applied for CAR T cell approaches in autoimmune diseases. Harnessing multiplex editing, the team aims to create a solution based on allogeneic donor cells to reduce costs and improve access.

This approach shifts from viral to non-viral editing and from random to precise integration.

PROJECT GOALS

- To develop an immunosuppressant-resistant, TCR-disrupted, CD19-specific CAR T cell product for off-the-shelf use in autoimmune disease treatment.
- Preclinical Proof-of-Concept

LONG-TERM GOALS

- Conduct Phase I/II clinical trial.
- Commercial distribution either via a license or Spin-Out.