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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government Owned Invention Available for License: Nucleophosmin 1 (NPM1) Mutation-Specific T Cell Receptors for Targeted Treatment of Acute Myeloid Leukemia (AML)

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The NCI seeks research co-development partners or licensees for NPM1 Mutation-Specific T Cell Receptors for Targeted Treatment of AML.

FOR FURTHER INFORMATION CONTACT: Inquiries related to this license opportunity should be directed to: Abritee Dhal, Ph.D., Technology Transfer Manager, NCI, Technology Transfer Center, Email: *abritee.dhal@nih.gov* or Phone: 240-276-6154.

SUPPLEMENTARY INFORMATION: AML is a rare form of blood cancer affecting myeloid stem and progenitor cells, associated with a poor prognosis and a 5-year survival rate of ~33%. Current treatments, including intensive chemotherapy and stem cell transplantation, are not suitable for all patients and can cause significant toxicities, including low blood cell counts, infection and graft-versus-host disease. Therefore, there is a need for safer and more effective treatments.

This specific invention concerns the isolation of two highly specific T cell receptors (TCRs), known as TCR6 and TCR7, recognizing a neoepitope, AVEEVSLRK. The neoepitope is derived from mutant NPM1 and presented in the context of HLA-A*11:01. Pre-clinical results for these TCRs revealed robust and specific cytotoxicity against a leukemia cell line and several patient-derived AML samples expressing the NPM1 mutation and HLA-A*11:01. Furthermore, they showed no cross-reactivity to normal peripheral blood mononuclear cells, structurally similar peptides or unrelated HLA alleles. These results suggest these novel TCRs represent a potential adoptive T cell therapy for the treatment of AML.

“This Notice is in accordance with 37 C.F.R. § 404.4 Authority to grant licenses.”

NIH Reference Number: E-200-2025-0.

Related Technologies: N/A.

Product Type: Therapeutic.

Therapeutic Area(s): Oncology.

Development Stage: Pre-clinical (*in vivo* validation).

Publications:

- Aidan Pursley, et al., T cell receptors targeting mutant NPM1 for adoptive cell therapy in acute myeloid leukemia**,** (https://doi.org/10.1182/blood-2025-4132).

Patens: U.S. Provisional Patent Application, 63/908,266, filed October, 30-2025.

Potential Commercial Applications:

- Acute myeloid leukemia patients expressing HLA-A*11:01.

Competitive Advantages:

- Highly specific targeting of mutant NPM1.
- Minimal off-target effects with enhanced safety profile.
- Significant unmet medical need for AML patients.

Collaboration Opportunity: Researchers at the NCI seek licensing and/or co-development research collaborations for NPM1 Mutation-Specific T Cell Receptors for Targeted Treatment of Acute Myeloid Leukemia.

Dated: July 21, 2026.

Richard U. Rodriguez,

Associate Director,

Technology Transfer Center,

National Cancer Institute.

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