

May 12, 2026



OPKO Health's ModeX Therapeutics Will Present Data Demonstrating In Vivo CAR-T Cell Generation and Deep B-Cell Depletion in Preclinical Studies

Multispecific antibody conjugated LNP/mRNA platform enables in vivo T-cell engineering and systemic B-cell depletion in animal models

Data will be presented at the American Society of Gene & Cell Therapy (ASGCT) 2026 Annual Meeting

WESTON, Mass., May 12, 2026 (GLOBE NEWSWIRE) -- ModeX Therapeutics Inc., an OPKO Health company (NASDAQ: OPK), will announce preclinical data demonstrating the *in vivo* generation of CAR-T cells and deep systemic B-cell depletion achieved with its MDX3001 candidate in animal models. The data, generated using ModeX's CD3xCD28 antibody-conjugated lipid nanoparticle (LNP)/mRNA platform, will be presented at the ASGCT 2026 Annual Meeting, being held May 11-15 in Boston.

The abstract, titled "Bispecific CD3xCD28 Antibody-LNPs Drive In Vivo CAR-T Cell Generation with Deep B-Cell Depletion," highlights preclinical studies showing B-cell depletion in blood and lymphoid tissues, including spleen, bone marrow, and lymph nodes. Activity was confirmed in both humanized mouse and non-human primate models.

By combining CD3 with CD28 costimulatory engagement, the technology enables efficient T-cell transfection, activation, and functional CAR-T cell generation directly *in vivo*. The antibody-conjugated LNP directs cell-specific gene delivery, and the mRNA nature of the platform, obviates the need for pre-conditioning chemotherapy while allowing for repeat dosing, leading to expansion and persistence of functional memory T-cell populations.

"These data demonstrate the strength of our *in vivo* targeting technology," said John Mascola, M.D., Chief Scientific Officer of ModeX Therapeutics. "Our antibody-conjugated LNP platform offers a simple and versatile approach to gene delivery for immune cells *in vivo*, and has the potential to simplify treatment access by eliminating the burden of *ex vivo* manufacturing."

"Our targeted gene delivery platform uses proprietary ModeX technology to generate CAR-T cells directly in patients," said Gary Nabel, M.D., Ph.D., President and Chief Executive Officer of ModeX Therapeutics. "It offers a promising clinical modality for diverse diseases, including autoimmunity and oncology."

Oral Presentation Details

- **Title:** *Bispecific CD3xCD28 Antibody-LNPs Drive In Vivo CAR-T Cell Generation with*

Deep B Cell Depletion

- **Abstract Number:** 338
- **Meeting:** ASGCT 2026 Annual Meeting
- **Date/Time:** May 14, 2026 at 10:15 a.m. Eastern time
- **Location:** Thomas M. Menino Convention Center, Boston

About ModeX Therapeutics

ModeX Therapeutics is a clinical-stage biopharmaceutical company developing innovative platforms for biologic delivery of therapies with multispecific biologics for cancer, immunology, and infectious diseases. Its platforms unite the power of multiple biologics in a single molecule to create multispecific antibody therapeutics designed to address complex diseases. The ModeX pipeline includes first-in-class candidates for oncology indications against both solid and hematologic tumors, autoimmune and immunological diseases, and for infectious disease indications against the most pressing viral threats. Its founding team includes globally recognized medical innovators with proven track records of delivering breakthrough medicines for patients. ModeX Therapeutics Inc., an OPKO Health company (NASDAQ: OPK), is based in Weston, Massachusetts. For more information, visit www.modextx.com.

About OPKO Health, Inc.

OPKO is a multinational biopharmaceutical and diagnostics company that seeks to establish industry-leading positions in large, rapidly growing markets by leveraging its discovery, development and commercialization expertise, and novel and proprietary technologies. For more information, visit www.opko.com.

Cautionary Statement Regarding Forward-Looking Statements

This press release contains "forward-looking statements," as that term is defined under the Private Securities Litigation Reform Act of 1995 (PSLRA), which statements may be identified by words such as "expects," "plans," "projects," "will," "could," "may," "anticipates," "believes," "should," "intends," "estimates," and other words of similar meaning, including whether and when we will initiate and complete clinical studies contemplated for MDX3001 and whether final study data will be positive, whether *in vivo* generation of CAR-T cells and deep systemic B-cell depletion is reproducible in other models, whether MDX3001 will be safe, or have any impact on the severity of disease, the platform's applicability for other diseases, as well as other non-historical statements about our expectations, beliefs or intentions regarding our business, technologies and products, financial condition, strategies or prospects. Many factors could cause our actual activities or results to differ materially from the activities and results anticipated in forward-looking statements. These factors include those described in our Annual Reports on Form 10-K filed and to be filed with the Securities and Exchange Commission and in our other filings with the Securities and Exchange Commission that earlier clinical results of effectiveness and safety may not be reproducible or indicative of future results, and that currently available over-the-counter and prescription products, as well as products under development by others, may prove to be as or more effective than our products for the indications being studied. In addition, forward-looking statements may also be adversely affected by general market factors, competitive

product development, product availability, federal and state regulations and legislation, the regulatory process for new products and indications, manufacturing issues that may arise, patent positions and litigation, among other factors. The forward-looking statements contained in this press release speak only as of the date the statements were made, and we do not undertake any obligation to update forward-looking statements. We intend that all forward-looking statements be subject to the safe-harbor provisions of the PSLRA.

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Source: OPKO Health, Inc.