



Direct Injection of CAR-Engineered CD19.taNK Cells Demonstrating Potential “Vaccine” Protective Effect to be Highlighted in Oral Presentation at the 58th Annual Meeting of the American Society of Hematology

November 22, 2016

CULVER CITY, Calif.--(BUSINESS WIRE)--Nov. 22, 2016-- NantKwest Inc. (Nasdaq:NK), a pioneering, next-generation, clinical-stage immunotherapy company focused on harnessing the unique power of our immune system using natural killer (NK) cells to treat cancer, infectious diseases and inflammatory diseases, today announced that the Company's abstract reviewing data on the company's CD19.taNK program has been accepted for an oral presentation at the upcoming 58th Annual Meeting of the American Society of Hematology (ASH) in San Diego, CA, December 3-6, 2016.

"NantKwest's transition from preclinical to clinical studies continues to make significant progress," said Patrick Soon-Shiong, MD, Chairman and CEO of NantKwest. "In these preclinical studies, aNK cells expressing a CD19-CAR (CD19.taNK) demonstrated strong killing of CD19-positive cancer cells. In addition, direct tumor injections of CD19.taNK into a fully immunocompetent mouse model induces tumor clearance and protection from tumor re-challenge, suggesting the induction of a memory ('vaccine') protective effect after the injection of the CD19.taNK cell."

Presentation Summary

Intra-Tumor Injection of CAR-Engineered NK Cells Induces Tumor Regression and Protection Against Tumor Re-Challenge

- Abstract #466, <https://ash.confex.com/ash/2016/webprogram/Paper95676.html>
- Presenter: Laurent Boissel, PhD, NantKwest, Woburn, MA
- Sunday, December 4, 2016, 5:15 PM, Room 5AB

This poster will review the potential use of CD19.taNK cells to effectively kill cancer cells. In vivo preclinical studies of direct tumor injection of CD19.taNK cells induces significant tumor regression and significantly improved survival, with 75% of the mice showing complete tumor regression at day 32 ($p < 0.05$). Upon re-challenge with A20 lymphoma cells, >80% mice remained free of tumor after 14 days.

NantKwest

NantKwest (Nasdaq:NK) is a pioneering, next-generation, clinical-stage immunotherapy company focused on harnessing the unique power of our immune system using natural killer (NK) cells to treat cancer, infectious diseases and inflammatory diseases. NK cells are the body's first line of defense due to the innate ability of NK cells to rapidly identify and destroy cells under stress, such as cancer or virally infected cells.

NantKwest's unique NK cell-based platform, with the capacity to grow active killer cells as a biological cancer therapy, has been designed to induce cell death against cancer or infected cells by three different modes of action: (1) Direct killing using activated NK cells (aNK) that release toxic granules directly into the cell through cell to cell contact; (2) Antibody-mediated killing using haNKs, which are NK cells engineered to incorporate a high affinity receptor that binds to an administered antibody, enhancing the cancer cell killing effect of that antibody; and (3) Targeted activated killing using taNKs, which are NK cells engineered to incorporate chimeric antigen receptors (CARs) to target tumor-specific antigens found on the surface of cancer cells.

Our aNK, haNK and taNK platform addresses certain limitations of T cell therapies, including the reduction of risk of serious "cytokine storms" reported after T cell therapy. As an "off-the-shelf" therapy, NantKwest's NK cells do not rely on a patient's own often compromised immune system. In Phase 1 clinical trials in patients with late stage cancer, NantKwest's NK cells have been successfully administered as an outpatient infusion therapy without any reported severe side effects, even at doses of 10 billion cells.

By leveraging an integrated and extensive genomics and transcriptomics discovery and development engine, together with a pipeline of multiple, clinical-stage, immuno-oncology programs that include a Phase 2 trial for a rare form of melanoma and the planned initiation of a clinical trial of NK cells targeted to breast cancer, we believe NantKwest is uniquely positioned to be the premier immunotherapy company and transform medicine by delivering living drugs in a bag and bringing novel NK cell-based therapies to routine clinical care. For more information, please visit <http://www.nantkwest.com>.



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