Nkarta Presents Data Supporting Engineered NK Cell Based Combination Therapies and Next Generation Commercial-Scale Manufacturing Platform at SITC 37th Annual Meeting

November 7, 2022

Improved Anti-Tumor Activity Demonstrated by the Combination of NKX019 and a CD20-directed Monoclonal Antibody in Preclinical Models

Pulsed Stimulation of NK Cells Derived from Peripheral Blood of Healthy Donors Induces Billion-Fold Expansion, Enabling Commercial-Scale Production of NK Cell Therapy from a Selected Single Donor

SOUTH SAN FRANCISCO, Calif., Nov. 07, 2022 (GLOBE NEWSWIRE) -- Nkarta, Inc. (Nasdaq: NKTX), a biopharmaceutical company developing engineered natural killer (NK) cell therapies to treat cancer, today announced the presentation of two preclinical data abstracts focused on its natural killer cell pipeline and proprietary manufacturing technology at the Society for Immunotherapy of Cancer (SITC) 37th Annual Meeting and Pre-Conference Programs.

"Our presentations at this year's SITC meeting illustrate the inherent power and potential of donor-derived NK cells," said James Trager, PhD, Chief Scientific Officer of Nkarta. "Nkarta's research team has shown that our manufacturing platform technology can expand NK cells by well over a billion-fold, while maintaining their integrity and potency. These findings could prospectively allow us to derive our CAR NK products from a very limited set of stringently selected donors. In a second study, the team has also further built on the considerable potency of our CD19-directed CAR NK candidate, NKX019."

SITC 2022 abstracts will be available on the SITC website, https://www.sitcancer.org/2022/abstracts/abstract-titles-publications.

Nkarta's posters will be available for download at https://www.nkartatx.com/publications/ after 9:00 a.m. ET on November 10, 2022.

Title: **Large-scale expansion and engineering of human NK cells sourced from peripheral blood versus umbilical cord blood**
Abstract Number: **381**
Poster Presentation Date and Time: **November 10, 2022, 9:00 a.m. – 9:00 p.m. ET**
This study illustrates a remarkable >250-billion fold expansion of NK cells derived from peripheral blood using Nkarta's proprietary NKSTIM cell line. NK cells maintained their potency, and showed no signs of chromosomal aberrations over an extended period of expansion. Both the expansion capacity and potency of NK cells derived from adult donors compared favorably to those from cord blood. Phenotypic analysis of expanded cells demonstrated the selective expansion or differentiation of in vivo educated NK cells. These cells could be identified and isolated from pre-expansion NK cells, and demonstrated superior expansion and native activity. These findings point the way toward selection of donors or of a specific cell population with optimal potential for expansion and potency based on straightforward phenotypic profiling.

Title: **NKX019, an Off-the-Shelf CD19 CAR-NK Cell, mediates improved anti-tumor activity and persistence in combination with CD20-directed therapeutic mAbs**
Abstract Number: **902**
Poster Presentation Date and Time: **November 11, 2022, 9:00 a.m. – 8:30 p.m. ET**
In this preclinical study, the CD19-directed CAR NK, NKX019, was combined with the widely used anti-CD20 monoclonal antibodies (mAb) rituximab or obinutuzumab. These antibodies mediate both direct cell killing of CD20+ B cell malignancies, and can also mediate the antibody-dependent cellular cytotoxicity (ADCC) activity of NK cells through their interaction with CD16. Both the CAR NK cells and the monoclonal antibodies showed high potency against cell lines and primary malignant cells. When NKX019 was used with either mAb, their combined potency was greater than that of the individual agents alone. The potency of these combinations could be attributed in part to NKX019 ADCC activity, as demonstrated using an ADCC-deficient variant of rituximab and by increased degranulation of NKX019 in the presence of obinutuzumab. Results of this study point to a potential to combine these agents clinically to improve product potency and tumor targeting.

About Nkarta
Nkarta is a clinical-stage biotechnology company advancing the development of allogeneic, off-the-shelf natural killer (NK) cell therapies for cancer patients. By combining its cell expansion and cryopreservation platform with proprietary cell engineering technologies and CRISPR-based genome engineering capabilities, Nkarta is building a pipeline of future cell therapies engineered for deep anti-tumor activity and intended for broad access in the outpatient treatment setting. For more information, please visit the company's website at www.nkartatx.com.

Cautionary Note on Forward-Looking Statements
Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Words such as "anticipates," "believes," "expects," "intends," "plans," "potential," "projects," "would" and "future" or similar expressions are intended to identify forward-looking statements. Examples of these forward-looking statements include, but are not limited to, statements concerning Nkarta's expectations regarding any or all of the following: the power and potential of donor-derived NK cells; the capabilities and benefits of Nkarta's manufacturing platform technology, including the potential ability to achieve commercial-scale quantities of NK cell therapies from a single donor; the potential to select donors or cell populations for optimal expansion and potency; and the anti-tumor activity of NKX019 in combination with anti-CD20 antibodies. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. These risks and uncertainties include, among others: Nkarta's limited operating history and historical losses; Nkarta's lack of any products approved for sale and its ability to achieve profitability; Nkarta's ability to raise additional funding to complete the development and any commercialization of its product candidates; Nkarta's dependence on the success of its co-lead product candidates, NKX101 and NKX019; that Nkarta may be delayed in initiating, enrolling or completing any clinical trials; competition from third parties that are developing products for similar uses; Nkarta's ability to obtain, maintain and protect its intellectual property; Nkarta's dependence on third parties in connection with manufacturing, clinical trials and pre-clinical studies; the complexity of the

manufacturing process for CAR NK cell therapies; and risks relating to the impact on our business of the COVID-19 pandemic or similar public health crises.

These and other risks are described more fully in Nkarta's filings with the Securities and Exchange Commission ("SEC"), including the "Risk Factors" section of Nkarta's Quarterly Report on Form 10-Q for the quarter ended June 30, 2022, filed with the SEC on August 11, 2022, and Nkarta's other documents subsequently filed with or furnished to the SEC. All forward-looking statements contained in this press release speak only as of the date on which they were made. Except to the extent required by law, Nkarta undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

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