NextCure Reports Preclinical Data for LNCB74 and Additional Clinical Biomarker Data for NC410 Combo at Society for Immunotherapy of Cancer Annual Meeting

November 5, 2024 at 4:05 PM EST

- *Preclinical data for LNCB74 highlights its potential as therapeutic for treating multiple solid tumor indications; Investigational New Drug (IND) application filing expected by year-end*
- *Additional biomarker data support proposed mechanism of action of NC410*

BELTSVILLE, Md., Nov. 05, 2024 (GLOBE NEWSWIRE) -- NextCure, Inc. (Nasdaq: NXTC), a clinical-stage biopharmaceutical company committed to discovering and developing novel, first-in-class and best-in-class therapies to treat cancer, today reports pre-clinical data from LNCB74, a B7-H4-targeting antibody-drug conjugate (ADC) being developed in partnership with LigaChem Biosciences (LCB) (KOSDAQ: 141080), and biomarker data from the NC410 combination study with pembrolizumab in patients with immune checkpoint inhibitor (ICI) naïve and refractory microsatellite stable (MSS)/microsatellite instability-low (MSI-L) colorectal cancer (CRC). The data will be presented during poster sessions at the Society for Immunotherapy of Cancer (SITC) annual meeting.

“The preclinical data reported for LNCB74, our B7-H4 antibody-drug conjugate program, continue to reinforce its promise as a potential best-in-class therapeutic with advantages over other B7-H4 ADCs,” said Michael Richman, NextCure’s president and CEO. “We remain on track to submit an IND application to the FDA by year-end and intend to rapidly advance the program into clinical development.”

Preclinical Data on LNCB74 B7-H4 Antibody Drug Conjugate (ADC)

LNCB74 is a B7-H4 antibody conjugated to the microtubule disrupting payload monomethyl auristatin E (MMAE) with a drug-to-antibody ratio of 4 (DAR4). The ADC employs a glucuronidase-cleavable, site-specific linkage conjugated to an engineered cysteine in the antibody light chain via LigaChem Biosciences’ ConjuAll ^{TM} technology to increase stability in circulation, improve selective release of payload in tumor cells, and reduce payload release in non-tumor cells. LNCB74 incorporates an Fc mitigating mutation to minimize binding and uptake of LNCB74 by Fc receptor expressing immune cells. The ConjuAll technology, with its selective cleavage and release within tumor cells, combined with mitigation of off-target uptake via disabled Fc interactions, is engineered to improve the safety profile and therapeutic index of LNCB74 compared to other B7-H4 targeted ADCs.

Key findings:

- B7-H4 protein is highly expressed in multiple tumor indications. B7-H4 expression limited in normal healthy human tissues, providing a potential broad therapeutic index for a B7-H4 targeting ADC.
- LNCB74 shows specific binding to B7-H4 expressing tumor cells and is rapidly internalized in a target-dependent manner by cancer cells.
- LNCB74 mediates potent cytotoxicity, with sub-nanomolar to low nanomolar EC50 values on multiple B7-H4-positive cancer cell lines.
- LNCB74 demonstrates strong anti-tumor activity in multiple CDX and PDX tumor models. A single dose of 3 mg/kg resulted in durable tumor regression in multiple tumor models, suggesting activity comparable or superior to published B7-H4 targeting ADCs.
- LNCB74 demonstrates favorable PK and stability in rodents.
- LNCB74 was well tolerated in cynomolgus monkeys up to 10 mg/kg.

Phase 1b Study of NC410 in Combination with Pembrolizumab

The presentation includes additional clinical data for CRC patients from the Phase 1b portion of a Phase 1b/2 study evaluating NC410, a LAIR-2 fusion protein, in combination with pembrolizumab. The trial is evaluating the combination in ovarian cancer and ICI-naïve MSS/MSI-L CRC. Overall, the combination of NC410 and pembrolizumab continues to demonstrate clinical activity against MSS/MSI-L CRC, which is generally unresponsive to immunotherapy. Subjects who achieved clinical benefit of partial response or stable disease demonstrated durability of their responses that was clinically meaningful in this patient population.

Key findings:

- Of the 43 evaluable ICI-naïve MSS/MSI-L CRC patients without liver metastasis, there were 3 PRs as of the data cut-off of October 14, 2024.
- Disease control rates were 86% and 47% for the 200 mg and 100 mg NC410 doses, respectively.
- Biomarker data support proposed mechanism of action of NC410, showing remodeling of the tumor microenvironment, promotion of immune infiltration and anti-tumor activity.

- Treatment was well tolerated.

Poster Presentation Details:

Title: LNCB74 is a B7-H4 antibody-drug conjugate with a β-glucuronide linker-MMAE payload system to enhance therapeutic index in B7-H4 expressing cancers
Lead Author: Shannon M. Kahan
Abstract Number: 1051
Session Date & Time: Friday, November 8, 2024, 5:30 – 7:00 PM

Title: NC410 in combination with pembrolizumab improves anti-tumor responses by promoting collagen remodeling and tumor immunity in advanced ICI naive MSS/MSI-L CRC
Lead Author: Alina Barbu
Abstract Number: 632
Session Date & Time: Saturday, November 9, 2024, 7:10 – 8:30 PM

About NextCure, Inc.

NextCure is a clinical-stage biopharmaceutical company that is focused on advancing innovative medicines that treat cancer patients that do not respond to, or have disease progression on, current therapies, through the use of differentiated mechanisms of actions including antibody-drug conjugates, antibodies and proteins. We focus on advancing therapies that leverage our core strengths in understanding biological pathways and biomarkers, the interactions of cells, including in the tumor microenvironment, and the role each interaction plays in a biologic response. http://www.nextcure.com

Cautionary Statement Regarding Forward-Looking Statements

Statements made in this press release that are not historical facts are forward-looking statements. Words such as “expects,” “believes,” “intends,” “hope,” “forward” and similar expressions are intended to identify forward-looking statements. Forward-looking statements involve substantial risks and uncertainties that could cause actual results to differ materially from those projected in any forward-looking statement. Such risks and uncertainties include, among others: our limited operating history and no products approved for commercial sale; our history of significant losses; our need to obtain additional financing; risks related to clinical development, including that early clinical data may not be confirmed by later clinical results; risks that pre-clinical research may not be confirmed in clinical trials; risks related to marketing approval and commercialization; and NextCure’s dependence on key personnel. More detailed information on these and additional factors that could affect NextCure’s actual results are described in NextCure’s filings with the Securities and Exchange Commission (the “SEC”), including NextCure’s most recent Form 10-K and subsequent Form 10-Q. You should not place undue reliance on any forward-looking statements. NextCure assumes no obligation to update any forward-looking statements, even if expectations change.

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