NextCure and LCB Present Preclinical Data on B7-H4 Antibody Drug Conjugate at AACR 2024

April 8, 2024 at 7:00 AM EDT

Poster presentation highlights strong safety and pharmacokinetic profiles for LNCB74

BELTSVILLE, Md., April 08, 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 announced the presentation of new preclinical data on LNCB74, a B7-H4-targeting antibody drug conjugate (ADC) developed in partnership with LigaChem Biosciences (LCB), formerly LegoChem Biosciences, (KOSDAQ: 141080), at the 2024 American Association for Cancer Research (AACR) Annual Meeting in San Diego, CA. The poster presentation highlights LNBC74's promising preclinical safety and anti-tumor activity.

LNCB74 is an ADC utilizing LigaChem Biosciences' proprietary site-specific conjugation and plasma-stable, cancer selectively activating linker technology to link monomethyl auristatin E (MMAE) to a B7-H4 targeting antibody in a drug-to-antibody ratio of 4 (DAR4). The presentation includes data demonstrating LNCB74's high affinity and specificity for human B7-H4, a protein highly expressed on a range of solid tumors including breast, ovarian and endometrial cancers. LNCB74 was shown to specifically bind to B7-H4 expressing tumor cells and was rapidly internalized in a target-dependent manner. In addition, data showed that LNCB74 mediated potent cytotoxicity in B7-H4-positive cancer cells *in vitro* and demonstrated serum stability with a favorable pharmacokinetic (PK) activity in rodents. LNCB74 demonstrated significant tolerability in cynomolgus monkeys and showed strong anti-tumor activity in multiple cell-line derived (CDX) and patient-derived xenograft (PDX) tumor models *in vivo*. The increase in tolerability and strong efficacy is expected to translate into clinical activity of LNCB74.

"LNCB74 was developed through NextCure's expertise in B7-H4 tumor biology and LCB's ConjuAll™ technology, resulting in a potent ADC with initial data demonstrating excellent tolerability and pharmacokinetics," said Solomon Langermann, Ph.D., NextCure's chief scientific officer. "These data underscore that LNCB74 is a promising candidate for the treatment of a variety of solid tumor indications. We look forward to continuing our work building a robust preclinical dataset to further support advancing this ADC to the clinic."

Key Findings:

- LNCB74 was engineered for an improved safety profile and therapeutic index with increased stability in circulation, tumor selective payload release, and a reduction in off-target release of active payload, mitigating toxicity compared to traditional vedotin ADCs.
- A single 3 mg/kg dose of LNCB74 resulted in durable tumor regression in multiple CDX and PDX tumor models, suggesting activity comparable or superior to competitor B7-H4 targeting ADCs.
- LNCB74 was well tolerated in cynomolgus monkeys following 2 doses of up to 10 mg/kg, showing a superior safety profile compared to traditional MMAE bearing ADCs.
- LNCB74 demonstrates favorable pharmacokinetics and stability in rodents, consistent with the molecule's preclinical safety profile.
- LNCB74 mediates potent cytotoxicity, with sub-nanomolar to low nanomolar EC50 values on multiple B7-H4-positive cancer cell lines.

Details of the presentation are as follows:

Title: LNCB74 is a potent and safe next-generation antibody-drug-conjugate utilizing a cancer selective linker for the treatment of B7-H4 expressing cancers
Date and Time: April 8, 2024, 9:00am-12:30pm PT
Session: Antibody-Drug Conjugates and Bispecific Antibodies
Abstract Number: 1898

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. www.nextcure.com

About LigaChem Biosciences, Inc.

LigaChem Biosciences (formerly LegoChem Biosciences, Inc.) is a clinical stage biopharmaceutical company dedicated to the discovery and development of innovative medicines by leveraging our medicinal chemistry expertise to make conventional biologics more targeted and potent for the benefit of patients with diseases of highly unmet medical needs. We are advancing sustainable pipelines in therapeutic areas within antibiotics, anti-fibrotics, oncology, and antibody-drug conjugate platform technology. www.legochembio.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. Examples of forward-looking statements in this press release include, among others, statements about NextCure’s plans, objectives, and intentions with respect to the discovery of immunomedicine targets and the discovery and development of immunomedicines. 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 the unproven approach to the discovery and development of product candidates based on our FIND-IO platform. 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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Source: NextCure