

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): March 27, 2024

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

DELAWARE
(State or other jurisdiction
of incorporation)

001-39717
(Commission
File Number)

20-2903526
(IRS Employer
Identification No.)

680 East Colorado Boulevard, Suite 180
Pasadena, California 91101
(Address of principal executive offices)

(631) 830-7092
(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (See General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act of 1933 (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(e) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	LIXT	The Nasdaq Stock Market LLC
Warrant to Purchase Common Stock	LIXTW	The Nasdaq Stock Market LLC

Item 8.01 Other Events.

On March 27, 2024, Lixte Biotechnology Holdings, Inc. (the "Company") issued a press release announcing the publication of pre-clinical data on the effect of Lixte's lead compound, LB-100, on cancer cells.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The Company is filing as part of this report the exhibits listed on the accompanying Index to Exhibits, which information is incorporated herein by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: March 27, 2024

LIXTE BIOTECHNOLOGY HOLDINGS, INC.
(Registrant)

By: /s/ BASTIAAN VAN DER BAAN
Bastiaan van der Baan
President and Chief Executive Officer

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INDEX TO EXHIBITS

Exhibit No.	Description
99.1	Press release announcing the publication of pre-clinical data on the effect of Lixte's lead compound, LB-100, on cancer cells
104	Cover Page Interactive Data File (embedded within the Inline XBRL Document)

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NEW SCIENTIFIC PUBLICATION SHOWS LB-100, LIXTE'S LEAD CLINICAL COMPOUND, CAN FORCE CANCER CELLS TO GIVE UP THEIR CANCER-CAUSING PROPERTIES

LB-100 IS SYNERGISTIC WITH WEE1 INHIBITION IN KILLING CANCER CELLS; FINDING OPENS NEW TREATMENT STRATEGY IN ADDITION TO THREE CURRENT LIXTE CLINICAL TRIALS

PASADENA, CA – (March 27, 2024) — LIXTE Biotechnology Holdings, Inc. (“LIXTE” or the “Company”) (Nasdaq: LIXT and LIXTW), a clinical stage pharmaceutical company, announced today publication of pre-clinical data in the online journal, *Cancer Discovery*, showing that its lead clinical compound, LB-100, can force cancer cells to give up their cancer-causing properties in a paper entitled “Paradoxical activation of oncogenic signaling as a cancer treatment strategy.” The finding opens a potentially new treatment strategy in addition to LIXTE’s current three clinical trials.

As will be published in the July 2024 issue and posted online today, LB-100 was shown to trigger hyper-activation of the signals that are responsible for the deregulated proliferation of cancer cells, which is the opposite of most of the current generation of cancer therapies. The deliberate hyper-activation of cancer signals becomes lethal when combined with an inhibitor of the WEE1 kinase. This well-tolerated combination proved to be highly effective in killing colon cancer cells in animal models of cancer and in cell culture.

Resistance to therapy is the leading cause of death due to cancer. Resistance to LB-100 therapy, however, has been shown to be associated with cancer cells becoming less malignant. Specifically, colon cancer cells that developed resistance to LB-100 had lost many of the features that make the cells cancerous in the first place and were unable to form tumors in experimental animal models.

This “tumor suppressive drug resistance” stems from the unique features of LB-100. Although cancer-causing signals force cancer cells to become more cancerous, the hyper-activation of these signals by LB-100 forces cancer cells to suppress these signals and thus become less cancerous.

The team of scientists reporting these findings was headed by Professor René Bernards at the Netherlands Cancer Institute and Oncode Institute, Amsterdam. Professor Bernards is a leader in the field of molecular carcinogenesis and is a member of the Board of Directors of LIXTE.

Bas van der Baan, Chief Executive Officer of LIXTE, said, “The effect of LB-100 on cancer cells is unique in that the only way for cancer cells to escape death is to evolve toward a less cancerous behavior. We look forward to testing this concept clinically, which is distinct from the well-characterized enhancement of checkpoint immunotherapy and chemotherapy by LB-100 currently being tested in three clinical trials.”

About LIXTE Biotechnology Holdings, Inc.

LIXTE Biotechnology Holdings, Inc. is a clinical-stage pharmaceutical company focused on new targets for cancer drug development and developing and commercializing cancer therapies. LIXTE has demonstrated that its first-in-class lead clinical PP2A inhibitor, LB-100, is well-tolerated in cancer patients at doses associated with anti-cancer activity. Based on extensive published preclinical data (see www.lixte.com), LB-100 has the potential to significantly improve outcomes for patients undergoing various chemotherapies or immunotherapies. LIXTE’s new approach has no known competitors and is covered by a comprehensive patent portfolio. Proof-of-concept clinical trials are in progress.

Forward-Looking Statement Disclaimer

This announcement contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934. For example, statements regarding the Company’s financial position, business strategy and other plans and objectives for future operations, and assumptions and predictions about future activities, including the continuing development of proprietary compounds, the planning, funding, coordination and potential results of clinical trials, the patent and legal costs to protect and maintain the Company’s intellectual property worldwide, and the Company’s ability to obtain and maintain compliance with Nasdaq’s continued listing requirements, are all forward-looking statements. These statements are generally accompanied by words such as “intend,” “anticipate,” “believe,” “estimate,” “potential(ly),” “continue,” “forecast,” “predict,” “plan,” “may,” “will,” “could,” “would,” “should,” “expect” or the negative of such terms or other comparable terminology.

The Company believes that the assumptions and expectations reflected in such forward-looking statements are reasonable, based on information available to it on the date hereof, but the Company cannot provide assurances that these assumptions and expectations will prove to have been correct or that the Company will take any action that the Company may presently be planning. However, these forward-looking statements are inherently subject to known and unknown risks and uncertainties. Actual results or experience may differ materially from those expected or anticipated in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, regulatory policies, available cash resources, research results, competition from other similar businesses, and market and general economic factors.

Readers are urged to read the risk factors set forth in the Company’s filings with the United States Securities and Exchange Commission at <https://www.sec.gov>. The Company disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

For more information about LIXTE, Contact: info@lixte.com

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