

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): September 17, 2010

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

DELAWARE
(State or other jurisdiction of incorporation)

000-51436
(Commission File Number)

20-2903526
(IRS Employer Identification No.)

248 Route 25A, No. 2
East Setauket, New York 11733
(Address of principal executive offices)

Registrant's telephone number, including area code: 631 942 7959

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))
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Item 8.01. Other Events

The National Cancer Institute Experimental Therapeutics (NExT) Program Senior Advisory Committee (SAC) approved a collaboration by NCI with Lixte Biotechnology Holdings, Inc. (the “Company”) for clinical evaluation of one of the Company’s drug compounds, LB-100. This collaboration is a milestone-based approach in which NCI will first confirm studies of the LB-100 compound in an animal model of glioblastoma multiforme, the most common brain tumor of adults, and conduct an initial exploratory toxicology study in an animal model. At milestone intervals, the SAC will re-evaluate project progress before considering assignment of additional support and resources to this project.

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: September 22, 2010

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

By: /s/ John S. Kovach

John S. Kovach, Chief Executive Officer