Lixte Biotechnology Holdings, Inc.
680 East Colorado Boulevard, Suite 180
Pasadena, CA 91101

July 24, 2025

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
Washington, D.C. 20549
Attention: Jessica Dickerson

**Re: Lixte Biotechnology Holdings, Inc.**
**Form 10-K for the Fiscal Year Ended December 31, 2024**
**Filed March 24, 2025**
**File No. 001-39717**

Ladies and Gentlemen:

By letter dated July 16, 2025, the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") provided Lixte Biotechnology Holdings, Inc. (the "Company") with comments on the Company's Form 10-K for the Fiscal Year Ended December 31, 2024, described above.

This letter contains the Company's responses to the Staff's comments. The numbered responses and the headings set forth below correspond to the numbered comments and headings in the Staff's letter.

Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2024

Item 1. Business, page 4

1. In future filings, please remove all statements indicating that your product candidates are safe and effective, as such determinations are solely within the authority of the FDA and comparable foreign regulatory authorities. For example only, without limitation, we note your statements throughout your annual report that LB-100 has been found to improve the effectiveness of anticancer drugs, as well as your disclosure on page 9 that LB-100 has "proven safe in patients at doses associated with anti-tumor activity."

   COMPANY'S RESPONSE

   In future filings, the Company will make the requested changes to the disclosures regarding its product candidates.

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Description of Business, page 4

2. We note your pipeline table on page 6. In future filings, please shorten the length of the arrows in your pipeline table as appropriate to accurately reflect the status of the product candidate. In this regard, we note the arrows in the second and third rows of the table extend through the end of the "Phase 1b" column, which may indicate the Phase 1b trials have been completed, but your disclosures on pages 7 and 8 indicate that the Phase 1b trial in patients with metastatic colon cancer is still enrolling patients and that the Phase 1b trial in patients with ASTS is still ongoing. Similarly, we note that the arrow in the first row of the table extends through most of the "Phase 2" column, which may indicate that a Phase 1b clinical trial has been completed and the Phase 2 clinical trial is nearly complete; however, your disclosures on pages 8 and F-32 indicate that this is a Phase 1b/2 clinical trial and that you expect the clinical trial will be completed by December 31, 2027.

   COMPANY'S RESPONSE

   In its future filings, the Company will make the requested changes to the pipeline table.

Clinical Trial Agreements, page 7

3. We note your discussion on page 8 of your Phase 1b/2 collaborative clinical trial to assess whether adding LB-100, your lead product candidate, to dostarlimab-gsly may enhance the effectiveness of immunotherapy in the treatment of ovarian clear cell carcinoma. In future filings, please file the applicable clinical trial agreement as an exhibit, or tell us why you do not believe such exhibit is required. Refer to Item 601(b)(10) of Regulation S-K.

   COMPANY'S RESPONSE

   The Company will file as an exhibit the clinical trial agreement for ovarian clear cell carcinoma in its next applicable securities filing.

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If you have any questions regarding this response, please direct them to our counsel David Ficksman at 310-789-1290 or dficksman@troygould.com.

Sincerely,

Lixte Biotechnology Holdings, Inc.

*/s/ Geordan Pursglove*

By: Geordan Pursglove
Chief Executive Officer

cc: David L. Ficksman