

CAN-FITE BIOPHARMA LTD.

10 Bareket Street
Kiryat Matalon, P.O. Box 7537
Petah-Tikva 49170, Israel

May 10, 2013

VIA EDGAR AND FEDERAL EXPRESS

Securities and Exchange Commission
100 F. Street, N.E.
Washington, DC 20549
Attn: Jeffrey P. Riedler, Assistant Director

**Re: Can-Fite BioPharma Ltd.
Amendment No. 1 to Draft Registration Statement on Form 20-F
Submitted April 15, 2013
CIK No. 0001536196**

Dear Mr. Riedler:

On behalf of Can-Fite BioPharma Ltd., an Israeli limited company (the "Company"), I am writing to respond to the comments of the staff (the "Staff") of the United States Securities and Exchange Commission (the "SEC") contained in its letter to the Company, dated April 23, 2013, regarding the Company's Draft Registration Statement on Form 20-F, confidentially submitted to the SEC on April 15, 2013 (CIK No. 0001536196) (the "Registration Statement").

Concurrently with this response, the Company is also filing Amendment No. 1 to the Registration Statement ("Amendment No. 1") incorporating the revisions to the Registration Statement described herein. To expedite your review, we have enclosed with this letter a clean copy of Amendment No. 1, as well as a marked copy of Amendment No. 1 showing all changes from the Registration Statement.

For your convenience, we have set forth the text of each of the Staff's comments in bold, followed in each case by the Company's response thereto.

Report of Independent Registered Public Accounting Firm, Page F-1

- 1. We note that your independent registered accountant's report does not include an opinion on whether the financial statements comply with IFRS as issued by the IASB. We also note that your footnote disclosure on page F-12 states that the financial statements complied with IFRS rather than IFRS as issued by the IASB. Please amend your filing to either provide an audit report that includes an opinion on whether the financial statements comply with IFRS as issued by the IASB and disclosure in your footnotes that you have complied with IFRS as issued by the IASB or a reconciliation from IFRS to US GAAP. Refer to Item 17(c) of Form 20-F.**
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In response to the Staff's comment, the Company has revised the Registration Statement to include an opinion in the audit report that the financial statements comply with IFRS as issued by the IASB and disclose in the footnotes to the financial statements that the Company has complied with IFRS as issued by the IASB. Please see pages F-1 and F-12 of Amendment No. 1.

In addition to the foregoing revisions to the Registration Statement in response to the Staff's comment and certain non-substantive conforming changes, the Company has revised the Registration Statement to: (i) include an explanatory note; (ii) remove certain references to a director who was not re-elected at a recently held annual meeting of the shareholders and indicate the same where appropriate; (iii) update the biography of an executive officer; (iv) update the table of beneficial ownership and other sections to reflect recently issued options; (v) include Exhibit 1.1; (vi) replace former Exhibits 4.12 and 4.13 with text searchable versions of such exhibits; (vii) remove former Exhibit 4.4; and (viii) update the date of the auditor's consent. See "Explanatory Note" on page 7, pages 8, 86, 87, 89, 90, 92, 100 and 101, Exhibit 1.1, Exhibit 4.11, Exhibit 4.12 and Exhibit 15.1 of Amendment No. 1.

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We thank you in advance for your consideration of this response. If you have any questions regarding this response, please call the Company's outside counsel, Robert L. Grossman, Esq. of Greenberg Traurig, P.A. at (305) 579-0756.

Sincerely,

By: /s/ Motti Farbstein
Motti Farbstein
Chief Operating and Financial Officer

cc: Robert L. Grossman, Esq.,
GreenbergTraurig, P.A.