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

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CAN-FITE BIOPHARMA LTD.

(Exact name of registrant as specified in its charter)

State of Israel

(State or other jurisdiction of incorporation or organization)

Not applicable

(I.R.S. Employer Identification No.)

10 Bareket Street Kiryat Matalon, P.O. Box 7537 Petach-Tikva 4951778, Israel (Address of Principal Executive Offices)

Can-Fite BioPharma Ltd. 2013 Global Incentive Option Scheme

(Full title of the plan)

Puglisi & Associates 850 Library Avenue Newark, Delaware 19711 (302) 738-6680 (Name, Address and Telephone Number of Agent For Service)

Copies of all communications, including communications sent to agent for service, should be sent to:

Ronen Kantor, Esq. Doron, Tikotzky, Kantor, Gutman, Ness, Amit Gross and Co. B.S.R. 4 Tower, 33 Floor 7 Metsada Street, Bnei Brak 5126112 Israel Tel: (+972) (3) 613-3371

Accelerated filer \Box

Gary Emmanuel, Esq. Eyal Peled, Esq. Greenberg Traurig, P.A. One Azrieli Center Round Tower, 30th Floor 132 Menachem Begin Rd Tel Aviv, Israel 6701101 +1 212 801 9337

Smaller reporting company \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Non-accelerated filer ⊠

Large accelerated filer \Box

Emerging growth company \Box

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

EXPLANATORY NOTE

Can-Fite BioPharma, Ltd. (the "Company") previously filed a registration statement on Form S-8 (SEC File No. 333-227753) with the Securities and Exchange Commission (the "SEC") in connection with the registration of an aggregate of 2,663,258 ordinary shares. This previously-filed registration statement is referred to as the "Prior Registration Statement."

In accordance with General Instruction E to Form S-8, the Company is filing this registration statement on Form S-8 solely to register an additional 32,534,566 ordinary shares, no par value, over and above the number of ordinary shares issuable pursuant to the Can-Fite BioPharma Ltd. 2013 Global Incentive Option Scheme that were registered under the Prior Registration Statement. Pursuant to General Instruction E to Form S-8, the contents of the Prior Registration Statement are hereby incorporated by reference in their entirety, with the exception of Items 3 and 8 of Part II of such Prior Registration Statement, each of which is amended and restated in its entirety herein.

Item 3. Incorporation of Documents by Reference.

The following additional documents, which have been filed by the Company with the SEC are incorporated by reference in and made a part of this registration statement, as of their respective dates:

- (a) The Company's Annual Report on Form 20-F for the year ended December 31, 2022 filed with the Commission on March 30, 2023;
- (b) The Company's reports of foreign private issuer on Form 6-K furnished with the Commission on January 10, 2023, January 11, 2023, January 13, 2023, January 13, 2023, January 24, 2023, February 14, 2023, February 21, 2023, February 22, 2023, March 13, 2023, March 30, 2023, and April 10, 2023 (to the extent expressly incorporated by reference into the Registrant's effective registration statements filed by us under the Securities Act); and
- (c) The description of our ordinary shares contained in Exhibit 2.1 to our Annual Report on Form 20-F for the year ended December 31, 2019, filed with the SEC on March 27, 2020, and any amendment or report filed for the purpose of further updating that description.

In addition to the foregoing, all documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and all reports on Form 6-K subsequently filed by the Registrant which state that they are incorporated by reference herein, prior to the filing of a post- effective amendment which indicates that all securities offered hereunder have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of filing of such documents and reports.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement herein, or in any subsequently filed document which also is or is deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 8. Exhibits.

Exhibit No.	Exhibit Description
4.1	Form of Amended and Restated Deposit Agreement, by and among Can-Fite BioPharma Ltd., The Bank of New York Mellon and the Owners and Holders of American Depositary Shares, dated September 11, 2013 (incorporated by reference to the Registration Statement on Form 8-A filed with the SEC on November 15, 2013)
4.2	Form of American Depositary Receipt evidencing American Depositary Shares (annexed as Exhibit A to Exhibit 4.1)
5.1	Opinion of Doron, Tikotzky, Kantor, Gutman, Ness, Amit Gross and Co., Israeli counsel to Registrant (including consent).
23.1	Consent of Kost Forer Gabbay & Kasierer,
23.2	Consent of Doron, Tikotzky, Kantor, Gutman, Ness, Amit Gross and Co. (included in Exhibit 5.1)
24.1	Power of Attorney (included on the signature page)
99.1	Can-Fite BioPharma Ltd. 2013 Global Incentive Option Scheme (incorporated by reference to the Annual Report on Form 20-F filed with the SEC on March 27, 2015)
107	Filing Fee Table

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Petach Tikva, State of Israel on this 21st day of April 2023.

CAN-FITE BIOPHARMA LTD.

By: /s/ Pnina Fishman, Ph.D.

Pnina Fishman, Ph.D. Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTED, that each director and officer of CAN-FITE BIOPHARMA LTD. whose signature appears below hereby appoints Pnina Fishman, Ph.D. and Motti Farbstein, and each of them severally, acting alone and without the other, his/her true and lawful attorney-in-fact with full power of substitution or re-substitution, for such person and in such person's name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective -amendments to this Registration Statement, and to sign any and all additional registration statements relating to the same offering of securities of the Registration Statement that are filed pursuant to Rule 462(b) of the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated:

Name	Title	Date		
/s/ Pnina Fishman Pnina Fishman, Ph.D.	Chief Executive Officer and Director (principal executive officer)	April 21, 2023		
/s/ Motti Farbstein	Chief Operating and Financial Officer	April 21, 2023		

Motti Farbstein	(principal financial officer and principal accounting officer)					
/s/ Ilan Cohen, Ph.D. Ilan Cohen, Ph.D.	Chairman of the Board	April 21 2023				
/s/ Guy Regev Guy Regev	Director	April 21, 2023				
/s/ Abraham Sartani Abraham Sartani	Director	April 21, 2023				
/s/ Yoseph Borenstein Yoseph Borenstein	Director	April 21, 2023				
/s/ Yaacov Goldman Yaacov Goldman	Director	April 21, 2023				
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AUTHORIZED REPRESENTATIVE

Pursuant to the Securities Act of 1933, as amended, the undersigned, the duly authorized representative in the United States of Can-Fite BioPharma Ltd. has signed this registration statement on April 21, 2023.

Puglisi & Associates

By: /s/ Donald J. Puglisi

Name: Donald J. Puglisi Title: Authorized Representative

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Yaron Tikotzky, Adv. (CPA)* Eli Doron, Adv. & Notary Ronen Kantor, Adv. Amit Gross, Adv. & Notary Dr. Shlomo Nass, Adv. (CPA) Giora Gutman, Adv. Rami Arie, Adv. (CPA) Rachel (Goren) Cavallero, Adv. Gil Mor. Adv. & Notarv* Sharon Fishman, Adv. & Notary Efrat Hamami, Adv. Tamir Kalderon, Adv. Asaf Gershgoren, Adv. & economist Efi Ohana, Adv. & economist Asaf Hofman, Adv. & economist Moti Philip, Adv. Shai Glikman, Adv. Rotem Nissim, Adv. Hadas Garoosi, Adv. Shmulik Cohen, Adv. Izhak Lax, Adv. Amit Moshe Cohen, Adv. Shimon Gros, Adv. & Notary Shahar Noah, Adv. (Tax advisor) Amichai Nitzan Tzidkiyahu, Adv. (CPA) Igal Rosenberg, Adv. Ori Perel, Adv. Shai Pnini Adv Tsvia Shif, Adv. Tali Pery, Adv. Rachel Don Yehia, Adv. Sandrine Dray, Adv. Mediator & Notary*** Nahi Hamud, Adv. Yair Messalem, Adv. Maayan Peled, Adv. Liav Menachem, Adv. Notary & Mediator Lilach Cohen-Shamir, Adv. Israel Asraf, Adv. & Notary Gali Ganoni, Adv. Odelia Cohen-Schondorf, Adv. Yana Shapiro Orbach, Adv. Oren Geni, Adv. Inbal Rachamim Avital, Adv. Moran Ovadia, Adv. Sonny Knaz, Adv. Racheli Levi, Adv. Bat-El Ovadia, Adv. Aharon Eitan, Adv. Rania Elime, Adv. Shaike Rakovsky, Adv. Ronit Rabinovich, Adv. Iris Borcom, Adv. Omri Alter, Adv. Shira Ben dov levi, Adv. Inbal Naim, Adv. Yonatan Gamarnik, Adv. Ben Mugraby, Adv. Liran Aharoni, Adv. Shirli Shlezinger, Adv. Michael Misul, Adv. Jacob Bayarsky, Adv. & economist Matan Hemo, Adv. Tamir Shenhav, Adv Adi Ben yair- Yosef, Adv Moshe Zoaretz, Adv. Or Nass, Adv. Nina Aharonov, Adv. Rozit kabudi Doron, Adv. Doron Pesso Adv Adi Barnes-Ovdat, Adv. Omri Yacov Adv Nov Keren, Adv. Felix Naftaliev Adv Lipaz Elimelch-Karni, Adv. Eli Hirsch, Adv. Maayan Gadalov, Adv. Dov Alter, Adv. Monica kevorkian karawani, Adv. Dudi Braitman, Adv. Faris Falah, Adv. Shahaf Zuker, Adv. Shlomi Cohen, Adv. Alexev Kvaktoun, Adv. Roman Bulick, Adv. Lior Valzman Haimovich, Adv. Elinor Yaakobi, Adv. Dor Elkrif; Adv. Oria Haim, Adv. Hadar Raz, Adv. Ilia Parkhomyuk, Adv. Dana Hofman, Adv. Omer Levi, Adv. Yamit Halperin, Adv. Moran Alezra, Adv. Elinor Palma, Adv.



April 20, 2023

& AMIT GROSS

Exhibit 5.1

To: Can-Fite Biopharma Ltd. 10 Bareket Street, Kiryat Matalon Petah-Tikva 4951778, Israel

Ladies and Gentlemen,

Re: REGISTRATION STATEMENT ON FORM S-8

We are acting as Israeli counsel for Can Fite Biopharma Ltd., an Israeli company (the 'Company"), in connection with the preparation of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), pertaining to the registration of 32,534,566 Ordinary Shares no par value of the Company (the "Plan Shares") under the 2013 Incentive Option Plan (the 'Plan").

In rendering our opinion, we have examined, and have relied as to factual matters solely upon, originals or copies certified, or otherwise identified to our satisfaction, of such documents, corporate records or other instruments as we have deemed necessary or appropriate for the purposes of this opinion. In our examination we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity with the originals of all documents submitted to us as copies. We have, when relevant facts material to our opinion were not independently established by us, relied to the extent we deemed such reliance proper upon written or oral statements of officers and other representatives of the Company.

In giving the opinion expressed herein, no opinion is expressed as to the laws of any jurisdiction other than the State of Israel.

Based upon and subject to the foregoing, we are of the opinion that the Plan Shares, when issued pursuant to the terms of the Plan, and the terms of any agreements relating to such issuance, will be upon receipt of the consideration provided for in the Plan, validly issued, fully paid and non-assessable.

This opinion is intended solely for the benefit and use of the Company and other persons who are entitled to rely on the Registration Statement, and is not to be used, released, quoted, or relied upon by anyone else for any purpose (other than as required by law), without our prior written consent.

We hereby consent to the filing of this opinion as Exhibit A to the Registration Statement, and to the use of our name wherever appearing in the Registration Statement in connection with Israeli law. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Sincerely.

/s/ Doron, Tikotzky, Kantor, Gutman & Amit Gross

Doron, Tikotzky, Kantor, Gutman, Nass, Amit Gross & Co

Advocates & Notaries

Lidor Amar, Adv. Tal Bukai, Adv.

Eli Kulas. Adv. Notary & Mediator - Of Counsel Eli Chenchinski, Adv. - Of Counsel Yaacov Wagner, Senior judge (retired), Adv.- L.L.M, Mediator & Arbitrator- Of Counsel Jan Robinsohn, M.Jur. Adv. & Notary - Of Counsel ****

Giora Amir (1928-2020)

* Member of the New York State Bar ** Member of the Law Society in England & Wales *** Accredited by the consulate of France **** Honorary Consul Of The Republic Of Poland(ret.)

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Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2013 Global Incentive Option Scheme of Can-Fite BioPharma Ltd. of our report dated March 30, 2023, with respect to the consolidated financial statements of Can-Fite BioPharma Ltd. and its subsidiary included in its Annual Report (Form 20-F) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

Tel-Aviv, Israel April 21, 2023 /s/ Kost Forer Gabbay & Kasierer A Member of Ernst & Young Global

Form S-8 (Form Type)

Can-Fite BioPharma Ltd.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Secu Tyj		Fee Calculation Rule	Amount Registered(2)	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	-	Amount of egistration Fee
Equity	Ordinary Shares, no par value (3)	Rule 457(c)	25,692,000	\$ 0.0856	\$ 2,199,235.20	0.00011020	\$	242.36
Equity	Ordinary Shares, no par value (4)	Rule 457(c) and Rule						
		457(h)	6,842,566	\$ 0.006	\$ 41,055.40	0.00011020	\$	4.52
Total Offering Amounts			32,534,566		\$ 2,240,290.60		\$	246.88
Total Fee Offsets								_
Net Fee Due							\$	246.88

(1) These shares may be represented by American Depositary Shares ("ADSs"), evidenced by American Depositary Receipts, issuable upon deposit of the ordinary shares registered hereby, no par value ("Ordinary Shares"), of Can-Fite BioPharma Ltd. (the "Company") and are registered on a separate registration statement on Form F-6 (File No. 333-183741). Each ADS represents 300 (300) Ordinary Shares.

(2) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement also covers such indeterminate number of Ordinary Shares as may be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions pursuant to the terms of the Can-Fite BioPharma Ltd. 2013 Global Incentive Option Scheme (the "Plan").

(3) Represents Ordinary Shares issuable upon exercise of outstanding options granted under the Plan and the corresponding proposed maximum offering price per share represents the weighted average exercise price of these outstanding options, expressed in U.S. dollars based on the Bank of Israel exchange rate on April 18, 2023 (\$1.00=NIS 3.647).

(4) Represents Ordinary Shares issuable upon future award grants under the Plan and the corresponding proposed maximum offering price per share, which is estimated solely for the purposes of calculating the registration fee under Rule 457(c) and Rule 457(h) under the Securities Act, is based on the average of the high and low prices for the Company's ADSs as quoted on the Nasdaq Capital Market on April 18, 2023, adjusted for ADS to Ordinary Share ratio.