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

FORM 6-K

Report of Foreign Private Issuer Pursuant to Rule 13a-16 or 15d-16
Under the Securities Exchange Act of 1934

For the Month of August 2018

001-36203
(Commission File Number)

CAN-FITE BIOPHARMA LTD.

(Exact name of Registrant as specified in its charter)

10 Bareket Street
Kiryat Matalon, P.O. Box 7537
Petach-Tikva 4951778, Israel
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F ☑ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

The first paragraph and "Forward Looking Statements" of the press release attached to this Form 6-K are hereby incorporated by reference into the registrant's Registration Statements on Form F-3 (File Nos. 333-195124, 333-204795, 333-209037 and 333-220644), to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

On August 21, 2018, Can-Fite BioPharma Ltd. issued a press release announcing that the first patient has been enrolled and dosed in its Phase III Comfort™ trial to evaluate its lead drug candidate, Piclidenoson (CF101). A copy of this press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Exhibit Index

Exhibit No.	Description
99.1	Press Release dated August 21, 2018

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, thereunto duly authorized.

Can-Fite BioPharma Ltd.

Date: August 21, 2018

By: /s/ Pnina Fishman
Pnina Fishman
Chief Executive Officer

Exhibit 99.1

Can-Fite Announces Enrollment of First Patient in its Comfort™ Phase III Trial of Piclidenoson in Psoriasis

- **Study initiation will prompt a milestone payment from the recently signed deal with Gebro Holding**
- **Psoriasis Therapeutic Market is Estimated to Reach $11.4B in 2020**

PETACH TIKVA, Israel, August 21, 2018 -- Can-Fite BioPharma Ltd. (NYSE American: CANF) (TASE:CFBI), a biotechnology company advancing a pipeline of proprietary small molecule drugs that address cancer, liver and inflammatory diseases, today announced the first patient has been enrolled and dosed in its Phase III Comfort™ trial to evaluate its lead drug candidate, Piclidenoson (CF101), a small orally bioavailable drug for the treatment of moderate-to-severe plaque psoriasis, which makes up about 90 percent of cases.

The Comfort™ Phase III Psoriasis study, is designed to evaluate the efficacy and safety of daily Piclidenoson, administered orally compared to Apremilast (Otezla®) and placebo, in 407 patients with moderate-to-severe plaque psoriasis. The study will be conducted in 5 countries in Europe, Israel and Canada. The first patient has been enrolled and dosed in Israel with enrollment in Europe and Canada expected to follow shortly.

Study initiation will prompt a milestone payment of 300,000 Euro from the recently signed deal with Gebro Holding which will distribute the drug upon regulatory approval in Spain, Austria and Switzerland. According to Visiongain, the psoriasis therapeutic market is estimated to reach $11.4B in 2020.

Pnina Fishman, PhD., Can-Fite CEO commented "Dosing the first patient in our Phase III Comfort™ trial marks a significant milestone for Can-Fite. We believe Piclidenoson is a potentially efficacious and safe option to the patients which need to take drugs chronically for a life time" stated Can-Fite CEO Dr. Pnina Fishman.

About Piclidenoson (CF101)

Piclidenoson is a novel, first-in-class, A3 adenosine receptor agonist (A3AR) small molecule, orally bioavailable drug with a favorable therapeutic index demonstrated in Phase II clinical studies. Piclidenoson is currently under development for the treatment of autoimmune inflammatory diseases. It is being evaluated in a Phase III study as a first line treatment, to replace MTX, in the treatment of rheumatoid arthritis and a Phase III study in the treatment of moderate-to-severe psoriasis.

About Can-Fite BioPharma Ltd.

Can-Fite BioPharma Ltd. (NYSE American: CANF) (TASE: CFBI) is an advanced clinical stage drug development Company with a platform technology that is designed to address multi-billion dollar markets in the treatment of inflammatory diseases, cancer, and NAFLD/NASH. The Company's lead drug candidate Piclidenoson is currently being evaluated in a global Phase III trial as a first line therapy for rheumatoid arthritis and a Phase III trial for moderate-to-severe psoriasis. Can-Fite's liver cancer drug CF102 concluded patient enrollment in a Phase II study for patients with liver cancer, and it is slated to enter Phase II for the treatment of non-alcoholic steatohepatitis (NASH). CF102 has been granted Orphan Drug Designation in the U.S. and Europe and Fast Track Designation as a second line treatment for hepatocellular carcinoma by the U.S. Food and Drug Administration. CF102 has also shown proof of concept to potentially treat other cancers including colon, prostate, and melanoma. CF602, the Company's third drug candidate, has shown efficacy in the treatment of erectile dysfunction in preclinical studies and the Company is investigating additional compounds, targeting A3AR, for the treatment of sexual dysfunction. These drugs have an excellent safety profile with experience in over 1,000 patients in clinical studies to date. For more information please visit: www.can-fite.com.

Forward-Looking Statements

This press release may contain forward-looking statements, about Can-Fite's expectations, beliefs or intentions regarding, among other things, market risks and uncertainties, its product development efforts, business, financial condition, results of operations, strategies or prospects. In addition, from time to time, Can-Fite or its representatives have made or may make forward-looking statements, orally or in writing. Forward-looking statements can be identified by the use of forward-looking words such as "believe," "expect," "intend," "plan," "may," "should" or "anticipate" or their negatives or other variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical or current matters. These forward-looking statements may be included in, but are not limited to, various filings made by Can-Fite with the U.S. Securities and Exchange Commission, press releases or oral statements made by or with the approval of one of Can-Fite's authorized executive officers. Forward-looking statements relate to anticipated or expected events, activities, trends or results as of the date they are made. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to risks and uncertainties that could cause Can-Fite's actual results to differ materially from any future results expressed or implied by the forward-looking statements. Many factors could cause Can-Fite's actual activities or results to differ materially from the activities and results anticipated in such forward-looking statements. Factors that could cause our actual results to differ materially from those expressed or implied in such forward-looking statements include, but are not limited to: the initiation, timing, progress and results of our preclinical studies, clinical trials and other product candidate development efforts; our ability to advance our product candidates into clinical trials or to successfully complete our preclinical studies or clinical trials; our receipt of regulatory approvals for our product candidates, and the timing of other regulatory filings and approvals; the clinical development, commercialization and market acceptance of our product candidates; our ability to establish and maintain corporate collaborations; the implementation of our business model and strategic plans for our business and product candidates; the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and our ability to operate our business without infringing the intellectual property rights of others; estimates of our expenses, future revenues, capital requirements and our needs for additional financing; competitive companies, technologies and our industry; statements as to the impact of the political and security situation in Israel on our business; and risks and other risk factors detailed in Can-Fite's filings with the SEC and in its periodic filings with the TASE. In addition, Can-Fite operates in an industry sector where securities values are highly volatile and may be influenced by economic and other factors beyond its control. Can-Fite does not undertake any obligation to publicly update these forward-looking statements, whether as a result of new information, future events or otherwise.

Contact

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