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 April 2015

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): ____

This Report on Form 6-K (including exhibits thereto) is hereby incorporated by reference into the registrant's Registration Statements on Form F-3 (File Nos.. 333-195124 and 333-199033), to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.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 April 20, 2015, Can-Fite BioPharma Ltd. issued a press release announcing it has submitted an application to the European Medicines Agency for Orphan Drug Designation for its drug candidate CF102 in the treatment of hepatocellular carcinoma, the most common form of liver cancer. 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 April 20, 2015

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 April 20, 2015

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

Exhibit 99.1

Can-Fite Applies for Orphan Drug Designation in Europe for CF102 in the Treatment of Liver Cancer

Designation would provide study protocol assistance and market exclusivity

PETACH TIKVA, Israel, April 20, 2015 -- Can-Fite BioPharma Ltd. (NYSE MKT: CANF) (TASE:CFBI), a biotechnology company with a pipeline of proprietary small molecule drugs that are being developed to treat inflammatory diseases, cancer and sexual dysfunction, announced today it has submitted an application to the European Medicines Agency for Orphan Drug Designation for its drug candidate CF102 in the treatment of hepatocellular carcinoma (HCC), the most common form of liver cancer.

CF102 is currently in a Phase II trial in the U.S., Israel, and Europe. The study enrolls HCC patients with Child-Pugh Class B cirrhosis who failed the only FDA approved drug on the market, Nexavar (sorafenib). The patients are treated twice daily with 25 mg of CF102, which has been found to be the most efficacious dose in our earlier Phase I/II study resulting in the longest overall survival time. CF102 is a stable drug which is hardly metabolized in the liver and therefore is suitable for treatment of liver diseases. In addition, the 25 mg dose had an excellent safety profile in the Phase I/II study and showed no hepatotoxicity and even maintained liver function in patients with advanced liver disease.

Can-Fite has already been granted Orphan Drug Status for CF102 for the indication of HCC by the U.S. Food and Drug Administration. CF102 is also approved for Compassionate Use by Israel's Ministry of Health.

If CF102 is granted Orphan Drug Designation in Europe, Can-Fite would benefit from incentives including protocol assistance, fee reductions, and market exclusivity once the medicine is on the market for up to 10 years in European Union member nations.

"As we are currently conducting our Phase II trial for CF102 in the treatment of liver cancer, we believe this is an opportune time for us to apply for Orphan Drug Designation in Europe. If our Phase II study results are favorable, then this designation would grant us the European Medicines Agency's valuable assistance in the development of our Phase III study protocol," stated Pnina Fishman, CEO of Can-Fite. "Upon marketing approval, receiving market exclusivity for CF102 would be significantly beneficial to Can-Fite."

According to Global Industry Analysts, the global market for liver cancer is projected to exceed $2 billion by 2015.

About CF102

CF102 is a small orally bioavailable drug that binds with high affinity and selectivity to the A3 adenosine receptor (A3AR). A3AR is highly expressed in tumor cells whereas low expression is found in normal cells. This differential effect accounts for the excellent safety profile of the drug. In Can-Fite's pre-clinical and clinical studies, CF102 has demonstrated a robust anti-tumor effect via deregulation of the Wnt signaling pathway, resulting in apoptosis of liver cancer cells. CF102 is in Phase II clinical trials for the treatment of liver cancer in the U.S., Israel, and Europe. The U.S. Food and Drug Administration has agreed with Can-Fite's Phase II study protocol and had previously granted Can-Fite Orphan Drug Designation for CF102 in the treatment of hepatocellular carcinoma, the most common form of liver cancer.

About Can-Fite BioPharma Ltd.

Can-Fite BioPharma Ltd. (NYSE MKT: 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 cancer, inflammatory disease and sexual dysfunction. The Company's CF101 recently completed Phase II/III trials for the treatment of psoriasis and the Company is preparing for a Phase III CF101 trial for rheumatoid arthritis. Can-Fite's liver cancer drug CF102 is in Phase II trials and has been granted Orphan Drug Designation 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. The Company's CF602 has shown efficacy in the treatment of erectile dysfunction. Can-Fite has initiated a full pre-clinical program for CF602 in preparation for filing an IND with the U.S. FDA in this indication. These drugs have an excellent safety profile with experience in over 1,200 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, 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, including, but not limited to, the factors summarized 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.

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