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 December 2013

000-55041 (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): _____

On December 19, 2013, Can-Fite BioPharma Ltd. (the "Company") issued a press release announcing that the U.S. Patent and Trademark Office granted a patent to the Company on September 24, 2013 which bears the Patent No. 8,541,182 and is titled "A Biological Marker for Inflammation". A copy of the 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 December 19, 2013

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: December 19, 2013

By: /s/ Motti Farbstein

Motti Farbstein Chief Operating and Financial Officer



Can-Fite BioPharma Granted a U.S. Patent for the Utilization of the A3 Adenosine Receptor as a Biomarker to Predict Patient Response

to CF101 in Autoimmune Inflammatory Indications

PETACH TIKVA, ISRAEL – December 19, 2013 - <u>Can-Fite BioPharma</u> Ltd. (TASE:CFBI), (NYSE MKT:CANF), a biotechnology company developing a pipeline of small molecule drugs that address inflammatory and cancer diseases, announced today that on September 24, 2013, the U.S. Patent and Trademark Office granted a patent which bears the Patent No. 8,541,182 and is titled "A Biological Marker for Inflammation". The patent will be valid until 2026 and protects Can-Fite's findings relating to the utilization of the A3 Adenosine Receptor ("A3AR") as a biomarker to predict patients' response to CF101 in autoimmune inflammatory indications.

Can-Fite's platform technology is based on the development of small molecule orally bioavailable drugs, in particular, ligands that bind to the A3AR, which is known to be over-expressed in inflammatory cells. The correlation between A3AR expression levels prior to treatment with CF101 and patients' response to the drug suggest that the A3AR may be a predictive biomarker to be analyzed prior to CF101 treatment. As such, and based on past Phase IIa clinical data in rheumatoid arthritis patients suggesting a direct, statistically significant correlation, Can-Fite developed a simple blood assay to test the expression level of such a biomarker, which is the subject of the patent. Most currently, all potential patients for Can-Fite's Phase IIb clinical trial in rheumatoid arthritis were tested for such A3AR biomarker prior to treatment and only those with an A3AR over-expression were enrolled in the trial.

As previously announced, Can-Fite expects to receive the data from such Phase IIb clinical trial by the end of December 2013.

Prof. Pnina Fishman, CEO of Can-Fite, said today: "We are very pleased with the grant by the U.S. Patent and Trademark Office for our A3AR biomarker. We believe it possesses a very unique ability to predict patient response to CF101. There is a need for a more personalized medicine approach in the rheumatology field, and we look to fulfill this unmet need.

About Can-Fite BioPharma Ltd.

Can-Fite BioPharma Ltd is an Israeli public company, the ordinary shares of which are traded on the TASE (TASE: CFBI). Level II American Depository Receipts of the company are traded on the NYSE MKT (NYSE MKT: CANF). Can-Fite, which commenced business activity in 2000, was founded by Pnina Fishman, Ph.D., researcher in the Rabin Medical Center, and Ilan Cohn Ph.D., patent attorney and senior partner at Reinhold Cohn Patent Attorneys in Israel. Dr. Fishman serves as the Chief Executive Officer of Can-Fite. Dr. Fishman founded Can-Fite on the basis of her scientific findings, and Can-Fite is focused on the development of small molecule orally bioavailable drugs, in particular, ligands that bind to the A3 adenosine receptor. Such drugs mediate anti-inflammatory and anti-cancer effects and are suggested as a biological predictive marker. Can-Fite's lead drug candidate, CF101, is in clinical development for the treatment of autoimmune inflammatory diseases. Can-Fite's CF102 drug candidate is being developed for the treatment of liver diseases and its CF602 drug is being developed for the treatment of inflammation and sexual dysfunction. To date, more than 700 patients have participated in clinical trials conducted by Can-Fite. Can-Fite previously licensed its activity in the ophthalmic field to OphthaliX Inc., in which it holds a controlling interest and which is currently listed on the U.S. Over-The-Counter Markets (OTCQB: OPLI).



Forward-Looking Statements

This press-release contains 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 (the "SEC"), 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, 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.

Contact

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