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 January 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): ____

On January 19, 2018, Can-Fite BioPharma Ltd. mailed a letter to shareholders. A copy of this letter is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Exhibit Index

Exhibit No.	Description
99.1	Letter to Shareholders dated January 19, 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: January 19, 2018

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

Exhibit 99.1

January 18, 2018

Dear Can-Fite shareholders,

Can-Fite BioPharma achieved a significant number of milestones in 2017. We further progressed our drug candidates towards advanced stages of clinical development after we successfully completed positive meetings with regulatory authorities and agreed on the protocol design of our Phase III studies. We believe that these activities combined with the strength of our existing patent portfolio, lay the groundwork for the strong foundation of the Company and position us strategically for long-term growth.

Catalysts for 2018

At Can-Fite, we are extremely excited about our platform technology, which addresses multibillion-dollar markets in the treatment of autoimmune, inflammatory, and liver diseases. This platform technology is based on work identifying that the Gi protein-coupled A3 adenosine receptor (A3AR) is over-expressed in inflammatory and cancer cells. Our proprietary drug candidates target and bind with A3AR and induce specific death of cancer and inflammatory cells, while leaving normal cells unharmed. A3AR expression is also a biological predictive marker, which helps to potentially identify improved patient responsive to drug treatment.

We are currently enrolling patients in a pivotal Phase III rheumatoid arthritis trial with our lead drug candidate, Piclidenoson (CF101). The ACRObat trial will evaluate Piclidenoson as a first-line therapy and an alternative to Methotrexate (MTX), the current standard of care and most widely used rheumatoid arthritis drug. The trial is slated to enroll approximately 500 patients in Europe, Canada, and Israel over a 24-week, randomized, double-blind, placebo-controlled design. An estimated 90% of rheumatoid arthritis patients receive MTX at some point in their disease. However, studies show that up to 50% of patients stop taking MTX due to reasons including drug intolerance, minor and major side effects, and lack of efficacy. Accordingly, there is a significant need for a new, safe and effective treatment option in the rheumatoid arthritis market, which is forecast to reach $34.6 billion by 2020. We believe that we have an alternative to the standard of care for the treatment of rheumatoid arthritis and will continue to update you based on our findings.

We are also advancing Piclidenoson toward a pivotal Phase III trial in the treatment of psoriasis, which is expected to commence in 2018. The upcoming trial will investigate the efficacy and safety of Piclidenoson compared to placebo and as compared to apremilast (Otezla®) in approximately 400 patients with moderate-to-severe plaque psoriasis. The psoriasis market is forecast to be $8.9 billion in 2018, and Celgene recently issued guidance that Otezla® sales for 2018 are expected to be $1.5 billion.

We opened 2018 with the announcement of a multi-million dollar distribution agreement with Gebro Holding GmBH to distribute Piclidenoson for the treatment of rheumatoid arthritis and psoriasis in three European countries: Spain, Switzerland and Austria. Under the terms of the distribution agreement, Gebro will be making a total upfront and milestone payment of approximately $2 million. In addition, Can-Fite has the potential to earn up to an additional approximately $7 million in milestone payments upon the achievement of certain regulatory and marketing milestones, plus double digit percentage royalty payments on net sales following regulatory approval. We view this transaction as providing further validation of our technology. Gebro is one of the top growth companies in the European pharma sector and they have a strong franchise and core therapeutic focus on rheumatology and pain. We currently have four active licensing transactions around our product candidates.

During the third quarter of 2017, we completed enrollment of 78 patients in a Phase II study investigating Namodenoson in the treatment of hepatocellular carcinoma (HCC), the most common form of liver cancer. Patients with advanced HCC, Child Pugh B, were enrolled in the U.S., Europe, and Israel. The primary endpoint of the Phase II study is overall survival. The HCC market is expected to generate $1.4 billion in sales in 2019. We are following the survival data closely and plan to perform the survival analysis at the earliest possible opportunity. Although the trial remains blinded to the Company, we reported in December 2017 that accumulated safety data at that time indicated a potentially favorable drug safety profile without hepatotoxicity and possible positive clinical effects. There are now subjects treated for more than one year and in some cases, two years. At the time of our update in December 2017, 15 subjects completed at least 12 cycles of treatment (each cycle is 28 days of treatment) of which two completed 24 cycles. The Company anticipates data release to occur in the second half of 2018.

In addition, we initiated patient enrollment for a Phase II trial for the treatment of non-alcoholic fatty liver disease (NAFLD) and non-alcoholic steatohepatitis (NASH). The 12-week trial will enroll approximately 60 patients. There is currently no U.S. FDA-approved drug for the indication of NASH, which is an addressable pharmaceutical market estimated to reach $35-40 billion by 2025.

Building on Our Asset Portfolio

We continue to expand our patent portfolio. Recently, we were issued a new patent from the Korean Intellectual Property Office for Piclidenoson titled, "Pharmaceutical Composition Comprising A3 Adenosine Receptor Agonist (IB-MECA/CF-101) For Treatment of Psoriasis." This adds to our intellectual property portfolio, which consists of 13 patent families issued and pending. This continues to be an important strategic initiative for us as we have successfully demonstrated success in licensing our assets to our strategic partners outside the U.S. and Israel.

During the third quarter of 2017, we received a milestone payment of $500,000 from Chong Kun Dang Pharmaceuticals (CKD), which licensed the exclusive right to distribute Namodenoson for the treatment of liver cancer in South Korea upon receipt of regulatory approvals. The payment is part of a deal worth up to $3 million in upfront and milestone payments plus 23% royalties.

As noted above, earlier this year we announced the licensing of Piclidenoson to the European pharmaceutical company, Gebro, for commercialization of Piclidenoson for rheumatoid arthritis and psoriasis in Spain, Switzerland and Austria. This transaction will provide Can-Fite with approximately $2 million in upfront payments.

In closing, we believe we are building momentum and have clear milestones and important catalysts in 2018 to position Can-Fite for continued success in 2018 and beyond. We are excited about our pipeline and believe that we are getting closer to commercializing valuable treatments that address large unmet needs in cancer autoimmune, and liver disease. We also believe that our platform can capture opportunities and provide long-term growth and value for our investors. I would personally like to thank our shareholders for their continued support. We are excited by what the future holds.

My warmest regards,

/s/ Pnina Fishman
Pnina Fishman, Ph.D.
Chief Executive Officer

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Forward-Looking Statements

Statements herein 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. 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. 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.

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