UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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 March 2019
Commission File Number
001-37846

CELLECT BIOTECHNOLOGY LTD.
(Translation of registrant's name into English)

23 Hata'as Street
Kfar Saba, Israel 44425
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of 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 Regulations S-T Rule 101(b)(1): ☐

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

The first three paragraphs of the press release attached to this Form 6-K are incorporated by reference into the registrant's Registration Statements on Form S-8 (Registration No. 333-214817, 333-220015 and 333-225003) and on Form F-3 (Registration No. 333-229083, 333-219614 and 333-212432).

Attached hereto as Exhibit 99.1 and incorporated by reference herein is a press release issued by the Registrant entitled “Cellect Announces Positive Phase I/II Mid-Study Results of its ApoGraft™ Technology.”

Exhibit

99.1	Press Release, dated March 27, 2019

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.

Cellect Biotechnology Ltd.

Date: March 27, 2019

By: /s/ Eyal Leibovitz
Name: Eyal Leibovitz
Title: Chief Financial Officer

Exhibit 99.1

Cellect Announces Positive Phase I/II Mid-Study Results of its ApoGraft™ Technology

Successful Completion of First half of ApoGraft™ Phase I/II Clinical Trial Shows 100% Engraftment and No Related Adverse Effects

Tel Aviv, Israel March 27, 2019 – Further validating its ApoGraft™ technology, Cellect Biotechnology Ltd. (Nasdaq: APOP), a developer of a novel stem cell production technology, announced positive mid-study data from the Company's Phase I/II study of its ApoGraft™ technology. The first half of patients planned for the study have completed the 180 day follow up, and 8 out of 12 planned subjects have been enrolled.

All patients transplanted using the ApoGraft™ process were engrafted and time to engraftment was similar to the standard of care. To date, there have not been any safety concerns during the study and patient enrollment is continuing. Both, the principal investigator (PI) and independent data safety monitoring board (DSMB) agree that no serious adverse events (SAEs) reported during the course of the study were related to the ApoGraft™ process.

The following is the mid-study results overview of the first six patients at 180 days:

- Patients' average age is 45.8 years of age (21-64), 50% males, the primary disease is AML (63% of total patients) and 25% suffer from MDS and 12% from ALL
- Safety and dose escalation were monitored by the DSMB. No safety concerns were identified during the study and enrollment has continued as planned.
- All patients transplanted with ApoGraft were engrafted. Mean time to neutrophil and platelet engraftment was 15.8 and 16.9 respectively. These results are fully compatible with the standard of care in patients undergoing bone marrow transplantations.
- There were no serious adverse events reported during the ApoGraft study that were considered related to the ApoGraft process by either the study principal investigator or the sponsor.
- Eleven SAEs were reported during the ApoGraft study in six patients - all defined as not related to the ApoGraft procedure.

"We are encouraged that the data for the Phase I/II study continues to validate our ApoGraft technology – and the data at this point fully met our expectations," commented Dr. Shai Yarkoni, Chief Executive Officer. "As we enroll the remaining patients, we believe the results strengthen our plans to initiate the next trial in the U.S. during the first half of the year and begin to monetize Cellect's proof of concept as we seek partnerships and collaborations with academics and corporate customers."

The Phase I/II, open-label, proof of concept, staggered 4-cohort clinical study is designed to evaluate safety and tolerability of ApoGraft™ in patients with haemato-oncology disorders undergoing allogenic HLA-matched hematopoietic stem cell transplant (HSCT). The primary endpoint of the study is to evaluate the overall incidence, frequency, and severity of adverse events potentially related to ApoGraft™ at 180-days post-transplant.

About Cellect Biotechnology Ltd.

Cellect Biotechnology (NASDAQ: APOP) has developed a breakthrough technology, for the selection of stem cells from any given tissue, that aims to improve a variety of stem cell-based therapies.

The Company's technology is expected to provide researchers, clinical community and pharma companies with the tools to rapidly isolate stem cells in quantity and quality allowing stem cell-based treatments and procedures in a wide variety of applications in regenerative medicine. The Company's current clinical trial is aimed at bone marrow transplantations in cancer treatment.

Forward Looking Statements

This press release contains forward-looking statements about the Company's expectations, beliefs and intentions. Forward-looking statements can be identified by the use of forward-looking words such as "believe", "expect", "intend", "plan", "may", "should", "could", "might", "seek", "target", "will", "project", "forecast", "continue" or "anticipate" or their negatives or variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical matters. For example, forward-looking statements are used in this press release when we discuss Cellect's intent regarding the future potential of Cellect's technology. These forward-looking statements and their implications are based on the current expectations of the management of the Company only and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. In addition, historical results or conclusions from scientific research and clinical studies do not guarantee that future results would suggest similar conclusions or that historical results referred to herein would be interpreted similarly in light of additional research or otherwise. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: the Company's history of losses and needs for additional capital to fund its operations and its inability to obtain additional capital on acceptable terms, or at all; the Company's ability to continue as a going concern; uncertainties of cash flows and inability to meet working capital needs; the Company's ability to obtain regulatory approvals; the Company's ability to obtain favorable pre-clinical and clinical trial results; the Company's technology may not be validated and its methods may not be accepted by the scientific community; difficulties enrolling patients in the Company's clinical trials; the ability to timely source adequate supply of FasL; risks resulting from unforeseen side effects; the Company's ability to establish and maintain strategic partnerships and other corporate collaborations; the scope of protection the Company is able to establish and maintain for intellectual property rights and its ability to operate its business without infringing the intellectual property rights of others; competitive companies, technologies and the Company's industry; unforeseen scientific difficulties may develop with the Company's technology; and the Company's ability to retain or attract key employees whose knowledge is essential to the development of its products. Any forward-looking statement in this press release speaks only as of the date of this press release. The Company undertakes no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by any applicable securities laws. More detailed information about the risks and uncertainties affecting the Company is contained under the heading "Risk Factors" in Cellect Biotechnology Ltd.'s Annual Report on Form 20-F for the fiscal year ended December 31, 2018 filed with the U.S. Securities and Exchange Commission, or SEC, which is available on the SEC's website, www.sec.gov, and in the Company's periodic filings with the SEC.

Contact
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