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 October 2018
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, third and fourth paragraphs and the "Forward Looking Statements" 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. 333-219614 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 Clinical Results.”

Exhibit

99.1	Press Release, dated October 15, 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.

Cellect Biotechnology Ltd.

Date: October 15, 2018

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

Exhibit 99.1

Cellect Announces Positive Clinical Results

- ***One-month assessment of half of the planned patients in the ApoGraft™ study show complete engraftment and zero related adverse events***

- ***First cohort of patients completed the full study showing safety and tolerability (zero Related Adverse Events -primary endpoint) and engraftment before 28 days post-transplant***

- ***Independent Data Safety Monitoring Board approves dose escalation for next group of Patients***

TEL AVIV, Israel, October 15th, 2018 -- Cellect Biotechnology Ltd. (Nasdaq: APOP), a developer of a novel stem cell production technology, announced today further data from a Phase I/II study of its ApoGraft™ technology. With half of the patients planned for the study having finished first month follow up, all such patients have shown 100% engraftment with no procedure related adverse events reported. Further to the six patients' one month data detailed above, Cellect reports that the first three patients of the trial (cohort I) have completed the study period (180 days) with full safety and tolerability.

Up to 50% of stem cell transplantation procedures result in life-threatening rejection disease and other immune responses such as Graft-versus-Host-Disease (GvHD). These adverse reactions stem from the inability of current practice to select between cells needed for successful transplant and those which cause the adverse effects. Cellect's ApoGraft™ technology aims to turn stem cell transplantations into a simple and safe yet cost-effective procedure by proper selection of the needed cells and elimination of the toxicity causing cells thereby reducing the associated severe side effects and consequently the outcome of the patients.

The Phase I/II, dose escalating, 4-cohort, open label clinical trial of twelve patients is designed to evaluate the safety and tolerability of the ApoGraft™ process in patients with hematological malignancies in an allogeneic hematopoietic stem cell transplantation (HSCT). The primary endpoint of the study is overall incidence, frequency and severity of adverse events potentially related to ApoGraft™ at 180 days from transplantation.

An independent Data Safety Monitoring Board (DSMB) has reviewed the study results and approved dose escalation to 50 ng/ml FasL. The first cohort in the study was dosed with 10 ng/ml FasL and the second was dosed with 25 ng/ml FasL. Based on the DSMB's recommendation, Cellect is proceeding with enrolling and dosing the third cohort of the study.

"The data is very encouraging and points to the potential of ApoGraft™ to make stem cell usage safe and effective. Eliminating the cells that cause the adverse events in Bone Marrow Transplants validates the ability of the Apograft's selection process. This proof of concept combined with the effect in Fat derived Stem cells further supports the generic use of Cellect's technology from a variety of cell sources and widens the scope of applications within Regenerative Medicine", stated Cellect CEO Dr. Shai Yarkoni.

Cellect's simple process selects and eliminates immune reaction-causing cells from the donor sample and delivers an improved cell batch comprising enriched stem cells. The ApoGraft™ is intended to result in recovery of the patient's new immune system with reduced related safety concerns in contrast to the significant morbidity or even death that happens a lot in currently standard BMT.

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 research, hospitals 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 future potential results of the clinical trial. 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 the Company's Annual Report on Form 20-F for the fiscal year ended December 31, 2017 filed with the U.S. Securities and Exchange Commission ("SEC"), which is available on the SEC's website, http://www.sec.gov, and in the Company's periodic filings with the SEC.

Contact

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