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 May 2020 (No. 1)

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 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): _____

The press release attached hereto as Exhibit 99.1 entitled "Cellect Biotechnology Announces Positive Data Demonstrating Robust Engraftment Using Apograft Was Featured in *Bone Marrow Transplantation;* Primary Data Points Were Submitted to the FDA during Investigational New Drug Approval" is hereby incorporated by reference into the Registrant's Registration Statements on Form S-8 (Registration Nos. 333-214817, 333-220015, 333-225003 and 333-232230) and on Form F-3 (Registration No. 333-219614).

Exhibit No.	Description
99.1	Cellect Biotechnology Announces Positive Data Demonstrating Robust Engraftment Using Apograft Was Featured in *Bone Marrow Transplantation;* Primary Data Points Were Submitted to the FDA during Investigational New Drug Approval

SIGNATURE

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.

Date: May 11, 2020

CELLECT BIOTECHNOLOGY, LTD.

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

Cellect Biotechnology Announces Positive Data Demonstrating Robust Engraftment Using ApoGraft Was Featured in *Bone Marrow Transplantation;* Primary Data Points Were Submitted to the FDA During Investigational New Drug Approval Process

Tel Aviv, Israel May 11, 2020 – Cellect Biotechnology Ltd. (NASDAQ: "APOP"), a developer of innovative technology which enables the functional selection of stem cells, today announced the publication of an article in *Bone Marrow Transplantation*, a peer-reviewed medical journal (member of the Nature publishing house) covering transplantation of bone marrow in humans and published monthly by the prestigious *Nature Research*, entitled "**Ex-vivo FAS-ligand to Improve Allograft Safety**". The article is co-authored by researchers at Cellect and its academic partners.

The paper highlights the pre-clinical research and demonstrates that engraftment is robust following transplantation of treated graft, and the graft retains its immune reconstitution and anti-leukemic effects. The Company has initiated a Phase 1/2 study in adults undergoing stem cell transplant for the treatment of hematological malignancies. 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. All patients transplanted through present time 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 and tolerability 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 data from the pre-clinical research, and published in this paper, was included in the Company's Investigational New Drug (IND) application, which was approved by the U.S. Food and Drug Administration in late 2019. The Company has received all the necessary approvals to initiate the trial with its academic partner, Washington University, and plans to begin patient recruitment once the COVID-19 pandemic is mitigated and clinics can resume normal practices.

About Cellect Biotechnology Ltd.

Cellect Biotechnology (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.

WWW.CELLECTBIO.COM **ENABLING STEM CELLS**

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 expectations regarding timing of the commencement of its planned U.S. clinical trial and its plan to reduce operating costs. 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; the Company's ability to retain or attract key employees whose knowledge is essential to the development of its products; and the Company's ability to pursue any strategic transaction or that any transaction, if pursued, will be completed. 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, 2019 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

Cellect Biotechnology Ltd.
Eyal Leibovitz, Chief Financial Officer
www.cellect.co
+972-9-974-1444
Or

EVC Group LLC
Michael Polyviou
(732) 933-2754
mpolyviou@evcgroup.com