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 October 2020 (No. 3)

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 Initiates U.S. Clinical Trial of ApoGraft” 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 Nos. 333-219614 and 333-229083).

Exhibit No.	Description
99.1	Cellect Biotechnology Initiates U.S. Clinical Trial of ApoGraft

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: October 22, 2020

CELLECT BIOTECHNOLOGY, LTD.

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

Exhibit 99.1

Cellect Biotechnology Initiates U.S. Clinical Trial of ApoGraft

Tel Aviv, Israel October 22, 2020 – Cellect Biotechnology Ltd. (NASDAQ: "APOP"), a developer of innovative technology which enables the functional selection of cells facilitating safer and more efficacious cell and gene therapies, today announced that it has initiated its clinical trial in the U.S. to determine the safety and tolerability of the ApoGraft technology for bone marrow transplantations (BMT). The trial will enroll 18 patients and the primary end point of the study is overall incidence, frequency and severity of adverse events potentially related to ApoGraft at 180 and 360 days from transplantation.

This is the second clinical trial of ApoGraft. The first trial in Israel has enrolled eleven patients, and the dose level of the final cohort is identical to the dose level used in the U.S. trial. The Company has previously disclosed interim data showing that the trial unequivocally met the safety and tolerability end point, and the Company expects to publish top line data in early 2021.

"This is a pivotal development for Cellect, and it demonstrates a significant step forward as we embark on our first-ever U.S. clinical trial for ApoGraft," commented Dr. Shai Yarkoni, Chief Executive Officer. "Although the COVID-19 pandemic impacted our expected commencement and timelines, I am encouraged by the work of our team and collaborators as they navigated all the pandemic constraints after the U.S. Investigational New Drug (IND) approval. We plan to leverage our collaborators' support and expertise to seek out further indications and regulatory approvals for other indications of cell therapy where ApoGraft may be used. This is an exciting period for Cellect, and we are pleased to begin treating patients in this trial in the coming weeks."

The trial will be conducted by bone marrow transplantation specialists at Washington University School of Medicine, a leading academic institution based in St. Louis, Missouri and is co-sponsored by the university and Cellect. ApoGraft cell selection technology is designed to prevent graft-versus-host disease (GVHD) following bone marrow transplantation. This is an open label phase 1 clinical trial of eighteen patients and is designed to evaluate the safety and tolerability of the ApoGraft process in patients with hematological malignancies who are undergoing a haploidentical hematopoietic stem cell transplantation (HSCT).

The Principal Investigator for the clinical trial is Zhifu Xiang, M.D., of Washington University. He is an Associate Professor in the Division of Oncology's Bone Marrow Transplantation & Leukemia Section in the Department of Medicine. In addition, Mark Schroeder, M.D., and John DiPersio M.D., Ph.D., will act as co-Principal Investigators for the study. Dr. DiPersio is the chief of the Division of Oncology in the Department of Medicine at Washington University. The collaboration is led by Dr. DiPersio, who also is Director of the Center for Gene and Cellular Immunotherapy, Washington University School of Medicine, and a past president of the American Society for Blood and Marrow Transplantation.

About Cellect Biotechnology Ltd.

Cellect Biotechnology (APOP) has developed a breakthrough technology and line of products, for the functional selection of cells. The Company is in clinical development of its lead product – the ApoGraft™ - improving Bone Marrow Transplantations (BMT) outcome.

The Company’s technology aims to improve the robustness, safety and efficacy of a variety of cell and gene therapies and therefore can be used by researchers, clinical community and pharma companies in a wide variety of applications including next generation CAR-T, NK, MSC and gene therapies. During human clinical trials, the Company has previously disclosed that interim data has unequivocally met safety and tolerability end point, further validating ApoGraft.

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.

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