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 April 2020 (No. 2)

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): _____

Attached hereto as Exhibit 99.1 is a press release issued by the Registrant entitled “Cellect Biotechnology Reports Fourth Quarter and Full Year 2019 Results.” The text of the press release under the following headings is 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): Additional Operating Highlights; Clinical Progress Update; Fourth Quarter and Full Year 2019 Financial Results; Balance Sheet Highlights; Cellect Biotechnology Ltd. Consolidated Statement of Operation; Cellect Biotechnology Ltd. Consolidated Balance Sheet Data; and Cellect Biotechnology Ltd. Consolidated Cash Flow Data.

Exhibit No.	Description
99.1	Cellect Biotechnology Reports Fourth Quarter and Full Year 2019 Results

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: April 3, 2020

CELLECT BIOTECHNOLOGY, LTD.

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

Cellect Biotechnology Reports Fourth Quarter and Full Year 2019 Results

Achieved Primary Investigational New Drug (IND) Approval in the U.S.; Positioned to Commence Patient Enrollment

Maintained Clinical Progress in Israel and Nearing Completion of Phase 1/2 Trial

Strategic Commercial Agreement with Canndoc Anticipated to Generate Significant Revenue; Closing of Merger Transaction Progressing as Planned

Tel Aviv, Israel April 3, 2020 – Cellect Biotechnology Ltd. (Nasdaq: APOP), a developer of a novel stem cell production technology, today announced operating and financial results for the fourth quarter and full year ended December 31, 2019.

"We achieved a number of strategic priorities in 2019, including the IND approval to commence our first-ever trial in the U.S.," commented Dr. Shai Yarkoni, Chief Executive Officer. "We plan to begin enrolling patients for this trial and completing the trial in Israel when the COVID-19 pandemic is mitigated. While these near-term events are value-enhancers, I believe that our recently announced prospective partnership with Canndoc could be a game-changer for Cellect and change our growth trajectory. It has the potential to significantly enhance our short and long term business prospects and shareholder value. As a player in the fast-growing pain management market, we would anticipate significant revenue opportunities already this year."

Recent Strategic Development

As previously announced, on March 4, 2020, the Company entered into a commercial binding Letter Of Intent (LOI) with Canndoc Ltd, a leading pharma grade medical cannabis pioneer and a wholly owned subsidiary of publicly-traded Intercure Ltd. (TASE: INCR), to acquire from Canndoc all rights to the use and sell Canndoc products for the reduction of opioid usage, including accumulated data, as well as on-going and pipeline of clinical trials. This commercial arrangement is subject to negotiation and approval by each company's board of directors and definitive agreements.

Additionally, the two companies signed a non-binding LOI for a full merger. Under preliminary details, Cellect will acquire from Intercure all of Canndoc outstanding shares, in exchange for additional Cellect ADRs to be in total ~95% (~93% on a fully diluted basis) of the merged company. The proposed merger is subject to independent valuation of both companies, fairness opinion by a third party, negotiation of a definitive agreement, approval of the agreement by the Company's Board of Directors and shareholders, internal approvals by Canndoc and Intercure, and customary closing conditions, including the approval of the IMCA (Israeli Medical Cannabis Agency). Upon the closing of the merger, Cellect and Canndoc will aim to fulfill all of the requirements to ensure the Company's ADRs and warrants continue trading on the Nasdaq Stock Market (Nasdaq) and, for this purpose, Intercure would commit to invest a cash sum of at least $3.0 million in any public offering that is undertaken by the Company, at a price of not less than $4.50 per ADR.

Based on the progress to date, the Company continues to expect the commercial and merger transactions will close in the second quarter of 2020.

Additional Operating Highlights:

- The Phase 1/2 clinical trial in Israel has successfully recruited 11 of the 12 patients needed to complete the trial, and subject to COVID-19 and resumption of normal activities, , the Company anticipates recruiting the final patient and publishing top line results by the end of 2020.

- Received all the necessary technology and regulatory approvals, including an Investigational New Drug (IND) approval from the U.S. Food and Drug Administration (FDA) to evaluate the safety and tolerability of the ApoGraft technology for haploidentical bone marrow transplantations.

- Prior to the delaying of the Cell & Gene Meeting on the Mediterranean and the International Congress on Autoimmunity due to the ongoing COVID-19 pandemic, the Company was selected to present data via oral presentations, further bolstering the Company's peer-reviewed credentials and growing body of clincal evidence

- Featured article highlighting the safety and tolerability of ApoGraft, Company's novel stem cell selection technology was approved for publication in Bone Marrow Transplantation, a high quality, peer-reviewed journal published monthly by Nature Research and covering all aspects of clinical and bone marrow transplantation

- Expanded intellectual property (IP) portfolio in multiple jurisdictions. The Company now has 65 patent applications worldwide, of which 33 are issued/allowed patents, and plans to continue expanding and protecting its global IP to create further barriers to entry

- Strengthened the balance sheet through a registered direct offering of $7.0 million (February 2019) and a registered direct offering of $3.0 million (January 2020), totaling $10 million, before deducting fees and other offering expenses.

Clinical Progress Update:

Due to the ongoing COVID-19 pandemic, the Company is experiencing clinical disruption such as:

- In Israel, the recruitment of patients in the final cohort for the Phase 1/2 clinical trial has been halted. Previously, the Company had anticipated completion of this trial in the second quarter of 2020.
    - Published mid-study data from the first half of patients was positive. All patients transplanted using the ApoGraft™ process were engrafted and time to engraftment was not changed.
    - To date, there have not been any safety concerns during the study and patient enrollment is continuing.
- In the U.S., the Phase 1/2 clinical trial, which was scheduled to begin enrolling patients in the first half of 2020, is delayed as major academic centers have suspended trials not affiliated with COVID-19.
    - The Company is collaborating with Washington University (WU) School of Medicine in St. Louis on the trial.
    - A total of 18 patients are planned for the initial phase.
    - Completed the technology transfer to WU's facility enabling the study to initiate immediately after the COVID-19 pandemic is mitigated.

The Company continues to take all the necessary precautions advised by global health officials to ensure the health and safety of its employees and partners. The Company is unaware of any impact on employees from pandemic related exposure or illness and is continuing to perform in-house research, including in the opioid/pain management area.

Fourth Quarter and Full Year 2019 Financial Results:

- Research and development (R&D) expenses for the fourth quarter and for the full year of 2019 were $0.74 million and $3.51 million respectively, compared to $1.17 million in the fourth quarter of 2018 and $3.91 million for the full year of 2018. The decrease in R&D expenses for the full year of 2019 as compared to the full year of 2018 resulted from the reduction in our research and development activities, as we decreased the number of our employees engaged in research and related activities.

- General and administrative (G&A) expenses for the fourth quarter and for the full year of 2019 were $0.69 million and $2.95 million respectively, compared to $1.37 million in the fourth quarter of 2018 and $4.55 million for the full year of 2018. The decrease in G&A expenses for the full year of 2019 as compared to the full year of 2018 resulted from the reduction in management salaries and travel expenses

- Finance expenses for the fourth quarter of 2019 were $0.33 million, and financial income was $1.60 million for the full year of 2019, compared to finance expenses of $1.45 million in the fourth quarter of 2018 and financial income of $2.64 million for the full year of 2018, respectively. The financial income in the full year of 2019 as compared to the financial income in the full year of 2018 is primarily due to the change in the fair value of the listed warrants granted in our U.S. initial public offering in 2016 and of the unregistered warrants granted in our registered direct offerings in 2019.

- Total Comprehensive loss for the fourth quarter and for the full year of 2019 was $1.76 million and $4.86 million respectively, or $0.008 per share for the fourth quarter and $0.023 per share for the full year of 2019, respectively, compared to $1.09 million, or $0.008 per share, in the fourth quarter of 2018 and $5.82 million, or $0.045 per share, for the full year of 2018.

Balance Sheet Highlights:

- Cash and cash equivalents totaled $5.24 million as of December 31, 2019, compared to $6.32 million on September 30, 2019, and $5.15 million on December 31, 2018. The change compared to December 31, 2018 was primarily due to the net proceeds of $5.8 million in a registered direct offering in February 2019, offset by ongoing operational expenses.

- Subsequent to the end of the full year, on January 8, 2020, the Company raised $3.0 million through a registered direct offering, before deducting fees and other estimated offering expenses.

- Shareholders' equity totaled $4.29 million as of December 31, 2019, compared to $5.34 million on September 30, 2019, and $4.03 million on December 31, 2018.

For the convenience of the reader, the amounts have been translated from NIS into U.S. dollars, at the representative rate of exchange on December 31, 2019 (U.S. $1 = NIS 3.456).

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, 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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Cellect Biotechnology Ltd
Consolidated Statement of Operation

	Convenience translation Twelve months ended December 31,	Twelve months ended December 31,		Three months ended December 31,	
	2019	2019	2018	2019	2018
	Unaudited	Audited	Audited	Unaudited	Unaudited
	U.S. dollars	NIS			
	(In thousands, except share and per share data)				
Research and development expenses	3,508	12,122	13,513	2,571	4,040
General and administrative expenses	2,954	10,210	15,734	2,378	4,733
Operating loss	6,462	22,332	29,247	4,949	8,773
Financial expenses (income) due to warrants exercisable into ADS	(2,032)	(7,022)	(7,719)	998	(4,784)
Other financial expenses (income), net	433	1,498	(1,415)	129	(238)
Total comprehensive loss	4,863	16,808	20,113	6,076	3,751
Loss per share:					
Basic and diluted loss per share	0.023	0.079	0.155	0.027	0.029
Weighted average number of shares outstanding used to compute basic and diluted loss per share	212,642,505	212,642,505	129,426,091	224,087,799	130,274,953

Cellect Biotechnology Ltd
Consolidated Balance Sheet Data

	Convenience translation December 31, 2019	December 31, 2019	December 31, 2018
	Unaudited	Audited	Audited
	U.S. dollars	NIS	
	(In thousands, except share and per share data)		
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	5,239	18,106	17,809
Other receivables	136	469	816
	5,375	18,575	18,625
NON-CURRENT ASSETS:			
Restricted cash	95	328	337
Right of use - Assets under operating lease	299	1,035	-
Other long-term assets	27	94	132
Property, plant and equipment, net	373	1,288	1,544
	794	2,745	2,013
	6,169	21,320	20,638
LIABILITIES AND SHAREHOLDERS' EQUITY			
CURRENT LIABILITIES:			
Trade payables	46	158	887
Leases liabilities	115	396	-
Other payables	891	3,080	4,012
	1,052	3,634	4,899
NON-CURRENT LIABILITIES:			
Warrants to ADS	628	2,172	1,816
Leases liabilities	196	677	-
	824	2,849	1,816
EQUITY:			
Ordinary shares of no par value: Authorized: 500,000,000 shares at December 31, 2018 and December 31 2019; Issued and outstanding: 130,414,799*) and 224,087,799*) shares as of December 31, 2018 and December 31, 2019, respectively.	-	-	-
Additional Paid In Capital	31,423	108,598	95,085
Share-based payments	4,782	16,528	12,319
Treasury shares	(2,727)	(9,425)	(9,425)
Accumulated deficit	(29,185)	(100,864)	(84,056)
	4,293	14,837	13,923
	6,169	21,320	20,638

*) Net of 2,641,693 treasury shares of the Company held by the Company.

Cellect Biotechnology Ltd
Consolidated Cash Flow Data

	Convenience translation Twelve months ended December 31,	Twelve months ended December 31,		Three months ended December 31,	
	2019	2019	2018	2019	2018
	Unaudited	Audited	Audited	Unaudited	Unaudited
	U.S. dollars	NIS (In thousands)			
Cash flows from operating activities:					
Total comprehensive loss	(4,863)	(16,808)	(20,113)	(6,076)	(3,751)
Adjustments to reconcile net loss to net cash used in operating activities:					
Exchange rate difference	300	1,036	(1,297)	(50)	(380)
Loss (gain) from revaluation of financial assets presented at fair value through profit and loss	-	-	(397)	(8)	(109)
Depreciation of Right of use - Assets under operating lease	125	433	-	(24)	-
Depreciation	108	373	459	88	122
Finance expenses	37	128	-	128	-
Issuance expenses	469	1,621	-	1,621	-
Changes in fair value of traded and non traded warrants to ADS	(2,501)	(8,643)	(7,719)	708	(4,511)
Share-based payment	784	2,708	4,537	807	1,290
Decrease (increase) in other receivables	111	385	43	239	(214)
Increase (decrease) in other payables	(481)	(1,663)	798	192	1,505
Interest received	27	93	54	168	7
Net cash used in operating activities	(5,884)	(20,337)	(23,635)	(2,207)	(6,041)
Cash flows from investing activities:					
Short term deposits, net	-	-	387	-	105
Restricted deposit, net	3	9	(22)	9	-
Proceeds received from the sale of fixed assets	2	6		6	
(Purchase) Sales of marketable securities measured at fair value through profit and loss	-	-	13,999	-	-
Purchase of property, plant and equipment	(36)	(123)	(656)	(3)	(13)
Net cash provided by investing activities	(31)	(108)	13,708	12	92
Cash flows from financing activities:					
Exercise of warrants and stock options into shares	-	-	399	-	-
Repayment on account of lease liabilities	(151)	(522)	-	(101)	-
Issue of share capital and warrants, net of issue costs	6,479	22,393	12,360	(1,330)	-
Net cash provided (used) by financing activities	6,328	21,871	12,759	(1,431)	-
Exchange differences on balances of cash and cash equivalents	(327)	(1,129)	1,243	(117)	373
Increase (decrease) in cash and cash equivalents	86	297	4,075	(3,743)	(5,576)
Balance of cash and cash equivalents at the beginning of the period	5,153	17,809	13,734	21,849	23,385
Balance of cash and cash equivalents at the end of the period	5,239	18,106	17,809	18,106	17,809