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 May 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 financial statements included in 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 Biotechnology Reports First Quarter 2019 Financial and Operating Results.”

Exhibit

99.1	Press Release, dated May 21, 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.

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

Date: May 21, 2019

Exhibit 99.1

Cellect Biotechnology Reports First Quarter 2019 Financial and Operating Results

Tel Aviv, Israel May 21, 2019 – Cellect Biotechnology Ltd. (NASDAQ: "APOP"), a developer of innovative technology which enables the functional selection of stem cells, today reported financial and operating results for the first quarter ended March 31, 2019 and provided a corporate update.

"Our technology continues to be validated with our recently announced mid-study results from our Phase I/II study, further demonstrating the immense potential to reshape the clinical development environment for hundreds of corporations and academic labs by significantly reducing time to market and cost," commented Dr. Shai Yarkoni, Chief Executive Officer. "However, notwithstanding our clinical success, we are undertaking a strategic review of our business and we intend to explore all value-focused options that better reflect our great promise and maximize shareholder equity. Therefore, we are implementing a number of initiatives, including lowering our operating costs, as we remain committed to our IND application and US clinical study plans".

First Quarter Clinical Success Continues to Validate Novel Manufacturing Technology

- Announced mid-study data from the Company's Phase I/II study of the Company's ApoGraft™ technology being conducted in Israel. 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. The Company currently expects its planned human ApoGraft™ Phase I/II trial in the United States to commence sometime during the first half of 2020, following the successful submission of an Investigational New Drug (IND) application with the U.S. Food and Drug Administration (FDA).

- Announced preliminary results from the Company's collaboration with Cell2in, a privately held South Korean company, that further demonstrated that Cellect's Apograft™ technology significantly improves both proliferation and functional capabilities of hematopoietic (HSC) and mesenchymal (MSC) stem cells originating from bone marrow, peripheral blood, umbilical cord, and adipose tissue.

The Company's cash and cash equivalents totaled $9.6 million as of March 31, 2019, which includes gross proceeds of $7.0 million from an underwritten public offering completed in February 2019. The Company is implementing a cost reduction plan, including a reduction in workforce, which is designed to preserve the Company's financial resources to allow it to continue its ongoing clinical program, including its planned Phase I/II trial in the United States in collaboration with Washington University while exploring strategic alternatives.

In May 2019, the Company announced that it commenced plans to explore strategic alternatives focused on maximizing shareholder value. Potential strategic alternatives that may be evaluated include, but are not limited to, an acquisition, merger, business combination, in-licensing, or other strategic transaction involving the Company or its assets.

First Quarter 2019 Financial Results:

- Research and development (R&D) expenses for the first quarter of 2019 were $0.97 million, compared to $1.11 million in the fourth quarter of 2018 and $0.79 million in the first quarter of 2018. The decrease in the first quarter of 2019 as compared to the fourth quarter of 2018 was primarily due to a decrease in clinical trial activity.

- General and administrative (G&A) expenses for the first quarter of 2019 were $0.65 million, compared to $1.30 million in the fourth quarter of 2018 and $0.95 million in the first quarter of 2018. The decrease in the first quarter of 2019 as compared to the fourth quarter of 2018 was primarily due to decrease in expenses related to provision for bonus for 2018 and stock-based compensation.

- Finance income for the first quarter of 2019 were $0.21 million, compared to finance income of $1.38 million in the fourth quarter of 2018. The decrease was primarily due to changes related to fair value of the tradable and non-tradable warrants issued in a prior fundraising.

- Net loss for the first quarter of 2019 was $1.40 million, or $0.008 per share and $0.16 per ADS, compared to $1.03 million, or $0.008 per share and $0.16 per ADS, in the fourth quarter of 2018, and $0.98 million, or $0.008 per share and $0.15 per ADS, in the first quarter of 2018.

* For the convenience of the reader, the amounts above have been translated from NIS into U.S. dollars, at the representative rate of exchange on March 31, 2019 (U.S. $1 = NIS 3.632).

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.

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, 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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Cellect Biotechnology Ltd.
Consolidated Statement of Operation

	Convenience translation Three months ended March 31, 2019	Three months ended March 31,	
		2019	2018
	Unaudited	Unaudited	
	U.S. dollars	NIS	
Research and development expenses, net	970	3,523	2,857
General and administrative expenses	649	2,355	3,452
Total operating loss	1,619	5,878	6,309
Financial expenses (income) due to warrants exercisable into ADS	(328)	(1,192)	(2,224)
Other financial expenses (income), net	115	418	(510)
Total comprehensive loss	1,406	5,104	3,575
Loss per share and ADS:			
Basic and diluted loss per share	0.008	0.029	0.028
Basic and diluted loss per ADS	0.16	0.58	0.56
Weighted average number of shares outstanding used to compute basic and diluted loss per share	177,277,833	177,277,833	126,973,049

Cellect Biotechnology Ltd.
Consolidated Balance Sheet Data

	Convenience translation March 31, 2019	March 31, 2019	December 31, 2018
	Unaudited	Unaudited	Audited
	U.S. dollars	NIS	
	(In thousands, except share and per share data)		
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	9,598	34,862	17,809
Other receivables	209	757	816
	9,807	35,619	18,625
NON-CURRENT ASSETS:			
Restricted cash	92	333	337
Right of use assests	413	1,499	-
Other long-term receivables	33	123	132
Property, plant and equipment, net	431	1,566	1,544
	969	3,521	2,013
	10,776	39,140	20,638
LIABILITIES AND SHAREHOLDERS' EQUITY			
CURRENT LIABILITIES:			
Trade payables	233	848	887
Other payables	1,425	5,176	4,012
Current maturities of lease liability	135	492	-
	1,793	6,516	4,899
NON-CURRENT LIABILITIES:			
Warrants to ADS	2,648	9,617	1,816
Lease liability	281	1,021	-
	2,929	10,638	1,816
EQUITY:			
Ordinary shares of no par value: Authorized: 500,000,000 shares at December 31, 2018 and March 31, 2019; Issued and outstanding: 130,414,799*) and 224,087,799*) shares as of December 31, 2018 and March 31, 2019, respectively.	-	-	-
Additional Paid in Capital	29,810	108,269	95,085
Share-based payments	3,387	12,302	12,319
Treasury shares	(2,595)	(9,425)	(9,425)
Accumulated deficit	(24,548)	(89,160)	(84,056)
	6,054	21,986	13,923
	10,776	39,140	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 Three months ended March 31, 2019	Three months ended March 31,	
		2019	2018
	Unaudited	Unaudited	
	U.S. dollars	NIS	
Cash flows from operating activities:			
Total comprehensive loss	(1,406)	(5,104)	(3,575)
Adjustments to reconcile net loss to net cash used in operating activities:			
Exchange rate difference	103	372	(523)
Loss from revaluation of financial assets presented at fair value through profit and loss	1	4	-
Depreciation	27	98	105
Share-based payment	(59)	(215)	1,247
Changes in fair value of traded and not traded warrants to ADS	(701)	(2,546)	(2,496)
Decrease (increase) in other receivables	19	70	63
Depreciation in right of use assets	31	114	-
Increase (decrease) in other payables	4	15	(911)
Net cash used in operating activities	(1,981)	(7,192)	(6,090)
Cash flows from investing activities:			
Restricted deposit	-	-	(163)
Marketable securities measured at fair value through profit and loss, net	-	-	4,500
Purchase of property, plant and equipment	(33)	(120)	(140)
Net cash provided by investing activities	(33)	(120)	4,197
Cash flows from financing activities:			
Exercise of warrants and stock options into shares	-	-	399
Issue of share capital and warrants, net of issue costs	6,839	24,837	12,365
Interest paid	11	37	-
Repayment of lease liability	(38)	(137)	-
Net cash provided by financing activities	6,812	24,737	12,764
Exchange differences on balances of cash and cash equivalents	(103)	(372)	523
Increase (decrease) in cash and cash equivalents	4,695	17,053	11,394
Balance of cash and cash equivalents at the beginning of the period	4,903	17,809	13,734
Balance of cash and cash equivalents at the end of the period	9,598	34,862	25,128