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 March 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 financial statements in this Form 6-K are incorporated by reference into the Registrant's Registration Statements on Form S-8 (Registration No. 333-214817 and 333-220015) 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 Biotechnology Provides Corporate Update and Reports Fourth Quarter and Full Year 2017 Financial Results.”

Exhibit

99.1	Press Release, dated March 19, 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: March 19, 2018

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

Exhibit 99.1

Cellect Biotechnology Provides Corporate Update and Reports Fourth Quarter and Full Year 2017 Financial Results

Tel Aviv, Israel March 19, 2018 – Cellect Biotechnology Ltd. (NASDAQ: "APOP"), a developer of innovative technology which enables the functional selection of stem cells, today provided a corporate update and announced financial results for the fourth quarter and full year ended December 31, 2017.

“We are very pleased with our accomplishments in the fourth quarter and the full year of 2017," said Dr. Shai Yarkoni, Chief Executive Officer.

“During the fourth quarter, the Company reported positive results from a 20 patient trial with Tel-Aviv Ichilov Medical Center, in which ApoGraft™ significantly improved stem cells derived from fat tissues and the Company announced that Company CEO, Dr. Shai Yarkoni, was chosen to present Cellect technology and recent advancements at the Bio-Europe 2017 conference in Berlin.

“Overall, during 2017, the Company announced the treatment of the first blood cancer patient in its ongoing Phase I/II trial of the Company's stem cell technology ApoGraft™ and the successful performance of the procedure using the Company’s ApoGraft™ technology; received a notice of allowance on a key method of treatment patent (Application No. 13/811,374) from the United States Patent & Trademark Office; announced positive final results from the non-interventional clinical trial of ApoGraft™ in healthy donors (104 donor test base); announced that Michael Berelowitz MD., former head, Clinical Development and Medical Affairs, Pfizer Specialty Care Business Unit, joined Cellect’s board of directors; announced that Dr. Corey Cutler, Senior Physician at the world-renowned U.S. Dana Farber Cancer Institute and an Associate Professor of Medicine at Harvard Medical School, joined the Company's Scientific and Medical Advisory Board; announced the U.S. Food & Drug Administration (FDA) provided Cellect with pre-Investigational New Drug (IND) meeting minutes supporting an IND submission in the U.S. for Cellect’s flagship product, ApoGraft™; the Company received a formal notice of Intention to Grant for a patent (Application No. 11751949.6-1466) covering a key method of treatment from the European Patent Office; the Company received a formal notice of allowance for a patent (Application No. 14/383,288) covering a key composition of matter and method of use from the US Patent & Trademark Office (USPTO); further to the notices of allowance received from the USPTO, the Company received further confirmation for grant of its patent by the Russian patent authorities (Application No. 2014138001) for a key composition of matter and method of use covering various devices using the ApoGraft™ for selection of stem cells; announced that the FDA granted Orphan Drug Status to Cellect's ApoGraft™ for Acute GvHD and Chronic GvHD; announced a $4.3 million raise in a registered direct offering; completed its voluntary de-listing from the Tel Aviv Stock Exchange” continued Dr. Yarkoni.

"We believe Cellect’s transformative approach to cell selection represents a significant breakthrough in the ability to achieve much better stem cell preparation, for whatever use. Production of enriched stem cells material with substantially reduced mature immune cells has shown a great promise for reducing the significant risks associated with bone marrow transplantation”, continued Dr. Yarkoni. “With this continued development progress, and our two registered direct offerings, Cellect is focused on creating long-term value for our shareholders.”

Recent corporate highlights:

- the Company announced the results of the first group of patients in the Company's ongoing Phase I/II clinical trial of ApoGraft™ after one month follow-up with 100% acceptance of the stem cell transplant and zero related adverse events,

- the Company announced the opening of a second clinical trial site at Hadassah Medical Center for the Company's ongoing Phase I/II clinical trial of ApoGraft™ and that it received the approval from the Data and Safety Monitoring Board (DSMB) for dose escalation in the clinical trial,

- David Braun, Head of Merck Group's Medical Device Business, joined Cellect's Board of Directors, and

- the Company announced a $4 million registered direct offering.

Fourth Quarter and Full Year 2017 Financial Results:

- Research and development (R&D) expenses for the fourth quarter and for the full year of 2017 were $0.98 million and $3.32 million respectively, compared to $0.73 million in the fourth quarter of 2016 and $2.38 million for the full year of 2016. The increase in R&D expenses for the full year of 2017 as compared to the full year of 2016 was primarily attributable to an increase from share based payment, salaries and related personnel expenses reflecting the growth in the Company's activities resulting from an increase in the number of employees engaged in research and development related activities from thirteen to eighteen.

- General and administrative (G&A) expenses for the fourth quarter and for the full year of 2017 were $0.98 million and $3.73 million respectively, compared to $0.50 million in the fourth quarter of 2016 and $2.30 million for the full year of 2016. The increase in G&A expenses for the full year of 2017 as compared to the full year of 2016 was primarily due to professional services, share based compensation and expenses related to business development activities.

- Finance income, net for the fourth quarter of 2017 were $0.99 million, and finance expenses, net for the full year of 2017 were $1.09 million, compared to net finance income, net of $0.39 million in the fourth quarter of 2016 and $0.18 million for the full year of 2016 respectively. The financial expenses, net in the full year of 2017 as compared to the financial income, net in the full year of 2016, was primarily due to the change in the fair value of the listed warrants granted in the Company's initial public offering in 2016 and the unregistered warrants granted in the Company's registered direct offering in 2017.

- Net loss for the fourth quarter and for the full year of 2017 was $0.97 million and $8.14 million respectively, or $0.008 per share for the fourth quarter and $0.073 per share for the year of 2017 respectively, compared to $0.83 million, or $0.008 per share, in the fourth quarter and $4.41 million, or $0.049 per share for the full year of 2016.

Balance Sheet Highlights:

- Cash and cash equivalents (including marketable securities and short terms deposits) totaled $8.0 million as of December 31, 2017, compared to $9.4 million on September 30, 2017, and $8.9 million as of December 31, 2016. The change in the cash and cash equivalents was primarily due to net proceeds of $4.0 million (after deducting underwriters' fees) raised through a registered direct offering completed in September 2017, offset by cash used in operations during the year.

- Shareholders' equity totaled $5.4 million as of December 31, 2017, compared to $6.0 million on September 30 2017, and $8.2 million as of December 31, 2016.

For the convenience of the reader, the amounts have been translated from NIS into U.S. dollars, at the representative rate of exchange as of December 31, 2017 (U.S. $1 = NIS 3.467).

About Cellect Biotechnology Ltd.
Cellect Biotechnology (NASDAQ: "APOP", "APOPW") has developed a breakthrough technology for the selection of stem cells from any given tissue that aims to improve a variety of stem cell applications.

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 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 belief that its transformative approach to cell selection represents a significant breakthrough in the ability to achieve much better stem cell preparation. 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, 2017 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 Twelve months ended December 31,	Twelve months ended December 31,		Three months ended December 31,	
	2017	2017	2016	2017	2016
	Unaudited	Audited	Audited	Unaudited	Unaudited
	U.S. dollars	NIS			
	(In thousands, except share and per share data)				
Research and development expenses, net	3,318	11,503	8,256	3,404	2,518
General and administrative expenses	3,729	12,930	7,968	3,406	1,721
Other income	-	-	(280)	-	-
Total operating loss	7,047	24,433	15,944	6,810	4,239
Financial expenses due to warrants exercisable into ADS	926	3,208	(612)	(3,614)	(1,144)
Other financial expenses (income), net	168	583	(15)	172	(213)
Total comprehensive loss	8,141	28,224	15,317	3,368	2,882
Loss per share and ADS:					
Basic and diluted loss per share	0.073	0.252	0.168	0.028	0.027
Basic and diluted loss per ADS	1.46	5.04	3.36	0.56	0.54
Weighted average number of shares outstanding used to compute basic and diluted loss per share	111,968,663	111,968,663	91,128,516	120,011,684	107,583,485

Cellect Biotechnology Ltd.
Consolidated Balance Sheet Data
ASSETS

	Convenience translation December 31, 2017 Unaudited U.S. dollars	December 31, 2017 Audited NIS	December 31, 2016 Audited NIS
	(In thousands, except share and per share data)		
CURRENT ASSETS:			
Cash and cash equivalents	3,961	13,734	6,279
Short term deposits	-	-	19,660
Marketable securities	4,038	13,999	4,997
Other receivables	236	818	1,461
	8,235	28,551	32,397
NON-CURRENT ASSETS:			
Restricted cash	88	305	140
Other long-term assets	50	173	-
Property, plant and equipment, net	388	1,344	1,373
	526	1,822	1,513
	8,761	30,373	33,910
LIABILITIES AND SHAREHOLDERS' EQUITY			
CURRENT LIABILITIES:			
Trade payables	491	1,703	1,401
Other payables	691	2,396	2,084
	1,182	4,099	3,485
NON-CURRENT LIABILITIES:			
Warrants to ADS	2,141	7,422	1,938
EQUITY:			
Ordinary shares of no par value: Authorized: 500,000,000 shares at December 31, 2016 and 2017; Issued and outstanding: 107,628,485*) and 120,185,659*) shares as of December 31, 2016 and 2017, respectively.	-	-	-
Additional Paid In Capital	23,894	82,839	67,414
Share-based payments	2,706	9,381	6,217
Treasury shares	(2,718)	(9,425)	(9,425)
Accumulated deficit	(18,444)	(63,943)	(35,719)
	5,438	18,852	28,487
	8,761	30,373	33,910

*) 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,	
	2017	2017	2016	2017	2016
	Unaudited	Audited	Audited	Unaudited	Unaudited
	U.S. dollars	NIS			
		(In thousands)			
Cash flows from operating activities:					
Total comprehensive loss	(8,141)	(28,224)	(15,317)	(3,368)	(2,882)
Adjustments to reconcile net loss to net cash used in operating activities:					
Net financing expenses	154	532	134	175	(12)
Loss (gain) from revaluation of financial assets presented at fair value through profit and loss	40	139	(106)	(1)	(142)
Depreciation	107	372	350	94	123
Share-based payment	1,553	5,384	1,552	1,368	(534)
Changes in fair value of traded and not traded warrants to ADS	866	3,003	(1,235)	(3,647)	(1,158)
Decrease (increase) in other receivables	136	470	(1,049)	107	(306)
Increase in other payables	117	407	1,259	1,040	664
Interest received	42	147	-	-	-
Net cash used in operating activities	(5,126)	(17,770)	(14,412)	(4,232)	(4,247)
Cash flows from investing activities:					
Proceeds received from the sale of fixed assets	-	-	95	-	-
Short term deposits, net	5,633	19,530	(19,530)	-	120
Restricted deposit	(47)	(165)	(120)	2	(120)
Marketable securities measured at fair value through profit and loss, net	(2,599)	(9,008)	2,808	(4,001)	1,007
Purchase of property, plant and equipment	(77)	(266)	(1,265)	(91)	(82)
Net cash provided by (used in) investing activities	2,910	10,091	(18,012)	(4,090)	925
Cash flows from financing activities:					
Exercise of warrants and stock options into shares	414	1,432	7	169	-
Issue of share capital and warrants, net of issue costs	4,148	14,381	34,917	(510)	(167)
Net cash provided (used in) by financing activities	4,562	15,813	34,924	(341)	(167)
Exchange differences on balances of cash and cash equivalents	(196)	(679)	(134)	(175)	12
Increase (decrease) in cash and cash equivalents	2,150	7,455	2,366	(8,838)	(3,477)
Balance of cash and cash equivalents at the beginning of the period	1,811	6,279	3,913	22,572	9,756
Balance of cash and cash equivalents at the end of the period	3,961	13,734	6,279	13,734	6,279