

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 2016

Commission file number: 001-35932

ALCOBRA LTD.
(Translation of registrant's name into English)

Azrieli Triangle Building
132 Derech Menachem Begin 39th Floor
Tel Aviv 6701101 Israel
(Address of principal executive offices)

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): _____

Attached hereto and incorporated by reference herein is the registrant's press release issued on May 16, 2016, announcing its financial results for the first quarter ended March 31, 2016.

The GAAP financial statements in this Form 6-K of the registrant are incorporated by reference into the Registration Statement on Form F-3 (File No. 333-209960) and Forms S-8 (File Nos. 333-194875, 333-202394 and 333-209947) of the registrant, filed with the Securities and Exchange Commission, to be a part thereof from the date on which this report is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

Exhibit No.

99.1 Press release issued by Alcobra Ltd. on May 16, 2016, announcing its financial results for the first quarter ended March 31, 2016.

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.

Alcobra Ltd.
(Registrant)

By /s/ Dr. Yaron Daniely
Name: Dr. Yaron Daniely

Chief Executive Officer and President

Date: May 18, 2016

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ALCOBRA ANNOUNCES FIRST QUARTER 2016 FINANCIAL RESULTS AND PROVIDES CORPORATE UPDATE

· *Conference Call & Webcast May 16th at 8:30 a.m. Eastern Time/5:30 a.m. Pacific Time*

Tel Aviv, Israel – May 16, 2016 – Alcobra Ltd. (NasdaqGM: ADHD), an emerging pharmaceutical company focused on the development of new medications to treat patients with cognitive disorders, including Attention Deficit Hyperactivity Disorder (ADHD) and Fragile X Syndrome (Fragile X), today announced financial results for the three months ended March 31, 2016, and provided a corporate update.

First Quarter Ended March 31, 2016 Financial Results:

- Total operating expenses in the first quarter 2016 were \$5.2 million, in line with the first quarter 2015.
- Net operating expenses, excluding non-cash stock based compensation of \$0.7 million, in the first quarter 2016 were \$4.5 million, compared with \$4.4 million in the first quarter 2015
- Research and development (R&D) expenses in the first quarter 2016 were \$3.4 million, compared with \$3.6 million in the first quarter 2015. R&D expenses consist primarily of costs associated with the conduct of our Phase III Adult ADHD clinical study.
- General and administrative (G&A) expenses in the first quarter 2016 were \$1.5 million, compared with \$1.3 million in the first quarter 2015. Pre-commercialization expenses in the first quarter 2016 were \$0.4 million, compared with \$0.3 million in the first quarter 2015.
- Cash, marketable securities, and deposits totaled \$65.2 million at March 31, 2016, compared with \$69.7 million at December 31, 2015 and \$45.0 million at March 31, 2015.

First Quarter and Recent Corporate Updates:

- The company is currently enrolling patients into the MEASURE study (MDX Evaluation in Adults – Study of Response and Efficacy). The MEASURE study is the company's second Phase III study of Metadoxine Extended Release (MDX) in adults with ADHD. The company continues to expect data from the study by year-end 2016.
 - The company is advancing discussions with the U.S. Food and Drug Administration (FDA) on its pediatric ADHD development plan, including the launch of the first of two registration studies with MDX in pediatric ADHD.
 - The company continues its preparations and discussions with FDA on the design of its planned Phase III study in adolescents and adult patients with Fragile X. The FDA has previously granted an orphan drug designation and Fast Track designation to MDX for the treatment of Fragile X.
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Conference Call & Webcast

Monday, May 16, 2016 @ 8:30am Eastern Time

Domestic: 855-469-0611
International: 484-756-4341
Passcode: 97907530
Webcast: <http://www.alcobra-pharma.com/events.cfm>

Replays available through May 30, 2016

Domestic: 855-859-2056
International: 404-537-3406
Passcode: 97907530

About Alcobra Ltd.

Alcobra Ltd. is an emerging pharmaceutical company primarily focused on the development and commercialization of MDX, a proprietary drug candidate, to treat cognitive disorders including ADHD and Fragile X. For more information please visit the Company's website, www.alcobra-pharma.com, the content of which is not incorporated herein by reference.

Forward Looking Statements

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws.

Because such statements deal with future events and are based on Alcobra's current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of Alcobra could differ materially from those described in or implied by the statements in this press release. For example, forward-looking statements include statements regarding the design of future clinical studies and content of discussions with the FDA and possible positive outcomes of such discussions. In addition, historic results of scientific research do not guarantee that the conclusions of future research would not suggest different conclusions or that historic results referred to in this press release would not be interpreted differently in light of additional research or otherwise. Also, while Alcobra has received Fast Track designation for MDX for the treatment of Fragile X, the company cannot guarantee that it will be able to maintain such designation due to reasons within or outside of its control. The forward-looking statements contained or implied in this press release are subject to other risks and uncertainties, including those discussed under the heading "Risk Factors" in Alcobra Ltd.'s Annual Report on Form 20-F for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission (SEC) and in subsequent filings with the SEC. Except as otherwise required by law, Alcobra disclaims any intention or obligation to update or revise any forward-looking statements, which speak only as of the date they were made, whether as a result of new information, future events or circumstances or otherwise.

Alcobra Ltd.
Consolidated Statements of Operation
(In thousands, except share and per share amounts)

| | Three Months Ended | |
|---|--------------------|-------------------|
| | March 31, | |
| | 2016 | 2015 |
| | (Unaudited) | (Unaudited) |
| Research and development | \$ 3,362 | \$ 3,590 |
| Pre commercialization expenses | 412 | 349 |
| General and administrative | 1,458 | 1,289 |
| Total operating expenses | 5,232 | 5,228 |
| Financial income, net | (172) | (64) |
| Loss before taxes on income | 5,060 | 5,164 |
| Taxes on income | 26 | 13 |
| Net loss attributable to holders of Ordinary shares | <u>\$ 5,086</u> | <u>\$ 5,177</u> |
| Net basic and diluted loss per share | <u>\$ (0.18)</u> | <u>\$ (0.26)</u> |
| Weighted average number of Ordinary shares used in computing basic and diluted net loss per share | <u>27,562,239</u> | <u>20,158,404</u> |

Alcobra Ltd.
Consolidated Balance Sheet Data
(In thousands)

ASSETS

| | March 31, 2016 (Unaudited) | December 31, 2015 |
|--|----------------------------------|----------------------|
| Current assets: | | |
| Cash and cash equivalents | \$ 13,487 | \$ 16,658 |
| Short-term bank deposits | 36,000 | 34,022 |
| Marketable securities | 3,739 | - |
| Prepaid expenses and other receivables | 1,538 | 1,666 |
| Total current assets | 54,764 | 52,346 |
| Long-term assets: | | |
| Long-term bank deposits | 12,000 | 19,000 |
| Other long-term assets | 98 | 110 |
| Property and equipment, net | 235 | 227 |
| Total long-term assets | 12,333 | 19,337 |
| Total assets | \$ 67,097 | \$ 71,683 |

**LIABILITIES AND
SHAREHOLDERS' EQUITY**

| | | |
|---|------------------|------------------|
| Current liabilities: | | |
| Trade payables | \$ 111 | \$ 57 |
| Accrued expenses and other liabilities | 1,999 | 2,295 |
| Total current liabilities | 2,110 | 2,352 |
| Shareholders' equity: | | |
| Ordinary shares | 74 | 74 |
| Additional paid-in capital | 141,016 | 140,274 |
| Accumulated deficit | (76,103) | (71,017) |
| Total shareholders' equity | 64,987 | 69,331 |
| Total liabilities and shareholders' equity | \$ 67,097 | \$ 71,683 |

Alcobra Ltd.
Consolidated Cash Flow Data
(In thousands)

| | Three Months Ended | |
|---|--------------------|-----------------|
| | March 31, | |
| | 2016 | 2015 |
| | (Unaudited) | (Unaudited) |
| <u>Cash flow from operating activities:</u> | | |
| Net loss | \$ (5,086) | \$ (5,177) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation | 15 | 10 |
| Stock based compensation | 736 | 783 |
| Change in operating assets and liabilities: | | |
| Prepaid expenses and other receivables | 187 | 180 |
| Other long-term assets | (47) | (12) |
| Trade payables | 54 | (250) |
| Accrued expenses and other liabilities | (296) | (129) |
| Net cash used in operating activities | <u>(4,437)</u> | <u>(4,595)</u> |
| <u>Cash flow from investing activities:</u> | | |
| Purchase of property and equipment, net | (23) | (12) |
| Investment in marketable securities | (3,739) | - |
| Proceeds from (investment in) bank deposits, net | 5,022 | (18,000) |
| Net cash provided (used in) by investing activities | <u>1,260</u> | <u>(18,012)</u> |
| <u>Cash flow from financing activities:</u> | | |
| Issuance of share capital upon public offering, net | - | 27,903 |
| Exercise of options | 6 | - |
| Net cash provided by financing activities | <u>6</u> | <u>27,903</u> |
| Increase (decrease) in cash and cash equivalents | (3,171) | 5,296 |
| Cash and cash equivalents at the beginning of the period | <u>16,658</u> | <u>2,176</u> |
| Cash and cash equivalents at the end of the period | <u>\$ 13,487</u> | <u>\$ 7,472</u> |

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