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: November 2013 (Report number 2)

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

Amot Investment Building
2 Weizman St. 9th Floor
Tel Aviv 6423902 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 x 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):_____

Indicate by check mark, whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes ☐ No ☒

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): ___

Attached hereto and incorporated by reference herein is the registrant's press release issued on November 22, 2013.

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: November 25, 2013

Alcobra Ltd. Announces New Findings on Diminished Abuse Potential of its Proprietary Drug Candidate, MG01CI

Pre-clinical data show that MG01CI displays lower reinforcing properties than methylphenidate and similar reinforcing properties to a saline control

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Tel Aviv, Israel – (November 22, 2013) – Alcobra Ltd. (NASDAQ CM: ADHD) (the "Company"), an emerging biopharmaceutical company primarily focused on the development and commercialization of its proprietary drug candidate, MG01CI (Metadoxine extended-release), to treat cognitive dysfunctions, such as ADHD and Fragile X Syndrome, announced today the results from a preclinical abuse liability study that evaluated the potential reinforcing effects of Metadoxine (i.e. its ability to produce psychological dependence or craving) using a well-established self-administration procedure in methylphenidate-trained rats. Data from this study affirm that Metadoxine has substantially less potential to be a recreationally abused drug than methylphenidate, a common stimulant ADHD medication.

"These data further confirm our mechanistic findings of MG01CI, which appears to be working via a non-dopaminergic mechanism in treating cognitive dysfunctions," commented Dr. Yaron Daniely, President and Chief Executive Officer of Alcobra Ltd. "MG01CI is poised to provide an answer to a dire concern of regulatory agencies and the public by potentially being a non-scheduled, non-addictive, yet still rapidly effective ADHD medication."

The likelihood of Metadoxine to serve as a positive reinforcer was assessed in a well-characterized preclinical model utilizing rats previously trained to intravenously self-administer methylphenidate by pressing an active lever. The self-administration model is a common and mandatory technique to compare the positive reinforcing effects of novel CNS-active drugs to those of known substances of abuse. Data from this model play a critical role in abuse liability testing and determination because they provide a surrogate for the motivational or drug-seeking properties of novel drugs in humans. Methylphenidate, which was used as a positive reinforcer in this experiment, is a well-established stimulant with powerful reinforcing properties that presents a risk for recreational abuse in humans.

The study showed that methylphenidate was associated with robust self-administration while Metadoxine, when tested across a range of pharmacologically active doses, did not maintain levels of self-administration greater than the non-reinforcer saline control. Importantly, all doses of Metadoxine tested were self-administered at levels statistically lower than those for methylphenidate, and comparable to those of the negative saline control, indicating that Metadoxine does not serve as a positive reinforcer in methylphenidate-trained rats. This finding suggests that Metadoxine may lack abuse potential in humans.

About Alcobra Ltd.

Alcobra Ltd. is an emerging biopharmaceutical company primarily focused on the development and commercialization of a proprietary drug candidate, MG01CI, to treat cognitive dysfunctions including Attention Deficit Hyperactivity Disorder (ADHD) and Fragile X Syndrome. MG01CI has completed Phase II studies to treat Attention Deficit Hyperactivity Disorder. The company was founded in 2008 and is headquartered in Tel Aviv, Israel. 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 may contain 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 that imply that MG01CI may be helpful to treat cognitive dysfunctions such as ADHD and Fragile X or that our drug candidate would be marketed as a non-scheduled, non-addictive and rapidly effective ADHD medication. In addition, historic results of scientific research and clinical and preclinical trials do not guarantee that the conclusions of future research or trials would not suggest different conclusions or that historic results referred to in this press release would be interpreted differently in light of additional research and clinical and preclinical trials results. 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 registration statement on Form F-1/A filed with the Securities and Exchange Commission ("SEC") on October 22, 2013 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 hereof, whether as a result of new information, future events or circumstances or otherwise.

Contact:
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