

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR 12(g) OF THE
SECURITIES EXCHANGE ACT OF 1934

ALCOBRA LTD.

(Exact name of registrant as specified in its charter)

State of Israel

(State of incorporation or organization)

Not Applicable

(I.R.S. Employer Identification No.)

**35 Ehad Ha-Am Street
4th Floor
Tel-Aviv, Israel**

(Address of principal executive offices)

65202

(Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class
to be so registered

Name of each exchange on which
each class is to be registered

Ordinary shares, par value NIS 0.01 per share

The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this form relates: **333-186003** (If applicable)

Securities to be registered pursuant to Section 12(g) of the Act: **None**

Item 1. Description of Registrant's Securities to be Registered.

The description of the ordinary shares of the Registrant set forth under the caption "Description of Share Capital" in the prospectus forming a part of the Registrant's Registration Statement on Form F-1 (File No. 333-186003) filed with the U.S. Securities and Exchange Commission (the "Commission") on January 14, 2013, as amended (the "Registration Statement"), shall be deemed to be incorporated by reference herein. In addition, any description of such securities contained in a form of prospectus relating to the Registration Statement subsequently filed by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, shall be deemed to be incorporated by reference herein.

Item 2. Exhibits.

Because no other securities of the Registrant are registered on The NASDAQ Capital Market, and the securities being registered by this Registration Statement on Form 8-A are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended, no exhibits are required to be filed with this Registration Statement on Form 8-A.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: May 17, 2013

ALCOBRA LTD.

By: /s/ Dr. Yaron Daniely
Dr. Yaron Daniely
Chief Executive Officer and President
