UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

ALCOBRA LTD.

(Exact name of registrant as specified in its charter)

State of Israel

(State or other jurisdiction of incorporation or organization)

Not applicable

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

Amot Investment Building, 2 Weizman St. 9th Floor, Tel Aviv 6423902 Israel

(Address of Principal Executive Offices)

Alcobra Ltd. 2010 Incentive Option Plan

(Full title of the plan)

Alcobra Inc.

600 West Germantown Pike, Suite 400, Plymouth Meeting, PA, 19462 Tel: (610)-940-1631

(Name, Address and Telephone Number of Agent For Service)

COPIES TO:

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CALCULATION OF REGISTRATION FEE

		Pro	oposed maximum		Proposed maximum		
	Amount to be	of	ffering price per	ag	gregate offering		Amount of
Title of Securities to be Registered	registered (2)		share		price	ľ	registration fee
Ordinary Shares (1)	4,978	\$	0.0005(3)	\$	2.44	\$	0.01
Ordinary Shares (1)	340,460	\$	0.33(3)	\$	112,351.80	\$	14.48
Ordinary Shares (1)	8,805	\$	2.18(3)	\$	19,194.90	\$	2.48
Ordinary Shares (1)	257,925	\$	8.00(3)	\$	2,063,400	\$	265.77
Ordinary Shares (1)	24,000	\$	12.99(3)	\$	311,760	\$	40.16
Ordinary Shares (1)	55,640	\$	14.61(3)	\$	812,900.40	\$	104.71
Ordinary Shares (1)	127,275	\$	17.59(3)	\$	2,238,767.25	\$	288.36
Ordinary Shares (1)	150,000	\$	20.84(3)	\$	3,126,000	\$	402.63
Ordinary Shares (1)	5,000	\$	23.00(3)	\$	115,000	\$	14.82
Ordinary Shares (1)	150,000	\$	23.85(3)	\$	3,577,500	\$	460.79
Ordinary Shares (1)	240,450	\$	19.05(4)	\$	4,580,572.5	\$	590.00
Total	1,364,533		N/a	\$	16,957,449.29	\$	2,184.20

- (1) Par value NIS 0.01 per share.
- Pursuant to Rule 416(a) under the Securities Act of 1933, as amended, or the Securities Act, this Registration Statement also covers an indeterminate number of additional securities which may be offered and issued to prevent dilution resulting from stock splits, stock dividends, recapitalizations or similar transactions.
- (3) Computed in accordance with Rule 457(h) promulgated under the Securities Act based on the exercise price of the options underlying the ordinary shares.
- (4) The fee is based on the number of Ordinary Shares which may be issued under the plan this registration statement relates to and is estimated in accordance with paragraphs (c) and (h) of Rule 457 under the Securities Act solely for the purpose of calculating the registration fee based upon the average of the high and low sales price of an Ordinary Share as reported on the Nasdaq Capital Market on March 26, 2014.

EXPLANATORY NOTE

This registration statement relates to 1,364,533 Ordinary Shares to be issued in the future upon the exercise of options that have been, or may be, granted under the Registrant's 2010 Incentive Option Plan.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information required in Part I of this Registration Statement have been or will be sent or given to participating employees as specified in Rule 428(b)(1) under the Securities Act, in accordance with the rules and regulations of the United States Securities and Exchange Commission or the Commission. Such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 of the Securities Act. These documents and the documents incorporated by reference into this Registration Statement pursuant to Item 3 of Part II of this Registration Statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following additional documents, which have been filed by the Registrant with the Commission are incorporated by reference in and made a part of this registration statement, as of their respective dates:

- (a) The Registrant's Annual Report on Form 20-F for the fiscal year ended December 31, 2013, filed with the Commission on March 28, 2014;
- (b) The notice of annual general meeting of the Registrant incorporated by reference into the Registrant's report of foreign private issuer on Form 6-K furnished to the Commission on January 10, 2014;
- (c) The Registrant's report of foreign private issuer on Form 6-K furnished to the Commission on February 18, 2014; and
- (d) The description of the Registrant's Ordinary Shares, par value NIS 0.01 per share contained in the Registrant's registration statement on Form 8-A filed pursuant to the Securities the Exchange Act of 1934, as amended, or the Exchange Act, on May 17, 2013 (File No. 001-35932).

In addition to the foregoing, all documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, and all reports on Form 6-K subsequently filed by the Registrant which state that they are incorporated by reference herein, prior to the filing of a post-effective amendment which indicates that all securities offered hereunder have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of filing of such documents and reports.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement herein, or in any subsequently filed document which also is or is deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not Applicable.

Item 5. Interests of Named Experts and Counsel.

Not Applicable.

Item 6. Indemnification of Directors and Officers.

Under the Israeli Companies Law, or the Companies Law, a company may indemnify, or undertake in advance to indemnify, an office holder (defined as a director, chief executive officer, deputy chief executive officer or other officer reporting to the chief executive officer of the company) for the following liabilities and expenses, imposed on an office holder or incurred by an office holder due to acts performed by him or her as an office holder, provided its articles of association include a provision authorizing such indemnification:

- financial liability incurred by or imposed on him or her in favor of another person pursuant to a judgment, including a settlement or arbitrator's award approved by a court. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such an undertaking must be limited to events which, in the opinion of the board of directors, can be foreseen based on the company's activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances, and such undertaking shall detail the abovementioned foreseen events and amount or criteria;
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder as a result of an investigation or proceeding instituted against him or her by an authority authorized to conduct such investigation or proceeding, provided that (i) no indictment was filed against such office holder as a result of such investigation or proceeding; and (ii) no financial liability was imposed upon him or her as a substitute for the criminal proceeding as a result of such investigation or proceeding or, if such financial liability was imposed, it was imposed with respect to an offense that does not require proof of criminal intent or as a monetary sanction; and
- · reasonable litigation expenses, including attorneys' fees, incurred by the office holder or imposed by a court in proceedings instituted against him or her by the company, on its behalf, or by a third party, or in connection with criminal proceedings in which the office holder was acquitted, or as a result of a conviction for an offense that does not require proof of criminal intent.

Under the Companies Law, a company may insure an office holder against the following liabilities incurred for acts performed by him or her as an office holder if and to the extent provided in the company's articles of association:

- · a breach of the duty of loyalty to the company, provided that the office holder acted in good faith and had a reasonable basis to believe that the act would not harm the company;
- · a breach of duty of care to the company or to a third party; and
- · a financial liability imposed on the office holder in favor of a third party.

Nevertheless, under the Companies Law, a company may not indemnify, exculpate or insure an office holder against any of the following:

- a breach of fiduciary duty, except for indemnification and insurance for a breach of the duty of loyalty to the company in the event office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;
- · a breach of duty of care committed intentionally or recklessly, excluding a breach arising out of the negligent conduct of the office holder;
- · an act or omission committed with intent to derive unlawful personal benefit; or
- · a fine, monetary sanction, penalty or forfeit levied against the office holder.

Under the Companies Law, exculpation, indemnification and insurance of office holders require the approval of the compensation committee, board of directors and, in certain circumstances, the shareholders.

The Registrant's amended and restated articles of association permit the Registrant to exculpate, indemnify and insure its office holders to the fullest extent permitted by the Companies Law.

The Registrant has obtained directors' and officers' liability insurance for the benefit of its office holders and intends to continue to maintain such coverage and pay all premiums thereunder to the fullest extent permitted by the Companies Law. In addition, the Registrant has entered into agreements with each of its office holders undertaking to indemnify them to the fullest extent permitted by Israeli law, including with respect to liabilities resulting from this offering to the extent that these liabilities are not covered by insurance.

Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8. Exhibits.

- 4.1(1) Articles of Association of the Registrant
- 5.1 Opinion of Zysman, Aharoni, Gayer & Co.
- 23.1 Consent of Kost Forer Gabbay & Kasierer, Certified Public Accountants (Israel) (a Member of Ernst & Young Global)

- 23.2 Consent of Zysman, Aharoni, Gayer & Co. (included in the opinion filed as Exhibit 5.1 to this Registration Statement)
- 24.1 Power of Attorney (included on signature page)
- 99.1(2) Alcobra Ltd. 2010 Incentive Option Plan
 - (1) Previously filed as Exhibit 3.2 to Form F-1/A filed on March 19, 2013 (File No. 333-186003), and incorporated herein by reference.
 - (2) Previously filed as Exhibit 10.3 to Form F-1 filed on January 14, 2013 (File No. 333-186003), and incorporated herein by reference.

Item 9. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, *however*, that subparagraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in the periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in this registration statement.

- That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (b) The undersigned Registrant hereby further undertakes that, for the purposes of determining any liability under the Securities Act of 1933, each filing of the Company's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Tel-Aviv, State of Israel, on March 28, 2014.

ALCOBRA LTD.

By: /s/ Dr. Yaron Daniely

Name: Dr. Yaron Daniely

Title: Chief Executive Officer and President

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Alcobra Ltd., hereby severally constitute and appoint Yaron Daniely and Ehud (Udi) Gilboa, and each of them individually, our true and lawful attorney to sign for us and in our names in the capacities indicated below any and all amendments or supplements, including any post-effective amendments, to this registration statement on Form S-8 and to file the same, with exhibits thereto and other documents in connection therewith, with the Commission, granting unto said attorney full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming our signatures to said amendments to this registration statement signed by our said attorney and all else that said attorney may lawfully do and cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement on Form S-8 has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Yaron Daniely Yaron Daniely	Chief Executive Officer, President and Director (principal executive officer)	March 28, 2014
/s/ Ehud (Udi) Gilboa		
Ehud (Udi) Gilboa	Chief Financial Officer and Director (principal financial officer and principal accounting officer)	March 28, 2014
/s/ Howard B. Rosen		
Howard B. Rosen	Chairman of the Board	March 28, 2014
/s/ Daniel E. Geffken		
Daniel E. Geffken	Director	March 28, 2014
Hadas Gelander	Director	
/s/ Dalia Megiddo		
Dalia Megiddo	Director	March 28, 2014
Ori Mor	 Director	
(// Alleres Cale and		
/s/ Aharon Schwarts Aharon Schwarts	 Director	March 28, 2014
Maion Schwarts	Director	17td 25, 251
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SIGNATURE OF AUTHORIZED REPRESENTATIVE IN THE UNITED STATES

Pursuant to the Securities Act of 1933, as amended, the undersigned, Alcobra Inc., the duly authorized representative in the United States of Alcobra Ltd., has signed this registration statement on March 28, 2014.

ALCOBRA INC.

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

Title: Chief Executive Officer and President

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Alcobra Ltd. Amot Investment Building, 2 Weizman St. 9th Floor, Tel Aviv 6423902 Israel

Re: REGISTRATION STATEMENT ON FORM S-8

Ladies and Gentlemen:

We are acting as Israeli counsel for Alcobra Ltd., an Israeli company (the "Company"), in connection with the preparation of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), pertaining to the registration of an additional 1,364,533 Ordinary Shares nominal value NIS 0.01 per share of the Company (the "Plan Shares") under the Alcobra Ltd. 2010 Incentive Option Plan (the "Plan").

In rendering our opinion, we have examined, and have relied as to factual matters solely upon, originals or copies certified, or otherwise identified to our satisfaction, of such documents, corporate records or other instruments as we have deemed necessary or appropriate for the purposes of this opinion. In our examination we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity with the originals of all documents submitted to us as copies. We have, when relevant facts material to our opinion were not independently established by us, relied to the extent we deemed such reliance proper upon written or oral statements of officers and other representatives of the Company.

In giving the opinion expressed herein, no opinion is expressed as to the laws of any jurisdiction other than the State of Israel.

Based upon and subject to the foregoing, we are of the opinion that the Plan Shares, when issued pursuant to the terms of the Plan, and the terms of any agreements relating to such issuance, will be upon receipt of the consideration provided for in the Plan, validly issued, fully paid and nonassessable.

This opinion is intended solely for the benefit and use of the Company and other persons who are entitled to rely on the Registration Statement, and is not to be used, released, quoted, or relied upon by anyone else for any purpose (other than as required by law), without our prior written consent.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement, and to the use of our name wherever appearing in the Registration Statement in connection with Israeli law. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

/S/ ZYSMAN AHARONI GAYER & CO., LAW OFFICES

Zysman, Aharoni, Gayer & Co., Law Offices

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference, in the Registration Statement (Form S-8) pertaining to the Alcobra Ltd. 2010 Incentive Option Plan of our reports dated March 27, 2014 with respect to the consolidated financial statements of Alcobra Ltd. And its subsidiary included in the Annual Report on Form 20-F of Alcobra Ltd. for the year ended December 31, 2013 filed with the Securities and Exchange Commission.

Tel-Aviv, Israel March 27, 2014

A member firm of Ernst & Young Global Limited

/s/ Kost Forer Gabbay & Kasierer Kost Forer Gabbay & Kasierer A member of EY Global