**As filed with the Securities and Exchange Commission on January 11, 2011**

**Registration No. 333-**

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION

**WASHINGTON, D.C. 20549**

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# FORM F-3

**REGISTRATION STATEMENT**
**UNDER THE SECURITIES ACT OF 1933**

# Compugen Ltd.

(Exact name of registrant as specified in its charter)

| **Israel** | **Not Applicable** |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |

**72 Pinchas Rosen Street**
**Tel Aviv, 69512 Israel**
**972-3-765-8585**

(Address and telephone number of registrant's principal executive offices)

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**Dikla Czaczkes Axselbrad**
**Chief Financial Officer**
**Compugen Ltd.**
**72 Pinchas Rosen Street**
**Tel Aviv, 69512 Israel**
**Phone: +972-3-765-8585**
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(Name, address, and telephone number of agent for service)

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**Copies to:**

| | |
|---|---|
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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ☐

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a registration statement pursuant to General Instruction I.C. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462 (e) under the Securities Act, check the following box. ☐

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.C. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

**CALCULATION OF REGISTRATION FEE**

| Title of each class of securities to be registered | Proposed maximum aggregate offering price (1) | Amount of registration fee (2) |
|---|---|---|
| Ordinary shares, par value NIS 0.01 per share (3) | | |
| Rights (4) | | |
| Warrants (5) | | |
| Units (6) | | |
| Total | $ 40,000,000 | $ 4,644 |

(1) Pursuant to General Instruction II.C of Form F-3, the amount to be registered, proposed maximum offering price per security, proposed maximum aggregate offering price and amount of registration fee have been omitted for each class registered hereby. The proposed maximum offering price per security will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder.

(2) The registration fee has been calculated pursuant to Rule 457(o) under the Securities Act of 1933, as amended, on the basis of the maximum aggregate offering price of the securities listed.

(3) This Registration Statement registers an indeterminate number of ordinary shares that the registrant may sell from time to time. Ordinary shares may be issued separately or upon the exercise of rights, warrants or units to purchase ordinary shares that are registered hereby.

(4) This Registration Statement registers an indeterminate number of rights, representing rights to purchase ordinary shares or warrants that are registered hereby, which the registrant may sell from time to time.

(5) This Registration Statement registers an indeterminate number of warrants, representing rights to purchase ordinary shares that are registered hereby, which the registrant may sell from time to time.

(6) This Registration Statement registers an indeterminate number of units, representing rights to purchase ordinary shares, rights or warrants that are registered hereby, which the registrant may sell from time to time.

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.**

**The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell securities and it is not soliciting an offer to buy securities in any state where the offer or sale is not permitted.**

**Subject to Completion, Dated January 11, 2011**

**Prospectus**


**$40,000,000**
**Ordinary Shares**
**Rights**
**Warrants**
**Units**

We may offer and sell from time to time in one or more offerings our ordinary shares rights, warrants and units having an aggregate offering price up to $40,000,000.

Each time we sell securities pursuant to this prospectus, we will provide in a supplement to this prospectus the price and any other material terms of any such offering and the securities offered. Any prospectus supplement may also add, update or change information contained in the prospectus. You should read this prospectus and any applicable prospectus supplement, as well as the documents incorporated by reference or deemed incorporated by reference into this prospectus, carefully before you invest in any securities. **This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement**.

Our ordinary shares are traded on the Nasdaq Capital Market and on the Tel Aviv Stock Exchange under the symbol "CGEN". The closing sale price of our ordinary shares on the Nasdaq Capital Market and on the Tel Aviv Stock Exchange on January 5, 2010, was $5.05 and $4.99 per share respectively. The currency in which our stock is traded on the Tel Aviv Stock Exchange is the New Israeli Shekel. The dollar amounts represent a conversion from New Israeli Shekels to dollar amounts in accordance with the dollar - New Israeli Shekel conversion rate as of the date of trade.

**Investing in our securities involves a high degree of risk. Risks associated with an investment in our securities will be described in the applicable prospectus supplement and are and will be described in certain of our filings with the Securities and Exchange Commission, as described in "Risk Factors" on page 3.**

The securities may be sold directly by us to investors including corporate partners in various programs of the Company, through agents designated from time to time or to or through underwriters or dealers, or through a combination of such methods. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution." If any underwriters are involved in the sale of our securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable commissions or discounts will be set forth in a prospectus supplement. The net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

The date of this prospectus is _____, 2011

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## ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the Commission, utilizing a "shelf" registration process. Under this shelf registration process, we may offer from time to time up to $40,000,000 in the aggregate of our ordinary shares, rights, warrants or units, or combinations thereof, in one or more offerings. We will refer to our ordinary shares, rights, warrants and units collectively as the "securities" throughout this prospectus.

Each time we sell securities, we will provide you with a prospectus supplement that will describe the securities, the specific amounts, prices and terms of such offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read carefully both this prospectus and any prospectus supplement together with additional information described below under "Where You Can Find More Information and Incorporation by Reference."

This prospectus does not contain all of the information provided in the registration statement that we filed with the Commission. For further information about us or our securities, you should refer to that registration statement, which you can obtain from the Commission as described below under "Where You Can Find More Information and Incorporation by Reference."

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus and the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information that we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since those dates.

## ABOUT COMPUGEN LTD.

Compugen is a drug and diagnostic discovery company that relies on an extensive infrastructure of computer-based (*"in silico"*) discovery capabilities to systematically predict and select novel product candidates in areas of high industry interest and unmet medical need. Following this *in silico* prediction and selection, the resulting novel molecules are synthesized and then validated utilizing traditional *in vitro* and *in vivo* experimental procedures. Our business model is to provide an increasing number of these validated product candidates to pharmaceutical, biotech and diagnostic companies under licensing and other commercialization arrangements whereby we are entitled to receive advance fees or research revenues, milestone payments and revenue-sharing amounts from the development and commercialization by such companies of products based on such candidate molecules.

From 1997 through 2005, most of our R&D efforts were directed towards establishing the required infrastructure of proprietary scientific understandings and predictive platforms, algorithms, machine learning systems and other computational biology tools to enable accurate and broadly applicable *in silico* drug and diagnostic candidate prediction and selection. Beginning in 2005, an increasing portion of our R&D activities was committed to utilizing these capabilities for product candidate discovery, while continuing to expand and enhance our *in silico* discovery infrastructure, which remains an on-going primary objective. During 2006, increasing efforts, mainly in the form of *in vitro* and *in vivo* studies, were undertaken in order to validate selected product candidates resulting from either our on-going infrastructure building activities or our initial use of the resulting discovery capabilities. In addition, we entered into various collaborations for some of these initial product candidates.

More recently, with the successful validation of an increasing number of our *in silico* predicted product candidates in well-established animal disease model and other experimental validation approaches, we began to focus our discovery efforts on unmet needs, primarily in the fields of immunology and oncology, and also initiated a program ( the "Pipeline Program") to both substantially increase the number of molecules in our validation pipeline and to increase the value of certain of our candidates by advancing selected molecules 12-18 months beyond proof of concept experimental validation. With respect to increasing the number of product candidates, during 2010, approximately 20 additional novel molecules entered our validation pipeline. With respect to advancing selected molecules, we anticipate that the candidates selected for these preclinical activities will continue to be primarily protein, peptide and monoclonal antibody therapeutics in the fields of immunology and oncology. To date, among the product candidates included in Pipeline Program are the following molecules, which are currently at various stages from *in silico* selection to post animal model validation:

- CGEN-471 - Drug target for monoclonal antibody based therapy for oncology
- CGEN-928 - Drug target for monoclonal antibody based therapy for multiple myeloma
- CGEN-1017 - Drug target for monoclonal antibody based therapy for oncology
- CGEN-1033 - Drug target for monoclonal antibody based therapy for oncology
- CGEN-15001 - Protein therapeutic for rheumatoid arthritis, multiple sclerosis and other autoimmune diseases
- CGEN-15001T - Drug target for monoclonal antibody based therapy for oncology
- CGEN-15011 - Protein therapeutic for autoimmune diseases
- CGEN-15011T - Drug target for monoclonal antibody based therapy for oncology
- CGEN-15021 - Protein therapeutic for autoimmune diseases
- CGEN-25007- Peptide therapeutic for autoimmune diseases
- CGEN-25017 - Peptide therapeutic for oncology, inflammatory and ocular diseases
- CGEN- 25028 - Peptide therapeutic for oncology
- CGEN- 25048 - Peptide therapeutic for oncology

**Research and Discovery Activities**: Our research and discovery activities consist of three primary and overlapping components. The first is our continuing effort to obtain deeper predictive understandings of important biological phenomena at the molecular level through the analysis and integration of biological data of various types such as DNA, RNA, protein and peptide sequences, gene expression data, protein network data, and drug-related data. The second utilizes these scientific understandings, in order to continuously expand and enhance our underlying discovery infrastructure through the development of predictive platforms, algorithms, machine learning systems and other computational biology tools. The third component is the utilization of this infrastructure, for ourselves and our partners, for the *in silico* prediction and selection of multiple novel molecules of interest as potential drugs, drug targets or diagnostics, followed by experimental *in vitro* and *in vivo* validation.

**Therapeutic and Diagnostic Product Candidates**: In utilizing our discovery infrastructure, we independently, or with a partner company, seek to predict, select and validate novel candidates that answer unmet medical needs and that may be suitable for further development as therapeutic or diagnostic products. Our discovery infrastructure is broadly applicable to numerous applications and fields in both diagnostics and therapeutics, with our current focus being therapeutics, and within therapeutics, the fields of oncology and immunology. Our therapeutic candidates are biologics and include peptide therapeutics, protein therapeutics and drug targets for monoclonal antibody therapy. Among these are novel peptides which modulate known clinically relevant targets and/or pathways, novel proteins which belong to clinically important protein families and/or pathways, and drug targets which reside on the cell surfaces of tissues involved with particular diseases, such as cancer. Although not a current focus for discovery by the Company, our novel diagnostic candidates include protein and nucleic based biomarkers which can indicate the presence or absence of a condition, such as a disease, or a person's predisposition to either acquire a disease or to respond to a therapeutic treatment.

**Business Model**: Our business model relies on providing an increasing number of attractive drug and diagnostic product candidates to leading pharmaceutical, biotechnology, and diagnostic companies under various forms of collaborations. Underlying this business model is the continuing enhancement and expansion of our unique and broadly applicable *in silico* predictive discovery infrastructure. In all cases, our objective is that these collaborations be "product oriented", with us having the right to receive advance payments or research revenues, milestone payments and revenue-sharing amounts from all products developed and commercialized by third parties based on our product candidates. Furthermore, these collaborations can be based not only on product candidates previously discovered by us, but also on product candidate "discovery on demand" in areas of interest to our partner, or combinations of the two. We have entered into several such "discovery on demand" agreements, but we have not yet recognized significant revenues from these initial agreements.

During 2010 we began planning and initiating our Pipeline Program to both substantially increase the number of product candidates in our validation pipeline, and to advance selected molecules beyond the animal disease model proof of concept. During the year approximately 20 additional molecules were added to our validation pipeline, and with respect to advancing certain molecules past the animal disease model proof of concept, we have selected the first set of such molecules; additional candidates will be selected from our validation pipeline and future discovery runs.

Our principal executive offices are located at 72 Pinchas Rosen Street, Tel Aviv, Israel 69512. Our telephone number is +972-3-765-8585 and our website address is www.cgen.com. The information on our website is not incorporated by reference into this prospectus and should not be relied upon with respect to this offering.

## MATERIAL CHANGES

Since the filing of our most recent Annual Report on Form 20-F, we have entered into an agreement (the "Funding Agreement") dated December 29, 2010, with Baize Investments (Israel) Ltd. ("Baize"). Under the Funding Agreement, Baize has provided us with $5,000,000 in support of our Pipeline Program. In exchange, Baize received (i) with respect to five designated molecules that are currently in the Pipeline Program, the right to receive ten percent (which amount may be reduced under certain circumstances) (the "Participation Payments") of certain cash consideration (including both development and post-marketing fees) that may be received by Compugen in the future pursuant to any licenses covering the development and commercialization of products developed from these five designated molecules, provided that, in all cases, any such Participation Payments are to reduced by certain pass-through amounts; and (ii) warrants for 500,000 Compugen ordinary shares, exercisable at $6.00 per share through June 30, 2013. Currently, all five designated molecules are in active research in the Pipeline Program, with their current status ranging from *in silico* selection to post animal model validation. In addition, Baize has the right, until June 30, 2013, to waive its right to receive Participation Payments, in exchange for 833,334 Compugen ordinary shares.

If, prior to June 30, 2011, we receive commitments from third parties for an investment in us of an aggregate of at least $15,000,000, which investment includes financial participation rights in ten or more Compugen-discovered molecules (including at least three of the five designated in the Funding Agreement) (a "Subsequent Financing"), the Funding Agreement provides that Baize will be required to elect to either (i) exchange in total its rights to receive Participation Payments as described above for such consideration on the same terms and conditions as would be received by third parties for a $5,000,000 investment in such Subsequent Financing, or (ii) waive in total its rights to receive Participation Payments as described above and have the $5,000,000 investment amount refunded to it, or (iii) exercise its right, as described above, to waive its right to receive Participation Payments in exchange for 833,333 Compugen ordinary shares. The June 30, 2011 deadline for Compugen to receive the future commitments for a new investment may be extended by us on a month to month basis, but not past December 31, 2011, by issuing to Baize a warrant for 83,333 additional Compugen ordinary shares, on the same terms as the original warrant, for each such month of extension.

This transaction is also described in our report on Form 6-K filed with the Commission on December 30, 2010.

## RISK FACTORS

Before making an investment decision, you should carefully consider the risks described under "Risk Factors" in the applicable prospectus supplement and in our most recent Annual Report on Form 20-F, or any updates in our Reports on Form 6-K, together with all of the other information appearing in this prospectus or incorporated by reference into this prospectus and any applicable prospectus supplement, in light of your particular investment objectives and financial circumstances. The risks so described are not the only risks facing our company. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Our business, financial condition and results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment.

## NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains, and any accompanying prospectus supplement will contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the Private Securities Litigation Reform Act of 1995. Also, documents that we incorporate by reference into this prospectus, including documents that we subsequently file with the Commission, will contain forward-looking statements. Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements as statements containing the words "may," "will," "could," "should," "expect," "anticipate," "intend," "estimate," "believe," "project," "plan," "assume" or other similar expressions, or negatives of those expressions, although not all forward-looking statements contain these identifying words. All statements contained or incorporated by reference in this prospectus and any prospectus supplement regarding our future strategy, future operations, projected financial position, proposed products, estimated future revenues, projected costs, future prospects, the future of our industry and results that might be obtained by pursuing management's current plans and objectives are forward-looking statements.

You should not place undue reliance on our forward-looking statements because the matters they describe are subject to certain risks, uncertainties and assumptions that are difficult to predict. Our forward-looking statements are based on the information currently available to us and speak only as of the date on the cover of this prospectus, the date of any prospectus supplement, or, in the case of forward-looking statements incorporated by reference, the date of the filing that includes the statement. Over time, our actual results, performance or achievements may differ from those expressed or implied by our forward-looking statements, and such difference might be significant and materially adverse to our security holders. We undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

We have identified some of the important factors that could cause future events to differ from our current expectations and they are described in this prospectus and supplements to this prospectus under the caption "Risk Factors," as well as in our most recent Annual Report on Form 20-F, including without limitation under the captions "Risk Factors" and "Operating and Financial Review and Prospects," and in other documents that we may file with the Commission, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this prospectus and any prospectus supplement.

## OFFER STATISTICS AND EXPECTED TIMETABLE

We may sell from time to time pursuant to this prospectus (as may be detailed in prospectus supplements) an indeterminate number of securities as shall have a maximum aggregate offering price of $40,000,000. The actual per share price of the securities that we will offer pursuant hereto will depend on a number of factors that may be relevant as of the time of offer (see "Plan of Distribution" below).

**PRICE RANGE OF OUR SHARES**

The following table lists the high and low market prices for our ordinary shares, for the periods indicated, on Nasdaq. Our ordinary shares were listed on the Nasdaq Global Market through June 16, 2009. Since June 17, 2009, our ordinary shares have been listed on the Nasdaq Capital Market.

| **Calendar Period** | **Price Per Share** | |
|---|---|---|
| | **In US$** | |
| **Annual** | **High** | **Low** |
| 2006 | 5.22 | 2.10 |
| 2007 | 3.40 | 1.56 |
| 2008 | 2.80 | 0.34 |
| 2009 | 5.86 | 0.39 |
| 2010 | 5.32 | 3.04 |
| **Fiscal Quarters** | | |
| **2009** | | |
| First Quarter | 1.00 | 0.39 |
| Second Quarter | 2.25 | 0.63 |
| Third Quarter | 3.37 | 1.73 |
| Fourth Quarter | 5.86 | 2.30 |
| **2010** | | |
| First Quarter | 5.32 | 3.80 |
| Second Quarter | 5.30 | 3.26 |
| Third Quarter | 4.85 | 3.04 |
| Fourth Quarter | 5.18 | 3.72 |
| **Most Recent Six Months** | | |
| July | 4.30 | 3.04 |
| August | 4.48 | 3.57 |
| September | 4.85 | 3.66 |
| October | 5.18 | 4.37 |
| November | 4.64 | 3.72 |
| December | 5.03 | 3.82 |

On January 5, 2011, the closing price of our ordinary shares on the Nasdaq Capital Market was $5.05.

The following table lists the high and low market prices for our ordinary shares, for the periods indicated, on the Tel-Aviv Stock Exchange:

| Calendar Period | Price Per Share In US$* | |
|---|---|---|
| **Annual** | **High** | **Low** |
| 2006 | 5.30 | 2.38 |
| 2007 | 3.53 | 1.64 |
| 2008 | 2.81 | 0.42 |
| 2009 | 6.06 | 0.42 |
| 2010 | 5.64 | 3.08 |
| **Fiscal Quarters** | | |
| **2009** | | |
| First Quarter | 0.79 | 0.42 |
| Second Quarter | 2.17 | 0.64 |
| Third Quarter | 3.19 | 1.67 |
| Fourth Quarter | 6.06 | 2.39 |
| **2010** | | |
| First Quarter | 5.64 | 3.81 |
| Second Quarter | 5.35 | 3.30 |
| Third Quarter | 4.87 | 3.08 |
| Fourth Quarter | 5.20 | 3.69 |
| **Most Recent Six Months** | | |
| July | 4.27 | 3.08 |
| August | 4.38 | 3.50 |
| September | 4.87 | 3.66 |
| October | 5.20 | 4.48 |
| November | 4.74 | 3.69 |
| December | 5.01 | 3.75 |

On January 5, 2011, the closing price of our ordinary shares on the Tel-Aviv Stock Exchange was *$4.99.

* The currency in which our stock is traded on the Tel Aviv Stock Exchange is the New Israeli Shekel. The above dollar amounts represent a conversion from New Israeli Shekels to dollar amounts in accordance with the dollar - New Israeli Shekel conversion rate as of the relevant date of trade.

## REASONS FOR THE OFFER AND USE OF PROCEEDS

Our management will have broad discretion over the use of the net proceeds from the sale of our securities pursuant to this prospectus. Unless otherwise indicated in any accompanying prospectus supplement, we currently intend to use the net proceeds from the sale of the securities offered pursuant to this prospectus for general corporate purposes and working capital requirements. Pending use of the proceeds, we intend to invest the proceeds in short-term money market funds with portfolios of investment grade corporate and government securities.

## DESCRIPTION OF ORDINARY SHARES

Our authorized share capital consists of 100,000,000 ordinary shares, par value NIS 0.01 per share. Holders of ordinary shares have one vote per share, and are entitled to participate equally in the payment of dividends and share distributions and, in the event of our liquidation, in the distribution of assets after satisfaction of liabilities to creditors. No preferred shares are currently authorized. All outstanding ordinary shares are validly issued and fully paid.

**Transfer of Shares**

Fully paid ordinary shares are issued in registered form and may be freely transferred under our Articles of Association unless the transfer is restricted or prohibited by another instrument.

**Voting Rights**

Our ordinary shares do not have cumulative voting rights in the election of directors. As a result, the holders of ordinary shares that represent more than 50% of the voting power represented at a shareholders meeting have the power to elect all of our directors, except the external directors whose election requires a special majority.

Holders of ordinary shares have one vote for each ordinary share held on all matters submitted to a vote of shareholders. Shareholders may vote in person or by proxy. These voting rights may be affected by the grant of any special voting rights to the holders of a class of shares with preferential rights that may be authorized in the future.

Under the Israeli Companies Law, or the Companies Law, unless otherwise provided in the Articles of Association or by applicable law, all resolutions of the shareholders require a simple majority and all shareholders' meetings require prior notice of at least 21 days. Our Articles of Association provide that, except with respect to matters which require the approval of a special majority under the Companies Law, all decisions may be made by a simple majority of the voting power represented at the meeting, in person, by proxy or by proxy card, and voting thereon.

**Annual and Special General Meetings**

We must hold our annual general meeting of shareholders each year no later than 15 months from the last annual meeting, at a time and place determined by the board of directors, upon at least 21 days' prior notice to our shareholders. The board of directors may, whenever it thinks fit, convene a special meeting as may be determined by the board of directors. The board of directors shall be obligated to convene a special meeting, as may be determined by the board of directors, upon requisition in writing in accordance with the Companies Law. Not less than 21 days' prior notice, or 35 days' prior notice to the extent required under regulations promulgated under the Companies Law, shall be given of every general meeting. Each such notice shall specify the place and the time of the meeting and the general nature of each item to be acted upon thereat, as well as any other information required by the Companies Law or any regulation promulgated thereunder, said notice to be given to all shareholders who will be entitled to attend and vote at such meeting and delivered or publicized in any manner permitted under the Companies Law.

The quorum required for a meeting of shareholders consists of at least two shareholders present in person or by proxy who hold or represent between them at least 33.3% of the issued share capital. A meeting adjourned for lack of a quorum generally is adjourned to the same day in the following week at the same time and place or any time and place as the directors designate in a notice to the shareholders. At the reconvened meeting, the required quorum consists of any two members present in person or by proxy.

**Limitations on the Rights to Own Securities**

The ownership or voting of ordinary shares by non-residents of Israel is not restricted in any way by our Articles of Association or the laws of the State of Israel, except that nationals of countries which are, or have been, in a state of war with the State of Israel, may not be recognized as owners of our shares.

**Approval of Certain Transactions**

The Companies Law codifies the fiduciary duties that office holders, including directors and executive officers, owe to a company. An office holder, as defined in the Companies Law, is a director, general manager, chief business manager, deputy general manager, vice general manager, executive vice president, vice president, other manager directly subordinate to the managing director or any other person assuming the responsibilities of any of the foregoing positions without regard to such person's title. An office holder's fiduciary duties consist of a duty of care and a duty of loyalty. The duty of loyalty includes avoiding any conflict of interest between the office holder's position in the company and his personal affairs, avoiding any competition with the company, avoiding exploitation of any business opportunity of the company in order to reap personal gain for himself or others, and revealing to the company any information or documents relating to the company's affairs which the office holder has received due to his position as an office holder. Under the Companies Law, all arrangements as to compensation of office holders who are not directors require approval of the board of directors, or a committee thereof or of persons to whom such power is delegated. Arrangements regarding the compensation of directors also require audit committee and shareholder approval, with the exception of compensation to external directors in the amounts specified in the regulations promulgated under the Companies Law.

The Companies Law requires that an office holder promptly disclose any personal interest that he or she may have and all related material information known to him or her, in connection with any existing or proposed transaction by the company. The disclosure must be made to our board of directors or shareholders prior to the meeting at which the transaction is to be discussed. In addition, if the transaction is an extraordinary transaction, as defined under the Companies Law, the office holder must also disclose any personal interest held by the office holder's spouse, siblings, parents, grandparents, descendants, spouse's descendants and the spouses of any of the foregoing, or by any corporation in which the office holder is a five percent (5%) or greater shareholder, or holder of five percent (5%) or more of the voting power, director or general manager or in which he or she has the right to appoint at least one director or the general manager. An extraordinary transaction is defined as a transaction not in the ordinary course of business, not on market terms, or that is likely to have a material impact on the company's profitability, assets or liabilities.

In the case of a transaction which is not an extraordinary transaction, after the office holder complies with the above disclosure requirement, only board of directors' approval is required unless the Articles of Association of the company provide otherwise. A transaction must not be adverse to the company's interest. If the transaction is an extraordinary transaction, then, in addition to any approval required by the Articles of Association, the transaction must also be approved by the audit committee and by the board of directors, and under specified circumstances, by a meeting of the shareholders. An office holder who has a personal interest in a matter that is considered at a meeting of the board of directors or the audit committee may not be present at this meeting or vote on this matter.

The Companies Law applies the same disclosure requirements to a controlling shareholder of a public company, which is defined as a shareholder who has the ability to direct the activities of a company, other than in circumstances where this power derives solely from the shareholder's position on the board of directors or any other position with the company, and includes a shareholder that holds 25% or more of the voting rights if no other shareholder owns more than 50% of the voting rights in the company. Extraordinary transactions with a controlling shareholder or in which a controlling shareholder has a personal interest, and the terms of compensation of a controlling shareholder who is an office holder, require the approval of the audit committee, the board of directors and the shareholders of the company.

The shareholders' approval must either include at least one-third of the disinterested shareholders who are present, in person or by proxy, at the meeting, or, alternatively, the total shareholdings of the disinterested shareholders who vote against the transaction must not represent more than one percent (1%) of the voting rights in the company.

In addition, a private placement of securities that will increase the relative holdings of a shareholder that holds five percent (5%) or more of the company's outstanding share capital, assuming the exercise by such person of all of the convertible securities into shares held by that person, or that will cause any person to become a holder of more than five percent (5%) of the company's outstanding share capital, requires approval by the board of directors and the shareholders of the company. However, subject to certain exceptions, shareholder approval will not be required if the aggregate number of shares issued pursuant to such private placement, assuming the exercise of all of the convertible securities into shares being sold in such a private placement, comprises less than twenty percent (20%) of the voting rights in a company prior to the consummation of the private placement.

Under the Companies Law, a shareholder has a duty to act in good faith towards the company and other shareholders and refrain from abusing his power in the company. Shareholders' voting powers includes their power to vote in the general meetings of shareholders on the following matters:

- any amendment to the Articles of Association;
- an increase of the company's authorized share capital;
- a merger; and
- approval of interested party transactions.

In addition, any controlling shareholder, any shareholder who knows it can determine the outcome of a shareholders vote and any shareholder who, under our Articles of Association, can appoint or prevent the appointment of an office holder, is under a duty to act with fairness towards the company. The Companies Law does not describe the substance of this duty. The Companies Law requires that specified types of transactions, actions and arrangements be approved as provided for in a company's articles of association and in some circumstances by the audit committee, by the board of directors and by the shareholders. In general, the vote required by the audit committee and the board of directors for approval of these matters, in each case, is a majority of the disinterested directors participating in a duly convened meeting.

**Dividend and Liquidation Rights**

We may declare a dividend to be paid to the shareholders of our ordinary shares according to their rights and interests in our profits. In the event of our liquidation, after satisfaction of liabilities to creditors, our assets will be distributed to the shareholders of our ordinary shares in proportion to the nominal value of their shareholdings. This right may be affected by the grant of preferential dividend or distribution rights to the shareholders of a class of shares with preferential rights that may be authorized in the future. Pursuant to Israel's securities laws, a company registering its shares for trade on the Tel Aviv Stock Exchange may not have more than one class of shares for a period of one year following registration, after which it is permitted to issue preference shares. Under the Companies Law, the declaration of a dividend does not require the approval of the shareholders of the company, unless the company's Articles of Association require otherwise. Our Articles of Association provide that the board of directors may declare and distribute dividends without the approval of the shareholders.

To date, we have not declared or distributed any dividend.

**Anti-Takeover Provisions under Israeli Law**

The Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if, as a result of such acquisition, the purchaser would become shareholder with over 25% of the voting rights in the company. This rule does not apply if there is already another shareholder of the company with 25% or more of the voting rights. Similarly, the Companies Law provides that an acquisition of shares in a public company must be made by means of a tender offer if, as a result of the acquisition, the purchaser's shareholdings would entitle the purchaser to over 45% of the voting rights in the company, unless there is a shareholder with 50% or more of the voting rights in the company. These rules do not apply if the acquisition is made by way of a merger.

Finally, in general, Israeli tax law treats specified acquisitions less favorably than does U.S. tax law. However, Israeli tax law provides for tax deferral in specified acquisitions, including transactions where the consideration for the sale of shares is the receipt of shares of the acquiring company.

## DESCRIPTION OF RIGHTS

### General

We may issue rights to purchase any of our securities or any combination thereof. Rights may be issued independently or together with any other offered security and may or may not be transferable by the person purchasing or receiving the rights. In connection with any rights offering to our shareholders, we may enter into a standby underwriting arrangement with one or more underwriters pursuant to which such underwriters will purchase any offered securities remaining unsubscribed for after such rights offering. We may also appoint a rights agent that may act solely as our agent in connection with the rights that are sold. Any such agent will not assume any obligation or relationship of agency or trust with any of the holders of the rights. In connection with a rights offering to our shareholders, we will distribute certificates evidencing the rights and a prospectus supplement to our shareholders on the record date that we set for receiving rights in such rights offering.

The applicable prospectus supplement will describe the following terms of rights in respect of which this prospectus is being delivered:

- the title of such rights;
- the securities for which such rights are exercisable;
- the exercise price for such rights;
- the number of such rights issued with respect to each ordinary share;
- the extent to which such rights are transferable;
- if applicable, a discussion of the material income tax considerations applicable to the issuance or exercise of such rights;
- the date on which the right to exercise such rights shall commence, and the date on which such rights shall expire (subject to any extension);
- the extent to which such rights include an over-subscription privilege with respect to unsubscribed securities;
- if applicable, the material terms of any standby underwriting or other purchase arrangement, or any agency agreement, that we may enter into in connection with the rights offering; and
- any other terms of such rights, including terms, procedures and limitations relating to the exchange and exercise of such rights.

### Exercise of Rights

Each right will entitle the holder of the right to purchase for cash such securities or any combination thereof at such exercise price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the rights offered thereby. Rights may be exercised at any time up to the close of business on the expiration date for such rights set forth in the prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

Rights may be exercised as set forth in the prospectus supplement relating to the rights offered thereby. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or any other office indicated in the prospectus supplement, we will forward, as soon as practicable, the securities purchasable upon such exercise. We may determine to offer any unsubscribed offered securities directly to persons other than shareholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting arrangements, as set forth in the applicable prospectus supplement.

## DESCRIPTION OF WARRANTS

We may issue warrants to purchase any of our securities. We may issue warrants independently or together with any other securities offered by any prospectus supplement and the warrants may be attached to or separate from those securities. Any series of warrants may be issued under a separate warrant agreement, which may be entered into between us and a warrant agent specified in a prospectus supplement. Any such warrant agent will act solely as our agent in connection with the warrants of such series and will not assume any obligation or relationship of agency or trust with any of the holders of the warrants. We will set forth further terms of the warrants and any applicable warrant agreements in the applicable prospectus supplement relating to the issuance of any warrants, including, where applicable, the following:

- the title of the warrants;
- the aggregate number of the warrants;
- the number and type of securities purchasable upon exercise of the warrants;
- the designation and terms of the securities, if any, with which the warrants are issued and the number of the warrants issued with each such offered security;
- the date, if any, on and after which the warrants and the related securities will be separately transferable;
- the price at which, and form of consideration for which, each security purchasable upon exercise of the warrants may be purchased;
- the date on which the right to exercise the warrants will commence and the date on which the right will expire;
- the minimum or maximum amount of the warrants which may be exercised at any one time;
- any circumstances that will cause the warrants to be deemed to be automatically exercised; and
- any other material terms of the warrants.

## DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of our ordinary shares, rights, warrants or any combination of such securities. The applicable prospectus supplement will describe:

- the terms of the units and of the ordinary shares, rights and/or warrants comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- a description of the terms of any unit agreement governing the units or any arrangement with an agent that may act on our behalf in connection with the unit offering; and
- a description of the provisions for the payment, settlement, transfer or exchange of the units.

## PLAN OF DISTRIBUTION

We may sell the offered securities on a negotiated or competitive bid basis to or through underwriters or dealers. We may also sell the securities directly to corporate partners in various programs of the Company, institutional investors or other purchasers or through agents. We will identify any underwriter, dealer, or agent involved in the offer and sale of the securities, and any applicable commissions, discounts and other terms constituting compensation to such underwriters, dealers or agents, in a prospectus supplement.

We may distribute our securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Only underwriters named in the prospectus supplement are underwriters of our securities offered by the prospectus supplement.

If underwriters are used in the sale of our securities, such securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Unless stated otherwise in a prospectus supplement, the obligation of any underwriters to purchase our securities will be subject to certain conditions and the underwriters will be obligated to purchase all of the applicable securities if any are purchased. If a dealer is used in a sale, we may sell our securities to the dealer as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale. In effecting sales, dealers engaged by us may arrange for other dealers to participate in the resales.

We or our agents may solicit offers to purchase securities from time to time. Unless stated otherwise in a prospectus supplement, any agent will be acting on a best efforts basis for the period of its appointment. In addition, we may enter into derivative, sale or forward sale transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with such transaction, the third parties may, pursuant to this prospectus and the applicable prospectus supplement, sell securities covered by this prospectus and the applicable prospectus supplement. If so, the third party may use securities borrowed from us or others to settle such sales and may use securities received from us or others to close out any related short positions. We may also loan or pledge securities covered by this prospectus and the applicable prospectus supplement to third parties, who may sell the loaned securities or, in the event of default in the case of a pledge, sell the pledged securities pursuant to this prospectus and the applicable prospectus supplement. The third party in such transactions will be an underwriter and will be identified in the applicable prospectus supplement or a in a post-effective amendment.

In connection with the sale of our securities, underwriters or agents may receive compensation (in the form of discounts, concessions or commissions) from us or from purchasers of securities for whom they may act as agents. Underwriters may sell securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of our securities may be deemed to be "underwriters" as that term is defined in the Securities Act of 1933, or the Securities Act, and any discounts or commissions received by them from us and any profits on the resale of the shares by them may be deemed to be underwriting discounts and commissions under the Securities Act. Compensation as to a particular underwriter, dealer or agent might be in excess of customary commissions and will be in amounts to be negotiated in connection with transaction involving our securities. We will identify any such underwriter or agent, and we will describe any such compensation paid, in the related prospectus supplement. Maximum compensation to any underwriters, dealers or agents will not exceed any applicable FINRA limitations.

Underwriters, dealers and agents may be entitled, under agreements with us, to indemnification against and contribution toward certain civil liabilities, including liabilities under the Securities Act.

If stated in a prospectus supplement, we will authorize agents and underwriters to solicit offers by certain specified institutions or other persons to purchase our securities at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specific date in the future. Institutions with whom such contracts may be made include commercial savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions, and other institutions, but shall in all cases be subject to our approval. Such contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth the commission payable for solicitation of such contracts. The obligations of any purchase under any such contract will be subject to the condition that the purchase of the securities shall not be prohibited at the time of delivery under the laws of the jurisdiction to which the purchaser is subject. The underwriters and other agents will not have any responsibility in respect of the validity or performance of such contracts.

If underwriters or dealers are used in the sale, until the distribution of our securities is completed, Commission rules may limit the ability of any such underwriters and selling group members to bid for and purchase the securities. As an exception to these rules, representatives of any underwriters are permitted to engage in certain transactions that stabilize the price of the securities. Such transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities. If the underwriters create a short position in the securities in connection with the offering (in other words, if they sell more shares than are set forth on the cover page of the prospectus supplement), the representatives of the underwriters may reduce that short position by purchasing securities in the open market. The representatives of the underwriters also may elect to reduce any short position by exercising all or part of any over-allotment option we may grant to the underwriters, as described in the prospectus supplement. In addition, the representatives of the underwriters may impose a penalty bid on certain underwriters and selling group members. This means that if the representatives purchase securities in the open market to reduce the underwriters' short position or to stabilize the price of our securities, they may reclaim the amount of the selling concession from the underwriters and selling group members who sold those securities as part of the offering. In general, purchases of a security for the purpose of stabilizing or to reduce a short position could cause the price of the security to be higher than it might be in the absence of such purchases. The imposition of a penalty bid might also have the effect of causing the price of the securities to be higher than it would otherwise be. If commenced, the representatives of the underwriters may discontinue any of the transactions at any time. These transactions may be effected on any exchange on which our securities are traded, in the over-the-counter market, or otherwise.

Certain of the underwriters or agents and their associates may engage in transactions with and perform services for us or our affiliates in the ordinary course of their respective businesses.

## EXPENSES

We are paying all of the expenses of the registration of our securities under the Securities Act , including registration and filing fees, printing and duplication expenses, administrative expenses, accounting fees and the legal fees of our counsel. We estimate these expenses to be approximately $40,644 which at the present time include the following categories of expenses:

| | | |
|---|---|---|
| SEC registration fee | $ | 4,644 |
| Legal fees and expenses | $ | 25,000 |
| Accounting fees and expenses | $ | 10,000 |
| Miscellaneous expenses | $ | 1,000 |
| **Total** | **$** | **40,644** |

In addition, we anticipate incurring additional expenses in the future in connection with the offering of our securities pursuant to this prospectus. Any such additional expenses will be disclosed in a prospectus supplement.

## LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon for us by Meitar Liquornik Geva & Leshem Brandwein, Ramat-Gan, Israel. Kramer Levin Naftalis & Frankel LLP, New York, New York, is acting as our counsel in connection with United States securities laws.

## EXPERTS

The consolidated financial statements of Compugen Ltd. at December 31, 2009 and 2008, and for each of the three years in the period ended December 31, 2009, appearing in our Annual Report on Form 20-F for the year ended December 31, 2009 have been audited by Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global independent registered public accounting firm, as set forth in their reports thereon included therein, and incorporated herein by reference. The financial statements for the year ended December 31, 2007 of our wholly-owned subsidiary, Keddem Bioscience Ltd., not separately presented in our Annual Report, were audited by Kesselman & Kesselman (C.P.A Isr.), a member firm of PricewaterhouseCoopers International Limited, whose reports have also been incorporated in this prospectus by reference to our Annual Report on Form 20-F for the year ended December 31, 2009. The financial statements referred to above are included in reliance upon such reports given on the authority of such firms as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION AND INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

We are an Israeli company and are a "foreign private issuer" as defined in Rule 3b-4 under the Exchange Act. As a result, (1) our proxy solicitations are not subject to the disclosure and procedural requirements of Regulation 14A under the Exchange Act, (2) transactions in our equity securities by our officers and directors are exempt from Section 16 of the Exchange Act, and (3) until November 4, 2002, we were not required to make our SEC filings electronically, so that many of those filings are not available on the Commission's website. However, since that date, we have been making all required filings with the Commission electronically, and these filings are available over the Internet as described below.

In addition, we are not required to file reports and financial statements with the Commission as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act. However, we file with the Commission an Annual Report on Form 20-F containing financial statements audited by an independent registered public accounting firm. We also furnish reports on Form 6-K containing unaudited financial information for the first three quarters of each fiscal year and other material information that we are required to make public in Israel, that we file with, and that is made public by, any stock exchange on which our shares are traded, or that we distribute, or that is required to be distributed by us, to our shareholders.

You can read and copy any materials we file with the Commission at its Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You can obtain information about the operation of the Commission Public Reference Room by calling the Commission at 1-800-SEC-0330. The Commission also maintains a web site that contains information we file electronically with the Commission, which you can access over the Internet at http://www.sec.gov. You may also access the information we file electronically with the Commission through our website at http://www.cgen.com. The information contained on, or linked from our website does not form part of this prospectus.

This prospectus is part of a registration statement on Form F-3 filed by us with the Commission under the Securities Act. As permitted by the rules and regulations of the Commission, this prospectus does not contain all the information set forth in the registration statement and the exhibits thereto filed with the Commission. For further information with respect to us and the ordinary shares offered hereby, you should refer to the complete registration statement on Form F-3, which may be obtained from the locations described above. Statements contained in this prospectus or in any prospectus supplement about the contents of any contract or other document are not necessarily complete. If we have filed any contract or other document as an exhibit to the registration statement or any other document incorporated by reference in the registration statement, you should read the exhibit for a more complete understanding of the document or matter involved. Each statement regarding a contract or other document is qualified in its entirety by reference to the actual document.

We incorporate by reference in this prospectus the documents listed below, and any future Annual Reports on Form 20-F or Reports on Form 6-K (to that extent that such Form 6-K indicates that it is intended to by incorporated by reference herein) filed with the Commission pursuant to the Exchange Act prior to the termination of the offering. The documents we incorporate by reference are:

- our Annual Report on Form 20-F for the fiscal year ended December 31, 2009;
- our Reports on Form 6-K filed with the Commission on each of March 11, 2010, April 27, 2010, July 27, 2010, September 21, 2010, September 22, 2010, October 26, 2010 and December 30, 2010;
- our consolidated financial statements for the nine month period ending on September 30, 2010 as filed on Form 6-K on January 11, 2011.

The information we incorporate by reference is an important part of this prospectus, and later information that we file with the Commission will automatically update and supersede the information contained in this prospectus.

We shall provide you without charge, upon your written or oral request, a copy of any of the documents incorporated by reference in this prospectus, other than exhibits to such documents which are not specifically incorporated by reference into such documents. Please direct your written or telephone requests to us at Compugen Ltd., 72 Pinchas Rosen Street, Tel Aviv, Israel 69512; +972-765-8585, Attention: Dikla Czaczkes Axselbrad, Chief Financial Officer.

**ENFORCEABILITY OF CIVIL LIABILITIES**

Service of process upon us and upon our directors and officers and the experts named in his prospectus, most of whom reside outside the United States, may be difficult to obtain within the United States. Furthermore, because substantially all of our assets and substantially all of our directors and officers are located outside the United States, any judgment obtained in the United States against us or any of our directors and officers may not be collectible within the United States.

There is doubt as to the enforceability of civil liabilities under the Securities Act and the Exchange Act in original actions instituted in Israel. However, subject to specified time limitations, an Israeli court may declare a foreign civil judgment enforceable if it finds that:

— the judgment was rendered by a court which was, according to the laws of the state of the court, competent to render the judgment,

— the judgment is no longer appealable,

— the obligation imposed by the judgment is enforceable according to the rules relating to the enforceability of judgments in Israel and the substance of the judgment is not contrary to public policy, and

— the judgment is executory in the state in which it was given.

Even if the above conditions are satisfied, an Israeli court will not enforce a foreign judgment if it was given in a state whose laws do not provide for the enforcement of judgments of Israeli courts (subject to exceptional cases) or if its enforcement is likely to prejudice the sovereignty or security of the State of Israel.

An Israeli court also will not declare a foreign judgment enforceable if:

- the judgment was obtained by fraud.
- there was no due process,
- the judgment was rendered by a court not competent to render it according to the laws of private international law in Israel,
- the judgment is at variance with another judgment that was given in the same matter between the same parties and which is still valid, or
- at the time the action was brought in the foreign court a suit in the same matter and between the same parties was pending before a court or tribunal in Israel.

If a foreign judgment is enforced by an Israel court, it generally will be payable in Israeli currency. Judgment creditors must bear the risk of unfavorable exchange rates.

**PART II**

**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 8. Indemnification of Directors and Officers**

The Israeli Companies Law, 5759-1999, or the Companies Law, describes the fiduciary duty of an office holder as a duty to act in good faith and for the benefit of the company, including by refraining from actions in which he has a conflict of interest or that compete with the company's business, refraining from exploiting a business opportunity of the company in order to gain a benefit for himself or for another person, and disclosing to the company any information and documents which are relevant to the company and that were obtained by him in his or her capacity as an office holder. The duty of care is defined as an obligation of caution of an office holder that requires the office holder to act at a level of competence at which a reasonable office holder would have acted in the same position and under the same circumstances, including by adopting reasonable means for obtaining information concerning the profitability of the act brought for his approval.

Under the Companies Law, a company may not exempt an office holder from liability with respect to a breach of his fiduciary duty, but may exempt in advance an office holder from his liability to the company, in whole or in part, with respect to a breach of his duty of care.

Pursuant to the Companies Law, a company may indemnify an office holder against a monetary liability imposed on him by a court including in settlement or arbitration proceedings, and against reasonable legal expenses in a civil proceeding or in a criminal proceeding in which the office holder was found to be innocent or in which he was convicted of an offense which does not require proof of a criminal intent. The indemnification of an office holder must be expressly allowed in the articles of association, under which the company may (i) undertake in advance to indemnify its office holders with respect to categories of events that can be foreseen at the time of giving such undertaking and up to an amount determined by the board of directors to be reasonable under the circumstances, or (ii) provide indemnification retroactively at amounts deemed to be reasonable by the board of directors.

A company may also procure insurance for an office holder's liability in consequence of an act performed in the scope of his office. in the following cases: (a) a breach of the duty of care of such office holder, (b) a breach of the fiduciary duty, only if the office holder acted in good faith and had reasonable grounds to believe that such act would not be detrimental to the company, or (c) a monetary obligation imposed on the office holder for the benefit of another person.

A company may not indemnify an office holder against, nor enter into an insurance contract which would provide coverage for, any monetary liability incurred as a result of any of the following:

— a breach by the office holder of his fiduciary duty unless the office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;

— a breach by the office holder of his duty of care if such breach was done intentionally or recklessly; any act or omission done with the intent to derive an illegal personal gain; or

— any fine or penalty levied against the office holder as a result of a criminal offense.

In addition, under the Companies Law, indemnification of, and procurement of insurance coverage for a company's office holders must be approved by the company's audit committee and board of directors and, in specified circumstances, by the company's shareholders.

Our Articles of Association allow the Company to exempt any office holder to the maximum extent permitted by law, before or after the occurrence giving rise to such exemption. Our Articles of Association also provide that we may indemnify an office holder to the maximum extent permitted by law, against any liabilities he or she may incur in such capacity, limited with respect (i) to the categories of events that can be foreseen in advance by our board of directors when authorizing such undertaking and (ii) to the amount of such indemnification as determined retroactively by our board of directors to be reasonable in the particular circumstances. Similarly, we may also agree to indemnify an office holder for past occurrences, whether or not we are obligated under any agreement to provide such indemnification. We have obtained directors' and officers' liability insurance covering our officers and directors and those of our subsidiaries for certain claims. In addition, as of July 31, 2007, we received approval of our shareholders authorizing us to provide our directors and officers with letters granting them indemnification to the fullest extent permitted under Israeli law, and we have subsequently provided such letters.

Our Articles of Association also allow us to procure insurance covering any past or present office holder against any liability which he or she may incur in such capacity, to the maximum extent permitted by law. Such insurance may also cover us for indemnifying such office.

**Item 9. Exhibits**

| Exhibit Number | Description |
|---|---|
| 4.1 | Specimen Certificate for Ordinary Shares (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form F-1/A filed with the Securities and Exchange Commission on August 2, 2000) |
| 5.1 | Opinion of Meitar Liquornik Geva & Leshem Brandwein |
| 23.1 | Consent of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global |
| 23.2 | Consent of Kesselman & Kesselman (C.P.A Isr.), a member firm of PricewaterhouseCoopers International Limited |
| 23.3 | Consent of Meitar Liquornik Geva & Leshem Brandwein (included in Exhibit 5.1) |
| 24 | Power of Attorney (included on the signature page) |

**Item 10. 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 the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*Provided, however*, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information otherwise required to be included in a post-effective amendment by those paragraphs is contained in 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 the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) 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.

(4) To file a post-effective amendment to the registration statement to include any financial statements required by Item 8.A. of Form 20-F at the start of any delayed offering or throughout a continuous offering; provided, however, that a post-effective amendment need not be filed to include financial statements and information otherwise required by Section 10(a)(3) of the Act or §210.3-19 if such financial statements and information are contained in 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.

(5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

(ii) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424; (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant; (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant'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 the 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the Act 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 of whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby further undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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.

**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 F-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunder duly authorized, in the City of Tel Aviv, State of Israel, on January 11, 2011.

COMPUGEN LTD.

By: /s/ ANAT COHEN-DAYAG
Name: Anat Cohen-Dayag
Title: President and Chief Executive Officer

**POWER OF ATTORNEY**

That the undersigned officers and directors of Compugen Ltd., an Israeli corporation, do hereby constitute and appoint Anat Cohen-Dayag, President and -Chief Executive Officer, and Dikla Czaczkes Axselbrad, Chief Financial Officer, and each of them individually, with full powers of substitution and resubstitution, the lawful attorneys-in-fact and agents with full power and authority to do any and all acts and things and to execute any and all instruments which said attorneys and agents, determine may be necessary or advisable or required to enable said corporation to comply with the Securities Act of 1933, as amended, and any rules or regulations or requirements of the Securities and Exchange Commission in connection with this Registration Statement. Without limiting the generality of the foregoing power and authority, the powers granted include the power and authority to sign the names of the undersigned officers and directors in the capacities indicated below to this Registration Statement, to any and all amendments, both pre-effective and post-effective, and supplements to this Registration Statement, and to any and all instruments or documents filed as part of or in conjunction with this Registration Statement or amendments or supplements thereof, and each of the undersigned hereby ratifies and confirms that said attorneys and agents, shall do or cause to be done by virtue hereof. This Power of Attorney may be signed in several counterparts.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated:

| **Signature** | **Title** | **Date** |
|---|---|---|
| /s/ ANAT COHEN-DAYAG<br>Anat Cohen-Dayag | President and Chief Executive Officer (Principal Executive Officer) | January 11, 2011 |
| /s/ DIKLA CZACZKES AXSELBRAD<br>Dikla Czaczkes Axselbrad | Chief Financial Officer (Principal Accounting Officer) | January 11, 2011 |
| /s/ YAIR AHARONOWITZ<br>Yair Aharonowitz | Director | January 11, 2011 |
| /s/ RUTH ARNON<br>Ruth Arnon | Director | January 11, 2011 |
| /s/ MARTIN GERSTEL<br>Martin Gerstel | Director | January 11, 2011 |
| /s/ DOV HERSHBERG<br>Dov Hershberg | Director | January 11, 2011 |
| /s/ ALEX KOTZER<br>Alex Kotzer | Director | January 11, 2011 |

| Signature | Title | Date |
| --- | --- | --- |
| /s/ ARIE OVADIA | Director | January 11, 2011 |
| Arie Ovadia | | |
| /s/ JOSHUA SHEMER | Director | January 11, 2011 |
| Joshua Shemer | | |

**EXHIBIT INDEX**

| Exhibit Number | Description |
|---|---|
| 4.1 | Specimen Certificate for Ordinary Shares (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form F-1/A filed with the Securities and Exchange Commission on August 2, 2000) |
| 5.1 | Opinion of Meitar Liquornik Geva & Leshem Brandwein |
| 23.1 | Consent of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global |
| 23.2 | Consent of Kesselman & Kesselman (C.P.A Isr.), a member firm of PricewaterhouseCoopers International Limited |
| 23.3 | Consent of Meitar Liquornik Geva & Leshem Brandwein (included in Exhibit 5.1) |
| 24 | Power of Attorney (included on the signature page) |

**Exhibit 5.1**

Opinion and consent of Meitar Liquornik Geva & Leshem Brandwein

January 6, 2011

Compugen Ltd.
72 Pinchas Rosen Street
Tel Aviv, 69512 Israel
Re: Registration Statement on Form F-3

Gentlemen:

We have acted as Israeli counsel to Compugen Ltd., a company organized under the laws of the State of Israel (the "Company"), in connection with the registration statement on Form F-3 (the "Registration Statement") filed with the Securities and Exchange Commission under the Securities Act of 1933 (the "Securities Act") covering the sale, from time to time, by the Company of up to $40,000,000, in the aggregate, of:

(i) ordinary shares of the Company, par value New Israeli Shekel 0.01 per share (the "Shares");
(ii) warrants to purchase Shares (the "Warrants");
(iii) rights to purchase Shares and/or Warrants (the "Rights"); and
(iv) units comprised of one or more of the Shares, Warrants and Rights, in any combination (the "Units") (collectively, the Shares, Warrants, Rights and Units are referred to as the "Securities").

In connection with this opinion, we have examined originals or copies, certified or otherwise identified to our satisfaction, of the Registration Statement and such other agreements, certificates, resolutions, minutes and other statements of corporate officers and other representatives of the Company and others and other documents provided to us by the Company as we have deemed necessary or appropriate as a basis for this opinion.

In rendering an opinion on the matters hereinafter set forth, we have assumed the authenticity of all original documents submitted to us as certified, conformed or photographic copies thereof, the genuineness of all signatures and the due authenticity of all persons executing such documents. We have assumed the same to have been properly given and to be accurate. We have also assumed the truth of all facts communicated to us by the Company and that all consents, minutes and protocols of meetings of the Company's board of directors which have been provided to us are true and accurate and have been properly prepared in accordance with the Company's memorandum and articles of association and all applicable laws. We have assumed, in addition, that at the time of the execution and delivery of any definitive purchase, underwriting or similar agreement between the Company and any third party pursuant to which any of the Securities may be issued (the "Securities Agreement"), the Securities Agreement will be the valid and legally binding obligation of such third party, enforceable against such third party in accordance with its terms. We have further assumed that at the time of the issuance and sale of any of the Securities, the terms of the Securities, and their issuance and sale, will have been established so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and so as to comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company. In addition, we have assumed that at or prior to the time of issuance and delivery of any Security, the consideration for such Security will have been received by the Company.

Members of our firm are admitted to the Bar in the State of Israel, and we do not express any opinion as to the laws of any other jurisdiction. We furthermore express no opinion as to the effect of applicable liquidation, bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the rights of creditors, to the extent applicable to this opinion. This opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated.

Based upon and subject to the foregoing, in reliance thereon and subject to the assumptions, comments, qualifications, limitations and exceptions stated herein and the effectiveness of the Registration Statement under the Securities Act, we are of the opinion that:

1. With respect to the Shares, assuming the taking of all necessary corporate action to authorize and approve the issuance of any Shares, the terms of the offering thereof and related matters, including the entry by the Company into, and its performance under, the applicable Securities Agreement pursuant to which the Shares may be issued, upon payment of the consideration therefor provided for in the applicable Securities Agreement approved by the Company's Board of Directors and otherwise in accordance with the provisions of the applicable convertible Securities, if any, such Shares will be legally issued, fully paid and non-assessable.

2. With respect to the Warrants, assuming the (a) taking of all necessary corporate action to authorize and approve the issuance and terms of any Warrants, the terms of the offering thereof and related matters, including the entry by the Company into, and performance under, the applicable Securities Agreement pursuant to which any Warrants may be issued, and (b) due execution, authentication, issuance and delivery of such Warrants and any Securities Agreement pursuant to which any such Warrants may be issued, upon payment of the consideration therefor provided for in the applicable Securities Agreement approved by the Company's Board of Directors and otherwise in accordance with the provisions of the applicable Securities Agreement, such Warrants will constitute valid and legally binding obligations of the Company.

3. With respect to the Rights, assuming the (a) taking of all necessary corporate action to authorize and approve the issuance and the terms of the Rights, the terms of the offering thereof and related matters, including the entry by the Company into, and performance under, the applicable Securities Agreement pursuant to which any Rights may be issued, and (b) due execution, authentication, issuance and delivery of the Rights and any Securities Agreement pursuant to which any such Rights may be issued, upon the payment of the consideration therefor provided for in the applicable Securities Agreement approved by the Company's Board of Directors and otherwise in accordance with the provisions of the applicable Securities Agreement, such Rights will constitute valid and legally binding obligations of the Company and will entitle the holders thereof to the rights with respect thereto specified in the Securities Agreement.

4. With respect to the Units, assuming the (a) taking of all necessary corporate action to authorize and approve the issuance and the terms of the Units, the terms of the offering thereof and related matters, including the entry by the Company into, and performance under, the applicable Securities Agreement pursuant to which the Securities which are components of the Units may be issued, and (b) due execution, authentication, issuance and delivery of the Units, the Securities that are components of such Units and any Securities Agreement pursuant to which any such Units may be issued, in each case upon the payment of the consideration therefor provided for in the applicable Securities Agreement approved by the Company's Board of Directors and otherwise in accordance with the provisions of the applicable Securities Agreement, such Units will constitute valid and legally binding obligations of the Company and will entitle the holders thereof to the rights with respect thereto specified in the Securities Agreement.

You have informed us that you intend to issue the Securities from time to time on a delayed or continuous basis, and this opinion is limited to the laws, including the rules and regulations, as in effect on the date hereof. We understand that prior to issuing any Securities you will afford us an opportunity to review the corporate approval documents and operative documents pursuant to which such Securities are to be issued, and we will file such supplement or amendment to this opinion (if any) as we may reasonably consider necessary or appropriate.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. We also consent to the appearance of our firm's name under the caption "Legal Matters" in the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder or Item 509 of Regulation S-K promulgated under the Securities Act.

This opinion letter is rendered as of the date hereof and we disclaim any obligation to advise you of facts, circumstances, events or developments that may be brought to our attention after the effective date of the Registration Statement that may alter, affect or modify the opinions expressed herein.

Very truly yours,
/s/ Meitar Liquornik Geva & Leshem Brandwein

**Exhibit 23.1**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form F-3) and related Prospectus of Compugen Ltd. for the registration of its securities and to the incorporation by reference therein of our report dated March 16, 2009, with respect to the consolidated financial statements of Compugen Ltd. included in its Annual Report (Form 20-F) for the year ended December 31, 2009, filed with the Securities and Exchange Commission.

/s/ KOST FORER GABBAY & KASIERER,
a member of Ernst & Young Global

Tel Aviv, Israel
January 6, 2011

**Exhibit 23.2**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in this Registration Statement on Form F-3 of Compugen Ltd., of our report dated March 13, 2008 relating to the 2007 financial statements of Keddem Bio-Science, which appears in the Annual Report on Form 20-F for the year ended December 31, 2009, of Compugen Ltd.

/s/ KESSELMAN & KESSELMAN, (C.P.A Isr.),
a member firm of PricewaterhouseCoopers International Limited

Tel Aviv, Israel
January 6, 2011