

COMPUGEN LTD
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Registration Statement No. 333-213007

PROSPECTUS SUPPLEMENT
(to Prospectus dated October 11, 2016)

5,316,457 Ordinary Shares
Warrants to Purchase up to 4,253,165 Ordinary Shares

Compugen Ltd.

We are offering directly to certain institutional investors 5,316,457 of our ordinary shares and warrants to purchase up to 4,253,165 of our ordinary shares. This prospectus supplement also relates to the offering of the ordinary shares issuable upon exercise or exchange of the warrants. The warrants will have an exercise price of \$4.74 per share. The warrants will be exercisable six months from the date of issuance and will terminate on the fifth anniversary of the date of issuance. For a more detailed description of the warrants, see the section entitled “Description of the Securities We Are Offering — Warrants” beginning on page S-9 of this prospectus supplement.

Our ordinary shares are traded on the Nasdaq Global Market and the Tel Aviv Stock Exchange, (the “TASE”), under the symbol “CGEN.” The currency in which our shares trade on the TASE is the New Israeli Shekel, or NIS. The last reported sale price for our ordinary shares on the Nasdaq Global Market and on the TASE on June 14, 2018, was \$4.00 and NIS 14.26 per share (\$3.97 at a current exchange rate of \$1 to NIS 3.596), respectively. There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on the Nasdaq Global Market, the TASE, or any other securities exchange.

Investing in our securities involves risks. See “Risk Factors” beginning on page S-3 of this prospectus supplement.

| | Per Ordinary Share and Accompanying Warrant | Total |
|------------------------------------|--|-----------------|
| Offering price | \$ 3.95 | \$21,000,005.15 |
| Placement agent fee ⁽¹⁾ | \$ 0.17775 | \$945,000.23 |
| Proceeds, before expenses, to us | \$ 3.77225 | \$20,055,004.92 |

Assumes a placement agent fee of 4.5% of the aggregate gross proceeds received from the sale of the ordinary (1) shares and warrants in this offering, but does not include transaction expenses. See “Plan of Distribution” beginning on page S-19.

We expect delivery of the ordinary shares and warrants will be made to purchasers on or about June 19, 2018. The ordinary shares will be delivered in book-entry form through The Depository Trust Company, New York, New York. We will mail the warrants directly to each purchaser at the address provided by such purchaser in the securities

purchase agreement with us.

None of the Securities and Exchange Commission, the Israeli Securities Authority or any state or other securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus supplement or the accompanying prospectus. Any representation to the contrary is a criminal offense under the laws of the United States and the laws of the State of Israel.

JMP Securities

The date of this prospectus supplement is June 14, 2018.

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About this Prospectus Supplement

On August 9, 2016, we filed with the Securities and Exchange Commission, or SEC, a registration statement on Form F-3 (File No. 333-213007) utilizing a shelf registration process relating to the securities described in this prospectus supplement, which registration statement was declared effective on October 11, 2016. Under this shelf registration process, we may, from time to time, sell up to \$200,000,000 of our ordinary shares and other securities, of which this offering is a part.

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, gives more general information, some of which may not apply to this offering. When we refer to this prospectus, we are referring to the combined document consisting of this prospectus supplement and the accompanying prospectus.

In this prospectus supplement, as permitted by law, we “incorporate by reference” information from other documents that we file with the U.S. Securities and Exchange Commission, or the SEC. This means that we can disclose important information to you by referring to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and the accompanying prospectus, and should be read with the same care. When we make future filings with the SEC to update the information contained in documents that have been incorporated by reference, the information included or incorporated by reference in this prospectus supplement is considered to be automatically updated and superseded. If the description of the offering varies between this prospectus supplement and the accompanying prospectus, you should rely on the information contained in this prospectus supplement. However, if any statement in this prospectus supplement or the accompanying prospectus is inconsistent with a statement in another document having a later date (including a document incorporated by reference in the accompanying prospectus), the statement in the document having the later date modifies or supersedes the earlier statement.

You should rely only on the information contained in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with the offering. We have not, and the placement agent has 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. We are not, and the placement agent is not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. The distribution of this prospectus supplement and the offering of the ordinary shares in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement must inform themselves about, and observe any restrictions relating to, the offering of the ordinary shares and the distribution of this prospectus supplement outside the United States. This prospectus supplement does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. You should assume that the information appearing in this prospectus supplement is accurate as of the date on the front cover of this prospectus supplement only. Our business, financial condition, results of operations and prospects may have changed since that date.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in the prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless the context indicates otherwise, references in this prospectus to “NIS” are to the legal currency of Israel, and “U.S. dollars,” “\$” or “dollars” are to United States dollars.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have included or incorporated by reference into this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein, therein and in any free writing prospectus that we have authorized for use in connection with this offering, statements that may constitute “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. Forward-looking statements may be identified by the use of words including “believe,” “anticipate,” “should,” “intend,” “plan,” “will,” “expect,” “estimate,” “project,” “positioned,” “strategy,” and similar expressions. Such statements are our management’s current expectations and involve risks and uncertainties. Our actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors, including those discussed in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein, therein and in any free writing prospectus that we have authorized for use in connection with this offering. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. While we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein and in any free writing prospectus that we have authorized for use in connection with this offering, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain.

In addition, you should refer to the information contained under the heading “Risk Factors” in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein for a discussion of other important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these and other factors, we cannot assure you that the forward-looking statements in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein, therein or in any free writing prospectus that we have authorized for use in connection with this offering will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this prospectus supplement. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference herein, therein or and in any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in the reports we file with the Securities and Exchange Commission.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected material information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary may not contain all the information that you should consider before investing in our securities. You should read this summary together with the entire prospectus supplement and the accompanying prospectus carefully, including the “Risk Factors” sections contained in this prospectus supplement, the accompanying prospectus and the documents that are incorporated herein and therein by reference, and in any free writing prospectus that we have authorized for use in connection with this offering, as well as our financial statements and the notes to those financial statements, before making an investment decision. This prospectus supplement may add to, update or change information contained in or incorporated by reference in the accompanying prospectus.

Unless we have indicated otherwise, or the context otherwise requires, references in this prospectus supplement summary to “Compugen,” “the Company,” “we,” “us” and “our” refer to Compugen Ltd. and its wholly-owned subsidiary, Compugen USA, Inc.

Overview

We are a clinical-stage therapeutic discovery and development company utilizing our broadly applicable predictive discovery infrastructure to identify novel drug targets and develop first-in-class therapeutics in the field of cancer immunotherapy. Our therapeutic pipeline consists of immuno-oncology programs against novel drug targets we have discovered, including T cell immune checkpoints and myeloid target candidates, which serve for the development of first-in-class cancer immunotherapy drugs. By diversifying our pipeline with the discovery of new target pathways having the potential to address multiple immune suppressive components in the tumor microenvironment, we aim to broadly address cancer treatment and provide first-in-class treatment solutions in areas of unmet medical needs in various cancer types and patient populations, both as monotherapy and in combination with other drugs. Currently, we have one clinical and three preclinical stage programs in our pipeline, all originating from our discovery capabilities, as well as a portfolio of earlier stage programs mostly focused on myeloid targets, a newly-rising and promising field in cancer immunotherapy. Our clinical and preclinical stage pipeline currently consists of three immuno-oncology product candidates, of which two are expected to enter the clinic in 2018 and a preclinical stage fusion protein for autoimmunity. Our business model is to selectively enter into collaborations for our novel targets and related drug product candidates at various stages of research and development. Compugen is headquartered in Holon, Israel, with R&D facilities located in both Holon and South San Francisco. At the U.S. facilities, therapeutic monoclonal antibodies (mAbs) are discovered and developed against our novel drug target candidates.

Our fields of focus are oncology and autoimmunity, with substantial emphasis on immuno-oncology. Oncology and autoimmunity are medical fields with significant unmet medical needs, and both are of high interest to the biopharmaceutical industry with numerous efforts being made to identify novel therapeutic solutions. Within oncology, our primary focus area of immuno-oncology is of particularly high interest, and is seen as providing a major breakthrough in cancer treatment.

Biologic therapies have revolutionized patients’ treatment in our selected fields of focus and have demonstrated substantial clinical benefit and commercial success. As a result, biologics are one of the fastest growing segments in the drug industry and made up 26% of 2017 U.S. Food and Drug Administration approvals. Biologics to treat cancer represented three of the top ten best-selling drugs in 2017, and included Rituxan®, Herceptin® and Avastin®. Additionally, seven of the top ten selling drugs in 2017 were biologics including Humira® (adalimumab), the top selling drug in 2017 with sales of \$18.4 billion, Remicade® (infliximab) and Rituxan/MabThera® (rituximab), all indicated for the treatment of arthritis, one of the therapeutic conditions in autoimmunity.

Corporate Information

Our legal and commercial name is Compugen Ltd. We were incorporated on February 10, 1993 as a limited liability company under Israeli law. The legislative framework within which Compugen Ltd. now operates is the Israeli Companies Law, 5759-1999, as amended, which originally became effective on February 1, 2000, and the Israeli Companies Ordinance (New Version) 1983, as amended. Compugen USA, Inc., our wholly owned subsidiary, was incorporated as a corporation under Delaware law in March 1997 and is qualified to do business in California.

Our principal executive offices are located at 26 Harokmim Street, Holon 5885849, Israel. Our telephone number is +972-3-765-8585 and our website is www.cgen.com. The information on, or accessible through, our website or any other website referenced herein is not incorporated by reference into this prospectus supplement, is not considered a part of this prospectus supplement and should not be relied upon with respect to this offering.

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THE OFFERING

Ordinary shares offered by us: 5,316,457 ordinary shares, par value NIS 0.01 per share, having an aggregate offering price of \$21.0 million.

Warrants to purchase up to 4,253,165 ordinary shares offered in combination with the ordinary shares offered hereby. The warrants will be exercisable beginning six months from the date of issuance and will terminate on the fifth anniversary of the date of issuance.

Warrants offered by us: The exercise price for the warrants will be \$4.74 per whole ordinary share. The exercise price will be subject to certain adjustments as described herein. For more information, see the section entitled “Description of Securities We Are Offering — Warrants” on page S-9 of this prospectus supplement. This prospectus supplement also relates to the offering of the ordinary shares issuable upon exercise of the warrants.

Ordinary shares to be outstanding after this offering: 57,121,527 ordinary shares.

Use of Proceeds: We intend to use the net proceeds from this offering for pre-clinical and clinical development of our product candidates and for other general corporate purposes. See “Use of Proceeds” on page S-8 of this prospectus supplement.

Risk Factors: Investing in our securities involves significant risks. See the information under the heading “Risk Factors” beginning on page S-3 of this prospectus supplement, on page 4 of the accompanying prospectus and in the documents incorporated by reference into this prospectus supplement for a discussion of factors you should carefully consider before deciding to invest in our securities.

Trading markets: Our ordinary shares are traded on the Nasdaq Global Market and on the TASE under the symbol “CGEN.”

The number of ordinary shares to be outstanding immediately after this offering as shown above is based on 51,805,070 ordinary shares outstanding as of March 31, 2018 and excludes the following as of that date:

8,736,810 ordinary shares issuable upon the exercise of outstanding options to purchase ordinary shares, having a weighted average exercise price of \$5.01 per share; and

an aggregate of 1,705,831 ordinary shares issuable and reserved for future grants under the Compugen 2010 Share Incentive Plan.

Unless otherwise indicated, all information contained in this prospectus supplement assumes no exercise of the warrants offered hereby.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks described below as well as those discussed under the section captioned “Item 3. Key Information. Risk Factors” contained in our Annual Report on Form 20-F for the year ended December 31, 2017, as filed with the SEC on March 27, 2018, which is incorporated by reference in the prospectus supplement and the accompanying prospectus, in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated by reference herein and therein, and in any free writing prospectus that we have authorized for use in connection with this offering. The risks and uncertainties previously described and discussed below are not the only ones we face. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any of these risks actually occurs, our business, financial condition, results of operation or cash flow could be adversely affected. This could cause the trading price of our ordinary shares to decline, resulting in a loss of all or part of your investment.

Risks Related to our Securities and this Offering

Our management will have broad discretion in the use of the net proceeds we receive in this offering and might not apply the proceeds in ways that increase the value of your investment.

Our management and board of directors will have broad discretion over the use of our net proceeds from this offering, and you will be relying on their judgment regarding the application of these proceeds, which can be different from that contemplated at the time of this offering. Our management and board of directors might not apply our net proceeds in ways that ultimately increase the value of your investment and we might not be able to yield a significant return, if any, on any investment of these net proceeds. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our products and cause the price of our ordinary shares to decline.

Investors in this offering will experience immediate and substantial dilution.

The public offering price of the ordinary shares and accompanying warrants offered pursuant to this prospectus supplement is higher than the net tangible book value per share of our ordinary shares. Therefore, if you purchase securities in this offering, you will incur immediate and substantial dilution in the net tangible book value per share from the price per share that you pay. If the holders of outstanding options to acquire ordinary shares exercise those options at prices below the public offering price, you will incur further dilution. See the section entitled “Dilution” herein for a more detailed discussion of the dilution associated with this offering.

Because we do not intend to declare cash dividends on our ordinary shares in the foreseeable future, shareholders must rely on appreciation of the value of our ordinary shares for any return on their investment and may not receive any funds without selling their ordinary shares.

We have never declared or paid cash dividends on our ordinary shares and do not anticipate declaring or paying any cash dividends in the foreseeable future. As a result, we expect that only appreciation of the price of our ordinary shares, if any, will provide a return to investors in this offering for the foreseeable future. In addition, because we do not pay cash dividends, if our shareholders want to receive funds in respect of our ordinary shares, they must sell their ordinary shares to do so.

There is no public market for the warrants to purchase our ordinary shares being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the warrants on any national securities exchange or

other nationally recognized trading system, including Nasdaq. Without an active market, the liquidity of the warrants will be limited.

The warrants are speculative in nature. You may not be able to recover your investment in the warrants, and the warrants may expire worthless.

If our ordinary share price does not increase to an amount sufficiently above the applicable exercise price of the warrants during the period the warrants are exercisable, you will be unable to recover any of your investment in the warrants. There can be no assurance that the market price of the ordinary shares will ever equal or exceed the exercise price of the warrants, and consequently, whether it will ever be profitable for holders of the warrants to exercise the warrants.

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Holders of the warrants will have no rights as ordinary shareholders until they acquire our ordinary shares.

Until you acquire our ordinary shares upon exercise of the warrants, you will have no rights with respect to our ordinary shares issuable upon exercise of the warrants, including the right to vote or respond to tender offers. Upon exercise of your warrants, you will be entitled to exercise the rights of an ordinary shareholder only as to matters for which the record date occurs after the exercise date.

Because we received grants from the Israel Innovation Authority (“IIA”), formerly and more commonly known as the Office of the Chief Scientist, we are subject to the Law of Encouragement of Research and Development in the Industry (“R&D Law”), and therefore to ongoing restrictions and conditions, including restrictions on the transfer of know-how that we develop.

We have received research and development grants from the IIA. Therefore, even following full repayment of any IIA grants, and unless otherwise agreed by the applicable authority of the IIA, we must continue to comply with the requirements of the R&D Law. Accordingly, the transfer to third parties of know-how or technologies developed under the programs submitted to the IIA and as to which we received the grants, or of manufacturing or rights to manufacture based on and/or incorporating such know-how to third parties, might require the prior consent of the IIA, as well as payments of increased royalties to the IIA. Although such restrictions do not apply to the sale of the Company’s products developed with such know-how, they may prevent us from engaging in transactions with our affiliates, customers or other third parties outside Israel involving the transfer of such know-how, which might otherwise be beneficial to us.

The transfer of know-how outside of Israel may be approved by the Research Committee operating under the IIA, in its discretion, in special cases, subject to the payment by the Company of certain amounts calculated according to a formula set forth in the R&D Law and regulations promulgated hereunder up to a maximum of six (6) times the total amount of the IIA grants we received plus applicable interest; or three (3) times such total amount, should the R&D activity related to the know-how remain in Israel.

In addition, the R&D Law imposes reporting requirements on us with respect to changes in the ownership of Compugen. Accordingly, we must notify the IIA of any change in control of the Company or the holdings of the “means of control” that result in an Israeli or a non-Israeli becoming an interested party directly in the Company. The R&D Law also requires the new interested party to undertake to comply with the R&D Law. For this purpose, “control” means the ability to direct the activities of a company (other than any ability arising solely from serving as an officer or director of the company), including the holding of 25% or more of the “means of control”, if no other shareholder holds 50% or more of such “means of control.” “Means of control” refer to voting rights or the right to appoint directors or the chief executive officer. An “interested party” of a company includes a holder of 5% or more of its outstanding share capital or voting rights, its chief executive officer and directors, someone who has the right to appoint its chief executive officer or at least one director, and a company with respect to which any of the foregoing interested parties owns 25% or more of the outstanding share capital or voting rights or has the right to appoint 25% or more of the directors.

Furthermore, the R&D Law requires that the manufacture of products which incorporate know-how developed with funds received from the IIA (“IIA Products”) will be carried out in Israel, unless otherwise approved by the IIA. This approval may be subject to various conditions, including the repayment of increased royalties equal to up to three (3) times of the total grant amount received by the Company plus applicable interest and an increase of 1% in the royalty rate. Under the terms of the grants received, we will be required to pay royalties ranging between 3% and 5% of the revenues we generate from our IIA Products until 100% of the amount of the grant is repaid (plus LIBOR interest applicable to grants received on or after January 1, 1999). As of June 15, 2018, we received grants from the IIA in the amount of \$7.3 million. Therefore our contingent obligation for royalties, net of royalties already paid in the sum of \$1 million, along with the accumulated LIBOR interest to date of approximately \$2.9 million, totaled to

approximately \$9.2 million.

In addition to the grants described above, we participated in four MAGNET Consortium programs - Drugs and Diagnostic Kits ("DAAT") Consortium, Tevel Biotechnology Consortium, Pharmalogica Consortium and Rimolim Consortium. Under these programs, we collaborated with other Israeli research institutions and high-technology companies for the purpose of developing generic technologies in the fields of biotechnology, agricultural biotechnology and pharmaceuticals. Each of these programs was sponsored by the IIA, through an annual grant payment to the Consortium members (including us) over the period of each such program. In addition, we participated in three MAGNETON programs, also under the IIA the MAGNET Plans and sponsored by the IIA. The total amount that we received for these three MAGNETON Programs is approximately \$0.5 million. The grants described in this paragraph do not bear any royalty obligations, but as the R&D Law applies to these programs, the restrictions on transfer of know-how or manufacturing outside of Israel, as described above, do apply.

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PRICE RANGE OF OUR SHARES

The following table lists the high and low reported sales price for our ordinary shares, for the periods indicated, on Nasdaq. Our ordinary shares were listed on The Nasdaq Global Market through June 16, 2009. On June 17, 2009, we transferred the listing of our ordinary shares from The Nasdaq Global Market to The Nasdaq Capital Market, and on January 27, 2014 we transferred the listing of our ordinary shares from The Nasdaq Capital Market back to The Nasdaq Global Market:

| Calendar Period | Price Per Share In US\$ | |
|--|-------------------------------|------|
| | High | Low |
| Annual | | |
| 2013 | 11.92 | 4.56 |
| 2014 | 14.32 | 6.27 |
| 2015 | 9.65 | 4.64 |
| 2016 | 7.57 | 4.32 |
| 2017 | 5.40 | 2.25 |
| Fiscal Quarters | | |
| 2016 | | |
| First Quarter | 6.92 | 4.32 |
| Second Quarter | 7.14 | 5.48 |
| Third Quarter | 7.57 | 6.25 |
| Fourth Quarter | 6.80 | 5.05 |
| 2017 | | |
| First Quarter | 5.40 | 4.20 |
| Second Quarter | 5.40 | 3.50 |
| Third Quarter | 4.25 | 2.60 |
| Fourth Quarter | 4.15 | 2.25 |
| 2018 | | |
| First Quarter | 4.73 | 2.43 |
| Second Quarter (through June 14, 2018) | 5.00 | 3.10 |
| Most Recent Six Months | | |
| December 2017 | 2.90 | 2.25 |
| January 2018 | 3.65 | 2.50 |
| February 2018 | 4.15 | 2.43 |
| March 2018 | 4.73 | 3.60 |
| April 2018 | 5.00 | 3.45 |
| May 2018 | 3.98 | 3.10 |
| June 2018 (through June 14, 2018) | 4.05 | 3.50 |

On June 14, 2018, the closing price of our ordinary shares on the Nasdaq Global Market was \$4.00.

The following table lists the high and low reported sales price for our ordinary shares, for the periods indicated, on the Tel Aviv Stock Exchange:

| Calendar Period | Price Per Share In US\$* | |
|--|-----------------------------|------|
| | High | Low |
| Annual | | |
| 2013 | 11.80 | 4.57 |
| 2014 | 13.48 | 6.40 |
| 2015 | 9.66 | 4.59 |
| 2016 | 7.38 | 4.31 |
| 2017 | 5.32 | 2.36 |
| Fiscal Quarters | | |
| 2016 | | |
| First Quarter | 6.93 | 4.31 |
| Second Quarter | 7.29 | 5.51 |
| Third Quarter | 7.38 | 6.30 |
| Fourth Quarter | 6.70 | 5.11 |
| 2017 | | |
| First Quarter | 5.32 | 4.18 |
| Second Quarter | 5.37 | 3.52 |
| Third Quarter | 3.99 | 2.76 |
| Fourth Quarter | 3.95 | 2.36 |
| 2018 | | |
| First Quarter | 4.66 | 2.41 |
| Second Quarter (through June 14, 2018) | 4.66 | 3.13 |
| Most Recent Six Months | | |
| December 2017 | 2.85 | 2.36 |
| January 2018 | 3.26 | 2.52 |
| February 2018 | 3.97 | 2.41 |
| March 2018 | 4.66 | 3.68 |
| April 2018 | 4.66 | 3.54 |
| May 2018 | 3.89 | 3.13 |
| June 2018 (through June 14, 2018) | 4.03 | 3.61 |

On June 14, 2018, the closing price of our ordinary shares on the Tel Aviv Stock Exchange was \$3.97.

* 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.

CAPITALIZATION

The table below sets forth our cash and cash equivalents, restricted cash, short-term bank deposits, and capitalization as of March 31, 2018:

on an actual basis; and

on an as adjusted basis to give effect to this offering (excluding ordinary shares issuable upon exercise of the warrants offered hereby) and the receipt of the net proceeds by us from such offering as described under the “Use of Proceeds.”

The information set forth in the following table should be read in conjunction with, and is qualified in its entirety by, reference to our audited and unaudited financial statements and the notes thereto incorporated by reference into this prospectus supplement and the accompanying prospectus.

| | As of March 31, 2018 | |
|--|-----------------------------------|-------------|
| | As | |
| | Actual | Adjusted |
| | (in thousands, except share data) | |
| Cash and cash equivalents, restricted cash and short-term bank deposits | \$20,531 | \$40,416 |
| Shareholders' equity: | | |
| Ordinary shares, NIS 0.01 nominal value: 100,000,000 ordinary shares authorized; | | |
| 51,805,070 ordinary shares issued and outstanding, actual; | | |
| 57,121,526 ordinary shares issued and outstanding, as adjusted | \$142 | \$157 |
| Additional paid-in capital | 338,401 | 358,271 |
| Accumulated deficit | \$(308,138) | \$(308,138) |
| Total shareholders' equity | \$30,405 | \$50,290 |
| Total capitalization | \$30,405 | \$50,290 |

The number of outstanding ordinary shares set forth above excludes, as of March 31, 2018:

8,736,810 ordinary shares issuable upon the exercise of outstanding options to purchase ordinary shares, having a weighted average exercise price of \$5.01 per share; and

an aggregate of 1,705,831 ordinary shares issuable and reserved for future grants under the Compugen 2010 Share Incentive Plan.

USE OF PROCEEDS

We estimate that the proceeds from this offering of our ordinary shares and warrants will be approximately \$19.9 million, after deducting the placement agent's cash fee and estimated fees and expenses payable by us. The foregoing description of estimated net proceeds does not give effect to the potential exercise of the warrants offered hereby.

We currently expect to use the net proceeds from this offering for pre-clinical and clinical development of our product candidates and for other general corporate purposes. We have not determined the amount of net proceeds to be used specifically for the foregoing purposes. This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development efforts, the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our product candidates, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

Pending use of the net proceeds, we intend to invest any proceeds in a variety of capital preservation instruments, including short-term, investment-grade and interest-bearing instruments.

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DESCRIPTION OF THE SECURITIES WE ARE OFFERING

Ordinary Shares

The material terms and provisions of our ordinary shares are described under the caption “Description of Ordinary Shares” starting on page 7 of the accompanying prospectus. Our ordinary shares are listed on The Nasdaq Global Market and the TASE under the symbol “CGEN.” The transfer agent and registrar for our ordinary shares is American Stock Transfer & Trust Company, LLC.

Warrants

The following is a brief summary of certain terms and conditions of the warrants and is subject in all respects to the provisions contained in the warrants. You should review a copy of the form of ordinary share purchase warrant for a complete description of the terms and conditions applicable to the warrants.

Term

The warrants are exercisable during the period beginning six months from the date of issuance and ending at 5:00 P.M. on June 19, 2023.

Exercise Price

The exercise price of the warrants is \$4.74 per whole ordinary share. The exercise price is subject to appropriate adjustment in the event of certain stock splits, dividends, recapitalizations or similar events affecting our ordinary shares.

Exercisability

Holders may exercise the warrants beginning six months from the date of issuance and at any time during the applicable term of the warrant. The warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a written notice and, within one trading day of delivering such notice, payment shall be made in full for the number of ordinary shares purchased upon such exercise. If there is no effective registration statement registering the issuance and sale of the ordinary shares underlying the warrants, the holder may exercise the warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of ordinary shares determined according to the formula set forth in the warrant.

Exercise Limitation

Holders shall not have the right to exercise the warrant, to the extent that after giving effect to such exercise, such holder, together with such holder’s affiliates and any other persons acting as a group together with the holder or any of the holder’s affiliates, would beneficially own in excess of 4.99% of the ordinary shares outstanding immediately after giving effect to such exercise which limitation may be increased to 9.99% by the holder.

No Fractional Shares

No fractional ordinary shares will be issued upon exercise of the warrants. If there is a fractional share issuable upon exercise, we will, at our election, either pay a cash adjustment or it will be rounded up to the nearest whole share.

Transferability

Subject to applicable laws and the restriction on transfer set forth in the warrant, the warrant may be transferred at the option of the holder upon surrender of the warrant to us together with the appropriate instruments of transfer.

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Authorized Shares

During the period the warrants are outstanding, we will reserve from our authorized and unissued ordinary shares a sufficient number of shares to provide for the issuance of ordinary shares underlying the warrants upon the exercise of the warrants.

Exchange Listing

We do not plan on applying to list the warrants on Nasdaq, the TASE, any other national securities exchange or any other nationally recognized trading system.

Purchase Rights

Subject to certain limitations, if at any time during the period the warrants are outstanding we grant, issue or sell certain of our securities pro rata to the record holders of our ordinary shares, the warrant holders shall be entitled to participate upon the same terms in an amount up to the number of ordinary shares acquirable upon complete exercise of the warrant.

Pro Rata Distributions

Subject to certain limitations, if at any time during the period the warrants are outstanding we declare or make any dividend or other distribution of assets to our ordinary shareholders, the warrant holders shall be entitled to distributions upon the same terms in an amount up to the number of ordinary shares acquirable upon complete exercise of the warrant.

Fundamental Transactions

In the event of any fundamental transaction, as defined in the warrants and generally including any consolidation or merger with or into another entity, the sale of all or substantially all of our assets, tender offer or exchange offer, reorganization or recapitalization through which another entity acquires us, or reclassification of our ordinary shares, then the successor entity in such transaction will assume in writing all of our obligations under the warrant pursuant to written agreements, including an adjusted exercise price equal to the value for the ordinary shares reflected by the terms of such fundamental transaction, and exercisable for a corresponding number of shares of capital stock equivalent to the ordinary shares acquirable and receivable upon exercise of the warrant prior to such fundamental transaction.

Failure to Timely Deliver Securities

If we fail for any reason to deliver to a holder the number of shares of common stock due to the holder pursuant to the holder's written notice on or before the second trading day following receipt of such notice, we will pay to the holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of ordinary shares subject to such exercise, \$10 per trading day (increasing to \$20 per trading day on the fifth trading day after such liquidated damages begin to accrue) for each trading day until such ordinary shares are delivered or the holder rescinds such exercise.

Right as a Stockholder

Except as otherwise provided in the warrants or by virtue of such holder's ownership of our ordinary shares, the holders of the warrants do not have the rights or privileges of holders of our ordinary shares, including any voting rights, until they exercise their warrants.

Waivers and Amendments

Any term of the warrants issued in the offering may be amended or waived with our written consent and the written consent of the holder.

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MATERIAL TAX CONSIDERATIONS

The following is a brief summary of certain material tax consequences concerning the ownership and disposition of our securities by purchasers or holders of our securities. Because parts of this discussion are based on new or existing tax or other legislation that has not been subject to judicial or administrative interpretation, there can be no assurance that the views expressed herein will be accepted by the tax or other authorities in question. The summary below does not address all of the tax consequences that may be relevant to all purchasers or holders of our securities in light of each purchaser's or holder's particular circumstances and specific tax treatment. For example, the summary below does not address the tax treatment of residents of Israel and traders in securities who are subject to specific tax regimes. As individual circumstances may differ, holders of our securities should consult their own tax advisors as to United States, Israeli or other tax consequences of the purchase, ownership and disposition of our securities. This discussion is not intended, nor should it be construed, as legal or professional tax advice and it is not exhaustive of all possible tax considerations. Each individual should consult his or her own tax or legal advisor.

Israeli Taxation

Taxation of Capital Gains Applicable to Non-Israeli Shareholders

Israeli law generally imposes a capital gains tax on the sale of securities of an Israeli company, including securities traded on the TASE, on a recognized stock exchange outside Israel (such as Nasdaq) or on a regulated market (which includes a system through which securities are traded pursuant to rules prescribed by the competent authority in the relevant jurisdiction) in or outside Israel (a "Recognized Exchange"). The capital gains tax rate applicable to individuals upon the sale of such securities is such individual's capital gain tax rate of 25%, or 30% with respect to an individual who meets the definition of a 'Substantial Shareholder' on the date of the sale of the securities or at any time during the 12 months preceding such date. A 'Substantial Shareholder' is defined as a person who, either alone or together with other persons, holds, directly or indirectly, at least 10% of any of the means of control of a company (including, among other things, the right to receive profits of the company, voting rights, the right to receive the company's liquidation proceeds and the right to appoint a director).

Notwithstanding the foregoing, dealers in securities in Israel are taxed at regular tax rates applicable to business income.

With respect to corporate investors, capital gain tax equal to the corporate tax rate (24% in 2017 and 23% starting in 2018) will be imposed on the sale of our traded shares.

In addition, if our ordinary shares are traded on a Recognized Exchange gains on the sale of our ordinary shares held by non-Israeli tax resident investors will generally be exempt from Israeli capital gains tax so long as the shares were not held through a permanent establishment that the non-Israeli tax resident investor maintains in Israel.

However, non-Israeli resident corporations will not be entitled to the foregoing exemption if Israeli residents: (i) hold more than 25% of any of the means of control in such non-Israeli corporation or (ii) are the beneficiaries of, or are entitled to, 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly. In addition, persons paying consideration for shares, including purchasers of shares, Israeli securities dealers effecting a transaction, or a financial institution through which securities being sold are held, are generally required to withhold tax at source upon the sale of publicly traded securities at a rate of 25% for individuals and at the corporate tax rate (24% in 2017 and 23% starting 2018) for corporations. Shareholders may be required to demonstrate that they are exempt from tax on their capital gains by providing a valid certificate from the Israeli Tax Authority allowing for an exemption from withholding tax at source at the time of sale.

Income Taxes on Dividend Distribution to Non-Israeli Shareholders

Non-Israeli residents (whether individuals or corporations) are generally subject to Israeli income tax on the receipt of dividends paid on our ordinary shares at the rate of 25%. With respect to a person who is a Substantial Shareholder at the time of receiving the dividend or on any time during the preceding 12 months, the applicable tax rate is 30%.

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In principle, non-Israeli residents (whether individuals or corporations) are generally subject to Israeli withholding tax on the receipt of dividends paid for publicly traded shares at the rate of 25% and at the rate of 30% on dividends paid to Substantial Shareholders. However, so long as the shares are registered with a Nominee Company, which is a company incorporated to be a holder of record and distribution agent of publicly traded or other securities in accordance with the Israeli Securities Law, the shares are generally subject to Israeli withholding tax at a rate of 25%, unless a different rate is provided under an applicable tax treaty (provided that a certificate from the Israel Tax Authority allowing for a reduced withholding tax rate is obtained in advance).

The distribution of dividends to non-Israeli residents (either individuals or corporations) from income derived from the Company's Approved Enterprises or Benefiting Enterprises during the applicable benefits period is subject to withholding tax at a rate of 20% unless a different tax rate is provided under an applicable tax treaty (provided that a certificate from the Israel Tax Authority allowing for a reduced withholding tax rate is obtained in advance). We cannot assure you that we will designate the profits that we may distribute in a way that will reduce shareholders' tax liability.

A non-resident of Israel who has dividend and/or capital income derived from or accrued in Israel, from which the full amount of tax was withheld, is generally exempt from the duty to file tax returns in Israel in respect of such income, provided that: (i) such income was not derived from a business conducted in Israel by the taxpayer; and (ii) the taxpayer has no other taxable sources of income in Israel with respect to which a tax return is required to be filed.

U.S. Israel Tax Treaty

The Convention between the Government of the State of Israel and the Government of the United States of America With Respect to Taxes on Income (the "Treaty") is generally effective as of January 1, 1995. Under the Treaty, the maximum Israeli withholding tax on dividends paid to a holder of our ordinary shares who is a Treaty U.S. Resident (as defined below) is generally 25%. However, pursuant to the Encouragement of Capital Investments Law 1959 (the "Investment Law"), dividends distributed by an Israeli company and derived from income eligible for benefits under the Investment Law will generally be subject to a reduced withholding tax rate, subject to the conditions specified in the Treaty. The Treaty further provides that a 15% or a 12.5% Israeli withholding tax will apply to dividends paid to a U.S. corporation owning 10% or more of an Israeli company's voting shares during, in general, the year in which the dividends are paid and the preceding tax year of the Israeli company. The 15% rate applies to dividends distributed from income derived from an Approved Enterprise or, presumably, from a Benefiting Enterprise, in each case within the applicable period or, presumably, from a Preferred Enterprise, and the lower 12.5% rate applies to dividends distributed from income derived from other sources. However, these provisions do not apply if the company has certain amounts of passive income.

Pursuant to the Treaty, the sale, exchange or disposition of our ordinary shares by a person who qualifies as a resident of the United States within the meaning of the Treaty and who is entitled to claim the benefits afforded to such residents under the Treaty (a "Treaty U.S. Resident") generally will not be subject to the Israeli capital gains tax unless: (i) such Treaty U.S. Resident holds, directly or indirectly, shares representing 10% or more of the voting power of the Company during any part of the 12-month period preceding such sale, exchange or disposition subject to certain conditions; (ii) the capital gain arising from such sale, exchange or disposition can be attributable to a permanent establishment of the shareholder maintained in Israel, under certain terms; (iii) such U.S. resident is an individual and was present in Israel for a period or periods aggregating to 183 days or more during the relevant taxable year. A sale, exchange or disposition of our ordinary shares by a Treaty U.S. Resident who holds, directly or indirectly, shares representing 10% or more of the voting power of the Company at any time during such preceding 12-month period would not be exempt under the Treaty from such Israeli tax; however, under the Treaty, U.S. Resident would be permitted to claim a credit for such taxes against U.S. federal income tax imposed on any gain from such sale, exchange or disposition, under the circumstances and subject to the limitations specified in the Treaty and U.S. domestic law.

Surcharge Tax

Individuals who are subject to tax in Israel are also currently subject to an additional tax at a rate of 3% on annual income exceeding NIS 640,000 for 2017, and NIS 641,880 for 2018, which amount is linked to the annual change in the Israeli Consumer Price Index.

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Certain Material U.S. Federal Income Tax Consequences

General

The following discussion describes certain material U.S. federal income tax consequences relating to the ownership and disposition of ordinary shares and warrants by U.S. Holders (as defined below). This discussion applies to U.S. Holders that purchase ordinary shares and warrants pursuant to the offering and hold such ordinary shares and warrants as capital assets within the meaning of Section 1221 of the U.S. Internal Revenue Code of 1986, as amended (the “Code”). This discussion is based on the Code, U.S. Treasury regulations promulgated thereunder and administrative and judicial interpretations thereof, all as in effect on the date hereof and all of which are subject to change, possibly with retroactive effect. This discussion does not address all of the U.S. federal income tax consequences that may be relevant to specific U.S. Holders in light of their particular circumstances or to U.S. Holders subject to special treatment under U.S. federal income tax law (such as certain financial institutions, insurance companies, broker-dealers and traders in securities or other persons that generally mark their securities to market for U.S. federal income tax purposes, tax-exempt entities, retirement plans, governmental entities, regulated investment companies, real estate investment trusts, certain former citizens or residents of the United States, persons who hold ordinary shares and warrants as part of a “straddle,” “hedge,” “conversion transaction,” “synthetic security” or integrated investment, persons that have a “functional currency” other than the U.S. dollar, persons that own directly, indirectly or through attribution 10% or more of the voting power or value of our shares, corporations that accumulate earnings to avoid U.S. federal income tax, S corporations, partnerships (or entities or arrangements classified as partnerships for U.S. federal income tax purposes), and other pass-through entities, and investors in such pass-through entities and persons who are subject to Section 451(b) of the Code). This discussion does not address any U.S. state or local or non-U.S. tax consequences or any U.S. federal estate, gift or alternative minimum tax consequences.

As used in this discussion, the term “U.S. Holder” means a beneficial owner of ordinary shares and warrants that is, for U.S. federal income tax purposes, (1) an individual who is a citizen or resident of the United States, (2) a corporation created or organized in or under the laws of the United States, any state thereof, or the District of Columbia, (3) an estate the income of which is subject to U.S. federal income tax regardless of its source or (4) a trust (x) with respect to which a court within the United States is able to exercise primary supervision over its administration and one or more United States persons have the authority to control all of its substantial decisions or (y) that has elected under applicable U.S. Treasury regulations to be treated as a domestic trust for U.S. federal income tax purposes.

If an entity treated as a partnership for U.S. federal income tax purposes holds ordinary shares and warrants, the U.S. federal income tax consequences relating to an investment in the ordinary shares and warrants will depend in part upon the status and activities of such entity and the particular partner. Any such entity (and a partner in any such entity) should consult its own tax advisor regarding the U.S. federal income tax consequences applicable to it and its partners of the purchase, ownership and disposition of ordinary shares and warrants.

We have not sought, nor will we seek, a ruling from the U.S. Internal Revenue Service, or the IRS, with respect to the matters discussed below, nor have we sought, nor will we seek, an opinion from tax counsel. There can be no assurance that the IRS will not take a different position concerning the tax consequences of the purchase, ownership or disposition of the ordinary shares and warrants or that any such position would not be sustained.

THIS SUMMARY OF CERTAIN U.S. FEDERAL INCOME TAX CONSEQUENCES IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. YOU SHOULD CONSULT YOUR TAX ADVISOR WITH RESPECT TO THE APPLICATION OF U.S. FEDERAL INCOME TAX LAWS TO YOUR PARTICULAR SITUATION AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP, AND DISPOSITION OF THE ORDINARY SHARES AND WARRANTS ARISING UNDER U.S. FEDERAL ESTATE OR GIFT TAX RULES OR UNDER THE LAWS OF ANY STATE, LOCAL, NON-U.S. OR ANY OTHER TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

Acquisition of Ordinary Shares and Warrants

The purchase price paid by a U.S. Holder for ordinary shares and warrants will be allocated between the ordinary shares and warrants in proportion to their relative fair market values at the time the securities are purchased by the U.S. Holder. This allocation of the purchase price between ordinary shares and warrants will establish a U.S. Holder's initial tax basis for U.S. federal income tax purposes in each of the ordinary shares and accompanying warrants acquired.

Passive Foreign Investment Company Consequences

In general, a corporation organized outside the United States will be treated as a passive foreign investment company, a "PFIC," for any taxable year in which either (1) at least 75% of its gross income is "passive income", the "PFIC income test", or (2) on average at least 50% of its assets, determined on a quarterly basis, are assets that produce passive income or are held for the production of passive income, the "PFIC asset test." Passive income for this purpose generally includes, among other things, dividends, interest, royalties, rents, and gains from the sale or exchange of property that gives rise to passive income. Assets that produce or are held for the production of passive income generally include cash, even if held as working capital or raised in a public offering, marketable securities, and other assets that may produce passive income. Generally, in determining whether a non-U.S. corporation is a PFIC, a proportionate share of the income and assets of each corporation in which it owns, directly or indirectly, at least a 25% interest (by value) is taken into account.

Our status as a PFIC will depend on the nature and composition of our income and the nature, composition and value of our assets from time to time. The 50% passive asset test described above is generally based on the fair market value of each asset, with the value of goodwill and going concern value determined in large part by reference to the market value of our ordinary shares, which may be volatile. Our status may depend, in part, on how quickly we utilize the cash proceeds from this offering in our business and whether we earn primarily passive income (such as interest income) in the current taxable year or future taxable years. We believe that we were classified as a PFIC for our taxable year that ended December 31, 2017, and we may be classified as a PFIC for our current taxable year. Even if we determine that we are not a PFIC for a taxable year, there can be no assurance that the IRS will agree with our conclusion and that the IRS would not successfully challenge our position. Our U.S. counsel expresses no opinion with respect to our PFIC status in our previous, current or future taxable years.

If we are a PFIC for any taxable year during which a U.S. Holder holds ordinary shares or warrants, the U.S. Holder could be liable for additional taxes and interest charges under the “PFIC excess distribution regime” upon (1) a distribution paid during a taxable year that is greater than 125% of the average annual distributions paid in the three preceding taxable years, or, if shorter, the U.S. Holder’s holding period for the ordinary shares or warrants, and (2) any gain recognized on a sale, exchange or other disposition, including a pledge, of the ordinary shares or warrants, whether or not we continue to be a PFIC. Under the PFIC excess distribution regime, the tax on such distribution or gain would be determined by allocating the distribution or gain ratably over the U.S. Holder’s holding period for ordinary shares or warrants. The amount allocated to the current taxable year (i.e., the year in which the distribution occurs or the gain is recognized) and any year prior to the first taxable year in which we are a PFIC will be taxed as ordinary income earned in the current taxable year. The amount allocated to other taxable years will be taxed at the highest marginal rates in effect for individuals or corporations, as applicable, to ordinary income for each such taxable year, and an interest charge, generally applicable to underpayments of tax, will be added to the tax.

If we are a PFIC for any taxable year during which a U.S. Holder holds ordinary shares or warrants, we must generally continue to be treated as a PFIC by that holder for all succeeding years during which the U.S. Holder holds the ordinary shares or warrants, unless, in the case of ordinary shares, we cease to meet the requirements for PFIC status and the U.S. Holder makes a “deemed sale” election with respect to the ordinary shares. If the election is made, the U.S. Holder will be deemed to sell the ordinary shares it holds at their fair market value on the last day of the last taxable year in which we qualified as a PFIC, and any gain recognized from such deemed sale would be taxed under the PFIC excess distribution regime. After the deemed sale election, the U.S. Holder’s ordinary shares would not be treated as shares of a PFIC unless we subsequently become a PFIC.

If we are a PFIC for any taxable year during which a U.S. Holder holds ordinary shares, warrants or warrant shares and one of our non-U.S. corporate subsidiaries is also a PFIC (i.e., a lower-tier PFIC), such U.S. Holder would be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC and would be taxed under the PFIC excess distribution regime on distributions by the lower-tier PFIC and on gain from the disposition of shares of the lower-tier PFIC even though such U.S. Holder would not receive the proceeds of those distributions or dispositions. Each U.S. Holder is advised to consult its tax advisors regarding the application of the PFIC rules to our non-U.S. subsidiaries.

If we are a PFIC, a U.S. Holder will not be subject to tax under the PFIC excess distribution regime on distributions or gain recognized on ordinary shares if such U.S. Holder makes a valid “mark-to-market” election for our ordinary shares. A mark-to-market election is available to a U.S. Holder only for “marketable stock.” Our ordinary shares will be marketable stock as long as they remain listed on the NASDAQ and are regularly traded, other than in de minimis quantities, on at least 15 days during each calendar quarter. If a mark-to-market election is in effect, a U.S. Holder generally would take into account, as ordinary income each year, the excess of the fair market value of ordinary shares held at the end of such taxable year over the adjusted tax basis of such ordinary shares. The U.S. Holder would also take into account, as an ordinary loss each year, the excess of the adjusted tax basis of such ordinary shares over their fair market value at the end of the taxable year, but only to the extent of the excess of amounts previously included in

income over ordinary losses deducted as a result of the mark-to-market election. The U.S. Holder's tax basis in ordinary shares would be adjusted to reflect any income or loss recognized as a result of the mark-to-market election. Any gain from a sale, exchange or other disposition of ordinary shares in any taxable year in which we are a PFIC would be treated as ordinary income and any loss from such sale, exchange or other disposition would be treated first as ordinary loss (to the extent of any net mark-to-market gains previously included in income) and thereafter as capital loss. Because warrants will not be "marketable stock", a mark-to-market election is not available for warrants.

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A mark-to-market election will not apply to ordinary shares for any taxable year during which we are not a PFIC, but will remain in effect with respect to any subsequent taxable year in which we become a PFIC. Such election will not apply to any non-U.S. subsidiaries that we may organize or acquire in the future. Accordingly, a U.S. Holder may continue to be subject to tax under the PFIC excess distribution regime with respect to any lower-tier PFICs that we may organize or acquire in the future notwithstanding the U.S. Holder's mark-to-market election for the ordinary shares.

Any mark-to-market election made by a U.S. Holder for the ordinary shares will also apply to such U.S. Holder's warrant shares. As a result, if a mark-to-market election has been made by a U.S. Holder with respect to ordinary shares acquired pursuant to this offering, any warrant shares received will automatically be marked-to-market in the year of exercise of the warrant. Because, as described below, a U.S. Holder's holding period for warrant shares includes the period during which such U.S. Holder held the warrants if we are a PFIC with respect to such U.S. Holder, a U.S. Holder will be treated as making a mark-to-market election with respect to its warrant shares after the exercise of the warrant unless the warrant shares are acquired in the same tax year as the year in which the U.S. Holder acquired its ordinary shares and warrants pursuant to this offering. Consequently, the excess distribution regime provisions described above generally will apply to the mark-to market gain realized in the tax year in which warrant shares are received. However, the general mark-to-market rules will apply to subsequent tax years.

Alternatively, a U.S. Holder can make an election (a "QEF Election"), if we provide the necessary information, to treat us and each lower-tier PFIC as a qualified electing fund in the first taxable year we (and our relevant subsidiaries) are treated as a PFIC with respect to the holder. If such election remains in place while we and any lower-tier PFIC subsidiaries are PFICs, we and our subsidiaries will not be treated as PFICs with respect to such U.S. Holder when we cease to be a PFIC. A U.S. Holder must make the QEF Election for each PFIC by attaching a separate properly completed IRS Form 8621 for each PFIC to the holder's timely filed U.S. federal income tax return. There is no assurance that we will provide such information as the IRS may require in order to enable U.S. holders to make the QEF election. Moreover, there is no assurance that we will have timely knowledge of our status as a PFIC in the future.

If a U.S. Holder makes a QEF Election with respect to a PFIC, the holder will be currently taxable on its pro rata share of the PFIC's ordinary earnings and net capital gain (at ordinary income and capital gain rates, respectively) for each taxable year that the entity is classified as a PFIC. If a U.S. Holder makes a QEF Election with respect to us, any distributions paid by us out of our earnings and profits that were previously included in the holder's income under the QEF Election would not be taxable to the holder. A U.S. Holder will increase its tax basis in its ordinary shares by an amount equal to any income included under the QEF Election and will decrease its tax basis by any amount distributed on the ordinary shares that is not included in the holder's income. In addition, a U.S. Holder will recognize capital gain or loss on the disposition of ordinary shares in an amount equal to the difference between the amount realized and the holder's adjusted tax basis in the ordinary shares. U.S. Holders should note that if they make QEF Elections with respect to us and lower-tier PFICs, they may be required to pay U.S. federal income tax with respect to their ordinary shares for any taxable year significantly in excess of any cash distributions received on the ordinary shares for such taxable year. As noted above, however, there is no assurance that we will provide such information as the IRS may require in order to enable U.S. holders to make the QEF election. U.S. Holders should consult their tax advisors regarding making QEF Elections in their particular circumstances.

Each U.S. person that is an investor of a PFIC is generally required to file an annual information return on IRS Form 8621 containing such information as the U.S. Treasury Department may require. The failure to file IRS Form 8621 could result in the imposition of penalties and the extension of the statute of limitations with respect to U.S. federal income tax.

The U.S. federal income tax rules relating to PFICs are very complex. Prospective U.S. investors are strongly urged to consult their own tax advisors with respect to the impact of PFIC status on the purchase, ownership and disposition of

ordinary shares and warrants, the consequences to them of an investment in a PFIC, any elections available with respect to the ordinary shares and warrants and the IRS information reporting obligations with respect to the purchase, ownership and disposition of shares and warrants of a PFIC.

Distributions

Subject to the discussion above under “- Passive Foreign Investment Company Consequences,” a U.S. Holder that receives a distribution with respect to ordinary shares generally will be required to include the gross amount of such distribution (before reduction for any Israeli withholding taxes withheld therefrom) in gross income as a dividend when actually or constructively received to the extent of the U.S. Holder’s pro rata share of our current and/or accumulated earnings and profits (as determined under U.S. federal income tax principles). To the extent a distribution received by a U.S. Holder is not a dividend because it exceeds the U.S. Holder’s pro rata share of our current and accumulated earnings and profits, it will be treated first as a tax-free return of capital and reduce (but not below zero) the adjusted tax basis of the U.S. Holder’s ordinary shares. To the extent the distribution exceeds the adjusted tax basis of the U.S. Holder’s ordinary shares, the remainder will be taxed as capital gain. Because we may not account for our earnings and profits in accordance with U.S. federal income tax principles, U.S. Holders should expect all distributions to be reported to them as dividends. Distributions on ordinary shares that are treated as dividends generally will constitute income from sources outside the United States for foreign tax credit purposes and generally will constitute passive category income. Such dividends will not be eligible for the “dividends received” deduction generally allowed to corporate shareholders with respect to dividends received from U.S. corporations.

Dividends paid by a “qualified foreign corporation” are eligible for taxation at a reduced capital gains rate rather than the marginal tax rates generally applicable to ordinary income provided that certain requirements are met. However, if we are a PFIC for the taxable year in which the dividend is paid or the preceding taxable year (see discussion above under “- Passive Foreign Investment Company Consequences”), we will not be treated as a qualified foreign corporation, and therefore the reduced capital gains tax rate described above will not apply. Each U.S. Holder is advised to consult its tax advisors regarding the availability of the reduced tax rate on dividends with regard to its particular circumstances.

A non-United States corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) generally will be considered to be a qualified foreign corporation (a) if it is eligible for the benefits of a comprehensive tax treaty with the United States which the Secretary of Treasury of the United States determines is satisfactory for purposes of this provision and which includes an exchange of information provision, or (b) with respect to any dividend it pays on ordinary shares that are readily tradable on an established securities market in the United States. We believe that we qualify as a resident of Israel for purposes of, and are eligible for the benefits of, the U.S.-Israel Treaty, although there can be no assurance in this regard. Further, the IRS has determined that the U.S.-Israel Treaty is satisfactory for purposes of the qualified dividend rules and that it includes an exchange of information provision. Therefore, subject to the discussion above under “- Passive Foreign Investment Company Consequences,” if the U.S.-Israel Treaty is applicable, such dividends will generally be “qualified dividend income” in the hands of individual U.S. Holders, provided that certain conditions are met.

As described above under “Description of the Securities We Are Offering – Pro Rata Distributions,” a U.S. Holder may receive a distribution with respect to such U.S. Holder’s warrants. Such distributions would generally be taxable to U.S. Holders, although the taxation of such distributions is unclear. Each U.S. Holder is advised to consult its tax advisors regarding the tax consequences of distributions received with respect to warrants.

Sale, Exchange or Other Disposition of Ordinary Shares

Subject to the discussion above under “- Passive Foreign Investment Company Consequences,” a U.S. Holder generally will recognize capital gain or loss for U.S. federal income tax purposes upon the sale, exchange or other disposition of ordinary shares in an amount equal to the difference, if any, between the amount realized (i.e., the amount of cash plus the fair market value of any property received) on the sale, exchange or other disposition and such U.S. Holder’s adjusted tax basis in the ordinary shares. Such capital gain or loss generally will be long-term capital gain taxable at a reduced rate for non-corporate U.S. Holders or long-term capital loss if, on the date of sale, exchange or other disposition, the ordinary shares were held by the U.S. Holder for more than one year. Any capital gain of a non-corporate U.S. Holder that is not long-term capital gain is taxed at ordinary income rates. The deductibility of capital losses is subject to limitations. Any gain or loss recognized from the sale or other disposition of ordinary shares will generally be gain or loss from sources within the United States for U.S. foreign tax credit purposes.

Exercise and Disposition of Warrants

The following discussion is subject in its entirety to the rules described above under the heading “—Passive Foreign Investment Company Consequences.”

Exercise of Warrants

A U.S. Holder will not recognize gain or loss on the exercise of a warrant and related receipt of warrant shares. A U.S. Holder’s initial tax basis in the warrant shares received on the exercise of a warrant will be equal to the sum of (a) such U.S. Holder’s tax basis in such warrant plus (b) the exercise price paid by such U.S. Holder on the exercise of such warrant. If we are a PFIC, a U.S. Holder’s holding period for the warrant shares received on the exercise of a warrant should begin on the date on which such U.S. Holder acquired its warrants. If we are not a PFIC with respect to

a U.S. Holder, the holding period for the warrant shares received by the U.S. Holder will begin on the date following the date of exercise and will not include the period during which the U.S. Holder held its warrants.

In certain limited circumstances, a U.S. Holder may be permitted to undertake a cashless exercise of warrants into warrant shares. The U.S. federal income tax treatment of a cashless exercise of warrants into warrant shares is unclear, and the tax consequences of a cashless exercise could differ from the consequences upon the exercise of a warrant described in the preceding paragraph. U.S. Holders should consult their own tax advisors regarding the U.S. federal income tax consequences of a cashless exercise of warrants.

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Disposition of Warrants

A U.S. Holder will recognize gain or loss on the sale or other taxable disposition of a warrant in an amount equal to the difference, if any, between (a) the amount of cash plus the fair market value of any property received and (b) such U.S. Holder's tax basis in the warrant sold or otherwise disposed of (as such basis may be adjusted for any actual or constructive distributions in respect of the warrants as described below under "- Certain Adjustments to the Warrants"). Subject to the PFIC rules discussed above, any such gain or loss generally will be a capital gain or loss, which will be long-term capital gain or loss if the warrant is held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

Expiration of Warrants Without Exercise

Upon the lapse or expiration of a warrant, a U.S. Holder will recognize a loss in an amount equal to such U.S. Holder's tax basis in the warrant. Any such loss generally will be a capital loss and will be long-term capital loss if the warrants are held for more than one year. Deductions for capital losses are subject to complex limitations under the Code.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of warrant shares that will be issued on the exercise of the warrants, or an adjustment to the exercise price of the warrants, may be treated as a constructive distribution to a U.S. Holder of the warrants that may be treated as taxable dividends to U.S. Holders to the extent paid out of our current or accumulated earnings and profits, if, and to the extent that, such adjustment has the effect of increasing such U.S. Holder's proportionate interest in our "earnings and profits" or our assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to the shareholders). Adjustments to the exercise price of warrants made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the warrants should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution of cash or other property. (See more detailed discussion of the rules applicable to distributions made by us at "— Distributions" below).

Disposition of Foreign Currency

U.S. Holders are urged to consult their tax advisors regarding the tax consequences of receiving, converting or disposing of any non-U.S. currency received as dividends on ordinary shares or on the sale or retirement of ordinary shares or warrants.

Medicare Tax

Certain U.S. Holders that are individuals, estates or trusts and whose income exceeds certain thresholds generally are subject to a 3.8% tax on all or a portion of their net investment income, which may include their gross dividend income and net gains from the disposition of ordinary shares or warrants. If you are a United States person that is an individual, estate or trust, you are encouraged to consult your tax advisors regarding the applicability of this tax to your income and gains in respect of your investment in ordinary shares and warrants.

Information Reporting and Backup Withholding

U.S. Holders may be required to file certain U.S. information reporting returns with the IRS with respect to an investment in ordinary shares, including, among others, IRS Form 8938 (Statement of Specified Foreign Financial Assets). As described above under "Passive Foreign Investment Company Consequences", each U.S. Holder who is a shareholder of a PFIC must file an annual report containing certain information. U.S. Holders paying more than

\$100,000 for ordinary shares and warrants may be required to file IRS Form 926 (Return by a U.S. Transferor of Property to a Foreign Corporation) reporting this payment. Substantial penalties may be imposed upon a U.S. Holder that fails to comply with the required information reporting.

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Dividends on and proceeds from the sale or other disposition of ordinary shares may be reported to the IRS unless the U.S. Holder establishes a basis for exemption. Backup withholding may apply to amounts subject to reporting if the holder (1) fails to provide an accurate United States taxpayer identification number or otherwise establish a basis for exemption, or (2) is described in certain other categories of persons. However, U.S. Holders that are corporations generally are excluded from these information reporting and backup withholding tax rules. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules generally will be allowed as a refund or a credit against a U.S. Holder's U.S. federal income tax liability if the required information is furnished by the U.S. Holder on a timely basis to the IRS.

U.S. Holders should consult their own tax advisors regarding the backup withholding tax and information reporting rules.

EACH PROSPECTIVE INVESTOR IS URGED TO CONSULT ITS OWN TAX ADVISOR ABOUT THE TAX CONSEQUENCES TO IT OF AN INVESTMENT IN ORDINARY SHARES IN LIGHT OF THE INVESTOR'S OWN CIRCUMSTANCES.

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DILUTION

If you invest in our ordinary shares and warrants in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share and warrant and the as adjusted net tangible book value per ordinary share after this offering. Net tangible book value per ordinary share is calculated by subtracting our total liabilities from our total tangible assets, which is total assets, and dividing this amount by the number of ordinary shares outstanding. Our net tangible book value as of March 31, 2018 was \$30.4 million, or \$0.59 per ordinary share.

After giving effect to the sale of 5,316,457 ordinary shares and accompanying warrants to purchase 4,253,165 ordinary shares in this offering (excluding the proceeds, if any, from the exercise of the warrants issued pursuant to this offering) at the public offering price of \$3.95 per share and warrant, and after deducting fees and other estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2018 would have been approximately \$50.3 million, or \$0.88 per ordinary share. This amount represents an immediate increase in the net tangible book value of \$0.29 per ordinary share to our existing shareholders and an immediate and substantial dilution in net tangible book value of \$3.07 per ordinary share to new investors purchasing ordinary shares and accompanying warrants in this offering. The following table illustrates this per share dilution:

| | |
|---|--------|
| Public offering price per share | \$3.95 |
| Net tangible book value per share as of March 31, 2018 | \$0.59 |
| Increase in net tangible book value per share attributable to new investors | \$0.29 |
| As adjusted net tangible book value per share after this offering | \$0.88 |
| Net dilution per share to new investors in this offering | \$3.07 |

The information above is based on 51,805,070 ordinary shares outstanding as of March 31, 2018, and does not include the following as of March 31, 2018:

8,736,810 ordinary shares issuable upon the exercise of outstanding options to purchase ordinary shares, having a weighted average exercise price of \$5.01 per share; and

an aggregate of 1,705,831 ordinary shares issuable and reserved for future grants under the Compugen 2010 Share Incentive Plan.

To the extent that outstanding options outstanding as of March 31, 2018 have been or may be exercised, investors purchasing our securities in this offering may experience further dilution.

PLAN OF DISTRIBUTION

Pursuant to a placement agency agreement, dated June 14, 2018, we have engaged JMP Securities LLC, or the placement agent, to act as our exclusive placement agent in connection with this offering of our ordinary shares and warrants pursuant to this prospectus supplement and the accompanying prospectus. Under the terms of the placement agency agreement, the placement agent has agreed to be our exclusive placement agent, on a best efforts basis, in connection with the issuance and sale by us of our ordinary shares and warrants. The terms of this offering were subject to market conditions and negotiations between us, the placement agent and the prospective investors. The placement agency agreement does not give rise to any commitment by the placement agent to purchase any of our ordinary shares and warrants, and the placement agent will have no authority to bind us by virtue of the placement agency agreement. The placement agent is not purchasing or selling any ordinary shares or any warrants from us, nor is it required to arrange for the purchase or sale of any specific number or dollar amount of the ordinary shares or warrants.

We will enter into a securities purchase agreement directly with the investors in connection with this offering, and we will only sell to investors who have entered into the securities purchase agreement.

We expect to deliver the ordinary shares and warrants being offered pursuant to this prospectus supplement on or about June 19, 2018.

We have agreed to pay the placement agent a total cash fee equal to 4.5% of the gross proceeds of this offering. We estimate the total expenses payable by us for this offering will be approximately \$145,000, which amount excludes the placement agent's fees.

We have agreed to indemnify the placement agent and specified other persons against certain civil liabilities, including liabilities under the Securities Act of 1933, as amended, or the Securities Act, and the Securities Exchange Act of 1934, as amended, or the Exchange Act, and to contribute to payments that the placement agent may be required to make in respect of such liabilities.

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act and any commissions received by it and any profit realized on the resale of the ordinary shares and warrants sold by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act, and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of ordinary shares by the placement agent acting as principal. Under these rules and regulations, the placement agent:

- may not engage in any stabilization activity in connection with our securities; and

- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

Listing

Our ordinary shares are traded on the Nasdaq Global Market and the Tel Aviv Stock Exchange, or TASE, under the symbol "CGEN." There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on the Nasdaq Global Market or the TASE, or any other securities exchange.

Other Relationships

The placement agent and certain of its affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The placement agent and certain of its affiliates may in the future engage in investment banking and other commercial dealings in the ordinary course of business with us and our affiliates, for which it may in the future receive customary fees, commissions and expenses.

In addition, in the ordinary course of their business activities, the placement agent and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The placement agent and its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

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LEGAL MATTERS

The validity of the warrants and certain legal matters of U.S. securities law relating to this offering will be passed upon for us by Cooley LLP, New York, New York. The validity of the ordinary shares and the warrant shares and certain other legal matters as to Israeli law will be passed upon for us by Shibolet & Co., Tel Aviv, Israel. JMP Securities LLC is being represented in connection with this offering by Goodwin Procter LLP, New York, New York.

EXPERTS

The consolidated financial statements of Compugen Ltd. appearing in the Annual Report (Form 20-F) for the year ended December 31, 2017 and the effectiveness of Compugen Ltd. internal control over financial reporting as of December 31, 2017, as filed with the SEC on March 27, 2018, have been audited by Kost Forer Gabbay & Kasierer, a Member of Ernst & Young Global, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements and the assessment of the effectiveness of internal control over financial reporting as of December 31, 2017 are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

EXPENSES

We estimate that the total expenses of this offering payable by us, excluding commissions and reimbursement of expenses, will be approximately \$145,000 as follows:

| | |
|----------------------------------|-----------|
| Transfer agent fees and expenses | \$2,500 |
| Printer fees and expenses | 3,000 |
| Legal fees and expenses | 110,000 |
| Accounting fees and expenses | 25,000 |
| Miscellaneous | 4,500 |
| Total | \$145,000 |

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form F-3 under the Securities Act with respect to the securities offered by this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus do not contain all the information contained in the registration statement, including its exhibits and schedules. You should refer to the registration statement, including its exhibits and schedules, for additional information. Whenever we make reference in this prospectus supplement to any of our contracts, agreements or other documents, the references are not necessarily complete and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreements or other document.

We are subject to the informational requirements of the Exchange Act applicable to foreign private issuers. We, as a “foreign private issuer,” are exempt from the rules under the Exchange Act prescribing certain disclosure and procedural requirements for proxy solicitations, and our officers, directors and principal shareholders are exempt from the reporting and “short-swing” profit recovery provisions contained in Section 16 of the Exchange Act, with respect to their purchases and sales of ordinary shares. In addition, we are not required to file annual, quarterly and current reports and financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act.

You may read and copy the registration statement, including the related exhibits and schedules, as well as any document we file or furnish with the SEC without charge at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of the documents at prescribed rates by writing to the Public

Reference Section of the SEC at 100 F Street, N.E., Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. You can review our SEC filings and the registration statement by accessing the SEC's website at www.sec.gov.

We also maintain a website at www.cgen.com, through which you can access certain SEC filings. The information on, or accessible through, our website is not incorporated by reference into this prospectus supplement, is not considered a part of this prospectus supplement and should not be relied upon with respect to this offering.

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INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus supplement and the accompanying prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. Each document incorporated by reference is current only as of the date of such document, and the incorporation by reference of such documents shall not create any implication that there has been no change in our affairs since the date thereof or that the information contained therein is current as of any time subsequent to its date. The information incorporated by reference is considered to be part of this prospectus supplement and information we file later with the SEC will automatically update and supersede this information. The documents we are incorporating by reference as of their respective dates of filing are:

• our Annual Report on Form 20-F for the year ended December 31, 2017, filed on March 27, 2018 (File No. 000-30902);

• our Reports on Form 6-K filed on January 31, 2018, February 6, 2018, February 21, 2018, March 14, 2018, April 2, 2018, April 27, 2018, May 9, 2018, May 25, 2018, June 4, 2018 and June 11, 2018; and

• the description of our ordinary shares contained in our Form 8-A filed on August 2, 2000 (File No. 000-30902).

All subsequent annual reports on Form 20-F and all subsequent reports on Form 6-K filed by us, that are identified by us as being incorporated by reference, shall be deemed to be incorporated by reference into this prospectus supplement and deemed to be a part hereof after the date of this prospectus supplement but before the termination of the offering under this prospectus supplement. Unless expressly incorporated by reference, nothing in this prospectus supplement and the accompanying prospectus shall be deemed to incorporate by reference information furnished to, but not filed with, the SEC.

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

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost, by contacting:

Donna Gershowitz
General Counsel
Compugen Ltd.
26 Harokmim Street
Holon 5885849, Israel
Phone: +972-3-765-8585
Fax: +972-3-765-8555

A copy of this prospectus supplement and the accompanying prospectus are available for inspection at our offices at Compugen Ltd. headquarters at 26 Harokmim Street, Holon, Israel and on the Israel Securities Authority’s magna website, www.magna.isa.gov.il.

Prospectus

\$200,000,000
Ordinary Shares
Debt Securities
Rights
Warrants
Units

We may offer and sell from time to time in one or more offerings our ordinary shares, debt securities, rights, warrants and units comprising any combination of these securities having an aggregate offering price up to \$200,000,000.

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.

Our ordinary shares are traded on The NASDAQ Global Market and on the Tel Aviv Stock Exchange under the symbol "CGEN." The closing sale price of our ordinary shares on The NASDAQ Global Market and on the Tel Aviv Stock Exchange on October 10, 2016, was \$6.37 and \$6.32 per share, respectively. The currency in which our stock is traded on the Tel Aviv Stock Exchange is the New Israeli Shekel, or NIS. The above closing price on the Tel Aviv Stock Exchange represents a conversion from NIS to dollar amounts in accordance with the dollar - NIS conversion rate as of October 11, 2016.

AN INVESTMENT IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. SEE THE SECTION ENTITLED "RISK FACTORS" BEGINNING ON PAGE 4.

Neither the Securities and Exchange Commission nor any state or other securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus may not be used to consummate sales of securities unless it is accompanied by a prospectus supplement.

The date of this prospectus is October 11, 2016

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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 SEC, using a “shelf” registration process. Under this shelf registration process, we may from time to time sell ordinary shares, debt securities, rights, warrants or units comprising any combination of these securities, in one or more offerings up to a total dollar amount of \$200,000,000. We have provided to you in this prospectus a general description of the securities we may offer. Each time we sell securities, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of the offering. We may also add, update or change in any accompanying prospectus supplement or any free writing prospectus we may authorize to be delivered to you any of the information contained in this prospectus. To the extent there is a conflict between the information contained in this prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus or any prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement. This prospectus, together with any accompanying prospectus supplement and any free writing prospectus we may authorize to be delivered to you, includes all material information relating to the offering of our securities.

As permitted by the rules and regulations of the SEC, the registration statement, of which this prospectus forms a part, includes additional information not contained in this prospectus. You may read the registration statement and the other reports we file with the SEC at the SEC's web site or at the SEC's offices described below under the heading "Where You Can Find Additional Information."

In this prospectus, unless otherwise stated or the context otherwise requires, references to "Compugen," "the Company," "we," "us", "our" and similar references refer to Compugen Ltd. and our wholly owned subsidiary, Compugen USA, Inc. except where the context otherwise requires or as otherwise indicated.

You should rely only on the information contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or any "free writing prospectus" we may authorize to be delivered to you. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information appearing in this prospectus, any prospectus supplement and the documents incorporated by reference herein and therein are accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates.

Neither this prospectus nor any accompanying prospectus supplement shall constitute an offer or solicitation by anyone in any jurisdiction in which such offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

(i)

PROSPECTUS SUMMARY

This summary highlights only some of the information included or incorporated by reference in this prospectus. You should carefully read this prospectus together with the additional information about us described in the sections entitled “Where You Can Find Additional Information” and “Incorporation of Certain Information by Reference” before purchasing our securities.

Compugen Ltd.

Overview

Compugen is a leading therapeutic discovery company utilizing its broadly applicable predictive discovery infrastructure to identify novel drug targets and develop first-in-class biologics. The Company’s current pipeline primarily consists of early-stage immuno-oncology programs aimed at harnessing the immune system to fight cancer. Our pipeline’s focus is on immune checkpoint target candidates discovered by us, which are predicted to serve as promising drug targets for cancer immunotherapies addressing various cancer types and patient populations, both as monotherapy and in combination with other drugs. Our business model relies on extracting the commercial value of our systematic discovery capability by entering into various forms of revenue-sharing collaborations for our novel drug target candidates and therapeutic product candidates at various stages of research and development. Compugen is headquartered in Holon, Israel, with R&D facilities located in both Holon and South San Francisco. At the U.S. facilities, therapeutic monoclonal antibodies (mAbs) are discovered and developed against our novel drug target candidates.

Predictive Discovery of Novel Targets

The establishment of our broadly applicable discovery approach evolved over a decade of pioneering multidisciplinary research involving in-depth understanding of key biological phenomena combined with the development of superior computational modeling capabilities. This approach, which is constantly enhanced and broadened, has been designed to allow us to focus on a selected biomedical field of research, and to emerge with a set of novel drug targets that otherwise would have been challenging to identify. We employ our discovery approach in multiple therapeutic and diagnostic areas and have demonstrated significant advantages of our methodologies in terms of ability to discover novel target candidates, cost, time and probability of successful experimental validation, in comparison to traditional discovery methods.

Therapeutic/Disease Fields of Focus

Oncology and immunology (autoimmune diseases) are two medical fields with significant unmet medical needs. Biologics, such as mAb and Fc-fusion proteins, have revolutionized patients’ treatment in these two disease areas and have demonstrated substantial clinical benefit and commercial success. Compugen has chosen these two growing disease areas as its focus for its broadly applicable predictive capabilities. Biologics are one of the fastest growing segments in the drug industry and made up 27% of 2014 FDA approvals. Seven of the top ten selling drugs in 2014 were biologics including Humira (adalimumab), the top selling drug in 2014 with sales of \$12.5 billion, Remicade (infliximab) and Rituxan/MabThera (rituximab), all indicated for the treatment of arthritis. Additionally, biologics to treat cancer represented three of the top ten best-selling drugs in 2014, and included Rituxan, Herceptin and Avastin.

For these reasons oncology and autoimmune diseases continue to be disease areas of high interest to pharmaceutical companies with numerous efforts to identify novel therapeutic solutions. Our science-driven predictive capabilities are well suited for the identification of novel target candidates suitable for therapeutic intervention for these complex, multi-factorial diseases. In recent years, we further focused our activities to be mainly in the field of immuno-oncology, an area of high medical promise and industry interest, where the modulation of the immune system

has shown notable clinical success in treating various types of cancer.

Monoclonal Antibody Therapy for Oncology

mAb therapeutics is a class of biological drugs that harnesses the exquisite specificity and potent binding properties of antibodies to create a mono-specific antibody (drug) that binds to the drug target of interest with high specificity and thereby limits the potential for off-target toxicity that is often seen with small molecule drugs. The extremely large repertoire of possible mAb that can be generated means that one can generate highly specific mAb drug candidates that can: a) bind to almost any extracellular or cell surface target protein; b) bind and antagonize the target of interest or c) bind and agonize the target of interest. Due to the versatility and high specificity of this approach, mAb therapies are being intensively researched, developed and commercialized as treatments for numerous serious diseases with the belief that they have the potential to be more effective treatments with fewer side effects compared to traditional small molecule chemical drugs. During the past two decades, mAbs have emerged as an important and rapidly growing drug class, with over 20 mAbs already approved for therapeutic use in the United States for various clinical indications, including oncology, chronic inflammatory diseases, transplantation, infectious diseases and cardiovascular diseases. For cancer therapy, a mAb may inhibit cellular processes critical for tumor growth, stimulate the patient's immune system to attack the target cancerous cells, or be used for targeted delivery of chemotherapy specifically to the cells identified by the antibodies (known ADC technology). Moreover, according to an analysis by Tufts University, the rate of success for mAb therapeutics from first use in humans to regulatory approval is more than double that of traditional small molecule chemical drugs.

Although significant progress has been made in recent years in mAb therapeutics, numerous challenges still remain. One of the main challenges in this extremely promising field of mAb therapeutics is the identification of novel extracellular or cell surface targets that can translate into clinically relevant therapies for a variety of disease indications. To this end, we have developed several proprietary target discovery platforms through focusing on and integration of various aspects of our unique predictive discovery capabilities to identify novel drug targets for mAb therapies. Our Pipeline Program activities are currently focused on mAbs as the therapeutic modality for cancer immunotherapy, with an additional Fc fusion therapeutics program for autoimmune diseases.

Therapeutic Proteins for Immunology

Therapeutic proteins are another type of biological drug, typically a large biological molecule or a fragment derived from a relevant extracellular or cell surface protein and usually engineered and produced by recombinant technologies to have drug-like properties. For example a cell surface or extracellular protein could be engineered to be fused to the Fc domain of an IgG (antibody) protein to provide a longer half-life in the blood. Therapeutic proteins are clinically used to treat a wide range of diseases including cancer, autoimmune diseases, infectious diseases, blood-related disorders and others. CGEN-15001, our lead program for autoimmune diseases, is an Fc fusion protein. This class of therapeutic proteins, known as Fc fusion proteins, has achieved significant clinical and commercial success as exemplified by the anti-rheumatic biologics ENBREL® (etanercept) with sales of about \$8.9 billion in 2014, and ORENCIA® (abatacept) with about \$1.6 billion in sales in 2014.

The Pipeline Program

In order to leverage our capability to predict multiple novel drug targets with each discovery effort, we established our Pipeline Program to allow the parallel target validation and early development of multiple therapeutic candidates based on such targets. Our Pipeline Program currently ranges from target validation to pre-clinical studies in the fields of oncology and immunology, with a primary focus on immuno-oncology. The aim of the Pipeline Program is to advance the validation of Compugen-discovered drug target candidates to generate therapeutic drug candidates against such targets – mainly as mAb therapeutics or to a lesser extent as Fc fusion protein therapeutics - and to further advance selected therapeutic candidates beyond their animal proof of concept stage. The newly discovered target candidates enter the Pipeline Program when they begin experimental evaluation following their in silico prediction and selection and undergo various experimental validation studies to confirm their therapeutic potential. The experimental validation studies are conducted at our facilities, or at external expert laboratories, selected specifically for each

relevant field. This is followed by the generation of a therapeutic product candidate to be used for in vitro and in vivo proof of concept studies in disease animal models, as applicable. Therapeutic Fc fusion proteins or mAb product candidates, either humanized or fully-human, then enter the stage of lead candidate selection and optimization, with a final lead to be advanced to investigational new drug application (IND) enabling studies. For selected therapeutic product candidates we intend to continue development into early clinical development. Our strategy is to partner our novel drug target candidates and their respective therapeutic product candidates in our Pipeline Program will be partnered at different stages of the drug development process, under collaborative and/or licensing arrangements of different types with third parties.

Bayer Collaboration

On August 5, 2013, we and Bayer Pharma AG, or Bayer, entered into a Research and Development Collaboration and License Agreement for the research, development and commercialization of antibody-based therapeutics against two novel Compugen-discovered immune checkpoint regulators, CGEN 15001T and CGEN 15022 (referred to herein as the “Bayer Collaboration”).

Under the terms of the Bayer Collaboration, we received an upfront payment of \$10 million, and we are eligible to receive an aggregate of over \$500 million in potential milestone payments for both programs, not including aggregate pre-clinical milestone payments of up to \$30 million during the research programs. Additionally, we are eligible to receive mid- to high single digit royalties on global net sales of any approved products under the collaboration. In 2014, we achieved the first and second pre-clinical milestones and in 2015 we achieved the third pre-clinical milestone with respect to CGEN-15001T, one of the two immune checkpoint regulators licensed to Bayer, receiving a total of \$15 million in milestone payments for this program. Pursuant to the terms of the Bayer Collaboration, this program was transferred to Bayer’s full control for further preclinical and clinical development activities, and worldwide commercialization under milestone and royalty bearing licenses from Compugen.

Bayer and Compugen are continuing the preclinical research program for CGEN-15022, the second of two checkpoint protein candidates discovered by Compugen that are being developed pursuant to the Agreement. In April 2016, pursuant to an amendment to the Bayer Collaboration, we achieved the first preclinical milestone for CGEN-15022 for which we received a \$400,000 payment. A joint steering committee consisting of representatives from each party is responsible for overseeing and directing the research program pursuant to an agreed upon workplan. Following the completion of this second research program, Bayer will have full control over further pre-clinical and clinical development of any cancer therapeutic product candidates targeting CGEN-15022 and will have worldwide commercialization under milestone and royalty bearing licenses from Compugen.

Bayer may terminate the Bayer Collaboration, either in whole or only with respect to one of the programs, and in each case also on a product-by-product and/or country-by country basis, at any time without cause, upon prior written notice. Either party may also terminate the Bayer Collaboration, either in whole or with respect to only one of the programs, if the other party is in material breach and such breach has not been cured within the applicable cure period. Upon any termination of the Agreement, depending upon the circumstances, the parties have varying rights and obligations with respect to the continued development and commercialization of any products and certain payment and royalty obligations.

Corporate Information

Our legal and commercial name is Compugen Ltd. We were incorporated on February 10, 1993 as an Israeli corporation and operate under the Israel Companies Law, 5759-1999, as amended (the “Companies Law”). Our principal offices are located at 26 Harokmim Street, Holon 5885849, Israel, and our telephone number is +972-3-765-8585. Our web address is www.cgen.com. The information on our website is not incorporated by reference into this prospectus, is not considered a part of this prospectus and should not be relied upon with respect to any offering.

Compugen USA, Inc., our wholly owned subsidiary, was incorporated in Delaware in March 1997 and is qualified to do business in California. This subsidiary did not have any significant operations from 2008 to March 2012.

RISK FACTORS

Investing in our securities may involve a high degree of risk. 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 SEC, 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,” “objective,” “goal,” “intend,” “estimate,” “believe,” “project,” “plan,” “assume” or other similar expressions, or negatives of these 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, anticipated collaborations, 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, including in many cases decisions or actions by third parties, 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 SEC, 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 \$200,000,000. The actual number of securities and 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).

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CAPITALIZATION

The table below sets forth our unaudited capitalization as of June 30, 2016. As of June 30, 2016, we had no indebtedness.

| | As of June 30, 2016 (in thousands, except share and per share data) |
|--|--|
| Shareholder's Equity: | |
| Ordinary Shares, NIS 0.01 nominal value: | |
| 100,000,000 shares authorized and 50,908,454 shares issued and outstanding (1) | 139 |
| Additional paid in capital | 331,538 |
| Accumulated other comprehensive income | 148 |
| Accumulated deficit | (254,692) |
| Total Shareholders' Equity | \$77,133 |

(1) Does not include as of June 30, 2016 outstanding options to purchase a total of 7,490,463 ordinary shares, at a weighted average exercise price of \$5.11 per share.

PRICE RANGE OF OUR ORDINARY SHARES

Our ordinary shares were listed on The NASDAQ Global Market through June 16, 2009. On June 17, 2009, we transferred the listing of our ordinary shares from The NASDAQ Global Market to The NASDAQ Capital Market, and on January 27, 2014 we transferred the listing of our ordinary shares from The NASDAQ Capital Market back to The NASDAQ Global Market. The high and low sales prices per share of our ordinary shares for the periods indicated are set forth below:

| Year Ended | High | Low |
|-------------------|---------|--------|
| December 31, 2011 | \$5.80 | \$3.32 |
| December 31, 2012 | \$6.47 | \$2.96 |
| December 31, 2013 | \$11.92 | \$4.56 |
| December 31, 2014 | \$14.32 | \$6.27 |
| December 31, 2015 | \$9.65 | \$4.64 |

| Quarter Ended | | |
|--------------------|---------|--------|
| March 31, 2014 | \$14.32 | \$8.76 |
| June 30, 2014 | \$11.55 | \$7.58 |
| September 30, 2014 | \$10.02 | \$8.19 |
| December 31, 2014 | \$9.09 | \$6.27 |
| March 31, 2015 | \$9.65 | \$6.92 |
| June 30, 2015 | \$7.98 | \$6.10 |
| September 30, 2015 | \$7.41 | \$4.64 |
| December 31, 2015 | \$7.79 | \$4.91 |
| March 31, 2016 | \$6.92 | \$4.32 |

| | | |
|-------------------|--------|--------|
| June 30, 2016 | \$7.14 | \$5.48 |
| Month Ended | | |
| February 29, 2016 | \$5.03 | \$4.32 |
| March 31, 2016 | \$6.09 | \$4.75 |
| April 30, 2016 | \$7.14 | \$5.48 |
| May 31, 2016 | \$7.13 | \$6.42 |
| June 30, 2016 | \$7.04 | \$6.13 |
| July 31, 2016 | \$6.83 | \$6.36 |

The high and low sales prices per share of our ordinary shares on the Tel Aviv Stock Exchange for the periods indicated are set forth below. The currency in which our stock is traded on the Tel Aviv Stock Exchange is the New Israeli Shekel, or NIS. The below dollar amounts represent a conversion from NIS to dollar amounts in accordance with the dollar NIS conversion rate as of the relevant date.

| Year Ended | High | Low |
|-------------------|---------|--------|
| December 31, 2011 | \$5.92 | \$3.27 |
| December 31, 2012 | \$6.35 | \$3.03 |
| December 31, 2013 | \$11.80 | \$4.57 |
| December 31, 2014 | \$13.48 | \$6.40 |
| December 31, 2015 | \$9.66 | \$4.59 |

| Quarter Ended | | |
|--------------------|---------|--------|
| March 31, 2014 | \$13.48 | \$8.79 |
| June 30, 2014 | \$11.35 | \$7.62 |
| September 30, 2014 | \$9.69 | \$8.29 |
| December 31, 2014 | \$9.07 | \$6.40 |
| March 31, 2015 | \$9.66 | \$7.33 |
| June 30, 2015 | \$7.88 | \$6.16 |
| September 30, 2015 | \$7.20 | \$4.59 |
| December 31, 2015 | \$7.74 | \$5.02 |
| March 31, 2016 | \$6.93 | \$4.31 |
| June 30, 2016 | \$7.29 | \$5.51 |

| Month Ended | | |
|-------------------|--------|--------|
| February 29, 2016 | \$5.09 | \$4.31 |
| March 31, 2016 | \$5.93 | \$4.68 |
| April 30, 2016 | \$7.29 | \$5.51 |
| May 31, 2016 | \$7.14 | \$6.33 |
| June 30, 2016 | \$6.99 | \$6.12 |
| July 31, 2016 | \$6.78 | \$6.38 |

The closing sale price of our ordinary shares on The NASDAQ Global Market and on the Tel Aviv Stock Exchange on October 10, 2016, was \$6.37 and \$6.32 per share, respectively.

REASONS FOR THE OFFER AND USE OF PROCEEDS

We cannot assure you that we will receive any proceeds in connection with securities offered pursuant to this prospectus. Unless otherwise indicated in the applicable prospectus supplement, we intend to use any net proceeds from the sale of securities under this prospectus for our operations and for other general corporate purposes, which may include repayment or refinancing of indebtedness or other corporate borrowings, working capital, intellectual property protection and enforcement, capital expenditures, investments, acquisitions or collaborations, research and development and product development. We may set forth additional information on the use of proceeds from the sale of securities we offer under this prospectus in a prospectus supplement relating to the specific offering. We have not determined the amount of net proceeds to be used specifically for the foregoing purposes. As a result, our management will have broad discretion in the allocation of the net proceeds. Pending use of the net proceeds, we would expect to invest any proceeds in a variety of capital preservation instruments, including short-term, investment grade, interest bearing instruments.

DESCRIPTION OF SECURITIES

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplements, summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below.

We may sell from time to time, in one or more offerings, ordinary shares, debt securities, rights, warrants to purchase ordinary shares and units comprising any combination of these securities.

In this prospectus, we refer to the ordinary shares, debt securities, rights, warrants and units that may be offered by us collectively as “securities.” The total dollar amount of all securities that we may issue under this prospectus will not exceed \$200,000,000.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

DESCRIPTION OF ORDINARY SHARES

Our authorized share capital consists of 100,000,000 ordinary shares, nominal (par) value NIS 0.01 per share. As of August 1, 2016, 50,908,454 ordinary shares were issued and outstanding. Subject to our articles of association (the “Articles”), fully paid ordinary shares of the Company confer on the holders thereof rights to attend and to vote at general meetings of the shareholders. Subject to the rights of holders of shares with limited or preferred rights which may be issued in the future, the ordinary shares of the Company confer upon the holders thereof equal rights to vote, to receive dividends and to participate in the distribution of the assets of the Company upon its winding-up, in proportion to the amount paid up or credited as paid up on account of the nominal value of the shares held by them respectively and in respect of which such dividends are being paid or such distribution is being made, without regard to any premium paid in excess of the nominal value, if any. All outstanding ordinary shares are validly issued and fully paid.

Transfer of Shares

Our ordinary shares which have been fully paid-up are transferable by submission of a proper instrument of transfer together with the certificate of the shares to be transferred and such other evidence of title, as our Board of Directors may require, unless such transfer is prohibited by another instrument or by applicable securities laws.

Dividends

Under the Companies Law, dividends may be distributed only out of profits available for dividends as determined by the Companies Law, provided that there is no reasonable concern that the distribution will prevent the Company from being able to meet its existing and anticipated obligations when they become due. If the company does not meet the profit requirement, a court may nevertheless allow the company to distribute a dividend, as long as the court is convinced that there is no reasonable concern that such distribution will prevent the company from being able to meet its existing and anticipated obligations when they become due. Pursuant to our Articles, no dividend shall be paid other than out of the profits of the Company. Generally, under the Companies Law, the decision to distribute dividends and the amount to be distributed is made by a company’s board of directors.

Our Articles provide that our Board of Directors, may, subject to the Companies Law, from time to time, declare and cause the Company to pay such dividends as may appear to the Board of Directors to be justified by the profits of our

Company. Subject to the rights of the holders of shares with preferential, special or deferred rights that may be authorized in the future, our profits which shall be declared as dividends shall be distributed according to the proportion of the nominal (par) value paid up or credited as paid up on account of the shares held at the date so appointed by the Company and in respect of which such dividend is being paid, without regard to the premium paid in excess of the nominal (par) value, if any. The declaration of dividends does not require shareholders' approval.

To date, we have not declared or distributed any dividend and we do not intend to pay cash dividends on our ordinary shares in the foreseeable future.

Voting Rights

Subject to the provisions of our Articles, holders of ordinary shares have one vote for each ordinary share held by such shareholder of record, on all matters submitted to a vote of shareholders. Shareholders may vote in person, by proxy or by proxy card. Alternatively, shareholders who hold shares through members of the Tel Aviv Stock Exchange may vote electronically via the electronic voting system of the Israel Securities Authority ("Electronic Vote"). 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. As our ordinary shares do not have cumulative voting rights in the election of directors, the holders of the majority of the shares present and voting at a shareholders meeting generally have the power to elect all of our directors, except the external directors whose election requires a special majority.

Liquidation Rights

In the event of our winding up on liquidation or dissolution, subject to applicable law, our assets available for distribution among the shareholders shall be distributed to the holders of ordinary shares in proportion to the amount paid up or credited as paid up on account of the nominal value of the shares held by them respectively and in respect of which such distribution is being made, without regard to any premium paid in excess of the nominal value, if any. This liquidation right may be affected by the grant of limited or preferential rights as to liquidation to the holders of a class of shares that may be authorized in the future.

Redemption Provisions

We may, subject to applicable law and to our Articles, issue redeemable shares and redeem the same upon such terms and conditions as determined by our Board of Directors.

Capital Calls

Under our Articles, the liability of each shareholder for the Company's obligations is limited to the unpaid sum, if any, owing to the Company in consideration for the issuance of the shares held by such shareholder.

Shareholders Meetings and Resolutions

Our Articles provide that our annual general meeting shall be held once in every calendar year at such time (within a period of not more than fifteen months after the last preceding annual general meeting), and place determined by our Board of Directors. Our Board of Directors may, in its discretion, convene additional special shareholders meetings and, pursuant to the Companies Law, must convene a meeting upon the demand of: (a) two directors or one quarter of the directors in office; or (b) the holder or holders of (i) 5% or more of the Company's issued share capital and one percent or more of its voting rights; or (ii) 5% or more of the Company's voting rights. All demands for shareholders meetings must set forth the items to be considered at that meeting.

The chairman of the Board of Directors shall preside as chairman at each of our general meetings. If there is no such chairman, or if the appointed chairman is unwilling to take the chair, or if he shall have indicated in advance that he will not be attending, or if at any meeting such chairman is not present within fifteen (15) minutes after the time fixed for holding the meeting, then those present at the meeting shall choose someone present to be chairman of the meeting. The office of chairman shall not, by itself, entitle the holder thereof to vote at any general meeting nor shall it entitle a second or casting vote.

According to regulations promulgated pursuant to the Companies Law and governing the terms of notice and publication of shareholder meetings of public companies (the “General Meeting Regulations”), holder(s) of one percent or more of the Company’s voting rights may propose any matter appropriate for deliberation at a shareholder meeting to be included on the agenda of a shareholder meeting, generally by submitting a proposal within seven days of publicizing the convening of a shareholder meeting, or, if the Company publishes a preliminary notice at least 21 days prior to publicizing the convening of a meeting, stating its intention to convene such meeting and the agenda thereof, within fourteen days of such preliminary notice. Any such proposal must further comply with the information requirements under applicable law and the Articles. The agenda for a shareholder meeting is determined by the Board of Directors and must include matters in respect of which the convening of a shareholder meeting was demanded and any matter requested to be included by holder(s) of one percent of the Company’s voting rights, as detailed above.

Pursuant to the Companies Law and the General Meeting Regulations shareholder meetings generally require prior notice of not less than 21 days, and not less than 35 days in certain cases. Pursuant to the Articles, we are not required to deliver or serve notice of a general meeting or of any adjournments thereof to any shareholder. However, subject to applicable law and stock exchange rules and regulations, we will publicize the convening of a general meeting in any manner reasonably determined by us, such as posting a notice on the Company's website, filing an appropriate periodic report with the SEC, or publishing on one or more international wire services or in one or more newspapers, and any such publication shall be deemed duly made, given and delivered to all shareholders on the date on which it is first made, posted, filed or published in the manner so determined by us in our sole discretion.

The function of the annual general meeting is to elect directors, receive and consider the profit and loss account, the balance sheet and the ordinary reports and accounts of the directors and auditors, appoint auditors and transact any other business which under our Articles or applicable law may be transacted by the shareholders of the Company in a general meeting.

Pursuant to our Articles, the quorum required for a meeting of shareholders consists of at least two shareholders, present in person, by proxy or by proxy card and holding shares conferring in the aggregate thirty-three and a third percent (33.3%) or more of the voting power of the Company. If within half an hour from the time appointed for the meeting a quorum is not present, the meeting, if convened by the Board of Directors upon the demand of shareholders or upon the demand of less than 50% of the directors then in office or directly by such shareholders or directors, shall be cancelled. Otherwise, if a meeting is otherwise called and no quorum is present within half an hour from the time appointed for such meeting it shall stand adjourned to the same day in the following week at the same time and place or to such other day, time and place as the Board of Directors may determine. At the adjourned meeting, the required quorum consists of any two shareholders present, in person, by proxy, by proxy card or by Electronic Vote.

Generally, under the Companies Law and our Articles, shareholder resolutions are deemed adopted if approved by the holders of a simple majority of the voting rights represented at the meeting, in person, by proxy, by proxy card or by Electronic Vote, and voting on the matter, unless a different majority is required by law or pursuant to the Articles such as a resolution for the voluntary winding up of our Company which requires the approval of holders of 75% of the voting power presented and voting at the meeting.

Change of Control

Merger

Under the Companies Law, a merger is generally required to be approved by the shareholders and board of directors of each of the merging companies. If the share capital of the company that will not be the surviving company is divided into different classes of shares, the approval of each class is also required, unless determined otherwise by the court. Similarly, unless an Israeli court determines otherwise, a merger will not be approved if it is objected to by shareholders holding a majority of the voting rights participating and voting at the meeting (abstentions are disregarded), after excluding the shares held by the other party to the merger, by any person who holds 25% or more of the other party to the merger or by anyone on their behalf, including by the relatives of, or corporations controlled by, these persons. In approving a merger, the board of directors of both merging companies must determine that there is no reasonable concern that, as a result of the merger, the surviving company will not be able to satisfy its obligations to its creditors. Similarly, upon the request of a creditor of either party to the proposed merger, an Israeli court may prevent or delay the merger if it concludes that there exists a reasonable concern that, as a result of the merger, the surviving company will not be able to satisfy the obligations of the merging parties. A court may also issue other instructions for the protection of the creditors' rights in connection with a merger. Further, a merger may not be completed unless at least (i) 50 days have passed from the time that the requisite proposals for the approval of the merger were filed with the Israeli registrar of companies; and (ii) 30 days have passed since the merger was approved by the shareholders of each party.

Special Tender Offer

The Companies Law provides that an acquisition of shares of an Israeli public company must be made by means of a special tender offer if as a result of the acquisition the purchaser would become a holder of 25% or more of the voting rights in the company. This rule does not apply if there is already another holder of 25% or more of the voting rights in the company. 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 would become a holder of more than 45% of the voting rights in the company, if there is no other shareholder of the company who holds more than 45% of the voting rights in the company. These requirements do not apply if the acquisition (i) occurs in the context of a private placement by the company that received shareholder approval, (ii) was from a shareholder holding 25% or more of the voting rights in the company and resulted in the acquirer becoming a holder of 25% or more of the voting rights in the company, or (iii) was from a holder of more than 45% of the voting rights in the company and resulted in the acquirer becoming a holder of more than 45% of the voting rights in the company. A special tender offer may be consummated only if (i) at least 5% of the voting power attached to the company's outstanding shares will be acquired by the offeror and (ii) the number of shares tendered in the offer exceeds the number of shares whose holders objected to the offer (excluding controlling shareholders, holders of 25% or more of the voting rights in the company and any person having a personal interest in the acceptance of the tender offer).

In the event that a special tender offer is made, a company's board of directors is required to express its opinion on the advisability of the offer, or shall abstain from expressing any opinion if it is unable to do so, provided that it gives the reasons for its abstention. An office holder in a target company who, in his or her capacity as an office holder, performs an action the purpose of which is to cause the failure of an existing or foreseeable special tender offer or is to impair the chances of its acceptance, is liable to the potential purchaser and shareholders for damages, unless such office holder acted in good faith and had reasonable grounds to believe he or she was acting for the benefit of the company. However, office holders of the target company may negotiate with the potential purchaser in order to improve the terms of the special tender offer, and may further negotiate with third parties in order to obtain a competing offer.

If a special tender offer is accepted, then shareholders who did not respond to or that had objected the offer may accept the offer within four days of the last day set for the acceptance of the offer. In the event that a special tender offer is accepted, then the purchaser or any person or entity controlling it or under common control with the purchaser or such controlling person or entity may not make a subsequent tender offer for the purchase of shares of the target company and may not enter into a merger with the target company for a period of one year from the date of the offer, unless the purchaser or such person or entity undertook to effect such an offer or merger in the initial special tender offer.

Full Tender Offer

Under the Companies Law, a person may not acquire shares in a public company if, after the acquisition, the acquirer will hold more than 90% of the shares or more than 90% of any class of shares of that company, unless a tender offer is made to purchase all of the shares or all of the shares of the particular class. The Companies Law also generally provides that as long as a shareholder in a public company holds more than 90% of the company's shares or of a class of shares, that shareholder shall be precluded from purchasing any additional shares. In order for all of the shares that the purchaser offered to purchase be transferred to him by operation of law, one of the following needs to have occurred: (i) the shareholders who declined or do not respond to the tender offer hold less than 5% of the company's outstanding share capital or of the relevant class of shares and the majority of offerees who do not have a personal interest in accepting the tender offer accepted the offer, or (ii) the shareholders who declined or do not respond to the tender offer hold less than 2% of the company's outstanding share capital or of the relevant class of shares.

A shareholder that had his or her shares so transferred, whether he or she accepted the tender offer or not, has the right, within six months from the date of acceptance of the tender offer, to petition the court to determine that the tender offer was for less than fair value and that the fair value should be paid as determined by the court. However, the purchaser may provide in its offer that shareholders who accept the tender offer will not be entitled to such rights.

If the conditions set forth above are not met, the purchaser may not acquire additional shares of the company from shareholders who accepted the tender offer to the extent that following such acquisition, the purchaser would own more than 90% of the company's issued and outstanding share capital. The above restrictions apply, in addition to the acquisition of shares, to the acquisition of voting power.

Transfer Agent and Registrar

The transfer agent and registrar for our ordinary shares is American Stock Transfer & Trust Company, LLC.

The NASDAQ Global Market and the Tel Aviv Stock Exchange

Our ordinary shares are listed on The NASDAQ Global Market and the Tel Aviv Stock Exchange under the symbol "CGEN."

Warrants

As of August 1, 2016, we had no warrants outstanding.

Share History

The following is a summary of the history of our share capital for the last three years.

Ordinary Share Issuances

Stock Options. Since January 1, 2013 and through August 1, 2016, we have issued a total of 2,829,724 ordinary shares upon the exercise of stock options.

Cantor Sales Agreement. On August 30, 2011, we entered into a sales agreement with Cantor Fitzgerald & Co. (the "Cantor Sales Agreement"), which enabled us to offer and sell an aggregate of up to 6,000,000 of our ordinary shares, from time to time, through Cantor, as our sales agent. The gross proceeds from all sales made pursuant to the Cantor Sales Agreement could not exceed \$40.0 million in the aggregate. Sales of our ordinary shares under the Cantor Sales Agreement were made in sales deemed to be "at-the-market" equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended. On January 21, 2014, the registration statement on Form F-3 under which we had been selling ordinary shares pursuant to the Cantor Sales Agreement terminated. Between January 1, 2013 and January 21, 2014, we had sold through the Cantor Sales Agreement an aggregate of 2,988,252 ordinary shares, and received gross proceeds of approximately \$24.2 million, before deducting issuance expenses. Cantor received a commission of 3.0% of gross sales in connection with the sale of these ordinary shares.

March 2014 Underwritten Offering. On March 5, 2014, we closed an underwritten public offering of 6,900,000 ordinary shares, including 900,000 shares sold pursuant to the full exercise of the underwriters' option to purchase additional shares, at a price to the public of \$10.50 per share. Gross proceeds were approximately \$72.5 million, before deducting the underwriting discounts and commissions and estimated offering expenses payable by us. Jefferies LLC acted as the sole bookrunner for the offering, and JMP Securities LLC, Oppenheimer & Co. Inc. and Chardan Capital Markets acted as co-managers. The offering was conducted pursuant to our effective shelf registration filed with the SEC on Form F-3 (File No. 333-185910).

Termination and Equity Conversion Agreement with Baize Investments (Israel) Ltd. (“Baize”). On August 20, 2014, we and Baize entered into a Termination and Equity Conversion Agreement pursuant to which the funding arrangement with Baize was terminated and we issued 1,600,000 ordinary shares to Baize.

Authorized Share Capital

There has been no amendment to our authorized share capital since January 1, 2013.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future debt securities we may offer, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. If we so indicate in a prospectus supplement, the terms of any debt securities we offer under that prospectus supplement may differ from the terms we describe below.

We will issue senior notes under a senior indenture that we will enter into with a trustee to be named in the senior indenture. We will issue subordinated notes under a subordinated indenture that we will enter into with a trustee to be named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus forms a part. We will describe changes to the indentures in connection with an offering of debt securities in a prospectus supplement. We use the term “indentures” to refer to both the senior indenture and the subordinated indenture. The indentures will be qualified under the Trust Indenture Act of 1939, or the Trust Indenture Act. We use the term “trustee” to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The following summaries of material provisions of senior notes, subordinated notes and the indentures are subject to, and qualified in their entirety by reference to, the provisions of the indenture applicable to a particular series of debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

If we decide to issue any senior notes or subordinated notes pursuant to this prospectus, we will describe in a prospectus supplement the terms of the series of notes, including the following:

- the title of the notes;
- any limit on the amount that may be issued;
- whether or not we will issue the series of notes in global form, the terms and who the depository will be;
- the maturity date;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

- If the notes are guaranteed the name of the guarantor and a brief outline of the contract of guarantee;
- whether or not the notes will be secured or unsecured, and the terms of any secured debt;
- whether or not the notes will be senior or subordinated;
- the terms of the subordination of any series of subordinated debt;

the terms on which the notes may be convertible into or exchangeable for ordinary shares or other securities of ours, including provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option and provisions pursuant to which the number of ordinary shares or other securities of ours that the holders of the series of debt securities receive would be subject to adjustment;

- the place where payments will be payable and the currency in which the debt is payable;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, and the price at which, we may, at our option, redeem the series of notes pursuant to any optional redemption provisions ;
- the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund provisions or otherwise, to redeem, or at the holder's option to purchase, any series of notes which are not convertible into or exchangeable for our securities;
- whether the indenture will restrict our ability to pay dividends, or will require us to maintain any asset ratios or reserves;
- whether we will be restricted from incurring any additional indebtedness;
- a discussion of any material or special U.S. federal income tax considerations;
- the denominations in which we will issue the series of notes, if other than denominations of \$1,000 and any integral multiple thereof;
- the definition and consequences of events of default under the indentures; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities.

Subordination of Subordinated Notes

Subordinated notes will be unsecured and will be subordinate and junior in priority of payment to certain indebtedness to which we may be subject to the extent described in a prospectus supplement. The subordinated indenture does not limit the amount of subordinated notes that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

Form, Exchange and Transfer

We will issue the notes of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue notes of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, or DTC, or another

depository named by us and identified in a prospectus supplement with respect to that series.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the notes of any series can exchange the notes for other notes of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the notes may present the notes for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the notes that the holder presents for transfer or exchange, we will not require any payment for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any notes. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the notes of each series.

If we elect to redeem the notes of any series, we will not be required to:

- reissue, register the transfer of, or exchange any notes of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any notes that may be selected for redemption and ending at the close of business on the day of the mailing; or

- register the transfer of or exchange any notes so selected for redemption, in whole or in part, except the unredeemed portion of any notes we are redeeming in part.

Consolidation, Merger or Sale

The indentures do not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the notes, as appropriate.

Events of Default Under the Indentures

The following are events of default under the indentures with respect to any series of notes that we may issue:

- if we fail to pay interest when due and our failure continues for 90 days and the time for payment has not been extended or deferred;

- if we fail to pay the principal, or premium, if any, when due and the time for payment has not been extended or delayed;

- if we fail to observe or perform any other covenant contained in the notes or the indentures, other than a covenant specifically relating to another series of notes, and our failure continues for 90 days after we receive notice from the trustee or holders of at least 25% in aggregate principal amount of the outstanding notes of the applicable series; and

- if we experience specified events of bankruptcy, insolvency or reorganization.

If an event of default with respect to notes of any series occurs and is continuing, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding notes of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, or premium, if any, on and accrued interest, if any, on the notes due and payable immediately.

The holders of a majority in principal amount of the outstanding notes of an affected series may waive any default or event of default with respect to the series and its consequences, except uncured defaults or events of default regarding payment of principal, or premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of notes, unless such holders have offered the trustee reasonable indemnity. In such event, the holders of a majority in principal amount of the outstanding notes of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the notes of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and

- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the notes of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies, if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;

- the holders of at least 25% in aggregate principal amount of the outstanding notes of that series have made written request, and such holders have offered reasonable indemnity to the trustee to institute the proceeding as trustee; and

- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding notes of that series other conflicting directions within 60 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of notes if we default in the payment of the principal of, or the premium, if any, or interest on, the notes.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

Discharge

Each indenture provides that we can elect, under specified circumstances, to be discharged from our obligations with respect to one or more series of debt securities, except for obligations to:

- register the transfer or exchange of debt securities of the series;

- replace stolen, lost or mutilated debt securities of the series;

- maintain paying agencies;

- hold monies for payment in trust;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Modification of Indenture; Waiver

We and the trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; or
- to change anything that does not materially adversely affect the interests of any holder of notes or any series.

In addition, under the indentures, we and the trustee may change the rights of holders of a series of notes with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding notes of each series that is affected. However, we and the trustee may only make the following changes with the consent of each holder of any outstanding notes affected:

- extending the fixed maturity of the series of notes;
- reducing the principal amount, the rate of interest or any premium payable upon the redemption of any notes; or
- reducing the minimum percentage of notes, the holders of which are required to consent to any amendment.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care and skill as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given to it by the indentures at the request of any holder of notes unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any notes on any interest payment date to the person in whose name the notes, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest payment.

We will pay principal of and any premium and interest on the notes of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check which we will mail to the holder. Unless we otherwise indicate in a prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to notes of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the notes of a particular series. We will maintain a paying agent in each place of payment for the

notes of a particular series.

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All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any notes which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the security thereafter may look only to us for payment thereof.

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 Israeli and U.S. 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.

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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 ordinary shares. 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 of ordinary shares 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, debt securities, rights, warrants or any combination of such securities. The applicable prospectus supplement will describe:

- the terms of the units and of the ordinary shares, debt securities, 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 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, 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 transactions 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 Israel and 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, SEC 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.

LEGAL MATTERS

Certain legal matters with respect to the legality of the issuance of the ordinary shares offered by this prospectus will be passed upon for us by Shibolet & Co.

EXPERTS

The consolidated financial statements of Compugen Ltd. appearing in the Annual Report on Form 20-F for the year ended December 31, 2015 and the effectiveness of Compugen Ltd. internal control over financial reporting as of December 31, 2015, as filed with the SEC on March 7, 2016, have been audited by Kost Forer Gabbay & Kasierer (a Member of Ernst & Young Global), independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports pertaining to such consolidated financial statements and the effectiveness of Compugen Ltd. internal control over financial reporting as of the respective dates, given on the authority of such firm

as experts in accounting and auditing. The address of Kost Forer Gabbay & Kasierer is 3 Aminadav St., Tel-Aviv, Israel 6706703.

EXPENSES

The following are the estimated expenses related to the filing of the registration statement of which this prospectus forms a part, all of which will be paid by us. 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.

| | |
|-------------------------------|----------|
| SEC registration fee | \$20,140 |
| FINRA review | 30,500 |
| Legal fees and expenses* | 22,000 |
| Accounting fees and expenses* | 9,000 |
| Miscellaneous* | 3,360 |
| Total* | \$85,000 |

*Estimated

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus and information we file later with the SEC will automatically update and supersede this information. The documents we are incorporating by reference as of their respective dates of filing are:

- Annual Report on Form 20-F for the year ended December 31, 2015, filed on March 7, 2016 (File No. 000-30902);

- Reports on Form 6-K filed on March 8, 2016, April 18, 2016, April 20, 2016, May 10, 2016, June 22, 2016, August 2, 2016 and August 9, 2016 (File Nos. 000-30902); and

- the description of our ordinary shares contained in our Form 8-A filed on August 2, 2000 (File No. 000-30902), as updated and amended by the disclosure contained under “Description of Ordinary Shares” in this registration statement on Form F-3.

All subsequent annual reports on Form 20-F, Form 40-F or Form 10-K filed by us, all subsequent filings on Forms 10-Q and 8-K filed by us, and all subsequent reports on Form 6-K filed by us that are identified by us as being incorporated by reference shall be deemed to be incorporated by reference into this prospectus and deemed to be a part hereof after the date of this prospectus but before the termination of the offering by this prospectus.

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

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost, by contacting:

Donna Gershowitz
General Counsel
Compugen Ltd.
26 Harokmim Street
Holon 5885849, Israel
Phone: +972-3-765-8585
Fax: +972-3-765-8555

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of a registration statement on Form F-3 that we filed with the SEC relating to the securities offered by this prospectus, which includes additional information. You should refer to the registration statement and its exhibits for additional information. Whenever we make reference in this prospectus to any of our contracts, agreements or other documents, the references are not necessarily complete and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreements or other document.

We are subject to the informational requirements of the Exchange Act applicable to foreign private issuers. We, as a “foreign private issuer,” are exempt from the rules under the Exchange Act prescribing certain disclosure and procedural requirements for proxy solicitations, and our officers, directors and principal shareholders are exempt from the reporting and “short-swing” profit recovery provisions contained in Section 16 of the Exchange Act, with respect to their purchases and sales of shares. In addition, we are not required to file annual, quarterly and current reports and financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act.

You may read and copy any materials we file or furnish with the SEC at the SEC’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room. You can review our SEC filings and the registration statement by accessing the SEC’s internet site at <http://www.sec.gov>.

We also maintain a website at www.cgen.com, through which you can access certain SEC filings. The information set forth on our website is not part of this prospectus.

ENFORCEABILITY OF CIVIL LIABILITIES

We are incorporated under the laws of the State of Israel. Service of process upon us and upon our directors and officers, almost all of whom reside outside the United States, may be difficult to obtain within the United States. Furthermore, because the majority of our assets and investments, and almost all of our directors and officers are located outside the United States, any judgment obtained in the United States against us or any of them may not be collectible within the United States.

Additionally, it may be difficult to assert U.S. securities law claims in original actions instituted in Israel. Israeli courts may refuse to hear a claim based on an alleged violation of U.S. securities laws because Israel is not the most appropriate forum to bring such a claim. In addition, even if an Israeli court agrees to hear such a claim, it may determine that Israeli law and not U.S. law is applicable to the claim. If U.S. law is found to be applicable, the content of applicable U.S. law must be proved as a fact which can be a time-consuming and costly process. Certain matters of procedure will also be governed by Israeli law. There is little binding case law in Israel that addresses the matters described above.

Subject to specified time limitations and legal procedures, Israeli courts may enforce a United States judgment in a civil matter which, subject to certain exceptions, is non-appealable, including judgments based upon the civil liability provisions of the Securities Act and the Exchange Act and including a monetary or compensatory judgment in a non-civil matter, provided that among other things:

- the judgments are obtained after due process before a court of competent jurisdiction, according to the laws of the state in which the judgment is given and the rules of private international law currently prevailing in Israel;

- the prevailing law of the foreign state in which the judgments were rendered allows for the enforcement of judgments of Israeli courts;

- adequate service of process has been effected and the defendant has had a reasonable opportunity to be heard and to present his or her evidence;

- the judgments are not contrary to public policy of Israel, and the enforcement of the civil liabilities set forth in the judgment is not likely to impair the security or sovereignty of Israel;

- the judgments were not obtained by fraud and do not conflict with any other valid judgments in the same matter between the same parties;

- an action between the same parties in the same matter is not pending in any Israeli court at the time the lawsuit is instituted in the foreign court;

- the judgment is not subject to any further appeal procedures; and

- the judgment is enforceable according to the laws of Israel and according to the law of the foreign state in which the relief was granted.

Generally, an Israeli court will not enforce a foreign judgment if the motion for enforcement was filed more than five years after the date of its award in the United States, unless Israel and the United States have agreed otherwise on a different period, or if an Israeli court finds exceptional reasons justifying the delay.

If a foreign judgment is enforced by an Israeli court, it generally will be payable in Israeli currency, which can then be converted into non-Israeli currency and transferred out of Israel. The usual practice in an action before an Israeli court to recover an amount in a non-Israeli currency is for the Israeli court to issue a judgment for the equivalent amount in Israeli currency at the rate of exchange in force on the date of the judgment, but the judgment debtor may make payment in foreign currency. Pending collection, the amount of the judgment of an Israeli court stated in Israeli currency ordinarily will be linked to the Israeli consumer price index plus interest at the annual statutory rate set by Israeli regulations prevailing at the time. Judgment creditors must bear the risk of unfavorable exchange rates.

INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

5,316,457 Ordinary Shares

Warrants to Purchase up to 4,253,165 Ordinary Shares

PROSPECTUS SUPPLEMENT

June 14, 2018

JMP Securities
