Bioblast Pharma Ltd. Form F-1/A March 16, 2017

As filed with the Securities and Exchange Commission on March 15, 2017

Registration No. 333-216238

### UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Amendment No. 1

to

Form F-1

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

### Bioblast Pharma Ltd.

(Exact name of registrant as specified in its charter)

State of Israel 2834 Not Applicable (State or other jurisdiction of (Primary Standard Industrial (I.R.S. Employer

incorporation or organization) Classification Code Number) Identification Number)

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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date hereof.

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

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

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

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

Barnea & Co.

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

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

#### PRELIMINARY PROSPECTUS SUBJECT TO COMPLETION DATED MARCH 15, 2017

### **11,627,907 Ordinary Shares**

We are offering up to 11,627,907 of our Ordinary Shares, par value NIS 0.01, or Ordinary Shares, in a firm commitment underwritten public offering. Our Ordinary Shares are listed on the NASDAQ Global Market under the symbol "ORPN." The closing price of our Ordinary Shares on the NASDAQ Global Market, on March 14, 2017, was \$0.86 per Ordinary Share. The actual offering price per Ordinary Share will be as determined between us and the underwriters at the time of pricing, and may be at a discount to the current market price. We are offering all of the Ordinary Shares offered by this prospectus.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and are subject to reduced public company reporting requirements.

Investing in our Ordinary Shares involves a high degree of risk. See "Risk Factors" beginning on page 8 of this prospectus for a discussion of information that should be carefully considered in connection with an investment in our Ordinary Shares.

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

	Per	Total	
	Share	Total	
Public offering price	\$	\$	
Underwriting discounts and commissions (1)	\$	\$	
Proceeds to us (before expenses)	\$	\$	

(1) H.C. Wainwright & Co., LLC, or H.C. Wainwright, the representative of the underwriters, will receive compensation in addition to the underwriting discounts and commissions upon the closing of this offering. See the heading entitled "Underwriting" on page 114 of this prospectus for additional disclosure regarding compensation and expenses to H.C. Wainwright and the underwriters payable by us.

We have granted the underwriters an option, exercisable one or more times in whole or in part, to purchase up to 1,744,186 additional Ordinary Shares from us at the public offering price, less the underwriting discounts and commissions, within 45 days from the date of this prospectus to cover over-allotments, if any. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable will be \$590,000, and the total proceeds to us, before expenses, will be \$10,910,000.

The underwriters expect to deliver the Ordinary Shares to purchasers in the offering on or about , 2017.

### H.C. Wainwright & Co.

The date of this prospectus is , 2017

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You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with information that is different. We are offering to sell our Ordinary Shares, and seeking offers to buy our Ordinary Shares, only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus or any such free writing prospectus, regardless of the time of delivery or the time of any sale of our Ordinary Shares.

For investors outside the United States: neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus outside of the United States.

In this prospectus, "we," "us," "our," the "Company" and "Bioblast" refer to Bioblast Pharma Ltd. and its wholly owned subsidiary, Bio Blast Pharma, Inc., a Delaware corporation.

In this prospectus, the term "Trehalose IV" refers to trehalose 90mg/mL intravenous solution, our current product candidate. In the past we have also referred to "Trehalose" (including all varying dosages) as "Cabaletta".

Our reporting currency and functional currency is the U.S. dollar. Unless otherwise expressly stated or the context otherwise requires, references in this prospectus to "dollars" or "\$" mean U.S. dollars.

### PROSPECTUS SUMMARY

The items in the following summary are described in more detail later in this prospectus. This summary provides an overview of selected information and does not contain all of the information you should consider before buying our Ordinary Shares. Therefore, you should read the entire prospectus carefully, especially the "Risk Factors" section beginning on page 8 and our financial statements and the related notes appearing at the end of this prospectus before deciding to invest in our Ordinary Shares.

### THE COMPANY

#### Overview

We are a clinical stage biotechnology company committed to developing meaningful therapies for patients with rare and ultra-rare genetic diseases. Currently our focus is on trehalose, a therapeutic platform that offers potential solutions for several diseases that share a common pathophysiological mechanism, which are the functional changes that accompany a particular syndrome or disease. Since our inception in 2012, our work with trehalose has centered around oculopharyngeal muscular dystrophy, or OPMD, and Spinocerebellar Ataxia Type 3, or SCA3. We address diseases with severe and debilitating manifestations, where the unmet medical need is clear, the biological mechanism of action is understood, and for which there is no satisfactory treatment.

#### Trehalose IV Solution

Trehalose is a protein stabilizer and an autophagy enhancer that activates lysosomal pathways. We have developed a proprietary high dose, trehalose 90mg/mL intravenous, or Trehalose IV, solution that allows trehalose to reach target organs and facilitate tissue penetration to the brain and muscles. Mutant unstable cellular proteins are the cause of several protein aggregation genetic diseases known as PolyA/PolyQ diseases, including OPMD, where mutant protein aggregates in muscle, and in SCA3 where mutant protein aggregates in the brain. These pathological proteins aggregate within cells and cell nuclei, eventually leading to cell death. Data from the literature and from our nonclinical studies in both cell and animal models of disease indicate that trehalose may have the potential to prevent mutant protein aggregation and to enhance autophagy in human diseases, by stabilizing proteins, reducing the formation of protein aggregates, and promoting clearance of abnormal proteins or other storage materials thereby preventing cell death.

Drug Candidate - Overview and Development Plan

Our current product candidate, the Trehalose IV solution, has been developed internally. Our strategy is to retain global commercialization rights to our product to maximize long-term value. Over time, we may decide to build our own commercial organization in the United States, which we believe would be of modest size due to the relatively small number of specialists who treat patients with rare and ultra-rare diseases. We will consider partnership arrangements that may accelerate product development and facilitate access to international market opportunities.

The diseases which we are addressing have severe consequences on patients' health, quality of life and potential life expectancy. In addition, these diseases create significant burdens on patients' families and caretakers as well as on public health resources. In all diseases we are addressing, patients either cannot be offered an alternative therapy or the current solutions are inadequate in their abilities to alter the course of the disease. We believe that prompt and efficient drug development can be of substantial benefit to the patients who are suffering from these incurable diseases. We have assembled an experienced team of employees, consultants, service providers and a Board of Directors with extensive drug development and commercialization capabilities, particularly in the orphan drug area.

Trehalose IV Solution for the Treatment of OPMD

Trehalose IV solution is our proprietary drug candidate for the treatment of OPMD, an ultra-rare, inherited myopathy. OPMD is a muscle disease caused by a primary defect in muscle cells as a result of aggregation of a protein called PABPN1. Overall worldwide prevalence of OPMD is estimated at 1:100,000. Characteristically to genetic diseases with autosomal inheritance, there are documented clusters of higher prevalence, for example, in people of French Canadian origin residing in Quebec, Canada, among Hispanics in Northern New Mexico, USA, and Bukhara Jews in Israel. The prevalence data collected suggest that the prevalence is approximately 1:1,000 patients among French Canadian, approximately 12:100,000 patients among Hispanics of Northern New Mexico, and approximately 1:600 patients among Bukhara Jews in Israel. We estimate that there are about 4,300 patients in the United States and Canada and overall about 12,000 patients around the world.

OPMD is characterized by progressive muscle weakness that leads to development of symptoms including ptosis (dropping of eyelids), dysphagia (difficulty in swallowing) and proximal muscle weakness. As the dysphagia becomes more severe, patients may suffer from repeated incidents of aspiration pneumonia, may become malnourished (cachexia), and may develop tongue atrophy and speech difficulties (dysphonia). OPMD is caused by a genetic mutation responsible for the creation of a mutant protein (PABPN1) with an expanded polyalanine domain that aggregates within patient muscle cells. OPMD is one of a larger group of diseases called tri-nucleotide repeat diseases that are associated with the presence of an abnormal cellular protein that aggregates in the cells eventually causing cell death. In OPMD, the mutant protein PABPN1 was found to be correlated with disease severity in animal models and was identified within the typical cellular protein aggregates-the intranuclear inclusion body (INI) that is the diagnostic hallmark of the disease.

There is no drug therapy or, to our knowledge, potential cure for OPMD. Current therapeutic strategies are confined to interventions and surgical procedures that have limited efficacy and may need to be repeated while the progressive loss of muscle contractility continues relentlessly.

Trehalose IV Solution for the Treatment of SCA3

SCA3, also known as Machado Joseph disease, a dominantly inherited ataxia, is the most common of the cerebellar ataxias, and is one of a group of genetic diseases that are characterized by memory deficits, spasticity, difficulty with speech and swallowing, weakness in arms and other muscular disorders. The prevalence of SCA3 is conservatively estimated at approximately 3-4 cases per 100,000 people in North America and Europe. The prevalence of the disease is highest among people of Portuguese/Azorean descent. For example, among immigrants of Portuguese ancestry in New England, the prevalence is approximately one in 4,000, and the highest prevalence in the world, about one in 140, occurs on the small Azorean island of Flores. There is no medical treatment for SCA3 and current approaches are focused on alleviating disease symptoms and supportive care.

In most individuals with SCA3, symptoms typically begin in the third to fifth decade of life but can start as early as young childhood or as late as 70 years of age. Eventually SCA3 leads to paralysis, and severe cases can lead to an early death in the fourth decade of life. SCA3 is incurable, and there is currently no approved treatment for the disease. Natural history studies indicate that death occurs, on average, 21 years after diagnosis. SCA3 is caused by a mutation in the DNA that leads to the creation of a pathological protein called ataxin 3. In affected patients, ataxin 3 is unstable, aggregates within the cells, and eventually leads to cell death.

Multiple reported studies in cell models have shown that trehalose, both as an anti-mutant protein aggregation agent and as an autophagy enhancer, is able to reduce protein aggregates and improve cell survival in several spinocerebellar ataxias including SCA3 cells. We have conducted animal studies in two disease models of SCA3, demonstrating that we have found that treatment with trehalose reduced the level of the pathological protein in nerve cells and reduced

the disease symptoms in animal models. In 2015, we announced positive *in vivo* proof of concept results of our Trehalose IV solution for SCA3 in these two different mouse models of the disease.

Trehalose IV Solution Next Steps

During 2016, we initiated a prospective natural history of disease study for OPMD conducted at the Sherbrooke University in Canada. As part of the study, retrospective data from more than 300 patients was reviewed and a longitudinal data collection is expected to begin in 2017 to document the natural progression of the disease over time including, age of onset, age at diagnosis, mutation size and symptoms. Based on preliminary analysis of retrospective data collected, 96.6% of patients in the cohort experienced dysphagia as one of their symptoms.

During 2017, and subject to regulatory approval, we anticipate initiating a multicenter 24 week, double-blind placebo-controlled Phase 2b trial with our Trehalose IV solution in OPMD. We plan to enroll 48 patients and randomize them in a 1:1 ratio. The study is designed to assess safety and tolerability as well as explore whether our Trehalose IV solution could improve or prevent worsening of OPMD disease markers.

Based on the mechanism of action of trehalose and nonclinical and clinical findings, we believe that this drug platform has the potential to treat several PolyA/PolyQ diseases, protein aggregation diseases, lysosomal storage diseases and certain hepatic diseases. As such, during 2017 we plan to initiate our Trehalose IV solution diversification program and clinically test our Trehalose IV solution in one or more other diseases. During 2017 we will also continue to pursue pre-commercial activities for our Trehalose IV solution in OPMD.

### **Our Approach**

Our approach is to develop our Trehalose IV solution as a first-in-class therapy for orphan-designated genetic diseases with high unmet needs where the mechanism of action involves prevention of protein aggregation, activation of autophagy or lysosomal pathways, and where there is involvement of the brain and/or muscle. We focus on diseases where there is proof of concept for trehalose in disease models. The main components of our business strategy include the following:

Focus on rare and ultra-rare diseases with significant unmet medical need. There are numerous rare and ultra-rare metabolic genetic diseases that currently have no approved drug therapy. Some such diseases have drugs currently in development. Patients suffering from these diseases often have a high unmet medical need with significant morbidity and/or mortality. We are focused on developing and commercializing therapies for multiple indications with our current focus on genetic diseases with high unmet needs characterized by protein aggregation or abnormal storage of metabolites, including neuromuscular diseases and lysosomal storage diseases with a neurologic or muscle involvement:

Focus on diseases and therapies with clear mechanisms of action. We focus on diseases that have biology and root causes that are well understood. We believe that developing drugs that directly impact known disease pathways will increase the probability of success of our development programs;

Develop and selectively commercialize our Trehalose IV solution for multiple indications. Development of multiple programs based on one compound has the potential to generate development and commercial efficiencies as well as multiple market opportunities and reduced risk; and

Focus on excellent and efficient clinical and regulatory execution. We believe that building a successful and sustainable rare disease-focused company requires very specific expertise in the areas of patient identification, clinical trial design and conduct, and regulatory strategy. We have assembled a team with both a successful track record in managing global clinical development activities in an efficient manner, and with multinational experience in obtaining regulatory approvals for rare disease products.

#### **Risks Associated with Our Business**

Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled "Risk Factors" immediately following this prospectus summary. These are not the only risks we face. These risks include, among others:

our ability to continue as a going concern;

we are in Phase 2 development of Trehalose IV, which is the only product candidate that we currently pursue. It may be several years, if ever, before it or any other product candidate we pursue is approved for commercialization;

we are a development-stage biotechnological company and have a limited operating history on which to assess our business, have incurred significant losses since our inception, and anticipate that we will continue to incur significant losses for the foreseeable future;

even if this offering is successful, we expect that we will need to raise additional funding before we can expect to become profitable from sales of our products;

we are heavily dependent upon the success of Trehalose IV, which is in the early stages of clinical development, and we cannot provide any assurance that it will receive regulatory approval;

we may find it difficult to enroll patients in our clinical trials, in particular with respect to Trehalose IV and any future product candidates that we may pursue, which could delay or prevent clinical trials of Trehalose IV and any future product candidates we may develop and potentially harm our business;

even if we are able to obtain regulatory approval to sell Trehalose IV, because the target patient populations of our current and any future product candidates is small, we must be able to successfully identify patients and achieve a significant market share to maintain profitability and growth;

we do not have any products approved for sale by the U.S. Food and Drug Administration, or the FDA, or any other regulatory bodies, with such approval being a prerequisite to the sale of a new drug product in the United States;

the insurance coverage and reimbursement status of newly-approved orphan products is uncertain and failure to obtain or maintain adequate coverage and reimbursement for current and/or future product candidates could limit our ability to market this product and decrease our ability to generate revenue;

- if we are unable to obtain and maintain effective intellectual property rights for our technology, product candidates, or any future product candidates, we may not be able to compete effectively in our markets;
  - our ability to regain and effectively comply with NASDAQ listing requirements including minimum stockholders' equity and minimum bid price of \$1.00 per share; and

our future success depends in part upon our ability to retain our executive team, particularly Mr. Fredric Price, and to attract, retain, and motivate other qualified personnel.

### **Corporate Information**

We are an Israeli corporation based in Tel Aviv and were incorporated on January 22, 2012. Our principal executive offices are located at 37 Dereh Menachem Begin St., Tel Aviv 6522042, Israel, and our telephone number is: +972-722409060. Our website address is https://bioblastpharma.com, the contents of which are not a part of this prospectus and is included as an inactive textual reference.

# Implications of being an "Emerging Growth Company"

We are an "emerging growth company," as defined in Section 2(a) of the Securities Act of 1933, as amended, or the Securities Act, as modified by the JOBS Act. As such, we are eligible to, and intend to, take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not "emerging growth companies" such as the exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002. We could remain an "emerging growth company" for up to five years from the date of our initial public offering in July 2014, or until the earliest of (a) the last day of the first fiscal year in which our annual

gross revenue exceeds \$1 billion, (b) the date that we become a "large accelerated filer" as defined in Rule 12b-2 under the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act, which would occur if the market value of our securities held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter, or (c) the date on which we have issued more than \$1 billion in nonconvertible debt during the preceding three-year period.

# Implications of being a "Foreign Private Issuer"

We are subject to the information reporting requirements of the Exchange Act that are applicable to "foreign private issuers," and under those requirements we file reports with the U.S. Securities and Exchange Commission, or the SEC. As a foreign private issuer, we are not subject to the same requirements that are imposed upon U.S. domestic issuers by the SEC. Under the Exchange Act, we are subject to reporting obligations that, in certain respects, are less detailed and less frequent than those of U.S. domestic reporting companies. For example, we are not required to issue quarterly reports, proxy statements that comply with the requirements applicable to U.S. domestic reporting companies, or individual executive compensation information that is as detailed as that required of U.S. domestic reporting companies. We also have four months after the end of each fiscal year to file our annual report with the SEC and are not required to file current reports as frequently or promptly as U.S. domestic reporting companies. Our officers, directors and principal shareholders are exempt from the requirements to report transactions in our equity securities and from the short-swing profit liability provisions contained in Section 16 of the Exchange Act. As a foreign private issuer, we are not subject to the requirements of Regulation FD (Fair Disclosure) promulgated under the Exchange Act. In addition, as a foreign private issuer, we are permitted to follow certain home country corporate governance practices instead of those otherwise required under the NASDAQ Stock Market rules for domestic U.S. issuers (See "Risk Factors — Risks Related to this Offering and the Ownership of Our Ordinary Shares.") These exemptions and leniencies will reduce the frequency and scope of information and protections available to you in comparison to those applicable to a U.S. domestic reporting company. We intend to take advantage of the exemptions available to us as a foreign private issuer during and after the period we qualify as an "emerging growth company".

#### THE OFFERING

Ordinary Shares offered by us

11,627,907 Ordinary Shares.

Ordinary Shares

to be outstanding 28,019,677 Ordinary Shares (or 29,763,863 Ordinary Shares if the over-allotment option is

exercised in full).

after this offering

Over-allotment option

We have granted the underwriters the right to purchase up to 1,744,186 additional Ordinary Shares from us at the public offering price less the underwriting discounts and commissions within 45 days from the date of this prospectus to cover over-allotments, if any.

We expect to receive approximately \$9.10 million in net proceeds from the sale of 11,627,907 Ordinary Shares offered by us in this offering (approximately \$10.51 million if the over-allotment option is exercised in full), based on an assumed public offering price of \$0.86 per Ordinary Share, the closing price of our Ordinary Shares on March 14, 2017, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The actual offering price per Ordinary Share will be as determined between us and the underwriters at the time of pricing, and may be at a discount to the current market price.

Use of proceeds

We expect to use the net proceeds from this offering to initiate a Phase 2b clinical trial of our Trehalose IV solution for the treatment of OPMD, patients; initiate one or two Phase 2a clinical trials of our Trehalose IV solution for other indications; continue a prospective natural history of disease study for OPMD; and for working capital and other general corporate purposes. See "Use of Proceeds" for additional information.

Risk factors

You should read the "Risk Factors" section starting on page 8 of this prospectus for a discussion of factors to consider carefully before deciding to invest in our Ordinary Shares.

NASDAQ symbol

Our Ordinary Shares are listed on the NASDAQ Global Market under the symbol "ORPN."

The number of Ordinary Shares to be outstanding after this offering is based on 16,391,770 Ordinary Shares outstanding as of March 15, 2017, and excludes:

<sup>2,599,281</sup> Ordinary Shares issuable upon the exercise of options to purchase Ordinary Shares outstanding as of March 15, 2017, at a weighted-average exercise price of \$3.44 per share;

- 1,080,645 Ordinary Shares issuable upon the exercise of warrants to purchase Ordinary Shares outstanding as of March 15, 2017, at an exercise price of \$4.50 per share; and
- · 746,679 Ordinary Shares reserved for future issuance under the 2013 Incentive Option Plan.

Unless otherwise indicated, all information in this prospectus assumes the following:

- no exercise by the underwriters of their option to purchase up to an additional 1,744,186 Ordinary Shares in this offering; and
- · no exercise of outstanding options or warrants to acquire Ordinary Shares on or after March 15, 2017.

# SUMMARY CONSOLIDATED FINANCIAL DATA

The following summary consolidated financial data for the years ended December 31, 2016, 2015 and 2014 and as of December 31, 2016 and 2015 are derived from, and should be read in conjunction with, the audited consolidated financial statements, and notes thereto, included elsewhere in this prospectus. The summary consolidated financial data for the years ended December 31, 2013 and 2012 and as of December 31, 2014, 2013 and 2012 have been derived from audited financial statements not included in this prospectus.

Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations", our financial statements and related notes included elsewhere in this prospectus.

### **Statement of Operations Data - Year Ended December 31**

U.S. dollars in thousands, except share and per share data

	2016		2015		2014		2013		2012	
Research and development	\$8,881		\$7,694		\$4,441		\$732		\$140	
Pre-commercialization	1,085		829		-		-		-	
General and administrative	5,900		6,953		2,639		416		86	
Total operating expenses	15,866		15,476		7,080		1,148		226	
Loss from operations	(15,866	)	(15,476	)	(7,080	)	(1,148	)	(226	)
Financial income, net	60		135		58		3		(3	)
Loss before taxes on income	(15,806	)	(15,341	)	(7,022	)	(1,145	)	(229	)
Taxes on income	(216	)	(24	)	-		-		-	
Deemed dividend	-		-		-		(26	)	-	
Net loss	\$(16,022	)	\$(15,365	)	\$(7,022	)	\$(1,171	)	\$(229	)
Net loss attributable to Ordinary shareholders	\$(16,022	)	\$(15,365	)	\$(7,022	)	\$(1,171	)	\$(229	)
Net loss per share attributable to Ordinary shareholders - basic and diluted	\$(1.01	)	\$(1.08	)	\$(0.57	)	\$(0.14	)	\$(0.03	)
Weighted average number of Ordinary shares outstanding - basic and diluted	15,906,22	0	14,230,48	30	12,259,60	00	8,423,0	18	7,551,4	27

# **Balance Sheet Data - December 31,**

U.S. dollars in thousands

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	2016	2015	2014	2013	2012
Cash and cash equivalents	\$6,871	\$7,286	\$10,583	\$270	\$146
Short-term bank deposits	3,007	12,046	22,028	-	-
Current Assets	10,541	20,392	32,885	299	156
Total assets	10,630	20,516	32,954	306	156
Current liabilities	1,931	2,514	2,280	131	81
Long-term liabilities	-	70	-	-	-
Total Liabilities	1,931	2,584	2,280	131	81
Accumulated deficit	(39,809)	(23,787)	(8,422)	(1,400)	(229)
Shareholders' equity	8,699	17,932	30,674	175	75

### RISK FACTORS

An investment in our Ordinary Shares involves a high degree of risk. We operate in a dynamic and rapidly changing industry that involves numerous risks and uncertainties. You should carefully consider the following information about these risks, together with the other information appearing elsewhere in this prospectus, including our financial statements and related notes thereto, before deciding to invest in our Ordinary Shares. The occurrence of any of the following risks could have a material adverse effect on our business, financial condition, results of operations and future growth prospects. In these circumstances, the market price of our Ordinary Shares could decline, and you may lose all or part of your investment.

### Risks Related to Our Financial Position and Capital Resources

We are a development-stage company and have a limited operating history on which to assess our business, we have incurred significant losses since our inception, and anticipate that we will continue to incur significant losses for the foreseeable future.

We are a development-stage biotechnological company with a limited operating history. We have incurred net losses since our inception in January 2012, including a net loss of \$16.0 million for the year ended December 31, 2016. As of December 31, 2016, we had an accumulated deficit of \$39.8 million.

We have devoted substantially all of our financial resources to identify, acquire, license, and develop our current product candidate, including conducting nonclinical and clinical trials and providing general and administrative support for these operations. To date, we have financed our operations primarily through the sale of equity securities. The amount of our future net losses will depend, in part, on the rate of our future expenditures. Biotechnological product development is a highly speculative undertaking and involves a substantial degree of risk. We are in Phase 2 development of Trehalose IV, which is the only product candidate that we currently pursue. It may be several years, if ever, before we have this product candidate and/or any future product candidates that we may pursue approved for commercialization. Even if we obtain regulatory approval to market a product candidate, our future revenue will depend upon the size of any markets in which our product candidates may receive approval, and our ability to achieve sufficient market acceptance, pricing, reimbursement from third-party payers, and adequate market share for our current or future product candidates in those markets.

We have incurred continuing losses, and depend on outside financing resources to continue our activities. On August 5, 2014, we completed a successful initial public offering that raised net proceeds of approximately \$31.4 million, and in March 2016 we completed a net \$6.1 million registered direct offering of our Ordinary Shares and a private

placement of warrants to purchase additional Ordinary Shares. In the opinion of our management and based on our current business plans, our balances of cash and cash equivalents including short-term bank deposits will enable us to fund our activities at least until the end of the second quarter of 2017. However, the actual amount of cash we will need to fund our operations is subject to many factors, including, but not limited to, the timing, design and execution of the clinical trials of our existing drug candidate, any future projects which may be in-licensed or any other business development activities. For example, changing circumstances and/or acquisition of new technologies may cause us to consume capital significantly faster than management currently anticipates and we may need to spend more money than currently expected because of, among others, circumstances beyond our control. Should we be unable to obtain additional funding required, we may reduce our activities until we have sufficient funds to continue.

We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. We anticipate that our expenses will increase substantially if and as we:

continue our research and nonclinical and clinical development of our product candidate and any future products candidates that we may pursue;

expand the scope of our clinical trials for our sole product candidate;

change or add additional manufacturers or suppliers;

seek regulatory and marketing approvals for our current and any future product candidates that successfully complete clinical trials;

establish a sales, marketing, and distribution infrastructure to commercialize Trehalose IV and/or any products we pursue in the future for which we may obtain marketing approval;

seek to identify, assess, acquire, license, and/or develop other future product candidates;

make milestone or other payments under any license agreements;

seek to maintain, protect, and expand our intellectual property portfolio;

seek to attract and retain skilled personnel; and

create additional infrastructure to support our operations as a public company and our product development and planned future commercialization efforts.

Further, the net losses we incur may fluctuate significantly from quarter to quarter and year to year, such that a period-to-period comparison of our results of operations may not be a good indication of our future performance.

The report of our independent registered public accounting firm contains an explanatory paragraph regarding substantial doubt about our ability to continue as a going concern.

The report of our independent registered public accounting firm on our audited financial statements as of and for the year ended December 31, 2016 contains an explanatory paragraph expressing substantial doubt about our ability to continue as a going concern. Our financial statements do not include any adjustments that might result from the outcome of the uncertainty regarding our ability to continue as a going concern. This going concern opinion could materially limit our ability to raise additional funds through the issuance of equity or debt securities or otherwise. Further reports on our financial statements may include an explanatory paragraph with respect to our ability to continue as a going concern. If we cannot continue as a going concern, our investors may lose their entire investment.

We have not generated any revenue from any commercial products and may never be profitable.

Our ability to become profitable depends upon our ability to generate revenue. Unless and until marketing approval is obtained from either the FDA (to market and sell Trehalose IV in the United States), the European Medicines Agency, or EMA (to market and sell Trehalose IV in the European Union), or any comparable foreign agency for Trehalose IV or any future product candidates we may develop, we may not be able to generate any revenue or attain profitability. In addition, our ability to generate profits after any regulatory approval of our current or future product candidates is subject to our ability to contract for the manufacture of commercial quantities of our product candidates at acceptable cost levels and establish sales and marketing capabilities or identify and enter into one or more strategic collaborations to effectively market and sell any approved product candidates.

Even if Trehalose IV or any future product candidate is approved for commercial sale, any approved therapeutic may not gain market acceptance or achieve commercial success, and such commercialization could come with significant costs. If we are unable to generate product revenues, we will not become profitable and may be unable to continue operations without continued funding.

We have a limited operating history and no history of commercializing drugs, which may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We commenced operations in 2012, and our operations to date have been largely focused on raising capital and developing Trehalose IV, including undertaking nonclinical studies and conducting clinical trials. Trehalose IV is the only product candidate that we are currently pursing. We have not yet demonstrated our ability to successfully complete additional later-stage clinical trials, obtain FDA or other regulatory approvals, manufacture a commercial-scale drug or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization.

Consequently, we may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to transition at some point from a company with a development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Risks Related to Development, Regulatory Approval and Commercialization of Trehalose IV and any Future Product Candidates

We are currently entirely dependent on the success of Trehalose IV, which is in the early stages of clinical development. We cannot give any assurance that Trehalose IV or any future product candidate will receive regulatory approval, which is necessary before they can be commercialized.

We are a biotechnology company with no products approved by regulatory authorities or available for commercial sale, and have never submitted a product for approval to the FDA or comparable foreign regulatory authorities. Our future success is dependent on our ability to successfully develop, obtain regulatory approval for, and then successfully commercialize Trehalose IV.

Currently, we are focusing our entire business on the development of Trehalose IV, which is in the early stages of development. Trehalose IV will require additional non-clinical and clinical development, management of nonclinical, clinical, and manufacturing activities, regulatory approval, obtaining adequate manufacturing supply, building of a commercial organization, and significant marketing efforts before we generate any revenue from product sales. We completed two Phase 2a clinical trials of Trehalose IV in two indications. We are not permitted to market or promote any of our current or any future product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities, and we may never receive such regulatory approval for any of our product candidates, including Trehalose IV. We may also receive regulatory approval in some jurisdictions, but not others. We cannot be certain that Trehalose IV will be successful in clinical trials or receive regulatory approval. Further, Trehalose IV may not receive regulatory approval, even if it is successful in clinical trials. If we do not receive regulatory approvals for any product candidates we attempt to develop, we are not likely to be able to continue our operations.

We generally plan to seek regulatory approval to commercialize Trehalose IV in the United States, Canada, the European Union, and in additional foreign countries where we have commercial rights. To obtain regulatory approval in other countries, we must comply with numerous and varying regulatory requirements of such other countries regarding safety, efficacy, chemistry, manufacturing and controls, clinical trials, commercial sales, pricing, and distribution of the product candidates we may attempt to commercialize. Even if we are successful in obtaining approval in one jurisdiction, we cannot ensure that we will obtain approval in any other jurisdictions, and as such our revenues and results of operations could be negatively affected.

The drug development and regulatory approval processes of the FDA and comparable foreign regulatory authorities are comprehensive and therefore are likely to be lengthy and expensive. If we are ultimately unable to obtain regulatory approval for our current or future product candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA and comparable foreign regulatory authorities is expensive, typically takes many years following the commencement of early stage clinical trials, and depends upon numerous factors. We have not obtained regulatory approval for our sole product candidate.

In addition, even if we obtain regulatory approvals, the timing or scope of any approvals may prohibit or reduce our ability to commercialize Trehalose IV successfully. For example, if the approval process takes too long, we may miss market opportunities and give other companies the ability to develop competing products or establish market dominance. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render Trehalose IV not commercially viable. Further, regulatory authorities may approve Trehalose IV for fewer or more limited indications than we request, may limit approved usage to narrower patient populations, may grant approval contingent on the performance of costly post- marketing clinical trials, or may approve Trehalose IV with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that indication. Any of the foregoing scenarios could harm the commercial prospects for Trehalose IV and our business.

Delays in the initiation of the planned Phase 2b clinical trial of Trehalose IV in OPMD and the clinical trials for other indications, or any future clinical trials we intend to conduct for other product candidates we may develop, or negative findings in those trials, could significantly affect our product development costs or our ability to commercialize Trehalose IV. We do not know whether future trials will begin or whether all of our planned clinical trials, will be completed on schedule, if at all, or will be successful. Product development costs for Trehalose IV for OPMD or any other future indications we may pursue or for product candidates we may develop in the future will increase if we have delays in testing or approval, if we need to perform more or larger clinical studies than planned or if we have delays in adding new clinical trial sites.

The success of Trehalose IV and/or any other future product candidates that we may pursue, will depend on the receipt and maintenance of regulatory approval and the issuance and maintenance of such approvals is uncertain and subject to a number of risks, including the following:

the FDA or comparable foreign regulatory authorities, institutional review boards, or IRBs, or ethics committees may disagree with the design or conduct of our clinical trials and suspend or terminate the trials;

we may not be able to provide acceptable evidence of Trehalose IV's safety and efficacy;

the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA or comparable foreign regulatory authorities for marketing approval;

patients in our clinical trials may suffer adverse effects for reasons that may or may not be related to Trehalose IV and would raise concerns regarding safety;

the population studied in any clinical program may not be sufficiently broad or representative to assure safety or efficacy in the full population for which we seek approval;

the data collected from clinical trials may not be sufficient to obtain regulatory approval in the United States or elsewhere;

the FDA or comparable foreign regulatory authorities may find, during an inspection at clinical sites, serious violations that jeopardize patient safety and rights and either stop or disregard the results of the study;

the FDA or comparable foreign regulatory authorities may identify deficiencies with the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies and/or may suspend or withdraw approval of our products;

the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval;

we may need to repeat trials if previous and future research activities are no longer acceptable by the FDA and other comparable regulatory agencies to support regulatory approval;

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the FDA or comparable foreign regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional clinical trials, or nonclinical or other studies; and

even if we obtain marketing approval in one or more countries, future safety or other issues could result in the suspension or withdrawal of regulatory approval in such countries.

These factors that can cause, or lead to, termination or suspension of, or a delay in the commencement or completion of clinical trials may also ultimately lead to the denial or even withdrawal of regulatory approval of Trehalose IV for OPMD, SCA3 and any other indication.

We have no experience in filing the applications necessary to gain regulatory approvals and have relied before and expect to continue to rely on consultants and third-party contract research organizations, or CROs, with expertise in this area to assist us in this process. Securing FDA and other comparable regulatory approval requires the submission of extensive nonclinical and clinical data, information about product manufacturing processes and inspection of facilities and supporting information to the FDA for each therapeutic indication to establish a product candidate's safety and efficacy for each indication and manufacturing quality.

In addition, regulatory approval obtained in one jurisdiction does not necessarily mean that a product candidate will receive regulatory approval in all jurisdictions in which we may seek approval, but the failure to obtain approval in one jurisdiction may negatively impact our ability to seek approval in a different jurisdiction. The inability to meet the continuously evolving regulatory standards for approval may result in our failing to obtain regulatory approval to market our current product candidate or any other product candidate we may develop in the future, which would significantly harm our business, results of operations, and prospects.

Positive results of clinical trials may be different from results of other clinical trials, and positive data from open-label clinical trials might not be replicated in subsequent open-label (open versus blinded) or placebo-controlled (controlled versus non-controlled) clinical trials.

Failure can occur at any time during the clinical trial process. The results of nonclinical trials and early clinical trials of any product candidate we may develop may not be predictive of the results of later-stage clinical trials. Product candidates that have shown promising results in early-stage clinical trials may still suffer significant setbacks in subsequent clinical trials. There is a high failure rate for drugs proceeding through clinical trials, and product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through nonclinical trials and initial clinical trials. A number of companies in the biotechnological industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. Moreover, nonclinical and clinical data are often susceptible to varying interpretations and analyses. We do not know whether any Phase 2, Phase 3, or other clinical trials we may conduct will demonstrate consistent or adequate efficacy and safety sufficient to obtain regulatory approval to market our drug candidates.

On March 16, 2016, we reported the final results from our open-label HOPEMD Phase 2a clinical trial, on October 24, 2016 we reported the finals results of a double-blind placebo-controlled pharmacokinetic study of Trehalose IV in healthy volunteers, and on September 12, 2016 we reported the results of the extension portion of HOPEMD Phase 2a trial. This trial relates to the treatment of patients suffering from OPMD, with our lead product candidate, Trehalose IV. These final results may not necessarily predict results from future trials. Results in our open-label HOPEMD Phase 2a clinical trial might not be repeated in later trials or may not be statistically significant, because, among other things, early stage trials are often conducted in smaller groups of patients than later trials, and without the same trial design features, such as randomized controls and blinding. If the results are not replicated in future trials or are not statistically significant, we might not be able to rationalize continued development of the product candidate, or substantiate our request to obtain approval from applicable regulatory authorities at a future time.

Changes in regulatory requirements and guidance may also occur and we may need to amend clinical trial protocols submitted to applicable regulatory authorities to reflect these changes. Amendments may require us to resubmit clinical trial protocols to IRBs or ethics committees for re-examination, which may impact the costs, timing or successful completion of a clinical trial.

The FDA's and other regulatory authorities' policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of Trehalose IV and any future product candidates we may develop. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, clinical trials may be adversely effected, terminated, or disregarded. Additionally, we may lose any marketing approval that we may have obtained, and we may not achieve or sustain profitability, which would harm our business, prospects, financial condition and results of operations.

In the event that the FDA's and/or other regulatory authorities' policies change, we could be forced to conduct additional pre-clinical, clinical trials or other studies with respect to Trehalose IV or any future product candidates we may develop beyond those that we currently contemplate. Regardless of past results, if we are unable to successfully complete the additional requirements required by regulatory changes, we may be delayed in obtaining regulatory approval of Trehalose IV and/or any future product candidates we may develop, we may not be able to obtain regulatory approval at all or we may obtain approval of indications that are not as broad as intended. Moreover, due to potential regulatory changes, our product development costs may also increase if we experience delays in the additional testing or approvals required. As a result, we may not have sufficient funding to complete the testing and approval process for Trehalose IV or any future product candidates we may develop. Significant clinical trial delays could allow our competitors to bring products to market before we do and impair our ability to commercialize our products if and when approved. If any of this occurs, our business would be harmed.

In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may require significant financial resources and may cause delays in the approval or the decision not to approve an application.

We may find it difficult to enroll patients in our clinical trials, in particular with respect to Trehalose IV and/or any future product candidates that we may pursue, which could delay or prevent clinical trials of Trehalose IV and any future product candidates we may develop and potentially harm our business.

Identifying and approving patients (those with required or desired characteristics to achieve diversity in a trial) to participate in clinical trials of Trehalose IV and any future product candidates we may develop in the future is critical to our success. The timing of our clinical trials depends on the speed at which we can recruit patients to participate in testing Trehalose IV and any future product candidates we may develop as well as completion of required follow-up periods. If patients are unable or unwilling to participate in our clinical trials for any reason, the timeline for recruiting patients, conducting studies and obtaining regulatory approval of Trehalose IV and any future product candidates we may develop may be delayed. These delays could result in increased costs, delays in advancing Trehalose IV or any of our future product candidates, delays in testing the safety and effectiveness of our product candidates or termination of the clinical trials altogether, any of which would have an adverse effect on our business.

In particular, the conditions for which we currently plan to evaluate Trehalose IV are orphan diseases, which consist of limited patient populations from which to draw for clinical trials. Patient enrollment is affected by factors including:

severity of the disease under investigation;

design of the clinical trial protocol;

perceived risks and benefits of the product candidate under trial;

proximity and availability of clinical trial sites for prospective patients;

availability of competing therapies and clinical trials;

efforts to facilitate timely enrollment of patients in clinical trials; and

our ability to monitor patients adequately during and after treatment.

We could encounter delays in recruitment for clinical trials if physicians and healthcare providers encounter unresolved ethical issues associated with enrolling patients in clinical trials of Trehalose IV and any future product candidates we may develop. We may not be able to initiate or continue clinical trials if we cannot enroll a sufficient number of eligible patients to participate in the clinical trials. Our ability to successfully initiate, enroll and complete a clinical trial in any foreign country is subject to numerous risks unique to conducting business in foreign countries, including:

difficulty in establishing or managing relationships with CROs and physicians;

different requirements and standards for conducting clinical trials;

foreign corruption;

our inability to locate qualified local consultants, physicians and partners; and

the potential burden of complying with a variety of foreign laws, medical standards and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatments.

Trehalose IV and/or any future product candidates that we may pursue may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by Trehalose IV, our only current product candidate, could cause us or regulatory authorities to interrupt, delay, or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. Patients enrolled in our trials of Trehalose IV for OPMD and other indications, may suffer side effects associated with the use of our Trehalose IV. Results of our trials could reveal a high and unacceptable severity and prevalence of side effects. In such an event, our trials could be suspended or terminated, and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny or withdraw approval of our product candidates for any or all targeted indications.

Any drug-related side effects could affect patient recruitment, the ability of enrolled patients to complete the trial, and/or result in potential product liability claims.

Additionally, if Trehalose IV or any other product candidate we may choose to develop receives marketing approval, and we or others later identify undesirable side effects caused by such products (even when used or tested for other indications, patient populations or other countries), or if a patient suffers a serious complication, including death, with respect to one of our products, a number of potentially significant negative consequences could result, including but not limited to:

regulatory authorities may withdraw approvals of such product;

regulatory authorities may require additional warnings on the label;

we may be required to create a Risk Evaluation and Mitigation Strategy, or REMS plan, which could include a medication guide outlining the risks of such side effects for distribution to patients, a communication plan for healthcare providers, and/or other elements to assure safe use;

we could be sued and held liable for harm caused to patients; and

our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations, and prospects.

Even if we receive regulatory approval of Trehalose IV, we may still face future development and regulatory challenges that could inhibit or preclude our ability to commercialize Trehalose IV for any indication.

If Trehalose IV is approved, they will be subject to ongoing regulatory requirements for manufacturing and quality, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing trials, and submission of safety, efficacy, and other post-market information, including both federal and state requirements in the United States and in other foreign jurisdictions. In addition, manufacturers, manufacturers' facilities, shippers and distributors are required to comply with extensive FDA and other international regulatory regulations, including ensuring that quality control and manufacturing procedures conform to current Good Manufacturing Practices, or cGMP. As such, we and our contract manufacturers will be subject to continual review and inspections to assess

compliance with cGMP and adherence to commitments made in any approved New Drug Application, or NDA, Marketing Authorization Application, or MAA. Accordingly, we and others with whom we work must continue to expend time, money, and effort in all areas of regulatory compliance, including manufacturing, production, shipping storage and quality control.

Any regulatory approvals that we receive for Trehalose IV may be subject to limitations on the approved indicated uses for which the product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate, including pharmacovigilance data collection. We will also be required to routinely report adverse reactions and production problems, if any, to the FDA and other international regulatory agencies, and to comply with requirements concerning advertising and promotion for our products. The FDA or comparable foreign regulatory authorities could require a special warning on the label, such as a Black Box Warning, which could significantly affect marketing and promotional efforts. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we may not promote Trehalose IV and/or any future product candidates that we may pursue for indications or uses for which they do not have regulatory approval. The holder of an approved NDA or MAA must also submit new or supplemental applications and variations and obtain FDA and other regulatory authority approval for certain changes to product labeling or manufacturing processes. We could also be asked to conduct post-marketing clinical trials to verify the safety and efficacy of our products in general or in specific patient subsets. If original marketing approval were to be obtained for our products via the accelerated or conditional approval pathways, we could be required to conduct a post-marketing confirmatory clinical trial. A post-marketing trial that fails to confirm the clinical benefit or failure to complete such a trial could result in the withdrawal of marketing approval and, thus, cessation of marketing and sales of the product.

If we or a regulatory agency discovers previously unknown problems such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, such regulatory agency may impose restrictions on that product or us. If we fail to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other actions:

issue FDA Form 483 or Warning Letters, which may be made public, or similar letters by other regulatory authorities;

publish information on the FDA or other authorities homepage;

impose civil or criminal penalties;

impose an Import Alert or detention;

suspend or withdraw regulatory approval;

suspend any of our ongoing clinical trials;

refuse to approve pending applications or supplements to approved applications submitted by us;

seek an injunction or impose other restrictions on our operations, including closing our contract manufacturers' facilities; or

seize or detain products, or require corrective action, such as a product recall.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure by us or our partners to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenue from our products. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected.

We may face substantial competition from other companies with considerable resources that may already have products available in the market, and they or others may also discover, develop or commercialize additional

### products before or more successfully than we do.

Our industry is highly competitive and subject to rapid and significant technological change as researchers learn more about diseases and develop new technologies and treatments. Our potential competitors include primarily large pharmaceutical, biotechnology and specialty pharmaceutical companies. In attempting to achieve the widespread commercialization of Trehalose IV, we will face competition from established drug companies or generic versions of these products. Key competitive factors affecting the commercial success of Trehalose IV and any other product candidates we may develop are likely to be efficacy, safety and tolerability profile, reliability, convenience of administration, price and reimbursement and effectiveness of our promotional activities. Competition could also force us to lower prices or could result in reduced sales with other, more well-known or effective products or by selling their product at a lower price.

Our existing or potential competitors may have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of current or future product candidates we may develop, obtaining FDA and other regulatory approvals of products and the commercialization of those products. These companies may also have long-established relationships within the medical and patient community, including patients, physicians, nurses and commercial third-party payors and government payors. Our ability to compete successfully will depend largely on our ability to:

· discover and develop product candidates that are competitive with or superior to other products in the market;
obtain required regulatory approvals;
be free of material capital commitments and limitations;
· adequately communicate the benefits of Trehalose IV, if approved;
attract and retain qualified personnel;
obtain and maintain patent and/or other proprietary protection for Trehalose IV and any future product candidates that we may develop; and
in certain geographies, obtain collaboration arrangements to commercialize Trehalose IV and any future product candidates we may develop.
Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a small number of our competitors. Accordingly, our competitors may be more successful than we may be in obtaining FDA or other regulatory agency approvals of drugs and achieving widespread market acceptance. Our competitors' drugs may be more effective, or more effectively marketed and sold, than any drug we may commercialize and may render Trehalose IV or any future product candidates we may develop obsolete or non-competitive before we can recover the expenses of developing and commercializing Trehalose IV or any future product candidates we may develop.

We anticipate that we will face intense and increasing competition as new drugs enter the market and more advanced technologies become available. If we are unable to compete effectively, our opportunity to generate revenue from the sale of Trehalose IV or any future product candidates we may develop, if approved, could be impaired.

In addition, if one or more clinical trials are delayed, not only could our competitors be able to bring products to market before we do, and significantly reduce the commercial viability of Trehalose IV, but any trial delays could also shorten any periods during which our products have patent protection. Such delays may allow our competitors to bring products to market before we do, which could impair our ability to obtain orphan exclusivity and to successfully commercialize our current or future product candidates and may harm our business and results of operations.

The number of patients suffering from OPMD and SCA3 is small and has yet to be established with precision. Our assumptions and estimates regarding prevalence may be wrong. If our Trehalose IV product candidate is approved for sale, and the actual number of patients in the applicable market is smaller than we estimate, our revenue could be adversely affected, possibly materially.

We target indications that are rare or ultra-rare diseases. Based on our own market research, in the United States and Canada there are approximately 4,300 patients with OPMD, our target indication. Similarly, there are a small number of individuals with SCA3, also known as Machado Joseph disease. However, there is no guarantee that these estimates are correct. The ultimate number of patients with OPMD and SCA3, in particular the number of patients for whom our Trehalose IV solution, if approved, is approved for use, could actually be significantly fewer than these estimates.

If the total addressable market for our products is smaller than we estimate, our revenue could be adversely affected, possibly materially.

Even if we receive regulatory approval of Trehalose IV, it may not achieve an adequate level of government price authorization or acceptance by physicians, patients and third-party payors and government payors, and we may not generate sufficient revenue or be able to achieve or sustain profitability.

Even if we receive regulatory approvals of Trehalose IV, its commercial success will depend in large part on the willingness of private and government payers to reimburse for its use at an appropriate price and for physicians to prescribe Trehalose IV to their patients. In order to achieve an acceptable level of prescriptions for Trehalose IV, we must be able to meet the needs of payors, the medical community and patients with respect to cost, efficacy, safety and other factors, including, but not limited to, the following:

· the efficacy of the product as demonstrated in clinical trials and potential advantages over competing treatments;

the prevalence and severity of any side effects, including any limitations or warnings contained in a product's approved labeling;

the clinical indications for which approval is granted;

relative convenience and ease of administration;

the cost of treatment, particularly in relation to competing treatments;

· the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;

• the strength of marketing and distribution support and timing of market introduction of competitive products;

publicity concerning our products or competing products and treatments; and

sufficient price approval and third-party insurance reimbursement to generate sufficient revenue and achieve or sustain profitability.

Even if Trehalose IV is approved, it may not achieve an adequate level of acceptance by physicians, healthcare payors and patients, and we may not generate sufficient revenue or be able to achieve or sustain profitability. Our efforts to educate the medical community, patients, governments and private payors on the benefits of Trehalose IV to achieve an adequate level of their acceptance may require significant resources and may never be successful.

The manufacture and packaging of our current and any future product candidates that we may pursue are subject to FDA requirements and those of similar foreign regulatory bodies. If we or our third-party manufacturers fail to satisfy these requirements, our product development and commercialization efforts may be harmed.

The manufacture and packaging of pharmaceutical products, such as trehalose dyhidrate, our active pharmaceutical ingredient, or API, and our Trehalose IV solution, if approved, are regulated by the FDA and similar foreign regulatory bodies and must be conducted in accordance with the FDA's cGMP and comparable requirements of foreign regulatory bodies. In order to comply with these requirements, we may be required to perform additional development work, including, but not limited to changes or additions to the manufacturing process and increased quality controls.

Failure by us or our third-party manufacturers to comply with applicable regulations or requirements could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our products, delays, suspension or withdrawal of approvals, seizures or voluntary recalls of product, operating restrictions and criminal prosecutions, any of which could harm our business.

Should Trehalose IV solution or any future product that we may pursue be approved to market in the United States, post approval changes in the manufacturing process or procedure may require FDA review and approval. Changes include, but are not limited to, changes in the location where the product is manufactured, the manufacturing process, or the identity of a third-party manufacturer. The FDA ensures that the change does not compromise the quality of the product. Any new facility is subject to an inspection by the FDA and would require us to demonstrate product comparability to the FDA. There are comparable foreign requirements. This review may be costly and time consuming and could delay or prevent the launch of a product. Moreover, the cost of manufacturing may be too high to sustain profitability or conduct clinical and nonclinical trials.

In order to obtain approval of our Trehalose IV and/or any future product candidates that we may pursue, we will be required to complete a process validation which is defined as the collection and evaluation of data, from the process design stage through commercial production, which establishes scientific evidence that a process is capable of consistently delivering quality product. Process validation involves a series of activities taking place over the lifecycle of the product and process. If the FDA does not consider the result of the process validation or required testing to be satisfactory, regulatory approval and/or commercial supply after launch may be delayed. The FDA and similar foreign regulatory bodies may also implement new requirements, or change their interpretation and enforcement of existing requirements, for manufacture, packaging or testing of products at any time. If we are unable to comply, we may be subject to regulatory, civil actions or penalties which could harm our business.

Our relationships with patients, physicians, third-party payors and others will be subject to applicable state and federal anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians, and others will play a primary role in the recommendation and prescription of Trehalose IV and any future product candidates we may develop for which we obtain regulatory approval. Our operations may expose us to broadly applicable federal and state fraud and abuse, patient privacy, and other healthcare laws and regulations that may affect our business or financial arrangements and relationships through which we would market, sell and distribute our products. Restrictions under applicable federal and state healthcare laws and regulations that may affect our operations and expose us to areas of risk include the following:

the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual, or the purchase, order or recommendation of, any good, item, or service, for which payment may be made in whole or in part, under a federal healthcare program, such as Medicare and Medicaid;

federal civil and criminal false claims laws and civil monetary penalty laws, including the False Claims Act, which impose criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, including the Medicare and Medicaid programs, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;

the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, and for knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statements in connection with the delivery of or payment for healthcare benefits, items or services;

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, and their implementing regulations, which also impose obligations and requirements on healthcare providers, health plans, and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of certain individually identifiable health information;

•the federal transparency requirements under the Affordable Care Act, or the ACA, including the provision commonly referred to as the Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices,

biologics and medical supplies that are reimbursable under Medicare, Medicaid or Children's Health Insurance Program to report annually to Centers for Medicare and Medicaid Services, or CMS, information related to payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and their immediate family members;

analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may be broader in scope and apply to referrals and items or services reimbursed by both governmental and non-governmental third-party payors, including private insurers; some state laws which require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information to the state related to payments and other transfers of value to physicians and other healthcare providers, price disclosures, or marketing expenditures; and state and foreign laws which govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and often are not preempted by federal law, thus complicating compliance efforts; and

the U.S. Foreign Corrupt Practices Act, or FCPA, which prohibits companies from making improper payments to foreign government officials and other persons for the purpose of obtaining or retaining business.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. In addition, recent health care reform legislation has strengthened these laws. For example, the Affordable Care Act, among other things, amends the intent requirement of the federal anti-kickback and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. Moreover, the Affordable Care Act provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

Efforts to ensure that our business arrangements with third parties are compliant with applicable healthcare laws and regulations will involve the expenditure of appropriate, and possibly significant, resources. In addition, and with respect to dealings with governmental regulatory agencies, we cannot assure that our employees or independent contractors will not engage in prohibited conduct under the FCPA. If our operations are found to be in violation of any current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, contractual damages, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, which could adversely affect our ability to operate our business and our results of operations. If any physicians or other healthcare providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs, which could adversely affect our ability to operate our business and our results of operations.

The long-term growth of our business depends on our efforts to leverage Trehalose IV to be used in other indications, which may require substantial financial resources and may ultimately be unsuccessful.

The long-term growth of our business depends upon our ability to utilize our proprietary Trehalose IV as a platform to be used in other indications, aside from SCA3 and OPMD, which is something that we may never achieve or ever receive regulatory approval for. Research programs to identify new target indications for Trehalose IV require substantial technical, financial and human resources whether or not we ultimately identify any such applicable indication.

There are a number of FDA, EMA and other health authority requirements that we must satisfy before we can commence a clinical trial of Trehalose IV in other indications. If we are able to identify additional potential new indications, satisfaction of these regulatory requirements will entail substantial time, effort and financial resources.

Any time, effort and financial resources we expend on development of other indications may impair our ability to continue development and commercialization of Trehalose IV for the treatment of OPMD and SCA3. As a result of such impairments, we may never commence clinical trials of such development programs despite expending significant resources in pursuit of their development. If we do commence clinical trials of other indications, these product candidates may never demonstrate sufficient safety and efficacy to be approved by the FDA or other regulatory authorities. If any of these events occur, we may be forced to abandon our development efforts for such program or programs, which could harm our business.

We may be unable to obtain orphan drug designation or exclusivity for the use of Trehalose IV for other indications. Even if we obtain orphan drug designation, we may not be able to capitalize on its benefits.

Our Trehalose IV solution has been granted orphan designation in the United States and the European Union for the treatment of OPMD and SCA3. Regulatory authorities in some jurisdictions, including the United States and the European Union, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act of 1983, or the Orphan Drug Act, the FDA may designate a product candidate as an orphan drug if it is intended to treat a rare disease or condition, which is generally defined as having a patient population of fewer than 200,000 individuals diagnosed annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the European Union, the European Commission, after reviewing the opinion of the EMA's Committee for Orphan Medicinal Products, or COMP, grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition affecting not more than five in 10,000 persons in the European Union. In the Health Canada proposal, a rare disease is described as a life-threatening, seriously debilitating, or serious chronic condition that only affects a very small number of patients, typically less than five in 10,000 persons.

Additionally, orphan drug designation is granted for products intended for the diagnosis, prevention or treatment of a life-threatening, seriously debilitating or serious and chronic condition when, without incentives, it is unlikely that sales of the drug would be sufficient to justify the necessary investment in developing the product candidate. Even if we request orphan drug designation for any future product candidates or other indications we may develop, there can be no assurances that the FDA or the European Commission will grant any of these product candidates such designation. Additionally, the orphan drug designation by the FDA of our current or any future product candidates we may develop as an orphan drug does not guarantee that the FDA will accelerate regulatory review of or ultimately approve that product candidate.

Generally, if a product candidate with an orphan drug designation subsequently receives the first marketing approval of the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the EMA or the FDA from approving another marketing application for the same drug and indication for that time period, except in limited circumstances. The applicable period is seven years in the United States and 10 years in European exclusivity period can be reduced to six years if a product no longer meets the criteria for orphan drug designation or if the product is sufficiently profitable so that market exclusivity is no longer justified. Orphan drug exclusivity may be lost if the FDA or EMA determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the product to meet the needs of patients with the rare disease or condition.

Because the extent and scope of patent protection for our products may in some cases be limited, orphan drug designation is especially important for our products for which orphan drug designation may be available. For Trehalose IV, we plan to rely on the exclusivity period under the Orphan Drug Act to maintain a competitive position. If we do not obtain orphan drug exclusivity for Trehalose IV or any therapeutic candidate designated as an orphan drug but does not have broad patent protection, our competitors may then sell the same drug to treat the same condition sooner than if we had obtained orphan drug exclusivity and our revenue will be reduced.

Even though, we may have obtained orphan drug designation for Trehalose IV in the United States for the treatment of OPMD and SCA3, we may not successfully obtain orphan drug exclusivity. Any such exclusivity that we do obtain may not effectively protect the product candidate from competition because different drugs can be approved for the same condition and the same drugs can be approved for different indications and might then be used off-label in our approved indication. In the United States, even after an orphan drug is approved, the FDA can subsequently approve another drug for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, if our current or any future product candidate we may develop receives an orphan drug designation is approved for a particular indication or use within the rare disease or condition, the FDA may later approve the same drug for additional indications or uses within that rare disease or condition that are not protected by our exclusive approval. As a result, if our product is approved and receives orphan drug status, the FDA can still approve other drugs for use in treating the same indication or disease covered by our product, which could create a more competitive market for us.

We currently have no sales organization and a limited pre-commercial/marketing organization. If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our products that may be approved or cleared for marketing in the future, we may be unable to generate any revenue.

We currently do not have any products that are approved or cleared for marketing. In the event that Trehalose IV and/or any therapeutic candidate that we may pursue is approved or cleared for marketing, we may still be unable to generate revenue. Although our management has experience with selling other similar products in the past while employed at other companies, we as a company have no experience selling and marketing our current product candidate and we currently have no sales organization and limited pre-commercial/marketing organization. To successfully commercialize any products that may result from our development programs, we will need to develop these capabilities, either on our own or with others. If our current product candidate or any future product candidates receive regulatory approval, we intend to establish a sales and marketing organization with technical expertise and supporting distribution capabilities to commercialize our product candidates in major markets, which will be expensive, difficult, and time consuming. Any failure or delay in the development of our internal sales, marketing, and distribution capabilities would adversely impact the commercialization of our products. We would need to invest resources in this prior to regulatory approval, which may prove to be a waste if such approval cannot be obtained.

Further, given our lack of prior experience in marketing and selling biotechnological products, our initial estimate of the size of the required sales force may be materially inadequate when compared to the size of the sales force actually required to effectively commercialize our current and/or future product candidates. As such, we may be required to hire substantially more sales representatives to adequately support the commercialization of our current and/or future product candidates or we may incur excess costs as a result of hiring more sales representatives than necessary. With respect to certain geographical markets, we may enter into collaborations with other entities to utilize their local marketing and distribution capabilities, but we may be unable to enter into such agreements on favorable terms, if at all. If our future collaborators do not commit sufficient resources to commercialize our future products, if any, and we are unable to develop the necessary marketing capabilities on our own, we will be unable to generate sufficient product revenue to sustain our business. We may be competing with companies that currently have extensive and well-funded marketing and sales operations. Without an internal team or the support of a third party to perform marketing and sales functions, we may be unable to compete successfully against these more established companies.

While orphan drug products are typically sold at a high price relative to other medications, the market may not be receptive to high pricing of our products.

We currently have one product candidate and may develop additional product candidates to treat rare and ultra-rare diseases, a space where medications are usually sold at high prices compared with other medications. However, even if regulatory authorities approve any product candidates that we may develop, the market may not be receptive to, and it may be difficult for us to achieve, a per-patient per-year price high enough to allow us to realize a return on our investment.

The insurance coverage and reimbursement status of newly-approved products is uncertain. If we are able to obtain regulatory approval for our product candidates, failure to obtain or maintain adequate coverage and reimbursement for new or current products could limit our ability to market those products and decrease our ability to generate revenue.

Our target patient populations are small, and accordingly the pricing, coverage, and reimbursement of our current and/or future product candidates, if approved, must be adequate to support our commercial infrastructure. Our per-patient prices must be sufficient to recover our development and manufacturing costs and potentially achieve profitability. Accordingly, the availability and adequacy of coverage and reimbursement by governmental and private payers are essential for most patients to be able to afford potentially expensive treatments such as ours, assuming we are able to obtain regulatory approval for our products. If we are able to obtain regulatory approval, sales of our product candidates will depend substantially, both domestically and abroad, on the extent to which the costs of our product candidates will be paid for by health maintenance, managed care, pharmacy benefit, and similar healthcare management organizations, or reimbursed by government authorities, private health insurers, and other third-party payers. If coverage and reimbursement are not available, or are available only in limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a return on our

investment.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the reimbursement rate that the payor will pay for the product. Moreover, a payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. In order to obtain coverage and reimbursement for any product that might obtain regulatory approval, we may need to provide supporting scientific, clinical and cost-effectiveness data relating to such product, which may be costly and difficult to obtain. Further, in the U.S., the Centers for Medicare and Medicaid Services, or CMS, and other third-party payors, frequently change product descriptors, coverage policies, product and service codes, payment methodologies and reimbursement rates. Private payers tend to follow the coverage reimbursement policies and payment limitations established by CMS to a substantial degree. It is difficult to predict what CMS or any other third-party payor will decide with respect to reimbursement for products such as ours, assuming we are able to obtain regulatory approval for our products, and any such policies or payment limitations may be subject to change in the future.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe, Canada, and other countries has and will continue to put pressure on the pricing and usage of any product candidate we attempt to commercialize. In many countries, the prices of medical products are subject to varying price control mechanisms as part of national health systems. In general, the prices of medicines under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for medicinal products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for any product candidate that we may develop. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits.

Moreover, increasing efforts by government bodies and third-party payers in the United States and abroad to cap or reduce healthcare costs may cause both coverage and the level of reimbursement for newly approved products to be limited and, as a result, we may not obtain adequate payment or coverage for our current or any future product candidates. We expect to experience pricing pressures in connection with the sale of our current product candidate or any future product candidates, if we obtain regulatory approval, due to the trend toward managed healthcare, the increasing influence of health maintenance organizations, and additional legislative changes. In the U.S., changes in federal healthcare policy and reforms aimed at lowering healthcare costs were enacted through the Affordable Care Act in 2010 and some provisions are still being implemented. Some reforms and cost containment measures could result in reduced reimbursement rates for our product candidates, which would adversely affect our business strategy, operations and financial results. The downward pressure on healthcare costs in general, particularly prescription drugs and surgical procedures and other treatments, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively referred to as the Affordable Care Act, was signed into law, which substantially changes the way health care is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The Affordable Care Act, among other things, subjects biologic products to potential competition by lower-cost biosimilars, imposes reporting requirements on manufacturers related to drug samples and financial relationships with certain healthcare providers, addresses a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations, establishes annual fees and taxes on manufacturers of certain branded prescription drugs, and promotes a new Medicare Part D coverage gap discount program. Some of the provisions of the Affordable Care Act have not yet been fully implemented, and certain provisions have been subject to judicial and Congressional challenges. The healthcare regulatory environment in the U.S. is still in flux, and judicial challenges and legislative initiatives to modify, limit, or repeal the Affordable Care Act continue, and may increase in

light of the change in administrations following the U.S. presidential election. For example, a recent Executive Order signed by the U.S. President directed executive departments and federal agencies to waive, defer, grant exemptions from, or delay the implementation of provisions of the Affordable Care Act that would impose a fiscal or regulatory burden on individuals and certain entities to the maximum extent permitted by law. We cannot predict the impact on our business of future legal challenges to the Affordable Care Act or other changes to current laws and regulations. However, any changes that lower reimbursements for products that we obtain regulatory approval for, or that impose administrative and financial burdens on us, could adversely affect our business.

In addition, other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. These changes include, among others, aggregate reductions of Medicare payments to providers of up to 2% per fiscal year, starting in 2013. We expect that additional state and federal healthcare reform measures will be adopted in the future, which may alter or completely replace the existing healthcare financing structure. Any of these reform measures could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for any such product candidate that we may have developed or additional pricing pressures on our business.

In December 2016, the 21st Century Cures Act became law. There are expected to be a number of changes to the FDA's regulation of drugs including revisions to the approval processes. While the life sciences industry expects, for the most part, these changes to be positive, the long-term effects remain uncertain. Similarly, a new U.S. Presidential administration took office in January 2017. It is possible that the new administration may implement additional healthcare reforms, including potentially significant changes to existing healthcare programs and policies, such as the ACA.

Similar initiatives and legislations may come into force in other jurisdictions as well, such as in the different countries of the European Union, where price ceilings and rebate systems are essential parts of the reimbursement of medicinal products. Some of these systems are being adapted on a regular or irregular basis to further reduce drug prices.

We may not be able to maintain our current product liability coverage, and, even if we do, our coverage may not be adequate to cover any or all liabilities that we may incur, which could decrease our cash and harm our business.

We currently have \$10 million in product liability insurance coverage in the aggregate, which may not be adequate to cover any or all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise. We intend to expand our product liability insurance coverage to include the sale of commercial products if we obtain marketing approval of Trehalose IV and any future product candidates we may develop, but we may be unable to obtain commercially reasonable product liability insurance for these product candidates, if approved for marketing. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our cash and harm our business, and in the extreme case, cause us to shut down. In addition, we may not be able to maintain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims, which could prevent or inhibit the commercial production and sale of our products.

Additionally, if any claims are brought against us, even if we are fully covered by insurance, we may suffer harm such as adverse publicity. We also could suffer diversion of attention of technical and management personnel and incur substantial costs in resolving disputes, including litigation, with our insurance provider regarding coverage.

#### Risks Related to our Reliance on Third Parties

We rely, and will continue to rely in the future, on third parties to conduct our nonclinical studies, clinical trials, drug product manufacturing and other research and development activities. If these third parties do not appropriately carry out their contractual duties, fail to conduct high-quality studies or meet expected deadlines,

regulatory approval and commercialization of Trehalose IV or any future candidates we may develop could be delayed or not obtained at all.

We do not have the ability to conduct all of our clinical trials independently. We relied and continue to rely on third parties, including clinical investigators, third-party CROs, labs and consultants, to monitor, manage and protect sensitive data for, and execute our ongoing nonclinical and planned clinical programs for Trehalose IV and other potential product candidates. We currently have a small number of employees, which limits the internal resources we have available to identify and monitor our third-party providers. Nevertheless, we are responsible for ensuring that each of our nonclinical studies and clinical trials are conducted, not only in accordance with contractual obligations, but also in accordance with the applicable protocol and legal, regulatory and scientific requirements and standards, including, for example, Good Laboratory Practices, the Animal Welfare Act and Good Clinical Practices, or GCPs. In addition, we rely on their policies and standard operating procedures. In addition, we may be responsible for maintaining compliance with applicable federal and state regulations that impose requirements related to privacy and security of health information, including those promulgated pursuant to HIPAA. Our reliance on third parties does not relieve us of our regulatory responsibilities. Regulatory authorities enforce GCPs and other standards through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCPs and other standards, the clinical data generated in our clinical trials may be deemed unreliable and the relevant regulatory authorities may require us to perform additional clinical trials in support of our regulatory approval applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP requirements and other standards. Failure to comply with these regulations may require us to repeat nonclinical studies and clinical trials, which would delay the regulatory approval process. If the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our protocols, regulatory requirements or for other reasons, our nonclinical studies and clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval of or successfully commercialize Trehalose IV and any future product candidates we may develop. Additionally, we must ensure that our contracts with third parties are at an affordable price. As a result, our results of operations and the commercial prospects for our current and/or future product candidates could be harmed, our costs could increase and our ability to generate revenues could be delayed. To the extent we are unable to identify and successfully manage the performance of third-party service providers in the future, our business may be adversely affected.

We rely completely on third parties to manufacture Trehalose IV. Our business could be harmed if those third parties fail to provide us with sufficient quantities of Trehalose IV, or fail to do so at acceptable quality levels.

We do not currently have, nor do we plan to acquire, the infrastructure or internal capability to manufacture our nonclinical and clinical drug supplies for use in the conduct of our nonclinical and clinical trials, and we lack the resources and the capability to manufacture Trehalose IV on a clinical or, if approved, commercial scale. In specific instances we may rely on a single provider or manufacturer for a product candidate. For example, the raw materials used to manufacture our Trehalose IV solution product candidate are acquired from a single third party drug products supplier. Additionally, our Trehalose IV solution is manufactured by a single third party manufacturer. There are a limited number of suppliers for raw materials that are used to manufacture trehalose, and there may be a need to identify alternate suppliers to prevent a possible disruption of the manufacture of the materials necessary to produce any product candidate we are developing for our clinical trials, and, if approved, ultimately for commercial sale. Any significant delay or discontinuity in the supply of a product candidate, or the raw material components thereof, for an ongoing clinical trial due to the need to replace a third-party manufacturer could considerably delay completion of our clinical trials.

In the event that the FDA believes that Trehalose IV and/ or any future therapeutic candidate that we may develop in the future, is approvable, our contract manufacturers would be audited by the FDA before approving our NDA. We rely on our contract manufacturing partners for compliance with cGMPs for manufacture of both API and finished drug products. These cGMP regulations and other relevant standards cover all aspects of the manufacturing, testing, quality control and record keeping relating to Trehalose IV. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, we will not be able to secure and/or maintain regulatory approval of our product candidate being manufactured at their manufacturing facilities or have sufficient quantities to meet market demands. If the FDA or a comparable foreign regulatory authority finds deficiencies at these facilities, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval of or market Trehalose IV, if approved.

If, for any reason, these third parties are unable or unwilling to perform, we may not be able to terminate our agreements with them, and we may not be able to locate alternative manufacturers or formulators or enter into favorable agreements with them and we cannot be certain that any such third parties will have the manufacturing capacity to meet future requirements. If these manufacturers or any alternate manufacturer of finished drug product experiences any significant difficulties in its respective manufacturing processes for our API or finished Trehalose IV product or should cease doing business with us, we could experience significant interruptions in the supply of Trehalose IV or may not be able to create a supply of Trehalose IV at all. Our inability to coordinate the efforts of our third-party manufacturing partners, or the lack of capacity available at our third-party manufacturing partners, could impair our ability to supply Trehalose IV at required levels. Due to the significant regulatory requirements that we would need to satisfy in order to qualify a new bulk or finished product manufacturer, if we face these or other difficulties with our current manufacturing partners, we could experience significant interruptions in the supply of Trehalose IV if we decided to transfer the manufacture of Trehalose IV to one or more alternative manufacturers in an effort to deal with the difficulties.

In the event that Trehalose IV and/or any future product candidates that we may pursue is approved or cleared for marketing, manufacturers may not have the experience or ability to manufacture those products at commercial levels. We may run into technical or scientific issues related to manufacturing or development that we may be unable to resolve in a timely manner or with available funds.

If the manufacturing costs of Trehalose IV remain at current levels, these costs may significantly impact our operating results. In order to reduce costs, we may need to develop and implement process improvements. However, in order to do so, we will need, from time to time, to notify or make submissions with regulatory authorities, and the improvements may be subject to approval by such regulatory authorities. We cannot be sure that we will receive these necessary approvals or that these approvals will be granted in a timely fashion. We also cannot guarantee that we will be able to enhance and optimize output in our commercial manufacturing process, as any deviations from normal manufacturing processes, for Trehalose IV and any other product candidate we may develop, could result in reduced production yields, product defects, and other supply disruptions. If we cannot enhance and optimize output, we may not be able to reduce our costs over time.

#### **Risks Related to Our Intellectual Property**

If we are unable to obtain and maintain effective patent and other intellectual property rights for our product candidates or any future product candidates, we may not be able to compete effectively in our markets.

We rely upon a combination of patents, trade secret protection, and confidentiality agreements to protect the intellectual property related to our technologies and product candidates. Our success depends in large part on our and our licensors' ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries around the world with respect to our proprietary technology and products.

We have sought to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies, methods of treatments, formulations and products that are important to our business. This process is expensive, time consuming and inherently uncertain. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. It is also possible that some of our filed applications may not result in issued patents.

There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found, which can invalidate a patent or prevent a patent from issuing from a pending patent application. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or are published in a foreign language or in some cases not at all. We therefore cannot be certain that we or our licensors were the first to make the invention claimed in our owned and licensed patents or pending applications, or that we or any of our licensors were the first to file for patent protection of such inventions before any prior publication. Even if patents do successfully issue, and even if such patents cover our product candidates, third parties may challenge their validity, enforceability, or scope, which may result in such patents being narrowed, found unenforceable or invalidated. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property,

provide exclusivity for our product candidates, or prevent others from designing around our claims.

If we cannot obtain and maintain effective patent rights for our product candidates, we may not be able to compete effectively and our business and results of operations could be harmed.

Patent policy and rule changes could increase the uncertainties and costs surrounding the prosecution of our patent applications and the value, enforcement or defense of our issued patents.

Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. The United States has recently enacted and is currently implementing wide-ranging patent reform legislation. Recent U.S. Supreme Court rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on future actions by the U.S. Congress, the federal courts, and the U.S. Patent and Trademark Office, or USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future. The laws and courts of foreign countries also may not protect our rights to the same extent as the laws and courts of the United States.

If we are unable to maintain effective proprietary rights for our product candidate or any future product candidates, we may not be able to compete effectively in our markets.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that we elect not to patent, processes for which patents are difficult to obtain or to enforce and any other elements of our product candidate discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Trade secrets, however, can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by entering into confidentiality agreements with our employees, consultants, scientific advisors, and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. There are different laws of varying scope and strength that protect trade secrets in every state of the U.S., as well as foreign countries, and depending on what acts occur where, or what law applies to a given situation, the trade secret may not be recognized as a trade secret, many not fall under a confidentiality agreement, or may be found insufficient by a court ruling on such a dispute over trade secrets or other proprietary information.

Although we expect all of our employees and consultants to assign their inventions to us, and all of our employees, consultants, advisors, and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot provide any assurances that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Misappropriation or unauthorized disclosure of our trade secrets could impair our competitive position and may have a material adverse effect on our business. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret.

We may not be successful in obtaining or maintaining necessary rights to our product candidate through acquisitions and in-licenses.

While we currently have three issued patents and other pending patent applications, our programs may require the use of intellectual proprietary rights held by third parties. Accordingly, the growth of our business may depend in part on our ability to acquire, in-license, maintain or use these proprietary rights. In addition, our current and/or future product candidates may require specific formulations to work effectively and efficiently and the rights to these formulations may be held by others. We may be unable to acquire or in-license any compositions, methods of use, processes, or other third-party intellectual property rights from third parties that we identify as necessary for our current and/or future product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive

advantage over us due to their size, cash resources, and greater clinical development and commercialization capabilities.

If we are unable to successfully obtain rights to required third-party intellectual property rights, we may have to abandon development of that program and our business and financial condition could suffer.

We may be involved in lawsuits to protect or enforce our patents or confidential information, which could be expensive, time consuming, and unsuccessful.

Competitors may infringe our patents or the patents of our licensors, or misappropriate our confidential information. If we or one of our licensing partners were to initiate legal proceedings against a third party to enforce a patent or confidential information covering or related to a product candidate we develop, the defendant could counterclaim that the patent covering our product candidate is invalid and/or unenforceable or that the confidential information is not confidential or otherwise not protectable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable.

Interference or other post-grant proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority or patentability of inventions with respect to our patents or patent applications or those of our licensors. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party, or might eliminate the key claim coverage of a product, process, or proposed technology. Depending on the proceeding, our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of litigation, or interference or other post-grant proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. In addition, the uncertainties associated with litigation and post-grant proceedings at the PTO or equivalent patent office in any other jurisdiction could have a material adverse effect on our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties, or enter into development partnerships that would help us bring our current and/or future product candidates to market.

Furthermore, because of the substantial amount of discovery required in connection with any type of intellectual property litigation or even the more limited discovery in a post-grant proceeding, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or proceeding. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our Ordinary Shares.

We may be subject to claims that our employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties or that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.

We employ individuals who were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees, consultants, and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants, or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary information, of any of our employee's former employer or other third parties. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages or be subjected to a court order, we may lose valuable intellectual property rights or personnel, which could adversely impact our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We may be subject to claims that former employees, collaborators or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor, or that such third party owns the patent or intellectual property rights. For example, we may have inventorship or ownership disputes arise from conflicting obligations of consultants or others who are involved in developing our current or any future product candidates. Litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation or patent office proceedings could result in substantial costs and be a distraction to management and other employees. Therefore, we may receive less revenue from future products if such claims are successful which in turn could impact our future profitability.

We may not be able to protect our intellectual property rights throughout the world.

Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may also export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting, enforcing, and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits or post-grant proceedings that we initiate and the damages or other remedies awarded to us if we prevail, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we rely on third parties to develop and manufacture our current product candidate, we must, at times, share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements, or other similar agreements with our collaborators, advisors, employees, and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, such as trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business.

#### **Risks Related to Our Business Operations**

Our future success depends in part on our ability to retain our executive officers and management level employees and to attract, retain, and motivate other qualified personnel.

Our ability to compete in the highly competitive pharmaceuticals industry depends in large part upon our ability to attract and retain highly qualified managerial, pre-commercial, scientific and medical personnel. We are highly dependent on our management, commercial, scientific and medical personnel. In order to induce valuable employees to remain with us, we have provided employees with stock options that vest over time. The value to employees of

stock options that vest over time is significantly affected by movements in our stock price that we cannot control and, together with our other compensation programs and benefits, may at any time be insufficient to counteract more lucrative offers from other companies.

We are highly dependent on Fredric Price, our Executive Chairman of the Board of Directors and Chief Executive Officer, Dr. Warren Wasiewski, our Chief Medical Officer and Vice President of Research and Development, Dr. Zohar Argov, special advisor, Mr. Chaime Orlev, our Chief Financial Officer and Vice President of Finance and Administration, and Dana Gelbaum our Chief Commercial Officer. These executives have significant research and development, regulatory industry, sales and marketing, operational, and/or corporate finance and legal experience. The loss of any executive or other principal member of our management team would impair our ability to identify, develop and market new products and conduct successful operations.

As our development and commercialization plans and strategies develop, we expect to need additional managerial, operational, sales, marketing, financial, legal, research, and other resources. Our management may need to divert a disproportionate amount of its attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities. Our expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of additional product candidates.

In addition, failure to succeed in nonclinical or clinical trials may make it more challenging to recruit and retain qualified personnel. The inability to recruit and retain qualified personnel, or the loss of the services of these executives without proper replacement, may impede the progress of our overall growth. If this were to occur, our expenses could increase more than expected, our ability to generate and/or grow revenue could be reduced and we could face challenges in implementing our business strategy.

We underwent management and other changes that could impact our ability to execute our operational plans as quickly as we have planned.

During 2016 and 2015, we experienced significant management and cultural shifts. For example, in January 2015, our co-founder and then Chief Executive Officer, Dr. Dalia Megiddo, became Chief Development Officer and Mr. Colin Foster was appointed as our Chief Executive Officer and President. In November 2015, we announced that Dr. Megiddo and Udi Gilboa, our then Chief Financial Officer, would both transition to advisor positions. Our management further expanded, by the hiring of Dr. Warren Wasiewski as Chief Medical Officer and Vice President of Research and Development and other key executives, in connection with our establishment of a U.S.-based headquarters in New Haven, Connecticut, in addition to our facility in Israel. In June 2016, we decided to close our U.S. based headquarters, terminate the employment agreements of most of the executives and employees in the United States, including that of Colin Foster, and we appointed Fredric Price as our Executive Chairman and Chief Executive Officer. In September and November 2016, we engaged new executive officers, including Mr. Chaime Orlev as Chief Financial Officer and Vice President of Finance and Administration and Dana Gelbaum as Chief Commercial Officer. In addition, during 2016, we shifted the emphasis of our development activities and concentrated solely on the development of Trehalose IV for OPMD, SCA3, and other indications while terminating all activities regarding previously developed products. The changes that we implemented and any future changes we may implement occupy much of our existing senior management's time, are difficult to manage and might not always prove to be successful.

Our employees, independent contractors, consultants, commercial partners, principal investigators, CROs and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could cause significant liability for us and harm our reputation.

We are exposed to the risk that our employees, independent contractors, consultants, commercial partners, principal investigators, CROs and vendors may engage in fraudulent conduct or other misconduct, including intentional failures to comply with FDA regulations or similar regulations of comparable foreign regulatory authorities, to provide accurate information to the FDA or comparable foreign regulatory authorities, to comply with regulations pertaining to clinical trials, to comply with manufacturing standards we have established, to comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by comparable foreign regulatory authorities, and to report financial information or data accurately or disclose unauthorized activities to us. The misconduct of our employees and contractors could also involve the improper use of information obtained in the course of clinical trials and other research and development activities, which could result in regulatory sanctions and serious harm to our reputation. In connection with our initial public offering, we

implemented a code of conduct and ethics for our directors, officers and employees, but it is not always possible to identify and deter such misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

We incur significant costs as a result of operating as a public company, and our management is required to devote substantial time to new compliance initiatives.

As a public company, we incur significant legal, accounting, and other expenses. In addition, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules subsequently implemented by the SEC and the NASDAQ Stock Market, or NASDAQ, have imposed various requirements on public companies. New laws and regulations as well as changes to existing laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act, and changes in required accounting practices and rules adopted by the SEC and by NASDAQ, would likely result in increased costs to us as we respond to their requirements.

Emerging growth companies may implement some of these requirements over a longer period and up to five years from the date of their initial public offering. We are taking advantage of this legislation but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Shareholder activism, the current political environment, and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased our legal and financial compliance costs and will make some activities more time consuming and costly. For example, these rules and regulations make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain our current levels of such coverage.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, pursuant to Section 404 of the Sarbanes-Oxley Act, we are required to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting. Our testing may reveal deficiencies in our internal control over financial reporting that are deemed to be material weaknesses. Our compliance with the SEC's rules requires that we incur substantial accounting expense and expend significant management efforts. Per Section 404 of the Sarbanes-Oxley Act, we are required to disclose if we maintain effective disclosure controls and procedures and internal control over financial reporting. Nevertheless, for so long as we remain an emerging growth company, as defined in the JOBS Act, we are not required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act.

Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected. Moreover, if we are not able to comply with the SEC's requirements in a timely manner or if we identify or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, we may not be able to produce timely and accurate financial statements. As a result we would be required to place additional financial and management resources on solving the issue. Moreover, if any of the aforementioned were to occur, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our Ordinary Shares is listed, the SEC or other regulatory authorities.

Compliance with changing European privacy laws could require us to incur significant costs or experience significant business disruption and failure to so comply could result in an adverse impact on our business.

In Europe, Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, or the Directive, has required European Union member states to implement data protection laws to meet the strict privacy requirements of the Directive. Among other requirements, the Directive regulates transfers of personally identifiable data that is subject to the Directive, or Personal Data, to countries such as the United States, that have not been found to provide adequate protection to such Personal Data. We have not in the past and cannot in the future rely upon adherence to the U.S. Department of Commerce's Safe Harbor Privacy Principles and compliance with the U.S.-EU and U.S.-Swiss Safe Harbor Frameworks as agreed to and set forth by the U.S. Department of Commerce, and the European Union and Switzerland, which established a means for legitimating the transfer of Personal Data by data controllers in the European Economic Area, or the EEA, to the United States. As a result of the October 6, 2015 European Union Court of Justice, or ECJ, opinion in Case C-362/14 (Schrems v. Data Protection Commissioner) regarding the adequacy of the U.S.-EU Safe Harbor Framework, the U.S. – EU Safe Harbor Framework is no longer deemed to be a valid method of compliance with requirements set forth in the Directive (and member states' implementations thereof) regarding the transfer of Personal Data outside of the EEA.

Recently, it was announced that negotiators from Europe and the United States reached political agreement on a successor to the Safe Harbor framework that will be referred to as the EU-US Privacy Shield. However, we cannot predict when all of the details regarding the Privacy Shield program will be finalized and a procedure is introduced to allow interested companies to participate in the program. While the details regarding the Privacy Shield program continue to be finalized, we will continue to face uncertainty as to whether our efforts to comply with our obligations under European privacy laws will be sufficient. If we are investigated by a European data protection authority, we may face fines and other penalties. Any such investigation or charges by European data protection authorities could have a negative effect on our existing business and on our ability to attract and retain new customers. We may be unsuccessful in establishing conforming means of transferring data from the EEA, including due to ongoing legislative activity, which may vary the current data protection landscape.

The Directive may be replaced in time with the pending European General Data Protection Regulation, which may impose additional obligations and risk upon our business and which may increase substantially the penalties to which we could be subject in the event of any non-compliance. We may incur substantial expense in complying with the new obligations to be imposed by the European General Data Protection Regulation and we may be required to make significant changes in our operations, all of which may adversely affect our business.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

Our research and development activities and our third-party manufacturers' and suppliers' activities involve the controlled storage, use, and disposal of hazardous materials, including the components of our product candidate and other hazardous compounds. We and our manufacturers and suppliers are subject to laws and regulations governing the use, manufacture, storage, handling, and disposal of these hazardous materials. In some cases, these hazardous materials and various wastes resulting from their use are stored at our and our manufacturers' facilities pending their use and disposal. We cannot eliminate the risk of contamination, which could cause an interruption of our commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling, and disposal of these materials and specified waste products. Although we believe that the safety procedures utilized by our third-party manufacturers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, we cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. In such an event, we may be held liable for any resulting damages, such liability could exceed our resources and state or federal or other applicable authorities may curtail our use of certain materials and/or interrupt our business operations. Furthermore, environmental laws and regulations are complex, change frequently, and have tended to become more stringent. We cannot predict the impact of such changes and cannot be certain of our future compliance. We do not currently carry biological or hazardous waste insurance coverage.

Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer.

We collect and store sensitive data, including intellectual property, our proprietary business information and that of our manufacturers, business partners, healthcare professionals and patients. This includes, where required or permitted by applicable laws, personally identifiable information. The secure maintenance of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, disrupt our operations, and damage our reputation which could adversely affect our business.

Exchange rate fluctuations between the U.S. dollar and non-U.S. currencies may negatively affect our results of operations.

The U.S. dollar is our functional and reporting currency; however, a portion of our operations are currently conducted in Israel and a portion of the Israeli expenses are currently paid or denominated in New Israeli Shekels, or NIS. We also contract with CROs internationally, primarily for the execution of clinical trials and manufacturing activities. A portion of these transactions are settled in Euros or Great British Pounds, or GBPs. As a result, we are exposed to the risk that the NIS, Euro or GBP may appreciate relative to the U.S. dollar, or, if the NIS, Euro or GBP instead devalue relative to the U.S. dollar, that the relative inflation rate may exceed such rate of devaluation, or that the timing of such devaluation may lag behind the relative inflation. In any such event, the U.S. dollar cost of our operations in Israel and transactions with certain CROs and other third parties would increase and our U.S. dollar-denominated results of operations would be adversely affected. To date, we have not engaged in hedging transactions. In the future, we may enter into currency hedging transactions to decrease the risk of financial exposure from fluctuations in the exchange rates of our principal operating currencies. These measures, however, may not adequately protect us from the material adverse effects of such fluctuations. If the U.S. dollar cost of our operations increases, our U.S. dollar-measured results of operations will be adversely affected. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Quantitative and Qualitative Disclosure about Market Risk."

# Risks Related to this Offering and Ownership of Our Ordinary Shares

If we are unable to comply with NASDAQ listing requirements, our Ordinary Shares could be delisted from the NASDAQ Global Market, and as a result we and our shareholders could incur material adverse consequences, including negative impact on our liquidity, our stockholders' ability to sell shares and our ability to raise capital.

Our Ordinary Shares are currently listed on the NASDAQ Global Market. Our listing on the NASDAQ Global Market is conditioned upon our continued compliance with the NASDAQ Marketplace Rules, including minimum stockholders' equity of \$10,000,000 and minimum bid price of \$1.00 per share for the last 30 consecutive business days.

On March 6, 2017, we received a deficiency letter from NASDAQ stating that our annual report on Form 20-F for the period ended December 31, 2016 reported stockholders' equity below the minimum threshold of \$10,000,000 for continued listing, and accordingly we have 45 calendar days to submit a plan to regain compliance. If our plan to regain compliance is accepted, we may be granted an extension of up to 180 calendar days from the date of the letter to evidence compliance.

In addition, as of March 14, 2017, the bid price of our Ordinary Shares was \$0.86. If we fail to comply with a minimum bid price of \$1.00 per share for 30 consecutive business days, we would have a period of 180 calendar days to achieve compliance by meeting the applicable standard for a minimum of ten consecutive business days. If we are not in compliance before the expiration of the 180 day compliance period, NASDAQ may grant us an additional 180 day compliance period, provided that on the 180<sup>th</sup> day of the first compliance period we have demonstrated that we meet all applicable standards for initial listing on the NASDAQ (except the bid price requirement) based on our most recent public filings and market information.

If we fail to achieve compliance with NASDAQ Marketplace Rules, including the minimum stockholders' equity threshold and minimum bid price of \$1.00 per a share, our Ordinary Shares could be delisted from the NASDAQ Global Market. If our Ordinary Shares are delisted from the NASDAQ Global Market, our shareholders could incur material adverse consequences such as reduced liquidity and reduced market prices for their securities. Following such delisting, we could encounter material adverse consequence, including increased difficulty in issuing additional securities at an attractive price, or at all, in order to fund our operations.

Even if we maintain compliance with the NASDAQ Global Market upon the completion of this offering, we cannot assure you that we will in the future be able to satisfy the continued listing requirements of the NASDAQ Global Market.

Our directors, executive officers and principal shareholders exercise significant control over our company, which will limit your ability to influence corporate matters.

After this offering, our executive officers, directors and principal shareholders will beneficially own approximately 36.4% of our Ordinary Shares. As a result, these shareholders, if they act together, will be able to influence our management and affairs and all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. In addition, this concentration of ownership may delay or prevent a change in control of our company and make some future transactions more difficult or impossible without the support of these shareholders. The interests of these shareholders may not coincide with our interests or the interests of other shareholders.

We will likely be characterized as a "passive foreign investment company" for U.S. tax purposes, which could cause adverse U.S. income tax consequences to U.S. holders of our Ordinary Shares.

If we were to be characterized as a passive foreign investment company, or PFIC, under the U.S. Internal Revenue Code of 1986, as amended, or the Code, in any taxable year during which a U.S. taxpayer owns Ordinary Shares, such U.S. holder could be liable for additional taxes and interest charges upon certain distributions by us and any gain recognized on a sale, exchange or other disposition, including a pledge, of the Ordinary Shares, whether or not we continue to be a PFIC. Based on the nature of our business, the projected composition of our income and the projected composition and estimated fair market values of our assets, we believe that we likely will be deemed a PFIC. In addition, we may have been a PFIC in prior years and may be a PFIC in the future. Were we to be classified as a PFIC, a U.S. investor may be able to mitigate some of the adverse U.S. federal income tax consequences with respect to owning the Ordinary Shares for our taxable year ended December 31, 2016, provided that such U.S. investor is eligible to make, and successfully makes, a "mark-to-market" election. U.S. investors could also mitigate some of the adverse U.S. federal income tax consequences of us being classified as a PFIC by making a "qualified electing fund", or QEF, election, provided that we provide the information necessary for a U.S. investor to make such an election. We intend to make available to U.S. investors upon request the information necessary for U.S. holders to make qualified electing fund elections. U.S. Holders are strongly urged to consult their tax advisors about the PFIC rules, including tax return filing requirements and the eligibility, manner, and consequences to them of making a QEF or mark-to-market election with respect to our Ordinary Shares in the event we that qualify as a PFIC. For more information see Taxation - "U.S. Federal Income Tax Consequences."

We do not know whether a market for our Ordinary Shares will be sustained or what the market price of our Ordinary Shares will be and as a result it may be difficult for you to sell your shares.

On August 5, 2014, we completed an initial public offering of 3,200,000 Ordinary Shares at a price to the public of \$11.00 per share. In March 2016, we completed the sale of 2,161,290 Ordinary Shares in a registered direct offering at a price of \$3.10 per share, which included a private placement of warrants to purchase additional Ordinary Shares. Although our Ordinary Shares are quoted on the NASDAQ Global Market, an active trading market for our Ordinary

Shares may not be sustained. It may be difficult for you to sell your Ordinary Shares at all or without depressing the market price for the Ordinary Shares. As a result of these and other factors, you may not be able to sell your Ordinary Shares at or above the price you paid for such shares or at all. In addition, the trading price of our Ordinary Shares is likely to be volatile.

We have registered for the offer and sale a number of the Ordinary Shares that are reserved for issuance pursuant to outstanding options, and intend to similarly register additional Ordinary Shares in the future. Shares covered by such registration statements upon the exercise of stock options generally will be eligible for sale in the public market, except that affiliates continue to be subject to volume limitations and other requirements of Rule 144 under the Securities Act. The issuance or sale of such shares could depress the market price of our Ordinary Shares.

In addition, the stock market in general, and NASDAQ in particular, as well as biotechnology companies, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of small companies. Broad market and industry factors may negatively affect the market price of our Ordinary Shares, regardless of our actual operating performance. Further, a systemic decline in the financial markets and related factors beyond our control may cause our share price to decline rapidly and unexpectedly. In addition, our ability to raise additional capital may be dependent on our shares being quoted on the NASDAQ Global Market or upon obtaining stockholder approval. There can be no assurance that we will be able to satisfy the criteria for continued listing on the NASDAQ Global Market. If our share price falls below the listing standards of NASDAQ Global Market, our Ordinary Shares may be delisted from trading.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our securities may be volatile, in the past companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Litigation of this type could result in substantial costs and diversion of management's attention and resources, which could seriously hurt our business. Any adverse determination in litigation could also subject us to significant liabilities. While we currently have directors' and officers' insurance, there is no guarantee that the current policy will be maintained, or whether it will be sufficient to cover the costs of potential litigation.

Sales of a substantial number of our Ordinary Shares in the public market by our existing shareholders could cause our share price to fall.

Sales of substantial amounts of our Ordinary Shares in the public market after this offering, or the perception that these sales may occur, could materially and adversely affect the price of our securities and could impair our ability to raise capital through the sale of additional equity securities. The Ordinary Shares sold in this offering will be freely tradable, without restriction, in the public market.

In connection with this offering, we, our executive officers and directors have agreed prior to the commencement of this offering, subject to limited exceptions, not to sell or transfer any Ordinary Shares for 90 days after the date of this prospectus without the consent of the underwriters. However, the underwriters may release these shares from any restrictions at any time. We cannot predict what effect, if any, market sales of shares held by any shareholder or the availability of shares for future sale will have on the market price of our Ordinary Shares.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they adversely change their recommendations or publish negative reports regarding our business

or our Ordinary Shares, our share price and trading volume could decline.

The trading market for our Ordinary Shares is and will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. We do not have any control over these analysts and we cannot provide any assurance that analysts will cover us or provide favorable coverage. If any of the analysts who may cover us adversely change their recommendation regarding our Ordinary Shares, or provide more favorable relative recommendations about our competitors, our share price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline.

We have never paid cash dividends on our capital stock and we do not anticipate paying any dividends in the foreseeable future. Consequently, any gains from an investment in our Ordinary Shares will likely depend on whether the price of our Ordinary Shares increases, which may not occur.

We have not paid cash dividends on any of our classes of capital stock to date and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the Israeli Companies Law 5759-1999, or the Companies Law, imposes restrictions on our ability to declare and pay dividends. As a result, capital appreciation, if any, of our Ordinary Shares will be your sole source of gain for the foreseeable future. Consequently, in the foreseeable future, you will likely only experience a gain from your investment in our Ordinary Shares if the price of our Ordinary Shares increases beyond the price in which you originally acquired the Ordinary Shares.

If you purchase our Ordinary Shares in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The offering price in this offering is substantially higher than the net tangible book value per share of our Ordinary Shares. Therefore, if you purchase Ordinary Shares in this offering, you will pay a price per Ordinary Share that substantially exceeds our net tangible book value per Ordinary Share. As a result, if you purchase Ordinary Shares in this offering, you will incur immediate dilution of \$0.22 per share, based on an assumed public offering price of \$0.86 per share, which is the last reported sale price of our Ordinary Shares on March 14, 2017, and our as adjusted net tangible book value as of December 31, 2016. Moreover, purchasers of Ordinary Shares in this offering will have contributed approximately 17.0% of the aggregate price paid by all purchasers of our Ordinary Shares, however, will own approximately 41.5% of our Ordinary Shares outstanding after this offering. In addition, as of that date, options to purchase 2,599,281 of our Ordinary Shares at a weighted average exercise price of \$3.44 per share, and warrants to purchase 1,080,645 of our Ordinary Shares at an exercise price of \$4.50 per share were outstanding. The exercise of these options and warrants would result in additional dilution. As a result of this dilution, investors purchasing shares in this offering may receive significantly less than the purchase price paid in this offering in the event of liquidation. For more information, please refer to the section of this prospectus entitled "Dilution".

Management will have broad discretion as to the use of the proceeds from this offering.

Our management will have broad discretion in the allocation of the net proceeds and could use them for purposes other than those contemplated at the time of this offering. Our shareholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds.

The JOBS Act and our status as a foreign private issuer will allow us to postpone the date by which we must comply with some of the laws and regulations intended to protect investors and to reduce the amount of information we provide in our reports filed with the SEC, which could undermine investor confidence in our company and adversely affect the market price of our Ordinary Shares.

For so long as we remain an "emerging growth company" as defined in the JOBS Act, we intend to take advantage of certain exemptions from various requirements that are applicable to public companies that are not emerging growth companies including:

the provisions of the Sarbanes-Oxley Act requiring that our independent registered public accounting firm provide an attestation report on the effectiveness of our internal control over financial reporting;

Section 107 of the JOBS Act, which provides that an emerging growth company may take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act, for complying with new or revised accounting standards. This means that an emerging growth company may delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected to delay such adoption of new or revised accounting standards. As a result, our financial statements may not be comparable to companies that comply with the public company effective date; and

any rules that may be adopted by the Public Company Accounting Oversight Board requiring mandatory audit firm rotation or a supplement to the auditor's report on the financial statements.

We intend to take advantage of these exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of our initial public offering which occurred in 2014, (b) in which we have total annual gross revenue of at least \$1 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our Ordinary Shares that is held by non-affiliates exceeds \$700 million as of the prior June 30th, and (2) the date on which we have issued more than \$1 billion in non-convertible debt during the prior three-year period.

Our status as a foreign private issuer also exempts us from compliance with certain laws and SEC regulations and certain regulations of NASDAQ, including the proxy rules, the short-swing profits recapture rules, and certain governance requirements such as independent director oversight of the nomination of directors and executive compensation. Also, although a recent amendment to the Companies Law will require us to disclose the annual compensation of our five most highly compensated senior officers and directors on an individual basis (rather than on an aggregate basis, as was permitted under the Companies Law for Israeli public companies listed overseas, such as in the United States, prior to such amendment), this disclosure will not be as extensive as that required of a U.S. domestic issuer. For example, it currently appears as if the disclosure required under Israeli law would be limited to compensation paid in the immediately preceding year without any requirement to disclose option exercises and vested stock options, pension benefits or potential payments upon termination or change of control.

We cannot predict if investors will find our Ordinary Shares less attractive because we may rely on these exemptions. If some investors find our Ordinary Shares less attractive as a result, there may be a less active trading market for our Ordinary Shares, and our share price may be more volatile and may decline.

#### Risks Related to Israeli Law and Our Operations in Israel

While some of our senior management team is in the United States, a number of our officers, directors and employees are located in Israel and, therefore, our results may be adversely affected by political, economic and military instability in Israel.

Our business headquarters, part of our senior management team and a number of our directors and employees are located in Israel. Accordingly, political, economic and military conditions in Israel may directly affect our business. Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its neighboring countries, the Hamas militant group and the Hezbollah. Any hostilities involving Israel or the interruption or curtailment of trade between Israel and its trading partners could adversely affect our operations and results of operations. Since October 2000, there have been increasing occurrences of terrorist violence. In 2006, a conflict between Israel and the Hezbollah in Lebanon resulted in thousands of rockets being fired from Lebanon into Israel. In 2008, Israel engaged in an armed conflict with Hamas in the Gaza Strip, which involved missile strikes against Israel and negatively affected business conditions in Israel. In 2012 and 2014, Israel experienced a similar armed conflict, resulting in hundreds of rockets being fired from the Gaza Strip. Ongoing and revived hostilities or other Israeli political or economic factors, such as, an interruption of operations at the Tel Aviv airport, could prevent or delay shipments of our components or products. If continued or resumed, these hostilities may negatively affect business conditions in Israel in general and our business in particular. In the event that hostilities disrupt the ongoing operation of our facilities or the airports and seaports on which we depend to import and export our supplies and any product candidates, our operations may be materially adversely affected.

In addition, since 2010 political uprisings and conflicts in various countries in the Middle East, including Egypt and Syria, are affecting the political stability of those countries. It is not clear how this instability will develop and how it will affect the political and security situation in the Middle East. This instability has raised concerns regarding security in the region and the potential for armed conflict. Any potential future conflict could also include missile strikes against parts of Israel, including our offices and facilities. Such instability may lead to deterioration in the political and trade relationships that exist between the State of Israel and certain other countries. Any armed conflicts, terrorist activities or political instability in the region could adversely affect business conditions, could harm our results of operations and could make it more difficult for us to raise capital. Parties with whom we do business may sometimes decline to travel to Israel during periods of heightened unrest or tension, forcing us to make alternative arrangements when necessary in order to meet our business partners face to face. Several countries, principally in the Middle East, still restrict doing business with Israel and Israeli companies, and additional countries may impose restrictions on doing business with Israel and Israeli companies if hostilities in Israel or political instability in the region continues or increases. Similarly, Israeli companies are limited in conducting business with entities from

countries that are considered to be in a state of war with Israel. In addition, the political and security situation in Israel may result in parties with whom we have agreements involving performance in Israel claiming that they are not obligated to perform their commitments under those agreements pursuant to force majeure provisions in such agreements.

Our commercial insurance does not cover losses that may occur as a result of an event associated with the security situation in the Middle East or for any resulting disruption in our operations. Although the Israeli government has in the past covered the reinstatement value of certain damages that were caused by terrorist attacks or acts of war, we cannot assure you that this government coverage will be maintained or, if maintained, will be sufficient to compensate us fully for damages incurred and the government may cease providing such coverage or the coverage might not suffice to cover potential damages. Any losses or damages incurred by us could have a material adverse effect on our business. Any armed conflicts or political instability in the region would likely negatively affect business conditions generally and could harm our results of operations.

Further, in the past, the State of Israel and Israeli companies have been subjected to economic boycotts. Several countries still restrict business with the State of Israel and with Israeli companies. These restrictive laws and policies may have an adverse impact on our operating results, financial conditions or the expansion of our business.

We may become subject to claims for remuneration or royalties for assigned service invention rights by our employees, which could result in litigation and harm our business.

A significant portion of our intellectual property has been developed by our employees in the course of their employment for us. Under the Israeli Patent Law, 5727-1967, or the Patent Law, and recent decisions by the Israeli Supreme Court and the Israeli Compensation and Royalties Committee, a body constituted under the Patent Law, employees may be entitled to remuneration for intellectual property that they develop for us unless they explicitly waive any such rights. Although we enter into agreements with our employees pursuant to which they agree that any inventions created in the scope of their employment or engagement are owned exclusively by us, we may face claims demanding remuneration. As a consequence of such claims, we could be required to pay additional remuneration or royalties to our current and former employees, or be forced to litigate such claims, which could negatively affect our business.

Under current Israeli law, we may not be able to enforce our Israeli employees' covenants not to compete and therefore may be unable to prevent our competitors from benefiting from the expertise of some of our former employees.

We generally enter into non-competition agreements with our key employees, in most cases within the framework of their employment agreements. These agreements prohibit our key employees, if they cease working for us, from competing directly with us or working for our competitors for a limited period. Under applicable Israeli law, we may be unable to enforce these agreements or any part thereof against our Israeli employees. If we cannot enforce our non-competition agreements against our Israeli employees, then we may be unable to prevent our competitors from benefiting from the expertise of these former employees, which could impair our business, results of operations and ability to capitalize on our proprietary information.

Provisions of Israeli law and our amended and restated articles of association may delay, prevent or otherwise impede a merger with, or an acquisition of, our company, which could prevent a change of control, even when the terms of such a transaction are favorable to us and our shareholders.

As a company incorporated under the law of the State of Israel, we are subject to Israeli corporate law. Israeli corporate law regulates mergers, requires tender offers for acquisitions of shares above specified thresholds, requires

special approvals for transactions involving directors, officers or significant shareholders and regulates other matters that may be relevant to such types of transactions. For example, a merger may not be consummated unless at least 50 days have passed from the date on which a merger proposal is filed by each merging company with the Israel Registrar of Companies and at least 30 days have passed from the date on which the shareholders of both merging companies have approved the merger. In addition, a majority of each class of securities of the target company must approve a merger. Moreover, a tender offer for all of a company's issued and outstanding shares can only be completed if the acquirer receives positive responses from the holders of at least 95% of the issued share capital. Completion of the tender offer also requires approval of and a majority of the offerees that do not have a personal interest in the tender offer approves the tender offer, unless, following consummation of the tender offer, the acquirer would hold at least 98% of the company's outstanding shares. Furthermore, the shareholders, including those who indicated their acceptance of the tender offer, may, at any time within six months following the completion of the tender offer, claim that the consideration for the acquisition of the shares does not reflect their fair market value, and petition an Israeli court to alter the consideration for the acquisition, unless accordingly, other than those who indicated their acceptance of the tender offer in case the acquirer stipulated in its tender offer that a shareholder that accepts the offer may not seek such appraisal rights, and the acquirer or the company published all required information with respect to the tender offer prior to the tender offer's response date. See "Description of Share Capital —Acquisitions under Israeli Law" for additional information.

Furthermore, Israeli tax considerations may make potential transactions unappealing to us or to our shareholders whose country of residence does not have a tax treaty with Israel exempting such shareholders from Israeli tax. See "Taxation - Israeli Tax Considerations" for additional information.

Our amended and restated articles of association also contain provisions that could delay or prevent changes in control or changes in our management without the consent of our Board of Directors. These provisions include the following:

no cumulative voting in the election of directors, which limits the ability of minority shareholders to elect director candidates; and

the right of our Board of Directors to elect a director to fill a vacancy created by the expansion of the Board of Directors or the resignation, death or removal of a director, which may prevent shareholders from being able to fill vacancies on our Board of Directors.

It may be difficult to enforce a judgment of a United States court against us, to assert United States securities laws claims in Israel or to serve process on our officers and directors that reside outside of the United States.

We were incorporated in Israel. Several of our directors reside outside of the United States, and most of our assets and the assets of these persons are located outside of the United States. Therefore, a judgment obtained against us, or any of these persons, including a judgment based on the civil liability provisions of the U.S. federal securities laws, may not be collectible in the United States and may not necessarily be enforced by an Israeli court. It also may be difficult for you to affect service of process on these persons in the United States or to assert U.S. securities law claims in original actions instituted in Israel. Additionally, it may be difficult for an investor, or any other person or entity, to initiate an action with respect to United States securities laws in Israel. Israeli courts may refuse to hear a claim based on an alleged violation of United States securities laws reasoning that Israeli is not the most appropriate forum in which to bring such a claim. In addition, even if an Israeli court agrees to hear a claim, it may determine that Israeli law and not United States law is applicable to the claim. If United States law is found to be applicable, the content of applicable United States law must be proven as a fact by expert witnesses, 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. As a result of the difficulty associated with enforcing a judgment against us in Israel, you may not be able to collect any damages awarded by either a United States or foreign court.

Your rights and responsibilities as a shareholder will be governed by Israeli law which differs in some material respects from the rights and responsibilities of shareholders of U.S. companies.

The rights and responsibilities of the holders of our Ordinary Shares are governed by our amended and restated articles of association and by Israeli law. These rights and responsibilities differ in some material respects from the rights and responsibilities of shareholders in typical U.S.-based corporations. In particular, a shareholder of an Israeli company has certain duties to act in good faith and fairness toward the Company and other shareholders, and to refrain from abusing its power in us. See "Management – Approval of Related Party Transactions under Israeli Law" for additional information. There is limited case law available to assist us in understanding the nature of this duty or the

implications of these provisions. These provisions may be interpreted to impose additional obligations on holders of our Ordinary Shares that are not typically imposed on shareholders of U.S. corporations.

Our operations may be disrupted as a result of the obligation of management or key personnel to perform military service.

Our employees and consultants in Israel, including members of our senior management, may be obligated to perform one month, and in some cases longer periods, of military reserve duty until they reach the age of 40 (or older, for citizens who hold certain positions in the Israeli armed forces reserves) and, in the event of a military conflict or emergency circumstances, may be called to immediate and unlimited active duty. In the event of severe unrest or other conflict, individuals could be required to serve in the military for extended periods of time. In response to increases in terrorist activity, there have been periods of significant call-ups of military reservists. It is possible that there will be similar large-scale military reserve duty call-ups in the future. Our operations could be disrupted by the absence of a significant number of our officers, directors, employees and consultants related to military service. Such disruption could materially adversely affect our business and operations.

#### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND MARKET DATA

Some of the statements made under "Prospectus Summary," "Risk Factors," "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Business" and elsewhere in this prospectus constitute forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "intends," or "continue," or these terms or other comparable terminology.

Forward-looking statements include, but are not limited to, statements about:

our ability to continue as a going concern;

our expectations regarding the timing of commencing clinical trials with respect to our Trehalose IV solution in OPMD;

our expectations regarding the progress of our clinical trials, including the duration, cost and whether such trials will be conducted at all:

- the number, scope, size and design of our planned development programs, including nonclinical, clinical trials;
- · our intention to successfully complete clinical trials in order to be in a position to submit an NDA to the FDA;

our intention to apply for regulatory approval for our current and any future product candidates we may develop, and the costs and timing of such regulatory approvals;

the likelihood of regulatory approvals for any product candidate we may develop;

the timing, cost or other aspects of the commercial launch of any product candidate we may develop, including our intention to a build a commercial infrastructure to support commercialization of our current and any future product candidates we may develop;

our intention to enter into strategic partnerships;

our intention to retain global commercialization rights to our product to maximize long-term value; future sales of our product candidate or any other future products or product candidates; our ability to achieve favorable pricing for our product candidate; the potential for our product candidates to receive designation as an orphan drug and implications if they do not receive such designation; that any product candidate we develop potentially offers effective solutions for various diseases; whether we will develop any future product candidates internally or through strategic partnerships; our expectations regarding the manufacturing and supply of any product candidate we may have developed for use in our nonclinical and clinical trials, and the commercial supply of those product candidates; third-party payer reimbursement for our current or any future product candidates; ·our estimates regarding anticipated expenses, capital requirements and our needs for substantial additional financing; the ultra-rare and rare diseases patient market size and market adoption of our current or any future product candidates by physicians and patients; completion and receiving favorable results of clinical trials for our product candidates; protection of our intellectual property, including issuance of patents to us by the USPTO and other governmental patent agencies;

our intention to pursue marketing and orphan drug exclusivity periods that are available to us under regulatory provisions in certain countries;

the development and approval of the use of our current or any future product candidates for additional indications other than ultra-rare and rare diseases;

our expectations regarding commercial and pre-commercial activities;

our expectations regarding licensing, acquisitions, and strategic operations; and

our liquidity.

These statements are only current predictions and are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in this prospectus in greater detail under the heading "Risk Factors" and elsewhere in this prospectus. You should not rely upon forward-looking statements as predictions of future events.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. Except as required by law, we do not intend to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this prospectus.

# PRICE HISTORY OF OUR ORDINARY SHARES

Our Ordinary Shares have been listed on the NASDAQ Global Market under the symbol "ORPN" since July 30, 2014. Prior to that date, there was no public trading market for our Ordinary Shares. The following table sets forth for the periods indicated the high and low sales prices per ordinary share as reported on the NASDAQ Global Market:

	Low	High
Annual information		
2014	\$4.50	\$11.00
2015	\$3.45	\$8.85
2016	\$0.92	\$7.95
Quarterly information		
First quarter 2015	\$5.80	\$8.85
Second quarter 2015	\$5.10	\$8.50
Third quarter 2015	\$4.90	\$7.15
Fourth quarter 2015	\$3.45	\$6.60
First quarter 2016	\$2.30	\$7.95
Second quarter 2016	\$1.54	\$3.13
Third quarter 2016	\$1.50	\$2.04
Fourth quarter 2016	\$0.92	\$1.75
Monthly information		
August 2016	\$1.50	\$2.04
September 2016	\$1.55	\$1.87
October 2016	\$1.50	\$1.75
November 2016	\$1.30	\$1.71
December 2016	\$0.92	\$1.58
January 2017	\$1.01	\$1.55
February 2017*	\$1.15	\$1.55

<sup>\*</sup> Updated until February 21, 2017

#### **USE OF PROCEEDS**

We expect to receive approximately \$9.10 million in net proceeds from the sale of 11,627,907 Ordinary Shares offered by us in this offering (approximately \$10.51 million if the over-allotment option is exercised in full), based on an assumed public offering price of \$0.86 per Ordinary Share, the closing price of our Ordinary Shares on March 14, 2017, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The actual offering price per Ordinary Share will be as determined between us and the underwriters at the time of pricing, and may be at a discount to the current market price. A \$0.10 increase (decrease) in the assumed public offering price of \$0.86 per Ordinary Share would increase (decrease) our net proceeds from this offering by approximately \$1.09 million, assuming that the number of Ordinary Shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses. We may also increase or decrease the number of Ordinary Shares we are offering. An increase of 1,000,000 Ordinary Shares in the number of Ordinary Shares offered by us would increase the net proceeds to us from this offering by approximately \$0.81 million after deducting estimated underwriting discounts and estimated offering expenses payable by us. Conversely, a decrease of 1,000,000 Ordinary Shares in the number of Ordinary Shares offered by us would decrease the net proceeds to us from this offering by approximately \$0.82 million after deducting estimated underwriting discounts and estimated offering expenses payable by us.

We currently expect to use the net proceeds from this offering for the following purposes:

- Approximately \$6.00 million to initiate a Phase 2b clinical trial of our Trehalose IV solution for the treatment of OPMD patients;
- Approximately \$750,000 to initiate one or two Phase 2a clinical trial of our Trehalose IV solution for other indications; and
- · Approximately \$250,000 to continue a prospective natural history of disease study for OPMD.

We expect to use the remainder of any net proceeds from this offering for working capital and other general corporate purposes.

The amounts and schedule of our actual expenditures will depend on multiple factors including the progress of our clinical development and regulatory efforts, the status and results of the clinical trials, the pace of our partnering efforts with respect to manufacturing and commercialization and the overall regulatory environment. Therefore, our management will retain broad discretion over the use of the proceeds from this offering. We may ultimately use the proceeds for different purposes than what we currently intend. Pending any ultimate use of any portion of the proceeds

from this offering, if the anticipated proceeds will not be sufficient to fund all the proposed purposes, our management will determine the order of priority for using the proceeds, as well as the amount and sources of other funds needed.

Pending our use of the net proceeds from this offering, we may invest the net proceeds in a variety of capital preservation investments, including short-term, investment grade, interest bearing instruments and/or governmental securities.

#### **DIVIDEND POLICY**

We have never declared or paid cash dividends on our Ordinary Shares. We do not anticipate paying dividends in the foreseeable future. Payment of cash dividends, if any, in the future will be at the discretion of our Board of Directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our Board of Directors may deem relevant.

The Companies Law imposes further restrictions on our ability to declare and pay dividends. See "Description of Share Capital—Dividend and Liquidation Rights" for additional information.

Payment of dividends may be subject to Israeli withholding taxes. See "Taxation—Israeli Tax Considerations" for additional information.

#### **CAPITALIZATION**

The following table sets forth our cash and cash equivalents and our capitalization as of December 31, 2016:

on an actual basis; and

on an as adjusted basis to give effect to the sale of 11,627,907 Ordinary Shares in this offering at an assumed public offering price of \$0.86 per share the last reported sale price of the Ordinary Shares on the NASDAQ Global Market on March 14, 2017, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with the sections titled "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus. Information in the table below is in thousands, except for share and per share amounts.

	December 31, 2016				
	A	ctual	Α	s Adjusted	Ĺ
		U.S. dollars in thousands, except share data			
Cash and cash equivalents	\$	6,871	\$	15,971	
SHAREHOLDERS' EQUITY:					
Ordinary shares of NIS 0.01 par value - 50,000,000 shares authorized at December 31,					
2016 actual and as adjusted; 16,391,770 and 28,019,677 issued and outstanding shares		45		77	
at December 31, 2016 actual and as adjusted, respectively					
Additional paid-in capital		48,463		57,531	
Accumulated deficit		(39,809)		(39,809	)
<u>Total</u> stockholders' equity	\$	8,699	\$	17,799	

The number of Ordinary Shares to be outstanding after this offering is based on 16,391,770 Ordinary Shares outstanding as of December 31, 2016, and excludes:

2,651,781 Ordinary Shares issuable upon the exercise of options to purchase Ordinary Shares outstanding as of December 31, 2016, at a weighted-average exercise price of \$3.41 per share;

1,080,645 Ordinary Shares issuable upon the exercise of warrants to purchase Ordinary Shares outstanding as of December 31, 2016, at an exercise price of \$4.50 per share; and

·694,179 Ordinary Shares reserved for future issuance under the 2013 Incentive Option Plan.

#### **DILUTION**

If you invest in our Ordinary Shares, you will experience immediate and substantial dilution to the extent of the difference between the public offering price of our Ordinary Shares and the as adjusted net tangible book value per share of our Ordinary Shares immediately after the offering.

Our historical net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the actual number of outstanding Ordinary Shares. The historical net tangible book value of our Ordinary Shares as of December 31, 2016, was \$8.7 million, or \$0.53 per share.

The as adjusted net tangible book value of our Ordinary Shares as of December 31, 2016, was \$17.8 million, or \$0.64 per share. The as adjusted net tangible book value gives effect to the sale of 11,627,907 Ordinary Shares in this offering at the public offering price of \$0.86 per share (based on the last reported sale price of the Ordinary Shares on the NASDAQ Global Market on March 14, 2017), after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The difference between the public offering price and the as adjusted net tangible book value per share represents an immediate dilution of \$0.22 per share to new investors purchasing Ordinary Shares in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed public offering price per share		\$ 0.86
Historical net tangible book value per share before this offering, as of December 31, 2016	\$ 0.53	
Increase in net tangible book value per share attributable to new investors in this offering	0.11	
As adjusted net tangible book value per share after offering		0.64
Dilution in as adjusted tangible book value per share to new investors		\$ 0.22

If the underwriters' over-allotment option to purchase additional shares from us is exercised in full, and based on the public offering price of \$0.86 per share (based on the last reported sale price of the Ordinary Shares on the NASDAQ Global Market on March 14, 2017), the as adjusted net tangible book value per share after this offering would be approximately \$0.65 per share, the increase in the as adjusted net tangible book value per share attributable to new investors would be approximately \$0.12 per share and the dilution to new investors purchasing shares in this offering would be approximately \$0.21 per share.

A \$0.10 increase (decrease) in the assumed public offering price of \$0.86 per ordinary share would increase (decrease) our net tangible book value per share by \$0.03 and the dilution per ordinary share to new investors by \$0.07, assuming that the number of Ordinary Shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions.

An increase of 1,000,000 Ordinary Shares in the number of Ordinary Shares offered by us, would increase our as adjusted net tangible book value after this offering by approximately \$0.81 million and the as adjusted net tangible book value per Ordinary Share after this offering by \$0.01 and would decrease the dilution per Ordinary Shares to new investors by \$0.01, assuming no changes in the assumed public offering price of \$0.86 per Ordinary Shares and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Conversely, a decrease of 1,000,000 Ordinary Shares in the number of Ordinary Shares offered by us would decrease our as adjusted net tangible book value after this offering by approximately \$0.82 million and the as adjusted net tangible book value per Ordinary Shares after this offering by \$0.01 per Ordinary Shares and would increase the dilution in net tangible book value per Ordinary Shares to new investors by \$0.01, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will adjust based on the actual public offering price and other terms of the offering determined at pricing.

The table below summarizes as of December 31, 2016, on the as adjusted basis described above, the number of Ordinary Shares we issued and sold, the total consideration we received and the average price per share (1) paid by our existing shareholders and (2) to be paid by new investors purchasing our Ordinary Shares in this offering at the public offering price of \$0.86 per share, before deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Considera	Average Price		
	Number	Percent	Amount	Percent	Per Share	
Existing shareholders	16,391,770	58.5 %	\$ 48,973,819	83.0 %	\$ 2.99	
New investors	11,627,907	41.5 %	\$ 10,000,000	17.0 %	\$ 0.86	
Total	28,019,677	100.0 %	\$ 58,973,819	100.0 %	\$ 2.10	

The number of Ordinary Shares to be outstanding after this offering is based on 16,391,770 Ordinary Shares outstanding as of December 31, 2016, and excludes:

2,651,781 Ordinary Shares issuable upon the exercise of options to purchase Ordinary Shares outstanding as of December 31, 2016, at a weighted-average exercise price of \$3.41 per share;

1,080,645 Ordinary Shares issuable upon the exercise of warrants to purchase Ordinary Shares outstanding as of December 31, 2016, at an exercise price of \$4.50 per share; and

·694,179 Ordinary Shares reserved for future issuance under the 2013 Incentive Option Plan.

#### SELECTED CONSOLIDATED FINANCIAL DATA

The following summary consolidated financial data for the years ended of December 31, 2016, 2015 and 2014 and as of December 31, 2016, and 2015 are derived from, and should be read in conjunction with, the audited consolidated financial statements, and notes thereto, included elsewhere in this prospectus. The summary consolidated financial for the years ended December 31, 2013 and 2012 and as of December 31, 2014, 2013 and 2012 have been derived from audited financial statements not included in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus.

#### **Statement of Operations Data - Year Ended December 31**

U.S. dollars in thousands, except share and per share data

	2016	2015	í	201	4	2013		2012	
Research and development	\$8,881	\$7,6	94	\$4,4	141	\$732		\$140	
Pre-commercialization	1,085	829	)	-		-		-	
General and administrative	5,900	6,9	53	2,6	539	416		86	
Total operating expenses	15,866	15,	476	7,0	080	1,14	8	226	
Loss from operations	(15,866	) (15	,476 )	(7,	,080	(1,14	18 )	(226	)
Financial income, net	60	135	5	58		3		(3	)
Loss before taxes on income	(15,806	) (15	,341 )	(7,	,022	(1,14	<b>4</b> 5 )	(229	)
Taxes on income	(216	) (24	. )	-		-		-	
Deemed dividend	-	-		-		(26	)	-	
Net loss	\$(16,022	) \$(15	,365 )	\$(7,	,022	\$(1,17	71 )	\$(229	)
Net loss attributable to Ordinary shareholders	\$(16,022	) \$(15	,365 )	\$(7,	,022	\$(1,17	71 )	\$(229	)
Net loss per share attributable to Ordinary	\$(1.01	\ \$ (1 i	10 )	\$(0.	57	\$ (0.1)	1 \	\$(0.03	`
shareholders - basic and diluted	\$(1.01	) \$(1.0	) )	\$(0.	.57	\$(0.14)	+ )	\$(0.03	)
Weighted average number of Ordinary shares outstanding - basic and diluted	15,906,22	0 14,	230,480	12	,259,600	8,42	3,018	7,551	,427

# **Balance Sheet Data - December 31,**

U.S. dollars in thousands

	2016	2015	2014	2013	2012
Cash and cash equivalents	\$6,871	\$7,286	\$10,583	\$270	\$146

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Short-term bank deposits	3,007	12,046	22,028	-	-
Current Assets	10,541	20,392	32,885	299	156
Total assets	10,630	20,516	32,954	306	156
Current liabilities	1,931	2,514	2,280	131	81
Long-term liabilities	-	70	-	-	-
Total Liabilities	1,931	2,584	2,280	131	81
Accumulated deficit	(39,809)	(23,787)	(8,422)	(1,400)	(229)
Shareholders' equity	8,699	17,932	30,674	175	75

# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of the prospectus contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth under "Risk Factors" and elsewhere in this prospectus.

#### Introduction

We are a clinical stage biotechnology company committed to developing meaningful therapies for patients with rare and ultra-rare genetic diseases. Currently our focus is on Trehalose IV, a therapeutic platform that offers potential solutions for several diseases that share a common pathophysiological mechanism, which are the functional changes that accompany a particular syndrome or disease. Since our inception in 2012, our work with trehalose has centered around two diseases, OPMD and SCA3. We also address diseases with severe and debilitating manifestations, where the unmet medical need is clear, the biological mechanism of action is understood, and for which there is no satisfactory treatment.

To date, we have not generated revenue from the sale of any product, and we do not expect to generate significant revenue unless and until we obtain marketing approval of, and commercialize our product candidate. As of December 31, 2016, we had an accumulated deficit of \$39.81 million. Our financing activities are described below under "Liquidity and Capital Resources". We expect to continue to incur significant expenses and operating losses for at least the next several years as we continue to incur substantial expenses related to product development, clinical and nonclinical studies, regulatory filling and, if approved, commercial launch of our product candidate. These losses, combined with prior losses will continue to have an adverse effect on our cash resources, shareholders' deficit and working capital. As a result of these expected losses and negative cash flows from operations, along with our current cash position, we only have sufficient resources to fund operations at least until the end of second quarter of 2017. Therefore, there is substantial doubt about our ability to continue as a going concern.

If we obtain regulatory approval for our product candidate and any future product candidates we may develop, we may incur significant sales, marketing, in-licensing and outsourced manufacturing expenses, as well as continued research and development expenses. In addition, we expect our research and development expenses to significantly increase in connection with our planned additional Phase 2b clinical trial of Trehalose IV for treatment of OPMD patients and other planned clinical trials of our Trehalose IV solution for treatments of other indications, and as we develop additional product candidates for our drug pipeline. Because of the numerous risks and uncertainties associated with developing and commercializing pharmaceutical products, we are unable to predict the extent of any

future losses or when we will become profitable, if at all.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings and debt financings, as well as license and collaboration agreements with potential partners. We may be unable to raise capital when needed or on attractive terms, or to enter into collaboration agreements, which could force us to delay, limit, reduce or terminate our product development or future commercialization efforts. We will need to generate significant revenues to achieve profitability, which we may not be able to achieve.

#### **Financial Overview**

#### Research and Development

Research and development expenses consist of expenses incurred in performing research and development activities, including compensation and benefits (which includes share based compensation for research and development employees), an allocation of facilities expenses, overhead expenses, nonclinical pharmacology and toxicology studies, manufacturing process-development, clinical trial and related clinical manufacturing expenses, fees paid to CROs, investigative sites, and other external expenses. In the early phases of development, our research and development costs include expanding our product platform as well as early development of specific product candidates. As we expand the clinical development of our Trehalose IV solution, we expect the amount of research and development of our Trehalose IV solution.

We expense research and development costs as incurred. Conducting a significant amount of research and development is central to our business model. Product candidates in advanced stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of advanced stage clinical trials. We plan to increase our research and development expenses for the foreseeable future as we seek to obtain regulatory approval for our Trehalose IV solution in the United States and rest of the world as well as to expand the indications for our Trehalose IV solution, and to further advance our nonclinical and earlier stage research and development projects into clinical stages. The successful development of our Trehalose IV solution for treatment of OPMD patients and other indications is highly uncertain. At this time, we cannot reasonably estimate the nature, timing or costs of the efforts that will be necessary to complete the remainder of the development of our Trehalose IV solution, or the period, if any, in which material net cash inflows from this product candidate may commence. Clinical development timelines, the probability of success and development costs can differ materially from expectations. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those which we currently anticipate will be required for the completion of clinical development of a product candidate or if we experience significant delays in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

#### Pre-commercialization

Pre-commercialization expenses consist primarily of professional fees related to preparation for, and if approved, the eventual commercialization of our Trehalose IV solution, including compensation and benefits (which includes share-based compensation), fees paid to third parties for market research activities and commercialization planning activities, and allocation of facilities expenses and overhead expenses. We anticipate that these expenses will materially increase as we accelerate our preparation for commercialization and, if it is approved, start to market our Trehalose IV solution and as we explore new collaborations to develop and commercialize our Trehalose IV solution and other products.

#### General and Administrative

General and administrative expenses consist primarily of salaries and related benefits, including share-based compensation, related to our executive, finance, business development, and support functions. Other general and administrative expenses include facility-related costs not otherwise allocated to research and development expenses, travel expenses for our general and administrative personnel and professional fees for auditing, tax, as well as corporate and intellectual property legal services. We anticipate that our general and administrative expenses will increase in future periods, reflecting an expanding infrastructure and increased professional fees associated with being a public company and potentially as a commercial-stage company.

# Finance Income, Net

Finance income, net consists mainly of interest income on bank deposits offset by bank fees and exchange rate fluctuations.

#### **Provision for Income Taxes**

We are subject to Israeli income taxes for earnings generated in Israel and for federal and state income taxes for earnings of our wholly-owned U.S. subsidiary generated in the United States. Our consolidated tax expense is affected by the mix of our taxable income (loss) in the Israel and the United States permanent items, discrete items, and unrecognized tax benefits. We file Israeli income tax returns, U.S. federal and various U.S. states returns. The associated tax filings remain subject to examination by applicable tax authorities for a certain length of time following the tax year to which those filings relate. As of December 31, 2016, in Israel and the United States, all the tax years since inception (2012 in Israel, and 2015 in the United States) remain subject to examination by the applicable taxing authorities.

# **Results of Operations**

#### Comparison for the years ended December 31, 2016 and 2015

The following tables set forth, for the periods indicated, our results of operations and the change between the specified periods expressed as a percent increase or decrease:

#### Research and Development Expenses

2016 2015 \$ change % change
U.S. dollars in thousands, except
percentages

Research and development 8,881 7,694 1,187 15 %

For the year ended December 31, 2016, our total research and development expenses increased by approximately \$1.19 million, or 15%, compared to the prior year. The increase was primarily due to increased salaries and related expenses including share-based compensation expenses, as well as initiation activities with respect to our planned Phase 2b clinical trial of our Trehalose IV solution for treatment of OPMD patients.

#### **Pre-Commercialization Expenses**

2016 2015 \$ change % change U.S. dollars in thousands, except percentages

Pre-commercialization 1,085 829 256 31 %

For the year ended December 31, 2016, our pre-commercialization expenses increased by \$256,000, or 31%, compared to the prior year. The increase was primarily due to increased market research activities directed at assessing the commercial opportunity presented by our Trehalose IV solution for treatment of OPMD and SCA3 patients which were offset by reversal of previously recognized share-based compensation due to forfeiture of options previously granted to departing employees.

#### General and Administrative Expenses

2016 2015 \$ change % change U.S. dollars in thousands, except percentages

General and administrative 5.900 6.953 (1.053) (15 )%

For the year ended December 31, 2016, our general and administrative expenses decreased by approximately \$1.05 million, or 15%, compared to the prior year. The decrease was primarily due to our decision to downsize corporate overhead by reducing the number of employees of our wholly-owned U.S. subsidiary and closing of U.S. offices. The general and administrative costs during 2016 included termination related payments to departing employees. Such termination related payments were offset by reversal of previously recognized share-based compensation due to forfeiture of options previously granted to departing employees.

#### Finance Income, Net

Our finance income, net totaled \$60,000 for the year ended December 31, 2016, and was \$135,000 for the year ended December 31, 2015. The decrease was primarily due to the reduction of our outstanding balance of cash equivalents and short-term bank deposits on which we generate interest income.

# **Provision for Income Taxes**

Our total tax provision was \$216,000 for the year ended December 31, 2016, representing an effective tax rate of (1.37%), as compared to a tax provision of \$24,000 for the year ended December 31, 2015, representing an effective tax rate of (0.16%).

Our deferred tax assets at December 31, 2016 and 2015 were \$5,000 and \$0, respectively. Deferred tax assets were reported net of valuation allowances of approximately \$7.64 million and \$5.77 million at December 31, 2016 and 2015, respectively, primarily as a result of the recording of a full valuation allowance against net operating loss, or NOL, carryforwards, as we believe it is more likely than not that we will not be able to generate sufficient future taxable income to absorb them. On December 31, 2016, we had Israeli NOL carryforwards of approximately \$24.72 million. The Israeli NOL carryforwards do not expire.

Our effective tax rate differs from the statutory rate each year primarily due to a full valuation allowance maintained against deferred tax assets.

#### Comparison for the Years Ended December 31, 2015 and 2014

The following tables set forth, for the periods indicated, our results of operations and the change between the specified periods expressed as a percent increase or decrease:

#### Research and Development Expenses

For the year ended December 31, 2015, our total research and development expenses increased by approximately \$3.25 million, or 73%, compared to the prior year. The increase was primarily due to an increase in clinical trial and manufacturing related expenses associated with our Trehalose IV solution and other product candidates, as well as increases in compensation related expenses, share-based compensation and employee recruitment costs.

#### **Pre-Commercialization Expenses**

For the year ended December 31, 2015, our pre-commercialization expenses totaled \$829,000 and included costs related to the hiring of our Chief Commercial Officer during August 2015, and to actively assessing the commercial opportunity presented by our Trehalose IV solution in treating OPMD and SCA3. There were no pre-commercialization expenses incurred in 2014.

<sup>\*</sup> Not a meaningful percentage

#### General and Administrative Expenses

For the year ended December 31, 2015, our general and administrative expenses increased by \$4.31 million, or 163%, compared to the prior year. The increase was primarily due to increased compensation and related share-based compensation expense, related to hiring of a new Chief Executive Officer and chief corporate development officer as well as support staff in the United States and increased professional fees.

#### Finance Income, net

Our finance income, net totaled \$135,000 for the year ended December 31, 2015, and was \$58,000 for the year ended December 31, 2014. The increase was primarily attributable to the increased duration in which cash equivalents and short-term bank deposits were earning interest income.

#### **Provision for Income Taxes**

Our total tax provision was \$24,000 for the year ended December 31, 2015, representing an effective tax rate of (0.16%), and was mainly attributable to taxable earnings generated by our wholly-owned U.S. subsidiary. For the year ended December 31, 2014 our tax provision was \$0, mainly as a result of full valuation allowance against NOL carryforwards.

Deferred tax assets at December 31, 2015 and 2014 were \$0 and were reported net of valuation allowances of approximately \$5.77 million and \$1.79 million at December 31, 2015 and 2014, respectively, primarily as a result of the recording of a full valuation allowance against NOL carryforwards, as we believe it is more likely than not that we will not be able to generate sufficient future taxable income to absorb them. On December 31, 2015, we had Israeli NOL carryforwards of \$13.51 million. The Israeli NOL carryforwards do not expire.

Our effective tax rate differs from the statutory rate each year primarily due to a full valuation allowance maintained against deferred tax assets.

#### **Liquidity and Capital Resources**

Since our inception and through December 31, 2016, we had raised an aggregate of \$44.16 million to fund our operations, of which nearly \$37.49 million is from issuing our Ordinary Shares in our initial public offering and follow-on offerings, and nearly \$6.67 million from the issuance of private securities.

At December 31, 2016, our cash, cash equivalents and short-term bank deposits were \$9.88 million, compared to approximately \$19.33 million at December 31, 2015. Our cash and cash equivalents are highly liquid investments with maturities of 90 days or less at the date of purchase, and are stated at fair value. We did not hold any marketable securities nor any mortgage asset-backed or auction-rate securities in our investment portfolio as of December 31, 2016. Our U.S. subsidiary held \$252,000 in cash as of December 31, 2016. All of our cash is available for corporate use.

#### Plan of Operations and Future Funding Requirements

Our primary uses of capital are, and we expect will continue to be, further development and the seeking of regulatory approval of our Trehalose IV solution. These costs will include clinical trial costs, manufacturing and process development costs, compensation and related expenses, third-party clinical and nonclinical research and development services, laboratory and related supplies, legal and other regulatory expenses, and other general operating costs.

We expect that our cash and cash equivalents and short-term deposits as of December 31, 2016 will fund our operating expenses and capital expenditure requirements, based on our current plan, at least until the end of second fiscal quarter of 2017. Such current plan includes the commencement of a Phase 2b double-blind placebo-controlled trial of our Trehalose IV solution during 2017 and other early phase clinical trials to test our Trehalose IV solution in other indications, which is subject to regulatory approval. Additional funding beyond our existing cash resources will be required to entirely cover the cost of the Phase 2b study and the underlying expense of our operations while the study is ongoing. Should we be unable to obtain the additional funding required to complete our clinical activity, we may reduce those activities until we have sufficient resources to do so. In addition, we expect that we will require substantial additional capital to obtain regulatory approval for, and to commercialize, our Trehalose IV solution. Furthermore, our operating plans may change as a result of many factors that may currently be unknown to us, and we may need to seek additional funds sooner than planned. Our future capital requirements will depend on many factors, including:

- ·continuing our research and nonclinical and clinical development of our product candidate;
- ·expanding the scope of our current clinical trials for our product candidate;
- ·change or addition of additional manufacturers or suppliers;
- ·seeking regulatory and marketing approvals for our product candidate that successfully complete clinical trials;
- establishing a sales, marketing, and distribution infrastructure to commercialize any products for which we may obtain marketing approval;

- · seeking to identify, assess, acquire, license, and/or develop other product candidates;
- ·milestone or other payments under any license agreements;
- ·maintaining, protecting, and expanding our intellectual property portfolio;
- ·seeking to attract and retain skilled personnel; and

creating additional infrastructure to support our operations as a public company and our product development and planned future commercialization efforts.

Until such time, if ever, as we can generate substantial product sales, we expect to finance our cash needs through a combination of equity offerings, debt financings and license and collaboration arrangements. To the extent that we raise additional capital through future issuance of equity or debt, the ownership interest of our shareholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing ordinary shareholders. If we raise additional funds through collaboration arrangements, we may have to relinquish valuable rights to our technologies, future revenue streams or drug candidates on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market our current and any future product candidates that we would otherwise prefer to develop and market ourselves. This may raise substantial doubts about our ability to continue as a going concern.

#### Cash Flow

The following is a summary of cash flows for the years ended December 31, 2016 and 2015:

2016 2015
U.S. dollars in thousands
Operating activities \$ (15,486 ) \$ (13,249 )
Investing activities 8,982 9,952
Financing activities 6,089 -

#### **Operating Activities**

For the year ended December 31, 2016, net cash used in operating activities was approximately \$15.49 million and primarily consisted of \$16.02 million in net loss, adjusted for non-cash items of \$777,000 (primarily share-based compensation expenses), and changes in operating assets and liabilities of \$241,000. Net cash used in operating activities was approximately \$13.25 million during the year ended December 31, 2015, and primarily consisted of approximately \$15.37 million in net loss, adjusted for non-cash items of approximately \$2.62 million (primarily share-based compensation expenses), and partially offset by changes in operating assets and liabilities of \$506,000. The increase in net cash used of approximately \$2.24 million was driven by increased activities related to clinical studies of our Trehalose IV solution in OPMD and SCA3and an increase in compensation and related personnel expenses, professional services and pre-commercial work related to our Trehalose IV solution.

# **Investing Activities**

For the year ended December 31, 2016, net cash provided by investing activities was \$8.98 million, compared to cash provided by investing activities of \$9.95 million for the year ended December 31, 2015. The majority of cash provided by investing activities in both years is attributable to withdrawal of short-term bank deposits that matured during both years.

#### Financing Activities

For the year ended December 31, 2016, net cash provided by financing activities was \$6.09 million and consisted of net proceeds from a public offering of Ordinary Shares and warrants. There was no cash provided by financing activities during the year ended December 31, 2015.

We have an effective Form F-3 registration statement, filed under the Securities Act with the SEC using a "shelf" registration process. Under this shelf registration process, and subject to certain limitations, we may, from time to time, sell our Ordinary Shares in one or more offerings up to a total dollar amount of \$100 million. However, since the aggregate market value of our Ordinary Shares held by non-affiliates is less than \$75 million, we are limited to selling Ordinary Shares under such "shelf" registration statement during any 12 month period that have an aggregate value that is no more than one-third of the aggregate market value of our Ordinary Shares held by non-affiliates. In March 2016, we issued 2,161,290 Ordinary Shares in a registered direct offering with gross proceeds of approximately \$6.70 million. As a result of this limitation, we are currently not able to sell any Ordinary Shares under this "shelf" registration statement.

#### **Critical Accounting Policies and Use of Estimates**

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, and expenses, and the disclosure of contingent assets and liabilities as of and during the reporting periods. These items are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities and the reported amount of expenses that are not readily apparent from other sources. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our consolidated financial statements and understanding and evaluating our reported financial results.

### **Share-based Compensation**

We issue share-based awards to employees and nonemployees generally in the form of options. We account for our share-based awards in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all share-based payments to employees, including grants of employee options and modifications to existing options, to be recognized in the consolidated statements of operations based on their fair values on the date of grant or date of modification. We account for share-based awards to nonemployees in accordance with FASB ASC Topic 505-50, *Equity-Based Payments to Non-Employees*, which requires the fair value of the nonemployee awards to be remeasured as the award vests. For employee stock-based awards with only service conditions, we recognize compensation using the graded vesting attribution approach over the requisite service period, which is usually the vesting period of the award.

For modification of share-based compensation awards, we record the incremental fair value of the modified awards as compensation on the date of modification for vested awards, or over the remaining vesting period for unvested awards. The incremental compensation is the excess of the fair value of the modified awards on the date of modification over the fair value of the original awards immediately before the modification.

Compensation expense related to our share-based awards is subject to a number of estimates including volatility and the underlying fair value of our Ordinary Shares, as well as the estimated life of the awards. Since our initial public offering in July 2014, share option value has been determined based on the trading price of our Ordinary Shares. As of December 31, 2016 and 2015, we recognized share-based compensation expenses of \$700,000 and \$2.62 million, respectively.

#### Income Taxes

The consolidated financial statements presented elsewhere in this prospectus reflect provisions for Israeli, federal and state income taxes. Deferred tax assets and liabilities represent future tax consequences of temporary differences between the financial statement carrying amounts and the tax basis of assets and liabilities and for loss carryforwards using enacted tax rates expected to be in effect in the years in which the differences reverse. A valuation allowance is recorded when it is more likely than not that some or all of the deferred tax assets will not be realized. We cannot be certain that future Israeli taxable income will be sufficient to realize our deferred tax assets and, accordingly, a full valuation allowance has been provided against our Israeli net deferred tax assets.

We evaluate the tax positions we have taken when preparing our Israeli, federal and state income tax returns, and determine whether it is more likely than not that a tax position will be sustained upon examination. If it is not more likely than not that a position will be sustained, none of the benefit attributable to the position is recognized. The tax benefit to be recognized for any tax position that meets the more-likely-than-not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. As of December 31, 2016 and 2015, we have provided a liability of \$24,000 and \$0, respectively.

#### **JOBS Act**

Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We are electing to delay such adoption of new or revised accounting standards. As a result, our financial statements may not be comparable to companies that comply with the public company effective date.

#### Quantitative and Qualitative Disclosure about Market Risk

In the ordinary course of our operations, we are exposed to certain market risks, primarily changes in foreign currency exchange rates and interest rates.

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates. As of December 31, 2016, we had approximately \$9.88 million in cash and cash equivalents and short-term bank deposits, consisting of cash in checking accounts and deposits at Israeli and U.S. banking institutions. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of Israeli and U.S. interest rates. Given the current low rates of interest we receive, we do not believe will be adversely affected if such rates are reduced. As of December 31, 2016, we had no outstanding borrowings, and as such, we are not exposed to interest rate risks associated with credit facilities or other debt.

We are subject to currency risk for balances held, or denominated, in currencies other than U.S. dollars. We work to maintain all balances in U.S. dollars until payment in other currencies is required. In addition, portions of our expenses are denominated in each of NIS, Euro and GBP. For instance, in 2016, approximately 19% of our expenses were denominated in NIS. Changes of 5% and 10% in the U.S. dollar / NIS exchange rate will increase/decrease our operating expenses by approximately 1% and 2%, respectively. However, these historical figures may not be indicative of future exposure, as the percentage of our NIS denominated expenses may change in the future.

We do not hedge our foreign currency exchange risk.

# **Off-Balance Sheet Arrangements**

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

### **Contractual Obligations**

The following table summarizes our contractual obligations at December 31, 2016:

	Total	Less than 1 year		1-3	3 years	3-5 year		More than 5 years	
	(in thousands of U.S. dollars)								
Operating leases (1):									
Facility	\$174	\$	99	\$	75	\$	-	\$	-
Motor vehicles	14		14		-		-		_
	\$188	\$	113	\$	75	\$	-	\$	-

(1) Represents future minimum lease payments under non-cancelable operating leases in effect as of December 31, 2016.

The table excludes potential payments we may be required to make under existing agreements with suppliers and service providers as the timing of when these payments will actually be made is uncertain and the payments are contingent upon the initiation and completion of future activities.

**BUSINESS** 

#### Overview

We are a clinical stage biotechnology company committed to developing meaningful therapies for patients with rare and ultra-rare genetic diseases. Currently our focus is on trehalose, a therapeutic platform that offers potential solutions for several diseases that share a common pathophysiological mechanism, which are the functional changes that accompany a particular syndrome or disease. Since our inception in 2012, our work with trehalose has centered around OPMD and SCA3. We address diseases with severe and debilitating manifestations, where the unmet medical need is clear, the biological mechanism of action is understood, and for which there is no satisfactory treatment.

Trehalose IV Solution

Trehalose is a protein stabilizer and an autophagy enhancer that activates lysosomal pathways. We have developed a proprietary high dose, trehalose 90mg/mL intravenous, or Trehalose IV, solution that allows trehalose to reach target organs and facilitate tissue penetration to the brain and muscles. Mutant unstable cellular proteins are the cause of several protein aggregation genetic diseases known as PolyA/PolyQ diseases, including OPMD, where mutant protein aggregates in muscle, and in SCA3 where mutant protein aggregates in the brain. These pathological proteins aggregate within cells and cell nuclei eventually leading to cell death. Data from the literature and from our nonclinical studies in both cell and animal models of disease indicate that trehalose may have the potential to prevent mutant protein aggregation and to enhance autophagy in human diseases by stabilizing proteins, reducing the formation of protein aggregates, and promoting clearance of abnormal proteins or other storage materials thereby preventing cell death.

Summary of our Clinical Trials to Date

In March 2016, we reported final results of our HOPEMD Phase 2a open-label study in which 25 patients with OPMD were treated with our Trehalose IV solution for 24 weeks using a weekly dose of 27 grams. Our Trehalose IV solution was observed to be generally safe and well tolerated, with no drug-related serious adverse events, and while not powered for efficacy, the study produced early efficacy signals. These efficacy signals related to the main symptoms of OPMD, such as dysphagia (difficulty in swallowing) and muscle weakness. At the conclusion of the 24-week trial, patients were allowed to continue treatment for another 12 months. 22 patients of the original HOPEMD trial enrolled in this extension study (16 of whom continued to receive our Trehalose IV solution while six were in the non-treatment group), in which our Trehalose IV solution was observed to be generally safe and well tolerated. Patients who remained on our Trehalose IV solution remained stable with improved dysphagia and patients withdrawn

from treatment had worsening of their dysphagia. In October 2016, we reported the results of a randomized double-blind placebo-controlled trial assessing the pharmacokinetics of trehalose in 24 healthy volunteers (randomized 3:1 trehalose to placebo) to establish safety and tolerability of escalating doses of trehalose and to determine the Maximum Tolerated Dose (MTD), or maximum feasible dose, and assess pharmacokinetics of escalating doses of trehalose. Our Trehalose IV solution was observed to be generally safe and well tolerated at twice the 27 grams dose used in the HOPEMD clinical trial. The MTD was 54 grams administered by IV over 60 minutes. In January 2017, we reported the results of a Phase 2a open-label study of 14 SCA3 patients for a six-month period; eight patients received a dose of 13.5 grams and six patients received a dose of 27 grams of our Trehalose IV solution on a weekly basis. (The study began with 15 patients; however, one patient withdrew after three weeks and prior to any efficacy assessment). Weekly Trehalose IV infusions of both doses were generally safe and well tolerated. There were no changes in any safety laboratory parameters with treatment. Patients remained stable with no change on the Scale for Assessment and Rating of Ataxia, or SARA, score – a well-accepted clinical tool for measuring the effect of the disease – over the six-month period. Five patients received treatment for as long as 12 months and continued to remain stable on the SARA scale.

SARA is a clinical scale that assesses a range of different impairments in cerebellar ataxia. The scale is made up of eight measurements related to gait, stance, sitting, speech, finger-chase test, nose-finger test, fast alternating movements and heel-shin test. A higher score indicates a more symptomatic patient. A recently published long term natural history study in patients with SCA3 showed an average annual increase of 1.56 points on the SARA scale score, denoting the disease progression.

# **Our Approach**

Our approach is to develop our Trehalose IV solution as a first-in-class therapy for orphan-designated genetic diseases with high unmet needs where the mechanism of action involves prevention of protein aggregation, activation of autophagy or lysosomal pathways, and where there is involvement of the brain and/or muscle. We focus on diseases where there is proof of concept for trehalose in disease models.

The patients we seek to treat have diseases with limited or no treatment options, and their lives and well-being are highly dependent upon on the development of new therapies. The main components of our business strategy include the following:

Focus on rare and ultra-rare diseases with significant unmet medical need. There are numerous rare and ultra-rare metabolic genetic diseases that currently have no approved drug therapy. Some such diseases have drugs currently in development. Patients suffering from these diseases often have a high unmet medical need with significant morbidity and/or mortality. We are focused on developing and commercializing therapies for multiple indications with our current focus on genetic diseases with high unmet needs characterized by protein aggregation or abnormal storage of metabolites, including neuromuscular diseases and lysosomal storage diseases with a neurologic or muscle involvement;

Focus on diseases and therapies with clear mechanisms of action. We focus on diseases that have biology and root causes that are well understood. We believe that developing drugs that directly impact known disease pathways will increase the probability of success of our development programs;

Develop and selectively commercialize our Trehalose IV solution for multiple indications. Development of multiple programs based on one compound has the potential to generate development and commercial efficiencies as well as multiple market opportunities and reduced risk; and

Focus on excellent and efficient clinical and regulatory execution. We believe that building a successful and sustainable rare disease-focused company requires very specific expertise in the areas of patient identification, clinical trial design and conduct, and regulatory strategy. We have assembled a team with both a successful track record in managing global clinical development activities in an efficient manner, and with multinational experience in obtaining regulatory approvals for rare disease products.

# **Drug Candidate - Overview and Development Plan**

Our strategy is to retain global commercialization rights to our product to maximize long-term value. Over time, we may decide to build our own commercial organization in the United States, which we believe would be of modest size due to the relatively small number of specialists who treat patients with rare and ultra-rare diseases. We will consider partnership arrangements that may accelerate product development and facilitate access to international market opportunities.

The diseases which we are addressing have severe consequences on patients' health, quality of life and potential life expectancy. In addition, these diseases create significant burdens on patients' families and caretakers as well as on public health resources. In all diseases we are addressing, patients either cannot be offered an alternative therapy or the current solutions are inadequate to alter the course of the disease. We believe that prompt and efficient drug development can be of substantial benefit to the patients who are suffering from these incurable diseases. We have assembled an experienced team of employees, consultants, service providers and a Board of Directors with extensive drug development and commercialization capabilities, particularly in the orphan drug area.

#### Trehalose

Trehalose is naturally-occurring and is well known for its protein-stabilizing properties, and recently, for its autophagy enhancing properties and effect on activation of lysosomal pathways. When orally administered, trehalose is metabolized at the epithelial brush border of the intestine into two D-glucose molecules. Less than 0.5% of ingested trehalose is absorbed into the blood stream where it is further metabolized by the liver and kidney. To achieve therapeutic amounts of trehalose in the muscle cells, it is necessary to circumvent the massive metabolism in the gastrointestinal tract.

Our proprietary IV solution of Trehalose IV has been designed to circumvent the breakdown of trehalose in the gastrointestinal tract and to enable therapeutic doses of trehalose to reach target organ muscle and brain tissues.

We have shown in a nonclinical study that trehalose administered via an IV is able to penetrate muscle and remain measurable in the muscle tissue for 48 hours. In a separate study trehalose administered via an IV was shown to penetrate the brain where it remained measurable for 24 hours.

Trehalose is a low molecular weight disaccharide (0.342 kilodaltons), which is a chemical molecule comprised of two sugar components that can prevent the folding of proteins and that buffer abnormal protein aggregation, thus protecting against pathological processes in cells. Trehalose has been shown to prevent pathological aggregation of proteins within cells in several diseases associated with abnormal cellular-protein aggregation as well as acting as an autophagy enhancer. Autophagy is the basic catabolic mechanism that involves cell-based degradation of unnecessary or dysfunctional cellular components. Autophagy in healthy adults, or if regulated in those with abnormalities, ensures degradation and recycling of cellular components. Trehalose effectively reduced the aggregation and toxicity of mutant PABPN1 proteins in OPMD cell models. Furthermore, treatment of an OPMD in a mouse model with trehalose resulted in the attenuation of muscle weakness, decreased aggregate formation and a reduced number of TUNEL-positive nuclei in skeletal muscle fibers.

The following provides an illustration of the proposed trehalose mechanism of action:

Trehalose IV Solution for the Treatment of OPMD

Trehalose IV solution is our proprietary drug candidate for the treatment of OPMD, an ultra-rare, inherited myopathy. OPMD is a muscle disease caused by a primary defect in muscle cells as a result of aggregation of a protein called PABPN1. Overall worldwide prevalence of OPMD is estimated at 1:100,000. Characteristically to genetic diseases with autosomal inheritance, there are documented clusters of higher prevalence. For example, in people of French Canadian origin residing in Quebec, Canada, among Hispanics in Northern New Mexico, USA, and Bukhara Jews in Israel. The prevalence data collected suggest that the prevalence is approximately 1:1,000 patients among French Canadian<sup>1</sup>, approximately 12:100,000 patients among Hispanics of Northern New Mexico, and approximately 1:600 patients among Bukhara Jews in Israel<sup>1</sup>. We estimate that there are about 4,300 patients in the United States and Canada and overall about 12,000 patients around the world<sup>3</sup>.

OPMD is characterized by progressive muscle weakness that leads to development of symptoms including ptosis (dropping of eyelids), dysphagia (difficulty in swallowing) and proximal muscle weakness. As the dysphagia becomes more severe, patients may suffer from repeated incidents of aspiration pneumonia, may become malnourished (cachexia), and may develop tongue atrophy and speech difficulties (dysphonia). OPMD is caused by a genetic mutation responsible for the creation of a mutant protein (PABPN1) with an expanded polyalanine domain that aggregates within patient muscle cells. OPMD is one of a larger group of diseases called tri-nucleotide repeat diseases that are associated with the presence of an abnormal cellular protein that aggregates in the cells, eventually causing cell death. In OPMD, the mutant protein PABPN1 was found to be correlated with disease severity in animal models and was identified within the typical cellular protein aggregates-the intranuclear inclusion body (INI) that is the diagnostic hallmark of the disease.

The following provides an illustration of the OPMD symptoms:

There is no drug therapy or, to our knowledge, potential cure for OPMD. Current therapeutic strategies are confined to interventions and surgical procedures that have limited efficacy and may need to be repeated while the progressive loss of muscle contractility continues relentlessly.

The HOPEMD Phase 2a open-label clinical study was conducted at two centers - Montreal Neurological Institute at McGill University in Montreal, Canada, and Hadassah-Hebrew University Medical Center in Jerusalem, Israel. The primary objective was to assess the safety and tolerability of our Trehalose IV solution in patients suffering from OPMD. Although not powered for efficacy, secondary endpoints were included to explore if our Trehalose IV solution could improve or prevent worsening of OPMD disease markers, notably those related to dysphagia (difficulty in swallowing) and upper and lower muscle weakness. A total of 25 patients were enrolled, with 11 patients in Canada and 14 patients in Israel. All 25 patients received our Trehalose IV solution weekly, for 24 weeks.

Our Trehalose IV solution was observed to be generally safe and well-tolerated with no drug-related serious adverse events. There were no significant changes in lab safety data including chemistry, hematology, and electrocardiography tests. There was one death due to aspiration pneumonia that was not considered drug-related but instead was related to the underlying disease. No patients chose to discontinue the study for reasons related to safety or side effects. Additionally, improvements versus baseline were observed in a number of secondary efficacy endpoints related to dysphagia and muscle strength and function as detailed below.

The dysphagia (swallowing difficulties) endpoints were the timed cold water drinking test (80mL) for all sites, the nectar (80mL) and honey (80mL) timed drinking tests at the Canadian site and the Penetration Aspiration Score as measured by video fluoroscopy (VFS-PAS), a radiographic technique to determine the severity of swallowing difficulties and risk of aspiration. The swallowing quality of life questionnaire (SWAL-QOL), specifically developed for patients suffering from swallowing problems, was employed to assess the degree to which patients felt that their swallowing capability improved with treatment.

In a post-hoc analysis there was a 40.2% reduction in the median individual drinking time (n=23) and in the nectar and honey timed drinking tests, there was a 46.5% and 61.7% reduction, respectively, in the median drinking times (n=11). Patients in the Israeli arm of the trial did not get tested for nectar or honey timed drinking tests. Out of the 11 patients in Canada whose scores were evaluated in the per protocol analysis of the VFS-PAS, six patients improved (54.5%), two patients showed stabilization (18.2%), and three patients deteriorated (27.2%). Deviations from protocol and deficient radiological procedures lead to exclusion of the VFS-PAS tests from the Israel cohort from the final analysis. With respect to the SWAL-QOL questionnaire, there was a 12.4% (n=24) mean improvement versus baseline with the mean total symptom severity score increasing from 43.2 to 48.7.

In the muscle strength tests, as measured quantitatively by a digital hand-held dynamometer, there was a mean increase in lower body muscle strength compared to baseline in knee extension of 15.0% (n=22) and foot dorsiflexion of 22.4% (n=22). Hip flexion did not materially change (1.3% deterioration, n=21). For the upper extremity strength tests, arm (bicep) flexion increased on average 17.9% (n=22), and shoulder abduction increased by 11.4% (n=22). In the muscle function tests, the 30 second arm-lift test showed an average of 16.0% increase in the number of completed tasks (n=20 right arm -21 left arm) at 24 weeks of treatment versus baseline while the 30 second sit-to-stand test showed a 16.6% increase (n=21). The standard 4-stair climbing test did not materially change (1.5% deterioration, n=21).

At the conclusion of the 24-week trial, 22 patients (13 in Israel and 9 in Canada) elected to continue treatment for another 12 months; 16 of whom continued to receive Trehalose IV while six were in the non-treatment group. There were three main objectives for this extension study: (i) to determine the long-term effect of trehalose on disease progression as assessed by the changes in the disease markers; (ii) to determine the long-term effect of trehalose on disease progression as assessed by the changes in the patient's swallowing quality of life; and (iii) to determine the long-term safety and tolerability of repeated IV administration of trehalose 30 grams in OPMD patients.

The results from the extension study indicated that trehalose was generally safe and well tolerated. There were no clinically significant changes in safety labs. There was one serious adverse event, unrelated to drug treatment, renal colic; and there were no infusion reactions or adverse events leading to discontinuation. Patients who remained on treatment (n=16) continued to benefit, as demonstrated by a continued improvement in the cold water drinking test times. Patient who were removed from treatment (n=6) had an increase in their cold water drinking times over the one year period. Thus, the treatment effects of trehalose persisted over the year of continued treatment, but were lost for those who came off treatment. At the conclusion of the 12-month extension study, 10 patients in Israel rolled into a

52-week compassionate use study, and nine patients in Canada were rolled into a subsequent 52-week extension study. These studies were initiated in September 2016. All 19 patients participating in these studies receive a weekly dose of 27 grams of our Trehalose IV solution.

Trehalose IV Solution for the Treatment of SCA3

SCA3, also known as Machado Joseph disease, a dominantly inherited ataxia, is the most common of the cerebellar ataxias, and is one of a group of genetic diseases that are characterized by memory deficits, spasticity, difficulty with speech and swallowing, weakness in arms and other muscular disorders. The prevalence of SCA3 is conservatively estimated at approximately 3-4 cases per 100,000 people in North America and Europe. The prevalence of the disease is highest among people of Portuguese/Azorean descent. For example, among immigrants of Portuguese ancestry in New England, the prevalence is approximately one in 4,000, and the highest prevalence in the world, about one in 140, occurs on the small Azorean island of Flores. There is no medical treatment for SCA3 and current approaches are focused on alleviating disease symptoms and supportive care.

In most individuals with SCA3, symptoms typically begin in the third to fifth decade of life but can start as early as young childhood or as late as 70 years of age. Eventually SCA3 leads to paralysis, and severe cases can lead to an early death in the fourth decade of life. SCA3 is incurable, and there is currently no approved treatment for the disease. Natural history studies indicate that death occurs, on average, 21 years after diagnosis. SCA3 is caused by a mutation in the DNA that leads to the creation of a pathological protein called ataxin 3. In affected patients, ataxin 3 is unstable, aggregates within the cells, and eventually leads to cell death.

Multiple reported studies in cell models have shown that trehalose, both as an anti-mutant protein aggregation agent and as an autophagy enhancer, is able to reduce protein aggregates and improve cell survival in several spinocerebellar ataxias including SCA3 cells. We have conducted animal studies in two disease models of SCA3, demonstrating that treatment with trehalose reduced the level of the pathological protein in nerve cells and reduced the disease symptoms. In 2015, we announced positive *in vivo* proof of concept results for our Trehalose IV solution for SCA3 in these two different mouse models.

During 2015 and 2016, we conducted a 24-week Phase 2a open-label study (that also included a six-month follow-up period) investigating Trehalose IV in patients with SCA3. The objectives of the study were to establish safety and tolerability of two doses of Trehalose IV as well as to assess an effect of the drug on reducing the rate of clinical decline in this progressively disabling disease. The Phase 2a open-label study evaluated 14 SCA3 patients over 24 weeks; eight patients received a dose of 13.5 grams of Trehalose IV, and six patients received a dose of 27 grams, both on a weekly basis. (The study began with 15 patients; however, one patient withdrew after three weeks prior to any efficacy assessment). Investigators and patients were blinded to the dose administered.

The study had several key findings, including (i) weekly trehalose infusions of both doses were generally safe and well tolerated (there were no changes in any safety laboratory parameters with treatment), (ii) patients remained stable with no change on the SARA score – over the 24 week treatment and (iii) five patients received treatment for as long as 12 months and continued to remain stable on the SARA scale.

Trehalose IV Solution Safety and Dosing

During 2016, we conducted a randomized double-blind placebo-controlled single ascending dose pharmacokinetic (PK) study of Trehalose IV in 24 healthy volunteers separated into three groups of eight patients. In each group, six patients received trehalose and two patients received a placebo. The first group received 27 grams of IV trehalose as a one hour infusion. The second group was then dosed with 54 grams, and the third group was then dosed with 81 grams. The primary objective of the study was to establish safety and tolerability of escalating doses of trehalose. The secondary objectives were to determine the Maximum Tolerated Dose (MTD) and pharmacokinetics of escalating doses of trehalose. The key findings of the study were: (i) the MTD was determined to be 54 grams administered IV over 60 minutes, which is twice the level of drug that has been given to patients in our OPMD and SCA3 Phase 2a studies, (ii) 54 grams of trehalose administered over one hour was generally safe and well tolerated with no changes in any safety parameters, (iii) the PK of trehalose was linear; i.e. doubling the dose, doubled the exposure, (iv) the half-life of trehalose was approximately 1.5 hours and did not change when the dose was increased, (v) there was no effect on serum glucose levels during or following the infusion, and (vi) the rate of trehalose clearance from the blood was directly related to the patient's weight; i.e., the greater the weight the faster the clearance of drug.

Peak serum concentration increased with increasing doses from 27 grams to 81 grams. The mean elimination half-life (t½) ranged from 1.41 hours to 1.59 hours and was consistent as the dose increased. In the 81-gram dose cohort, one subject out of six subjects who received trehalose had an increase in liver enzymes that resolved without treatment; thus no higher doses of trehalose were administered, thereby establishing the MTD for trehalose as 54 grams. There was a positive relationship between clearance of trehalose from the blood and body weight over a range of 50 kilograms (kg) to 100kg. This finding suggested that clearance is related to body size and thus, weight-based dosing, i.e. g/kg, would be more appropriate to achieve consistent exposure across a range of body weights in future studies.

Overview of Clinical and Nonclinical Study Results

The most common adverse event in the HOPEMD Phase 2a study in patients with OPMD, as well as in the Phase 2a study in patients with SCA3, was transient and benign glucosuria, lasting for a few hours after infusion of trehalose. Glucosuria is the result of the metabolism of trehalose by the enzyme trehalase into two glucose molecules and subsequent excretion in the urine. The following table summarizes the dosing of Trehalose IV solutions administered during completed clinical studies:

A total of 58 people have been exposed to trehalose: 25 patients with OPMD, 15 patients with SCA3 and 18 healthy subjects, with some patients having been on the drug for more than 18 months. These patients and healthy volunteers have received a total of more than 2,200 doses of Trehalose IV, representing a total of more than 56,000 grams. Overall, trehalose has been well tolerated in all 58 people, with no infusion reactions being reported and no safety signals identified. No adverse event has led to discontinuation of the study drug, or drug related death.

Nonclinical toxicology studies have shown that trehalose is generally safe and well tolerated, is not genotoxic, and there is no CYP450 inhibition in drug-drug interaction analysis. Such nonclinical toxicology studies included two short-term 3-months studies in dogs and rats using a dose of 3.6 g/kg which were completed, and two chronic toxicity studies. Chronic toxicology studies were performed at a dose range of 2.7 g/kg through 10.8g/kg and include a 6-months rat study (in which the in-life phase was terminated at 5 months due to catheter complications) and an on-going 9-month dog study for which the 6-months interim report had no negative findings. The six-month rat study report showed that there was no systemic toxicity, at any dose studied, of trehalose. However, there was increased incidence of procedural-related (indwelling catheters) complications with increasing doses of trehalose, thus suggesting that trehalose infusion may exacerbate this procedure-related event. Indwelling catheters have not been used and are not permitted in the clinical trials of trehalose.

Trehalose IV 90mg/mL Solution Next Steps

During 2016, we initiated a prospective natural history of disease study for OPMD conducted at the Sherbrooke University in Canada. As part of the study, retrospective data from more than 300 patients was reviewed and a longitudinal data collection will begin in 2017 to document the natural progression of the disease over time including, age of onset, age at diagnosis, mutation size and symptoms. Based on preliminary analysis of retrospective data collected, 96.6% of patients in the cohort experienced dysphagia as one of their symptoms.

During 2017, and subject to regulatory approval, we anticipate initiating a multicenter 24 week, double-blind placebo-controlled Phase 2b trial with our Trehalose IV solution in OPMD. We plan to enroll 48 patients and randomize them in a 1:1 ratio. The study is designed to assess safety and tolerability as well as explore whether our Trehalose IV solution could improve or prevent worsening of OPMD disease markers.

Based on the mechanism of action of trehalose and nonclinical and clinical findings, we believe that this drug platform has the potential to treat several PolyA/PolyQ diseases, protein aggregation diseases, lysosomal storage diseases and certain hepatic diseases. As such, during 2017, we plan to initiate our Trehalose IV solution diversification program

and clinically test our Trehalose IV solution in one or more other diseases. During 2017, we will also continue to pursue pre-commercial activities for our Trehalose IV solution in OPMD.

# Competition

The commercialization of new drugs is competitive, and we may face worldwide competition from individual investigators, major pharmaceutical companies, specialty pharmaceutical companies, biotechnology companies and ultimately biosimilar and generic companies. Our competitors may develop or market therapies that are more effective, safer, or less costly than any that may be commercialized by us, or may obtain regulatory approval for their therapies more rapidly than we may obtain approval for ours. Many of our competitors have substantially greater financial, technical and human resources than we have. Additional mergers and acquisitions in the pharmaceutical industry may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances made in the commercial applicability of technologies and greater availability of capital for investment in these fields. Our success will be based in part on our ability to build and actively manage a portfolio of indication-specific trehalose products that addresses unmet medical needs and creates value in patient therapy.

### Trehalose IV Solution Competition

Although we are not aware of any other products currently in clinical development for the treatment of OPMD, it is possible that competitors may produce, develop and commercialize therapeutics, or utilize other approaches, such as gene therapy, to treat OPMD. Benitec Pharma is in the nonclinical testing phase with a gene silencing program. University Hospital, Caen tested an autologous transplantation of myoblasts for treatment of ptosis related to OPMD. Hopitaux de Paris, Association Francaise contre les Myopathies (AFM) is testing autologous transplantation of myoblasts for the treatment of dysphagia related to OPMD.

With respect to our programs in our Trehalose IV solution for SCA3, Biohaven Pharmaceutical is developing a new chemical entity, BHV-4157, for SCA3 which is in a Phase 2b/3 clinical trial. Steminent Biotherapeutics is developing a stem cell based therapy (allogeneic adipose derived mesenchymal stem cells) in a Phase 2 clinical trial. It is possible that other competitors may produce, develop and commercialize therapeutics, or utilize other approaches such as gene therapy, to treat SCA3. In the last few years several academic research initiatives were conducted to explore the efficacy of approved drugs such as lithium, varenicline (Chantix ®) and 4 aminopyridine (dalfampridine).

Although only insignificant amounts of trehalose can be absorbed through an oral administration, it is possible that other companies or individuals may attempt to use food-grade trehalose taken orally as a substitute for a drug, and others may attempt to sell the product via a nutraceutical or food pathway. We believe that if our patent applications are approved, we will be well protected in our intellectual property from the use of trehalose as an IV product.

# **Terminated License Agreements**

In 2011, we entered into a Research and Exclusive License Agreement with Yissum Research Development Company of the Hebrew University of Jerusalem Ltd., and another with Hadasit Medical Research Services and Development Ltd. whereby we obtained exclusive licenses to a mitochondrial protein replacement platform which included two patent families. In addition, on January 1, 2014, we entered into an Exclusive License Agreement with Ramot at Tel Aviv University Ltd. for the use, development and commercialization of a read-through. Both agreements were terminated during September and November 2016, respectively, and we surrendered all rights and titles to these platforms and related data. Pursuant to the mutual termination agreement with Ramot at Tel Aviv University Ltd, and under certain conditions, although unlikely, we may be entitled to future royalty payments.

#### **Intellectual Property and Patents and Proprietary Rights**

The proprietary nature of, and protection for, our current and/or any future product candidates, processes and know-how are important to our business as is our ability to operate without infringing on the proprietary rights of others, and to prevent others from infringing our proprietary rights. We seek patent protection in the United States and internationally for our current and any future product candidates we may develop and other technology. Our policy is to patent or in-license the technology, inventions and improvements that we consider important to the development of our business. In addition to patent protection, we intend to use other means to protect our proprietary rights, including pursuing marketing or data exclusivity periods, orphan drug status, and similar rights that are available under regulatory provisions in certain countries, including the United States, Europe, Japan, and China. See "U.S. Government Regulation - Orphan Designation and Exclusivity," "U.S. Government Regulation - Pediatric Studies and Exclusivity," "U.S. Government Regulation - Patent Term Restoration," "U.S. Government Regulation - Biosimilars and Exclusivity," "U.S. Government Regulation - Abbreviated New Drug Applications for Generic Drugs," "U.S. Government Regulation - Hatch-Waxman Patent Certification and the 30-Month Stay," and "European Union/Rest of World Government Regulation - Orphan Designation and Exclusivity" below for additional information. We also rely on trade secrets, know-how and continuing innovation to develop and maintain our competitive position. We cannot be certain that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents granted to us in the future will be commercially useful or sufficient in protecting our technology. We seek regulatory approval for our products in disease areas with high unmet medical need, great market potential and where we have a proprietary position through patents covering various aspects of our products, such as composition, dosage, formulation, use and manufacturing process, among others. Our success depends on an intellectual property portfolio that supports our future revenue streams and erects barriers to our competitors. We are maintaining and building our patent portfolio through filing new patent applications, prosecuting existing applications and licensing and acquiring new patents and patent applications.

Despite these measures, any of our intellectual property and proprietary rights could be challenged, invalidated, circumvented, infringed, found unenforceable, or misappropriated, or such intellectual property and proprietary rights may not be sufficient to permit us to take advantage of current market trends or otherwise to provide competitive advantages. For more information, see "Risks Related to our Intellectual Property." With respect to any patents that may issue in the United States and Europe, we may also be entitled to obtain a patent term extension and/or patent term adjustment to extend or adjust the patent expiration date. For example, in the United States, we can apply for a patent term extension of up to five years for one of the patents covering a product once the product is approved by the FDA. The exact duration of the extension depends on the time we spend in clinical trials as well as getting an NDA from the FDA.

### **Trehalose IV solution**

We have three U.S. issued patents relating to methods of administering IV trehalose for the treatment of OPMD (US 9,084,720), SCA3 (US 9,125,924) and Huntington's disease (US 9,572,825). In addition, we have filed 12 patent applications that are pending in the United States and around the world that relate to the use of parenteral trehalose for the treatment of protein aggregation diseases. The patent applications are directed to a novel therapeutic regime using parenteral administration of trehalose, thereby achieving higher bioavailability and therapeutic efficacy in the treatment of myopathic and neurodegenerative diseases associated with abnormal protein aggregation, specifically polyalanine (PolyA) or polyglutamine (PolyQ) expansion protein and tauopathies disorders such as OPMD, SCA, spino bulbar muscular atrophy, Huntington's disease and other diseases. Of those patent applications, one pending patent application in the United States relates to deuterated forms of trehalose.

The expiring patent terms for such patents and, if issued, pending patent applications in the United States would be 2034 if all fees are timely paid, with possible patent term extension. We intend to pursue marketing and orphan drug exclusivity periods that are available to us under regulatory provisions in certain countries.

In addition, we have received orphan drug designation for the use of trehalose in OPMD and SCA3 patients, in the United States and in the E.U., which if approved will provide seven and ten years, respectively, of data exclusivity for the product.

#### **Trademarks**

We have filed with the USPTO an intent to use application for the trademark BIOBLAST in association with prescription pharmaceutical preparations for the treatment of rare and ultra-rare (orphan) diseases.

# Other

We rely upon unpatented trade secrets, know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our ownership of know-how and trade secrets through an active program of legal mechanisms including assignments, confidentiality agreements, material transfer agreements, research collaborations and licenses.

# Manufacturing

We currently contract with third parties for the manufacturing and testing of our Trehalose IV solution for nonclinical and clinical trials and intend to do so in the future. We do not own or operate manufacturing facilities for the production of clinical quantities of our product candidate. We currently have no plans to build our own clinical or commercial scale manufacturing capabilities, though we may decide to build a capable facility in the future.

The drug substance for our Trehalose IV solution is purchased from a third-party supplier and the drug product for our Trehalose IV solution is manufactured by a third-party manufacturer.

To date, our third-party manufacturers have met our manufacturing requirements. Although we have not yet engaged our third-party manufacturers in long-term commercial supply agreements, we expect third-party manufacturers to be capable of providing sufficient quantities of our product candidate to meet anticipated full scale commercial demands. In addition to third parties with whom we currently work, we believe that there are alternate sources of supply that can satisfy our clinical and commercial requirements, although we cannot be certain that identifying and establishing relationships with such sources, if necessary, would not result in significant delay or material additional costs.

#### Sales and Marketing

We may build the commercial infrastructure in the United States to effectively support the commercialization of our current or any future product candidates, if and when we believe a regulatory approval of the first of such a product candidate in that particular geographic market appears imminent. The commercial infrastructure for orphan products typically consists of a targeted, specialty sales force that calls on a limited and focused group of physicians supported by sales management, medical liaisons, internal sales support, an internal marketing group and distribution support. One challenge unique to commercializing therapies for rare diseases is the difficulty in identifying eligible patients due to the very small and sometimes heterogeneous disease populations. Our management team is experienced in maximizing patient identification for both clinical development and commercialization purposes in rare diseases.

Additional capabilities important to the orphan marketplace include the management of key accounts such as managed care organizations, group-purchasing organizations, specialty pharmacies and government accounts. To develop the appropriate commercial infrastructure, we will have to invest significant amounts of financial and management resources, some of which will be committed prior to any confirmation that our current or any future product candidates will be approved.

Outside of the United States, where appropriate, we may elect in the future to utilize strategic partners, distributors, or contract sales forces to assist in the commercialization of our products. In certain instances, we may consider building our own commercial infrastructure.

# **Government Regulation**

Clinical trials, the drug approval process and the marketing of drugs are intensively regulated in the United States and in all other major foreign countries. Governmental authorities in the United States (including federal, state and local authorities) and in other countries, extensively regulate, among other things, the manufacturing, research and clinical development, marketing, labeling and packaging, storage, distribution, post-approval monitoring and reporting, advertising and promotion, pricing and export and import of pharmaceutical products, such as those we are developing. The process for obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

### U.S. Government Regulation

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and related regulations, and the Public Health Service Act, or PHSA and its implementing regulations. FDA approval is required before any new drug candidate or dosage form, including a new use of a previously approved drug, can be marketed in the United States. We intend to submit an NDA in the United States. Failure to comply with the applicable United States regulatory requirements at any time during the product development process, approval process or after approval may subject an applicant to administrative or judicial sanctions. These sanctions could include the imposition by the FDA or an IRB of a clinical hold on trials, the FDA's refusal to approve pending applications or supplements, license suspension or revocation, withdrawal of an approval, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, other corrective action, injunctions, fines, civil penalties or criminal prosecution. Any agency or judicial enforcement action could have a material adverse effect on us.

The FDA and foreign regulatory authorities impose substantial requirements upon the clinical development, manufacture and marketing of pharmaceutical products. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, safety, effectiveness, labeling, storage, distribution, record keeping, approval, advertising and promotion of our products.

The FDA's policies may change and additional government regulations may be enacted that could prevent or delay regulatory approval of our platforms and candidate products or any future product candidates or approval of new disease indications or label changes. We cannot predict the likelihood, nature or extent of adverse governmental regulation that might arise from future legislative or administrative action, either in the United States or abroad.

# Marketing Approval

The process required by the FDA before a product candidate may be marketed in the United States generally involves the following:

completion of extensive nonclinical laboratory tests and nonclinical animal studies, all performed in accordance with cGMP and current Good Laboratory Practices, or cGLP, guidance and regulations;

submission to the FDA of an investigational new drug, or IND, application which must become effective before human clinical trials may begin and must be updated annually;

· approval by an IRB or ethics committee representing each clinical site before each clinical trial may be initiated;

performance of adequate and well-controlled human clinical trials to establish the safety and efficacy of the product candidate for each proposed indication;

- preparation of and submission to the FDA an NDA after completion of all clinical trials;
- · potential review of the product application by an FDA Advisory Committee, where appropriate and if applicable;
  - a determination by the FDA within 60 days of its receipt of an NDA to file the application for review;

satisfactory completion of FDA pre-approval inspection of the manufacturing facilities where the proposed product is produced to assess compliance with cGMP; and

·FDA review and approval of an NDA prior to any commercial marketing or sale of the drug in the United States.

The testing and approval process requires substantial time and financial resources and we cannot be certain that any approvals for our candidate products will be granted on a timely basis, if at all.

An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for human studies. The IND also includes results of *in vitro* and *in vivo* studies and animal testing results assessing the toxicology, pharmacokinetics and pharmacodynamic characteristics of the product; chemistry, manufacturing and controls information; and any available human data or literature to support the use of the investigational new drug. An IND must become effective before human clinical trials may begin. An IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to the proposed clinical trials. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before clinical trials can begin. Accordingly, submission of an IND may or may not result in the FDA allowing clinical trials to commence.

We will need to successfully complete clinical trials in order to be in a position to submit an NDA to the FDA. Our planned future clinical trials for our candidate products may not begin or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including:

not obtaining regulatory approval to commence a trial;

not reaching agreement with third-party clinical trial sites and their subsequent performance in conducting accurate and reliable studies on a timely basis;

not obtaining IRB approval to conduct a trial at a prospective site;

recruiting an insufficient number of patients to participate in a trial;

inadequate supply of the drug; and

clinical adverse finding(s) during the trial itself.

We must reach agreement with the FDA on the proposed protocols for our future clinical trials in the United States. A separate submission apart from an IND application must be made for each clinical trial to be conducted during product development. Further, an independent IRB for each site proposed to conduct the clinical trial must review and approve the plan for any clinical trial before it commences at that site. Informed consent must also be obtained from each trial subject. Regulatory authorities, an IRB or the sponsor, may suspend or terminate a clinical trial at any time on various grounds, including a finding that the participants are being exposed to an unacceptable health risk.

#### Clinical trials

Clinical trials involve the administration of the product candidate to human subjects under the supervision of qualified investigators in accordance with current good clinical practices, or cGCP, which include the requirement that all research subjects provide their informed consent for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety and the efficacy criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. Additionally, approval must also be obtained from each clinical trial site's IRB before the studies may be initiated and the IRB must monitor the trial until completed. There are also requirements governing the reporting of ongoing clinical trials and clinical trial results to public registries.

Our objective is to conduct clinical trials for our candidate products and, if those trials are successful, seek marketing approval from the FDA and other worldwide regulatory bodies.

For purposes of NDA approval, human clinical trials are typically conducted in phases that may overlap.

*Phase 1.* The drug is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients;

*Phase* 2. This phase involves trials in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage;

*Phase 3.* This phase involves trials undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population, often at geographically dispersed clinical trial sites. These trials are intended to establish the overall benefit/risk profile of the product and provide an adequate basis for product labeling; and

*Phase 4.* In some cases, the FDA may condition approval of an NDA for a product candidate on the sponsor's agreement to conduct additional clinical trials after approval. In other cases, a sponsor may voluntarily conduct additional clinical trials after approval to gain more information about the drug. Such post-approval studies are typically referred to as Phase 4 clinical trials.

A pivotal trial is a clinical trial that adequately meets regulatory agency requirements for the evaluation of a drug candidate's efficacy and safety such that it can be used to justify the approval of the product. Generally, pivotal trials are Phase 3 trials, but the FDA may accept results from Phase 2 trials if the trial design provides a well-controlled and reliable assessment of clinical benefit, particularly in situations where there is an unmet medical need and the results are sufficiently robust.

The FDA, the IRB, or the clinical trial sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk.

Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a Data Safety Monitoring Board or Committee. This group provides oversight and assessment of designated milestones based on access to certain data during the conduct of the trial. We may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

All of these trials must be conducted in accordance with GCP requirements in order for the data to be considered reliable for regulatory purposes.

The clinical trial process can take three to ten years or more to complete and there can be no assurance that the data collected will support FDA approval or licensure of the product. Government regulation may delay or prevent marketing of a product candidate or new drugs for a considerable period of time and impose costly procedures upon our activities. We cannot be certain that the FDA or any other regulatory agency will grant approvals for a product candidate on a timely basis, if at all. Success in early stage clinical trials does not ensure success in later stage clinical trials. Data obtained from clinical activities is not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval.

### The NDA Approval Process

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, detailed investigational new drug product information is submitted to the FDA in the form of an NDA requesting approval to market the product for one or more indications. Under federal law, the submission of most NDAs is subject to an application user fee. For the FDA's fiscal year 2017, the application user fee with clinical data is \$2,038,100, and the sponsor of an approved NDA is also subject to annual product and establishment user fees. For the FDA's fiscal year 2017, these fees are set at \$97,750 per product and \$512,200 per establishment. These fees are typically increased annually. Applications for orphan drug products are exempted from the NDA user fees and may be exempted from product and establishment user fees, unless the application includes an indication for other than a rare

disease or condition.

An NDA must include all relevant data available from pertinent nonclinical and clinical trials, regardless of the results or findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. Data is generated from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or in certain instances, from other sources, including trials initiated by investigators. To support marketing approval, the data submitted must be sufficient in quality and quantity to establish the safety and effectiveness of the investigational new drug product to the satisfaction of the FDA.

The FDA will initially review the NDA for completeness before it accepts it for filing. The FDA has 60 days from receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that the application is sufficiently complete to permit substantive review. After the NDA submission is accepted for filing, the FDA reviews the NDA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA may refer applications for novel drug products or drug products that present difficult questions of safety or efficacy to an Advisory Committee, typically a panel that includes independent clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and, if so, under what conditions. The FDA is not bound by the recommendations of an Advisory Committee, but it considers such recommendations carefully when making decisions.

Upon the request of an applicant, the FDA may grant a Priority Review designation to a product, which sets the target date for FDA action on the application at six months, rather than the standard ten months. Priority review is given where preliminary assessments indicates that a product, if approved, has the potential to provide a significant improvement compared to marketed products or offers a therapy where no satisfactory alternative therapy exists. Priority Review designation does not alter the scientific/medical standard for approval or the quality of evidence necessary to support approval.

The FDA is required to complete its review in a certain amount of time, for which the user fees are paid to help with the costs of the evaluation. However, FDA and the sponsor can agree to extend this review time. After the FDA completes its review of an NDA, it will communicate to the sponsor that the drug will either be approved, or it will issue a Complete Response Letter to communicate that the NDA will not be approved in its current form and inform the sponsor of changes that must be made or additional clinical, nonclinical or manufacturing data that must be received before the application can be approved, with no implication regarding the ultimate approvability of the application.

Before approving an NDA, the FDA will typically inspect the facilities at which the drug substance or drug product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications.

Additionally, before approving an NDA, the FDA may inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines the application, manufacturing process or manufacturing facilities are not acceptable, it typically will outline the deficiencies and often will request additional testing or information. This may significantly delay further review of the application. If the FDA finds that a clinical site did not conduct the clinical trial in accordance with GCP, the FDA may determine the data generated by the clinical site should be excluded from the primary efficacy analyses provided in the NDA. Additionally, notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The testing and approval process for a drug requires substantial time, effort and financial resources and this process may take several years to complete. Data obtained from clinical activities are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The FDA may not grant approval on a timely basis, or at all. We may encounter difficulties or unanticipated costs in our efforts to secure necessary governmental approvals, which could delay or preclude us from marketing our products.

The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 trials may be made a condition to be satisfied for continuing drug approval. The results of Phase 4 trials can

confirm the effectiveness of a product candidate and can provide important safety information. In addition, the FDA now has express statutory authority to require sponsors to conduct post-market trials to specifically address safety issues identified by the agency.

Any approvals that we may ultimately receive could be withdrawn if required post-marketing trials or analyses do not meet the FDA requirements, which could materially harm the commercial prospects for our candidate products.

The FDA also has authority to require a Risk Evaluation and Mitigation Strategy, or REMS, from sponsors to ensure that the benefits of a drug or biological product outweigh its risks. A sponsor may also propose a REMS as part of the NDA submission. The need for a REMS is determined as part of the review of the NDA. Based on statutory standards, elements of a REMS may include "Dear Doctor" letters, a Medication Guide, more elaborate targeted educational programs and in some cases restrictions on distribution. These elements are negotiated as part of the NDA approval, and in some cases if consensus is not obtained until after the Prescription Drug User Fee Act review cycle, the approval date may be delayed. Once adopted, REMS are subject to periodic assessment and modification.

Even if a product candidate receives regulatory approval, the approval may be limited to specific disease states, patient populations and dosages, or might contain significant limitations on use in the form of warnings, precautions or contraindications, including Black Box Warnings, or in the form of risk management plans, restrictions on distribution, or post-marketing trial requirements. Further, even after regulatory approval is obtained, later discovery of previously unknown problems with a product may result in restrictions on the product or complete withdrawal of the product from the market. Delay in obtaining, or failure to obtain, regulatory approval for our candidate products, or obtaining approval but for significantly limited use, would harm our business. In addition, we cannot predict what adverse governmental regulations may arise from future U.S. or foreign governmental action.

# FDA Post-Approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product. After approval, changes to the approved product or the addition of new indications or other labeling claims are subject to prior FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data.

Drug sponsors and their manufacturers are subject to periodic unannounced inspections by the FDA and state agencies for compliance with cGMP requirements. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting and documentation requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

We rely, and expect to continue to rely, on third parties for the production of clinical quantities of our current product candidate and expect to rely in the future on third parties for the production of commercial quantities. Future FDA and state inspections may identify compliance issues at our facilities or at the facilities of our contract manufacturers that may disrupt production or distribution, or require substantial resources to correct. In addition, discovery of previously unknown problems with a product or the failure to comply with applicable requirements may result in restrictions on a product, manufacturer or holder of an approved NDA, including withdrawal or recall of the product from the market or other voluntary, FDA-initiated or judicial action that could delay or prohibit further marketing. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of a requirement to conduct post-market trials or clinical trials to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, but not limited to the following:

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restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;

fines, warning letters or holds on post-approval clinical trials;

refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product license approvals;

· injunctions or the imposition of civil or criminal penalties; or

· product seizure or detention, or refusal to permit the import or export of products.

The FDA strictly regulates marketing, labeling, advertising, and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant enforcement and product liability exposure.

Orphan Drug Designation and Exclusivity

The FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making the drug for this type of disease or condition will be recovered from sales in the United States.

Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and user-fee waivers. In addition, if a product receives FDA approval for the indication for which it has orphan designation, the product is entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same drug for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity. Orphan drug designation does not affect the regulatory review standards or shorten the review period. Designation does not imply FDA approval, and it is possible a company may, in certain cases, lose designation before a product's approval and, thus, may not obtain orphan drug exclusivity.

#### European Union/Rest of World Government Regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. In the European Union, for example, a clinical trial application, or CTA, must be submitted for each clinical protocol to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the CTA is accepted in accordance with a country's requirements, the clinical trial may proceed.

The requirements and process governing the conduct of clinical trials vary from country to country. In all cases, the clinical trials are conducted in accordance with cGCP, the applicable regulatory requirements, and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational medicinal product under European Union regulatory systems, we must submit a marketing authorization application. The content of the NDA filed in the United States is similar to that required in the European Union, with the exception of, among other things, country and EU-specific document requirements.

For other countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing product licensing, pricing, and reimbursement vary from country to country.

Countries that are part of the European Union, as well as countries outside of the European Union, have their own governing bodies, requirements, and processes with respect to the approval of pharmaceutical products. If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Authorization Procedures in the European Union

Medicines can be authorized in the European Union by using either the centralized authorization procedure or national authorization procedures (Decentralized or Mutual recognition or national procedures).

Centralized procedure. The European Commission implemented the centralized procedure for the approval of human medicines to facilitate marketing authorizations that are valid throughout the EEA which is comprised of the 28 member states of the European Union plus Norway, Iceland, and Lichtenstein. This procedure results in a single marketing authorization issued by the European Commission that is valid across the EEA. The centralized procedure is compulsory for human medicines that are: derived from biotechnology processes, such as genetic engineering, contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative disorders or autoimmune diseases and other immune dysfunctions, and officially designated orphan medicines.

For medicines that do not fall within these categories, an applicant has the option of submitting an application for a centralized marketing authorization to the EMA following a favorable eligibility request by the EMA, as long as the medicine concerned is a significant therapeutic, scientific or technical innovation, or if its authorization would be in the interest of public health.

National authorization procedures. There are also two other possible routes to authorize medicinal products in several European Union countries, which are available for investigational medicinal products that fall outside the scope of the centralized procedure:

Decentralized procedure. Using the decentralized procedure, an applicant may apply for simultaneous authorization § in more than one European Union country of medicinal products that have not yet been authorized in any European Union country and that do not fall within the mandatory scope of the centralized procedure.

Mutual recognition procedure. In the mutual recognition procedure, a medicine is first authorized in one European Union Member State, in accordance with the procedure laid down in the EU directive 2001/83 as amended and \$implemented into national legislation. Following this, further marketing authorizations can be sought from other European Union countries in a procedure whereby the countries concerned agree to recognize the validity of the original, national marketing authorization.

In some cases, a Pediatric Investigation Plan, or PIP, and/or a request for waiver or deferral, is required for submission prior to submitting a marketing authorization application. A PIP describes, among other things, proposed pediatric trials and their timing relative to clinical trials in adults.

New Chemical Entity Exclusivity

In the European Union, new chemical entities, sometimes referred to as new active substances or new molecular entities, as well as submissions following Article 8.3 of Directive 2001/83 as amended, qualify for eight years of data exclusivity upon marketing authorization and an additional two years of market exclusivity. This data exclusivity, if granted, prevents regulatory authorities in the European Union from referencing the innovator's data to assess a generic (abbreviated) application for eight years, after which generic marketing authorization can be submitted, and the innovator's data may be referenced, the product may be approved but must not be launched prior to the end of the 10 years data exclusivity period. The overall ten-year period will be extended by one year if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, is held to bring a significant clinical benefit, in comparison with existing therapies, or by six months if there is a pediatric development in accordance with a PIP has been performed.

Orphan Drug Designation and Exclusivity

In the European Union, the EMA's COMP grants orphan drug designation to promote the development of products that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than five in 10,000 persons in the European Union and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized (or the product would be a significant benefit to those affected, i.e. where a prior approval was granted). Additionally, designation is granted for products intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the drug in the European Union would be sufficient to justify the necessary investment in developing the medicinal product.

In the European Union, orphan drug designation entitles a party to financial incentives such as reduction of fees or fee waivers and 10 years of market exclusivity is granted following medicinal product approval. This period may be reduced to six years if the orphan drug designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. This period can be prolonged to 12 years in case a pediatric development has been performed following an agreed PIP.

Orphan drug designation must be requested and granted before submitting an application for marketing approval. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

Exceptional Circumstances/Conditional Approval

Orphan drugs or drugs with unmet medical needs may be eligible for European Union approval under exceptional circumstances or with conditional approval. Approval under exceptional circumstances is applicable to all applications including orphan products and is used when an applicant is unable to provide comprehensive data on the efficacy and safety under normal conditions of use because the indication for which the product is intended is encountered so rarely that the applicant cannot reasonably be expected to provide comprehensive evidence, when the present state of scientific knowledge does not allow comprehensive information to be provided, or when it is medically unethical to collect such information. Conditional marketing authorization is applicable to orphan medicinal products, medicinal products for seriously debilitating or life-threatening diseases, or medicinal products to be used in emergency situations in response to recognized public threats. Conditional marketing authorization can be granted on the basis of less complete data than is normally required in order to meet unmet medical needs and in the interest of public health, provided the risk-benefit balance is positive, it is likely that the applicant will be able to provide the comprehensive clinical data after approval, and unmet medical needs will be fulfilled. Conditional marketing authorization is subject to certain specific obligations to be reviewed annually. The initial approval needs to be renewed annually. This renewal is controlled by the CHMP and, if not granted, may lead to cessation of the marketing authorization at the end of this particular year

Accelerated Review

Under the Centralized Procedure in the European Union, the maximum timeframe for the evaluation of a marketing authorization application is 210 days (excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the EMA's Committee for Medicinal Products for Human Use, or CHMP). Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, particularly from the point of view of therapeutic innovation. In this circumstance, EMA ensures that the opinion of the CHMP is given within 150 days, excluding clock stops.

Drug Application Process in Canada

In Canada, the *Food and Drugs Act* governs which drugs can be manufactured, marketed and sold in the country. It also establishes approval processes and sets standards for the manufacture, testing, packaging and labelling of regulated products. Applications for approval to market drugs and related products in Canada are reviewed by the Health Products and Food Branch, or HPFB, of Health Canada.

New Drug Approval Process

In the case of new drugs, the HPFB will review preclinical test results indicating that the substance produces the desired result and is not toxic, before authorizing clinical trials in Canada. When the clinical trial studies (the application process is detailed below) prove that the drug has potential therapeutic value that outweighs the risks associated with its use, the sponsor may file a New Drug Submission, or NDS, with HPFB.

An NDS consists of data and material on the safety, effectiveness and quality of the drug, as well as the results of the preclinical and clinical studies, whether done in Canada or elsewhere, and information that the sponsor proposes to provide to health care practitioners and consumers, such as details regarding the production of the drug, packaging and labelling, and information regarding therapeutic claims and side effects.

If the HPFB concludes that the benefits outweigh the risks and that the risks can be mitigated, the drug is issued a Notice of Compliance, as well as a Drug Identification Number which permits the sponsor to market the drug in Canada and indicates the drug's official approval in Canada.

Clinical Trial Application Process

In Canada, clinical trial sponsors must submit a clinical trial application, or CTA, to Health Canada for authorization to sell or import a drug for the purpose of a clinical trial. A CTA must be filed prior to the initiation of the trial, and approval from both Health Canada and the clinical site(s) Research Ethics Board(s) must be obtained prior to the initiation of the trial. During the 30-day review of Health Canada, a 'No Objection Letter' is issued to the sponsor company if the application is deemed acceptable. All clinical testing is subject to rigorous regulatory requirements, including the requirement to follow good clinical practices, obtain study subjects informed consent, and obtain institutional review board or independent ethics committee approval.

## Orphan Drugs in Canada

Canada does not have specific legislation regarding orphan drug development and approval. Health Canada is developing an orphan drug regulatory framework that seeks to encourage the development of orphan drugs and increase the availability of these products on the Canadian market. In this regard, the *Office of Legislative and Regulatory Modernization, Policy, Planning and International Affairs Directorate, Health Products and Food Branch* published the *Initial Draft Discussion Document for A Canadian Orphan Drug Regulatory Framework*.

Health Canada's draft definition of the term "orphan drug" is to mean a drug that meets the following criteria:

The drug is intended for the diagnosis, treatment, mitigation or prevention of a life-threatening, seriously a debilitating, or serious and chronic disease or condition affecting not more than five (5) in ten thousand (10,000) persons in Canada; and

b. The drug is not currently authorized by the Minister or if currently authorized, it will provide a potentially substantial benefit for the patient distinguishable from the existing therapy.

In the absence of an orphan drug regulatory framework in Canada, Canadians have been able to access some orphan drugs, also known as Drugs for Rare Diseases, through Health Canada's Special Access Program, clinical trials or as new drugs that have received their Notice of Compliance under Part C, Division 8 of the *Food and Drug Regulations*.

#### Pharmaceutical Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any drug products for which we may obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend in part on the availability of coverage and reimbursement from third-party payers. Third-party payers include government authorities, managed care providers, private health insurers and other organizations. If we obtain regulatory approval for our products, third-party payers may not provide coverage for our products, or may limit coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drugs for a particular indication. Moreover, a payer's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Third-party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. To obtain coverage and reimbursement for any product that receives regulatory approval for commercial sale, we may need to provide supporting scientific, clinical and cost-effectiveness data, which may be difficult and costly to obtain. Our current or any future product candidates may not be considered medically necessary or cost-effective. If third-party payers do not consider a product to be cost-effective compared to other available therapies, they may not cover the product after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products at a profit.

The U.S. government, state legislatures and foreign governments have shown significant interest in implementing cost containment programs to limit the growth of health care costs, including price controls, reporting requirements, restrictions on reimbursement and requirements for substitution of generic products for branded prescription drugs. By way of example, the ACA contains provisions that may reduce the profitability of drug products, including, for example, increased rebates for drugs sold to Medicaid programs, extension of Medicaid rebates to Medicaid managed care plans, mandatory discounts for certain Medicare Part D beneficiaries and annual fees based on pharmaceutical companies' share of sales to federal health care programs. Adoption of additional government controls and measures, and tightening of restrictive policies in jurisdictions with existing controls and measures, could limit payments for pharmaceuticals.

In the U.S., judicial challenges as well as legislative initiatives to modify, limit, or repeal the ACA have been initiated and continue, including a recent Executive Order signed by the U.S. President directing executive departments and federal agencies to waive, defer, grant exemptions from, or delay the implementation of provisions of the ACA that would impose a fiscal or regulatory burden on individuals and certain entities to the maximum extent permitted by law. The extent to which any repeal or replacement of elements of the ACA or other legislation would affect our ability to obtain regulatory approval for the sale of Trehalose IV, or the prices and net revenues from its sale is unknown at the time of this filing and represent an additional uncertainty.

In the European Union, governments influence the price of pharmaceutical products through their pricing and reimbursement rules, legislation and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed to by the government. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs in general, particularly prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

In Canada, the federal government, provinces and territories provide coverage to about one third of residents through publicly financed programs. Both the federal and provincial governments play a role in regulating drug prices and reimbursement. The prices of patented drugs are regulated at the federal level by the Patented Medicine Prices Review Board, which ensures that prices are not excessive. Also, drugs must be approved at the provincial level in order to be covered under provincial health insurance systems. Once Health Canada has approved a drug for use, the country's public drug plans must decide if the drug will be eligible for public reimbursement. The Canadian Agency for Drugs and Technologies in Health (CADTH), an independent non-profit agency has a mandate to provide advice and evidence-based information about the effectiveness of drugs and other health technologies to Canadian health care decision makers. CADTH implements a Common Drug Review (CDR) process to provide formulary recommendations for all provinces except Quebec. Through the CDR process, CADTH conducts evaluations of the clinical, economic, and patient evidence on drugs, and uses this evaluation to provide reimbursement recommendations and advice to Canada's federal, provincial, and territorial public drug plans, with the exception of

Quebec. About two-thirds of Canada's residents are covered for prescription drugs by private insurance. Private plans establish their own lists of covered drugs.

The marketability of any products for which we receive regulatory approval for commercial sale may suffer if governmental and other third-party payers fail to provide adequate coverage and reimbursement. In addition, there is an increasing emphasis on cost containment measures in the United States and other countries, which we expect will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

#### Other Healthcare Laws and Compliance Requirements

If we obtain regulatory approval for our current or any future product candidates, we may be subject to various federal and state laws targeting fraud and abuse in the healthcare industry. These laws may impact, among other things, our proposed sales, marketing and education programs. In addition, we may be subject to patient privacy regulation by both the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include:

the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce or reward, or in return for, the referral of an individual, or the purchase, order or recommendation of any good, item or service reimbursable under a federal healthcare program, such as Medicare and Medicaid;

federal civil and criminal false claims laws and civil monetary penalty laws, including the False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from the federal government, including Medicare, Medicaid, or other third-party payers, that are false or fraudulent;

HIPAA, which imposes criminal and civil liability for knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, and for knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statements in connection with the delivery of or payment for healthcare benefits, items or services:

the federal transparency laws, including the physician sunshine provisions of the Affordable Care Act, that requires certain drug manufacturers to disclose certain payments and other transfers of value provided to physicians and teaching hospitals, and ownership and investment interests held by physicians and their family members;

HIPAA, as amended by HITECH, and its implementing regulations, which imposes certain requirements relating to the privacy and security of individually identifiable health information; and

state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payer, including commercial insurers, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts; and

the FCPA, which prohibits companies from making improper payments to foreign government officials and other persons for the purpose of obtaining or retaining business.

The Affordable Care Act broadened the reach of the fraud and abuse laws by, among other things, amending the intent requirement of the federal Anti-Kickback Statute and the applicable criminal healthcare fraud statutes contained within 42 U.S.C. §1320a-7b. Pursuant to the statutory amendment, a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act (discussed below) or the civil monetary penalties statute. Many states have adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare items or services reimbursed by any source, not only federal healthcare programs such as the Medicare and Medicaid programs.

Safeguards we implement to prohibit improper payments or offers of payments by our employees, consultants, and others may be ineffective, and violations of the fraud and abuse laws, the FCPA and similar laws may result in severe

criminal or civil sanctions, or other liabilities or proceedings against us, any of which would likely harm our reputation, business, financial condition and result of operations.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, imprisonment, damages, fines, disgorgement, contractual remedies, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

## Labeling, Marketing and Promotion

The FDA closely regulates the labeling, marketing and promotion of drugs. While doctors are free to prescribe any drug approved by the FDA for any use, a company can only make claims relating to safety and efficacy of a drug that are consistent with FDA approval, and the company is allowed to actively market a drug only for the particular use and treatment approved by the FDA. In addition, any claims we make for our products in advertising or promotion must be appropriately balanced with important safety information and otherwise be adequately substantiated. Failure to comply with these requirements can result in adverse publicity, enforcement letters, such as publicly-posted warning letters, corrective advertising, injunctions and potential civil and criminal penalties. Government regulators recently have increased their scrutiny of the promotion and marketing of drugs. These federal enforcement actions can also potentially lead to state actions and product liability claims, as well as competitor challenges of deceptive advertising.

## Anti-Kickback Statute, False Claims Act, and Other Laws

In the United States, the research, manufacturing, distribution, sale and promotion of drug products and medical devices are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare and Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, state Attorneys General, and other federal, state and local government agencies. For example, sales, marketing and scientific/educational grant programs must comply with, among others, the federal Anti-Kickback Statute, the federal False Claims Act, privacy and security regulations promulgated under HIPAA, and similar state laws, as applicable. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

The federal Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf) to knowingly and willfully solicit, receive, offer, or pay any remuneration that is intended to induce or reward referrals, or the purchase, order, or prescription of a particular drug or other item or service, for which payment may be made under a federal healthcare program, such as Medicare or Medicaid.

The federal False Claims Act prohibits anyone from knowingly presenting, or causing to be presented, for payment to the government, claims for items or services (including drugs) that are false or fraudulent, such as claims for items or services not provided as claimed, or claims for medically unnecessary items or services.

There are also an increasing number of state laws that require manufacturers to make reports to states on pricing and marketing information. Many of these laws contain ambiguities as to what is required to comply with the laws. In addition, a similar federal requirement requires manufacturers to track and report to the federal government certain payments made to physicians and certain teaching hospitals made in the previous calendar year. These laws may affect our sales, marketing, and other promotional activities by imposing administrative and compliance burdens on us, and additional laws and regulations may be enacted in the future that expand our compliance obligations even further. In addition, given the lack of clarity with respect to these laws and their implementation, our reporting actions could be subject to the penalty provisions of the pertinent state, and federal authorities.

#### Other Regulations

We are also subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control, and disposal of hazardous or potentially hazardous substances. We may incur significant costs to comply with such laws and regulations now or in the future.

Israel

#### Clinical Testing in Israel

In order to conduct clinical testing on humans in the State of Israel, special authorization must first be obtained from the ethics committee and general manager of the institution in which the clinical trials are scheduled to be conducted, as required under the Guidelines for Clinical Trials in Human Subjects implemented pursuant to the Israeli Public Health Regulations (Clinical Trials in Human Subjects), as amended from time to time, and other applicable legislation. These regulations require authorization by the institutional ethics committee and general manager as well as from the Israeli Ministry of Health, except in certain circumstances, and in the case of genetic trials, special fertility trials and complex clinical trials, an additional authorization of the Ministry of Health's overseeing ethics committee. The institutional ethics committee must, among other things, evaluate the anticipated benefits that are likely to be derived from the project to determine if it justifies the risks and inconvenience to be inflicted on the human subjects, and the committee must ensure that adequate protection exists for the rights and safety of the participants as well as the accuracy of the information gathered in the course of the clinical testing. Since we perform a portion of the clinical trials on certain of our therapeutic candidates in Israel, we are required to obtain authorization from the ethics committee and general manager of each institution in which we intend to conduct our clinical trials, and in most cases, from the Israeli Ministry of Health.

## **Organizational Structure**

Our sole wholly owned subsidiary is Bio Blast Pharma, Inc., which was incorporated in the state of Delaware.

#### **Property and facilities**

Our headquarters are currently located in Tel Aviv, Israel and consists of approximately 3,390 square feet of leased office space under a three-year lease, which commenced in 2014, with an option to extend the lease for two additional consecutive three-year periods. During December 2016, we exercised the option to extend the lease for an additional three years period through 2020, while maintaining the right to terminate the lease agreement under certain conditions during the extended lease term. During 2015 and 2016, we leased U.S. office facilities - one in New Haven, Connecticut and one in Doylestown, PA for use by our U.S. staff and management under two short-term lease agreements. As of October 2016, we terminated these lease agreements and vacated these locations.

We consider our current office space sufficient to meet our anticipated needs for the foreseeable future and suitable for the conduct of our business.

## **Employees**

As of March 15, 2017, our staff included 11 persons. Our management consists of our Chief Executive Officer, our Chief Financial Officer and Vice President of Finance and Administration, our Chief Medical Officer and Vice President of Research and Development and our Chief Commercial officer. We believe that we maintain good relations with all of our employees.

#### **Capital Expenditures**

Our capital expenditures for 2016, 2015 and 2014 amounted to \$18,000, 48,000 and \$63,000, respectively. These expenditures were primarily for computers, electrical equipment, office furniture and leasehold improvements. We expect to finance future expenditures primarily from available cash resources.

# **MANAGEMENT**

## **Executive Officers and Directors**

The following table sets forth information regarding our executive officers, senior management and directors:

Name	Age	Position
Fredric Price	71	Executive Chairman of the Board of Directors, Chief Executive Officer
Chaime Orlev	46	Chief Financial Officer, Vice President of Finance and Administration
Dr. Warren Wasiewski	64	Chief Medical Officer, Vice President of Research and Development
Dana Gelbaum	43	Chief Commercial Officer
Prof. Avizohar Argov	69	Special Medical Advisor to the Chief Executive Officer
Michael Burshtine (1)(2)(3)	53	Director
Thomas I.H. Dubin (1)(3)	55	Director
Colin Foster	54	Director
Robert Friedman (1)(3)	61	Director
Marlene Haffner (2)(3)	76	Director
Dr. Dalia Megiddo	65	Director
Ran Nussbaum	43	Director
Dr. Ralf Rosskamp (2)(3)	64	Director

<sup>(1)</sup> Member of our Audit Committee.

Member of our Compensation Committee.

<sup>(3)</sup> Indicates independent director under NASDAQ rules.

Fredric Price has been our Chief Executive Officer since July 2016, and has served as Executive Chairman of our Board of Directors since April 2014, having served as our Chairman of the Board of Directors from April 2012 until April 2014. Since 2013, Mr. Price has served as a member of the Advisory Board of FDNA Inc. From 2013 until 2014, he was Executive Chairman of the Board of Directors and from 2008 to 2013 Chairman of the Board of Directors and Chief Executive Officer of Chiasma, Inc. From 2004 to 2008, Mr. Price was Chairman of the Board of Directors of Omrix Biopharmaceuticals, Inc., from 2006 to 2012 a member of the Board of Directors of Enobia Pharma Corp., from 2007 to 2010 a member of the Board of Directors of Pharmasset Inc., from 2007 to 2011 Executive Chairman of the Board of Directors of Peptimmune, Inc., from 2004 to 2005 Executive Chairman of the Board of Directors of Zymenex A/S, from 2000 to 2004 Chairman of the Board of Directors and Chief Executive Officer of BioMarin Pharmaceutical Inc., and from 1994 to 2000 Chief Executive Officer and a member of the Board of Directors of Applied Microbiology Inc. As Chairman and/or Chief Executive Officer, he has raised more than \$700 million in a variety of securities transactions, led a total of 22 M&A and licensing transactions, built FDA approved facilities and had drugs approved in the United States as well as in international markets. His earlier experience includes having been Vice President of Finance and administration and Chief Financial Officer of Regeneron Pharmaceuticals, Inc., the founder of the strategy consulting firm RxFDP, and Vice President of Pfizer, Inc. with both line and staff responsibilities. Mr. Price is a co-inventor of 17 issued U.S. patents. He received a B.A. from Dartmouth College and an M.B.A. from the Wharton School of the University of Pennsylvania.

Chaime Orlev has been our Chief Financial Officer and Vice President, Finance and Administration since September 2016. Prior to joining us, he served as the Vice President of Finance and Administration of Chiasma, Inc. (NASDAQ: CHMA) from 2010 to 2016. In addition, he was a financial consultant to several Israeli biotechnology and medical device companies from 2008 to 2010. From 2008 to 2009, Mr. Orlev served as Chief Financial Officer of Oramed Pharmaceuticals Inc.(NASDAQ: ORMP). Mr. Orlev served as Chief Financial Officer of Gammacan International Inc. from 2005 to 2008 and as Vice President, Finance and Chief Financial Officer of Huntleigh USA Corporation from 2001 to 2004. Mr. Orlev received his M.B.A. from the Leon Recanati Graduate School of Business Administration at the Tel Aviv University and a B.A. in Business Administration from the College of Business in Israel. Mr. Orlev is a Certified Public Accountant under the laws of Israel.

Dr. Warren Wasiewski has been our Chief Medical Officer and Vice President of Research and Development since November 2015. Dr. Wasiewski is a board certified pediatric neurologist with twenty-two years of clinical experience in pediatric neurology and fifteen years of experience in the pharmaceutical industry. From 2014 to 2015, Dr. Wasiewski was Chief Medical Officer and Executive Vice President of Clinical Development for Neurotrope BioScience, Inc. Prior to this, from 2012 to 2014, he was Vice President of Clinical Development for Neurology at Alexion Pharmaceuticals, Inc. (NASDAQ: ALXN), an S&P 500 biopharmaceuticals company that discovers, develops, and commercializes medicines for patients with ultra-rare, life-threatening disorders. From 2001 to 2006 he was the Senior Medical Director for AstraZeneca plc (LON: AZN) in Neurology. In 2012, Dr. Wasiewski was an Associate Professor of Pediatrics and Neurology at Penn State Children's Hospital where he had previously served from 1987 to 1991 as an Assistant Professor of Pediatrics. In 1991, he founded Child Neurology Associates PC in Lancaster PA and was appointed Chair of Pediatrics at Lancaster General Hospital. Dr. Wasiewski has a B.A. from Rutgers College, an M.S. from State University of New York Downstate Medical Center, and an M.D. from State University of New York, at Buffalo. Dr. Wasiewski is member of the medical honor society, Alpha Omega Alpha and Fellow of the American Academy of Pediatrics.

Dana Gelbaum has been our Chief Commercial Officer since November 2016. Ms. Gelbaum also serves as the VP Global Marketing & Corporate Development at Chiasma, Inc. (NASDAQ:CHMA), a position she has held since January 2016. Prior to that, and since 2009, Ms. Gelbaum held various roles at Chiasma, Inc. From 2007 to 2008, she was Director of Business Development at Recoly N.V., a biotechnology company that developed a drug for hemophilia A. Prior to that, and from 2003 to 2007, Ms. Gelbaum was an associate at Johnson & Johnson Development Corporation, Johnson & Johnson's investment arm, focusing on investments in biopharmaceutical companies in Europe and medical device companies in Israel. Prior to that, and from 2001 to 2003 Ms. Gelbaum was a Manager at Ernst & Young Life Science Corporate Finance Department. Ms. Gelbaum received her M.Sc. and M.B.A. from Tel Aviv University.

Prof. Avizohar Argov has been our Special Medical Advisor to the Chief Executive Officer since November 2015. Prior to that and since June 2014 Prof. Argov was our Chief Medical Officer. Since 1991, Prof. Argov has been a Professor of Neurology & Josephine Frank Kanrich Chair of Neuromuscular Diseases, Hadassah-Hebrew University Medical Center in Jerusalem, Israel, and since 1996, has been an adjunct professor in the Department of Neurology/Neurosurgery at the Neurological Institute at McGill University in Montreal, Canada. Since 2010, Prof. Argov has been a member of the executive committee of the World Muscle Society. From 2010 until 2011 he served as the President of the European Neurological Society and the Chairman of its subcommittee of Muscle & Neuromuscular Disorders. In addition, he has served as the Chairman of the Israeli Society of Neuromuscular Diseases. Prof. Argov's primary research fields include hereditary inclusion body myopathies, hereditary neuromuscular disorders, particularly in Jewish ethnic clusters, and latrogenic neuromuscular disorders, particularly drug-induced myasthenia. He received his M.D. from the Hebrew University-Hadassah Medical School in Jerusalem, Israel and was a Resident in Neurology at the Hadassah University Hospital in Jerusalem, Israel. He received training in neuromuscular diseases from the Muscular Dystrophy Association in Newcastle Upon Tyne, England and further training in biochemistry and biophysics from the University of Pennsylvania in the United States.

Michael Burshtine has been a director since October 30, 2014. Mr. Burshtine is currently serving as co-Chief Executive Officer at Adhestick Innovations Ltd., a chemical company specializing in the development, manufacturing and marketing of adhesion polymers formulations. Mr. Burshtine served as the president and Chief Executive Officer of Flight Medical Innovations Ltd., a med-tech company specializing in the development, manufacturing and marketing of portable ventilators, between 2009 and May 2014. Prior to that, between 2007 and 2009, he served as President and Chief Executive Officer of Recoly N.V., a bio-med company engaged in the research, development and commercialization of drug enhancement technologies. From 2004 to 2007, he served as the Chief Financial Officer of Omrix Biopharmaceuticals Inc., a public biotechnology company that develops, manufactures and commercializes plasma derivative products. Mr. Burshtine has been a certified CPA since 1994 and was a senior partner at Kesselman & Kesselman PricewaterhouseCoopers (PwC) auditing firm, until 2004. He holds an M.B.A. and a B.A. in economics and accounting, both from Tel Aviv University. Mr. Burshtine serves on our Audit Committee and our Compensation Committee.

Thomas I.H. Dubin has been a director since September 2015. Mr. Dubin is an attorney and has over twenty years of senior leadership experience in the pharmaceutical and biotechnology industries. From January 2014 through November 2014, Mr. Dubin served as an advisor to the Chief Executive Officer of Infinity Pharmaceuticals Inc. (NASDAQ: INFI). From 2008 through 2013, he was Senior Vice President and Chief Legal Officer, and from 2001 through 2008 he was Vice President and General Counsel, of Alexion Pharmaceuticals, Inc. (NASDAQ:ALXN). Prior to Alexion, from 1992 to 2000, Mr. Dubin served in senior positions at ChiRex, Inc. (NASDAQ:CHRX) and at Warner-Lambert Company (NYSE:WLA) prior to its sale to Pfizer, Inc. Mr. Dubin began his career as an attorney with Cravath, Swaine & Moore LLP in New York City. He is a Trustee of the American Jewish World Service, and a Member of Launchpad Venture Group. Mr. Dubin received his J.D. from New York University School of Law, and his B.A. from Amherst College, cum laude.

Colin Foster has been a director since January 2015, having served as our President and Chief Executive Officer from January 2015 until July 2016. Mr. Foster has extensive experience in leading therapeutic, diagnostic, and medical device companies in the United States and internationally, working across the R&D-to-commercial continuum. He was a founder of iSci Management LLC, a life sciences advisory firm, and served as its Managing Director from 2011 until 2015. In 2005, Mr. Foster co-founded Optherion, Inc., a venture backed biologics and diagnostics company targeting ultra-orphan diseases of the immune system and age-related macular degeneration, and served as its Chief Executive Officer from 2006 until 2012. Prior to that, and from 1994 until 2004, he held various senior executive positions at Bayer AG, including President and Chief Executive Officer of Bayer Pharmaceuticals Corporation USA and Region Head of the North American Pharmaceuticals business of Bayer AG. In 1988, Mr. Foster began his post-graduate career with Sandoz Canada Inc. before embarking on an international career with Bayer in Canada, the USA, and Europe. From January 2014 through August 2015, Mr. Foster served as Executive Chairman of Ivenix, Inc. Mr. Foster has a B.Sc. in Zoology and Microbiology from the University of Toronto, and an M.B.A. from Western University in Canada.

*Robert Friedman* has been a director since October 2016. Mr. Friedman has had a long career in life sciences management consulting that began with The Wilkerson Group in 1987 and has included IBM Corporation, Easton Associates, LLC, where he was a co-founder, and Navigant Consulting, Inc. He has advised companies both large and

small in biotechnology, pharmaceuticals, medical devices and diagnostics. Mr. Friedman's areas of expertise include corporate and product strategy development and execution, pre-commercial planning, and due diligence. In addition to his experience as a consultant, Mr. Friedman spent five years as an equity analyst for several investment banks including Lehman Brothers, Paine Webber and Hanover Securities, where he covered universes of both large- and small-cap biotech companies. Mr. Friedman began his career as an Associate at Steinberg & Lyman, a venture capital fund dedicated to creating new biopharmaceutical firms. There, he was instrumental in founding Genetic Therapy, Inc., the first gene therapy company, which was sold to Novartis. Mr. Friedman holds an MBA in Marketing and Finance from the Johnson Graduate School of Management, Cornell University, and a BA in Biology from Yeshiva University.

*Dr. Marlene Haffner* has been a director since July 1, 2013. From 1986 until 2007, Dr. Haffner served as the Director of the Office of Orphan Products Development (OOPD) of the FDA. As OOPD Director she was responsible for the leadership and management of the FDA orphan products development program, the first Orphan Products program in the world. After leaving the FDA, and from 2007 until 2009, she served as Executive Director, Global Regulatory Policy and Intelligence at Amgen, Inc., and since 2009 has held the position of Chief Executive Officer at Orphan Solutions and Haffner Associates, LLC, services companies for the orphan drug industry. In addition to her consulting activities, Dr. Haffner is Adjunct Professor, Department of Preventive Medicine and Biometrics and Clinical Professor at the Department of Medicine of the F. Edward Hébert School of Medicine, Uniformed Services University of the Health Sciences in Bethesda, Maryland. For 36 years she served in the United States Public Health Service beginning her career with the Indian Health Service in Gallup, New Mexico prior to moving to the FDA. Dr. Haffner received her M.D. from the George Washington University School of Medicine where she then interned in Internal Medicine. She received further training in internal medicine, dermatology and hematology at the Presbyterian Hospital, New York and at the Albert Einstein College of Medicine, New York. She received an M.P.H. from the Johns Hopkins University Bloomberg School of Public Health. During her public health career, she rose to the rank of Rear Admiral in the United States Public Health Service.

*Dr. Dalia Megiddo* has been a director since our inception. From our inception until February 2015, Dr. Megiddo was our Chief Executive Officer, from January 2015 to November 2015, she was our Chief Development Officer and from November 2015 to December 2016, she was a special advisor to our Chief Executive Officer. Dr. Megiddo co-founded Alcobra Ltd. (NASDAQ: ADHD), a company primarily focused on the development and commercialization of a drug to treat Attention Deficit Hyperactivity Disorder in February 2008, and became a Director at that time. She is an entrepreneur and a medical doctor in family medicine. Since 2000, she has been a manager of InnoMed Ventures LP, an Israeli venture capital fund focused on life sciences. From 2006 to 2010, she was also a manager of 7 Health Ventures Ltd., an Israeli venture capital fund. She is also the founder of a number of life science companies. Dr. Megiddo received her M.D. degree from Hebrew University Hadassah Medical School and holds a specialist degree in Family Medicine, and also holds an M.B.A. from the Kellogg-Recanati School of Business.

Ran Nussbaum has been a director since July 1, 2013. Mr. Nussbaum is a co-founder, and since 2004, has served as a managing partner of the Pontifax Group Ltd., a venture capital firm. Mr. Nussbaum currently serves as a director of several companies, including, Kite Pharma Inc. (NASDAQ: KITE) (since July 2013), Eloxx Pharmaceuticals, Ltd. (since September 2013), UroGen Pharma Ltd. (since April 2013), Quiet Therapeutics Ltd. (since September 2010), Ocon Medical Ltd. (since May 2013), Nutrina Ltd. (since December 2014), N.T.B Pharma Ltd. (since November 2015) and NovellusDx Ltd. (since December 2015). In addition, Mr. Nussbaum previously served as a director of CollPlant Holdings Ltd. (TASE: CLPT) (from May 2010 until August 2014.), Protab Ltd. (from December 2010 until August 2014), Fusimab Ltd. (from July 2010 until December 2014), c-Cam Biotherapeutics Ltd. (from April 2012 until July 2015) and Insuline Medical Ltd. (TASE: INSL) (from December 2013 until January 2015).

*Dr. Ralf Rosskamp* has been a director since August 2016. Dr. Rosskamp has served as Chief Medical Officer of Summit PLC since September 2015. From 2013 to 2015, Dr. Rosskamp served as VP Global Clinical Development of NPS Pharmaceuticals, Inc. (NASDAQ: NPSP). Dr. Rosskamp received his MD and PhD from the University of Bonn in Germany.

## **Arrangements Concerning Election of Directors; Family Relationships**

There are no arrangements or understandings with major shareholders, customers, suppliers or others pursuant to which any of our directors or members of senior management were selected as such. In addition, there are no family relationships among our executive officers and directors.

#### Compensation

In accordance with the Companies Law, the table below reflects the compensation granted to our five most highly compensated officers during or with respect to the year ended December 31, 2016. All amounts reported reflect the cost to the Company for the year ended December 31, 2016. Amounts paid in NIS are translated into U.S. dollars at the rate of NIS 3.845 = U.S.\$1.00, based on the average representative rate of exchange between the NIS and the U.S. dollar as reported by the Bank of Israel in the year ended December 31, 2016.

Name and Position	Salary/Fees	Share-Based Compensation	Bonus/Severanc	<b>e</b> Total
Fredric Price, Chairman of the Board of Directors, Chief Executive Officer (4)	\$ 250,000	\$ 825,025	\$ 125,000	\$1,200,025

Colin Foster, Director and former President and Chief	\$ 254,200	\$ -	\$ 912,000	\$1,166,200
Executive Officer (5)				
Dr. Warren Wasiewski, Chief Medical Officer, Vice	\$ 432,749	\$ 333,304	\$ 128,000	\$894,053
President of Research and Development (6)	Ψ 132,7 12	φ 232,201	Ψ 120,000	φον 1,000
Robert Cook, former Chief Financial Officer (7)	\$ 243,759	\$ -	\$ 393,750	\$637,509
Theresa Stevens, former Chief Corporate Development	\$ 192 864	\$ -	\$ 393,750	\$586,614
Officer (8)	Ψ 172,004	Ψ -	Ψ 3/3,730	Ψ300,014

<sup>(1)</sup> Represents salaries, related compensation expenses, employer's costs and fees

- Amounts reflect the grant date fair value of option awards granted or modified during the year ended December 31, 2016, in accordance with ASC 718. Such grant date fair value does not take into account any estimated forfeitures related to service-vesting conditions. For information regarding assumptions underlying the valuation
- (2) of equity awards, see Note 10 to our financial statements and the discussion under "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Use of Estimates—Share-based Compensation" included elsewhere in this prospectus. These amounts do not correspond to the actual value that may be recognized by the respective executive officers upon vesting of applicable awards.
- Represents discretionary bonuses and separation related payments for departing executive officers with respect to the year ended December 31, 2016 (excluding employer's costs).
- Mr. Price has been the Chief Executive Officer since May 2016, and Executive Chairman of the Board of Directors, since April 2012.
- (5)Mr. Foster's employment as President and Chief Executive Officer of the Company terminated in June 2016.
- Dr. Wasiewski has been the Chief Medical Officer, Vice President of Research and Development since November 2015.
- (7) Mr. Cook's employment with the Company terminated in June 2016.
- (8) Ms. Stevens' employment with the Company terminated in May 2016.

The aggregate amount of compensation paid or accrued to all of our directors and executive officers as a group with respect to the year ended December 31, 2016 was approximately \$6.5 million. Such amount is inclusive of the grant date fair value of option awards granted or modified during the year ended December 31, 2016 in the amount of \$1.8 million. The amount does not include business travel, relocation, professional and business association due and expenses.

#### **Employment and Service Agreements with Executive Officers**

We have entered into written employment agreements with all of our executive officers. Each of these agreements contains provisions regarding non-competition, confidentiality of information and ownership of inventions. The non-competition provision applies for a period that is generally 12 months following termination of employment. The enforceability of covenants not to compete in Israel and the United States is subject to limitations. In addition, we are required to provide notice prior to terminating the employment of our executive officers, other than in the case of a termination for cause. For further information, see "Risk Factors – Risks Related to Israeli Law and Our Operations in Israel."

#### **Corporate Governance Practices**

As an Israeli company issuing shares to the public, we are subject to various corporate governance requirements under Israeli law relating to such matters as the appointment of the Audit Committee, the Compensation Committee and an internal auditor. These requirements are in addition to the corporate governance requirements imposed by the

NASDAQ Stock Market rules and other applicable provisions of U.S. securities laws as applicable to foreign private issuers. Under the NASDAQ Stock Market rules, a foreign private issuer may generally follow its home country rules of corporate governance in lieu of the comparable requirements of the NASDAQ Stock Market rules, except for certain matters, including (among others) the composition and responsibilities of the Audit Committee and the independence of its members within the meaning of the rules and regulations of the SEC. For further information, see "Risk Factors—Risks Related to Israeli Law and Our Operations in Israel" and "Management—NASDAQ Listing Rules and Home Country Practices."

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## **Board of Directors**

Under the Companies Law, our Board of Directors is vested with the power to set corporate policy and oversee our business. Our Board of Directors may exercise all powers and may take all actions that are not specifically granted to our shareholders or to management. Our executive officers are responsible for our day-to-day management and have individual responsibilities established by our Board of Directors. Our Chief Executive Officer is appointed by, and serves at the discretion of, our Board of Directors, subject to the employment agreement that we have entered into with him. All other executive officers are appointed by our Chief Executive Officer, and are subject to the terms of any applicable employment agreements that we may enter into with them.

Under our amended and restated articles of association, our Board of Directors must consist of at least five and not more than eleven directors. Following the resignations of Messrs. Udi Gilboa and Gili Cohen, our Board of Directors currently consists of nine directors. We have only one class of directors.

Our directors are each elected at the annual general meeting of our shareholders and serve until the next annual general meeting. Such election is subject to the selection, or recommendation for the Board of director's selection, by a majority of independent directors. Directors may nevertheless be removed prior to the end of their term by the majority of our shareholders at a general meeting of our shareholders or upon the occurrence of certain events, all in accordance with the Companies Law and our amended and restated articles of association.

In addition, our amended and restated articles of association allow our Board of Directors to appoint directors, to fill vacancies on our Board of Directors, for a term of office equal to the remaining period of the term of office of the directors whose offices have been vacated, or appoint new additions to the Board of Directors up to the maximum number of directors.

Under the Companies Law, nominations for directors may be made by any shareholder holding at least one percent of our outstanding voting power. However, any such shareholder may make such a nomination only if a written notice of such shareholder's intent to make such nomination has been given to our Board of Directors. Any such notice must include certain information which is required under the Companies Law to provide to our shareholders, the consent of the proposed director nominee(s) to serve as our director(s) if elected and a declaration signed by the nominee(s) declaring that there is no limitation under the Companies Law preventing their election and that all of the information that is required under the Companies Law to be provided to us in connection with such election has been provided.

#### **External Directors**

Under the Companies Law, except as provided below, companies incorporated under the laws of the State of Israel that are publicly traded, including Israeli companies with shares listed on the NASDAQ, are required to appoint at least two external directors who meet the qualification requirements set forth in the Companies Law. The definitions of an external director under the Companies Law and independent director under the Listing Rules of NASDAQ are similar such that it would generally be expected that our two external directors will also comply with the independence requirement under the Listing Rules of NASDAQ.

Pursuant to newly enacted regulations under the Companies Law, the Board of Directors of a company such as the Company is not required to have external directors if: (i) the company does not have a controlling shareholder (as such term is defined in the Companies Law); (ii) a majority of the directors serving on the Board of Directors are

"independent," as defined under NASDAQ Listing Rule 5605(a)(2); and (iii) the company follows NASDAQ Rule 5605(e)(1), which requires that the nomination of directors be made, or recommended to the Board of Directors, by a Nominating Committee of the Board of Directors consisting solely of independent directors, or by a majority of independent directors. The Company meets all these requirements. On June 28, 2016, our Board of Directors resolved to adopt the corporate governance exemption set forth above, and accordingly we no longer have external directors as members of our Board of Directors. Mr. Gili Cohen, a former director, served as our last external director until October 13, 2016. Mr. Cohen subsequently left our Board of Directors on January 15, 2017.

#### Leadership Structure of the Board

In accordance with the Companies Law and our amended and restated articles of association, our Board of Directors is required to appoint one of its members to serve as Chairman of the Board of Directors. Our Board of Directors has appointed Mr. Fredric Price (who is also serving as our Chief Executive Officer) to serve as Executive Chairman of the Board of Directors. Under the Companies Law, the Chief Executive Officer of a public company may not serve as the chairperson of the board of such company unless approved by the Company's shareholders, which approval lapses after three years. On August 9, 2016, our shareholders approved that our Executive Chairperson may also serve as our Chief Executive Officer.

## Role of Board in Risk Oversight Process

Risk assessment and oversight are an integral part of our governance and management processes. Our Board of Directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings, and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with the Board of Directors at regular board meetings as part of management presentations that focus on particular business functions, operations or strategies and presents the steps taken by management to mitigate or eliminate such risks.

#### **Board Committees**

#### Audit Committee

Under the Companies Law, the Board of Directors of a public company must appoint an audit committee.

Our Audit Committee provides assistance to our Board of Directors in fulfilling its legal and fiduciary obligations in matters involving our accounting, auditing, financial reporting, internal control and legal compliance functions by pre-approving the services performed by our independent accountants and reviewing their reports regarding our accounting practices and systems of internal control over financial reporting. Our Audit Committee also oversees the audit efforts of our independent accountants and takes those actions that it deems necessary to satisfy it that the accountants are independent of management.

Under the Companies Law, our Audit Committee is responsible for:

determining whether there are deficiencies in the business management practices of our Company, and making recommendations to the Board of Directors to improve such practices;

determining whether to approve certain related party transactions (including transactions in which an office holder has a personal interest and whether such transaction is extraordinary or material under the Companies Law) (see "Management—Approval of Related Party Transactions under Israeli law");

examining our internal controls and internal auditor's performance, including whether the internal auditor has sufficient resources and tools to dispose of its responsibilities;

examining the scope of our auditor's work and compensation and submitting a recommendation with respect thereto to our Board of Directors or shareholders, depending on which of them is considering the appointment of our auditor;

establishing procedures for the handling of employees' complaints as to the management of our business and the protection to be provided to such employees;

determining whether certain acts of an office holder not in accordance with his or her fiduciary duty owed to the Company are extraordinary or material and to approve such acts and certain related party transactions (including transactions in which an office holder has a personal interest) and whether such transaction is extraordinary or material under the Companies Law (see "Management —Approval of Related Party Transactions under Israeli Law");

deciding whether to approve and to establish the approval process (including by tender or other competitive proceedings) for certain transactions with a controlling shareholder or in which a controlling shareholder has a personal interest; and

determining the process of approving of transactions that are not negligible, including determining the types of transactions that will be subject to the approval of the Audit Committee.

Audit Committee - Charter

Our Board of Directors has adopted an Audit Committee charter setting forth the responsibilities of the Audit Committee consistent with the rules of the SEC and the Listing Rules of NASDAQ and the requirements under the Companies Law, as described below. The Audit Committee Charter is posted on our website.

#### NASDAQ requirements

Under the Listing Rules of NASDAQ, we are required to maintain an Audit Committee consisting of at least three independent directors, all of whom are financially literate and one of whom has accounting or related financial management expertise.

Our Audit Committee consists of Mr. Michael Burshtine, who serves as the chairperson, Mr. Thomas Dubin and Mr. Robert Friedman. Our Board of Directors has determined that Mr. Burshtine is an audit committee financial expert as defined by the SEC rules and has the requisite financial experience as defined by the Listing Rules of NASDAQ. All of the members of our Audit Committee meet the requirements for financial literacy under the applicable Listing Rules of NASDAQ.

Each member of the Audit Committee is required to be "independent" as such term is defined in Rule 10A-3(b)(1) under the Exchange Act.

#### **Compensation Committee**

Under the Companies Law, the Board of Directors of a public company must appoint a Compensation Committee.

Under the Listing Rules of NASDAQ, we are required to maintain a Compensation Committee consisting entirely of independent directors (or the determination of such compensation solely by the independent members of our Board of Directors).

Our Compensation Committee consists of Mr. Michael Burshtine, Dr. Marlene Haffner and Dr. Ralf Rosskamp.

Under the Companies Law, our Compensation Committee is responsible for (i) proposing an office holder compensation policy to the Board of Directors, (ii) proposing necessary revisions to the compensation policy and examining its implementation, (iii) determining whether to approve transactions with respect to the terms of office and employment of office holders and (iv) determining, in accordance with our office holder compensation policy, whether to exempt an engagement with an unaffiliated nominee for the position of Chief Executive Officer from requiring shareholders' approval. Under the regulations promulgated under the Companies Law, certain exemptions

and reliefs with respect to the Compensation Committee are granted to companies whose securities are traded outside of Israel. We may use these exemptions and reliefs after the listing of our Ordinary Shares on the NASDAQ.

The Companies Law provides that our compensation policy must serve as the basis for the decisions concerning the financial terms of employment or engagement of executives and directors, including exculpation, insurance, indemnification or any monetary payment or obligation of payment in respect of employment or engagement. The compensation policy must be approved (or reapproved) not longer than every three years, and relate to certain factors, including advancement of the company's objective, business plan and its long term strategy and creation of appropriate incentives for office holders. It must also consider, among other things, the company's risk management, size and nature of its operations. The compensation policy must furthermore consider the following additional factors:

the knowledge, skills, expertise and accomplishments of the relevant office holder;

the office holder's roles and responsibilities and prior compensation agreements with him or her;

the relationship between the terms offered and the average compensation of the other employees of the company, including those employed through manpower companies;

the impact of disparities in salary upon work relationships in the company;

the possibility of reducing variable compensation at the discretion of the Board of Directors or the possibility of setting a limit on the exercise value of non-cash variable equity-based compensation; and

as to severance compensation, the period of service of the office holder, the terms of his or her compensation during such service period, the company's performance during that period of service, the person's contributions towards the company's achievement of its goals and the maximization of its profits and the circumstances under which the person is leaving the company.

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- the link between variable compensation and long-term performance and measurable criteria;
- · the relationship between variable and fixed compensation, and the ceiling for the value of variable compensation;

the conditions under which a director or executive would be required to repay compensation paid to him or her if it was later shown that the data upon which such compensation was based was inaccurate and was required to be restated in the company's financial statements;

- the minimum holding or vesting period for variable, equity-based compensation; and
- ·maximum limits for severance compensation.

Our compensation policy, consistent with the foregoing Companies Law requirements, was adopted by our shareholders on May 5, 2015.

Compensation Committee - Charter

Our Board of Directors has adopted a Compensation Committee Charter setting forth the responsibilities of the Compensation Committee consistent with the Listing Rules of NASDAQ and the requirements under the Companies Law, as described above. The Compensation Committee Charter requires that our Compensation Committee be comprised of at least three members. The Compensation Committee Charter, which was amended and restated on October 13, 2016, is posted on our website.

#### Nominating Committee

Our Board of Directors does not have an independent Nominating Committee. As indicated above, the election of members of our Board of Directors is subject to the selection, or recommendation for the Board of director's selection, by a majority of our independent directors.

#### Internal auditor

Under the Companies Law, the Board of Directors of an Israeli public company must appoint an internal auditor recommended by the Audit Committee and nominated by the Board of Directors. An internal auditor may not be:

- ·a person (or a relative of a person) who holds more than 5% of the Company's outstanding shares or voting rights;
- ·a person (or a relative of a person) who has the power to appoint a director or the general manager of the company;
  - an office holder (including a director) of the company (or a relative thereof); or
  - a member of the company's independent accounting firm, or anyone on his or her behalf.

The role of the internal auditor is to examine, among other things, our compliance with applicable law and orderly business procedures.

#### **NASDAQ Listing Rules and Home Country Practices**

The Sarbanes-Oxley Act, as well as related rules subsequently implemented by the SEC, requires foreign private issuers, such as us, to comply with various corporate governance practices. In addition, we are required to comply with NASDAQ Stock Market rules. Under those rules, we may elect to follow certain corporate governance practices permitted under the Companies Law in lieu of compliance with corresponding corporate governance requirements otherwise imposed by the NASDAQ Stock Market rules for U.S. domestic issuers.

In accordance with Israeli law and practice and subject to the exemption set forth in Rule 5615 of the Listing Rules of NASDAQ, we have elected to follow the provisions of the Companies Law, rather than the Listing Rules of NASDAQ, with respect to the following requirements:

Distribution of periodic reports to shareholders; proxy solicitation. As opposed to the Listing Rules of NASDAQ, which require listed issuers to make such reports available to shareholders in one of a number of specific manners, Israeli law does not require us to distribute periodic reports directly to shareholders, and the generally accepted business practice in Israel is not to distribute such reports to shareholders but to make such reports available through a public website. In addition to making such reports available on a public website, we currently make our audited financial statements available to our shareholders at our offices and will only mail such reports to shareholders upon request. As a foreign private issuer, we are generally exempt from the SEC's proxy solicitation rules.

Quorum. While the Listing Rules of NASDAQ require that the quorum for purposes of any meeting of the holders of a listed company's common voting stock, as specified in the company's bylaws, be no less than one third of the company's outstanding common voting stock, under Israeli law, a company is entitled to determine in its articles of association the number of shareholders and percentage of holdings required for a quorum at a shareholders meeting. In line with the Listing Rules of NASDAQ, our amended and restated articles of association provide that the quorum required for our general meetings of shareholders consists of at least two shareholders present in person, by proxy or written ballot who holds or represent between them at least one-third of the total outstanding voting rights. A meeting adjourned for lack of a quorum is generally adjourned to the same day in the following week at the same time and place or to a later time/date if so specified in the summons or notice of the meeting. However, unlike the Listing Rules of NASDAQ, at the reconvened meeting, any two or more shareholders present in person or by proxy shall constitute a lawful quorum.

Compensation of officers. Israeli law and our amended and restated articles of association do not require that the independent members of our Board of Directors (or a Compensation Committee composed solely of independent members of our Board of Directors) determine an executive officer's compensation, as is generally required under the NASDAQ Stock Market rules with respect to the Chief Executive Officer and all other executive officers.

Shareholder approval is generally required in the event (i) approval by our Board of Directors and our Compensation Committee is not consistent with our office holders' compensation policy, or (ii) compensation required to be approved is that of our Chief Executive Officer or an executive officer who is also the controlling shareholder of us (including an affiliate thereof). Such shareholder approval shall require a majority vote of the shares present and voting at a shareholders meeting, provided either (i) such majority includes a majority of the shares held by non-controlling shareholders who do not have a personal interest in the compensation arrangement that are voted at the meeting, excluding for such purpose any abstentions disinterested majority, or (ii) the total shares held by non-controlling disinterested shareholders voted against the arrangement does not exceed 2% of the voting rights in us.

Additionally, approval of the compensation of a director, including a director who is also an executive officer, shall require a simple majority vote of the shares present and voting at a shareholders meeting, if consistent with our office

holders compensation policy or a special majority as set forth above if the proposed compensation for the director is not consistent with our compensation policy. Our Compensation Committee and Board of Directors may, in special circumstances, approve the compensation of an executive officer (other than a director or a controlling shareholder) despite shareholders' objection, based on specified arguments and taking shareholders' objection into account. Our Compensation Committee may exempt an engagement with a nominee for the position of Chief Executive Officer, who meets the non-affiliation requirements for an external director, as set forth in the Companies Law, from requiring shareholders' approval, if such engagement is consistent with our office holders compensation policy and our Compensation Committee determines based on specified arguments that presentation of such engagement to shareholders' approval is likely to prevent such engagement.

A director or executive officer may not be present when the Compensation Committee or Board of Directors of a company discusses or votes upon the terms of his or her compensation, unless the Chairman of the Compensation Committee or Board of Directors (as applicable) determines that he or she should be present to present the transaction that is subject to approval.

Shareholder approval. We will seek shareholder approval for all corporate actions requiring such approval under the requirements of the Companies Law, rather than seeking approval for corporation actions in accordance with NASDAQ Listing Rule 5635. In particular, under this NASDAQ rule, shareholder approval is generally required for: (i) an acquisition of shares/assets of another company that involves the issuance of 20% or more of the acquirer's shares or voting rights or if a director, officer or 5% shareholder has greater than a 5% interest in the target company or the consideration to be received; (ii) the issuance of shares leading to a change of control; (iii) adoption/amendment of equity compensation arrangements; and (iv) issuances of 20% or more of the shares or voting rights (including securities convertible into, or exercisable for, equity) of a listed company via a private placement (and/or via sales by directors/officers/5% shareholders) if such equity is issued (or sold) at below the greater of the book or market value of shares. By contrast, under the Companies Law, shareholder approval is required for, among other things: (i) transactions with directors concerning the terms of their service or indemnification, exemption and insurance for their service (or for any other position that they may hold at a company), for which approvals of the Compensation Committee, Board of Directors and shareholders are all required, (ii) extraordinary transactions with controlling shareholders of publicly held companies, which require the special approval described below under "Approval of Related Party Transactions under Israeli Law - Disclosure of personal interests of controlling shareholders", and (iii) terms of employment or other engagement of the controlling shareholder of the company or such controlling shareholder's relative, which require the special approval described below under "Approval of Related Party Transactions under Israeli Law-Disclosure of personal interests of controlling shareholders". In addition, under the Companies Law, a merger requires approval of the shareholders of each of the merging companies.

#### Approval of Related Party Transactions under Israeli Law

Fiduciary Duties of Directors and Executive Officers

The Companies Law codifies the fiduciary duties that office holders owe to a company. Each person listed in the table under "Management—Executive Officers and Directors" is an office holder under the Companies Law.

An office holder's fiduciary duties consist of a duty of care and a duty of loyalty. The duty of care requires an office holder to act with the level of care with which a reasonable office holder in the same position would have acted under the same circumstances. The duty of loyalty requires that an office holder act in good faith and in the best interests of the company. The duty of care includes a duty to use reasonable means to obtain:

information on the advisability of a given action brought for his or her approval or performed by virtue of his or he	er
position; and	

all other important information pertaining to these actions.

The duty of loyalty requires an office holder to act in good faith and for the benefit of the company, and includes a duty to:

refrain from any conflict of interest between the performance of his or her duties to the company and his or her other duties or personal affairs;

refrain from any activity that is competitive with the company;

refrain from exploiting any business opportunity of the company to receive a personal gain for himself or herself or others; and

disclose to the company any information or documents relating to the company's affairs which the office holder received as a result of his or her position as an office holder.

Disclosure of Personal Interests of an Office Holder

The Companies Law requires that an office holder promptly disclose to the Board of Directors any personal interest that he or she may have concerning any existing or proposed transaction with the company, as well as any substantial information or document with respect thereof. An interested office holder's disclosure must be made promptly and in any event no later than the first meeting of the Board of Directors at which the transaction is considered. A personal interest includes an interest of any person in an act or transaction of a company, including a personal interest of one's relative or of a corporate body in which such person or a relative of such person is a 5% or greater shareholder, director or general manager or in which he or she has the right to appoint at least one director or the general manager, but excluding a personal interest stemming from one's ownership of shares in the company. Furthermore, a personal interest includes the personal interest of a person for whom the office holder holds a voting proxy, or the interest of the office holder with respect to his or her vote on behalf of the shareholder for whom he or she holds a proxy even if such shareholder itself has no personal interest in the approval of the matter. An office holder is not, however, obliged to disclose a personal interest if it derives solely from the personal interest of a relative of such office holder in a transaction that is not considered an extraordinary transaction. Under the Companies Law, an extraordinary transaction is defined as any of the following:

a transaction other than in the ordinary course of business;

a transaction that is not on market terms; or

a transaction that may have a material impact on a company's profitability, assets or liabilities.

If it is determined that an office holder has a personal interest in a transaction which is not an extraordinary transaction, approval by the Board of Directors is required for the transaction, unless the company's articles of association provide for a different method of approval. Our amended and restated articles of association do not state otherwise. Further, so long as an office holder has disclosed his or her personal interest in a transaction, the Board of Directors may approve an action by the office holder that would otherwise be deemed a breach of duty of loyalty. However, a company may not approve a transaction or action that is adverse to the company's interest or that is not performed by the office holder in good faith. Approval first by the company's Audit Committee and subsequently by the Board of Directors is required for an extraordinary transaction in which an office holder has a personal interest. Arrangements regarding the compensation, indemnification or insurance of an office holder require the approval of the Compensation Committee, Board of Directors and, in certain circumstances, the shareholders, in that order, as described above under "Management—NASDAQ Listing Rules and Home Country Practices—Compensation of officers" and "Management—NASDAQ Listing Rules and Home Country Practices—Shareholder approval."

Generally, except with respect to non-extraordinary transactions, a person who has a personal interest in a matter which is considered at a meeting of the Board of Directors or the Audit Committee may not be present at such a

meeting or vote on that matter unless a majority of the directors or members of the Audit Committee have a personal interest in the matter, or unless the Chairman of the Audit Committee or Board of Directors (as applicable) determines that he or she should be present in order to present the transaction that is subject to approval. Generally, if a majority of the members of the Audit Committee and/or the Board of Directors has a personal interest in the approval of a transaction, then all directors may participate in discussions of the Audit Committee and/or the Board of Directors on such transaction and the voting on approval thereof, but shareholder approval is also required for such transaction.

Disclosure of a personal interest is also required of a person who is an interested party with respect to (i) a private placement submitted for approval whereby 20% or more of the company's outstanding share capital prior to the placement is offered, and the payment for which is not only in cash or in tradable securities registered in a stock exchange, or that is not at market terms, and which will result in an increase of the holdings of a shareholder that already holds 5% or more of the company's outstanding share capital or voting rights or will cause any person to become, as a result of the issuance, a holder of more than 5% of the company's outstanding share capital or voting rights or (ii) a private placement submitted for approval that as a result of which will become a controlling shareholder. Such personal interest disclosure requirements also apply to certain shareholders of a public company who have a personal interest in the adoption by the shareholders of certain proposals with respect to (i) certain special tender offers or forced bring along share purchase transactions, (ii) approval of a compensation policy governing the terms of employment and compensation of office holders, (iii) approval of the terms of employment and compensation of the Chief Executive Officer, (iv) approval of the terms of employment and compensation of office holders of the company when such terms deviate from the compensation policy previously approved by the company's shareholders and (v) approving the appointment of either (1) the Chairman of the Board or his/her relative as the Chief Executive Officer of the company or (2) the Chief Executive Officer or his/her relative as the Chairman of the Board of Directors of the company. If any shareholder casting a vote at a shareholders meeting in connection with such proposals as aforesaid does not notify the company if he, she or it has a personal interest with respect to such proposal, his, her or its vote with respect to the proposal will be disqualified.

# Disclosure of Personal Interests of Controlling Shareholders

The disclosure requirements regarding personal interests that apply to directors and executive officers also apply to controlling shareholders, as defined below. The Companies Law requires a special approval procedure for (1) extraordinary transactions with controlling shareholders, (2) extraordinary transactions with a third party where a controlling shareholder has a personal interest in the transaction and (3) any transaction with the controlling shareholder or the controlling shareholder's relative regarding terms of service provided directly or indirectly (including through a company controlled by the controlling shareholder) and terms of employment (for a controlling shareholder who is not an office holder).

Such extraordinary transactions with controlling shareholders require the approval of the Audit Committee or the Compensation Committee, as applicable, the Board of Directors and the majority of the voting power of the shareholders present and voting at the general meeting of the company (not including abstentions), provided that either:

the majority of the shares of shareholders who have no personal interest in the transaction and who are present and voting, vote in favor; or

shareholders who have no personal interest in the transaction who vote against the transaction do not represent more than 2% of the aggregate voting rights in the company.

Any shareholder participating in the vote on approval of an extraordinary transaction with a controlling shareholder must inform the company prior to the voting whether or not he or she has a personal interest in the approval of the transaction and if he or she fails to do so, his or her vote will be disregarded.

Further, extraordinary transactions with controlling shareholders, extraordinary transactions with a third party where a controlling shareholder has a personal interest in the transaction or transactions with a controlling shareholder or his or her relative concerning terms of service or employment need to be re-approved once every three years; provided, however, that with respect to extraordinary transactions with controlling shareholders or extraordinary transaction with a third party where a controlling shareholder has a personal interest in the transaction, the Audit Committee may determine that the duration of the transaction in excess of three years is reasonable given the circumstances related thereto.

In accordance with regulations promulgated under the Companies Law, certain defined types of extraordinary transactions between a public company and its controlling shareholder or controlling shareholders are exempt from the

shareholder approval requirements. Furthermore, a transaction with a controlling shareholder that would otherwise require approval of the shareholders is generally exempt from shareholders' approval if the Audit Committee and the Board of Directors determine that the transaction is on market terms and in the ordinary course of business and does not otherwise harm the company. Examples to such transactions are stipulated in the regulations and include transactions, the terms of which were concluded as a framework transaction and approved as such; transactions which are solely extensions to ongoing transactions and are made on substantially similar terms; transactions that can only benefit the company, without imposing any liabilities. However, such exemptions will not apply if one or more shareholders holding at least 1% of the issued and outstanding shares or voting rights, objects to the use of these exemptions in writing not later than 14 days from the date the company notifies its shareholders of the adoption by the relevant corporate bodies of the resolution regarding the transaction without shareholder approval in reliance upon such exemption.

A "controlling shareholder" is defined in the Companies Law for purposes of the provisions governing related party transactions and office holder compensation as a person with the ability to direct the actions of a company, or a person who holds 25% or more of the voting power in a public company if no other shareholder owns more than 50% of the voting power in the company, but excluding a person whose power derives solely from his or her position as a director of the company or any other position with the company. Any two or more persons holding voting rights in the company, who each have a personal interest in the approval of the same such transaction, shall be deemed to be one holder with respect thereto.

Arrangements regarding the terms of engagement and compensation of a controlling shareholder who is an office holder, and the terms of employment of a controlling shareholder who is an employee of the company, require the approval of the Compensation Committee, Board of Directors and, generally, the shareholders, in that order, as described above under "Management—NASDAQ Listing Rules and Home Country Practices - Compensation of officers."

Shareholder Duties

Pursuant to the Companies Law, a shareholder has a duty to act in good faith and in a customary manner toward the company and other shareholders and to refrain from abusing his or her power in the company, including, among other things, in voting at the general meeting of shareholders and at class shareholder meetings with respect to the following matters:

- an amendment to the company's articles of association;
- an increase of the company's authorized share capital;
  - · a merger; or
- approval of interested party transactions and acts of office holders that require shareholder approval.

In addition, a shareholder also has a general duty to refrain from discriminating against other shareholders.

Certain shareholders have a further duty of fairness toward the company. These shareholders include any controlling shareholder, any shareholder who knows that it has the power to determine the outcome of a shareholder vote or a shareholder class vote and any shareholder who has the power to appoint or to prevent the appointment of an office holder of the company or other power towards the company. The Companies Law does not define the substance of this duty of fairness, except to state that the remedies generally available upon a breach of contract will also apply in the event of a breach of the duty to act with fairness.

**Exculpation, Insurance and Indemnification of Directors and Officers** 

Under the Companies Law, a company may not exculpate an office holder from liability for a breach of a fiduciary duty. An Israeli company may exculpate an office holder in advance from liability to the company, in whole or in part, for damages caused to the company as a result of a breach of duty of care but only if a provision authorizing such exculpation is included in its articles of association. Our amended and restated articles of association include such a provision. The company may not exculpate in advance a director from liability arising out of a prohibited dividend or distribution to shareholders.

Under the Companies Law and the Israeli Securities Law, 5728-1968, or the Israeli Securities Law, a company may indemnify, or undertake in advance to indemnify, an office holder for the following liabilities and expenses, imposed on office holder or incurred by office holder due to acts performed by him or her as an office holder, provided its articles of association include a provision authorizing such indemnification:

financial liability incurred by or imposed on him or her in favor of another person pursuant to a judgment, including a settlement or arbitrator's award approved by a court. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such an undertaking must be limited to events which, in the opinion of the Board of Directors, can be foreseen based on the company's activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the Board of Directors as reasonable under the circumstances, and such undertaking shall detail the abovementioned foreseen events and amount or criteria;

reasonable litigation expenses, including attorneys' fees, incurred by the office holder as a result of an investigation or proceeding instituted against him or her by an authority authorized to conduct such investigation or proceeding, provided that (1) no indictment was filed against such office holder as a result of such investigation or proceeding and (2) (i) no financial liability, such as criminal penalty, was imposed upon him or her as a substitute for the criminal proceeding as a result of such investigation or proceeding or, (ii) if such financial liability was imposed, it was imposed with respect to an offense that does not require proof of criminal intent or as a monetary sanction;

reasonable litigation expenses, including attorneys' fees, incurred by the office holder or imposed by a court in proceedings instituted against him or her by the company, on its behalf, or by a third party, or in connection with criminal proceedings in which the office holder was acquitted, or as a result of a conviction for a crime that does not require proof of criminal intent; and

expenses, including reasonable litigation expenses and legal fees, incurred by an office holder in relation to an administrative proceeding instituted against such office holder, or certain compensation payments required to be made to an injured party, pursuant to certain provisions of the Israeli Securities Law.

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

a breach of the duty of loyalty to the company, provided that the office holder acted in good faith and had a reasonable basis to believe that the act would not harm the company;

a breach of duty of care to the company or to a third party, including a breach arising out of the negligent conduct of an officer; and

a financial liability imposed on the office holder in favor of a third party.

Without derogating from the aforementioned, subject to the provisions of the Companies Law and the Israeli Securities Law, we may also enter into a contract to insure an office holder, in respect of expenses, including reasonable litigation expenses and legal fees, incurred by an office holder in relation to an administrative proceeding instituted against such office holder or payment required to be made to an injured party, pursuant to certain provisions of the Israeli Securities Law.

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

a breach of fiduciary duty, except for indemnification and insurance for a breach of the duty of loyalty to the company in the event office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;

a breach of duty of care committed intentionally or recklessly, excluding a breach arising out of the negligent conduct of the office holder:

- · an act or omission committed with intent to derive unlawful personal benefit; or
- a fine, monetary sanction, penalty or forfeit levied against the office holder.

The Securities Law provides that a company cannot obtain insurance against or indemnify a third party (including its officers and/or employees) for any administrative procedure conducted by the Israeli Securities Authority and/or monetary fine (other than for certain legal expenses and payments of damages to an injured party). The Israeli Securities Law permits insurance coverage and/or indemnification for certain liabilities incurred in connection with an administrative procedure, such as reasonable legal fees and certain compensation payable to injured parties for damages suffered by them, provided that such insurance and/or indemnification is permitted under the company's articles of association. Our amended and restated articles of association contains such a provision.

Under the Companies Law, exculpation, indemnification and insurance of office holders require the approval of the Compensation Committee, Board of Directors and, in certain circumstances, by our shareholders, as described above under "Management—NASDAQ Listing Rules and Home Country Practices—Compensation of officers"

Our amended and restated articles of association permit us to exculpate, indemnify and insure our office holders to the fullest extent permitted by the Companies Law and Israeli Securities Law.

We have obtained directors' and officers' liability insurance for the benefit of our office holders and intend to continue to maintain such coverage and pay all premiums thereunder to the fullest extent permitted by the Companies Law, the Israeli Securities Law, and our amended and restated articles of association. In addition, we have entered into agreements with each of our office holders undertaking to indemnify them to the fullest extent permitted by Israeli law, including with respect to liabilities resulting from this offering to the extent that these liabilities are not covered by insurance. In the opinion of the SEC, however, indemnification of directors and office holders for liabilities arising under the Securities Act is against public policy and therefore unenforceable. It is our intention to include in our office holders compensation policy to be brought for approval of the shareholders following the issuance of the securities hereunder (and as required under the Companies Law) applicable provisions with respect to directors' and officers' liability insurance for the benefit of our office holders, as well as with respect to indemnification of office holders.

#### **Code of Business Conduct and Ethics**

We have adopted a written code of ethics that applies to our officers and employees, including our principal executive officer, principal financial officer, principal controller and persons performing similar functions as well as our directors. Our Code of Business Conduct and Ethics is posted on our website at <a href="https://bioblastpharma.com/">https://bioblastpharma.com/</a>. Information contained on, or that can be accessed through, our website does not constitute a part of this prospectus and is not incorporated by reference herein. If we make any amendment to the Code of Business Conduct and Ethics or grant any waivers, including any implicit waiver, from a provision of the code, we will disclose the nature of such amendment or waiver on our website to the extent required by the rules and regulations of the SEC including the instructions to Item 16B of Form 20-F. We have not granted any waivers under our Code of Business Conduct and Ethics.

#### **2013 Incentive Option Plan**

We maintain one equity incentive plan - our 2013 Incentive Option Plan, or our 2013 Plan. As of March 15, 2017, there were a total of 3,345,960 options to purchase Ordinary Shares under our 2013 Plan, of which 2,599,281 options to purchase Ordinary Shares were issued and outstanding and 746,679 remained available for future issuance. A total of 1,477,380 options to purchase Ordinary Shares were vested as of that date, with a weighted average exercise price of \$4.22 per share.

Our 2013 Plan, which was adopted by our Board of Directors on November 13, 2013, and amended most recently on March 28, 2016, provides for the grant of options to our and our affiliates' respective directors, employees, office holders, service providers and consultants.

The 2013 Plan is administered by our Board of Directors, which shall determine, subject to Israeli law, the grantees of awards and various terms of the grant. The 2013 Plan provides for granting options in compliance with Section 102 of the Israeli Income Tax Ordinance, 1961, or the Ordinance.

Options granted under the 2013 Plan to Israeli employees have been granted under the capital gains track of Section 102 of the Ordinance. Section 102 of the Ordinance allows employees, directors and officers, who are not controlling shareholders and are considered Israeli residents, to receive favorable tax treatment for compensation in the form of shares or options. Our Israeli non-employee service providers and controlling shareholders may only be granted options under Section 3(i) of the Ordinance, which does not provide for similar tax benefits. Section 102 of the Ordinance includes two alternatives for tax treatment involving the issuance of options or shares to a trustee for the benefit of the grantees and also includes an additional alternative for the issuance of options or shares directly to the grantee. Section 102(b)(2) of the Ordinance, the most favorable tax treatment for grantees, permits the issuance to a trustee under the "capital gains track." However, under this track we are not allowed to deduct an expense with respect to the issuance of the options or shares. In order to comply with the terms of the capital gains track, all options granted under the 2013 Plan pursuant and subject to the provisions of Section 102 of the Ordinance, as well as the Ordinary Shares issued upon exercise of these options and other shares received subsequently following any realization of rights with respect to such options, such as share dividends and share splits, must be granted to a trustee for the benefit of the relevant employee, director or officer and should be held by the trustee for at least two years after the date of the grant.

Options granted under the 2013 Plan will generally vest over four years commencing on the date of grant such that 25% vest after one year and an additional 6.25% vest at the end of each subsequent three-month period thereafter for 36 months. Options that are not exercised within ten years from the grant date expire, unless otherwise determined by the Board of Directors or its designated committee, as applicable. In case of termination for reasons of disability or death, the grantee or his legal successor may exercise options that have vested prior to termination within a period of six months from the date of disability or death. If we terminate a grantee's employment or service for cause, all of the grantee's vested and unvested options will expire on the date of termination. If a grantee's employment or service is terminated for any other reason, the grantee may exercise his or her vested options within 90 days of the date of termination. Any expired or unvested options return to the pool for reissuance.

In the event of a merger or consolidation of our company subsequent to which we shall no longer exist as a legal entity, or a sale of all, or substantially all, of our shares or assets or other transaction having a similar effect on us, then any outstanding option shall be assumed, or an equivalent option shall be substituted, by such successor corporation or an affiliate thereof or, in case the successor corporation refuses to assume or substitute the option, our Board of Directors or its designated committee may (a) provide the grantee with the opportunity to exercise the option as to all or part of the shares, vested or otherwise, and (b) specify a period of time, no less than 7 days, following which all outstanding options shall terminate.

### CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than the executive and director compensation and indemnification arrangements discussed in "Management," and the transaction described below, we have not entered into any transactions since January 1, 2014, to which we have been or are a party and in which any of our directors, executive officers or holders of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest.

### **Employment Agreements**

We have entered into written employment agreements with each of our executive officers. These agreements provide for notice periods of varying duration for termination of the agreement by us or by the relevant executive officer, during which time the executive officer will continue to receive base salary and benefits. We have also entered into customary non-competition, confidentiality of information and ownership of inventions arrangements with our executive officers. However, the enforceability of the noncompetition provisions may be limited under applicable law. We describe our service agreements with directors under "Management—Exculpation, Insurance and Indemnification of Directors and Officers" above.

#### **Options**

Since our inception we have granted options to purchase our ordinary shares to our officers and certain of our directors. Such option agreements may contain acceleration provisions upon certain merger, acquisition, or change of control transactions. We describe our option plans under "Management—2013 Incentive Option Plan" above. If the relationship between us and an executive officer or a director is terminated, except for cause (as defined in the various option plan agreements), options that are vested will generally remain exercisable for ninety days after such termination.

### Indemnification Agreements and Insurance Coverage

Our articles of association permit us to exculpate, indemnify and insure each of our directors and office holders to the fullest extent permitted by the Companies Law. We have entered into indemnification agreements with each of our directors and other office holders, undertaking to indemnify them to the fullest extent permitted by Israeli law. We have also obtained directors and officers insurance for each of our officers and directors.

# PRINCIPAL SHAREHOLDERS

The following table sets forth information relating to the beneficial ownership of our Ordinary Shares as of March 15, 2017, by: each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding Ordinary Shares; each of our directors; each of our executive officers; and all directors and executive officers as a group.

The number of shares beneficially owned by each entity, person, director or executive officer is determined in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days of March 15, 2017 through the exercise of any stock options or other rights. Except as otherwise indicated, and subject to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all Ordinary Shares held by that person.

Ordinary Shares that a person has the right to acquire within 60 days of March 15, 2017, are deemed outstanding for purposes of computing the percentage ownership of the person holding such rights, but are not deemed outstanding for purposes of computing the percentage ownership of any other person, except with respect to the percentage ownership of all directors and executive officers as a group. Unless otherwise indicated below, the address for each beneficial owner listed is c/o Bioblast Pharma Ltd., 37 Dereh Menechem Begin St., 15th Floor, Tel Aviv 6522042 Israel.

We are not owned or controlled, directly or indirectly, by another corporation or by any foreign government. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

		Percentage of shares beneficially owned						
	Number of shares beneficially owned	Before offering		After offering				
Holders of more than 5% of our voting securities:								
Udi Gilboa (1)	3,320,512	20.3	%	11.9	%			
Dr. Dalia Megiddo <sup>(1)</sup>	3,311,421	20.2	%	11.8	%			
Ran Nussbaum (2)	2,529,008	15.4	%	9.0	%			
Fredric Price (3)	1,107,985	6.4	%	3.8	%			

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Directors and executive officers who are not 5%					
holders:					
Chaime Orlev	-	-		-	
Dr. Warren Wasiewski (4)	80,046	0.5	%	0.3	%
Dana Gelbaum	-	-		-	
Prof. Avizohar Argov <sup>(5)</sup>	18,750	0.1	%	0.1	%
Michael Burshtine	-	-		-	
Thomas I.H. Dubin	-	-		-	
Colin Foster (6)	252,709	1.5	%	0.9	%
Robert Friedman	-	-		-	
Marlene Haffner (7)	83,579	0.5	%	0.3	%
Dr. Ralf Rosskamp	-	-		-	
All directors and executive officers as a group (13 persons) $^{(8)}$	7,383,498	41.5	%	25.1	%

- (1) Based solely on a Schedule 13G filed with the SEC on February 15, 2015, and which reflects holdings as of December 31, 2014. Mr. Gilboa served as a director on our Board of Directors until January 2, 2017. Comprised of Pontifax (Cayman) III Limited Partnership that holds 804,909 Ordinary Shares and Pontifax (Israel) III Limited Partnership that holds 1,724,099 Ordinary Shares. These two entities are under common control of,
- (2) and are affiliated with, our director, Ran Nussbaum. The address of Ran Nussbaum is 14 Shenkar St. Herzliya, 46140, Israel. Based solely on a Schedule 13G filed with the SEC on February 17, 2015, and which reflects holdings as of December 31, 2016.
- (3) Comprised of: (a) 131,572 Ordinary Shares; and (b) 976,233 options to purchase Ordinary Shares presently exercisable or exercisable within 60 days of March 15, 2017.
- (4) Comprised of 80,046 options to purchase Ordinary Shares presently exercisable or exercisable within 60 days of March 15, 2017.
- (5) Comprised of 18,750 options to purchase Ordinary Shares presently exercisable or exercisable within 60 days of March 15, 2017.
- (6) Comprised of: (a) 3,676 Ordinary Shares; and (b) 249,033 options to purchase Ordinary Shares presently exercisable or exercisable within 60 days of March 15, 2017.
- (7) Comprised of 83,579 options to purchase Ordinary Shares presently exercisable or exercisable within 60 days of March 15, 2017.
- (8) Comprised of: (a) 5,975,857 Ordinary Shares; and (b) 1,407,641 options to purchase Ordinary Shares presently exercisable or exercisable within 60 days of March 15, 2017.

### **Record Holders**

According to our transfer agent, as of March 14, 2017, there were seven record holders of our Ordinary Shares, among whom are three U.S. holders (including Cede & Co., the nominee of the Depositary Trust Company, holding 65.301% of our Ordinary Shares). The number of record holders in the United States is not representative of the number of beneficial holders nor is it representative of where such beneficial holders are resident since many of these Ordinary Shares are held by brokers or other nominees. None of our shareholders has different voting rights from other shareholders.

### **DESCRIPTION OF SHARE CAPITAL**

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#### General

#### **Ordinary Shares**

Our share capital is NIS 500,000, consisting of 50,000,000 Ordinary Shares NIS 0.01 par value per share. In addition to the warrants and options described below, in the last three years, we have issued an aggregate of 7,208,903 Ordinary Shares.

#### Warrants

As part of a registered direct offering that was consummated on March 22, 2016, we issued to the investors warrants to purchase up to 1,080,645 Ordinary Shares, exercise price of \$4.50 per share, exercisable for a period of five years commencing on September 22, 2016. The warrants include a mechanism for cashless exercise, and standard provisions regarding adjustments for stock dividends, splits and fundamental transactions. As of March 15, 2017, none of the warrants have been exercised.

#### **Options**

As of March 15, 2017, there were a total of 3,345,960 options to purchase Ordinary Shares under our 2013 Plan, of which 2,599,281 options to purchase Ordinary Shares were issued and outstanding, and 746,679 remained available for future issuance. A total of 1,477,380 options to purchase Ordinary Shares were vested as of that date, with a weighted average exercise price of \$4.22 per share. We describe our option plan under "Management - 2013 Incentive Option Plan."

# **Registration Rights**

As part of the registered direct offering that was consummated on March 22, 2016, we granted piggyback registration rights with respect to Ordinary Shares issuable upon the exercise of warrants issued to certain investors. Accordingly, concurrently with the filing of this prospectus, we are required to deliver to each such investor a written notice, and if, within 15 days after the date of delivery of such notice, the investor shall so request in writing, we will be obligated to register such investor's warrant shares herewith.

The registration rights expire upon the earlier of March 22, 2017, or the first day as of which all of the warrant shares may be sold under Rule 144. The exercise price of the warrants is \$4.50 per share. As of the date of this prospectus, none of the warrants have been exercised.

### **Voting Rights**

Subject to any rights or restrictions for the time being attached to any class or classes of shares, each shareholder shall have one vote for each share of which he or she is the holder, whether on a show of hands or on a poll. Our amended and restated articles of association do not permit cumulative voting and it is not mandated by Israeli law. Votes may be given either personally or by proxy. A proxy need not be a shareholder. If any shareholder is without legal capacity, he may vote by means of a trustee or a legal custodian, who may vote either personally or by proxy. If two or more persons are jointly entitled to a share then, in voting upon any question, the vote of the senior person who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other registered holders of the share and, for this purpose seniority shall be determined by the order in which the names stand in the shareholder register.

#### **Transfer of Shares**

Our Ordinary Shares that are fully paid for are issued in registered form and may be freely transferred under our amended and restated articles of association, unless the transfer is restricted or prohibited by applicable law or the rules of a stock exchange on which the shares are traded. The ownership or voting of our Ordinary Shares by non-residents of Israel is not restricted in any way by our amended and restated articles of association or the laws of the State of Israel, except under certain circumstances for ownership by nationals of some countries that are, or have been, in a state of war with Israel.

#### **Election of Directors**

Our Ordinary Shares do not have cumulative voting rights in the election of directors. As a result, the holders of a majority of the voting power represented at a shareholders meeting have the power to elect all of our directors.

Our directors hold office for their scheduled term unless they are removed from office upon the occurrence of certain events, in accordance with the Companies Law and our amended and restated articles of association. In addition, our amended and restated articles of association allow our Board of Directors to appoint directors to fill vacancies on the Board of Directors to serve for a term of office equal to the remaining period of the term of office of the directors(s) whose office(s) have been vacated.

#### **Dividend and Liquidation Rights**

We may declare a dividend to be paid to the holders of our Ordinary Shares in proportion to their respective shareholdings. Under the Companies Law, dividend distributions are determined by the Board of Directors and do not require the approval of the shareholders of a company unless the company's articles of association provide otherwise. Our amended and restated articles of association do not require shareholder approval of a dividend distribution and provide that dividend distributions may be determined by our Board of Directors.

Pursuant to the Companies Law, the distribution amount is limited to the greater of retained earnings or earnings generated over the previous two years, as such are defined in the Companies Law, according to our then last reviewed or audited financial reports, provided that the date of the financial reports is not more than six months prior to the date of distribution, or we may distribute dividends that do not meet such criteria only with court approval. Where court approval is required, we will only be permitted to pay a dividend if the court determines that there is no reasonable

concern that payment of the dividend will prevent us from satisfying our existing and foreseeable obligations as they become due.

In the event of our liquidation, after satisfaction of liabilities to creditors, our assets will be distributed to the holders of our Ordinary Shares in proportion to their shareholdings. This right, as well as the right to receive dividends, may be affected by the grant of preferential dividend or distribution rights to the holders of a class of shares with preferential rights that may be authorized in the future.

### **Exchange Controls**

There are currently no Israeli currency control restrictions on payments of dividends or other distributions with respect to our Ordinary Shares or the proceeds from the sale of our Ordinary Shares, except for the obligation of Israeli residents to file reports with the Bank of Israel regarding certain transactions. However, legislation remains in effect pursuant to which currency controls can be imposed by administrative action at any time.

Non-residents of Israel who purchase our securities with non-Israeli currency will be able to repatriate dividends (if any), liquidation distributions and the proceeds of any sale of such securities, into non-Israeli currencies at the rate of exchange prevailing at the time of repatriation, provided that any applicable Israeli taxes have been paid (or withheld) on such amounts.

Neither our amended and restated articles of association nor the laws of the State of Israel restrict in any way the ownership or voting of our Ordinary Shares by non-residents of Israel, except with respect to citizens of countries that are in a state of war with Israel.

#### **Shareholder Meetings**

Under Israeli law, we are required to hold an annual general meeting of our shareholders once every calendar year that must be no later than 15 months after the date of the previous annual general meeting. All meetings other than the annual general meeting of shareholders are referred to as special meetings. Our Board of Directors may call special meetings whenever it sees fit, at such time and place, within or outside of Israel, as it may determine. In addition, the Companies Law provides that our Board of Directors is required to convene a special meeting upon the written request of (i) any two of our directors or one-quarter of our Board of Directors or (ii) one or more shareholders holding, in the aggregate, either (a) 5% of our outstanding issued shares and 1% of our outstanding voting power or (b) 5% of our outstanding voting power.

Subject to the provisions of the Companies Law and the regulations promulgated thereunder, shareholders entitled to participate and vote at general meetings are the shareholders of record on a date to be decided by the Board of Directors. Furthermore, the Companies Law requires that resolutions regarding the following matters must be passed at a general meeting of our shareholders:

amendments to our amended and restated articles of association;

the exercise of our Board of Directors' powers by a general meeting, if our Board of Directors is unable to exercise its powers and the exercise of any of its powers is required for our proper management;

appointment or termination of our auditors;

approval of acts and transactions involving related parties, as defined by the Companies Law;

increases or reductions of our authorized share capital; and

a merger.

The Companies Law and our amended and restated articles of association require that a notice of any annual general meeting or special shareholders meeting be provided to shareholders at least 21 days prior to the meeting and if the agenda of the meeting includes matters upon which shareholders may vote by means of a voting deed, including the appointment or removal of directors, the approval of a compensation policy with respect to office holders, the approval of transactions with office holders or interested or related parties, or an approval of a merger, notice must be provided at least 35 days prior to the meeting.

Under the Companies Law and our amended and restated articles of association, shareholders are not permitted to take action via written consent in lieu of a meeting.

**Voting Rights** 

#### Quorum Requirements

The quorum required for our general meetings of shareholders consists of at least two shareholders present in person, by proxy or written ballot who hold or represent between them at least one-third of the total outstanding voting rights. A meeting adjourned for lack of a quorum is generally adjourned to the same day in the following week at the same time and place or to a later time/date if so specified in the summons or notice of the meeting. At the reconvened meeting, any two or more shareholders present in person or by proxy shall constitute a lawful quorum.

# Vote Requirements

Our amended and restated articles of association provide that all resolutions of our shareholders require a simple majority vote, unless otherwise required by the Companies Law or by our amended and restated articles of association. Under the Companies Law certain actions require a special majority, which may include (i) approving an extraordinary transaction with a controlling shareholder and the terms of employment or other engagement of the controlling shareholder of the company or such controlling shareholder's relative (even if not extraordinary), requiring the approval described above under "Approval of Related Party Transactions under Israeli Law—Disclosure of Personal Interests of Controlling Shareholders," (ii) approving executive officers' compensation inconsistent with our office holder compensation policy, compensation of our Chief Executive Officer or the compensation of an executive officer who is also the controlling shareholder of our company (including an affiliate thereof), all of which require the special majority approval described above under "Management—NASDAO Listing Rules and Home Country Practices—Compensation of officers," (iii) approving the authorization of the Chairman of the Board of Directors or a relative thereof to assume the role or responsibilities of the Chief Executive Officer, or the authorization of the Chief Executive Officer or a relative thereof to assume the role or responsibilities of the Chairman of the Board of Directors for periods of no longer than three years each and subject to receipt of the approval of a majority of the shares voting on the matter, providing that either (1) included in such majority are at least two-thirds of the shares of shareholders who are non-controlling parties and do not have a personal interest in the said resolution (excluding for such purpose any abstentions) or (2) the total number of shares of shareholders specified in clause (3) who voted against the resolution does not exceed 2% of the voting rights in the company and (iv) approving mergers, certain private placements that will increase certain types of shareholders' relative holdings in the company or certain special tender offers or forced bring along share purchase transactions, all of which require the approval described below under "Acquisitions under Israeli Law."

Further exceptions to the simple majority vote requirement are a resolution for the voluntary winding up, or an approval of a scheme of arrangement or reorganization, of the company pursuant to Section 350 of the Companies Law, which requires the approval of the majority of the shareholders present at the meeting and who are together the holders of 75% of the voting rights represented at the meeting, in person, by proxy or by voting deed and voting on the resolution.

Israeli law provides that a shareholder of a public company may vote in a meeting and in a class meeting by means of a voting deed in which the shareholder indicates how he or she votes on resolutions relating to the following matters:

appointment or removal of directors;

approval of transactions with office holders or interested or related parties;

approval of a merger;

authorization of the Chairman of the Board of Directors or a relative thereof to assume the role or responsibilities of our Chief Executive Officer, and authorization of our Chief Executive Officer or a relative thereof to assume the role or responsibilities of the Chairman of the Board of Directors;

- · approval of an arrangement or reorganization of the company pursuant to Section 350 of the Companies Law;
- · approval of the compensation policy with respect to the terms of office and employment of office holders; and

other matters in respect of which there is a provision in the articles of association providing that decisions of the general meeting may also be passed by voting deed or which may be prescribed by Israel's Minister of Justice.

The provision allowing the vote by voting deed does not apply if, to the best of our knowledge at the time of calling the general shareholders meeting, a controlling shareholder will hold on the record date for such shareholders meeting, voting power sufficient to determine the outcome of the vote.

The Companies Law provides that a shareholder, in exercising his or her rights and performing his or her obligations toward us and our other shareholders, including voting at general meetings, must act in good faith and in a customary manner and avoid abusing his or her power. See "Management—Approval of Related Party Transactions under Israeli Law—Shareholder Duties" above for further detail.

### Access to Corporate Records

Under the Companies Law and our amended and restated articles of association, shareholders are provided access to the following corporate records: minutes of our general meetings; our shareholders register and principal shareholders register, amended and restated articles of association and financial statements; and any document that we are required by law to file publicly with the Israeli Companies Registrar or the Israel Securities Authority. In addition, shareholders may submit a reasoned request to be provided with any document related to an action or transaction requiring shareholder approval under the approval of related party transaction provisions of the Companies Law. We may deny this request if we believe it has not been submitted in good faith or if such denial is necessary to protect our interest or protect a trade secret or patent.

## Modification of Class Rights

The rights attached to any class of shares, such as voting, liquidation and dividend rights, may be amended by adoption of a resolution by the holders of a majority (or a special majority, as may be applicable to the particular matter) of the shares of that class present at a separate class meeting, or otherwise in accordance with the rights attached to such class of shares, as set forth in our amended and restated articles of association.

### Acquisitions under Israeli Law

### Full Tender Offer

A person wishing to acquire shares of a public Israeli company and who could as a result hold over 90% of the target company's issued and outstanding share capital or voting rights is required by the Companies Law to make a tender offer to all of the company's shareholders for the purchase of all of the issued and outstanding shares of the company. A person wishing to acquire shares of a public Israeli company and who could as a result hold over 90% of the issued and outstanding share capital or voting rights of a certain class of shares is required to make a tender offer to all of the shareholders who hold shares of the relevant class for the purchase of all of the issued and outstanding shares of that class. If the shareholders who do not accept the offer hold less than 5% of the issued and outstanding share capital and voting rights of the company or of the applicable class, all of the shares that the acquirer offered to purchase will be transferred to the acquirer by operation of law (provided that a majority of the offerees that do not have a personal interest in such tender offer shall have approved it, which condition shall not apply if, following consummation of the tender offer, the acquirer would hold at least 98% of all of the company's outstanding shares and voting rights (or shares and voting rights of the relevant class)). However, shareholders may, at any time within six months following the completion of the tender offer, petition the court to alter the consideration for the acquisition. Even shareholders who indicated their acceptance of the tender offer may so petition the court, unless the acquirer stipulated that a shareholder that accepts the offer may not seek appraisal rights. If the shareholders who did not accept the tender offer hold 5% or more of the issued and outstanding share capital or voting rights of the company or of the applicable class, the acquirer may not acquire shares of the company that will increase its holdings to more than 90% of the company's issued and outstanding share capital or voting rights or 90% of the shares or voting rights of the applicable class, from shareholders who accepted the tender offer.

### Special Tender Offer

The Companies Law provides that an acquisition of shares of an public Israeli company must be made by means of a special tender offer if as a result of the transaction the shareholder could become a holder of 25% or more of the

voting rights in the company, unless one of the exemptions in the Companies Law (as described below) is met. This rule does not apply if there is already another holder of at least 25% of the voting rights in the company. Similarly, the Companies Law provides that an acquisition of shares of a public company must be made by means of a tender offer if as a result of the acquisition the purchaser could 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, unless one of the exemptions in the Companies Law is met. Such exemptions include (a) acquisition of shares issued in the course of a private placement approved by the general meeting of the company as a private placement intended to provide purchaser with holdings of 25% or more of the voting rights in the company, if there is no other shareholder of the company who holds more than 25% 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, (b) acquisition of shares from a holder of 25% or more of the voting rights in the company following which purchaser shall hold 25% or more of the voting rights in the company following which purchaser shall hold 45% or more of the voting rights in the company.

A special tender offer must be extended to all shareholders of a company but the offeror is not required to purchase shares representing more than 5% of the voting power attached to the company's outstanding shares, regardless of how many shares are tendered by shareholders. 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 (disregarding holders who control the offeror and who have a personal interest in the acceptance of the offer or the holder of 25% or more of the voting rights of the company, any of their relatives or corporations controlled by any of the above).

If 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.

# Merger

The Companies Law permits merger transactions between Israeli companies if approved by each party's Board of Directors and, unless certain requirements described under the Companies Law are met, by a majority vote of each party's shares, and, in the case of the target company, a majority vote of each class of its shares, voted on the proposed merger at a shareholders meeting called with at least 35 days' prior notice.

For purposes of the shareholder vote, unless a court rules otherwise, the merger will not be deemed approved if a majority of the votes of shares represented at the shareholders meeting (disregarding abstentions) that are held by parties other than the other party to the merger, or by any person (or group of persons acting in concert) who holds (or hold, as the case may be) 25% or more of the voting rights or the right to appoint 25% or more of the directors of the other party, vote against the merger, or anyone on such parties' behalf, including relatives of such parties and corporations controlled them, vote against the merger. If, however, the merger involves a merger with a company's own controlling shareholder or if the controlling shareholder has a personal interest in the merger, then the merger is instead subject to the same special majority approval that governs all extraordinary transactions with controlling shareholders (as described above in this prospectus under "Management—NASDAQ Listing Rules and Home Country Practices—Shareholder approval").

If the transaction would have been approved by the shareholders of a merging company but for the separate approval of each class or the exclusion of the votes of certain shareholders as provided above, a court may still approve the merger upon the request of holders of at least 25% of the voting rights of a company, if the court holds that the merger is fair and reasonable, taking into account the value of the parties to the merger and the consideration offered to the shareholders of the company that have petitioned the court to approve the merger.

Upon the request of a creditor of either party to the proposed merger, the court may delay or prevent the merger if it concludes that there exists a reasonable concern that, as a result of the merger, the surviving company will be unable to satisfy the obligations of any of the parties to the merger, and may further give instructions to secure the rights of creditors.

In addition, a merger may not be consummated unless at least 50 days have passed from the date on which a proposal for approval of the merger was filed by each party with the Israeli Registrar of Companies and at least 30 days have passed from the date on which the merger was approved by the shareholders of each party.

#### Anti-takeover Measures under Israeli Law

The Companies Law allow us to create and issue shares having rights different from those attached to our Ordinary Shares, including shares providing certain preferred rights, distributions or other matters and shares having preemptive rights. As of the closing of this offering, no preferred shares will be authorized under our amended and restated articles of association. In the future, if we do authorize, create and issue a specific class of preferred shares, such class of shares, depending on the specific rights that may be attached to it, may have the ability to frustrate or prevent a takeover or otherwise prevent our shareholders from realizing a potential premium over the market value of their Ordinary Shares. The authorization and designation of a class of preferred shares will require an amendment to our amended and restated articles of association, which requires the prior approval of the holders of a majority of the voting power attaching to our issued and outstanding shares at a general meeting. The convening of the meeting, the shareholders entitled to participate and the majority vote required to be obtained at such a meeting will be subject to the requirements set forth in the Companies Law as described above in "Description of Share Capital—Voting Rights."

#### **Borrowing Powers**

Pursuant to the Companies Law and our amended and restated articles of association, our Board of Directors may exercise all powers and take all actions that are not required under law or under our amended and restated articles of association to be exercised or taken by our shareholders or other corporate bodies, including the power to borrow money for company purposes.

### **Changes in Capital**

Our amended and restated articles of association enable us to increase or reduce our share capital. Any such changes are subject to the provisions of the Companies Law and must be approved by a resolution duly passed by our shareholders at a general meeting by voting on such change in the capital. In addition, transactions that have the effect of reducing capital, such as the declaration and payment of dividends in the absence of sufficient retained earnings or profits and, in certain circumstances, an issuance of shares for less than their nominal value, require the approval of both our Board of Directors and an Israeli court.

### **Transfer Agent**

Our transfer agent in the United States is VStock Transfer, LLC, its address is 18 Lafayette Place, Woodmere, New York 11598, and its telephone number is (212) 828-8436.

#### SHARES ELIGIBLE FOR FUTURE SALE

Our shares trade on the NASDAQ Global Market. However, a liquid trading market for our Ordinary Shares may not be sustained after this offering. Sales of substantial amounts of our Ordinary Shares following this offering, or the perception that these sales could occur, could adversely affect prevailing market prices of our Ordinary Shares and could impair our future ability to obtain capital, especially through an offering of equity securities. Assuming that the underwriters do not exercise their over-allotment option with respect to this offering and assuming no exercise of options outstanding following the offering, we will have an aggregate of Ordinary Shares outstanding upon completion of this offering. Of these shares, the Ordinary Shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, unless purchased by "affiliates" (as that term is defined under Rule 144 of the Securities Act), who may sell only the volume of shares described below and whose sales would be subject to additional restrictions described below.

The remaining Ordinary Shares will be held by our existing shareholders. Because substantially all of these shares have been held for more than 6 months, they also will be freely tradable without restriction or further registration, except that shares held by affiliates must be sold only subject to the fulfillment of certain conditions, including manner of sale provisions, notice requirements, and a volume limitation that limits the number of shares that may be sold thereby, within any three-month period, and except for the lock-up restrictions described below.

#### Lock-Up agreements

We, all of our directors and executive officers and certain of our shareholders have signed lock-up agreements pursuant to which, subject to certain exceptions, they have agreed not to sell or otherwise dispose of their Ordinary Shares for a period of ninety days after the date of the closing of the offering of the Ordinary Shares without the prior written consent of H.C. Wainwright. In addition, we have agreed not to issue any Ordinary Shares, subject to certain exceptions, for a period of ninety days after the closing of the offering of Ordinary Shares without the prior written consent of H.C. Wainwright.

#### **Rule 144**

In general, and unless subject to a lock-up agreement or otherwise restricted, under Rule 144, any person who is not our affiliate and has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon the closing of this

offering without regard to whether current public information about us is available.

In the case of a person who is our affiliate or who was our affiliate at any time during the preceding three months and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, the right to sell is also subject to the fulfillment of certain additional conditions, including manner of sale provisions, notice requirements, and a volume limitation that limits the number of shares that may be sold thereby, within any three-month period that does not exceed the greater of:

1% of the number of Ordinary Shares then outstanding, which will equal shares; or

the average weekly trading volume of our Ordinary Shares on the NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

If an affiliate acquires "restricted securities," those securities will also be subject to holding period requirements. Substantially all of our outstanding Ordinary Shares are either unrestricted or will be eligible for sale under Rule 144. We cannot estimate the number of our Ordinary Shares that our existing shareholders will elect to sell.

# Form S-8 Registration Statements

We have filed registration statements on Form S-8 under the Securities Act to register an aggregate of 2,345,960 Ordinary Shares, in the aggregate, issued or reserved for issuance under our equity incentive plans. In the future we intend to similarly register additional Ordinary Shares. Such registration statements became effective automatically upon filing. Ordinary Shares issued upon exercise of a share option and registered pursuant to the Form S-8 registration statements will, subject to vesting provisions, lock-up restrictions and Rule 144 volume limitations applicable to our affiliates, be available for sale in the open market immediately. As of February 20, 2017, a total of 2,621,781 Ordinary Shares underlying options were outstanding under our equity incentive plans.

#### **TAXATION**

The following description is not intended to constitute a complete analysis of all tax consequences relating to the ownership or disposition of our Ordinary Shares. You should consult your own tax advisor concerning the tax consequences of your particular situation, as well as any tax consequences that may arise under the laws of any state, local, foreign, including Israeli, or other taxing jurisdiction.

The following is a summary of the current tax structure, which is applicable to companies in Israel, with special reference to its effect on us. The following also contains a discussion of material Israeli and U.S. tax consequences to persons purchasing our Ordinary Shares and government programs from which we and some of our group companies benefit. To the extent that the discussion is based on new tax legislation, which has yet to be subject to judicial or administrative interpretation, there can be no assurance that the views expressed in the discussion will accord with any such interpretation in the future. The discussion is not intended and should not be construed as legal or professional tax advice and is not exhaustive of all possible tax considerations. An Israeli company that is subject to Israeli taxes on the income of its non-Israeli subsidiaries will receive a credit for income taxes paid/withheld or that will be paid/withheld by the subsidiary in its country of residence, according to the terms and conditions determined in the Israeli Tax Ordinance.

The following summary is included herein as general information only and is not intended as a substitute for careful tax planning. Accordingly, each investor should consult his or her own tax advisor as to the particular tax consequences to such investor of the purchase, ownership or sale of an ordinary share, including the effect of applicable state, local, foreign or other tax laws and possible changes in tax laws.

#### ISRAELI TAX CONSIDERATIONS

THE FOLLOWING IS A SUMMARY OF THE MATERIAL ISRAELI INCOME TAX LAWS APPLICABLE TO US. THIS SECTION ALSO CONTAINS A DISCUSSION OF MATERIAL ISRAELI INCOME TAX CONSEQUENCES CONCERNING THE OWNERSHIP AND DISPOSITION OF OUR ORDINARY SHARES. THIS SUMMARY DOES NOT DISCUSS ALL THE ASPECTS OF ISRAELI INCOME TAX LAW THAT MAY BE RELEVANT TO A PARTICULAR INVESTOR IN LIGHT OF HIS OR HER PERSONAL INVESTMENT CIRCUMSTANCES OR TO SOME TYPES OF INVESTORS SUBJECT TO SPECIAL TREATMENT UNDER ISRAELI LAW. EXAMPLES OF THIS KIND OF INVESTOR INCLUDE RESIDENTS OF ISRAEL OR TRADERS IN SECURITIES WHO ARE SUBJECT TO SPECIAL TAX REGIMES NOT COVERED IN THIS DISCUSSION. TO THE EXTENT THAT THE DISCUSSION IS BASED ON NEW TAX LEGISLATION THAT HAS NOT YET BEEN SUBJECT TO JUDICIAL OR ADMINISTRATIVE INTERPRETATION, WE CANNOT ASSURE YOU THAT THE APPROPRIATE TAX AUTHORITIES OR THE COURTS WILL ACCEPT THE VIEWS EXPRESSED IN THIS DISCUSSION. THIS SUMMARY IS BASED ON LAWS AND REGULATIONS IN

EFFECT AS OF THE DATE OF THIS PROSPECTUS AND DOES NOT TAKE INTO ACCOUNT POSSIBLE FUTURE AMENDMENTS WHICH MAY BE UNDER CONSIDERATION.

### General corporate tax structure in Israel

As of January 1, 2016, Israeli resident companies, such as us, are generally subject to corporate tax at the rate of 25%. As of January 1, 2017, the corporate tax rate is reduced to 24% and as of January 1, 2018, should be further reduced to 23%. Between January 1, 2014 and December 31, 2015, the corporate tax rate was 26.5%.

Capital gains derived by an Israeli resident company are generally subject to tax at the same rate as the corporate tax rate. Under Israeli tax legislation, a corporation will be considered as an "Israeli Resident" if it meets one of the following: (a) it was incorporated in Israel; or (b) its business is managed and controlled from Israel.

#### Taxation of our Israeli individual shareholders on receipt of dividends

Israeli residents who are individuals are generally subject to Israeli income tax for dividends paid on our Ordinary Shares (other than bonus shares or share dividends) at a rate of 25%, or 30% if the recipient of such dividend is a "substantial shareholder" (as defined below) at the time of distribution or at any time during the preceding 12-month period.

As of January 1, 2016, an additional income tax at a rate of 2% will be imposed on high earners whose annual taxable income or gain exceeds NIS 803,520. As of January 1, 2017, an additional income tax at a rate of 3% will be imposed on high earners whose annual taxable income or gain exceeds NIS 640,000.

A "substantial Shareholder" is generally a person who alone, or together with his relative or another person who collaborates with him on a regular basis, holds, directly or indirectly, at least 10% of any of the "means of control" of the corporation. "Means of control" generally include the right to vote in a general meeting of shareholders, receive profits, nominate a director or an officer, receive assets upon liquidation, or instruct someone who holds any of the aforesaid rights regarding the manner in which he or she is to exercise such right(s), and whether by virtue of shares, rights to shares or other rights, or in any other manner, including by means of voting or trusteeship agreements.

The term "Israeli Resident" for Individuals is generally defined under Israeli Income Tax Ordinance [New Version], 1961, or the Israeli Tax Ordinance, as an individual whose center of life is in Israel. According to the Israeli Tax Ordinance, in order to determine the center of life of an individual, account will be taken of the individual's family, economic and social connections, including: (a) the place of the individual's permanent home; (b) the place of residence of the individual and his family; (c) the place of the individual's regular or permanent place of business or the place of his permanent employment; (d) place of the individual's active and substantial economic interests; (e) place of the individual's activities in organizations, associations and other institutions. The center of life of an individual will be presumed to be in Israel if: (a) the individual was present in Israel for 183 days or more in the tax year; or (b) the individual was present in Israel for 30 days or more in the tax year, and the total period of the individual's presence in Israel in that tax year and the two previous tax years is 425 days or more. The presumption in this paragraph may be rebutted either by the individual or by the assessing officer.

#### Taxation of Israeli Resident Corporations on Receipt of Dividends

Israeli resident corporations are generally exempt from Israeli corporate income tax with respect to dividends paid on our Ordinary Shares.

#### **Capital Gains Taxes Applicable to Israeli Resident Shareholders**

The income tax rate applicable to Real Capital Gain derived by an Israeli individual from the sale of shares which had been purchased after January 1, 2012, whether listed on a stock exchange or not, is 25%. However, if such shareholder is considered a "Substantial Shareholder" (as defined above) at the time of sale or at any time during the preceding 12-month period, such gain will be taxed at the rate of 30%. As of January 1, 2016, an additional tax at a rate of 2% will be imposed on high earners whose annual income or gains exceed NIS 803,520. As of January 1, 2017, an

additional income tax at a rate of 3% will be imposed on high earners whose annual taxable income or gain exceeds NIS 640,000.

Moreover, capital gains derived by a shareholder who is a dealer or trader in securities, or to whom such income is otherwise taxable as ordinary business income, are taxed in Israel at ordinary income rates (currently, up to 50% for individuals and As of January 1, 2016, 25% for Israeli resident corporations. As of January 1, 2017, the corporate tax rate is reduced to 24% and as of January 1, 2018, should be further reduced to 23%).

#### Taxation of Non-Israeli Shareholders on Receipt of Dividends

Non-Israeli residents are generally subject to Israeli income tax on the receipt of dividends paid on our Shares at the rate of 25% (or 30% for individuals, if such individual is a "substantial shareholder" at the time receiving the dividend or on any date in the 12 months preceding such date), which tax will be withheld at source, unless a tax certificate is obtained from the Israeli Tax Authority authorizing withholding-exempt remittances or a reduced rate of tax pursuant to an applicable tax treaty.

A non-Israeli resident who receives dividends from which tax was withheld is generally exempt from the duty to file tax returns in Israel in respect of such income.

For example, under the Convention Between the Government of the United States of America and the Government of Israel with Respect to Taxes on Income, as amended, Israeli withholding tax on dividends paid to a U.S. resident for treaty purposes may not, in general, exceed 25%, or 15% in the case of dividends paid out of the profits of a Benefited Enterprise, subject to certain conditions. Where the recipient is a U.S. corporation owning 10% or more of the outstanding shares of the voting stock of the paying corporation during the part of the paying corporation's taxable year which precedes the date of payment of the dividend and during the whole of its prior taxable year (if any) and not more than 25% of the gross income of the paying corporation for such prior taxable year (if any) consists certain interest or dividends, the Israeli tax withheld may not exceed 12.5%, subject to certain conditions.

#### Capital gains income taxes applicable to non-Israeli shareholders.

Non-Israeli resident shareholders are generally exempt from Israeli capital gains tax on any gains derived from the sale, exchange or disposition of our Ordinary Shares, provided that such gains were not derived from a permanent establishment or business activity of such shareholders in Israel. However, non-Israeli corporations' shareholders will not be entitled to the foregoing exemptions if an Israeli resident (i) has a controlling interest of more than 25% in such non-Israeli corporation or (ii) is the beneficiary of or is entitled to 25% or more of the revenues or profits of such non-Israeli corporation, whether directly or indirectly.

Regardless of whether shareholders may be liable for Israeli income tax on the sale of our Ordinary Shares, the payment of the consideration may be subject to withholding of Israeli tax at the source. Accordingly, shareholders may be required to demonstrate that they are exempt from tax on their capital gains in order to avoid withholding at source at the time of sale.

#### Estate and gift tax

Currently, Israeli law does not impose estate or gift taxes.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE PARTICULAR ISRAELI TAX CONSEQUENCES OF PURCHASING, HOLDING, AND DISPOSING OF OUR ORDINARY SHARES, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

# U.S. FEDERAL INCOME TAX CONSEQUENCES

THE FOLLOWING SUMMARY IS INCLUDED HEREIN FOR GENERAL INFORMATION AND IS NOT INTENDED TO BE, AND SHOULD NOT BE CONSIDERED TO BE, LEGAL OR TAX ADVICE. EACH U.S. HOLDER SHOULD CONSULT WITH HIS OR HER OWN TAX ADVISOR AS TO THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND SALE OF ORDINARY SHARES, INCLUDING THE EFFECTS OF APPLICABLE STATE, LOCAL, FOREIGN OR OTHER TAX LAWS AND POSSIBLE CHANGES IN THE TAX LAWS.

#### **U.S. Federal Income Taxation**

Subject to the limitations described in the next paragraph, the following discussion summarizes the material U.S. federal income tax consequences to a "U.S. Holder" arising from the purchase, ownership and sale of the Ordinary Shares. For this purpose, a "U.S. Holder" is a holder of Ordinary Shares that is: (1) an individual citizen or resident of the United States, including an alien individual who is a lawful permanent resident of the United States or meets the substantial presence residency test under U.S. federal income tax laws; (2) a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) or a partnership (other than a partnership that is not treated as a U.S. person under any applicable U.S. Treasury Regulations) created or organized in or under the laws of the United States or the District of Columbia or any political subdivision thereof; (3) an estate, the income of which is subject to U.S. federal income tax regardless of source; (4) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have authority to control all substantial decisions of the trust; (5) a trust that has a valid election in effect to be treated as a U.S. person to the extent provided in U.S. Treasury regulations; or (6) any person otherwise subject to U.S. federal income tax on a net income basis in respect of the Ordinary Shares, if such status as a U.S. Holder is not overridden pursuant to the provisions of an applicable tax treaty.

This summary is for general information purposes only and does not purport to be a comprehensive description of all of the U.S. federal income tax considerations that may be relevant to a decision to purchase or hold our Ordinary Shares. This summary generally considers only U.S. Holders that will own our Ordinary Shares as capital assets. Except as explicitly discussed below, this summary does not consider the U.S. federal tax consequences to a person that is not a U.S. Holder, nor does it describe the rules applicable to determine a taxpayer's status as a U.S. Holder. This summary is based on the provisions of the Code, final, temporary and proposed U.S. Treasury Regulations promulgated thereunder, administrative and judicial interpretations thereof, and the U.S./Israel Income Tax Treaty, all as in effect as of the date hereof and all of which are subject to change, possibly on a retroactive basis, and all of which are open to differing interpretations. We will not seek a ruling from the U.S. Internal Revenue Service, or the IRS, with regard to the U.S. federal income tax treatment of an investment in our Ordinary Shares by U.S. Holders and, therefore, can provide no assurances that the IRS will agree with the conclusions set forth below.

This discussion does not address all of the aspects of U.S. federal income taxation that may be relevant to a particular shareholder based on such shareholder's particular circumstances and in particular does not discuss any estate, gift, generation-skipping, transfer, state, local or foreign tax considerations. In addition, this discussion does not address the U.S. federal income tax treatment of a U.S. Holder who is: (1) a bank, life insurance company, regulated investment company, or other financial institution or "financial services entity"; (2) a broker or dealer in securities or foreign currency; (3) a person who acquired our Ordinary Shares in connection with employment or other performance of services; (4) a U.S. Holder that is subject to the U.S. alternative minimum tax; (5) a U.S. Holder that holds our Ordinary Shares as a hedge or as part of a hedging, straddle, conversion or constructive sale transaction or other risk-reduction transaction for U.S. federal income tax purposes; (6) a tax-exempt entity; (7) real estate investment trusts; (8) a U.S. Holder that expatriates out of the United States or a former long-term resident of the United States; or (9) a person having a functional currency other than the U.S. dollar. This discussion does not address the U.S. federal income tax treatment of a U.S. Holder that owns, directly or constructively, at any time, Ordinary Shares representing 10% or more of our voting power. Additionally, the U.S. federal income tax treatment of persons who hold Ordinary Shares through a partnership or other pass-through entity are not considered.

You are encouraged to consult your own tax advisor with respect to the specific U.S. federal and state income tax consequences to you of purchasing, holding or disposing of our Ordinary Shares, including the effects of applicable state, local, foreign or other tax laws and possible changes in the tax laws.

### **Distributions on Ordinary Shares**

Subject to the discussion under the heading "Passive Foreign Investment Companies" below, a U.S. Holder will be required to include in gross income as ordinary income the amount of any distribution paid on Ordinary Shares (including the amount of any Israeli tax withheld on the date of the distribution), to the extent that such distribution does not exceed our current and accumulated earnings and profits, as determined for U.S. federal income tax purposes. The amount of a distribution that exceeds our earnings and profits will be treated first as a non-taxable return of capital, reducing the U.S. Holder's tax basis for the Ordinary Shares to the extent thereof, and then capital gain.

Corporate holders generally will not be allowed a deduction for dividends received. For noncorporate U.S. Holders, to the extent that their total adjusted income does not exceed applicable thresholds, the maximum federal income tax rate for "qualified dividend income" and long-term capital gains is generally 15%. For those noncorporate U.S. Holders whose total adjusted income exceeds such income thresholds, the maximum federal income tax rate for "qualified dividend income" and long-term capital gains is generally 20%. For this purpose, "qualified dividend income" means, inter alia, dividends received from a "qualified foreign corporation." A "qualified foreign corporation" is a corporation that is entitled to the benefits of a comprehensive tax treaty with the United States which includes an exchange of information program. The IRS has stated that the Israel/U.S. Tax Treaty satisfies this requirement and we believe we are eligible for the benefits of that treaty.

In addition, our dividends will be qualified dividend income if our Ordinary Shares are readily tradable on NASDAQ or another established securities market in the United States. Dividends will not qualify for the preferential rate if we are treated, in the year the dividend is paid or in the prior year, as a PFIC. A U.S. Holder will not be entitled to the preferential rate: (1) if the U.S. Holder has not held our Ordinary Shares or ADRs for at least 61 days of the 121 day period beginning on the date which is 60 days before the ex-dividend date, or (2) to the extent the U.S. Holder is under an obligation to make related payments on substantially similar property. Any days during which the U.S. Holder has diminished its risk of loss on our Ordinary Shares are not counted towards meeting the 61-day holding period. Finally, U.S. Holders who elect to treat the dividend income as "investment income" pursuant to Code section 163(d)(4) will not be eligible for the preferential rate of taxation.

The amount of a distribution with respect to our Ordinary Shares will be measured by the amount of the fair market value of any property distributed, and for U.S. federal income tax purposes, the amount of any Israeli taxes withheld therefrom. (See discussion above under "Israeli Tax Considerations - Taxation of Our Shareholders - Dividends.") Cash distributions paid by us in NIS will be included in the income of U.S. Holders at a U.S. dollar amount based upon the spot rate of exchange in effect on the date the dividend is includible in the income of the U.S. Holder, and U.S. Holders will have a tax basis in such NIS for U.S. federal income tax purposes equal to such U.S. dollar value. If the U.S. Holder subsequently converts the NIS, any subsequent gain or loss in respect of such NIS arising from exchange rate fluctuations will be U.S. source ordinary exchange gain or loss.

Distributions paid by us will generally be foreign source income for U.S. foreign tax credit purposes. Subject to the limitations set forth in the Code, U.S. Holders may elect to claim a foreign tax credit against their U.S. income tax liability for Israeli income tax withheld from distributions received in respect of the Ordinary Shares. In general, these rules limit the amount allowable as a foreign tax credit in any year to the amount of regular U.S. tax for the year attributable to foreign source taxable income. This limitation on the use of foreign tax credits generally will not apply to an electing individual U.S. Holder whose creditable foreign taxes during the year do not exceed \$300, or \$600 for joint filers, if such individual's gross income for the taxable year from non-U.S. sources consists solely of certain passive income. A U.S. Holder will be denied a foreign tax credit with respect to Israeli income tax withheld from dividends received with respect to the Ordinary Shares if such U.S. Holder has not held the Ordinary Shares for at least 16 days out of the 31-day period beginning on the date that is 15 days before the ex-dividend date or to the extent that such U.S. Holder is under an obligation to make certain related payments with respect to substantially similar or related property. Any day during which a U.S. Holder has substantially diminished his or her risk of loss with respect to the Ordinary Shares will not count toward meeting the 16-day holding period. A U.S. Holder will also be denied a foreign tax credit if the U.S. Holder holds the Ordinary Shares in an arrangement in which the U.S. Holder's reasonably expected economic profit is insubstantial compared to the foreign taxes expected to be paid or accrued. The rules relating to the determination of the U.S. foreign tax credit are complex, and U.S. Holders should consult with their own tax advisors to determine whether, and to what extent, they are entitled to such credit. U.S. Holders that do not elect to claim a foreign tax credit may instead claim a deduction for Israeli income taxes withheld, provided such U.S. Holders itemize their deductions.

#### **Disposition of Shares**

Except as provided under the PFIC rules described below, upon the sale, exchange or other disposition of our Ordinary Shares, a U.S. Holder will recognize capital gain or loss in an amount equal to the difference between such U.S. Holder's tax basis in the sold Ordinary Shares and the amount realized on the disposition of such Ordinary Shares (or its U.S. dollar equivalent determined by reference to the spot rate of exchange on the date of disposition, if the amount realized is denominated in a foreign currency). The gain or loss realized on the sale or exchange or other disposition of Ordinary Shares will be long-term capital gain or loss if the United States Holder has a holding period of more than one year at the time of the disposition.

In general, gain realized by a U.S. Holder on a sale, exchange or other disposition of Ordinary Shares will generally be treated as U.S. source income for U.S. foreign tax credit purposes. A loss realized by a U.S. Holder on the sale, exchange or other disposition of Ordinary Shares is generally allocated to U.S. source income. However, U.S. Treasury Regulations require such loss to be allocated to foreign source income to the extent specified dividends were received by the taxpayer within the 24-month period preceding the date on which the taxpayer recognized the loss. The deductibility of a loss realized on the sale, exchange or other disposition of Ordinary Shares is subject to limitations.

### **Tax on Net Investment Income**

U.S. Holders who are individuals, estates or trusts will generally be required to pay a 3.8% tax on their net investment income (including dividends on and gains from the sale or other disposition of our Ordinary Shares), or in the case of estates and trusts on their net investment income that is not distributed. In each case, the 3.8% Medicare tax applies only to the extent the U.S. Holder's total adjusted income exceeds applicable thresholds.

### **Passive Foreign Investment Companies.**

Special U.S. federal income tax laws apply to a U.S. Holder who owns shares of a corporation that was (at any time during the U.S. Holder's holding period) a PFIC. We would be treated as a PFIC for U.S. federal income tax purposes for any tax year if, in such tax year, either:

75% or more of our gross income (including our pro rata share of gross income for any company, U.S. or foreign, in which we are considered to own 25% or more of the shares by value), in a taxable year is passive, or the Income Test; or

At least 50% of our assets, averaged over the year and generally determined based upon value (including our pro rata share of the assets of any company in which we are considered to own 25% or more of the shares by value), in a taxable year are held for the production of, or produce, passive income, or the Asset Test.

For this purpose, passive income generally consists of dividends, interest, rents, royalties, annuities and income from certain commodities transactions and from notional principal contracts. Cash is treated as generating passive income.

If we are or become a PFIC, each U.S. Holder who has not elected to treat us as a qualified electing fund by making a "QEF election", or who has not elected to mark the shares to market (as discussed below), would, upon receipt of certain distributions by us and upon disposition of our Ordinary Shares at a gain, be liable to pay U.S. federal income tax at the then prevailing highest tax rates on ordinary income plus interest on such tax, as if the distribution or gain had been recognized ratably over the taxpayer's holding period for the Ordinary Shares. In addition, when shares of a PFIC are acquired by reason of death from a decedent that was a U.S. Holder, the tax basis of such shares would not receive a step-up to fair market value as of the date of the decedent's death, but instead would be equal to the decedent's basis if lower, unless all gain were recognized by the decedent. Indirect investments in a PFIC may also be subject to special U.S. federal income tax rules.

The PFIC taxation regime would not apply to a U.S. Holder who makes a QEF election for all taxable years that such U.S. Holder has held the Ordinary Shares while we are a PFIC, provided that we comply with specified reporting requirements. Instead, each U.S. Holder who has made such a QEF election is required for each taxable year that we are a PFIC to include in income such U.S. Holder's *pro rata* share of our ordinary earnings as ordinary income and such U.S. Holder's *pro rata* share of our net capital gains as long-term capital gain, regardless of whether we make any distributions of such earnings or gain. In general, a QEF election is effective only if we make available certain required information. The QEF election is made on a shareholder-by-shareholder basis and generally may be revoked only with the consent of the IRS. U.S. Holders should consult with their own tax advisors regarding eligibility, manner and advisability of making a QEF election if we are treated as a PFIC.

A U.S. Holder of PFIC shares which are traded on qualifying public markets, including the NASDAQ, can elect to mark the shares to market annually, recognizing as ordinary income or loss each year an amount equal to the difference as of the close of the taxable year between the fair market value of the PFIC shares and the U.S. Holder's adjusted tax basis in the PFIC shares. Losses are allowed only to the extent of net mark-to-market gain previously included income by the U.S. Holder under the election for prior taxable years.

Based on the nature of our business, the projected composition of our income and the projected composition and estimated fair market values of our assets, we likely will be classified as a PFIC. In addition, we may have been a PFIC in prior years and may be a PFIC in the future. U.S. Holders who hold Ordinary Shares during a period when we are a PFIC will be subject to the foregoing rules, even if we cease to be a PFIC, subject to specified exceptions for U.S. Holders who made a QEF or mark-to-market election. U.S. Holders are strongly urged to consult their tax advisors about the PFIC rules, including tax return filing requirements and the eligibility, manner, and consequences to them of making a QEF or mark-to-market election with respect to our Ordinary Shares in the event we that qualify as a PFIC. As with a QEF election, a mark-to-market election is made on a shareholder-by-shareholder basis, applies to all Ordinary Shares held or subsequently acquired by an electing U.S. holder and can only be revoked with consent of the IRS (except to the extent the Ordinary Shares no longer constitute "marketable stock").

### **Information Reporting and Withholding**

A U.S. Holder may be subject to backup withholding (at a rate of 28%) with respect to cash dividends and proceeds from a disposition of Ordinary Shares. In general, back-up withholding will apply only if a U.S. Holder fails to comply with specified identification procedures. Backup withholding will not apply with respect to payments made to designated exempt recipients, such as corporations and tax-exempt organizations. Backup withholding is not an additional tax and may be claimed as a credit against the U.S. federal income tax liability of a U.S. Holder, provided that the required information is timely furnished to the IRS.

# **Foreign Asset Reporting**

Certain U.S. Holders who are individuals may be required to report information relating to an interest in the Ordinary Shares, subject to certain exceptions. U.S. Holders are urged to consult their tax advisors regarding the application of these and other reporting requirements that may apply to their ownership of Ordinary Shares.

### Non-U.S. Holders of Ordinary Shares

Except as provided below, an individual, corporation, estate or trust that is not a U.S. Holder generally will not be subject to U.S. federal income or withholding tax on the payment of dividends on, and the proceeds from the disposition of, our Ordinary Shares.

A non-U.S. Holder may be subject to U.S. federal income or withholding tax on a dividend paid on our Ordinary Shares or the proceeds from the disposition of our Ordinary Shares if: (1) such item is effectively connected with the conduct by the non-U.S. Holder of a trade or business in the United States or, in the case of a non-U.S. Holder that is a resident of a country which has an income tax treaty with the United States, such item is attributable to a permanent establishment or, in the case of gain realized by an individual non-U.S. Holder, a fixed place of business in the United States; (2) in the case of a disposition of our Ordinary Shares, the individual non-U.S. Holder is present in the United States for 183 days or more in the taxable year of the sale and other specified conditions are met; (3) the non-U.S. Holder is subject to U.S. federal income tax pursuant to the provisions of the U.S. tax law applicable to U.S. expatriates.

In general, non-U.S. Holders will not be subject to backup withholding with respect to the payment of dividends on our Ordinary Shares if payment is made through a paying agent, or office of a foreign broker outside the United

States. However, if payment is made in the United States or by a U.S. related person, non-U.S. Holders may be subject to backup withholding, unless the non-U.S. Holder provides on an applicable Form W-8 (or a substantially similar form) a taxpayer identification number, certifies to its foreign status, or otherwise establishes an exemption. A U.S. related person for these purposes is a person with one or more current relationships with the United States.

The amount of any backup withholding from a payment to a non-U.S. Holder will be allowed as a credit against such holder's U.S. federal income tax liability and may entitle such holder to a refund, provided that the required information is timely furnished to the IRS.

#### **UNDERWRITING**

We have entered into an underwriting agreement with the underwriters named below. H.C. Wainwright & Co., LLC is acting as representative of the underwriters.

The underwriting agreement provides for the purchase of a specific number of Ordinary Shares by each of the underwriters. The underwriters' obligations are several, which means that each underwriter is required to purchase a specified number of Ordinary Shares, but is not responsible for the commitment of any other underwriter to purchase Ordinary Shares. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase the number of Ordinary Shares set forth opposite its name below:

Number

Underwriter

Ordinary

Shares

H.C. Wainwright & Co., LLC

Total

The underwriters have agreed to purchase all of the Ordinary Shares offered by this prospectus (other than those covered by the over-allotment option described below) if any are purchased. Under the underwriting agreement, if an underwriter defaults in its commitment to purchase Ordinary Shares, the commitments of non-defaulting underwriters may be increased or the underwriting agreement may be terminated, depending on the circumstances.

The underwriters are offering the Ordinary Shares subject to various conditions and may reject all or part of any order. The representative has advised us that the underwriters propose to offer the Ordinary Shares directly to the public at the public offering price that appears on the cover page of this prospectus. In addition, the representative may offer some of the Ordinary Shares to other securities dealers at such price less a concession of \$ per share. After the Ordinary Shares are released for sale to the public, the representative may change the offering price and other selling terms at various times.

#### **Over-Allotment Option**

We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 45 days after the date of this prospectus, permits the underwriters to purchase a maximum of additional Ordinary Shares

# **Discounts and Commissions**

The following table provides information regarding the amount of the discount to be paid to the underwriters by us:

		Total	Total
	Per Ordinary Share	Without	With Full
		Exercise	Exercise
		of Over-	of Over-
		Allotment	Allotment
		Option	Option
Public offering price	\$	\$	\$
Underwriting discounts and commissions	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

We have agreed to pay the representative a non-accountable expense allowance to equal to \$35,000 and legal fees and expenses of up to \$75,000.

We estimate that our total expenses of the offering, excluding the underwriting discounts and commissions and expenses, will be approximately \$ .

Subject to the consummation of this offering, we have also agreed to provide the representative a right of first refusal for a period of nine months, to act as our lead manager or lead agent with respect to certain future capital raising transactions undertaken by us and tail compensation for nine months in certain circumstances.

#### Indemnification

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

#### **Lock-Up Agreements**

We, our officers and directors and certain of our shareholders have agreed to a 90 day "lock up" with respect to Ordinary Shares and other of our securities beneficially owned, including securities that are convertible into Ordinary Shares and securities that are exchangeable or exercisable for Ordinary Shares. This means that, subject to certain exceptions, for a period of 90 days following the date of this prospectus, we and such persons may not offer, sell, pledge or otherwise dispose of any such securities without the prior written consent of the representative.

# **NASDAQ Listing**

Our Ordinary Shares are listed on the NASDAQ Global Market under the trading symbol "ORPN."

### Price Stabilization, Short Positions and Penalty Bids

Rules of the SEC may limit the ability of the underwriters to bid for or purchase shares before the distribution of the shares is completed. However, the underwriters may engage in the following activities in accordance with the rules:

Stabilizing transactions — The representative may make bids or purchases for the purpose of pegging, fixing or maintaining the price of the shares, so long as stabilizing bids do not exceed a specified maximum.

Over-allotments and syndicate covering transactions — The underwriters may sell more Ordinary Shares in connection with this offering than the number of Ordinary Shares than they have committed to purchase. This over-allotment creates a short position for the underwriters. This short sales position may involve either "covered" short sales or "naked" short sales. Covered short sales are short sales made in an amount not greater than the underwriters' over-allotment option to purchase additional Ordinary Shares in this offering described above. The underwriters may close out any covered short position either by exercising their over-allotment option or by purchasing Ordinary Shares in the open market. To determine how they will close the covered short position, the underwriters will consider, among other things, the price of Ordinary Shares available for purchase in the open market, as compared to the price at which they may purchase Ordinary Shares through the over-allotment option. Naked short sales are short sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing Ordinary Shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that, in the open market after pricing, there may be downward pressure on the price of the Ordinary Shares that could adversely affect investors who purchase Ordinary Shares in this offering.

Penalty bids — If the representative purchases Ordinary Shares in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from the underwriters and selling group members who sold those Ordinary Shares as part of this offering.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales or to stabilize the market price of our Ordinary Shares may have the effect of raising or maintaining the market price of our Ordinary Shares or preventing or mitigating a decline in the market price of our Ordinary Shares. As a result, the price of the shares of our Ordinary Shares may be higher than the price that might otherwise exist in the open market. The imposition of a penalty bid might also have an effect on the price of the Ordinary Shares if it discourages resales of the Ordinary Shares.

Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of the Ordinary Shares. These transactions may occur on The NASDAQ Global Market or otherwise. If such transactions are commenced, they may be discontinued without notice at any time.

*Electronic Delivery of Preliminary Prospectus*: A prospectus in electronic format may be delivered to potential investors by one or more of the underwriters. The electronic format will be identical to the paper version of such preliminary prospectus. Other than the prospectus in electronic format, the information on any underwriter's web site and any information contained in any other web site maintained by an underwriter is not part of this prospectus.

### **Determination of Offering Price**

The public offering price for our Ordinary Shares has been determined by negotiations between us and the representative. Among the factors to be considered in these negotiations were the prevailing market conditions, our financial information, market valuations of other companies that we and the representative believes to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

### **Other Relationships**

From time to time, the underwriters and their affiliates may provide in the future, various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which they have received and may continue to receive customary fees and commissions. However, except as disclosed in this prospectus, we have no present arrangements with the underwriter for any further services.

H.C. Wainwright & Co., LLC acted as our co-placement agent in our registered direct offering consummated in March 2016, for which it received compensation.

### **Notice to Non-U.S. Investors**

# Israel

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the securities offered hereby is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals", each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

# EXPENSES RELATED TO THE OFFERING

We estimate that the total expenses of this offering payable by us, excluding the underwriting discounts and commissions and expenses, will be approximately \$400,000 as listed below. All amounts listed below are estimates except the SEC registration fee, NASDAQ listing fee and the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee.

SEC filing fee	\$1,133
FINRA filing fee	2,225
NASDAQ filing fee	7,500
Transfer agent fees and expenses	6,750
Printer fees and expenses	10,000
Legal fees and expenses	300,000
Accounting fees and expenses	60,000
Miscellaneous	12,392
Total	\$400,000

### **LEGAL MATTERS**

Certain legal matters concerning this offering will be passed upon for us by Zysman, Aharoni, Gayer and Sullivan & Worcester LLP, New York, New York. Certain legal matters with respect to the legality of the issuance of the securities offered by this prospectus will be passed upon for us by Zysman, Aharoni, Gayer & Co., Tel-Aviv, Israel. Certain legal matters related to the offering will be passed upon for the underwriters by Haynes and Boone, LLP, New York, New York.

### **EXPERTS**

Our financial statements for fiscal years ended December 31, 2016 and December 31, 2015, included herein 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 (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements). Such financial statements are included herein in reliance upon such report given on the authority of such firm as experts in accounting and auditing. The address of Kost Forer Gabbay & Kasierer is 3 Aminaday St., Tel Aviv, Israel 67067.

#### **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 and the Israeli experts named in this registration statement, a substantial majority of who reside outside of the United States, may be difficult to obtain within the United States. Furthermore, because substantially all of our assets and substantially all of our directors and officers are located outside of the United States, any judgment obtained in the United States against us or any of our directors and officers may not be collectible within the United States.

We have been informed by our legal counsel in Israel, Zysman, Aharoni, Gayer & Co., that 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 a 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 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.

Subject to specified time limitations and legal procedures, Israeli courts may enforce a U.S. 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 judgment is 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 judgment is final and is not subject to any right of appeal;

the prevailing law of the foreign state in which the judgment was 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 liabilities under the judgment are enforceable according to the laws of the State of Israel and the judgment and the enforcement of the civil liabilities set forth in the judgment is not contrary to the law or public policy in Israel nor likely to impair the security or sovereignty of Israel;

the judgment was 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; and

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

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.

### WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form F-1 under the Securities Act relating to this offering of our Ordinary Shares. This prospectus does not contain all of the information contained in the registration statement.

The rules and regulations of the SEC allow us to omit certain information from this prospectus that is included in the registration statement. Statements made in this prospectus concerning the contents of any contract, agreement or other document are summaries of all material information about the documents summarized, but are not complete descriptions of all terms of these documents. If we filed any of these documents as an exhibit to the registration statement, you may read the document itself for a complete description of its terms.

You may read and copy the registration statement, including the related exhibits and schedules, and any document we file with the SEC without charge at the SEC's public reference room at 100 F Street, N.E., Room 1580, Washington, DC 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., Room 1580, Washington, DC 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. The SEC also maintains an Internet website that contains reports and other information regarding issuers that file electronically with the SEC. Our filings with the SEC are also available to the public through the SEC's website at http://www.sec.gov.

We are subject to the information reporting requirements of the Exchange Act that are applicable to foreign private issuers, and under those requirements are filing reports with the SEC. Those other reports or other information may be inspected without charge at the locations described above. As a foreign private issuer, we are exempt from the rules under the Exchange Act related to the furnishing and content of proxy statements, 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. In addition, we are not required under the Exchange Act to file annual, quarterly and current reports and financial statements with the SEC as frequently or as promptly as United States companies whose securities are registered under the Exchange Act. However, we will file with the SEC, within 120 days after the end of each fiscal year, or such applicable time as required by the SEC, an annual report on Form 20-F containing financial statements audited by an independent registered public accounting firm, and will submit to the SEC, on Form 6-K, unaudited quarterly financial information.

We maintain a corporate website at <a href="https://bioblastpharma.com">https://bioblastpharma.com</a>. Information contained on, or that can be accessed through, our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference. We post on our website any materials required to be so posted on such website under applicable corporate or securities laws and regulations, including, posting any XBRL interactive financial data required to be filed with the SEC and any notices of general meetings of our shareholders.

# BIOBLAST PHARMA LTD.

# BIOBLAST PHARMA LTD. AND ITS SUBSIDIARY

# CONSOLIDATED FINANCIAL STATEMENTS

# AS OF DECEMBER 31, 2016

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Tel-Aviv 6706703, Israel ey.com

### REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of

#### BIOBLAST PHARMA LTD.

We have audited the accompanying consolidated balance sheets of Bioblast Pharma Ltd. and its subsidiary (the "Company") as of December 31, 2016, and 2015, and the related consolidated statements of operations, consolidated changes in shareholders' equity and consolidated cash flows for each of the three years in the period ended December 31, 2016. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by the management, and evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Company as of December 31, 2016, and 2015, and the consolidated results of their operations and their cash flows for each of the three years ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 1, the Company has incurred recurring losses and negative cash flows from operating activities during the year ended December 31, 2016. Its ability to continue to operate is dependent upon obtaining additional financial support. These conditions as described in Note 1, raise substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

Tel-Aviv, Israel /S/ KOST FORER GABBAY & KASIERER February 24, 2017 A Member of EY Global

# CONSOLIDATED BALANCE SHEETS

ASSETS	20 U	December 31, 016 2015 U.S. dollars in thousands, except share ata		
CURRENT ASSETS: Cash and cash equivalents Short-term bank deposits Receivables and prepaid expenses Total current assets	\$	6,871 3,007 663 10,541	\$	7,286 12,046 1,060 20,392
LONG-TERM ASSETS: Long-term assets Property and equipment, net  Total long-term assets		18 71 89		33 91 124
TOTAL ASSETS LIABILITIES AND SHAREHOLDERS' EQUITY	\$	10,630	\$	20,516
CURRENT LIABILITIES: Trade payables Other accounts payable Total current liabilities	\$	700 1,231 1,931	\$	1,412 1,102 2,514
LONG-TERM LIABILITIES  SHAREHOLDERS' EQUITY: Ordinary shares of NIS 0.01 par value - 50,000,000 shares authorized at December 31, 2016 and 2015; 16,391,770 and 14,230,480 issued and		45		70 39
outstanding shares at December 31, 2016 and 2015, respectively Additional paid-in capital Accumulated deficit Total stockholders' equity TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$	48,463 (39,809 ) 8,699 10,630	\$	41,680 (23,787 17,932 20,516

The accompanying notes are an integral part of the consolidated financial statements.

# CONSOLIDATED STATEMENTS OF OPERATIONS

	Year ended December 31,			
	2016	2015	2014	
	U.S. dollars in thousands, except share and per share			
	data			
Research and development	\$ 8,881	\$ 7,694	\$ 4,441	
Pre-commercialization	1,085	829	-	
General and administrative	5,900	6,953	2,639	
<u>Total</u> operating expenses	15,866	15,476	7,080	
Loss from operations	(15,866	) (15,476	) (7,080 )	
Financial income, net	60	135	58	
Loss before taxes on income	(15,806	) (15,341	) (7,022 )	
Taxes on income	(216	) (24	) -	
Net loss	\$ (16,022	) \$ (15,365	) \$ (7,022	
Net loss attributable to Ordinary shareholders	\$ (16,022	) \$ (15,365	) \$ (7,022	
Net loss per share attributable to Ordinary shareholders - basic and diluted	\$ (1.01	) \$ (1.08	) \$ (0.57	
Weighted average number of Ordinary shares outstanding - basic and diluted	15,906,220	14,230,480	12,259,600	

The accompanying notes are an integral part of the consolidated financial statements.

# CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Ordinary sha	res	Additional paid-in	Δccumula		rs'
	Number	Amoun	t <b>Capital</b>	deficit	equity	
	U.S. dollars i	n thousa	nds, except shar	re and per shar	re data	
Balance as of January 1, 2014	9,182,867	\$ 24	\$ 1,551	\$ (1,400	) \$ 175	
Issuance of Ordinary shares (\$0.95 per share), net of issuance costs of \$0	1,065,076	3	1,009	-	1,012	
Issuance of Ordinary shares upon private placement (\$6.07 per share), net of issuance costs of \$382	782,537	3	4,365	-	4,368	
Issuance of Ordinary shares upon initial public offering (\$11.00 per share), net of issuance costs of \$3,795	3,200,000	9	31,396	-	31,405	
Share based compensation	-	-	736	-	736	
Net loss	-	-	-	(7,022	) (7,022	)
Balance as of December 31, 2014	14,230,480	39	39,057	(8,422	) 30,674	
Share based compensation	_	_	2,623	_	2,623	
Net loss	-	-	-	(15,365	) (15,365	)
Balance as of December 31, 2015	14,230,480	39	41,680	(23,787	) 17,932	
Issuance of Ordinary shares and warrants for Ordinary shares in a registered direct offering (\$3.10 per share), net of issuance costs of \$611	2,161,290	6	6,083	-	6,089	
Share based compensation	_	_	700	_	700	
Net loss	-	_	-	(16,022	) (16,022	)
Balance as of December 31, 2016	16,391,770	\$ 45	\$ 48,463	\$ (39,809	) \$ 8,699	•

The accompanying notes are an integral part of the consolidated financial statements.

# CONSOLIDATED STATEMENTS OF CASH FLOWS

	2016	d December 2015 rs in thousa	2014
Cash flows from operating activities  Net loss  Adjustments to reconcile net loss to net cash used in operating activities:	\$(16,022)	\$(15,365)	\$(7,022)
Depreciation and disposal of property and equipment Share based compensation Interest on short-term deposit	38 700 39	17 2,623 (18 )	5 736 (28 )
Changes in operating assets and liabilities:  Decrease (increase) in receivables and prepaid expenses  Decrease (increase) in long-term assets  Increase (decrease) in trade payables  Increase in other accounts payable  Increase (decrease) in long-term liabilities	399 13 (712 ) 129 (70 )	107	,
Net cash used in operating activities	(15,486)	(13,249)	(4,409 )
Cash flow from investing activities			
Withdrawal of (investment in) short-term bank deposits Purchase of property and equipment Net cash provided by (used in) investing activities  Cash flow from financing activities	9,000 (18 ) 8,982	10,000 (48) 9,952	(22,000) (63 ) (22,063)
Issuance of shares and warrants, net Net cash provided by financing activities	6,089 6,089	- -	36,785 36,785
Increase (decrease) in cash and cash equivalents Cash and cash equivalents, beginning of the year	(415 ) 7,286	(3,297) 10,583	10,313 270
Cash and cash equivalents, end of the year	\$6,871	\$7,286	\$10,583
Supplemental disclosures of cash flow information: Cash paid for taxes Cash received for interest	\$210 \$120	\$4 \$162	\$- \$57

The accompanying notes are an integral part of the consolidated financial statements.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### 1. Nature of business and basis of presentation

#### **Nature of business**

Bioblast Pharma Ltd. (the "Parent") was incorporated in Israel and commenced its operations on January 22, 2012. In January 2015, Bioblast Pharma Inc. was established in the state of Delaware as a wholly owned subsidiary (the "Subsidiary"). The Parent and the Subsidiary (together the "Company") are a clinical-stage biotechnology company committed to developing clinically meaningful therapies for patients with rare and ultra-rare genetic diseases. The Company focuses on trehalose, a therapeutic platform that potentially offers solutions for several diseases that share a common pathophysiological mechanism, which are the functional changes that accompany a particular syndrome or disease. The Company focuses on diseases with severe and debilitating manifestations, where the unmet medical need is clear, the biological mechanism of action is understood, and for which there is no satisfactory treatment. Since inception in 2012, the Company has been engaged in the development of potential treatments using trehalose for two diseases, oculopharyngeal muscular dystrophy ("OPMD") and spinocerebellar ataxia type 3 (SCA3; Machado Joseph disease). The Company's ordinary shares ("Ordinary shares") are traded on the NASDAQ Global Market.

The Company has not generated revenue from the sale of any product, and does not expect to generate significant revenue unless and until it obtains marketing approval, and successfully commercializes its products. Since its inception, the Company has financed its operations through issuance of preferred shares, its initial public offering (the "IPO") and a subsequent registered direct offering. The Company recorded a net loss of \$16,022 thousand during the year ended December 31, 2016 and as of December 31, 2016, the Company had an accumulated deficit of \$39,809 thousand. As of December 31, 2016, the Company's cash and short-term bank deposits were \$9,878 thousand. Additional funding beyond its existing cash resources will be required to entirely cover the cost of the Company's planned Phase 2b study in OPMD patients and the underlying expense of the Company's operations while the study is ongoing. The Company plans to continue to fund its losses from operations and capital funding needs through the issuance of equity and/or debt or through collaborations or license agreements with other companies. Equity or debt financing may not be available on a timely basis on terms acceptable to the Company, or at all. If the Company is not able to secure adequate additional funding, the Company may be forced to make reductions in spending, extend payment terms with suppliers, liquidate assets where possible, or suspend or curtail planned programs. Any of these actions could materially harm the Company's business, results of operations and future prospects.

The Company's ability to continue to operate is dependent upon the ability to raise additional financing. These factors raise substantial doubt about the Company's ability to continue as a going concern. The financial statements as of December 31, 2016, do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

The Company is currently developing trehalose, which is the only product candidate that it currently pursues. There can be no assurance that the Company's research and development activities with respect to trehalose will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that trehalose or any other future products the Company may developed will obtain required regulatory approval or that any approved products will be commercially viable. Even if the Company's development efforts are successful, it is uncertain when, if ever, the Company will generate significant product sales. The Company operates in an environment of rapid technological change and substantial competition from pharmaceutical and biotechnology companies

# **Basis of presentation**

The accompanying consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (the "U.S. GAAP") and are stated in U.S. dollars. The consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities in the ordinary course of business.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### Use of estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates, judgment and assumptions that affect the reported amounts of assets, liabilities, expenses and the disclosure of contingent assets and liabilities as of and during the reporting period. The Company bases estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. Significant estimates relied upon in preparing the accompanying consolidated financial statements related to expense recognition, the fair value of Ordinary shares and other equity instruments, accounting for share-based compensation, income taxes, useful lives of long-lived assets, and accounting for certain accruals. The Company assesses the above estimates on an ongoing basis; however, actual results could materially differ from those estimates.

# 2. Summary of significant accounting policies

#### Principles of consolidation

The consolidated financial statements include the accounts of Bioblast Pharma Ltd and its Subsidiary. All significant intercompany balances and transactions have been eliminated in consolidation.

#### Financial statements in U.S. dollars

The Company finances its operations primarily in U.S. dollars, and a significant part of the Company's expenses are denominated and determined in U.S. dollars. The Company's management believes that the U.S dollar is the currency of the primary economic environment in which it operates and expects to continue to operate in the foreseeable future. Thus, the functional currency of the Company is the U.S. dollar.

The Parent and the Subsidiary's transactions and balances denominated in U.S. dollars are presented at their original amounts. Non-dollar transactions and balances have been remeasured to U.S. dollars in accordance with Accounting Standards Codification ("ASC") 830, "Foreign Currency Matters", of the Financial Accounting Standards Board (the "FASB"). All transaction gains and losses from remeasurement of monetary balance sheet items denominated in non-dollar currencies are reflected in the statements of operations as financial income or expenses, as appropriate.

# Cash equivalents

Cash equivalents are short-term highly liquid investments that are readily convertible to cash with original maturities of three months or less at acquisition.

### Short-term bank deposits

Short-term bank deposits are deposits with maturities of more than three months but less than one year. Short-term bank deposits are presented at their amortized cost, including accrued interest, which approximates fair value. As of December 31, 2016, the Company's bank deposits were in U.S. dollars and bore interest at a rate of 1.25% per-annum.

# Segment information

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, the Company's Chief Executive Officer, in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment.

### Concentrations of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents and short-term bank deposits. Cash and cash equivalents and short-term bank deposits are invested in major banks in Israel and the United States. Generally, these deposits may be redeemed upon demand and therefore bear minimal risk. The Company has no off-balance-sheet concentration of credit risk such as foreign exchange contracts, option contracts or other foreign hedging arrangements.

### Fair value of financial instruments

The Company has no financial instruments that are measured at fair value. The carrying amounts of cash and cash equivalents, short-term bank deposits, receivables and prepaid expenses, trade payables and other accounts payable, approximate their fair value due to the short-term maturities of such instruments.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### Property and equipment

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets at the following rates:

%

Computers and software 33 Electronic equipment 15 Office furniture and equipment 6

Leasehold improvements The shorter of term of the lease or the useful life of the asset

### Long-term assets

Long-term assets include long-term deposits related to motor vehicles under operating leases, presented at their cost and deposits to secure credit line for the Company's employee's credit cards. In accordance with FASB Accounting Standards Update ("ASU") 2015-17, long-term assets also include deferred tax assets.

### Impairment of long-lived assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. In 2016, 2015 and 2014, no impairment losses were identified.

#### Contingent liabilities

In the normal course of business, the Company is subject to proceedings, lawsuits, and other claims and assessments. The Company assesses the likelihood of any adverse judgments or outcomes to these matters as well as potential ranges of probable losses. A determination of the amount of reserves required, if any, for these contingencies is made after careful analysis of each individual issue. The required reserves may change in the future due to new developments in each matter or changes in approach such as a change in settlement strategy in dealing with these

matters. We record charges for the losses we anticipate incurring in connection with litigation and claims against us when we conclude a loss is probable and we can reasonably estimate these losses. During the years ended December 31, 2016, 2015, and 2014, we were not subject to any material litigation or claims and assessments.

#### Warrants

Warrants to purchase Ordinary shares issued in connection with an offering of Ordinary shares are classified as a component of shareholders' equity because they are free standing financial instruments that are legally detachable, separately exercisable, do not embody an obligation for the Company to repurchase its own shares, and permit the holders to receive a fixed number of Ordinary shares upon exercise. In addition, the Ordinary shares warrants require physical settlement and do not provide any guarantee of value or return. Ordinary shares warrants are initially recorded at their relative fair value and are not subsequently remeasured.

### Research and development costs

Research and development costs are expensed as incurred. Research and development costs include payroll and personnel expense, share-based compensation expenses related to research and development personnel, consulting costs, external contract research and development expenses, raw materials, drug product manufacturing costs, and allocated overhead including depreciation and amortization, rent, and utilities. Research and development costs that are paid in advance of performance are capitalized as a prepaid expense and amortized over the service period as the services are provided.

Clinical trial costs are a component of research and development expenses. The Company accrues and expenses clinical trial activities performed by third parties on an evaluation of the progress to completion of specific tasks using data such as hours spent in performance of services, patient enrollment, clinical site activation, and other information provided to the Company by its vendors.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

# Share-based compensation

The Company applies ASC 718 and ASC 505-50 "Equity Based Payments to Non-Employees" ("ASC 505-50") with respect to options and warrants issued to non-employee's consultants. The Company accounts for all share-based compensation granted to employees and nonemployees using a fair value method. Share-based compensation is measured at the grant date fair value of employees' and directors' Ordinary share option grants and is recognized over the requisite service period of the awards, usually the vesting period, on the graded vesting attribution method. The expenses are adjusted for actual forfeitures on a quarterly basis. Share-based compensation awards to nonemployees are subject to revaluation over their vesting terms.

For modification of share compensation awards, the Company records the incremental fair value of the modified award as share-based compensation on the date of modification for vested awards or over the remaining vesting period for unvested awards. The incremental compensation is the excess of the fair value of the modified award on the date of modification over the fair value of the original award immediately before the modification.

The Company recognizes, as expense, the estimated fair value of all share-based payments to employees which is determined using the Black-Scholes option pricing model using the graded vesting attribution approach over the vesting period of the award. In periods that the Company grants Ordinary share options, fair value assumptions are based on volatility, interest, dividend yield, and expected term over which the Ordinary share options will be outstanding. The computation of expected volatility is based on an average historical share price volatility based on an analysis of reported data for a peer group of comparable publicly traded companies, which were selected based upon industry similarities. The interest rate for periods within the expected term of the award is based on the U.S. Treasury risk-free interest rate in effect at the time of grant. The expected lives of the options were estimated using the simplified method.

### Income taxes

The consolidated financial statements reflect provisions for Israeli, U.S. federal and state income taxes. Deferred tax assets and liabilities represent future tax consequences of temporary differences between the consolidated financial statement carrying amounts and the tax basis of assets and liabilities and for loss carryforwards using enacted tax rates expected to be in effect in the years in which the differences reverse. A valuation allowance is recorded when it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company determines whether it is more likely than not that a tax position will be sustained upon examination. If it is not more likely than not that a position will be sustained, none of the benefit attributable to the position is recognized. The tax benefit to be recognized for any tax position that meets the more-likely-than-not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. The Company accounts for interest and penalties related to uncertain tax positions as part of its tax expenses.

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### Basic and diluted loss per share

The Company computes basic loss per share attributable to Ordinary shareholders by dividing net loss attributable to Ordinary shareholders by the weighted average number of Ordinary share outstanding for the period. The Company computes diluted loss per Ordinary share after giving consideration to all potentially dilutive Ordinary shares, including Ordinary share options and warrants outstanding during the period except where the effect of such non-participating securities would be antidilutive.

Since the Company reported net loss attributable to Ordinary shareholders for the years ended December 31, 2016, 2015 and 2014, basic and diluted net loss per share attributable to Ordinary shareholders are the same as basic net loss per share attributable to Ordinary shareholders for those periods. All Ordinary shares warrants and Ordinary share options have been excluded from the computation of diluted weighted-average shares outstanding because such securities would have an antidilutive impact due to net losses reported for the years ended December 31, 2016, 2015 and 2014.

### Recently issued accounting pronouncements

In February 2016, the FASB issued ASU 2016-02 - *Leases* ("ASC 842"), which sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract (i.e. lessees and lessors). The new standard requires lessees to apply a dual approach, classifying leases as either finance or operating leases based on the principle of whether or not the lease is effectively a financed purchase by the lessee. This classification will determine whether lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, respectively. A lessee is also required to record a right-of-use asset and a lease liability for all leases with a term of greater than 12 months regardless of their classification. Leases with a term of 12 months or less will be accounted for similar to existing guidance for operating leases today. The new standard requires lessors to account for leases using an approach that is substantially equivalent to existing guidance for sales-type leases, direct financing leases and operating leases. The ASU is expected to impact our consolidated financial statements as we have certain operating lease arrangements. ASC 842 supersedes the previous leases standard, ASC 840 Leases. The standard is effective on January 1, 2019, with early adoption permitted.

The Company is currently evaluating the effect, if any, that the adoption of this new pronouncements will have on the Company's consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17 related to balance sheet classification of deferred taxes. The new guidance requires that deferred tax assets and liabilities to be classified as noncurrent in a classified statement of financial position.

In March 2016, the FASB issued ASU 2016-09, Improvements to Employee Share-Based Payment Accounting. The new guidance will require all income tax effects of awards to be recognized in the income statement when the awards vest or are settled. It will allow an employer to repurchase more of an employee's shares than it can today for tax withholding purposes without triggering liability accounting. It also will allow an employer to make a policy election to account for forfeitures as they occur. The Company elected to adopt the new standards in 2016.

In 2014, the FASB issued ASU 15-2014, *Presentation of Financial Statements-Going Concern* (Subtopic 205-40): Disclosure of uncertainties about an entity's ability to continue as a Going Concern, which defines management's responsibility to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures if there is substantial doubt about its ability to continue as a going concern.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

# 3. Receivables and prepaid expenses

December 31,
2016 2015
U.S. dollars in thousands

Government authorities \$ 52 \$ 145
Prepaid expenses 611 915

\$ 663 \$ 1,060

# 4. Property and equipment, net

December 31

	December 51,				
	2016		20	15	
	U	.S. dolla	rs in th	ousands	
Cost:					
Computers and software	\$	50	\$	54	
Electronic equipment		20		19	
Office furniture and equipment		39		38	
Leasehold improvements		2		2	
	\$	111	\$	113	
Accumulated depreciation:		40		22	
Depreciated cost	\$	71	\$	91	

Depreciation expenses for the years ended December 31, 2016, 2015 and 2014 were \$25 thousands, \$17 thousands, and \$5 thousands, respectively.

During the year ended December 31, 2016, the Company disposed of certain property and equipment generating a net loss of \$13 thousands which were classified as general and administrative expense.

# 5. Other accounts payable

	December 31, 2016 2015 U.S. dollars in thousar		
Employees and payroll accruals Accrued expenses	\$ 677 554 \$ 1,231	\$ 463 639 \$ 1,102	

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

6.

# License agreements

The Company entered into a research and exclusive license agreement with Yissum Research Development Company of the Hebrew University in Jerusalem Ltd. ("Yissum"), for the use, development and commercialization of TAT-MTS-Protein for protein replacement in mitochondrial diseases. The consideration to Yissum was composed of a tiered low single digit royalty on net sales and a sublicense fee that will not exceed twenty (20) percent of the sublicense consideration, however, if the sublicense arises from the sales of a product, the sublicense fee shall not be less than a low single digit percent of the gross sales of such product. On September 30, 2016, the Company terminated the license agreement with Yissum and surrendered all rights and titles to the licensed product and related data.

The Company entered into an exclusive license agreement with Ramot at Tel Aviv University Ltd. ("Ramot") for the use, development and commercialization of a read-through platform. The consideration to Ramot was composed of a tiered low single digit royalty on net sales and a sublicense fee that in the single digit percent range of payments or other consideration that the Company receives in connection with a sublicense. On November 29, 2016, the Company executed a mutual termination agreement with Ramot pursuant to which it surrendered all rights and titles to the platform and related data. In addition, pursuant to the mutual termination agreement and under certain conditions the Company may be entitled to future royalty payments.

### 7. Commitments and contingent liabilities

The Parent entered into an operating lease agreement for its facilities in Israel until June 2020, while maintaining the right to terminate the lease agreement under certain conditions during its term. To secure its obligation under the lease agreement, the Parent provided bank guarantees in the amount of \$26 thousands. The lease expenses for those facilities for the years ended December 31, 2016, 2015 and 2014 amounted to \$100 thousands, \$104 thousands, and \$120 thousands, respectively.

The Subsidiary entered into short-term operating lease agreements for office facilities in New Haven, CT and in Doylestown, PA. The combined lease expenses for those facilities for the years ended December 31, 2016 and 2015 amounted to \$80 thousands and \$36 thousands, respectively. The Subsidiary terminated both lease agreements during October, 2016.

The Parent entered into an operating lease agreement for certain vehicles provided to its employees until 2019. To secure its obligation under the lease agreement, the Parent provided a cash deposits in the total amount of \$13 thousands, of which \$11 thousands were classified as long-term assets and \$2 thousand as part of prepaid expenses. The vehicles lease expenses for the years ended December 31, 2016, 2015 and 2014 amounted to \$46 thousands, \$43 thousands and \$25 thousands, respectively.

Future minimum non-cancelable payments under these lease agreements as of December 31, 2016, are as follows:

December 31, 2016 U.S. dollars in thousands

2017 \$ 113 2018 75 \$ 188

As permitted under Israeli law, the Parent indemnifies its officers, directors, and employees for certain events or occurrences that happen by reason of the relationship with, or position held at, the Company. Through December 31, 2016, the Company had not experienced any losses related to these indemnification obligations, and no claims were outstanding. The Company does not expect significant claims related to these indemnification obligations and, consequently, concluded that the fair value of these obligations is negligible, and no related reserves were established.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

8.

### **Ordinary shares**

On January 26, 2014, the Company effected the issuance of 6.55-to-1 bonus shares, which was equivalent to a 7.55-to-1 share split. As a result, all Ordinary shares, options for Ordinary shares, exercise price and earnings per share amounts for periods prior to January 2014, were adjusted retrospectively.

The Ordinary shares confer upon their holders the right to participate and vote in general shareholders' meetings of the Company and to participate in the distribution of dividends, if any, declared by the Company.

In June 2013, the Company entered into a share purchase agreement according to which, the Company issued a total of 2,130,159 Ordinary shares at a price of \$0.95 per share for total net consideration of \$2,024 thousand, in two equal installments: June 2013 and January 2014.

On February 6, 2014, the Company issued 782,537 Ordinary shares to private placement investors at a price of \$6.07 per share for total net consideration of \$4,368 thousand, net of related costs.

On August 5, 2014, the Company completed an IPO of 3,200,000 Ordinary shares at a price of \$11.00 per share for total net consideration of \$31,405 thousands, after deducting underwriting discounts and commissions and other issuance expenses.

On March 22, 2016, the Company completed a registered direct offering of 2,161,290 Ordinary shares at a price of \$3.10 per share for total net consideration of \$6,089 thousands, after deduction underwriting commissions and other issuance expenses.

9. Warrants

The following Ordinary shares warrants were issued by the Company in 2016:

	Shares of Ordinary Shares		_	
	Underlying	Exercise Price	Issuance	Expiration
	Warrants	Per Share	Date	Date
Issued In connection with: Registered direct offering of Ordinary shares	1,080,645	\$ 4.50	March 22, 2016	September 22, 2021
Total	1,080,645			

The Ordinary shares warrants are exercisable at any time following September 22, 2016 and through their expiration dates

10.

### Share incentive plan

In December 2013, the Company adopted the 2013 Incentive Option Plan (the "2013 Plan"), which provided for the grant of incentive Ordinary share options and nonqualified Ordinary share options to employees, directors, and nonemployees of the Company. As of December 31, 2016, the Company granted a total of 3,345,960 options to purchase Ordinary shares. Option awards generally expire 10 years from the grant date and generally vest over four years, but vesting conditions can vary at the discretion of the Company's board of directors (the "Board"). As of December 31, 2016, 694,179 shares of Ordinary shares remain available for future grants under the 2013 Plan.

The fair value of each Ordinary share option issued was estimated at the date of grant using the following weighted-average assumptions:

	Year ended December 31,				
	2016	2015	2014		
Risk-free interest rate	1.18%-2.06%	1.30% -1.90%	1.55%-2.21%		
Expected option term (years)	5.00-7.00	5.12-7.00	5.12-7.00		
Expected price volatility	79.34%-90.65%	70.40%-83.74%	69.49% - 84.63%		
Dividend yield	0%	0%	0%		

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A summary of option activity as of December 31, 2016, and the year then ended is presented below:

	Number of Stock Options	Weigh Averag	ge	Weighted- Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding, January 1, 2016	2,103,502	\$ 5.8		8.52	\$1,584,753
Exercised	- -	φ J.o -	1	0.32	\$1,364,733
Granted	1,658,416	\$ 2.2	1		
Forfeited/Expired	(1,110,137)	\$ 6.1	6		
Outstanding, December 31, 2016	2,651,781	\$ 3.4	1	7.74	\$419,840
Exercisable, December 31, 2016	1,300,224	\$ 4.4	7	6.00	\$419,696
Vested and expected to vest, December 31, 2016	2,651,781	\$ 3.4	1	7.74	\$419,840

The weighted-average grant date per-share fair value of Ordinary shares options granted during 2016, 2015, and 2014 were \$1.56, \$4.16, and \$4.10, respectively. At December 31, 2016, there was \$1,309 thousands of unrecognized compensation cost related to Ordinary share options, which is expected to be recognized over a weighted-average period of 3.0 years.

Share-based compensation expense is classified in the consolidated statements of operations as follows:

	December 2016 U.S. do thousand	2015 ollars in	2014
Research and development expenses	\$531	\$381	\$83
Pre-commercialization expenses	(147)	159	-
General and administrative expenses	316	2,083	653
-	\$700	\$2,623	\$736

During 2016, and primarily as result of the workforce reductions discussed in Note 13, 1,110,137 Ordinary share options were forfeited. As a result of said forfeitures \$1,424 thousands of previously recognized share-based compensation expenses were reversed, of which \$130 thousands, \$287 thousands and \$1,007 thousands, were recorded in the research and development expenses, pre-commercialization expenses and general and administrative expenses, respectively.

During 2016, the Company modified the terms of certain outstanding Ordinary shares options by extending exercisability of the options through the first anniversary of termination of employment. In addition, during 2015, the Company modified terms of certain outstanding Ordinary shares options by (a) extending exercisability of the options through the first anniversary of termination of employment, and (b) accelerating the vesting of Ordinary shares options upon termination of employment. The incremental compensation expense, resulting from comparing the fair value of Ordinary shares options immediately before and immediately after the modifications, for the year ended December 31, 2015 totaled \$46 thousands There was no incremental compensation related to the 2016 modification. The incremental compensation expenses for the year ended December 31, 2015 were classified as general and administrative expense in the accompanying consolidated financial statements.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

11. Income taxes

Loss before provision for income taxes consists of the following:

December 31, 2016 2015 2014 U.S. dollars in thousands

Domestic (Israel) \$15,765 \$13,388 \$7,022 Foreign (US) 41 1,953 -\$15,806 \$15,341 \$7,022

The components of income tax provision consist of the following:

December 31, 2016 2015 2014 U.S. dollars in thousands

Current Provision for income taxes:

Domestic (Israel)	\$ 5	\$ -	\$ -
Foreign (U.S)	166	24	-
Total current provision for income taxes	\$ 171	\$ 24	\$ -
Previous years adjustments – foreign	50	-	-
Deferred tax benefit – foreign	(5	) -	-
Total provision for income tax	\$ 216	\$ 24	\$ -

A reconciliation setting forth the differences between the effective tax rates of the Company and the Israeli statutory tax rate is as follows:

December 31,

2016 2015 2014

25.00 % 26.50 % 26.50 %

Israeli tax provision at statutory rate

Foreign/state rate differences	(0.32)%	(0.22)%	0.00 %
Non-deductible stock based compensation	(1.11)%	(4.53)%	(2.54)%
Previous years taxes	(0.47)%	0.00 %	0.00 %
Differences form which deferred taxes were not recorded	0.19 %	0.20 %	0.00 %
Changes in valuation allowance	(18.39)%	(22.02)%	(5.35)%
Adjustment of deferred taxes due to tax rate changes	(5.89)%	0.00 %	0.00 %
Other permanent differences	(0.38)%	(0.09)%	(18.61)%
	(1.37)%	(0.16)%	0.00 %

The Subsidiary is taxed under U.S. tax law. The federal corporate tax rate (progressive) is up to 35%, excluding state tax. State tax rates vary and are dependent on the state in which the Subsidiary conducts its business.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets are as follows:

	December 2016	r 31, 2015		
	U.S. dollars in thous			
Operating loss roll forward	\$ 5,685	\$ 3,580		
Reserves and allowances	1,956	2,185		
Net deferred tax asset before valuation allowance	7,641	5,765		
Valuation allowance	(7,636	) (5,765	)	
	\$ 5	\$ -		

When realization of a deferred tax asset is more likely than not to occur, the benefit related to the deductible temporary differences attributable to operations is recognized as a reduction of income tax expense. Valuation allowances are provided against deferred tax assets when, based on all available evidence, it is considered more likely than not that some portion or all of the recorded deferred tax assets will not be realized in future periods. The Company cannot be certain that future Israeli taxable income will be sufficient to realize its deferred tax assets. Accordingly, a full valuation allowance has been provided against its Israeli net deferred tax assets. The Company continues to monitor the need for a valuation allowance based on the profitability of its future operations.

The Parent has accumulated losses for tax purposes as of December 31, 2016, in the amount of \$24,717 thousands, which may be carried forward and offset against taxable income in the future for an indefinite period.

The Company files income tax returns in Israel, in the United States and in various U.S. states. The associated tax filings remain subject to examination by applicable tax authorities for a certain length of time following the tax year to which those filings relate. In Israel and the United States all tax years since inception remain subject to examination by the applicable taxing authorities as of December 31, 2016.

As of December 31, 2016, the Company provided a liability of \$24 thousands, for uncertain tax positions related to various income tax matters from prior years, which was classified as other long-term liabilities. These uncertain tax positions would affect the Company's effective tax rate, if recognized. The Company does not expect that the amounts

of uncertain tax positions will change significantly within the next 12 months.

**12.** 

**Related party transactions** 

Balances with related parties:

December 31, 2016 2015 U.S. dollars in thousands

Other accounts payables \$ 1 \$ 132

Related parties' expenses:

Year Ended December 31, 2016 2015 2014 U.S. dollars in thousands

Research and development expense \$ 318 \$ 312 \$ 145

General and administrative expense \$ 207 \$ 196 \$ 467

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

In August 2013, the Company entered in to a consulting agreement with an entity owned by one of its shareholders who was also a co-founder and a member of the Board. Pursuant to the agreement, the shareholder was appointed as the Company's chief financial officer in consideration for a monthly fee of \$6 thousand. In April 2014, the agreement was amended and restated to affect, upon the consummation of the Company's IPO (which took place in August 2014), an increase of the monthly fee to a total of \$15 thousands as well as pay a one-time bonus in the amount of \$80 thousand. During 2015, the Company paid a subsequent one-time bonus to the shareholder in the amount of \$70 thousands in connection with services rendered. As of January 2016, following the appointment of a new chief financial officer, the consulting agreement was amended and restated. Pursuant to such amendment, the shareholder was appointed as a special advisor to the chief executive officer with no change to his remuneration. In June 2016, the Company terminated the amended and restated consulting agreement effective as of February 2017.

In September 2013, the Company entered into a services agreement with a company owned by one of its shareholders who was also a co-founder and a member of the Board. Pursuant to the agreement the Company leased an office facility and received office administration services in consideration for a monthly fee of \$6 thousand. The agreement was terminated in September 2014.

During December 2015, the Company paid a \$15 thousand one-time fee to an employee of an entity owned by one of the Company's shareholders who was also a co-founder and a member of the Board, for administration support services provided during 2015. In addition, during 2015, the Company paid \$1 thousand to a family member of the shareholder in connection with services provided related to leasehold improvements of the Parent's new offices. Such payment was recorded to leasehold improvement as part of property and equipment.

In August 2013, the Company entered in to a consulting agreement with an entity owned by one of its shareholders who was also a co-founder and a member of the Board. Pursuant to the agreement, the shareholder was appointed as the Company's chief executive officer in consideration for a monthly fee of \$15 thousand. In April 2014, the agreement was amended and restated to affect, upon the consummation of the Company's IPO (which took place in August 2014), an increase of the monthly fee to of \$19 thousands, as well as, pay a one-time bonus in the amount of \$90 thousand. As of January 2015, following the appointment of a new chief executive officer, the consulting agreement was terminated and the Company's shareholders approved the entry into an employment agreement, pursuant to which the shareholder was appointed as chief development officer of the Company, and was entitled to a gross annual salary of \$250 thousand. Such agreement was never executed. In November 2015, effective retrospectively as of January 2015, the consulting agreement was amended and restated (and the employment agreement was terminated). Pursuant to such amendment, the shareholder was appointed as a special advisor to the chief executive officer and was entitled to a monthly fee of \$28 thousand. In June 2016, the Company terminated the amended and restated consulting agreement effective December 2016.

In July 2013, the Company entered into a two-year services agreement with one of its shareholders, to render consulting services in consideration for a monthly fee of \$1 thousand. The agreement expired in July 2015. Effective as of August, 2014, the shareholder received an annual compensation of \$25 thousand, for services rendered as a member of the Board. As of August 2016, such annual director's fee was increased to a total of \$30 thousand per year. In addition, in August 2016, the Company granted to a member of its Board, who is a principal of the shareholder, 30,000 options to purchase Ordinary shares at an exercise price of \$1.62 per share.

### 13. Employee benefits plan

Pursuant to the Israeli Severance Pay Law 1963 (the "Israeli Severance Pay Law"), Israeli employees are entitled to severance pay equal to one month's salary for each year of employment, or a portion thereof. The Israeli employees of the Company agreed to the terms set forth under Section 14 of the Israeli Severance Pay Law, according to which amounts deposited in severance pay funds by the Company shall be the only severance payments released to the employee upon termination of employment, voluntarily or involuntarily. As a result, no assets or liabilities are recorded in the accompanying consolidated balance sheets, as the Company is legally released from the obligation to employees once the deposit amount has been paid. Such payments are recorded as severance expenses. The severance expenses for the years ended December 31, 2016, 2015 and 2014 amounted to \$65 thousand, \$131 thousands, and \$34 thousands, respectively.

Since 2015, the Company's U.S. operations maintain a retirement plan (the "U.S. Plan") that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Participants in the U.S. Plan may elect to defer a portion of their pre-tax earnings, up to the Internal Revenue Service annual contribution limit. The Company matches 100% of each participant's contributions up to 4%. Contributions to the U.S. Plan are recorded during the year contributed as an expense in the consolidated statement of operations. Total employer 401(k) contributions for the years ended December 31, 2016 and 2015 were\$42 thousands, \$11 thousands, respectively.

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

In June 2016, following a decision to downsize the Company and focus on one product platform, the Subsidiary terminated the employment agreements of certain employees. These employees were entitled to payments upon their involuntary termination. The employee termination process was completed by the end of 2016. During the year ended December 31, 2016, the Subsidiary paid a total of \$1,907 thousands, termination related payments to departing employees, of which \$145 thousands and \$1,762 thousands were recorded as research and development and general and administrative expenses, respectively. In addition, as of December 31, 2016, the Subsidiary accrued a total of \$19 thousands related to termination benefits of departing employees, to be paid during 2017.

14.

### Financial income, net

Financial income, net are as follows:

	Year Ended December 31,			
	2016	2015	2014	
	U.S. dol	lars in the	ousands	
Interest income	\$ 90	\$ 186	\$ 85	
Loss on foreign currency transactions, net	(22)	(39	(21)	
Other expenses	(8)	(12)	(6)	
Total	\$ 60	\$ 135	\$ 58	

15. Quarterly Financial Data (unaudited)

Three mont	th ended			
Morob 21	Juna 20	September	December	
Maich 51,	Julie 30,	30,	31,	
2016	2016	2016	2016	
U.S. dollars	s in thousand	s, except for pe	er share data	
\$ (4,492 )	\$ (3,722)	\$ (4,578	) \$ (3,074	)
(4,594)	(3,685)	(4,670	) (3,073	)
(4,594)	(3,685)	(4,670	) (3,073	)
\$ (0.32)	\$ (0.22	\$ (0.28	) \$ (0.19	)
	March 31, 2016 U.S. dollars \$ (4,492 ) (4,594 )	2016 2016 U.S. dollars in thousand \$ (4,492 ) \$ (3,722 ) (4,594 ) (3,685 ) (4,594 ) (3,685 )	March 31, June 30, September 30, 2016 2016 2016 2016 U.S. dollars in thousands, except for per (4,492 ) \$ (3,722 ) \$ (4,578 (4,594 ) (3,685 ) (4,670 (4,594 ) (3,685 ) (4,670 )	March 31, June 30, September 30, 31, 2016 2016 2016 2016 2016 U.S. dollars in thousands, except for per share data \$ (4,492 ) \$ (3,722 ) \$ (4,578 ) \$ (3,074 (4,594 ) (3,685 ) (4,670 ) (3,073 (4,594 ) (3,685 ) (4,670 ) (3,073

	Three month ended			
	Monah 21	Juna 20	September	December
	March 31,	June 30,	30,	31,
	2015	2015	2015	2015
	U.S. dollars	in thousands	, except for per	share data
Loss from operations	\$ (3,318)	\$ (3,738)	\$ (3,587 )	\$ (4,833 )
Net loss	(3,299 )	(3,686)	(3,551)	(4,829)
Net loss attributable to Ordinary shareholders	(3,299 )	(3,686)	(3,551)	(4,829)
Net loss per share attributable to Ordinary shareholders - basic and diluted	\$ (0.23)	\$ (0.26 )	\$ (0.25)	\$ (0.34)

-.-.-.

\$10,000,000	
Ordinary Shares	
PROSPECTUS	
H.C. Wainwright & Co.	
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### **PART II**

### INFORMATION NOT REQUIRED IN PROSPECTUS

### Item 6. Indemnification of Directors, Officers and Employees

Under the Israeli Companies Law 5759-1999, or the Companies Law, a company may not exculpate an office holder from liability for a breach of a fiduciary duty. An Israeli company may exculpate an office holder in advance from liability to the company, in whole or in part, for damages caused to the company as a result of a breach of duty of care but only if a provision authorizing such exculpation is included in its articles of association. Our amended and restated articles of association include such a provision. The company may not exculpate in advance a director from liability arising out of a prohibited dividend or distribution to shareholders.

Under the Companies Law and the Israeli Securities Law, 5728-1968, or the Israeli Securities Law a company may indemnify, or undertake in advance to indemnify, an office holder for the following liabilities and expenses, imposed on office holder or incurred by office holder due to acts performed by him or her as an office holder, provided its articles of association include a provision authorizing such indemnification:

financial liability incurred by or imposed on him or her in favor of another person pursuant to a judgment, including a settlement or arbitrator's award approved by a court. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such an undertaking must be limited to events which in the opinion of the Board of Directors can be foreseen based on the company's activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the Board of Directors as reasonable under the circumstances, and such undertaking shall detail the abovementioned foreseen events and amount or criteria.

reasonable litigation expenses, including attorneys' fees, incurred by the office holder as a result of an investigation or proceeding instituted against him or her by an authority authorized to conduct such investigation or proceeding, provided that (1) no indictment was filed against such office holder as a result of such investigation or proceeding and (2)(i) no financial liability, such as a criminal penalty, was imposed upon him or her as a substitute for the criminal proceeding as a result of such investigation or proceeding or, (ii) if such financial liability was imposed, it was imposed with respect to an offense that does not require proof of criminal intent or as a monetary sanction;

·reasonable litigation expenses, including attorneys' fees, incurred by the office holder or imposed by a court in proceedings instituted against him or her by the company, on its behalf or by a third party or in connection with criminal proceedings in which the office holder was acquitted or as a result of a conviction for a crime that does not

require proof of criminal intent; and

expenses, including reasonable litigation expenses and legal fees, incurred by an office holder in relation to an ·administrative proceeding instituted against such office holder, or certain compensation payments required to be made to an injured party, pursuant to certain provisions of the Israeli Securities Law.

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

a breach of duty of loyalty to the company, provided that the office holder acted in good faith and had a reasonable basis to believe that the act would not harm the company;

a breach of duty of care to the company or to a third party, including a breach arising out of the negligent conduct of an officer; and

financial liability imposed on the office holder in favor of a third party.

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Without derogating from the aforementioned, subject to the provisions of the Companies Law and the Israeli Securities Law, we may, also enter into a contract to insure an office holder, in respect of expenses, including reasonable litigation expenses and legal fees, incurred by an office holder in relation to an administrative proceeding instituted against such office holder or payment required to be made to an injured party, pursuant to certain provisions of the Israeli Securities Law.

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

a breach of fiduciary duty, except for indemnification and insurance for a breach of the duty of loyalty to the company in the event office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;

a breach of duty of care committed intentionally or recklessly, excluding a breach arising out of the negligent conduct of the office holder;

- an act or omission committed with intent to derive unlawful personal benefit; or
- a fine, monetary sanction, penalty or forfeit levied against the office holder.

The Israeli Securities Law provides that a company cannot obtain insurance against or indemnify a third party (including its officers and/or employees) for any administrative procedure conducted by the Israeli Securities Authority and/or monetary fine (other than for certain legal expenses and payments of damages to an injured party). The Israeli Securities Law permits insurance coverage and/or indemnification for certain liabilities incurred in connection with an administrative procedure, such as reasonable legal fees and certain compensation payable to injured parties for damages suffered by them, provided that such insurance and/or indemnification is permitted under the company's articles of association. Our amended and restated articles of association contain such a provision.

Under the Companies Law, exculpation, indemnification and insurance of office holders require the approval of our Compensation Committee, our Board of Directors and, in certain circumstances, by our shareholders.

Our amended and restated articles of association permit us to exculpate, indemnify and insure our office holders to the fullest extent permitted by the Companies Law and Israeli Securities Law.

We have obtained directors' and officers' liability insurance for the benefit of our office holders and intend to continue to maintain such coverage and pay all premiums thereunder to the fullest extent permitted by the Companies Law, the Israeli Securities Law and our amended and restated articles of association. In addition, we have entered into agreements with each of our office holders undertaking to indemnify them to the fullest extent permitted by Israeli law, including with respect to liabilities resulting from this offering to the extent that these liabilities are not covered by insurance. In the opinion of the SEC, however, indemnification of directors and office holders for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, is against public policy and therefore unenforceable.

It is our intention to include in our office holders compensation policy to be brought for approval of the shareholders following the initial issuance of the securities hereunder (and as required under the Companies Law) applicable provisions with respect to directors' and officers' liability insurance for the benefit of our office holders, as well as with respect to indemnification of office holders.

### **Item 7. Recent Sales of Unregistered Securities**

Set forth below are the sales of all securities by the Company during the three years preceding this offering, which were not registered under the Securities Act. We believe that each of such issuances was exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act.

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In March 2016, in connection with a registered direct offering, we issued unregistered warrants to purchase up to approximately 1.08 million Ordinary Shares with an exercise price of \$4.50. The warrants are initially exercisable six months following issuance and have a term of five and one-half years following issuance. Roth Capital Partners and Rodman & Renshaw, a unit of H.C. Wainwright & Co., acted as the exclusive placement agents for this transaction.

From time to time we have issued options to purchase Ordinary Shares under our 2013 Incentive Option Plan, as amended, or our 2013 Plan, for which we have not yet filed a registration statement on Form S-8. In the past three years we have issued options to purchase an aggregate of 253,321 Ordinary Shares under our 2013 Plan, with a weighted average exercise price of \$1.65 per share, for which no registration statement has been filed. We may in the future register the Ordinary Shares underlying these options.

#### **Item 8. Exhibits and Financial Statement Schedules**

#### **Exhibits:**

Exhibit	
Number	Exhibit Description
1.1*	Form of Underwriting Agreement by and among Bioblast Pharma Ltd. and the underwriters named therein.
3.1	Amended and Restated Articles of Association of the Company, filed as Exhibit 3.2 to Form F-1/A filed
	on July 8, 2014 (File No. 333-193824), and incorporated herein by reference.
4.1	Form of Ordinary Share Purchase Warrant issued to investors on March 22, 2016, filed as Exhibit 4.1 to
	Form 6-K filed on March 18, 2016 (File No. 001-36578), and incorporated herein by reference.
5.1*	Opinion of Zysman, Aharoni, Gayer & Co., Israeli counsel to Bioblast Pharma Ltd., as to the validity of
	the Ordinary Shares being offered (including consent).
10.1	Bioblast Pharma Ltd. 2013 Incentive Option Plan, as amended, filed as Exhibit 4.1 to Form 20-F filed on
	March 29, 2016 (File No. 001-36578), and incorporated herein by reference.
10.2	Bioblast Pharma Ltd. Compensation Policy for Company Office Holders, included in Exhibit 99.1 to Form
	6-K filed on March 31, 2015 (File No. 001-36578), and incorporated herein by reference.
10.3	Form of Indemnification Agreement, filed as Exhibit 10.4 to Form F-1/A filed on April 8, 2014 (File No.
	333-193824) and incorporated herein by reference.
23.1	Consent of Kost Forer Gabbay & Kasierer (a Member of EY Global).
23.2	Consent of Zysman, Aharoni, Gayer & Co. (included in Exhibit 5.1).
24.1**	Power of Attorney (included on the signature page of the Registration Statement).

<sup>\*</sup> To be filed by amendment.

<sup>\*\*</sup> Previously filed and filed again herewith with respect to an additional director.

#### **Financial Statement Schedules:**

All financial statement schedules have been omitted because either they are not required, are not applicable or the information required therein is otherwise set forth in our financial statements and related notes thereto.

### Item 9. Undertakings

- (a) The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.
- (b) The undersigned registrant hereby undertakes:
- To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

i. to include any prospectus required by section 10(a)(3) of the Securities Act;

ii. to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

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

That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment 2. shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

To file a post-effective amendment to the registration statement to include any financial statements required by Item 8.A. of Form 20-F at the start of any delayed offering or throughout a continuous offering. Financial statements and information otherwise required by Section 10(a)(3) of the Act need not be furnished, provided that the registrant includes in the prospectus, by means of a post-effective amendment, financial statements required pursuant to this paragraph (a)(4) and other information necessary to ensure that all other information in the prospectus is at least as current as the date of those financial statements.

That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of 5. sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- ii. Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- ... The portion of any other free writing prospectus relating to the offering containing material information about the iii. undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- iv. Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions described in Item 6 hereof, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
- (d) The undersigned registrant hereby undertakes that:
- For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a 2. form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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### **SIGNATURES**

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-1 and has duly caused this registration statement on Form F-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Tel Aviv, Israel on March 15, 2017.

#### BIOBLAST PHARMA LTD.

By:/s/ Fredric Price Fredric Price,

Executive Chairman of the Board of Directors and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement on Form F-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Fredric Price Fredric Price	Executive Chairman of the Board of Directors, Chief Executive Officer	March 15, 2017
/s/ Chaime Orlev Chaime Orlev	Chief Financial Officer, Vice President of Finance and Administration	March 15, 2017
/s/ * Michael Burshtine	Director	March 15, 2017
/s/ * Thomas I.H. Dubin	Director	March 15, 2017
/s/ * Colin Foster	Director	March 15, 2017

March 15, /s/ \* Director 2017 Robert Friedman March 15, /s/ \* Director 2017 Marlene Haffner March 15, /s/ \* Director 2017 Dr. Dalia Megiddo Ran Nussbaum Director March 15, /s/ \* Director 2017 Dr. Ralf Rosskamp \*By: /s/ Fredric Price Fredric Price

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Attorney-in-fact

# SIGNATURE OF AUTHORIZED REPRESENTATIVE IN THE UNITED STATES

Pursuant to the Securities Act, as amended, the undersigned, Zysman, Aharoni, Gayer and Sullivan & Worcester LLP, the duly authorized representative in the United States of Bioblast Pharma Ltd. has signed this registration statement on March 15, 2017.

/s/ ZYSMAN, AHARONI, GAYER AND SULLIVAN & WORCESTER LLP

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