Filed Pursuant to Rule 424(b)(1)
Registration No. 333-207379
Registration No. 333-207940

PROSPECTUS

6,375,000 Shares

Ordinary Shares

We are offering 6,375,000 of our ordinary shares. This is our initial public offering and no public market currently exists for our ordinary shares. The initial public offering price is $16.00 per share.

Our ordinary shares have been approved for listing on the NASDAQ Global Market under the symbol “WVE.”

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

Investing in our ordinary shares involves risks. See the section titled “Risk Factors” beginning on page 15.

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

	PER SHARE	TOTAL
Public offering price	$ 16.00	$102,000,000
Underwriting discounts and commissions (1)	$ 1.12	$ 7,140,000
Proceeds to WAVE Life Sciences Ltd., before expenses	$ 14.88	$ 94,860,000

(1) We refer you to the section titled “Underwriting” for additional information regarding underwriter compensation.

Entities affiliated with RA Capital Management, LLC and certain other entities affiliated with our directors have indicated an interest in purchasing an aggregate of approximately $32.0 million of our ordinary shares in this offering at the initial public offering price. In addition, Teva Pharmaceutical Industries Ltd. has indicated an interest in purchasing an aggregate of up to approximately $30.0 million of our ordinary shares in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these entities and any of these entities could determine to purchase more, less or no shares in this offering.

Delivery of the ordinary shares is expected to be made on or about November 16, 2015. We have granted the underwriters an option for a period of 30 days to purchase up to an additional 956,250 ordinary shares solely to cover over-allotments. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $8.2 million, and the total proceeds to us, before expenses, will be $109.1 million.

Joint Book-Running Managers

Jefferies **Leerink Partners**

Co-Managers

JMP Securities **SunTrust Robinson Humphrey**

Prospectus dated November 10, 2015.

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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 and the underwriters have not authorized anyone to provide you with information that is different from that contained in such prospectuses. We are offering to sell our ordinary shares, and seeking offers to buy our ordinary shares, only in jurisdictions where such offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our ordinary shares.

PROSPECTUS SUMMARY

The following is a summary of information discussed elsewhere in this prospectus, and does not contain all the details concerning our business, our ordinary shares or other information that you should consider in making your investment decision. See the section titled "Business" for more information. You should carefully review this entire prospectus, including the information set forth in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes, before making an investment decision. As used in this prospectus, unless the context otherwise indicates, references to "WAVE," the "company," "we," "our," "us" or similar terms refer to WAVE Life Sciences Ltd. and our wholly-owned subsidiaries. References in this prospectus to "S$" refer to Singapore dollars, "¥" refer to Japanese yen and "€" refer to euros.

Our Company

Overview

We are a preclinical biopharmaceutical company with an innovative and proprietary synthetic chemistry drug development platform that we are using to design, develop and commercialize a broad pipeline of first-in-class or best-in-class nucleic acid therapeutic candidates. Nucleic acid therapeutics have the potential to address diseases that have been difficult to treat with small molecule drugs or biologics. Currently, there are two nucleic acid therapeutics that have received regulatory approval by the U.S. Food and Drug Administration, or FDA, and others are in development. We are initially developing nucleic acid therapeutics that target genetic defects to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins.

The nucleic acid therapeutics we are developing are stereopure, meaning they are comprised of molecules having atoms uniformly arranged in three-dimensional orientations, which we believe is advantageous for making drugs with consistent pharmacologic properties. The stereopure therapies we are developing differ from the mixture-based nucleic acid therapeutics currently on the market and in development by others. Those therapies are mixtures of many thousands of molecules, each having varying three-dimensional atomic arrangements. Such variations may lead to potentially differing pharmacologic properties, with some constituent molecules producing therapeutic effects and others being less beneficial or even contributing to undesirable side effects. Building upon the innovative work of our scientific founders, Gregory L. Verdine, Ph.D. and Takeshi Wada, Ph.D., our preclinical studies have demonstrated that our stereopure nucleic acid therapeutics may achieve superior drug properties as compared to mixture-based nucleic acid therapeutics. Our platform is designed to enable us to rationally design, optimize and produce stereopure nucleic acid therapeutics. Further, it has the potential to be used to design therapies that utilize any of the major molecular mechanisms employed by nucleic acid therapeutics, including antisense, ribonucleic acid interference, or RNAi, and exon skipping, as described below.

Our goal is to develop disease-modifying drugs for indications with a high degree of unmet medical need, in both orphan and broad diseases. We are initially focused on designing single-stranded nucleic acid therapeutics that can distribute broadly within the human body, allowing us to target diseases across multiple organ systems and tissues, through both systemic and local administration.

Our most advanced therapeutic programs are in Huntington's disease, Duchenne muscular dystrophy, or DMD, and inflammatory bowel disease, or IBD.

- In Huntington's disease, we have programs targeting two disease-associated single nucleotide polymorphisms, or SNPs, within the *huntingtin* gene – HTT SNP-1 and HTT SNP-2. SNPs are naturally occurring variations within a given genetic sequence and in certain instances can be used to distinguish between two related copies of a gene where only one is responsible for causing production of a defective protein and causing disease. It has been shown that by targeting HTT SNP-1 and HTT SNP-2, the production of disease-causing proteins associated with Huntington's disease can be

prevented. We have selected a lead product candidate in our HTT SNP-1 program and we expect to select a lead candidate in our HTT SNP-2 program in early 2016. We expect to file investigational new drug applications, or INDs, with the FDA for our candidate targeting HTT SNP-1 in late 2016 and our candidate targeting HTT SNP-2 in early 2017.

- In DMD, we have a program targeting Exon 51, a region within the ribonucleic acid, or RNA, transcribed from the *dystrophin* gene. DMD is a genetic disorder caused by mutations in the *dystrophin* gene, including those in Exon 51, that result in dysfunctional Dystrophin protein, and it has been shown that production of functional Dystrophin protein can be restored by targeting Exon 51. We have selected a lead product candidate in our Exon 51 program and expect to file an IND with the FDA for this candidate in late 2016.
- In IBD, we have a program targeting the RNA transcribed from the *SMAD7* gene. Overproduction of the SMAD7 protein has been shown to increase gastro-intestinal, or GI, inflammation and exacerbate IBD. It has also been demonstrated that by targeting the RNA transcribed from the *SMAD7* gene, the overproduction of the SMAD7 protein can be suppressed, thereby decreasing GI inflammation. We expect to select a lead candidate in our SMAD7 program in early 2016. We expect to file an IND with the FDA for this candidate in 2017.

We also have late-stage discovery programs in epidermolysis bullosa simplex, or EBS, and in DMD.

- In EBS, we are targeting KRT14 SNP-1 and KRT14 SNP-2. EBS is caused by mutations in the *KRT14* gene, which result in the production of defective KRT14 proteins that manifest the symptoms of EBS. KRT14 SNP-1 and KRT14 SNP-2 are disease-associated SNPs within the *KRT14* gene, and we have shown in preclinical experiments that by targeting these SNPs selective reduction in the expression of the disease associated gene can be achieved. We expect to identify lead candidates in our KRT14 SNP-1 and KRT14 SNP-2 programs in 2016.
- In DMD, we are also developing therapies targeting Activin Receptor type IIb, or AcRIIb, that can promote skeletal muscle growth. It has been shown that such muscle growth can be promoted by silencing the RNA transcribed from the gene encoding AcRIIb. We believe that targeting AcRIIb could be beneficial in cases where DMD has progressed to a state of advanced muscle damage, where exon-skipping therapies (including the candidates we are developing in our exon-skipping DMD program) may be less effective. We expect to identify a lead candidate in our AcRIIb program in 2016.

Furthermore, we believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for approximately 25 other potential target indications, mostly consisting of orphan indications, with an initial focus on orphan neuromuscular and central nervous system disease targets.

We believe that we have a strong intellectual property position relating to the development and commercialization of our stereopure nucleic acid therapeutics. Our intellectual property portfolio includes filings designed to protect stereopure oligonucleotide compositions generally, as well as filings designed to protect stereopure compositions of oligonucleotides with particular stereochemical patterns (for example, that affect or confer biological activity). Oligonucleotides are chemically modified, short-length strands of RNA or deoxyribonucleic acid, or DNA. Our portfolio also includes filings on both methods and reagents that are designed to protect various features of the chemical methodologies that enable production of such stereopure oligonucleotide compositions. Our portfolio also includes filings designed to protect methods of using stereopure oligonucleotide compositions and filings designed to protect particular stereopure oligonucleotide products, such as those having a particular sequence, pattern of nucleoside or backbone modification, or both, pattern of backbone linkages and pattern of backbone chiral centers. A chiral center is an atom that is bonded to a defined set of pendant groups arranged in three-dimensional space in a way that is not superimposable on its mirror image.

We believe that our technology provides us with a unique position in the therapeutic oligonucleotide marketplace. Due to prior or expected patent expirations and patent invalidations, we believe that a variety of useful and effective oligonucleotide chemistries, such as certain backbone and sugar modifications, that have been developed in the industry will be available to the public prior to when we expect our drugs will be commercialized. Therefore, we believe that we can readily incorporate these chemistries or other chemistries into our stereopure drugs. Moreover, our strategy does not require or rely on a particular chemistry or any particular nucleotide sequence, thus permitting us to navigate the intellectual property landscape in the field while developing our novel and proprietary oligonucleotide drugs.

Nucleic Acid Therapeutics

A majority of traditional therapeutic modalities, such as small molecule drugs and biologics, work by interacting with proteins that contribute to the disease. However, there are thought to be a limited number of "druggable" proteins; it is currently estimated that approximately 80% of human protein targets cannot be addressed by these conventional approaches. In contrast, directing medicines to the ribonucleic acid, or RNA, which is critical to the production of proteins, rather than to the proteins themselves, has the potential to significantly increase the number of druggable targets.

Nucleic acid therapeutics is a large and innovative class of drugs that can modulate the function of target RNAs to ultimately affect the production of disease-associated proteins. Nucleic acid therapeutics employ a number of different molecular mechanisms to regulate protein production. These mechanisms can be broadly categorized as those that promote degradation of the target RNA, including antisense and RNAi, and those that involve binding to the target RNA and modulating its function by promoting exon skipping and RNA-guided gene editing.

The nucleic acid therapeutics we are currently developing employ the following techniques:

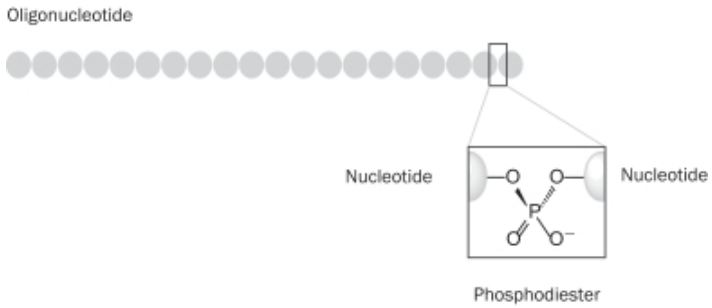
- **Antisense**, which refers to a technology that utilizes a therapeutic oligonucleotide designed to bind to a specific sequence in a target RNA strand that encodes a disease-associated protein. The resulting two-stranded molecule, or duplex, is then recognized by a cellular enzyme called RNase H, which cleaves, or cuts, the duplex molecule, thereby preventing the disease-associated protein from being made.
- **RNA interference**, or RNAi, which refers to a technology that utilizes a therapeutic oligonucleotide designed to bind to a specific sequence in a target RNA that encodes a disease-associated protein. This target RNA molecule is then recognized and cleaved by an enzyme known as Argonaut, or Ago2, thereby preventing the disease-associated protein from being made.
- **Exon skipping**, which refers to a technology that utilizes a therapeutic oligonucleotide designed to bind to a particular sequence within a target RNA and direct the cellular machinery to delete, or splice, the defect out of that RNA. Often, the underlying defect in the target RNA is a mutation that includes a "stop" instruction, so that, absent the therapeutic oligonucleotide, a truncated and defective protein is produced. Use of the exon-skipping oligonucleotide permits the cellular machinery to skip over the "stop" instruction and assemble a partially functional protein, thereby mitigating or alleviating the disease that would otherwise result from the genetic mutation.

The unique capability of nucleic acid therapeutics to address a wide range of genomic targets across multiple therapeutic areas has the potential to create significant market opportunities to develop drugs to treat a broad spectrum of human diseases, including diseases where no medicines currently exist or for which existing treatments are suboptimal.

Design of Nucleic Acid Therapeutics

A large subset of nucleic acid therapeutics are comprised of chemically modified, short-length RNA or deoxyribonucleic acid, or DNA, strands, commonly known as oligonucleotides. Oligonucleotides are comprised of a sequence of nucleotides—the building blocks of RNA and DNA—that are linked together by a backbone of chemical bonds.

In nucleic acid molecules that have not been modified for therapeutic use, the nucleotides are linked by phosphodiester bonds, as shown below.



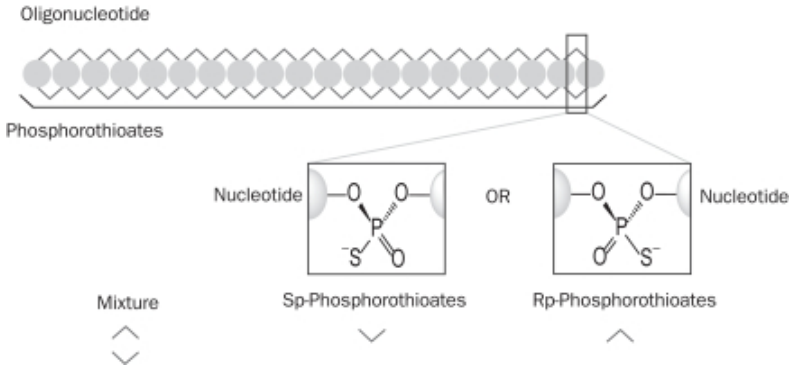
Such unmodified nucleic acid molecules are unsuitable for use as therapeutics because they are rapidly degraded by enzymes called nucleases that are widely present in the human body, are rapidly cleared by the kidneys and have poor uptake into targeted cells. The industry has employed chemical modifications of the nucleotides and phosphodiester bonds to improve the stability, biodistribution and cellular uptake of nucleic acid therapeutics.

Phosphorothioate, or PS, modification was one of the earliest and remains one of the most common backbone modifications used in nucleic acid therapeutics. In PS modification, one of the nonbridging oxygen (O) atoms bonded to a phosphorus (P) atom is replaced with a sulfur (S) atom. PS modification has been shown to improve the stability of oligonucleotides by making them less susceptible to enzymatic degradation. Further, PS bond-containing oligonucleotides often show increased binding to plasma proteins, which improves biodistribution by preventing rapid renal excretion of these molecules.

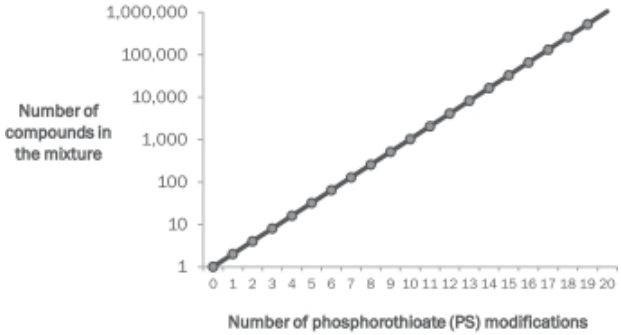
PS modification is accepted as state-of-the-art in the nucleic acid therapeutics field. The two nucleic acid therapeutics that have received regulatory approval, mipomersen and fomiversen, as well as a large majority of nucleic acid therapeutics currently in development, employ PS modification. We believe that PS modification will remain a critical component of this class of therapeutics.

PS Modification Results in Complex Drug Mixtures

A consequence of using PS modification in oligonucleotide synthesis is that it creates a chiral center at each phosphorus, each of which is designated as either an “Sp” or “Rp” configuration. This chirality creates stereoisomers, which, as shown below, have identical chemical composition but different three-dimensional arrangement of their atoms and consequently different chemical and biological properties.



The configuration of each PS modification occurs randomly during conventional nucleic acid synthesis. Because oligonucleotides are comprised of numerous nucleotides and associated PS modifications—with each PS modification having a random chiral configuration—the synthesis process generates an exponentially large number of stereoisomers of the synthesized oligonucleotide. Specifically, each linkage of an additional nucleotide residue doubles the number of stereoisomers of the product, so that a conventional preparation of a PS-containing oligonucleotide is in fact a highly heterogeneous mixtures of 2^N stereoisomers, where N represents the number of PS modifications. For instance, as shown below, a conventional fully PS-modified oligonucleotide (20 nucleotides in length, 19 PS modifications) in fact is a mixture of over 500,000 stereoisomers, each having the same nucleotide sequence but differing in the stereochemistry along their backbones.



Stereoisomers often possess different chemical and pharmacologic properties. For example, certain stereoisomers can drive the therapeutic effects of a drug while others can be less beneficial or can even contribute to undesirable side effects. The greater the variation among a drug's constituent stereoisomers, the greater the potential to diminish the drug's efficacy and safety.

Up until now, it has not been possible to create stereopure PS-modified nucleic acid therapeutics—meaning drugs comprised entirely of the same stereoisomer—because of an inability to specifically control the configuration of each chiral PS linkage during chemical synthesis. Moreover, because of the sheer number of stereoisomers present in a mixture, it would be impractical, if not impossible, to physically isolate the most therapeutically optimal stereoisomer from within a mixture. For these reasons, all of the PS-modified nucleic acid therapeutics currently on the market and in development by others are mixtures of many stereoisomers, which we believe are not optimized for stability, catalytic activity, efficacy or toxicity.

In small molecule therapeutics, U.S. regulators have long sought to eliminate the risks potentially posed by drug mixtures containing multiple stereoisomers. Since 1992, the FDA has recommended full molecular characterization of stereoisomers within small molecule drug mixtures. Historically, it has not been possible to achieve such characterization of nucleic acid therapeutic drug mixtures, which can contain tens of thousands to millions of distinct pharmacologic entities. Based on our preclinical studies, we believe we have the ability to design and synthesize stereopure PS-modified nucleic acid therapeutics, which in preclinical models have shown superior drug properties compared with mixture-based nucleic acid therapeutics. We believe our drug development platform has the potential to set a new industry standard for the molecular characterization of complex nucleic acid therapeutic drug mixtures.

Our Solution: Controlling Stereochemistry in Nucleic Acid Therapeutics

We have developed proprietary technology that, for the first time, enables the development of PS-modified nucleic acid therapeutics in which stereochemistry is precisely controlled. This degree of control enables us to both rationally design and synthesize therapeutically optimized stereopure nucleic acid therapeutics.

We have discovered and expect to continue to identify fundamental relationships between pharmacology and the three-dimensional orientation or arrangement of atoms within an oligonucleotide, including stability, catalytic activity, specificity, safety and immunogenicity, which we believe have the potential to lead to

improved efficacy and durability of effect. We have designed and synthesized stereopure PS-modified drugs that, in preclinical studies, have demonstrated superior stability or potency, or both, as compared to their respective parent drug mixtures, which may result in increased durability of effect, as well as specificity and decreased immune activity. Therefore, we expect our stereopure PS-modified drugs to have improved safety profiles and to be dosed at lower concentrations or less frequently, or both, compared with mixture-based nucleic acid therapeutics. We are using these discoveries to guide our drug development activities.

Advantages of Our Approach

We believe that our innovative and proprietary synthetic chemistry drug development platform is a significant advance in the development of nucleic acid therapeutics. The advantages of our approach include:

- ***Ability to design drugs rationally with optimized pharmacological properties***. Our platform reduces susceptibility to enzymatic degradation and renal clearance and optimizes interactions with proteins that mediate activity as well as those that affect safety and tolerability. Our ability to improve pharmacologic stability and reduce clearance can enhance the biodistribution of single-stranded oligonucleotides to multiple tissues following systemic administration without the need for additional delivery technology.
- ***Broad applicability***. Our platform is applicable to multiple RNA-targeting approaches, including antisense, RNAi, exon-skipping, RNA-guided gene editing, microRNA and others, and is compatible with a broad range of chemical modifications and targeting moieties.
- ***Proprietary production of stereopure nucleic acid therapeutics***. Our scientific personnel have developed expertise in the techniques required to produce the limited supplies of PS-modified stereopure nucleic acid therapeutics needed for our preclinical activities. We believe we have the intellectual property position and know-how necessary to protect, advance and scale these production processes.

Proof of Concept of Our Technology

We have demonstrated in preclinical models, predictive of human biology, that direct relationships exist between stereochemistry and pharmacology, and that these relationships can be used to rationally design and construct nucleic acid therapeutics. In proof-of-concept studies, we examined diverse sets of oligonucleotides designed and synthesized using our platform, which allowed us to characterize and compare the behavior of various stereoisomers. These preclinical studies have demonstrated that by controlling stereochemistry, we can optimize multiple aspects of pharmacology, including stability, catalytic activity, specificity, safety and immunogenicity, which we believe have the potential to lead to improved efficacy and durability of effect. See “Business—Proof of Concept of Our Technology” for greater detail. As with any drug under development, we cannot be certain that our stereopure nucleic acid therapeutics will demonstrate in humans the same favorable pharmacologic properties we have observed in the preclinical studies we have conducted to date. See “Risk Factors—Risks Related to the Discovery, Development and Commercialization of Our Product Candidates” for a discussion of the risks associated with the development of pharmaceuticals, and nucleic acid therapeutics in particular.

Our Strategy

We are leveraging our innovative platform to design, develop and commercialize optimized nucleic acid therapeutics that address important unmet medical needs. The key components of our strategy are as follows:

- ***Rapidly advance product candidates***. We are initially focused on designing single-stranded nucleic acid therapeutics that can distribute broadly within the human body, allowing us to target diseases across multiple organ systems and tissues, through both systemic and local administration. Our most advanced therapeutic programs are in Huntington’s disease, DMD and IBD. In Huntington’s disease, we have programs targeting HTT SNP-1 and HTT SNP-2; in DMD, we are targeting Exon 51; and in IBD, we are targeting SMAD7. We have selected lead product candidates in our programs targeting HTT SNP-1 and Exon 51, and we expect to select lead candidates in our HTT SNP-2 and SMAD7 programs in early 2016. We expect to file INDs with the FDA for each of these candidates in 2016

and early 2017. We also have late-stage discovery programs in epidermolysis bullosa simplex, in which we are targeting KRT14 SNP-1 and KRT14 SNP-2, and in DMD, in which we are focused on an additional DMD target, AcRIIb. We expect to identify lead candidates for these programs in 2016.

- ***Expand our pipeline in the area of orphan diseases***. We intend to continue to expand our pipeline in the area of orphan diseases to provide multiple opportunities for clinical and commercial success and demonstrate the breadth of our abilities across multiple organ systems and tissues and therapeutic modalities. We believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for approximately 25 other target indications, mostly consisting of orphan indications, with an initial focus on orphan neuromuscular and central nervous system disease targets.
- ***Establish opportunistic strategic partnerships***. We intend to collaborate selectively and opportunistically with pharmaceutical and biotechnology companies in the development and commercialization of nucleic acid therapeutics targeting certain orphan and broad indications. We expect to pursue such partnerships primarily when we believe they will significantly accelerate and enhance the clinical and commercial potential of a given development program.
- ***Leverage and expand our intellectual property portfolio***. We believe we have a strong intellectual property position relating to the design, development and commercialization of stereopure nucleic acid therapeutics. We intend to file new patent applications and take other steps to leverage, expand and enforce our intellectual property position.
- ***Maintain and extend our leadership in oligonucleotide stereochemistry***. We plan to establish a dominant position in the field of oligonucleotide stereochemistry, advancing basic research and pharmacology across multiple therapeutic modalities and target classes.

Our Pipeline

We are developing nucleic acid therapeutics that are capable of targeting diseases in a wide range of organ systems and tissues. Based on our design principles, we have demonstrated in preclinical studies our ability to rapidly design and select lead therapeutic candidates with optimized pharmacological properties.

Our most advanced therapeutic programs are in Huntington's disease, DMD and IBD. In Huntington's disease, we have programs targeting HTT SNP-1 and HTT SNP-2; in DMD, we are targeting Exon 51; and in IBD, we are targeting SMAD7. We have selected lead product candidates in our programs targeting HTT SNP-1 and Exon 51, and we expect to select lead candidates in our HTT SNP-2 and SMAD7 programs in early 2016. We expect to file INDs with the FDA for each of these candidates in 2016 and early 2017. See "Business—Our Initial Therapeutic Candidates" for more information about these targets.

We also have late-stage discovery programs in epidermolysis bullosa simplex, in which we are targeting KRT14 SNP-1 and KRT14 SNP-2, and in DMD, in which we are focused on an additional DMD target, AcRIIb. We expect to identify lead candidates for these programs in 2016. See "Business—Our Late-Stage Discovery Programs" for more information about these targets.

Our therapeutic and late-stage discovery programs are summarized in the table below.

			MECHANISM OF ACTION			MILESTONES	
			SILENCING				
TISSUE	DISEASE	TARGET	ALLELE SPECIFIC	NON-ALLELE SPECIFIC	EXON SKIPPING	NEXT 12 MONTHS	12-24 MONTHS
Therapeutic programs							
CNS	Huntington's disease	HTT SNP-1	ü			IND-enabling studies	File IND, initiate Phase 1/2a
CNS	Huntington's disease	HTT SNP-2	ü			Candidate selection	File IND, initiate Phase 1/2a
Neuromuscular	Duchenne muscular dystrophy	Exon 51			ü	IND-enabling studies	File IND, initiate Phase 1/2a
GI	Inflammatory bowel disease	SMAD7		ü		Candidate selection	File IND, initiate Phase 1/2a
Late-stage discovery programs							
Skin	Epidermolysis bullosa simplex	KRT14 SNP-1	ü			Lead optimization, candidate selection	File IND, initiate Phase 1/2a
Skin	Epidermolysis bullosa simplex	KRT14 SNP-2	ü			Lead optimization, candidate selection	File IND, initiate Phase 1/2a
Neuromuscular	Duchenne muscular dystrophy	AcRIIb		ü		Lead optimization, candidate selection	File IND, initiate Phase 1/2a

We also have early-stage discovery programs in which we are focused on screening activities and lead optimization for potential drug candidates targeting eye, hepatic and neuromuscular and central nervous system diseases.

We believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for a number other target indications, mostly consisting of orphan indications.

Recent Private Placement

In August 2015, we completed a private placement of our Series B preferred shares, which was led by institutional investor Foresite Capital. Other new investors included entities affiliated with Fidelity Management and Research Company, New Leaf Venture Partners, Redmile Group, Jennison Associates (on behalf of certain clients), Cormorant Asset Management and certain private investment funds advised by Clough Capital Partners L.P. Our existing shareholders, RA Capital Management LLC and Kagoshima Shinsangyo Sosei Investment Limited Partnership, also participated in this private placement. Net proceeds from this private placement were approximately $62.5 million.

Risks Related to Our Business

Our business is subject to a number of risks you should be aware of before making an investment decision. These risks are discussed more fully in the "Risk Factors" section of this prospectus immediately following this prospectus summary. These risks include, among others, the following:

- We are a preclinical biopharmaceutical company with a history of losses, expect to continue to incur losses for the foreseeable future and may never achieve or maintain profitability. We have not produced any meaningful revenues and have not generated any product revenues to date. We do not expect to generate any product revenue for the foreseeable future.
- We will require substantial additional funding, which may not be available on acceptable terms, or at all.
- The approach we are taking to discover and develop nucleic acid therapeutics is novel and may never lead to marketable products. Furthermore, relatively few nucleic acid therapeutic product candidates

have been tested on humans, and a number of clinical trials for such therapeutics conducted by other companies have not been successful. Only two nucleic acid therapeutics have received regulatory approval by the FDA. The drugs we are studying may not demonstrate in patients the pharmacological properties ascribed to them in laboratory studies, and they may interact with human biological systems in unforeseen, ineffective or harmful ways.

- All of our therapeutic programs are still in the preclinical development stage. If we are unable to successfully complete preclinical and clinical development and commercialize product candidates, our business will be materially harmed.
- We have no experience conducting and managing the clinical trials necessary to obtain regulatory approval, including approval by the FDA, or otherwise advancing product candidates through the regulatory approval process.
- Even if we receive regulatory approval to market product candidates, the market may not be receptive to our product candidates upon their commercial introduction, which will prevent us from becoming profitable.
- The pharmaceutical market is intensely competitive. If we are unable to compete effectively with existing drugs, new treatment methods and new technologies, we may be unable to commercialize successfully any drugs that we develop.
- Intellectual property rights of third parties could adversely affect our ability to commercialize our product candidates, and we might be required to litigate or obtain licenses from third parties in order to develop or market our product candidates. Such litigation or licenses could be costly or not available on commercially reasonable terms. If we are unable to protect the confidentiality of our trade secrets, our business and competitive position will be harmed.
- We are subject to the laws of Singapore, which differ in certain material respects from the laws of the United States, including the Singapore Code on Take-Overs and Mergers pursuant to which a person acquiring 30% or more of our voting shares is required to conduct a takeover offer for all of our voting shares.

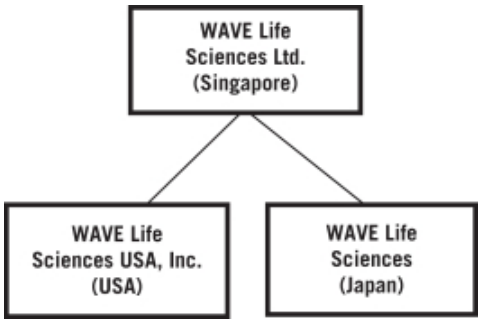
If we are unable to adequately address these and other risks we face, our business, financial condition, operating results and prospects may be adversely affected.

Emerging Growth Company Status

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, enacted in April 2012. We intend to take advantage of certain exemptions under the JOBS Act from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002, reduced disclosure obligations regarding executive compensation and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments not previously approved. We may take advantage of these exemptions for up to five years or until we are no longer an emerging growth company, whichever is earlier.

Corporate History and Information

WAVE Life Sciences Pte. Ltd. (Registration No.: 201218209G) was incorporated under the laws of Singapore on July 23, 2012. In connection with this offering, on November 5, 2015, WAVE Life Sciences Pte. Ltd. converted from a private limited company to a Singapore public limited company known as WAVE Life Sciences Ltd., or WAVE. WAVE has two wholly-owned subsidiaries: WAVE Life Sciences USA, Inc., or WAVE USA, a Delaware corporation (formerly Ontorii, Inc.), and WAVE Life Sciences (Japan), or WAVE Japan, a company organized under the laws of Japan (formerly Chiralgen., Ltd.). Our therapeutic development research and development activities are conducted in WAVE USA's facilities and our process development research and development activities are conducted in WAVE Japan's facilities.



Our registered office is located at 8 Cross Street #10-00, PWC Building, Singapore 048424, and our telephone number at that address is +65 6236 3388. Our U.S. office and the WAVE USA office is located at 733 Concord Avenue, Cambridge, MA 02138, and our telephone number at that address is +1-617-949-2900. WAVE Japan's office is located at OHBIC 108, 12-75 Suzaki Uruma-shi, Okinawa, 904-2234, Japan. Our corporate website address is www.wavelifesciences.com. The information on our website is not part of this prospectus, and you should not consider any information contained on, or that can be accessed through, our website in deciding whether to purchase our ordinary shares.

The WAVE Life Sciences Ltd. and WAVE Life Sciences Pte. Ltd. names, the WAVE Life Sciences mark, and the other trademarks, trade names and service marks of WAVE Life Sciences Ltd. appearing in this prospectus are the property of WAVE Life Sciences Ltd. WAVE has applied to register certain of its trademarks in the United States. This prospectus also contains additional trade names, trademarks and service marks belonging to WAVE Life Sciences Ltd. and to other companies. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such reference should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

THE OFFERING

Ordinary shares offered by us	6,375,000 shares
Ordinary shares to be outstanding after this offering	20,933,297 shares (or 21,889,547 ordinary shares if the underwriters exercise their option to purchase additional ordinary shares in full)
Series A preferred shares to be outstanding after this offering	3,901,348 shares
Total ordinary shares and Series A preferred shares to be outstanding after this offering	24,834,645 shares (or an aggregate of 25,790,895 ordinary shares and Series A preferred shares if the underwriters exercise their option to purchase additional ordinary shares in full)
Option to purchase additional ordinary shares	We have granted the underwriters an option to purchase up to an additional 956,250 ordinary shares from us within 30 days of the date of this prospectus.
Voting rights	Upon the closing of this offering, we will have two classes of outstanding securities: ordinary shares and Series A preferred shares. The rights of the Series A preferred shares will be identical to the ordinary shares, other than having: (1) no voting rights other than in limited circumstances, (2) a liquidation preference equal to $0.0024743 per Series A preferred share, or an aggregate of $9,653 based on the number of Series A preferred shares currently outstanding, and (3) the right to convert the Series A preferred shares at any time on a one-for-one basis into ordinary shares at the discretion of the holder. See “Description of Share Capital.”
Use of proceeds	We estimate that the net proceeds from this offering to us will be approximately $91.3 million (or approximately $105.5 million, if the underwriters exercise their option to purchase additional ordinary shares in full), based on the initial offering price of $16.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering to fund our most advanced therapeutic programs and advance our late-stage discovery programs, including to select our lead product candidates in those programs, to advance our early-stage discovery programs, to expand our pipeline further, for working capital and for other general corporate purposes. See “Use of Proceeds.”
Dividend policy	We have never declared or paid any dividends on our ordinary shares. We do not currently anticipate declaring or paying any cash dividends on our ordinary shares for the foreseeable future. See “Dividend Policy.”

Risk factors	You should read the section titled “Risk Factors” for a discussion of factors to consider carefully before deciding to invest in our ordinary shares.
NASDAQ listing symbol	“WVE”

Entities affiliated with RA Capital Management, LLC and certain other entities affiliated with our directors have indicated an interest in purchasing an aggregate of approximately $32.0 million of our ordinary shares in this offering at the initial public offering price. In addition, Teva Pharmaceutical Industries Ltd. has indicated an interest in purchasing an aggregate of up to approximately $30.0 million of our ordinary shares in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these entities and any of these entities could determine to purchase more, less or no shares in this offering.

The number of our ordinary shares to be outstanding immediately after this offering is based on 14,558,297 ordinary shares outstanding as of June 30, 2015, and excludes:

- 1,844,770 ordinary shares issuable upon the exercise of options outstanding as of June 30, 2015, with an exercise price of $2.47 per share, plus 169,942 ordinary shares issuable upon the exercise of options granted subsequent to June 30, 2015, with a weighted average exercise price of $7.77 per share;
- 462,960 ordinary shares reserved for future issuance under our 2014 Equity Incentive Plan, or the 2014 Plan, as of June 30, 2015, plus an additional 2,396,016 ordinary shares reserved for future issuance subsequent to June 30, 2015; and
- 3,901,348 outstanding Series A preferred shares which can be converted at any time on a one-for-one basis into ordinary shares at the discretion of the holder.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- the conversion of all outstanding Series B preferred shares into 5,334,892 ordinary shares prior to the closing of this offering;
- a 4.0415917-for-1 forward share split of our ordinary shares, our Series A preferred shares and our Series B preferred shares effected on November 1, 2015;
- no exercise by the underwriters of their option to purchase up to an additional 956,250 ordinary shares from us;
- the effectiveness of our amended and restated memorandum and articles of association in connection with this offering; and
- no exercise of any outstanding options after June 30, 2015.

SUMMARY CONSOLIDATED FINANCIAL DATA

You should read the following summary consolidated financial data together with our consolidated financial statements and related notes included elsewhere in this prospectus and the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." We have derived the summary consolidated statements of operations data for the years ended December 31, 2013 and 2014 from our audited consolidated financial statements appearing elsewhere in this prospectus. The summary consolidated statements of operations data for the six months ended June 30, 2014 and 2015 and the consolidated balance sheet data as of June 30, 2015 have been derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus and have been prepared on the same basis as our audited consolidated financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the consolidated financial information in those statements. Our consolidated historical results are not necessarily indicative of the results that should be expected in the future, and our consolidated results for the six months ended June 30, 2015 are not necessarily indicative of the results that should be expected for the full year ending December 31, 2015.

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Revenue	$ —	$ —	$ —	$ 152
Operating expenses:				
Research and development	1,920	2,395	1,087	3,457
General and administrative	1,654	2,999	1,173	3,789
Total operating expenses	3,574	5,394	2,260	7,246
Loss from operations	(3,574)	(5,394)	(2,260)	(7,094)
Other (expense) income:				
Interest expense	(111)	(12)	(12)	(15)
Other, net	37	261	215	43
Total other (expense) income	(74)	249	203	28
Loss before income taxes	(3,648)	(5,145)	(2,057)	(7,066)
Income tax benefit (provision)	330	(84)	(60)	(99)
Net loss	$ (3,318)	$ (5,229)	$ (2,117)	$ (7,165)
Net loss per share attributable to ordinary shareholders—basic and diluted (1)	$ (1.90)	$ (1.34)	$ (0.60)	$ (0.82)
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted (1)	1,743,014	3,911,556	3,553,626	8,729,072

(1) See Note 10 to our consolidated financial statements appearing elsewhere in this prospectus for further details on the calculation of net loss per share attributable to ordinary shareholders, basic and diluted.

	As of June 30, 2015		
	Actual	Pro Forma (1)	Pro Forma as Adjusted (1)(2)
		(unaudited)	
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash	$ 7,779	$ 70,279	$ 161,539
Working capital	6,134	68,634	159,894
Total assets	11,596	74,096	164,687
Total liabilities	2,633	2,633	1,964
Accumulated deficit	(23,041)	(23,041)	(23,041)
Total shareholders' equity	8,963	71,463	162,723

(1) The pro forma balance sheet data reflects the issuance of 5,334,892 Series B preferred shares in exchange for net proceeds of approximately $62.5 million, which occurred in August 2015, and the conversion of those shares into an aggregate of 5,334,892 ordinary shares.

(2) The pro forma as adjusted balance sheet data further reflects the issuance of 6,375,000 ordinary shares upon the completion of this offering at the initial public offering price of $16.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, as if this offering occurred on June 30, 2015.

RISK FACTORS

Investing in our ordinary shares involves significant risks. In deciding whether to invest, you should carefully consider the following risk factors, as well as the other information contained in this prospectus, including our financial statements and the related notes appearing elsewhere in this prospectus. Any of the following risks could adversely affect our business, financial condition, results of operations and prospects and cause the value of our ordinary shares to decline, which could cause you to lose all or part of your investment. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations.

Risks Related to Our Financial Results and Capital Requirements

We are a preclinical biopharmaceutical company with a history of losses, expect to continue to incur losses for the foreseeable future and may never achieve or maintain profitability.

We are a preclinical biopharmaceutical company and have incurred significant operating losses since our incorporation in 2012. Our net loss was $3.3 million, $5.2 million and $7.2 million for the years ended December 31, 2013 and 2014, and for the six months ended June 30, 2015, respectively. As of June 30, 2015, we had an accumulated deficit of $23.0 million. To date, we have not generated any product revenue. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. We have no products on the market, we have not initiated clinical development of any product candidates and expect that it will be many years, if ever, before we have a product candidate ready for commercialization.

We have not generated, and do not expect to generate, any product revenue for the foreseeable future, and we expect to continue to incur significant operating losses for the foreseeable future due to the cost of research and development, preclinical studies and clinical trials and the regulatory approval process for product candidates. The amount of future losses is uncertain. To achieve profitability, we must successfully develop product candidates, obtain regulatory approvals to market and commercialize product candidates, manufacture any approved product candidates on commercially reasonable terms, establish a sales and marketing organization or suitable third-party alternatives for any approved product and raise sufficient funds to finance our business activities. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

We will require substantial additional funding, which may not be available on acceptable terms, or at all.

We have used substantial funds to develop our therapeutic programs and proprietary synthetic chemistry drug development platform and will require substantial funds to conduct further research and development, including preclinical studies and clinical trials of our product candidates, seek regulatory approvals for our product candidates and manufacture and market any products that are approved for commercial sale. As of June 30, 2015, we had $7.8 million in cash. Based on our current operating plan, we believe that our available cash along with net proceeds of approximately $62.5 million from our Series B preferred share financing, which closed on August 14, 2015, and the net proceeds from this offering will be sufficient to fund our anticipated level of operations through at least 2017. Our future capital requirements and the period for which we expect our existing resources to support our operations may vary significantly from what we expect. Our monthly spending levels vary based on new and ongoing development and corporate activities. Because we cannot be certain of the length of time or activities associated with successful development and commercialization of our product candidates, we are unable to estimate the actual funds we will require to develop and commercialize them.

We do not expect to realize revenue from product sales, milestone payments or royalties in the foreseeable future, if at all. Our revenue sources will remain extremely limited unless and until our product candidates complete clinical development and are approved for commercialization and successfully marketed. To date, we have primarily financed

our operations through sales of our securities. We intend to seek additional funding in the future through either collaborations, public or private equity offerings or debt financings, credit or loan facilities or a combination of one or more of these funding sources. Our ability to raise additional funds will depend on financial, economic and other factors, many of which are beyond our control. Additional funds may not be available to us on acceptable terms or at all. If we raise additional funds by issuing equity securities, our shareholders will suffer dilution and the terms of any financing may adversely affect the rights of our shareholders. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing shareholders. Debt financing, if available, may involve restrictive covenants limiting our flexibility in conducting future business activities, and, in the event of insolvency, debt holders would be repaid before holders of equity securities received any distribution of corporate assets.

If we are unable to obtain funding on a timely basis or on acceptable terms, we may have to delay, limit or terminate our research and development programs and preclinical studies or clinical trials, if any, limit strategic opportunities or undergo reductions in our workforce or other corporate restructuring activities. We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our product candidates or technologies that we would otherwise pursue on our own.

Our short operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are a preclinical biopharmaceutical with limited operating history. We commenced active operations in 2012. Our operations to date have been limited to organizing and staffing our company, research and development activities, business planning and raising capital. All of our therapeutic programs are still in the preclinical development stage, and we plan to file our first INDs, for therapies to treat Huntington's disease and Duchenne muscular dystrophy, in late 2016 and early 2017. We have not yet demonstrated our ability to initiate or successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial-scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Typically, it takes many years to develop one new medicine from the time it is discovered to when it is available for treating patients. Further, biopharmaceutical product development is a capital-intensive and highly speculative undertaking that involves a substantial degree of risk. You should consider our prospects in light of the costs, uncertainties, delays and difficulties frequently encountered by companies in the early stages of development, especially preclinical biopharmaceutical companies such as ours. Any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing pharmaceutical products.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Risks Related to The Discovery, Development and Commercialization of Our Product Candidates

The approach we are taking to discover and develop nucleic acid therapeutics is novel and may never lead to marketable products.

We have concentrated our efforts and research and development activities on nucleic acid therapeutics and our synthetic chemistry drug development platform. Our future success depends on the successful development of such therapeutics and the effectiveness of our platform. The scientific discoveries that form the basis for our efforts to discover and develop new drugs, including our discoveries about the relationships between oligonucleotide stereochemistry and pharmacology, are relatively new. The scientific evidence to support the feasibility of developing drugs based on these discoveries is both preliminary and limited. Skepticism as to the feasibility of developing nucleic acid therapeutics generally has been, and may continue to be, expressed in scientific literature. In addition, decisions by other companies with respect to their nucleic acid therapeutic development efforts may increase skepticism in the marketplace regarding the potential for nucleic acid therapeutics.

Relatively few nucleic acid therapeutic product candidates have been tested on humans, and a number of clinical trials for such therapeutics conducted by other companies have not been successful. Only two nucleic acid therapeutics have received regulatory approval. The drugs we are studying may not demonstrate in patients the

pharmacological properties ascribed to them in laboratory studies, and they may interact with human biological systems in unforeseen, ineffective or harmful ways. If our nucleic acid product candidates prove to be ineffective, unsafe or commercially unviable, our entire platform and pipeline would have little, if any, value, which would substantially harm our business, financial condition, results of operations and prospects.

Because we are developing nucleic acid therapeutics, which are considered a relatively new class of drugs, there is increased risk that the outcome of our future clinical trials will not be sufficient to obtain regulatory approval.

The U.S. Food and Drug Administration, or the FDA, has relatively limited experience with nucleic acid therapeutics, which may increase the complexity, uncertainty and length of the regulatory approval process for our product candidates. To date, the FDA has approved only two nucleic acid therapeutics for marketing and commercialization, and the FDA and its foreign counterparts have not yet established any definitive policies, practices or guidelines in relation to these drugs. The lack of policies, practices or guidelines may hinder or slow review by the FDA of any regulatory filings that we may submit. Moreover, the FDA may respond to these submissions by defining requirements we may not have anticipated. Such responses could lead to significant delays in the clinical development of our product candidates. In addition, because there may be approved treatments for some of the diseases for which we may seek approval, in order to receive regulatory approval, we may need to demonstrate through clinical trials that the product candidates we develop to treat these diseases, if any, are not only safe and effective, but safer or more effective than existing products. Furthermore, in recent years, there has been increased public and political pressure on the FDA with respect to the approval process for new drugs, and the FDA's standards, especially regarding drug safety, appear to have become more stringent. As a result of the foregoing factors, we may never receive regulatory approval to market and commercialize any product candidate.

Even if we obtain regulatory approval, the approval may be for disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We may be required to perform additional or unanticipated clinical trials to obtain regulatory approval or be subject to post-marketing testing requirements to maintain such approval. As a result, we may never succeed in developing a marketable product, we may not become profitable and the value of our ordinary shares could decline.

All of our therapeutic programs are in the preclinical development stage. Our preclinical studies and clinical trials may not be successful. If we are unable to commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We are very early in our development efforts, and all of our drug candidates are still in preclinical development. We have only recently identified lead product candidates for two of our programs. We have no products on the market or in clinical development. We have invested a significant portion of our efforts and financial resources in the identification and preclinical development of nucleic acid therapeutics and the development of our platform. Our ability to generate product revenue, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of our product candidates. Our success will depend on several factors, including the following:

- successfully completing preclinical studies and clinical trials;
- receiving regulatory approvals from applicable regulatory authorities to market our product candidates;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- launching commercial sales of the products, if and when approved, whether alone or in collaboration with others;
- acceptance of the products, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies; and
- a continued acceptable safety profile of the products following approval.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we intend to focus on developing product candidates for specific indications that we identify as most likely to succeed, in terms of both regulatory approval and commercialization. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications that may prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

Any product candidates we develop may fail in development or be delayed to a point where they do not become commercially viable.

Before obtaining regulatory approval for the commercial distribution of any of our product candidates, we must conduct, at our own expense, extensive preclinical studies and clinical trials to demonstrate the safety and efficacy in humans of our product candidates. Preclinical and clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome, and the historical failure rate for drugs in preclinical and clinical development is high. We currently have a number of therapeutic programs in the preclinical development stage. However, we may not be able to further advance any product candidates through clinical trials.

In addition, we, the FDA or comparable foreign regulatory authorities, or an institutional review board, or IRB, or similar foreign review board or committee, may suspend clinical trials of a product candidate at any time for various reasons, including if we or they believe the healthy volunteer subjects or patients participating in such trials are being exposed to unacceptable health risks. Among other reasons, adverse side effects of a product candidate on healthy volunteer subjects or patients in a clinical trial could result in the FDA or comparable foreign regulatory authorities suspending or terminating the trial and refusing to approve a particular product candidate for any or all indications of use.

Clinical trials also require the review, oversight and approval of IRBs, which continually review clinical investigations and protect the rights and welfare of human subjects. Inability to obtain or delay in obtaining IRB approval can prevent or delay the initiation and completion of clinical trials, and the FDA or comparable foreign regulatory authorities may decide not to consider any data or information derived from a clinical investigation not subject to initial and continuing IRB review and approval in support of a marketing application.

Our product candidates may encounter problems during clinical trials that will cause us, an IRB or regulatory authorities to delay, suspend or terminate these trials, or that will delay or confound the analysis of data from these trials. If we experience any such problems, we may not have the financial resources to continue development of the product candidate that is affected, or development of any of our other product candidates. We may also lose, or be unable to enter into, collaborative arrangements for the affected product candidate and for other product candidates we are developing.

The development of one or more of our product candidates can fail at any stage of testing. We may experience numerous unforeseen events during, or as a result of, preclinical studies and clinical trials that could delay or prevent regulatory approval or our ability to commercialize our product candidates, including:

- our preclinical studies or clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials, or we may abandon projects that we had expected to be promising;
- delays in filing INDs or comparable foreign applications or delays or failure in obtaining the necessary approvals from regulators or IRBs in order to commence a clinical trial at a prospective trial site, or their suspension or termination of a clinical trial once commenced;
- conditions imposed on us by an IRB, or the FDA or comparable foreign authorities regarding the scope or design of our clinical trials;

- problems in engaging IRBs to oversee clinical trials or problems in obtaining or maintaining IRB approval of trials;
- delays in enrolling patients and volunteers into clinical trials, and variability in the number and types of patients and volunteers available for clinical trials;
- high drop-out rates for patients and volunteers in clinical trials;
- negative or inconclusive results from our clinical trials or the clinical trials of others for product candidates similar to ours;
- inadequate supply or quality of product candidate materials or other materials necessary for the conduct of our clinical trials;
- greater than anticipated clinical trial costs;
- serious and unexpected drug-related side effects experienced by participants in our clinical trials or by individuals using drugs similar to our product candidates;
- poor or disappointing effectiveness of our product candidates during clinical trials;
- unfavorable FDA or other regulatory agency inspection and review of a clinical trial site or records of any clinical or preclinical investigation;
- failure of our third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around clinical testing generally or with respect to our product candidates in particular; or
- varying interpretations of data by the FDA and similar foreign regulatory agencies.

If the development of any of our product candidates fails or is delayed to a point where such product candidate is no longer commercially viable, our business may be materially harmed.

Results of preclinical studies and early clinical trials may not be predictive of results of future clinical trials.

If we enter into clinical trials, the results from preclinical studies or early clinical trials of a product candidate may not predict the results that will be obtained in subsequent subjects or in subsequent clinical trials of that product candidate or any other product candidate. The design of a clinical trial can determine whether its results will support approval of a product candidate and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. We have no experience in designing clinical trials and we may be unable to design and execute a clinical trial to support regulatory approval of our product candidates. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses. Product candidates that seemingly perform satisfactorily in preclinical studies may nonetheless fail to obtain regulatory approval. There is a high failure rate for drugs proceeding through clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in clinical development even after achieving promising results in earlier studies, and any such setbacks in our clinical development could negatively affect our business and operating results.

If we experience delays or difficulties in the enrollment of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

Clinical trials of a new product candidate require the enrollment of a sufficient number of patients, including patients who are suffering from the disease the product candidate is intended to treat and who meet other eligibility criteria. Rates of patient enrollment are affected by many factors, including the size of the patient population, the age and condition of the patients, the stage and severity of disease, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease, and the eligibility criteria for the clinical trial. Delays or difficulties in patient enrollment or difficulties retaining trial participants, including as a result of the availability of existing or other investigational treatments, can result in increased costs, longer development times or termination of a clinical trial.

We may be unable to obtain regulatory approval in the United States or foreign jurisdictions and, as a result, unable to commercialize our product candidates and our ability to generate revenue will be materially impaired.

Our product candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs. Rigorous preclinical studies and clinical trials and an extensive regulatory approval process are required to be successfully completed in the United States and in many foreign jurisdictions before a new drug can be marketed. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. It is possible that none of the product candidates we may develop will obtain the regulatory approvals necessary for us or our collaborators to begin selling them.

We have no experience in conducting and managing the human clinical trials necessary to obtain regulatory approvals, including approval by the FDA, or otherwise advancing product candidates through the regulatory approval process. The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the product candidate. The standards that the FDA and its foreign counterparts use when regulating us are not always applied predictably or uniformly and can change. Any analysis we perform of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be.

Any delay or failure in obtaining required approvals could adversely affect our ability to generate revenues from the particular product candidate for which we are seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which we may market the product or the labeling or other restrictions. In addition, the FDA has the authority to require a Risk Evaluation and Mitigation Strategy, or REMS, plan as part of a new drug application, or NDA, or after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. These limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries and includes all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Approval by the FDA does not ensure approval by comparable regulatory authorities outside the United States and vice versa.

Even if we obtain regulatory approvals, our marketed drugs will be subject to ongoing regulatory oversight. If we fail to comply with continuing U.S. and foreign requirements, our approvals could be limited or withdrawn, we could be subject to other penalties, and our business would be seriously harmed.

Following any initial regulatory approval of any drugs we may develop, we will also be subject to continuing regulatory oversight, including the review of adverse drug experiences and clinical results that are reported after our drug products are made commercially available. This would include results from any post-marketing tests or surveillance to monitor the safety and efficacy of the drug product required as a condition of approval or agreed to by us. Any regulatory approvals that we receive for our product candidates may also be subject to limitations on the approved uses for which the product may be marketed. Other ongoing regulatory requirements include, among other things, submissions of safety and other post-marketing information and reports, registration and listing, as well as continued compliance with cGMP requirements and good clinical practices for any clinical trials that we conduct post-approval. In addition, we are conducting, and intend to continue to conduct, clinical trials for our product candidates, and we intend to seek approval to market our product candidates, in jurisdictions outside of the United States, and therefore will be subject to, and must comply with, regulatory requirements in those jurisdictions.

The FDA has significant post-market authority, including, for example, the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate serious safety risks related to the use of a drug and to require withdrawal of the product from the market. The FDA also has the authority to require a REMS plan after approval, which may impose further requirements or restrictions on the distribution or use of an approved drug.

The manufacturer and manufacturing facilities we use to make our product candidates will also be subject to periodic review and inspection by the FDA and other regulatory agencies. The discovery of any new or previously unknown problems with us or our third-party manufacturers, or our or their manufacturing processes or facilities, may result in restrictions on the drug or manufacturer or facility, including withdrawal of the drug from the market. We may not have the ability or capacity to manufacture material at a broader commercial scale in the future. We may manufacture clinical trial materials or we may contract a third party to manufacture these materials for us. Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured products ourselves, including reliance on the third-party manufacturer for regulatory compliance. Our product promotion and advertising will also be subject to regulatory requirements and continuing regulatory review.

If we or our collaborators, manufacturers or service providers fail to comply with applicable continuing regulatory requirements in the United States or foreign jurisdictions in which we may seek to market our products, we or they may be subject to, among other things, fines, warning letters, holds on clinical trials, refusal by the FDA or comparable foreign regulatory authorities to approve pending applications or supplements to approved applications, suspension or withdrawal of regulatory approval, product recalls and seizures, refusal to permit the import or export of products, operating restrictions, injunction, civil penalties and criminal prosecution.

Even if we receive regulatory approval to market our product candidates, the market may not be receptive to our product candidates upon their commercial introduction, which will prevent us from becoming profitable.

Our product candidates are based upon new discoveries, technologies and therapeutic approaches. Key participants in pharmaceutical marketplaces, such as physicians, third-party payors and consumers, may not adopt a product intended to improve therapeutic results that is based on the technology employed by nucleic acid therapeutics. As a result, it may be more difficult for us to convince the medical community and third-party payors to accept and use our product, or to provide favorable reimbursement.

Other factors that we believe will materially affect market acceptance of our product candidates include:

- the timing of our receipt of any regulatory approvals, the terms of any approvals and the countries in which approvals are obtained;
- the safety and efficacy of our product candidates, as demonstrated in clinical trials and as compared with alternative treatments, if any;
- the prevalence and severity of any side effects;
- relative convenience and ease of administration of our product candidates;
- the willingness of patients to accept potentially new routes of administration;
- the success of our physician education programs;
- the availability of government and third-party payor coverage and adequate reimbursement;
- the pricing of our products, particularly as compared to alternative treatments; and
- availability of alternative effective treatments for the diseases that product candidates we develop are intended to treat and the relative risks, benefits and costs of those treatments.

In addition, our estimates regarding the potential market size may be materially different from what we currently expect at the time we commence commercialization, which could result in significant changes in our business plan and may significantly harm our results of operations and financial condition.

The pharmaceutical market is intensely competitive. If we are unable to compete effectively with existing drugs, new treatment methods and new technologies, we may be unable to commercialize successfully any drugs that we develop.

The pharmaceutical market is intensely competitive and rapidly changing. Many large pharmaceutical and biotechnology companies, academic institutions, governmental agencies and other public and private research organizations are pursuing the development of novel drugs for the same diseases that we are targeting or expect to target. Many of our competitors have:

- much greater financial, technical and human resources than we have at every stage of the discovery, development, manufacture and commercialization of products;
- more extensive experience in designing and conducting preclinical studies and clinical trials, obtaining regulatory approvals, and in manufacturing, marketing and selling pharmaceutical products;
- product candidates that are based on previously tested or accepted technologies;
- products that have been approved or are in late stages of development; and
- collaborative arrangements in our target markets with leading companies and research institutions.

We will face intense competition from drugs that have already been approved and accepted by the medical community for the treatment of the conditions for which we may develop drugs. We also expect to face competition from new drugs that enter the market. We believe a significant number of drugs are currently under development, and may become commercially available in the future, for the treatment of conditions for which we may try to develop drugs. These drugs may be more effective, safer, less expensive, or marketed and sold more effectively, than any products we develop.

Our competitors may develop or commercialize products with significant advantages over any products we are able to develop and commercialize based on many different factors, including:

- the safety and effectiveness of our products relative to alternative therapies, if any;
- the ease with which our products can be administered and the extent to which patients accept relatively new routes of administration;
- the timing and scope of regulatory approvals for these products;
- the availability and cost of manufacturing, marketing and sales capabilities;
- price;
- reimbursement coverage; and
- patent position.

Our competitors may therefore be more successful in commercializing their products than we are, which could adversely affect our competitive position and business. Competitive products may make any products we develop obsolete or noncompetitive before we can recover the expenses of developing and commercializing our product candidates. Such competitors could also recruit our employees, which could negatively impact our level of expertise and the ability to execute on our business plan.

If we or our collaborators, manufacturers or service providers fail to comply with applicable healthcare laws and regulations, we or they could be subject to enforcement actions, which could affect our ability to develop, market and sell our products and may harm our reputation.

As a manufacturer of pharmaceuticals, we are currently or may in the future be subject to federal, state, local, and comparable foreign healthcare laws and regulations pertaining to such topics as fraud and abuse and patients' rights. These laws may constrain the business or financial arrangements and relationships through which we conduct our operations, including how we research, market, sell and distribute our products for which we obtain marketing approval. These laws and regulations include:

- the U.S. federal Anti-Kickback Statute, which prohibits, among other things, persons and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for a healthcare item or

service, or the purchasing, recommending, or ordering of an item or service, for which payment may be made under a federal healthcare program such as Medicare or Medicaid;

- the U.S. federal false claims and civil monetary penalties laws, including the civil False Claims Act, which prohibits, among other things, individuals or entities from knowingly presenting or causing to be presented, claims for payment by government-funded programs such as Medicare or Medicaid 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 U.S. federal Health Insurance Portability and Accountability Act, or HIPAA, which imposes criminal and civil liability for, among other things, executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA as amended by the Health Information Technology for Economic and Clinical Health, or HITECH, Act, and its implementing regulations, which impose requirements relating to the privacy, security, and transmission of individually identifiable health information; and require notification to affected individuals and regulatory authorities of certain breaches of security of individually identifiable health information;
- the U.S. federal Physician Payments Sunshine Act, which requires certain manufacturers of medical devices, biological products, medical supplies, and drugs for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare and Medicaid Services, or CMS, all transfers of value, including consulting fees, travel reimbursements, research grants, and other payments or gifts with values over $10 made to physicians and teaching hospitals, and teaching hospitals, applicable manufacturers, and applicable group purchasing organizations to report annually to CMS ownership and investment interests held by physicians and their immediate family members. Disclosure of such information is made by CMS on a publicly available website; and
- state and foreign laws comparable to each of the above federal laws, such as, for example: state anti-kickback and false claims laws applicable to commercial insurers and other non-federal payors; state laws that require pharmaceutical manufacturers to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws relating governing the privacy and security of health information, some which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

If our operations are found to be in violation of any such requirements, we may be subject to penalties, including civil or criminal penalties, criminal prosecution, monetary damages, the curtailment or restructuring of our operations, loss of eligibility to obtain approvals from the FDA, exclusion from participation in federal healthcare programs including Medicare and Medicaid, the imposition of a corporate integrity agreement with the Office of Inspector General of the Department of Health and Human Services, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and future earnings, any of which could adversely affect our financial results and adversely affect our ability to operate our business. We intend to develop and implement a comprehensive corporate compliance program prior to the commercialization of our product candidates. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation could cause us to incur significant legal expenses and could divert our management's attention from the operation of our business, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

If we or our collaborators, manufacturers or service providers fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions, which could affect our ability to develop, market and sell our products successfully and could harm our reputation and lead to reduced acceptance of our products by the market. These enforcement actions include, among others:

- adverse regulatory inspection findings;
- warning letters;

- voluntary or mandatory product recalls or public notification or medical product safety alerts to healthcare professionals;
- restrictions on, or prohibitions against, marketing our products;
- restrictions on, or prohibitions against, importation or exportation of our products;
- suspension of review or refusal to approve pending applications or supplements to approved applications;
- exclusion from participation in government-funded healthcare programs;
- exclusion from eligibility for the award of government contracts for our products;
- suspension or withdrawal of product approvals;
- product seizures;
- injunctions; and
- civil and criminal penalties, up to and including criminal prosecution resulting in fines, exclusion from healthcare reimbursement programs and imprisonment.

Moreover, federal, state or foreign laws or regulations are subject to change, and while we, our collaborators, manufacturers and/or service providers currently may be compliant, that could change due to changes in interpretation, prevailing industry standards or other reasons.

Any drugs we develop may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.

The regulations that govern marketing approvals, pricing and reimbursement for new drugs vary widely from country to country. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. We are monitoring these regulations as several of our programs move into later stages of development, however, many of our programs are currently in the earlier stages of development and we will not be able to assess the impact of price regulations for a number of years. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenues we are able to generate from the sale of the product in that country and potentially in other countries due to reference pricing.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered medically necessary and/or cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. For our earlier stage programs, we are unable at this time to determine their cost effectiveness or the likely level or method of reimbursement. Increasingly, the third-party payors who reimburse patients or healthcare providers, such as government and private insurance plans, are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed for pharmaceutical products. If the price we are able to charge for any products we develop, or the reimbursement provided for such products, is inadequate in light of our development and other costs, our return on investment could be adversely affected.

We currently expect that any drugs we develop may need to be administered under the supervision of a physician on an outpatient basis. Under currently applicable U.S. law, certain drugs that are not usually self-administered (including injectable drugs) may be eligible for coverage under the Medicare Part B program if:

- they are incident to a physician’s services;
- they are reasonable and necessary for the diagnosis or treatment of the illness or injury for which they are administered according to accepted standards of medical practice; and
- they have been approved by the FDA and meet other requirements of the statute.

There may be significant delays in obtaining coverage for newly-approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA or comparable foreign regulatory authorities. Patients who are prescribed medications for the treatment of their conditions, and their prescribing physicians, generally rely on third-party payors to reimburse all or part of the costs associated with their prescription drugs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover all or a significant portion of the cost of our products. Therefore, coverage and adequate reimbursement is critical to new product acceptance. Coverage decisions may depend upon clinical and economic standards that disfavor new drug products when more established or lower cost therapeutic alternatives are already available or subsequently become available. Moreover, eligibility for coverage does not imply that any drug will be reimbursed in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new drugs, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Reimbursement may be based on payments allowed for lower-cost drugs that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates. However, no uniform policy requirement for coverage and reimbursement for drug products exists among third-party payors in the United States. Therefore, coverage and reimbursement for drug products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for new drugs that we develop and for which we obtain regulatory approval could adversely affect our operating results, our ability to raise capital needed to commercialize products, and our overall financial condition.

We believe that the efforts of governments and third-party payors to contain or reduce the cost of healthcare and legislative and regulatory proposals to broaden the availability of healthcare will continue to affect the business and financial condition of pharmaceutical and biopharmaceutical companies. A number of legislative and regulatory changes in the healthcare system in the United States and other major healthcare markets have been proposed and/or adopted in recent years, and such efforts have expanded substantially in recent years. These developments have included prescription drug benefit legislation that was enacted in 2003 and took effect in January 2006, healthcare reform legislation enacted by certain states, and major healthcare reform legislation that was passed by Congress and enacted into law in the United States in 2010. These developments could, directly or indirectly, affect our ability to sell our products, if approved, at a favorable price.

In particular, in March 2010, the Patient Protection and Affordable Care Act, or PPACA, was signed into law. This new legislation changes the current system of healthcare insurance and benefits and is intended to broaden access to healthcare coverage, enhance remedies against fraud and abuse, add transparency requirements for the healthcare and health insurance industries, impose taxes and fees on the healthcare industry, impose health policy reforms, and control costs. The new law also contains provisions that will affect companies in the pharmaceutical industry and other healthcare related industries by imposing additional costs and changes to business practices. Provisions affecting pharmaceutical companies include the following:

- Minimum rebates for drugs sold under the Medicaid Drug Rebate Program have increased, and the rebate requirement has been extended to drugs used in risk-based Medicaid managed care plans.
- The 340B Drug Pricing Program under the Public Health Service Act has been extended to require mandatory discounts for drug products sold to certain critical access hospitals, cancer hospitals and other covered entities.
- Pharmaceutical manufacturers are required to offer discounts off negotiated prices on applicable brand-name drugs to eligible beneficiaries who fall within the Medicare Part D coverage gap, commonly referred to as the “Donut Hole.”
- Pharmaceutical manufacturers are required to pay an annual non-tax deductible fee to the federal government based on each company’s market share of prior year total sales of branded products to certain

federal healthcare programs, such as Medicare and Medicaid, and programs administered by the Department of Veterans Affairs or the Department of Defense. Since we expect our branded pharmaceutical sales to constitute a small portion of the total federal health program pharmaceutical market, we do not expect this annual assessment to have a material impact on our financial condition.

- A new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected.
- Expansion of eligibility criteria for Medicaid programs.
- A new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.
- The new law provides that approval of an application for a follow-on biologic product may not become effective until 12 years after the date on which the reference innovator biologic product was first licensed by the FDA, with a possible six-month extension for pediatric products. After this exclusivity ends, it will be easier for so-called “biosimilar” manufacturers to enter the market, which is likely to reduce the pricing for such products and could affect our profitability. In July 2015, the U.S Court of Appeals for the Federal Circuit interpreted the statute as requiring biosimilar manufacturers to send a required pre-launch notice to the manufacturer of the reference biologic only after the FDA has approved the biosimilar for licensure. This ruling potentially provides the reference product manufacturer with an additional 180 days of marketing exclusivity for the innovator biologic, depending on whether the product’s 12-year exclusivity has expired at the time that the pre-launch notice is received from the biosimilar manufacturer.

The full effects of PPACA cannot be known until the new law is fully implemented through regulations or guidance issued by the CMS and other federal and state healthcare agencies. The financial impact of PPACA over the next few years will depend on a number of factors, including, but not limited, to the policies reflected in implementing regulations and guidance, and changes in sales volumes for products affected by the new system of rebates, discounts and fees. The new legislation may also have a positive impact on our future net sales, if any, by increasing the aggregate number of persons with healthcare coverage in the United States. We expect that PPACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and lower reimbursement, and in additional downward pressure on the price that we receive for any approved product. Any reduction in reimbursement from Medicare or other government-funded programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability or commercialize our drugs.

Moreover, we cannot predict what healthcare reform initiatives may be adopted in the future. Further federal and state legislative and regulatory developments are likely, and we expect ongoing initiatives in the United States to increase pressure on drug pricing. Such reforms could have an adverse effect on anticipated revenues from product candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop drug candidates.

Our ability to obtain services, reimbursement or funding from the federal government may be impacted by possible reductions in federal spending.

Other legislative changes have been proposed and adopted since PPACA was enacted. For example, in August 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction (Joint Select Committee) to recommend to Congress proposals in spending reductions. The failure of Congress to enact deficit reduction measures of at least $1.2 trillion for the years 2013 through 2021 triggered the legislation’s automatic reduction to several government programs. These cuts included aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, which went into effect beginning on April 1, 2013, and will stay in effect through 2024 unless additional Congressional action is taken. Additionally, under the American Taxpayer Relief Act of 2012, which was enacted on January 1, 2013, the imposition of these automatic cuts was delayed until March 1, 2013. As required by law, President Obama issued a sequestration order on March 1, 2013. Certain of these automatic cuts have been implemented resulting in reductions in Medicare payments to physicians, hospitals, and other healthcare providers, among other things. The full impact on our business of these automatic cuts is uncertain.

If other federal spending is reduced, any budgetary shortfalls may also impact the ability of relevant agencies, such as the FDA or National Institutes of Health to continue to function. Amounts allocated to federal grants and contracts may be reduced or eliminated. These reductions may also impact the ability of relevant agencies to timely review and approve drug research and development, manufacturing, and marketing activities, which may delay our ability to develop, market and sell any products we may develop.

There is a substantial risk of product liability claims in our business. If we are unable to obtain sufficient insurance, a product liability claim against us could adversely affect our business.

Our business exposes us to significant potential product liability risks that are inherent in the development, testing, manufacturing and marketing of human therapeutic products. Product liability claims could delay or prevent completion of our clinical development programs. If we succeed in marketing products, such claims could result in an FDA investigation of the safety and effectiveness of our products, our manufacturing processes and facilities or our marketing programs, and potentially a recall of our products or more serious enforcement action, limitations on the approved indications for which they may be used, or suspension or withdrawal of approvals. Regardless of the merits or eventual outcome, liability claims may also result in decreased demand for our products, injury to our reputation, costs to defend the related litigation, a diversion of management's time and our resources, substantial monetary awards to trial participants or patients and a decline in our share price. Any insurance we obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could adversely affect our business.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research, development and manufacturing processes involve the use of hazardous materials, chemicals and various radioactive compounds. We maintain quantities of various flammable and toxic chemicals in our facilities that are required for our research, development and manufacturing activities. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. We believe our procedures for storing, handling and disposing of these materials comply with the relevant guidelines and laws of the jurisdictions in which our facilities are located. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by applicable regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of biohazardous materials.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate any of these laws or regulations.

Risks Related to Our Dependence on Third Parties

We expect to depend on collaborations with third parties for the development and commercialization of certain of our product candidates.

We expect to depend on third-party collaborators for the development and commercialization of certain of our product candidates. We face significant competition in seeking appropriate collaborators. Our likely collaborators include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

Collaborations are complex and time-consuming to negotiate and document. We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. We may also be restricted under existing license agreements from entering into agreements on certain terms with potential collaborators. If we are unable to enter

into collaborations with respect to a product candidate, we may have to curtail the development of such product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

Even if we are able to enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates would pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's strategic focus or available funding or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- a collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to the marketing and distribution of such product or products;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our products or product candidates or that result in costly litigation or arbitration that diverts management attention and resources; and
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates.

Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner, or at all. Further, if a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated.

We rely, and expect to continue to rely, on third parties to conduct some aspects of our compound formulation, research and preclinical studies, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such formulation, research or testing.

We do not independently conduct all aspects of our drug discovery activities, compound formulation research or preclinical studies of product candidates. We currently rely, and expect to continue to rely, on third parties to conduct some aspects of our research and development and preclinical studies. Any of these third parties may terminate their engagements with us at any time. If we need to enter into alternative arrangements, it would delay our product development activities. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, for product candidates that we develop and commercialize on our own, we will remain responsible for ensuring that each of our

IND-enabling studies and clinical trials are conducted in accordance with the study plan and protocols for the trial. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our studies in accordance with regulatory requirements or our stated study plans and protocols, we will not be able to complete, or may be delayed in completing, the necessary preclinical studies to enable us or our strategic alliance partners to select viable product candidates for IND submissions and will not be able to, or may be delayed in our efforts to, successfully develop and commercialize such product candidates.

If any of our research collaborators terminates or fails to perform its obligations under agreements with us, the development and commercialization of our product candidates could be delayed or terminated.

We are party to research collaboration agreements with certain academic partners. Our dependence on these research collaborators for select research capabilities means that our business could be adversely affected if any collaborator terminates its collaboration agreement with us or fails to perform its obligations under that agreement. Our current or future research collaborations, if any, may not be scientifically successful. Disputes may arise in the future with respect to the ownership of rights to technology or products developed with collaborators, which could have an adverse effect on our ability to develop and commercialize any affected product candidate.

Our current research collaborations allow, and we expect that any future research collaborations will allow, either party to terminate the collaboration for a material breach by the other party. In addition, our collaborators may have additional termination rights for convenience under certain circumstances. If we were to lose a collaborator, we would have to attract a new collaborator or develop internal research capabilities, which would require us to invest significant amounts of financial and management resources.

In addition, if we have a dispute with a collaborator over the ownership of technology or other matters, or if a collaborator terminates its collaboration with us, for breach or otherwise, or determines not to pursue the research that is the subject of the collaboration, it could delay or prevent the development of our product candidates, result in the need for additional company resources to develop product candidates, make it more difficult for us to attract new collaborators and could adversely affect how we are perceived in the business and financial communities.

We intend to rely on third parties to design, conduct, supervise and monitor our preclinical studies and clinical trials, and if those third parties perform in an unsatisfactory manner, it may harm our business.

We rely on third party clinical investigators, contract research organizations, or CROs, clinical data management organizations and consultants to design, conduct, supervise and monitor preclinical studies of our product candidates and will do the same for any clinical trials. Because we rely on third parties and do not have the ability to conduct preclinical studies or clinical trials independently, we have less control over the timing, quality and other aspects of preclinical studies and clinical trials than we would if we conducted them on our own. These investigators, CROs and consultants are not our employees and we have limited control over the amount of time and resources that they dedicate to our programs. These third parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs. Further, these third parties may not be diligent, careful or timely in conducting our preclinical studies or clinical trials, resulting in the preclinical studies or clinical trials being delayed or unsuccessful.

If we cannot contract with acceptable third parties on commercially reasonable terms, or at all, or if these third parties do not carry out their contractual duties, satisfy legal and regulatory requirements for the conduct of preclinical studies or clinical trials or meet expected deadlines, our clinical development programs could be delayed and otherwise adversely affected. In all events, we are responsible for ensuring that each of our preclinical studies and clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. The FDA requires clinical trials to be conducted in accordance with good clinical practices, including for conducting, recording and reporting the results of preclinical studies and clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. If we or our CROs fail to comply with these requirements, the data generated in our clinical trials may be deemed unreliable and the FDA may require us to perform additional clinical trials. Our reliance on third parties that we do not control does not relieve us of these responsibilities and requirements. Any such event could adversely affect our business, financial condition, results of operations and prospects.

We rely on third-party supply and manufacturing partners for drug supplies for our research and development and preclinical activities and may do the same for any clinical and commercial supplies of our product candidates.

We rely on third-party supply and manufacturing partners to supply the materials and components for, and manufacture, a portion of our research and development and preclinical study drug supplies and may do the same for any clinical trial drug supplies. We do not own manufacturing facilities or supply sources for such components and materials. There can be no assurance that our supply of research and development, preclinical and clinical development drugs and other materials will not be limited, interrupted, restricted in certain geographic regions or of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of any drug product formulation manufacturer we may engage could require significant effort and expertise because there may be a limited number of qualified replacements.

The manufacturing process for a product candidate is subject to FDA and foreign regulatory authority review. Suppliers and manufacturers must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory standards, such as current Good Manufacturing Practices, or cGMPs. In the event that any of our suppliers or manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all. In some cases, the technical skills or technology required to manufacture our product candidates may be unique or proprietary to the original manufacturer and we may have difficulty, or there may be contractual restrictions prohibiting us from, transferring such skills or technology to another third party and a feasible alternative may not exist. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third party manufacture our product candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates in a timely manner or within budget.

We may rely on third party manufacturers if we receive regulatory approval for any product candidate. To the extent that we have existing, or enter into future, manufacturing arrangements with third parties, we will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance. If we are unable to obtain or maintain third-party manufacturing for product candidates, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our product candidates successfully. Our or a third party's failure to execute on our manufacturing requirements could adversely affect our business in a number of ways, including:

- an inability to initiate or continue clinical trials of product candidates under development;
- delay in submitting regulatory applications, or receiving regulatory approvals, for product candidates;
- loss of the cooperation of a collaborator;
- subjecting our product candidates to additional inspections by regulatory authorities;
- requirements to cease distribution or to recall batches of our product candidates; and
- in the event of approval to market and commercialize a product candidate, an inability to meet commercial demands for our products.

If any of our product candidates are approved for marketing and commercialization and we are unable to develop sales, marketing and distribution capabilities on our own or enter into agreements with third parties to perform these functions on acceptable terms, we will be unable to commercialize successfully any such future products.

We currently have no sales, marketing or distribution capabilities or experience. If any of our product candidates is approved, we will need to develop internal sales, marketing and distribution capabilities to commercialize such products, which would be expensive and time-consuming, or enter into collaborations with third parties to perform these services. If we decide to market our products directly, we will need to commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and supporting distribution, administration and compliance capabilities. If we rely on third parties with such capabilities to market our products or

decide to co-promote products with collaborators, we will need to establish and maintain marketing and distribution arrangements with third parties, and there can be no assurance that we will be able to enter into such arrangements on acceptable terms or at all. In entering into third-party marketing or distribution arrangements, any revenue we receive will depend upon the efforts of the third parties and there can be no assurance that such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance of any approved product. If we are not successful in commercializing any product approved in the future, either on our own or through third parties, our business, financial condition, results of operations and prospects would be adversely affected.

Risks Related to Managing Our Operations

If we are unable to attract and retain qualified key management and scientists, staff, consultants and advisors, our ability to implement our business plan may be adversely affected.

We are highly dependent upon our senior management and our scientific, clinical and medical staff and advisors. The loss of the service of any of the members of our senior management, including Paul B. Bolno, M.D., our Chief Executive Officer, and Chandra Vargeese, Ph.D., our Senior Vice President, Head of Drug Discovery, could delay our research and development programs and materially harm our business, financial condition, results of operations and prospects. We are dependent on the continued service of our technical personnel because of the highly technical and novel nature of our product candidates, platform and technologies and the specialized nature of the regulatory approval process. Replacing such personnel may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully execute our business strategy. Because our management team and key employees are not obligated to provide us with continued service, they could terminate their employment with us at any time without penalty. We do not maintain key person life insurance policies on any of our management team members or key employees. Our future success will depend in large part on our continued ability to attract and retain additional highly qualified scientific, technical and management personnel, as well as personnel with expertise in preclinical and clinical testing, manufacturing, governmental regulation and commercialization. We face competition for personnel from other companies, universities, public and private research institutions, government entities and other organizations. If we are unable to attract and retain qualified personnel, the rate and success at which we may be able to discover and develop our product candidates and implement our business plan will be limited.

As we continue with our preclinical studies and advance to any clinical trials, we may experience difficulties in managing our growth and expanding our operations.

We have limited experience in drug development and have not begun clinical trials for any of our product candidates. As we advance product candidates through preclinical studies and any clinical trials, we will need to expand our development, regulatory and manufacturing capabilities or contract with other organizations to provide these capabilities for us. In the future, we expect to have to manage additional relationships with collaborators or partners, suppliers and other organizations. Our ability to manage our operations and future growth will require us to continue to improve our operational, financial and management controls, reporting systems and procedures. We may not be able to implement improvements to our management information and control systems in an efficient or timely manner and may discover deficiencies in existing systems and controls. In addition, our future growth may require significant capital expenditures and may divert financial resources from other projects, such as the development of our product candidates. If we are unable to effectively manage our future growth, our expenses may increase and our ability to generate revenue could be reduced.

Our employees, consultants and collaborators may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of fraud or other misconduct by our employees, consultants and collaborators. Such misconduct could include intentional failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Such misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious

harm to our reputation. 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, including the imposition of significant fines or other sanctions.

Our business and operations could suffer in the event of system failures.

Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war, and telecommunication and electrical failures. Such events could cause interruption of our operations. For example, the loss of preclinical trial data or data from completed or ongoing clinical trials for our product candidates could result in delays in our regulatory filings and development efforts and significantly increase our costs. To the extent that any disruption or security breach were to result in a loss of or damage to our data, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the development of our product candidates could be delayed.

Foreign currency exchange rates may adversely affect our results.

We are exposed to the effects of changes in foreign currency exchange rates, and we have not historically hedged our foreign currency exposure. Our Japanese subsidiary conducts its business in Japanese yen. As of December 31, 2014 and June 30, 2015, 35.4% and 7.2% of our assets, respectively, were located in Japan, and 17.7% and 8.2% of our general and administrative and research and development expenses were transacted in Japanese yen through the year ended December 31, 2014 and the six months ended June 30, 2015, respectively. Therefore, when the U.S. dollar strengthens relative to the yen, as it has in recent periods, our U.S. dollar reported revenue from non-U.S. dollar denominated income will decrease. Conversely, when the U.S. dollar weakens relative to the yen, our U.S. dollar reported expenses from non-U.S. dollar denominated operating costs will increase. Changes in the relative values of currencies occur regularly and, in some instances, could materially adversely affect our business, results of operations, financial condition or cash flows.

Risks Related to Our Intellectual Property

If we are not able to obtain and enforce patent protection for our technologies or product candidates, development and commercialization of our product candidates may be adversely affected.

Our success depends in part on our ability to obtain and maintain patents and other forms of intellectual property rights, including in-licenses of intellectual property rights of others, for our product candidates and platform, methods used to manufacture our product candidates and methods for treating patients using our product candidates, as well as our ability to preserve our trade secrets, to prevent third parties from infringing upon our proprietary rights and to operate without infringing upon the proprietary rights of others. We may not be able to apply for patents on certain aspects of our product candidates or our platform in a timely fashion or at all. Our existing issued and granted patents and any future patents we obtain may not be sufficiently broad to prevent others from using our technology or from developing competing products and technology. There is no guarantee that any of our pending patent applications will result in issued or granted patents, that any of our issued or granted patents will not later be found to be invalid or unenforceable or that any issued or granted patents will include claims that are sufficiently broad to cover our product candidates, our platform technologies, or any methods relating to them, or to provide meaningful protection from our competitors. Moreover, the patent position of biotechnology and pharmaceutical companies can be highly uncertain and involves complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our current and future proprietary technology and product candidates are covered by valid and enforceable patents or are effectively maintained as trade secrets. If third parties disclose or misappropriate our proprietary rights, it may materially and adversely impact our position in the market.

Additionally, in some countries, applicants are not able to protect methods of treating human beings or medical treatment processes. Countries such as India, Mexico, China, Europe and elsewhere have enacted various rules and laws precluding issuance of patents encompassing any methods a doctor may practice on a human being or any other animal to treat a disease or condition. Further, many countries have enacted laws and regulatory regimes that

do not provide patent protection for methods of use of known compounds. Particularly given that some of our products may represent stereopure versions of previously described oligonucleotides, it may be difficult or impossible to obtain patent protection for them in relevant jurisdictions. Thus, in some countries and jurisdictions, it may not be possible to patent some of our products at all. In some countries and jurisdictions, only product claims may be obtained, and only when those products are new or novel. Also, patents issued on product claims cannot always be enforced to protect methods of using those products to treat or diagnose diseases or medical conditions. In such countries or jurisdictions, enforcement of patents to protect our products or their uses may be difficult or impossible. Lack of patent protection in such cases may have a materially adverse effect on our business and financial condition.

Furthermore, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates, their manufacture or their use might expire before or shortly after those candidates receive regulatory approval and are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. We expect to seek extensions of patent terms where these are available upon regulatory approval in those countries where we are prosecuting patents. This includes in the United States under the Drug Price Competition and Patent Term Restoration Act of 1984, which permits a patent term extension of up to five years beyond the expiration of the patent. However, the applicable authorities, including the FDA in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be possible.

The U.S. Patent and Trademark Office, or USPTO, and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, or of right to enforce patent claims, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case. The standards applied by the USPTO and foreign patent offices in granting patents are not uniform, can vary substantially from country to country and are not always applied predictably, requiring country-specific patent expertise in each jurisdiction in which patent protection is sought. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in biotechnology and pharmaceutical patents. As such, we do not know the degree of future protection that we will have on our proprietary products and technology. While we will endeavor to try to protect our product candidates and platform with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time-consuming, expensive and sometimes unpredictable.

In addition, there are numerous recent changes to the patent laws and proposed changes to the rules of the USPTO which may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the America Invents Act, enacted within the last several years, involves significant changes in patent legislation. The U.S. Supreme Court has ruled on several patent cases in recent years, some of which cases either narrow the scope of patent protection available in certain circumstances or weaken the rights of patent owners in certain situations. The recent decision by the U.S. Supreme Court in Association for *Molecular Pathology v. Myriad Genetics, Inc.* precludes a claim to a nucleic acid having a stated nucleotide sequence which is identical to a sequence found in nature and unmodified. We currently are not aware of an immediate impact of this decision on our patents or patent applications because we are developing nucleic acid products which contain modifications that we believe are not found in nature. However, this decision has yet to be clearly interpreted by courts and by the USPTO. We cannot assure you that the interpretations of this decision or subsequent rulings will not adversely impact our patents or patent applications. 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 decisions by the U.S. Congress, the federal courts and the 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.

Once granted, patents may remain open to opposition, interference, re-examination, post-grant review, *inter partes* review, nullification or derivation action in court or before patent offices or similar proceedings for a given period

after allowance or grant, during which time third parties can raise objections against such initial grant. In the course of such proceedings, which may continue for a protracted period of time, the patent owner may be compelled to limit the scope of the allowed or granted claims thus attacked, or may lose the allowed or granted claims altogether. In addition, there can be no assurance that:

- Others will not or may not be able to make, use or sell compounds that are the same as or similar to our product candidates but that are not covered by the claims of the patents that we own or license.
- We or our licensors, collaborators or any future collaborators are the first to make the inventions covered by each of our issued patents and pending patent applications that we own or license.
- We or our licensors, collaborators or any future collaborators are the first to file patent applications covering certain aspects of our inventions.
- Others will not independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights.
- A third party may not challenge our patents and, if challenged, a court may not hold that our patents are valid, enforceable and infringed.
- Any issued patents that we own or have licensed will provide us with any competitive advantages, or will not be challenged by third parties.
- We may develop additional proprietary technologies that are patentable.
- The patents of others will not have an adverse effect on our business.
- Our competitors do not conduct research and development activities in countries where we do not have enforceable patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets.

We license patent rights from third-party owners or licensees. If such owners or licensees do not properly or successfully obtain, maintain or enforce the patents underlying such licenses, or if they retain or license to others any competing rights, our competitive position and business prospects may be adversely affected.

We do, and will continue to, rely on intellectual property rights licensed from third parties to protect certain aspects of our technology and programs. Specifically, we are a party to a license agreement with Max-Planck-Innovation GmbH, or Max Planck, pursuant to which Max Planck has licensed to us certain patent rights that provide intellectual property for research and development of single-stranded RNAi oligonucleotides. Under this agreement, we have a worldwide co-exclusive license from Max Planck for the exploitation of key intellectual property rights in this respect, and Max Planck retains ownership of the patents and patent applications to which we are licensed under the agreement. See “Business—Licensing Arrangements and Research Collaborations—Our Technology Licenses—Max-Planck-Innovation GmbH.” We also intend to license additional third-party intellectual property in the future. Our success will depend in part on the ability of our licensors to obtain, maintain and enforce patent protection for our licensed intellectual property, in particular, those patents to which we have secured exclusive rights. Our licensors may not successfully prosecute the patent applications licensed to us. Even if patents issue or are granted, our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents, or may pursue litigation less aggressively than we would. Further, we may not obtain exclusive rights, which would allow for third parties to develop competing products. Without protection for, or exclusive right to, the intellectual property we license, other companies might be able to offer substantially identical products for sale, which could adversely affect our competitive business position and harm our business prospects. In addition, we may sublicense our rights under our third-party licenses to current or future collaborators or any future strategic partners. Any impairment of these sublicensed rights could result in reduced revenue under our any future collaboration agreements we may enter into or result in termination of an agreement by one or more of our collaborators or any future strategic partners.

Certain third parties have rights in the patents related to single-stranded oligonucleotides included in the license granted to us by Max Planck, which could allow them to develop, market and sell product candidates in competition with ours.

Our license from Max Planck is one of two maximum allowable co-exclusive licenses for the patents that are the subject of the license, the other of which is currently held by Isis Pharmaceuticals, Inc., or Isis. We therefore do not have rights under this license to prevent Isis from developing product candidates in competition with ours. In addition, the German and U.S. governments have certain rights to the inventions covered by the patent rights and Max Planck, as an academic research and medical center, has the right to practice the licensed patent rights for

educational, research and clinical uses. If a third party develops, manufactures, markets and sells any product covered by the same patent rights and technologies that compete with ours, it could significantly undercut the value of any of our product candidates that rely on the patent rights under that license, which would materially adversely affect our revenue, financial condition and results of operations.

Other companies or organizations may challenge our or our licensors' patent rights or may assert patent rights that prevent us from developing and commercializing our products.

Nucleic acid therapeutics is a relatively new scientific field, the commercial exploitation of which has resulted in many different patents and patent applications from organizations and individuals seeking to obtain patent protection in the field. We have obtained grants and issuances of patents in this field, and also have licensed from Max Planck certain such patents on a co-exclusive basis. The issued patents and pending patent applications in the U.S. and in key markets around the world that we own or license claim certain methods, compositions and processes relating to the discovery, development, manufacture and/or commercialization of nucleic acid therapeutics and/or our platform.

As the field of nucleic acid therapeutics matures, patent applications are being processed by national patent offices around the world. There is uncertainty about which patents will issue, and, if they do, as to when, to whom, and with what claims. It is likely that there will be significant litigation in the courts and other proceedings, such as interference, reexamination and opposition proceedings, in various patent offices relating to patent rights in the nucleic acid therapeutics field. In many cases, the possibility of appeal or opposition exists for either us or our opponents, and it may be years before final, unappealable rulings are made with respect to these patents in certain jurisdictions. The timing and outcome of these and other proceedings is uncertain and may adversely affect our business, particularly if we are not successful in defending the patentability and scope of our pending and issued patent claims or if third parties are successful in obtaining claims that cover our any of our product candidates or our platform. In addition, third parties may attempt to invalidate our intellectual property rights. Even if our rights are not directly challenged, disputes could lead to the weakening of our intellectual property rights. Our defense against any attempt by third parties to circumvent or invalidate our intellectual property rights could be costly to us, could require significant time and attention of our management and could adversely affect our business and our ability to successfully compete in the field of nucleic acid therapeutics.

There are many issued patents and/or pending patent applications that claim aspects of oligonucleotide chemistry and/or modifications that we may want or need to apply to our product candidates. There are also many issued patents and/or pending patent applications that claim targeted genes or portions of genes that may be relevant for nucleic acid drugs we wish to develop. Thus, it is possible that one or more organizations will hold patent rights to which we will need or want a license. If those organizations refuse to grant us a license to such patent rights on reasonable terms, we may not be able to market products or perform research and development or other activities covered by these patents.

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

Obtaining a valid and enforceable issued or granted patent covering our technology in the United States and worldwide can be extremely costly. In jurisdictions where we have not obtained patent protection, competitors may use our technology to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but where it is more difficult to enforce a patent as compared to the United States Competitor products may compete with our future products in jurisdictions where we do not have issued or granted patents or where our issued or granted patent claims or other intellectual property rights are not sufficient to prevent competitor activities in these jurisdictions. The legal systems of certain countries, particularly certain developing countries, make it difficult to enforce patents and such countries may not recognize other types of intellectual property protection, particularly that relating to biopharmaceuticals. This could make it difficult for us to prevent the infringement of our patents or marketing of competing products in violation of our proprietary rights generally in certain jurisdictions. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

We generally file a provisional patent application first (a priority filing) at the USPTO. A Patent Cooperation Treaty, or PCT, application is usually filed within twelve months after the priority filing. Regional and/or national patent applications may be pursued outside of the United States, either based on a PCT application or as a direct filing, in some cases claiming priority to a prior U.S. or PCT filing. Some of our cases have been filed in, for example, in

Australia, Brazil, Canada, Chile, China, Europe, Indonesia, Israel, India, Japan, South Korean, Mexico, Russia, Singapore and South Africa. We also commonly enter the national stage in the United States through a PCT filing. We have so far not filed for patent protection in all national and regional jurisdictions where such protection may be available. In addition, we may decide to abandon national and regional patent applications before grant. Finally, the grant proceeding of each national or regional patent is an independent proceeding which may lead to situations in which applications might in some jurisdictions be refused by the relevant registration authorities, while granted by others. It is also quite common that depending on the country, various scopes of patent protection may be granted on the same product candidate or technology.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws in the United States, and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. If we or our licensors encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished and we may face additional competition from others in those jurisdictions. Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position in the relevant jurisdiction may be impaired and our business and results of operations may be adversely affected.

The requirements for patentability may differ in certain countries, particularly developing countries. For example, unlike other countries, China has a heightened requirement for patentability, and specifically requires a detailed description of medical uses of a claimed drug. In India, unlike the United States, there is no link between regulatory approval of a drug and its patent status. Furthermore, generic or biosimilar drug manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors' or collaborators' patents, requiring us or our licensors or collaborators to engage in complex, lengthy and costly litigation or other proceedings. Generic or biosimilar drug manufacturers may develop, seek approval for, and launch generic versions of our products. In addition to India, certain countries in Europe and developing countries, including China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors or collaborators may have limited remedies if patents are infringed or if we or our licensors or collaborators are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our and our licensors' and collaborators' efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

We or our licensors, collaborators or any future strategic partners may become subject to third party claims or litigation alleging infringement of patents or other proprietary rights or seeking to invalidate patents or other proprietary rights, and we may need to resort to litigation to protect or enforce our patents or other proprietary rights, all of which could be costly, time consuming, delay or prevent the development and commercialization of our product candidates, or put our patents and other proprietary rights at risk.

We or our licensors, collaborators or any future strategic partners may be subject to third-party claims for infringement or misappropriation of patent or other proprietary rights. We are generally obligated under our license or collaboration agreements to indemnify and hold harmless our licensors or collaborators for damages arising from intellectual property infringement by us. If we or our licensors, collaborators or any future strategic partners are found to infringe a third party patent or other intellectual property rights, we could be required to pay damages, potentially including treble damages, if we are found to have willfully infringed. In addition, we or our licensors, collaborators or any future strategic partners may choose to seek, or be required to seek, a license from a third party, which may not be available on acceptable terms, if at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. If we fail to obtain a required license, we or our collaborator, or any future collaborator, may be unable to effectively market product candidates based on our technology, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. In addition, we may find it necessary to pursue claims or initiate lawsuits to protect or enforce our patent or other intellectual property rights. The cost to us in defending or initiating any

litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation would divert our management's attention. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

If we were to initiate legal proceedings against a third party to enforce a patent covering one of our products or our technology, the defendant could counterclaim that our patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, 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 during patent litigation is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one or more of our products or certain aspects of our platform technology. Such a loss of patent protection could negatively impact our business. Patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without legally infringing our patents or other intellectual property rights.

Intellectual property rights of third parties could adversely affect our ability to commercialize our product candidates, and we might be required to litigate or obtain licenses from third parties in order to develop or market our product candidates. Such litigation or licenses could be costly or not available on commercially reasonable terms.

Because the nucleic acid therapeutics intellectual property landscape is still evolving, it is difficult to conclusively assess our freedom to operate without infringing third party rights. There are numerous companies that have pending patent applications and issued patents directed to certain aspects of nucleic acid therapeutics. Our competitive position may suffer if patents issued to third parties or other third party intellectual property rights cover our products or elements thereof, or our manufacture or uses relevant to our development plans. In such cases, we may not be in a position to develop or commercialize products or product candidates unless we successfully pursue litigation to nullify or invalidate the third party intellectual property right concerned, or enter into a license agreement with the intellectual property right holder, if available on commercially reasonable terms.

It is also possible that we have failed to identify relevant third party patents or applications. For example, U.S. applications filed before November 29, 2000 and certain U.S. applications filed after that date that will not be filed outside the United States remain confidential until patents issue. Patent applications in the United States and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our products or platform technology could have been filed by others without our knowledge. Additionally, pending patent applications which have been published can, subject to certain limitations, be later amended in a manner that could cover our platform technologies, our products or the use of our products. Third party intellectual property right holders may also actively bring infringement claims against us. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in or continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our products. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our product candidates that are held to be infringing. We might, if possible, also be forced to redesign product candidates so that we no longer infringe the third party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business.

If we fail to comply with our obligations under any license, collaboration or other agreements, we may be required to pay damages and could lose intellectual property rights that are necessary for developing and protecting our product candidates or we could lose certain rights to grant sublicenses.

Our current license with Max Planck imposes, and any future licenses we enter into are likely to impose, various development, commercialization, funding, milestone, royalty, diligence, sublicensing, insurance, patent prosecution and enforcement, and other obligations on us. If we breach any of these obligations, or use the intellectual property licensed to us in an unauthorized manner, we may be required to pay damages and the licensor may have the right to terminate the license, which could result in us being unable to develop, manufacture and sell products that are covered by the licensed technology or enable a competitor to gain access to the licensed technology. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights. In addition, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent protection for certain aspects of our product candidates, we also consider trade secrets, including confidential and unpatented know-how important to the maintenance of our competitive position. We protect trade secrets and confidential and unpatented know-how, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants that obligate them to maintain confidentiality and assign their inventions to us. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts in the United States and certain foreign jurisdictions are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets of our employees' or consultants' former employers or their clients. These claims may be costly to defend and if we do not successfully do so, we may be required to pay monetary damages and may lose valuable intellectual property rights or personnel.

Many of our employees were previously employed at universities or biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper our ability to commercialize, or prevent us from commercializing, our product candidates, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively and our business may be adversely affected.

Risks Related to Our Being a Singapore Company

We are a Singapore incorporated company and it may be difficult to enforce a judgment of U.S. courts for civil liabilities under U.S. federal securities laws against us, our directors or officers in Singapore.

We are incorporated under the laws of the Republic of Singapore, and certain of our officers and directors are residents outside the United States. Moreover, a majority of our consolidated assets are located outside the United States. Although we are incorporated outside the United States, we have agreed to accept service of process in the United States through our agent designated for that purpose. Nevertheless, because a majority of the consolidated assets owned by us are located outside the United States, any judgment obtained in the United States against us may not be collectible within the United States.

There is no treaty between the United States and Singapore providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters and a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the federal securities laws, would, therefore, not be automatically enforceable in Singapore. It is not clear whether a Singapore court may impose civil liability on us or our directors and officers who reside in Singapore in a suit brought in the Singapore courts against us or such persons with respect to a violation solely of the federal securities laws of the United States. In addition, holders of book-entry interests in our shares will be required to be registered shareholders as reflected in our shareholder register in order to have standing to bring a shareholder action and, if successful, to enforce a foreign judgment against us, our directors or our executive officers in the Singapore courts. The administrative process of becoming a registered holder could result in delays prejudicial to any legal proceedings or enforcement action. Consequently, it may be difficult for investors to enforce against us, our directors or our officers in Singapore judgments obtained in the United States which are predicated upon the civil liability provisions of the federal securities laws of the United States. See “Enforcement of Civil Liabilities Under United States Federal Securities Laws.”

We are incorporated in Singapore and our shareholders may have more difficulty in protecting their interests than they would as shareholders of a corporation incorporated in the United States.

Our corporate affairs are governed by our memorandum and articles of association and by the laws governing corporations incorporated in Singapore. The rights of our shareholders and the responsibilities of the members of our board of directors under Singapore law are different from those applicable to a corporation incorporated in the United States. Principal shareholders of Singapore companies do not owe fiduciary duties to minority shareholders, as compared, for example, to controlling shareholders in corporations incorporated in Delaware. Our public shareholders may have more difficulty in protecting their interests in connection with actions taken by our management, members of our board of directors or our principal shareholders than they would as shareholders of a corporation incorporated in the United States.

In addition, only persons who are registered as shareholders in our shareholder register are recognized under Singapore law as shareholders of our company. Only registered shareholders have legal standing to institute shareholder actions against us or otherwise seek to enforce their rights as shareholders. Investors in our shares who are not specifically registered as shareholders in our shareholder register (for example, where such shareholders hold shares indirectly through the Depository Trust Company) are required to become registered as shareholders in our shareholder register in order to institute or enforce any legal proceedings or claims against us, our directors or our executive officers relating to shareholder rights. Holders of book-entry interests in our shares may become registered shareholders by exchanging their book-entry interests in our shares for certificated shares and being registered in our shareholder register. See “Comparison of Shareholder Rights” in this prospectus for a discussion of differences between Singapore and Delaware corporation law.

We are subject to the laws of Singapore, which differ in certain material respects from the laws of the United States.

As a company incorporated under the laws of the Republic of Singapore, we are required to comply with the laws of Singapore, certain of which are capable of extra-territorial application, as well as our memorandum and articles of association. In particular, we are required to comply with certain provisions of the Securities and Futures Act of Singapore (Cap 289), or the SFA, which prohibit certain forms of market conduct and information disclosures, and impose criminal and civil penalties on corporations, directors and officers in respect of any breach of such provisions. We are also required to comply with the Singapore Code on Take-Overs and Mergers, or the Singapore Takeover Code, which specifies, among other things, certain circumstances in which a general offer is to be made upon a change in effective control, and further specifies the manner and price at which voluntary and mandatory general offers are to be made.

The laws of Singapore and of the United States differ in certain significant respects. The rights of our shareholders and the obligations of our directors and officers under Singapore law are different from those applicable to a company incorporated in the State of Delaware in material respects, and our shareholders may have more difficulty and less clarity in protecting their interests in connection with actions taken by our management, members of our board of directors or our controlling shareholders than would otherwise apply to a company incorporated in the State of Delaware. See "Comparison of Shareholder Rights" in this prospectus for a discussion of differences between Singapore and Delaware corporation law.

In addition, the application of Singapore law, in particular, the Companies Act of Singapore (Cap 50), or the Singapore Companies Act, may in certain circumstances impose more restrictions on us and our shareholders, directors and officers than would otherwise be applicable to a company incorporated in the State of Delaware. For example, the Singapore Companies Act requires directors to act with a reasonable degree of diligence and, in certain circumstances, imposes criminal liability for specified contraventions of particular statutory requirements or prohibitions. In addition, pursuant to the provisions of the Singapore Companies Act, shareholders holding 10% or more of the total number of paid-up shares carrying the right of voting in general meetings may require the convening of an extraordinary general meeting of shareholders by our directors. If our directors fail to comply with such request within 21 days of the receipt thereof, shareholders holding more than 50% of the voting rights represented by the original requisitioning shareholders may proceed to convene such meeting, and we will be liable for the reasonable expenses incurred by such requisitioning shareholders. We are also required by the Singapore Companies Act to deduct corresponding amounts from fees or other remuneration payable by us to such non-complying directors.

We are subject to the Singapore Takeover Code, which requires a person acquiring 30% or more of our voting shares to conduct a takeover offer for all of our voting shares. This could have the effect of discouraging, delaying or preventing a merger or acquisition and limit the market price of our ordinary shares.

We are subject to the Singapore Takeover Code. The Singapore Takeover Code contains provisions that may delay, deter or prevent a future takeover or change in control of our company and limit the market price of our ordinary shares for so long as we remain a public company with more than 50 shareholders and net tangible assets of S$5 million or more. For example, under the Singapore Takeover Code, any person acquiring, whether by a series of transactions over a period of time or not, either on his own or together with parties acting in concert with him, 30% or more of our voting shares, or if such person holds, either on his own or together with parties acting in concert with him, between 30% and 50% (both inclusive) of our voting shares, and if he (or parties acting in concert with him) acquires additional voting shares representing more than 1% of our voting shares in any six-month period, must, except with the consent of Securities Industry Council in Singapore, extend a takeover offer for our remaining voting shares in accordance with the Singapore Takeover Code. Therefore, any investor seeking to acquire a significant stake in our company may be deterred from doing so if, as a result, such investor would be required to conduct a takeover offer for all of our voting shares.

These same provisions could discourage potential investors from acquiring a stake or making a significant investment in our company and may substantially impede the ability of our shareholders to benefit from a change of effective control and, as a result, may adversely affect the market price of our ordinary shares and the ability to realize any benefits from a potential change of control.

For a limited period of time, our directors have general authority to allot and issue new shares on terms and conditions and with any preferences, rights or restrictions as may be determined by our board of directors in its sole discretion.

Under Singapore law, we may only allot and issue new shares with the prior approval of our shareholders in a general meeting. We expect that prior to the completion of this offering our shareholders will provide our directors with a general authority to allot and issue any number of new shares (whether as ordinary shares or preferred shares) until the earliest of (i) the conclusion of our 2016 annual general meeting of shareholders, (ii) the expiration of the period within which the next annual general meeting is required to be held (i.e., within 15 months from the conclusion of the last general meeting) and (iii) the subsequent revocation or modification of such general authority by our shareholders acting at an extraordinary general meeting duly convened for such purpose. Subject to the general requirements of the Singapore Companies Act and our memorandum and articles of association, the general authority given to our directors by our shareholders to allot and issue shares may be exercised by our directors to allot and issue shares on such terms and conditions as they deem fit to impose. Any additional issuances of new shares by our directors may dilute your interest in our ordinary shares and/or adversely impact the market price of our ordinary shares. See "Description of Share Capital—New Shares."

We may be or become a passive foreign investment company, or a PFIC, which could result in adverse U.S. federal income tax consequences to U.S. Holders.

The rules governing passive foreign investment companies, or PFICs, can have adverse effects for U.S. federal income tax purposes. The tests for determining PFIC status for a taxable year depend upon the relative values of certain categories of assets and the relative amounts of certain kinds of income. The determination of whether we are a PFIC depends on the particular facts and circumstances (such as the valuation of our assets, including goodwill and other intangible assets) and may also be affected by the application of the PFIC rules, which are subject to differing interpretations. The fair market value of our assets is expected to relate, in part, to (a) the market price of our ordinary shares and (b) the composition of our income and assets, which will be affected by how, and how quickly, we spend any cash that is raised in any financing transaction, including this offering. Moreover, our ability to earn specific types of income that we currently treat as non-passive for purposes of the PFIC rules is uncertain with respect to future years. Based on the current and anticipated value of our assets and the composition of our income and assets, we do not expect to be treated as a PFIC for our current taxable year ending December 31, 2015; however, there can be no assurance that we will not be considered a PFIC for any taxable year.

If we are a PFIC, a U.S. Holder (as defined in the section titled “Material Tax Considerations”) would be subject to adverse U.S. federal income tax consequences, such as ineligibility for any preferred tax rates on capital gains or on actual or deemed dividends, interest charges on certain taxes treated as deferred, and additional reporting requirements under U.S. federal income tax laws and regulations. A U.S. Holder may in certain circumstances mitigate adverse tax consequences of the PFIC rules by filing an election to treat the PFIC as a qualified electing fund, or QEF, or, if shares of the PFIC are “marketable stock” for purposes of the PFIC rules, by making a mark-to-market election with respect to the shares of the PFIC. We do not intend to comply with the reporting requirements necessary to permit U.S. Holders to elect to treat us as a QEF. If a U.S. Holder makes a mark-to-market election with respect to its ordinary shares, the U.S. Holder is required to include annually in its U.S. federal taxable income an amount reflecting any year end increase in the value of its ordinary shares.

Investors should consult their own tax advisors regarding all aspects of the application of the PFIC rules to the ordinary shares. For more information related to classification as a PFIC and the elections available to a U.S. Holder, see “Material Tax Considerations—Material U.S. Federal Income Tax Considerations—Passive Foreign Investment Company.”

Singapore taxes may differ from the tax laws of other jurisdictions.

Prospective investors should consult their tax advisers concerning the overall tax consequences of purchasing, owning and disposing of our shares. Singapore tax law may differ from the tax laws of other jurisdictions, including the United States. See “Material Tax Considerations—Material Singapore Tax Considerations.”

We may become subject to unanticipated tax liabilities.

We are incorporated under the laws of Singapore. We may, however, become subject to income, withholding or other taxes in certain jurisdictions by reason of our activities and operations, and it is also possible that taxing authorities in any such jurisdictions could assert that we are subject to greater taxation than we currently anticipate. Any such non-Singaporean tax liability could materially adversely affect our results of operations.

Taxing authorities could reallocate our taxable income among our subsidiaries, which could increase our overall tax liability.

We are organized in Singapore, and we currently have a subsidiary in the United States and Japan. If we succeed in growing our business, we expect to conduct increased operations through our subsidiaries in various tax jurisdictions pursuant to transfer pricing arrangements between us and our subsidiaries. If two or more affiliated companies are located in different countries, the tax laws or regulations of each country generally will require that transfer prices be the same as those between unrelated companies dealing at arms’ length and that appropriate documentation is maintained to support the transfer prices. While we are revising our transfer pricing policies to come into compliance with applicable transfer pricing laws, we may not amend returns for prior years, and even our new transfer pricing procedures are not binding on applicable tax authorities.

If tax authorities in any of these countries were to successfully challenge our transfer prices as not reflecting arms’ length transactions, they could require us to adjust our transfer prices and thereby reallocate our income to reflect these revised transfer prices, which could result in a higher tax liability to us. In addition, if the country from which

the income is reallocated does not agree with the reallocation, both countries could tax the same income, resulting in double taxation. If tax authorities were to allocate income to a higher tax jurisdiction, subject our income to double taxation or assess interest and penalties, it would increase our consolidated tax liability, which could adversely affect our financial condition, results of operations and cash flows.

Risks Related to this Offering and Our Ordinary Shares

Investors in this offering will pay a much higher price than the book value of our ordinary shares.

If you purchase ordinary shares in this offering, you will incur an immediate and substantial dilution of $9.45 per share after giving effect to the sale by us of 6,375,000 ordinary shares offered in this offering, based on the initial public offering price of $16.00 per share, and after deducting underwriting discounts and commissions for shares sold in the public offering and estimated offering expenses payable by us. See “Dilution.” In the past, we have issued options to acquire ordinary shares at prices significantly below this offering price. To the extent these outstanding options are ultimately exercised, you will incur additional dilution. Furthermore, if the underwriters exercise their option to purchase additional ordinary shares, you will also incur additional dilution.

No public market for our ordinary shares currently exists, and we do not know whether a market will develop or what the market price of our ordinary shares will be. As a result, it may be difficult for you to sell your ordinary shares.

Prior to this offering, there has been no public market for our ordinary shares. Although our ordinary shares have been approved for listing on the NASDAQ Global Market, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our ordinary shares does not develop, it may be difficult for you to sell shares you purchase in this offering without depressing the market price for the shares, or at all. The initial public offering price for our ordinary shares was determined through negotiations with the underwriters and the negotiated price may not be indicative of the market price of our ordinary shares after this offering. As a result of these and other factors, you may not be able to sell your ordinary shares at or above the initial public offering price, or at all. Further, an inactive market may also impair our ability to raise capital by selling our ordinary shares and may impair our ability to enter into strategic partnerships or acquire companies or products by using our ordinary shares as consideration.

The market price of our ordinary shares is likely to be highly volatile, and you may lose some or all of your investment.

The market price of our ordinary shares following this offering is likely to be highly volatile, including in response to factors that are beyond our control. The stock market in general has recently experienced extreme price and volume fluctuations. In particular, the market prices of securities of pharmaceutical and biotechnology companies have been extremely volatile, and have experienced fluctuations that often have been unrelated or disproportionate to the operating performance of these companies. These broad market fluctuations could result in extreme fluctuations in the price of our ordinary shares, regardless of our operating performance. The market price of our ordinary shares may decline below the initial public offering price, and you may lose some or all of your investment.

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

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting and other requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the Dodd-Frank Wall Street Reform and Protection Act, as well as rules subsequently adopted by the SEC and the NASDAQ Stock Market. These rules and regulations will require, among other things, that we file annual, quarterly and current reports with respect to our business and financial condition and establish and maintain effective disclosure and financial controls and corporate governance practices. We expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly, particularly after we are no longer an “emerging growth company,” as defined in the recently enacted Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance, which could make it more difficult for us to attract and retain qualified members of our board of directors. We cannot predict or estimate the amount of additional costs we will incur as a public company or the timing of such costs.

We may take advantage of specified reduced disclosure requirements applicable to an "emerging growth company" under the JOBS Act, and the information that we provide to shareholders may be different than they might receive from other public companies.

We are an "emerging growth company," as defined under the JOBS Act. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include:

- Only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure.
- Reduced disclosure about our executive compensation arrangements.
- No non-binding advisory votes on executive compensation or golden parachute arrangements.
- Exemption from the auditor attestation requirement in the assessment of our internal control over financial reporting.

We intend to take advantage of certain of the exemptions provided under the JOBS Act. We may continue to take advantage of exemptions under the JOBS Act for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than $1 billion in annual revenues, we have more than $700 million in market value of our shares held by non-affiliates, or we issue more than $1 billion of non-convertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced burdens. We have taken advantage of these reduced reporting burdens in this prospectus, and may continue to do so in future filings. Therefore, the information that we provide shareholders may be different than you might get from other public companies in which you hold stock. Further, if some investors find our ordinary shares less attractive as result, there may be a less active trading market for our ordinary shares and the market price of our ordinary shares may be more volatile.

Our management will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds and the proceeds may not be used effectively.

Our management will have broad discretion as to the use of the net proceeds from any offering by us and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you may be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for our company.

We have identified a material weakness in our internal control over financial reporting and may identify additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, which may result in material misstatements of our financial statements or cause us to fail to meet our periodic reporting obligations.

Prior to this offering, we were a private company and had limited accounting and financial reporting personnel and other resources with which to address our internal controls and procedures. In connection with the audit of our consolidated financial statements for the years ended December 31, 2013 and 2014, we and our independent registered public accounting firm identified a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. Our lack of adequate accounting personnel has resulted in the identification of a material weakness in our internal controls over financial reporting. Specifically, we did not appropriately design and implement controls over the review and approval of manual journal entries and the related supporting journal entry calculations.

To address this material weakness, we plan to hire additional accounting personnel and implement management review controls. While we intend to implement a plan to remediate this material weakness, we cannot predict the success of such plan or the outcome of our assessment of these plans at this time. We can give no assurance that this implementation will remediate this deficiency in internal control or that additional material weaknesses or significant deficiencies in our internal control over financial reporting will not be identified in the future. Our failure to implement

and maintain effective internal control over financial reporting could result in errors in our financial statements that could result in a restatement of our financial statements, cause us to fail to meet our reporting obligations.

As a result of becoming a public company, we will be obligated to develop and maintain proper and effective internal controls over financial reporting and any failure to maintain the adequacy of these internal controls may adversely affect investor confidence in our company and, as a result, the value of our ordinary shares.

We will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, or Section 404, to furnish a report by management on the effectiveness of our internal control over financial reporting for the first fiscal year beginning after the effective date of this offering. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. Our independent registered public accounting firm will not be required to attest to the effectiveness of our internal control over financial reporting until our first annual report required to be filed with the SEC following the date we are no longer an "emerging growth company," as defined in the JOBS Act. At such time as we are required to obtain auditor attestation, if we then have a material weakness, we would receive an adverse opinion regarding our internal control over financial reporting from our independent registered accounting firm.

We are beginning the costly and challenging process of compiling the system and processing documentation necessary to perform the evaluation needed to comply with Section 404, and we may not be able to complete our evaluation, testing and any required remediation in a timely fashion. Our compliance with Section 404 will require that we incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge and compile the system and process documentation necessary to perform the evaluation needed to comply with Section 404.

During our evaluation of our internal control, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective. We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition or results of operations. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of our ordinary shares could decline, and we could be subject to sanctions or investigations by NASDAQ, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

Our principal shareholders and management own a significant percentage of our ordinary shares and will be able to exert significant control over matters subject to shareholder approval.

Based on the beneficial ownership of our ordinary shares as of August 15, 2015, after this offering, our executive officers and directors, together with holders of 5% or more of our outstanding ordinary shares before this offering (assuming the conversion of all of our outstanding preferred shares into ordinary shares) and their respective affiliates, will beneficially own approximately 71% of our outstanding ordinary shares (assuming no exercise of the underwriters' option to purchase additional ordinary shares). Entities affiliated with RA Capital Management, LLC and certain other entities affiliated with our directors have indicated an interest in purchasing an aggregate of approximately $32.0 million of our ordinary shares in this offering at the initial public offering price. Indications of interest are not binding agreements or commitments to purchase, and the underwriters could determine to sell more, less or no shares to any of these entities and any of these entities could determine to purchase more, less or no shares in this offering. However, if any of our ordinary shares are purchased by these entities, the number of ordinary shares beneficially owned by our principal shareholders and management would increase. Assuming these entities purchase an aggregate of $32.0 million of our ordinary shares in this offering and no exercise of the underwriters' option to purchase additional shares, our executive officers, directors and holders of 5% or more of our outstanding ordinary shares and their respective affiliates would beneficially own approximately 79% of our outstanding shares.

These shareholders, if acting together, will continue to have significant influence over the outcome of corporate actions requiring shareholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets and any other significant corporate transaction. The interests of these shareholders may not be the same as or may even conflict with your interests. For example, these shareholders could delay or prevent a change of control of our company, even if such a change of control would benefit our other shareholders, which could deprive shareholders of an opportunity to receive a premium for their ordinary shares as part of a sale of our company or our assets and might affect the prevailing market price of our ordinary shares. The significant concentration of share ownership may adversely affect the trading price of our ordinary shares due to investors' perception that conflicts of interest may exist or arise.

We do not anticipate paying any cash dividends on our ordinary shares in the foreseeable future.

We have never declared or paid cash dividends on our ordinary shares. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business, and we do not anticipate paying any cash dividends on our ordinary shares in the foreseeable future. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our ordinary shares will be your sole source of gain for the foreseeable future.

We may incur significant costs from class action litigation due to share volatility.

Our share price may fluctuate for many reasons, including as a result of public announcements regarding the progress of our development efforts or the development efforts of our collaborators and/or competitors, the addition or departure of our key personnel, variations in our quarterly operating results and changes in market valuations of pharmaceutical and biotechnology companies. Holders of stock which has experienced significant price and trading volatility have occasionally brought securities class action litigation against the companies that issued the stocks. If any of our shareholders were to bring a lawsuit of this type against us, even if the lawsuit is without merit, we could incur substantial costs defending the lawsuit. The lawsuit could also divert the time and attention of our management, which could harm our business.

Sales of additional ordinary shares could cause the price of our ordinary shares to decline.

Sales of substantial amounts of our ordinary shares in the public market, or the availability of such shares for sale, by us or others, including the issuance of ordinary shares upon exercise of outstanding options, could adversely affect the price of our ordinary shares. In connection with this offering, we, our directors and officers and certain of our existing shareholders have entered into lock-up agreements for a period of 180 days following this offering. We, our directors, officers or our shareholders may be released from lock-up prior to the expiration of the lock-up period at the sole discretion of Jefferies LLC and Leerink Partners LLC. See "Underwriting." Upon expiration or earlier release of the lock-up, we, our directors, officers or our shareholders may sell shares into the market, which could adversely affect the market price of our ordinary shares.

After this offering, certain of our shareholders will have the right to require us to register the sales of their shares under the Securities Act of 1933, as amended, under agreements between us and such shareholders. See "Description of Share Capital—Registration Rights" for a more detailed description of these rights.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our share price and trading volume could decline.

The trading market for our ordinary shares will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If no or too few securities or industry analysts commence coverage of our company, the trading price for our ordinary shares would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrade our ordinary shares or publish inaccurate or unfavorable research about our business, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our ordinary shares could decrease, which might cause our share price and trading volume to decline.

ENFORCEMENT OF CIVIL LIABILITIES UNDER UNITED STATES FEDERAL SECURITIES LAWS

We are incorporated under the laws of the Republic of Singapore, and certain of our officers and directors are residents outside the United States. Moreover, a majority of our consolidated assets are located outside the United States. Although we are incorporated outside the United States, we have agreed to accept service of process in the United States through our agent designated for that purpose. Nevertheless, since a majority of the consolidated assets owned by us are located outside the United States, any judgment obtained in the United States against us may not be collectible within the United States. There is no treaty between the United States and Singapore providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters and a final judgment for the payment of money rendered by any federal or state court in the United States based on civil liability, whether or not predicated solely upon the federal securities laws, would, therefore, not be automatically enforceable in Singapore.

It is not clear whether a Singapore court may impose civil liability on us or our directors and officers who reside in Singapore in a suit brought in the Singapore courts against us or such persons with respect to a violation solely of the federal securities laws of the United States. In making a determination as to enforceability of a foreign judgment, the Singapore courts would have regard to whether the judgment was final and conclusive, given by a court of competent jurisdiction, and was expressed to be for a fixed sum of money. In general, a foreign judgment would be enforceable in Singapore unless procured by fraud, or the proceedings in which such judgments were obtained were not conducted in accordance with principles of natural justice, or the enforcement thereof would be contrary to public policy, or if the judgment would conflict with earlier judgment(s) from Singapore or earlier foreign judgment(s) recognized in Singapore, or if the judgment would amount to the direct or indirect enforcement of foreign penal, revenue or other public laws.

Accordingly, there can be no assurance that the Singapore courts would enforce against us, our directors or our officers resident in Singapore judgments obtained in the United States which are predicated upon the civil liability provisions of the federal securities laws of the United States. In addition, holders of book-entry interests in our shares will be required to exchange such interests for certificated shares and to be registered as shareholders in our shareholder register in order to have standing to bring a shareholder suit and, if successful, to enforce a foreign judgment against us, our directors or our executive officers in the Singapore courts.

A holder of book-entry interests in our shares may become a registered shareholder of our company by exchanging such holder’s interest in our shares for certificated shares and being registered in our shareholder register. The administrative process of becoming a registered shareholder could result in delays prejudicial to any legal proceeding or enforcement action.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections titled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “future,” “goals,” “intend,” “likely,” “may,” “might,” “ongoing,” “objective,” “plan,” “potential,” “predict,” “project,” “seek,” “should,” “strategy,” “will” and “would” or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain. Forward-looking statements include statements about:

- our ability to fund our working capital requirements;
- our success, cost and timing of our product development activities and future clinical trials;
- the timing of and our ability to obtain and maintain regulatory approvals for any of our product candidates;
- our ability to identify and develop new product candidates;
- our intellectual property position;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our use of proceeds from this offering;
- our ability to develop sales and marketing capabilities;
- our estimates regarding future expenses and needs for additional financing;
- our ability to identify, recruit and retain key personnel;
- our financial performance; and
- developments and projections relating to our competitors in the industry.

You should refer to the “Risk Factors” section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended, do not protect any forward-looking statements that we make in connection with this offering. In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

INDUSTRY AND MARKET DATA

Certain industry data and market data included in this prospectus were obtained from independent third-party surveys, market research, publicly available information, reports of governmental agencies and industry publications and surveys. All of management's estimates presented herein are based upon management's review of independent third-party surveys and industry publications prepared by a number of sources and other publicly available information. All of the market data used in this prospectus involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. We believe that the information from these industry publications and surveys that is included in this prospectus is reliable. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled "Risk Factors." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that we will receive approximately $91.3 million in net proceeds from the sale of our ordinary shares in this offering, or approximately $105.5 million if the underwriters exercise their option to purchase additional ordinary shares in full, based upon the initial public offering price of $16.00 per share, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering as follows:

- approximately $11.3 million to fund additional preclinical studies and Phase 1 clinical trials for our HD HTT SNP-1 program;
- approximately $13.4 million to fund the selection of a lead product candidate and additional preclinical studies and Phase 1 clinical trials for our HD HTT SNP-2 program;
- approximately $14.2 million to fund additional preclinical studies and Phase 1 clinical trials for our DMD Exon 51 program; and
- approximately $11.6 million to fund the selection of a lead product candidate and additional preclinical studies and Phase 1 clinical trials for our IBD SMAD7 program.

The remainder of the net proceeds will be used to advance our discovery programs, to expand our pipeline, for working capital and for other general corporate purposes. We may also use a portion of the net proceeds to acquire, license and invest in complementary products, technologies or businesses; however, we currently have no agreements or commitments to do so.

As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. The amount and timing of our actual expenditures may vary significantly depending upon numerous factors, including those described in the “Risk Factors” section of this prospectus. We may find it necessary or advisable to use the net proceeds for other purposes, and our management will retain broad discretion in the allocation of our net proceeds from this offering.

This expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development activities, feedback from regulatory authorities, the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our current and future product candidates, and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

As of June 30, 2015, we had cash of $7.8 million. We believe that the net proceeds from this offering, together with the approximately $62.5 million in net proceeds raised from the sale and issuance of our Series B preferred shares in August 2015, and our cash and related interest we earn on these balances, will be sufficient to meet our anticipated cash requirements through at least 2017. We will need to raise substantial additional funds before we can expect to commercialize any products. We may satisfy our future cash needs through the sale of equity securities, debt financings, working capital lines of credit, corporate collaborations or license agreements, grant funding, through interest income earned on cash balances or a combination of one or more of these sources.

Pending use of our net proceeds from this offering, we plan to invest the proceeds in a variety of capital preservation investments, including investment-grade, interest-bearing instruments. We cannot predict whether the net proceeds will yield a favorable return.

DIVIDEND POLICY

We have never declared or paid any dividends on our ordinary shares. We currently anticipate that we will retain any future earnings for the operation and expansion of our business. Accordingly, we do not currently anticipate declaring or paying any cash dividends on our ordinary shares for the foreseeable future. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on then existing conditions, including our financial condition, results of operations, contractual restrictions (including in the agreements governing our credit facilities), capital requirements, business prospects and other factors our board of directors may deem relevant. We may, by ordinary resolution, declare dividends at a general meeting of shareholders, but we are restricted from paying dividends in excess of the amount recommended by our board of directors. In addition, pursuant to Singapore law and our articles of association, no dividends may be paid except out of our profits.

CAPITALIZATION

The table below reflects our cash and capitalization as of June 30, 2015:

- on an actual basis;
- on a pro forma basis to reflect (i) the sale by us of 5,334,892 Series B preferred shares in August 2015 for net proceeds of approximately $62.5 million; (ii) the conversion of all Series B preferred shares outstanding as of August 15, 2015 into an aggregate of 5,334,892 ordinary shares prior to the closing of this offering; and (iii) the effectiveness of our amended and restated memorandum and articles of association in connection with this offering; and
- on a pro forma basis, as adjusted to further reflect the sale of 6,375,000 ordinary shares in this offering at the initial public offering price of $16.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table together with the sections titled “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this prospectus.

	As of June 30, 2015		
	Actual	Pro Forma	Pro Forma As Adjusted
	(unaudited) (in thousands, except share data)		
Cash	$ 7,779	$ 70,279	$ 161,539
Series B preferred shares, no par value, no shares issued and outstanding actual, pro forma and pro forma as adjusted	$ —	$ —	$ —
Shareholders’ equity:			
Series A preferred shares, no par value, 3,901,348 shares issued and outstanding actual, pro forma and pro forma as adjusted	7,874	7,874	7,874
Ordinary shares, no par value, 9,223,405 shares issued and outstanding actual, 14,558,297 shares issued and outstanding pro forma, 20,933,297 shares issued and outstanding pro forma as adjusted	22,446	84,946	176,206
Additional paid-in capital	1,650	1,650	1,650
Accumulated other comprehensive income	34	34	34
Accumulated deficit	(23,041)	(23,041)	(23,041)
Total shareholders’ equity	8,963	71,463	162,723
Total capitalization	$ 8,963	$ 71,463	$ 162,723

The tables and calculations above are based on the number of our ordinary shares outstanding as of June 30, 2015, and exclude:

- 1,844,770 ordinary shares issuable upon the exercise of options outstanding as of June 30, 2015, with an exercise price of $2.47 per share, plus 169,942 ordinary shares issuable upon the exercise of options granted subsequent to June 30, 2015, with a weighted average exercise price of $7.77 per share;
- 462,960 ordinary shares reserved for future issuance under our 2014 Plan as of June 30, 2015, plus an additional 2,396,016 ordinary shares reserved for future issuance subsequent to June 30, 2015; and
- 3,901,348 outstanding Series A preferred shares which can be converted at any time on a one-for-one basis into ordinary shares at the discretion of the holder.

DILUTION

If you invest in our ordinary shares, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of our ordinary shares and the pro forma as adjusted net tangible book value per share of our ordinary shares after this offering. We calculate net tangible book value per share by dividing the net tangible book value, or tangible assets less total liabilities, by the number of outstanding ordinary shares of our share capital. Our historical net tangible book value as of June 30, 2015 was $8.3 million, or $0.90 per ordinary share.

Pro forma net tangible book value and pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, after giving effect to (i) the issuance and sale by us of 5,334,892 Series B preferred shares in August 2015 for net proceeds of approximately $62.5 million, (ii) the conversion of all of our outstanding Series B preferred shares into 5,334,892 ordinary shares prior to the closing of this offering and (iii) the voluntary conversion of the 3,901,348 outstanding Series A preferred shares which can be converted at any time on a one-for-one basis into ordinary shares at the sole discretion of the holder. Our pro forma net tangible book value at June 30, 2015 was $70.8 million, or $3.84 per share.

Our pro forma as adjusted net tangible book value represents our pro forma net tangible book value, plus the effect of the sale of 6,375,000 ordinary shares by us at the initial public offering price of $16.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Our pro forma as adjusted net tangible book value at June 30, 2015 was $162.7 million, or $6.55 per share. This amount represents an immediate increase in the pro forma as adjusted net tangible book value of $2.71 per share to existing shareholders and an immediate dilution of $9.45 per share to new investors purchasing shares at the initial public offering price of $16.00 per share.

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

Initial public offering price per share		$16.00
Pro forma net tangible book value per share as of June 30, 2015	$3.84	
Increase in pro forma net tangible book value per share attributable to new investors	2.71	
Pro forma as adjusted net tangible book value per share after this offering		6.55
Dilution in pro forma as adjusted net tangible book value per share to new investors		$ 9.45

If the underwriters exercise in full their option to purchase 956,250 additional ordinary shares in this offering, the pro forma as adjusted net tangible book value per share after the offering would be $6.86 per share, the increase in the pro forma as adjusted net tangible book value per share to existing shareholders would be $3.02 per share and the dilution in pro forma as adjusted net tangible book value per share to new investors purchasing ordinary shares in this offering would be $9.14 per share.

The following table summarizes, as of June 30, 2015, on a pro forma as adjusted basis as described above the number of ordinary shares we issued and sold, the total consideration paid and the average price per share (i) paid to us by existing shareholders and (ii) to be paid by investors purchasing ordinary shares in this offering. The table is based upon the initial public offering price of $16.00 per share, before deducting underwriting discounts and commissions and estimated expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percentage	Amount	Percentage	
Existing shareholders	18,459,645	74.3%	$ 95,662,000	48.4%	$ 5.18
Investors participating in this offering	6,375,000	25.7	102,000,000	51.6	16.00
Total	24,834,645	100.0%	$197,662,000	100.0%	

Except as otherwise indicated, the discussion and tables above assume no exercise of the underwriters' option to purchase additional shares. If the underwriters' option to purchase additional shares is exercised in full, our existing shareholders would own approximately 71.6% and investors participating in this offering would own approximately 28.4% of the total number of our ordinary shares outstanding after this offering.

The information discussed above excludes:

- 1,844,770 ordinary shares issuable upon the exercise of options outstanding as of June 30, 2015, with an exercise price of $2.47 per share, plus 169,942 ordinary shares issuable upon the exercise of options granted subsequent to June 30, 2015, with a weighted average exercise price of $7.77 per share; and
- 462,960 ordinary shares reserved for future issuance under our 2014 Plan as of June 30, 2015, plus an additional 2,396,016 ordinary shares reserved for future issuance subsequent to June 30, 2015.

To the extent that any options or other equity incentive grants are issued in the future or we issue additional ordinary shares in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market considerations or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible securities, the issuance of these securities could result in further dilution to our shareholders.

Entities affiliated with RA Capital Management, LLC and certain other entities affiliated with our directors have indicated an interest in purchasing an aggregate of approximately $32.0 million of our ordinary shares in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these entities and any of these entities could determine to purchase more, less or no shares in this offering. The foregoing discussion and tables do not reflect any potential purchases by these entities.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the following selected consolidated financial data together with our consolidated financial statements and the related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. We have derived the selected consolidated statements of operations data for the years ended December 31, 2013 and 2014 and the selected consolidated balance sheet data as of December 31, 2013 and 2014 from our audited consolidated financial statements appearing elsewhere in this prospectus. The selected consolidated statements of operations data for the six months ended June 30, 2014 and 2015 and the selected consolidated balance sheet data as of June 30, 2015 have been derived from our unaudited consolidated financial statements appearing elsewhere in this prospectus and have been prepared on the same basis as our audited consolidated financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the consolidated financial information in those statements. Our consolidated historical results are not necessarily indicative of the results that should be expected in the future, and our consolidated results for the six months ended June 30, 2015 are not necessarily indicative of the results that should be expected for the full year ending December 31, 2015.

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
	(in thousands, except share and per share data)			
Consolidated Statements of Operations Data:				
Revenue	$ —	$ —	$ —	$ 152
Operating expenses:				
Research and development	1,920	2,395	1,087	3,457
General and administrative	1,654	2,999	1,173	3,789
Total operating expenses	3,574	5,394	2,260	7,246
Loss from operations	(3,574)	(5,394)	(2,260)	(7,094)
Other (expense) income:				
Interest expense	(111)	(12)	(12)	(15)
Other, net	37	261	215	43
Total other (expense) income	(74)	249	203	28
Loss before income taxes	(3,648)	(5,145)	(2,057)	(7,066)
Income tax benefit (provision)	330	(84)	(60)	(99)
Net loss	$ (3,318)	$ (5,229)	$ (2,117)	$ (7,165)
Net loss per share attributable to ordinary shareholders—basic and diluted (1)	$ (1.90)	$ (1.34)	$ (0.60)	$ (0.82)
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted (1)	1,743,014	3,911,556	3,553,626	8,729,072

(1) See Note 10 to our consolidated financial statements appearing elsewhere in this prospectus for further details on the calculation of net loss per share attributable to ordinary shareholders, basic and diluted.

	As of December 31,		As of June 30, 2015
	2013	2014	(unaudited)
Consolidated Balance Sheet Data:		(in thousands)	
Cash	$ 439	$ 1,048	$ 7,779
Working (deficit) capital	(9,270)	605	6,134
Total assets	2,323	2,938	11,596
Total liabilities	10,085	911	2,633
Accumulated deficit	(10,647)	(15,876)	(23,041)
Total shareholders' (deficit) equity	(7,762)	2,027	8,963

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

You should read the following discussion and analysis of financial condition and results of operations together with the section titled "Selected Consolidated Financial Data" and our consolidated financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the "Risk Factors" section of this prospectus. All references in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" to 2013 and 2014 are references our fiscal years ended December 31, 2013 and 2014, respectively.

Overview

We are a preclinical biopharmaceutical company with an innovative and proprietary synthetic chemistry drug development platform that we are using to design, develop and commercialize a broad pipeline of first-in-class or best-in-class nucleic acid therapeutic candidates. Nucleic acid therapeutics have the potential to address diseases that have been difficult to treat with small molecule drugs or biologics and have emerged as a large and promising class of drugs. We are initially developing nucleic acid therapeutics that target genetic defects to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins. Building upon the innovative work of our scientific founders, Gregory L. Verdine, Ph.D. and Takeshi Wada, Ph.D., our preclinical studies have demonstrated that our stereopure nucleic acid therapeutics may achieve superior drug properties as compared to mixture-based nucleic acid therapeutics. Our platform is designed to enable us to rationally design, optimize and manufacture stereopure nucleic acid therapeutics. Further, it has the potential to be used to design therapies that utilize any of the major molecular mechanisms employed by nucleic acid therapeutics, including antisense, ribonucleic acid interference, or RNAi, and exon skipping.

Our most advanced therapeutic programs are in Huntington's disease, Duchenne muscular dystrophy, or DMD, and inflammatory bowel disease, or IBD. In Huntington's disease, we have programs targeting HTT SNP-1 and HTT SNP-2; in DMD, we are targeting Exon 51; and in IBD, we are targeting SMAD7. We have selected lead product candidates in our programs targeting HTT SNP-1 and Exon 51, and we expect to select lead candidates in our HTT SNP-2 and SMAD7 programs in early 2016. We expect to file investigational new drug applications, or INDs, with the U.S. Food and Drug Administration, or FDA, for each of these candidates in 2016 and early 2017. We also have late-stage discovery programs in epidermolysis bullosa simplex, in which we are targeting KRT14 SNP-1 and KRT14 SNP-2, and in DMD, in which we are focused on an additional DMD target, AcRIIb. We expect to identify lead candidates for these programs in 2016. We believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for approximately 25 other potential target indications, mostly consisting of orphan indications, with an initial focus on orphan neuromuscular and central nervous system disease targets.

Since our inception in 2012, we have devoted substantially all of our resources to developing an innovative and proprietary synthetic chemistry drug development platform that we are using to design, develop and commercialize nucleic acid therapeutic candidates, building our intellectual property portfolio, developing our supply chain, business planning, raising capital and providing general and administrative support for these operations. To date, we have not generated any product revenue and we have primarily financed our operations through sales of our securities.

We have never been profitable, and since our inception, we have incurred significant operating losses. Our net loss was $3.3 million in 2013, $5.2 million in 2014, and $2.1 million and $7.2 million in the six months ended June 30, 2014 and 2015, respectively. As of December 31, 2014 and June 30, 2015, we had an accumulated deficit of $15.9 million and $23.0 million, respectively. We expect to incur significant expenses and increasing operating losses for the foreseeable future.

Financial Operations Overview

Revenue

We have not generated any product revenue since our inception and do not expect to generate any revenue from the sale of products for the foreseeable future. Our revenue during the six months ended June 30, 2015 consisted of a payment received for research and development services under an agreement that was terminated in May 2015. We are not a party to any other license or collaboration agreements that have generated revenue as of June 30, 2015.

Operating Expenses

Our operating expenses since inception have consisted primarily of research and development costs and general and administrative costs.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research activities, including our discovery efforts, and the development of our product candidates, which include:

- expenses incurred under agreements with third parties, including contract research organizations, or CROs, that conduct research and preclinical activities on our behalf, as well as contract manufacturing organizations, or CMOs, that manufacture drug products for use in our preclinical trials;
- employee salaries, benefits and other related costs, including share-based compensation expense, for personnel in our research and development organization;
- costs of third-party consultants, including fees, share-based compensation and related travel expenses;
- the cost of sponsored research, which includes laboratory supplies and facility-related expenses, including rent, maintenance and other operating costs; and
- costs related to compliance with regulatory requirements.

We recognize research and development costs as incurred and are reflected in our financial statements as prepaid or accrued research and development expenses. We recognize external development costs based on an evaluation of the progress to completion of specific tasks using information provided to us by our vendors. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our financial statements as prepaid or accrued research and development expenses.

Our primary research and development focus since inception has been the development of our innovative and proprietary synthetic chemistry drug development platform. We are using our platform to design, develop and commercialize a broad pipeline of nucleic acid therapeutic candidates.

Our direct research and development expenses are tracked on a program-by-program basis and consist primarily of certain external costs, consultants and CROs in connection with our preclinical studies and regulatory fees. We do not allocate the cost of sponsored research, which includes laboratory supplies and facility-related expenses, including rent, maintenance and other operating costs, because these costs are deployed across multiple product programs under development and, as such, are classified as costs of our research.

The table below summarizes our research and development expenses incurred on our platform and by program.

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
	(in thousands)			
HD HTT SNP-1 and HD HTT SNP-2 programs (1)	$ —	$ —	$ —	$ 215
DMD Exon 51 program	—	—	—	188
IBD SMAD7 program	—	—	—	149
Discovery programs	—	—	—	203
Platform development and identification of potential drug discovery candidates	1,920	2,395	1,087	2,702
Total research and development expenses	$1,920	$2,395	$1,087	$3,457

(1) Given the nature of program development for these programs, the costs incurred in such programs have been common to both programs and therefore are not subject to separability. We expect that upon the filing of an IND with respect to the lead product candidate in each such program and the initiation of clinical studies for each such candidate, the costs incurred for each such candidate will be separate and distinct.

Product candidates in later 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 later-stage clinical trials. We expect that our research and development expenses will continue to increase in the foreseeable future as we initiate clinical trials for certain product candidates, continue to discover and develop additional product candidates, and pursue later stages of clinical development of product candidates.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries, bonus and other related costs, including share-based compensation, for personnel in our executive, finance, corporate and business development and administrative functions. General and administrative expenses also include legal fees relating to patent and corporate matters; professional fees for accounting, auditing, tax and consulting services; insurance costs; travel expenses; and facility-related expenses, which include rent and maintenance of our corporate offices; and other operating costs.

We anticipate that our general and administrative expenses will increase in the future, in the form of additional compensation, including salaries, benefits, incentive arrangements and share-based compensation awards, as we increase our headcount to support the expected growth in our research and development activities and the potential commercialization of our product candidates. Additionally, we expect our rent costs to increase as a result of the relocation of our U.S. operations to a new and expanded facility in the fourth quarter of 2015. We expect our rental costs to increase to $1.0 million for the year ended December 31, 2016. We also expect to incur increased expenses associated with being a public company, including increased costs of accounting, audit, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, director and officer insurance costs and investor and public relations costs.

We expect our general and administrative costs to increase as we attract and retain additional personnel.

Other Income (Expense)

Other income (expense) consists of reimbursement of research and development costs extent under a research and development grant awarded by the Ministry of Economy, Trade and Industry, or METI, interest expense associated with notes payable that were converted in 2014, and interest income on cash.

Income Taxes

We are a multi-national company subject to taxation in the United States, Japan and Singapore. In 2013 and 2014, our benefit from (or provision for) income taxes was $0.3 million and $(0.1) million, respectively, on pre-tax loss of $3.6 million and $5.1 million, respectively. As of December 31, 2014, we had federal and state net operating loss

carryforwards of $2.1 million and $2.4 million, respectively, both of which begin to expire in 2030. As of December 31, 2014, we also had federal and state research and development tax credit carryforwards of $0.4 million and $0.2 million, respectively, which begin to expire in 2025. As of December 31, 2014, we had net operating loss carryforwards in Japan of $3.5 million, which may be available to offset future income tax liabilities and begin to expire in 2015.

Results of Operations

Comparison of Six Months Ended June 30, 2014 and 2015 (unaudited)

The following table summarizes our results of operations for the six months ended June 30, 2014 and 2015:

	Six Months Ended June 30,		Increase (Decrease)
	2014	2015	
	(in thousands)		
Revenue	$ —	$ 152	$ 152
Operating expenses:			
Research and development	1,087	3,457	2,370
General and administrative	1,173	3,789	2,616
Total operating expenses	2,260	7,246	4,986
Loss from operations	(2,260)	(7,094)	(4,834)
Other income (expense), net	203	28	(175)
Loss before income taxes	(2,057)	(7,066)	(5,009)
Income tax provision	(60)	(99)	(39)
Net loss	$(2,117)	$(7,165)	$ (5,048)

Revenue

Revenue was $0 for the six months ended June 30, 2014 compared to $0.2 million for the six months ended June 30, 2015 due to revenue earned for research and development performed under our collaboration agreement which we entered into in 2014 and terminated in May 2015.

Research and Development Expenses

The table below summarizes our research and development expenses incurred on our platform and by program for the six months ended June 30, 2014 and 2015:

	Six Months Ended June 30,		Increase (Decrease)
	2014	2015	
	(in thousands)		
HD HTT SNP-1 and HD HTT SNP-2 programs (1)	$ —	$ 215	$ 215
DMD Exon 51 program	—	188	188
IBD SMAD7 program	—	149	149
Discovery programs	—	203	203
Platform development and identification of potential drug discovery candidates	1,087	2,702	1,615
Total research and development expenses	$1,087	$3,457	$ 2,370

(1) Given the nature of program development for these programs, the costs incurred in such programs have been common to both programs and therefore are not subject to separability. We expect that upon the filing of an IND with respect to the lead product candidate in each such program and the initiation of clinical studies for each such candidate, the costs incurred for each such candidate will be separate and distinct.

Research and development expenses were $1.1 million for the six months ended June 30, 2014, compared to $3.5 million for the six months ended June 30, 2015. The increase of $2.4 million was due, in part, to the following:

- an increase of $0.2 million in research expenses related to our HD HTT SNP-1 and HD HTT SNP-2 programs for collaborations with Children's Hospital of Philadelphia for preclinical research studies;
- an increase of $0.2 million in research expenses related to our DMD Exon 51 program for collaborations with the University of Oxford for preclinical research studies;
- an increase of $0.1 million in research expenses related to our IBD SMAD7 program for preclinical research studies; and
- an increase of $0.2 million in drug discovery candidate expenses due to research related to our DMD AcRIIb, EBS KRT14 SNP-1 and EBS KRT14 SNP-2 programs and three potential other targets.

Platform development and identification of potential drug discovery candidates includes salary and related benefits costs, as well as costs associated with overall research directed at the identification of additional potential drug candidates. These expenses increased $1.6 million as a result of higher salary and related benefits costs of $1.8 million, including $1.2 million of share-based compensation, due to an increase in employee headcount, offset by costs redirected to product and drug discovery candidates.

General and Administrative Expenses

General and administrative expenses were $1.2 million for the six months ended June 30, 2014 compared to $3.8 million for the six months ended June 20, 2015. The increase of $2.6 million was due to an increase in share-based compensation expense of $1.3 million as well as an increase in employee headcount, which resulted in an increase in salary and related benefits costs of $0.2 million. Our professional fees increased $0.9 million in the six months ended June 30, 2015 due to higher legal fees and accounting fees as we prepared for our potential initial public offering.

Research and development and general and administrative expenses incurred at our Japan facility in the six months ended June 30, 2014 and 2015 represented 21.6% and 8.2% of the related consolidated expenses for the six months ended June 30, 2014 and 2015, respectively. The impact of changes in foreign currency did not have a significant impact on changes in our consolidated research and development and general and administrative expenses from the six months ended June 30, 2014 to the six months ended June 30, 2015.

Other (Expense) Income

Other (expense) income for the six months ended June 30, 2014 decreased from $0.2 million to less than $0.1 million for the six months ended June 30, 2015 due to fewer government grant reimbursements for research and development in Japan during the six months ended June 30, 2015.

Income Tax Benefit (Provision)

During both the six months ended June 30, 2014 and 2015, we recorded a tax provision of $0.1 million, which is a result of income taxed in the United States due to income under a contract research arrangement between our U.S. and Singapore entities. During the six months ended June 30, 2014 and 2015, we recorded no income tax benefits for the net operating losses incurred in Japan and Singapore, due to uncertainty regarding future taxable income in these jurisdictions.

Comparison of the Year Ended December 31, 2013 to the Year Ended December 31, 2014

The following table summarizes our results of operations for 2013 and 2014:

	Year Ended December 31,		Increase (Decrease)
	2013	2014	
	(in thousands)		
Revenue	$ —	$ —	$ —
Operating expenses:			
Research and development	1,920	2,395	475
General and administrative	1,654	2,999	1,345
Total operating expenses	3,574	5,394	1,820
Loss from operations	(3,574)	(5,394)	(1,820)
Other (expense) income	(74)	249	323
Loss before income taxes	(3,648)	(5,145)	(1,497)
Income tax benefit (provision)	330	(84)	(414)
Net loss	$(3,318)	$(5,229)	$ (1,911)

Revenue

There was no revenue for the years ended December 31, 2013 and 2014.

Research and Development Expenses

The table below summarizes our research and development expenses incurred on our platform and by program for 2013 and 2014:

	Year Ended December 31,		Increase (Decrease)
	2013	2014	
	(in thousands)		
HD HTT SNP-1 and HD HTT SNP-2 programs (1)	$ —	$ —	$ —
DMD Exon 51 program	—	—	—
IBD SMAD7 program	—	—	—
Discovery programs	—	—	—
Platform development and identification of potential drug discovery candidates	1,920	2,395	475
Total research and development expenses	$1,920	$2,395	$ 475

(1) Given the nature of program development for these programs, the costs incurred in such programs have been common to both programs and therefore are not subject to separability. We expect that upon the filing of an IND with respect to the lead product candidate in each such program and the initiation of clinical studies for each such candidate, the costs incurred for each such candidate will be separate and distinct.

Research and development expenses were $1.9 million in 2013, compared to $2.4 million in 2014. The increase of $0.5 million was a result of higher salary and related benefits costs due to an increase in employee headcount, as we increased our research for potential drug candidates.

General and Administrative Expenses

General and administrative expenses were $1.7 million in 2013 compared to $3.0 million in 2014. The increase of $1.3 million was a result of salary and related benefits costs due to an increase in employee headcount, which resulted in higher salary and related benefits costs of $1.0 million, as well as an increase in our professional fees of $0.3 million from 2013 to 2014 due to higher legal fees.

Research and development and general and administrative expenses incurred at our Japan facility in 2013 and 2014 represented 23.0% and 17.7% of the related consolidated expenses for 2013 and 2014, respectively. The impact of changes in foreign currency did not have a significant impact on changes in our consolidated research and development and general and administrative expenses from 2013 to 2014.

Other (Expense) Income

Other (expense) income in 2013 increased from an expense of less than $0.1 million to income of $0.3 million in 2014 due additional government grants received in Japan for reimbursement of certain research and development costs.

Liquidity and Capital Resources

Since our inception, we have not generated any product revenue and have incurred recurring net losses. From our inception through June 30, 2015, we have financed our operations through private placements of promissory notes and the proceeds from the issuance of ordinary shares. Through December 31, 2014 and June 30, 2015, we had received net proceeds of approximately $15.2 million and $26.8 million, respectively, from such transactions. In August 2015, we completed a private placement of Series B preferred shares and received net proceeds of approximately $62.5 million.

As of December 31, 2014, we had cash totaling $1.0 million and an accumulated deficit of $15.9 million. As of June 30, 2015, we had cash totaling $7.8 million and an accumulated deficit of $23.0 million and restricted cash of $1.0 million related to a letter of credit for our new office and laboratory space in Cambridge, Massachusetts.

The cash resources we have on hand at June 30, 2015 along with the net proceeds of $62.5 million raised from the private placement of Series B preferred shares on August 14, 2015 are expected to allow us to fund our operations and meet our working capital obligations through at least 2016. We expect that our existing cash together with anticipated net proceeds from this offering will enable us to fund our operating expenses and capital expenditure requirements through at least 2017. We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect.

Until we can generate significant revenue from product sales, if ever, we expect to finance our operations through a combination of public or private equity or debt financings or other sources, which may include collaborations with third parties. Adequate additional financing may not be available to us on acceptable terms, or at all. Our inability to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. We will need to generate significant revenue to achieve profitability, and we may never do so.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
	(in thousands)			
Cash used in operating activities	$(3,551)	$(4,426)	$(2,000)	$ (3,011)
Cash used in investing activities	(47)	(257)	(205)	(1,430)
Cash provided by financing activities	3,672	5,619	5,619	11,646
Effect of foreign exchange rates of cash	(14)	(327)	(104)	(474)
Net increase in cash	$ 60	$ 609	$ 3,310	$ 6,731

Operating Activities

During the six months ended June 30, 2015, operating activities used $3.0 million of cash, primarily resulting from our net loss of $7.2 million offset by non-cash charges of $2.8 million and by cash provided by changes in our operating assets and liabilities of $1.4 million. The non-cash charges for the six months ended June 30, 2015 related primarily to an increase in share-based compensation of $2.5 million. Net cash provided by changes in our operating assets and liabilities during the six months ended June 30, 2015 was due primarily to an increase in accounts payable due to higher research and development costs, as well as the timing of payments.

During the six months ended June 30, 2014, operating activities used $2.0 million of cash, resulting from our net loss of $2.1 million offset by non-cash charges of $0.1 million due primarily to depreciation and amortization associated with our property and equipment. There was little change in our operating assets and liabilities during the six months ended June 30, 2014.

During 2014, operating activities used $4.4 million of cash, primarily resulting from our net loss of $5.2 million offset by non-cash charges of $0.4 million and by cash provided by changes in our operating assets and liabilities of $0.4 million. The non-cash charges for 2014 related primarily to $0.3 million of depreciation and amortization associated with our property and equipment. Net cash provided by changes in our operating assets and liabilities during 2014 consisted primarily of a $0.4 million increase in accrued expenses due to higher accruals for research and development costs.

During 2013, operating activities used $3.6 million of cash, resulting from our net loss of $3.3 million and cash used in changes in our operating assets and liabilities of $0.3 million, which consisted of a $0.2 million decrease in accounts payable and accrued expenses due to the timing of vendor invoicing and payments and a $0.1 million increase in accounts receivable.

Investing Activities

During the six months ended June 30, 2015, investing activities used $1.4 million of cash, consisting of restricted cash of $1.0 million primarily placed in favor of a letter of credit for our new office and laboratory space in Cambridge, Massachusetts along with purchases of property and equipment of $0.4 million.

During the six months ended June 30, 2014, investing activities used $0.2 million of cash, primarily consisting of purchases of property and equipment of $0.5 million offset by reimbursements of $0.3 million from METI.

During 2014, investing activities used $0.3 million of cash, primarily consisting of purchases of property and equipment of $0.6 million offset by reimbursements of $0.3 million from METI.

During 2013, investing activities used less than $0.1 million of cash for purchases of property and equipment.

Financing Activities

During the six months ended June 30, 2015, net cash provided by financing activities was $11.6 million, primarily from the issuance of ordinary shares to a third-party investor for $11.6 million.

During the six months ended June 30, 2014, net cash provided by financing activities was $5.6 million, primarily from the issuance of ordinary shares to investors.

During 2014, net cash provided by financing activities was $5.6 million, primarily from the issuance of ordinary shares to investors.

During 2013, net cash provided by financing activities was $3.7 million due to proceeds under notes payable to a related party of $6.2 million, offset by repayments in the amount of $2.5 million.

Effect of Foreign Exchange Rates on Cash

During the six months ended June 30, 2015, the effect of changes in foreign exchange rates on cash was $0.5 million due to changes in the Japanese yen related primarily to the translation of intercompany accounts denominated in Japanese yen from December 31, 2014 to June 30, 2015.

During the six months ended June 30, 2014, net cash provided by financing activities was $0.1 million due to minimal changes in the Japanese yen from December 31, 2013 to June 30, 2014.

During 2014, the effect of changes in foreign exchange rates on cash was $0.3 million due to changes in the Japanese yen related primarily to the translation of intercompany accounts denominated in Japanese yen from December 31, 2013 to December 31, 2014.

During 2013, the effect of changes in foreign exchange rates on cash were minimal due to the low level of cash balances on hand during the year.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing research and development activities. In addition, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. We anticipate that our expenses will increase substantially if and as we:

- file INDs and initiate clinical studies for our programs in Huntington's disease, DMD and IBD;
- conduct research and continue preclinical development of the discovery targets such as AcRIIb and KRT14, as well as other future potential pipeline candidates;
- make strategic investments in manufacturing processes and formulations;
- develop manufacturing capabilities through outsourcing and potentially build a scalable manufacturing facility;
- maintain our intellectual property portfolio and consider the acquisition of complementary intellectual property; and
- seek regulatory approvals for our product candidates.

We may experience delays or encounter issues with any of the above, including but not limited to failed studies, complex results, safety issues or other regulatory challenges.

We expect that our existing cash together with anticipated net proceeds from this offering will enable us to fund our operating expenses and capital expenditure requirements through at least 2017. We have based this estimate on assumptions that may prove to be wrong, and we may use our available capital resources sooner than we currently expect. Because of the numerous risks and uncertainties associated with the development of drug candidates or follow-on programs and because the extent to which we may enter into collaborations with third parties for development of product candidates is unknown, we are unable to estimate the amounts of increased capital outlays and operating expenses associated with completing the research and development for our therapeutic programs. Our future capital requirements for our therapeutic programs will depend on many factors, including:

- the progress and results of conducting research and continued preclinical development within our therapeutic programs and with respect to future potential pipeline candidates;
- the cost of manufacturing clinical supplies of our product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the effect of competing technological and market developments; and
- the extent to which we acquire or invest in businesses, products and technologies, including entering into licensing or collaboration arrangements for product candidates, although we currently have no commitments or agreements to complete any such transactions.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our product revenue, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if ever. Accordingly, we will need to obtain substantial additional funds to achieve our business objectives.

Adequate additional funds may not be available to us on acceptable terms, or at all. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a holder of ordinary shares. Additional debt

financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends and may require the issuance of warrants, which could potentially dilute your ownership interest.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses 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 programs or any future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2014 and the effect such obligations are expected to have on our liquidity and cash flows in future periods:

	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
			(in thousands)		
Operating lease commitments (1)	$11,505	$ 457	$2,302	$3,038	$ 5,708
Capital lease obligations (1)	203	51	135	17	—
License and collaboration agreements (2)	714	319	365	30	—
Total	$12,422	$ 827	$2,802	$3,085	$ 5,708

(1) Includes the following leases entered into subsequent to December 31, 2014: (i) office and laboratory space in Okinawa, Japan under an annually renewable lease, which was renewed in April 2015 and expires in March 2016; (ii) in April 2015, we entered into a lease agreement for an office and laboratory facility in Cambridge, Massachusetts; the lease term commenced in October 2015 and has a term of 7.5 years; and (iii) in April 2015, we entered into a three-year lease to acquire laboratory equipment in the amount of $0.3 million, which has been accounted for as a capital lease.

(2) We have also entered into certain license and research and collaboration agreements subsequent to December 31, 2014. See “Business—Licensing Arrangements and Research Collaborations.” Our known commitments under those agreements are included in the table above under “License and collaboration agreements.” In addition, we may be obligated to make future payments to third parties under certain of these license and research and collaboration agreements, including sublicense fees, royalties and payments that become due and payable on the achievement of certain development and regulatory milestones. As the amount and timing of sublicense fees and the achievement and timing of these milestones are not probable and estimable, such commitments have not been included on our balance sheet or in the table above.

We enter into contracts in the normal course of business with CROs for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. These contracts generally provide for termination upon notice, and therefore we believe that our non-cancelable obligations under these agreements are not material.

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 Securities and Exchange Commission.

Recently Adopted Accounting Pronouncements

In July 2013, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update 2013-11, or ASU 2013-11, *Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*, which requires unrecognized tax benefits to be presented as a decrease in a net operating loss, similar tax loss or tax credit carryforward if certain criteria are met. The guidance was effective for fiscal years and interim periods within those years beginning after December 15, 2013 for public entities with early adoption permitted in 2013. Previously provide explicit guidance on the financial statement presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss or a tax credit carryforward exists. We elected to early adopt ASU 2013-11 in 2013.

In June 2014, the FASB issued ASU 2014-10, *Development Stage Entities*. The amendments in this update removed all incremental financial reporting requirements, including inception-to-date information and certain other disclosures currently required under U.S. GAAP, in the financial statements of development stage companies. The amendments are effective for annual reporting periods beginning after December 15, 2014 and interim reporting periods beginning after December 15, 2015. Early adoption is permitted for any annual reporting period or interim period for which the entity's financial statements have not yet been issued (public business entities) or made available for issuance (other entities). We elected to early adopt this guidance and, therefore, have not presented inception-to-date disclosures in our consolidated financial statements.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU No. 2014-09—*Revenue from Contracts with Customers (Topic 606)*. ASU 2014-09 supersedes most of the existing guidance on revenue recognition in ASC Topic 605, Revenue Recognition. The core principle of the revenue model is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods and services. In applying the revenue model to contracts within its scope, an entity will need to (i) identify the contract(s) with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract and (v) recognize revenue when (or as) the entity satisfies a performance obligation. On July 9, 2015, the FASB extended the effective date of adoption of the standard to interim reporting periods within annual reporting periods beginning after December 15, 2017 (that is, beginning in the first interim period within the year of adoption). Early adoption of the standard is permitted for all entities for interim and annual periods beginning after December 15, 2016. We do not expect the impact of adopting ASU 2014-09 will be material to our consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, *Presentation of Financial Statements—Going Concern*, on disclosure of uncertainties about an entity's ability to continue as a going concern. This guidance addresses management's responsibility in evaluating whether there is substantial doubt about a company's ability to continue as a going concern and to provide related footnote disclosures. The guidance is effective for fiscal years beginning after December 15, 2016 and for interim periods within those fiscal years, with early adoption permitted. We do not expect the adoption of this guidance to have material impact on our consolidated financial statements.

In February 2015, the FASB issued ASU 2015-02, *Consolidation (Topic 810)*, to address financial reporting considerations for the evaluation as to the requirement to consolidate certain legal entities. ASU 2015-02 is effective for fiscal years and for interim periods within those fiscal years beginning after December 15, 2015. We are evaluating the impact of ASU 2015-02 and if early adoption is appropriate in future reporting periods.

In April 2015, the FASB issued ASU 2015-03, *Interest—Imputation of Interest (Subtopic 835-30)*, as part of the initiative to reduce complexity in accounting standards. The update requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. ASU 2015-03 is effective for annual periods beginning after December 15, 2015 and for interim periods within those fiscal years. We do not expect the impact of ASU 2015-03 to be material to our consolidated financial statements.

Other accounting standards that have been issued or proposed by the FASB or other standards-setting bodies that do not require adoption until a future date are not expected to have a material impact on our consolidated financial statements upon adoption.

Quantitative and Qualitative Disclosure about Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily the result of fluctuations in interest rates and foreign exchange rates as well as, to a lesser extent, inflation.

Interest Rate Risk

We are exposed to interest rate risk in the ordinary course of our business. Our cash is held in readily available checking accounts.

Foreign Currency Risk

We are exposed to market risk related to changes in the value of the Japanese yen, which is the currency our Japanese subsidiary conducts its business in. As of June 30, 2015, 7.2% of our assets were located in Japan, and 8.2% of our general and administrative and research and development expenditures were transacted in Japanese yen through the six months ended June 30, 2015. Our foreign currency sensitivity is affected by changes in the Japanese yen, which is impacted by economic factors both locally in Japan and worldwide. A hypothetical 10% change in foreign currency rates would not have a material impact on our historical financial position or results of operations.

Inflation Risk

We do not believe that inflation had a material effect on our business, financial condition or results of operations in the last two years.

Critical Accounting Policies and Significant Judgments and Estimates

Our financial statements are prepared in accordance with generally accepted accounting principles, or GAAP, in the United States of America. The preparation of our financial statements and related disclosures requires us to make estimates and assumptions that affect the reported amount of assets, liabilities, revenue, costs and expenses and related disclosures. We believe that the estimates and assumptions involved in the accounting policies described below may have the greatest potential impact on our consolidated financial statements and, therefore, consider these to be our critical accounting policies. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions.

Income Taxes

We are a multi-national company subject to taxation in the United States, Japan and Singapore.

We account for income taxes using an asset and liability approach, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements, but have not been reflected in taxable income. A valuation allowance is established to reduce deferred tax assets to their estimated realizable value. Therefore, we provide a valuation allowance to the extent that it is more likely than not that it will generate sufficient taxable income in future periods to realize the benefit of its deferred tax assets.

We account for uncertainty in income taxes recognized in the financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Share-Based Compensation

We measure options to purchase our ordinary shares and other share-based awards granted to employees and directors based on the fair value on the date of grant and recognize the corresponding compensation expense of those awards, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. Generally, we have issued options to purchase shares and share awards and record the expense for these awards using the straight-line method.

We measure share-based awards granted to consultants and non-employees based on the fair value of the award on the date at which the related service is complete. Compensation expense is recognized over the period during which services are rendered by such consultants and non-employees until completed. At the end of each financial reporting period prior to completion of the service, the fair value of these awards is re-measured using the then-current fair value of our ordinary shares and updated assumption inputs in the Black-Scholes option-pricing model.

The initial public offering price of $16.00 per share was determined as a result of negotiations between us and the underwriters. In comparison, our valuation of our ordinary shares as of September 30, 2015 was $10.22 per share. As is typical in initial public offerings, the initial public offering price for this offering was not derived using a formal determination of fair value, but was determined by negotiation between us and the underwriters. Among the factors that were considered in setting this price were the following: (i) the history and prospects for the industry in which we compete; (ii) our financial information; (iii) the ability of our management and our business potential and earning prospects; (iv) the prevailing securities markets at the time of this offering; and (v) the recent market prices of, and the demand for, publicly traded shares of generally comparable companies.

The fair value of each share option grant was determined using the methods and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment and estimation by management.

- *Fair Value of Ordinary Shares.* As discussed below, the fair value of our ordinary shares underlying our share options has historically been determined by our board of directors. Because there has been no public market for our ordinary shares, our board of directors has determined the fair value of our ordinary shares at the time of grant of the option by considering a number of objective and subjective factors, including valuations of comparable companies, sales of our shares to unrelated third parties, our operating and financial performance and general and industry specific economic outlook.
- *Expected Term.* The expected term of share options represents the weighted-average period that the share options are expected to remain outstanding. We estimated the expected term using the simplified method, which is an average of the contractual term of the option and the vesting period.
- *Expected Volatility.* Since there has been no public market for our ordinary shares and lack of company-specific historical volatility, we have determined the share price volatility for options granted based on an analysis of the volatility used by a peer group of publicly traded companies. In evaluating similarity, we consider factors such as industry, stage of life cycle and size.
- *Risk-free Interest Rate.* The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of the grant for zero-coupon U.S. Treasury notes with remaining terms similar to the expected term of the options.
- *Dividend Rate.* The expected dividend was assumed to be zero as we have never paid dividends and have no current plans to do so.
- *Expected Forfeiture Rate.* We are required to estimate forfeitures at the time of grant, and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. We use historical data to estimate pre-vesting option forfeitures and record share-based compensation expense only for those awards that are expected to vest. To the extent actual forfeitures differ from the estimates, the difference will be recorded as a cumulative adjustment in the period that the estimates are revised.

We did not issue any share options or share awards in 2013 and 2014.

The estimated grant-date fair value of our share-based awards granted to our employees and directors was calculated using the Black-Scholes option-pricing model, based on the following assumptions for the six months ended June 30, 2015:

	Six Months Ended June 30, 2015
Risk-free interest rate	1.78%
Expected term (in years)	5.52 – 6.08
Expected volatility	71.02%
Expected dividend yield	0%
Exercise price	$2.47
Fair value of ordinary share	$4.41

The fair value of our share-based awards granted to our non-employees was calculated using the Black-Scholes option-pricing model, based on the following assumptions for the six months ended June 30, 2015:

	Six Months Ended June 30, 2015
Risk-free interest rate	2.14% – 2.35%
Expected term (in years)	9.69 – 10.00
Expected volatility	69.16% – 69.80%
Expected dividend yield	0%
Exercise price	$2.47
Fair value of ordinary share	$4.41 – $8.80

These assumptions represented our best estimates, but the estimates involve inherent uncertainties and the application of our judgment.

The following table summarizes the classification of our share-based compensation expense recognized in our consolidated statements of operations:

	Six Months Ended June 30, 2015 (unaudited)
Research and development expenses	$ 1,182
General and administrative expenses	1,310
Total share-based compensation expense	$ 2,492

Determination of the Fair Value of Ordinary Shares

We are a privately held company with no active public market for our ordinary shares. Therefore, our board of directors has estimated the fair value of our ordinary shares at various dates, with input from management, considering our most recently available third-party valuations of ordinary shares and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant.

The board determined the estimated per share fair value of our ordinary shares at various dates considering contemporaneous and retrospective valuations performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, or the Practice Aid. Following the consummation of this offering, the fair value of our ordinary shares will be determined based on the quoted market price of our ordinary shares. In conducting the valuations, the third-party considered all objective and subjective factors that it believed to be relevant for each valuation conducted in accordance with the Practice Aid, including our best estimate of our business condition, prospects and operating performance at each valuation date. Other significant factors included:

- the prices at which we sold shares to unrelated third parties;
- the progress of our research and development programs, including the status of preclinical studies within our therapeutic programs;
- our stage of development and commercialization and our business strategy;
- external market conditions affecting the biopharmaceutical industry;
- trends within the biopharmaceutical industry;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- the lack of an active public market for our ordinary shares and our preferred shares;

- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company in light of prevailing market conditions; and
- the analysis of initial public offerings and the market performance of similar companies in the biopharmaceutical industry.

There are significant judgments and estimates inherent in these valuations. These judgments and estimates include assumptions regarding our future operating performance, the stage of development of our product candidates, the timing of a potential initial public offering or other liquidity event and the determination of the appropriate valuation methodology at each valuation date. If we had made different assumptions, our share-based compensation expense, net loss attributable to ordinary share and net loss per share attributable to ordinary shareholders could have been significantly different.

Once a public trading market for our ordinary shares has been established in connection with the closing of this offering, it will no longer be necessary for our board of directors to estimate the fair value of our ordinary shares in connection with our accounting for granted share options and share awards, as the fair value of our ordinary shares will be its trading price on The NASDAQ Global Market.

Valuation Methodologies

The valuations were prepared in accordance with the guidelines in the Practice Aid, which prescribes several valuation approaches for setting the value of an enterprise, such as the cost, market and income approaches, and various methodologies for allocating the value of an enterprise to its ordinary shares.

We considered several types of approaches in the preparation of our valuations as follows:

- *Market Approach.* The market approach values a business by reference to guideline companies, for which enterprise values are known. This approach has two principal methodologies. The guideline public company methodology derives valuation multiples from the operating data and share prices of similar publicly-traded companies. The guideline acquisition methodology focuses on comparisons between the subject company and guideline acquired public or private companies. A derivative of the guideline public company method is the guideline initial public offering method, which compares the enterprise values of newly public enterprises in our industry.
- *Discounted Cash Flow Method, or DCF.* The discounted cash flow method estimates the value of the business by discounting the estimated future cash flows available for distribution after funding internal needs to present value.
- *Option-Pricing Method Backsolve, or OPM Backsolve.* The OPM Backsolve method derives the implied equity value for a company from a recent transaction involving the company's own securities issued on an arms-length basis.

Methods Used to Allocate Our Enterprise Value to Classes of Securities

In accordance with the Practice Aid, we used the probability-weighted expected return method, or PWERM, to allocate the enterprise value across our classes and series of share capital to determine the fair value of our ordinary shares at each valuation date. The PWERM is a scenario-based analysis that estimates the value per share based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class.

The foregoing valuation methodologies are not the only methodologies available and they will not be used to value our ordinary shares once this offering is complete. We cannot make assurances as to any particular valuation for our ordinary shares. Accordingly, investors are cautioned not to place undue reliance on the foregoing valuation methodologies as an indicator of future stock prices.

Option Grants

The following table summarizes by grant date the number of shares subject to options granted since our inception on July 12, 2012, the per share exercise price of the options, the fair value of ordinary shares underlying the options on date of grant and the per share estimated fair value of options:

Grant Date	Number of Shares Subject to Options Granted	Per Share Exercise Price of Options	Estimated Fair Value of Ordinary Shares per Share
March 10, 2015	1,723,524	$ 2.47	$ 4.41(1)
March 22, 2015	121,247	2.47	4.41(1)
July 9, 2015	98,611	5.99	8.80(1)
October 7, 2015	71,331	10.22	10.22

(1) In the third quarter of 2015, we undertook retrospective valuations of the fair value of our ordinary shares as of the grant dates and the values reflected in this column represent our estimated fair value per ordinary share in accordance with such retrospective valuations.

Based upon the initial public offering price of $16.00 per share, the aggregate intrinsic value of options outstanding as of June 30, 2015 was approximately $25.0 million, of which approximately $5.6 million related to vested options and approximately $19.4 million related to unvested options.

JOBS Act Accounting Election

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an "emerging growth company" can 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. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

BUSINESS

Overview

We are a preclinical biopharmaceutical company with an innovative and proprietary synthetic chemistry drug development platform that we are using to design, develop and commercialize a broad pipeline of first-in-class or best-in-class nucleic acid therapeutic candidates. Nucleic acid therapeutics have the potential to address diseases that have been difficult to treat with small molecule drugs or biologics. Currently, there are two nucleic acid therapeutics that have received regulatory approval by the U.S. Food and Drug Administration, or FDA, and others are in development. We are initially developing nucleic acid therapeutics that target genetic defects to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins.

The nucleic acid therapeutics we are developing are stereopure, meaning they are comprised of molecules having atoms uniformly arranged in three-dimensional orientations, which we believe is advantageous for making drugs with consistent pharmacologic properties. The stereopure therapies we are developing differ from the mixture-based nucleic acid therapeutics currently on the market and in development by others. Those therapies are mixtures of many thousands of molecules, each having varying three-dimensional atomic arrangements. Such variations may lead to potentially differing pharmacologic properties, with some constituent molecules producing therapeutic effects and others being less beneficial or even contributing to undesirable side effects. Building upon the innovative work of our scientific founders, Gregory L. Verdine, Ph.D. and Takeshi Wada, Ph.D., our preclinical studies have demonstrated that our stereopure nucleic acid therapeutics may achieve superior drug properties as compared to mixture-based nucleic acid therapeutics. Our platform is designed to enable us to rationally design, optimize and produce stereopure nucleic acid therapeutics. Further, it has the potential to be used to design therapies that utilize any of the major molecular mechanisms employed by nucleic acid therapeutics, including antisense, ribonucleic acid interference, or RNAi, and exon skipping, as described below.

Our goal is to develop disease-modifying drugs for indications with a high degree of unmet medical need, in both orphan and broad diseases. We are initially focused on designing single-stranded nucleic acid therapeutics that can distribute broadly within the human body, allowing us to target diseases across multiple organ systems and tissues, through both systemic and local administration.

Our most advanced therapeutic programs are in Huntington's disease, Duchenne muscular dystrophy, or DMD, and inflammatory bowel disease, or IBD.

- In Huntington's disease, we have programs targeting two disease-associated single nucleotide polymorphisms, or SNPs, within the *huntingtin* gene – HTT SNP-1 and HTT SNP-2. SNPs are naturally occurring variations within a given genetic sequence and in certain instances can be used to distinguish between two related copies of a gene where only one is responsible for causing production of a defective protein and causing disease. It has been shown that by targeting HTT SNP-1 and HTT SNP-2, the production of disease-causing proteins associated with Huntington's disease can be prevented. We have selected a lead product candidate in our HTT SNP-1 program and we expect to select a lead candidate in our HTT SNP-2 program in early 2016. We expect to file investigational new drug applications, or INDs, with the FDA for our candidate targeting HTT SNP-1 in late 2016 and our candidate targeting HTT SNP-2 in early 2017.
- In DMD, we have a program targeting Exon 51, a region within the ribonucleic acid, or RNA, transcribed from the *dystrophin* gene. DMD is a genetic disorder caused by mutations in the *dystrophin* gene, including those in Exon 51, that result in dysfunctional Dystrophin protein, and it has been shown that production of functional Dystrophin protein can be restored by targeting Exon 51. We have selected a lead product candidate in our Exon 51 program and expect to file an IND with the FDA for this candidate in late 2016.
- In IBD, we have a program targeting the RNA transcribed from the *SMAD7* gene. Overproduction of the SMAD7 protein has been shown to increase gastro-intestinal, or GI, inflammation and exacerbate IBD. It has also been demonstrated that by targeting the RNA transcribed from the *SMAD7* gene, the overproduction of the SMAD7 protein can be suppressed, thereby decreasing GI inflammation. We expect to select a lead candidate in our SMAD7 program in early 2016. We expect to file an IND with the FDA for this candidate in 2017.

We also have late-stage discovery programs in epidermolysis bullosa simplex, or EBS, and in DMD.

- In EBS, we are targeting KRT14 SNP-1 and KRT14 SNP-2. EBS is caused by mutations in the *KRT14* gene, which result in the production of defective KRT14 proteins that manifest the symptoms of EBS. KRT14 SNP-1 and KRT14 SNP-2 are disease-associated SNPs within the *KRT14* gene, and we have shown in preclinical experiments that by targeting these SNPs selective reduction in the expression of the disease associated gene can be achieved. We expect to identify lead candidates in our KRT14 SNP-1 and KRT14 SNP-2 programs in 2016.
- In DMD, we are also developing therapies targeting Activin Receptor type IIb, or AcRIIb, that can promote skeletal muscle growth. It has been shown that such muscle growth can be promoted by silencing the RNA transcribed from the gene encoding AcRIIb. We believe that targeting AcRIIb could be beneficial in cases where DMD has progressed to a state of advanced muscle damage, where exon-skipping therapies (including the candidates we are developing in our exon-skipping DMD program) may be less effective. We expect to identify a lead candidate in our AcRIIb program in 2016.

Furthermore, we believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for approximately 25 other potential target indications, mostly consisting of orphan indications, with an initial focus on orphan neuromuscular and central nervous system disease targets.

We believe that we have a strong intellectual property position relating to the development and commercialization of our stereopure nucleic acid therapeutics. Our intellectual property portfolio includes filings designed to protect stereopure oligonucleotide compositions generally, as well as filings designed to protect stereopure compositions of oligonucleotides with particular stereochemical patterns (for example, that affect or confer biological activity). Oligonucleotides are chemically modified, short-length strands of RNA or deoxyribonucleic acid, or DNA. Our portfolio also includes filings on both methods and reagents that are designed to protect various features of the chemical methodologies that enable production of such stereopure oligonucleotide compositions. Our portfolio also includes filings designed to protect methods of using stereopure oligonucleotide compositions and filings designed to protect particular stereopure oligonucleotide products, such as those having a particular sequence, pattern of nucleoside or backbone modification, or both, pattern of backbone linkages and pattern of backbone chiral centers. A chiral center is an atom that is bonded to a defined set of pendant groups arranged in three-dimensional space in a way that is not superimposable on its mirror image.

We believe that our technology provides us with a unique position in the therapeutic oligonucleotide marketplace. Due to prior or expected patent expirations and patent invalidations, we believe that a variety of useful and effective oligonucleotide chemistries, such as certain backbone and sugar modifications, that have been developed in the industry will be available to the public prior to when we expect our drugs will be commercialized. Therefore, we believe that we can readily incorporate these chemistries or other chemistries into our stereopure drugs. Moreover, our strategy does not require or rely on a particular chemistry or any particular nucleotide sequence, thus permitting us to navigate the intellectual property landscape in the field while developing our novel and proprietary oligonucleotide drugs.

Our founders and members of our management team are leaders in the field of nucleic acid therapeutics, including world renowned scientists, leading researchers in the field and executives with a proven track record in drug discovery development and commercialization of innovative therapeutics.

Nucleic Acid Therapeutics

A majority of traditional therapeutics modalities, such as small molecule drugs and biologics, work by interacting with proteins that contribute to the disease. However, there are thought to be a limited number of “druggable” proteins; it is currently estimated that approximately 80% of human protein targets cannot be addressed by these conventional approaches. In contrast, directing medicines to the ribonucleic acid, or RNA, which is critical to the production of proteins, rather than to the proteins themselves, has the potential to significantly increase the number of druggable targets.

Nucleic acid therapeutics is a large and innovative class of drugs that can modulate the function of target RNAs to ultimately affect the production of disease-associated proteins. Nucleic acid therapeutics employ a number of

different molecular mechanisms to regulate protein production. These mechanisms can be broadly categorized as those that promote degradation of the target RNA, including antisense and RNAi, and those that involve binding to the target RNA and modulating its function by promoting exon skipping and RNA-guided gene editing.

The nucleic acid therapeutics we are currently developing employ the following techniques:

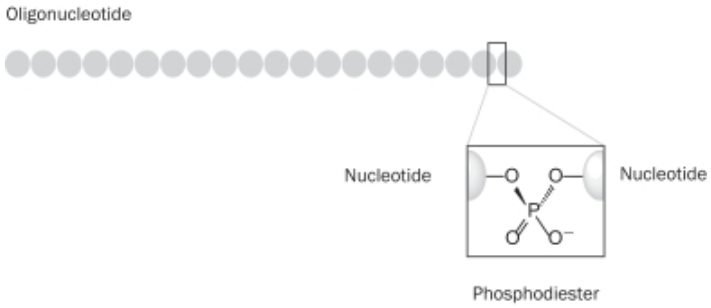
- **Antisense**, which refers to a technology that utilizes a therapeutic oligonucleotide designed to bind to a specific sequence in a target RNA strand that encodes a disease-associated protein. The resulting two-stranded molecule, or duplex, is then recognized by a cellular enzyme called RNase H, which cleaves, or cuts, the duplex molecule, thereby preventing the disease-associated protein from being made.
- **RNA interference**, or RNAi, which refers to a technology that utilizes a therapeutic oligonucleotide designed to bind to a specific sequence in a target RNA that encodes a disease-associated protein. This target RNA molecule is then recognized and cleaved by an enzyme known as Argonaut, or Ago2, thereby preventing the disease-associated protein from being made.
- **Exon skipping**, which refers to a technology that utilizes a therapeutic oligonucleotide designed to bind to a particular sequence within a target RNA and direct the cellular machinery to delete, or splice, the defect out of that RNA. Often, the underlying defect in the target RNA is a mutation that includes a “stop” instruction, so that, absent the therapeutic oligonucleotide, a truncated and defective protein is produced. Use of the exon-skipping oligonucleotide permits the cellular machinery to skip over the “stop” instruction and assemble a partially functional protein, thereby mitigating or alleviating the disease that would otherwise result from the genetic mutation.

The unique capability of nucleic acid therapeutics to address a wide range of genomic targets across multiple therapeutic areas has the potential to create potentially significant market opportunities to develop drugs to treat a broad spectrum of human diseases, including diseases where no medicines currently exist or for which existing treatments are suboptimal.

Design of Nucleic Acid Therapeutics

A large subset of nucleic acid therapeutics are comprised of chemically modified, short-length RNA or deoxyribonucleic acid, or DNA, strands, commonly known as oligonucleotides. Oligonucleotides are comprised of a sequence of nucleotides—the building blocks of RNA and DNA—that are linked together by a backbone of chemical bonds.

In nucleic acid molecules that have not been modified for therapeutic use, the nucleotides are linked by phosphodiester bonds, as shown below.



Such unmodified nucleic acid molecules are unsuitable for use as therapeutics because they are rapidly degraded by enzymes called nucleases that are widely present in the human body, are rapidly cleared by the kidneys and have poor uptake into targeted cells. The industry has employed chemical modifications of the nucleotides and phosphodiester bonds to improve the stability, biodistribution and cellular uptake of nucleic acid therapeutics.

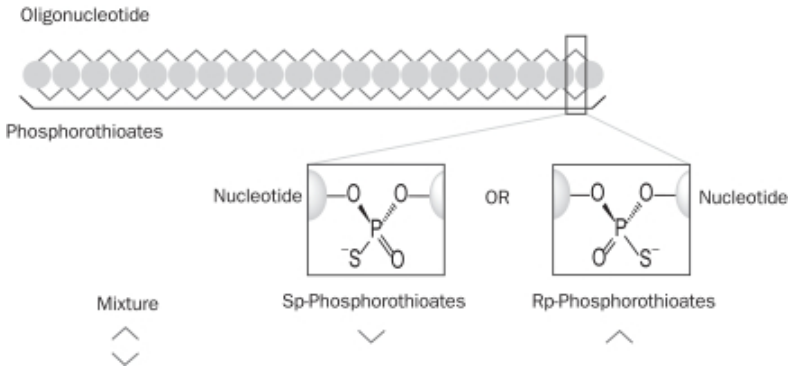
Phosphorothioate, or PS, modification was one of the earliest and remains one of the most common backbone modifications used in nucleic acid therapeutics. In PS modification, one of the nonbridging oxygen (O) atoms

bonded to a phosphorus (P) atom is replaced with a sulfur (S) atom. PS modification has been shown to improve the stability of oligonucleotides by making them less susceptible to enzymatic degradation. Further, PS bond-containing oligonucleotides increase binding to plasma proteins, which improves biodistribution by preventing rapid renal excretion of these molecules.

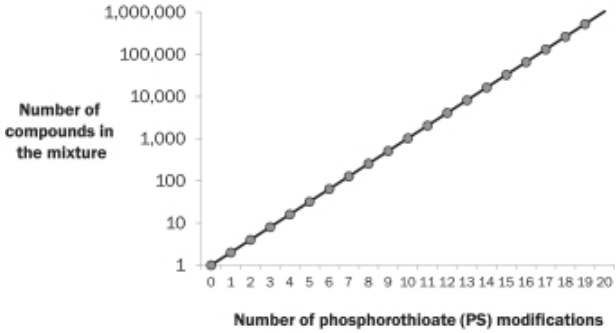
PS modification is accepted as state-of-the-art in the nucleic acid therapeutics field. The two nucleic acid therapeutics that have received regulatory approval, mipomersen and fomiversen, as well as a large majority of nucleic acid therapeutics currently in development (of which there are at least 20 in late-stage development or under regulatory review), employ PS modification. We believe that PS modification will remain a critical component of this class of therapeutics.

PS Modification Results in Complex Drug Mixtures

A consequence of using PS modification in oligonucleotide synthesis is that it creates a chiral center at each phosphorus, each of which is designated as either an “Sp” or “Rp” configuration. This chirality creates stereoisomers, which, as shown below, have identical chemical composition but different three-dimensional arrangement of their atoms and consequently different chemical and biological properties.



The configuration of each PS modification occurs randomly during conventional nucleic acid synthesis. Because oligonucleotides are comprised of numerous nucleotides and associated PS modifications—with each PS modification having a random chiral configuration—the synthesis process generates an exponentially large number of stereoisomers of the synthesized oligonucleotide. Specifically, each linkage of an additional nucleotide residue doubles the number of stereoisomers of the product, so that a conventional preparation of a PS-containing oligonucleotide is in fact a highly heterogeneous mixtures of 2^N stereoisomers, where N represents the number of PS modifications. For instance, as shown below, a conventional fully PS-modified oligonucleotide (20 nucleotides in length, 19 PS modifications) in fact is a mixture of over 500,000 stereoisomers, each having the same nucleotide sequence but differing in the stereochemistry along their backbones.



Stereoisomers often possess different chemical and pharmacologic properties. For example, certain stereoisomers can drive the therapeutic effects of a drug while others can be less beneficial or can even contribute to undesirable side effects. The greater the variation among a drug’s constituent stereoisomers, the greater the potential to diminish the drug’s efficacy and safety.

Up until now, it has not been possible to create stereopure PS-modified nucleic acid therapeutics—meaning drugs comprised entirely of the same stereoisomer—because of an inability to specifically control the configuration of each chiral PS linkage during chemical synthesis. Moreover, because of the sheer number of stereoisomers present in a mixture, it would be impractical, if not impossible, to physically isolate the most therapeutically optimal stereoisomer from within a mixture. For these reasons, all of the PS-modified nucleic acid therapeutics currently on the market and in development by others are mixtures of many stereoisomers, which we believe are not optimized for stability, catalytic activity, efficacy or toxicity.

In small molecule therapeutics, U.S. regulators have long sought to eliminate the risks potentially posed by drug mixtures containing multiple stereoisomers. Since 1992, the FDA has recommended full molecular characterization of stereoisomers within small molecule drug mixtures. Historically, it has not been possible to achieve such characterization of nucleic acid therapeutic drug mixtures, which can contain tens of thousands to millions of distinct pharmacologic entities. Based on our preclinical studies, we believe we have the ability to design and synthesize stereopure PS-modified nucleic acid therapeutics, which in preclinical models have shown superior drug properties compared with mixture-based nucleic acid therapeutics. We believe our drug development platform has the potential to set a new industry standard for the molecular characterization of complex nucleic acid therapeutic drug mixtures.

Our Solution: Controlling Stereochemistry in Nucleic Acid Therapeutics

We have developed proprietary technology that, for the first time, enables the development of PS-modified nucleic acid therapeutics in which stereochemistry is precisely controlled. This degree of control enables us to both rationally design and synthesize therapeutically optimized stereopure nucleic acid therapeutics.

We have discovered and expect to continue to identify fundamental relationships between pharmacology and the three-dimensional orientation or arrangement of atoms within an oligonucleotide, including stability, catalytic activity, specificity, safety and immunogenicity, which we believe have the potential to lead to improved efficacy and durability of effect. We have designed and synthesized stereopure PS-modified drugs that, in preclinical studies, have demonstrated superior stability or potency, or both, as compared to their respective parent drug mixtures, which may result in increased durability of effect, as well as specificity and decreased immune activity. Therefore, we expect our stereopure PS-modified drugs to have improved safety profiles and to be dosed at lower concentrations or less frequently, or both, compared with mixture-based nucleic acid therapeutics. We are using these discoveries to guide our drug development activities.

Advantages of Our Approach

We believe that our innovative and proprietary synthetic chemistry drug development platform is a significant advance in the development of nucleic acid therapeutics. The advantages of our approach include:

- ***Ability to design drugs rationally with optimized pharmacological properties***. Our platform reduces susceptibility to enzymatic degradation and renal clearance and optimizes interactions with proteins that mediate activity as well as those that affect safety and tolerability. Our ability to improve pharmacologic stability and reduce clearance can enhance the biodistribution of single-stranded oligonucleotides to multiple tissues following systemic administration without the need for additional delivery technology.
- ***Broad applicability***. Our platform is applicable to multiple RNA-targeting approaches, including antisense, RNAi, exon-skipping, RNA-guided gene editing, microRNA and others, and is compatible with a broad range of chemical modifications and targeting moieties.
- ***Proprietary production of stereopure nucleic acid therapeutics***. Our scientific personnel have developed expertise in the techniques required to produce the limited supplies of PS-modified stereopure nucleic acid therapeutics needed for our preclinical activities. We believe we have the intellectual property position and know-how necessary to protect, advance and scale these production processes.

Proof of Concept of Our Technology

We have demonstrated in preclinical models, predictive of human biology, that direct relationships exist between stereochemistry and pharmacology, and that these relationships can be used to rationally design and construct nucleic acid therapeutics. In proof-of-concept studies, we examined diverse sets of oligonucleotides designed and synthesized using our platform, which allowed us to characterize and compare the behavior of various stereoisomers. These preclinical studies have demonstrated that by controlling stereochemistry, we can optimize multiple aspects of pharmacology, including stability, catalytic activity, specificity, safety and immunogenicity, which we believe have the potential to lead to improved efficacy and durability of effect. As with any drug under development, we cannot be certain that our stereopure nucleic acid therapeutics will demonstrate in humans the same favorable pharmacologic properties we have observed in the preclinical studies we have conducted to date. See “Risk Factors—Risks Related to the Discovery, Development and Commercialization of Our Product Candidates” for a discussion of the risks associated with the development of pharmaceuticals, and nucleic acid therapeutics in particular.

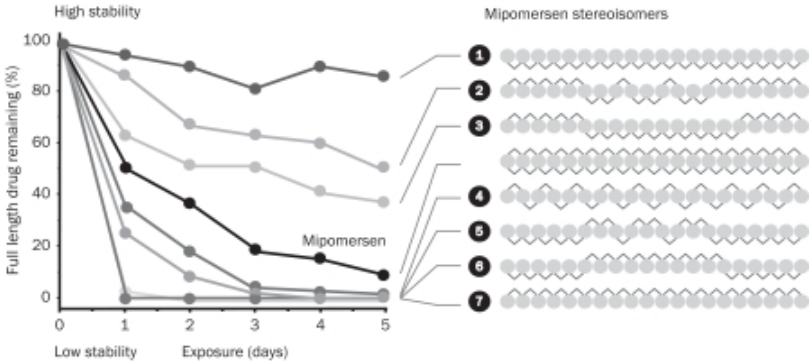
To assess the relationship between stereochemistry and pharmacology, we conducted studies of mipomersen using a diverse set of stereoisomers alongside the parent mixture. We chose to study mipomersen because it is the only systematically administered nucleic acid therapeutic approved for commercialization and because of the public availability of documents from the regulatory bodies that have evaluated mipomersen for marketing approval. Mipomersen, which is marketed by Genzyme Corporation, a Sanofi Company under the brand name KYNAMRO, is approved for the treatment of homozygous familial hypercholesterolemia and is designed to silence production of apolipoprotein B, or ApoB. While mipomersen received marketing authorization in the United States, concerns about the drug’s tolerability and liver and cardio-vascular safety led the European Medicines Agency, or the EMA, in 2012 to refuse to grant marketing authorization for mipomersen in the European Union. One of the EMA’s central concerns about mipomersen was that a high proportion of patients stopped taking the drug within two years, mainly due to side effects such as flu-like symptoms, injection site reactions and liver toxicity. The EMA considered these side effects important because mipomersen is intended for long-term treatment in order to maintain its cholesterol-lowering effect.

Mipomersen is an oligonucleotide that contains 20 nucleotides and 19 PS modifications. The chirality of each PS modification has the effect of doubling the number of stereoisomers at each phosphorus and, therefore, mipomersen is actually a mixture of over 500,000 different stereoisomers (2^{19} = 524,288), or a stereomixture. We rationally designed and synthesized individual stereoisomers of mipomersen, each having specific and different stereochemistry, and conducted studies comparing the stereoisomers with the mipomersen stereomixture.

Stability

We investigated the relationship between stereochemistry and stability by exposing our panel of individual mipomersen stereoisomers and the mipomersen stereomixture to metabolic enzymes, including nucleases, in homogenate rat liver and rat serum. Each stereoisomer and the mipomersen stereomixture were incubated separately in rat whole-liver homogenate for five days at physiological temperature and the percentage of each full-length stereoisomer and the mipomersen stereomixture remaining was measured daily.

As shown in the graph below, by day five, less than 15% of the stereomixture remained. In contrast, at day five, over 50% of our stereopure isomers 1 and 2 remained, indicating that these individual stereoisomers have greater stability than the stereomixture. However, the mipomersen stereomixture was more stable than stereoisomers 5, 6 and 7.



Similar results were observed when the stability of the stereomixture and selected stereoisomers were compared in rat serum.

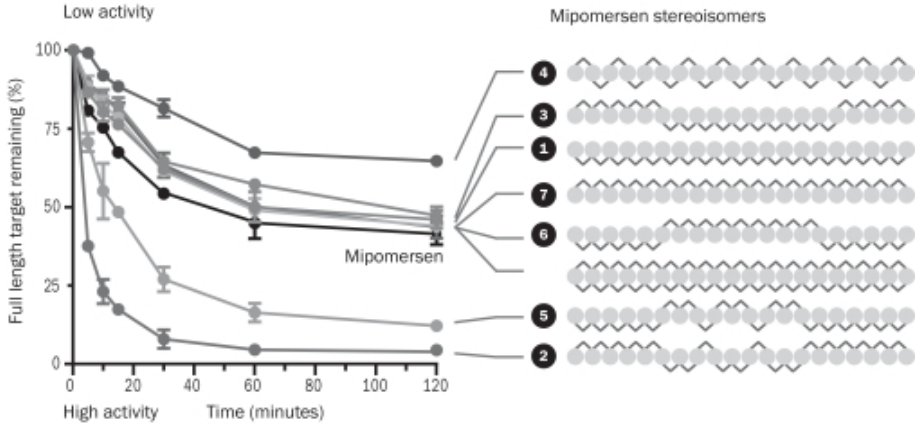
Catalytic Activity

We investigated the relationship between stereochemistry and catalytic activity, which, in the case of antisense, is a measure of the efficiency with which the drug can knockdown the target. Efficient catalytic activity is critical for optimized pharmacology of drugs like mipomersen.

In the body, mipomersen uses a cellular enzyme called RNase H to degrade or knockdown ApoB mRNA. Using *in vitro* assays of human RNase H, we evaluated the catalytic activity of the same panel of stereoisomers described above compared with the stereomixture.

Stereoisomers or stereomixtures were bound to target ApoB mRNA and incubated with human RNase H to initiate the catalytic reaction. The reaction was stopped at various time-points and the amount of full-length target ApoB mRNA remaining was measured.

As shown below, stereoisomers and the stereomixture exhibited large differences in their catalytic activity, as demonstrated by their efficiency in reducing the amount of the full-length target remaining over time. Certain stereoisomers, most notably stereoisomer 2, demonstrated catalytic activity at levels far superior to that of the stereomixture. Also, importantly, we identified stereoisomers that exhibited lower efficiency levels, most notably isomer 4.



Based on these and other data, we have established key design principles relating stereochemistry and catalytic efficiency using RNase H-mediated antisense. These principles can be applied across antisense therapeutics and are compatible with a broad range of chemical modifications to the drug molecule.

We believe that, based on these studies and others we have conducted, it is possible to synthesize stereopure nucleic acid therapies possessing increased stability and catalytic activity for any PS-modified nucleic acid therapeutic independent of nucleotide sequence composition.

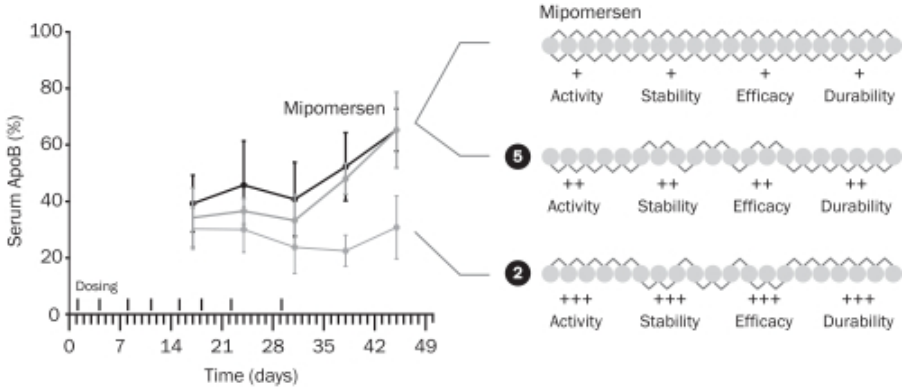
Efficacy

We assessed whether improved stability and catalytic activity of our stereoiosomers will translate into greater efficacy in an *in vivo* pharmacological study. We administered our panel of stereoisomers and the stereomixture to transgenic mice that express human ApoB. This validated animal model was included in the preclinical package used for the regulatory approval of mipomersen in the United States.

Mice were injected twice weekly with 10 milligrams per kilogram of our stereoisomer 2, our stereoisomer 5 or the stereomixture over a four-week period. ApoB protein levels in the mice's serum were measured on a weekly basis. This treatment protocol and study design replicates the preclinical *in vivo* pharmacology study for mipomersen included in the regulatory submission for mipomersen.

As shown in the graph below, during the treatment period (up to day 28), stereoisomers 2 and 5, which as described above demonstrated increased catalytic activity *in vitro* compared with the stereomixture, also achieved greater

reduction in serum ApoB compared with the stereomixture. In the graph below, levels of ApoB in serum are expressed as a percentage of ApoB at baseline, which was 100%. Knockdown of ApoB by the stereomixture decreased dramatically following final dose. This effect was also observed for stereoisomer 5, which had increased catalytic activity compared with the stereomixture but lowered stability. In comparison, stereoisomer 2, which had superior catalytic activity and stability, demonstrated durable knockdown of serum ApoB for over two weeks after the final dose.



These results demonstrate our ability to rationally design PS-modified nucleic acid therapeutics that, in a preclinical setting, have greater stability and catalytic activity, which we believe have the potential to lead to improved efficacy and durability of effect.

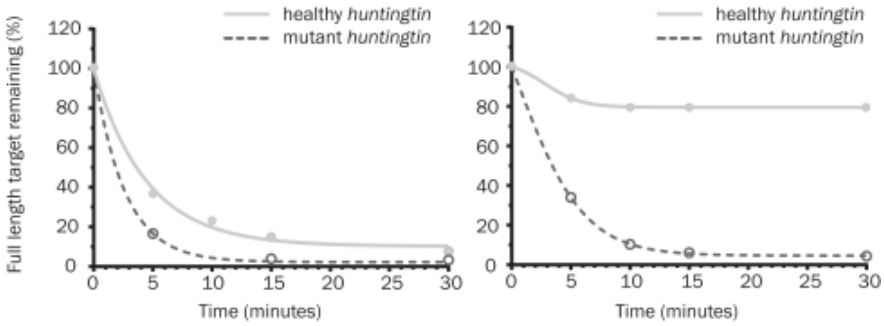
Specificity

By controlling stereochemistry, we have discovered that the pattern of cleavage caused by PS-modified antisense, within the target RNA, can be changed, including directing cleavage toward specific sites within the target. This unique capability enables the cleavage of target RNA to be sensitive to small differences between similar targets, where cleavage may be undesirable or potentially unsafe.

For example, Huntington's disease is caused by mutations in one allele (which is one of two or more versions of a gene) of the *huntingtin* gene, resulting in the production of a disease-causing protein, while the other allele encodes a healthy protein. By optimizing stereochemistry, we are able to direct cleavage towards single-nucleotide differences between these alleles and silence the disease-causing *huntingtin* RNA while leaving the healthy *huntingtin* RNA intact.

Stereoisomers or stereomixtures were bound to mutant and healthy *huntingtin* RNA and incubated with human RNase H to initiate the catalytic reaction. The reaction was stopped at various time-points and the amount of full-length mutant and healthy *huntingtin* RNA remaining was measured.

Using these *in vitro* assays of human RNase H, we observed that the stereomixture (left figure) caused substantial reductions in both the mutant and healthy *huntingtin* RNA, while the optimized stereoisomers (right figure) preferentially cleaved mutant *huntingtin* RNA while sparing the healthy *huntingtin* RNA.



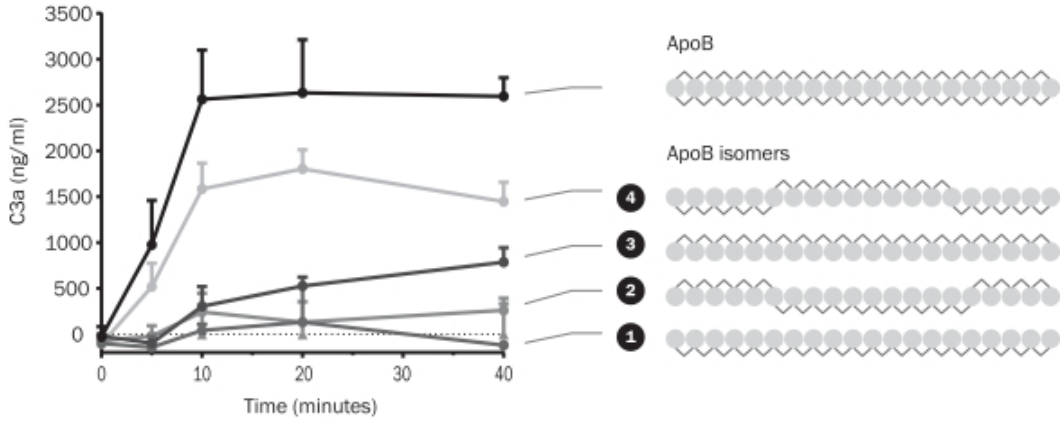
We believe our unique ability to change the cleavage pattern of PS-modified nucleic acid therapies with stereochemistry will create opportunities to mitigate unwanted cleavage and also open allele-specific targeting (meaning the preferential interaction of an oligonucleotide with target RNA transcribed from one allele of a given gene) involving causative or associated non-causative genetic variations.

Through these studies, we have demonstrated an ability to use stereochemistry in the preclinical setting to control cleavage and reduce off-target cleavage. We believe these findings can be applied in the design of nucleic acid therapies that target a range of variation-specific disease targets.

Immunogenicity

We investigated the relationship between stereochemistry and immunogenicity, which is the ability of a substance to activate an immune response. Immune activation has been observed with PS modified oligonucleotides in preclinical toxicology studies, and flu-like symptoms and injection-site reactions in clinical studies are believed to be immune mediated.

Using non-human primate serum we analyzed the activation of the complement system following exposure to our panel of individual stereoisomers and the parent stereomixtures. Each isomer and parent stereomixture were incubated at physiological temperature in non-human primate serum from three individual animals. Samples were removed at the indicated times and complement activation was measured by measuring the increase in the amount of protein C3a. Protein C3a is formed by the cleavage of complement component 3 upon activation of the complement system, and its levels in serum increase in direct proportion to the amount of activation. Such measurements were taken using the enzyme-linked immunosorbent assay, or ELISA, analytical method, a technique used to determine the amount of a specific protein present in a biological sample and which requires an antibody that is specific to the protein of interest, which is linked to an enzyme whose activity can be used to quantify the amount of protein present.



As shown above, equal concentrations of stereoisomers and the stereomixture exhibited differences in the levels of C3a. Gray triangles represent activation using a control solution of water. Certain stereoisomers showed greater than twice the reduction in C3a compared to the stereomixture. We believe that, based on these studies, it is possible to modulate complement activation and potentially reduce immunogenicity of PS-modified oligonucleotides by controlling stereochemistry.

Our Strategy

We are leveraging our innovative platform to design, develop and commercialize optimized nucleic acid therapeutics that address important unmet medical needs. The key components of our strategy are as follows:

- ***Rapidly advance product candidates***. We are initially focused on designing single-stranded nucleic acid therapeutics that can distribute broadly within the human body, allowing us to target diseases across multiple organ systems and tissues, through both systemic and local administration. Our most advanced

therapeutic programs are in Huntington's disease, DMD and IBD. In Huntington's disease, we have programs targeting HTT SNP-1 and HTT SNP-2; in DMD, we are targeting Exon 51; and in IBD, we are targeting SMAD7. We have selected lead product candidates in our programs targeting HTT SNP-1 and Exon 51, and we expect to select lead candidates in our HTT SNP-2 and SMAD7 programs in early 2016. We expect to file INDs with the FDA for each of these candidates in 2016 and early 2017. We also have late-stage discovery programs in epidermolysis bullosa simplex, in which we are targeting KRT14 SNP-1 and KRT14 SNP-2, and in DMD, in which we are focused on an additional DMD target, AcRIIb. We expect to identify lead candidates for these programs in 2016.

- ***Expand our pipeline in the area of orphan diseases***. We intend to continue to expand our pipeline in the area of orphan diseases to provide multiple opportunities for clinical and commercial success and demonstrate the breadth of our abilities across multiple organ systems and tissues and therapeutic modalities. We believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for approximately 25 other target indications, mostly consisting of orphan indications, with an initial focus on orphan neuromuscular and central nervous system disease targets.
- ***Establish opportunistic strategic partnerships***. We intend to collaborate selectively and opportunistically with pharmaceutical and biotechnology companies in the development and commercialization of nucleic acid therapeutics targeting certain orphan and broad indications. We expect to pursue such partnerships primarily when we believe they will significantly accelerate and enhance the clinical and commercial potential of a given development program.
- ***Leverage and expand our intellectual property portfolio***. We believe we have a strong intellectual property position relating to the design, development and commercialization of stereopure nucleic acid therapeutics. We intend to file new patent applications and take other steps to leverage, expand and enforce our intellectual property position.
- ***Maintain and extend our leadership in oligonucleotide stereochemistry***. We plan to establish a dominant position in the field of oligonucleotide stereochemistry, advancing basic research and pharmacology across multiple therapeutic modalities and target classes.

Our Pipeline

We are developing nucleic acid therapeutics that are capable of targeting diseases in a wide range of organ systems and tissues. Based on our design principles, we have demonstrated in preclinical studies our ability to rapidly design and select lead therapeutic candidates with optimized pharmacological properties.

Our most advanced therapeutic programs are in Huntington's disease, DMD and IBD. In Huntington's disease, we have programs targeting HTT SNP-1 and HTT SNP-2; in DMD, we are targeting Exon 51; and in IBD, we are targeting SMAD7. We have selected lead product candidates in our programs targeting HTT SNP-1 and Exon 51, and we expect to select lead candidates in our HTT SNP-2 and SMAD7 programs in early 2016. We expect to file INDs with the FDA for each of these candidates in 2016 and early 2017. See "—Our Initial Therapeutic Candidates" for more information about these targets.

We also have late-stage discovery programs in epidermolysis bullosa simplex, in which we are targeting KRT14 SNP-1 and KRT14 SNP-2, and in DMD, in which we are focused on an additional DMD target, AcRIIb. We expect to identify lead candidates for these programs in 2016. See "—Our Late-Stage Discovery Programs" for more information about these targets.

Our therapeutic programs and late-stage discovery programs are summarized in the table below.

			MECHANISM OF ACTION			MILESTONES	
			SILENCING				
TISSUE	DISEASE	TARGET	ALLELE SPECIFIC	NON-ALLELE SPECIFIC	EXON SKIPPING	NEXT 12 MONTHS	12-24 MONTHS
Therapeutic programs							
CNS	Huntington's disease	HTT SNP-1	ü			IND-enabling studies	File IND, initiate Phase 1/2a
CNS	Huntington's disease	HTT SNP-2	ü			Candidate selection	File IND, initiate Phase 1/2a
Neuromuscular	Duchenne muscular dystrophy	Exon 51			ü	IND-enabling studies	File IND, initiate Phase 1/2a
GI	Inflammatory bowel disease	SMAD7		ü		Candidate selection	File IND, initiate Phase 1/2a
Late-stage discovery programs							
Skin	Epidermolysis bullosa simplex	KRT14 SNP-1	ü			Lead optimization, candidate selection	File IND, initiate Phase 1/2a
Skin	Epidermolysis bullosa simplex	KRT14 SNP-2	ü			Lead optimization, candidate selection	File IND, initiate Phase 1/2a
Neuromuscular	Duchenne muscular dystrophy	AcRIIb		ü		Lead optimization, candidate selection	File IND, initiate Phase 1/2a

We also have early-stage discovery programs in which we are focused on screening activities and lead optimization for potential drug candidates targeting eye, hepatic and neuromuscular and central nervous system diseases.

We believe that, based on our initial selection criteria of novel and fast-follower opportunities, our platform can potentially be used in the near-term to design treatments for a number other target indications, mostly consisting of orphan indications.

Our Initial Therapeutic Candidates

We are currently focused on developing nucleic acid therapies for Huntington's disease, Duchenne muscular dystrophy and inflammatory bowel disease.

Huntington's Disease

Background and Market Opportunity

Huntington's disease is an orphan hereditary neurodegenerative disease that is fatal and for which there is no cure. Huntington's disease results from the accumulation of the defective gene product huntingtin, which promotes the degeneration of neurons, and can lead to neuronal cell death, causing motor, cognitive and psychiatric disability. Symptoms typically appear between the ages of 35 and 44 and worsen over the next 10 to 20 years. Many describe the symptoms of Huntington's disease as having amyotrophic lateral sclerosis, or ALS, Parkinson's disease and Alzheimer's disease simultaneously. Patients experience a gradual reduction in motor function and psychological disturbances. Ultimately, the affected individual succumbs to pneumonia, heart failure or other fatal complications. Life expectancy after symptom onset is approximately 20 years. We estimate that approximately 43,000 people in the United States have Huntington's disease.

Current Treatments

Currently, there are no approved treatments that can reverse or slow down the course of Huntington's disease. Some of the symptoms of Huntington's disease can be managed with medication and therapies. Antipsychotics and other drugs affecting the dopamine pathways are used for symptom control. Lowering the levels of mutant huntingtin protein has demonstrated therapeutic effects in animal models. Roche and Isis Pharmaceuticals have antisense oligonucleotides to silence the *huntingtin* gene in Phase 1/2a clinical development, with human trials having commenced in July 2015.

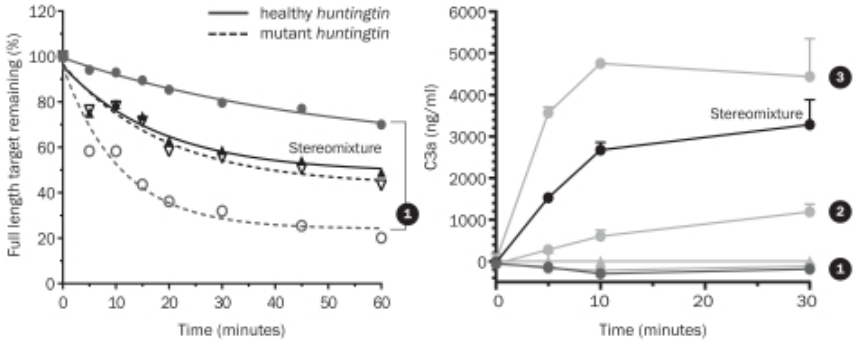
Our Program

We are advancing multiple therapeutic candidates targeting single nucleotide polymorphisms, or SNPs, associated with the mutant alleles of *huntingtin* gene. We have selected a lead candidate in our HTT SNP-1 program and have

initiated IND-enabling preclinical studies in that program. We expect to identify a lead candidate in our HTT SNP-2 program in early 2016. The precise targeting of such alleles by stereochemically controlled, or stereopure, oligonucleotides should allow discrimination and selective silencing of *huntingtin* alleles associated with manifestations of the disease while leaving functional *huntingtin* alleles intact. Each SNP has a particular demographic distribution, and defines a subpopulation of patients suited for allele-specific interventions. Approximately 80% of the total patient population is associated with one of the three most common SNPs. Therefore, we are attempting to develop oligonucleotides targeting these three SNPs, as they represent the largest unmet need.

We intend to advance our first programs into non-human primate studies to establish the safety and distribution of our stereopure antisense oligonucleotides in the central nervous system. Upon the completion of a rigorous toxicology program in non-human primates, we intend to file an IND and conduct early-stage clinical trials to establish the safety and tolerability, pharmacokinetics and surrogate evidence of therapeutic benefits in patients with manifest Huntington's disease. Route of administration will be intrathecal, by simple spinal tap or by the insertion of a spinal catheter, depending on the frequency of administration. We expect to dose on a monthly basis or potentially less frequently. Single ascending doses will be rapidly escalated to establish the maximum tolerated dose and guide our selection of doses for potential multiple dose studies. We believe that the recently demonstrated ability to distinguish in preclinical studies the mutant and the wild-type huntingtin protein in the cerebral spinal fluid will enable us to rapidly demonstrate clinical proof-of-concept for target engagement and allele selectivity.

As shown below, *huntingtin* targeted stereoisomer 1 (circles) or stereomixture (triangles) drugs were bound to healthy and mutant *huntingtin* mRNA and incubated with human RNase H (left figure). Catalysis mediated by the stereopure drug increased the degree of knockdown while also discriminating between healthy versus mutant *huntingtin*, compared with the stereomixture.



Using non-human primate serum, we analyzed the activation of the complement system following exposure to a panel of *huntingtin* targeted stereoisomers and the parent stereomixture. Each isomer and parent stereomixture was incubated at physiological temperature in non-human primate serum from three individual animals. Samples were removed at the indicated times and complement activation was measured by the increase in C3a levels using the ELISA analytical method. As shown above (right figure), certain stereoisomers and the stereomixture demonstrated increased production of C3a, notably stereoisomer 3, however there was no production of C3a following exposure to stereoisomer 1, which showed discrimination between heathy and mutant *huntingtin*.

We expect to file an IND for our therapeutic candidate targeting HTT SNP-1 in late 2016 and our therapeutic candidate targeting HTT SNP-2 in early 2017.

Duchenne Muscular Dystrophy

Background and Market Opportunity

DMD is a genetic disorder caused by mutations in the *dystrophin* gene on the X chromosome that affects approximately one in 3,500 newborn boys around the world. In skeletal and cardiac muscles, the dystrophin protein is part of a protein complex called the dystrophin-associated protein complex that acts as an anchor, connecting each muscle cell's structural framework with the lattice of proteins and other molecules outside the cell through the muscle cell membrane. The dystrophin-associated protein complex protects the muscle from injury during

contraction and relaxation. DMD patients typically develop muscle weakness in the early years of life and become wheelchair-bound in their early teens. As the disease progresses, DMD patients typically develop respiratory, orthopedic and cardiac complications. Cardiomyopathy and breathing difficulties usually begin by the age of 20 and patients typically die from respiratory failure or lung disorders by age 25.

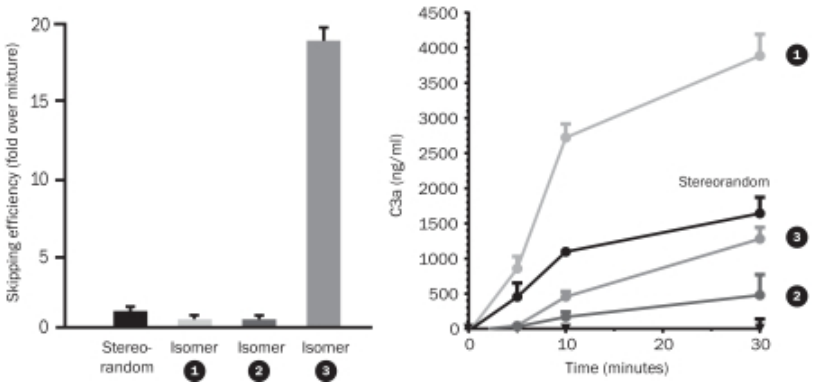
Current Treatments

Currently, there are no approved treatments that can reverse or slow down the progression of DMD. Corticosteroids and physical and respiratory therapy are used in DMD patients to slow the decline in muscle strength and to prolong ambulation and respiratory function. One disease-modifying strategy in DMD is exon skipping. Exon skipping allows for the production of internally deleted, but functional, dystrophin protein instead of a dysfunctional, truncated one. In Europe, conditional market authorization has been granted to PTC Therapeutics' Ataluren (TRANSLARNA) for the treatment of nonsense mutation DMD for ambulatory patients who are 5 years or older. In addition, there are two exon skipping nucleic acid therapeutic candidates currently undergoing regulatory review in the United States: BioMarin Pharmaceutical's DRISAPERSEN and Sarepta Therapeutics's ETEPLIRSEN.

Our Program

We are developing stereochemically optimized oligonucleotides that we believe have superior pharmacology attributes as compared to stereomixtures. Using a variety of preclinical *in vitro* assays, we have selected our product candidate targeting Exon 51, which affects 13% of the DMD patient population.

Our product candidate for the treatment of Exon 51 was selected, in part, based on its ability to demonstrate efficient restoration of the production of functionally active dystrophin. Using patient-derived cells, we assessed exon skipping efficiency by measuring Exon 51 skipped RNA following exposure to equal concentrations of stereorandom or stereopure oligonucleotides. As shown below (left figure), certain stereopure oligonucleotides were identified that had increased and decreased exon skipping efficiency compared to stereorandom mixture, including stereoisomer 3, which possessed a large increase in skipping efficiency compared with the stereorandom mixture.



Using non-human primate serum, we analyzed the activation of the complement system following exposure to exon skipping stereoisomers and the parent stereomixture. Each isomer and parent stereomixture was incubated at physiological temperature in non-human primate serum from three individual animals. Samples were removed at the indicated times and complement activation was measured by measuring the increase in C3a levels using the ELISA analytical method. As shown above (right figure), certain stereoisomers demonstrated increased production of C3a, notably stereoisomer 1. Production of C3a from stereoisomer 3, which showed increased exon skipping efficiency, was lower than production from the mixture.

We believe that the use of a stereopure compound (in contrast with a stereomixture) will reduce adverse events noted with stereomixtures, such as injection site reactions, renal toxicity and thrombocytopenia. Following the filing of an IND in the United States or a Clinical Trial Authorization in Europe, we intend to conduct early-stage clinical trials to establish safety, tolerability, pharmacokinetics and efficient exon skipping. The efficiency of exon skipping will be measured by the *de novo* production of internally deleted, but functional, dystrophin in muscle biopsies as the basis for any improvement of muscle strength, which is an anticipated clinical endpoint of later clinical studies.

We expect to file an IND for our first therapeutic candidate in DMD in late 2016.

Inflammatory Bowel Disease

Background and Market Opportunity

Inflammatory bowel disease involves chronic inflammation of all or part of the digestive tract, which may be caused by a dysregulated immune response to host bacteria present in the intestine. There are two primary types of IBD: ulcerative colitis, or UC, and Crohn's disease, or CD. According to the Centers for Disease Control and Prevention, or the CDC, approximately 1.3 million people in the United States have IBD. Based on data from the CDC, we estimate that approximately 600,000 of these individuals have CD and 700,000 have UC. Patients with IBD are typically diagnosed by the age of 30, and symptoms are highly variable in frequency and intensity.

CD is a chronic inflammatory disease of the digestive tract that primarily affects the terminal ileum and right colon, but may affect any region of the gastrointestinal tract. CD-related inflammation is segmental and transmural, leading to various degrees of tissue damage. At disease onset, most patients have inflammatory lesions, which become predominantly strictures or penetrating lesions over time.

UC is a chronic inflammatory disease of the innermost lining of the colon and rectum, together known as the large intestine, in which the lining becomes inflamed and develops tiny open sores, or ulcers, that produce pus and mucous. The combination of inflammation and ulceration can cause abdominal discomfort and frequent emptying of the colon. UC is believed to be the result of an abnormal response by the body's immune system, which sends white blood cells into the lining of the large intestine, where they produce chronic inflammation and ulcerations.

Current Treatments

The goal of current treatments for IBD is to reduce inflammation that triggers signs and symptoms, which may lead to symptom relief, long-term remission and a reduced risk of complications. Mucosal healing can be promoted with the use of immunosuppressive drugs and anti–tumor necrosis factor a, or TNF-a, antibodies; however, more than one third of patients do not have a response to these therapies. The efficacy of these therapies may also diminish over time, and they can increase a patient's risk of opportunistic infections and cancer. While UC can be cured by colectomy, currently there is no known cure for CD.

Recently reported clinical results related to the use of a first-generation, stereorandom antisense oligonucleotide (MONGERSEN) targeting SMAD7, a protein of the SMAD family involved in the signal transduction pathway of TGF-B and its receptors, which is present in abundant concentration in inflamed intestinal tissues, have been encouraging. In a 160-patient, Phase 2 trial, MONGERSEN induced pronounced and sustained relief of the inflammation and related symptoms of CD. Celgene Corporation is currently developing MONGERSEN, for the treatment of terminal ileitis, the most frequent form of CD. Idera Pharmaceuticals is currently conducting a Phase 1 clinical trial in healthy volunteers for a Toll-Like Receptor antagonist (IMO-9200), which an oligonucleotide-based therapy. Idera Pharmaceuticals intends to initiate further development of IMO-9200 in a selected autoimmune disease indication in the future.

Our Program

We are developing stereochemically optimized antisense oligonucleotides against SMAD7, which should result in superior activity and durability over stereomixtures. Our initial goal is to design different stereochemistries optimized for antisense, translational blockade or immune modulating *in vitro* activity and select our lead therapeutic candidate based on its performance on an efficacy model of IBD. We expect to identify a lead candidate in our SMAD7 program in early 2016. We also plan to collaborate with a third-party contract manufacturing organization to produce oral, gastro-resistant, solid formulations (tablets or capsules) that are able to deliver the stereopure oligonucleotides at the desired site of gastrointestinal inflammation, which we refer to as encapsulated oligonucleotides. Our selected lead therapeutic candidate would undergo the customary Chemistry and Manufacturing Controls, or CMC, and toxicology programs in preparation for the filing of an IND. Following our filing of an IND, we would expect to conduct clinical trials leveraging the availability of endoscopic and mucosal healing endpoints as early evidences of therapeutic potential, and as short-term surrogates for the clinical endpoints we would expect to use in late-stage and registration studies.

We expect to file an IND for our therapeutic candidate in IBD in 2017.

Our Late-Stage Discovery Programs

Duchenne Muscular Dystrophy

Our Program

In addition to our previously described program relating to the development of exon skipping nucleic acid therapeutic candidates for the treatment of DMD, we are investigating other novel approaches to treat DMD, especially in the advanced stages of the disease. Restoration of dystrophin using exon skipping approaches alone may be less effective in situations where disease has progressed to a state of advanced muscle damage. To promote skeletal muscle growth, we are investigating antisense-mediated myostatin pathway inhibitors at the ligand and receptor level, by targeting AcRIIb. We will investigate these inhibitors alone and in combination with our exon skipping therapeutic candidates. We expect to identify a lead candidate in our AcRIIb program in 2016.

Epidermolysis Bullosa Simplex

Background and Market Opportunity

Epidermolysis bullosa simplex is an autosomal dominant genetic condition that causes the skin to become very fragile and blister easily. Blisters and areas of skin loss occur in response to minor injury or friction, such as rubbing or scratching. The signs and symptoms of this condition vary widely among affected individuals. Blistering primarily affects the hands and feet in mild cases, and the blisters usually heal without leaving scars. Severe cases of this condition involve widespread blistering that can lead to infections, dehydration, and other medical problems. Severe cases may be life-threatening in infancy. Researchers have identified four major types of epidermolysis bullosa simplex. Although the types differ in severity, their features overlap significantly, and they are caused by mutations in the same genes. We estimate that approximately 6,300 people in the United States have epidermolysis bullosa simplex.

Current Treatments

Epidermolysis bullosa simplex has no known cure, though mild forms may improve with age. Treatment focuses on addressing the symptoms, such as infection and itching, and preventing pain and wounds. Severe forms may cause serious complications and can be fatal.

Our Program

We are investigating allele-selective antisense oligonucleotides against SNPs widely associated with causative mutations in *KRT14* gene, which produces the Keratin 14 protein. In particular, we are targeting KRT14 SNP-1 and KRT14 SNP-2. We and our collaborators have identified single SNPs in *KRT14* that provide coverage for approximately 46% of the EBS population. In EBS preclinical models, it has been shown that allele-specific reduction in expression of the mutant keratin genes can prevent the skin-blistering phenotype. Due to the absence of appropriate transgenic SNP models, we are advancing topical formulation development efforts with our collaborators alongside *in vitro* optimization of allele-specific targeting agents. Additionally, we are working with leading clinicians and translational scientists in the United Kingdom to establish well-controlled experimental medicine studies in patients with EBS.

We expect to identify lead candidates in our KRT14 SNP-1 and KRT14 SNP-2 programs in 2016. We expect investigator-sponsored studies of our therapeutic candidates for EBS to be initiated in early 2017.

Licensing Arrangements and Research Collaborations

Our business strategy is to develop and commercialize a broad pipeline of nucleic acid therapies. As part of this strategy, we have entered into, and expect to enter into additional, license and research collaboration agreements as a means of advancing our own investigational nucleic acid therapeutic programs and leveraging our synthetic chemistry drug development platform to optimize the therapies being developed by our partners.

Our Technology Licenses

Max-Planck-Innovation GmbH

In June 2015, we entered into an agreement with Max-Planck-Innovation GmbH, or MI, pursuant to which we obtained a co-exclusive royalty-bearing, worldwide license, with the right to sublicense, to research, develop, manufacture and commercialize products in all fields of use under certain patent rights owned by Max-Planck-Gesellschaft, or MPG, and patent rights owned by University of Massachusetts Medical School, or UMMS, which has

been granted to us by MI, a wholly-owned subsidiary of MPG, acting as MPG's technology transfer agency and UMMS's authorized licensing agency for such patents. MPG and MI are collectively referred to herein as Max-Planck.

Our patent rights under this license are to patent filings that relate to certain sequence and structural features of single-stranded RNA molecules that mediate target-specific RNA interference, and include both filings that are owned by Max Planck and arose from research conducted by Thomas Tuschl, Ph.D. and his colleagues at the Max-Planck-Institute for Biophysical Chemistry, and also an issued U.S. patent owned by the University of Massachusetts, or UMASS, that prevailed in an interference with one of the Max-Planck filings and was subsequently included, through a separate agreement between Max-Planck and UMASS, within the portfolio that Max-Planck is authorized to license. The Max-Planck licensed patent portfolio includes issued U.S. and Canadian patents, and pending U.S. and European patent applications, each of which has a projected 20 year term that extends into 2023. We intend to develop and commercialize diagnostic and therapeutic products based on our patent rights under this license, although currently we do not rely on the patent rights under this license for any of our drug candidates under development in our therapeutic or discovery programs. Max-Planck retains the right to practice the intellectual property licensed under the agreement for non-commercial purposes.

Our license is one of two maximum allowable co-exclusive licenses for these patents, the other of which is currently held by Isis Pharmaceuticals, Inc., or Isis. If either we or Isis terminates its respective co-exclusive portion of the license, Max-Planck is obligated to grant the other party an exclusive license on substantially the same terms and conditions previously applicable to the terminated co-exclusive licensee.

Under certain conditions, we are permitted to sublicense our rights under the license. The license requires that we use commercially reasonable efforts to develop and commercialize products under the agreement, whether solely or through our affiliates and sublicensees. In order to secure the license, we made an upfront payment of less than $0.1 million to Max-Planck. Additionally, starting on the first anniversary of the agreement, we will be required to pay annual license maintenance fees of less than $0.1 million to Max-Planck which will be credited against any royalties payable for the applicable calendar year. We will be required to make payments based upon regulatory milestones, including the initiation of clinical trials, and product approval milestones totaling up to $1.6 million for each licensed product reaching such clinical stage, provided that such milestone payments will only be payable once per target irrespective of the number of licensed products targeting such target to achieve such milestones. In addition to milestone payments, we will be required to pay royalties of a percentage of cumulative annual net sales of a licensed product commercialized by us, our affiliates and sublicensees. The percentage is in the low single
digits. The royalties payable to Max-Planck are subject to reduction for any third party payments required to be made, with a minimum floor in the low single digits. If we grant a sublicense of our rights under this license, we will be obligated to pay Max-Planck a percentage of specified sublicensing consideration received from such sublicensee attributable to the sublicense granted under the licensed patents, ranging from the mid-single digits to the low thirties depending on the stage of development at the time the sublicense is executed.

We may unilaterally terminate the license agreement upon 90 days' prior written notice and payment of all accrued amounts owing to Max-Planck. Max-Planck may terminate the agreement upon 30 days' prior written notice if we challenge the validity of its patents, upon 30 days' prior written notice if we undergo a change of control and cannot demonstrate that we will maintain a development and commercialization program that is substantially similar or greater in scope than the program prior to the change of control event, or in the event of our material breach which remains uncured after 60 days of receiving written notice of such breach (or 45 days in the case of nonpayment). Absent early termination, the agreement will automatically terminate upon the later of the expiration or abandonment of all issued patents and filed patent applications with the patent rights covered by the agreement or April 28, 2019.

Our Research Collaborations

University of Oxford; Professor Matthew Wood's Laboratory

In April 2015, we entered into a translational research collaboration agreement with The Chancellor, Masters, and Scholars of the University of Oxford, or Oxford. Research under this collaboration is being conducted by Dr. Matthew J.A. Wood, Professor of Neuroscience at the University of Oxford and Co-Director of the Oxford Centre for Neuromuscular Science. Dr. Wood's research is in the field of degenerative disorders of the nervous system and muscle. His laboratory's main focus is the investigation of novel therapeutic approaches utilizing short nucleic acids

to target messenger RNA, or mRNA. His current work is investigating the potential of single-stranded antisense oligonucleotides for the modification of mRNA splicing, for example in Duchenne muscular dystrophy. In addition, his investigation includes the potential of double-stranded RNA for gene silencing, or RNAi, for the silencing of target genes and mutant alleles both in muscle and in the nervous system.

Our research collaboration with Oxford involves characterizing our proprietary isomers in order to improve the pharmacology of oligonucleotides for the treatment of DMD. Under the agreement, both parties are obligated to use reasonable endeavors to carry out the research project in accordance with the agreed upon research plan. Under the agreement, we have agreed to pay Oxford up to $0.4 million to conduct specified research services for our benefit during an initial 18-month term, which may be extended by the parties.

We will own the results of the research conducted under the collaboration, including any potential intellectual property inventions, and we may, at our own expense, elect to register and maintain any protection for the intellectual property included in or arising or derived from the results of the research, including patent applications, without payment of any additional compensation to Oxford. The agreement does not affect the respective ownership rights of any background information, intellectual property, technology, design or know-how owned by the parties that are not results of the research conducted under the collaboration. Oxford retains the right to use the results of the research for purposes of Oxfords' own internal academic teaching and other scholarly uses undertaken solely for education and academic research.

Either we or Oxford may terminate the research collaboration in the event of the other party's breach of the agreement if such breach is capable of cure but remains uncured after 60 days of receiving written notice of such breach, or upon the occurrence of certain bankruptcy events.

The Children's Hospital of Philadelphia; Dr. Beverly Davidson's Laboratory

In April 2015, we entered into a master sponsored research agreement with The Children's Hospital of Philadelphia, or CHOP, which employs Dr. Beverly Davidson, who is the principal investigator under the first research project under the agreement. Dr. Davidson is the director of the Center for Cellular and Molecular Therapeutics at CHOP, a Professor at the University of Pennsylvania and a scientific co-founder of and advisor to Spark Therapeutics, Inc. Dr. Davidson and her laboratory team have succeeded in reversing neurological deficits in small and large animal models of disease, and are working to advance this approach to treating human diseases such as Huntington's disease. In these studies, she has delivered forms of RNA to the brains of animals to silence the activity of disease-associated genes. Our agreement requires that all research for this first project be conducted in Dr. Davidson's laboratory at CHOP.

Our research collaboration with CHOP involves characterization of our proprietary isomers for the treatment of Huntington's disease. Under the agreement, for this first research project we have agreed to pay CHOP up to approximately $0.2 million to conduct specified research activities, on a project-by-project basis, for our benefit. Additional research projects may be agreed upon by CHOP and the company under the agreement. The term of the research collaboration will end during a term that ends on the later of the five-year anniversary or the date that the last research project is completed.

Each party shall be the sole owner of any intellectual property resulting from the research collaboration that is created solely by on or behalf of such party pursuant to the performance of research activities under the agreement. Similarly, the parties shall be joint owners of intellectual property created jointly under the agreement. Prior to us exercising an option to license any such intellectual property (as described below), CHOP is responsible for preparing, prosecuting and maintaining all patents related to CHOP intellectual property and joint intellectual property and we are responsible for reimbursing CHOP for the costs associated with the protection of such intellectual property that we request CHOP to protect. In addition, we have a first and exclusive option to negotiate for a revenue-bearing license, exclusive or non-exclusive at our election, under all of CHOP's interest in and to the CHOP intellectual property and the joint intellectual property resulting from each research project performed under the agreement, provided that we pay all costs for the preparation, filing, prosecution and maintenance of patents or other intellectual property protection in the case of an exclusive license or our pro rata costs in the case of a non-exclusive license. Each such option expires 90 days after CHOP's disclosure of the intellectual property to us. If we elect to exercise an option for a license, then we have six months to negotiate and enter into such license with CHOP. Furthermore, if certain

background or enabling intellectual property is held by CHOP that would be necessary for us to obtain rights to develop and exploit the CHOP or joint intellectual property that we elect to license, then such license rights to such blocking intellectual property will be added to our license for the applicable option exercise.

We may terminate the agreement at any time upon 30 days' prior written notice to CHOP. In addition, we may terminate the agreement with immediate effect if CHOP is unable to perform the requested research, materially breaches the agreement and fails to cure such breach within 30 days after receiving written notice of such breach, if performance of the agreement would violate the law or upon the occurrence of certain CHOP bankruptcy events.

CHOP may terminate the agreement if we materially breach the agreement and do not cure such breach within 30 days after receiving written notice of such breach from CHOP.

University of Dundee

In September 2015, we entered into a research collaboration agreement with the University of Dundee, or Dundee. Our research collaboration with Dundee involves characterizing our proprietary isomers in order to improve the pharmacology of oligonucleotides for the treatment of EBS. Under the agreement, both parties are obligated to use reasonable endeavors to carry out the research project in accordance with the agreed upon research plan. Under the agreement, we have agreed to pay Dundee up to $0.2 million to conduct specified research services for our benefit during an initial two-year term, which may be extended by the parties.

We will own the results of the research conducted under the collaboration, including any potential intellectual property inventions, and we may, at our own expense, elect to register and maintain any protection for the intellectual property included in or arising or derived from the results of the research, including patent applications, without payment of any additional compensation to Dundee. The agreement does not affect the respective ownership rights of any background information, intellectual property, technology, design or know-how owned by the parties that are not results of the research conducted under the collaboration. Dundee retains the right to use the results of the research for purposes of Dundee's own internal academic teaching and other scholarly uses undertaken solely for education and academic research.

Either we or Dundee may terminate the research collaboration in the event of the other party's breach of the agreement, if such breach is capable of cure, but remains uncured after 60 days of receiving written notice of such breach, or upon the occurrence of certain bankruptcy events.

Manufacturing

To date, we have manufactured only limited supplies of drug substance for use in IND-enabling toxicology studies in animals at our own facility and have contracted with several third-party contract manufacturing organizations for the supply of drug substance and finished product to meet our testing needs for preclinical toxicology and clinical testing. We may continue to rely on third-party contract manufacturing organizations for the supply of drug substance and certain drug product for our product candidates for the foreseeable future. In the future, we may also develop our own capabilities to manufacture drug substance for human clinical use. Commercial quantities of any drugs that we may seek to develop will have to be manufactured in facilities, and by processes, that comply with FDA regulations and other federal, state and local regulations, as well as comparable foreign regulations.

We believe we have sufficient manufacturing capacity through our third-party contract manufacturers and our internal GLP manufacturing facility to meet our current research, clinical and early-stage commercial needs. We believe that the supply capacity we have established externally, together with the internal capacity we developed to support preclinical trials, will be sufficient to meet our anticipated needs for the next several years. We monitor the capacity availability for the manufacture of drug substance and drug product and believe that our supply agreements with our contract manufactures and the lead times for new supply agreements would allow us to access additional capacity to meet our currently anticipated needs. We also believe that our products can be manufactured at a scale and with production and procurement efficiencies that will result in commercially competitive costs.

Research and Development

Since commencing operations, we have dedicated a significant portion of our resources to research and development activities, including our therapeutic programs. We incurred research and development expenses of $1.9 million and

$2.4 million during the years ended December 31, 2013 and 2014, respectively, and $1.1 million and $3.5 million during the six months ended June 30, 2014 and 2015, respectively. We anticipate that a significant portion of our operating expenses will continue to be related to research and development as we continue to advance our therapeutic programs.

Intellectual Property

We own or have rights to worldwide patent filings that protect our proprietary technologies for manufacturing stereochemically pure oligonucleotide compositions, and also protect compositions themselves, as well as methods of using them, including in the treatment of diseases. As of the date of this prospectus, our portfolio included at least three issued U.S. patents, at least four issued foreign patents and pending applications in at least 17 jurisdictions.

Synthetic Methodologies

Our patent portfolio includes multiple families that protect synthetic methodologies and/or key reagents for generating stereochemically pure oligonucleotide compositions. Certain synthetic methodologies are covered by families licensed from the University of Tokyo which include two issued Japanese patents and have terms that extend into 2022-2025.

Additional synthetic methodologies are protected by families that we own , including one with issued patents in Japan and Singapore and pending applications in Australia, Brazil, Canada, China, Europe, India, Japan, Russia, Singapore, South Korea and the U.S. that has a 20-year expiration date in December 2029 and one with pending applications in Australia, Brazil, Canada, Chile, China, Europe, India, Indonesia, Israel, Japan, Mexico, Russia, Singapore, South Africa, South Korea and the United States that has a 20-year expiration date in July 2033.

Certain modification methods and reagents are protected by families that we own, that have pending applications in Australia, Brazil, Canada, Chile, China, Europe, India, Indonesia, Israel, Japan, Mexico, Russia, Singapore, South Africa, South Korea and the United States, and have 20-year expiration dates in July 2030 and July 2032, respectively.

We also own or co-own (with either the University of Tokyo or Shin Nippon Biomedical Laboratories, Ltd.) certain filings that are particularly directed to methods and reagents for synthesizing RNA oligonucleotides. These include issued patents in the United States, and pending applications in China, Europe, Japan and the United States; their 20-year expiration dates fall in 2030 and 2031.

Stereochemically Pure Oligonucleotide Compositions

Certain of our patent filings protect stereochemically pure compositions, particularly of therapeutically relevant oligonucleotides. Some such filings are directed to compositions whose oligonucleotides are characterized by particular patterns of chemical modifications (including bases, sugars and/or internucleotidic linkages) and/or of internucleotidic linkage stereochemistry. Specific compositions designed for use in the treatment of particular diseases (e.g., Huntington's disease, etc.), were also described. One such family, owned by us, is pending in Australia, Brazil, Canada, Chile, China, Europe, India, Indonesia, Israel, Japan, Mexico, Russia, Singapore, South Africa and South Korea, and has a 20-year term extending into July 2033; another, also owned by us, is pending in the International Phase (i.e., the PCT), and has a 20-year term extending into January 2035. This latter family includes data demonstrating key valuable attributes of particular stereochemically pure oligonucleotide compositions that act as antisense agents.

We also own various patent families that relate to stereochemically pure oligonucleotide adjuvant compositions. These include pending filings in Australia, Brazil, Canada, China, Europe, Japan, India, Israel, Mexico, Russia, Singapore, South Korea, the United Arab Emirates, the United States, and in the International Phase, and have 20-year terms extending into 2033-2035.

Filings that protect compositions are also directed to methods of using such compositions, for example in the treatment of particular diseases.

Future Filings

We maintain a thoughtful and ambitious program for developing and protecting additional intellectual property, including new synthetic methodologies and reagents. We also intend to prepare and submit patent filings specifically

directed to protecting individual product candidates and their uses as we finalize leads and collect relevant data, which is expected to include comparison data confirming novel and/or beneficial attributes of our product candidates.

Singapore Intellectual Property Law

Section 34 of the Singapore Patents Act provides that a person residing in Singapore is required to obtain written authorization from the Singapore Registrar of Patents before filing an application for a patent for an invention outside of Singapore. A violation of Section 34 is criminal offense punishable by a fine not exceeding S$5,000, or imprisonment for a term not exceeding two years, or both. If the Registrar does not issue any direction prohibiting or restricting the publication or communication of information contained in the patent application within two months after the request for authorization is filed, the applicant may file a patent application for that invention in another jurisdiction. If a person unintentionally violates Section 34, the Registrar may grant relief upon payment of a fine not exceeding S$2,000.

Competition

The pharmaceutical marketplace is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our expertise in nucleic acid therapeutics, scientific knowledge and intellectual property estate provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research institutions. Not only must we compete with other companies that are focused on nucleic acid therapeutics, but any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future.

Many of our competitors may have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Mergers and acquisitions in the pharmaceutical, biotechnology and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Huntington's Disease

There are no approved treatments available to slow the progression of Huntington's disease. We believe, based on publicly available information, that (i) Isis Pharmaceuticals and Roche (Phase 1/2) and Sangamo Biosciences (preclinical) are developing therapies that directly target the *huntingtin* RNA and (ii) a number of other companies are developing drugs to treat symptoms associated with Huntington's disease, including Auspex Pharmaceuticals and Teva Pharmaceutical Industries (which have submitted an New Drug Application, or NDA, to the FDA), Prana Biotechnology (Phase 2), Siena Biotech (Phase 2), Raptor Pharmaceuticals (Phase 2), Omeros Corporation (Phase 2), Pfizer (Phase 2) and Ipsen (Phase 2), among others.

Duchenne Muscular Dystrophy

There are no therapies approved for the treatment of DMD in the United States. We believe, based on publicly available information, that (i) PTC Therapeutics, BioMarin Pharmaceuticals and Sarepta Therapeutics are each developing exon skipping nucleic acid therapies to specifically target the disease-associated exons of the *dystrophin* RNA and all have submitted an NDA to the FDA and (ii) a number of other companies, including Summit Therapeutics (Phase 1), are developing or have approval to market drugs that can alter the progression of the disease in patients.

Inflammatory Bowel Disease

There are a limited number of drugs available for the treatment of IBD (either UC or CD) including mesalazine, azathioprine, budesonide and vedoluzimab. We believe based on publicly available information that (i) Celgene is developing a nucleic acid therapy to target CD (Phase 2) and (ii) other companies either are developing or have approval to sell drugs to treat the symptoms of IBD, including Johnson & Johnson, Receptos, Pfizer, Eisai, Mylan, Novartis, Takeda and Valeant Pharmaceuticals, among others.

Government Regulation

FDA Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Food Drug and Cosmetic Act, or FDCA, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable FDA or other requirements may subject a company to a variety of administrative or judicial sanctions, such as the FDA's refusal to approve pending applications, a clinical hold, warning letters, recall or seizure of products, partial or total suspension of production, withdrawal of the product from the market, injunctions, fines, civil penalties or criminal prosecution.

FDA approval is required before any new drug, such as a new chemical entity, or a new dosage form, new use or new route of administration of a previously approved product, can be marketed in the United States. The process required by the FDA before a new drug product may be marketed in the United States generally involves:

- completion of preclinical laboratory and animal testing and formulation studies in compliance with the FDA's good laboratory practice, or GLP, regulation;
- submission to the FDA of an IND for human clinical testing which must become effective before human clinical trials may begin in the United States;
- approval by an independent institutional review board, or IRB, at each site where a clinical trial will be performed before the trial may be initiated at that site;
- performance of adequate and well-controlled human clinical trials in accordance with good clinical practices, or GCP, to establish the safety and efficacy of the proposed product candidate for each intended use;
- satisfactory completion of an FDA pre-approval inspection of the facility or facilities at which the product is manufactured to assess compliance with the FDA's cGMP regulations;
- submission to the FDA of a new product application, or NDA which must be accepted for filing by the FDA;
- satisfactory completion of an FDA advisory committee review, if applicable;
- payment of user fees, if applicable; and
- FDA review and approval of the NDA.

The preclinical and clinical testing and approval process requires substantial time, effort and financial resources. Preclinical tests include laboratory evaluation of product chemistry, formulation, manufacturing and control procedures and stability, as well as animal studies to assess the toxicity and other safety characteristics of the product. The results of preclinical tests, together with manufacturing information, analytical data and a proposed clinical trial protocol and other information, are submitted as part of an IND to the FDA. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions and places the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical
trial can begin. As a result, our submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development. Even if the IND becomes effective and the trial proceeds without initial FDA objection, the FDA may stop the trial at a later time if it has concerns, such as if unacceptable safety risks arise.

Further, an independent IRB, covering each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and informed consent information for subjects before the trial commences at that site and it must monitor the study until completed. The FDA, the IRB, or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk or for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials involve the administration of the investigational new product to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial. Sponsors of clinical

trials generally must register and report, at the NIH-maintained website ClinicalTrials.gov, key parameters of certain clinical trials. For purposes of an NDA submission and approval, human clinical trials are typically conducted in the following sequential phases, which may overlap or be combined:

- ***Phase 1***. The product is initially introduced into healthy human subjects or patients and tested for safety, dose tolerance, absorption, metabolism, distribution and excretion and, if possible, to gain an early indication of its effectiveness.
- ***Phase 2***. The product is administered to a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted indications and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more extensive clinical trials.
- ***Phase 3***. These are commonly referred to as pivotal studies. When Phase 2 evaluations demonstrate that a dose range of the product appears to be effective and has an acceptable safety profile, trials are undertaken in large patient populations to further evaluate dosage, to obtain additional evidence of clinical efficacy and safety in an expanded patient population at multiple, geographically-dispersed clinical trial sites, to establish the overall risk-benefit relationship of the product and to provide adequate information for the labeling of the product.
- ***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 to further assess the product's safety and effectiveness after NDA approval. Such post-approval trials are typically referred to as Phase 4 studies.

The results of product development, preclinical studies and clinical trials are submitted to the FDA as part of an NDA. NDAs must also contain extensive information relating to the product's pharmacology, chemistry, manufacturing and controls and proposed labeling, among other things.

For some products, the FDA may require a risk evaluation and mitigation strategy, or REMS, which could include measures imposed by the FDA such as prescribing restrictions, requirements for post-marketing studies or certain restrictions on distribution and use. Under federal law, the submission of most NDAs is additionally subject to a substantial application user fee, and the manufacturer and/or sponsor under an approved NDA are also subject to annual product and establishment user fees. The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information and is subject to payment of additional user fees. The resubmitted application is also subject to review before the FDA accepts it for filing.

Once the submission has been accepted for filing, the FDA begins an in-depth substantive review. Under the Prescription Drug User Fee Act, or PDUFA, the FDA agrees to specific performance goals for NDA review time through a two-tiered classification system, Standard Review and Priority Review. Standard Review NDAs have a goal of being completed within a ten-month timeframe from FDA filing of the application. A Priority Review designation is given to products that offer major advances in treatment, or provide a treatment where no adequate therapy exists. The goal for completing a Priority Review is six months from filing.

The review process may be extended by the FDA for three additional months to consider certain information or obtain clarification regarding information already provided in the submission. The FDA may refer applications for novel products or products which present difficult questions of safety or efficacy to an advisory committee for review, evaluation and recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendation of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA may inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP.

After the FDA evaluates the NDA and, in some cases, the related manufacturing facilities, it may issue an approval letter or a Complete Response Letter, or CRL, to indicate that the review cycle for an application is complete and

that the application is not ready for approval. CRLs generally outline the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when the deficiencies have been addressed to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications.

Once issued, the FDA may withdraw product approval if ongoing regulatory requirements are not met or if safety problems are identified after the product reaches the market. In addition, the FDA may require post-approval testing, including Phase 4 studies, and surveillance programs to monitor the effect of approved products which have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs. Products may be marketed only for the approved indications and in accordance with the provisions of the approved label, and, even if the FDA approves a product, it may limit the approved indications for use for the product or impose other conditions, including labeling or distribution restrictions or other risk-management mechanisms, such as a Black Box Warning, which highlights a specific warning (typically life-threatening), or a REMS program. Further, if there are any modifications to the product, including changes in indications, labeling, or manufacturing processes or facilities, a company may be required to submit and obtain FDA approval of a new or supplemental NDA, which may require the company to develop additional data or conduct additional preclinical studies and clinical trials.

Post-Approval Requirements

Once an NDA is approved, a product will be subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to product/device listing, recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies, and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with cGMP requirements. Changes to the manufacturing process are strictly regulated and generally 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 cGMP compliance.

Once an approval is granted, the FDA may withdraw the 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, among other things:

- 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 applications or supplements to approved applications, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. While physicians may prescribe for off label uses, manufacturers may only promote 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 liability, both at the federal and state levels.

The FDA has authority to require a Risk Evaluation and Mitigation Strategy, or REMS, from manufacturers to ensure that the benefits of a drug or biological product outweigh its risks. In determining whether a REMS is necessary, FDA

must consider the size of the population likely to use the drug, the seriousness of the disease or condition to be treated, the expected benefit of the drug, the duration of treatment, the seriousness of known or potential adverse events, and whether the drug is a new molecular entity. If the FDA determines a REMS is necessary, the drug sponsor must agree to the REMS plan at the time of approval. A REMS may be required to include various elements, such as a medication guide or patient package insert, a communication plan to educate health care providers of the drug's risks, limitations on who may prescribe or dispense the drug, or other measures that the FDA deems necessary to assure the safe use of the drug. In addition, the REMS must include a timetable to assess the strategy at 18 months, three years, and seven years after the strategy's approval. The FDA may also impose a REMS requirement on a drug already on the market if the FDA determines, based on new safety information, that a REMS is necessary to ensure that the drug's benefits outweigh its risks.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug intended to treat a rare disease or condition which is defined as one affecting fewer than 200,000 individuals in the United States or more than 200,000 individuals where there is no reasonable expectation that the product development cost will be recovered from product sales in the United States. Orphan drug designation must be requested before submitting an NDA and does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

If an orphan drug-designated product subsequently receives the first FDA approval for the disease for which it was designed, the product will be entitled to seven years of product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same indication, except in very limited circumstances, for seven years. If a competitor obtains approval of the same drug, as defined by the FDA, or if our product candidate is determined to be contained within the competitor's product for the same indication or disease, the competitor's exclusivity could block the approval of our product candidate in the designated orphan indication for seven years.

Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of FDA approval of the use of our therapeutic candidates, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND, and the submission date of an NDA, plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension and the application for extension must be made prior to expiration of the patent. The United States Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond their current expiration date, depending on the expected length of clinical trials and other factors involved in the submission of the relevant NDA.

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application, or ANDA, or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an approved NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, for new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active

agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Other Healthcare Laws

Although we currently do not have any products on the market, we may be subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and other countries in which we conduct our business. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations, many of which may become more applicable to us if our product candidates are approved and we begin commercialization. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to penalties, including, without limitation, administrative, civil and criminal penalties, damages, fines, disgorgement, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs and imprisonment, any of which could adversely affect our ability to operate our business and our financial results.

Healthcare Reform

The Patient Protection and Affordable Care Act, or PPACA, has had, and is expected to continue to have, a significant impact on the healthcare industry in the United States. PPACA was designed to expand coverage for the uninsured while at the same time containing overall healthcare costs. With regard to pharmaceutical products, among other things, PPACA expanded and increased industry rebates for drugs covered under Medicaid programs and made changes to the coverage requirements under the Medicare prescription drug benefit. We continue to evaluate the effect that PPACA has on our business. In the coming years, additional legislative and regulatory changes could be made to governmental health programs that could significantly impact pharmaceutical companies and the success of our product candidates. PPACA, as well as other federal, state and foreign healthcare reform measures that have been and may be adopted in the future, could harm our future revenues.

Pharmaceutical Coverage, Pricing, and Reimbursement

Sales of our products, when and if approved for marketing, will depend, in part, on the extent to which our products will be covered by third-party payors, such as federal, state, and foreign government health care programs, commercial insurance and managed healthcare organizations. These third-party payors are increasingly reducing reimbursements for medical products, drugs and services. In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. Adoption of price controls and cost containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our net revenue and results. Limited third-party reimbursement for our product candidates or a decision by a third-party payor not to cover our product candidates could reduce physician usage of our products once approved and have a material adverse effect on our sales, results of operations and financial condition.

Manufacturing Requirements

We and our third-party manufacturers must comply with applicable FDA regulations relating to FDA's cGMP regulations and, if applicable, quality system regulation requirements for medical devices. The cGMP regulations include requirements relating to, among other things, organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports, and returned or salvaged products. The manufacturing facilities for our products must meet cGMP requirements to the satisfaction of the FDA pursuant to a pre-approval inspection before we can use them to manufacture our products. We and our third-party manufacturers are also subject to periodic unannounced inspections of facilities by the FDA and other authorities, including procedures and operations used in the testing and manufacture of our products to assess our compliance with applicable regulations. Failure to comply with statutory and regulatory requirements subjects a manufacturer to possible legal or regulatory action, including, among other things, warning letters, voluntary corrective action, the seizure of products, injunctions, consent decrees placing significant restrictions on or suspending manufacturing operations and civil and criminal penalties.

Other Regulatory Requirements

We are also subject to various laws and regulations regarding laboratory practices, the experimental use of animals, and the use and disposal of hazardous or potentially hazardous substances in connection with our research. In each of these areas, as above, the FDA has broad regulatory and enforcement powers, including, among other things, the ability to levy fines and civil penalties, suspend or delay issuance of approvals, seize or recall products, and withdraw approvals, any one or more of which could have an adverse effect on our ability to operate our business and generate revenues. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, operating results and financial condition.

Employees

As of June 30, 2015, we employed 28 full-time employees. A significant number of our management and professional employees have had prior experience with pharmaceutical, biotechnology or medical product companies. Management considers relations with our employees to be good.

Facilities

We maintain our corporate offices in Cambridge, Massachusetts, where we occupy approximately 30,900 square feet of office space under a lease that expires in March 2023, and research and development facilities in Okinawa, Japan and Cambridge, Massachusetts.

Legal Proceedings

We may be involved in various legal proceedings, claims, investigations and other legal matters which arise in the ordinary course of business. Although it is not possible to predict the outcome of these matters, we believe that the ultimate outcome of our pending legal proceedings, individually and in the aggregate, will not have a material adverse effect on our business, financial condition or results of operations.

MANAGEMENT

The following table sets forth information regarding our executive officers and directors as of June 30, 2015.

Name	Age	Position/Title
Executive Officers		
Paul B. Bolno, M.D.	41	President, Chief Executive Officer and Director
Christopher Francis, Ph.D.	37	Vice President, Head of Business Development
Roberto Guerciolini, M.D.	61	Senior Vice President, Head of Early Development
Kyle Moran	45	Vice President, Head of Finance
Chandra Vargeese, Ph.D.	54	Senior Vice President, Head of Drug Discovery
Non-Employee Directors		
Gregory L. Verdine, Ph.D.	56	Chairman of the Board of Directors
Peter Kolchinsky, Ph.D.	38	Director
Koji Miura	66	Director
Ken Takanashi	51	Director
Masaharu Tanaka	62	Director
Takeshi Wada, Ph.D.	53	Director

Executive Officers

Paul B. Bolno, M.D. has served as our President and Chief Executive Officer and as a director since December 2013. Prior to joining us, he served at GlaxoSmithKline from 2009 to 2013 in various roles, including Vice President, Worldwide Business Development – Head of Asia BD and Investments, Head of Global Neuroscience BD, a director of Glaxo Welcome Manufacturing, Pte. Ltd. in Singapore and Vice President, Business Development for the Oncology Business Unit, where he helped establish GlaxoSmithKline's global oncology business and served as a member of the Oncology Executive Team, Oncology Commercial Board and Cancer Research Executive Team. Prior to GlaxoSmithKline, he served as director of Research at Two River LLC, a health care private equity firm from 2004 to 2009. Dr. Bolno earned a medical degree from MCP-Hahnemann School of Medicine and an M.B.A. from Drexel University. He was a general surgery resident and cardiothoracic surgery postdoctoral research fellow at Drexel University College of Medicine. We believe that Dr. Bolno's experience serving as our President and Chief Executive Officer and a member of our board of directors and his experience leading biopharmaceutical companies qualify him to serve on our board of directors.

Christopher Francis, Ph.D. has served as our Vice President, Head of Business Development since April 2014. Prior to joining us, Dr. Francis held senior operational, strategic and business development roles within GlaxoSmithKline Oncology from 2009 to 2014 and was a member of the team that established GlaxoSmithKline's Rare Disease Unit. Before GlaxoSmithKline, Dr. Francis was a health care private equity associate at Two River LLC from 2008 to 2009. He began his career in pharmaceutical pricing and reimbursement consulting at IMS Health. Dr. Francis earned undergraduate and graduate degrees in biochemistry and molecular biology from the University of Melbourne and was a doctoral research associate at the University of Cambridge.

Roberto Guerciolini, M.D. has served as our Senior Vice President, Head of Early Development since March 2015. Dr. Guerciolini was Vice President, Emerging Business Unit at Shire AG from 2011 to 2014. He was Senior Vice President of Pharmaceutical Development at Dicerna Pharmaceuticals, Inc., a company he co-founded, from 2007 to 2011. From 2004 to 2007 he served as Chief Medical Officer of Sirna Therapeutics, which was acquired by Merck & Co. in 2006. Dr. Guerciolini also previously served as Senior Director of Experimental Medicine at Millennium Pharmaceuticals, as well as in clinical development roles at Hoffmann-La Roche and Schering-Plough Inc. Dr. Guerciolini received his medical degree and board certification in Internal Medicine from the University of Perugia Medical School in Italy. He completed a postdoctoral fellowship in Clinical Pharmacology at the Mayo Clinic and is certified by the American Board of Clinical Pharmacology. Dr. Guerciolini additionally earned an executive M.B.A. from the Haas School of Business, University of California, Berkeley.

Kyle Moran has served as our Vice President, Head of Finance since July 2014. Prior to joining us, Mr. Moran served as Chief Financial Officer and Chief Operating Officer of Veroha, Inc., an information assurance software company focused on electronic notary solutions, from 2010 to 2014. He was also a founding partner of Context Financial Services, LLC, a boutique consulting firm that provided interim CFO-services to start-up and middle market companies undergoing rapid expansion or needing expert financial counsel and worked there from 2006 to 2014. In addition, Mr. Moran held senior operational and financial roles at leading global financial services firms, including Zurich Scudder Investments, JPMorgan Chase and Putnam Investments. Mr. Moran holds a bachelor's degree in economics from Boston College and attended the Lemberg Master's Program in international economics and finance at Brandeis University. Mr. Moran is a Chartered Financial Analyst.

Chandra Vargeese, Ph.D. has served as our Senior Vice President, Head of Drug Discovery since August 2014. Before joining us, Dr. Vargeese served as Novartis' Executive Director and Head of RNA Chemistry and Delivery, a position she held from 2008 to 2014. Prior to joining Novartis, Dr. Vargeese led siRNA delivery in the RNA Therapeutics division at Merck & Co., where she served as Senior Director and Head of RNA Chemistry and Delivery. Dr. Vargeese joined Merck through its acquisition of Sirna Therapeutics, where she was Vice President of Chemistry. Before Sirna, Dr. Vargeese served as Associate Director of Chemistry at NeXstar Pharmaceuticals and is the co-inventor of Macugen (pegaptanib), an approved therapy for treating wet AMD. Dr. Vargeese earned a Ph.D. in Organic Chemistry at the Indian Institute of Science, Bangalore, India and completed post-doctoral work at the University of Rhode Island.

Non-Employee Directors

Gregory L. Verdine, Ph.D., one of our founders, has served on the board of directors since our founding in 2012, and has served as Chairman of the board of directors since July 2013. He was our President, Chief Executive Officer and Chief Scientific Officer from our inception through December 2013. Since 1989, he has served as the Erving Professor of Chemistry in the Department of Stem Cell and Regenerative Biology at Harvard University. Dr. Verdine is a director of Gloucester Marine Genomics Institute, which he co-founded in 2013. Since 2011, he has served as the President, Chief Scientific Officer and a co-founder and director of WarpDriveBio. Dr. Verdine founded Enanta Pharmaceuticals and served as a director of the company from 1990 through its successful public offering in 2013. He is a Venture Partner and TRUST Member of Third Rock Ventures, the founder, President and Chief Executive Officer of Verdyne Partners LLC and a Senior Advisor of Shin Nippon Biomedical Laboratories, or SNBL. Dr. Verdine is also the co-founder of Eleven Biotherapeutics, Tokai Therapeutics, Aileron Therapeutics and Gloucester Pharmaceuticals (acquired by Celgene in 2010). He has also served as a director of the Chemical Biology Initiative and the Program in Cancer Chemical Biology at the Dana-Farber Cancer Institute. Dr. Verdine received his Ph.D. in Chemistry from Columbia University and completed postdoctoral work in Molecular Biology at the Massachusetts Institute of Technology and Harvard Medical School. We believe he is qualified to serve on our board of directors because of his expertise and deep knowledge of our company, its technology and our industry and his long track record of creating and advising successful biopharmaceuticals companies.

Peter Kolchinsky, Ph.D. has served on our board of directors since January 2015. Dr. Kolchinsky is a founder, Managing Partner and Portfolio Manager of RA Capital Management, LLC, a crossover fund manager which is dedicated to evidence-based investing in healthcare and life science companies, where he has worked since 2001. RA Capital Management, LLC is the general partner of RA Capital Healthcare Fund, L.P. He serves as a member of the board of directors of Dicerna Pharmaceuticals as well as a number of private companies. Dr. Kolchinsky authored "Entrepreneur's Guide to a Biotech Startup," serves on the board of the American Fertility Association and served on the Board of Global Science and Technology for the National Academics of Sciences from 2009 to 2012. Dr. Kolchinsky earned his Ph.D. in virology from Harvard University and earned his bachelor's degree in Biology from Cornell University. We believe Dr. Kolchinsky is qualified to serve on our board of directors because of his business experience including his experience as a venture capitalist and his experience serving on the boards of various healthcare and life science companies.

Koji Miura has served on our board of directors since October 2012. Mr. Miura is the Managing Director of Miura & Associates Management Consultants Pte. Ltd. Mr. Miura is the Founder and Managing Director of Miura & Associates Management Consultants Pte. Ltd. and serves on the board of directors of Azeus Systems Holdings Ltd., Evolutional Material Pte. Ltd., Marine Tec Tachibana Pte. Ltd., Matsuura Singapore Pte. Ltd., Mercury Investment Holding Pte.

Ltd., Richway Intelligence Trading & Technology Pte. Ltd., Sunmoon Pte. Ltd., Triple Farm Singapore Pte. Ltd. and WithArt Pte. Ltd. Mr. Miura holds a bachelor's degree in Business Administration from the University of Aoyama Gakuin, Tokyo, Japan. We believe he is qualified to serve on our board of directors because of his business experience including his diverse background serving on the board of directors of various companies, both private and publicly-held, across industries.

Ken Takanashi has served on our board of directors since July 2012. Since 2002, Mr. Takanashi has served in various executive management and director roles Shin Nippon Biomedical Laboratories Ltd., or SNBL, and its affiliates and currently serves as its Senior Management Director, Overseas Business Division. Mr. Takanashi was the Chief Financial Officer of SNBL USA, Ltd., a subsidiary of Shin Nippon Biomedical Laboratories, from 2012 to 2014. Mr. Takanashi earned an M.B.A. from the University of Warwick and received his bachelor's degree from the University of Tokyo and is a Chartered Public Accountant. We believe he is qualified to serve on our board of directors because of his extensive experience leading research and development for biopharmaceutical companies and his business, financial and accounting credentials.

Masaharu Tanaka has served on our board of directors since August 2014. Mr. Tanaka is the President of Kagoshima Development Co. Ltd., the general partner of Kagoshima Shinsangyo Sousei Investment Limited Partnership, or KSS. From 2013 to 2014, he was a Managing Director of the Kagoshima Lease Co. Ltd. and from 2007 to 2013, he served as the Auditing Officer of the Kagoshima Bank, Ltd. Mr. Tanaka earned his bachelor's degree in Commercial Science from Seinan Gakuin University. We believe Mr. Tanaka is qualified to serve on our board of directors because of his broad business and financial experience as a venture capitalist and banker.

Takeshi Wada, Ph.D., one of our founders, has served on our board of directors since July 2013. Dr. Wada is a Professor at the Tokyo University of Science. From 1999 to 2014, Dr. Wada was an Associate Professor in the Graduate School of Frontier Sciences at The University of Tokyo and previously was an Assistant Professor in the Department of Life Science at Tokyo Institute of Technology. Dr. Wada earned his Ph.D. from Tokyo Institute of Technology Interdisciplinary Graduate School of Science and Engineering Department of Life Chemistry. He earned his master's degree from the Tokyo Institute of Technology and completed his undergraduate studies at Tokyo University of Science Department of Applied Chemistry. We believe he is qualified to serve on our board of directors because of his extensive experience in biopharmaceuticals research.

Composition of Our Board of Directors

Our board of directors currently consists of seven directors. Pursuant to the terms of a voting agreement that we entered into with our shareholders dated as of August 14, 2015, our shareholders party thereto have agreed to vote their shares to elect the following persons to our board of directors as designated by the following shareholders: (i) RA Capital Healthcare Fund, L.P. has the right to designate one director, and its designee is Dr. Kolchinsky, (ii) Kagoshima Shinsangyo Sousei Investment Limited has the right to designate one director, and its designee is Mr. Tanaka and (iii) the holders of our ordinary shares and our Series B preferred shares have the right to designate three members to our board of directors, and have designated Dr. Verdine, and Messrs. Miura and Wada. Our shareholders have also agreed to elect the person serving as our chief executive officer, who is currently Dr. Bolno, to our board of directors. The voting agreement will be terminated in connection with this offering and there will be no further contractual agreements regarding the election of our directors. The authorized number of directors may be changed from time to time by resolution of our board of directors. Vacancies on our board of directors can be filled by resolution of our board of directors. Upon completion of this offering, any additional directorships resulting from an increase in the number of directors may only be filled by the directors then in office unless otherwise required by law or by a resolution passed by our board of directors. The term of office for each director will be until his or her successor is elected at our annual general meeting of shareholders or his or her death, resignation or removal, whichever is earliest to occur. Singapore law requires that at least one of our directors be resident in Singapore. Mr. Miura is our resident Singapore director.

Director Independence

In connection with this offering, our ordinary shares have been approved for listing on the NASDAQ Global Market. Under the rules of the NASDAQ Stock Market, our board of directors must be comprised of a majority of independent directors within a specified period of the completion of this offering. In addition, the rules of the NASDAQ Stock Market require that, subject to specified exceptions, each member of our audit, compensation and nominating and corporate governance committees must be independent. Under the NASDAQ Stock Market rules, a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Additionally, compensation committee members must not have a relationship with us that is material to the director's ability to be independent from management in connection with the duties of a compensation committee member.

Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. In order to be considered independent for purposes of Rule 10A-3, members of our audit committee may not, other than in their capacity as members of the audit committee, the board of directors or any other board committee: (i) accept, directly or indirectly, any consulting, advisory or other compensatory fee from us or any of our subsidiaries; or (ii) be an affiliate of us or any of our subsidiaries.

Our board of directors has undertaken a review of the independence of each director and considered whether each director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. As a result of this review, our board of directors determined that Drs. Kolchinsky and Wada and Messrs. Miura, Takanashi and Tanaka, representing five of our seven directors, are "independent directors" as defined under the listing requirements and rules of the NASDAQ Stock Market.

Committees of our Board of Directors

Upon the completion of this offering, the standing committees of our board of directors will be an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. Each of the committees will report to our board of directors as they deem appropriate and as our board of directors may request. The expected composition, duties and responsibilities of these committees are set forth below.

All of our committees comply with all applicable requirements of the Sarbanes-Oxley Act of 2002, SEC rules and NASDAQ Stock Market rules, other than with respect to the audit committee independence requirements, as described below. Our Audit Committee will rely on the phase-in exception available under the NASDAQ Stock Market and SEC rules.

Audit Committee

The Audit Committee will be responsible for, among other matters: (i) oversight and review of our financial statements and financial reporting processes; (ii) our systems of internal accounting and financial controls and disclosure controls; (iii) the qualifications and independence of our independent auditors; (iv) the performance of our internal audit function and independent auditors; and (v) compliance with legal and regulatory requirements and codes of conduct and ethics programs established by management and our board of directors.

Our Audit Committee consists of Koji Miura, Masaharu Tanaka and Ken Takanashi and is chaired by Mr. Takanashi. Our board of directors has determined that Messrs. Miura and Masaharu satisfy the independence requirements for audit committee members under Rule 10A-3 of the Exchange Act and NASDAQ Stock Market rules. Mr. Takanashi is not considered an independent director under Rule 10A-3 of the Exchange Act in connection with his service on the Audit Committee. We are permitted to phase-in our compliance with the independent audit committee requirements set forth in NASDAQ Stock Market rules and SEC rules as follows: (i) one independent member at the time of listing, (ii) a majority of independent members within 90 days of listing and (iii) all independent members within one year of listing. We expect that, within one year of listing, all three members of our Audit Committee will be determined by our board of directors to be independent.

Our board of directors has determined that each member of our Audit Committee meets the financial literacy requirements of the NASDAQ Stock Market rules and that Mr. Takanashi qualifies as an "audit committee financial expert," as such term is defined in Item 401(h) of Regulation S-K. Our board of directors has adopted a written charter for the Audit Committee in connection with this offering that satisfies the applicable rules of the SEC and the listing standards of the NASDAQ Stock Market.

Compensation Committee

The Compensation Committee will be responsible for, among other matters: (i) reviewing and approving all compensation, including incentive compensation and corporate and individual goals and objectives relevant to our chief executive officer and evaluating our chief executive officer's performance in light of those goals and objectives; (ii) reviewing and approving the base salaries, incentive compensation and equity-based compensation of our other executive officers; (iii) approving all significant compensation or incentive plans for executives, including material changes to all such plans; and (iv) having the sole authority to retain or obtain the advice of any compensation consultant, independent legal counsel or other adviser after taking into account certain factors which address the independence of that consultant, counsel or adviser.

Our Compensation Committee consists of Peter Kolchinsky and Ken Takanashi and is chaired by Mr. Kolchinsky. Our board of directors has adopted a written charter for the Compensation Committee in connection with this offering that satisfies the applicable rules of the SEC and the listing standards of the NASDAQ Stock Market.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee will be responsible for, among other matters: (i) assisting our board of directors by identifying individuals qualified to become members of our board; (ii) recommending to our board the director nominees to be recommended to shareholders for appointment at each annual general meeting of shareholders or in connection with filling vacancies on our board; (iii) recommending to our board our corporate governance guidelines to be adopted; and (iv) leading our board in its annual review of the performance of our directors.

Our Nominating and Corporate Governance Committee consists of Peter Kolchinsky and Ken Takanashi and is chaired by Mr. Takanashi. Our board of directors has adopted a written charter for the Nominating and Corporate Governance Committee in connection with this offering that satisfies the applicable rules of the SEC and the listing standards of the NASDAQ Stock Market.

Compensation Committee Interlocks and Insider Participation

No officer or employee has served as a member of our Compensation Committee. None of our executive officers serve as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or Compensation Committee.

Risk Oversight

Our board of directors will oversee the risk management activities designed and implemented by our management. Our board of directors will execute its oversight responsibility for risk management both directly and through its committees. The full board of directors will also consider specific risk topics, including risks associated with our strategic plan, business operations and capital structure. In addition, our board of directors will receive detailed regular reports from members of our senior management and other personnel that include assessments and potential mitigation of the risks and exposures involved with their respective areas of responsibility.

Our board of directors will delegate to the Audit Committee oversight of our risk management process. Our other board committees will also consider and address risk as they perform their respective committee responsibilities. All committees will report to the full board of directors as appropriate, including when a matter rises to the level of a material or enterprise level risk.

Family Relationships

There are no family relationships between any of our executive officers and directors.

Code of Business Conduct and Ethics

Our board of directors has adopted a code of business conduct and ethics in connection with this offering. Upon the closing of this offering, our code of business conduct and ethics will apply to all of our employees, officers and directors. The full text of our code of business conduct and ethics will be posted on our website at www.wavelifesciences.com. If we make any substantive amendments to this code or grant any waiver from a provision to our chief executive officer, principal financial officer or principal accounting officer, we will disclose the nature of such amendment or waiver on our website or in a report on Form 8-K. The information contained on our website is not part of this prospectus.

EXECUTIVE AND DIRECTOR COMPENSATION

2014 Summary Compensation Table

The following table presents summary information regarding the total compensation earned by our principal executive officer and our two most highly compensated executive officers, other than our principal executive officer, for the year ended December 31, 2014. We refer to these individuals collectively as our named executive officers.

Name and Principal Position	Year	Salary ($)	Non-Equity Incentive Plan Compensation ($) (1)	All Other Compensation ($) (2)	Total ($)
Paul B. Bolno, M.D. *President and Chief Executive Officer*	2014	450,000	112,500	71	562,571
Christopher Francis, Ph.D. *Vice President of Business Development*	2014	131,042 (3)	29,671	50	160,763
Chandra Vargeese, Ph.D. *Senior Vice President, Head of Drug Discovery*	2014	118,750 (4)	32,945	29	151,724

(1) Pursuant to the terms of the named executive officer's employment agreement or offer letter, each named executive officer is eligible to receive an annual bonus award of up to 25% of the executive officer's annual base salary, subject to the achievement of annual performance milestones as determined by our board of directors in its sole discretion. Our 2014 goals related to the advancement of biological proof of concept, scalable chemical process and our intellectual property portfolio.
(2) Amount reflects the value of annual premiums paid by us with respect to a life insurance policy for the benefit of the named executive officer.
(3) Amount reflects the prorated amount of Dr. Francis's annual salary of $185,000. Dr. Francis joined us in April 2014.
(4) Amount reflects the prorated amount of Dr. Vargeese's annual salary of $285,000. Dr. Vargeese joined us in August 2014.

Outstanding Equity Awards at December 31, 2014

None of our named executive officers held equity awards at December 31, 2014.

2015 Equity Awards

In March 2015, under the 2014 Equity Incentive Plan, our board of directors approved a share issuance to Dr. Bolno of 190,856 ordinary shares, which were fully vested on their date of grant, and approved the following grants of incentive share options to each of the named executive officers:

Name	Grant Amount	Exercise Price
Paul B. Bolno, M.D.	544,025 (1)	$ 2.47
Christopher Francis, Ph.D.	146,976 (2)	2.47
Chandra Vargeese, Ph.D.	220,464 (3)	2.47

(1) The shares underlying the option vest in equal monthly installments over 36 months, commencing on December 12, 2014, subject to such officer's continued service with us on each such vesting date. All shares underlying these options will become fully vested upon a change of control, as defined in each option grant.
(2) 25% of the shares underlying the options vested on April 15, 2015 and the remainder vest in equal monthly installments over 36 months, subject to such officer's continued service with us on each such vesting date. All shares underlying these options will become fully vested upon a change of control, as defined in each option grant.
(3) 25% of the shares underlying the options vested on August 1, 2015 and the remainder vest in equal monthly installments over 36 months, subject to such officer's continued service with us on each such vesting date. All shares underlying these options will become fully vested upon a change of control, as defined in each option grant.

Employment Agreements

Paul Bolno, M.D. In December 2013, we entered into an employment agreement with Dr. Bolno pursuant to which he serves as our President and Chief Executive Officer. Pursuant to this agreement, Dr. Bolno's current annual base salary is $450,000 and he has the opportunity to earn an annual performance bonus of up to 25% of his annual base salary, subject to the achievement of annual performance milestones defined by our board of directors in its sole discretion.

Dr. Bolno is also entitled to certain benefits in connection with a termination of his employment or a change of control, which are discussed below under "—Potential Payments upon Termination or Change of Control."

Christopher Francis, Ph.D. In March 2014, we entered into an offer letter agreement with Dr. Francis pursuant to which he serves as our Vice President, Business Development. In accordance with the terms of this agreement, Dr. Francis's initial annual base salary is $185,000 and he has the opportunity to earn an annual performance bonus of up to 25% of his annual base salary, subject to the achievement of annual performance milestones defined by our board of directors in its sole discretion. In connection with this agreement, Dr. Francis was granted options to purchase 146,976 of our ordinary shares in March 2015.

Chandra Vargeese, Ph.D. In July 2014, we entered into an offer letter agreement with Dr. Vargeese pursuant to which she serves as our Senior Vice President, Head of Drug Discovery. In accordance with the terms of this agreement, Dr. Vargeese's initial annual base salary is $285,000 and she has the opportunity to earn an annual performance bonus of up to 25% of her annual base salary, subject to on the achievement of annual performance milestones defined by our board of directors in its sole discretion. In connection with this agreement, Dr. Vargeese was granted options to purchase 220,464 of our ordinary shares in March 2015 and received a signing bonus of $15,000 in August 2015.

As a condition of their employment, each of our named executive officers has entered into a non-competition and non-solicitation agreement pursuant to which he or she has agreed not to compete with us for a period of 12 months after the termination of his or her employment. All agreements generally provide for at-will employment and that our named executive officers are eligible to participate in employee benefit plans maintained from time to time by us of general applicability to other senior executives.

Retirement Benefits

We participate in the national pension schemes as defined by the laws of the countries in which we operate. As part of our overall compensation program, we provide all full-time U.S.-based employees, including our named executive officers, with the opportunity to participate in a defined contribution 401(k) plan. Our 401(k) plan is intended to qualify under Section 401 of the Internal Revenue Code so that employee contributions and income earned on such contributions are not taxable to employees until withdrawn. Employees may elect to defer up to up to the statutorily prescribed annual limit of their eligible compensation in the form of elective deferral contributions to our 401(k) plan. We have a J401k defined contribution pension plan covering all Japan-based permanent employees. The J401k defined contribution pension plan allows us to make pre-tax contributions up to the maximum allowable amount set by the chief officer of Kyushu Regional Bureau of Health and Welfare and applicable wage regulations.

Potential Payments Upon Termination or Change in Control

Pursuant to the employment agreement that we entered into with Dr. Bolno, in the event that Dr. Bolno ceases to be employed by, or terminates his employment with us, then all unvested rights to acquire our shares which are held by him will be forfeited and will automatically be transferred and reacquired by us at no cost. In addition, pursuant to the applicable option agreements with each of Drs. Bolno, Francis and Vargeese, all unvested shares underlying outstanding options will become fully vested upon a change of control, as defined in each such option agreement. See "—2015 Equity Awards" described above.

Additionally, if we terminate Dr. Bolno's employment without cause (but not including termination due to his death or disability), then he will be entitled to receive as of the date of termination: (i) any earned but unpaid base salary, (ii) reimbursement for all reasonable and necessary expenses incurred by him in connection with the performance of services on our behalf and (iii) continued payment of his base salary for 12 months. If however we terminate Dr. Bolno's employment for cause, or upon his voluntary resignation, in either case, subject to his execution and delivery of a full and unconditional general release of claims in our favor which becomes effective no later than 60 days following his termination, or upon his death or disability, he will be entitled to receive as of the date of termination: (i) any earned but unpaid base salary and (ii) reimbursement for all reasonable and necessary expenses incurred by him in connection with the performance of services. The definitions of "cause" and "disability" are defined in Dr. Bolno's employment agreement.

Equity Incentive Plan

2014 Plan

In December 2014, our board adopted our 2014 Equity Incentive Plan, or the 2014 Plan, and reserved 1,763,714 ordinary shares for issuance under the 2014 Plan. The 2014 Plan was approved by our shareholders in January 2015. In March 2015, our board and shareholders amended the plan to increase the number of ordinary shares issuable under the 2014 Plan to 2,498,597 ordinary shares, on August 14, 2015, our board and shareholders further amended the plan to increase the number of ordinary shares issuable under the 2014 Plan to 3,555,774 shares, and in November 2015, our board and shareholders further amended the plan to increase the number of ordinary shares issuable under the 2014 Plan to 5,064,544.

As of October 30, 2015, 2,014,712 ordinary shares were issuable upon the exercise of outstanding options under the 2014 Plan and 2,858,976 shares were available for issuance under the 2014 Plan.

Types of Awards. The 2014 Plan provides for the granting of incentive share options, non-qualified share options, or NQSOs, share appreciation rights and restricted awards.

- *Incentive and Nonqualified Share Options*. The plan administrator determines the exercise price of each share option. The exercise price of an NQSO may not be less than the fair market value of our ordinary shares on the date of grant. The exercise price of an incentive share option may not be less than the fair market value of our ordinary shares on the date of grant if the recipient holds 10% or less of the combined voting power of our securities, or 110% of the fair market value of a share of our ordinary shares on the date of grant otherwise.
- *Share Grants*. The plan administrator may grant or sell shares, including restricted shares. The share grant will be subject to the conditions and restrictions determined by the administrator. The recipient of a share grant shall have the rights of a shareholder with respect to the ordinary shares issued to the holder under the 2014 Plan.
- *Share-Based Awards*. The administrator of the 2014 Plan may grant other share-based awards, including share appreciation rights and RSUs, with terms approved by the administrator, including restrictions related to the awards. The holder of a share-based award shall not have the rights of a shareholder until shares of our share capital are issued pursuant to such award.

Plan Administration. Our board is the administrator of the 2014 Plan, except to the extent it delegates its authority to a committee, in which case the committee shall be the administrator. Our board expects to delegate this authority to our compensation committee following the completion of this offering. The administrator has the authority to determine the terms of awards, including exercise and purchase price, the number of shares subject to awards, the value of our ordinary shares, the vesting schedule applicable to awards, the form of consideration, if any, payable upon exercise or settlement of an award and the terms of award agreements for use under the 2014 Plan.

Eligibility. Our board will determine the participants in the 2014 Plan from among our employees, directors and consultants. A grant may be approved in advance with the effectiveness of the grant contingent and effective upon such person's commencement of service within a specified period. The maximum number of ordinary shares with respect to awards which may be granted to any participant under the 2014 Plan is 450,000 shares.

Termination of Service. Unless otherwise provided by our board or in an award agreement, upon a termination of a participant's service, all unvested options then held by the participant will terminate and all other unvested awards will be forfeited.

Transferability. Awards of incentive share options under the 2014 Plan may not be transferred except by will or by the laws of descent and distribution and shall only be exercisable during the lifetime of the option holder by the option holder. Awards of NQSOs may be transferred to a permitted transferee upon the written approval of the administrator to the extent provided in the award agreement or by will or by the laws of descent and distribution and shall only be exercisable during the lifetime of the option holder by the option holder.

Adjustment. In the event of a share dividend, split, recapitalization or reorganization or other change in change in capital structure, our board will make appropriate adjustments to the number and kind of shares or securities subject to awards.

Shares Eligible for Reissuance. Any shares subject to an award that is canceled, forfeited or expires prior to exercise or realization, either in full or in part, will again become available for issuance under the 2014 Plan. However, shares subject to an award under the 2014 Plan will not again be made available for issuance or delivery under the 2014 Plan if such shares are (a) shares tendered in payment of an option; (b) shares delivered or withheld by us to satisfy any tax withholding obligation; or (c) shares covered by a share-settled share appreciation right or other awards that were not issued upon the settlement of the award.

Corporate Transaction. If we are acquired, our board of directors (or compensation committee) will with respect to options and share appreciation rights: (i) make appropriate provision for the continuation of the option or share appreciation right by substituting on an equitable basis for the ordinary shares then subject to such option or share appreciation right either the consideration payable with respect to the outstanding ordinary shares in connection with the corporate transaction or securities of any successor or acquiring entity; (ii) cancel or arrange for the cancellation of the options or share appreciation rights, to the extent not vested or exercised prior to the effective time of the transaction, in exchange for a payment in cash or ordinary shares as determined by the board of directors, in an amount equal to the amount by which the then fair market value of the ordinary shares subject to such vested option or share appreciation right exceeds the exercise price; or (iii) after giving holders an opportunity to exercise to the extent vested their outstanding options or share appreciation rights, terminate any or all unexercised options and share appreciation rights at such time as the board deems appropriate. If we are acquired, our board of directors (or compensation committee) with respect to outstanding restricted awards, shall make appropriate provision for the continuation of such restricted awards on the same terms and conditions by substituting on an equitable basis for the ordinary shares then subject to such restricted awards either the consideration payable with respect to the outstanding ordinary shares in connection with the transaction or securities of any successor or acquiring entity. In lieu of the foregoing, if we are acquired, the board of directors may provide that, upon consummation of the acquisition, each outstanding restricted award shall be terminated in exchange for payment of an amount equal to the consideration payable upon consummation of such transaction to a holder of the number of ordinary shares comprising such restricted award to then extent then vested.

Amendment. The 2014 Plan may be amended by our board, except that shareholder approval will be required for any amendment to the 2014 Plan to the extent such approval is required by law, include the Internal Revenue Code.

Amendment of Outstanding Awards. The administrator may amend any term or condition of any outstanding award including, without limitation, to reduce or increase the exercise price or purchase price, accelerate the vesting schedule or extend the expiration date, provided that no such amendment shall impair the rights of a participant without such participant's consent.

Director Compensation

The following table shows the total compensation earned during the year ended December 31, 2014 by each of our non-employee directors except Dr. Kolchinsky, who was not a member of our board of directors in 2014.

Name	Fees earned or paid in cash ($)	Total ($)
Gregory L. Verdine, Ph.D.	150,000 (1)	150,000 (1)
Hidekazu Yonezawa (2)	—	—
Koji Miura	2,223 (3)	2,223 (3)
Ken Takanashi	—	—
Masaharu Tanaka	—	—
Takeshi Wada, Ph.D.	24,505 (4)	24,505 (4)

(1) Amount paid pursuant to a consulting agreement between WAVE USA and Dr. Verdine.
(2) Mr. Yonezawa was elected to our board of directors in April 2014 and resigned in August 2014.

(3) The amount was paid as a fee for serving on our board of directors pursuant to a nominee director fee agreement between the company and Miura & Associates Management Consultants Pte. Ltd. and reflects the converted value of S$3,000 at a conversion rate of 1.34671 Singapore dollars per U.S. dollar on June 30, 2015.
(4) The amount was paid as a fee for the provision of scientific advisory services to WAVE Japan and reflects the converted to U.S. dollar value of ¥3,000,000 at a conversion rate of 122.4222 yen per U.S. dollar on June 30, 2015.

We anticipate that, following this offering, we will adopt a compensation policy for our non-employee directors. We may seek the advice of a third-party compensation consultant prior to adopting such policy.

Limitations on Liability and Indemnification Matters

Our articles of association provide that, subject to the provisions of the Singapore Companies Act in effect from time to time, every director, managing director, secretary or other officer of our company or our subsidiaries and affiliates shall be entitled to be indemnified by our company against all costs, charges, losses, expenses and liabilities incurred by him or her in the execution and discharge of his or her duties or in relation thereto and in particular and without prejudice to the generality of the foregoing, no director, managing director, secretary or other officer of our company or our subsidiaries and affiliates shall be liable for the acts, receipts, neglects or defaults of any other director or officer or for joining in any receipt or other act for conformity or for any loss or expense happening to our company through the insufficiency or deficiency of title to any property acquired by order of the directors for or on behalf of our company or for the insufficiency or deficiency of any security in or upon which any of the moneys of our company shall be invested or for any loss or damage arising from the bankruptcy, insolvency or tortious act of any person with whom any moneys, securities or effects shall be deposited or left or for any other loss, damage or misfortune whatever which shall happen in the execution of the duties of his or her office or in relation thereto unless the same happen through his or her own negligence, default, breach of duty or breach of trust.

We have entered into deeds of indemnity with all directors and our president and chief executive officer. The deeds of indemnity provide, among other things, that we will indemnify such officer or director, under the circumstances and to the extent provided for therein, for expenses, damages, judgments, fines and settlements he may be required to pay in actions or proceedings which he is or may be made a party by reason of his position as a director, officer or other agent of the Company, subject to and to the fullest extent permitted under the Singapore Companies Act, as amended, and our articles of association. We believe that these provisions and agreements are necessary to attract and retain qualified persons as our directors and executive officers. Furthermore, we have obtained director and officer liability insurance to cover liabilities our directors and officers may incur in connection with their services to us.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell our ordinary shares on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or executive officer when entering into the plan, without further direction from them. The director or executive officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be subject to the lock-up agreement that the director or executive officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2012 to which we have been a party, in which the amount involved in the transaction exceeded $120,000, and in which any of our directors, executive officers or beneficial owners of more than 5% of our ordinary shares, on an as converted basis, or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under “Executive and Director Compensation.” We refer to such transactions as “related party transactions” and such persons as “related parties.” With the approval of our board of directors, we have engaged in the related party transactions described below.

Share Exchange Creating Our Corporate Structure

We were formed as a result of the combination of companies under the common control of Shin Nippon Biomedical Laboratories, Ltd., or SNBL, which prior to this offering beneficially owns approximately 31% of our ordinary shares, on an as-converted basis, and which is affiliated with our director, Ken Takanashi. SNBL held (i) 80% of WAVE USA (formerly Ontorii, Inc.), with the remaining 20% held by Dr. Gregory L. Verdine, our co-founder and a member of our board of directors, and (ii) 90% of WAVE Japan (formerly Chiralgen., Ltd.), with the remaining 10% held by Dr. Takeshi Wada. In July 2012, SNBL formed WAVE Life Sciences Pte. Ltd. (a predecessor to our company) for the purpose of combining these two entities. On September 13, 2012, SNBL entered into the following two share exchange transactions resulting in WAVE USA and WAVE Japan becoming wholly-owned subsidiaries of WAVE Life Sciences Pte. Ltd.:

- *Ontorii, Inc. Share Exchange*. We issued 202,079 ordinary shares to Dr. Gregory L. Verdine in exchange for his 750 shares of common stock of Ontorii, Inc. and 808,318 ordinary shares to SNBL in exchange for its 3,000 shares of common stock of Ontorii, Inc.
- *Chiralgen., Ltd. Share Exchange*. We issued 100,635 ordinary shares to Dr. Takeshi Wada in exchange for his 152 ordinary shares of Chiralgen., Ltd. and 909,762 ordinary shares to SNBL in exchange for its 1,374 ordinary shares of Chiralgen., Ltd.

Private Placement of Shares

Issuance of Series B Preferred Shares in August 2015

In August 2015, we issued an aggregate of 5,334,892 Series B preferred shares at a purchase price of $12.37 per share to 19 accredited investors, including the following related parties, each of whom purchased the number of Series B preferred shares indicated below and beneficially owns more than 5% of our outstanding shares.

Name	Series B Preferred Shares
Foresite Capital Fund III, L.P.	1,333,725
Entities affiliated with FMR LLC (1)	1,212,477
Entities affiliated with RA Capital Healthcare Fund, L.P. (2)	1,172,060
Entities affiliated with Shin Nippon Biomedical Laboratories, Ltd. (3)	161,663
Kagoshima Shinsangyo Sousei Investment Limited Partnership (4)	161,663

(1) Consists of (a) 982,333 shares purchased by Fidelity Select Portfolios: Biotechnology Portfolio and (b) 230,144 shares purchased by Fidelity Advisor Series VII: Fidelity Biotechnology Fund.

(2) Consists of (a) 970,466 shares purchased by RA Capital Healthcare Fund, L.P., or RA Capital, and (b) 201,594 shares purchased by Blackwell Partners LLC—Series A. RA Capital Management, LLC is the general partner of RA Capital, and the investment adviser for Blackwell Partners LLC—Series A. Dr. Peter Kolchinsky who serves on our board of directors, is a founder, managing partner and portfolio manager of RA Capital Management LLC, the general partner of RA Capital.

(3) Shares purchased by SNBL USA, Ltd., an affiliate of SNBL. Mr. Ken Takanashi, a member of our board of directors, is a director and executive officer of SNBL and its affiliates.

(4) Mr. Masaru Tanaka, a member of our board of directors, is the President of Kagoshima Development Co. Ltd., the general partner of Kagoshima Shinsangyo Sousei Investment Limited Partnership.

Issuance of Ordinary Shares in January 2015

In January 2015, we issued an aggregate of 4,769,077 ordinary shares at a purchase price of $2.47 per share to two accredited investors, both of whom are beneficial owners of more than 5% of our outstanding shares. RA Capital

Health Care Fund, L.P., or RA Capital, purchased 4,041,591 ordinary shares in this transaction at an aggregate purchase price of $10.0 million. Dr. Peter Kolchinsky, who serves on our board of directors, is a founder, managing partner and portfolio manager of RA Capital Management, LLC, the general partner of RA Capital. Kagoshima Shinsangyo Sousei Investment Limited Partnership, or KSS, purchased 727,486 ordinary shares in this transaction at an aggregate purchase price of $1.8 million. Masaharu Tanaka, who serves on our board of directors, is the President of Kagoshima Development Co. Ltd., the general partner of KSS.

Issuance of Ordinary Shares and Series A Preferred Shares in February 2014

In February 2014, we entered into a subscription agreement with KSS pursuant to which we issued 2,263,291 ordinary shares to KSS at a purchase price of $2.47 per share for a total consideration of $5.6 million. Masaharu Tanaka, who serves on our board of directors, is the President of Kagoshima Development Co. Ltd., the general partner of KSS.

In February 2014, we issued 2,365,139 Series A preferred shares and 1,515,596 ordinary shares to SNBL in exchange for the cancellation of certain debt obligations owed by us to SNBL in the amount of $9.6 million. Ken Takanashi, a member of our board of directors, is a director and executive officer of SNBL and its affiliates. The corresponding debt obligations were issued by SNBL in our favor between November 2012 and November 2013 with original principal amounts ranging from $0.3 million to $4.1 million for an aggregate amount of $9.6 million and at the U.S. federal interest rate applicable at the time of each loan's issuance.

Indemnification Agreements with Officers and Directors

We have entered into deeds of indemnity with each of our directors, our president and chief executive officer, and our vice president, head of finance, who serves as our principal financial officer and principal accounting officer. These agreements will require us to indemnify these individuals to the fullest extent permitted under Singapore law against liabilities that may arise by reason of their service to us, as a result of any proceeding against them as to which they could be indemnified. These indemnification rights shall not be exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, provision of our articles of association, agreement, vote of shareholders or disinterested directors or otherwise if he or she is subsequently found to have been negligent or otherwise have breached his or her trust or fiduciary duties or to be in default thereof, or where the Singapore courts have declined to grant relief. See "Description of Share Capital—Limitations of Liability and Indemnification Matters."

Registration Rights

The holders of 9,223,405 ordinary shares, the holders of 5,334,892 Series B preferred shares and the holder of 3,901,348 Series A preferred shares have entered into an agreement with us that provides certain registration rights to these holders and future transferees of their securities. See "Description of Share Capital—Registration Rights" for a description of these rights. Such holders include the following related parties:

Name	Securities
Entities affiliated with Shin Nippon Biomedical Laboratories, Ltd. (1)	5,760,478
Entities affiliated with RA Capital Healthcare Fund, L.P. (2)	5,213,651
Kagoshima Shinsangyo Sousei Investment Limited Partnership	3,152,440
Foresite Capital Fund III, L.P.	1,333,725
Entities affiliated with FMR LLC (3)	1,212,477
Dr. Gregory L. Verdine	202,079
Dr. Paul Bolno	190,856
Dr. Takeshi Wada	100,635

(1) Consists of (a) 1,697,476 ordinary shares and 3,901,348 Series A preferred shares held by SNBL and (b) 161,663 Series B preferred shares held by SNBL USA, Ltd., an affiliate of SNBL.

(2) Consists of (a) 4,041,591 ordinary shares and 970,466 Series B preferred shares held by RA Capital and (b) 201,594 shares held by Blackwell Partners LLC—Series A, an affiliate of RA Capital.

(3) Consists of (a) 982,333 shares purchased by Fidelity Select Portfolios: Biotechnology Portfolio and (b) 230,144 shares purchased by Fidelity Advisor Series VII: Fidelity Biotechnology Fund. These entities are managed by direct or indirect subsidiaries of FMR LLC.

Consulting Agreement with Dr. Gregory L. Verdine

Dr. Gregory L. Verdine entered into a consulting agreement with WAVE USA, dated as of April 1, 2012, pursuant to which Dr. Verdine serves as a scientific advisor. The consulting agreement does not have a certain term and may be terminated by either party upon 14 days' prior written notice. WAVE USA pays Dr. Verdine $12,500 per month and reimburses him for all reasonable expenses incurred in connection with the provision of these services. We paid Dr. Verdine $112,500, $150,000, $150,000 and $75,000 in 2012, 2013, 2014 and through June 30, 2015, respectively, under this agreement.

Agreement with Dr. Takeshi Wada

We pay Dr. Takeshi Wada ¥250,000 per month, or approximately $2,042 using a conversion rate of 122.4222 yen per U.S. dollar on June 30, 2015, and reimburse him for all reasonable expenses incurred in connection with the provision of scientific advisory services to WAVE Japan. We do not have a formal agreement with Dr. Wada related to the provisions of these services. We paid Dr. Wada $16,116, $19,928, $28,339 and $12,477 in 2012, 2013, 2014 and through June 30, 2015, respectively under this agreement.

Agreements with SNBL

Pursuant to the terms of a commercial lease agreement with SNBL USA, Ltd., an affiliate of SNBL, or SNBL USA, which WAVE USA entered into in January 2010, WAVE USA pays $5,797 per month to SNBL USA for the sublease of office space in Boston, Massachusetts and is obligated to pay $9,029 per month to SNBL USA for 112 months for the cost of improvements to the leased premises. We paid SNBL $213,709 in each of 2012, 2013, 2014 and $106,855 through June 30, 2015, respectively under this lease. Ken Takanashi, a member of our board of directors, is a director and executive officer of SNBL and its affiliates.

Pursuant to the terms of a service agreement we previously held with SNBL, we paid SNBL $98,008, $245,412, $70,942 and $1,094 in 2012, 2013, 2014 and through June 30, 2015, respectively, for accounting and administrative services provided to us and our affiliates.

Voting Agreement

Pursuant to the terms of a voting agreement that we entered into with certain holders of our ordinary shares and preferred shares dated as of August 14, 2015 and which will terminate upon the completion of this offering, such shareholders had the right to designate members for election to our board of directors.

Related Party Transaction Policy

Our board of directors has adopted a written policy, which we refer to as the "related party transaction approval policy," which, effective upon the closing of this offering, will require our management to identify proposed related party transactions and present information about the proposed related party transaction to our audit committee, or if audit committee approval would be inappropriate, to another independent body of our board of directors, for review and if deemed appropriate, for approval by the committee. In approving or rejecting such proposed related party transaction, the committee will be required to consider relevant facts and circumstances. The committee will approve only those transactions that, in light of known circumstances, are deemed to be in our best interests. In the event that any member of the committee is not a disinterested person with respect to the related party transaction under review, that member will be excluded from the review and approval or rejection of such related party transaction: provided, however, that such committee member may be counted in determining the presence of a quorum at the meeting, of the committee at which such transaction is considered. If we become aware of an existing related party transaction which has not been approved under the policy, the matter will be referred to the committee. The committee will evaluate all options available, including ratification, revision or termination of such transaction. In the event that management determines that it is impractical or undesirable to wait until a meeting of the committee to consummate a related party transaction, the chair of the committee may approve such transaction in accordance with the related person transaction approval policy. Any such approval must be reported to the committee at the next regularly scheduled meeting.

PRINCIPAL SHAREHOLDERS

The following table sets forth certain information regarding beneficial ownership of our ordinary shares as of August 15, 2015 for

- each beneficial owner of more than 5% of our ordinary shares and Series A preferred shares;
- each named executive officer;
- each director; and
- all of our executive officers and directors as a group.

Each shareholder's ordinary share percentage ownership before this offering is based on 14,558,297 ordinary shares outstanding as of August 15, 2015, after giving effect to the conversion of all outstanding Series B preferred shares into 5,334,892 ordinary shares prior to the closing of this offering. Each shareholder's ordinary share percentage ownership after this offering is based on 20,933,297 ordinary shares outstanding immediately after the completion of this offering after giving effect to the conversion of all outstanding Series B preferred shares into 5,334,892 ordinary shares prior to the closing of this and assuming no exercise by the underwriters of their option to purchase additional ordinary shares. Each shareholder's Series A preferred share percentage ownership before and after this offering is based on 3,901,348 Series A preferred shares outstanding as of August 15, 2015.

Beneficial ownership for the purposes of the following table is determined in accordance with the rules and regulations of the SEC. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting thereof, or to dispose or direct the disposition thereof or has the right to acquire such powers within 60 days. Ordinary shares subject to options that are currently exercisable or exercisable within 60 days of August 15, 2015 are deemed to be outstanding and beneficially owned by the person holding the options. These shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. Except as disclosed in the footnotes to this table and subject to applicable community property laws, we believe that each shareholder identified in the table possesses sole voting and investment power over all ordinary shares shown as beneficially owned by the shareholder.

Entities affiliated with RA Capital Management, LLC and certain other entities affiliated with our directors have indicated an interest in purchasing an aggregate of approximately $32.0 million of our ordinary shares in this offering at the initial public offering price. Indications of interest are not binding agreements or commitments to purchase, and the underwriters could determine to sell more, less or no shares to any of these entities and any of these entities could determine to purchase more, less or no shares in this offering. Therefore, the following table does not reflect any potential purchases by these entities. However, if any of our ordinary shares are purchased by these entities, the number of ordinary shares beneficially owned by our principal shareholders and management would increase. Assuming these entities purchase an aggregate of $32.0 million of our ordinary shares in this offering at the initial public offering price of $16.00 per share, and no exercise of the underwriters' option to purchase additional shares, our executive officers, directors and holders of 5% or more of our outstanding ordinary shares and their respective affiliates would beneficially own approximately 84% of our outstanding shares.

Unless otherwise noted below, the address of each beneficial owner listed in the table is c/o WAVE Life Sciences Ltd., 8 Cross Street #10-00, PWC Building, Singapore 048424.

Name	Beneficial Ownership Prior to the Offering				Beneficial Ownership After the Offering					
	Ordinary Shares		Series A Preferred Shares		Ordinary Shares		Series A Preferred Shares		% of Total Voting Power	% of Total Voting Power (as-converted)**
	Shares	%	Shares	%	Shares	%	Shares	%		
5% Beneficial Owner										
RA Capital Healthcare Fund, L.P. (1)	5,213,651	35.8%	—	—	5,213,651	24.9%	—	—	24.9%	21.0%
Kagoshima Sinsangyo Sousei Investment Limited Partnership (2)	3,152,440	21.7	—	—	3,152,440	15.1	—	—	15.1	12.7
Shin Nippon Biomedical Laboratories, Ltd. (3)	1,859,130	12.8	3,901,348	100.0%	1,859,130	8.9	3,901,348	100.0%	8.9	23.2
Foresite Capital Fund III, L.P. (4)	1,333,725	9.2	—	—	1,333,725	6.4	—	—	6.4	5.4
FMR LLC (5)	1,212,477	8.3	—	—	1,212,477	5.8	—	—	5.8	4.9
Directors and Named Executive Officers										
Paul B. Bolno, M.D. (6)	341,970	2.3	—	—	341,970	1.6	—	—	1.6	1.4
Christopher Francis, Ph.D. (7)	52,038	*	—	—	52,038	*	—	—	*	*
Chandra Vargeese, Ph.D. (8)	64,296	*	—	—	64,296	*	—	—	*	*
Gregory L. Verdine, Ph.D. (9)	454,075	3.1	—	—	454,075	2.1	—	—	2.1	1.8
Peter Kolchinsky, Ph.D. (10)	5,213,651	35.8	—	—	5,213,651	24.9	—	—	24.9	21.0
Koji Miura	—	—	—	—	—	—	—	—	—	—
Ken Takanashi (11)	1,859,130	12.8	3,901,348	100.0	1,859,130	8.9	3,901,348	100.0	8.9	23.2
Masaharu Tanaka (12)	3,152,440	21.7	—	—	3,152,440	15.1	—	—	15.1	12.7
Dr. Takeshi Wada (13)	107,396	*	—	—	107,396	*	—	—	*	*
All directors and executive officers as a group (11 individuals) (14)	11,267,960	74.6%	3,901,348	100.0%	11,267,960	52.5%	3,901,348	100.0%	52.5%	44.4%

* Indicates beneficial ownership of less than 1% of our outstanding ordinary shares.

** Represents the voting power with respect to all of our ordinary shares and Class A preferred shares, voting as a single class and on an as-converted to ordinary share basis. Following this offering, each Series A preferred share can be converted at any time on a one-for-one basis into ordinary shares at the discretion of the holder. See “Description of Share Capital” for additional information.

(1) Consists of (a) 5,012,057 ordinary shares held by RA Capital Healthcare Fund, L.P., or RA Capital, and (b) 201,594 ordinary shares held by Blackwell Partners LLC – Series A, or Blackwell, an affiliate of RA Capital. Dr. Peter Kolchinsky, a member of our board of directors is the managing member of RA Capital Management, LLC, the general partner of RA Capital and the investment advisor of Blackwell. Dr. Kolchinsky and RA Capital Management, LLC may be deemed to beneficially own the shares held by RA Capital and Blackwell. The address of RA Capital Healthcare Fund, L.P. and Blackwell is 20 Park Plaza, Suite 1200, Boston, MA 02116.

(2) Mr. Masaharu Tanaka, a member of our board of directors, is the President of Kagoshima Development Co. Ltd., the general partner of Kagoshima Shinsangyo Sousei Investment Limited Partnership, or KSS. Mr. Tanaka has the sole power to vote and dispose of the shares held by KSS and may be deemed to beneficially own these shares. The address of KSS is 6-1-20, Nanei Kagoshima City Kagoshima 891-0122, Japan.

(3) Consists of (a) 1,697,467 ordinary shares and 3,901,348 Series A preferred shares held by Shin Nippon Biomedical Laboratories, Ltd., or SNBL, whose address is 2438 Miyanoura-machi, Kagoshima City, Kagoshima 891-1394, Japan and (b) 161,663 ordinary shares held by SNBL USA, Ltd., or SNBL USA, an affiliate of SNBL, whose address is 6605 Merrill Creek Parkway, Everett, WA 98203. The board of directors of SNBL and SNBL USA has the power to vote and dispose of the shares held by their respective entities. Mr. Ken Takanashi, a member of our board of directors, is a director and executive officer of SNBL and its affiliates and in such capacity may be deemed to beneficially own the shares held by SNBL and SNBL USA.

(4) Foresite Capital Management III, LLC, or Foresite Management III, is the general partner of Foresite Capital Fund III, L.P., or Foresite Fund III, and in its capacity as such, Foresite Management III may be deemed to have sole voting and investment power over the shares held by Foresite Fund III. James Tananbaum is the managing member of Foresite Management III, and in his capacity as such, Mr. Tananbaum may be deemed to have sole voting and investment power over shares held by Foresite Fund III. The address of Mr. Tananbaum, Foresite Management III and Foresite Fund III is 101 California Street, Suite 4100, San Francisco, CA 94111.

(5) Consists of (a) 982,333 ordinary shares held by Fidelity Select Portfolios: Biotechnology Portfolio whose address is c/o Brown Brothers Harriman & Co., 525 Washington Blvd., Jersey City, NJ 07310 and (b) 230,144 ordinary shares held by Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund, whose address is c/o State Street Bank & Trust, P.O. Box 5756, Boston, MA 02206. These entities are managed by direct or indirect subsidiaries of FMR LLC and are advised by Fidelity Management & Research Company, or FMR Co, a wholly owned subsidiary of FMR LLC. Edward C. Johnson 3d is a director and the Chairman of FMR LLC and Abigail P. Johnson is a director, the Vice Chairman and President of FMR LLC. Members of the family of Edward C. Johnson 3d, including Abigail P. Johnson, collectively, the Johnson Family Group, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson Family Group and all other Series B shareholders have entered into a shareholders’ voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders’ voting agreement, members of the Johnson Family Group may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC.

None of FMR LLC, Edward C. Johnson 3d or Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by these entities which power resides with the Fidelity Funds' Boards of Trustees. FMR Co carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address of FMR LLC is 245 Summer Street, V13H, Boston, MA 02110.

(6) Consists of 190,856 ordinary shares and 151,114 ordinary shares underlying options exercisable within 60 days of August 15, 2015.

(7) Consists of ordinary shares underlying options exercisable within 60 days of August 15, 2015.

(8) Consists of ordinary shares underlying options exercisable within 60 days of August 15, 2015.

(9) Consists of (a) 202,079 ordinary shares held by Dr. Verdine, (b) 245,235 ordinary shares underlying options exercisable within 60 days of August 15, 2015 held by Dr. Verdine and (c) 6,761 ordinary shares underlying options exercisable within 60 days of August 15, 2015, held by Dr. Verdine's spouse.

(10) Consists of 5,012,057 ordinary shares held by RA Capital, and 201,594 ordinary shares held by Blackwell, an affiliate of RA Capital. Dr. Kolchinsky is the managing partner of RA Capital Management, LLC, the general partner of RA Capital and the investment advisor of Blackwell and may be deemed to beneficially own the shares held by RA Capital and Blackwell.

(11) Consists of (a) 1,697,467 ordinary shares and 3,901,348 Series A preferred shares held by SNBL and (b) 161,663 ordinary shares held by SNBL USA. Mr. Takanashi is a director and executive officer of SNBL and its affiliates and in such capacity may be deemed to beneficially own the shares held by SNBL or SNBL USA. The board of directors of SNBL and SNBL USA has the power to vote and dispose of the shares held by their respective entities.

(12) Consists of 3,152,440 ordinary shares held by Kagoshima Shinsangyo Sousei Investment Limited Partnership, or KSS. Mr. Tanaka is the President of Kagoshima Development Co. Ltd., the general partner of KSS and has the sole power to vote and dispose of these shares. Mr. Tanaka may be deemed to beneficially own the shares held by KSS.

(13) Consists of 100,635 ordinary shares and 6,761 ordinary shares underlying options exercisable within 60 days of August 15, 2015.

(14) Consists of (a) 549,169 ordinary shares underlying options exercisable within 60 days of August 15, 2015, (b) 10,718,791 ordinary shares beneficially held by our directors and executive officers including shares issuable upon conversion of Series B preferred shares held by entities affiliated with certain of our directors and (c) 3,901,348 Series A preferred shares held by an entity affiliated with one of our directors.

DESCRIPTION OF SHARE CAPITAL

In connection with this offering, we have amended our memorandum and articles of association. Copies of the forms of our memorandum and articles of association are filed as exhibits to the registration statement of which this prospectus forms a part. Material provisions of our memorandum and articles of association and relevant sections of Singapore law are summarized below. The following summary is qualified in its entirety by the provisions of our memorandum and articles of association as amended in connection with this offering.

General

For the purposes of this section, references to "shareholders" mean those shareholders whose names and number of shares are entered in our shareholder register. Only persons who are registered in our shareholder register are recognized under Singapore law as shareholders of our company with legal standing to institute shareholder actions against us or otherwise seek to enforce their rights as shareholders. Our share register and will be maintained by our transfer agent, Computershare Trust Company, N.A., or Computershare.

The shares offered pursuant to this offering are expected to be held through the Depository Trust Company, or DTC. Accordingly, DTC or its nominee, Cede & Co., will be the shareholder of record registered in our register of shareholders. The holder of our shares held in book-entry through DTC or its nominee may become a registered shareholder by exchanging its interest in our shares for certificated shares and being registered in our shareholder register. The procedures by which a holder of book-entry interests held through DTC or its nominee may exchange such interests for certificated shares are determined by DTC and Computershare, in accordance with their internal policies and guidelines regulating the withdrawal and exchange of book-entry interests for certificated shares, and following such an exchange Computershare will perform the procedures to register the shares in the register.

If: (a) the name of any person is without sufficient cause entered in or omitted from the shareholder register; or (b) default is made or there is unnecessary delay in entering in the shareholder register the fact of any person having ceased to be a member, the person aggrieved or any member of the company or the company, may apply to the Singapore courts for rectification of the shareholder register. The Singapore courts may either refuse the application or order rectification of the shareholder register, and may direct the company to pay any damages sustained by any party to the application. The Singapore courts will not entertain any application for the rectification of a shareholder register in respect of an entry which was made in the shareholder register more than 30 years before the date of the application.

As of June 30, 2015 there were outstanding:

- 9,223,405 ordinary shares held by six shareholders of record;
- 3,901,348 Series A preferred shares held by one shareholder of record;
- 5,334,892 Series B preferred shares held by 19 shareholders of record, after giving effect to the issuance of such shares in August 2015; and
- 1,844,770 ordinary shares issuable upon the exercise of outstanding share options, plus 169,942 ordinary shares issuable upon the exercise of options granted subsequent to June 30, 2015.

The following description of our share capital and provisions of our memorandum and articles of association are summaries and are qualified by reference to the memorandum and articles of association that will be in effect on or before the closing of this offering and assumes the conversion of shares of our Series B preferred shares into ordinary shares on a one-for-one basis. Copies of these documents have been filed with the SEC as exhibits to the registration statement of which this prospectus forms a part. The description of the ordinary shares reflects changes to our capital structure that will occur upon the closing of this offering.

The Companies (Amendment) Act 2014 was passed in October 2014 and provides for certain amendments to be made to the Singapore Companies Act. The amendments introduced by way of the Companies (Amendment) Act 2014 are being implemented in two phases. The first phase of amendments to certain provisions of the Singapore Companies Act took effect on July 1, 2015, with the remaining amendments expected to come into effect in the first quarter of 2016.

Ordinary Shares

As of the date of this prospectus, our issued and paid-up share capital consists of 9,223,405 ordinary shares. We currently have only one class of issued ordinary shares, which have identical rights in all respects and rank equally with one another. Our ordinary shares have no par value and there is no authorized share capital under Singapore law. There is a provision in our articles of association which enables us in specified circumstances to issue shares with preferential, deferred or other special rights or restrictions (except as to voting rights, which, prior to the second phase of implementation of the Companies (Amendment) Act 2014, are fixed at one vote for each ordinary share in a public company) as our directors may determine, subject to the provisions of the Singapore Companies Act and our articles of association. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to allow public companies such as our company to issue shares with different voting rights (including special, limited or conditional voting rights), subject to, among other things, the adoption by our shareholders of a special resolution approving such issuance.

All shares presently issued are fully paid and existing shareholders are not subject to any calls on shares. Although Singapore law does not recognize the concept of “non-assessability” with respect to newly-issued shares, we note that any purchaser of our shares who has fully paid up all amounts due with respect to such shares will not be subject under Singapore law to any personal liability to contribute to the assets or liabilities of our company in such purchaser’s capacity solely as a holder of such shares. We believe that this interpretation is substantively consistent with the concept of “non-assessability” under most, if not all, U.S. state corporations laws. All shares are in registered form. We cannot, except in the circumstances permitted by the Singapore Companies Act, grant any financial assistance for the acquisition or proposed acquisition of our own shares. Except as described below under “—Takeovers,” there are no limitations imposed by the laws of Singapore or by our memorandum and articles of association on the right of shareholders not resident in Singapore to hold or vote ordinary shares.

New Shares

Under the Singapore Companies Act, new shares may be issued only with the prior approval of our shareholders in a general meeting. General approval may be sought from our shareholders in a general meeting for the issue of shares. Approval, if granted, will lapse at the earlier of:

- the conclusion of the next annual general meeting;
- the expiration of the period within which the next annual general meeting is required by law to be held (i.e., within 15 months from the last annual general meeting); or
- the subsequent revocation or modification of approval by our shareholders acting at a duly noticed and convened meeting.

Our shareholders have provided such general authority to issue new shares until the conclusion of our 2015 Annual General Meeting. Such approval will lapse in accordance with the preceding paragraph if our shareholders do not grant a new approval at our annual general meeting. Subject to this and the provisions of the Singapore Companies Act and our articles of association, our board of directors may allot and issue or grant options over or otherwise dispose of new shares to such persons on such terms and conditions and with the rights and restrictions as they may think fit to impose.

Preferred Shares

Series A Preferred Shares

As of closing of this offering, we will have 3,901,348 Series A preferred shares outstanding. These shares are currently held by one of our largest shareholders, Shin Nippon Biomedical Laboratories, Ltd. Upon the closing of the offering, the rights of the Series A preferred shares will be identical to our ordinary shares, other than having (1) no voting rights other than in limited circumstances, (2) a liquidation preference equal to $0.0024743 per Series A preferred share, or an aggregate of $9,653 based on the number of Series A preferred shares currently outstanding and (3) the right to convert the Series A preferred shares at any time on a one-for-one basis into ordinary shares at the discretion of the holder.

The Series A preferred shares are not entitled to vote at any general meeting. The only instances in which the Series A preferred shares are able to vote at a general meeting would be if (but only if):

- the non-cumulative dividend payable on a Series A preferred share or any part thereof is in arrears and has remained unpaid for at least 12 months after it has been declared; and/or
- the matters to be discussed at the meeting relate to or there is intent to pass resolutions on (i) abrogating or changing the rights attached to the Series A preferred shares; and (ii) for the winding up of the Company, such resolutions would require the unanimous approval of the holders of the Series A preferred shares.

Upon the closing of this offering, the existing right of Series A preferred shares to a non-cumulative dividend, if and when declared by our board of directors, shall cease and be replaced by the $0.0024743 per share liquidation preference described above.

Other Preferred Shares

Our articles of association provide that we may issue shares of a different class with preferential, deferred, qualified or other special rights, privileges or conditions as our board of directors may determine. Under Singapore law, our preferred shareholders will have the right to attend any general meeting and in a poll at such general meeting, to have at least one vote for every preferred share held:

- upon any resolution concerning the winding-up of our company;
- upon any resolution which varies the rights attached to such preferred shares; or
- when the dividends to be paid on our preferred shares are more than twelve months in arrears, for the period they remain unpaid.

We may, subject to the prior approval in a general meeting of our shareholders, issue preferred shares which are, or at our option or are to be, subject to redemption provided that such preferred shares may not be redeemed out of capital unless:

- all the directors have made a solvency statement in relation to such redemption; and
- we have lodged a copy of the statement with the Accounting and Corporate Regulatory Authority of Singapore.

Further, the shares must be fully paid-up before they are redeemed.

The issue of preferred shares could have the effect of decreasing the trading price of our ordinary shares, restricting dividends on our ordinary shares, diluting the voting power of our ordinary shares, impairing the liquidation rights of our ordinary shares, or delaying or preventing a change in control of our company. As of the closing of this offering, we will have no preferred shares outstanding other than the Series A preferred shares described above. At present, we have no plans to issue additional preferred shares.

Transfer of Ordinary Shares

Subject to applicable securities laws in relevant jurisdictions and our articles of association, our ordinary shares are freely transferable. Shares may be transferred by a duly signed instrument of transfer in any usual or common form or in a form approved by the directors. The directors may decline to register any transfer unless, among other things, evidence of payment of any stamp duty payable with respect to the transfer is provided together with other evidence of ownership and title as the directors may require. We will replace lost or destroyed certificates for shares upon notice to us and upon, among other things, the applicant furnishing evidence and indemnity as the directors may require and the payment of all applicable fees.

Election and Re-election of Directors

We may, by ordinary resolution, remove any director before the expiration of his or her period of office, notwithstanding anything in our articles of association or in any agreement between us and such director. We may also, by an ordinary resolution, appoint another person in place of a director removed from office pursuant to the foregoing.

Subject to the Singapore Companies Act, under our articles of association, at each annual general meeting, our directors are required to retire from office. Retiring directors are eligible for re-election at that meeting.

Our board of directors shall have the power, at any time and from time to time, to appoint any person to be a director either to fill a casual vacancy or as an additional director so long as the total number of directors shall not at any time exceed the maximum number fixed by or in accordance with our articles of association.

Shareholders' Meetings

We are required to hold an annual general meeting each year and not more than 15 months after the date of our most recent annual general meeting. The directors may convene an extraordinary general meeting whenever they think fit and they must do so upon the written request of shareholders holding not less than 10% of the total number of paid-up shares carrying the right to vote at a general meeting. In addition, two or more shareholders holding not less than 10% of our total number of issued shares (excluding our treasury shares) may call a meeting of our shareholders.

A shareholder is entitled to attend and speak and vote at any general meeting. Unless otherwise required by law or by our articles of association, voting at general meetings is by ordinary resolution, requiring the affirmative vote of a majority of the shareholders present in person or represented by proxy at the meeting and entitled to vote on the resolution. An ordinary resolution suffices, for example, for appointments of directors. A special resolution, requiring an affirmative vote of not less than three-fourths of the shareholders present in person or represented by proxy at the meeting and entitled to vote on the resolution, is necessary for certain matters under Singapore law, such as an alteration of our articles of association. A shareholder entitled to attend and vote at a meeting of the company, or at a meeting of any class of shareholders of the company, shall be entitled to appoint another person or persons, whether a shareholder of the company or not, as his proxy to attend and vote instead of the shareholder at the meeting. A proxy appointed to attend and vote instead of the shareholder shall also have the same right as the shareholder to speak at the meeting, but unless the articles of association of the company otherwise provide, (i) a proxy shall not be entitled to vote except on a poll, (ii) a shareholder shall not be entitled to appoint more than two proxies to attend and vote at the same meeting and (iii) where a shareholder appoints two proxies the appointment shall be invalid unless the shareholder specifies the proportions of his holdings to be represented by each proxy.

Only registered shareholders of our company, and their proxies, will be entitled to attend, speak and vote at any meeting of shareholders. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to allow public companies to issue non-voting shares and shares with different voting rights (including special, limited or conditional voting rights), such that the holder of a share may vote on a resolution before a general meeting of the company if, in accordance with the provisions of Section 64 of the Singapore Companies Act, the share confers on the holder a right to vote on that resolution.

Voting Rights

Voting at any meeting of shareholders is by show of hands unless a poll has been demanded prior to or as a result of the show of hands by either (i) the chairman (being a person entitled to vote thereat) or (ii) at least one shareholder present in person or by proxy or by attorney or, in the case of a corporation, by a representative entitled to vote thereat, in each case representing in the aggregate not less than 10% of the total voting rights of all shareholders having the right to vote at the general meeting, provided that no poll shall be demanded in respect of an election of a chairman or relating to any adjournment of such meeting. On a poll every shareholder who is present in person or by proxy or by attorney, or in the case of a corporation, by a representative, has one vote for every share held by such shareholder. Proxies need not be shareholders. Only those shareholders who are registered in our shareholder register will be entitled to vote at any meeting of shareholders. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to lower the threshold of 10% of the total voting rights for the eligibility for shareholders to demand a poll to 5%.

Minority Rights

The rights of minority shareholders of Singapore companies are protected under Section 216 of the Singapore Companies Act, which gives the Singapore courts a general power to make any order, upon application by any shareholder of a company, as they think fit to remedy any of the following situations:

- the affairs of a company are being conducted or the powers of the board of directors are being exercised in a manner oppressive to, or in disregard of the interests of, one or more of the shareholders, including the applicant; or
- a company takes an action, or threatens to take an action, or the shareholders pass a resolution, or propose to pass a resolution, which unfairly discriminates against, or is otherwise prejudicial to, one or more of the shareholders, including the applicant.

Singapore courts have wide discretion as to the remedy they may grant, and the remedies listed in the Singapore Companies Act itself are not exclusive. In general, Singapore courts may, with a view to bringing to an end or remedying the matters complained of:

- direct or prohibit any act or cancel or modify any transaction or resolution;
- regulate the conduct of the affairs of the company in the future;
- authorize civil proceedings to be brought in the name of, or on behalf of, the company by a person or persons and on such terms as the court may direct;
- provide for the purchase of a minority shareholder's shares by the other shareholders or by the company itself and, in the case of a purchase of shares by the company, a corresponding reduction of its share capital;
- provide that the memorandum of association or the articles of association of the company be amended; or
- provide that the company be wound up.

Dividends

Subject to any preferential rights of holders of any outstanding preferred shares, holders of our ordinary shares will be entitled to receive dividends and other distributions in cash, shares or property as may be declared by our company from time to time. We may, by ordinary resolution, declare dividends at a general meeting of shareholders, but we are restricted from paying dividends in excess of the amount recommended by our board of directors. Pursuant to Singapore law and our articles of association, no dividend may be paid except out of our profits. To date, we have not declared any cash dividends on our ordinary shares and have no current plans to pay cash dividends in the foreseeable future. See "Dividend Policy" elsewhere in this prospectus.

Bonus and Rights Issues

In a general meeting, our shareholders may, upon the recommendation of the directors, capitalize any reserves or profits and distribute them as bonus shares, credited as paid-up, to the shareholders in proportion to their shareholdings.

Subject to the provisions of the Singapore Companies Act and our articles of association, our directors may also issue rights to take up additional ordinary shares to our shareholders in proportion to their respective ownership. Such rights are subject to any condition attached to such issue and the regulations of any stock exchange on which our shares are listed, as well as U.S. federal and blue sky securities laws applicable to such issue.

Takeovers

The Singapore Code on Take-overs and Mergers regulates, among other things, the acquisition of voting shares of Singapore-incorporated public companies. Any person acquiring, whether by a series of transactions over a period of time or not, either on his or her own or together with parties acting in concert with such person, 30% or more of our voting shares, or, if such person holds, either on his or her own or together with parties acting in concert with such person, between 30% and 50% (both amounts inclusive) of our voting shares, and if such person (or parties acting in concert with such person) acquires additional voting shares representing more than 1% of our voting shares in any

six-month period, must, except with the consent of the Securities Industry Council in Singapore, extend a mandatory takeover offer for the remaining voting shares in accordance with the provisions of the Singapore Code on Take-overs and Mergers. Responsibility for ensuring compliance with the Singapore Code on Take-overs and Mergers rests with parties (including company directors) to a take-over or merger and their advisors.

“Parties acting in concert” comprise individuals or companies who, pursuant to an agreement or understanding (whether formal or informal), cooperate, through the acquisition by any of them of shares in a company, to obtain or consolidate effective control of that company. Certain persons are presumed (unless the presumption is rebutted) to be acting in concert with each other. They are as follows:

- a company, its parent company, subsidiaries and fellow subsidiaries, the associated companies of any of the company and its related companies, subsidiaries and fellow subsidiaries, companies whose associated companies include any of these companies and any person who has provided financial assistance (other than a bank in the ordinary course of business) to any of the foregoing for the purchase of voting rights;
- a company with any of its directors (together with their close relatives, related trusts and companies controlled by any of the directors, their close relatives and related trusts);
- a company with any of its pension funds and employee share schemes;
- a person with any investment company, unit trust or other fund whose investment such person manages on a discretionary basis, but only in respect of the investment account which such person manages;
- a financial or other professional adviser, including a stockbroker, with its client in respect of the shareholdings of (i) the adviser and persons controlling, controlled by or under the same control as the adviser and (ii) all the funds managed by the adviser on a discretionary basis, where the shareholdings of the adviser and any of those funds in the client total 10% or more of the client’s equity share capital;
- directors of a company (together with their close relatives, related trusts and companies controlled by any of such directors, their close relatives and related trusts) which is subject to an offer or where the directors have reason to believe a bona fide offer for their company may be imminent;
- partners; and
- an individual and (i) such person’s close relatives, (ii) such person’s related trusts, (iii) any person who is accustomed to act in accordance with such person’s instructions, (iv) companies controlled by the individual, such person’s close relatives, related trusts or any person who is accustomed to act in accordance with such person’s instructions and (v) any person who has provided financial assistance (other than a bank in the ordinary course of business) to any of the foregoing for the purchase of voting rights.

A mandatory offer must be in cash or be accompanied by a cash alternative at not less than the highest price paid by the offeror or parties acting in concert with the offeror for voting rights of the offeree company during the offer period and within the six months prior to its commencement.

Under the Singapore Code on Take-overs and Mergers, where effective control of a company is acquired or consolidated by a person, or persons acting in concert, a general offer to all other shareholders is normally required. An offeror must treat all shareholders of the same class in an offeree company equally. A fundamental requirement is that shareholders in the company subject to the takeover offer must be given sufficient information, advice and time to consider and decide on the offer. These legal requirements may impede or delay a takeover of our company by a third-party.

We may submit an application to the Securities Industry Council of Singapore for a waiver from the Singapore Code on Take-overs and Mergers so that the Singapore Code on Take-overs and Mergers will not apply to our company for so long as we are not listed on a securities exchange in Singapore. We will make an appropriate announcement if we submit the application and when the result of the application is known.

Liquidation or Other Return of Capital

On a winding-up or other return of capital, subject to any special rights attaching the Series A preferred shares or to any other class of shares, holders of ordinary shares will be entitled to participate in any surplus assets in proportion to their shareholdings.

Limitations of Liability and Indemnification Matters

Section 172 of the Singapore Companies Act prohibits a company from exempting or indemnifying its officers (including directors acting in an executive capacity) or auditors against any liability, which by law would otherwise attach to them for any negligence, default, breach of duty or breach of trust of which they may be guilty relating to us. However, a company is not prohibited from (a) purchasing and maintaining for any such individual insurance against any such liability, or (b) indemnifying such individual against any liability incurred by him or her in defending any proceedings, whether civil or criminal, in which judgment is given in his favor or in which such individual is acquitted, or in connection with any application under Section 76A(13) or 391 or any other provision of the Singapore Companies Act in which relief is granted to him or her by the court. It is expected that the restriction in Section 172 of the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to enable a company to indemnify its officers against third party liability, except in circumstances where such liability is for any criminal or regulatory fines or penalties, or where such liability is incurred in respect of (i) defending criminal proceedings in which he or she is convicted, (ii) defending civil proceedings commenced by the company or a related company against him in which judgment is given against him or (iii) in connection with an application for relief under section 76A(13) or section 391 of the Singapore Companies Act in which the court refuses to grant him relief.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force concerning companies and affecting us, our articles of association provide that each of our directors and other officers and those of our subsidiaries and affiliates shall be entitled to be indemnified by us or such subsidiary against any liability incurred by him or her arising out of or in connection with any acts, omissions or conduct, actual or alleged, by such individual acting in his or her capacity as either director, officer, secretary or employee of us or the relevant subsidiary, except to such extent as would not be permitted under applicable Singapore laws or which would otherwise result in such indemnity being void in accordance with the provisions of the Singapore Companies Act.

We may indemnify our directors and officers against costs, charges, fees, expenses and liabilities that may be incurred by any of them in defending any proceedings (whether civil or criminal) relating to anything done or omitted or alleged to be done or omitted by such person acting in his or her capacity as a director, officer or employee of our company, in which judgment is given in his or her favor, or in which he or she is acquitted or in which the courts have granted relief pursuant to the provisions of the Singapore Companies Act or other applicable statutes, provided that such indemnity shall not extend to any liability which by law would otherwise attach to him or her in respect of any negligence, default, breach of duty or breach of trust in relation to our company, or which would otherwise result in such indemnity being voided under applicable Singapore laws. No director or officer of our company shall be liable for any acts, omissions, neglects, defaults or other conduct of any other director or officer, and to the extent permitted by Singapore law, our company shall contribute to the amount paid or payable by a director or officer in such proportion as is appropriate to reflect the relative fault of such director or officer, taking into consideration any other relevant equitable considerations, including acts of other directors or officers and our company, and the relative fault of such parties in respect thereof.

In addition, no director, managing director or other officer shall be liable for the acts, receipts, neglects or defaults of any other director or officer, or for joining in any receipt or other act for conformity, or for any loss or expense incurred by us, through the insufficiency or deficiency of title to any property acquired by order of the directors for us or for the insufficiency or deficiency of any security upon which any of our moneys are invested or for any loss or damage arising from the bankruptcy, insolvency or tortious act of any person with whom any moneys, securities or effects are deposited, or any other loss, damage or misfortune which happens in the execution of his duties, unless the same happens through his own negligence, default, breach of duty or breach of trust.

We have entered into deeds of indemnity with each of our directors and our chief executive officer. These agreements will require us to indemnify these individuals to the fullest extent permitted under Singapore law against liabilities that may arise by reason of their service to us, and to advance expenses incurred as a result of any proceeding against them as to which they could be indemnified, subject to our company reserving its rights to recover the full amount of such advances in the event that he or she is subsequently found to have been negligent or otherwise have breached his or her trust or fiduciary duties to our company or to be in default thereof, or where the Singapore courts have declined to grant relief, as provided in the Singapore Companies Act. These indemnification rights shall not be

exclusive of any other right which an indemnified person may have or hereafter acquire under any statute, provision of our articles of association, agreement, vote of shareholders or disinterested directors or otherwise.

We expect to maintain standard policies of insurance that provide coverage (1) to our directors and officers against loss rising from claims made by reason of breach of duty or other wrongful act and (2) to us with respect to indemnification payments that we may make to such directors and officers.

The proposed form of Underwriting Agreement, to be filed as Exhibit 1.1 to the registration statement of which this prospectus forms a part, provides for indemnification to us, our directors and officers by the underwriters against certain liabilities.

Singapore Sales Restrictions

This prospectus has not been and will not be lodged with or registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the ordinary shares may not be circulated or distributed, nor may the ordinary shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor, as defined under Section 4A(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, under Section 274 of the SFA, (ii) to a "relevant person" as defined in Section 275(2) of the SFA pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the ordinary shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation has acquired any securities pursuant to an offer made in reliance on an exemption under Section 275 of the SFA except:

- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or (in the case of such corporation) where the transfer arises from an offer referred to in Section 275(1A) of the SFA or (in the case of such trust) where the transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets;
- where no consideration is or will be given for the transfer;
- were the transfer is by operation of law;
- as specified in Section 276(7) of the SFA; or
- as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

By accepting this prospectus, the recipient hereof represents and warrants that such recipient is entitled to receive it in accordance with the restrictions set forth above and agrees to be bound by the limitations contained herein. Any failure to comply with these limitations may constitute a violation of law.

Registration Rights

We are party to an investors' rights agreement dated as of August 14, 2015, pursuant to which all holders of our ordinary and preferred shares outstanding prior to this offering are entitled to demand Form S-3 and piggyback registration rights. Such shareholders have agreed not to exercise their registration rights during the lock-up period for this offering. See "Shares Eligible for Future Sale—Lock-up Agreements."

Demand Registration Rights

At any time after 180 days of the closing of this offering, the holders of at least a majority of the registrable securities have the right to require us to file one registration statement on Form S-1 to register all or a portion of their registrable securities provided that the anticipated aggregate offering price of the registrable securities to be sold under that registration statement on Form S-1 exceeds $25.0 million, net of underwriting discounts and commissions.

Form S-3 Registration Rights

After the closing of this offering, the holders of at least 30% of the registrable securities have the right to demand that we to file an unlimited number of registration statements on Form S-3 provided that the anticipated aggregate offering price of the registrable securities to be sold under the registration statement on Form S-3 exceeds $5.0 million, net of underwriting discounts and commissions.

Piggyback Registration Rights

If we propose to register any of our securities under the Securities Act of 1933, as amended, or the Securities Act, for sale to the public other than certain exceptions, the holders of registrable securities are entitled to receive notice of such registration and to request that we include their registrable securities for resale in the registration statement. The underwriters of the offering will have the right to limit the number of shares to be included in such registration.

Expenses of Registration; Indemnification

We are generally required to bear all registration expenses incurred in connection with the demand, Form S-3 and piggyback registrations described above, other than underwriting commissions and discounts and will pay the reasonable fees and expenses, not to exceed $25,000, of one special counsel to represent all participating shareholders in a registration. The investors' rights agreement contains customary indemnification provisions with respect to registration rights.

Termination of Registration Rights

The demand, Form S-3 and piggyback registration rights described above will terminate three years after the closing of this offering. In addition, the registration rights of a holder of registrable securities will expire if all of the holder's registrable securities may be sold in a three-month period under Rule 144 of the Securities Act.

Transfer Agent and Registrar and Register of Shareholders

The transfer agent and registrar for our ordinary shares will be Computershare Trust Company, N.A. Its address is 250 Royall Street, Canton, MA 02021.

Only persons who are registered in our shareholder register are recognized under Singapore law as shareholders of our company. We will not, except as required by applicable law, recognize any equitable, contingent, future or partial interest in any ordinary share or other rights for any ordinary share other than the absolute right thereto of the registered holder of that ordinary share. We may close our register of shareholders for any time or times, provided that our shareholder register may not be closed for an aggregate of more than 30 days in any calendar year. We typically close our shareholder register to, among others, determine shareholders' entitlement to receive dividends and other distributions and for the purposes of determining distribution of shareholder notices and related proxy voting materials to our shareholders or book-entry interest holders of our shares.

Listing

Our ordinary shares have been approved for listing on the NASDAQ Global Market under the symbol "WVE."

COMPARISON OF SHAREHOLDER RIGHTS

We are incorporated under the laws of Singapore. The following discussion summarizes material differences between the rights of holders of our ordinary shares and the rights of holders of the common stock of a typical corporation incorporated under the laws of the state of Delaware which result from differences in governing documents and the laws of Singapore and Delaware.

This discussion does not purport to be a complete statement of the rights of holders of our ordinary shares under applicable law in Singapore and our articles of association or the rights of holders of the common stock of a typical corporation under applicable Delaware law and a typical certificate of incorporation and bylaws.

The Singapore Companies Act contains the default articles that apply to a Singapore-incorporated company to the extent they are not excluded or modified by a company's articles of association. They provide examples of the common provisions adopted by companies in their articles of association. However, as is the usual practice for companies incorporated in Singapore, we have specifically excluded the application of these provisions in our articles of association, which we refer to below as our articles.

It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 such that public companies may not be permitted to adopt the model constitution to be prescribed under the Singapore Companies Act.

Delaware	Singapore
Board of Directors	
A typical certificate of incorporation and bylaws provides that the number of directors on the board of directors will be fixed from time to time by a vote of the majority of the authorized directors. Under Delaware law, a board of directors can be divided into classes and cumulative voting in the election of directors is only permitted if expressly authorized in a corporation's certificate of incorporation.	The memorandum and articles of association of companies will typically state the minimum and maximum number of directors as well as provide that the number of directors may be increased or reduced by shareholders via ordinary resolution passed at a general meeting, provided that the number of directors following such increase or reduction is within the maximum (if any) and minimum number of directors provided in our articles and the Singapore Companies Act, respectively.
Limitation on Personal Liability of Directors	
A typical certificate of incorporation provides for the elimination of personal monetary liability of directors for breach of fiduciary duties as directors to the fullest extent permissible under the laws of Delaware, except for liability (i) for any breach of a director's loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law (relating to the liability of directors for unlawful payment of a dividend or an unlawful stock purchase or redemption) or (iv) for any transaction from which the director derived an improper personal benefit. A typical certificate of incorporation also provides that if the Delaware General Corporation Law is amended so as to allow further elimination of, or limitations on, director liability, then the liability of directors will be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law as so amended.	Pursuant to the Singapore Companies Act, any provision (whether in the articles of association, a contract with the company or otherwise) exempting or indemnifying a director (including directors acting in an executive capacity) against any liability which by law would otherwise attach to him or her in respect of any negligence, default, breach of duty or breach of trust of which such director may be guilty in relation to the company will be void. However, a company may indemnify a director against any liability incurred by him or her (i) in defending any proceedings (whether civil or criminal) in which judgment is given in his favor or in which the director is acquitted or (ii) in connection with any application under section 76A(13) or section 391 or any other provision of the Singapore Companies Act, in which relief is granted to him by the court. Singapore counsel to our company has advised that nevertheless, under common law in Singapore, a director can be released by the shareholders of a company for breaches of duty to a company except in the case of fraud, illegality,

Delaware	Singapore
	insolvency and oppression or disregard of minority interests. Our articles provide that subject to the provisions of the Singapore Companies Act, every director, managing director, secretary and other officer of the Company and its subsidiaries and affiliates, will be indemnified against any liability incurred by such person in defending any proceedings, whether civil or criminal, which relate to anything done or omitted or alleged to be done or omitted by such person as an officer or employee of the company and in which judgment is given in their favor or in which such person is acquitted or in connection with any application under the Singapore Companies Act or any other Singapore statute in which relief is granted to such person by the court unless the same should happen through their own negligence, default, breach of duty or breach of trust. Our company shall indemnify each of our directors to the extent permitted under applicable Singapore laws and shall procure indemnity insurance for each of our directors and officers. It is expected that the restriction in Section 172 of the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to enable a company to indemnify its officers against third party liability, except in circumstances where such liability is for any criminal or regulatory fines or penalties, or where such liability is incurred in respect of (i) defending criminal proceedings in which he or she is convicted, (ii) defending civil proceedings commenced by the company or a related company against him in which judgment is given against him or (iii) in connection with an application for relief under section 76A(13) or section 391 of the Singapore Companies Act in which the court refuses to grant him relief.
Interested Shareholders	
Section 203 of the Delaware General Corporation Law generally prohibits a Delaware corporation from engaging in specified corporate transactions (such as mergers, stock and asset sales, and loans) with an “interested stockholder” for three years following the time that the stockholder becomes an interested stockholder. Subject to specified exceptions, an “interested stockholder” is a person or group that owns 15% or more of the corporation’s outstanding voting stock (including any rights to acquire stock pursuant to an option, warrant, agreement, arrangement or understanding, or upon the exercise of conversion or exchange rights, and stock with respect to which the person has voting rights only), or is	There are no comparable provisions in Singapore with respect to public companies which are not listed on the Singapore Exchange Securities Trading Limited.

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an affiliate or associate of the corporation and was the owner of 15% or more of the voting stock at any time within the previous three years. A Delaware corporation may elect to “opt out” of, and not be governed by, Section 203 through a provision in either its original certificate of incorporation, or an amendment to its original certificate or bylaws that was approved by majority stockholder vote. With a limited exception, this amendment would not become effective until 12 months following its adoption.	
Removal of Directors	
A typical certificate of incorporation and bylaws provide that, subject to the rights of holders of any preferred stock, directors may be removed at any time by the affirmative vote of the holders of at least a majority, or in some instances a supermajority, of the voting power of all of the then outstanding shares entitled to vote generally in the election of directors, voting together as a single class. A certificate of incorporation could also provide that such a right is only exercisable when a director is being removed for cause (removal of a director only for cause is the default rule in the case of a classified board).	According to the Singapore Companies Act, directors of a public company may be removed before expiration of their term of office, notwithstanding anything in its memorandum or articles or in any agreement between the public company and such directors, by ordinary resolution (i.e., a resolution which is passed by a simple majority of those shareholders present and voting in person or by proxy). Notice of the intention to move such a resolution has to be given to the company not less than 28 days before the meeting at which it is moved. The company shall then give notice of such resolution to its shareholders not less than 14 days before the meeting. Where any director removed in this manner was appointed to represent the interests of any particular class of shareholders or debenture holders, the resolution to remove such director will not take effect until such director’s successor has been appointed.
Filling Vacancies on the Board of Directors	
A typical certificate of incorporation and bylaws provide that, subject to the rights of the holders of any preferred stock, any vacancy, whether arising through death, resignation, retirement, disqualification, removal, an increase in the number of directors or any other reason, may be filled by a majority vote of the remaining directors, even if such directors remaining in office constitute less than a quorum, or by the sole remaining director. Any newly elected director usually holds office for the remainder of the full term expiring at the annual meeting of stockholders at which the term of the class of directors to which the newly elected director has been elected expires.	The articles of a Singapore company typically provide that the directors have the power to appoint any person to be a director, either to fill a vacancy or as an addition to the existing directors, but so that the total number of directors will not at any time exceed the maximum number (if any) fixed in the articles. Any director so appointed shall hold office until the next following annual general meeting, where such director will then be eligible for re-election. Our articles provide that the directors may appoint any person to be a director as an additional director or to fill a vacancy provided that any person so appointed will only hold office until the next annual general meeting, and will then be eligible for re-election.
Amendment of Governing Documents	
Under the Delaware General Corporation Law, amendments to a corporation’s certificate of incorporation require the approval of stockholders holding a majority of	Our memorandum and articles may be altered by special resolution (i.e., a resolution passed by at least a three-fourths majority of the shareholders entitled to

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the outstanding shares entitled to vote on the amendment. If a class vote on the amendment is required by the Delaware General Corporation Law, a majority of the outstanding stock of the class is required, unless a greater proportion is specified in the certificate of incorporation or by other provisions of the Delaware General Corporation Law. Under the Delaware General Corporation Law, the board of directors may amend bylaws if so authorized in the charter. The stockholders of a Delaware corporation also have the power to amend bylaws.	vote, present in person or by proxy at a meeting for which not less than 21 days' written notice is given). The board of directors has no right to amend the memorandum or articles. Under the Singapore Companies Act, an entrenching provision may be included in the memorandum or articles with which a company is formed and may at any time be inserted into the memorandum or articles of a company only if all the shareholders of the company agree. An entrenching provision is a provision of the memorandum or articles of a company to the effect that other specified provisions of the memorandum or articles may not be altered in the manner provided by the Singapore Companies Act or may not be so altered except (i) by a resolution passed by a specified majority greater than 75% (the minimum majority required by the Singapore Companies Act for a special resolution) or (ii) where other specified conditions are met. The Singapore Companies Act provides that such entrenching provision may be removed or altered only if all the members of the company agree. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Singapore Companies (Amendment) Act 2014 to include provisions whereby the constitutional documents of a company shall no longer be referred to as its memorandum of association and articles of association, but as its constitution.

Meetings of Shareholders

Annual and Special Meetings Typical bylaws provide that annual meetings of stockholders are to be held on a date and at a time fixed by the board of directors. Under the Delaware General Corporation Law, a special meeting of stockholders may be called by the board of directors or by any other person authorized to do so in the certificate of incorporation or the bylaws.	*Annual General Meetings* All companies are required to hold an annual general meeting once every calendar year and not more than 15 months after the date of the most recent annual general meeting. The first annual general meeting must be held within 18 months of the company's incorporation and subsequently, not more than 15 months may elapse between annual general meetings. *Extraordinary General Meetings* Any general meeting other than the annual general meeting is called an "extraordinary general meeting". Notwithstanding anything in the articles, directors of a company are required to convene an extraordinary general meeting if required to do so by requisition (i.e. written notice, requiring that a meeting be called, given to the directors) by shareholder(s) holding not less than 10% of the total number of paid-up shares as at the date of the deposit of the requisition carrying the right

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	of voting at general meetings of the company. In addition, the articles usually also provide that general meetings may be convened in accordance with the Singapore Companies Act by the directors.
Quorum Requirements	*Quorum Requirements*
Under the Delaware General Corporation Law, a corporation's certificate of incorporation or bylaws can specify the number of shares which constitute the quorum required to conduct business at a meeting, provided that in no event shall a quorum consist of less than one-third of the shares entitled to vote at a meeting.	Our articles provide that any two shareholders entitled to vote, holding in aggregate at least a majority of the number of our issued and paid-up shares, present in person or by proxy at a meeting, shall constitute a quorum. In the event a quorum is not present, the meeting may be adjourned for one week. When reconvened, the quorum for the meeting will be any two shareholders entitled to vote holding between them at least a majority of the number of our issued and paid-up shares, present in person or by proxy at such meeting.
	Shareholders' Rights at Meetings
	The Singapore Companies Act provides that every member shall, notwithstanding any provision in the memorandum or articles, have a right to attend any general meeting of the company and to speak and vote on any resolution before the meeting except that the company's articles may provide that a member shall not be entitled to vote unless all calls or other sums personally payable by him in respect of shares in the company have been paid. Notwithstanding the foregoing, the articles of association may provide that holders of preferred shares as defined in Section 4(1) of the Singapore Companies Act shall not have a right to vote at any general meeting other than in specified circumstances.
	It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to allow public companies to issue non-voting shares, such that shareholders' entitlements under the Singapore Companies Act will extend only to attending and speaking at general meetings.
	Circulation of Shareholders' Resolutions
	Under the Singapore Companies Act, (a) any number of shareholders representing not less than 5% of the total voting rights of all the shareholders having at the date of requisition a right to vote at a meeting to which the requisition relates or (b) not less than 100 members holding shares on which there has been paid up an average sum, per shareholder, of not less than S$500, may requisition the company to give to shareholders notice of any resolution which may properly be moved and is intended to be moved at the next annual general meeting, and circulate to shareholders any statement of not more than 1,000 words with respect to the matter referred to in any proposed resolution or the business to be dealt with at that meeting.

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Indemnification of Officers, Directors and Employees

Under the Delaware General Corporation Law, subject to specified limitations in the case of derivative suits brought by a corporation's stockholders in its name, a corporation may indemnify any person who is made a party to any third-party action, suit or proceeding on account of being a director, officer, employee or agent of the corporation (or was serving at the request of the corporation in such capacity for another corporation, partnership, joint venture, trust or other enterprise) against expenses, including attorney's fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with the action, suit or proceeding through, among other things, a majority vote of a quorum consisting of directors who were not parties to the suit or proceeding, if the person:

- acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation or, in some circumstances, at least not opposed to its best interests; and
- in a criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Delaware corporate law permits indemnification by a corporation under similar circumstances for expenses (including attorneys' fees) actually and reasonably incurred by such persons in connection with the defense or settlement of a derivative action or suit, except that no indemnification may be made in respect of any claim, issue or matter as to which the person is adjudged to be liable to the corporation unless the Delaware Court of Chancery or the court in which the action or suit was brought determines upon application that the person is fairly and reasonably entitled to indemnity for the expenses which the court deems to be proper.

To the extent a director, officer, employee or agent is successful in the defense of such an action, suit or proceeding, the corporation is required by Delaware corporate law to indemnify such person for reasonable expenses incurred thereby. Expenses (including attorneys' fees) incurred by such persons in defending any action, suit or proceeding may be paid in advance of the final disposition of such action, suit or proceeding upon receipt of an undertaking by or on behalf of that person to repay the amount if it is ultimately determined that that person is not entitled to be so indemnified.

Section 172 of the Singapore Companies Act prohibits a company from exempting or indemnifying its officers (including directors acting in an executive capacity) or auditors against liability, which by law would otherwise attach to them for any negligence, default, breach of duty or breach of trust of which they may be guilty relating to the company.

However, the Singapore Companies Act allows a company to:

- purchase and maintain for any officer insurance against any liability which by law would otherwise attach to such officer in respect of any negligence, default, breach of duty or breach of trust of which such officer may be guilty in relation to the company;
- indemnify such officer or auditor against any liability incurred by such officer or auditor in defending any proceedings (whether civil or criminal) in which judgment is given in such officer's favor or in which such officer is acquitted; or
- indemnify such officer or auditor against any liability incurred by such officer or auditor in connection with any application under specified portions of the Singapore Companies Act in which relief is granted to such officer or auditor by a court.

In cases where a director is sued by the company, the Singapore Companies Act gives the court the power to relieve directors either wholly or partially from the consequences of their negligence, default, breach of duty or breach of trust. In order for relief to be obtained, it must be shown that (i) the director acted reasonably and honestly; and (ii) it is fair, having regard to all the circumstances of the case including those connected with such director's appointment, to excuse the director. However, Singapore case law has indicated that such relief will not be granted to a director who has benefited as a result of his or her breach of trust.

Our articles provide that subject to the provisions of the Singapore Companies Act, every director, managing director, secretary and other officer for the time being of our company and our subsidiaries and affiliates, will be indemnified by the company against any liability incurred by such person in defending any proceedings, whether civil or criminal, which relates to anything done or omitted or alleged to be done or omitted by

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	such person as an officer or employee of the company and in which judgment is given in their favor or in which such person is acquitted or in connection with any application under the Singapore Companies Act or any other Singapore statute in which relief is granted to such person by the court unless the same shall happen through their own negligence, default, breach of duty or breach of trust. It is expected that the restriction in Section 172 of the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to enable a company to indemnify its officers against third party liability, except in circumstances where such liability is for any criminal or regulatory fines or penalties, or where such liability is incurred in respect of (i) defending criminal proceedings in which he or she is convicted, (ii) defending civil proceedings commenced by the company or a related company against him in which judgment is given against him or (iii) in connection with an application for relief under section 76A(13) or section 391 of the Singapore Companies Act in which the court refuses to grant him relief.
Shareholder Approval of Issuances of Shares	
Under Delaware law, the board of directors has the authority to issue, from time to time, capital stock in its sole discretion, as long the number the shares to be issued, together with those shares that are already issued and outstanding and those shares reserved to be issued, do not exceed the authorized capital for the corporation as previously approved by the stockholders and set forth in the corporation's certificate of incorporation. Under the foregoing circumstances, no additional stockholder approval is required for the issuance of capital stock. Under Delaware law, stockholder approval is required (i) for any amendment to the corporation's certificate of incorporation to increase the authorized capital and (ii) for the issuance of stock in a direct merger transactions where the number of shares exceeds 20% of the corporation's shares outstanding prior to the transaction, regardless of whether there sufficient authorized capital.	Section 161 of the Singapore Companies Act provides that notwithstanding anything in the company's memorandum or articles, the directors shall not exercise any power to issue shares without prior approval of Company's shareholders at a general meeting of shareholders. The affirmative vote of shareholders holding at least a majority of the ordinary shares held by the shareholders present in person or represented by proxy at the annual general meeting and entitled to vote is required for this authorization. Once this shareholders' approval is obtained, unless previously revoked or varied by the company in general meeting, it continues in force until the conclusion of the next annual general meeting or the expiration of the period within which the next annual general meeting after that date is required by law to be held, whichever is earlier. Notwithstanding this general authorization to allot and issue our ordinary shares, WAVE will be required to seek shareholder approval with respect to future issuances of ordinary shares, where required under the NASDAQ Stock Market rules, such as if we were to propose an issuance of ordinary shares that would result in a change in control of WAVE or in connection with a transaction involving the issuance of ordinary shares representing 20% or more of our outstanding ordinary shares.

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Shareholder Approval of Business Combinations

Generally, under the Delaware General Corporation Law, completion of a merger, consolidation, or the sale, lease or exchange of substantially all of a corporation's assets or dissolution requires approval by the board of directors and by a majority (unless the certificate of incorporation requires a higher percentage) of outstanding stock of the corporation entitled to vote.

The Delaware General Corporation Law also requires a special vote of stockholders in connection with a business combination with an "interested stockholder" as defined in section 203 of the Delaware General Corporation Law. See "—Interested Shareholders" above.

The Singapore Companies Act mandates that specified corporate actions require approval by the shareholders in a general meeting, notably:

- notwithstanding anything in the company's memorandum or articles, directors are not permitted to carry into effect any proposals for disposing of the whole or substantially the whole of the company's undertaking or property unless those proposals have been approved by shareholders in a general meeting;
- the company may by special resolution resolve that it be wound up voluntarily or the court;
- subject to the memorandum of each amalgamating company, an amalgamation proposal must be approved by the shareholders of each amalgamating company via special resolution at a general meeting;
- a compromise or arrangement proposed between a company and its shareholders, or any class of them, must, among other things, be approved by a majority in number representing three-fourths in value of the shareholders or class of shareholders present and voting either in person or by proxy at the meeting ordered by the court; and
- notwithstanding anything in the company's memorandum or articles, the directors may not, without the prior approval of shareholders, issue shares, including shares being issued in connection with corporate actions.

Shareholder Action Without A Meeting

Under the Delaware General Corporation Law, unless otherwise provided in a corporation's certificate of incorporation, any action that may be taken at a meeting of stockholders may be taken without a meeting, without prior notice and without a vote if the holders of outstanding stock, having not less than the minimum number of votes that would be necessary to authorize such action, consent in writing. It is not uncommon for a corporation's certificate of incorporation to prohibit such action.

There are no equivalent provisions in respect of public companies which are listed on a securities exchange outside Singapore, like our company. As a result, shareholder action by written consent is not permitted.

Shareholder Suits

Under the Delaware General Corporation Law, a stockholder may bring a derivative action on behalf of the corporation to enforce the rights of the corporation. An individual also may commence a class action suit on

Standing

Only registered shareholders of our company reflected in our shareholder register are recognized under Singapore law as shareholders of our company. As a

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behalf of himself or herself and other similarly situated stockholders where the requirements for maintaining a class action under the Delaware General Corporation Law have been met. A person may institute and maintain such a suit only if such person was a stockholder at the time of the transaction which is the subject of the suit or his or her shares thereafter devolved upon him or her by operation of law. Additionally, under Delaware case law, the plaintiff generally must be a stockholder not only at the time of the transaction which is the subject of the suit, but also through the duration of the derivative suit. The Delaware General Corporation Law also requires that the derivative plaintiff make a demand on the directors of the corporation to assert the corporate claim before the suit may be prosecuted by the derivative plaintiff, unless such demand would be futile.	result, only registered shareholders have legal standing to institute shareholder actions against us or otherwise seek to enforce their rights as shareholders. Holders of book-entry interests in our shares will be required to exchange their book-entry interests for certificated shares and to be registered as shareholders in our shareholder register in order to institute or enforce any legal proceedings or claims against us, our directors or our executive officers relating to shareholder rights. A holder of book-entry interests may become a registered shareholder of our company by exchanging its interest in our shares for certificated shares and being registered in our shareholder register. *Personal remedies in cases of oppression or injustice* A shareholder may apply to the court for an order under Section 216 of the Singapore Companies Act to remedy situations where (i) the company's affairs are being conducted or the powers of the company's directors are being exercised in a manner oppressive to, or in disregard of the interests of one or more of the shareholders or holders of debentures of the company, including the applicant; or (ii) the company has done an act, or threatens to do an act, or the shareholders or holders of debentures have passed some resolution, which unfairly discriminates against, or is otherwise prejudicial to, one or more of the company's shareholders or holders of debentures, including the applicant. Singapore courts have wide discretion as to the relief they may grant under such application, including, *inter alia*, directing or prohibiting any act or cancelling or varying any transaction or resolution, providing that the company be wound up, or authorizing civil proceedings to be brought in the name of or on behalf of the company by such person or persons and on such terms as the court directs. *Derivative actions and arbitrations* The Singapore Companies Act has a provision which provides a mechanism enabling shareholders to apply to the court for leave to bring a derivative action or commence an arbitration on behalf of the company. Derivative actions are also allowed as a common law action. Applications are generally made by shareholders of the company, but courts are given the discretion to allow such persons as they deem proper to apply (e.g., beneficial owner of shares). It should be noted that this provision of the Singapore Companies Act is primarily used by minority shareholders to bring an action or arbitration in the

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	name and on behalf of the company or intervene in an action or arbitration to which the company is a party for the purpose of prosecuting, defending or discontinuing the action or arbitration on behalf of the company. Prior to commencing a derivative action or arbitration, the court must be satisfied that (i) 14 days' notice has been given to the directors of the company of the party's intention to commence such action or arbitration if the directors of the company do not bring, diligently prosecute or defend or discontinue the action, (ii) the party is acting in good faith and (iii) it appears to be prima facie in the interests of the company that the action be brought, prosecuted, defended or discontinued. *Class actions* The concept of class action suits, which allows individual shareholders to bring an action seeking to represent the class or classes of shareholders, does not exist in Singapore. However, it is possible as a matter of procedure for a number of shareholders to lead an action and establish liability on behalf of themselves and other shareholders who join in or who are made parties to the action. These shareholders are commonly known as "lead plaintiffs."
Distributions and Dividends; Repurchases and Redemptions	
The Delaware General Corporation Law permits a corporation to declare and pay dividends out of statutory surplus or, if there is no surplus, out of net profits for the fiscal year in which the dividend is declared and/or for the preceding fiscal year as long as the amount of capital of the corporation following the declaration and payment of the dividend is not less than the aggregate amount of the capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets. Under the Delaware General Corporation Law, any corporation may purchase or redeem its own shares, except that generally it may not purchase or redeem these shares if the capital of the corporation is impaired at the time or would become impaired as a result of the redemption. A corporation may, however, purchase or redeem out of capital shares that are entitled upon any distribution of its assets to a preference over another class or series of its shares if the shares are to be retired and the capital reduced.	The Singapore Companies Act provides that no dividends can be paid to shareholders except out of profits. The Singapore Companies Act does not provide a definition on when profits are deemed to be available for the purpose of paying dividends and this is accordingly governed by case law. Our articles provide that no dividend can be paid otherwise than out of profits. *Acquisition of a company's own shares* The Singapore Companies Act generally prohibits a company from acquiring its own shares or purporting to acquire the shares of its holding company or ultimate holding company, whether directly or indirectly, in any way, subject to certain exceptions. Any contract or transaction made or entered into in contravention of the aforementioned prohibition by which a company acquires or purports to acquire its own shares or shares in its holding company or ultimate holding company is void. However, provided that it is expressly permitted to do so by its articles and subject to the special conditions of each permitted acquisition contained in the Singapore Companies Act, a company may: n redeem redeemable preferred shares on such terms and in such manner as is provided by its

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	articles of association. Preferred shares may be redeemed out of capital if all the directors make a solvency statement in relation to such redemption in accordance with the Singapore Companies Act, and the company lodges a copy of the statement with the Registrar of Companies; n whether listed on a securities exchange in Singapore or any securities exchange outside Singapore, or not, make an off-market purchase of its own shares in accordance with an equal access scheme authorized in advance at a general meeting; n make a selective off-market purchase of its own shares in accordance with an agreement authorized in advance at a general meeting by a special resolution where persons whose shares are to be acquired and their associated persons have abstained from voting; and n whether listed on a securities exchange in Singapore or any securities exchange outside Singapore, or not, make an acquisition of its own shares under a contingent purchase contract which has been authorized in advance at a general meeting by a special resolution. A company may also purchase its own shares by an order of a Singapore court. The total number of ordinary shares in any class and non-redeemable preferred shares that may be acquired by a company in a relevant period may not exceed 20% (or such other prescribed percentage) of the total number of ordinary shares, or non-redeemable preferred shares (as the case may be) in that class as of the date of the resolution to acquire the shares. Where, however, a company has reduced its share capital by a special resolution or a Singapore court made an order to such effect, the total number of ordinary shares or non-redeemable preferred shares in any class shall be taken to be the total number of ordinary shares, or non-redeemable preferred shares (as the case may be) in that class as altered by the special resolution or the order of the court. Payment, including any expenses (including brokerage or commission) incurred directly in the acquisition by the company of its own shares, may be made out of the company's profits or capital, provided that the company is solvent.

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	Financial assistance for the acquisition of shares
	A public company or a company whose holding company or ultimate holding company is a public company may not give financial assistance to any person whether directly or indirectly for the purpose of or in connection with: n the acquisition or proposed acquisition of shares in the company or units of such shares; or n the acquisition or proposed acquisition of shares in its holding company or ultimate holding company, or units of such shares. Financial assistance may take the form of a loan, the giving of a guarantee, the provision of security, the release of an obligation, the release of a debt or otherwise. However, it should be noted that a company may provide financial assistance for the acquisition of its shares or shares in its holding company or ultimate holding company if it complies with the requirements (including approval by special resolution) set out in the Singapore Companies Act. Our articles provide that subject to the provisions of the Singapore Companies Act, we may purchase or otherwise acquire our own shares upon such terms and subject to such conditions as we may deem fit. These shares may be held as treasury shares or cancelled as provided in the Singapore Companies Act or dealt with in such manner as may be permitted under the Singapore Companies Act. On cancellation of the shares, the rights and privileges attached to those shares will expire.
Transactions with Officers or Directors	
Under the Delaware General Corporation Law, some contracts or transactions in which one or more of a corporation's directors has an interest are not void or voidable because of such interest provided that some conditions, such as obtaining the required approval and fulfilling the requirements of good faith and full disclosure, are met. Under the Delaware General Corporation Law, either (a) the stockholders or the board of directors of a corporation must approve in good faith any such contract or transaction after full disclosure of the material facts or (b) the contract or transaction must have been "fair" as to the corporation at the time it was approved. If board approval is sought, the contract or transaction must be approved in good faith by a majority of disinterested directors after full disclosure of material facts, even though less than a majority of a quorum.	Under the Singapore Companies Act, directors are not prohibited from dealing with the company, but where they have an interest in a transaction with the company, that interest must be disclosed to the board of directors. In particular, every director who is in any way, whether directly or indirectly, interested in a transaction or proposed transaction with the company must, as soon practicable after the relevant facts have come to such director's knowledge, declare the nature of such director's interest at a board of directors' meeting. In addition, a director who holds any office or possesses any property which directly or indirectly might create interests in conflict with such director's duties as director is required to declare the fact and the nature, character and extent of the conflict at a meeting of directors.

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	The Singapore Companies Act extends the scope of this statutory duty of a director to disclose any interests by pronouncing that an interest of a member of a director's family (including spouse, son, adopted son, step-son, daughter, adopted daughter and step-daughter) will be treated as an interest of the director. A director shall not be deemed to be interested or at any time interested in a transaction or proposed transaction where the interest of the director consists only of being a member or creditor of a corporation which is interested in the transaction or proposed transaction with the company if the interest may properly be regarded as immaterial. Where the transaction or the proposed transaction relates to any loan to the company, no disclosure need be made where the director has only guaranteed the repayment of such loan, unless the articles of association provide otherwise. Further, where the transaction or the proposed transaction has been or will be made with or for the benefit of a related corporation (i.e. the holding company, subsidiary or subsidiary of a common holding company), the director shall not be deemed to be interested or at any time interested in such transaction or proposed transaction, unless the articles of association provide otherwise. Subject to specified exceptions, the Singapore Companies Act prohibits a company from making a loan to its directors or to directors of a related corporation, or giving a guarantee or security in connection with such a loan. Companies are also prohibited from making loans to its directors' spouse or children (whether adopted or natural or step-children), or giving a guarantee or security in connection with such a loan. Subject to specified exceptions, the Singapore Companies Act prohibits a company from making a loan to another company or entering into any guarantee or providing any security in connection with a loan made to another company by a person other than the first-mentioned company, if a director or directors of the first-mentioned company is or together are interested in 20% or more of the total number of equity shares in the other company (excluding treasury shares). Such prohibition shall extend to apply to a loan, guarantee or security in connection with a loan made by a company to another company where such other company is incorporated outside Singapore, if a director or directors of the first-mentioned company (a)

Delaware	Singapore
	is or together are interested in 20% or more of the total number of equity shares in the other company (excluding treasure shares) or (b) in a case where the other company does not have a share capital, exercises or together exercise control over the other company whether by reason of having the power to appoint directors or otherwise. The Singapore Companies Act also provides that an interest of a member of a director's family (including spouse, son, adopted son, step-son, daughter, adopted daughter and step-daughter) will be treated as an interest of the director. It is expected that the Singapore Companies Act will be amended in the second phase of implementation of the Companies (Amendment) Act 2014 to require disclosure by the chief executive officer of his or her interest and any conflict of interest, and to allow directors and chief executive officers to make disclosure by sending a written notice to the company containing details on the nature, character and extent of his or her interest. A company will also be prohibited from, among others, (i) making a quasi-loan to and (ii) entering into a credit transaction as creditor with, its directors or directors of a related corporation. In addition, a company will also be prohibited from, among others, (i) making a quasi-loan to and (ii) entering into a credit transaction as creditor for, another company or a limited liability partnership, if a director or directors of the first-mentioned company is or together are interested in 20% or more of the total voting power in the other company or the limited liability partnership, as the case may be, unless there is prior approval by the company in general meeting for the making of, provision for or entering into the loan, quasi-loan, credit transaction, guarantee or security (as the case may be) at which the interested director or directors and his or their family members abstained from voting.
Dissenters' Rights	
Under the Delaware General Corporation Law, a stockholder of a corporation participating in some types of major corporate transactions may, under varying circumstances, be entitled to appraisal rights pursuant to which the stockholder may receive cash in the amount of the fair market value of his or her shares in lieu of the consideration he or she would otherwise receive in the transaction.	There are no equivalent provisions in Singapore under the Singapore Companies Act.

Delaware	Singapore
Cumulative Voting	
Under the Delaware General Corporation Law, a corporation may adopt in its bylaws that its directors shall be elected by cumulative voting. When directors are elected by cumulative voting, a stockholder has the number of votes equal to the number of shares held by such stockholder times the number of directors nominated for election. The stockholder may cast all of such votes for one director or among the directors in any proportion.	There is no equivalent provision in respect of companies incorporated in Singapore.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our ordinary shares. Future sales of substantial amounts of our ordinary shares in the public market, or the perception that such sales may occur, could adversely affect the prevailing market price of our ordinary shares. No prediction can be made as to the effect, if any, future sales of shares, or the availability of shares for future sales, will have on the market price of our ordinary shares prevailing from time to time. The sale of substantial amounts of our ordinary shares in the public market, or the perception that such sales could occur, could harm the prevailing market price of our ordinary shares.

Upon completion of this offering we will have 20,933,297 ordinary shares outstanding. As a result of the lock-up agreements, other contractual restrictions on resale and the provisions of Rule 144, described below, our ordinary shares will be available for sale in the public market as follows: (i) 6,375,000 ordinary shares to be sold in this offering, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction or further registration under the Securities Act and (ii) 14,558,297 ordinary shares will be available for sale at various times after 180 days after the date of this prospectus (subject, in some cases, to volume limitations).

Sale of Restricted Shares

All of the ordinary shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except that any shares purchased by or owned by our "affiliates," as that term is defined in Rule 144 under the Securities Act, may generally only be sold publicly in compliance with the limitations of Rule 144 described below. As defined in Rule 144, an affiliate of an issuer is a person that directly or indirectly, through one or more intermediaries, controls, or is controlled by or is under common control with, such issuer. Based on each shareholder's ownership before this offering, immediately following the completion of this offering, 10,718,791 shares, or 51.2% of our ordinary shares, will be "restricted securities" as that term is used in Rule 144. Subject to contractual restrictions, including the lock-up agreement described below, the holders of these shares will be entitled to sell these shares in the public market only if the sale of such shares is registered with the SEC or if the sale of such shares qualifies for an exemption from registration under Rule 144 or any other applicable exemption under the Securities Act. At such time as these restricted shares become unrestricted and available for sale, the sale of these restricted shares, whether pursuant to Rule 144 or otherwise, may have a negative effect on the price of our ordinary shares.

Rule 144

In general, under Rule 144 of the Securities Act as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell such shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144 as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- 1% of the number of our ordinary shares then outstanding; or
- the average weekly trading volume of our ordinary shares during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Rule 144 also provides that a person who is not deemed to have been an affiliate of ours at any time during the three months preceding a sale and who has for at least six months beneficially owned ordinary shares that are restricted securities, will be entitled to freely sell such ordinary shares subject only to the availability of current public information regarding us. A person who is not deemed to have been an affiliate of ours at any time during the

three months preceding a sale and who has beneficially owned for at least one year our ordinary shares that are restricted securities, will be entitled to freely sell such ordinary shares under Rule 144 without regard to the current public information requirements of Rule 144.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who purchased shares from us in connection with a qualified compensatory share or option plan or other written agreement before the effective date of this offering is eligible to resell such shares 90 days after the effective date of this offering in reliance on Rule 144. Securities issued in reliance of Rule 701 are "restricted securities" and, subject to the contractual restrictions described below, beginning 90 days after the date of this prospectus, may be sold by persons other than "affiliates" subject only to the manner of sale provisions of Rule 144 and by "affiliates" under Rule 144 without compliance with its one year minimum holding requirement.

Registration Rights

As described above in "Certain Relationships and Related Party Transactions—Registration Rights," following the completion of this offering, subject to the 180-day lock-up period described below, all holders of our ordinary shares and preferred shares outstanding prior to this offering will be entitled, subject to certain exceptions, to certain rights with respect to the registration under the Securities Act of the ordinary shares held by them. By exercising their registration rights and causing a large number of shares to be registered and sold in the public market, our existing shareholders could cause the price of our ordinary shares to fall. In addition, any demand to include such shares in our registration statements could have a material adverse effect on our ability to raise needed capital. We have not granted any other holders of our securities any registration rights. See "Description of Share Capital—Registration Rights" for a description of these rights.

Form S-8 Registration Statements

We intend to file with the SEC one or more registration statements on Form S-8 under the Securities Act to register all ordinary shares ordinary shares that are issuable under the 2014 Plan. These registration statement will become effective upon filing with the SEC. Shares registered under such registration statement will be available for sale in the open market following the effective date, unless such shares are subject to vesting restrictions with us, Rule 144 restrictions applicable to our affiliates or the lock-up restrictions described below.

Lock-Up Agreements

We and each of our directors and executive officers, and holders of substantially all our outstanding share capital and other securities, have agreed that, without the prior written consent of Jefferies LLC and Leerink Partners LLC on behalf of the underwriters, we and they will not (subject to certain exceptions), during the period ending 180 days after the date of this prospectus:

- sell, offer to sell, contract to sell or lend, effect any short sale or establish or increase an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as amended, pledge, hypothecate or grant any security interest in, or in any other way transfer or dispose of, directly or indirectly, any ordinary shares or any other securities convertible into or exercisable or exchangeable for ordinary shares;
- enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of the ordinary shares or any other securities convertible or exercisable or exchangeable for ordinary shares, regardless of whether any transaction described above is to be settled by delivery of securities, in cash or otherwise;
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any ordinary shares or securities convertible or exchangeable or exercisable for ordinary shares, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration; or
- publicly announce any intention to do any of the foregoing.

The foregoing restriction shall not apply to transactions relating to ordinary shares purchased (i) in this offering and (ii) in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended, will be required or will be voluntarily made during the lock-up period in connection with any subsequent sales of such shares purchased in this offering or in the open market during the lock-up period.

For additional information, see the section titled “Underwriting.”

MATERIAL TAX CONSIDERATIONS

Material U.S. Federal Income Tax Considerations

Subject to the limitations and qualifications stated herein, this discussion sets forth a summary of material U.S. federal income tax consequences of the purchase, ownership and disposition of the ordinary shares. The discussion is based on the U.S. Internal Revenue Code of 1986, as amended, its legislative history, final, temporary and proposed regulations thereunder, published rulings and court decisions, all as currently in effect and all subject to change at any time, possibly with retroactive effect. We cannot assure you that a change in law will not alter significantly the tax considerations described in this summary. We have not sought and do not expect to seek any rulings from the U.S. Internal Revenue Service, or the IRS, regarding the matters discussed below. There can be no assurance that the IRS will not take positions concerning the tax consequences of the purchase, ownership or disposition of our ordinary shares that differ from those discussed below.

The discussion of the holders' tax consequences addresses only those persons that acquire their ordinary shares in this offering and that hold those ordinary shares as capital assets (generally, property held for investment) and does not address the tax consequences to any special class of holder, including without limitation, holders of (directly, indirectly or constructively) 10% or more of the ordinary shares, dealers in securities or currencies, banks, tax-exempt organizations, qualified retirement plans, individual retirement accounts and other tax-deferred accounts, life insurance companies, financial institutions, broker-dealers, regulated investment companies, real estate investment trusts, traders in securities that elect the mark-to-market method of accounting for their securities holdings, persons that hold securities that are a hedge or that are hedged against currency or interest rate risks or that are part of a straddle, conversion or "integrated" transaction, persons that are not U.S. Holders (as defined below), persons who acquired our ordinary shares pursuant to the exercise of an employee share option or otherwise as compensation, partnerships or other entities classified as partnerships for U.S. federal income tax purposes and U.S. Holders (as defined below) whose functional currency for U.S. federal income tax purposes is not the U.S. dollar. This discussion does not address the effect of the U.S. federal alternative minimum tax, or U.S. federal gift, estate or generation-skipping transfer tax, or any state, local or foreign tax laws on a holder of ordinary shares.

For purposes of this discussion, a "U.S. Holder" is a beneficial owner of ordinary shares that is for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust (i) if a court within the U.S. can exercise primary supervision over its administration, and one or more U.S. persons have the authority to control all of the substantial decisions of that trust, or (ii) that was in existence on August 20, 1996, and validly elected under applicable Treasury Regulations to continue to be treated as a domestic trust.

If a partnership or an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes holds our ordinary shares, the U.S. federal income tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. Partnerships that hold our ordinary shares and partners in such partnerships should consult their own tax advisors regarding the particular U.S. federal, state, local and foreign tax consequences of owning and disposing of ordinary shares.

If you are considering the purchase of our ordinary shares, you should consult your own tax advisors concerning the particular U.S. federal income tax consequences to you of the purchase, ownership and disposition of our ordinary shares, as well as the consequences to you arising under other U.S. federal tax laws and the laws of any other applicable taxing jurisdiction and any applicable tax treaty in light of your particular circumstances.

Dividends and Other Distributions

As described in the section titled "Dividend Policy," we do not currently anticipate declaring or paying cash dividends to holders of our ordinary shares in the foreseeable future. However, subject to the discussion below on the

passive foreign investment company rules, if we do make distributions of cash or other property in respect of our ordinary shares, other than certain pro rata distributions of ordinary shares, the U.S. dollar amount of the gross amount of any such distribution will be taxable as a dividend, to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Such income will be includable in your gross income on the day actually or constructively received by you. The amount of any distribution of property other than cash will be the fair market value of that property on the date of distribution. To the extent the amount of the distribution exceeds our current and accumulated earnings and profits (as determined under U.S. federal income tax principles), such excess amount will be treated first as a tax-free return of your tax basis in your ordinary shares, and then, to the extent such excess amount exceeds your tax basis in your ordinary shares, as capital gain. We, however, may not calculate earnings and profits in accordance with U.S. federal tax principles. In that case, we intend to treat the full amount of any distribution by us to U.S. Holders as a dividend for U.S. federal income tax purposes. The amount of the dividend will generally be treated as foreign-source dividend income to U.S. Holders. U.S. Holders of the ordinary shares that are corporations generally will not be entitled to claim a "dividends received deduction" with respect to dividends paid on the ordinary shares.

Dividends received by a non-corporate U.S. Holder, including an individual, may qualify for the lower rates of tax applicable to "qualified dividend income," provided that (i) we are not a passive foreign investment company (as defined below) for our taxable year in which the dividend is paid or in the preceding taxable year, and (ii) certain holding period and other requirements are met.

You should consult your own tax advisors regarding the availability of the lower tax rates applicable to qualified dividend income for any dividends that we pay with respect to the ordinary shares, as well as the effect of any change in applicable law.

A U.S. Holder who pays (whether directly or through withholding) Singapore income tax with respect to dividends paid on our ordinary shares generally will be entitled, at the election of such U.S. Holder, to receive either a deduction or credit for such Singapore income tax paid. The rules relating to the determination of the foreign tax credit are complex and you should consult your own tax advisors regarding the availability of a foreign tax credit in your particular circumstances.

Disposition of the Ordinary Shares

You will recognize gain or loss on a sale, exchange or other taxable disposition of our ordinary shares in an amount equal to the difference between the amount realized (in U.S. dollars) on the sale, exchange or taxable disposition and your tax basis (in U.S. dollars) in the ordinary shares. Subject to the passive foreign investment company rules discussed below, such gain or loss generally will be capital gain or loss. If you are a non-corporate U.S. Holder, including an individual, that has held the ordinary shares for more than one year, you will be eligible for reduced tax rates. The deductibility of capital losses is subject to limitations.

Any gain or loss that you recognize on a disposition of our ordinary shares generally will be treated as U.S.-source income or loss for foreign tax credit limitation purposes. You should consult your own tax advisors regarding the proper treatment of gain or loss, as well as the availability of a foreign tax credit, in your particular circumstances.

Passive Foreign Investment Company

Based on the current and anticipated value of our assets and the composition of our income and assets, we do not expect to be treated as a passive foreign investment company, or PFIC, for U.S. federal income tax purposes for our current taxable year ending December 31, 2015; however, there can be no assurance that we will not be considered a PFIC for any taxable year. The determination of PFIC status is based on an annual determination that cannot be made until the close of a taxable year, involves extensive factual investigation, including ascertaining the fair market value of all of our assets on a quarterly basis and the character of each item of income that we earn, and is subject to uncertainty in several respects. Moreover, our ability to earn specific types of income that we currently treat as non-passive for purposes of the PFIC rules is uncertain with respect to future years. Accordingly, we cannot assure you that we will not be treated as a PFIC for our current taxable year ending December 31, 2015, or for any future taxable year or that the IRS will not take a contrary position. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., our U.S. tax counsel, therefore expresses no opinion with respect to our PFIC status for any taxable year or our expectations relating to such status set forth in this paragraph.

A non-U.S. corporation will be treated as a PFIC for U.S. federal income tax purposes for any taxable year if, applying applicable look-through rules, either:

- at least 75% of its gross income for such year is passive income; or
- at least 50% of the value of its assets (determined based on a quarterly average) during such year is attributable to assets that produce or are held for the production of passive income.

For these purposes, we will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, at least 25% by value of the stock or shares. Subject to various exceptions, passive income generally includes dividends, interest, capital gains, royalties and rents (other than certain royalties and rents derived in the active conduct of a trade or business and not derived from a related person).

We must make a separate determination each year as to whether we are a PFIC. As a result, our PFIC status may change. Because PFIC status must be determined annually based on tests which are factual in nature, our PFIC status in future years will depend on our income, assets and activities in those years. Furthermore, because the value of our gross assets is likely to be determined in large part by reference to our market capitalization and the value of our goodwill, a decline in the value of our shares could affect the determination of whether we are a PFIC. There can be no assurance that we will not be considered a PFIC for any taxable year. If we are a PFIC for any taxable year during which you hold ordinary shares, we generally will continue to be treated as a PFIC for all succeeding years during which you hold the ordinary shares. However, if we cease to be a PFIC, you may avoid some of the adverse effects of the PFIC regime by making a “deemed sale” election with respect to the ordinary shares, as applicable.

If we are or become a PFIC in a taxable year in which we pay a dividend or the prior taxable year, the preferential tax rates discussed above with respect to dividends paid to non-corporate U.S. Holders would not apply. In addition, if we are a PFIC for any taxable year during which you hold ordinary shares, in the absence of a “qualifying electing fund” election (which, as noted below, will not be available to you), you will be subject to special tax rules with respect to any “excess distribution” that you receive and any gain you realize from a sale or other disposition (including, under certain circumstances, a pledge) of the ordinary shares, unless you make a “mark-to-market” election as discussed below. Distributions you receive in a taxable year that are greater than 125% of the average annual distributions you received during the shorter of the three preceding taxable years or your holding period for the ordinary shares will be treated as an excess distribution. Under these special tax rules:

- the excess distribution or gain will be allocated ratably over your holding period for the ordinary shares,
- the amount allocated to the current taxable year, and any taxable year prior to the first taxable year in which we became a PFIC, will be treated as ordinary income, and
- the amount allocated to each other year will be subject to the highest tax rate in effect for individuals or corporations, as appropriate, for that year and the interest charge generally applicable to underpayments of tax will be imposed on the resulting tax attributable to each such year.

The tax liability for amounts allocated to years prior to the year of disposition or “excess distribution” cannot be offset by any net operating losses for such years, and gains (but not losses) realized on the sale of the ordinary shares cannot be treated as capital, even if you hold the ordinary shares as capital assets.

If we are treated as a PFIC with respect to you for any taxable year, to the extent any of our subsidiaries are also PFICs, you will be deemed to own shares in such lower-tier PFICs that are directly or indirectly owned by us in the proportion that the value of the ordinary shares you own bears to the value of all of our ordinary shares, and you may be subject to the rules described in the preceding paragraphs with respect to the shares of such lower-tier PFICs you are deemed to own. You should consult your own tax advisor regarding the application of the PFIC rules to any of our subsidiaries.

In certain circumstances, a U.S. Holder of shares in a PFIC may avoid the adverse tax consequences described above by making a “qualified electing fund” election to include in income its pro rata share of the corporation’s income on a current basis. However, you may make a qualified electing fund election with respect to your ordinary shares only if we

agree to furnish you annually with a PFIC annual information statement as specified in the applicable Treasury regulations. We currently do not intend to prepare or provide the information that would enable you to make a qualified electing fund election.

Alternatively, a U.S. Holder of "marketable stock" (as defined below) in a PFIC may make a mark-to-market election with respect to such stock to elect out of the tax treatment discussed above. If you make a valid mark-to-market election for the ordinary shares you will include in income each year an amount equal to the excess, if any, of the fair market value of the ordinary shares as of the close of your taxable year over your adjusted basis in such ordinary shares. You are allowed a deduction for the excess, if any, of the adjusted basis of the ordinary shares over their fair market value as of the close of the taxable year. However, deductions are allowable only to the extent of any net mark-to-market gains on the ordinary shares included in your income for prior taxable years. Amounts included in your income under a mark-to-market election, as well as gain on the actual sale or other disposition of the ordinary shares, are treated as ordinary income. Ordinary loss treatment also applies to the deductible portion of any mark-to-market loss on the ordinary shares, as well as to any loss realized on the actual sale or disposition of the ordinary shares, to the extent that the amount of such loss does not exceed the net mark-to-market gains previously included for such ordinary shares. Your basis in the ordinary shares will be adjusted to reflect any such income or loss amounts. If you make such an election, the tax rules that apply to distributions by corporations that are not PFICs would apply to distributions by us, except that the preferential tax rate discussed above under "—Dividends and Other Distributions" would not apply. U.S. Holders should consult their tax advisers regarding the availability and advisability of making a mark-to-market election in their particular circumstances.

The mark-to-market election is available only for "marketable stock," which is stock that is traded in other than *de minimis* quantities on at least 15 days during each calendar quarter "regularly traded" on a qualified exchange or other market, as defined in applicable U.S. Treasury regulations. The NASDAQ Global Market is a qualified exchange. We anticipate that our ordinary shares will be regularly traded on the NASDAQ Global Market, and therefore, in 2015 and any subsequent year in which our ordinary shares continue to be regularly traded, the mark-to-market election would be available to a holder of our ordinary shares if we become a PFIC. If any of our subsidiaries are or become PFICs, the mark-to-market election will not be available with respect to the shares of such subsidiaries that are treated as owned by you. Consequently, you could be subject to the PFIC rules with respect to income of the lower-tier PFICs the value of which already had been taken into account indirectly via mark-to-market adjustments.

If you hold ordinary shares in any year in which we are a PFIC, you will also be subject to annual information reporting requirements.

The PFIC rules are complex, and you should consult your own tax advisors regarding the application of the PFIC rules to your investment in our ordinary shares and the availability, application and consequences of the elections discussed above.

Information Reporting and Backup Withholding

Unless an exception applies, information reporting to the IRS generally will be required with respect to payments on the ordinary shares and proceeds of the sale of the ordinary shares paid to U.S. Holders, other than corporations and other exempt recipients. Backup withholding, currently at the rate of 28%, may apply to those payments if such a holder fails to provide a taxpayer identification number to the paying agent and to certify that no loss of exemption from backup withholding has occurred. The amounts withheld under the backup withholding rules are not an additional tax and may be refunded, or credited against the holder's U.S. federal income tax liability, if any, provided the required information is furnished to the IRS.

In addition, certain U.S. Holders who are individuals that hold certain foreign financial assets (which may include the ordinary shares), or who have a beneficial interest in or signatory authority over certain foreign financial accounts, are required to report information relating to such assets or accounts, subject to certain exceptions.

You should consult your own tax advisor regarding the application of the information reporting and backup withholding requirements to your particular situation.

Medicare Tax

Certain U.S. Holders that are individuals, estates or trusts are required to pay up to an additional 3.8% tax on, among other things, interest, dividends and gains from the sale or other disposition of capital assets. Special rules apply and certain elections are available for certain U.S. Holders that are subject to the 3.8% tax on net investment income and hold shares in a PFIC. Each U.S. Holder that is an individual, estate or trust should consult its own tax advisors regarding the effect, if any, of this tax provision on their ownership and disposition of ordinary shares.

Information with Respect to Foreign Financial Assets

Certain U.S. Holders may be required to report information relating to an interest in our ordinary shares, subject to certain exceptions (including an exception for ordinary shares held in accounts maintained by certain U.S. financial institutions). U.S. Holders should consult their tax advisers regarding the effect, if any, of this requirement on their ownership and disposition of the ordinary shares.

Transfer Reporting Requirements

A U.S. Holder (including a U.S. tax-exempt entity) that acquires equity of a non-U.S. corporation may be required to file a Form 926 or a similar form with the IRS under certain circumstances. Penalties may be imposed upon a U.S. Holder that fails to comply with the reporting requirements. U.S. Holders should consult their tax advisers regarding the applicability of this requirement to the acquisition or disposition of the ordinary shares.

Disclosure of Reportable Transactions

If a U.S. Holder sells or disposes of the ordinary shares at a loss or otherwise incurs certain losses that meet certain thresholds, such U.S. Holder may be required to file a disclosure statement with the IRS. Failure to comply with these and other reporting requirements could result in the imposition of significant penalties.

POTENTIAL PURCHASERS OF OUR ORDINARY SHARES ARE URGED TO CONSULT THEIR OWN TAX ADVISORS TO DETERMINE THE U.S. FEDERAL, STATE, LOCAL, AND NON-U.S. INCOME, GIFT, ESTATE OR GENERATION-SKIPPING TRANSFER, AND OTHER TAX AND TAX TREATY CONSIDERATIONS OF PURCHASING, OWNING AND DISPOSING OF OUR ORDINARY SHARES.

Material Singapore Tax Considerations

The following discussion is a summary of material Singapore income tax, stamp duty and estate duty considerations relevant to the purchase, ownership and disposition of our ordinary shares by an investor who is not tax resident or domiciled in Singapore and who does not carry on business or otherwise have a presence in Singapore. The statements made herein regarding taxation are based on certain aspects of the tax laws of Singapore and administrative guidelines issued by the relevant authorities in force as of the date hereof and are subject to any changes in such laws or administrative guidelines, or in the interpretation of those laws or guidelines, occurring after such date, which changes could be made on a retroactive basis. The statements made herein do not describe all of the tax considerations that may be relevant to all our shareholders, some of which (such as dealers in securities) may be subject to different rules. The statements are not intended to be and do not constitute legal or tax advice and no assurance can be given that courts or fiscal authorities responsible for the administration of such laws will agree with the interpretation adopted therein. Each prospective investor should consult an independent tax advisor regarding all Singapore income and other tax consequences applicable to them from owning or disposing of our ordinary shares in light of the investor's particular circumstances.

Income Taxation Under Singapore Law

Dividend Distributions with Respect to Ordinary Shares

Singapore has a one-tier corporate income tax system. Under the one-tier corporate income tax system, the tax paid by a company that is tax resident in Singapore is a final tax. Any dividends paid by a company that is tax resident in Singapore are exempt from Singapore income tax in the hands of the company's shareholders. As our company will be a tax resident of Singapore, the dividends payable by our company will be one-tier tax-exempt dividends and will be exempt from Singapore income tax in the hands of our shareholders, regardless of their legal form or tax residence status. There will be no tax credits attached to the dividends payable by our company. There is no withholding tax on payment of dividends to non-resident shareholders.

Capital Gains upon Disposition of Ordinary Shares

Under current Singapore tax law, there is no tax on capital gains. As such, any profits from the disposal of our ordinary shares would not ordinarily be taxable in Singapore. However, if the gains from the disposal of ordinary shares are construed to be of an income nature (which could be the case if, for instance, the gains arise from carrying on a trade or business in Singapore), the disposal profits would be taxable as income rather than capital gains.

In addition, shareholders who apply, or who are required to apply, the Singapore Financial Reporting Standard 39 Financial Instruments—Recognition and Measurement, or FRS-39, for the purposes of Singapore income tax may be required to recognize gains or losses (not being gains or losses in the nature of capital) in accordance with the provisions of FRS 39 (as modified by the applicable provisions of Singapore income tax law) even though no sale or disposal of our ordinary shares is made. Singapore corporate shareholders who may be subject to such tax treatment should consult their own accounting and tax advisers regarding the Singapore income tax consequences of their acquisition, holding and disposal of our ordinary shares.

Stamp Duty

There is no Singapore stamp duty payable in respect of the issuance or holding of our ordinary shares. Singapore stamp duty will be payable if there is an instrument of transfer executed in Singapore or if there is an instrument of transfer executed outside of Singapore which is received in Singapore. Under Singapore law, stamp duty is not applicable to electronic transfers of our shares effected on a book entry basis. We therefore expect that no Singapore stamp duty will be payable in respect of ordinary shares purchased by U.S. holders in this offering assuming that they are acquired in book entry form through the facility established by our transfer agent and registrar. Where shares evidenced in certificated form are transferred and an instrument of transfer is executed between the parties, Singapore stamp duty is payable on an instrument of transfer of the shares at the rate of 0.2% of the consideration for, or market value of, the transferred shares, whichever is higher. The Singapore stamp duty is borne by the purchaser unless there is an agreement to the contrary. Where the instrument of transfer is executed outside of Singapore, Singapore stamp duty must be paid within 30 days of receipt in Singapore if the instrument of transfer is received in Singapore.

Estate Duty

Singapore estate duty has been abolished with effect from February 15, 2008 in relation to the estate of any person whose death has occurred on or after February 15, 2008.

Tax Treaties Regarding Withholding Taxes

There is no comprehensive avoidance of double taxation agreement between the United States and Singapore which applies to withholding taxes on dividends or capital gains.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated as of November 10, 2015, between us and Jefferies LLC and Leerink Partners LLC, as the representative of the underwriters named below, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of ordinary shares shown opposite its name below:

Underwriter	Number of Ordinary Shares
Jefferies LLC	2,550,000
Leerink Partners LLC	2,550,000
JMP Securities LLC	637,500
SunTrust Robinson Humphrey, Inc.	637,500
Total	6,375,000

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the ordinary shares if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the pricing of this offering, they currently intend to make a market in our ordinary shares as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for our ordinary shares, that you will be able to sell any of our ordinary shares held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the ordinary shares subject to their acceptance of the ordinary shares from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. In addition, the underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

Entities affiliated with RA Capital Management, LLC and certain other entities affiliated with our directors have indicated an interest in purchasing an aggregate of approximately $32.0 million of our ordinary shares in this offering at the initial public offering price. In addition, Teva Pharmaceutical Industries Ltd. has indicated an interest in purchasing an aggregate of up to approximately $30.0 million of our ordinary shares in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters could determine to sell more, less or no shares to any of these entities and any of these entities could determine to purchase more, less or no shares in this offering. Any ordinary shares purchased in this offering by Teva Pharmaceutical Industries Ltd. will not be subject to the lock-up agreement described under the caption "—No Sales of Similar Securities.

Commission and Expenses

The underwriters have advised us that they propose to offer the ordinary shares to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $0.672 per ordinary share. After the offering, the initial public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional ordinary shares in this offering.

	Per Share		Total	
	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares
Public offering price	$ 16.00	$ 16.00	$102,000,000	$117,300,000
Underwriting discounts and commissions paid by us	$ 1.12	$ 1.12	$ 7,140,000	$ 8,211,000
Proceeds to us, before expenses	$ 14.88	$ 14.88	$ 94,860,000	$109,089,000

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $3.6 million. We have also agreed to reimburse the underwriters for certain of their expenses incurred in connection with review by the Financial Industry Regulatory Authority, Inc. of the terms of this offering in an amount not to exceed $30,000.

Determination of Offering Price

Prior to this offering, there has not been a public market for our ordinary shares. Consequently, the initial public offering price for our ordinary shares was determined by negotiations between us and the underwriters. Among the factors that were considered in these negotiations were prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which our ordinary shares will trade in the public market subsequent to the offering or that an active trading market for our ordinary shares will develop and continue after the offering.

Listing

Our ordinary shares have been approved for listing on the NASDAQ Global Market under the trading symbol "WVE."

Stamp Taxes

If you purchase ordinary shares offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

Option to Purchase Additional Shares

We have granted the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of ordinary shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above.

No Sales of Similar Securities

We, our officers, directors and holders of substantially all our outstanding share capital and other securities have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer to sell, contract to sell or lend, effect any short sale or establish or increase an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as

amended, pledge, hypothecate or grant any security interest in, or in any other way transfer or dispose of, directly or indirectly, any ordinary shares or any other securities convertible into or exercisable or exchangeable for ordinary shares;

- enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of the ordinary shares or any other securities convertible or exercisable or exchangeable for ordinary shares, regardless of whether any transaction described above is to be settled by delivery of securities, in cash or otherwise;
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any ordinary shares or securities convertible or exchangeable or exercisable for ordinary shares, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration; or
- publicly announce any intention to do any of the foregoing.

The foregoing restriction shall not apply to transactions relating to ordinary shares purchased (i) in this offering and (ii) in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended, will be required or will be voluntarily made during the lock-up period in connection with any subsequent sales of such shares purchased in this offering or in the open market during the lock-up period.

The foregoing restriction terminates after the close of trading of our ordinary shares on and including the 180th day after the date of this prospectus.

The representatives may in their sole discretion and at any time or from time to time before the termination of the 180-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, they may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of our ordinary shares at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional ordinary shares in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional ordinary shares or purchasing our ordinary shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional ordinary shares. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our ordinary shares in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of ordinary shares on behalf of the underwriters for the purpose of fixing or maintaining the price of our ordinary shares. A syndicate covering transaction is the bid for or the purchase of ordinary shares on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriters’ purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our ordinary shares or preventing or retarding a decline in the market price of our ordinary shares. As a result, the price of our ordinary shares may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if our

ordinary shares originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we, nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our ordinary shares. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the websites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of ordinary shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of its affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

Leerink Partners LLC acted as a financial advisor to us in connection with our Series B preferred share financing, which we closed on August 14, 2015 and from which we received aggregate net proceeds of approximately $62.5 million. We compensated Leerink Partners LLC for their services as our financial advisor for this transaction. Leerink Partners LLC also acquired 80,830 of our Series B preferred shares through purchases by its related entities on the same terms as other investors.

In the ordinary course of their various business activities, the underwriters and certain of their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own accounts and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially our ordinary shares offered hereby. Any such short positions could adversely affect future trading prices of our ordinary shares offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling Restrictions

This prospectus does not constitute an offer to sell to, or a solicitation of an offer to buy from, anyone in any country or jurisdiction (i) in which such an offer or solicitation is not authorized, (ii) in which any person making such offer or solicitation is not qualified to do so or (iii) in which any such offer or solicitation would otherwise be unlawful. No action has been taken that would, or is intended to, permit a public offer of the ordinary shares or possession or distribution of this prospectus or any other offering or publicity material relating to the ordinary shares in any country or jurisdiction (other than the United States) where any such action for that purpose is required. Accordingly, each underwriter has undertaken that it will not, directly or indirectly, offer or sell any ordinary shares or have in its

possession, distribute or publish any prospectus, form of application, advertisement or other document or information in any country or jurisdiction except under circumstances that will, to the best of its knowledge and belief, result in compliance with any applicable laws and regulations and all offers and sales of the ordinary shares by it will be made on the same terms.

European Economic Area

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), an offer to the public of any ordinary shares which are the subject of the offering contemplated by this prospectus supplement and the accompanying prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any ordinary shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a "qualified investor" as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the underwriters or the underwriters nominated by us for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of ordinary shares shall require us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer ordinary shares to the public" in relation to the ordinary shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the ordinary shares to be offered so as to enable an investor to decide to purchase or subscribe to the ordinary shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated (each such person being referred to as a "relevant person").

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Bermuda

Securities may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act 2003 of Bermuda which regulates the sale of securities in Bermuda and it is not intended for any offer or sale of shares to the public to take place in Bermuda.

Australia

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

- a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;
- a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;
- a person associated with the company under Section 708(12) of the Corporations Act; or
- a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the securities issued to you pursuant to this prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong, or SFO, and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong ("CO") or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the initial purchaser will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This prospectus has not been and will not be lodged or registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the ordinary shares may not be circulated or distributed, nor may the ordinary shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Subject to Section 276(7) of the SFA and Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, where the ordinary shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferred within six months after that corporation has acquired any securities pursuant to an offer made in reliance on an exemption under Section 275 of the SFA unless:

- such transfer is made only to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or arises from an offer referred to in Section 275(1A) of the SFA;
- no consideration is or will be given for the transfer; or
- the transfer is by operation of law.

Subject to Section 276(7) of the SFA and Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, where the ordinary shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that trust has acquired the securities pursuant to an offer made under Section 275 of the SFA unless:

- such transfer is made only to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets;
- no consideration is or will be given for the transfer; or
- the transfer is by operation of law.

Switzerland

The ordinary shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a of the CO or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing relating to the ordinary shares or this offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to this offering, the company or the ordinary shares has been or will be filed with or approved by any Swiss regulatory authority.

Canada

The offering of our ordinary shares in Canada is being made on a private placement basis in reliance on exemptions from the prospectus requirements under the securities laws of each applicable Canadian province and territory where the ordinary shares may be offered and sold, and therein may only be made with investors that are purchasing as principal and that qualify as both an "accredited investor" as such term is defined in National Instrument 45-106 Prospectus and Registration Exemptions and as a "permitted client" as such term is defined in National Instrument

31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligation. Any offer and sale of our ordinary shares in any province or territory of Canada may only be made through a dealer that is properly registered under the securities legislation of the applicable province or territory wherein our ordinary shares are offered and/or sold or, alternatively, by a dealer that qualifies under and is relying upon an exemption from the registration requirements therein.

Any resale of our ordinary shares by an investor resident in Canada must be made in accordance with applicable Canadian securities laws, which may require resales to be made in accordance with prospectus and registration requirements, statutory exemptions from the prospectus and registration requirements or under a discretionary exemption from the prospectus and registration requirements granted by the applicable Canadian securities regulatory authority. These resale restrictions may under certain circumstances apply to resales of our ordinary shares outside of Canada.

Upon receipt of this document, each Canadian investor hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the securities described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. *Par la réception de ce document, chaque investisseur canadien confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.*

LEGAL MATTERS

The validity of the ordinary shares offered pursuant to this prospectus and certain other matters of Singapore law will be passed upon for us by Camford Law Corporation, Singapore. Selected legal matters as to U.S. law in connection with this offering will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts. Selected intellectual property matters will be passed upon for us by Choate Hall & Stewart LLP, Boston, Massachusetts. The underwriters are being represented by Cooley LLP, Boston, Massachusetts.

EXPERTS

The consolidated financial statements of WAVE Life Sciences Ltd. as of December 31, 2013 and 2014, and for the years then ended, have been included herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of KPMG LLP as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1 with the SEC with respect to our ordinary shares being offered by this prospectus. This prospectus is a part of and does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. For further information with respect to us and our ordinary shares, please refer to the registration statement, including its exhibits and schedules. Statements made in this prospectus relating to any contract or other document are not necessarily complete and you should refer to the exhibits attached to the registration statement for copies of the actual contract or document. You may read and copy all materials that we file with the SEC, including the registration statement and its exhibits and schedules, at the SEC's public reference room, located at 100 F Street, N.E., Washington, D.C. 20549, as well as on the website maintained by the SEC at www.sec.gov. Please call the SEC at 1-800-SEC-0330 for more information on the public reference room. Information contained on any website referenced in this prospectus does not and will not constitute a part of this prospectus or the registration statement on Form S-1 of which this prospectus is a part.

In addition, upon the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file periodic reports and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We also maintain a website at www.wavelifesciences.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus. Additionally, you may request a copy of any of our filings with the SEC at no cost, by writing or telephoning us at the following address:

WAVE Life Sciences Ltd.
8 Cross Street #10-00
PWC Building
Singapore 048424

You should rely only on the information contained in this prospectus or to which we have referred you. We have not and the underwriters have not authorized any person to provide you with different information or to make any representation not contained in this prospectus.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders
WAVE Life Sciences Ltd.:

We have audited the accompanying consolidated balance sheets of WAVE Life Sciences Ltd. and subsidiaries as of December 31, 2013 and 2014, and the related consolidated statements of operations, comprehensive loss, shareholders' (deficit) equity, and cash flows for the years then ended. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall 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 financial position of WAVE Life Sciences Ltd. and subsidiaries as of December 31, 2013 and 2014, and the results of their operations and their cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

/s/ KPMG LLP

Cambridge, Massachusetts
September 4, 2015, except for note 16, as to which the date is November 5, 2015

WAVE LIFE SCIENCES LTD.

CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31, 2013	December 31, 2014	June 30, 2015 (unaudited)
Assets			
Current assets:			
Cash	$ 439	$ 1,048	$ 7,779
Accounts receivable	95	200	—
Prepaid expenses and other current assets	75	103	114
Deferred tax assets	170	64	64
Deferred offering costs	—	72	669
Total current assets	779	1,487	8,626
Property and equipment, net	1,384	1,269	1,832
Deferred tax assets	160	182	83
Restricted cash	—	—	1,055
Total assets	$ 2,323	$ 2,938	$ 11,596
Liabilities and shareholders' (deficit) equity			
Current liabilities:			
Related party notes payable	$ 9,602	$ —	$ —
Accounts payable	176	125	2,057
Accrued expenses and other current liabilities	271	605	373
Deferred revenue	—	152	—
Current portion of capital lease obligation	—	—	62
Total current liabilities	10,049	882	2,492
Long-term liabilities:			
Capital lease obligation, net of current portion	—	—	109
Other liabilities	36	29	32
Total long-term liabilities	36	29	141
Total liabilities	$ 10,085	$ 911	$ 2,633
Commitments and Contingencies (Note 9)			
Shareholders' (deficit) equity:			
Series A preferred shares, no par value; 1,536,209, 3,901,348 and 3,901,348 shares issued and outstanding at December 31, 2013, December 31, 2014 and June 30, 2015, (unaudited), respectively	2,022	7,874	7,874
Ordinary shares, no par value; 484,585, 4,263,472 and 9,223,405 shares issued and outstanding at December 31, 2013, December 31, 2014 and June 30, 2015, (unaudited), respectively	638	9,973	22,446
Additional paid-in capital	—	—	1,650
Accumulated other comprehensive income	225	56	34
Accumulated deficit	(10,647)	(15,876)	(23,041)
Total shareholders' (deficit) equity	(7,762)	2,027	8,963
Total liabilities and shareholders' equity	$ 2,323	$ 2,938	$ 11,596

The accompanying notes are an integral part of the consolidated financial statements.

WAVE LIFE SCIENCES LTD.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Revenue	$ —	$ —	$ —	$ 152
Operating expenses:				
Research and development	1,920	2,395	1,087	3,457
General and administrative	1,654	2,999	1,173	3,789
Total operating expenses	3,574	5,394	2,260	7,246
Loss from operations	(3,574)	(5,394)	(2,260)	(7,094)
Other (expense) income:				
Interest expense	(111)	(12)	(12)	(15)
Other, net	37	261	215	43
Total other (expense) income	(74)	249	203	28
Loss before income taxes	(3,648)	(5,145)	(2,057)	(7,066)
Income tax benefit (provision)	330	(84)	(60)	(99)
Net loss	$ (3,318)	$ (5,229)	$ (2,117)	$ (7,165)
Net loss per share attributable to ordinary shareholders—basic and diluted	$ (1.90)	$ (1.34)	$ (0.60)	$ (0.82)
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted	1,743,014	3,911,556	3,553,626	8,729,072

The accompanying notes are an integral part of the consolidated financial statements.

WAVE LIFE SCIENCES LTD.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(in thousands)

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Net loss	$(3,318)	$(5,229)	$(2,117)	$(7,165)
Other comprehensive income (loss):				
Foreign currency translation	135	(169)	(86)	(22)
Comprehensive loss	$(3,183)	$(5,398)	$(2,203)	$(7,187)

The accompanying notes are an integral part of the consolidated financial statements.

WAVE LIFE SCIENCES LTD.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' (DEFICIT) EQUITY
(in thousands, except share amounts)

	Series A Preferred Shares		Ordinary Shares		Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total Shareholders' (Deficit) Equity
	Shares	Amount	Shares	Amount				
Balance at December 31, 2012	—	$ —	2,020,794	$ 2,660	$ —	$ 90	$ (7,329)	$ (4,579)
Conversion of ordinary shares to Series A preferred shares	1,536,209	2,022	(1,536,209)	(2,022)	—	—	—	—
Other comprehensive income	—	—	—	—	—	135	—	135
Net loss	—	—	—	—	—	—	(3,318)	(3,318)
Balance at December 31, 2013	1,536,209	2,022	484,585	638	—	225	(10,647)	(7,762)
Conversion of related party notes payable to ordinary shares and Series A preferred shares	2,365,139	5,852	1,515,596	3,750	—	—	—	9,602
Issuance of ordinary shares, net of offering costs of $15	—	—	2,263,291	5,585	—	—	—	5,585
Other comprehensive loss	—	—	—	—	—	(169)	—	(169)
Net loss	—	—	—	—	—	—	(5,229)	(5,229)
Balance at December 31, 2014	3,901,348	7,874	4,263,472	9,973	—	56	(15,876)	2,027
Share-based compensation, including issuance of ordinary shares to an employee (unaudited)	—	—	190,856	842	1,650	—	—	2,492
Issuance of ordinary shares, net of offering costs of $169 (unaudited)	—	—	4,769,077	11,631	—	—	—	11,631
Other comprehensive loss (unaudited)	—	—	—	—	—	(22)	—	(22)
Net loss (unaudited)	—	—	—	—	—	—	(7,165)	(7,165)
Balance at June 30, 2015 (unaudited)	3,901,348	$ 7,874	9,223,405	$ 22,446	$ 1,650	$ 34	$ (23,041)	$ 8,963

The accompanying notes are an integral part of the consolidated financial statements.

WAVE LIFE SCIENCES LTD.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Operating Activities				
Net loss	$(3,318)	$(5,229)	$(2,117)	$ (7,165)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	276	281	104	178
Share-based compensation expense	—	—	—	2,492
Deferred rent	(6)	(6)	(3)	(3)
Loss on disposal of property and equipment	—	14	7	—
Deferred income taxes	(330)	84	60	99
Changes in operating assets and liabilities:				
Accounts receivable	(102)	(129)	90	200
Prepaid expenses and other current assets	3	(12)	(10)	(18)
Accounts payable	(152)	9	(28)	1,713
Accrued expenses and other current liabilities	78	410	(103)	(355)
Deferred revenue	—	152	—	(152)
Net cash used in operating activities	(3,551)	(4,426)	(2,000)	(3,011)
Investing Activities				
Increase in restricted cash	—	—	—	(1,055)
Proceeds from government grant reimbursements for property and equipment	—	319	312	3
Proceeds from sale of property and equipment	—	14	—	—
Purchase of property and equipment	(47)	(590)	(517)	(378)
Net cash used in investing activities	(47)	(257)	(205)	(1,430)
Financing Activities				
Proceeds from related party notes payable	6,172	—	—	—
Repayment of related party notes payable	(2,500)	—	—	—
Proceeds from the issuance of ordinary shares, net of offering costs	—	5,585	5,585	11,631
Proceeds from government grant advances	—	34	34	112
Principal payments on capital lease obligation	—	—	—	(97)
Net cash provided by financing activities	3,672	5,619	5,619	11,646
Effect of foreign exchange rates on cash	(14)	(327)	(104)	(474)
Net increase in cash	60	609	3,310	6,731
Cash at beginning of period	379	439	439	1,048
Cash at end of period	$ 439	$ 1,048	$ 3,749	$ 7,779
Supplemental disclosure of cash flow information:				
Conversion of related party notes payable into ordinary and Series A preferred shares	$ —	$ 9,602	$ 9,602	$ —
Conversion of ordinary shares into Series A preferred shares	$ 2,022	$ —	$ —	$ —
Equipment acquired for capital lease obligation	$ —	$ —	$ —	$ 268
Deferred offering costs in accounts payable and accrued expenses	$ —	$ 72	$ —	$ 669
Property and equipment purchases in accounts payable	$ 50	$ 3	$ 1	$ 114

The accompanying notes are an integral part of the consolidated financial statements.

WAVE Life Sciences Ltd.

Notes to Consolidated Financial Statements
(in thousands, except for share and per share amounts)
(Information as of June 30, 2015 and for the six months ended June 30, 2014 and 2015 is unaudited)

1. THE COMPANY

Organization

WAVE Life Sciences Ltd., formerly WAVE Life Sciences Pte. Ltd. (see Note 16) (together with its subsidiaries, "WAVE" or the "Company"), is a preclinical biopharmaceutical company with an innovative and proprietary synthetic chemistry drug development platform that the Company is using to design, develop and commercialize a broad pipeline of first-in-class or best-in-class nucleic acid therapeutic candidates. The Company is initially developing nucleic acid therapeutics that target genetic defects to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins.

The Company was incorporated in Singapore on July 23, 2012 and has its principal office in Boston, Massachusetts. The Company was incorporated with the purpose of combining two commonly held companies, WAVE Life Sciences USA, Inc., ("WAVE USA"), a Delaware corporation (formerly Ontorii, Inc.), and WAVE Life Sciences (Japan), ("WAVE Japan"), a company organized under the laws of Japan (formerly Chiralgen., Ltd.), which occurred on September 12, 2012.

The Company was created through the combination of entities that were under the common control of Shin Nippon Biomedical Laboratories Ltd. ("SNBL") both prior to and immediately following the Company's incorporation. Since the entities represent the combination of entities under common control, generally accepted accounting principles in the United States ("U.S. GAAP") require the presentation of the combined companies as if they have always been combined entities. Therefore, on the date of incorporation, the Company recognized the assets and liabilities of WAVE USA and WAVE Japan at the carrying amounts of the assets and liabilities as recorded in the standalone financial statements of the respective companies on that date.

The Company's primary activities since inception have been conducting research and experimental development of biotechnology and chemicals, conducting preclinical testing, recruiting personnel, and raising capital to support development activities.

Liquidity

Since the Company's inception, WAVE has incurred significant operating losses and has had negative cash flows from operations. The Company's net loss was $5,229 for the year ended December 31, 2014, and $7,165 (unaudited) for the six months ended June 30, 2015. As of December 31, 2014 and June 30, 2015, the Company had an accumulated deficit of $15,876 and $23,041 (unaudited), respectively.

From the Company's inception through June 30, 2015, the Company has financed its operations primarily through private placements of promissory notes and ordinary shares. Since the Company's incorporation, through December 31, 2014 and June 30, 2015, the Company has received net proceeds of $15,187 and $26,818 (unaudited), respectively, from such transactions.

The Company had cash of $1,048 and $7,779 (unaudited) at December 31, 2014 and June 30, 2015, respectively. On August 14, 2015, the Company completed a private placement of Series B preferred shares and received net proceeds of approximately $62,500 (unaudited). In connection with the private placement, the holders of the Company's preference shares agreed to rename the Company's "preference shares" as "Series A preferred shares" pursuant to an amendment to the Company's Articles and Memorandum of Association and Articles of Association. All references to the Series A preferred shares in the accompanying financial statements and notes herein give retroactive effect to the renaming of the preference shares and is limited to only that change except for the additional rights of the Series A preferred shares discussed in Note 15, which are treated on a prospective basis.

The Company believes that its cash at December 31, 2014 and June 30, 2015 along with the net proceeds of $62,500 (unaudited) from the issuance of Series B preferred shares on August 14, 2015 will allow the Company to meet its working capital obligations and fund its operations through at least December 31, 2016.

WAVE Life Sciences Ltd.

Notes to Consolidated Financial Statements
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Risks and Uncertainties

The Company is subject to risks common to companies in the biotechnology industry including, but not limited to, new technological innovations, protection of proprietary technology, dependence on key personnel, compliance with government regulations and the need to obtain additional financing. The Company's therapeutic programs will require significant additional research and development efforts, including extensive pre-clinical and clinical testing and regulatory approval, prior to commercialization of any product candidates. These efforts require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance-reporting capabilities.

The Company's therapeutic programs are currently in the development or discovery stage. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies. In addition, the Company is dependent upon the services of its employees and consultants.

Basis of Presentation

The Company has prepared the accompanying consolidated financial statements in conformity with U.S. GAAP and in U.S. dollars.

2. SIGNIFICANT ACCOUNTING POLICIES

Unaudited Interim Financial Data

The accompanying interim consolidated balance sheet as of June 30, 2015, the related interim consolidated statements of operations, comprehensive loss and cash flows for the six months ended June 30, 2014 and 2015, the consolidated statement of shareholders' equity (deficit) for the six months ended June 30, 2015 and the related interim information contained within the notes to the consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission for interim financial information. Accordingly, they do not include all of the information and the notes required by U.S. GAAP for complete financial statements. The financial data and other information disclosed in these notes related to the six months ended June 30, 2014 and 2015 are unaudited. In the opinion of management, the unaudited interim consolidated financial statements reflect all adjustments, consisting of normal and recurring adjustments, necessary for the fair presentation of the Company's financial position at June 30, 2015 and the consolidated results of its operations, comprehensive loss and cash flows for the six months ended June 30, 2015 are not necessarily indicative of the results to be expected for the year ending December 31, 2015 or any other interim period or future year or period.

Ordinary and Series A Preferred Share Split

The Company's board of directors and shareholders approved a 50-for-1 share split of its outstanding ordinary and Series A preferred shares effective November 18, 2014. All share and per share amounts in the consolidated financial statements and notes thereto have been retroactively adjusted for all periods presented to give effect to the share split.

Principles of Consolidation

The Company's consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and

WAVE Life Sciences Ltd.

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liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting periods. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to the valuation of its Series A preferred shares on conversion of the related party notes payable, the valuation of the Company's ordinary shares, the assumptions used to determine the fair value share-based awards, the valuation allowance required for the Company's deferred tax assets, and determining uncertain tax positions and the related liabilities. Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Actual results could differ from the Company's estimates.

Segment Data

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. The Company's singular focus is on developing its proprietary synthetic chemistry platform to develop and commercialize a broad pipeline of nucleic acid-based therapeutics.

Foreign Currency Translation

The functional currency of the Company's Japanese subsidiary and the Company's Singapore entity is the Japanese yen and U.S. dollar, respectively. Assets and liabilities of WAVE Japan are translated at period end exchange rates while revenues and expenses are translated at average exchange rates for the period. Intercompany loans that are not expected to be settled in the foreseeable future are translated at the historical rate for the date of each capital transaction. Net unrealized gains and losses from foreign currency translation are reflected as accumulated other comprehensive income within shareholders' (deficit) equity. Gains and losses on foreign currency transactions are included in the consolidated statements of operations within other, net.

Fair Value of Financial Instruments

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. The fair value hierarchy is a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the financial instrument based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing the financial instrument and are developed based on the information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments and is not a measure of the investment credit quality. The hierarchy defines three levels of valuation inputs:

Level 1—Unadjusted quoted prices in active markets that are accessible at the measurement date of identical, unrestricted assets.

Level 2—Quoted prices for similar assets, or inputs that are observable, either directly or indirectly, for substantially the full term through corroboration with observable market data. Level 2 includes investments valued at quoted prices adjusted for legal or contractual restrictions specific to the security.

Level 3—Pricing inputs are unobservable for the asset, that is, inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset. Level 3 includes private investments that are supported by little or no market activity.

There were no financial instruments recorded at fair value as of December 31, 2013 and 2014 and June 30, 2015 (unaudited). The carrying amounts of accounts receivable, accounts payable, accrued expenses and related party notes payable approximate their fair values due to their short-term maturities.

Concentration of Credit Risk

Cash is a financial instrument that potentially subjects the Company to concentration of credit risk. The Company uses eight financial institutions to maintain its cash which are high quality, accredited financial institutions and,

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accordingly, such funds are subject to minimal credit risk. The Company has not experienced any losses in such accounts and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held. The Company has no financial instruments with off-balance sheet risk of loss.

Restricted Cash

Restricted cash consists primarily of cash placed in a separate restricted bank account as required under the terms of the Company's lease arrangement for its Cambridge, Massachusetts facility. There was no restricted cash as of December 31, 2013 and 2014.

Property and Equipment

Property and equipment, which consists of furniture and equipment and leasehold improvements are stated at cost less accumulated depreciation and amortization. Depreciation is calculated on a straight-line basis over the following estimated useful lives of the assets:

Furniture and Equipment	3-7 years
Leasehold Improvements	Shorter of life of lease or useful life

Depreciation and amortization begins at the time the asset is placed in service. Maintenance and repairs are charged to operations as incurred. Upon retirement or sale, the cost of the disposed asset and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in the consolidated statements of operations.

Impairment of Long-Lived Assets

Long-lived assets consist of property and equipment. Long-lived assets are reviewed for impairment whenever events or other changes in circumstances indicate that the carrying amount may not be recoverable. Certain factors may exist or events may occur, which indicate that impairment exists including, but not limited to, the following: significant underperformance relative to historical or projected future operating results; significant changes in the manner of use of the underlying assets; and significant adverse industry or market economic trends.

When performing the impairment assessment for long-lived assets, the Company compares the carrying value of such assets to the estimated undiscounted future net cash flows expected from the use of the assets and their eventual disposition. In the event that the carrying value of the assets is determined to be unrecoverable, the Company would estimate the fair value of the assets and record an impairment charge for the excess of the carrying value over the fair value.

Through June 30, 2015 (unaudited), the Company has not recognized any impairment charges.

Deferred Offering Costs

The Company capitalizes certain legal, professional, accounting and other third party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated. After consummation of the equity financing, these costs are recorded in shareholders' equity (deficit) as a reduction to the carrying value of the shares issued.

There were none and $72 of deferred offering costs at December 31, 2013 and 2014, respectively. As of June 30, 2015, the Company has capitalized $669 (unaudited) of deferred offering costs in contemplation of its initial public offering. The Company will offset any deferred costs against proceeds upon the consummation of the initial public offering. If the initial public offering is terminated, deferred costs will be expensed.

WAVE Life Sciences Ltd.

Notes to Consolidated Financial Statements
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(Information as of June 30, 2015 and for the six months ended June 30, 2014 and 2015 is unaudited)

Revenue Recognition

Collaboration Agreement

The Company had a collaboration agreement with a third party, which was entered into in late 2014 and terminated in May 2015. The Company was entitled to a non-refundable upfront amount of $152 related to research and development services performed under the agreement. The upfront fee was billed in 2014 and collected in early 2015. The Company recorded its right to the upfront payment as accounts receivable and deferred revenue at December 31, 2014. Upon receipt of the non-refundable payment, the Company began recognizing the upfront fee on a straight-line basis over the service period. Upon termination of the agreement, the Company recognized the remainder of the upfront fee. Revenue recognized under the agreement was $152 (unaudited) for the six months ended June 30, 2015. There have been no other revenue generating activities from collaboration or license agreements entered into by the Company since its formation and through December 31, 2014 and June 30, 2015.

Product Revenue

The Company has had no product revenue to date.

Allowance for Doubtful Accounts

The Company has a limited amount of accounts receivable, which relate primarily to reimbursement of qualified expenditures under a government grant. The Company has not had any bad debts from the date of incorporation through December 31, 2014 and June 30, 2015 (unaudited). All amounts recorded as accounts receivable have been collected to date.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs include salaries, share-based compensation and benefits of employees, third-party license fees and other operational costs related to the Company's research and development activities, including allocated facility-related expenses and external costs of outside vendors engaged to conduct preclinical studies and other research and development activities.

Government Grants

The Company has applied for reimbursement of expenditures with the Japanese government for certain qualified operating or capital expenditures. The Company recognizes government grants when there is reasonable assurance that the Company will comply with the conditions attached to the grant arrangement and the grant will be received.

Government grants for research and development efforts are recorded as grant income and classified in other, net in the consolidated statements of operations. Government grants related to reimbursements of capital expenditures are recognized as a reduction of the basis of the asset and recognized in the consolidated statements of operations over the estimated useful life of the depreciable asset as reduced depreciation expense.

The Company recognized other income of $43 and $160 for the years ended December 31, 2013 and 2014, respectively and $108 (unaudited) and $44 (unaudited) for the six months ended June 30, 2014 and 2015, respectively, which is included in the consolidated statements of operations.

The Company recorded reimbursable capital expenditures of $66 and $248 for the years ended December 31, 2013 and 2014, respectively, and $249 (unaudited) and $3 (unaudited) for the six months ended June 30, 2014 and 2015 (unaudited), respectively, for which a reduction in the basis of the assets purchased was recorded in the consolidated balance sheets.

Net Loss per Share

Basic net loss per share is computed using the weighted-average number of ordinary shares outstanding during the period. Diluted net loss per share is computed using the sum of the weighted-average number of ordinary shares outstanding during the period and, if dilutive, the weighted-average number of potential ordinary shares, including the assumed exercise of share options.

WAVE Life Sciences Ltd.

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(Information as of June 30, 2015 and for the six months ended June 30, 2014 and 2015 is unaudited)

The Company applies the two-class method to calculate its basic and diluted net loss per share attributable to ordinary shareholders, as its Series A preferred shares are participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to ordinary shareholders. However, for the periods presented, the two-class method does not impact the net loss per ordinary share as the Company was in a net loss position for each of the periods presented and holders of Series A preferred shares do not participate in losses.

The Company's Series A preferred shares contractually entitle the holders of such shares to participate in dividends but do not contractually require the holders of such shares to participate in losses of the Company. Accordingly, for periods in which the Company reports a net loss attributable to ordinary shareholders, diluted net loss per share attributable to ordinary shareholders is the same as basic net loss per share attributable to ordinary shareholders, since dilutive ordinary shares are not assumed to have been issued if their effect is anti-dilutive.

License Agreements and Patent Costs

Costs associated with licenses of technology and patent costs are expensed as incurred and are generally included in research and development expense in the consolidated statement of operations.

Share-Based Compensation

The Company measures and recognizes share-based compensation expense, for both employee and director option awards, based on the grant date fair value of the awards. The Company recognizes share-based compensation expense, net of estimated forfeitures, on a straight-line basis over the requisite service period of the awards, which is generally the vesting period.

The Company determines the fair value of share-based awards granted to non-employees as either the fair value of the consideration received or the fair value of the equity instruments issued, whichever is more reliably measurable. All issuances of equity instruments issued to non-employees as consideration for goods or services received by the Company are accounted for based on the fair value of the equity instruments issued. These awards are recorded in expense and additional paid-in capital in shareholders' (deficit) equity over the applicable service periods based on the fair value of the options at the end of each period.

The Company classifies share-based compensation expense in its consolidated statements of operations in the same manner in which the award recipient's payroll costs are classified or in which the award recipients' service payments are classified.

The Company estimates the fair value of employee and director share options as of the date of grant using the Black-Scholes option pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected share volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded share price. The expected term of the Company's share options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The risk-free interest rate is determined by reference to the yield curve of a zero-coupon U.S. Treasury bond on the date of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends on ordinary shares and does not expect to pay any cash dividends in the foreseeable future.

The Company also estimates the fair value of consultant and non-employee share options using the Black-Scholes option pricing model reflecting the same assumptions as applied to employee and director options in each of the reporting periods, other than the expected life, which is assumed to be the remaining contractual life of the options.

Income Taxes

The Company accounts for income taxes using an asset and liability approach, which requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the

consolidated financial statements, but have not been reflected in taxable income. A valuation allowance is established to reduce deferred tax assets to their estimated realizable value. Therefore, the Company provides a valuation allowance to the extent that it is more likely than not that all or a portion of the deferred tax assets will not be realized in the future.

The Company accounts for uncertainty in income taxes recognized in the financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

The Company recognizes interest and penalties related to uncertain tax positions in income tax provision.

Recently Adopted Accounting Pronouncements

In July 2013, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2013-11, *Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists* (“ASU 2013-11”), which requires unrecognized tax benefits to be presented as a decrease in a net operating loss, similar tax loss or tax credit carryforward if certain criteria are met. The guidance was effective for fiscal years and interim periods within those years beginning after December 15, 2013 for public entities with early adoption permitted in 2013. The Company elected to early adopt ASU 2013-11 in 2013.

In June 2014, the FASB issued ASU 2014-10, *Development Stage Entities*. The amendments in this update removed all incremental financial reporting requirements, including inception-to-date information and certain other disclosures currently required under U.S. GAAP, in the financial statements of development stage companies. The amendments are effective for annual reporting periods beginning after December 15, 2014 and interim reporting periods beginning after December 15, 2015. Early adoption is permitted for any annual reporting period or interim period for which the entity’s financial statements have not yet been issued (public business entities) or made available for issuance (other entities). The Company elected to early adopt this guidance in 2014 and, therefore, has not presented inception-to-date disclosures in its consolidated financial statements.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09—*Revenue from Contracts with Customers (Topic 606)* (“ASU 2014-09”). ASU 2014-09 supersedes most of the existing guidance on revenue recognition in ASC Topic 605, *Revenue Recognition*. The core principle of the revenue model is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods and services. In applying the revenue model to contracts within its scope, an entity will need to (i) identify the contract(s) with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract and (v) recognize revenue when (or as) the entity satisfies a performance obligation. On July 9, 2015, the FASB extended the effective date of adoption of the standard to interim reporting periods within annual reporting periods beginning after December 15, 2017 (that is, beginning in the first interim period within the year of adoption). Early adoption of the standard is permitted for all entities for interim and annual periods beginning after December 15, 2016. The Company does not expect the impact of ASU 2014-09 to be material to its consolidated financial statements.

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In August 2014, the FASB issued ASU 2014-15, *Presentation of Financial Statements—Going Concern*, on disclosure of uncertainties about an entity's ability to continue as a going concern. This guidance addresses management's responsibility in evaluating whether there is substantial doubt about a company's ability to continue as a going concern and to provide related footnote disclosures. The guidance is effective for fiscal years beginning after December 15, 2016 and for interim periods within those fiscal years, with early adoption permitted. The Company does not expect the adoption of this guidance to have a material impact on the consolidated financial statements.

In February 2015, the FASB issued ASU 2015-02, *Consolidation* (Topic 810) ("ASU 2015-02"), to address financial reporting considerations for the evaluation as to the requirement to consolidate certain legal entities. ASU 2015-02 is effective for fiscal years and for interim periods within those fiscal years beginning after December 15, 2015. The Company is evaluating the impact of ASU 2015-02 and if early adoption is appropriate in future reporting periods.

In April 2015, the FASB issued ASU 2015-03, *Interest—Imputation of Interest (Subtopic 835-30)* ("ASU 2015-03"), as part of the initiative to reduce complexity in accounting standards. The update requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. ASU 2015-03 is effective for annual periods beginning after December 15, 2015 and for interim periods within those fiscal years. The Company does not expect the impact of ASU 2015-03 to be material to its consolidated financial statements.

Other accounting standards that have been issued or proposed by the FASB or other standards-setting bodies that do not require adoption until a future date are not expected to have a material impact on the Company's consolidated financial statements upon adoption.

3. PROPERTY AND EQUIPMENT

Property and equipment, net, consists of the following:

	December 31,		June 30,
	2013	2014	2015
			(unaudited)
Furniture and equipment	$1,900	$ 2,331	$ 2,763
Leasehold improvements	148	147	536
Total	2,048	2,478	3,299
Less accumulated depreciation and amortization	(664)	(1,209)	(1,467)
Property and equipment, net	$1,384	$ 1,269	$ 1,832

Depreciation expense was $276 and $281 for the years ended December 31, 2013 and 2014, respectively, and $104 (unaudited) and $178 (unaudited) for the six months ended June 30, 2014 and 2015, respectively.

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4. ACCRUED EXPENSES

Accrued expenses and other current liabilities consist of the following:

	December 31, 2013	December 31, 2014	June 30, 2015 (unaudited)
Accrued compensation	$145	$428	$ 158
Accrued interest on related party notes payable	74	—	—
Other	52	177	215
Total accrued expenses and other current liabilities	$271	$605	$ 373

5. RELATED PARTY NOTES PAYABLE

At December 31, 2012, the Company had unsecured loans in the amount of $6,174 payable to SNBL with interest rates which ranged from 1.33% to 1.58% annually, which were due to mature in 2013. In 2013, the Company borrowed an additional $6,172 at similar interest rates, and repaid $2,500 of such loans plus accrued and unpaid interest. Additionally, in 2013, the maturity dates of the remaining loans were extended to dates in 2014 through new loan agreements and a loan between WAVE Japan and SNBL was transferred to WAVE Life Sciences Ltd. in U.S. dollars.

At December 31, 2013, the Company had unsecured loans in the amount of $9,602 payable to SNBL with interest rates which ranged from 1.18% to 1.35% annually, which were due to mature in 2014.

In February 2014 and in connection with the issuance of 2,263,291 ordinary shares to a third party investor, SNBL agreed to convert the outstanding principal and accrued interest due under the notes payable in the amount of $9,602 into 1,515,596 ordinary shares and 2,365,139 Series A preferred shares. No gain or loss was recognized on the transaction due to the related party nature of the transaction and because the fair value of the Series A preferred shares and ordinary shares was equal to the carrying value of the related party notes payable.

6. SHARE CAPITAL

Ordinary Shares

Historical Transactions

The following represents the historical ordinary share transactions of the Company from its incorporation through June 30, 2015:

- In September 2012, the Company issued an aggregate of 2,020,794 ordinary shares to the then shareholders of WAVE USA and WAVE Japan, as consideration for the merger of the companies under common control in which the WAVE USA and WAVE Japan historical carrying values of their respective net assets were carried forward to the consolidated Company.
- In October 2013, the holder of 1,536,209 ordinary shares agreed to convert its holdings into an equivalent number of Series A preferred shares.
- In February 2014, the Company issued 2,263,291 ordinary shares to a third-party investor at $2.47 per share for net proceeds of $5,585.
- In February 2014, holders of $9,602 of related party notes payable agreed to convert such notes into 2,365,139 Series A preferred shares and 1,515,596 ordinary shares (Note 5).

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- In January 2015, the Company issued 4,769,077 ordinary shares to a third-party investor and an existing investor at $2.47 per share for net proceeds of $11,631 (unaudited).
- In March 2015, the Company granted 190,856 fully-vested ordinary shares to an executive of the Company (unaudited).

Features of the Ordinary Shares

The ordinary shares have no par value and there is no authorized share capital under Singapore law. The rights, preferences, and privileges of ordinary shares are as follows:

New Share Offering

Any new ordinary shares or securities convertible into ordinary shares shall be offered in the first instance to all the then holders of any class of shares, other than the Series A preferred shares, prior to issuance. Each shareholder shall have right of pre-emption with respect to any issuance of new ordinary shares or securities convertible into ordinary shares. This right of pre-emption shall not apply to shares sold in an initial public offering of the Company's equity securities and shall terminate immediately prior to the closing of an initial public offering.

Voting

The holders of ordinary shares are entitled to one vote for each ordinary share held at all meetings of shareholders and written actions in lieu of meetings provided; however, that except as otherwise required by law, holders of ordinary shares shall not be entitled to implement the following without the approval of more than 75% of the Company's issued and outstanding ordinary shares:

(i) a merger, split, corporate reorganization, liquidation, dissolution, or winding up of the Company or any member of the group;
(ii) authorize or issue any additional shares, other equity interests in the Company or any convertible securities into such equity interests;
(iii) effect any public offering or listing of the equity securities of the Company; or
(iv) purchase, redeem, pay or declare any dividend on any shares or other equity interests in the Company.

Dividends

All dividends shall be declared and paid pro rata according to the number of shares held by each member entitled to receive dividends. The Company's board of directors may deduct from any dividend all sums of money presently payable by the member to the Company on account of calls.

Liquidation

In the event of a liquidation, dissolution or winding up of, or a return of capital by the Company, the ordinary shares will rank equally with the Series A preferred shares.

Board of Directors

The board of directors shall consist of a maximum of seven directors, who shall be appointed by a majority of the Company's issued and outstanding ordinary shares and a majority of the Company's directors. The chairman of the Company will be a director appointed by a majority of the Company's directors.

Series A Preferred Shares

Historical Transactions

The following represents the historical Series A preferred share transactions of the Company from its incorporation through June 30, 2015:

- In October 2013, holders of 1,536,209 ordinary shares agreed to convert their holdings into an equivalent number of Series A preferred shares.

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- In February 2014, holders of $9,602 of related party notes payable agreed to convert such notes into 2,365,139 Series A preferred shares and 1,515,596 ordinary shares (Note 5).

Features of the Series A Preferred Shares

The Series A preferred shares have no par value and there is no authorized share capital under Singapore law. Except as described below, the Series A preferred shares rank equally with ordinary shares. The rights, preferences, and privileges of the Series A preferred shares are as follows:

Dividends

Each Series A preferred share will carry a fixed non-cumulative preferential dividend at an annual rate of 15% of the issue price of the Series A preferred shares in preference to the ordinary shares, payable out of the distributable profits of the financial year, subject to approval by the Company's board of directors.

Liquidation

In the event of a liquidation, dissolution or winding up of, or a return of capital by the Company, the Series A preferred shares will rank equally with the ordinary shares. Further, the Series A preferred shares rank equally with ordinary shares, in every aspect relating to bankruptcy proceedings.

Voting

Holders of the Series A preferred shares are not entitled to vote at any general meeting. The only instances in which the holders of Series A preferred shares are able to vote at a general meeting would be if either of the following situations occur:

- the non-cumulative dividend payable on a Series A preferred share or any part thereof is in arrears and has remained unpaid for at least 12 months after it has been declared; or
- if the matters to be discussed at the meeting relate to or there is intent to pass resolutions on (i) abrogating or changing the rights attached to the Series A preferred shares; and (ii) for the winding up of the Company, such resolutions would require the unanimous approval of the holders of the Series A preferred shares.

Redemption

The Series A preferred shares are not redeemable.

Right of First Refusal

The Series A preferred shareholders are entitled to exercise a right of first refusal, a feature that dictates that in the case of a transfer by a specific shareholder (i) the Company, then (ii) the non-selling shareholder, and then (iii) any third party identified by the Company shall be entitled within a period of 60 days to serve a purchase notice to the selling shareholder requesting to sell to the Company or to the non-selling shareholder at the same price and terms as those offered by the prospective purchaser.

7. SHARE-BASED COMPENSATION

Adoption of Equity Incentive Plan

In December 2014, the Company's board of directors adopted the WAVE Life Sciences Ltd. 2014 Equity Incentive Plan (the "2014 Plan"), and reserved 1,763,714 ordinary shares for issuance under the this plan.

2014 Plan Activity (unaudited)

The 2014 Plan was approved by the Company's shareholders in January 2015. In March 2015, the Company's board and shareholders amended the plan to increase the number of ordinary shares issuable under the 2014 Plan to 2,498,597 ordinary shares. The 2014 Plan authorizes the board of directors or a committee of the board to grant incentive share options, non-qualified share options, or NQSOs, share appreciation rights and restricted awards to eligible employees, outside directors and consultants of the Company. As of June 30, 2015, 462,960 ordinary shares remained available for future grant.

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During the six months ended June 30, 2015, the Company granted options to purchase 1,844,770 ordinary shares to employees, directors and non-employees. The Company did not grant any share options during the years ended December 31, 2013 and 2014. The Company recorded share-based compensation expense of $2,492 during the six months ended June 30, 2015 of which $893 related to equity-classified options granted to non-employees. Options generally vest over a period of three or four years, and options that lapse or are forfeited are available to be granted again. The contractual life of all options is ten years. The Company measures and records the value of options granted to non-employees over the period of time services are provided and, as such, unvested portions are subject to re-measurement at subsequent reporting periods.

Share option activity under the 2014 Plan is summarized as follows:

	Number of Shares [1]	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value [2]
Outstanding as of January 1, 2015	—	$ —		
Granted	1,844,770	2.47		
Outstanding as of June 30, 2015	1,844,770	$ 2.47	9.70	$ 11,667
Options vested and expected to vest as of June 30, 2015	1,773,079	$ 2.47	9.70	$ 11,213
Options exercisable as of June 30, 2015	410,992	$ 2.47	9.70	$ 2,599

(1) Includes 547,502 options granted to non-employees during March 2015.
(2) The aggregate intrinsic value of options is calculated as the difference between the exercise price of the share options and the fair value of the Company's ordinary shares for those share options that had exercise prices lower than the fair value of the ordinary shares as of the end of the period.

As of June 30, 2015, the unrecognized compensation cost related to outstanding options was $3,580 and is expected to be recognized as expense over a weighted-average period of approximately 2.77 years. For the six months ended June 30, 2015, the weighted-average grant date fair value per granted option was $3.34.

In March 2015, the Company granted 190,856 fully-vested ordinary shares to an executive of the Company, and the Company recorded compensation expense in the amount of $842.

Share-based compensation expense was classified in the consolidated statements of operations as follows:

	Six Months Ended June 30, 2015
Research and development expenses	$ 1,182
General and administrative expenses	1,310
Total share-based compensation	$ 2,492

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The assumptions used in the Black-Scholes option pricing model to determine the fair value of share options granted to employees during the period were as follows:

	Six Months Ended June 30, 2015
Risk-free interest rate	1.78%
Expected term (in years)	5.52 – 6.08
Expected volatility	71.02%
Expected dividend yield	0%
Exercise price	$ 2.47
Fair value of ordinary share	$ 4.41

The assumptions used in the Black-Scholes option pricing model to determine the fair value of share options granted to non-employees during the period were as follows:

	Six Months Ended June 30, 2015
Risk-free interest rate	2.14% – 2.35%
Expected term (in years)	9.69 – 10.00
Expected volatility	69.16% – 69.80%
Expected dividend yield	0%
Exercise price	$ 2.47
Fair value of ordinary share	$ 4.41-8.80

The fair value of the Company's ordinary shares was determined based upon a retrospective valuation with the assistance of a third-party valuation specialist and the guidance outlined in the American Institute of Certified Public Accountants Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, also known as the Practice Aid, based on a variety of different objective and subjective factors, including the Company's financial position, the status of development efforts within the Company, the composition and ability of the current scientific and management teams, the current climate in the marketplace, the illiquid nature of the Company's shares, the prices of arm's length sales of the Company's ordinary shares, and the likelihood of achieving a liquidity event such as a public offering or sale of the Company.

8. LEASES

The Company recorded rent expense of $248 and $294 for the years ended December 31, 2013 and 2014, respectively, and $138 (unaudited) and $143 (unaudited) for the six months ended June 30, 2014 and 2015, respectively.

Operating Leases

The Company leases its corporate office space in Boston, Massachusetts under a non-cancellable operating sublease with SNBL, a related party, which expires on August 1, 2019. The sublease had free rent that is being amortized on a straight-line basis over the term of the lease. The Company has the right to extend the lease for a five-year period.

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Future Minimum Lease Payments

Future minimum lease payments under the Company's non-cancelable operating leases as of December 31, 2014, are as follows:

	Operating Leases
Year ending December 31	
2015	$ 214
2016	214
2017	214
2018	214
2019	142
Thereafter	997
Total	$ 1,995

2015 Lease Agreement (unaudited)

In April 2015, the Company entered into a lease agreement for an office and laboratory facility in Cambridge, Massachusetts. The lease term is expected to commence in October 2015 and has a term of 7.5 years with a five year renewal option to extend the lease. In connection with signing the lease, the Company issued the lessor a letter of credit in the amount of $1,000, which is recorded as restricted cash on the consolidated balance sheets at June 30, 2015. Future minimum lease payments as of June 30, 2015 amounted to $200 in 2015, $834 in 2016, $1,030 in 2017, $1,321 in 2018, $1,360 in 2019 and $4,711 thereafter.

Capital Lease (unaudited)

In April 2015, the Company entered in a three year lease to acquire laboratory equipment, which has been accounted for as a capital lease. The capital asset was purchased for $268 and is included in property and equipment, net, along with accumulated amortization of $13 as of June 30, 2015.

9. COMMITMENTS AND CONTINGENCIES

Technology Licenses

Max-Planck Innovation GmbH (unaudited)

In June 2015, the Company entered into an agreement with Max-Planck-Innovation GmbH ("Max-Planck") through which it obtained a co-exclusive royalty-bearing, worldwide license with the right to sublicense to certain patent rights within a patent portfolio. The Company intends to develop and commercialize diagnostic and therapeutic products based on the Company's patent rights under this license. Max-Planck retains the right to use the intellectual property licensed under the agreement for non-commercial purposes.

The Company's license is one of two maximum allowable co-exclusive licenses for this technology. If either license holder terminates its respective co-exclusive portion of the license, Max-Planck is obligated to grant the other party an exclusive license with substantially the same terms and conditions previously applicable to the terminated co-exclusive licensee.

The Company is permitted to sublicense its rights under the license. The license requires that the Company use commercially reasonable efforts to develop and commercialize products under the agreement, whether solely or through its affiliates and sub-licensees. In order to secure the license, the Company made an upfront payment of $50 to Max-Planck and will be required to pay annual license maintenance fees of $30 to Max-Planck in June of

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each year under the agreement. The Company will be required to make payments based upon regulatory milestones, including the initiation of clinical trials, and product approval milestones totaling up to $1,575 for each licensed product reaching such clinical stage. In addition to milestone payments, the Company will be required to pay royalties in the low single digits, calculated as a percentage of cumulative annual net sales of a licensed product.

The Company recorded the $50 upfront payment as research and development expense in its consolidated statements of operations for the six months ended June 30, 2015. The agreement may be terminated by either party subject to certain conditions.

Research Collaborations

University of Oxford (unaudited)

In April 2015, the Company entered into a translational research collaboration agreement with The Chancellor, Masters, and Scholars of the University of Oxford (“Oxford”).

The agreement with Oxford involves characterizing the Company’s proprietary isomers in order to improve the pharmacology of oligonucleotides for the treatment of Duchenne muscular dystrophy. Under the agreement, the Company agreed to pay Oxford up to $380 to conduct specified research services for the Company’s benefit during an initial 18-month term, which may be extended by the parties.

The Company will own the results of the research conducted under the collaboration, including any potential intellectual property inventions. The agreement may be terminated by either party subject to certain conditions.

In the six months ended June 30, 2015, the Company incurred and paid $125 to Oxford pursuant to the agreement, which was recorded as research and development expense in its consolidated statements of operations. The remaining $255 is due in 2016.

The Children’s Hospital of Philadelphia (unaudited)

In April 2015, the Company entered into a master sponsored research agreement with The Children’s Hospital of Philadelphia (“CHOP”).

The agreement with CHOP involves characterization of the Company’s proprietary isomers for the treatment of Huntington’s disease. Under the agreement, the Company agreed to pay CHOP up to $194 to conduct research activities, on a project-by-project basis, for the Company’s benefit during a term that ends on the later of the five-year anniversary or the date that the last research project is completed.

Subject to certain conditions, the Company has a first and exclusive option to negotiate for a revenue-bearing license, exclusive or non-exclusive at its election, under all of CHOP’s interest in and to the CHOP intellectual property and the joint intellectual property resulting from each research project performed under the agreement, provided that the Company pays all costs for the preparation, filing, prosecution and maintenance of patents or other intellectual property protection in the case of an exclusive license or its pro rata costs in the case of a non-exclusive license.

The agreement may be terminated by either party subject to certain conditions.

In the six months ended June 30, 2015, the Company incurred and paid $145 to CHOP pursuant to the agreement, which was recorded as research and development expense in its consolidated statements of operations. The remaining $49 is due in 2016.

Other Commitments and Contingencies

Unasserted Claims

In the ordinary course of business, the Company may be subject to legal proceedings, claims and litigation as the Company operates in an industry susceptible to patent legal claims. The Company accounts for estimated losses with

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respect to legal proceedings and claims when such losses are probable and estimable. Legal costs associated with these matters are expensed when incurred. The Company is not currently a party to any legal proceedings.

10. NET LOSS PER ORDINARY SHARE

Basic loss per share is computed by dividing net loss attributable to ordinary shareholders by the weighted-average number of ordinary shares used in computing net loss per share attributable to ordinary shareholders:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Numerator:				
Net loss per share attributable to ordinary shareholders—basic and diluted	$ (3,318)	$ (5,229)	$ (2,117)	$ (7,165)
Denominator:				
Weighted-average ordinary shares used in computing net loss per share attributable to ordinary shareholders—basic and diluted	1,743,014	3,911,556	3,553,626	8,729,072
Net loss per share, basic and diluted	$ (1.90)	$ (1.34)	$ (0.60)	$ (0.82)

The Company's potentially dilutive shares, which include outstanding share options to purchase ordinary shares, are considered to be ordinary share equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

The following potential ordinary shares, presented based on amounts outstanding at each period end, were excluded from the calculation of diluted net loss per share attributable to ordinary shareholders for the periods indicated because including them would have had an anti-dilutive effect:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Options to purchase ordinary shares	—	—	—	1,844,770

11. INCOME TAXES

The components of loss before income taxes were as follows:

	Year Ended December 31,	
	2013	2014
Singapore	$(2,973)	$(4,542)
Rest of world	(675)	(603)
Loss before income taxes	$(3,648)	$(5,145)

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During the year ended December 31, 2013, the Company recorded a benefit for income taxes of $330 which is a result of changes in the United States valuation allowance during the period. During the year ended December 31, 2014, the Company recorded a provision for income taxes of $84 due to income taxed in the United States. During the six months ended June 30, 2014 and 2015, the Company recorded a tax provision of $60 (unaudited) and $99 (unaudited), respectively, which is a result of income taxed in the United States for each respective period.

During the years ended December 31, 2013 and 2014, and the six months ended June 30, 2014 and 2015, the Company recorded no income tax benefits for the net operating losses incurred in Japan, due to its uncertainty of realizing a benefit from those items.

The deferred components of the benefit (provision) for income taxes were as follows:

	Year Ended December 31,	
	2013	2014
Deferred tax benefit (provision):		
Singapore taxes	$ –	$ –
Rest of world taxes	330	(84)
Total deferred tax benefit (provision)	330	(84)
Total benefit (provision) income taxes	$ 330	$ (84)

There was no current portion of the benefit (provision) for income tax for the years ended December 31, 2013 and 2014.

A reconciliation of the Singapore statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2013	2014
Singapore statutory income tax rate	17.0%	17.0%
Research and development tax credits	4.1	2.2
Permanent differences	(1.4)	—
Foreign exchange loss	0.8	2.0
Changes in reserves for uncertain tax positions	(2.1)	(2.2)
Foreign rate differential	3.9	4.5
Change in deferred tax asset valuation allowance	(13.3)	(25.1)
Effective income tax rate	9.0%	(1.6)%

The Company recorded income tax expense based on effective income tax rates of 2.9% (unaudited) and 1.4% (unaudited) for the six months ended June 30, 2014 and 2015, respectively. The Company's effective income tax rate is based upon estimated income for the year, the estimated composition of income in different jurisdictions and the resolution or identification of tax position uncertainties. For the six months ended June 30, 2014 and 2015, the Company's effective income tax rate was different than the Singapore statutory tax rate mainly due to the Company's inability to benefit from tax losses due to the existence of a valuation allowance in loss jurisdictions.

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The components of the Company's deferred tax assets as of December 31, 2013 and 2014, are as follows:

	December 31, 2013	December 31, 2014
Deferred tax assets:		
Net operating loss carryforwards	$ 1,206	$ 1,298
Research and development credits	310	384
Accrued expenses	41	63
Deferred expenses	513	1,295
Other	23	94
	2,093	3,134
Valuation allowance	(1,534)	(2,658)
Total deferred tax assets	559	476
Deferred tax liabilities:		
Depreciation	(229)	(230)
Total deferred tax liability	(229)	(230)
Net deferred tax asset (liability)	$ 330	$ 246

A roll-forward of the valuation allowance for the years ended December 31, 2013 and 2014 is as follows:

	Year Ended December 31, 2013	Year Ended December 31, 2014
Balance at beginning of year	$1,209	$1,534
Increase in valuation allowance	864	1,292
Reversal of valuation allowance	(379)	—
Effect of foreign currency translation	(160)	(168)
Balance at end of year	$1,534	$2,658

As of December 31, 2013 and 2014, the Company has net operating loss carryforwards in the United States of approximately $2,381 and $2,115, respectively, available to offset future U.S. federal taxable income and approximately $2,598 and $2,365, respectively, available to reduce future state taxable income. The U.S. federal and state net operating losses begin to expire in 2030. As of December 31, 2013 and 2014, the Company also has United States research and development credit carryforwards of approximately $291 and $367, respectively, available to offset future U.S. federal income taxes and approximately $146 and $204, respectively, available to offset future state income taxes. The U.S. federal and state research and development credits will begin to expire in 2030 and 2025, respectively.

As of December 31, 2013 and 2014, the Company has net operating loss carryforwards in Japan of $2,801 and $3,535, respectively, which may be available to offset future income tax liabilities and begin to expire in 2015.

During the six months ended June 30, 2015, gross deferred tax assets increased by approximately $1,173 (unaudited), due to net operating losses incurred by the Company in Japan and Singapore during the period. There was no income tax benefit (provision) recognized for the six months ended June 30, 2015 in these jurisdictions due to the continued generation of net operating losses.

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The Company has evaluated the positive and negative evidence bearing upon its ability to realize its deferred tax assets. Management has considered the Company's history of cumulative net losses incurred since inception and its lack of commercialization of any products or generation of any revenue from product sales since inception and has concluded that it is more likely than not that the Company will not realize the benefits of the deferred tax assets in Japan and Singapore. Accordingly, a full valuation allowance has been established against those deferred tax assets as of December 31, 2013, December 31, 2014, and June 30, 2015 (unaudited). The valuation allowance increased by approximately $864 in 2013 and $1,292 in 2014, primarily as a result of operating losses generated with no corresponding financial statement benefit. The Company may release this valuation allowance when management determines that it is more likely than not that the deferred tax assets will be realized. Any release of valuation allowance will be recorded as a tax benefit increasing net income.

At December 31, 2013, the Company determined that it was more likely than not that the Company would be able to realize the majority of the United States deferred tax assets primarily related to United States federal research and development credits, as a result of the research services agreement established between Singapore and the United States in 2013, which results in marginal profitability in the United States in 2013 and for the foreseeable future. Accordingly, the Company reversed $379 of its valuation allowance on United States federal and state deferred tax assets in 2013.

The Company's reserves related to taxes and its accounting for uncertain tax positions are based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings or positions is more-likely-than-not to be realized following resolution of any potential contingencies present related to the tax benefit.

A summary of activity in the Company's unrecognized tax benefits is as follows:

	December 31	
	2013	2014
Unrecognized tax benefit beginning of year	$815	$ 901
Tax positions related to current year	86	124
Unrecognized tax benefit end of year	$901	$1,025

As of December 31, 2013 and 2014, the total amount of gross unrecognized tax benefits in the United States, which excludes interest and penalties, was $901 and $1,025, respectively. At December 31, 2013 and 2014, $819 and $925 of the net unrecognized tax benefits, respectively, would affect the Company's annual effective tax rate if recognized.

As discussed in Note 2, the Company early adopted ASU 2013-11 and therefore unrecognized tax benefits related to net operating losses are netted against the related deferred tax asset. The Company believes it is reasonably possible that approximately $700 of its unrecognized tax benefits may decrease by the end of 2015 as a result of the Company's intention to amend its tax filings for transfer pricing in prior years. The impact of the reversal of the uncertain tax benefit will reduce the net operating loss carryforwards in the United States.

The Company's policy is to record interest and penalties related to income taxes as part of its income tax provision. As of December 31, 2013 and 2014, the Company had no accrued interest or penalties related to uncertain tax positions, and no amounts have been recognized in the Company's statements of operations and comprehensive loss.

The Company files income tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by various taxing authorities in the United States, Japan, and Singapore. There are currently no pending income tax examinations. Tax years from 2010 to the present

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are still open to examination in the United States, from 2008 to the present in Japan, and from 2012 to the present in Singapore. To the extent the Company has tax attribute carryforwards, the tax years in which the attribute was generated may still be adjusted upon examination by the Internal Revenue Service and state tax authorities to the extent utilized in a future period.

As of December 31, 2013 and 2014, $227 of $439 and $484 of $1,048, respectively, of cash was held by the subsidiaries outside of Singapore. The Company does not provide for Singapore income tax or foreign withholding taxes on foreign unrepatriated earnings, as the Company intends to permanently reinvest undistributed earnings in its foreign subsidiaries. If the Company decides to change this assertion in the future to repatriate any additional foreign earnings, the Company may be required to accrue and pay taxes. Because of the complexity of Singapore and foreign tax rules applicable to the distribution of earnings from foreign subsidiaries to Singapore, the determination of the unrecognized deferred tax liability on these earnings is not practicable.

Utilization of the net operating loss carryforwards and research and development tax credit carryforwards in the United States may be subject to a substantial annual limitation under Section 382 of the Internal Revenue Code of 1986 due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the shares of a corporation by more than 50% over a three-year period. The Company has not conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of control, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit carryforwards would be subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's shares at the time of the ownership change by the applicable long-term tax-exempt rate, and then could be subject to additional adjustments, as required. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before utilization. Further, until a study is completed and any limitation is known, no amounts are being presented as an uncertain tax position.

12. EMPLOYEE BENEFIT PLANS

In 2013, the Company adopted a 401(k) retirement and savings plan (the "401(k) Plan") covering all U.S.-based employees. The 401(k) Plan allows employees to make pre-tax contributions up to the maximum allowable amount set by the IRS. Under the 401(k) Plan, the Company may make discretionary contributions as approved by the board of directors. During the years ended December 31, 2013 and December 31, 2014, and the six months ended June 30, 2014 and June 30, 2015, the Company did not make contributions to the 401(k) Plan.

The Company has a J401(k) defined contribution pension plan covering all Japan-based permanent employees that was adopted in 2010. The J401(k) defined contribution pension plan allows the Company to make pre-tax contributions up to the maximum allowable amount set by the chief officer of the Kyushu Regional Bureau of Health and Welfare's approval and company's wage regulation. Under the J401(k) defined contribution pension plan, the Company may make discretionary contributions as approved by the Board of Directors. The Company has made contributions of $3 (unaudited) through June 30, 2015.

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13. RELATED PARTIES

The Company had the following related party transactions for the periods presented in the accompanying consolidated financial statements, which have not otherwise been discussed in these notes to the consolidated financial statements:

- The Company has cash of $3, $17, and $10 (unaudited) at December 31, 2013 and 2014 and June 30, 2015, respectively, in depository accounts with one of its investors, who became an investor in February 2014.
- Pursuant to the terms of a service agreement previously held with SNBL, a related party, the Company paid SNBL $245 and $71 in the years ended December 31, 2013 and 2014, respectively, and $1 (unaudited) in the six months ended June 30, 2015, for accounting and administrative services provided to the Company and its affiliates.
- In 2012, the Company entered into a consulting agreement with a shareholder for services in the capacity as a scientific advisor. The consulting agreement does not have a certain term and may be terminated by either party upon 14 days' prior written notice. The Company pays the shareholder $13 per month and reimbursement for certain expenses.
- The Company also has an informal consulting arrangement with a shareholder in the amount of 250 Japanese yen, or $2, per month, plus reimbursement of certain expenses, for scientific advisory services.

14. GEOGRAPHIC DATA

The Company's long-lived assets consist of property and equipment and are located in the following geographical areas:

	December 31, 2013	December 31, 2014	June 30, 2015 (unaudited)
Asia	$ 777	$ 745	$ 650
United States	607	524	1,182
Total long-lived assets	$1,384	$1,269	$ 1,832

15. SUBSEQUENT EVENTS (UNAUDITED)

In preparing the financial statements as of and for the year ended December 31, 2014, we evaluated subsequent events for recognition and measurement purposes through September 4, 2015, the date that the independent auditors' report was originally issued and the audited annual consolidated financial statements were available for issuance. After the original issuance of the consolidated financial statements and through November 5, 2015, we have evaluated subsequent events or transactions that have occurred that may require disclosure in the accompanying financial statements. Except as described below, the Company has concluded that no events or transactions have occurred that require disclosure in the accompanying consolidated financial statements.

On August 14, 2015, the Company issued an aggregate of 5,334,892 Series B preferred shares at a purchase price of $12.37 per share to certain third-party investors for $62,500 of net proceeds.

As discussed in Note 1, in connection with the private placement of Series B preferred shares, holders of the Company's preference shares agreed to rename the existing "preference shares" as "Series A preferred shares." In addition, as further described below, the terms of the Series A preferred shares were substantively amended to

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remove their right of first refusal and to provide for their right to convert on a one-for-one basis into an aggregate of 3,901,348 ordinary shares at any time at the election of the holder. The rights of the Series A preferred shares are identical to the ordinary shares other than: (1) no voting rights other than in limited circumstances, (2) the right to a non-cumulative dividend if and when declared by our board of directors and (3) the right to convert the Series A preferred shares at any time on a one-for-one basis into ordinary shares at the discretion of the holder. The Company's shareholders, including holders of Series A preferred shares, entered into an investors' rights agreement and a voting agreement with the Company in connection with the private placement. Pursuant to the terms of the voting agreement, investors who hold at least 1,212,477 shares of registerable securities, including holders of Series A preferred shares and Series B preferred shares, have a right to purchase certain new securities offered by the Company. Additionally, in the event of the sale of 50% or more of the voting power of the company or a deemed liquidation event, if the holders of at least a majority of the ordinary shares and the holders of 56% of the Series B preferred shares vote to a sale of the Company, they have the right to force the other shareholders, including the holders of Series A preferred shares, to agree to such a sale.

On August 14, 2015, the Company's board of directors approved an increase in the number of ordinary shares issuable under the 2014 Plan from 2,498,597 to 3,555,774 shares.

On September 28, 2015, the terms of the Series A preferred shares were further substantively amended to provide that, upon the closing of an initial public offering, the existing right of Series A preferred shares to a non-cumulative dividend if and when declared by our board of directors shall cease and be replaced by a liquidation preference consisting of $0.0024743 per Series A preferred share, or an aggregate of $10 based on the number of Series A preferred shares outstanding at the date of the amendment.

In October 2015 the Company's board of directors approved an increase in the number of ordinary shares issuable under the 2014 Equity Incentive Plan by 1,508,770 shares to 5,064,544.

16. SUBSEQUENT EVENTS – SHARE SPLIT AND NAME CHANGE

On November 1, 2015, the Company effectuated a 4.0415917-for-1 forward share split of its issued and outstanding ordinary shares, Series A preferred shares and Series B preferred shares. Accordingly, all share and per share amounts for all periods presented in the accompanying consolidated financial statements and notes thereto have been adjusted retroactively, where applicable, to reflect this share split.

On November 5, 2015, the Company converted from a Singapore private limited company to a Singapore public limited company. In connection with this conversion, the Company changed its name from WAVE Life Sciences Pte. Ltd. to WAVE Life Sciences Ltd. All references to the Company have been changed to WAVE Sciences Ltd. in the accompanying consolidated financial statements and notes thereto.

6,375,000 Shares

Ordinary Shares

PROSPECTUS

Joint Book-Running Managers

Jefferies
Leerink Partners

Co-Managers

JMP Securities
SunTrust Robinson Humphrey

November 10, 2015

Until December 5, 2015 (25 days after the commencement of this offering), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.