Registration No. 333-

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

FORM S-3 **REGISTRATION STATEMENT** UNDER

THE SECURITIES ACT OF 1933

WAVE LIFE SCIENCES LTD.

(Exact name of registrant as specified in its charter)

Singapore (State or other jurisdiction of incorporation or organization)

Not applicable (I.R.S. Employer Identification Number)

7 Straits View #12-00, Marina One East Tower

Singapore 018936 +65 6236 3388

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

CT Corporation 155 Federal Street, Suite 700 **Boston, Massachusetts 02110** (617) 757-6400

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Non-accelerated filer \Box

Accelerated filer \Box

Smaller reporting company \Box

Emerging growth company \Box

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Primary Offering of Securities				
Ordinary Shares, no par value	(1)	(1)	(1)	(2)
Debt Securities	(1)	(1)	(1)	(2)
Warrants	(1)	(1)	(1)	(2)
Rights	(1)	(1)	(1)	(2)
Units(3)	(1)	(1)	(1)	(2)
Subtotal	(1)	(1)	(1)	(2)
Primary Offering of Securities				
Ordinary Shares, no par value	\$250,000,000	N/A*	\$250,000,000	\$3,946.08(4)
Total	(1)	(1)	(1)	(2)

* The proposed maximum offering price per unit is not applicable in that these securities are not issued in predetermined amounts or units.

(1) Pursuant to Form S-3 General Instructions II.E, this information is not required to be included. An indeterminate amount of the securities of each identified class of securities is being registered as may from time to time be offered hereunder at indeterminate prices, along with an indeterminate number of securities that may be issued upon exercise, settlement, exchange or conversion of securities offered or sold hereunder. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or pursuant to anti-dilution provisions of any of the securities. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of other securities.

(2) In accordance with Rules 456(b) and 457(r) under the Securities Act, the registrant is deferring payment of these registration fees and will pay these registration fees subsequently in advance or on a "pay-as-you-go" basis.

(3) Each unit will represent an interest in two or more other securities registered hereunder, which may or may not be separable from one another.
(4) Pursuant to Rule 415(a)(6) under the Securities Act, the securities registered for this offering pursuant to this registration statement include \$227,384,992 of unsold securities (the "Unsold Primary Securities") previously registered for primary offerings in accordance with Rule 415(a)(1) (x) under the Securities Act ("Rule 415(a)(1)(x)") on the registrant's registration statement on Form S-3 (File No. 333-215428) initially filed on January 4, 2017 and declared effective on February 6, 2017 (the "Prior Registration Statement"). The Prior Registration Statement registered securities for primary offerings in accordance with Rule 415(a)(1)(x) with a proposed maximum aggregate of \$200,000,000. The registrant sold an aggregate of \$272,615,008 of such securities under the Prior Registration Statement, leaving the balance of \$227,384,992 of Unsold Primary Securities, in respect of which the registrant paid an aggregate registration fee of \$26,353.92 in connection with the Prior Registration Statement. Consequently, a filing fee of \$3,946.08 is due in connection with the filing of this registration statement, which amount reflects the difference between the registration fee to be paid in connection with the \$250,000,000 of securities. Pursuant to Rule 415(a) (6), the offering of the Unsold Primary Securities under the Prior Registration Statement will be deemed terminated as of the time of filing of this registration statement.

EXPLANATORY NOTE

This registration statement contains:

- a base prospectus which covers the offering, issuance and sale by us of the securities identified above from time to time in one or more offerings; and
- a sales agreement prospectus covering the offering, issuance and sale by us of up to a maximum aggregate offering price of \$250,000,000 of our ordinary shares that may be issued and sold from time to time under an Open Market Sale AgreementSM, or the Sales Agreement, entered into with Jefferies LLC.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The specific terms of the securities to be issued and sold under the Sales Agreement are specified in the sales agreement prospectus that immediately follows the base prospectus.

PROSPECTUS



This prospectus will allow us to issue, from time to time at prices and on terms to be determined at or prior to the time of the offering, any combination of the securities described in this prospectus, either individually or in units. We may also offer ordinary shares upon conversion of or exchange for the debt securities; or ordinary shares or debt securities upon the exercise of warrants or rights.

This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide you with the specific terms of any offering in one or more supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any prospectus supplement, as well as any documents incorporated by reference into this prospectus or any prospectus supplement, carefully before you invest.

Our securities may be sold directly by us to you, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section titled "Plan of Distribution" in this prospectus and in the applicable prospectus supplement. If any underwriters or agents are involved in the sale of our securities with respect to which this prospectus is being delivered, the names of such underwriters or agents and any applicable fees, commissions or discounts and over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds that we expect to receive from such sale will also be set forth in a prospectus supplement.

Our ordinary shares are listed on The Nasdaq Global Market under the symbol "WVE." On May 9, 2019, the last reported sale price of our ordinary shares was \$27.31 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on The Nasdaq Global Market or any securities market or other securities exchange of the securities covered by the prospectus supplement. Prospective purchasers of our securities are urged to obtain current information as to the market prices of our securities, where applicable.

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described on page 6 of this prospectus under the caption "<u>Risk</u> <u>Factors</u>." We may include specific risk factors in supplements to this prospectus under the caption "<u>Risk Factors</u>." This prospectus may not be used to sell our securities unless accompanied by a prospectus supplement.

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.

The date of this prospectus is May 10, 2019.

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ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. The prospectus supplement may also add, update or change information contained or incorporated by reference in this prospectus. However, no prospectus supplement will offer a security that is not registered and described in this prospectus at the time of its effectiveness. This prospectus, together with the applicable prospectus supplements and the documents incorporated by reference into this prospectus, includes all material information relating to the offering of securities under this prospectus. You should carefully read this prospectus, the applicable prospectus supplement, the information and documents incorporated herein by reference and the additional information under the heading "Where You Can Find More Information" before making an investment decision.

You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information we have incorporated herein by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

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

This prospectus is not a "prospectus" as defined in the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, and accordingly, statutory liability under the SFA in relation to the content of prospectuses will not apply. This prospectus has not been and will not be lodged with or registered as a prospectus by 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 our securities may not be circulated or distributed, nor may the securities 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 in Section 4A(1)(c) of 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, in each case subject to compliance with the conditions set forth in the SFA.

Where securities or securities-based derivatives contracts 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 trustee of 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 securities or securities-based derivatives contracts (each as defined in Section 2(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 securities or securities-based derivatives contracts are acquired by that corporation or for that trust 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 in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or securities-based derivatives contracts or other assets;
- where no consideration is or will be given for the transfer;
- where the transfer is by operation of law; or
- as specified in Section 276(7) of the SFA.

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.

This prospectus may not be used to consummate sales of our securities, unless it is accompanied by a prospectus supplement. To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

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.

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.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed consolidated financial statements, notes to the consolidated financial statements and other information incorporated by reference from our other filings with the SEC or included in any applicable prospectus supplement. Investing in our securities involves risks. Therefore, carefully consider the risk factors set forth in any prospectus supplements and in our most recent annual and quarterly filings with the SEC, as well as other information in this prospectus and any prospectus supplements and the documents incorporated by reference herein or therein, before purchasing our securities. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

About Wave Life Sciences

We are a clinical-stage genetic medicines company committed to delivering life-changing treatments for people battling devastating diseases. Using PRISM, our proprietary discovery and drug development platform that enables the precise design, optimization and production of novel stereopure oligonucleotides, we aspire to develop best in class medicines across multiple therapeutic modalities.

Nucleic acid therapeutics, including oligonucleotides, are a growing and innovative class of drugs comprised of a sequence of nucleotides that are linked together by a backbone of chemical bonds. We are initially developing oligonucleotides that target the ribonucleic acid ("RNA") to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins. RNA is a critical molecule that can adopt complex three-dimensional structures and affect various cellular functions. By intervening at the RNA level, we have the potential to address diseases that have historically been difficult to treat with small molecules or biologics. Oligonucleotides have additional advantages as a therapeutic class including the ability to target multiple tissue types, often without the need for a delivery vehicle, and the ability to modulate the frequency of dosing to ensure broad distribution within tissues and account for cell turnover. Oligonucleotides also have well-established manufacturing processes and validated test methods based on decades of improvements.

The oligonucleotides we are developing with PRISM are stereopure. A stereopure oligonucleotide is comprised of molecules with atoms precisely arranged in three-dimensional orientations at each linkage. We believe that controlling the position of the sulfur atom following phosphorothioate ("PS") modification will optimize the pharmacological profile of our oligonucleotides by maximizing the potential therapeutic benefit while minimizing the potential for side effects and safety risks. The stereopure oligonucleotides we are developing differ from the mixture-based oligonucleotides currently on the market or in development by others. Our preclinical studies have demonstrated that our stereopure oligonucleotides may achieve superior pharmacological properties compared with mixture-based oligonucleotides. Through our work in developing stereopure oligonucleotides, we have created and continue to evolve PRISM, our proprietary discovery and drug development platform.

PRISM enables us to target genetically defined diseases with stereopure oligonucleotides across multiple therapeutic modalities. PRISM combines our unique ability to construct stereopure oligonucleotides with a deep understanding of how the interplay among oligonucleotide sequence, chemistry and backbone stereochemistry impacts key pharmacological properties. By exploring these interactions through iterative analysis of in vitro and in vivo outcomes and artificial intelligence-driven predictive modeling, we continue to define design principles that we deploy across programs to rapidly develop and manufacture clinical candidates that meet pre-defined product profiles.

Our goal is to develop and commercialize disease-modifying medicines for genetically defined diseases with a high degree of unmet medical need, and to become a fully integrated genetic medicines company. Our initial focus for our clinical development programs is in neurology, which we broadly define as genetic diseases within the neuromuscular system and central nervous system. We are conducting clinical trials of suvodirsen, our lead program in Duchenne muscular dystrophy ("DMD") targeting exon 51, and our two lead programs in Huntington's disease ("HD"). We are also advancing additional development programs in DMD, amyotrophic lateral sclerosis, frontotemporal dementia and spinocerebellar ataxia 3. In addition to neurology, we are advancing discovery research in ophthalmologic disorders, specifically inherited retinal diseases, and in hepatic diseases, and we expect to make continued investments in expanding the breadth of our portfolio. In further support of our pipeline, we continue to make substantial investments in, and leverage, PRISM to potentially develop the next generation of stereopure oligonucleotides. We have also established and continue to enhance our internal current good manufacturing practices ("cGMP") manufacturing capabilities to increase control and visibility of our drug substance supply chain. These investments further improve our ability to secure drug substance for current and future development activities and may provide commercial-scale manufacturing capabilities.

Corporate History and Information

We were incorporated under the name Wave Life Sciences Pte. Ltd. (Registration No.: 201218209G) under the laws of Singapore on July 23, 2012. On November 16, 2015, we closed our initial public offering. In preparation for our initial public offering, on November 5, 2015, Wave Life Sciences Pte. Ltd. converted from a private limited company to a public limited company known as Wave Life Sciences Ltd. ("Wave"). Wave has four wholly-owned subsidiaries: Wave Life Sciences USA, Inc. ("Wave USA"), a Delaware corporation (formerly Ontorii, Inc.); Wave Life Sciences Japan, Inc. ("Wave Japan"), a company organized under the laws of Japan (formerly Chiralgen., Ltd.); Wave Life Sciences Ireland Limited ("Wave Ireland"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of the United Kingdom.

Our registered office is located at 7 Straits View #12-00, Marina One East Tower, Singapore 018936, and our telephone number at that address is +65 6236 3388. Our principal office for Wave USA is located at 733 Concord Avenue, Cambridge, MA 02138, and our telephone number at that address is +1-617-949-2900. Our registered office for Wave Japan is 2438 Miyanoura-cho, Kagoshima-shi, Kagoshima pref. 891-1394, Japan. Our registered office for Wave Ireland is One Spencer Dock, North Wall Quay, Dublin 1, Ireland. Our registered office for Wave UK is Hays Galleria, 1 Hays Lane, London, SE1 2RD, United Kingdom.

Our corporate website address is www.wavelifesciences.com. The information on our website is not part of this prospectus or incorporated by reference into 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. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and all amendments to such reports are made available free of charge through the "For Investors & Media—Financial Information" section of our website as soon as reasonably practicable after they have been filed or furnished with the SEC.

Offerings Under This Prospectus

Under this prospectus, we may offer ordinary shares, various series of debt securities and/or warrants or rights, either individually or in units, from time to time at prices and on terms to be determined by market conditions at the time of the offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a

prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity, if applicable;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion or sinking fund terms, if any;
- voting or other rights, if any; and
- conversion or exercise prices, if any.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus. However, no prospectus supplement will offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We may sell the securities directly to investors or to or through agents, underwriters or dealers. We, and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we offer securities through agents or underwriters, we will include in the applicable prospectus supplement:

- the names of those agents or underwriters;
- applicable fees, discounts and commissions to be paid to them;
- · details regarding over-allotment options, if any; and
- the net proceeds to us.

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

RISK FACTORS

Investing in our securities involves significant risk. The prospectus supplement applicable to each offering of our securities may contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading "Risk Factors" in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under the heading "Risk Factors" included in our most recent annual report on Form 10-K, as revised or supplemented by our subsequent quarterly reports on Form 10-Q or our current reports on Form 8-K on file with the SEC, all of which are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents we have filed with the SEC that are incorporated by reference contain "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, that involve substantial risks and uncertainties. In some cases, forward-looking statements are identified 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, any accompanying prospectus and the documents that we have filed with the SEC that are incorporated by reference, such 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 future operations; our financial position, revenues, costs, expenses, uses of cash and capital requirements; our need for additional financing or the period for which our existing cash resources will be sufficient to meet our operating requirements;
- the success, progress, number, scope, cost, duration, timing or results of our research and development activities, preclinical studies and clinical trials, including the timing for initiation or completion of or availability of results from any preclinical studies and clinical trials or for submission, review or approval of any regulatory filing;
- the timing of, and our ability to, obtain and maintain regulatory approvals for any of our product candidates;
- the potential benefits that may be derived from any of our product candidates;
- our strategies, prospects, plans, goals, expectations, forecasts or objectives;
- the success of our collaborations with third parties;
- any payment that our collaboration partners may make to us;
- our ability to identify and develop new product candidates;
- our intellectual property position;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our expected uses of the net proceeds from any offering of our securities;
- 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;
- developments and projections relating to our competitors in the industry;
- our liquidity and working capital requirements; and
- the expected impact of new accounting standards.

You should refer to the section titled "Risk Factors" of this prospectus and in our other filings with the SEC 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 that the forward-looking statements in this prospectus, any accompanying prospectus or the documents we have filed with the SEC that are incorporated by reference 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, these statements should not be regarded as representations or warranties 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.

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 as predictions of future events.

You should read this prospectus, any accompanying prospectus supplement, the documents that we have incorporated by reference herein and therein and the documents we have filed as exhibits to the registration statement, 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, any accompanying prospectus supplement and the documents we have filed with the SEC that are incorporated herein by reference 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, any accompanying prospectus supplement and the documents we have filed with the SEC that are incorporated herein by reference involve 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 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.

RATIO OF EARNINGS TO FIXED CHARGES

Any time debt securities are offered pursuant to this prospectus, we will provide a table setting forth our ratio of earnings to fixed charges on a historical basis in the applicable prospectus supplement, if required.

USE OF PROCEEDS

We cannot assure you that we will receive any proceeds in connection with securities which may be offered pursuant to this prospectus. Unless otherwise indicated in the applicable prospectus supplement, we intend to use any net proceeds from the sale of securities under this prospectus for our operations and for other general corporate purposes, including, but not limited to, clinical trial costs and other research and development expenses; continued growth of our manufacturing capabilities; initial investments in commercial and medical affairs infrastructure to support our transition to a fully integrated, commercial-stage genetic medicines company; continued investment in our drug development platform; and working capital, capital expenditures and general and administrative expenses. We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds, if any, we receive in connection with securities offered pursuant to this prospectus for any purpose. Pending application of the net proceeds as described above, we may initially invest the net proceeds in short-term, investment-grade, interest-bearing securities or apply them to the reduction of short-term indebtedness.

DESCRIPTION OF SHARE CAPITAL

General

For the purposes of this section, references to "shareholders" mean those persons whose names and number of shares are entered in our register of members. Only persons who are registered in our register of members 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 branch register of members is maintained by our transfer agent, Computershare Trust Company, N.A. ("Computershare").

The shares offered in any offering pursuant to this prospectus and any accompanying prospectus supplement are expected to be held through the Depository Trust Company ("DTC"). Accordingly, DTC or its nominee, Cede & Co., will be the shareholder on record registered in our register of members. 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 register of members for such shares. 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.

Under the Singapore Companies Act, if (a) the name of any person is without sufficient cause entered in or omitted from the register of members; or (b) default is made or there is unnecessary delay in entering in the register of members the fact of any person having ceased to be a member, the person aggrieved or any member of the public company or the company itself, may apply to the Singapore courts for rectification of the register of members. The Singapore courts may either refuse the application or order rectification of the register of members, 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 register of members in respect of an entry which was made in the register of members more than 30 years before the date of the application.

As of March 31, 2019, there were outstanding:

- 34,255,406 ordinary shares;
- 3,901,348 Series A preferred shares held by one shareholder of record;
- 1,674,124 ordinary shares issuable upon vesting of outstanding restricted share units;
- 3,853,542 ordinary shares issuable upon the exercise of outstanding share options; and
- 201,898 ordinary shares reserved for issuance in connection with future grants under our equity incentive plan.

The following description of our share capital and provisions of our constitution (formerly known as our memorandum and articles of association) are summaries and are qualified by reference to the Singapore Companies Act and our constitution. A copy of our constitution has been filed with the SEC as an exhibit to the registration statement of which this prospectus forms a part.

Ordinary Shares

As of March 31, 2019, our issued and paid-up ordinary share capital consists of 34,255,406 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 constitution which provides that we may issue shares with such preferred, deferred or other special rights or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as our board of directors may determine.

All of our shares presently issued are fully paid-up, and existing shareholders are not subject to any calls on these 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 of our 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 Singapore Companies Act or by our constitution on the right of shareholders not resident in Singapore to hold or vote ordinary shares.

Transfer Agent and Registrar

The transfer agent and registrar for our ordinary shares is Computershare Trust Company, N.A.

Nasdaq Global Market

Our ordinary shares are listed for quotation on The Nasdaq Global Market under the symbol "WVE."

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; or
- the expiration of the period within which the next annual general meeting is required by law to be held (i.e., within six months after the end of each financial year),

but any approval may be revoked or varied by the company in a general meeting.

Our shareholders have provided such general authority to issue new ordinary shares until the conclusion of our 2019 annual general meeting. Such approval will lapse in accordance with the preceding paragraph if our shareholders do not grant a new approval at our 2019 annual general meeting. Subject to this and the provisions of the Singapore Companies Act and our constitution, our board of directors may allot and issue or grant options over or otherwise dispose of new ordinary 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 March 31, 2019, we 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. The terms of the Series A preferred shares as set out in our constitution include (1) no voting rights at any general meeting other than in limited circumstances, (2) a liquidation preference equal to \$0.002 per Series A preferred share, (3) no entitlement to dividends and (4) 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 in accordance with the constitution.

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

(but only 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.

Other Preferred Shares

Under the Singapore Companies Act, different classes of shares in a public company may be issued only if (a) the issue of the class or classes of shares is provided for in the constitution of the public company and (b) the constitution of the public company sets out in respect of each class of shares the rights attached to that class of shares. Our constitution provides that we may issue shares of a different class with preferred, deferred or other special rights, or such restrictions, whether in regard to dividend, voting, return of capital or otherwise 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 voluntary winding-up of our company under Section 290 of the Singapore Companies Act;
- upon any resolution which varies the rights attached to such preferred shares; or
- in the case of preferred shares issued after August 15, 1984, but before the commencement of Section 96 of the Companies (Amendment) Act 2014, when the dividends to be paid on our preferred shares or any part thereof are more than twelve months in arrears and unpaid, for the period they remain in arrears and unpaid.

We may, subject to the Singapore Companies Act and 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, such shares must be fully paid-up before they are redeemed.

As of the date of this prospectus, we 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.

Registration Rights under our Investors' Rights Agreement

As of March 31, 2019, the holders of approximately 7.3 million of our ordinary shares are entitled to rights with respect to the registration of these shares under the Securities Act. These rights are provided under the terms of the Investors' Rights Agreement dated as of August 14, 2015 between us and the holders of these shares, as amended on November 8, 2018, and include demand registration rights, Form S-3 registration rights and piggyback registration rights. We are generally required to bear all registration expenses incurred in connection with the demand, Form S-3 and piggyback registrations described below, 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.

Demand Registration Rights

Under the terms of the Investors' Rights Agreement, we will be required, upon the request of holders of at least 50% of the then-outstanding shares of Registrable Securities, as such term is defined in the Investors'

Rights Agreement, requesting registration of at least 50% of the then-outstanding shares of Registrable Securities having an anticipated aggregate offering price of at least \$25.0 million, net of selling expenses, to effect the registration of such shares on Form S-1 for public resale. We are required to effect only one registration pursuant to this provision of the Investors' Rights Agreement.

Form S-3 Registration Rights

At any time that we are entitled under the Securities Act to register our shares on Form S-3 and the holders of at least 30% of the then-outstanding Registrable Securities request that we register their shares for public resale on Form S-3 with an aggregate offering price of the shares to be registered of at least \$5.0 million, net of selling expenses, we will be required to effect such registration. If, however, our chief executive officer certifies that, in the good faith judgment of our board of directors, it would be materially detrimental to us and our shareholders for such registration to become or remain effective because such action would (i) materially interfere with a significant acquisition, corporate reorganization or similar transaction involving us, (ii) require premature disclosure of material information that we have a bona fide business purpose for preserving as confidential, or (iii) render us unable to comply with requirements under the Securities Act or Exchange Act, then we will have the right to defer the registration for up to 120 days. We are only obligated to effect up to one registration on Form S-3 within any 12 month period.

Piggyback Registration Rights

If we register any of our securities either for our own account or for the account of other shareholders, the holders of these shares are entitled to include their shares in the registration. Subject to certain exceptions, we and the underwriters may limit the number of shares included in the underwritten offering if the underwriters believe that including these shares would adversely affect the offering. In connection with the filing of the registration statement of which this prospectus forms a part, the holders of registrable securities were entitled to, and the necessary percentage of holders waived, their rights to include their shares of registrable securities in the registration statement of which this prospectus forms a part.

Indemnification

Our Investors' Rights Agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Termination of Registration Rights

The registration rights granted under the Investors' Rights Agreement will terminate on December 31, 2019 or, with respect to any holder of registrable securities, such earlier time as all such registrable securities held by such holder are available for resale without limitation during a threemonth period without registration, pursuant to Rule 144 or another similar exemption under the Securities Act.

Registration Rights under our Share Purchase Agreement with Pfizer

Under the terms of our Share Purchase Agreement dated as of May 5, 2016 with an affiliate of Pfizer Inc. (the "Pfizer Affiliate"), the Pfizer Affiliate agreed that the 1,875,000 ordinary shares that the Pfizer Affiliate purchased from us under the Share Purchase Agreement (the "Pfizer Shares"), are subject to a lock-up restriction, such that the Pfizer Affiliate will not, and will also cause its affiliates not to, without our prior approval, sell, transfer or otherwise dispose of the Pfizer Shares until certain specified periods of time after the effective date of the Share Purchase Agreement. For a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, we agreed to provide certain demand registration rights to the Pfizer Affiliate

in order to register all or a portion of the Pfizer Shares purchased by the Pfizer Affiliate. We also provided the Pfizer Affiliate with certain "piggyback" registration rights for a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, such that when we propose to register our ordinary shares for our account, the Pfizer Affiliate will have the right to include some or all of the Pfizer Shares in such registration. The Share Purchase Agreement also contains other customary terms and conditions of the parties with respect to the registration of the Pfizer Shares.

Registration Rights under our Share Purchase Agreement with Takeda

On February 19, 2018, the Company entered into a share purchase agreement with Takeda Pharmaceutical Company Limited ("Takeda"), pursuant to which Takeda purchased 1,096,892 of the Company's ordinary shares (the "Takeda Shares"). In connection with the share purchase agreement, Takeda and the Company agreed upon certain rights and restrictions as set forth in the Investor Agreement, dated as of April 2, 2018 (the "Investor Agreement"). The Takeda Shares are subject to a lock-up restriction, such that Takeda will not, and will also cause its affiliates not to, without our prior approval, sell, transfer or otherwise dispose of the Takeda Shares until certain specified periods of time after the effective date of the Investor Agreement. For a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, we agreed to provide certain demand registration rights to Takeda in order to register all or a portion of the Takeda Shares purchased by Takeda. We also provided Takeda with certain "piggyback" registration rights for a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, such that when we propose to register our ordinary shares for our account, Takeda will have the right to include some or all of the Takeda Shares in such registration. The Investor Agreement also contains other customary terms and conditions of the parties with respect to the registration of Takeda Shares.

Transfer of Ordinary Shares

Subject to applicable securities laws in relevant jurisdictions and our constitution, our ordinary shares are freely transferable. Our constitution provides that 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 and Nasdaq. 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 reasonably require to show the right of the transfer to make the transfer. 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 constitution 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.

Under our constitution, subject to the Singapore Companies Act, any director shall retire at the next annual general meeting and shall then be 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 (if any) fixed by or in accordance with our constitution.

Shareholders' Meetings

We are required to hold an annual general meeting each calendar year and within six months after the end of each financial year. 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 as of the date of deposit of the requisition 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.

The Singapore Companies Act provides that a shareholder is entitled to attend any general meeting and speak on any resolution put before the general meeting. Unless otherwise required by law or by our constitution, resolutions put forth at general meetings may be decided 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 constitution. 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. Under the Singapore Companies Act, a proxy appointed to attend and vote instead of the shareholder to speak at the meeting, but unless the constitution of the company otherwise provides, (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.

Notwithstanding the foregoing, a registered shareholder entitled to attend and vote at a meeting of the company held pursuant to an order of court under Section 210(1) of the Singapore Companies Act, or at any adjourned meeting under Section 210(3) of the Singapore Companies Act, is, unless the court orders otherwise, entitled to appoint only one proxy to attend and vote at the same meeting, and except where the aforementioned applies, a registered shareholder having a share capital who is a relevant intermediary (as defined under the Singapore Companies Act) may appoint more than two proxies in relation to a meeting to exercise all or any of his rights to attend and to speak and vote at the meeting, but each proxy must be appointed to exercise the rights attached to a different share or shares held by him (which number and class of shares shall be specified), and at such meeting, the proxy has the right to vote on a show of hands.

Only registered shareholders of our company, and their proxies, will be entitled to attend, speak and vote at any meeting of shareholders. Under the Singapore Companies Act, public companies may issue non-voting shares and shares that confer 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 64A of the Singapore Companies Act, the share confers on the holder a right to vote on that resolution.

Voting Rights

As provided under our constitution and the Singapore Companies Act, voting at any meeting of shareholders is by show of hands unless a poll has been demanded prior to the declaration of the result of the show of hands by, among others, (i) the chairman 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 5% 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 register of members as holders of ordinary shares will be entitled to vote at any meeting of shareholders. Therefore, DTC, or its nominee, will grant an omnibus proxy to

DTC participants holding our shares in book-entry form through a broker, bank, nominee, or other institution that is a direct or indirect participant in the DTC. Such shareholders will have the right to instruct their broker, bank, nominee or other institution holding these shares on how to vote such shares by completing the voting instruction form provided by the applicable broker, bank, nominee, or other institution. Whether voting is by a show of hands or by a poll, DTC's vote will be voted by the chairman of the meeting according to the results of the DTC's participants' votes (which results will reflect the instructions received from shareholders that own our shares electronically in book-entry form).

Minority Rights

The rights of minority shareholders of Singapore companies are protected, among other things, 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;
- in the case of a purchase of shares by the company provide for a reduction accordingly of the company's capital; 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 constitution, 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.

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 constitution, 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 applies to, among other things, the acquisition of voting shares of Singapore-incorporated listed public companies or unlisted public companies with more than 50 shareholders and net tangible assets of S\$5 million or more. 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 advisor, including a stockbroker, with its client in respect of the shareholdings of the advisor and persons controlling, controlled by or under the same control as the advisor;
- 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.
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Subject to certain exceptions, 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 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

Under Section 172 of the Singapore Companies Act, any provision exempting or indemnifying the officers of a company (including directors) against any liability that would otherwise attach to them in connection with any negligence, default, breach of duty or breach of trust in relation to the company is void. However, a company is not prohibited from (a) purchasing and maintaining for any such individual insurance against liability incurred by him or her in connection with any negligence, default, breach of trust in relation to the company, or (b) indemnifying the individual against liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the individual to pay a fine in criminal proceedings, (ii) of the individual to pay a penalty in respect of non-compliance with any requirements of a regulatory nature (howsoever arising), (iii) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual 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 or her relief.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force concerning companies and affecting us, our constitution provides 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.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting our company, we may indemnify our directors and officers against costs, charges, fees and other expenses 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, 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 of which he may be guilty 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, subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting our company, 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 officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under our constitution and the Singapore Companies Act against liabilities that may arise by reason of their service to us as a director or officer of the company (as the case may be), and to advance expenses incurred in connection with any proceeding against them by reason of their status as a director, officer, agent or employee of the company in accordance with the terms of the deeds. These indemnification rights shall not be exclusive of any other right which an indemnified person may have or thereafter acquire under any applicable law, provision of our constitution, 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.

DESCRIPTION OF DEBT SECURITIES

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

We may sell from time to time, in one or more offerings under this prospectus, debt securities, which may be senior or subordinated. We will issue any such senior debt securities under a senior indenture that we will enter into with a trustee to be named in the senior indenture. We will issue any such subordinated debt securities under a subordinated indenture, which we will enter into with a trustee to be named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part. We use the term "indentures" to refer to either the senior indenture or the subordinated indenture, as applicable. The indentures will be qualified under the Trust Indenture Act of 1939, as in effect on the date of the indenture, or the Trust Indenture Act. We use the term "debenture trustee" to refer to either the trustee under the senior indenture, as applicable.

The following summaries of material provisions of the senior debt securities, the subordinated debt securities and the indentures are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities.

General

Each indenture provides that debt securities may be issued from time to time in one or more series and may be denominated and payable in foreign currencies or units based on or relating to foreign currencies. Neither indenture limits the amount of debt securities that may be issued thereunder, and each indenture provides that the specific terms of any series of debt securities shall be set forth in, or determined pursuant to, an authorizing resolution and/or a supplemental indenture, if any, relating to such series.

We will describe in each prospectus supplement the following terms relating to a series of debt securities:

- the title or designation;
- the aggregate principal amount and any limit on the amount that may be issued;
- the currency or units based on or relating to currencies in which debt securities of such series are denominated and the currency or units in which principal or interest or both will or may be payable;
- whether we will issue the series of debt securities in global form, the terms of any global securities and who the depositary will be;
- the maturity date and the date or dates on which principal will be payable;
- the interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the date or dates interest will be payable and the record dates for interest payment dates or the method for determining such dates;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- the terms of the subordination of any series of subordinated debt;
- the place or places where payments will be payable;

- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- the date, if any, after which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional redemption provisions;
- the date, if any, on which, and the price at which, we are obligated, pursuant to any mandatory sinking fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities;
- whether the indenture will restrict our ability to pay dividends or will require us to maintain any asset ratios or reserves;
- whether we will be restricted from incurring any additional indebtedness;
- a discussion of any material or special U.S. federal income tax considerations applicable to a series of debt securities;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities.

We may issue debt securities that provide for an amount less than their stated principal amount to be due and payable upon declaration of acceleration of their maturity pursuant to the terms of the indenture. We will provide you with information on the U.S. federal income tax considerations and other special considerations applicable to any of these debt securities in the applicable prospectus supplement.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms, if any, on which a series of debt securities may be convertible into or exchangeable for our ordinary shares or our other securities. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of ordinary shares or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale; No Protection in the Event of a Change of Control or Highly Leveraged Transaction

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

Unless we state otherwise in the applicable prospectus supplement, the debt securities will not contain any provisions that may afford holders of the debt securities protection in the event we have a change of control or in the event of a highly leveraged transaction (whether or not such transaction results in a change of control), which could adversely affect holders of debt securities.

Events of Default Under the Indenture

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

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

- if we fail to observe or perform any other covenant set forth in the debt securities of such series or the applicable indentures, other than a
 covenant specifically relating to and for the benefit of holders of another series of debt securities, and our failure continues for 90 days after
 we receive written notice from the debenture trustee or holders of not less than a majority in aggregate principal amount of the outstanding
 debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur as to us.

No event of default with respect to a particular series of debt securities (except as to certain events of bankruptcy, insolvency or reorganization) necessarily constitutes an event of default with respect to any other series of debt securities. The occurrence of an event of default may constitute an event of default under any bank credit agreements we may have in existence from time to time. In addition, the occurrence of certain events of default or an acceleration under the indenture may constitute an event of default under certain of our other indebtedness outstanding from time to time.

If an event of default with respect to debt securities of any series at the time outstanding occurs and is continuing, then the trustee or the holders of not less than a majority in principal amount of the outstanding debt securities of that series may, by a notice in writing to us (and to the debenture trustee if given by the holders), declare to be due and payable immediately the principal (or, if the debt securities of that series are discount securities, that portion of the principal amount as may be specified in the terms of that series) of and premium, if any, and accrued and unpaid interest, if any, on all debt securities of that series. Before a judgment or decree for payment of the money due has been obtained with respect to debt securities of any series, the holders of a majority in principal amount of the outstanding debt securities of such series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) may rescind and annul the acceleration if all events of default, other than the non-payment of accelerated principal, premium, if any, and interest, if any, with respect to debt securities of that series of that series, have been cured or waived as provided in the applicable indenture (including payments or deposits in respect of principal, premium or interest that had become due other than as a result of such acceleration). We refer you to the prospectus supplement relating to any series of debt securities that are discount securities for the particular provisions relating to acceleration of a portion of the principal amount of such discount securities upon the occurrence of an event of default.

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

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

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

- the holder previously has given written notice to the debenture trustee of a continuing event of default with respect to that series;
- the holders of at least a majority in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the debenture trustee to institute the proceeding as trustee; and

• the debenture trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series (or at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) other conflicting directions within 60 days after the notice, request and offer.

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

We will periodically file statements with the applicable debenture trustee regarding our compliance with specified covenants in the applicable indenture.

Modification of Indenture; Waiver

The debenture trustee and we may change the applicable indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture; and
- to change anything that does not materially adversely affect the interests of any holder of debt securities of any series issued pursuant to such indenture.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) that is affected. However, the debenture trustee and we may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or any premium payable upon the redemption of any debt securities;
- reducing the principal amount of discount securities payable upon acceleration of maturity;
- making the principal of or premium or interest on any debt security payable in currency other than that stated in the debt security; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment or waiver.

Except for certain specified provisions, the holders of at least a majority in principal amount of the outstanding debt securities of any series (or, at a meeting of holders of such series at which a quorum is present, the holders of a majority in principal amount of the debt securities of such series represented at such meeting) may on behalf of the holders of all debt securities of that series waive our compliance with provisions of the indenture. The holders of a majority in principal amount of the outstanding debt securities of any series may on behalf of the holders of such series of such series waive any past default under the indenture with respect to that series and its consequences, except a default in the payment of the principal of, premium or any interest on any debt security of that series of a covenant or provision, which cannot be modified or amended without the consent of the holder of each outstanding debt security of the series affected; provided, however, that the holders of a majority in principal amount of the outstanding debt securities and its consequences, including any related payment default that resulted from the acceleration.

Discharge

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

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

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

Form, Exchange, and Transfer

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

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

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange or in the applicable indenture, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

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

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

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Debenture Trustee

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

Payment and Paying Agents

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

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

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

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Subordination of Subordinated Debt Securities

Our obligations pursuant to any subordinated debt securities will be unsecured and will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The subordinated indenture does not limit the amount of senior indebtedness we may incur. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

General

We may issue warrants to purchase our ordinary shares and/or debt securities in one or more series together with other securities or separately, as described in the applicable prospectus supplement. Warrants for the purchase of ordinary shares and/or debt securities will be in registered form only. Below is a description of certain general terms and provisions of the warrants that we may offer. Particular terms of the warrants will be described in the warrant agreements and the prospectus supplement relating to the warrants.

The applicable prospectus supplement will contain, where applicable, the following terms of and other information relating to the warrants:

- the specific designation and aggregate number of, and the price at which we will issue, the warrants;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the designation, amount and terms of the securities purchasable upon exercise of the warrants;
- if applicable, the exercise price for our ordinary shares and the number of ordinary shares to be received upon exercise of the warrants;
- if applicable, the exercise price for our debt securities, the amount of debt securities to be received upon exercise, and a description of that series of debt securities;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax considerations;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- if applicable, the date from and after which the warrants and the ordinary shares and/or debt securities will be separately transferable;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- the anti-dilution provisions of the warrants, if any;
- any redemption or call provisions;
- whether the warrants may be sold separately or with other securities as parts of units; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Transfer Agent and Registrar

The transfer agent and registrar for any warrants will be set forth in the applicable prospectus supplement.

DESCRIPTION OF RIGHTS

General

We may issue rights to our shareholders to purchase our ordinary shares or the other securities described in this prospectus. We may offer rights separately or together with one or more additional rights, debt securities, ordinary shares or warrants, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. Each series of rights will be issued under a separate rights agreement to be entered into between us and a bank or trust company, as rights agent. The rights agent will act solely as our agent in connection with the certificates relating to the rights of the series of certificates and will not assume any obligation or relationship of agency or trust for or with any holders of rights certificates or beneficial owners of rights. The following description sets forth certain general terms and provisions of the rights to which any prospectus supplement may relate. The particular terms of the rights to which any prospectus supplement may relate and the extent, if any, to which the general provisions may apply to the rights coefficients described in the applicable prospectus supplement. To the extent that any particular terms of the rights, rights agreement or rights certificates described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement. We encourage you to read the applicable rights agreement and rights certificate for additional information before you decide whether to purchase any of our rights.

We will provide in a prospectus supplement the following terms of the rights being issued:

- the date of determining the shareholders entitled to the rights distribution;
- the aggregate number of our ordinary shares or other securities purchasable upon exercise of the rights;
- the exercise price;
- the aggregate number of rights issued;
- whether the rights are transferrable and the date, if any, on and after which the rights may be separately transferred;
- the date on which the right to exercise the rights will commence, and the date on which the right to exercise the rights will expire;
- the method by which holders of rights will be entitled to exercise;
- the conditions to the completion of the offering, if any;
- the withdrawal, termination and cancellation rights, if any;
- whether there are any backstop or standby purchaser or purchasers and the terms of their commitment, if any;
- whether shareholders are entitled to oversubscription rights, if any;
- any applicable material U.S. federal income tax considerations; and
- any other terms of the rights, including terms, procedures and limitations relating to the distribution, exchange and exercise of the rights, as applicable.

Each right will entitle the holder of rights to purchase for cash the principal amount of our ordinary shares or other securities at the exercise price provided in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement.

Holders may exercise rights as described in the applicable prospectus supplement. Upon receipt of payment and the rights certificate properly completed and duly executed at the corporate trust office of the rights agent or



any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the ordinary shares or other securities, as applicable, purchasable upon exercise of the rights. If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than shareholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby arrangements, as described in the applicable prospectus supplement.

Rights Agent

The rights agent for any rights we offer will be set forth in the applicable prospectus supplement.

DESCRIPTION OF UNITS

The following description, together with the additional information that we include in any applicable prospectus supplements summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below.

We will incorporate by reference from reports that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we may offer under this prospectus, as well as any related free writing prospectuses and the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units consisting of our ordinary shares, one or more debt securities, warrants, or rights for the purchase of our ordinary shares and/or debt securities in one or more series, in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each security included in the unit. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We will describe in the applicable prospectus supplement the terms of the series of units being offered, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those set forth in any prospectus supplement or as described under "Description of Share Capital," "Description of Debt Securities," "Description of Warrants" and "Description of Rights" will apply to each unit, as applicable, and to any ordinary shares, debt security, warrant or right included in each unit, as applicable.

Unit Agent

The name and address of the unit agent, if any, for any units we offer will be set forth in the applicable prospectus supplement.

Issuance in Series

We may issue units in such amounts and in such numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

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 constitution 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.

Delaware

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.

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.

Singapore

The constitution 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 constitution and the Singapore Companies Act, respectively.

Pursuant to the Singapore Companies Act, any provision (whether in the constitution, a contract with the company or otherwise) exempting or indemnifying a director 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 is void. However, a company is not prohibited from (a) purchasing and maintaining for any such director insurance against any such liability, or (b) indemnifying such director against any liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the director to pay a fine in criminal proceedings, (ii) of the director to pay a penalty in respect of non-compliance with any regulatory requirements, (iii) incurred by the director in defending criminal proceedings in which he or she is convicted, (iv) incurred by the director in defending civil proceedings brought by the company or a related company in which judgment is given against him or her, or (v) incurred by the director 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 or her relief. Nevertheless, a director can be

Delaware

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 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.

Singapore

released by the shareholders of a company for breaches of duty to a company except in the case of fraud, illegality, insolvency of the company and oppression or disregard of minority interests.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting the Company, we may indemnify our directors against costs, charges, fees, and other expenses 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 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, 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 of which he may be guilty in relation to our company, or which would otherwise result in such indemnity being voided under applicable Singapore laws.

There are no comparable provisions under the Singapore Companies Act with respect to public companies which are not listed on the Singapore Exchange Securities Trading Limited.

Delaware

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).

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.

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 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

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Under the Singapore Companies Act, directors of a public company may be removed before expiration of their term of office, notwithstanding anything in its constitution 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.

The constitution of a Singapore company typically provides 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 shall not at any time exceed the maximum number (if any) fixed by or in accordance with the constitution. 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 constitution provides that the directors may appoint any person to be a director either to fill a casual vacancy or as an additional director but so that the total number of Directors shall not at any time exceed the maximum number fixed by or in accordance with the constitution.

Our constitution may be altered by special resolution (i.e., a resolution passed by at least a three-fourths majority of the shareholders entitled to 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 constitution.

Under the Singapore Companies Act, an entrenching provision may be included in the constitution with which a company is formed and may at any time be inserted into the constitution of a company only if all the shareholders of the company agree. An entrenching provision is a provision of the

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the charter. The stockholders of a Delaware corporation also have the power to amend bylaws.

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.

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.

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constitution of a company to the effect that other specified provisions of the constitution 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.

Annual General Meetings

All companies are required to hold an annual general meeting after the end of each financial year within either 4 months (in the case of a public company that is listed on an exchange in Singapore approved by the Monetary Authority of Singapore) or 6 months (in the case of any other company).

Extraordinary General Meetings

Any general meeting other than the annual general meeting is called an "extraordinary general meeting." Notwithstanding anything in the constitution, 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 of voting at general meetings of the company. In addition, the constitution usually also provides that general meetings may be convened in accordance with the Singapore Companies Act by the directors.

Quorum Requirements

Our constitution provides that any two shareholders present in person or by proxy or by attorney or, in the case of a corporation, by a representative and entitled to vote thereat; in each case representing in aggregate not less than a majority of the total voting rights of all shareholders having the right to vote at a general meeting, shall constitute a quorum. In the event a quorum is not present, the meeting if not convened on the requisition of shareholders may be adjourned for one week. When reconvened, the quorum for the meeting will be the same and if at such adjourned meeting a quorum is not present, the meeting will be dissolved.

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Shareholders' Rights at Meetings

The Singapore Companies Act provides that every member shall, notwithstanding any provision in the constitution, have a right to attend any general meeting of the company and to speak on any resolution before the meeting. The company's constitution 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.

Public companies may issue non-voting shares and shares that confer special, limited and conditional voting rights, such that the holder of a share may vote on a resolution before a general meeting if, in accordance with the provisions of Section 64A of the Singapore Companies Act, the share confers on the holder a right to vote on the resolution.

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 shareholders holding shares on which there has been paid up an average sum, per shareholder, of not less than \$\$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.

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 Under Section 172 of the Singapore Companies Act, any provision exempting or indemnifying the officers of a company (including directors) against liability, which by law would otherwise attach to them in connection with any negligence, default, breach of duty or breach of trust in relation to the company is void.

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

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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.

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in connection with any negligence, default, breach of duty or breach of trust in relation to the company;

 indemnify such officer against any liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the officer to pay a fine in criminal proceedings, (ii) of the officer to pay a penalty in respect of non-compliance with any regulatory requirements, (iii) incurred by the officer in defending criminal proceedings in which he or she is convicted, (iv) incurred by the officer in defending civil proceedings brought by the company or a related company in which judgment is given against him or her, or (v) incurred by the officer 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 or her relief.

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 their liability for 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 constitution provides that subject to the provisions of the Singapore Companies Act and every other applicable statute for the time being in force concerning companies and affecting the company, the directors and officers are entitled to be indemnified against costs, charges, fees and other expenses that may be 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 such person as a director, officer or employee of the company and in which judgment is given in his or her favor or in which such person is acquitted or in which the courts have granted relief pursuant to the provisions of the Singapore Companies Act, provided that such

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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 of which he or she may be guilty in relation to the company, or which would otherwise result in such indemnity being voided under applicable Singapore laws.

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 transaction where the number of shares exceeds 20% of the corporation's shares outstanding prior to the transaction, regardless of whether there sufficient authorized capital.

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

Section 161 of the Singapore Companies Act provides that notwithstanding anything in the company's constitution, the directors shall not exercise any power to issue shares without prior approval of Company's shareholders in a general meeting. 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; but any approval may be revoked or varied by the company in general meeting. 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.

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 constitution, 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;

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Corporation Law. See "—Interested Shareholders" above.

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- the company may by special resolution resolve that it be wound up voluntarily;
- subject to the constitution 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 constitution, the directors may not, without the prior approval of shareholders, issue shares, including shares being issued in connection with corporate actions.

There are no equivalent provisions under the Singapore Companies Act in respect of public companies which are listed on a securities exchange, like our company.

Standing

Only registered shareholders of our company reflected in our register of members are recognized under Singapore law as shareholders of our company. As a 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

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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.

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 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.

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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.

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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 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

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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.

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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 in the United States, which allows individual shareholders to bring an action seeking to represent the class or classes of shareholders, does not exist in the same manner in Singapore. In Singapore, it is possible as a matter of procedure for a number of shareholders to begin proceedings on behalf of themselves and other shareholders who have the same interest in the proceedings whom they represent. These shareholders are known as "representative plaintiffs."

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 constitution provides 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 constitution and subject to the special conditions of

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each permitted acquisition contained in the Singapore Companies Act, a company may:

- redeem redeemable preferred shares on such terms and in such manner as is provided by its constitution. Preferred shares may be redeemed out of capital only 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;
- whether listed on an exchange in Singapore approved by the Monetary Authority of 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;
- 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
- whether listed on an exchange in Singapore approved by the Monetary Authority of 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, stocks 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, stocks in any class or non-redeemable preferred shares (as the case may be) 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

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effect, the total number of ordinary shares, stocks in any class or non-redeemable preferred shares shall be taken to be the total number of ordinary shares, stocks in any class or non-redeemable preferred shares (as the case may be) 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.

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:

- the acquisition or proposed acquisition of shares in the company or units of such shares; or
- 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 constitution provides 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. We may deal with any such shares which is so purchased or acquired by us in such manner as may be permitted under the Singapore Companies Act (including, without limitation, hold such shares as treasury shares).

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 Under the Singapore Companies Act, directors and the chief executive officer of the company are not prohibited from dealing with the company, but where

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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.

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they have an interest, whether directly or indirectly, in a transaction with the company, that interest must be disclosed to the board of directors. In particular, every director or chief executive officer who is in any way, whether directly or indirectly, interested in a transaction or proposed transaction with the company must, as soon as is practicable after the relevant facts have come to such director's or, as the case may be, the chief executive officer's knowledge, declare the nature of such interest at a meeting of the directors or send a written notice to the company detailing the nature, character and extent of the interest.

In addition, a director or chief executive officer who holds any office or possesses any property which directly or indirectly might create interests in conflict with such director's or, as the case may be, the chief executive officer's duties as director or chief executive officer is required to declare the fact and the nature, character and extent of the conflict at a meeting of directors or send a written notice to the company detailing the nature, character and extent of the conflict.

The Singapore Companies Act extends the scope of this statutory duty of a director and chief executive officer to disclose any interests by pronouncing that an interest of a member of a director's or, as the case may be, the chief executive officer's family (including spouse, son, adopted son, step-son, daughter, adopted daughter and step-daughter) will be treated as an interest of the director or chief executive officer (as the case may be).

A director or chief executive officer shall not be deemed to be interested or at any time interested in a transaction or proposed transaction where the interest of the director or chief executive officer (as the case may be) 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 or chief executive officer (as the case may be) has only guaranteed the repayment of such loan, unless the constitution provides 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

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holding company), the director or chief executive officer shall not be deemed to be interested or at any time interested in such transaction or proposed transaction by virtue of only being a director or chief executive officer (as the case may be) of the related corporation, unless the constitution provides otherwise.

Subject to specified exceptions, the Singapore Companies Act prohibits a company (other than an exempt private company) from, among others, (i) making a loan or a quasi-loan to its directors or to directors of a related corporation, or giving a guarantee or security in connection with such a loan or quasi-loan, (ii) entering into a credit transaction as creditor for the benefit of its directors or the directors of a related corporation, or giving a guarantee or any security in connection with such a credit transaction, (iii) arranging an assignment to or assumption by us of any rights, obligations or liabilities under a transaction which, if it had been entered into by us, would have been a restricted transaction, and (iv) taking part in an arrangement under which another person enters into a transaction which, if entered into by us, would have been a restricted transaction and such person obtains a benefit from us or our related corporation pursuant thereto. Companies are also prohibited from entering into any of these transactions with the spouse or children (whether adopted or natural or step-children) of its directors.

Subject to specified exceptions, the Singapore Companies Act prohibits a company (other than an exempt private company) from making a loan or a quasi-loan to another company or a limited liability partnership or entering into any guarantee or providing any security in connection with a loan or a quasi-loan made to another company or a limited liability partnership by a person other than the first-mentioned company, entering into a credit transaction as a creditor for the benefit of another company or a limited liability partnership, or entering into any guarantee or provide any security in connection with a credit transaction entered into by any person for the benefit of 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).

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Such prohibition shall extend to apply to a loan, quasi-loan, credit transaction made by a company (other than an exempt private company), a credit transaction made by a company (other than an exempt private company) for the benefit of another company or limited liability partnership and a guarantee or security provided by a company (other than an exempt private company) in connection with a loan or quasi-loan made by a person other than the first-mentioned company to another company or a limited liability partnership where such other company or limited liability partnership is incorporated or formed (as the case may be) outside Singapore, if a director or directors of the first-mentioned company (a) is or together are interested in 20% or more of the total voting power in the other company or limited liability partnership 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.

There are no equivalent provisions in Singapore under the Singapore Companies Act.

There are no equivalent provisions in Singapore under the Singapore Companies Act.

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.

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.

PLAN OF DISTRIBUTION

We may offer securities under this prospectus from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities (1) through underwriters or dealers, (2) through agents or (3) directly to one or more purchasers, or through a combination of such methods. We may distribute the securities from time to time in one or more transactions at:

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

We may directly solicit offers to purchase the securities being offered by this prospectus and may also engage in "at the market" offerings as defined in Rule 415 of the Securities Act. We may also designate agents to solicit offers to purchase the securities from time to time. We will name in a prospectus supplement any underwriter or agent involved in the offer or sale of the securities.

If we utilize a dealer in the sale of the securities being offered by this prospectus, we will sell the securities to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If we utilize an underwriter in the sale of the securities being offered by this prospectus, we will execute an underwriting agreement with the underwriter at the time of sale, and we will provide the name of any underwriter in the prospectus supplement which the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, we, or the purchasers of the securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and the underwriter may compensate those dealers in the form of discounts, concessions or commissions.

With respect to underwritten public offerings, negotiated transactions and block trades, we will provide in the applicable prospectus supplement information regarding any compensation we pay to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

 the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and

 if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Our ordinary shares sold pursuant to the registration statement of which this prospectus is a part will be authorized for quotation and trading on the Nasdaq Global Market. The applicable prospectus supplement will contain information, where applicable, as to any other listing, if any, on the Nasdaq Global Market or any securities market or other securities exchange of the securities covered by the prospectus supplement. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

In order to facilitate the offering of the securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing the applicable security in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if the securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc., or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

The underwriters, dealers and agents may engage in other transactions with us, or perform other services for us, in the ordinary course of their business.

ENFORCEMENT OF CIVIL LIABILITIES UNDER UNITED STATES 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 enforceable 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.

There is uncertainty as to whether judgments of courts in the United States based upon the civil liability provisions of the federal securities laws of the United States would be recognized or enforceable in Singapore. 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 and on the merits of the case, given by a court of law 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. Civil liability provisions of the federal and state securities law of the United States permit the award of punitive damages against us, our directors and officers. Singapore courts would not recognize or enforce judgments against us, our directors and officers to the extent that doing so would amount to the direct or indirect enforcement of foreign penal, revenue or other public laws. It is uncertain as to whether a judgment of the courts of the United States under civil liability provisions of the federal securities law of the United States would be regarded by the Singapore courts as being pursuant to foreign, penal, revenue or other public laws. Such a determination has yet to be made by a Singapore court in a reported decision.

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.

LEGAL MATTERS

The validity of the securities offered pursuant to this prospectus and certain other matters of Singapore law will be passed upon for us by WongPartnership LLP. Selected legal matters as to U.S. law in connection with the offering of the debt securities offered pursuant to this prospectus will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts. Additional legal matters may be passed upon for us, or any underwriters, dealers or agents by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of Wave Life Sciences Ltd. as of December 31, 2018 and 2017, and for each of the years in the three-year period ended December 31, 2018, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2018 have been incorporated by reference herein and in the registration statement in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. SEC filings are available at the SEC's website at http://www.sec.gov. Our ordinary shares are listed on the Nasdaq Global Market, and you can read and inspect our filings at the offices of the Financial Industry Regulatory Authority at 1735 K Street, Washington, D.C. 20006.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act of 1933, as amended, and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may obtain a copy of the registration statement, including the exhibits and schedules, from the SEC's website.

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

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act with the SEC with respect to the securities we may offer pursuant to this prospectus. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained from the SEC's website at http://www.sec.gov. The documents we are incorporating by reference are:

- our Annual Report on <u>Form 10-K</u> for the year ended December 31, 2018 that we filed with the SEC on March 1, 2019, as amended by the <u>Form 10-K/A</u> filed with the SEC on April 29, 2019;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 that we filed with the SEC on May 10, 2019;
- our Current Reports on Form 8-K filed on January 23, 2019, January 24, 2019 and <u>April 16, 2019</u> (in each case, except for information contained therein which is furnished rather than filed);
- the description of our ordinary shares contained in our Registration Statement on Form 8-A filed on November 9, 2015, including any
 amendment or report filed for the purpose of updating such description; and
- all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination or completion of the offering of securities under this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing such reports and other documents.

The SEC file number for each of the documents listed above is 001-37627.

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

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting:

Wave Life Sciences Ltd. c/o 733 Concord Avenue Cambridge, MA 02138, USA ATTN: Investor Relations

You may also access these documents on our website, *http://www.wavelifesciences.com*. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

You should rely only on information contained in, or incorporated by reference into, this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.



Ordinary Shares

Debt Securities

Warrants

Rights

Units

PROSPECTUS

May 10, 2019

We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any securities in any jurisdiction where it is unlawful. Neither the delivery of this prospectus, nor any sale made hereunder, shall create any implication that the information in this prospectus is correct after the date hereof.



PROSPECTUS



Up to \$250,000,000 of Ordinary Shares

We have entered into an Open Market Sale Agreement, or the Sales Agreement, with Jefferies LLC, or Jefferies, relating to our ordinary shares, no par value, offered by this prospectus. In accordance with the terms of the Sales Agreement, we may offer and sell our ordinary shares having an aggregate offering price of up to \$250,000,000 from time to time through Jefferies, acting as sales agent. Sales of the ordinary shares, if any, may be made on the Nasdaq Global Market at market prices and such other sales as agreed upon by us and Jefferies, as the case may be.

Our ordinary shares are listed on the Nasdaq Global Market under the symbol "WVE." On May 9, 2019, the last reported sale price of our ordinary shares on the Nasdaq Global Market was \$27.31 per share.

Sales of our ordinary shares, if any, under this prospectus may be made in sales deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or the Securities Act. Jefferies is not required to sell any specific number or dollar amount of securities, but will act as sales agent on a best efforts basis and use commercially reasonable efforts to sell on our behalf all of the ordinary shares requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between us and Jefferies. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Jefferies will be entitled to compensation at a commission rate of up to 3.0% of the gross sales price per ordinary share sold under the Sales Agreement. See "Plan of Distribution" beginning on page S-49 for additional information regarding the compensation to be paid to Jefferies. In connection with the sale of our ordinary shares on our behalf, Jefferies will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Jefferies with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act.

Investing in our ordinary shares involves a high degree of risk. See the information contained under "<u>Risk Factors</u>" beginning on page S-7 of this prospectus and the documents incorporated by reference herein.

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.

Jefferies

The date of this prospectus is May 10, 2019.

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We are responsible for the information contained and incorporated by reference in this prospectus and in any related free writing prospectus we prepare or authorize. We have not authorized anyone to give you any other information, and we take no responsibility for any other information that others may give you. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this documentation are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this document does not extend to you. The information contained in this document speaks only as of the date of this document, unless the information specifically indicates that another date applies. Our business, financial condition, results of operations and prospects may have changed since those dates.

S-i

ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, as a "well-known seasoned issuer" as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under the shelf registration process, we may offer our ordinary shares having an aggregate offering price of up to \$250,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of the offering.

If the information contained in this prospectus differs or varies from the information contained in any document incorporated by reference herein that was filed with the SEC before the date of this prospectus, you should rely on the information set forth in this prospectus. If any statement in one of these documents is inconsistent with a statement in another document having a later date (for example, a subsequently filed document deemed incorporated by reference in this prospectus), the statement in the document having the later date modifies or supersedes the earlier statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You should rely only on the information contained or incorporated by reference in this prospectus. We have not, and the sales agent has not, authorized anyone to provide you with information that is in addition to or different from that contained or incorporated by reference in this prospectus or contained in any permitted free writing prospectuses we have authorized for use in connection with this offering. We and the sales agent take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide.

The information contained in this prospectus and the documents incorporated by reference herein is accurate only as of their respective dates, regardless of the time of delivery of any such document or the time of any sale of our ordinary shares. Our business, financial condition, results of operations and prospects may have changed since those dates. It is important for you to read and consider all information contained or incorporated by reference in this prospectus in making your investment decision. You should read this prospectus, as well as the documents incorporated by reference herein, the additional information described under the section titled "Where You Can Find More Information" and "Incorporation of Certain Documents by Reference" in this prospectus and any free writing prospectus that we have authorized for use in connection with this offering, before investing in our ordinary shares.

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

This prospectus is not a "prospectus" as defined in the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, and accordingly, statutory liability under the SFA in relation to the content of prospectuses will not apply. This prospectus has not been and will not be lodged with or registered as a prospectus by 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 our securities may not be circulated or distributed, nor may the securities 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 in Section 4A(1)(c) of 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(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, in each case subject to compliance with the conditions set forth in the SFA.

Where securities or securities-based derivatives contracts 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 trustee of 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 securities or securities-based derivatives contracts (each as defined in Section 2(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 securities or securities-based derivatives contracts are acquired by that corporation or for that trust 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 in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or securities-based derivatives contracts or other assets;
- where no consideration is or will be given for the transfer;
- where the transfer is by operation of law; or
- as specified in Section 276(7) of the SFA.

Notification under Section 309B(1) of the SFA, as applicable: The ordinary shares, which are stocks or shares issued or proposed to be issued by a corporation or body unincorporate (other than a corporation or body unincorporate that is a collective investment scheme), are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in the MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

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.

We are offering to sell, and seeking offers to buy, our ordinary shares only in jurisdictions where such offers and sales are permitted. The distribution of this prospectus and the offering of our ordinary shares in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of our ordinary shares and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

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.

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.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed consolidated financial statements, notes to the consolidated financial statements and other information incorporated by reference from our other filings with the SEC. Investing in our securities involves risks. Therefore, carefully consider the risk factors set forth in this prospectus and in our most recent annual and quarterly filings with the SEC, as well as other information in this prospectus and the documents incorporated by reference herein, before purchasing our securities. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

About Wave Life Sciences

We are a clinical-stage genetic medicines company committed to delivering life-changing treatments for people battling devastating diseases. Using PRISM, our proprietary discovery and drug development platform that enables the precise design, optimization and production of novel stereopure oligonucleotides, we aspire to develop best in class medicines across multiple therapeutic modalities.

Nucleic acid therapeutics, including oligonucleotides, are a growing and innovative class of drugs comprised of a sequence of nucleotides that are linked together by a backbone of chemical bonds. We are initially developing oligonucleotides that target the ribonucleic acid ("RNA") to either reduce the expression of disease-promoting proteins or transform the production of dysfunctional mutant proteins into the production of functional proteins. RNA is a critical molecule that can adopt complex three-dimensional structures and affect various cellular functions. By intervening at the RNA level, we have the potential to address diseases that have historically been difficult to treat with small molecules or biologics. Oligonucleotides have additional advantages as a therapeutic class including the ability to target multiple tissue types, often without the need for a delivery vehicle, and the ability to modulate the frequency of dosing to ensure broad distribution within tissues and account for cell turnover. Oligonucleotides also have well-established manufacturing processes and validated test methods based on decades of improvements.

The oligonucleotides we are developing with PRISM are stereopure. A stereopure oligonucleotide is comprised of molecules with atoms precisely arranged in three-dimensional orientations at each linkage. We believe that controlling the position of the sulfur atom following phosphorothioate ("PS") modification will optimize the pharmacological profile of our oligonucleotides by maximizing the potential therapeutic benefit while minimizing the potential for side effects and safety risks. The stereopure oligonucleotides we are developing differ from the mixture-based oligonucleotides currently on the market or in development by others. Our preclinical studies have demonstrated that our stereopure oligonucleotides may achieve superior pharmacological properties compared with mixture-based oligonucleotides. Through our work in developing stereopure oligonucleotides, we have created and continue to evolve PRISM, our proprietary discovery and drug development platform.

PRISM enables us to target genetically defined diseases with stereopure oligonucleotides across multiple therapeutic modalities. PRISM combines our unique ability to construct stereopure oligonucleotides with a deep understanding of how the interplay among oligonucleotide sequence, chemistry and backbone stereochemistry impacts key pharmacological properties. By exploring these interactions through iterative analysis of in vitro and in vivo outcomes and artificial intelligence-driven predictive modeling, we continue to define design principles that we deploy across programs to rapidly develop and manufacture clinical candidates that meet pre-defined product profiles.

Our goal is to develop and commercialize disease-modifying medicines for genetically defined diseases with a high degree of unmet medical need, and to become a fully integrated genetic medicines company. Our initial

focus for our clinical development programs is in neurology, which we broadly define as genetic diseases within the neuromuscular system and central nervous system. We are conducting clinical trials of suvodirsen, our lead program in Duchenne muscular dystrophy ("DMD") targeting exon 51, and our two lead programs in Huntington's disease ("HD"). We are also advancing additional development programs in DMD, amyotrophic lateral sclerosis, frontotemporal dementia and spinocerebellar ataxia 3. In addition to neurology, we are advancing discovery research in ophthalmologic disorders, specifically inherited retinal diseases, and in hepatic diseases, and we expect to make continued investments in expanding the breadth of our portfolio. In further support of our pipeline, we continue to make substantial investments in, and leverage, PRISM to potentially develop the next generation of stereopure oligonucleotides. We have also established and continue to enhance our internal current good manufacturing practices ("cGMP") manufacturing capabilities to increase control and visibility of our drug substance supply chain. These investments further improve our ability to secure drug substance for current and future development activities and may provide commercial-scale manufacturing capabilities.

Corporate History and Information

We were incorporated under the name Wave Life Sciences Pte. Ltd. (Registration No.: 201218209G) under the laws of Singapore on July 23, 2012. On November 16, 2015, we closed our initial public offering. In preparation for our initial public offering, on November 5, 2015, Wave Life Sciences Pte. Ltd. converted from a private limited company to a public limited company known as Wave Life Sciences Ltd. ("Wave"). Wave has four wholly-owned subsidiaries: Wave Life Sciences USA, Inc. ("Wave USA"), a Delaware corporation (formerly Ontorii, Inc.); Wave Life Sciences Japan, Inc. ("Wave Japan"), a company organized under the laws of Japan (formerly Chiralgen., Ltd.); Wave Life Sciences Ireland Limited ("Wave Ireland"), a company organized under the laws of Ireland; and Wave Life Sciences UK Limited ("Wave UK"), a company organized under the laws of the United Kingdom.

Our registered office is located at 7 Straits View #12-00, Marina One East Tower, Singapore 018936, and our telephone number at that address is +65 6236 3388. Our principal office for Wave USA is located at 733 Concord Avenue, Cambridge, MA 02138, and our telephone number at that address is +1-617-949-2900. Our registered office for Wave Japan is 2438 Miyanoura-cho, Kagoshima-shi, Kagoshima pref. 891-1394, Japan. Our registered office for Wave Ireland is One Spencer Dock, North Wall Quay, Dublin 1, Ireland. Our registered office for Wave UK is Hays Galleria, 1 Hays Lane, London, SE1 2RD, United Kingdom.

Our corporate website address is www.wavelifesciences.com. The information on our website is not part of this prospectus or incorporated by reference into 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. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and all amendments to such reports are made available free of charge through the "For Investors & Media—Financial Information" section of our website as soon as reasonably practicable after they have been filed or furnished with the SEC.

THE OFFERING	
Ordinary shares offered by us:	Ordinary shares having an aggregate offering price of up to \$250,000,000.
Ordinary shares to be outstanding after this offering:	Up to 43,409,561 ordinary shares (as more fully described in the notes following this table), assuming sales of 9,154,155 ordinary shares in this offering at an offering price of \$27.31 per share, which was the last reported sale price of our ordinary shares on the Nasdaq Global Market on May 9, 2019. The actual number of shares issued will vary depending on the sales price under this offering.
Manner of offering:	"At the market offering" that may be made from time to time on the Nasdaq Global Market or other existing trading market for our ordinary shares through our sales agent, Jefferies LLC, or Jefferies. See "Plan of Distribution" on page S-49 of this prospectus.
Use of proceeds:	We intend to use the net proceeds from this offering for clinical trial costs and other research and development expenses; continued growth of our manufacturing capabilities; initial investments in commercial and medical affairs infrastructure to support our transition to a fully integrated, commercial-stage genetic medicines company; continued investment in our drug development platform; and working capital, capital expenditures and general and administrative expenses. See "Use of Proceeds."
Risk factors:	Investing in our ordinary shares involves risks. See "Risk Factors" beginning on page S-7 of this prospectus and under similar headings in the documents incorporated by reference herein for a discussion of the factors you should carefully consider before deciding to invest in our ordinary shares.
Nasdaq Global Market symbol:	"WVE"

The number of ordinary shares to be outstanding after this offering is based on an aggregate of 34,255,406 ordinary shares outstanding as of March 31, 2019 and excludes:

- 3,901,348 ordinary shares issuable upon the conversion of our Series A preferred shares outstanding as of March 31, 2019;
- 3,853,542 ordinary shares issuable upon the exercise of share options outstanding as of March 31, 2019, at a weighted average exercise price of \$19.72 per share, of which 2,552,457 ordinary shares were exercisable as of such date;
- 1,674,124 restricted share units, or RSUs, outstanding as of March 31, 2019; and
- 201,898 ordinary shares reserved for future issuance under our 2014 Equity Incentive Plan, as amended (the "2014 Plan"), as of March 31, 2019.

Except as otherwise indicated, all information in this prospectus assumes no exercise of outstanding options, vesting of outstanding RSUs or conversion of Series A preferred shares, each as described above, and reflects an assumed public offering price of \$27.31, which was the last reported sale price of our ordinary shares on the Nasdaq Global Market on May 9, 2019.

RISK FACTORS

Investing in our ordinary shares involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below and in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, as well as any amendments thereto reflected in subsequent filings with the SEC, each of which are incorporated by reference in this prospectus, and all of the other information in this prospectus, including our financial statements and related notes incorporated by reference herein. If any of these risks is realized, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that event, the trading price of our ordinary shares could decline and you could lose part or all of your investment. Additional risks and uncertainties that are not yet identified or that we currently believe to be immaterial may also materially harm our business, financial condition, results of operations and prospects and could result in a complete loss of your investment.

Risks Related to This Offering and Our Ordinary Shares

If you purchase ordinary shares in this offering, you will suffer immediate dilution of your investment.

The public offering price of our ordinary shares is substantially higher than the net tangible book value per share of our ordinary shares. Therefore, if you purchase our ordinary shares in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after giving effect to this offering. If you purchase ordinary shares in this offering, you will incur an immediate and substantial dilution in net tangible book value of \$17.19 per share. For a further description of the dilution that you will experience immediately after this offering, see the section titled "Dilution." In addition, in the past, we have issued options to acquire ordinary shares at prices significantly below the offering price. To the extent these outstanding options are ultimately exercised, you will incur additional dilution.

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

Our management will have broad discretion as to the use of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you are 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 will be used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for Wave.

Because we do not anticipate paying any cash dividends on our ordinary shares in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our ordinary shares. We anticipate that we will retain our earnings, if any, for future growth and therefore do not anticipate paying cash dividends in the future. As a result, only appreciation of the price of our ordinary shares will provide a return to shareholders.

Sales of a significant number of our ordinary shares in the public markets, or the perception that such sales could occur, could depress the market price of our ordinary shares.

Sales of a substantial number of our ordinary shares in the public markets could depress the market price of our ordinary shares and impair our ability to raise capital through the sale of additional equity securities. In addition, certain of our shareholders have the right to require us to register the sales of their shares under the Securities Act under agreements between us and such shareholders. See the section titled "Description of Share Capital" for a more detailed description of these rights. We cannot predict the effect that future sales of our ordinary shares would have on the market price of our ordinary shares.

The public market for our ordinary shares may not be liquid enough for our shareholders to sell their ordinary shares quickly or at market price, or at all.

Prior to the completion of our initial public offering, there was no public market for our ordinary shares. An active trading market for our shares may not develop or be maintained and our shareholders may not be able to sell their ordinary shares quickly or at the market price, or at all. Our executive officers, our directors and their respective affiliates, and our other significant shareholders beneficially own a significant portion of our outstanding ordinary shares, and therefore, liquidity in our ordinary shares is limited. Due to the limited liquidity in our ordinary shares, relatively small orders can have a disproportionate impact on the trading price of our shares. Further, the limited liquidity in our ordinary shares may also impair our ability to raise capital by conducting offerings of 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 our shareholders may lose some or all of their investment.

The market price of our ordinary shares is likely to be highly volatile, including in response to factors that are beyond our control. The stock market in general experiences extreme price and volume fluctuations. In particular, the market prices of securities of pharmaceutical and biotechnology companies are extremely volatile, and experience fluctuations that are often unrelated or disproportionate to the operating performance of these companies. These broad and sector-specific market fluctuations can result in extreme fluctuations in the price of our ordinary shares, regardless of our operating performance, and can cause our shareholders to lose some or all of their investment in the Company.

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 information publicly available to us as of March 31, 2019, our executive officers, our directors and their respective affiliates, and our other significant shareholders beneficially own a significant portion of our outstanding ordinary shares. As a result, 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 the interests of our other shareholders. 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 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 stock. 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, or the perception that such sales could occur, could adversely affect the price of our ordinary shares. Certain of our shareholders have the right to require us to register the sales of their shares under the Securities Act under agreements between us and such shareholders.

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 may depend in part on the research and reports that securities or industry analysts publish about us or our business. If too few securities or industry analysts cover our company, the trading price for our ordinary shares would likely be negatively impacted. 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.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents we have filed with the SEC that are incorporated by reference contain "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that involve substantial risks and uncertainties. In some cases, forward-looking statements are identified 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 and the documents that we have filed with the SEC that are incorporated by reference, such 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 future operations; our financial position, revenues, costs, expenses, uses of cash and capital requirements; our need for additional financing or the period for which our existing cash resources will be sufficient to meet our operating requirements;
- the success, progress, number, scope, cost, duration, timing or results of our research and development activities, preclinical studies and clinical trials, including the timing for initiation or completion of or availability of results from any preclinical studies and clinical trials or for submission, review or approval of any regulatory filing;
- the timing of, and our ability to, obtain and maintain regulatory approvals for any of our product candidates;
- the potential benefits that may be derived from any of our product candidates;
- our strategies, prospects, plans, goals, expectations, forecasts or objectives;
- the success of our collaborations with third parties;
- any payment that our collaboration partners may make to us;
- our ability to identify and develop new product candidates;
- our intellectual property position;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our expected uses of the net proceeds from any offering of our securities;
- 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;
- developments and projections relating to our competitors in the industry;
- our liquidity and working capital requirements; and
- the expected impact of new accounting standards.

You should refer to the section titled "Risk Factors" of this prospectus and in our other filings with the SEC 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 that the forward-looking statements in this prospectus or the documents we have filed with the SEC that are incorporated by reference 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, these statements should not be regarded as representations or warranties 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.

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 as predictions of future events.

You should read this prospectus, the documents that we have incorporated by reference herein and the documents we have filed as exhibits to the registration statement, 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.

USE OF PROCEEDS

We may issue and sell our ordinary shares having aggregate sales proceeds of up to \$250.0 million from time to time. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares under or fully utilize our sales agreement with Jefferies as a source of financing.

We intend to use the net proceeds from this offering for clinical trial costs and other research and development expenses; continued growth of our manufacturing capabilities; initial investments in commercial and medical affairs infrastructure to support our transition to a fully integrated, commercial-stage genetic medicines company; continued investment in our drug development platform; and working capital, capital expenditures and general and administrative expenses.

Our expected use of the net proceeds from this offering represents our current intentions based upon our present plans and business conditions. The amounts and timing of our actual use of net proceeds will vary depending on numerous factors, including the relative success and cost of our research, preclinical and clinical development programs, whether we are able to enter into future collaborations, and any unforeseen delays or cash needs. As a result, our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds of this offering. In addition, we might decide to postpone or not pursue these planned trials and activities or other development activities if the net proceeds from this offering and the other sources of cash are less than, or do not last as long as, expected.

Pending their use, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest- bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

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, but (without prejudice to the powers of the Company to pay interest on share capital as provided in our constitution) no dividends shall be payable (i) except out of the profits of the Company or (ii) in excess of the amount recommended by our directors.

DILUTION

If you invest in our ordinary shares in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per ordinary share in this offering and the as adjusted net tangible book value per ordinary share immediately after this offering. The net tangible book value of our ordinary shares as of March 31, 2019 was approximately \$196.9 million, or approximately \$5.75 per ordinary share based upon 34,255,406 ordinary shares outstanding as of March 31, 2019. Net tangible book value per share is equal to our total tangible assets, less our total liabilities and Series A preferred shares, divided by the total number of ordinary shares outstanding as of March 31, 2019.

Net tangible book value dilution per share to investors participating in this offering represents the difference between the amount per share paid by purchasers of ordinary shares in this offering and the as adjusted net tangible book value per ordinary share immediately after this offering. After giving effect to the sale of 9,154,155 ordinary shares in this offering at an assumed public offering price of \$27.31 per share, the last reported sale price of our ordinary shares on the Nasdaq Global Market on May 9, 2019, and after deducting underwriting discounts and commissions and estimated aggregate offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2019 would have been approximately \$439.1 million, or approximately \$10.12 per ordinary share. This represents an immediate increase in as adjusted net tangible book value of \$4.37 per share to our existing stockholders and an immediate dilution in net tangible book value of \$17.19 per share to investors participating in this offering at the public offering price.

Dilution per share to new investors is determined by subtracting as adjusted net tangible book value per share after this offering from the assumed public offering price per share paid by new investors. The following table illustrates this per share dilution to new investors:

Assumed public offering price per share		\$27.31
Historical net tangible book value per share as of March 31, 2019	\$5.75	
Increase in net tangible book value per share attributable to the offering	\$4.37	
As adjusted net tangible book value per share after giving effect to this offering		\$10.12
Dilution in net tangible book value per share to investors participating in this offering		\$17.19

The table above assumes for illustrative purposes that an aggregate of \$250.0 million in ordinary shares are sold at a price of \$27.31 per share, the last reported sale price of our ordinary shares on the Nasdaq Global Market on May 9, 2019. The shares sold in this offering, if any, will be sold from time to time at various prices. An increase of \$1.00 per share in the price at which the shares are sold from the assumed offering price of \$27.31 per share shown in the table above, assuming all of our ordinary shares in the aggregate amount of \$250.0 million is sold at that price, would increase our as adjusted net tangible book value per share after the offering by \$0.07 per share and would increase the dilution in net tangible book value per share to investors participating in this offering by \$0.93 per share, after deducting underwriting discounts and commissions and estimated aggregate offering expenses payable by us. A decrease of \$1.00 per share in the aggregate amount of \$250.0 million is sold at that price, would decrease our as adjusted net tangible book value per share after the offering by \$0.08 per share are sold from the assumed offering price of \$27.31 per share shown in the table above, assuming all of our ordinary shares in the aggregate amount of \$250.0 million is sold at that price, would decrease our as adjusted net tangible book value per share after the offering by \$0.08 per share and would decrease the dilution in net tangible book value per share to investors participating in this offering by \$0.92 per share, after deducting underwriting discounts and commissions and estimated aggregate offering expenses payable by us.

The information discussed above is illustrative only and will adjust based on the actual public offering price and other terms of this offering determined at pricing.

The table and discussion above does not include:

• 3,901,348 ordinary shares issuable upon the conversion of our Series A preferred shares outstanding as of March 31, 2019;

- 3,853,542 ordinary shares issuable upon the exercise of share options outstanding as of March 31, 2019, at a weighted average exercise price of \$19.72 per share, of which 2,552,457 ordinary shares were exercisable as of such date;
- 1,674,124 restricted share units, or RSUs, outstanding as of March 31, 2019; and
- 201,898 ordinary shares reserved for future issuance under the 2014 Plan, as of March 31, 2019.

To the extent that outstanding options are exercised or outstanding RSUs vest, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities may result in further dilution to our shareholders.

MATERIAL TAX CONSIDERATIONS

Material U.S. Federal Income Tax Considerations for U.S. Holders

This discussion sets forth a summary of material U.S. federal income tax consequences to U.S. Holders (as defined below) 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.

This discussion addresses only material U.S. federal income tax considerations to U.S. Holders (as defined below) 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 purport to be a comprehensive description of all tax considerations that may be relevant to a particular person's decision to acquire the ordinary shares. In addition, this discussion does not address the U.S. federal income tax consequences to any special class of U.S. Holders, including without limitation, holders of (directly, indirectly or constructively) 10% or more of the total voting power or value of our ordinary shares (except to the limited extent discussed below), 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 applicable state, local, non-U.S. or other 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 of 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 income 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. However, if we are treated as a "United Statesowned foreign corporation," a portion of dividends paid by us may be treated as U.S. source for purposes of determining foreign tax credit. We will be treated as a United States-owned foreign corporation if 50% or more of the total value or total voting power of our stock is owned, directly, indirectly or by attribution, by United States persons. We do not believe that we are currently treated as a United States-owned foreign corporation, but there is no assurance that we will not be treated as such as a result of this offering or otherwise in the future. 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, (ii) certain holding period and other requirements are met and (iii) our stock is readily tradable on an established securities market in the United States.

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.

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 may 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 current and expected 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, 2019; 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, 2019, 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 including as a result of the changes included as part of the Tax Cuts and Jobs Act ("Tax Act").

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 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 advisors 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 the applicable Treasury regulations. The Nasdaq Global Market is a qualified exchange. We anticipate that our ordinary shares will continue to be regularly traded on the Nasdaq Global Market, and therefore, in 2019 and any subsequent year in which our ordinary shares continue to be regularly traded, the mark-to-market election would be available to a U.S. 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.

Disposition of Foreign Currency

U.S. Holders are urged to consult their tax advisors regarding the tax consequences of receiving, converting or disposing of any non-U.S. currency received as dividends on our ordinary shares (if any) or on the sale or other disposition of our ordinary shares.

Controlled Foreign Corporation

The changes included in the Tax Act can impact the tax treatment of a U.S. person treated as a 10% U.S. Shareholder (as defined below). The Tax Act eliminated the prohibition on "downward attribution" from non-U.S. persons to U.S. persons under Section 958(b)(4) of the Code for purposes of determining constructive stock ownership under the controlled foreign corporation ("CFC") rules. As a result, our U.S. subsidiaries is treated as a CFC for any taxable year, each U.S. person treated as a 10% U.S. Shareholder (as defined below) with respect to such CFC that held our ordinary shares directly or indirectly through one or more non-U.S. entities (including the Company) as of the last day of such taxable year that the subsidiary was a CFC generally would be required to include in gross income as ordinary income its pro rata share of certain investment income of the CFC (with certain adjustments), regardless of whether that income was actually distributed to such U.S. person. A "10% U.S. Shareholder" of a non-U.S. corporation includes any U.S. person that owns (or is treated as owning) stock of the non-U.S. corporation possessing 10% or more of the total voting power or total value of such non-U.S. corporation's stock. The legislative history of the Tax Act indicates that this change was not intended to cause our non-U.S. subsidiaries to be treated as CFCs with respect to a 10% U.S. Shareholder that is not related to our U.S. subsidiary. However, it is not clear whether the IRS or a court would interpret the change made by the Tax Act in a manner consistent with such indicated intent. To the extent that a non-U.S. subsidiary is treated as a CFC and as a PFIC for any taxable year, such non-U.S. subsidiary will be treated as a CFC and not as a PFIC with respect to any 10% U.S. Shareholder

You are strongly urged to consult your own tax advisors to determine whether your ownership of the ordinary shares will cause you to become a 10% U.S. Shareholder and the impact of such a classification.

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 24%, 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 advisors 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 advisors 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 is 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, there are no specific laws or regulations which deal with the characterization of whether a gain is income or capital in nature. 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 activities which the Inland Revenue Authority of Singapore regards as carrying on a trade or business in Singapore), the disposal profits would be taxable as income rather than capital gains. As the precise status of each prospective investor will vary from one another, each prospective investor should consult an independent tax advisor on the Singapore income tax and other tax consequences that will apply to their individual circumstances.

Subject to certain conditions being satisfied, gains derived by a company from the disposal of our ordinary shares between the period of June 1, 2012 and May 31, 2022 (inclusive of both dates) will not be subject to Singapore income tax, if the divesting company holds a minimum shareholding of 20% of our ordinary shares and these shares have been held for a continuous minimum period of 24 months.

In addition, shareholders who apply, or who are required to apply, the Singapore Financial Reporting Standard 39 ("FRS 39"), Financial Reporting Standard 109 ("FRS 109"), or Singapore Financial Reporting Standard (International) 9 ("SFRS(I) 9") (as the case may be) 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, FRS 109 or SFRS(I) 9 (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 advisors 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 of our ordinary shares 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 outside Singapore. 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 solely in book entry form through the facility outside Singapore established by our transfer agent and registrar outside Singapore.

Where shares evidenced in certificated form are transferred and an instrument of transfer is executed (whether physically or in the form of an electronic instrument) in Singapore or outside Singapore and which is received in Singapore, Singapore stamp duty is payable on the instrument of transfer for the sale of our ordinary shares at the rate of 0.2% of the consideration for, or market value of, the transferred shares, whichever is higher. The Singapore and is received in Singapore, Singapore to the contrary. Where the instrument of transfer is executed outside of Singapore and is received in Singapore, Singapore stamp duty must be paid within 30 days of receipt of the instrument of transfer in Singapore. Electronic instruments that are executed outside Singapore are treated as received in Singapore in any of the following scenarios: (a) it is retrieved or accessed by a person in Singapore; (b) an electronic copy of it is stored on a device (including a computer) and brought into Singapore; or (c) an electronic copy of it is stored on a computer in Singapore. Where the instrument of transfer is executed in 14 days of the execution of the instrument of transfer.

Goods and Services Tax

The issue or transfer of ownership of our ordinary shares would be exempt from Singapore goods and services tax, or GST. Hence, no GST would be incurred on the subscription or subsequent transfer of our ordinary shares.

The sale of our ordinary shares by a GST-registered investor belonging in Singapore for GST purposes to another person belonging in Singapore is an exempt supply not subject to GST. Any input GST incurred by the GST-registered investor in making the exempt supply is generally not recoverable from the Singapore Comptroller of GST.

Where our ordinary shares are sold by a GST-registered investor in the course of or furtherance of a business carried on by such investor contractually to and for the direct benefit of a person belonging outside Singapore, the sale should generally, subject to satisfaction of certain conditions, be considered a taxable supply subject to GST at 0%. Subject to the normal rules for input tax claims, any input GST incurred by the GST-registered investor in making such a supply in the course of or furtherance of a business carried out by such investor may be fully recoverable from the Singapore Comptroller of GST.

Each prospective investor should consult an independent tax advisor on the recoverability of input GST incurred on expenses in connection with the purchase and sale of our ordinary shares if applicable.

Services consisting of arranging, brokering, underwriting or advising on the issue, allotment or transfer of ownership of our ordinary shares rendered by a GST-registered person to an investor belonging in Singapore for GST purposes in connection with the investor's purchase, sale or holding of our ordinary shares will be subject to GST at the standard rate of 7%. Similar services rendered by a GST-registered person contractually to and for the direct benefit of an investor belonging outside Singapore should generally, subject to the satisfaction of certain conditions, be subject to GST at 0%.

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 currently no comprehensive avoidance of double taxation agreement between the United States and Singapore which applies to withholding taxes on dividends or capital gains.

DESCRIPTION OF SHARE CAPITAL

General

For the purposes of this section, references to "shareholders" mean those persons whose names and number of shares are entered in our register of members. Only persons who are registered in our register of members 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 branch register of members is maintained by our transfer agent, Computershare Trust Company, N.A. ("Computershare").

The shares offered in any offering pursuant to this prospectus are expected to be held through the Depository Trust Company ("DTC"). Accordingly, DTC or its nominee, Cede & Co., will be the shareholder on record registered in our register of members. 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 register of members for such shares. 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.

Under the Singapore Companies Act, if (a) the name of any person is without sufficient cause entered in or omitted from the register of members; or (b) default is made or there is unnecessary delay in entering in the register of members the fact of any person having ceased to be a member, the person aggrieved or any member of the public company or the company itself, may apply to the Singapore courts for rectification of the register of members. The Singapore courts may either refuse the application or order rectification of the register of members, 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 register of members in respect of an entry which was made in the register of members more than 30 years before the date of the application.

As of March 31, 2019, there were outstanding:

- 34,255,406 ordinary shares;
- 3,901,348 Series A preferred shares held by one shareholder of record;
- 1,674,124 ordinary shares issuable upon vesting of outstanding restricted share units;
- 3,853,542 ordinary shares issuable upon the exercise of outstanding share options; and
- 201,898 ordinary shares reserved for issuance in connection with future grants under our equity incentive plan.

The following description of our share capital and provisions of our constitution (formerly known as our memorandum and articles of association) are summaries and are qualified by reference to the Singapore Companies Act and our constitution. A copy of our constitution has been filed with the SEC as an exhibit to the registration statement of which this prospectus forms a part.

Ordinary Shares

As of March 31, 2019, our issued and paid-up ordinary share capital consists of 34,255,406 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 constitution which provides that we may issue shares with such preferred, deferred or other special rights or such restrictions, whether in regard to dividend, voting, return of capital or otherwise as our board of directors may determine.

All of our shares presently issued are fully paid-up, and existing shareholders are not subject to any calls on these 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 of our 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 Singapore Companies Act or by our constitution on the right of shareholders not resident in Singapore to hold or vote ordinary shares.

Transfer Agent and Registrar

The transfer agent and registrar for our ordinary shares is Computershare Trust Company, N.A.

Nasdaq Global Market

Our ordinary shares are listed for quotation on The Nasdaq Global Market under the symbol "WVE."

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; or
- the expiration of the period within which the next annual general meeting is required by law to be held (i.e., within six months after the end of each financial year),

but any approval may be revoked or varied by the company in a general meeting.

Our shareholders have provided such general authority to issue new ordinary shares until the conclusion of our 2019 annual general meeting. Such approval will lapse in accordance with the preceding paragraph if our shareholders do not grant a new approval at our 2019 annual general meeting. Subject to this and the provisions of the Singapore Companies Act and our constitution, our board of directors may allot and issue or grant options over or otherwise dispose of new ordinary 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 March 31, 2019, we 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. The terms of the Series A preferred shares as set out in our constitution include (1) no voting rights at any general meeting other than in limited circumstances, (2) a liquidation preference equal to \$0.002 per Series A preferred share, (3) no entitlement to dividends and (4) 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 in accordance with the constitution.

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

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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.

Other Preferred Shares

Under the Singapore Companies Act, different classes of shares in a public company may be issued only if (a) the issue of the class or classes of shares is provided for in the constitution of the public company and (b) the constitution of the public company sets out in respect of each class of shares the rights attached to that class of shares. Our constitution provides that we may issue shares of a different class with preferred, deferred or other special rights, or such restrictions, whether in regard to dividend, voting, return of capital or otherwise 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 voluntary winding-up of our company under Section 290 of the Singapore Companies Act;
- upon any resolution which varies the rights attached to such preferred shares; or
- in the case of preferred shares issued after August 15, 1984, but before the commencement of Section 96 of the Companies (Amendment) Act 2014, when the dividends to be paid on our preferred shares or any part thereof are more than twelve months in arrears and unpaid, for the period they remain in arrears and unpaid.

We may, subject to the Singapore Companies Act and 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, such shares must be fully paid-up before they are redeemed.

As of the date of this prospectus, we 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.

Registration Rights under our Investors' Rights Agreement

As of March 31, 2019, the holders of approximately 7.3 million of our ordinary shares are entitled to rights with respect to the registration of these shares under the Securities Act. These rights are provided under the terms of the Investors' Rights Agreement dated as of August 14, 2015 between us and the holders of these shares, as amended on November 8, 2018, and include demand registration rights, Form S-3 registration rights and piggyback registration rights. We are generally required to bear all registration expenses incurred in connection with the demand, Form S-3 and piggyback registrations described below, 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.

Demand Registration Rights

Under the terms of the Investors' Rights Agreement, we will be required, upon the request of holders of at least 50% of the then-outstanding shares of Registrable Securities, as such term is defined in the Investors' Rights

Agreement, requesting registration of at least 50% of the then-outstanding shares of Registrable Securities having an anticipated aggregate offering price of at least \$25.0 million, net of selling expenses, to effect the registration of such shares on Form S-1 for public resale. We are required to effect only one registration pursuant to this provision of the Investors' Rights Agreement.

Form S-3 Registration Rights

At any time that we are entitled under the Securities Act to register our shares on Form S-3 and the holders of at least 30% of the then-outstanding Registrable Securities request that we register their shares for public resale on Form S-3 with an aggregate offering price of the shares to be registered of at least \$5.0 million, net of selling expenses, we will be required to effect such registration. If, however, our chief executive officer certifies that, in the good faith judgment of our board of directors, it would be materially detrimental to us and our shareholders for such registration to become or remain effective because such action would (i) materially interfere with a significant acquisition, corporate reorganization or similar transaction involving us, (ii) require premature disclosure of material information that we have a bona fide business purpose for preserving as confidential, or (iii) render us unable to comply with requirements under the Securities Act or Exchange Act, then we will have the right to defer the registration for up to 120 days. We are only obligated to effect up to one registration on Form S-3 within any 12 month period.

Piggyback Registration Rights

If we register any of our securities either for our own account or for the account of other shareholders, the holders of these shares are entitled to include their shares in the registration. Subject to certain exceptions, we and the underwriters may limit the number of shares included in the underwritten offering if the underwriters believe that including these shares would adversely affect the offering. In connection with the filing of the registration statement of which this prospectus forms a part, the holders of registrable securities were entitled to, and the necessary percentage of holders waived, their rights to include their shares of registrable securities in the registration statement of which this prospectus forms a part.

Indemnification

Our Investors' Rights Agreement contains customary cross-indemnification provisions, under which we are obligated to indemnify holders of registrable securities in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Termination of Registration Rights

The registration rights granted under the Investors' Rights Agreement will terminate on December 31, 2019 or, with respect to any holder of registrable securities, such earlier time as all such registrable securities held by such holder are available for resale without limitation during a three-month period without registration, pursuant to Rule 144 or another similar exemption under the Securities Act.

Registration Rights under our Share Purchase Agreement with Pfizer

Under the terms of our Share Purchase Agreement dated as of May 5, 2016 with an affiliate of Pfizer Inc. (the "Pfizer Affiliate"), the Pfizer Affiliate agreed that the 1,875,000 ordinary shares that the Pfizer Affiliate purchased from us under the Share Purchase Agreement (the "Pfizer Shares"), are subject to a lock-up restriction, such that the Pfizer Affiliate will not, and will also cause its affiliates not to, without our prior approval, sell, transfer or otherwise dispose of the Pfizer Shares until certain specified periods of time after the effective date of the Share Purchase Agreement. For a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, we agreed to provide certain demand registration rights to the Pfizer Affiliate

in order to register all or a portion of the Pfizer Shares purchased by the Pfizer Affiliate. We also provided the Pfizer Affiliate with certain "piggyback" registration rights for a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, such that when we propose to register our ordinary shares for our account, the Pfizer Affiliate will have the right to include some or all of the Pfizer Shares in such registration. The Share Purchase Agreement also contains other customary terms and conditions of the parties with respect to the registration of the Pfizer Shares.

Registration Rights under our Share Purchase Agreement with Takeda

On February 19, 2018, the Company entered into a share purchase agreement with Takeda Pharmaceutical Company Limited ("Takeda"), pursuant to which Takeda purchased 1,096,892 of the Company's ordinary shares (the "Takeda Shares"). In connection with the share purchase agreement, Takeda and the Company agreed upon certain rights and restrictions as set forth in the Investor Agreement, dated as of April 2, 2018. The Takeda Shares are subject to a lock-up restriction, such that Takeda will not, and will also cause its affiliates not to, without our prior approval, sell, transfer or otherwise dispose of the Takeda Shares until certain specified periods of time after the effective date of the Investor Agreement. For a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, we agreed to provide certain demand registration rights to Takeda in order to register all or a portion of the Takeda Shares purchased by Takeda. We also provided Takeda with certain "piggyback" registration rights for a certain period following the expiration of the lock-up period, subject to certain conditions and limitations, such that when we propose to register our ordinary shares for our account, Takeda will have the right to include some or all of the Takeda Shares in such registration. The Investor Agreement also contains other customary terms and conditions of the parties with respect to the registration of Takeda Shares.

Transfer of Ordinary Shares

Subject to applicable securities laws in relevant jurisdictions and our constitution, our ordinary shares are freely transferable. Our constitution provides that 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 and Nasdaq. 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 reasonably require to show the right of the transfer to make the transfer. 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 constitution 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.

Under our constitution, subject to the Singapore Companies Act, any director shall retire at the next annual general meeting and shall then be 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 (if any) fixed by or in accordance with our constitution.

Shareholders' Meetings

We are required to hold an annual general meeting each calendar year and within six months after the end of each financial year. 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 as of the date of deposit of the requisition 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.

The Singapore Companies Act provides that a shareholder is entitled to attend any general meeting and speak on any resolution put before the general meeting. Unless otherwise required by law or by our constitution, resolutions put forth at general meetings may be decided 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 constitution. 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. Under the Singapore Companies Act, a proxy appointed to attend and vote instead of the shareholder at the same right as the shareholder to speak at the meeting, but unless the constitution of the company otherwise provides, (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.

Notwithstanding the foregoing, a registered shareholder entitled to attend and vote at a meeting of the company held pursuant to an order of court under Section 210(1) of the Singapore Companies Act, or at any adjourned meeting under Section 210(3) of the Singapore Companies Act, is, unless the court orders otherwise, entitled to appoint only one proxy to attend and vote at the same meeting, and except where the aforementioned applies, a registered shareholder having a share capital who is a relevant intermediary (as defined under the Singapore Companies Act) may appoint more than two proxies in relation to a meeting to exercise all or any of his rights to attend and to speak and vote at the meeting, but each proxy must be appointed to exercise the rights attached to a different share or shares held by him (which number and class of shares shall be specified), and at such meeting, the proxy has the right to vote on a show of hands.

Only registered shareholders of our company, and their proxies, will be entitled to attend, speak and vote at any meeting of shareholders. Under the Singapore Companies Act, public companies may issue non-voting shares and shares that confer 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 64A of the Singapore Companies Act, the share confers on the holder a right to vote on that resolution.

Voting Rights

As provided under our constitution and the Singapore Companies Act, voting at any meeting of shareholders is by show of hands unless a poll has been demanded prior to the declaration of the result of the show of hands by, among others, (i) the chairman 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 5% 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 register of members as holders of ordinary shares will be entitled to vote at any meeting of shareholders. Therefore, DTC, or its nominee, will grant an omnibus proxy to

DTC participants holding our shares in book-entry form through a broker, bank, nominee, or other institution that is a direct or indirect participant in the DTC. Such shareholders will have the right to instruct their broker, bank, nominee or other institution holding these shares on how to vote such shares by completing the voting instruction form provided by the applicable broker, bank, nominee, or other institution. Whether voting is by a show of hands or by a poll, DTC's vote will be voted by the chairman of the meeting according to the results of the DTC's participants' votes (which results will reflect the instructions received from shareholders that own our shares electronically in book-entry form).

Minority Rights

The rights of minority shareholders of Singapore companies are protected, among other things, 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;
- in the case of a purchase of shares by the company provide for a reduction accordingly of the company's capital; 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 constitution, 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.

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 constitution, 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 applies to, among other things, the acquisition of voting shares of Singapore-incorporated public listed companies or unlisted public companies with more than 50 shareholders and net tangible assets of S\$5 million or more. 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 advisor, including a stockbroker, with its client in respect of the shareholdings of the advisor and persons controlling, controlled by or under the same control as the advisor;
- 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.

Subject to certain exceptions, 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 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

Under Section 172 of the Singapore Companies Act, any provision exempting or indemnifying the officers of a company (including directors) against any liability that would otherwise attach to them in connection with any negligence, default, breach of duty or breach of trust in relation to the company is void. However, a company is not prohibited from (a) purchasing and maintaining for any such individual insurance against liability incurred by him or her in connection with any negligence, default, breach of duty or breach of trust in relation to the company, or (b) indemnifying the individual against liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the individual to pay a fine in criminal proceedings, (ii) of the individual to pay a penalty in respect of non-compliance with any requirements of a regulatory nature (howsoever arising), (iii) incurred by the individual in defending criminal proceedings in which he or she is convicted, (iv) incurred by the individual in defending civil proceedings brought by the company or a related company in which judgment is given against him or her, or (v) incurred by the individual 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 or her relief.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force concerning companies and affecting us, our constitution provides 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.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting our company, we may indemnify our directors and officers against costs, charges, fees and other expenses 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, 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 of which he may be guilty 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, subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting our company, 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 officers. These agreements will require us to indemnify these individuals to the fullest extent permitted under our constitution and the Singapore Companies Act against liabilities that may arise by reason of their service to us as a director or officer of the company (as the case may be), and to advance expenses incurred in connection with any proceeding against them by reason of their status as a director, officer, agent or employee of the company in accordance with the terms of the deeds. These indemnification rights shall not be exclusive of any other right which an indemnified person may have or thereafter acquire under any applicable law, provision of our constitution, 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.

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 constitution 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.

Delaware

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.

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.

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The constitution 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 constitution and the Singapore Companies Act, respectively.

Pursuant to the Singapore Companies Act, any provision (whether in the constitution, a contract with the company or otherwise) exempting or indemnifying a director 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 is void. However, a company is not prohibited from (a) purchasing and maintaining for any such director insurance against any such liability, or (b) indemnifying such director against any liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the director to pay a fine in criminal proceedings, (ii) of the director to pay a penalty in respect of non-compliance with any regulatory requirements, (iii) incurred by the director in defending criminal proceedings in which he or she is convicted, (iv) incurred by the director in defending civil proceedings brought by the company or a related company in which judgment is given against him or her, or (v) incurred by the director 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 or her relief. Nevertheless, a director can be

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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 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.

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released by the shareholders of a company for breaches of duty to a company except in the case of fraud, illegality, insolvency of the company and oppression or disregard of minority interests.

Subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting the Company, we may indemnify our directors against costs, charges, fees, and other expenses 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 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, 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 of which he may be guilty in relation to our company, or which would otherwise result in such indemnity being voided under applicable Singapore laws.

There are no comparable provisions under the Singapore Companies Act with respect to public companies which are not listed on the Singapore Exchange Securities Trading Limited.

Delaware 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).

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.

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 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.

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Under the Singapore Companies Act, directors of a public company may be removed before expiration of their term of office, notwithstanding anything in its constitution 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.

The constitution of a Singapore company typically provides 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 shall not at any time exceed the maximum number (if any) fixed by or in accordance with the constitution. 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 constitution provides that the directors may appoint any person to be a director either to fill a casual vacancy or as an additional director but so that the total number of Directors shall not at any time exceed the maximum number fixed by or in accordance with the constitution.

Our constitution may be altered by special resolution (i.e., a resolution passed by at least a three-fourths majority of the shareholders entitled to 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 constitution.

Under the Singapore Companies Act, an entrenching provision may be included in the constitution with which a company is formed and may at any time be inserted into the constitution of a company only if all

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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.

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.

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.

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the shareholders of the company agree. An entrenching provision is a provision of the constitution of a company to the effect that other specified provisions of the constitution 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.

Annual General Meetings

All companies are required to hold an annual general meeting after the end of each financial year within either 4 months (in the case of a public company that is listed on an exchange in Singapore approved by the Monetary Authority of Singapore) or 6 months (in the case of any other company).

Extraordinary General Meetings

Any general meeting other than the annual general meeting is called an "extraordinary general meeting." Notwithstanding anything in the constitution, 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 of voting at general meetings of the company. In addition, the constitution usually also provides that general meetings may be convened in accordance with the Singapore Companies Act by the directors.

Quorum Requirements

Our constitution provides that any two shareholders present in person or by proxy or by attorney or, in the case of a corporation, by a representative and entitled to vote thereat; in each case representing in aggregate not less than a majority of the total voting rights of all shareholders having the right to vote at a general meeting, shall constitute a quorum. In the event a quorum is not present, the meeting if not convened on the requisition of shareholders may be adjourned

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for one week. When reconvened, the quorum for the meeting will be the same and if at such adjourned meeting a quorum is not present, the meeting will be dissolved.

Shareholders' Rights at Meetings

The Singapore Companies Act provides that every member shall, notwithstanding any provision in the constitution, have a right to attend any general meeting of the company and to speak on any resolution before the meeting. The company's constitution 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.

Public companies may issue non-voting shares and shares that confer special, limited and conditional voting rights, such that the holder of a share may vote on a resolution before a general meeting if, in accordance with the provisions of Section 64A of the Singapore Companies Act, the share confers on the holder a right to vote on the resolution.

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 shareholders holding shares on which there has been paid up an average sum, per shareholder, of not less than \$\$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.

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) Under Section 172 of the Singapore Companies Act, any provision exempting or indemnifying the officers of a company (including directors) against liability, which by law would otherwise attach to them in connection with any negligence, default, breach of duty or breach of trust in relation to the company is void.

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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.

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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 connection with any negligence, default, breach of duty or breach of trust in relation to the company;
- indemnify such officer against any liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the officer to pay a fine in criminal proceedings, (ii) of the officer to pay a penalty in respect of non-compliance with any regulatory requirements, (iii) incurred by the officer in defending criminal proceedings in which he or she is convicted, (iv) incurred by the officer in defending civil proceedings brought by the company or a related company in which judgment is given against him or her, or (v) incurred by the officer 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 or her relief.

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 their liability for 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 constitution provides that subject to the provisions of the Singapore Companies Act and every other applicable statute for the time being in force concerning companies and affecting the company, the directors and officers are entitled to be indemnified against costs, charges, fees and other expenses that may be incurred by such person in defending any proceedings, whether civil or criminal, which relates to anything done or omitted or alleged

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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 transaction where the number of shares exceeds 20% of the corporation's shares outstanding prior to the transaction, regardless of whether there sufficient authorized capital.

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

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to be done or omitted by such person as a director, officer or employee of the company and in which judgment is given in his or her favor or in which such person is acquitted or in which the courts have granted relief pursuant to the provisions of the Singapore Companies Act, 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 of which he or she may be guilty in relation to the company, or which would otherwise result in such indemnity being voided under applicable Singapore laws.

Section 161 of the Singapore Companies Act provides that notwithstanding anything in the company's constitution, the directors shall not exercise any power to issue shares without prior approval of Company's shareholders in a general meeting. 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; but any approval may be revoked or varied by the company in general meeting. 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.

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 constitution, directors are not permitted to

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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.

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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;
- subject to the constitution 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 constitution, 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.

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 behalf of himself or herself and other similarly situated stockholders where the requirements for maintaining a

There are no equivalent provisions under the Singapore Companies Act in respect of public companies which are listed on a securities exchange, like our company.

Standing

Only registered shareholders of our company reflected in our register of members are recognized under Singapore law as shareholders of our company. As a result, only registered shareholders have legal standing to institute shareholder actions against us or

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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.

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otherwise seek to enforce their rights as shareholders. Holders of bookentry interests in our shares will be required to exchange their bookentry 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

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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.

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shareholders to bring an action or arbitration in the 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 in the United States, which allows individual shareholders to bring an action seeking to represent the class or classes of shareholders, does not exist in the same manner in Singapore. In Singapore, it is possible as a matter of procedure for a number of shareholders to begin proceedings on behalf of themselves and other shareholders who have the same interest in the proceedings whom they represent. These shareholders are known as "representative plaintiffs."

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 constitution provides 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,

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provided that it is expressly permitted to do so by its constitution and subject to the special conditions of each permitted acquisition contained in the Singapore Companies Act, a company may:

- redeem redeemable preferred shares on such terms and in such manner as is provided by its constitution. Preferred shares may be redeemed out of capital only 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;
- whether listed on an exchange in Singapore approved by the Monetary Authority of 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;
- 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
- whether listed on an exchange in Singapore approved by the Monetary Authority of 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, stocks 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, stocks in any class or non-redeemable preferred shares (as the case may be) 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

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Singapore court made an order to such effect, the total number of ordinary shares, stocks in any class or non-redeemable preferred shares shall be taken to be the total number of ordinary shares, stocks in any class or non-redeemable preferred shares (as the case may be) 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.

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:

- the acquisition or proposed acquisition of shares in the company or units of such shares; or
- 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 constitution provides 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. We may deal with any such shares which is so purchased or acquired by us in such manner as may be permitted under the Singapore Companies Act (including, without limitation, hold such shares as treasury shares).

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 Under the Singapore Companies Act, directors and the chief executive officer of the company are not prohibited from dealing with the company, but where

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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.

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they have an interest, whether directly or indirectly, in a transaction with the company, that interest must be disclosed to the board of directors. In particular, every director or chief executive officer who is in any way, whether directly or indirectly, interested in a transaction or proposed transaction with the company must, as soon as is practicable after the relevant facts have come to such director's or, as the case may be, the chief executive officer's knowledge, declare the nature of such interest at a meeting of the directors or send a written notice to the company detailing the nature, character and extent of the interest.

In addition, a director or chief executive officer who holds any office or possesses any property which directly or indirectly might create interests in conflict with such director's or, as the case may be, the chief executive officer's duties as director or chief executive officer is required to declare the fact and the nature, character and extent of the conflict at a meeting of directors or send a written notice to the company detailing the nature, character and extent of the conflict.

The Singapore Companies Act extends the scope of this statutory duty of a director and chief executive officer to disclose any interests by pronouncing that an interest of a member of a director's or, as the case may be, the chief executive officer's family (including spouse, son, adopted son, step-son, daughter, adopted daughter and step-daughter) will be treated as an interest of the director or chief executive officer (as the case may be).

A director or chief executive officer shall not be deemed to be interested or at any time interested in a transaction or proposed transaction where the interest of the director or chief executive officer (as the case may be) 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 or chief executive officer (as the case may be) has only guaranteed the repayment of such loan, unless the constitution provides 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

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holding company), the director or chief executive officer shall not be deemed to be interested or at any time interested in such transaction or proposed transaction by virtue of only being a director or chief executive officer (as the case may be) of the related corporation, unless the constitution provides otherwise.

Subject to specified exceptions, the Singapore Companies Act prohibits a company (other than an exempt private company) from, among others, (i) making a loan or a quasi-loan to its directors or to directors of a related corporation, or giving a guarantee or security in connection with such a loan or quasi-loan, (ii) entering into a credit transaction as creditor for the benefit of its directors or the directors of a related corporation, or giving a guarantee or any security in connection with such a credit transaction, (iii) arranging an assignment to or assumption by us of any rights, obligations or liabilities under a transaction which, if it had been entered into by us, would have been a restricted transaction, and (iv) taking part in an arrangement under which another person enters into a transaction which, if entered into by us, would have been a restricted transaction and such person obtains a benefit from us or our related corporation pursuant thereto. Companies are also prohibited from entering into any of these transactions with the spouse or children (whether adopted or natural or step-children) of its directors.

Subject to specified exceptions, the Singapore Companies Act prohibits a company (other than an exempt private company) from making a loan or a quasi-loan to another company or a limited liability partnership or entering into any guarantee or providing any security in connection with a loan or a quasi-loan made to another company or a limited liability partnership by a person other than the first-mentioned company, entering into a credit transaction as a creditor for the benefit of another company or a limited liability partnership, or entering into any guarantee or provide any security in connection with a credit transaction entered into by any person for the benefit of 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).

Such prohibition shall extend to apply to a loan, quasi-loan, credit transaction made by a company

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(other than an exempt private company), a credit transaction made by a company (other than an exempt private company) for the benefit of another company or limited liability partnership and a guarantee or security provided by a company (other than an exempt private company) in connection with a loan or quasi-loan made by a person other than the first-mentioned company to another company or a limited liability partnership where such other company or limited liability partnership is incorporated or formed (as the case may be) outside Singapore, if a director or directors of the first-mentioned company (a) is or together are interested in 20% or more of the total voting power in the other company or limited liability partnership 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.

There are no equivalent provisions in Singapore under the Singapore Companies Act.

There are no equivalent provisions in Singapore under the Singapore Companies Act.

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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.

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.

PLAN OF DISTRIBUTION

We have entered into an Open Market Sales Agreement, dated May 10, 2019, or the Sales Agreement, with Jefferies LLC, or Jefferies, under which we may offer and sell ordinary shares having an aggregate gross sales price of up to \$250.0 million from time to time through Jefferies, acting as agent. Sales of the ordinary shares, if any, may be made on the Nasdaq Global Market or into any other existing trading market for our ordinary shares at market prices and such other sales as agreed upon by us and Jefferies. The Sales Agreement has been filed as an exhibit to our registration statement on Form S-3 of which this prospectus forms a part.

Upon delivery of a placement notice and subject to the terms and conditions of the Sales Agreement, Jefferies may sell our ordinary shares by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act.

When requested by us, Jefferies will offer the ordinary shares subject to the terms and conditions of the Sales Agreement, which may be on a daily basis for periods of time, or as we may otherwise agree with Jefferies. We will designate the maximum amount of ordinary shares to be sold through Jefferies when we request Jefferies to do so. Jefferies has agreed, subject to the terms and conditions of the Sales Agreement, to use its commercially reasonable efforts to execute our orders to sell, as our sales agent and on our behalf, ordinary shares submitted to Jefferies from time to time by us, consistent with its normal sales and trading practices. We may instruct Jefferies not to place ordinary shares at or below a price designated by us. In any event, the ordinary shares shall be placed by Jefferies substantially at market price. We or Jefferies may suspend the offering of ordinary shares under the Sales Agreement upon proper notice to the other party.

If we and Jefferies so agree, Jefferies may act as principal in connection with the placement of the securities offered hereby.

We will pay Jefferies a commission of up to 3.0% of the gross proceeds of any shares sold through it pursuant to this prospectus, and reimburse Jefferies for up to \$50,000 of its expenses, including fees and disbursements to its legal counsel. The estimated offering expenses payable by us, in addition to such commission and expenses, are approximately \$220,000, which includes legal, accounting and printing costs and various other fees associated with registering the ordinary shares. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

Jefferies will provide written confirmation to us before the open of trading on the Nasdaq Global Market on the day following each day on which ordinary shares are sold under the Sales Agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the net proceeds to us. Settlement for sales of ordinary shares will occur, unless otherwise agreed, on the second business day following the date on which such sales were made.

In connection with the sale of our ordinary shares on our behalf, Jefferies will be deemed to be an "underwriter" within the meaning of the Securities Act and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. We have agreed to indemnify Jefferies against certain liabilities, including liabilities under the Securities Act. We have also agreed to contribute to payments Jefferies may be required to make in respect of such liabilities.

The offering of ordinary shares pursuant to the Sales Agreement will terminate upon the termination of the Sales Agreement according to its terms by either Jefferies or us.

Jefferies and its affiliates may in the future provide various investment banking, commercial banking, financial advisory and other services to us and our affiliates and may in the future receive customary fees. In the course of its business, Jefferies may actively trade our securities for its own account or for the accounts of customers, and,

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accordingly, Jefferies may at any time hold long or short positions in such securities. To the extent required by Regulation M, Jefferies will not engage in any market making activities involving our ordinary shares while the offering is ongoing under this prospectus.

This prospectus in electronic format may be made available on a website maintained by Jefferies, and Jefferies may distribute this prospectus electronically.

ENFORCEMENT OF CIVIL LIABILITIES UNDER UNITED STATES 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 enforceable 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.

There is uncertainty as to whether judgments of courts in the United States based upon the civil liability provisions of the federal securities laws of the United States would be recognized or enforceable in Singapore. 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 and on the merits of the case, given by a court of law 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. Civil liability provisions of the federal and state securities law of the United States permit the award of punitive damages against us, our directors and officers. Singapore courts would not recognize or enforce judgments against us, our directors and officers to the extent that doing so would amount to the direct or indirect enforcement of foreign penal, revenue or other public laws. It is uncertain as to whether a judgment of the courts of the United States under civil liability provisions of the federal securities law of the United States would be regarded by the Singapore courts as being pursuant to foreign, penal, revenue or other public laws. Such a determination has yet to be made by a Singapore court in a reported decision.

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.

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LEGAL MATTERS

The validity of the ordinary shares offered by us in this offering and certain other matters of Singapore law will be passed upon for us by WongPartnership LLP, 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. Jefferies LLC is being represented by White & Case LLP, New York, New York.

EXPERTS

The consolidated financial statements of Wave Life Sciences Ltd. as of December 31, 2018 and 2017, and for each of the years in the three-year period ended December 31, 2018, and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2018 have been incorporated by reference herein and in the registration statement in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act, and file annual, quarterly and current reports, proxy statements and other information with the SEC. SEC filings are available at the SEC's website at http://www.sec.gov. Our ordinary shares are listed on the Nasdaq Global Market, and you can read and inspect our filings at the offices of the Financial Industry Regulatory Authority at 1735 K Street, Washington, D.C. 20006.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act of 1933, as amended, and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may obtain a copy of the registration statement, including the exhibits and schedules, from the SEC's website.

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

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INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-3 under the Securities Act with the SEC with respect to the securities we may offer pursuant to this prospectus. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained from the SEC's website at http://www.sec.gov. The documents we are incorporating by reference are:

- our Annual Report on <u>Form 10-K</u> for the year ended December 31, 2018 that we filed with the SEC on March 1, 2019, as amended by the <u>Form 10-K/A</u> filed with the SEC on April 29, 2019;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 that we filed with the SEC on May 10, 2019;
- our Current Reports on Form 8-K filed on January 23, 2019, January 24, 2019 and <u>April 16, 2019</u> (in each case, except for information contained therein which is furnished rather than filed);
- the description of our ordinary shares contained in our Registration Statement on Form 8-A filed on November 9, 2015, including any
 amendment or report filed for the purpose of updating such description; and
- all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination or completion of the offering of securities under this prospectus shall be deemed to be incorporated by reference in this prospectus and to be a part hereof from the date of filing such reports and other documents.

The SEC file number for each of the documents listed above is 001-37627.

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

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting:

Wave Life Sciences Ltd. c/o 733 Concord Avenue Cambridge, MA 02138, USA ATTN: Investor Relations

You may also access these documents on our website, *http://www.wavelifesciences.com*. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

You should rely only on information contained in, or incorporated by reference into, this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

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Up to \$250,000,000 of Ordinary Shares

PROSPECTUS

Jefferies

May 10, 2019

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth an itemization of the various expenses, all of which we will pay, in connection with the issuance and distribution of the securities being registered.

SEC Registration Fee	\$3,946.08	}*
Legal Fees and Expenses		**
Accounting Fees and Expenses		**
Miscellaneous		**
Total	\$	**

- * In accordance with Rules 456(b) and 457(r), we are deferring payment of the registration fee for the securities offered under this registration statement other than the fees due in connection with the \$250,000,000 of our ordinary shares that may be issued and sold from time to time under an open market sales agreement with Jefferies LLC. The offering of \$227,384,992 of these ordinary shares was previously registered by us under a prior registration statement and in accordance with Rule 415(a)(6) under the Securities Act of 1933, as amended (the "Securities Act"), in respect of which we previously paid registration fees of \$26,353.92. Consequently, a filing fee of \$3,946.08 is due in connection with the filing of this registration statement, which amount reflects the difference between the registration fee to be paid in connection with the \$250,000,000 of securities to be registered pursuant to this registration statement, which is \$30,300.00, and the previously paid fees of \$26,353.92.
- ** These fees and expenses depend on the securities offered and the number of issuances and accordingly cannot be estimated at this time. Fees paid at this time related to the ordinary shares to be issued and sold from time to time under the open market sales agreement with Jefferies LLC consist of \$100,000 in legal fees and expenses, \$110,000 in accounting fees and expenses, and \$5,000 in miscellaneous fees, for total fees related to the at the market offering of approximately \$220,000.

Item 15. Indemnification of Directors and Officers

Under Section 172 of the Singapore Companies Act, any provision exempting or indemnifying the officers of a company (including directors) against liability, which by law would otherwise attach to them in connection with any negligence, default, breach of duty or breach of trust in relation to the company is void. However, the Singapore Companies Act allows a company to (a) purchase and maintain for any officer insurance against any liability which by law would otherwise attach to such officer in connection with any negligence, default, breach of duty or breach of trust in relation to the company; and (b) indemnify such officer against any liability incurred by him or her to a person other than the company except when the indemnity is against any liability (i) of the officer to pay a fine in criminal proceedings, (ii) of the officer to pay a penalty in respect of non-compliance with any regulatory requirements, (iii) incurred by the officer in defending criminal proceedings in which he or she is convicted, (iv) incurred by the officer in defending criminal proceedings in which he or she is convicted, (iv) incurred by the officer 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 or her relief.

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 their liability for 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 constitution provides that subject to the provisions of the Singapore Companies Act and every other applicable statute for the time being in force concerning companies and affecting the company, the directors and officers are entitled to be indemnified against costs, charges, fees and other expenses that may be 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 such person as a director, officer or employee of the company and in which judgment is given in his or her favor or in which such person is acquitted or in which the courts have granted relief pursuant to the provisions of the Singapore Companies Act, 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 of which he or she may be guilty in relation to the 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, subject to the Singapore Companies Act and every other Singapore statute for the time being in force and affecting our company, 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 officers. These agreements 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 constitution, agreement, vote of shareholders or disinterested directors or otherwise if such indemnified person is subsequently found to have been negligent or otherwise have breached indemnified person's trust or fiduciary duties or to be in default thereof, or where the Singapore courts have declined to grant relief.

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.

Any underwriting agreements that we may enter into will likely provide for the indemnification of us, our controlling persons, our directors and certain of our officers by the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended.

Item 16. Exhibits

The exhibits to this registration statement are listed in the Exhibit Index to this registration statement, which Exhibit Index is hereby incorporated by reference.

Item 17. Undertakings

- (a) The undersigned registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a

purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
- (d) The undersigned registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act ("Act") in accordance with the rules and regulations prescribed by the Commission under section 305(b)(2) of the Act.

Act of 1939.

EXHIBIT INDEX

Exhibit Number	Description
1.1*	Form of Underwriting Agreement.
1.2	Open Market Sale Agreement, dated as of May 10, 2019, by and between the Registrant and Jefferies LLC.
4.1(1)	Constitution (formerly known as Memorandum of Association and Articles of Association).
4.2(2)	Form of Specimen Ordinary Share Certificate.
4.3(3)	Investors' Rights Agreement by and among the Registrant and certain of its shareholders, dated as of August 14, 2015.
4.4(4)	Amendment No. 1 to Investors' Rights Agreement by and among the Registrant and certain of its shareholders, dated as of November 8, 2018.
4.5(5)	Share Purchase Agreement by and between the Registrant and C.P. Pharmaceuticals International C.V., dated as of May 5, 2016
4.6*	Form of Senior Debt Security.
4.7*	Form of Subordinated Debt Security.
4.8	Form of Senior Indenture.
4.9	Form of Subordinated Indenture.
4.10*	Form of Warrant Agreement and Warrant Certificate.
4.11*	Form of Rights Agreement and Right Certificate.
4.12*	Form of Unit Agreement and Unit.
5.1	Opinion of WongPartnership LLP with respect to the legality of the securities being registered.
5.2	Opinion of WongPartnership LLP with respect to the legality of the securities to be offered pursuant to the Sales Agreement.
5.3	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. with respect to the legality of the debt securities being registered.
23.1	Consent of KPMG LLP.
23.2	Consent of WongPartnership LLP (included in the opinions filed as Exhibit 5.1 and Exhibit 5.2).
23.3	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in the opinion filed as Exhibit 5.3).
24.1	Powers of Attorney (included on the signature page of this registration statement).
25.1*	The Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of the Trustee under the Senior Indenture will be incorporated herein by reference from a subsequent filing in accordance with Section 305(b)(2) of the Trust Indenture Act of 1939.
25.2*	The Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of the Trustee under the Subordinated Indenture will be incorporated herein by reference from a subsequent filing in accordance with Section 305(b)(2) of the Trust Indenture

* To be subsequently filed, if applicable, by an amendment to this registration statement or as an exhibit to a report on Form 10-K, Form 10-Q or Form 8-K and incorporated herein by reference.

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- (1) Incorporated by reference to Exhibit 3.2 to Amendment No. 5 to the Registrant's Registration Statement on Form S-1 (File No. 333-207379), filed with the Securities and Exchange Commission on November 10, 2015.
- (2) Incorporated by reference to Exhibit 4.1 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 (File No. 333-207379), filed with the Securities and Exchange Commission on November 6, 2015.
- (3) Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-207379), filed with the Securities and Exchange Commission on October 9, 2015.
- (4) Incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (Filed No. 001-37627), filed with the Securities and Exchange Commission on November 9, 2018.
- (5) Incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (Filed No. 001-37627), filed with the Securities and Exchange Commission on August 15, 2016.



SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Cambridge, Massachusetts, on May 10, 2019.

Wave Life Sciences Ltd.

By: /s/ Paul B. Bolno, M.D., MBA

Paul B. Bolno, M.D., MBA President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Wave Life Sciences Ltd., hereby severally constitute and appoint Paul B. Bolno, M.D. and Keith C. Regnante, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including, without limitation, post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them or their or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Paul B. Bolno, M.D., MBA Paul B. Bolno, M.D., MBA	President, Chief Executive Officer and Director (<i>principal executive officer</i>)	May 10, 2019
/s/ Keith C. Regnante Keith C. Regnante	Chief Financial Officer (principal financial officer and principal accounting officer)	May 10, 2019
/s/ Christian Henry Christian Henry	_ Chairman of the Board of Directors	May 10, 2019
/s/ Gregory L. Verdine, Ph.D. Gregory L. Verdine, Ph.D.	_ Director	May 10, 2019
/s/ Peter Kolchinsky, Ph.D. Peter Kolchinsky, Ph.D.	_ Director	May 10, 2019

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Signature	Title	Date
/s/ Koji Miura Koji Miura	Director	May 10, 2019
/s/ Adrian Rawcliffe Adrian Rawcliffe	Director	May 10, 2019
/s/ Ken Takanashi Ken Takanashi	Director	May 10, 2019

OPEN MARKET SALE AGREEMENTSM

Ladies and Gentlemen:

Wave Life Sciences Ltd., a company incorporated under the laws of the Republic of Singapore (the "**Company**"), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the "**Agent**"), ordinary shares of the Company, no par value (the "**Ordinary Shares**"), having an aggregate offering price of up to \$250,000,000.00 on the terms set forth in this agreement (this "**Agreement**").

Section 1. DEFINITIONS

(a) <u>Certain Definitions</u>. For purposes of this Agreement, capitalized terms used herein and not otherwise defined shall have the following respective meanings:

"Affiliate" of a Person means another Person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such first-mentioned Person. The term "control" (including the terms "controlling," "controlled by" and "under common control with") means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"Agency Period" means the period commencing on the date of this Agreement and expiring on the earliest to occur of (i) the date on which the Agent shall have placed the Maximum Program Amount pursuant to this Agreement and (ii) the date this Agreement is terminated pursuant to <u>Section 7</u>.

"Agent" has the meaning set forth in the introductory paragraph of this Agreement.

"Agreement" has the meaning set forth in the introductory paragraph of this Agreement.

"Code" has the meaning set forth in <u>Section 2(cc)</u>.

"Commission" means the U.S. Securities and Exchange Commission.

"Ordinary Shares" has the meaning set forth in the introductory paragraph of this Agreement.

"Company" has the meaning set forth in the introductory paragraph of this Agreement.

"**Debt Repayment Triggering Event**" means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

"**Default**" has the meaning set forth in <u>Section 2(s)</u>.

"EDGAR" means the Electronic Data Gathering Analysis and Retrieval system.

"Environmental Laws" has the meaning set forth in Section 2(bb).

"ERISA" has the meaning set forth in Section 2(cc).

"ERISA Affiliate" has the meaning set forth in Section 2(cc).

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder.

"Existing Instrument" has the meaning set forth in <u>Section 2(s)</u>.

"FCPA" has the meaning set forth in <u>Section 2(jj)</u>.

"FinCEN Certification" has the meaning set forth in Section 4(x).

"FINRA" has the meaning set forth in <u>Section 2(s)</u>.

"Floor Price" means the minimum price set by the Company in the Issuance Notice below which the Agent shall not sell Shares during the applicable Selling Period, which may be adjusted by the Company at any time during the Selling Period by delivering written notice of such change to the Agent and which in no event shall be less than \$1.00 without the prior written consent of the Agent, which consent may be withheld in the Agent's sole discretion.

"Free Writing Prospectus" has the meaning set forth in <u>Section 4(e)</u>.

"Hazardous Materials" has the meaning set forth in Section 2(bb).

"Health Care Laws" has the meaning set forth in <u>Section 2(ss)</u>.

"HIPAA" has the meaning set forth in <u>Section 2(ss)</u>.

"Intellectual Property" has the meaning set forth in Section 2(v).

"Interim Prospectus Supplement" has the meaning set forth in Section 4(a).

"Investment Company Act" has the meaning set forth in Section 2(dd).

"Issuance Amount" means the aggregate Sales Price of the Shares to be sold by the Agent pursuant to any Issuance Notice.

"**Issuance Notice**" means a written notice delivered to the Agent by the Company in accordance with this Agreement in the form attached hereto as <u>Exhibit A</u> that is executed by its Chief Executive Officer, President or Chief Financial Officer.

"Issuance Notice Date" means any Trading Day during the Agency Period that an Issuance Notice is delivered pursuant to Section 3(b)(i).

"Issuance Price" means the Sales Price less the Selling Commission.

"Material Adverse Change" has the meaning set forth in Section 2(j).

"Material Adverse Effect" has the meaning set forth in Section 2(0).

"Maximum Program Amount" means Ordinary Shares with an aggregate Sales Price of the lesser of (1) \$250,000,000.00 and (2) the aggregate amount of Shares registered under the Registration Statement.

"Money Laundering Laws" has the meaning set forth in Section 2(kk).

"OFAC" has the meaning set forth in Section 2(ll).

"Original Registration Statement" has the meaning set forth in Section 2(a).

"Open Market Sale Agreement" is a service mark of Jefferies LLC.

"PCAOB" has the meaning set forth in <u>Section 2(k)</u>.

"**Permits**" has the meaning set forth in Section $2(\underline{x})$.

"**Person**" means an individual or a corporation, partnership, limited liability company, trust, incorporated or unincorporated association, joint venture, joint stock company, governmental authority or other entity of any kind.

"PFIC" has the meaning set forth in Section 2(zz).

"**Principal Market**" means the Nasdaq Global Market or such other national securities exchange on which the Ordinary Shares, including any Shares, are then listed.

"Privacy Rule" has the meaning set forth in <u>Section 2(ss)</u>.

"Prospectus" has the meaning set forth in Section 2(a).

"Registration Statement" has the meaning set forth in <u>Section 2(a)</u>.

"Regulation M" has the meaning set forth in <u>Section 2(ee)</u>.

"Regulatory Agencies" has the meaning set forth in Section 2(rr).

"Related Judgment" has the meaning set forth in Section 8(g).

"Related Proceedings" has the meaning set forth in Section 8(g).

"Representation Date" has the meaning set forth in the introductory paragraph of Section 2.

"**Rule 462(b) Registration Statement**" means any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the offer and sale of Shares.

"**Rule 102**" has the meaning set forth in Section 4(u).

"Sales Price" means the actual sale execution price of each Share placed by the Agent pursuant to this Agreement.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder.

"Selling Commission" means up to three percent (3.0%) of the gross proceeds for the Shares sold pursuant to this Agreement.

"**Selling Period**" means the period of one (1) to twenty (20) consecutive Trading Days (as determined by the Company in the Company's sole discretion and specified in the applicable Issuance Notice) including the Trading Day on which an Issuance Notice is delivered pursuant to <u>Section 3(b)</u> (<u>i</u>), if such notice is delivered prior to 3:00 p.m. (New York City time) and otherwise, following the Trading Day on which an Issuance Notice is delivered pursuant to <u>Section 3(b)</u> (<u>i</u>).

"Settlement Date" means the second business day following each Trading Day during the Selling Period on which Shares are sold pursuant to this Agreement, when the Company shall deliver to the Agent the amount of Shares sold on such Trading Day and the Agent shall deliver to the Company the Issuance Price received on such sales.

"Shares" shall mean the Company's Ordinary Shares issued or issuable pursuant to this Agreement.

"**Specified Courts**" has the meaning set forth in <u>Section 8(g)</u>.

"Time of Sale" has the meaning set forth in <u>Section 3(b)(v)</u>.

"Time of Sale Information" has the meaning set forth in Section <u>2(b)</u>.

"Trading Day" means any day on which the Principal Market is open for trading.

"Triggering Event Date" has the meaning set forth in Section 4(0).

"USA Patriot Act" has the meaning set forth in Section 2(kk).

Section 2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants to, and agrees with, the Agent that as of (1) the date of this Agreement, (2) each Issuance Notice Date, (3) each Settlement Date, (4) each Triggering Event Date with respect to which the Company is required to deliver a certificate pursuant to Section 4(0) and (5) as of each Time of Sale (each of the times referenced above is referred to herein as a "**Representation Date**"), except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto) on or before a Representation Date:

(a) Registration Statement. The Company has prepared and filed with the Commission an "automatic shelf registration statement," as defined under Rule 405 under the Securities Act on Form S-3, including a base prospectus, relating to certain securities, including Ordinary Shares, to be issued from time to time by the Company, as well as a prospectus included as part of the Registration Statement specifically relating to the Shares (the "Sales Prospectus") to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Exchange Act and the rules and regulations thereunder. The Company may file one or more additional registration statements from time to time that will contain a prospectus or prospectus supplement, if applicable, with respect to the Shares. Except where the context otherwise requires, such registration statement(s), including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, including all financial statements, exhibits and schedules thereto and all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act as from time to time amended or supplemented, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act or deemed to be part of such registration statement pursuant to Rule 430(B) of the Securities Act, is herein referred to as the "Registration Statement." The Sales Prospectus and any other prospectus specifically relating to the Shares constituting a part of such registration statement(s), together with any prospectus supplement filed with the Commission pursuant to Rule 424(b) under the Securities Act relating to a particular issuance of the Shares, including all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act, in each case, as from time to time amended or supplemented, is referred to herein as the "Prospectus," except that if any revised prospectus is provided to the Agent by the Company for use in connection with the offering of the Shares that is not required to be filed by the Company pursuant to Rule 424(b) under the Securities Act, the term "Prospectus" shall refer to such revised prospectus from and after the time it is first provided to the Agent for such use. The Registration Statement at the time it originally became effective is herein called the "Original Registration Statement." As used in this Agreement, the terms "amendment" or "supplement" when applied to the Registration Statement or the Prospectus shall be deemed to

include the filing by the Company with the Commission of any document under the Exchange Act after the date hereof that is or is deemed to be incorporated therein by reference.

All references in this Agreement to financial statements and schedules and other information which is "contained," "included" or "stated" in, or "part of" the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date; and all references in this Agreement to amendments or supplements to the Registration Statement or the Prospectus shall be deemed to mean and include, without limitation, the filing of any document under the Exchange Act which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date. All references in this Agreement to the Registration Statement or the Prospectus, as the case may be, as of any specified date. All references in this Agreement to the Registration Statement or the Prospectus, as the case may be, as of any specified date. All references in this Agreement to the Registration Statement or the Prospectus, as the case may be, as of any specified date. All references in this Agreement to the Registration Statement, the Prospectus or any amendments or supplements thereto, or any Free Writing Prospectus (as defined herein), shall be deemed to include any copy filed with the Commission pursuant to EDGAR.

(a) <u>Compliance with Registration Requirements</u>. The Registration Statement and any Rule 462(b) Registration Statement have become effective under the Securities Act prior to the issuance of any Issuance Notices by the Company. The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the applicable conditions set forth in Form S-3 (including General Instructions I.A and I.B) under the Securities Act. The Company has complied to the Commission's satisfaction with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission. At the time the Registration Statement originally became effective and at the time the Company's most recent annual report on Form 10-K was filed with the Commission, the Company met the then-applicable requirements for use of Form S-3 under the Securities Act, including, but not limited to, General Instruction I.B.1. During the Agency Period, each time the Company files an annual report on Form 10-K the Company will meet the then-applicable requirements for use of Form S-3 under the Securities Act, including, but not limited to, General Instructions I.B.1. The Company meets the requirements for use of Form S-3 under the Securities Act, including, but not limited to, General Instructions I.B.1. The Company meets the requirements for use of Form S-3 under the Securities Act, including, but not limited to, General Instructions I.B.1. The Company meets the requirements for use of Form S-3 under the Securities Act, including, but not limited to, General Instructions I.B.1. The Company meets the requirements for use of Form S-3 under the Securities Act, including, but not limited to, General Instructions I.B.1. The Company meets the requireme

(b) <u>Disclosure</u>. The Prospectus when filed complied and will comply in all material respects with the Securities Act and, if filed by electronic transmission pursuant to EDGAR, was identical (except as may be permitted by Regulation S-T under the Securities Act) to the copy thereof delivered to the Agent for use in connection with the issuance and sale of the Shares. Each of the Registration Statement, any Rule 462(b) Registration Statement, the Prospectus and any post-effective amendment or supplement thereto, at the time it became or becomes effective and at all subsequent times, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the date of this Agreement, the Prospectus and any Free Writing Prospectus

considered together (collectively, the "**Time of Sale Information**") did not, and at each Settlement Date will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus, as of its date, did not, and at each Settlement Date will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus or the Time of Sale Information, or any amendments or supplements thereto, made in reliance upon and in conformity with written information relating to the Agent furnished to the Company in writing by the Agent expressly for use therein, it being understood and agreed that the only such information consists of the information described in Section 6 below. There are no contracts or other documents required to be described in the Time of Sale Information or the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required.

(c) <u>Ineligible Issuer Status</u>. As of the determination date referenced in Rule 164(h) under the Securities Act, the Company was not, is not or will not be (as applicable) an "ineligible issuer" in connection with the offering of the Shares pursuant to Rules 164, 405 and 433 under the Securities Act. Any Free Writing Prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each Free Writing Prospectus that the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act, including timely filing with the Commission or retention where required and legending, and each such Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the issuance and sale of the Shares did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus and not superseded or modified. Except for any Free Writing Prospectus, and electronic road shows, if any, furnished to the Agent before first use, the Company has not prepared, used or referred to, and will not, without the prior written consent of the Agent, prepare, use or refer to, any Free Writing Prospectus.

(d) <u>Incorporated Documents</u>. The documents incorporated or deemed to be incorporated by reference in the Registration Statement and the Prospectus, at the time they were filed with the Commission, complied in all material respects with the requirements of the Exchange Act, as applicable, and, when read together with the other information in the Prospectus, do not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. Any further documents so filed and incorporated by reference in the Registration Statement or the Prospectus, when such documents become effective or are filed with the Commission, as the case may be, will conform in all material respects to the requirements of the Securities Act or the Exchange Act, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact.

required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(e) <u>Exchange Act Compliance</u>. The documents incorporated or deemed to be incorporated by reference in the Prospectus, at the time they were or hereafter are filed with the Commission, and any Free Writing Prospectus or amendment or supplement thereto complied and will comply in all material respects with the requirements of the Exchange Act, and, when read together with the other information in the Prospectus, at the time the Registration Statement and any amendments thereto become effective and as of each Representation Date, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(f) <u>Distribution of Offering Material by the Company</u>. Prior to the completion of the Agent's distribution of the Shares, the Company has not distributed and will not distribute any offering material in connection with the offering and sale of the Shares other than the Registration Statement, the Prospectus or any Free Writing Prospectus reviewed and consented to by the Representatives.

(g) The Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(h) <u>Authorization of the Shares</u>. The Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and the issuance and sale of the Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Shares.

(i) <u>No Applicable Registration or Other Similar Rights</u>. There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights as have been duly waived.

(j) <u>No Material Adverse Change</u>. Except as otherwise disclosed in the Registration Statement, the Time of Sale Information and the Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement, the Time of Sale Information and the Prospectus: (i) there has been no material adverse change, or any development that could be expected to result in a material adverse change, in the condition, financial or otherwise, or in the earnings, business, properties, operations, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, considered as one entity (any such change being referred to herein as a "**Material Adverse Change**"); (ii) the Company and its subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, including without limitation any losses or interference with its business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the

Company and its subsidiaries, considered as one entity, entered into any transactions not in the ordinary course of business nor entered into any material agreement not in the ordinary course of business; and (iii) there has not been any material decrease in the share capital or capital stock or any material increase in any short-term or long-term indebtedness of the Company or its subsidiaries and there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for dividends paid to the Company or other subsidiaries, by any of the Company's subsidiaries on any class of share capital or capital stock, or any repurchase or redemption by the Company or any of its subsidiaries of any class of share capital or capital stock.

(k) <u>Independent Accountants</u>. KPMG LLP, which has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) filed with the Commission as a part of the Registration Statement, the Time of Sale Information and the Prospectus, is (i) an independent registered public accounting firm as required by the Securities Act, the Exchange Act, and the rules of the Public Company Accounting Oversight Board ("**PCAOB**"), (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act and (iii) a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(1) <u>Financial Statements</u>. The consolidated financial statements of the Company filed with the Commission as a part of the Registration Statement, the Time of Sale Information and the Prospectus present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of and at the dates indicated and the results of their operations, changes in shareholders' equity and cash flows for the periods specified. Such financial statements have been prepared in conformity with generally accepted accounting principles as applied in the United States applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. No other financial statements or supporting schedules are required to be included or incorporated by reference in the Registration Statement, the Time of Sale Information or the Prospectus. To the Company's knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements or other financial data filed with the Commission as a part of the Registration Statement, the Time of Sale Information and included in the Prospectus.

(m) <u>Company's Accounting System</u>. Except as otherwise disclosed in the Registration Statement, the Time of Sale Information and the Prospectus, the Company and each of its subsidiaries make and keep accurate books and records and maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the

interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, the Time of Sale Information and the Prospectus, fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto.

(n) Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting. Except as otherwise disclosed in the Registration Statement, the Time of Sale Information and the Prospectus, the Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects to perform the functions for which they were established. Except as otherwise disclosed in the Registration Statement, the Time of Sale Information and the Prospectus, since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weakness in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to material control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to material control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to material control over financial reporting that has occurred during reporting.

(o) <u>Incorporation and Good Standing of the Company</u>. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the Republic of Singapore and has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Time of Sale Information and the Prospectus and to enter into and perform its obligations under this Agreement. The Company is duly qualified as a foreign corporation to transact business and is in good standing in the Commonwealth of Massachusetts and each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or to be in good standing would not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or otherwise), earnings, business, properties, operations, assets, liabilities or prospects of the Company (a "**Material Adverse Effect**").

(p) <u>Subsidiaries.</u> Each of the Company's "subsidiaries" (for purposes of this Agreement, as defined in Rule 405 under the Securities Act) has been duly incorporated or organized, as the case may be, and is validly existing as a corporation or company, as applicable, in good standing under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its businesses as described in the Registration Statement, the Time of Sale Information and the Prospectus. Each of the Company's subsidiaries is duly qualified as a foreign corporation to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or to be in good standing would not

reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. All of the issued and outstanding share capital or capital stock or other equity or ownership interests of each of the Company's subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Company's most recent annual report on Form 10-K or otherwise disclosed in any filing by the Company with the Commission subsequent to the Company's most recent annual report on Form 10-K.

(q) Capitalization and Other Capital Stock Matters. The issued and outstanding capital stock of the Company is as set forth in the Registration Statement, the Time of Sale Information and the Prospectus (other than for subsequent issuances, if any, pursuant to employee benefit plans or upon the exercise of outstanding options or warrants, in each case, described in the Registration Statement, the Time of Sale Information and the Prospectus). The Ordinary Shares (including the Shares) conform in all material respects to the description thereof contained in the Prospectus. All of the issued and outstanding Ordinary Shares have been duly authorized and validly issued, are fully paid and nonassessable, at the respective time of their issuance were free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim, and have been issued in compliance with all applicable laws and the constitution of the Company, and are not subject to any restrictions on voting, pre-emptive or similar rights or transfer restrictions or liens thereunder. None of the outstanding Ordinary Shares were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any shares, capital stock or ownership interests of the Company or any of its subsidiaries other than those described in the Registration Statement, the Time of Sale Information and the Prospectus. The descriptions of the Company's share or stock option, share or stock bonus and other share or stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Registration Statement, the Time of Sale Information and the Prospectus accurately and fairly present the information required to be shown with respect to such plans, arrangements, options and rights. Except as disclosed in the Time of Sale Information, the Company has not sold, issued or distributed any Shares during the six month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulation D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, stock option plans or other employee compensation plans or pursuant to outstanding options, restricted stock units, rights or warrants.

(r) <u>Stock Exchange Listing</u>. The Ordinary Shares are registered pursuant to Section 12(b) of the Exchange Act and are listed on the Nasdaq Global Market, and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Ordinary Shares under the Exchange Act or delisting the Ordinary Shares from the Nasdaq Global Market, nor has the Company received any notification that the Commission or the Nasdaq Global Market is contemplating terminating such registration or listing. To the Company's knowledge, it is in compliance with all applicable listing requirements of the Nasdaq Global Market.

(s) Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required. Neither the Company nor any of its subsidiaries is in violation of its constitution, memorandum and articles of association, charter, by-laws, or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) ("Default") under any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject (each, an "Existing Instrument"), except for such Defaults as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. The Company's execution, delivery and performance of this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement, the Time of Sale Information and the Prospectus and the issuance and sale of the Shares (including the use of proceeds from the sale of the Shares as described in the Registration Statement, the Time of Sale Information and the Prospectus under the caption "Use of Proceeds") (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the constitution, memorandum and articles of association, charter, by-laws, or similar organizational documents, as applicable, of the Company or any subsidiary, (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its subsidiaries, except in the case of clauses (ii) and (iii) as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Registration Statement, the Time of Sale Information and the Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act and such as may be required under applicable state securities or blue sky laws or the Financial Industry Regulatory Authority, Inc. ("FINRA").

(t) <u>Compliance with Laws</u>. The Company and its subsidiaries have been and are in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance could not be expected, individually or in the aggregate, to have a Material Adverse Effect.

(u) <u>No Material Actions or Proceedings</u>. There is no action, suit, proceeding, inquiry or investigation brought by or before any governmental entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any such subsidiary, which would reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect or materially and adversely affect the consummation of the transactions contemplated by this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company or any of its subsidiaries is a party or of which any of their respective properties or assets is the subject,

including ordinary routine litigation incidental to the business, if determined adversely to the Company, would not reasonably be expected to have a Material Adverse Effect. No material labor dispute with the employees of the Company or any of its subsidiaries, or with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent, which would reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(v) Intellectual Property Rights. The Company and its subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the Registration Statement, the Time of Sale Information and the Prospectus as being owned or licensed by them or which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted (collectively, "Intellectual Property"). To the Company's knowledge: (i) the Registration Statement, the Time of Sale Information and the Prospectus accurately sets forth third party ownership and other interests (including, e.g., co-exclusive license rights) in the Intellectual Property; there are no third party rights in any Intellectual Property that are not identified in the Registration Statement, the Time of Sale Information and the Prospectus; and (ii) there is no infringement by third parties of any Intellectual Property. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's ownership of, or rights in or to, any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim that, if asserted on the date hereof, would reasonably be expected to succeed; (B) challenging the validity, enforceability or scope of any Intellectual Property (other than the ordinary rejections and assertions typically levied during patent examination within patent offices), and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim that, if asserted on the date hereof, would reasonably be expected to succeed; or (C) asserting that the Company or any of its subsidiaries infringes or otherwise violates, or would, through pursuing the discovery and development programs described in the Registration Statement, the Time of Sale Information or the Prospectus infringe or violate, any valid patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim that, if asserted on the date hereof, would reasonably be expected to succeed. The Company and its subsidiaries have complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or any subsidiary, and all such agreements are in full force and effect, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. The Intellectual Property includes claims that cover various valuable aspects and features of the discovery and development programs described in the Registration Statement, the Time of Sale Information and the Prospectus as being pursued by the Company and/or its subsidiaries. All patents and patent applications owned by, or exclusively licensed to, the Company have been duly and properly filed and maintained, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. To the knowledge of the Company, the parties prosecuting such patents and patent applications have complied with their duty of candor and disclosure to the U.S. Patent and Trademark Office, and the Company is not aware of any violation of such duty which would preclude the grant of a patent in connection with any such application or would reasonably be expected to form the basis of a finding of invalidity with

respect to any patents that have issued from such applications. The Company has complied with applicable laws relating to privacy, data protection, and the collection and use of personal information collected, used, or held for use by it in the conduct of its business, except where the failure to do so, individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect. Since November 1, 2015, no claims have been asserted or, to the knowledge of the Company, threatened against the Company alleging a violation of any person's privacy or personal information or data rights and, to the knowledge of the Company, the consummation of the transactions contemplated hereby will not breach or otherwise cause any violation of any law related to privacy, data protection, or the collection and use of personal information collected, used, or held for use by the Company in the conduct of the Company's business. The Company takes reasonable measures, consistent with industry standards, to ensure that such information is protected against unauthorized access, use, modification, or other misuse, except where the failure to do so, individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

(w) <u>IT Systems and Data</u>. Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, since November 1, 2015, to the Company's knowledge, there has been no security breach or attack or other compromise of or relating to any of the Company's and its subsidiaries' information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology.

(x) <u>All Necessary Permits, etc</u>. The Company and its subsidiaries possess such valid and current certificates, authorizations or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described in the Registration Statement, the Time of Sale Information or the Prospectus ("**Permits**"), except where failure to so possess would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect. Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit, except as would not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect.

(y) <u>Title to Properties</u>. The Company and its subsidiaries have good and marketable title to all of the personal property and other assets reflected as owned in the financial statements referred to in <u>Section 2(1)</u> above (or elsewhere in the Registration Statement, the Time of Sale Information or the Prospectus), in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. The equipment and personal property held under lease by the Company or any of its subsidiaries are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such equipment or personal property by the Company or such subsidiary. The Company and its subsidiaries do not own any real property.

(z) <u>Tax Law Compliance</u>. The Company and its subsidiaries have filed all necessary federal, state, local and foreign income and franchise tax returns or have properly requested extensions thereof, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except for any such taxes being contested in good faith and by appropriate proceedings or where the failure to make such payment would not reasonably be expected to have a Material Adverse Effect. The Company has made adequate charges, accruals and reserves in the financial statements referred to in <u>Section 2(1)</u> above in respect of all federal, state, local and foreign income and franchise taxes for all periods as to which the tax liability of the Company or any of its subsidiaries has not been finally determined, except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(a) <u>Insurance</u>. Each of the Company and its subsidiaries are insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as are generally deemed adequate and customary for their businesses including, but not limited to, policies covering real and personal property owned or leased by the Company and its subsidiaries against theft, damage, destruction, acts of vandalism, hurricanes and earthquakes and policies covering the Company and its subsidiaries for product liability claims and clinical trial liability claims. The Company has no reason to believe that it or any of its subsidiaries will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not reasonably be expected to have a Material Adverse Effect. Neither the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(bb) <u>Compliance with Environmental Laws</u>. Except as could not be expected, individually or in the aggregate, to have a Material Adverse Effect, (i) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, "**Hazardous Materials**") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "**Environmental Laws**"), (ii) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (iii) there are no pending or, to the Company's knowledge, threatened administrative, regulatory or judicial actions, suits, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries and (iv) to the Company's knowledge, there are no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any

private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(cc) ERISA Compliance. The Company and its subsidiaries and any "employee benefit plan" (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, "ERISA")) established or maintained by the Company, its subsidiaries or their "ERISA Affiliates" (as defined below) are in compliance in all material respects with ERISA. "ERISA Affiliate" means, with respect to the Company or any of its subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the "Code") of which the Company or such subsidiary is a member. No "reportable event" (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any "employee benefit plan" established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates. No "employee benefit plan" established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates. No "employee benefit plan" established or reasonably expects to incur any liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan" or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each "employee benefit plan" established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

(dd) <u>Company Not an "Investment Company."</u> The Company is not, and will not be, either after receipt of payment for the Shares or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement, the Time of Sale Information or the Prospectus, required to register as an "**investment company**" under the Investment Company Act of 1940, as amended (the **"Investment Company** Act").

(ee) <u>No Price Stabilization or Manipulation; Compliance with Regulation M</u>. Neither the Company nor any of its subsidiaries has taken, directly or indirectly, any action designed to or that might cause or result in stabilization or manipulation of the price of the Ordinary Shares or of any "**reference security**" (as defined in Rule 100 of Regulation M under the Exchange Act (**"Regulation M"**)) with respect to the Shares, whether to facilitate the sale or resale of the Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(ff) <u>Related Party Transactions</u>. There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or any other person required to be described in the Registration Statement, the Time of Sale Information or the Prospectus that have not been described as required.

(gg) <u>FINRA Matters</u>. All of the information provided to the Agent or to counsel for the Agent by the Company, its counsel, its officers and directors and, to the Company's knowledge, its counsel and the holders of any securities (debt or equity) or options to acquire any

securities of the Company in connection with the offering of the Shares is true, complete and correct in all material respects and compliant with FINRA's rules and any letters, filings or other supplemental information provided in response to questions relating to FINRA Rules 5110 and 5190 and is true, complete and correct in all material respects.

(hh) <u>Statistical and Market-Related Data</u>. All statistical, demographic and market-related data included or incorporated by reference in the Registration Statement, the Time of Sale Information and the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate in all material respects. To the extent required, the Company has obtained the written consent to the use of such data from such sources.

(ii) <u>No Unlawful Contributions or Other Payments</u>. Neither the Company nor any subsidiary nor, to the best of the Company's knowledge, any employee or agent of the Company or any of its subsidiaries, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law or of the character required to be disclosed in the Registration Statement, the Time of Sale Information and the Prospectus.

(jj) Foreign Corrupt Practices Act. Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or any of its subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any domestic government official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "FCPA")) or employee from corporate funds; (iii) violated or is in violation of any provision of the FCPA or any applicable non-U.S. anti-bribery statute or regulation; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any domestic government official, such foreign official or employee; and the Company and its subsidiaries and, to the knowledge of the Company, the Company's affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(kk) <u>Money Laundering Laws</u>. The operations of the Company and its subsidiaries are, and have been conducted at all times, in compliance with all applicable financial recordkeeping and reporting requirements, including those of the Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (USA PATRIOT Act) (Title III of Pub. L. 107-56 (signed into law October 26, 2001)) (the "USA Patriot Act"), and those of the Currency and Foreign Transactions Reporting Act of 1970, as amended, and the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(ll) <u>OFAC</u>. Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, after due inquiry, any director, officer, agent, employee, affiliate or person acting on behalf of the Company or any of its subsidiaries is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("**OFAC**"); and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that currently is the subject to any U.S. sanctions administered by OFAC or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of U.S. sanctions administered by OFAC. For the past five years, the Company and its subsidiaries have not knowingly engaged in, and the Company and its subsidiaries are not now knowingly engaged in, any dealings or transactions with any individual or entity, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(mm) <u>Brokers</u>. Except pursuant to this Agreement, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(nn) <u>Forward-Looking Statements</u>. Each financial or operational projection or other "forward-looking statement" (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement, the Time of Sale Information or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of an executive officer or director of the Company that it was false or misleading.

(oo) <u>Dividend Restrictions</u>. Except in each case as otherwise disclosed in the Registration Statement, the Time of Sale Information and the Prospectus, no subsidiaries of the Company are prohibited or restricted, directly or indirectly, from paying any dividends to the Company, or from making any other distribution with respect to such subsidiary's equity securities or from repaying to the Company any amounts that may from time to time become due under any loans or advances to either of the subsidiaries from the Company or from transferring any property or assets to the Company or any other subsidiary of the Company. Except as described in the Registration Statement, the Time of Sale Information and the Prospectus, no approvals of any governmental or regulatory body or agency are required in the Republic of Singapore in order for the Company to pay dividends or other distributions declared by the Company to the holders of Shares. Except as described in the Registration Statement, the Time of Sale Information and the Prospectus, under the laws and regulations of the Republic of Singapore (A) any amounts payable with respect to the Shares upon liquidation of the Company or upon redemption thereof and dividends and other distributions declared and payable on the Shares may be paid by the Company to the holders of Shares in Singapore dollars that may be converted into foreign currency and freely transferred out of the Republic of Singapore; and (B) no such payments made to holders thereof or therein who are non-residents of the Republic of

Singapore will be subject to income, withholding or other taxes under the laws and regulations of the Republic of Singapore or taxing authority thereof or therein and will otherwise be free and clear of any other tax, duty, withholding or deduction in the Republic of Singapore or taxing authority thereof or therein and without the necessity of obtaining any governmental authorization in the Republic of Singapore or taxing authority thereof.

(pp) <u>No Outstanding Loans or Other Extensions of Credit</u>. Neither the Company nor its subsidiaries has any outstanding extension of credit, in the form of a personal loan, to or for any director or executive officer (or equivalent thereof) of the Company and/or its subsidiaries except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act and the Companies Act (Chapter 50) of Singapore.

(qq) <u>Communications</u>. Since November 2015, the Company has not engaged in any communications with potential investors in reliance on Section 5(d) of the Securities Act and has not authorized anyone other than the Representatives to engage in such communications.

(rr) <u>Clinical Data and Regulatory Compliance</u>. The preclinical studies and clinical trials, and other studies (collectively, "studies") being conducted by or, to the knowledge of the Company, for the Company, or that are described in, or the results of which are referred to in, the Registration Statement, the Time of Sale Information or the Prospectus were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies and with standard medical and scientific research procedures; each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company and its subsidiaries have no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement, the Time of Sale Information or the Prospectus; the Company and its subsidiaries have made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or from any other applicable U.S. or foreign governmental agency engaged in the regulation of drugs or medical devices (including diagnostics) (collectively, the "**Regulatory Agencies**"), except where the failure to obtain such approval would not reasonably be expected to have a Material Adverse Effect; neither the Company nor any of its subsidiaries has received any written notice of, or other correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the Registration Statement, the Time of Sale Information and the Prospectus; and the Company and its subsidiaries have each operated and currently are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

(ss) <u>Compliance with Health Care Laws</u>. The Company's and each of its subsidiaries' business practices have been structured in a manner reasonably designed to comply with the state, federal and foreign Health Care Laws applicable to the Company and its subsidiaries respective businesses, and the Company and its subsidiaries are in compliance with Health Care Laws, except where the failure to do so would not reasonably be expected to have a Material Adverse Effect. The Company and its subsidiaries have not engaged in activities which to its

knowledge are cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other state health care program or federal health care program. For purposes of this Agreement, "Health Care Laws" includes without limitation applicable provisions of the: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et seq.) and the regulations promulgated thereunder; (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the U.S. civil False Claims Act (31 U.S.C. Section 3729 et seq.), the federal criminal false claims law (42 U.S.C. § 1320a-7b(a)), the federal civil monetary penalties law (42 U.S.C. § 1320a-7a), the Stark Law (42 U.S.C. §1395nn), 18 U.S.C. Sections 286 and 287, the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("HIPAA") (42 U.S.C. Section 1320d et seq.), the exclusion laws (42 U.S.C. §1320a-7), the statutes and regulations government healthcare programs, including the European Union General Data Protection Regulation (EU 2016 679), Medicare, Title XVIII of the Social Security Act, and Medicaid, Title XIX of the Social Security Act, and the regulations promulgated pursuant to such statutes; (iii) the U.S. federal Prescription Drug Marketing Act of 1987, as amended, and the regulations promulgated thereunder; (iv) the U.S. Controlled Substances Act; (v) the Clinical Laboratory Improvement Act; and (vi) the Standards for Privacy of Individually Identifiable Health Information (the "Privacy Rule"), the Security Standards, and the Standards for Electronic Transactions and Code Sets promulgated under HIPAA, the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated thereunder and any state or non-U.S. counterpart thereof or other law or regulation the purpose of which is to protect the privacy of individuals or prescribers. Neither the Company nor its subsidiaries have received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product, operation or activity is in violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. The Company and its subsidiaries have filed, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). Neither the Company nor its subsidiaries are a party to any corporate integrity agreements, monitoring agreements, consent decrees, plans of correction, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, its subsidiaries nor any of their respective employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

(tt) <u>No Rights to Purchase Preferred Shares</u>. The issuance and sale of the Shares as contemplated hereby will not cause any holder of any shares, securities convertible into or exchangeable or exercisable for shares or options, warrants or other rights to purchase shares or

any other securities of the Company to have any right to acquire any preference shares of the Company.

(uu) <u>No Contract Terminations</u>. Neither the Company nor any of its subsidiaries has sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in the Prospectus or any Free Writing Prospectus, or referred to or described in, or filed as an exhibit to, the Registration Statement, and no such termination or non-renewal has been threatened by the Company or any of its subsidiaries or, to the Company's knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

(vv) <u>Submission to Jurisdiction</u>. The Company and each of its subsidiaries has the power to submit, and pursuant to <u>Section 8(g)</u> of this Agreement, has legally, validly, effectively and irrevocably submitted, to the personal jurisdiction of the Specified Courts (as defined herein), and the Company and each of its subsidiaries has the power to designate, appoint and authorize, and pursuant to <u>Section 8(g)</u> of this Agreement, has legally, validly, effectively and irrevocably designated, appointed and authorized an agent for service of process in any action arising out of or relating to this Agreement or the Shares in any state or federal court in the Borough of Manhattan in the City of New York, and service of process effected on such authorized agent will be effective to confer valid personal jurisdiction over the Company as provided in Section <u>8(g)</u> hereof.

(ww) <u>No Rated Debt</u>. There are no debt securities or preferred stock issued, or guaranteed, by the Company or any of its subsidiaries that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) of the Exchange Act.

(xx) <u>Compliance with Sarbanes-Oxley</u>. The Company is in compliance, in all material respects, with all applicable provisions of the Sarbanes-Oxley Act of 2002 and all rules and regulations promulgated thereunder that are then in effect and with which the Company is required to comply as of the effectiveness of the Registration Statement. Any certificate signed by any officer of the Company or any of its subsidiaries and delivered to the Agent or counsel for the Agent in connection with an issuance of Shares shall be deemed a representation and warranty by the Company to the Agent as to the matters covered thereby. The Company has a reasonable basis for making each of the representations set forth in this Section 2. The Company acknowledges that the Agent and, for purposes of the opinions to be delivered pursuant to Section 4(p) hereof, counsel to the Company and counsel to the Agent, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

(yy) <u>Well-Known Seasoned Issuer</u>. (i) At the original effectiveness of the Registration Statement, (ii) at the time of the most recent amendment thereto for the purposes of complying with Section 10(a)(3) of the Securities Act (whether such amendment was by post-effective amendment or incorporated report filed pursuant to Section 13 or 15(d) of the Exchange Act or in the form of a prospectus), (iii) at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Securities Act) made any offer relating to the Shares in reliance on the exemption of Rule 163 under the Securities Act, and (iv) as of the Time of Sale, the Company was and is a "well-known seasoned issuer" (as defined in Rule 405).

(zz) <u>Passive Foreign Investment Company</u>. The Company was not a "passive foreign investment company" ("**PFIC**") as defined in Section 1297 of the Code for its most recently completed taxable year and, based on the Company's current projected income, assets and activities, the Company does not expect to be classified as a PFIC for the subsequent taxable year.

(aaa) <u>No Other At-The-Market Offerings</u>. The Company has not entered into any other sales agency agreements or other similar arrangements with any agent or any other representative in respect of at the market offerings of the Shares in accordance with Rule 415(a)(4) of the Securities Act.

(bbb) <u>Registration Rights</u>. Except as disclosed in the Registration Statement, the Time of Sale Information and the Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to a Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act.

Section 3. ISSUANCE AND SALE OF ORDINARY SHARES

(a) <u>Sale of Securities</u>. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company and the Agent agree that the Company may from time to time seek to sell Shares through the Agent, acting as sales agent, or directly to the Agent, acting as principal, as follows, with an aggregate Sales Price of up to the Maximum Program Amount, based on and in accordance with Issuance Notices as the Company may deliver, during the Agency Period.

(b) Mechanics of Issuances.

(i) <u>Issuance Notice</u>. Upon the terms and subject to the conditions set forth herein, on any Trading Day during the Agency Period on which the conditions set forth in <u>Section 5</u> shall have been satisfied, the Company may exercise its right to request an issuance of Shares by delivering to the Agent an Issuance Notice; *provided, however*, that (A) in no event may the Company deliver an Issuance Notice to the extent that the sum of (x) the aggregate Sales Price of the requested Issuance Notices effected pursuant to this Agreement, would exceed the Maximum Program Amount; and (B) prior to delivery of any Issuance Notice, the Selling Period for any previous Issuance Notice shall have expired or been terminated. An Issuance Notice shall be considered delivered on the Trading Day that it is received by e-mail to the persons set forth in <u>Exhibit B</u> hereto and confirmed by the Company by telephone (including a voicemail message to the persons so identified), with the understanding that, with adequate prior written notice, the Agent may modify the list of such persons from time to time.

(ii) <u>Agent Efforts</u>. Upon the terms and subject to the conditions set forth in this Agreement, upon the receipt of an Issuance Notice, the Agent will use its commercially

reasonable efforts consistent with its normal sales and trading practices to place the Shares with respect to which the Agent has agreed to act as sales agent, subject to, and in accordance with the information specified in, the Issuance Notice, unless the sale of the Shares described therein has been suspended, cancelled or otherwise terminated in accordance with the terms of this Agreement. For the avoidance of doubt, the parties to this Agreement may modify an Issuance Notice at any time provided they both agree in writing to any such modification.

(iii) <u>Method of Offer and Sale</u>. The Shares may be offered and sold (A) in privately negotiated transactions (in accordance with Nasdaq 5635(d)), (B) as block transactions or (C) by any other method or payment permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act, including sales made directly on the Principal Market or sales made into any other existing trading market of the Ordinary Shares. Nothing in this Agreement shall be deemed to require either party to agree to the method of offer and sale specified in the preceding sentence (except as specified in clauses (A) and (B) above), and the method of placement of any Shares by the Agent shall be at the Agent's discretion.

(iv) <u>Confirmation to the Company</u>. If acting as sales agent hereunder, the Agent will provide written confirmation to the Company no later than the opening of the Trading Day next following the Trading Day on which it has placed Shares hereunder setting forth the number of shares sold on such Trading Day, the corresponding Sales Price and the Issuance Price payable to the Company in respect thereof.

(v) <u>Settlement</u>. Each issuance of Shares will be settled on the applicable Settlement Date for such issuance of Shares and, subject to the provisions of <u>Sections 5</u>, on or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Shares being sold by crediting the Agent's or its designee's account at The Depository Trust Company through its Deposit/Withdrawal At Custodian (DWAC) System, or by such other means of delivery as may be mutually agreed upon by the parties hereto and, upon receipt of such Shares, which in all cases shall be freely tradable, transferable, registered shares in good deliverable form, the Agent will deliver, by wire transfer of immediately available funds, the related Issuance Price in same day funds delivered to an account designated by the Company prior to the Settlement Date. The Company may sell Shares to the Agent as principal at a price agreed upon at each relevant time Shares are sold pursuant to this Agreement (each, a "**Time of Sale**").

(vi) <u>Suspension or Termination of Sales</u>. Consistent with standard market settlement practices, the Company or the Agent may, upon notice to the other party hereto in writing or by telephone (confirmed immediately by verifiable email), suspend any sale of Shares, and the Selling Period shall immediately terminate; *provided, however*, that (A) such suspension and termination shall not affect or impair either party's obligations with respect to any Shares placed or sold hereunder prior to the receipt of such notice; (B) if the Company suspends or terminates any sale of Shares after the Agent confirms such sale to the Company, the Company shall still be obligated to comply with <u>Section 3(b)(v)</u> with respect to such Shares; and (C) if the Company defaults in its obligation to deliver Shares on a Settlement Date, the Company agrees that it will hold the Agent harmless against any loss, claim, damage or expense (including, without limitation, penalties, interest and reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company. The parties hereto acknowledge and agree

that, in performing its obligations under this Agreement, the Agent may borrow Ordinary Shares from stock lenders in the event that the Company has not delivered Shares to settle sales as required by subsection (v) above, and may use the Shares to settle or close out such borrowings. The Company agrees that no such notice shall be effective against the Agent unless it is made to the persons identified in writing by the Agent pursuant to <u>Section 3(b)</u>. (i).

(vii) <u>No Guarantee of Placement, Etc.</u> The Company acknowledges and agrees that (A) there can be no assurance that the Agent will be successful in placing Shares, (B) the Agent will incur no liability or obligation to the Company or any other Person if it does not sell Shares, and (C) the Agent shall be under no obligation to purchase Shares on a principal basis pursuant to this Agreement, except as otherwise specifically agreed by the Agent and the Company.

(viii) <u>Material Non-Public Information</u>. Notwithstanding any other provision of this Agreement, the Company and the Agent agree that the Company shall not deliver any Issuance Notice to the Agent, and the Agent shall not be obligated to place any Shares, during any period in which the Company is in possession of material non-public information.

(c) <u>Sales through Agent</u>. With respect to the offering and sale of Shares pursuant to this Agreement, the Company agrees that any offer to sell Shares, any solicitation of an offer to buy Shares, and any sales of Shares shall only be effected by or through Jefferies LLC, as Agent.

(d) <u>Fees</u>. As compensation for services rendered, the Company shall pay to the Agent, on the applicable Settlement Date, the Selling Commission for the applicable Issuance Amount (including with respect to any suspended or terminated sale pursuant to <u>Section 3(b)(vi)</u>) by the Agent deducting the Selling Commission from the applicable Issuance Amount.

(e) Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Shares (including all printing and engraving costs), (ii) all fees and expenses of the registrar and transfer agent of the Shares, (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Shares, (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors, (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Prospectus, any Free Writing Prospectus prepared by or on behalf of, used by, or referred to by the Company, and all amendments and supplements thereto, and this Agreement, (vi) all filing fees, attorneys' fees and expenses incurred by the Company or the Agent in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Shares for offer and sale under the state securities or blue sky laws or the provincial securities laws of Canada, and, if requested by the Agent, preparing and printing a "Blue Sky Survey" or memorandum and a "Canadian wrapper," and any supplements thereto, advising the Agent of such qualifications, registrations, determinations and exemptions, (vii) the reasonable and documented fees and disbursements of the Agent's counsel, including the filing fees incident to, and the reasonable and documented fees and expenses of counsel for the Agent in connection with, FINRA review, if any, and approval of the Agent's participation in the offering and distribution of the Shares,

(viii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Shares, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives, employees and officers of the Company and of the Agent and any such consultants, and the cost of any aircraft chartered in connection with the road show and (ix) the fees and expenses associated with listing the Shares on the Principal Market. The fees and disbursements of Agent's counsel pursuant to subsections (vi) and (vii) above shall not exceed \$50,000.

Section 4. ADDITIONAL COVENANTS

The Company covenants and agrees with the Agent as follows, in addition to any other covenants and agreements made elsewhere in this Agreement:

(a) <u>Exchange Act Compliance</u>. During the Agency Period, the Company shall (i) file, on a timely basis, with the Commission all reports and documents required to be filed under Section 13, 14 or 15 of the Exchange Act in the manner and within the time periods required by the Exchange Act and (ii) either (A) include in its quarterly reports on Form 10-Q and its annual reports on Form 10-K, a summary detailing, for the relevant reporting period, (1) the number of Shares sold, if any, through the Agent pursuant to this Agreement and (2) the net proceeds, if any, received by the Company from such sales or, in the Company's sole discretion, (B) prepare a prospectus supplement containing or include in such other filing permitted by the Securities Act or Exchange Act (each an "**Interim Prospectus Supplement**"), such summary information and, at least once a quarter and subject to this Section 4, file such Interim Prospectus Supplement pursuant to Rule 424(b) under the Securities Act (and within the time periods required by Rule 424(b) and Rule 430B under the Securities Act)), *provided, however*, that prior notice is given to the Agent of any such filing of an Interim Prospectus Supplement.

(b) <u>Securities Act Compliance</u>. After the date of this Agreement, the Company shall promptly advise the Agent in writing (i) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (ii) of the time and date of any filing of any post-effective amendment to the Registration Statement, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus, or any Free Writing Prospectus, (iii) of the time and date that any post-effective amendment to the Registration Statement or any Rule 462(b) Registration Statement or any Rule 462(b) Registration Statement or any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus or of any order preventing or suspending the use of any Free Writing Prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Ordinary Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rule 424(b) and Rule 433, as applicable, under the Securities Act and will use its

reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) or Rule 433 were filed in a timely manner with the Commission.

(c) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, not misleading, or if in the opinion of the Agent or counsel for the Agent it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, including the Securities Act, the Company agrees (subject to Sections 4(d) and 4(f)) to promptly prepare, file with the Commission and furnish at its own expense to the Agent, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law including the Securities Act. Neither the Agent's consent to, or delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Section 4(d) and 4(f)). Notwithstanding the foregoing, the Company shall not be required to file such amendment or supplement if there is no pending Issuance Notice and the Company believes that it is in its best interest not to file such amendment or supplement.

(d) <u>Agent's Review of Proposed Amendments and Supplements</u>. Prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act) or the Prospectus (excluding any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each such proposed amendment or supplement, insofar as such proposed amendment or supplement relates to the transactions contemplated hereby, and the Company shall not file or use any such proposed amendment or supplement without the Agent's prior written consent, and the Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(e) <u>Use of Free Writing Prospectus</u>. Neither the Company nor the Agent has prepared, used, referred to or distributed, or will prepare, use, refer to or distribute, without the other party's prior written consent, any "written communication" that constitutes a "free writing prospectus" as such terms are defined in Rule 405 under the Securities Act with respect to the offering contemplated by this Agreement (any such free writing prospectus being referred to herein as a "**Free Writing Prospectus**").

(f) <u>Free Writing Prospectuses</u>. The Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto to be prepared by or on behalf of, used by, or referred to by the Company insofar as such proposed free writing prospectus or amendment or supplement relates to the transactions contemplated hereby, and the Company shall not file, use or refer to any such proposed free writing prospectus or any such

amendment or supplement thereto without the Agent's prior written consent. The Company shall furnish to the Agent, without charge, as many copies of any free writing prospectus prepared by or on behalf of, or used by or referred to by the Company insofar as such proposed free writing prospectus relates to the transactions contemplated hereby, as the Agent may reasonably request. If at any time when a prospectus is required by the Securities Act (including, without limitation, pursuant to Rule 173(d)) to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Shares (but in any event if at any time through and including the date of this Agreement) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company shall promptly amend or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company shall promptly amend or supplemented will not include an untrue statement of a subsequent time, not misleading, as the case may be; *provided*, *however*, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus and the Company shall not file, use or refer to any such amended or s

(g) <u>Filing of Agent Free Writing Prospectuses</u>. The Company shall not take any action that would result in the Agent or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of the Agent that the Agent otherwise would not have been required to file thereunder.

(h) <u>Copies of Registration Statement and Prospectus</u>. After the date of this Agreement through the last time that a prospectus is required by the Securities Act (including, without limitation, pursuant to Rule 173(d)) to be delivered in connection with sales of the Shares, the Company agrees to furnish the Agent with copies (which may be electronic copies) of the Registration Statement and each amendment thereto, and with copies (which may be electronic copies) of the Prospectus and each amendment or supplement thereto in the form in which it is filed with the Commission pursuant to the Securities Act or Rule 424(b) under the Securities Act, both in such quantities as the Agent may reasonably request from time to time; and, if the delivery of a prospectus is required under the Securities Act or under the blue sky or securities laws of any jurisdiction at any time on or prior to the applicable Settlement Date for any Selling Period in connection with the offering or sale of the Shares and if at such time any event has occurred as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made when such Prospectus is delivered, not misleading, or, if for any other reason it is necessary during such same period to amend or supplement the Prospectus or to file under the Exchange Act any document incorporated by reference in the Prospectus in order to comply with the Securities Act or the Exchange Act, to notify the Agent and to request that the Agent suspend

offers to sell Shares (and, if so notified, the Agent shall cease such offers as soon as practicable); and if the Company decides to amend or supplement the Registration Statement or the Prospectus as then amended or supplemented, to advise the Agent promptly by telephone (with confirmation in writing) and to prepare and cause to be filed promptly with the Commission an amendment or supplement to the Registration Statement or the Prospectus as then amended or supplemented that will correct such statement or omission or effect such compliance; *provided, however*, that if during such same period the Agent is required to deliver a prospectus in respect of transactions in the Shares, the Company shall promptly prepare and file with the Commission such an amendment or supplement.

(i) <u>Blue Sky Compliance</u>. The Company shall cooperate with the Agent and counsel for the Agent to qualify or register the Shares for sale under (or obtain exemptions from the application of) the state securities or blue sky laws or Canadian provincial securities laws (or other foreign laws) of those jurisdictions designated by the Agent, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Shares. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Agent promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Shares for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(j) <u>Earnings Statement</u>. As soon as practicable, the Company will make generally available to its security holders and to the Agent an earnings statement (which need not be audited) covering a period of at least 12 months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act.

(k) <u>Listing; Reservation of Shares</u>. (a) The Company will use its best efforts to maintain the listing of the Shares on the Nasdaq Global Market, and (b) the Company will reserve and keep available at all times, free of preemptive rights, Shares for the purpose of enabling the Company to satisfy its obligations under this Agreement.

(I) <u>Transfer Agent</u>. The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

(m) <u>Due Diligence</u>. During the term of this Agreement, the Company will reasonably cooperate with any reasonable due diligence review conducted by the Agent in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during normal business hours and at the Company's principal offices, as the Agent may reasonably request from time to time.

(n) <u>Representations and Warranties</u>. The Company acknowledges that each delivery of an Issuance Notice and each delivery of Shares on a Settlement Date shall be deemed to be (i)

an affirmation to the Agent that the representations and warranties of the Company contained in or made pursuant to this Agreement are true and correct as of the date of such Issuance Notice or of such Settlement Date, as the case may be, as though made at and as of each such date, except as may be disclosed in the Prospectus (including any documents incorporated by reference therein and any supplements thereto), and (ii) an undertaking that the Company will advise the Agent if any of such representations and warranties will not be true and correct as of the Settlement Date for the Shares relating to such Issuance Notice, as though made at and as of each such date (except that such representations and warranties shall be deemed to relate to the Registration Statement and the Prospectus as amended and supplemented relating to such Shares).

(o) <u>Deliverables at Triggering Event Dates; Certificates.</u> The Company agrees that on or prior to the date of the first Issuance Notice and, during the term of this Agreement after the date of the first Issuance Notice, upon:

(A) the filing of the Prospectus or the amendment or supplement of any Registration Statement or Prospectus (other than a prospectus supplement relating solely to an offering of securities other than the Shares or a prospectus filed pursuant to Section 4(a)(ii)(B)), by means of a post-effective amendment, sticker or supplement, but not by means of incorporation of documents by reference into the Registration Statement or Prospectus;

(B) the filing with the Commission of an annual report on Form 10-K or a quarterly report on Form 10-Q (including any Form 10-K/A or Form 10-Q/A containing amended financial information or a material amendment to the previously filed annual report on Form 10-K or quarterly report on Form 10-Q), in each case, of the Company; or

(C) the filing with the Commission of a current report on Form 8-K of the Company containing amended financial information (other than information "furnished" pursuant to Item 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) that is material to the offering of securities of the Company in the Agent's reasonable discretion;

(any such event, a "**Triggering Event Date**"), the Company shall furnish the Agent (but in the case of clause (C) above only if the Agent reasonably determines that the information contained in such current report on Form 8-K of the Company is material) with a certificate as of the Triggering Event Date, in the form and substance satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented, (A) confirming that the representations and warranties of the Company contained in this Agreement are true and correct, (B) that the Company has performed all of its obligations hereunder to be performed on or prior to the date of such certificate and as to the matters set forth in <u>Section 5</u> hereof, and (C) containing any other certification that the Agent shall reasonably request. The requirement to provide a certificate under this <u>Section 4(0)</u> shall be waived for any Triggering Event Date occurring at a time when no Issuance Notice is pending or a suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Shares hereunder (which for such calendar quarter

shall be considered a Triggering Event Date) and the next occurring Triggering Event Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Triggering Event Date when a suspension was in effect and did not provide the Agent with a certificate under this Section 4(o), then before the Company delivers the instructions for the sale of Shares or the Agent sells any Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 4(o) dated as of the date that the instructions for the sale of Shares are issued.

(p) Legal Opinions and Negative Assurances Letters. On or prior to the date of the first Issuance Notice and within three (3) Trading Days of each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause to be furnished, at the request of the Agent, the written legal opinion and negative assurance letter of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., U.S. counsel to the Company, the written legal opinion of WongPartnership LLP, Singapore counsel to the Company, and the written legal opinion of Choate Hall & Stewart LLP, intellectual property counsel to the Company, each dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, the Company shall be required to furnish no more than one opinion hereunder per calendar quarter. In lieu of such opinions for subsequent periodic filings, in the discretion of the Agent, the Company may furnish a reliance letter from such counsel to the Agent, permitting the Agent to rely on a previously delivered opinion letter, modified as appropriate for any passage of time or Triggering Event Date (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of such Triggering Event Date).

(q) <u>Comfort Letter</u>. On or prior to the date of the first Issuance Notice and within three (3) Trading Days of each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(o) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause KPMG LLP, the independent registered public accounting firm who has audited the financial statements included or incorporated by reference in the Registration Statement, to furnish the Agent a comfort letter, dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel; *provided, however*, that any such comfort letter will only be required on the Triggering Event Date specified to the extent that it contains financial statements filed with the Commission under the Exchange Act and incorporated or deemed to be incorporated by reference into a Prospectus. If requested by the Agent, the Company shall also cause a comfort letter to be furnished to the Agent within ten (10) Trading Days of the date of occurrence of any material transaction or event requiring the filing of a current report on Form 8-K containing material amended financial information of the Company, including the restatement of the Company's financial statements. The Company shall be required to furnish no more than one comfort letter hereunder per calendar quarter

(r) <u>Director's Certificate</u>. On or prior to the date of the first Issuance Notice and within three (3) Trading Days of each Triggering Event Date with respect to which the Company

is obligated to deliver a certificate pursuant to <u>Section 4(o)</u> for which no waiver is applicable and excluding the date of this Agreement, the Company shall furnish the Agent a certificate executed by a Director of the Company, signing in such capacity, each dated the date of delivery (i) certifying that attached thereto are true and complete copies of the resolutions duly adopted by the Board of Directors of the Company authorizing the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby (including, without limitation, the issuance of the Shares pursuant to this Agreement), which authorization shall be in full force and effect on and as of the date of such certificate, (ii) certifying and attesting to the office, incumbency, due authority and specimen signatures of each Person who executed this Agreement for or on behalf of the Company, and (iii) containing any other certification that the Agent shall reasonably request.

(s) <u>Agent's Own Account; Clients' Account</u>. The Company consents to the Agent trading, in compliance with applicable law, in the Ordinary Shares for the Agent's own account and for the account of its clients at the same time as sales of the Shares occur pursuant to this Agreement.

(t) <u>Investment Limitation</u>. The Company shall not invest, or otherwise use the proceeds received by the Company from its sale of the Shares in such a manner as would require the Company or any of its subsidiaries to register as an investment company under the Investment Company Act.

(u) <u>Market Activities</u>. The Company will not take, and will ensure that no affiliate of the Company will take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Shares or any other reference security, whether to facilitate the sale or resale of the Shares or otherwise, and the Company will, and shall cause each of its affiliates to, comply with all applicable provisions of Regulation M. If the limitations of Rule 102 of Regulation M ("**Rule 102**") do not apply with respect to the Shares or any other reference security pursuant to any exception set forth in Section (d) of Rule 102, then promptly upon notice from the Agent (or, if later, at the time stated in the notice), the Company will, and shall cause each of its affiliates to, comply with Rule 102 as though such exception were not available but the other provisions of Rule 102 (as interpreted by the Commission) did apply.

(v) Notice of Other Sale. Without the written consent of the Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Ordinary Shares or securities convertible into or exchangeable for Ordinary Shares (other than Shares hereunder), warrants or any rights to purchase or acquire Ordinary Shares, during the period beginning on the third Trading Day immediately prior to the date on which any Issuance Notice is delivered to the Agent hereunder and ending on the third Trading Day immediately following the Settlement Date with respect to Shares sold pursuant to such Issuance Notice; and will not directly or indirectly in any other "at the market" or continuous equity transaction offer to sell, contract to sell, grant any option to sell or otherwise dispose of any Ordinary Shares (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Ordinary Shares or any rights to purchase or acquire, Ordinary Shares prior to the termination of this Agreement; *provided, however*, that such restriction will not be required in connection with the Company's (i) issuance

or sale of Ordinary Shares, options to purchase Ordinary Shares or Ordinary Shares issuable upon the exercise of options or other equity awards pursuant to any employee or director share option, incentive or benefit plan, share purchase or ownership plan, long-term incentive plan, dividend reinvestment plan, inducement award under the rules of the Nasdaq Global Market or other compensation plan of the Company or its subsidiaries, as in effect on the date of this Agreement, (ii) issuance or sale of Ordinary Shares issuable upon exchange, conversion or redemption of securities or the exercise or vesting of warrants, options or other equity awards outstanding at the date of this Agreement, (iii) issuance or sale of Ordinary Shares as consideration for mergers, acquisitions, other business combinations, joint ventures, collaborations, licensing arrangements or strategic alliances occurring after the date of this Agreement which are not used for capital raising purposes and (iv) modification of any outstanding options, warrants of any rights to purchase or acquire Ordinary Shares.

(w) <u>Use of Proceeds.</u> The Company intends to apply the net proceeds from the sale of the Shares sold by it in the manner described under the caption "Use of Proceeds" in the Registration Statement and the Prospectus.

(x) <u>Certification Regarding Beneficial Owners</u>. The Company will deliver to the Agent, on the date of execution of this Agreement, a properly completed and executed Certification Regarding Beneficial Owners of Legal Entity Customers (the "**FinCEN Certification**"), together with copies of identifying documentation, or such other documentation as the Agent may reasonably request in connection therewith and the Company undertakes to provide such additional supporting documentation as the Agent may reasonably request in connection with the verification of the FinCEN Certification during the Agency Period.

Section 5. CONDITIONS TO DELIVERY OF ISSUANCE NOTICES AND TO SETTLEMENT

<u>Conditions Precedent to the Right of the Company to Deliver an Issuance Notice and the Obligation of the Agent to Sell Shares During the Selling Period(s)</u>. The right of the Company to deliver an Issuance Notice hereunder is subject to the satisfaction, on the date of delivery of such Issuance Notice, and the obligation of the Agent to use its commercially reasonable efforts to place Shares during the applicable Selling Period is subject to the satisfaction, on each Trading Day during the Selling Period, of each of the following conditions:

(a) <u>Accuracy of the Company's Representations and Warranties; Performance by the Company</u>. The Company shall have delivered the certificate required to be delivered pursuant to <u>Section 4(0)</u> on or before the date on which delivery of such certificate is required pursuant to <u>Section 4(0)</u>. The Company shall have performed, satisfied and complied with all covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by the Company at or prior to such date, including, but not limited to, the covenants contained in , <u>Section 4(p)</u>, <u>Section 4(q)</u> and <u>Section 4(r)</u>.

(b) <u>No Injunction</u>. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction or any self-regulatory organization having

authority over the matters contemplated hereby that prohibits or directly and materially adversely affects any of the transactions contemplated by this Agreement, and no proceeding shall have been commenced that may have the effect of prohibiting or materially adversely affecting any of the transactions contemplated by this Agreement.

(c) <u>Material Adverse Changes</u>. Except as disclosed in the Prospectus and the Time of Sale Information, (a) in the reasonable judgment of the Agent nothing shall have occurred that would reasonably be expected to have a Material Adverse Effect; and (b) there shall not have occurred any downgrading, nor shall any notice have been received by the Company of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any "nationally recognized statistical rating organization" as such term is defined under Section 3(a)(62) of the Exchange Act.

(d) <u>No Suspension of Trading in or Delisting of Ordinary Shares; Other Events</u>. The trading of the Ordinary Shares (including without limitation the Shares) shall not have been suspended by the Commission, the Principal Market or FINRA and the Ordinary Shares (including without limitation the Shares) shall have been approved for listing or quotation on and shall not have been delisted from the Principal Market. There shall not have occurred (and be continuing in the case of occurrences under clauses (i) and (ii) below) any of the following: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the Principal Market, or trading in securities generally on the Principal Market shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges by the Commission or FINRA; (ii) a general banking moratorium shall have been declared by any of federal, New York, Delaware, Massachusetts or Singapore authorities; or (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the judgment of the Agent is material and adverse and makes it impracticable to market the Shares in the manner and on the terms described in the Prospectus or to enforce contracts for the sale of securities;

(e) <u>Documents Required to be Delivered on each Issuance Notice Date</u>. The Agent's obligation to use its commercially reasonable efforts to place Shares hereunder shall additionally be conditioned upon the delivery to the Agent on or before the Issuance Notice Date of a certificate in form and substance reasonably satisfactory to the Agent, executed by the Chief Executive Officer, President or Chief Financial Officer of the Company, to the effect that all conditions to the delivery of such Issuance Notice shall have been satisfied as at the date of such certificate as required to be delivered pursuant to <u>Section 4(o)</u> (which certificate shall not be required if the foregoing representations shall be set forth in the Issuance Notice).

(f) <u>No Misstatement or Material Omission</u>. Agent shall not have advised the Company that the Registration Statement, the Prospectus or the Time of Sale Information, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agent's reasonable opinion is material, or omits to state a fact that in the Agent's reasonable opinion is

material and is required to be stated therein or is necessary to make the statements therein not misleading.

(g) <u>Other Materials</u>. On each date on which the Company is required to deliver a certificate pursuant to <u>Section 4(o)</u>, the Company shall have furnished to the Agent such appropriate further information, certificates and documents as the Agent may have reasonably requested. All such opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company will furnish the Agent with such conformed copies of such opinions, certificates, letters and other documents as the Agent shall have reasonably requested.

(h) <u>Securities Act Filings Made</u>. All filings with the Commission required by Rule 424 under the Securities Act with respect to the Shares to have been filed prior to the issuance of any Issuance Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424.

(i) <u>FINRA</u>. If applicable, FINRA shall have raised no objection to the terms of this offering and the amount of compensation allowable or payable to the Agent as described in the Prospectus.

Section 6. INDEMNIFICATION AND CONTRIBUTION

(a) Indemnification of the Agent. The Company agrees to indemnify and hold harmless the Agent, its affiliates, directors, agents, officers and employees, and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Agent or such affiliate, director, agent, officer, employee or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (A) (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact included or incorporated by reference in the Prospectus or any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement to the foregoing), or the omission or alleged omission to state therein a material fact necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading; or (iii) any act or failure to act or any alleged act or failure to act by the Agent in connection with, or relating in any manner to, the Ordinary Shares or the offering contemplated hereby, and which is included as part of or referred to in any loss, claim, damage, liability or action arising out of or based upon any matter covered by clause (i) or (ii) above, or (B) the violation of any laws or regulations of foreign jurisdictions where Shares have been offered or sold; and to reimburse the Agent and each such affiliate, director, agent, officer, employee and controlling person for any and all expenses (including the fees and disbursements of counsel) as such expenses are incurred

by the Agent or such affiliate, director, agent, officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with information relating to the Agent furnished to the Company by the Agent in writing expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information consists of the information described in <u>Section 6(b)</u> below. The indemnity agreement set forth in this <u>Section 6(a)</u> shall be in addition to any liabilities that the Company may otherwise have.

(b) Indemnification of the Company and its Directors and Officers. The Agent agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act, against any loss, claim, damage, liability or expense, as incurred, to which the Company, or any such director, officer, or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Agent), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading or (ii) any untrue statement or alleged untrue statement of a material fact included or incorporated by reference in any Free Writing Prospectus or the Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433 of the Securities Act or the Prospectus (or any such amendment or supplement) or the omission or alleged omission to state therein a material fact necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, Free Writing Prospectus or the Prospectus (or any such amendment or supplement), in reliance upon and in conformity with information relating to the Agent furnished to the Company by the Agent in writing expressly for use therein; and to reimburse the Company, or any such director, officer, or controlling person for any and all expenses (including the fees and disbursements of counsel) as such expenses are incurred by the Company, or any such director, officer, or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The Company hereby acknowledges that the only information that the Agent have furnished to the Company expressly for use in the Registration Statement, any Free Writing Prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement to the foregoing) is the information set forth in the first sentence of the ninth paragraph under the caption "Plan of Distribution" in the Prospectus. The indemnity agreement set forth in this Section 6(b) shall be in addition to any liabilities that the Agent may otherwise have.

(c) Notifications and Other Indemnification Procedures. Promptly after receipt by an indemnified party under this Section 6 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 6, notify the indemnifying party in writing of the commencement thereof, but the omission so to notify the indemnifying party will not relieve the indemnifying party from any liability which it may have to any indemnified party to the extent the indemnifying party is not materially prejudiced as a proximate result of such failure and shall not in any event relieve the indemnifying party from any liability that it may have otherwise than on account of this indemnity agreement. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof with counsel reasonably satisfactory to such indemnified party; provided, however, that if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that a conflict may arise between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 6 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate counsel (together with local counsel), representing the indemnified parties who are parties to such action), which counsel (together with any local counsel) for the indemnified parties shall be selected by the Agent (in the case of counsel for the indemnified parties referred to in Section 6(a) above) or by the Company (in the case of counsel for the indemnified parties referred to in Section 6(b) above)) or (ii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized in writing the employment of counsel for the indemnified party at the expense of the indemnifying party, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party and shall be paid as they are incurred.

(d) <u>Settlements</u>. The indemnifying party under this <u>Section 6</u> shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by <u>Section 6(c)</u> hereof, the indemnifying party

shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding.

(e) <u>Contribution</u>. If the indemnification provided for in this <u>Section 6</u> is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount paid or payable by such indemnified party, as incurred, as a result of any losses, claims, damages, liabilities or expenses referred to therein (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Agent, on the other hand, from the offering of the Shares pursuant to this Agreement or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Agent, on the offering of the Shares pursuant to this Agreement (before deducting expenses) received by the Company bear to the total Selling Commission received by the Agent. The relative fault of the Company, on the one hand, and the Agent, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, on the one hand, or the Agent, on the other hand, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in <u>Section 6(c)</u>, any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in <u>Section 6(c)</u> with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this <u>Section 6(e)</u>; *provided*, *however*, that no additional notice shall be required with respect to any action for which notice has been given under <u>Section 6(c)</u> for purposes of indemnification.

The Company and the Agent agree that it would not be just and equitable if contribution pursuant to this <u>Section 6(e)</u> were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to in this <u>Section 6(e)</u>.

Notwithstanding the provisions of this <u>Section 6(e)</u>, the Agent shall not be required to contribute any amount in excess of the Selling Commission received by the Agent in connection with the offering contemplated hereby. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this <u>Section 6(e)</u>, each affiliate, director, agent, officer and employee of the Agent and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act shall have the same rights to contribution as the Agent, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of the Securities Act shall have the same rights to contribution as the Company within the meaning of the Securities Act shall have the same rights to contribution as the Company within the meaning of the Securities Act shall have the same rights to contribution as the Company within the meaning of the Securities Act shall have the same rights to contribution as the Company within the meaning of the Securities Act and the Exchange Act shall have the same rights to contribution as the Company.

Section 7. TERMINATION & SURVIVAL

(a) <u>Term</u>. Subject to the provisions of this <u>Section 7</u>, the term of this Agreement shall continue from the date of this Agreement until the end of the Agency Period, unless earlier terminated by the parties to this Agreement pursuant to this <u>Section 7</u>.

(b) <u>Termination; Survival Following Termination</u>. (i) Either party may terminate this Agreement prior to the end of the Agency Period, by giving written notice as required by this Agreement, upon one Trading Day's notice to the other party; provided that, (A) if the Company terminates this Agreement after the Agent confirms to <u>the Company any sale of Shares</u>, the Company shall remain obligated to <u>comply with Section 3(b)(v) with</u> <u>respect to such Shares</u> and (B) <u>Section 2</u>, <u>Section 6</u>, <u>Section 7</u> and <u>Section 8</u> shall survive termination of this Agreement. If termination shall occur prior to the Settlement Date for any sale of Shares, such sale shall nevertheless settle in accordance with the terms of this Agreement.

(ii) In addition to the survival provision of <u>Section 7(b)(i)</u>, the respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the Agent set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of the Agent or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Shares sold hereunder and any termination of this Agreement.

Section 8. MISCELLANEOUS

(a) <u>Press Releases and Disclosure</u>. The Company may issue a press release describing the material terms of the transactions contemplated hereby as soon as practicable following the date of this Agreement, and may file with the Commission a current report on Form 8-K, with this Agreement attached as an exhibit thereto, describing the material terms of the transactions contemplated hereby, and the Company shall consult with the Agent prior to making such disclosures, and the parties hereto shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosures that is reasonably satisfactory to all parties hereto. No party hereto shall issue thereafter any press release or like public statement (including, without limitation, any disclosure required in reports filed with the Commission pursuant to the Exchange Act) related to this Agreement or any of the transactions contemplated

hereby without the prior written approval of the other party hereto, except as may be necessary or appropriate in the reasonable opinion of the party seeking to make disclosure to comply with the requirements of applicable law or stock exchange rules and except for the disclosure required pursuant to Section 4(a) of this Agreement in the Company's quarterly reports on Form 10-Q or annual reports on Form 10-K. If any such press release or like public statement is so required, the party making such disclosure shall consult with the other party prior to making such disclosure, and the parties shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosure that is reasonably satisfactory to all parties hereto.

(b) <u>No Advisory or Fiduciary Relationship</u>. The Company acknowledges and agrees that (i) the transactions contemplated by this Agreement, including the determination of any fees, are arm's-length commercial transactions between the Company and the Agent, (ii) when acting as a principal under this Agreement, the Agent is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its securityholders, creditors, employees or any other party, (iii) the Agent has not assumed nor will assume an advisory or fiduciary responsibility in favor of the Company with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether the Agent has advised or is currently advising the Company on other matters) and the Agent does not have any obligation to the Company with respect to the transactions contemplated hereby except the obligations expressly set forth in this Agreement, (iv) the Agent and its respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (v) the Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

(c) <u>Research Analyst Independence</u>. The Company acknowledges that the Agent's research analysts and research departments are required to and should be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and as such the Agent's research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company or the offering that differ from the views of their respective investment banking divisions. The Company understands that the Agent is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the companies that may be the subject of the transactions contemplated by this Agreement.

(d) <u>Notices</u>. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Agent:

Jefferies LLC 520 Madison Avenue New York, NY 10022 Facsimile: (646) 619-4437 Attention: General Counsel

with a copy (which shall not constitute a notice) to:

White & Case LLP 1221 Avenue of the Americas New York, NY 10020-1095 Facsimile: (212) 354-8113 Attention: Stuart Bressman, Esq.

If to the Company:

Wave Life Sciences Ltd. 733 Concord Ave Cambridge, Massachusetts 02138 Facsimile: 617-949-2901 Attention: Paul Bolno.

with a copy (which shall not constitute a notice) to:

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, MA 02111 Facsimile: 617-542-2241 Attention: John Rudy, Esq.

Any party hereto may change the address for receipt of communications by giving written notice to the others in accordance with this Section 8(d).

(e) <u>Successors</u>. This Agreement will inure to the benefit of and be binding upon the parties hereto, and to the benefit of the affiliates, agents, employees, officers and directors and controlling persons referred to in <u>Section 6</u>, and in each case their respective successors and personal representatives, and no other person will have any right or obligation hereunder. The term "**successors**" shall not include any purchaser of the Shares as such from the Agent merely by reason of such purchase.

(f) <u>Partial Unenforceability</u>. The invalidity or unenforceability of any Article, Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Article, Section, paragraph or provision hereof. If any Article, Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

(g) <u>Governing Law Provisions</u>. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby ("**Related Proceedings**") may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located

in the Borough of Manhattan in the City of New York (collectively, the "**Specified Courts**"), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court (a "**Related Judgment**"), as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party's address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum. Each party not located in the United States has irrevocably appointed CT Corporation, which currently maintains a New York City office at 111 Eighth Avenue, 13th floor, New York, NY 10011, United States of America, as its agent to creceive service of process or other legal summons for purposes of any such suit, action or proceeding that may be instituted in any state or federal court in the Borough of Manhattan in the City of New York. With respect to any Related Proceeding, each party irrevocably waives, to the fullest extent permitted by applicable law, all immunity (whether on the basis of sovereignty or otherwise) from jurisdiction, service of process, attachment (both before and after judgment) and execution to which it might otherwise be entitled in the Specified Courts, and with respect to any Related Judgment, each party waives any such immunity in the Specified Courts or any other court of competent jurisdiction, and will not raise or claim or cause to be pleaded any such immunity at or in respect of any such Related Proceeding or Related Judgment, including, without limi

(h) <u>Recognition of the U.S. Special Resolution Regimes</u>. In the event that the Agent is a Covered Entity that becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from the Agent, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States. In the event that the Agent is a Covered Entity that becomes, or a BHC Act Affiliate of the Agent are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement that may be exercised against the Agent are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

For purposes of this <u>Section 8(h)</u>, a "**BHC Act Affiliate**" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k). "**Covered Entity**" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b). "**Default Right**" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable. "**U.S. Special Resolution Regime**" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

(i) <u>General Provisions</u>. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and may be delivered by facsimile transmission or by electronic delivery of a portable document format (PDF) file. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Article and Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

[Signature Page Immediately Follows]

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

WAVE LIFE SCIENCES LTD.

By: /s/ Keith C. Regnante

Name: Keith C. Regnante Title: Chief Financial Officer

The foregoing Agreement is hereby confirmed and accepted by the Agent in New York, New York as of the date first above written.

JEFFERIES LLC

By: /s/ Kevin J. Sheridan

Name: Kevin J. Sheridan Title: Managing Director

EXHIBIT A

ISSUANCE NOTICE

[Date]
Jefferies LLC
520 Madison Avenue
New York, New York 10022
Attn: []

Reference is made to the Open Market Sale Agreement between Wave Life Sciences Ltd. (the "**Company**") and Jefferies LLC (the "**Agent**") dated as of May 10, 2019. The Company confirms that all conditions to the delivery of this Issuance Notice are satisfied as of the date hereof.

Date of Delivery of Issuance Notice (determined pursuant to Section 3(b)(i)):

Issuance Amount (equal to the total Sales Price for such Shares):

	\$		
Number of Days in Selling Period:			
First Date of Selling Period:			
Last Date of Selling Period:			
Settlement Date(s) if other than standard T+2 settlement:			

Floor Price Limitation (in no event less than \$1.00 without the prior written consent of the Agent, which consent may be withheld in the Agent's sole discretion): \$_____ per share

Comments: _____

WAVE LIFE SCIENCES LTD.

By:

Name: Title:

A-1

Notice Parties

The Company

Paul Bolno, M.D. Keith Regnante Linda Rockett

The Agent

Michael Magarro Donald Lynaugh

B-2

FORM OF SENIOR INDENTURE

WAVE LIFE SCIENCES LTD.,

ISSUER

and ,

TRUSTEE

INDENTURE

Dated as of , 20

Senior Debt Securities

Section of Trust Indenture Act Section of of 1939, as amended	Section of Indenture
310(a)	7.09
310(b)	7.08, 7.10
310(c)	Inapplicable
311(a)	7.13
311(b) 211(c)	7.13
311(c) 312(a)	Inapplicable 5.01,
512(a)	5.02(a)
312(b)	5.02(c)
312(c)	5.02(c)
313(a)	5.04(a)
313(b)	5.04(b)
313(c)	5.04(a),
	5.04(b),
313(d)	5.04(b) 5.04(c)
315(d) 314(a)	5.04(C) 5.03,
514(a)	3.05(c)
314(b)	Inapplicable
314(c)	13.05
314(d)	Inapplicable
314(e)	13.05
314(f)	Inapplicable
315(a)	7.01(b),
215(4.)	7.02
315(b) 315(c)	5.04(d) 7.01
315(d)	7.01, 7.02
315(e)	6.07
316(a)	6.06, 8.04
316(b)	6.04
316(c)	8.01
317(a)	6.02
317(b)	4.03
318(a)	13.06

¹ This Cross-Reference Table does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.

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² This Table of Contents does not constitute part of the Indenture and shall not have any bearing on the interpretation of any of its terms or provisions.

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INDENTURE, dated as of [Singapore (the "Company"), and [

], 200[], between WAVE Life Sciences Ltd., a public limited company organized under the laws of], as trustee (the "Trustee"):

WHEREAS, for its lawful corporate purposes, the Company has duly authorized the execution and delivery of this Indenture to provide for the issuance of unsecured debt securities (hereinafter referred to as the "Securities"), in an unlimited aggregate principal amount to be issued from time to time in one or more series as in this Indenture provided, as registered Securities without coupons, to be authenticated by the certificate of the Trustee;

WHEREAS, to provide the terms and conditions upon which the Securities are to be authenticated, issued and delivered, the Company has duly authorized the execution of this Indenture; and

WHEREAS, all things necessary to make this Indenture a valid agreement of the Company, in accordance with its terms, have been done.

NOW, THEREFORE, in consideration of the premises and the purchase of the Securities by the holders thereof, it is mutually covenanted and agreed as follows for the equal and ratable benefit of the holders of Securities:

ARTICLE I

DEFINITIONS

SECTION 1.01 Definitions of Terms.

The terms defined in this Section (except as in this Indenture otherwise expressly provided or unless the context otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section and shall include the plural as well as the singular. All other terms used in this Indenture that are defined in the Trust Indenture Act of 1939, as amended, or that are by reference in such Act defined in the Securities Act of 1933, as amended (except as herein otherwise expressly provided or unless the context otherwise requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of the execution of this instrument.

"Authenticating Agent" means an authenticating agent with respect to all or any of the series of Securities appointed with respect to all or any series of the Securities by the Trustee pursuant to Section 2.10.

"Bankruptcy Law" means Title 11, U.S. Code, or any similar federal or state law or applicable non U.S. law for the relief of debtors.

"Board of Directors" means the Board of Directors of the Company or any duly authorized committee of such Board.

"Board Resolution" means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect on the date of such certification.

"Business Day" means, with respect to any series of Securities, any day other than a day on which banking institutions in Singapore, or Federal or State banking institutions in the Borough of Manhattan, The City of New York, are authorized or obligated by law, executive order or regulation to close.

"Certificate" means a certificate signed by the principal executive officer, the principal financial officer or the principal accounting officer of the Company. The Certificate need not comply with the provisions of Section 13.05.

"Company" means WAVE Life Sciences Ltd., a public limited company duly organized and existing under the laws of Singapore, and, subject to the provisions of Article Ten, shall also include its successors and assigns.

"Corporate Trust Office" means the office of the Trustee at which, at any particular time, its corporate trust business shall be principally administered, which office at the date hereof is located at [_____], except that whenever a provision herein refers to an office or agency of the Trustee in the Borough of Manhattan, The City of New York, such office is located, at the date hereof, at [_____].

"Custodian" means any receiver, trustee, assignee, liquidator, or similar official under any Bankruptcy Law.

"Default" means any event, act or condition that with notice or lapse of time, or both, would constitute an Event of Default.

"Depositary" means, with respect to Securities of any series, for which the Company shall determine that such Securities will be issued as a Global Security, The Depository Trust Company, New York, New York, another clearing agency, or any successor registered as a clearing agency under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or other applicable statute or regulation, which, in each case, shall be designated by the Company pursuant to either Section 2.01 or 2.11.

"Event of Default" means, with respect to Securities of a particular series any event specified in Section 6.01, continued for the period of time, if any, therein designated.

"Global Security" means, with respect to any series of Securities, a Security executed by the Company and delivered by the Trustee to the Depositary or pursuant to the Depositary's instruction, all in accordance with the Indenture, which shall be registered in the name of the Depositary or its nominee.

"Governmental Obligations" means securities that are (i) direct obligations of the United States of America for the payment of which its full faith and credit is pledged or (ii) obligations of a Person controlled or supervised by and acting as an agency or

instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America that, in either case, are not callable or redeemable at the option of the issuer thereof, and shall also include a depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act of 1933, as amended) as custodian with respect to any such Governmental Obligation or a specific payment of principal of or interest on any such Governmental Obligation held by such custodian for the account of the holder of such depositary receipt; provided, however, that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Governmental Obligation or the specific payment of principal of or interest on the Governmental Obligation evidenced by such depositary receipt.

"Herein," "hereof" and "hereunder," and other words of similar import, refer to this Indenture as a whole and not to any particular Article, Section or other subdivision.

"Indenture" means this instrument as originally executed or as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into in accordance with the terms hereof.

"Interest Payment Date," when used with respect to any installment of interest on a Security of a particular series, means the date specified in such Security or in a Board Resolution or in an indenture supplemental hereto with respect to such series as the fixed date on which an installment of interest with respect to Securities of that series is due and payable.

"Officers' Certificate" means a certificate signed by the Chief Executive Officer or the President or a Vice President and by the Treasurer or an Assistant Treasurer or the Secretary or an Assistant Secretary of the Company or any other officer authorized by the Board of Directors for such purpose that is delivered to the Trustee in accordance with the terms hereof. Each such certificate shall include the statements provided for in Section 13.05, if and to the extent required by the provisions thereof.

"Opinion of Counsel" means an opinion in writing of legal counsel, who may be an employee of or counsel for the Company, that is delivered to the Trustee in accordance with the terms hereof. Each such opinion shall include the statements provided for in Section 13.05, if and to the extent required by the provisions thereof.

"Outstanding," when used with reference to Securities of any series, means, subject to the provisions of Section 8.04, as of any particular time, all Securities of that series theretofore authenticated and delivered by the Trustee under this Indenture, except (a) Securities theretofore canceled by the Trustee or any paying agent, or delivered to the Trustee or any paying agent for cancellation or that have previously been canceled; (b) Securities or portions thereof for the payment or redemption of which moneys or Governmental Obligations in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Company) or shall have been set aside and segregated in trust by the Company (if the Company shall act as its own

paying agent); provided, however, that if such Securities or portions of such Securities are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as in Article Three provided, or provision satisfactory to the Trustee shall have been made for giving such notice; and (c) Securities in lieu of or in substitution for which other Securities shall have been authenticated and delivered pursuant to the terms of Section 2.07.

"Person" means any individual, corporation, partnership, joint venture, joint-stock company, unincorporated organization or government or any agency or political subdivision thereof.

"Predecessor Security" of any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such particular Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 2.07 in lieu of a lost, destroyed or stolen Security shall be deemed to evidence the same debt as the lost, destroyed or stolen Security.

"Responsible Officer" when used with respect to the Trustee means the Chief Executive Officer, the President, any Senior Vice President, the Secretary, the Treasurer, any trust officer, any corporate trust officer or any other officer or assistant officer of the Trustee customarily performing functions similar to those performed by the Persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with the particular subject.

"Securities" means the debt Securities authenticated and delivered under this Indenture.

"Securityholder," "holder of Securities," "registered holder" or other similar term, means the Person or Persons in whose name or names a particular Security shall be registered on the books of the Company kept for that purpose in accordance with the terms of this Indenture.

"Subsidiary" means, with respect to any Person, (i) any corporation at least a majority of whose outstanding Voting Stock shall at the time be owned, directly or indirectly, by such Person or by one or more of its Subsidiaries or by such Person and one or more of its Subsidiaries, (ii) any general partnership, joint venture or similar entity, at least a majority of whose outstanding partnership or similar interests shall at the time be owned by such Person, or by one or more of its Subsidiaries, or by such Person and one or more of its Subsidiaries and (iii) any limited partnership of which such Person or any of its Subsidiaries is a general partner.

"Trustee" means [], and, subject to the provisions of Article Seven, shall also include its successors and assigns, and, if at any time there is more than one Person acting in such capacity hereunder, "Trustee" shall mean each such Person. The term "Trustee" as used with respect to a particular series of the Securities shall mean the trustee with respect to that series.

"Trust Indenture Act" means the Trust Indenture Act of 1939, as amended, subject to the provisions of Sections 9.01, 9.02 and 10.01, as in effect at the date of execution of this instrument.

"Voting Stock," as applied to stock of any Person, means shares, interests, participations or other equivalents in the equity interest (however designated) in such Person having ordinary voting power for the election of the directors (or the equivalent) of such Person, other than shares, interests, participations or other equivalents having such power only by reason of the occurrence of a contingency.

ARTICLE II

ISSUE, DESCRIPTION, TERMS, EXECUTION, REGISTRATION AND EXCHANGE OF SECURITIES

SECTION 2.01 Designation and Terms of Securities.

(a) The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more series up to the aggregate principal amount of Securities of that series from time to time authorized by or pursuant to a Board Resolution of the Company or pursuant to one or more indentures supplemental hereto. Prior to the initial issuance of Securities of any series, there shall be established in or pursuant to a Board Resolution, and set forth in an Officers' Certificate, or established in one or more indentures supplemental hereto:

(1) the title of the Security of the series (which shall distinguish the Securities of the series from all other Securities);

(2) any limit upon the aggregate principal amount of the Securities of that series that may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of that series);

(3) the date or dates on which the principal of the Securities of the series is payable and the place(s) of payment;

(4) the rate or rates at which the Securities of the series shall bear interest or the manner of calculation of such rate or rates, if any;

(5) the date or dates from which such interest shall accrue, the Interest Payment Dates on which such interest will be payable or the manner of determination of such Interest Payment Dates, the place(s) of payment, and the record date for the determination of holders to whom interest is payable on any such Interest Payment Dates;

(6) the right, if any, to extend the interest payment periods and the duration of such extension;

(7) the period or periods within which, the price or prices at which and the terms and conditions upon which, Securities of the series may be redeemed, in whole or in part, at the option of the Company;

(8) the obligation, if any, of the Company to redeem or purchase Securities of the series pursuant to any sinking fund or analogous provisions (including payments made in cash in satisfaction of future sinking fund obligations) or at the option of a holder thereof and the period or periods within which, the price or prices at which, and the terms and conditions upon which, Securities of the series shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(9) the form of the Securities of the series including the form of the certificate of authentication for such series;

(10) if other than denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, the denominations in which the Securities of the series shall be issuable;

(11) any and all other terms with respect to such series (which terms shall not be inconsistent with the terms of this Indenture, as amended by any supplemental indenture) including any terms which may be required by or advisable under United States or Singapore laws or regulations or advisable in connection with the marketing of Securities of that series;

(12) whether the Securities are issuable as a Global Security and, in such case, the identity of the Depositary for such series;

(13) whether the Securities will be convertible into ordinary shares or other securities of the Company and, if so, the terms and conditions upon which such Securities will be so convertible, including the conversion price and the conversion period;

(14) if other than the principal amount thereof, the portion of the principal amount of Securities of the series which shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.01; and

(15) any additional or different Events of Default or restrictive covenants provided for with respect to the Securities of the series.

All Securities of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to any such Board Resolution or in any indentures supplemental hereto.

If any of the terms of the series are established by action taken pursuant to a Board Resolution, a copy of an appropriate record of such action shall be certified by the Secretary or an Assistant Secretary of the Company and delivered to the Trustee at or prior to the delivery of the Officers' Certificate setting forth the terms of the series.

Securities of any particular series may be issued at various times, with different dates on which the principal or any installment of principal is payable, with different rates of interest, if any, or different methods by which rates of interest may be determined, with different dates on which such interest may be payable and with different redemption dates.

SECTION 2.02 Form of Securities and Trustee's Certificate.

The Securities of any series and the Trustee's certificate of authentication to be borne by such Securities shall be substantially of the tenor and purport as set forth in one or more indentures supplemental hereto or as provided in a Board Resolution and as set forth in an Officers' Certificate and may have such letters, numbers or other marks of identification or designation and such legends or endorsements printed, lithographed or engraved thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange on which Securities of that series may be listed, or to conform to usage.

SECTION 2.03 Denominations; Provisions for Payment.

The Securities shall be issuable as registered Securities and in the denominations of one thousand U.S. dollars (\$1,000) or any integral multiple thereof, subject to Section 2.01(10). The Securities of a particular series shall bear interest payable on the dates and at the rate specified with respect to that series. The principal of and the interest on the Securities of any series, as well as any premium thereon in case of redemption thereof prior to maturity, shall be payable in the coin or currency of the United States of America that at the time is legal tender for public and private debt, at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, the City and State of New York. Each Security shall be dated the date of its authentication. Interest on the Securities shall be computed on the basis of a 360-day year composed of twelve 30-day months.

The interest installment on any Security that is payable, and is punctually paid or duly provided for, on any Interest Payment Date for Securities of that series shall be paid to the Person in whose name said Security (or one or more Predecessor Securities) is registered at the close of business on the regular record date for such interest installment. In the event that any Security of a particular series or portion thereof is called for redemption and the redemption date is subsequent to a regular record date with respect to any Interest Payment Date and prior to such Interest Payment Date, interest on such Security will be paid upon presentation and surrender of such Security as provided in Section 3.03.

Any interest on any Security that is payable, but is not punctually paid or duly provided for, on any Interest Payment Date for Securities of the same series (herein called "Defaulted Interest") shall forthwith cease to be payable to the registered holder on the relevant regular record date by virtue of having been such holder; and such Defaulted Interest shall be paid by the Company, at its election, as provided in clause (1) or clause (2) below:

(1) The Company may make payment of any Defaulted Interest on Securities to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered at the close of business on a special record date for the payment of such Defaulted Interest, which shall be fixed in the following manner: the Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each such Security and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as in this clause provided. Thereupon the Trustee shall fix a special record date for the payment of such Defaulted Interest which shall not be more than 15 nor less than 10 days prior to the date of the proposed payment and not less than 10 days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such special record date and, in the name and at the expense of the Company, shall cause notice of the proposed payment of such Defaulted Interest and the special record date therefor to be mailed, first class postage prepaid, to each Securityholder at his or her address as it appears in the Security Register (as hereinafter defined), not less than 10 days prior to such special record date. Notice of the proposed payment of such Defaulted Interest and the special record date therefor having been mailed as aforesaid, such Defaulted Interest shall be paid to the Persons in whose names such Securities (or their respective Predecessor Securities) are registered on such special record date.

(2) The Company may make payment of any Defaulted Interest on any Securities in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Securities may be listed, and upon such notice as may be required by such exchange, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause, such manner of payment shall be deemed practicable by the Trustee.

Unless otherwise set forth in a Board Resolution or one or more indentures supplemental hereto establishing the terms of any series of Securities pursuant to Section 2.01 hereof, the term "regular record date" as used in this Section with respect to a series of Securities with respect to any Interest Payment Date for such series shall mean either the fifteenth day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the first day of a month, or the last day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the first day of a month, or the last day of the month immediately preceding the month in which an Interest Payment Date established for such series pursuant to Section 2.01 hereof shall occur, if such Interest Payment Date is the fifteenth day of a month, whether or not such date is a Business Day.

Subject to the foregoing provisions of this Section, each Security of a series delivered under this Indenture upon transfer of or in exchange for or in lieu of any other Security of such series shall carry the rights to interest accrued and unpaid, and to accrue, that were carried by such other Security.

SECTION 2.04 Execution and Authentications.

The Securities shall be signed on behalf of the Company by its Chief Executive Officer, its President, or one of its Vice Presidents, or its Treasurer, or one of its Assistant Treasurers, or its Secretary, or one of its Assistant Secretaries, or any other officer authorized by the Board of Directors for such purpose, under its corporate seal attested by its Secretary or one of its Assistant Secretaries. Signatures may be in the form of a manual or facsimile signature. The Company may use the facsimile signature of any Person who shall have been a Chief Executive Officer or President or Vice President thereof, or of any Person who shall have been a Secretary or Assistant Secretary thereof, notwithstanding the fact that at the time the Securities shall be authenticated and delivered or disposed of such Person shall have ceased to be the Chief Executive Officer or the President or a Vice President, or the Secretary or an Assistant Secretary, of the Company. The seal of the Company may be in the form of a facsimile of such seal and may be impressed, affixed, imprinted or otherwise reproduced on the Securities. The Securities may contain such notations, legends or endorsements required by law, stock exchange rule or usage. Each Security shall be dated the date of its authentication by the Trustee.

A Security shall not be valid until authenticated manually by an authorized signatory of the Trustee, or by an Authenticating Agent. Such signature shall be conclusive evidence that the Security so authenticated has been duly authenticated and delivered hereunder and that the holder is entitled to the benefits of this Indenture. At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a written order of the Company for the authentication and delivery of such Securities, signed by its Chief Executive Officer or its President or any Vice President and its Secretary or any Assistant Secretary, and the Trustee or any other officer authorized by the Board of Directors for such purpose, in accordance with such written order shall authenticate and deliver such Securities.

In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, and (subject to Section 7.01) shall be fully protected in relying upon, an Opinion of Counsel stating that the form and terms thereof have been established in conformity with the provisions of this Indenture.

The Trustee shall not be required to authenticate such Securities if the issue of such Securities pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Securities and this Indenture or otherwise in a manner that is not reasonably acceptable to the Trustee.

SECTION 2.05 Registration of Transfer and Exchange.

(a) Securities of any series may be exchanged upon presentation thereof at the office or agency of the Company designated for such purpose in the Borough of Manhattan, the City and State of New York, for other Securities of such series of authorized denominations, and for a like aggregate principal amount, upon payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, all as provided in this Section. In respect of any Securities so surrendered for exchange, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in exchange therefor the Security or Securities of the same series that the Securityholder making the exchange shall be entitled to receive, bearing numbers not contemporaneously outstanding.

(b) The Company shall keep, or cause to be kept, at its office or agency designated for such purpose in the Borough of Manhattan, the City and State of New York, or such other location designated by the Company a register or registers (herein referred to as the "Security Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall register the Securities and the transfers of Securities as in this Article provided and which at all reasonable times shall be open for inspection by the Trustee. The registrar for the purpose of registering Securities and transfer of Securities as herein provided shall be appointed as authorized by a Board Resolution (the "Security Registrar").

Upon surrender for transfer of any Security at the office or agency of the Company designated for such purpose, the Company shall execute, the Trustee shall authenticate and such office or agency shall deliver in the name of the transferee or transferees a new Security or Securities of the same series as the Security presented for a like aggregate principal amount.

All Securities presented or surrendered for exchange or registration of transfer, as provided in this Section, shall be accompanied (if so required by the Company or the Security Registrar) by a written instrument or instruments of transfer, in form satisfactory to the Company or the Security Registrar, duly executed by the registered holder or by such holder's duly authorized attorney in writing.

(c) No service charge shall be made for any exchange or registration of transfer of Securities, or issue of new Securities in case of partial redemption of any series, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge in relation thereto, other than exchanges pursuant to Section 2.06, Section 3.03(b) and Section 9.04 not involving any transfer.

(d) The Company shall not be required (1) to issue, exchange or register the transfer of any Securities during a period beginning at the opening of business 15 days before the day of the mailing of a notice of redemption of less than all the Outstanding Securities of the same series and ending at the close of business on the day of such mailing, nor (2) to register the transfer of or exchange any Securities of any series or portions thereof called for redemption. The provisions of this Section 2.05 are, with respect to any Global Security, subject to Section 2.11 hereof.

SECTION 2.06 Temporary Securities.

Pending the preparation of definitive Securities of any series, the Company may execute, and the Trustee shall authenticate and deliver, temporary Securities (printed, lithographed or typewritten) of any authorized denomination. Such temporary Securities shall be substantially in the form of the definitive Securities in lieu of which they are issued, but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Company. Every temporary Security of any series shall be executed by the Company and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities of such series. Without unnecessary delay the Company will execute and will furnish definitive Securities of such series and thereupon any or all temporary Securities of such series may be surrendered in exchange therefor (without charge to the holders), at the office or agency of the Company designated for the purpose in the Borough of Manhattan, the City and State of New York, and the Trustee shall authenticate and such office or agency shall deliver in exchange for such temporary Securities an equal aggregate principal amount of definitive Securities of such series, unless the Company advises the Trustee to the effect that definitive Securities need not be executed and furnished until further notice from the Company. Until so exchanged, the temporary Securities of such series shall be entitled to the same benefits under this Indenture as definitive Securities of such series authenticated and delivered hereunder.

SECTION 2.07 Mutilated, Destroyed, Lost or Stolen Securities.

In case any temporary or definitive Security shall become mutilated or be destroyed, lost or stolen, the Company (subject to the next succeeding sentence) shall execute, and upon the Company's request, the Trustee (subject as aforesaid) shall authenticate and deliver, a new Security of the same series, bearing a number not contemporaneously outstanding, in exchange and substitution for the mutilated Security, or in lieu of and in substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substituted Security shall furnish to the Company and the Trustee such security or indemnity as may be required by them to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Company and the Trustee evidence to their satisfaction of the destruction, loss or theft of the applicant's Security and of the ownership thereof. The Trustee may authenticate any such substituted Security and deliver the same upon the written request or authorization of any officer of the Company. Upon the issuance of any substituted Security, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith. In case any Security that has matured or is about to mature shall become mutilated or be destroyed, lost or stolen, the Company may, instead of issuing a substitute Security, pay or authorize the payment of the same (without surrender thereof except in the case of a mutilated Security) if the applicant for such payment shall furnish to the Company and the Trustee such security or indemnity as they may require to save each of them harmless, and, in case of destruction, loss or theft, evidence to the satisfaction of the Company and the Trustee of the destruction, loss or theft of such Security and of the ownership thereof.

Every replacement Security issued pursuant to the provisions of this Section shall constitute an additional contractual obligation of the Company whether or not the mutilated, destroyed, lost or stolen Security shall be found at any time, or be enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of the same series duly issued hereunder. All Securities shall be held and owned upon the express condition that the foregoing provisions are exclusive with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities, and shall preclude (to the extent lawful) any and all other rights or remedies, notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

SECTION 2.08 Cancellation.

All Securities surrendered for the purpose of payment, redemption, exchange or registration of transfer shall, if surrendered to the Company or any paying agent, be delivered to the Trustee for cancellation, or, if surrendered to the Trustee, shall be cancelled by it, and no Securities shall be issued in lieu thereof except as expressly required or permitted by any of the provisions of this Indenture. On request of the Company at the time of such surrender, the Trustee shall deliver to the Company canceled Securities held by the Trustee. In the absence of such request the Trustee may dispose of canceled Securities in accordance with its standard procedures and deliver a certificate of disposition to the Company. If the Company shall otherwise acquire any of the Securities, however, such acquisition shall not operate as a redemption or satisfaction of the indebtedness represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

SECTION 2.09 Benefits of Indenture.

Nothing in this Indenture or in the Securities, express or implied, shall give or be construed to give to any Person, other than the parties hereto and the holders of the Securities, any legal or equitable right, remedy or claim under or in respect of this Indenture, or under any covenant, condition or provision herein contained; all such covenants, conditions and provisions being for the sole benefit of the parties hereto and of the holders of the Securities.

SECTION 2.10 Authenticating Agent.

So long as any of the Securities of any series remain Outstanding there may be an Authenticating Agent for any or all such series of Securities which the Trustee shall have the right to appoint. Said Authenticating Agent shall be authorized to act on behalf of the Trustee to authenticate Securities of such series issued upon exchange, transfer or partial redemption thereof, and Securities so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. All references in this Indenture to the authentication of Securities by the Trustee shall be deemed to include authentication by an Authenticating Agent for such series. Each Authenticating Agent shall be acceptable to the Company and shall be a

corporation that has a combined capital and surplus, as most recently reported or determined by it, sufficient under the laws of any jurisdiction under which it is organized or in which it is doing business to conduct a trust business, and that is otherwise authorized under such laws to conduct such business and is subject to supervision or examination by Federal or State authorities. If at any time any Authenticating Agent shall cease to be eligible in accordance with these provisions, it shall resign immediately.

Any Authenticating Agent may at any time resign by giving written notice of resignation to the Trustee and to the Company. The Trustee may at any time (and upon request by the Company shall) terminate the agency of any Authenticating Agent by giving written notice of termination to such Authenticating Agent and to the Company. Upon resignation, termination or cessation of eligibility of any Authenticating Agent, the Trustee may appoint an eligible successor Authenticating Agent acceptable to the Company. Any successor Authenticating Agent, upon acceptance of its appointment hereunder, shall become vested with all the rights, powers and duties of its predecessor hereunder as if originally named as an Authenticating Agent pursuant hereto.

SECTION 2.11 Global Securities.

(a) If the Company shall establish pursuant to Section 2.01 that the Securities of a particular series are to be issued as a Global Security, then the Company shall execute and the Trustee shall, in accordance with Section 2.04, authenticate and deliver, a Global Security that (1) shall represent, and shall be denominated in an amount equal to the aggregate principal amount of, all of the Outstanding Securities of such series, (2) shall be registered in the name of the Depositary or its nominee, (3) shall be delivered by the Trustee to the Depositary or pursuant to the Depositary's instruction and (4) shall bear a legend substantially to the following effect: "Except as otherwise provided in Section 2.11 of the Indenture, this Security may be transferred, in whole but not in part, only to another nominee of the Depositary or to a successor Depositary or to a nominee of such successor Depositary."

(b) Notwithstanding the provisions of Section 2.05, the Global Security of a series may be transferred, in whole but not in part and in the manner provided in Section 2.05, only to another nominee of the Depositary for such series, or to a successor Depositary for such series selected or approved by the Company or to a nominee of such successor Depositary.

(c) If at any time the Depositary for a series of the Securities notifies the Company that it is unwilling or unable to continue as Depositary for such series or if at any time the Depositary for such series shall no longer be registered or in good standing under the Exchange Act, or other applicable statute or regulation, and a successor Depositary for such series is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such condition, as the case may be, this Section 2.11 shall no longer be applicable to the Securities of such series and the Company will execute and, subject to Section 2.05, the Trustee will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal

amount of the Global Security of such series in exchange for such Global Security. In addition, the Company may at any time determine that the Securities of any series shall no longer be represented by a Global Security and that the provisions of this Section 2.11 shall no longer apply to the Securities of such series. In such event the Company will execute and, subject to Section 2.05, the Trustee, upon receipt of an Officers' Certificate evidencing such determination by the Company, will authenticate and deliver the Securities of such series in definitive registered form without coupons, in authorized denominations, and in an aggregate principal amount equal to the principal amount of the Global Security of such series in exchange for such Global Security. Upon the exchange of the Global Security for such Securities in definitive registered form without coupons, in authorized denominations, the Global Security shall be canceled by the Trustee. Such Securities in definitive registered form issued in exchange for the Global Security pursuant to this Section 2.11(c) shall be registered in such names and in such authorized denominations as the Depositary, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee shall deliver such Securities to the Depositary for delivery to the Persons in whose names such Securities are so registered.

ARTICLE III

REDEMPTION OF SECURITIES AND SINKING FUND PROVISIONS

SECTION 3.01 Redemption.

The Company may redeem the Securities of any series issued hereunder on and after the dates and in accordance with the terms established for such series pursuant to Section 2.01 hereof.

SECTION 3.02 Notice of Redemption.

(a) In case the Company shall desire to exercise such right to redeem all or, as the case may be, a portion of the Securities of any series in accordance with the right reserved so to do, the Company shall, or shall cause the Trustee to, give notice of such redemption to holders of the Securities of such series to be redeemed by mailing, first class postage prepaid, a notice of such redemption not less than 30 days and not more than 90 days before the date fixed for redemption of that series to such holders at their last addresses as they shall appear upon the Security Register unless a shorter period is specified in the Securities to be redeemed. Any notice that is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the registered holder receives the notice. In any case, failure duly to give such notice to the holder of any Security of any series designated for redemption in whole or in part, or any defect in the notice, shall not affect the validity of the proceedings for the redemption of any other Securities of such series or any other series. In the case of any redemption of Securities prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, the Company shall furnish the Trustee with an Officers' Certificate evidencing compliance with any such restriction.

Each such notice of redemption shall specify the date fixed for redemption and the redemption price at which Securities of that series are to be redeemed, and shall state that payment of the redemption price of such Securities to be redeemed will be made at the office or agency of the Company in the Borough of Manhattan, the City and State of New York, upon presentation and surrender of such Securities, that interest accrued to the date fixed for redemption will be paid as specified in said notice, that from and after said date interest will cease to accrue and that the redemption is for a sinking fund, if such is the case. If less than all the Securities to be so redeemed, the notice to the holders of Securities of that series to be redeemed in whole or in part shall specify the particular Securities to be so redeemed. In case any Security is to be redeemed in part only, the notice that relates to such Security shall state the portion of the principal amount thereof to be redeemed, and shall state that on and after the redemption date, upon surrender of such Security, a new Security or Securities of such series in principal amount equal to the unredeemed portion thereof will be issued.

(b) If less than all the Securities of a series are to be redeemed, the Company shall give the Trustee at least 45 days' notice in advance of the date fixed for redemption as to the aggregate principal amount of Securities of the series to be redeemed, and thereupon the Trustee shall select, by lot or in such other manner as it shall deem appropriate and fair in its discretion and that may provide for the selection of a portion or portions (equal to one thousand U.S. dollars (\$1,000) or any integral multiple thereof) of the principal amount of such Securities of a denomination larger than \$1,000, the Securities to be redeemed and shall thereafter promptly notify the Company in writing of the numbers of the Securities to be redeemed, in whole or in part. The Company may, if and whenever it shall so elect, by delivery of instructions signed on its behalf by its Chief Executive Officer or its President or any Vice President, or any other officer authorized by the Board of Directors for such purpose, instruct the Trustee or any paying agent to call all or any part of the Securities of a particular series for redemption and to give notice of redemption in the manner set forth in this Section, such notice to be in the name of the Company or its own name as the Trustee or such paying agent may deem advisable. In any case in which notice of redemption is to be given by the Trustee or any such paying agent, the Company shall deliver or cause to be delivered to, or permit to remain with, the Trustee or such paying agent, as the case may be, such Security Register, transfer books or other records, or suitable copies or extracts therefrom, sufficient to enable the Trustee or such paying agent to give any notice by mail that may be required under the provisions of this Section.

SECTION 3.03 Payment Upon Redemption.

(a) If the giving of notice of redemption shall have been completed as above provided, the Securities or portions of Securities of the series to be redeemed specified in such notice shall become due and payable on the date and at the place stated in such notice at the applicable redemption price, together with interest accrued to the date fixed for redemption and interest on such Securities or portions of Securities shall cease to accrue on and after the date fixed for redemption, unless the Company shall default in the payment of such redemption price and accrued interest with respect to any such Security or portion thereof. On presentation and surrender of such Securities on or after the date

fixed for redemption at the place of payment specified in the notice, said Securities shall be paid and redeemed at the applicable redemption price for such series, together with interest accrued thereon to the date fixed for redemption (but if the date fixed for redemption is an interest payment date, the interest installment payable on such date shall be payable to the registered holder at the close of business on the applicable record date pursuant to Section 2.03).

(b) Upon presentation of any Security of such series that is to be redeemed in part only, the Company shall execute and the Trustee shall authenticate and the office or agency where the Security is presented shall deliver to the holder thereof, at the expense of the Company, a new Security of the same series of authorized denominations in principal amount equal to the unredeemed portion of the Security so presented.

SECTION 3.04 Sinking Fund.

The provisions of Sections 3.04, 3.05 and 3.06 shall be applicable to any sinking fund for the retirement of Securities of a series, except as otherwise specified as contemplated by Section 2.01 for Securities of such series.

The minimum amount of any sinking fund payment provided for by the terms of Securities of any series is herein referred to as a "mandatory sinking fund payment," and any payment in excess of such minimum amount provided for by the terms of Securities of any series is herein referred to as a "optional sinking fund payment". If provided for by the terms of Securities of any series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 3.05. Each sinking fund payment shall be applied to the redemption of Securities of any series as provided for by the terms of Securities of such series.

SECTION 3.05 Satisfaction of Sinking Fund Payments with Securities.

The Company (a) may deliver Outstanding Securities of a series (other than any Securities previously called for redemption) and (b) may apply as a credit Securities of a series that have been redeemed either at the election of the Company pursuant to the terms of such Securities or through the application of permitted optional sinking fund payments pursuant to the terms of such Securities, in each case in satisfaction of all or any part of any sinking fund payment with respect to the Securities of such series required to be made pursuant to the terms of such Securities, provided that such Securities have not been previously so credited. Such Securities shall be received and credited for such purpose by the Trustee at the redemption price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly.

SECTION 3.06 Redemption of Securities for Sinking Fund.

Not less than 45 days prior to each sinking fund payment date for any series of Securities, the Company will deliver to the Trustee an Officers' Certificate specifying the amount of the next ensuing sinking fund payment for that series pursuant to the terms of the series, the portion thereof, if any, that is to be satisfied by delivering and crediting

Securities of that series pursuant to Section 3.05 and the basis for such credit and will, together with such Officers' Certificate, deliver to the Trustee any Securities to be so delivered. Not less than 30 days before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 3.02 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.02. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Section 3.03.

ARTICLE IV

COVENANTS

SECTION 4.01 Payment of Principal, Premium and Interest.

The Company will duly and punctually pay or cause to be paid the principal of (and premium, if any) and interest on the Securities of that series at the time and place and in the manner provided herein and established with respect to such Securities.

SECTION 4.02 Maintenance of Office or Agency.

So long as any series of the Securities remain Outstanding, the Company agrees to maintain an office or agency in the Borough of Manhattan, the City and State of New York, with respect to each such series and at such other location or locations as may be designated as provided in this Section 4.02, where (a) Securities of that series may be presented for payment, (b) Securities of that series may be presented as herein above authorized for registration of transfer and exchange, and (c) notices and demands to or upon the Company in respect of the Securities of that series and this Indenture may be given or served, such designation to continue with respect to such office or agency until the Company shall, by written notice signed by its Chief Executive Officer or its President or a Vice President, or any other officer authorized by the Board of Directors for such purpose, and delivered to the Trustee, designate some other office or agency for such purposes or any of them. If at any time the Company shall fail to maintain any such required office or agency or shall fail to furnish the Trustee with the address thereof, such presentations, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, notices and demands.

SECTION 4.03 Paying Agents.

(a) If the Company shall appoint one or more paying agents for all or any series of the Securities, other than the Trustee, the Company will cause each such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section:

(1) that it will hold all sums held by it as such agent for the payment of the principal of (and premium, if any) or interest on the Securities of that series (whether such sums have been paid to it by the Company or by any other obligor of such Securities) in trust for the benefit of the Persons entitled thereto;

(2) that it will give the Trustee notice of any failure by the Company (or by any other obligor of such Securities) to make any payment of the principal of (and premium, if any) or interest on the Securities of that series when the same shall be due and payable;

(3) that it will, at any time during the continuance of any failure referred to in the preceding paragraph (a)(2) above, upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such paying agent; and

(4) that it will perform all other duties of paying agent as set forth in this Indenture.

(b) If the Company shall act as its own paying agent with respect to any series of the Securities, it will on or before each due date of the principal of (and premium, if any) or interest on Securities of that series, set aside, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay such principal (and premium, if any) or interest so becoming due on Securities of that series until such sums shall be paid to such Persons or otherwise disposed of as herein provided and will promptly notify the Trustee of such action, or any failure (by it or any other obligor on such Securities) to take such action. Whenever the Company shall have one or more paying agents for any series of Securities, it will, prior to each due date of the principal of (and premium, if any) or interest on any Securities of that series, deposit with the paying agent a sum sufficient to pay the principal (and premium, if any) or interest so becoming due, such sum to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such paying agent is the Trustee) the Company will promptly notify the Trustee of this action or failure so to act.

(c) Notwithstanding anything in this Section to the contrary, (1) the agreement to hold sums in trust as provided in this Section is subject to the provisions of Section 11.05, and (2) the Company may at any time, for the purpose of obtaining the satisfaction and discharge of this Indenture or for any other purpose, pay, or direct any paying agent to pay, to the Trustee all sums held in trust by the Company or such paying agent, such sums to be held by the Trustee upon the same terms and conditions as those upon which such sums were held by the Company or such paying agent; and, upon such payment by any paying agent to the Trustee, such paying agent shall be released from all further liability with respect to such money.

SECTION 4.04 Appointment to Fill Vacancy in Office of Trustee.

The Company, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 7.10, a Trustee, so that there shall at all times be a Trustee hereunder.

ARTICLE V

SECURITYHOLDERS' LISTS AND REPORTS BY THE COMPANY AND THE TRUSTEE

SECTION 5.01 Company to Furnish Trustee Names and Addresses of Securityholders.

The Company will furnish or cause to be furnished to the Trustee (a) on each regular record date (as defined in Section 2.03) a list, in such form as the Trustee may reasonably require, of the names and addresses of the holders of each series of Securities as of such regular record date, provided that the Company shall not be obligated to furnish or cause to be furnished such list at any time that the list shall not differ in any respect from the most recent list furnished to the Trustee by the Company and (b) at such other times as the Trustee may request in writing within 30 days after the receipt by the Company of any such request, a list of similar form and content as of a date not more than 15 days prior to the time such list is furnished; provided, however, that, in either case, no such list need be furnished for any series for which the Trustee shall be the Security Registrar.

SECTION 5.02 Preservation Of Information; Communications With Securityholders.

(a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the holders of Securities contained in the most recent list furnished to it as provided in Section 5.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity).

(b) The Trustee may destroy any list furnished to it as provided in Section 5.01 upon receipt of a new list so furnished.

(c) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities. The Company, the Trustee, the Security Registrar and any other Person shall have the protection of the Trust Indenture Act Section 312(c).

SECTION 5.03 Reports by the Company.

(a) The Company covenants and agrees to file with the Trustee, within 15 days after the Company is required to file the same with the Commission, copies of the annual reports and of the information, documents and other reports (or copies of such portions of any of the foregoing as the Commission may from time to time by rules and regulations prescribe) that the Company may be required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act; or, if the Company is not required to file information, documents or reports pursuant to either of such sections, then to file with the Trustee and the Commission, in accordance with the rules and regulations prescribed from time to time by the Commission, such of the supplementary and periodic

information, documents and reports that may be required pursuant to Section 13 of the Exchange Act, in respect of a security listed and registered on a national securities exchange as may be prescribed from time to time in such rules and regulations.

(b) The Company covenants and agrees to file with the Trustee and the Commission, in accordance with the rules and regulations prescribed from to time by the Commission, such additional information, documents and reports with respect to compliance by the Company with the conditions and covenants provided for in this Indenture as may be required from time to time by such rules and regulations.

(c) The Company covenants and agrees to transmit by mail, first class postage prepaid, or reputable overnight delivery service that provides for evidence of receipt, to the Securityholders, as their names and addresses appear upon the Security Register, within 30 days after the filing thereof with the Trustee, such summaries of any information, documents and reports required to be filed by the Company pursuant to subsections (a) and (b) of this Section as may be required by rules and regulations prescribed from time to time by the Commission.

SECTION 5.04 Reports by the Trustee.

(a) On or before in each year in which any of the Securities are Outstanding, the Trustee shall transmit by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register, a brief report dated as of the preceding , if and to the extent required under Section 313(a) of the Trust Indenture Act.

(b) The Trustee shall comply with Sections 313(b), 313(c) and 313(d) of the Trust Indenture Act.

(c) A copy of each such report shall, at the time of such transmission to Securityholders, be filed by the Trustee with the Company, with each stock exchange upon which any Securities are listed (if so listed) and also with the Commission. The Company agrees to notify the Trustee when any Securities become listed on any stock exchange.

(d) If an Event of Default occurs and is continuing and the Trustee receives actual notice of such Event of Default, the Trustee shall mail to each Securityholder notice of the uncured Event of Default within 90 days after the occurrence thereof. Except in the case of an Event of Default in payment of principal of, or interest on, any Securities, or in the payment of any sinking or purchase fund installment, the Trustee may withhold the notice if and so long as the board of directors, the executive committee or a trust committee of directors and/or Responsible Officers of the Trustee in good faith determine that the withholding of such notice is in the interests of the Securityholders.

ARTICLE VI

REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT

SECTION 6.01 Events of Default.

(a) Whenever used herein with respect to Securities of a particular series, "Event of Default" means any one or more of the following events that has occurred and is continuing:

(1) the Company defaults in the payment of any installment of interest upon any of the Securities of that series, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by the Company in accordance with the terms of any indenture supplemental hereto, shall not constitute a default in the payment of interest for this purpose;

(2) the Company defaults in the payment of the principal of (or premium, if any, on) any of the Securities of that series as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to that series; provided, however, that a valid extension of the maturity of such Securities in accordance with the terms of any indenture supplemental hereto shall not constitute a default in the payment of principal or premium, if any;

(3) the Company fails to observe or perform any other of its covenants or agreements with respect to that series contained in this Indenture or otherwise established with respect to that series of Securities pursuant to Section 2.01 hereof (other than a covenant or agreement that has been expressly included in this Indenture solely for the benefit of one or more series of Securities other than such series) for a period of 90 days after the date on which written notice of such failure, requiring the same to be remedied and stating that such notice is a "Notice of Default" hereunder, shall have been given to the Company by the Trustee, by registered or certified mail, or to the Company and the Trustee by the holders of at least 25% in principal amount of the Securities of that series at the time Outstanding;

(4) the Company pursuant to or within the meaning of any Bankruptcy Law (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property or (iv) makes a general assignment for the benefit of its creditors; or

(5) a court of competent jurisdiction enters an order under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company for all or substantially all of its property or (iii) orders the liquidation of the Company, and the order or decree remains unstayed and in effect for 90 days.

(b) In each and every such case, unless the principal of all the Securities of that series shall have already become due and payable, either the Trustee or the holders of not less than 25% in aggregate principal amount of the Securities of that series then Outstanding hereunder, by notice in writing to the Company (and to the Trustee if given by such Securityholders), may declare the principal of all the Securities of that series to be due and payable immediately, and upon any such declaration the same shall become and shall be immediately due and payable.

(c) At any time after the principal of the Securities of that series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the holders of a majority in aggregate principal amount of the Securities of that series then Outstanding hereunder, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if: (1) the Company has paid or deposited with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of that series and the principal of (and premium, if any, on) all Securities of that series that shall have become due otherwise than by acceleration (with interest upon such principal and premium, if any, and, to the extent that such payment is enforceable under applicable law, upon overdue installments of interest, at the rate per annum expressed in the Securities of that series to the date of such payment or deposit) and any amount payable to the Trustee under Section 7.06, and (2) any and all other Events of Default under the Indenture with respect to such series, other than the nonpayment of principal on Securities of that series that shall have been remedied or waived as provided in Section 6.06.

No such rescission and annulment shall extend to or shall affect any subsequent default or impair any right consequent thereon.

(d) In case the Trustee shall have proceeded to enforce any right with respect to Securities of that series under this Indenture and such proceedings shall have been discontinued or abandoned because of such rescission or annulment or for any other reason or shall have been determined adversely to the Trustee, then and in every such case, subject to any determination in such proceedings, the Company and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Company and the Trustee shall continue as though no such proceedings had been taken.

SECTION 6.02 Suits for Enforcement by Trustee.

(a) If an Event of Default specified in Section 6.01(a)(1) or (2) hereof occurs and is continuing, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any action or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceeding to judgment or final decree, and may enforce any such judgment or final

decree against the Company or other obligor upon the Securities of that series and collect the moneys adjudged or decreed to be payable in the manner provided by law out of the property of the Company or other obligor upon the Securities of that series, wherever situated.

(b) In case of any receivership, insolvency, liquidation, bankruptcy, reorganization, readjustment, arrangement, composition or judicial proceedings affecting the Company, or its creditors or property, the Trustee shall have power to intervene in such proceedings and take any action therein that may be permitted by the court and shall (except as may be otherwise provided by law) be entitled to file such proofs of claim and other papers and documents as may be necessary or advisable in order to have the claims of the Trustee and of the holders of Securities of a series allowed for the entire amount due and payable by the Company under this Indenture at the date of institution of such proceedings and for any additional amount that may become due and payable by the Company after such date, and to collect and receive any moneys or other property payable or deliverable on any such claim, and to distribute the same after the deduction of the amount payable to the Trustee under Section 7.06; and any receiver, assignee or trustee in bankruptcy or reorganization is hereby authorized by each of the holders of Securities of such series to make such payments to the Trustee, and, in the event that the Trustee shall consent to the making of such payments directly to such Securityholders, to pay to the Trustee any amount due it under Section 7.06.

(c) All rights of action and of asserting claims under this Indenture, or under any of the terms established with respect to Securities of a series, may be enforced by the Trustee without the possession of any of such Securities, or the production thereof at any trial or other proceeding relative thereto, and any such suit or proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for payment to the Trustee of any amounts due under Section 7.06, be for the ratable benefit of the holders of the Securities of such series.

In case of an Event of Default hereunder, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any of such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture, or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

Nothing contained herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of that series or the rights of any holder thereof or to authorize the Trustee to vote in respect of the claim of any Securityholder in any such proceeding.

SECTION 6.03 Application of Moneys Collected.

Any moneys collected by the Trustee pursuant to this Article with respect to a particular series of Securities shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such moneys on account of principal (or premium, if any) or interest, upon presentation of the Securities of that series, and notation thereon the payment, if only partially paid, and upon surrender thereof if fully paid:

FIRST: To the payment of costs and expenses of collection and of all amounts payable to the Trustee under Section 7.06; and

SECOND: To the payment of the amounts then due and unpaid upon Securities of such series for principal (and premium, if any) and interest, in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal (and premium, if any) and interest, respectively.

SECTION 6.04 Limitation on Suits.

No holder of any Security of any series shall have any right by virtue or by availing of any provision of this Indenture to institute any suit, action or proceeding in equity or at law upon or under or with respect to this Indenture or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless (a) such holder previously shall have given to the Trustee written notice of an Event of Default and of the continuance thereof with respect to the Securities of such series specifying such Event of Default, as hereinbefore provided; (b) the holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding shall have made written request upon the Trustee to institute such action, suit or proceeding in its own name as trustee hereunder; (c) such holder or holders shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby; (d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity, shall have failed to institute any such action, suit or proceeding; and (e) during such 60-day period, the holders of a majority in principal amount of the Securities of that series shall not have given the Trustee a direction inconsistent with the request.

Notwithstanding anything contained herein to the contrary, the right of any holder of any Security to receive payment of the principal of (and premium, if any) and interest on such Security, as therein provided, on or after the respective due dates expressed in such Security (or in the case of redemption, on the redemption date), or to institute suit for the enforcement of any such payment on or after such respective dates or redemption date, shall not be impaired or affected without the consent of such holder. By accepting a Security hereunder it is expressly understood, intended and covenanted by the taker and holder of every Security of such series with every other such taker and holder and the Trustee, that no one or more holders of Securities of such series shall have any right in any manner whatsoever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of the holders of any other of such Securities, or to obtain or seek to obtain priority over or preference to any other such holder, or to enforce

any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all holders of Securities of such series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

SECTION 6.05 Rights and Remedies Cumulative; Delay or Omission Not Waiver.

(a) All powers and remedies given by this Article to the Trustee or to the Securityholders shall, to the extent permitted by law, be deemed cumulative and not exclusive of any other powers and remedies available to the Trustee or the holders of the Securities, by judicial proceedings or otherwise, to enforce the performance or observance of the covenants and agreements contained in this Indenture or otherwise established with respect to such Securities.

(b) No delay or omission of the Trustee or of any holder of any of the Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power, or shall be construed to be a waiver of any such default or on acquiescence therein; and, subject to the provisions of Section 6.04, every power and remedy given by this Article or by law to the Trustee or the Securityholders may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Securityholders.

SECTION 6.06 Control by Securityholders.

The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, determined in accordance with Section 8.01, shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee with respect to such series; provided, however, that such direction shall not be in conflict with any rule of law or with this Indenture or be unduly prejudicial to the rights of holders of Securities of any other series at the time Outstanding determined in accordance with Section 8.01. Subject to the provisions of Section 7.01, the Trustee shall have the right to decline to follow any such direction if the Trustee in good faith shall, by a Responsible Officer or Officers of the Trustee, determine that the proceeding so directed would involve the Trustee in personal liability. The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding affected thereby, determined in accordance with Section 8.01, may on behalf of the holders of all of the Securities of such series waive any past default in the performance of any of the covenants contained herein or established pursuant to Section 2.01 with respect to such series and its consequences, except an uncured default in the payment of the principal of (or premium, if any) or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities otherwise than by acceleration (unless such default has been cured and a sum sufficient to pay all matured installments of interest and principal and any premium has been deposited with the Trustee (in accordance with Section 6.01(c)). Upon any such waiver, the default covered thereby shall be deemed to be cured for all purposes of this Indenture and the Company, the Trustee and the holders of the Securities of such series shall be restored to their former positions and rights hereunder, resp

SECTION 6.07 Undertaking to Pay Costs.

All parties to this Indenture agree, and each holder of any Securities by such holder's acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Trustee, to any suit instituted by any Securityholder, or group of Securityholder for the enforcement of the payment of the principal amount of the Outstanding Securities of any series, or to any suit instituted by any Securityholder for the enforcement of the payment of the principal of (or premium, if any) or interest on any Security of such series, on or after the respective due dates expressed in such Security or established pursuant to this Indenture.

ARTICLE VI

CONCERNING THE TRUSTEE

SECTION 7.01 Certain Duties and Responsibilities of Trustee.

(a) The Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing of all Events of Default with respect to the Securities of that series that may have occurred, shall undertake to perform with respect to the Securities of such series such duties and only such duties as are specifically set forth in this Indenture, and no implied covenants shall be read into this Indenture against the Trustee. In case an Event of Default with respect to the Securities of a series has occurred (that has not been cured or waived), the Trustee shall exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his own affairs.

(b) No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that:

(1) prior to the occurrence of an Event of Default with respect to the Securities of a series and after the curing or waiving of all such Events of Default with respect to that series that may have occurred:

(i) the duties and obligations of the Trustee shall with respect to the Securities of such series be determined solely by the express provisions of this Indenture, and the Trustee shall not be liable with respect to the Securities of such series

except for the performance of such duties and obligations as are specifically set forth in this Indenture, and no implied covenants or obligations shall be read into this Indenture against the Trustee; and

(ii) in the absence of bad faith on the part of the Trustee, the Trustee may with respect to the Securities of such series conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but in the case of any such certificates or opinions that by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture;

(2) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts;

(3) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the holders of not less than a majority in principal amount of the Securities of any series at the time Outstanding relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee under this Indenture with respect to the Securities of that series; and

(4) none of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers, if there is reasonable ground for believing that the repayment of such funds or liability is not reasonably assured to it under the terms of this Indenture or adequate indemnity against such risk is not reasonably assured to it.

SECTION 7.02 Certain Rights of Trustee.

Except as otherwise provided in Section 7.01:

(a) The Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) Any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by a Board Resolution or an instrument signed in the name of the Company, by the Chief Executive Officer or the President or any Vice President and by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer or any other officer authorized by the Board of Directors for such purpose thereof (unless other evidence in respect thereof is specifically prescribed herein);

(c) The Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken or suffered or omitted hereunder in good faith and in reliance thereon;

(d) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders, pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities that may be incurred therein or thereby; nothing contained herein shall, however, relieve the Trustee of the obligation, upon the occurrence of an Event of Default with respect to a series of the Securities (that has not been cured or waived) to exercise with respect to Securities of that series such of the rights and powers vested in it by this Indenture, and to use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his own affairs;

(e) The Trustee shall not be liable for any action taken or omitted to be taken by it in good faith and believed by it to be authorized or within the discretion or rights or powers conferred upon it by this Indenture;

(f) The Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, consent, order, approval, bond, security or other papers or documents, unless requested in writing so to do by the holders of not less than a majority in principal amount of the Outstanding Securities of the particular series affected thereby (determined as provided in Section 8.04); provided, however, that if the payment within a reasonable time to the Trustee of the costs, expenses or liabilities likely to be incurred by it in the making of such investigation is, in the opinion of the Trustee, not reasonably assured to the Trustee by the security afforded to it by the terms of this Indenture, the Trustee may require reasonable indemnity against such costs, expenses or liabilities as a condition to so proceeding. The reasonable expense of every such examination shall be paid by the Company or, if paid by the Trustee, shall be repaid by the Company upon demand; and

(g) The Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder.

SECTION 7.03 Trustee Not Responsible for Recitals or Issuance or Securities.

(a) The recitals contained herein and in the Securities shall be taken as the statements of the Company, and the Trustee assumes no responsibility for the correctness of the same.

(b) The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Securities.

(c) The Trustee shall not be accountable for the use or application by the Company of any of the Securities or of the proceeds of such Securities, or for the use or application of any moneys paid over by the Trustee in accordance with any provision of this Indenture or established pursuant to Section 2.01, or for the use or application of any moneys received by any paying agent other than the Trustee.

SECTION 7.04 May Hold Securities.

The Trustee or any paying agent or Security Registrar, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not Trustee, paying agent or Security Registrar.

SECTION 7.05 Moneys Held in Trust.

Subject to the provisions of Section 11.05, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by law. The Trustee shall be under no liability for interest on any moneys received by it hereunder except such as it may agree with the Company to pay thereon.

SECTION 7.06 Compensation and Reimbursement.

(a) The Company covenants and agrees to pay to the Trustee, and the Trustee shall be entitled to, such reasonable compensation (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust), as the Company and the Trustee may from time to time agree in writing, for all services rendered by it in the execution of the trusts hereby created and in the exercise and performance of any of the powers and duties hereunder of the Trustee, and, except as otherwise expressly provided herein, the Company will pay or reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by the Trustee in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all Persons not regularly in its employ) except any such expense, disbursement or advance as may arise from its negligence or bad faith. The Company also covenants to indemnify the Trustee (and its officers, agents, directors and employees) for, and to hold it harmless against, any loss, liability or expense incurred without negligence or bad faith on the part of the Trustee and arising out of or in connection with the acceptance or administration of this trust, including the costs and expenses of defending itself against any claim of liability in the premises.

(b) The obligations of the Company under this Section to compensate and indemnify the Trustee and to pay or reimburse the Trustee for expenses, disbursements and advances shall constitute additional indebtedness hereunder. Such additional indebtedness shall be secured by a lien prior to that of the Securities upon all property and funds held or collected by the Trustee as such, except funds held in trust for the benefit of the holders of particular Securities.

SECTION 7.07 Reliance on Officers' Certificate.

Except as otherwise provided in Section 7.01, whenever in the administration of the provisions of this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering or omitting to take any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may, in the absence of negligence or bad faith on the part of the Trustee, be deemed to be conclusively proved and established by an Officers' Certificate delivered to the Trustee and such certificate, in the absence of negligence or bad faith on the part of the Trustee, shall be full warrant to the Trustee for any action taken, suffered or omitted to be taken by it under the provisions of this Indenture upon the faith thereof.

SECTION 7.08 Disqualification; Conflicting Interests.

If the Trustee has or shall acquire any "conflicting interest" within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Company shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

SECTION 7.09 Corporate Trustee Required; Eligibility.

There shall at all times be a Trustee with respect to the Securities issued hereunder which shall at all times be a corporation organized and doing business under the laws of the United States of America or any State or Territory thereof or of the District of Columbia, or a corporation or other Person permitted to act as trustee by the Commission, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least 50 million U.S. dollars (\$50,000,000), and subject to supervision or examination by Federal, State, Territorial or District of Columbia authority. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of the aforesaid supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. The Company may not, nor may any Person directly or indirectly controlling, controlled by or under common control with the Company, serve as Trustee. In case at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, the Trustee shall resign immediately in the manner and with the effect specified in Section 7.10.

SECTION 7.10 Resignation and Removal; Appointment of Successor.

(a) The Trustee or any successor hereafter appointed, may at any time resign with respect to the Securities of one or more series by giving written notice thereof to the Company and by transmitting notice of resignation by mail, first class postage prepaid, to the Securityholders of such series, as their names and addresses appear upon the Security Register. Upon receiving such notice of resignation, the Company shall promptly appoint a successor trustee with respect to Securities of such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee. If no successor trustee shall have been so appointed and have accepted appointment within 30 days after the mailing of such notice of resignation, the resigning Trustee may petition

any court of competent jurisdiction for the appointment of a successor trustee with respect to Securities of such series, or any Securityholder of that series who has been a bona fide holder of a Security or Securities for at least six months may on behalf of himself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any one of the following shall occur:

(1) the Trustee shall fail to comply with the provisions of Section 7.08 after written request therefor by the Company or by any Securityholder who has been a bona fide holder of a Security or Securities for at least six months; or

(2) the Trustee shall cease to be eligible in accordance with the provisions of Section 7.09 and shall fail to resign after written request therefor by the Company or by any such Securityholder; or

(3) the Trustee shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or commence a voluntary bankruptcy proceeding, or a receiver of the Trustee or of its property shall be appointed or consented to, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation, then, in any such case, the Company may remove the Trustee with respect to all Securities and appoint a successor trustee by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or, unless the Trustee's duty to resign is stayed as provided herein, any Securityholder who has been a bona fide holder of a Security or Securities for at least six months may, on behalf of that holder and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee. Such court may thereupon after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding may at any time remove the Trustee with respect to such series by so notifying the Trustee and the Company and may appoint a successor Trustee for such series with the consent of the Company.

(d) Any resignation or removal of the Trustee and appointment of a successor trustee with respect to the Securities of a series pursuant to any of the provisions of this Section shall become effective upon acceptance of appointment by the successor trustee as provided in Section 7.11.

(e) Any successor trustee appointed pursuant to this Section may be appointed with respect to the Securities of one or more series or all of such series, and at any time there shall be only one Trustee with respect to the Securities of any particular series.

SECTION 7.11 Acceptance of Appointment By Successor.

(a) In case of the appointment hereunder of a successor trustee with respect to all Securities, every such successor trustee so appointed shall execute, acknowledge and deliver to the Company and to the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor trustee, such retiring Trustee shall, upon payment of its charges, execute and deliver an instrument transferring to such successor trustee all the rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor trustee all property and money held by such retiring Trustee hereunder.

(b) In case of the appointment hereunder of a successor trustee with respect to the Securities of one or more (but not all) series, the Company, the retiring Trustee and each successor trustee with respect to the Securities of one or more series shall execute and deliver an indenture supplemental hereto wherein each successor trustee shall accept such appointment and which (1) shall contain such provisions as shall be necessary or desirable to transfer and confirm to, and to vest in, each successor trustee all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates, (2) shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series as to which the retiring Trustee is not retiring shall continue to be vested in the retiring Trustee, and (3) shall add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, it being understood that nothing herein or in such supplemental indenture shall constitute such Trustees co-trustees of the same trust, that each such Trustee shall be trustee of a trust or trusts hereunder separate and apart from any trust or trusts hereunder administered by any other such Trustee and that no Trustee shall be responsible for any act or failure to act on the part of any other Trustee hereunder; and upon the execution and delivery of such supplemental indenture the resignation or removal of the retiring Trustee shall become effective to the extent provided therein, such retiring Trustee shall with respect to the Securities of that or those series to which the appointment of such successor trustee relates have no further responsibility for the exercise of rights and powers or for the performance of the duties and obligations vested in the Trustee under this Indenture, and each such successor trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee with respect to the Securities of that or those series to which the appointment of such successor trustee relates; but, on request of the Company or any successor trustee, such retiring Trustee shall duly assign, transfer and deliver to such successor trustee, to the extent contemplated by such supplemental indenture, the property and money held by such retiring Trustee hereunder with respect to the Securities of that or those series to which the appointment of such successor trustee relates.

(c) Upon request of any such successor trustee, the Company shall execute any and all instruments for more fully and certainly vesting in and confirming to such successor trustee all such rights, powers and trusts referred to in paragraph (a) or (b) of this Section, as the case may be.

(d) No successor trustee shall accept its appointment unless at the time of such acceptance such successor trustee shall be qualified and eligible under this Article.

(e) Upon acceptance of appointment by a successor trustee as provided in this Section, the Company shall transmit notice of the succession of such trustee hereunder by mail, first class postage prepaid, to the Securityholders, as their names and addresses appear upon the Security Register. If the Company fails to transmit such notice within ten days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be transmitted at the expense of the Company.

SECTION 7.12 Merger, Conversion, Consolidation or Succession to Business.

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided that such corporation shall be qualified under the provisions of Section 7.08 and eligible under the provisions of Section 7.09, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding. In case any Securities shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Securities so authenticated with the same effect as if such successor Trustee had itself authenticated such Securities.

SECTION 7.13 Preferential Collection of Claims Against the Company.

The Trustee shall comply with Section 311(a) of the Trust Indenture Act, excluding any creditor relationship described in Section 311(b) of the Trust Indenture Act. A Trustee who has resigned or been removed shall be subject to Section 311(a) of the Trust Indenture Act to the extent included therein.

ARTICLE VIII

CONCERNING THE SECURITYHOLDERS

SECTION 8.01 Evidence of Action by Securityholders.

Whenever in this Indenture it is provided that the holders of a majority or specified percentage in aggregate principal amount of the Securities of a particular series may take any action (including the making of any demand or request, the giving of any notice, consent or waiver or the taking of any other action), the fact that at the time of taking any such action the holders of such majority or specified percentage of that series have joined therein may be evidenced by any instrument or any number of instruments of similar tenor executed by such holders of Securities of that series in Person or by agent or proxy appointed in writing.

If the Company shall solicit from the Securityholders of any series any request, demand, authorization, direction, notice, consent, waiver or other action, the Company may, at its option, as evidenced by an Officers' Certificate, fix in advance a record date for such series for the determination of Securityholders entitled to give such request, demand, authorization, direction, notice, consent, waiver or other action, but the Company shall have no obligation to do so. If such a record date is fixed, such request, demand, authorization, direction, notice, consent, waiver or other action may be given before or after the record date, but only the Securityholders of record at the close of business on the record date shall be deemed to be Securityholders for the purposes of determining whether Securityholders of the requisite proportion of Outstanding Securities of that series have authorized or agreed or consented to such request, demand, authorization, notice, consent, waiver or other action, and for that purpose the Outstanding Securities of that series shall be deemed effective unless it shall become effective pursuant to the provisions of this Indenture not later than six months after the record date.

SECTION 8.02 Proof of Execution by Securityholders.

Subject to the provisions of Section 7.01, proof of the execution of any instrument by a Securityholder (such proof will not require notarization) or his agent or proxy and proof of the holding by any Person of any of the Securities shall be sufficient if made in the following manner:

(a) The fact and date of the execution by any such Person of any instrument may be proved in any reasonable manner acceptable to the Trustee.

- (b) The ownership of Securities shall be proved by the Security Register of such Securities or by a certificate of the Security Registrar thereof.
- (c) The Trustee may require such additional proof of any matter referred to in this Section as it shall deem necessary.

SECTION 8.03 Who May be Deemed Owners.

Prior to the due presentment for registration of transfer of any Security, the Company, the Trustee, any paying agent and any Security Registrar may deem and treat the Person in whose name such Security shall be registered upon the books of the Company as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notice of ownership or writing thereon made by anyone other than the Security Registrar) for the purpose of receiving payment of or on account of the principal of (and premium, if any) and (subject to Section 2.03) interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any paying agent nor any Security Registrar shall be affected by any notice to the contrary.

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SECTION 8.04 Certain Securities Owned by Company Disregarded.

In determining whether the holders of the requisite aggregate principal amount of Securities of a particular series have concurred in any direction, consent or waiver under this Indenture, the Securities of that series that are owned by the Company or any other obligor on the Securities of that series or by any Person directly or indirectly controlling or controlled by or under common control with the Company or any other obligor on the Securities of that series shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver, only Securities of such series that the Trustee actually knows are so owned shall be so disregarded. The Securities so owned that have been pledged in good faith may be regarded as Outstanding for the purposes of this Section, if the pledgee shall establish to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not a Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Company or any such other obligor. In case of a dispute as to such right, any decision by the Trustee taken upon the advice of counsel shall be full protection to the Trustee.

SECTION 8.05 Actions Binding on Future Securityholders.

At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 8.01, of the taking of any action by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action, any holder of a Security of that series that is shown by the evidence to be included in the Securities the holders of which have consented to such action may, by filing written notice with the Trustee, and upon proof of holding as provided in Section 8.02, revoke such action so far as concerns such Security. Except as aforesaid any such action taken by the holder of any Security shall be conclusive and binding upon such holder and upon all future holders and owners of such Security, and of any Security issued in exchange therefor, on registration of transfer thereof or in place thereof, irrespective of whether or not any notation in regard thereto is made upon such Security. Any action taken by the holders of the majority or percentage in aggregate principal amount of the Securities of a particular series specified in this Indenture in connection with such action shall be conclusively binding upon the Company, the Trustee and the holders of all the Securities of that series.

ARTICLE IX

SUPPLEMENTAL INDENTURES

SECTION 9.01 Supplemental Indentures Without the Consent of Securityholders.

In addition to any supplemental indenture otherwise authorized by this Indenture, the Company and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect), without the consent of the Securityholders, for one or more of the following purposes:

(a) to cure any ambiguity, defect or inconsistency herein or in the Securities of any series;

(b) to comply with Article Ten;

(c) to provide for uncertificated Securities in addition to or in place of certificated Securities;

(d) to add to the covenants of the Company for the benefit of the holders of all or any series of Securities (and if such covenants are to be for the benefit of less than all series of Securities, stating that such covenants are expressly being included solely for the benefit of such series) or to surrender any right or power herein conferred upon the Company;

(e) to add to, delete from or revise the conditions, limitations and restrictions on the authorized amount, terms, purposes of issue, authentication and delivery of Securities, as herein set forth;

(f) to make any change that does not adversely affect the rights of any Securityholder in any material respect; or

(g) to provide for the issuance of and establish the form and terms and conditions of the Securities of any series as provided in Section 2.01, to establish the form of any certifications required to be furnished pursuant to the terms of this Indenture or any series of Securities, or to add to the rights of the holders of any series of Securities.

The Trustee is hereby authorized to join with the Company in the execution of any such supplemental indenture, and to make any further appropriate agreements and stipulations that may be therein contained, but the Trustee shall not be obligated to enter into any such supplemental indenture that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section may be executed by the Company and the Trustee without the consent of the holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 9.02.

SECTION 9.02 Supplemental Indentures With Consent of Securityholders.

With the consent (evidenced as provided in Section 8.01) of the holders of not less than a majority in aggregate principal amount of the Securities of each series affected by such supplemental indenture or indentures at the time Outstanding, the Company, when authorized by Board Resolutions, and the Trustee may from time to time and at any time enter into an indenture or indentures supplemental hereto (which shall conform to the provisions of the Trust Indenture Act as then in effect) for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this

Indenture or of any supplemental indenture or of modifying in any manner not covered by Section 9.01 the rights of the holders of the Securities of such series under this Indenture; provided, however, that no such supplemental indenture shall, without the consent of the holders of each Security then Outstanding and affected thereby, (i) extend the fixed maturity of any Securities of any series, or reduce the principal amount thereof, or reduce the rate of interest thereon, or reduce any premium payable upon the redemption thereof or (ii) reduce the aforesaid percentage of Securities, the holders of which are required to consent to any such supplemental indenture.

It shall not be necessary for the consent of the Securityholders of any series affected thereby under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

SECTION 9.03 Effect of Supplemental Indentures.

Upon the execution of any supplemental indenture pursuant to the provisions of this Article or of Section 10.01, this Indenture shall, with respect to such series, be and be deemed to be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Company and the holders of Securities of the series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

SECTION 9.04 Securities Affected by Supplemental Indentures.

Securities of any series affected by a supplemental indenture, authenticated and delivered after the execution of such supplemental indenture pursuant to the provisions of this Article or of Section 10.01, may bear a notation in form approved by the Company, provided such form meets the requirements of any exchange upon which such series may be listed, as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Securities of that series so modified as to conform, in the opinion of the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Company, authenticated by the Trustee and delivered in exchange for the Securities of that series then Outstanding.

SECTION 9.05 Execution of Supplemental Indentures.

Upon the request of the Company, accompanied by Board Resolutions authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders required to consent thereto as aforesaid, the Trustee shall join with the Company in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion but shall not be obligated to enter into such supplemental indenture. The

Trustee, subject to the provisions of Section 7.01, may receive an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article is authorized or permitted by, and conforms to, the terms of this Article and that it is proper for the Trustee under the provisions of this Article to join in the execution thereof; provided, however, that such Opinion of Counsel need not be provided in connection with the execution of a supplemental indenture that establishes the terms of a series of Securities pursuant to Section 2.01 hereof.

Promptly after the execution by the Company and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Trustee shall transmit by mail, first class postage prepaid, a notice, setting forth in general terms the substance of such supplemental indenture, to the Securityholders of all series affected thereby as their names and addresses appear upon the Security Register. Any failure of the Trustee to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

ARTICLE X

SUCCESSOR ENTITY

SECTION 10.01 Company May Consolidate, Etc.

Nothing contained in this Indenture or in any of the Securities shall prevent any consolidation or merger of the Company with or into any other Person (whether or not affiliated with the Company) or successive consolidations or mergers in which the Company or its successor or successors shall be a party or parties, or shall prevent any sale, conveyance, transfer or other disposition of the property of the Company or its successor or successors as an entirety, or substantially as an entirety, to any other corporation (whether or not affiliated with the Company or its successor or successors) authorized to acquire and operate the same; provided, however, the Company hereby covenants and agrees that, upon any such consolidation or merger (in each case, if the Company is not the survivor of such transaction), sale, conveyance, transfer or other disposition, the due and punctual payment of the principal of (premium, if any) and interest on all of the Securities of all series in accordance with the terms of each series, according to their tenor, and the due and punctual performance and observance of all the covenants and conditions of this Indenture with respect to each series or established with respect to such series pursuant to Section 2.01 to be kept or performed by the Company shall be expressly assumed, by supplemental indenture (which shall conform to the provisions of the Trust Indenture Act as then in effect) satisfactory in form to the Trustee executed and delivered to the Trustee by the entity formed by such consolidation, or into which the Company shall have been merged, or by the entity which shall have acquired such property.

SECTION 10.02 Successor Entity Substituted.

(a) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition and upon the assumption by the successor entity by supplemental

indenture, executed and delivered to the Trustee and satisfactory in form to the Trustee, of the due and punctual payment of the principal of (and premium, if any) and interest on all of the Securities of all series Outstanding and the due and punctual performance of all of the covenants and conditions of this Indenture or established with respect to each series of the Securities pursuant to Section 2.01 to be performed by the Company with respect to each series, such successor entity shall succeed to and be substituted for the Company with the same effect as if it had been named as the Company herein, and thereupon the predecessor corporation shall be relieved of all obligations and covenants under this Indenture and the Securities.

(b) In case of any such consolidation, merger, sale, conveyance, transfer or other disposition, such changes in phraseology and form (but not in substance) may be made in the Securities thereafter to be issued as may be appropriate.

(c) Nothing contained in this Article shall apply to limit or impose any requirements upon the consolidation or merger of any Person into the Company where the Company is the survivor of such transaction, or the acquisition by the Company, by purchase or otherwise, of all or any part of the property of any other Person (whether or not affiliated with the Company).

SECTION 10.03 Evidence of Consolidation, Etc. to Trustee.

The Trustee, subject to the provisions of Section 7.01, may receive an Opinion of Counsel as conclusive evidence that any such consolidation, merger, sale, conveyance, transfer or other disposition, and any such assumption, comply with the provisions of this Article.

ARTICLE XI

SATISFACTION AND DISCHARGE

SECTION 11.01 Satisfaction and Discharge of Indenture.

If at any time: (a) the Company shall have delivered to the Trustee for cancellation all Securities of a series theretofore authenticated (other than any Securities that have been destroyed, lost or stolen and that have been replaced or paid as provided in Section 2.07) and Securities for whose payment money or Governmental Obligations have theretofore been deposited in trust or segregated and held in trust by the Company (and thereupon repaid to the Company or discharged from such trust, as provided in Section 11.05); or (b) all such Securities of a particular series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption, and the Company shall deposit or cause to be deposited with the Trustee as trust funds the entire amount in moneys or Governmental Obligations or a combination thereof, sufficient in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay at

maturity or upon redemption all Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder with respect to such series by the Company then this Indenture shall thereupon cease to be of further effect with respect to such series except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03 and 7.10, that shall survive until the date of maturity or redemption date, as the case may be, and Sections 7.06 and 11.05, that shall survive to such date and thereafter, and the Trustee, on demand of the Company and at the cost and expense of the Company, shall execute proper instruments acknowledging satisfaction of and discharging this Indenture with respect to such series.

SECTION 11.02 Discharge of Obligations.

If at any time all such Securities of a particular series not heretofore delivered to the Trustee for cancellation or that have not become due and payable as described in Section 11.01 shall have been paid by the Company by depositing irrevocably with the Trustee as trust funds moneys or an amount of Governmental Obligations sufficient to pay at maturity or upon redemption all such Securities of that series not theretofore delivered to the Trustee for cancellation, including principal (and premium, if any) and interest due or to become due to such date of maturity or date fixed for redemption, as the case may be, and if the Company shall also pay or cause to be paid all other sums payable hereunder by the Company with respect to such series, then after the date such moneys or Governmental Obligations, as the case may be, are deposited with the Trustee, the obligations of the Company under this Indenture with respect to such series shall cease to be of further effect except for the provisions of Sections 2.03, 2.05, 2.07, 4.01, 4.02, 4.03, 7.06, 7.10 and 11.05 hereof that shall survive until such Securities shall mature and be paid. Thereafter, Sections 7.06 and 11.05 shall survive.

SECTION 11.03 Deposited Moneys to be Held in Trust.

All moneys or Governmental Obligations deposited with the Trustee pursuant to Sections 11.01 or 11.02 shall be held in trust and shall be available for payment as due, either directly or through any paying agent (including the Company acting as its own paying agent), to the holders of the particular series of Securities for the payment or redemption of which such moneys or Governmental Obligations have been deposited with the Trustee.

SECTION 11.04 Payment of Moneys Held by Paying Agents.

In connection with the satisfaction and discharge of this Indenture all moneys or Governmental Obligations then held by any paying agent under the provisions of this Indenture shall, upon demand of the Company, be paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys or Governmental Obligations.

SECTION 11.05 Repayment to Company.

Any moneys or Governmental Obligations deposited with any paying agent or the Trustee, or then held by the Company, in trust for payment of principal of (and premium, if any) or interest on the Securities of a particular series that are not applied but remain unclaimed by the holders of such Securities for at least two years after the date upon which the principal of (and premium, if any) or interest on such Securities shall have respectively become due and payable, shall be repaid to the Company or (if then held by the Company) shall be discharged from such trust; and thereupon the paying agent and the Trustee shall be released from all further liability with respect to such moneys or Governmental Obligations, and the holder of any of the Securities entitled to receive such payment shall thereafter, as an unsecured general creditor, look only to the Company for the payment thereof.

ARTICLE XII

IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS AND DIRECTORS

SECTION 12.01 No Recourse.

No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Company or of any predecessor or successor corporation, either directly or through the Company or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate obligations, and that no such personal liability whatever shall attach to, or is or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Company or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom; and that any and all such personal liability of every name and nature, either at common law or in equity or by constitution or statute, of, and any and all such rights and claims against, every such incorporator, stockholder, officer or director as such, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in erreation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom, are hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issuance of such Securities.

ARTICLE XIII

MISCELLANEOUS PROVISIONS

SECTION 13.01 Effect on Successors and Assigns.

All the covenants, stipulations, promises and agreements in this Indenture contained by or on behalf of the Company shall bind its successors and assigns, whether so expressed or not.

SECTION 13.02 Actions by Successor.

Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board, committee or officer of the Company shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Company.

SECTION 13.03 Notices.

Except as otherwise expressly provided herein any notice or demand that by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the holders of Securities to or on the Company may be given or served by being deposited first class postage prepaid in a post-office letterbox addressed (until another address is filed in writing by the Company with the Trustee), as follows:

Wave Life Sciences Ltd. 733 Concord Avenue Cambridge, MA 02138 USA Phone: +617-949-2900 Fax: +617-949-2901 Attention: Chief Financial Officer

Any notice, election, request or demand by the Company or any Securityholder to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made in writing at the Corporate Trust Office of the Trustee.

SECTION 13.04 Governing Law.

This Indenture and each Security shall be deemed to be a contract made under the internal laws of the State of New York, and for all purposes shall be construed in accordance with the laws of said State.

SECTION 13.05 Compliance Certificates and Opinions.

(a) Upon any application or demand by the Company to the Trustee to take any action under any of the provisions of this Indenture, the Company shall furnish to the Trustee an Officers' Certificate stating that all conditions precedent provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

(b) Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant in this Indenture shall include (1) a statement that the Person making such certificate or opinion has read such covenant or condition; (2) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based; (3) a statement that, in the opinion of such Person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and (4) a statement as to whether or not, in the opinion of such Person, such condition or covenant has been complied with.

(c) The Company shall furnish to the Trustee, on of each year, a brief certificate from the principal executive officer, principal financial officer or principal accounting officer as to his or her knowledge of such obligor's compliance with all conditions and covenants under this Indenture. For purposes of this subsection, such compliance shall be determined without regard to any period of grace or requirement of notice provided hereunder.

SECTION 13.06 Payments on Business Days.

Except as provided pursuant to Section 2.01 pursuant to a Board Resolution, and as set forth in an Officers' Certificate, or established in one or more indentures supplemental to this Indenture, in any case where the date of maturity of interest or principal of any Security or the date of redemption of any Security shall not be a Business Day, then payment of interest or principal (and premium, if any) may be made on the next succeeding Business Day with the same force and effect as if made on the nominal date of maturity or redemption, and no interest shall accrue for the period after such nominal date.

SECTION 13.07 Conflict with Trust Indenture Act.

If and to the extent that any provision of this Indenture limits, qualifies or conflicts with the duties imposed by Sections 310 to 317, inclusive, of the Trust Indenture Act, such imposed duties shall control.

SECTION 13.08 Counterparts.

This Indenture may be executed in any number of counterparts, each of which shall be an original, but such counterparts shall together constitute but one and the same instrument.

SECTION 13.09 Separability.

In case any one or more of the provisions contained in this Indenture or in the Securities of any series shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Indenture or of such Securities, but this Indenture and such Securities shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein or therein.

SECTION 13.10 Assignment.

The Company will have the right at all times to assign any of its rights or obligations under this Indenture to a direct or indirect wholly owned Subsidiary of the Company, provided that, in the event of any such assignment, the Company will remain liable for all such obligations. Subject to the foregoing, the Indenture is binding upon and inures to the benefit of the parties thereto and their respective successors and assigns. This Indenture may not otherwise be assigned by the parties thereto.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed all as of the day and year first above written.

WAVE LIFE SCIENCES LTD.

By:Name:				
Name: Title:				
[as Trustee],			
By:				
By: Name: Title				

FORM OF SUBORDINATED DEBT SECURITIES INDENTURE

WAVE LIFE SCIENCES LTD.

INDENTURE

DATED AS OF , 20

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TRUSTEE

SUBORDINATED DEBT SECURITIES

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WAVE LIFE SCIENCES LTD.

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Section 310	(a)(1) (a)(2) (a)(3) (a)(4) (a)(5) (b) (c)	7.10 7.10 Not Applicable Not Applicable 7.10 7.10 Not Applicable		
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INDENTURE

Indenture dated as of , 20 , between Wave Life Sciences Ltd., a public limited company existing under the laws of Singapore (the "Company"), and ("Trustee").

WITNESSETH

WHEREAS, the Company has duly authorized the issuance, execution and delivery, from time to time, of its unsecured debentures, notes or other evidences of indebtedness (hereinafter referred to as the "Securities"), without limit as to principal amount, issuable in one or more Series (as hereinafter defined), the amount and terms of each such Series to be determined as hereinafter provided; and, to provide the terms and conditions upon which the Securities are to be authenticated, issued and delivered, the Company has duly authorized the execution of this Indenture;

WHEREAS, all things necessary to make this Indenture a valid indenture and agreement according to its terms have been done;

NOW, THEREFORE:

In consideration of the premises and the purchases of the Securities by the holders thereof, the Company and the Trustee mutually covenant and agree for the equal and proportionate benefit of the respective holders from time to time of the Securities as follows:

ARTICLE I.

DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.1. Definitions.

"Additional Amounts" means any additional amounts which are required hereby or by any Security, under circumstances specified herein or therein, to be paid by the Company in respect of certain taxes imposed on Holders specified therein and which are owing to such Holders.

"Affiliate" of any specified person means any other person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified person. For the purposes of this definition, "control" (including, with correlative meanings, the terms "controlled by" and "under common control with"), as used with respect to any person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such person, whether through the ownership of voting securities or by agreement or otherwise.

"Agent" means any Registrar, Paying Agent or Service Agent.

"Authorized Newspaper" means a newspaper in an official language of the country of publication customarily published at least once a day for at least five days in each calendar week and of general circulation in the place in connection with which the term is used. If it shall be impractical in the opinion of the Trustee to make any publication of any notice required hereby in an Authorized Newspaper, any publication or other notice in lieu thereof that is made or given by the Trustee shall constitute a sufficient publication of such notice.

"Bearer" means anyone in possession from time to time of a Bearer Security.

"Bearer Security" means any Security, including any interest coupon appertaining thereto, that does not provide for the identification of the Holder thereof.

"Board of Directors" means the Board of Directors of the Company or any duly authorized committee thereof.

"Board Resolution" means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been adopted by the Board of Directors or pursuant to authorization by the Board of Directors and to be in full force and effect on the date of the certificate and delivered to the Trustee.

"Business Day" means, unless otherwise provided by Board Resolution, Officers' Certificate or supplemental indenture hereto for a particular Series, any day except a Saturday, Sunday or a legal holiday in the City of New York or in Singapore on which banking institutions are authorized or required by law, regulation or executive order to close.

"Company" means the party named as such above until a successor replaces it and thereafter means the successor.

"Company Order" means a written order signed in the name of the Company by two Officers, one of whom must be the Company's chief executive officer, chief financial officer or principal accounting officer.

"Company Request" means a written request signed in the name of the Company by its Chairman of the Board, a President or a Vice President, and by either its Chief Financial Officer, Treasurer, an Assistant Treasurer, its Secretary or an Assistant Secretary, or any other officer authorized by the Board of Directors for such purpose, and delivered to the Trustee.

"Corporate Trust Office" means the office of the Trustee located in , or such other office as may be designated by the Trustee to the Company in writing.

"Debt" of any person as of any date means, without duplication, all obligations of such person in respect of borrowed money, including all interest, fees and expenses owed in respect thereto (whether or not the recourse of the lender is to the whole of the assets of such person or only to a portion thereof), or evidenced by bonds, notes, debentures or similar instruments.

"Default" means any event which is, or after notice or passage of time would be, an Event of Default.

"Depository" means, with respect to the Securities of any Series issuable or issued in whole or in part in the form of one or more Global Securities, the person designated as Depository for such Series by the Company, which Depository shall be a clearing agency registered under the Exchange Act; and if at any time there is more than one such person, "Depository" as used with respect to the Securities of any Series shall mean the Depository with respect to the Securities of such Series.

"Designated Senior Indebtedness" means any of the Company's senior indebtedness that expressly provides that it is "designated senior indebtedness" for purposes of this Indenture (provided that the instrument, agreement or other document creating or evidencing such Senior Indebtedness may place limitations and conditions on the right of such Senior Indebtedness to exercise the rights of Designated Senior Indebtedness).

"Discount Security" means any Security that provides for an amount less than the stated principal amount thereof to be due and payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.2.

"Dollars" means the currency of the United States of America.

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Global Security" or "Global Securities" means a Security or Securities, as the case may be, in the form established pursuant to Section 2.2 evidencing all or part of a Series of Securities, issued to the Depository for such Series or its nominee, and registered in the name of such Depository or nominee.

"Holder" or "Securityholder" means a person in whose name a Security is registered or the holder of a Bearer Security.

"Indenture" means this Indenture as amended from time to time and shall include the form and terms of particular Series of Securities established as contemplated hereunder.

"Interest" with respect to any Discount Security which by its terms bears interest only after Maturity, means interest payable after Maturity.

"Maturity," when used with respect to any Security or installment of principal thereof, means the date on which the principal of such Security or such installment of principal becomes due and payable as therein or herein provided, whether at the Stated Maturity or by declaration of acceleration, call for redemption, notice of option to elect repayment or otherwise.

"Officer" means the Chairman of the Board, any President, any Vice-President, the Chief Financial Officer, the Treasurer, the Secretary, any Assistant Treasurer or any Assistant Secretary of the Company.

"Officers' Certificate" means a certificate signed by two Officers, one of whom must be the Company's principal executive officer, principal financial officer or principal accounting officer.

"Opinion of Counsel" means a written opinion of legal counsel who is acceptable to the Trustee. The counsel may be an employee of or counsel to the Company.

"Person" means any individual, corporation, partnership, joint venture, association, limited liability company, joint-stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

"Principal" of a Security means the principal of the Security plus, when appropriate, the premium, if any, on, and any Additional Amounts in respect of, the Security.

"Representative" means the (a) indenture trustee or other trustee, agent or representative for any Senior Indebtedness or (b) with respect to any Senior Indebtedness that does not have any such trustee, agent or other representative, (i) in the case of such Senior Indebtedness issued pursuant to an agreement providing for voting arrangements as among the holders or owners of such Senior Indebtedness, any holder or owner of such Senior Indebtedness acting with the consent of the required persons necessary to bind such holders or owners of such Senior Indebtedness and (ii) in the case of all other such Senior Indebtedness, the holder or owner of such Senior Indebtedness.

"Responsible Officer" means any officer of the Trustee in its Corporate Trust Office and also means, with respect to a particular corporate trust matter, any other officer to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with a particular subject.

"SEC" means the Securities and Exchange Commission.

"Securities" has the meaning given such item in the preamble hereto.

"Securities Act" means the Securities Act of 1933, as amended.

"Senior Indebtedness" means the principal, premium, if any, interest, including any interest accruing after bankruptcy, and other amounts due on any of our current or future Debt, whether created, incurred, assumed, guaranteed or in effect guaranteed by us, including any deferrals, renewals, extensions, refundings, amendments, modifications or supplements to the above. However, Senior Indebtedness does not include: (i) any Debt that expressly provides that it shall not be senior in right of payment to the Securities or expressly provides that it is on the same basis or junior to the Securities; (ii) any Debt by us to any of our majority-owned subsidiaries; and (iii) the Securities.

"Series" or "Series of Securities" means each series of debentures, notes or other debt instruments of the Company created pursuant to Sections 2.1 and 2.2 hereof.

"Significant Subsidiary" means (i) any direct or indirect Subsidiary of the Company that would be a "significant subsidiary" as defined in Article 1, Rule 1-02 of Regulation S-X, promulgated pursuant to the Securities Act, as such regulation is in effect on the date hereof, or (ii) any group of direct or indirect Subsidiaries of the Company that, taken together as a group, would be a "significant subsidiary" as defined in Article 1, Rule 1-02 of Regulation S-X, promulgated pursuant to the Securities Act, as such regulation is in effect on the date hereof.

"Stated Maturity," when used with respect to any Security or any installment of principal thereof or interest thereon, means the date specified in such Security as the fixed date on which the principal of such Security or such installment of principal or interest is due and payable.

"Subsidiary" of any specified person means any corporation or company of which at least a majority of the outstanding stock or shares having by the terms thereof ordinary voting power for the election of directors of such corporation or company (irrespective of whether or not at the time stock or shares of any other class or classes of such corporation or company shall have or might have voting power by reason of the happening of any contingency) is at the time directly or indirectly owned by such person, or by one or more other Subsidiaries, or by such person and one or more other Subsidiaries.

"TIA" means the Trust Indenture Act of 1939 (15 U.S. Code Sections 77aaa-77bbbb) as in effect on the date of this Indenture; provided, however, that in the event the Trust Indenture Act of 1939 is amended after such date, "TIA" means, to the extent required by any such amendment, the Trust Indenture Act as so amended.

"Trustee" means the person named as the "Trustee" in the first paragraph of this instrument until a successor Trustee shall have become such pursuant to the applicable provisions of this Indenture, and thereafter "Trustee" shall mean or include each person who is then a Trustee hereunder, and if at any time there is more than one such person, "Trustee" as used with respect to the Securities of any Series shall mean the Trustee with respect to Securities of that Series.

Section 1.2. Definitions.

TERM	DEFINED IN SECTION
"Bankruptcy Law"	6.1
"Custodian"	6.1
"Government Obligations"	8.3
"Legal Holiday"	10.7
"mandatory sinking fund payment"	11.1
"optional sinking fund payment"	11.1
"Paying Agent"	2.5
"Registrar"	2.5
"Service Agent"	2.5
"successor person"	5.1

Section 1.3. Incorporation by Reference of Trust Indenture Act.

Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture. The following TIA terms used in this Indenture have the following meanings:

"Commission" means the SEC.

"indenture securities" means the Securities.

"indenture security holder" means a Securityholder.

"indenture to be qualified" means this Indenture.

"indenture trustee" or "institutional trustee" means the Trustee.

"obligor" on the indenture securities means the Company and any successor obligor upon the Securities.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA and not otherwise defined herein are used herein as so defined.

Section 1.4. Rules of Construction.

Unless the context otherwise requires:

(a) a term has the meaning assigned to it;

(b) an accounting term not otherwise defined has the meaning assigned to it in accordance with generally accepted accounting

principles;

(c) "or" is not exclusive;

(d) words in the singular include the plural, and in the plural include the singular; and

(e) provisions apply to successive events and transactions.

ARTICLE II.

SECURITIES

Section 2.1. Amount Unlimited; Issuable in Series.

The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited. The Securities may be issued in one or more Series. All Securities of a Series shall be identical except as may be set forth in a Board Resolution, a supplemental indenture or an Officers' Certificate detailing the adoption of the terms thereof pursuant to the authority granted under a Board Resolution. In the case of Securities of a Series to be issued from time to time, the Board Resolution, Officers' Certificate or supplemental indenture may provide for

the method by which specified terms (such as interest rate, maturity date, record date or date from which interest shall accrue) are to be determined. Securities may differ between Series in respect of any matters, provided that all Series of Securities shall be equally and ratably entitled to the benefits of the Indenture.

Section 2.2. Establishment of Terms of Series of Securities.

At or prior to the issuance of any Securities within a Series, the following shall be established (as to the Series generally, in the case of subparagraph 2.2.1 and either as to such Securities within the Series or as to the Series generally in the case of subparagraphs 2.2.2 through 2.2.2) by a Board Resolution, a supplemental indenture or an Officers' Certificate pursuant to authority granted under a Board Resolution:

2.2.1. the title of the Series (which shall distinguish the Securities of that particular Series from the Securities of any other Series);

2.2.2. any limit upon the aggregate principal amount of the Securities of the Series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the Series pursuant to Section 2.8, 2.9, 2.10, 3.6 or 9.5);

2.2.3. the forms of the Securities of the Series in bearer or fully-registered form, whether any Securities of the Series may be represented initially by a Security in temporary or permanent global form and, if so, the initial Depository with respect to any such temporary or permanent global Security and, as applicable, whether and the circumstances under which beneficial owners of interests in any such temporary or permanent global Security may exchange such interests for Securities of such Series and of like tenor of any authorized form and denomination, and any other terms required for the establishment of a Series of Securities in bearer form, including, but not limited to, tax compliance procedures;

2.2.4. the price or prices (expressed as a percentage of the principal amount thereof) at which the Securities of the Series will be issued;

2.2.5. the person to whom any interest on any Security of the Series issued in fully-registered form shall be payable, if other than the person in whose name that Security is registered at the close of business on the regular record date for such interest, and the manner in which, the person to whom, any interest on any Security of the Series issued in bearer form shall be payable, if otherwise than upon presentation and surrender of the coupons appertaining thereto as they severally mature, and the extent to which, or the manner in which (including any certification requirement and other terms and conditions under which), any interest payable on a temporary or permanent global Security on an interest payment date will be paid if other than as described herein;

2.2.6. the date or dates on which the principal of the Securities of the Series is payable or the method or methods, if any, used to determine those dates;

2.2.7. the rate or rates (which may be fixed or variable) per annum or, if applicable, the method used to determine such rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index) at which the Securities of the Series shall bear interest, if any, the date or dates from which such interest, if any, shall accrue, the date or dates on which such interest, if any, shall commence and be payable and any regular record date for the interest payable on any interest payment date;

2.2.8. the place or places where and the manner in which the principal of and interest, if any, on the Securities of the Series shall be payable, any Securities of the Series issued as Registered Securities may be surrendered for registration of transfer, Securities of the Series may be surrendered for exchange and notices and demands to or upon the Company in respect of the Securities of the Series and this Indenture may be served;

2.2.9. if applicable, the period or periods within which, the price or prices at which and the terms and conditions upon which the Securities of the Series may be redeemed, in whole or in part, at the option of the Company;

2.2.10. the obligation, if any, of the Company to redeem or purchase the Securities of the Series pursuant to any sinking fund or analogous provisions or at the option of a Holder thereof, the conditions, if any, giving rise to such obligation, and the period or periods within which, the price or prices at which and the terms and conditions upon which Securities of the Series shall be redeemed or purchased, in whole or in part, pursuant to such obligation, and, if applicable, any provisions for the remarketing of such Securities;

2.2.11. if other than denominations of \$1,000 and any integral multiple thereof, the denominations in which the Securities of the Series shall be issuable;

2.2.12. the currency or currencies, including composite currencies, in which payment of the principal of or interest on the Securities of the Series shall be payable if other than the currency of the United States, and if so, whether the Securities of the Series may be satisfied and discharged other than as provided in Article VIII;

2.2.13. if the amount of payments of principal of or interest on the Securities of the Series is to be determined with reference to an index, formula or other method, or based on a coin or currency other than that in which the Securities of the Series are stated to be payable, the manner in which such amounts shall be determined and the calculation agent, if any, with respect thereto;

2.2.14. if other than the principal amount thereof, the portion of the principal amount of the Securities of the Series that shall be payable upon declaration of acceleration of the maturity thereof pursuant to Section 6.2;

2.2.15. if the Holders of Securities of the Series may convert or exchange the Securities into or for securities of the Company or other property, the period or periods within which, the rate or rates at which and the terms and conditions upon which Securities of the Series may be converted or exchanged, in whole or in part;

2.2.16. any terms applicable to Discount Securities of the Series, if any, including the issue price thereof and the rate or rates at which the original issue discount will accrue;

2.2.17. whether the Securities of the Series, in whole or any specified part, shall not be defeasible pursuant to Section 8.3 or Section 8.4 or both such Sections and, if other than by an Officer's Certificate, the manner in which any election by the Company to defease such Securities shall be evidenced;

2.2.18. the provisions, if any, relating to any security provided for the Securities of the Series;

2.2.19. any addition to or change in the Events of Default which applies to any Securities of the Series and any change in the right of the Trustee or the requisite Holders of such Securities to declare the principal amount thereof due and payable pursuant to Section 6.2;

2.2.20. any addition to or change in the covenants set forth in Articles IV or V which applies to Securities of the Series;

2.2.21. any other terms of the Securities of the Series (which terms shall not be inconsistent with the provisions of this Indenture, except as permitted by Section 9.1, but which may modify or delete any provision of this Indenture insofar as it applies to such Series); and

2.2.22. any depositories, interest rate calculation agents, exchange rate calculation agents or other agents with respect to Securities of such Series if other than those appointed herein.

All Securities of any one Series need not be issued at the same time and may be issued from time to time, consistent with the terms of this Indenture, if so provided by or pursuant to the Board Resolution, supplemental indenture or Officers' Certificate referred to above, and the authorized principal amount of any Series may not be increased to provide for issuances of additional Securities of such Series, unless otherwise provided in such Board Resolution, supplemental indenture or Officers' Certificate.

Section 2.3. Authentication and Delivery of Securities.

At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver any Series of Securities executed by the Company to the Trustee for authentication by it, and the Trustee shall thereupon authenticate and deliver said Securities to or upon a Company Order, without any further corporate action by the Company. If the form or terms of such Series of Securities have been established in or pursuant to one or more Board Resolutions or a supplemental indenture as permitted by this Section 2.3 and Section 2.2, in authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, and (subject to Section 7.1) shall be fully protected in relying upon:

(1) each Board Resolution relating to such Series of Securities;

(2) an executed supplemental indenture, if any, relating to such series of Securities;

(3) an Officers' Certificate setting forth the form and terms of the Securities, stating that the form and terms of the Securities have been established pursuant to Section 2.2 and subparagraph 2.4.3 and comply with this Indenture, and covering such other matters as the Trustee may reasonably request;

(4) an Opinion of Counsel to the effect that:

(a) if the form of such Securities has been established by or pursuant to resolutions of the Board of Directors of the Company as permitted by subparagraph 2.4.3 that such form has been established in conformity with the provisions of this Indenture;

(b) if the terms of such Securities have been established by or pursuant to Board Resolutions as permitted by Section 2.1, that such terms have been established in conformity with the provisions of this Indenture;

(c) that such Securities, when authenticated and delivered by the Trustee and executed and issued by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will be valid and binding obligations of the Company, except as any rights thereunder may be limited by bankruptcy, insolvency and other similar laws affecting the enforcement of creditor's rights generally and by general equity principles;

(d) that all laws and requirements in respect of the execution and delivery by the Company of such Securities have been complied with and that authentication and delivery of the Securities by the Trustee will not violate the terms of this Indenture; and

(e) covering such other matters as the Trustee may reasonably request.

Each Registered Security shall be dated the date of its authentication. Any Series of Bearer Securities shall be dated as provided in the Board Resolution or the provisions of the supplemental indenture creating such Series.

Section 2.4. Execution of Securities; Trustee's Certificate of Authentication; Form of Securities.

2.4.1. Two Officers shall sign the Securities for the Company by manual or facsimile signature. If an Officer whose signature is on a Security no longer holds that office at the time the Security is authenticated, the Security shall nevertheless be valid.

2.4.2. Only such Securities bearing a certificate of authentication executed by the Trustee by the manual signature of one of its Responsible Officers, shall be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. Such certificate by the Trustee upon any Security executed by the Company shall be conclusive evidence that the Security so authenticated has been duly authenticated and delivered hereunder and that the Holder is entitled to the benefits of this Indenture.

The Trustee shall have the right to decline to authenticate and deliver any Securities of such Series: (a) if the Trustee, being advised by counsel, determines that such action may not lawfully be taken; or (b) if the Trustee in good faith shall determine that such action would expose the Trustee to personal liability to Holders of any then outstanding Series of Securities.

The Trustee may appoint an authenticating agent acceptable to the Company to authenticate Securities. An authenticating agent may authenticate Securities whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. An authenticating agent has the same rights as an Agent to deal with the Company or an Affiliate.

2.4.3. The Securities of each series shall be substantially of the tenor and purport as shall be authorized by a Board Resolution or in an indenture or indentures supplemental hereto, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Indenture, and may have such letters, numbers or other marks of identification or designation and such legends or endorsements thereon as the Board of Directors of the Company may deem appropriate and as are not inconsistent with the provisions of this Indenture, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange on which the Securities may be listed, or to conform to usage.

The definitive Securities may be printed, lithographed or fully or partly engraved or produced in any other manner, all as determined by the officers executing such Securities, as evidenced by their executions thereof.



Section 2.5. Registrar and Paying Agent.

The Company shall maintain, with respect to each Series of Securities, an office or agency where Securities of such Series may be presented or surrendered for payment ("Paying Agent"), where Securities of such Series may be surrendered for registration of transfer or exchange ("Registrar") and where notices and demands to or upon the Company in respect of the Securities of such Series and this Indenture may be served ("Service Agent"). The Registrar shall keep a register with respect to each Series of Securities and to their transfer and exchange. The Corporate Trust Office of the Trustee shall be such office or agency for all of the aforesaid purposes unless the Company shall maintain some other office or agency for such purposes and The Company will give prompt written notice to the Trustee of the name and address, and any change in the name or address, of each Registrar, Paying Agent or Service Agent. If at any time the Company shall fail to maintain any such required Registrar, Paying Agent or Service Agent or shall fail to furnish the Trustee with the name and address thereof, such presentations, surrenders, notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive all such presentations, surrenders, notices and demands.

The Company may also from time to time designate one or more co-registrars, additional paying agents or additional service agents and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligations to maintain a Registrar, Paying Agent and Service Agent in each place so specified pursuant to Section 2.2 for Securities of any Series for such purposes. The Company will give prompt written notice to the Trustee of any such designation or rescission and of any change in the name or address of any such co-registrar, additional paying agent or additional service agent. The term "Registrar" includes any co-registrar; the term "Paying Agent" includes any additional paying agent; and the term "Service Agent" includes any additional service agent.

The Company hereby appoints the Trustee the initial Registrar, Paying Agent and Service Agent for each Series unless another Registrar, Paying Agent or Service Agent, as the case may be, is appointed prior to the time Securities of that Series are first issued.

Section 2.6. Paying Agent to Hold Money in Trust.

The Company shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust, for the benefit of Securityholders of any Series of Securities, or the Trustee, all money held by the Paying Agent for the payment of principal of or interest on the Series of Securities, and will notify the Trustee of any default by the Company in making any such payment. While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee. The Company or a Subsidiary) shall have no further liability for the money. If the Company or a Subsidiary acts as Paying Agent, it shall segregate and hold in a separate trust fund for the benefit of Securityholders of any Series of Securities all money held by it as Paying Agent.

Section 2.7. Securityholder Lists.

The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Securityholders of each Series of Securities and shall otherwise comply with TIA Section 312(a). If the Trustee is not the Registrar, the Company shall furnish to the Trustee at least ten days before each interest payment date and at such other times as the Trustee may request in writing a list, in such form and as of such date as the Trustee may reasonably require, of the names and addresses of Securityholders of each Series of Securities.

Section 2.8. Transfer and Exchange.

Upon surrender for registration of transfer of any Security at the office or agency of the Company designated for such purposes, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Securities of any authorized denomination or denominations of a like aggregate principal amount and tenor. No service charge shall be made for any registration of transfer or exchange (except as otherwise expressly permitted herein), but the Company may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection therewith (other than any such transfer tax or similar governmental charge payable upon exchanges pursuant to Sections 2.12, 3.6 or 9.5).

At the option of the Holder, Registered Securities of any Series may be exchanged for other Registered Securities of the same Series of any authorized denomination or denominations, of a like aggregate principal amount and tenor, upon surrender of the Securities to be exchanged at such office or agency. Whenever any Securities are so



surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Securities which the Holder making the exchange is entitled to receive. Bearer Securities may not be issued in exchange for Registered Securities.

All Securities issued upon any registration of transfer or exchange of Securities shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such registration of transfer or exchange.

Every Registered Security presented or surrendered for registration of transfer or exchange shall be duly endorsed, or be accompanied by a written instrument of transfer in form satisfactory to the Company and the Registrar duly executed, by the Holder thereof or his attorney duly authorized in writing.

Neither the Company nor the Registrar shall be required (a) to issue, register the transfer of, or exchange Securities of any Series for the period beginning at the opening of business 15 days immediately preceding the mailing of a notice of redemption of Securities of that Series selected for redemption and ending at the close of business on the day of such mailing, or (b) to register the transfer of or exchange Securities of any Series selected, called or being called for redemption as a whole or the portion being redeemed of any such Securities selected, called or being called for redemption in part.

Section 2.9. Mutilated, Destroyed, Lost and Stolen Securities.

If any mutilated Security is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a new Security of the same Series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

If there shall be delivered to the Company and the Trustee (i) evidence to their satisfaction of the destruction, loss or theft of any Security and (ii) such security or indemnity as may be required by them to save each of them and any agent of either of them harmless, then, in the absence of notice to the Company or the Trustee that such Security has been acquired by a bona fide purchaser, the Company shall execute and upon its request the Trustee shall authenticate and make available for delivery, in lieu of any such destroyed, lost or stolen Security, a new Security of the same Series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

In case any such mutilated, destroyed, lost or stolen Security has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security, pay such Security.

Upon the issuance of any new Security under this Section 2.9, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith.

Every new Security of any Series issued pursuant to this Section in lieu of any destroyed, lost or stolen Security shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone, and shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of that Series duly issued hereunder.

The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

Section 2.10. Outstanding Securities.

The Securities outstanding at any time are all the Securities authenticated by the Trustee except for those canceled by it, those delivered to it for cancellation, those reductions in the interest on a Global Security effected by the Trustee in accordance with the provisions hereof and those described in this Section as not outstanding.

If a Security is replaced pursuant to Section 2.9, it ceases to be outstanding until the Trustee receives proof satisfactory to it that the replaced Security is held by a bona fide purchaser.

If the Paying Agent (other than the Company, a Subsidiary or an Affiliate of any thereof) holds on the Maturity of Securities of a Series money sufficient to pay such Securities payable on that date, then on and after that date such Securities of the Series cease to be outstanding and interest on them ceases to accrue.

A Security does not cease to be outstanding because the Company or an Affiliate holds the Security.

In determining whether the Holders of the requisite principal amount of outstanding Securities have given any request, demand, authorization, direction, notice, consent or waiver hereunder, the principal amount of a Discount

Security that shall be deemed to be outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the Maturity thereof pursuant to Section 6.2.

Section 2.11. Treasury Securities.

In determining whether the Holders of the required principal amount of Securities of a Series have concurred in any request, demand, authorization, direction, notice, consent or waiver, Securities of a Series owned by the Company or an Affiliate shall be disregarded, except that for the purposes of determining whether the Trustee shall be protected in relying on any such request, demand, authorization, direction, notice, consent or waiver only Securities of a Series that the Trustee knows are so owned shall be so disregarded.

Section 2.12. Temporary Securities.

Until definitive Securities are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities upon a Company Order. Temporary Securities shall be substantially in the form of definitive Securities but may have variations that the Company considers appropriate for temporary Securities. Without unreasonable delay, the Company shall prepare and the Trustee upon request shall authenticate definitive Securities of the same Series and date of maturity in exchange for temporary Securities. Until so exchanged, temporary Securities shall have the same rights under this Indenture as the definitive Securities.

Section 2.13. Cancellation.

The Company at any time may deliver Securities to the Trustee for cancellation. The Registrar and the Paying Agent shall forward to the Trustee any Securities surrendered to them for registration of transfer, exchange or payment. The Trustee shall cancel all Securities surrendered for transfer, exchange, payment, replacement or cancellation and shall destroy such canceled Securities (subject to the record retention requirement of the Exchange Act) and deliver a certificate of such destruction to the Company, unless the Company otherwise directs. The Company may not issue new Securities to replace Securities that it has paid or delivered to the Trustee for cancellation.

Section 2.14. Defaulted Interest.

Unless the terms of a Series of Securities adopted pursuant to Section 2.2 shall provide otherwise, if the Company defaults in a payment of interest on a Series of Securities, it shall pay the defaulted interest, plus, to the extent permitted by law, any interest payable on the defaulted interest, to the persons who are Securityholders of the Series on a subsequent special record date. The Company shall fix the record date and payment date. At least 30 days before the record date, the Company shall mail to the Trustee and to each Securityholder of the Series a notice that states the record date, the payment date and the amount of interest to be paid. The Company may pay defaulted interest in any other lawful manner.

Section 2.15. Global Securities.

2.15.1. Terms of Securities. A Board Resolution, a supplemental indenture hereto or an Officers' Certificate shall establish whether the Securities of a Series shall be issued in whole or in part in the form of one or more Global Securities and the Depository for such Global Security or Securities.

2.15.2. Transfer and Exchange. Notwithstanding any provisions to the contrary contained in Section 2.8 of the Indenture and in addition thereto, any Global Security shall be exchangeable pursuant to Section 2.8 of the Indenture for Securities registered in the names of Holders other than the Depository for such Security or its nominee only if (i) such Depository notifies the Company that it is unwilling or unable to continue as Depository for such Global Security or if at any time such Depository ceases to be a clearing agency registered under the Exchange Act, and, in either case, the Company fails to appoint a successor Depository within 90 days of such event, (ii) the Company executes and delivers to the Trustee an Officers' Certificate to the effect that such Global Security shall be so exchangeable or (iii) an Event of Default with respect to the Securities represented by such Global Security shall have happened and be continuing. Any Global Security that is exchangeable pursuant to the preceding sentence shall be exchangeable for Securities registered in such names as the Depository shall direct in writing in an aggregate principal amount equal to the principal amount of the Global Security with like tenor and terms.

Except as provided in this Section 2.15.2, a Global Security may not be transferred except as a whole by the Depository with respect to such Global Security to a nominee of such Depository, by a nominee of such Depository to such Depository or another nominee of such Depository or by the Depository or any such nominee to a successor Depository or a nominee of such a successor Depository.

2.15.3. Legend. Any Global Security issued hereunder shall bear a legend in substantially the following form:

"This Security is a Global Security within the meaning of the Indenture hereinafter referred to and is registered in the name of the Depository or a nominee of the Depository. This Security is exchangeable for Securities registered in the name of a person other than the Depository or its nominee only in the limited circumstances described in the Indenture, and may not be transferred except as a whole by the Depository to a nominee of the Depository or another nominee of the Depository or by the Depository or any such nominee to a successor Depository or a nominee of such a successor Depository."

2.15.4. Acts of Holders. The Depository, as a Holder, may appoint agents and otherwise authorize participants to give or take any request, demand, authorization, direction, notice, consent, waiver or other action which a Holder is entitled to give or take under the Indenture.

2.15.5. Payments. Notwithstanding the other provisions of this Indenture, unless otherwise specified as contemplated by Section 2.2, payment of the principal of and interest, if any, on any Global Security shall be made to the Holder thereof.

2.15.6. Consents, Declaration and Directions. Except as provided in subparagraph 2.15.5, the Company, the Trustee and any Agent shall treat a person as the Holder of such principal amount of outstanding Securities of such Series represented by a Global Security as shall be specified in a written statement of the Depository with respect to such Global Security, for purposes of obtaining any consents, declarations, waivers or directions required to be given by the Holders pursuant to this Indenture.

Section 2.16. CUSIP Numbers.

The Company in issuing the Securities may use "CUSIP" numbers (if then generally in use), and, if so, the Trustee shall use "CUSIP" numbers in notices of redemption as a convenience to Holders; provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption and that reliance may be placed only on the other elements of identification printed on the Securities, and any such redemption shall not be affected by any defect in or omission of such numbers.

ARTICLE III.

REDEMPTION

Section 3.1. Notice to Trustee.

The Company may, with respect to any Series of Securities, reserve the right to redeem and pay the Series of Securities or may covenant to redeem and pay the Series of Securities or any part thereof prior to the Stated Maturity thereof at such time and on such terms as provided for in such Securities. If a Series of Securities is redeemable and the Company wants or is obligated to redeem prior to the Stated Maturity thereof all or part of the Series of Securities pursuant to the terms of such Securities, it shall notify the Trustee of the redemption date and the principal amount of Series of Securities to be redeemed. The Company shall give the notice at least 45 days before the redemption date (or such shorter notice as may be acceptable to the Trustee).

Section 3.2. Selection of Securities to be Redeemed.

Unless otherwise indicated for a particular Series by a Board Resolution, a supplemental indenture or an Officers' Certificate, if less than all the Securities of a Series are to be redeemed, the Trustee shall select the Securities of the Series to be redeemed by lot or in any other manner that the Trustee deems fair and appropriate. The Trustee shall make the selection from Securities of the Series outstanding not previously called for redemption. The Trustee may select for redemption portions of the principal of Securities of the Series that have denominations larger than \$1,000. Securities of the Series and portions of them it selects shall be in amounts of \$1,000 or whole multiples of \$1,000 or, with respect to Securities of any Series issuable in other denominations pursuant to Section 2.2.11, the minimum principal denomination for each Series and integral multiples thereof. Provisions of this Indenture that apply to Securities of a Series called for redemption also apply to portions of Securities of that Series called for redemption.

Section 3.3. Notice of Redemption.

Unless otherwise indicated for a particular Series by Board Resolution, a supplemental indenture hereto or an Officers' Certificate, at least 30 days but not more than 60 days before a redemption date, the Company shall mail a notice of redemption by first-class mail to each Holder whose Securities are to be redeemed and if any Bearer Securities are outstanding, publish on one occasion a notice in an Authorized Newspaper.

The notice shall identify the Securities of the Series to be redeemed and shall state:

- (a) the redemption date;
- (b) the redemption price;
- (c) the name and address of the Paying Agent;
- (d) that Securities of the Series called for redemption must be surrendered to the Paying Agent to collect the redemption price;
- (e) that interest on Securities of the Series called for redemption ceases to accrue on and after the redemption date; and
- (f) any other information as may be required by the terms of the particular Series or the Securities of a Series being redeemed.

At the Company's request, the Trustee shall give the notice of redemption in the Company's name and at its expense.

Section 3.4. Effect of Notice of Redemption.

Once notice of redemption is mailed or published as provided in Section 3.3, Securities of a Series called for redemption become due and payable on the redemption date and at the redemption price. A notice of redemption may not be conditional. Upon surrender to the Paying Agent, such Securities shall be paid at the redemption price plus accrued interest to the redemption date.

Section 3.5. Deposit of Redemption Price.

On or before the redemption date, the Company shall deposit with the Paying Agent money sufficient to pay the redemption price of and accrued interest, if any, on all Securities to be redeemed on that date.

Section 3.6. Securities Redeemed in Part.

Upon surrender of a Security that is redeemed in part, the Trustee shall authenticate for the Holder a new Security of the same Series and the same maturity equal in principal amount to the unredeemed portion of the Security surrendered.

ARTICLE IV.

COVENANTS

Section 4.1. Payment of Principal and Interest.

The Company covenants and agrees for the benefit of the Holders of each Series of Securities that it will duly and punctually pay the principal of and interest, if any, on the Securities of that Series in accordance with the terms of such Securities and this Indenture.

Section 4.2. SEC Reports.

The Company shall deliver to the Trustee within 15 days after it files them with the SEC, copies of the annual reports and of the information, documents, and other reports (or copies of such portions of any of the foregoing as the SEC may by rules and regulations prescribe) which the Company is required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act. The Company also shall comply with the other provisions of TIA Section 314(a).

Section 4.3. Compliance Certificate.

The Company shall deliver to the Trustee, within 120 days after the end of each fiscal year of the Company, an Officers' Certificate stating that a review of the activities of the Company and its Subsidiaries during the preceding fiscal year has been made under the supervision of the signing Officers with a view to determining whether the Company has kept, observed, performed and fulfilled its obligations under this Indenture, and further stating, as to each such Officer signing such certificate, that to the best of his knowledge the Company has kept, observed, performed and fulfilled each and every covenant contained in this Indenture and is not in default in the performance or observance of any of the terms, provisions and conditions hereof (or, if a Default or Event of Default shall have occurred, describing all such Defaults or Events of Default of which he may have knowledge).

The Company will, so long as any of the Securities are outstanding, deliver to the Trustee, forthwith upon becoming aware of any Default or Event of Default, an Officers' Certificate specifying such Default or Event of Default and what action the Company is taking or proposes to take with respect thereto.

Section 4.4. Stay, Extension and Usury Laws.

The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture or the Securities; and the Company (to the extent it may lawfully do so) hereby expressly waives all benefit or advantage of any such law and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law has been enacted.

Section 4.5. Corporate Existence.

Subject to Article V, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and the corporate, partnership or other existence of each Significant Subsidiary in accordance with the respective organizational documents of each Significant Subsidiary and the rights (charter and statutory), licenses and franchises of the Company and its Significant Subsidiaries; provided, however, that the Company shall not be required to preserve any such right, license or franchise, or the corporate, partnership or other existence of any Significant Subsidiary, if the Board of Directors shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Company and its Subsidiaries taken as a whole and that the loss thereof is not adverse in any material respect to the Holders.

ARTICLE V.

SUCCESSORS

Section 5.1. When Company May Merge, Etc.

The Company shall not consolidate with or merge with or into any other person or convey, transfer or lease its properties and assets substantially as an entirety to any person, unless:

(a) either (1) the Company shall be the continuing corporation or (2) the person (if other than the Company) formed by such consolidation or into which the Company is merged or the person which acquires by conveyance, transfer or lease the properties and assets of the Company substantially as an entirety (i) shall be a corporation, partnership, limited liability company, trust or other entity organized and validly existing under the laws of Singapore, the United States or any state thereof or the District of Columbia and (ii) shall expressly assume, by an indenture supplemental hereto, executed and delivered to the Trustee, in form satisfactory to the Trustee, all of the obligations of the Company under the Securities and this Indenture;

(b) immediately after giving effect to the transaction, no Default or Event of Default shall have occurred and be continuing; and

(c) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that such consolidation, merger, conveyance, transfer or lease and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture, comply with this Article and that all conditions precedent herein provided for relating to such transaction have been satisfied.

Section 5.2. Successor Corporation Substituted.

Upon any consolidation or merger, or any sale, lease, conveyance or other disposition of the properties and assets substantially as an entirety of the Company in accordance with Section 5.1, the successor person formed by any such consolidation or into which the Company is merged or the successor person to which such conveyance, transfer or lease is made shall succeed to, and be substituted for, and may exercise every right and power of the Company under this Indenture with the same effect as if such successor had been named as the Company herein; and thereafter, except in the case of a lease of its properties and assets substantially as an entirety, the Company shall be discharged from all obligations and covenants under this Indenture and the Securities.

ARTICLE VI.

DEFAULTS AND REMEDIES

Section 6.1. Events of Default.

"Event of Default," whenever used herein with respect to Securities of any Series, means any one of the following events, unless in the establishing Board Resolution, supplemental indenture or Officers' Certificate it is provided that such Series shall not have the benefit of said Event of Default:

(a) the Company defaults in (i) the payment of the principal of any Security of such Series at its Maturity or (ii) the payment of any interest on any Security of that Series when it becomes due and payable, and continuance of such default for a period of 30 days (unless the entire amount of such payment is deposited by the Company with the Trustee or with a Paying Agent prior to the expiration of such period of 30 days);

(b) the Company fails to comply with any of its agreements in the Securities or this Indenture (other than those referred to in clause (a) above and other than a covenant or warranty a default in whose performance or whose breach is elsewhere in this Section specifically deal with or which has been expressly included in this Indenture solely for the benefit of a Series of Securities other than such Series) and such failure continues for 60 days after there has been given, by registered or certified mail, to the Company by the Trustee or to the Company and the Trustee by the Holders of at least 25% in principal amount of the outstanding Securities of that Series a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" hereunder;

(c) the Company pursuant to or within the meaning of any Bankruptcy Law:

(i) commences a voluntary case,

(ii) consents to the entry of an order for relief against it in an involuntary case,

(iii) consents to the appointment of a Custodian of it or for all or substantially all of its property,

(iv) makes a general assignment for the benefit of its creditors, or

(v) generally is unable to pay its debts as the same become due; or

(d) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that:

(i) is for relief against the Company in an involuntary case,

(ii) appoints a Custodian of the Company for all or substantially all of its property, or

(iii) orders the liquidation of the Company or any of its Significant Subsidiaries, and the order or decree remains unstayed and in effect for 60 days; or

(e) any other Event of Default provided with respect to Securities of that Series, which is specified in a Board Resolution, a supplemental indenture hereto or an Officers' Certificate, in accordance with Section 2.2 hereof.

The term "Bankruptcy Law" means Title 11, U.S. Code or any similar Federal or state law or applicable non U.S. law for the relief of debtors. The term "Custodian" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

Section 6.2. Acceleration of Maturity; Rescission and Annulment.

If an Event of Default with respect to Securities of any Series at the time outstanding occurs and is continuing (other than an Event of Default referred to in Section 6.1(c) or (d)) then in every such case the Trustee or the Holders of not less than 25% in principal amount of the outstanding Securities of that Series may declare the principal amount (or, if any Securities of that Series are Discount Securities, such portion of the principal amount as may be specified in the terms of such Securities) of and accrued and unpaid interest, if any, on all of the Securities of that Series to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by Holders), and upon any such declaration such principal amount (or specified amount) and accrued and unpaid interest, if any, shall become immediately due and payable. If an Event of Default specified in Section 6.1(c) or (d) shall occur, the principal amount (or specified amount) of and accrued and unpaid interest, if any, on all outstanding Securities shall ipso facto become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Holder.

At any time after such a declaration of acceleration with respect to any Series has been made and before a judgment or decree for payment of the money due has been obtained by the Trustee as hereinafter in this Article VI provided, the Holders of a majority in principal amount of the outstanding Securities of that Series, by written notice to the Company and the Trustee, may rescind and annul such declaration and its consequences if:

(a) the Company has paid or deposited with the Trustee a sum sufficient to pay:

(i) all overdue interest, if any, on all Securities of that Series,

(ii) the principal of any Securities of that Series which have become due otherwise than by such declaration of acceleration and interest thereon at the rate or rates prescribed therefor in such Securities,

(iii) to the extent that payment of such interest is lawful, interest upon any overdue principal and overdue interest at the rate or rates prescribed therefor in such Securities, and

(iv) all sums paid or advanced by the Trustee hereunder and the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel; and

(b) all Events of Default with respect to Securities of that Series, other than the non-payment of the principal of Securities of that Series which have become due solely by such declaration of acceleration, have been cured or waived as provided in Section 6.13.

No such rescission shall affect any subsequent Default or impair any right consequent thereon.

Section 6.3. Collection of Indebtedness and Suits for Enforcement by Trustee.

The Company covenants that if

(a) default is made in the payment of any interest on any Security when such interest becomes due and payable and such default continues for a period of 30 days, or

(b) default is made in the payment of principal of any Security at the Maturity thereof, or

(c) default is made in the deposit of any sinking fund payment when and as due by the terms of a Security, then, the Company will, upon demand of the Trustee, pay to it, for the benefit of the Holders of such Securities, the whole amount then due and payable on such Securities for principal and interest and, to the extent that payment of such interest shall be legally enforceable, interest on any overdue principal or any overdue interest, at the rate or rates prescribed therefor in such Securities, and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

If the Company fails to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, may institute a judicial proceeding for the collection of the sums so due and unpaid, may prosecute such proceeding to judgment or final decree and may enforce the same against the Company or any other obligor upon such Securities and collect the moneys adjudged or deemed to be payable in the manner provided by law out of the property of the Company or any other obligor upon such Securities, wherever situated.

If an Event of Default with respect to any Securities of any Series occurs and is continuing, the Trustee may in its discretion proceed to protect and enforce its rights and the rights of the Holders of Securities of such Series by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, whether for the specific enforcement of any covenant or agreement in this Indenture or in aid of the exercise of any power granted herein, or to enforce any other proper remedy.

Section 6.4. Trustee May File Proofs of Claim.

In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to the Company or any other obligor upon the Securities or the property of the Company or of such other obligor or their creditors, the Trustee (irrespective of whether the principal of the Securities shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Company for the payment of overdue principal or interest) shall be entitled and empowered, by intervention in such proceeding or otherwise,

(a) to file and prove a claim for the whole amount of principal and interest owing and unpaid in respect of the Securities and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel) and of the Holders allowed in such judicial proceeding, and

(b) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same, and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amount due it for the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, and any other amounts due the Trustee under Section 7.7.

Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding.

Section 6.5. Trustee May Enforce Claims Without Possession of Securities.

All rights of action and claims under this Indenture or the Securities may be prosecuted and enforced by the Trustee without the possession of any of the Securities or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders of the Securities in respect of which such judgment has been recovered.

Section 6.6. Application of Money Collected.

Any money collected by the Trustee pursuant to this Article VI shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money on account of principal or interest, upon presentation of the Securities and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

First: To the payment of all amounts due the Trustee under Section 7.7; and

Second: To the payment of the amounts then due and unpaid for principal of and interest on the Securities in respect of which or for the benefit of which such money has been collected, ratably, without preference or priority of any kind, according to the amounts due and payable on such Securities for principal and interest, respectively; and

Third: To the Company.

Section 6.7. Limitation on Suits.

No Holder of any Security of any Series shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless

(a) such Holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Securities of that Series;

(b) the Holders of not less than 25% in principal amount of the outstanding Securities of that Series shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(c) such Holder or Holders have offered to the Trustee reasonable indemnity against the costs, expenses and liabilities to be incurred in compliance with such request;

and

(d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding;

(e) no direction inconsistent with such written request has been given to the Trustee during such 60-day period by the Holders of a majority in principal amount of the outstanding Securities of that Series;

it being understood and intended that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of, any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders, or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all such Holders.

Section 6.8. Unconditional Right of Holders to Receive Principal and Interest.

Notwithstanding any other provision in this Indenture, the right, which is absolute and unconditional, of any Holder of any Security to receive payment of the principal of and interest on such Security on the Stated Maturity or Maturities expressed in such Security (or in the case of redemption, on the redemption date) held by such Holder, on or after the respective due dates expressed in the Securities or any redemption date, or to bring suit for the enforcement of any such payment on or after the respective dates, shall not be impaired or affected adversely without the consent of each such Holder.

Section 6.9. Restoration of Rights and Remedies.

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, the Trustee and the Holders shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and the Holders shall continue as though no such proceeding had been instituted.

Section 6.10. Rights and Remedies Cumulative.

Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities in Section 2.9, no right or remedy herein conferred upon or reserved to the Trustee or to the Holders is intended to be exclusive of any other right or remedy, and every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

Section 6.11. Delay or Omission Not Waiver.

No delay or omission of the Trustee or of any Holder of any Securities to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article VI or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 6.12. Control by Holders.

The Holders of a majority in principal amount of the outstanding Securities of any Series shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee, with respect to the Securities of such Series. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture or that the Trustee determines in good faith is unduly prejudicial to the rights of other Holders or would involve the Trustee in personal liability.

Section 6.13. Waiver of Past Defaults.

The Holders of a majority in aggregate principal amount of the outstanding Securities of any Series, by notice to the Trustee (and without notice to any other Holder), may on behalf of the Holders of all of the Securities of such Series waive an existing Default with respect to such Series and its consequences except that the consent of the Holders of 100% of the Securities of such Series shall be required to waive (a) an Event of Default described in Section 6.1(a) with respect to such Series or (b) a Default in respect of a provision that under Section 9.2 cannot be amended without the consent of the Holder of each outstanding Security of the Series affected. When a Default is waived, it is deemed cured, but no such waiver shall extend to any subsequent or other Default or impair any consequent right.

Section 6.14. Undertaking for Costs.

All parties to this Indenture agree, and each Holder of any Security by his acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section 6.14 shall not apply to any suit instituted by the Company, to any suit instituted by the Trustee, to any suit instituted by any Holder, or group of Holders, holding in the aggregate more than 10% in principal amount of the outstanding Securities of any Series, or to any suit instituted by any Holder for the enforcement of the payment of the principal of or interest on any Security on or after the Stated Maturity or Stated Maturities expressed in such Security (or, in the case of redemption, on the redemption date).

ARTICLE VII.

TRUSTEE

Section 7.1. Duties of Trustee.

(a) If an Event of Default has occurred and is continuing, the Trustee shall exercise the rights and powers vested in it by this Indenture and use the same degree of care and skill in its exercise as a prudent man would exercise or use under the circumstances in the conduct of his own affairs.

(b) Except during the continuance of an Event of Default:

(i) The Trustee need perform only those duties that are specifically set forth in this Indenture and no others. The permissive right of the Trustee to take or refrain from taking any action hereunder shall not be construed as a duty.

(ii) In the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon Officers' Certificates or Opinions of Counsel furnished to the Trustee and conforming to the requirements of this Indenture; however, in the case of any such Officers' Certificates or Opinions of Counsel which by any provisions hereof are specifically required to be furnished to the Trustee, the Trustee shall examine such Officers' Certificates and Opinions of Counsel to determine whether or not they conform to the requirements of this Indenture.

(c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) This paragraph does not limit the effect of paragraph (b) of this Section.

(ii) The Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts.

(iii) The Trustee shall not be liable with respect to any action taken, suffered or omitted to be taken by it with respect to Securities of any Series in good faith in accordance with the direction of the Holders of a majority in principal amount of the outstanding Securities of such Series relating to the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, under this Indenture with respect to the Securities of such Series.

(d) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraph (a), (b) and (c) of this Section 7.1.

(e) The Trustee may refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against any loss, liability or expense.

(f) The Trustee shall not be liable for interest on any money received by it except as the Trustee may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

(g) No provision of this Indenture shall require the Trustee to risk its own funds or otherwise incur any financial liability in the performance of any of its duties, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk is not reasonably assured to it.

(h) The Paying Agent, the Registrar and any authenticating agent shall be entitled to the protections, immunities and standard of care as are set forth in paragraphs (a), (b) and (c) of this Section with respect to the Trustee.

Section 7.2. Rights of Trustee.

(a) The Trustee may rely on and shall be protected in acting or refraining from acting upon any document believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document.

(b) Before the Trustee acts or refrains from acting, it may require an Officers' Certificate or an Opinion of Counsel. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officers' Certificate or Opinion of Counsel.

(c) The Trustee may act through agents and shall not be responsible for the misconduct or negligence of any agent appointed with due care. No Depository shall be deemed an agent of the Trustee and the Trustee shall not be responsible for any act or omission by any Depository.

(d) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its rights or powers.

(e) The Trustee may consult with counsel and the advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon.

(f) The Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any of the Holders of Securities unless such Holders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction.

Section 7.3. Individual Rights of Trustee.

The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or an Affiliate with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. The Trustee is also subject to Sections 7.10 and 7.11.

Section 7.4. Trustee's Disclaimer.

The Trustee shall not be responsible for and makes no representation as to the validity or adequacy of this Indenture or the Securities, it shall not be accountable for the Company's use of the proceeds from the Securities, and it shall not be responsible for any statement or recital herein or any statement in the Securities or any other document in connection with the sale of the Securities or pursuant to this Indenture other than its authentication.

Section 7.5. Notice of Defaults.

If a Default or Event of Default occurs and is continuing with respect to the Securities of any Series and if it is known to a Responsible Officer of the Trustee, the Trustee shall mail to each Securityholder of the Securities of that Series and, if any Bearer Securities are outstanding, publish on one occasion in an Authorized Newspaper, notice of a Default or Event of Default within 90 days after it occurs or, if later, after a Responsible Officer of the Trustee has knowledge of such Default or Event of Default. Except in the case of a Default or Event of Default in payment of principal of or interest on any Security of any Series, the Trustee may withhold the notice if and so long as its corporate trust committee or a committee of its Responsible Officers in good faith determines that withholding the notice is in the interests of Securityholders of that Series.

Section 7.6. Reports by Trustee to Holders.

Within 60 days after [date] in each year, the Trustee shall transmit by mail to all Securityholders, as their names and addresses appear on the register kept by the Registrar and, if any Bearer Securities are outstanding, publish in an Authorized Newspaper, a brief report dated as of such [date], in accordance with, and to the extent required under, TIA Section 313.

A copy of each report at the time of its mailing to Securityholders of any Series shall be filed with the SEC and each stock exchange on which the Securities of that Series are listed. The Company shall promptly notify the Trustee when Securities of any Series are listed on any stock exchange.

Section 7.7. Compensation and Indemnity.

The Company shall pay to the Trustee from time to time reasonable compensation for its services. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee upon request for all reasonable out-of-pocket expenses incurred by it. Such expenses shall include the reasonable compensation and expenses of the Trustee's agents and counsel.

The Company shall indemnify the Trustee (including the cost of defending itself) against any loss, liability or expense incurred by it except as set forth in the next paragraph in the performance of its duties under this Indenture as Trustee or Agent. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have separate counsel and the Company shall pay the reasonable fees and expenses of such counsel. The Company need not pay for any settlement made without its consent, which consent shall not be unreasonably withheld. This indemnification shall apply to officers, directors, employees, shareholders and agents of the Trustee.

The Company need not reimburse any expense or indemnify against any loss or liability determined by a court to have been incurred by the Trustee or by any officer, director, employee, shareholder or agent of the Trustee through negligence or bad faith.

To secure the Company's payment obligations in this Section 7.7, the Trustee shall have a lien prior to the Securities of any Series on all money or property held or collected by the Trustee, except that held in trust to pay principal and interest on particular Securities of that Series.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 6.1(e) or (f) occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any Bankruptcy Law.

Section 7.8. Replacement of Trustee.

A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section 7.8.

The Trustee may resign with respect to the Securities of one or more Series by so notifying the Company. The Holders of a majority in principal amount of the Securities of any Series may remove the Trustee with respect to that Series by so notifying the Trustee and the Company in writing. The Company may remove the Trustee with respect to Securities of one or more Series if:

(a) the Trustee fails to comply with Section 7.10;

(b) the Trustee is adjudged bankrupt or insolvent or an order for relief is entered with respect to the Trustee under any Bankruptcy

Law;

(c) a Custodian or public officer takes charge of the Trustee or its property; or

(d) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor Trustee. Within one year after the successor Trustee takes office, the Holders of a majority in principal amount of the then outstanding Securities may appoint a successor Trustee to replace the successor Trustee appointed by the Company.

If a successor Trustee with respect to the Securities of any one or more Series does not take office within 60 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Holders of at least 10% in principal amount of the Securities of the applicable Series may petition any court of competent jurisdiction for the appointment of a successor Trustee.

If the Trustee with respect to the Securities of any one or more Series fails to comply with Section 7.10, any Securityholder of the applicable Series may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Immediately after that, the retiring Trustee shall transfer all property held by it as Trustee to the successor Trustee subject to the lien provided for in Section 7.7, the resignation or removal of the retiring Trustee shall become effective, and the successor Trustee shall have all the rights, powers and duties of the Trustee with respect to each Series of Securities for which it is acting as Trustee under this Indenture. A successor Trustee shall mail a notice of its succession to each Securityholder of each such Series and, if any Bearer Securities are outstanding, publish such notice on one occasion in an Authorized Newspaper. Notwithstanding replacement of the Trustee pursuant to this Section 7.8, the Company's obligations under Section 7.7 hereof shall continue for the benefit of the retiring trustee with respect to reasonable expenses and liabilities incurred by it prior to such replacement.

Section 7.9. Successor Trustee by Merger, Etc.

If the Trustee consolidates with, merges or converts into, or transfers all or substantially all of its corporate trust business to, another corporation, the successor corporation without any further act shall be the successor Trustee.

Section 7.10. Eligibility; Disqualification.

This Indenture shall always have a Trustee who satisfies the requirements of TIA Section 310(a)(1), (2) and (5). The Trustee shall always have a combined capital and surplus of at least \$25,000,000 as set forth in its most recent published annual report of condition. The Trustee shall comply with TIA Section 310(b).

Section 7.11. Preferential Collection of Claims Against Company.

The Trustee is subject to TIA Section 311(a), excluding any creditor relationship listed in TIA Section 311(b). A Trustee who has resigned or been removed shall be subject to TIA Section 311(a) to the extent indicated.

ARTICLE VIII.

SATISFACTION AND DISCHARGE; DEFEASANCE

Section 8.1. Satisfaction and Discharge of Indenture.

This Indenture shall upon Company Order cease to be of further effect (except as hereinafter provided in this Section 8.1), and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging satisfaction and discharge of this Indenture, when

(a) either

(i) all Securities theretofore authenticated and delivered (other than Securities that have been destroyed, lost or stolen and that have been replaced or paid) have been delivered to the Trustee for cancellation; or

(ii) all such Securities not theretofore delivered to the Trustee for cancellation pursuant to (i) above

(1) have become due and payable, or

(2) will become due and payable at their Stated Maturity within one year, or

(3) are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee in the name, and at the expense, of the Company, or

(4) are deemed paid and discharged pursuant to Section 8.3, as applicable;

and the Company, in the case of (1), (2) or (3) above, has deposited or caused to be deposited with the Trustee in trust an amount, without reinvestment, which is sufficient for the purpose of paying and discharging the entire

indebtedness on such Securities not theretofore delivered to the Trustee for cancellation, for principal and interest to the date of such deposit (in the case of Securities which have become due and payable on or prior to the date of such deposit) or to the Stated Maturity or redemption date, as the case may be;

(b) the Company has paid or caused to be paid all other sums payable hereunder by the Company; and

(c) the Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the satisfaction and discharge of this Indenture have been complied with.

Notwithstanding the satisfaction and discharge of this Indenture, the obligations of the Company to the Trustee under Section 7.7, and, if money shall have been deposited with the Trustee pursuant to clause (a) of this Section, the provisions of Sections 2.5, 2.8, 2.9, 8.1, 8.2 and 8.5 shall survive.

Section 8.2. Application of Trust Funds; Indemnification.

(a) Subject to the provisions of Section 8.5, all money deposited with the Trustee pursuant to Section 8.1, all money and Government Obligations deposited with the Trustee pursuant to Section 8.3 or 8.4 and all money received by the Trustee in respect of Government Obligations deposited with the Trustee pursuant to Section 8.3 or 8.4, shall be held in trust and applied by it, in accordance with the provisions of the Securities and this Indenture, to the payment, either directly or through any Paying Agent (including the Company acting as its own Paying Agent) as the Trustee may determine, to the persons entitled thereto, of the principal and interest for whose payment such money has been deposited with or received by the Trustee or to make mandatory sinking fund payments or analogous payments as contemplated by Sections 8.3 or 8.4.

(b) The Company shall pay and shall indemnify the Trustee against any tax, fee or other charge imposed on or assessed against Government Obligations deposited pursuant to Sections 8.3 or 8.4 or the interest and principal received in respect of such Government Obligations other than any payable by or on behalf of Holders.

(c) The Trustee shall deliver or pay to the Company from time to time upon Company Request any Government Obligations or money held by it as provided in Sections 8.3 or 8.4 which, in the opinion of a nationally recognized firm of independent certified public accountants expressed in a written certification thereof delivered to the Trustee, are then in excess of the amount thereof which then would have been required to be deposited for the purpose for which such Government Obligations or money were deposited or received. This provision shall not authorize the sale by the Trustee of any Government Obligations held under this Indenture.

Section 8.3. Legal Defeasance of Securities of any Series.

Unless this Section 8.3 is otherwise specified, pursuant to subparagraph 2.2.17, to be inapplicable to Securities of any Series, the Company shall be deemed to have paid and discharged the entire indebtedness on all the outstanding Securities of such Series on the date of the deposit referred to in subparagraph (c)(1) hereof, and the provisions of this Indenture, as it relates to such outstanding Securities of such Series, shall no longer be in effect (and the Trustee, at the expense of the Company, shall, at Company Request, execute proper instruments acknowledging the same), except as to:

(a) the rights of Holders of Securities of such Series to receive, from the trust funds described in subparagraph (c)(1) hereof, (i) payment of the principal of and each installment of principal of and interest on the outstanding Securities of such Series on the Stated Maturity of such principal or installment of principal or interest and (ii) the benefit of any mandatory sinking fund payments applicable to the Securities of such Series on the day on which such payments are due and payable in accordance with the terms of this Indenture and the Securities of such Series;

(b) the provisions of Sections 2.5, 2.8, 2.9, 8.2, 8.3 and 8.5; and (c) the rights, powers, trust and immunities of the Trustee hereunder; provided that, the following conditions shall have been satisfied:

(1) The Company shall have irrevocably deposited with the Trustee, in trust, (i) sufficient funds in the currency or currency unit in which the Securities of such Series are denominated to pay, without reinvestment, the principal of and interest to Stated Maturity (or redemption) on, the Securities of such Series, or (ii) such amount of direct obligations of, or obligations the principal of and interest on which are fully guaranteed by, the government which issued the currency in which the Securities of such series are denominated ("Government Obligations"), and which are not subject to prepayment, redemption or call, as will, together with the predetermined and certain income to accrue thereon without consideration of any reinvestment thereof, be sufficient to pay when due the principal of, and interest to Stated Maturity (or redemption) on, the Securities of such Series.

(2) The Company shall have delivered to the Trustee an Opinion of Counsel that the Company has met all of the conditions precedent to such defeasance and based on the fact that (x) the Company has received from the Internal Revenue Service a ruling or (y), since the date hereof, there has been a change in the applicable United States federal income tax law, in either case to the effect that, and such opinion shall confirm that, the Holders of the Securities of such Series will not recognize income, gain or loss for United States federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to United States federal income tax on the same amount and in the same manner and at the same times, as would have been the case if such deposit, defeasance and discharge had not occurred.

Section 8.4. Covenant Defeasance.

Unless this Section 8.4 is otherwise specified pursuant to subparagraph 2.2.17 to be inapplicable to Securities of any Series, on the date of the deposit referred to in subparagraph (a) hereof, the Company may omit to comply with any term, provision or condition set forth under Sections 4.2, 4.3, 4.4, 4.5 and 5.1 as well as any additional covenants contained in a supplemental indenture hereto for a particular Series of Securities or a Board Resolution or an Officers' Certificate delivered pursuant to Section 2.2.21 (and the failure to comply with any such covenants shall not constitute a Default or Event of Default under Section 6.1) and the occurrence of any event described in clause (e) of Section 6.1 shall not constitute a Default or Event of Default hereunder, with respect to the Securities of such Series, provided that the following conditions shall have been satisfied:

(a) The Company shall have irrevocably deposited with the Trustee, in trust, (i) sufficient funds in the currency or currency unit in which the Securities of such Series are denominated to pay the principal of and interest to Stated Maturity (or redemption) on, the Securities of such Series, or (ii) such amount of Government Obligations, which are not subject to prepayment, redemption or call, as will, together with the predetermined and certain income to accrue thereon without consideration of any reinvestment thereof, be sufficient to pay when due the principal of, and interest to Stated Maturity (or redemption) on, the Securities of such Series.

(b) The Company has delivered to the Trustee an Opinion of Counsel that the Company has met all of the conditions precedent to such defeasance and to the effect that, and such opinion shall confirm that, the Holders of the Securities of such Series will not recognize income, gain or loss for United States federal income tax purposes as a result of such deposit and covenant defeasance and will be subject to United States federal income tax on the same manner and at the same times, as would have been the case if such deposit and covenant defeasance had not occurred.

Section 8.5. Repayment to Company.

The Trustee and the Paying Agent shall pay to the Company upon request any money held by them for the payment of principal and interest that remains unclaimed for two years. After that, Securityholders entitled to the money must look to the Company for payment as general creditors unless an applicable abandoned property law designates another person.

ARTICLE IX.

AMENDMENTS AND WAIVERS

Section 9.1. Without Consent of Holders.

The Company and the Trustee may amend or supplement this Indenture or the Securities of one or more Series without the consent of any Securityholder:

(a) to evidence the succession of another corporation to the Company and the assumption by any such successor of the covenants of the Company herein and in the Securities;

(b) to add to the covenants, agreements and obligations of the Company for the benefit of the Holders of all of the Securities or any Series thereof, or to surrender any right or power herein conferred upon the Company;

(c) to establish the forms or terms of Securities of any Series;

(d) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee with respect to the Securities of one or more series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one Trustee, pursuant to the requirements of Section 7.8;

(e) to cure any ambiguity, defect or inconsistency;

(f) to add to, change or eliminate any of the provisions of this Indenture (which addition, change or elimination may apply to one or more Series of Securities), provided that any such addition, change or elimination shall neither (i) apply to any Security of any Series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the rights of the Holder of any such Security with respect to such provision;

(g) to secure the Securities; or

(h) to make any other change that does not adversely affect the rights of any Securityholder in any material respect.

Section 9.2. With Consent of Holders.

With the written consent of the Holders of at least a majority in aggregate principal amount of the outstanding Securities of each Series affected by such supplemental indenture, the Company and the Trustee may amend this Indenture or the Securities of any Series or may enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of modifying in any manner the rights of the Holders of the Securities of such series and any related coupons under this Indenture; provided, however, that no such amendment or supplemental indenture shall, without the consent of the Holder of each outstanding Security affected thereby:

(a) change the Stated Maturity of the principal of, or any installment of principal or interest on, any such Security or reduce the principal amount thereof or the rate of interest thereon or any premium payable upon redemption thereof or reduce the amount of principal of any such Discount Security that would be due and payable upon a declaration of acceleration of maturity thereof pursuant to Section 6.2, or change the coin or currency in which, any principal of, or any installment of interest on, any such Security is payable, or impair the right to institute suit for the enforcement of any such payment on or after the Stated Maturity thereof (or, in the case of redemption, on or after the redemption date);

(b) reduce the percentage in principal amount of the outstanding Securities of any series, the consent of whose Holders is required for any such amendment or supplemental indenture, or the consent of whose Holders is required for any waiver (of compliance with certain provisions of this Indenture or certain defaults hereunder and their consequences) with respect to the Securities of such Series provided for in this Indenture; or

(c) modify any of the provisions of this Section, Section 6.4 or 6.7, except to increase the percentage of outstanding Securities of such Series required for such actions to provide that certain other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each outstanding Security affected thereby.

A supplemental indenture which changes or eliminates any covenant or other provision of this Indenture which has expressly been included solely for the benefit of one or more particular Series of Securities, or which modifies the rights of the Holders of Securities of such Series with respect to such covenant or other provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other Series.

An amendment may not make any change that adversely affects the rights under Article XII of any Holder of Senior Indebtedness then outstanding unless the requisite holders of such Senior Indebtedness consent to such change pursuant to the terms of such Senior Indebtedness.

It shall not be necessary for the consent of the Holders under this Section 9.2 to approve the particular form of any proposed amendment or supplemental indenture, but it shall be sufficient if such consent approves the substance thereof.

After an amendment or supplemental indenture under this Section 9.2 becomes effective, the Company shall mail to each Holder of the particular Securities affected thereby and, if any Bearer Securities affected thereby are outstanding, publish on one occasion in an Authorized Newspaper, a notice briefly describing the amendment. Any failure by the Company to mail or publish such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such amendment or supplemental indenture.

Section 9.3. Compliance with Trust Indenture Act.

Every amendment to this Indenture or the Securities of one or more Series shall be set forth in a supplemental indenture hereto that complies with the TIA as then in effect.

Section 9.4. Revocation and Effect of Consents.

Until an amendment or waiver becomes effective, a consent to it by a Holder of a Security is a continuing consent by the Holder and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security, even if notation of the consent is not made on any Security. However, any such Holder or subsequent Holder may revoke the consent as to his Security or portion of a Security if the Trustee receives the notice of revocation before the date the amendment or waiver becomes effective.

Any amendment or waiver once effective shall bind every Securityholder of each Series affected by such amendment or waiver unless it is of the type described in any of clauses (a) through (c) of Section 9.2. In that case, the amendment or waiver shall bind each Holder of a Security who has consented to it and every subsequent Holder of a Security or portion of a Security that evidences the same debt as the consenting Holder's Security.

Section 9.5. Notation on or Exchange of Securities.

The Trustee may place an appropriate notation about an amendment or waiver on any Security of any Series thereafter authenticated. The Company in exchange for Securities of that Series may issue and the Trustee shall authenticate upon request new Securities of that Series that reflect the amendment or waiver.

Section 9.6. Trustee Protected.

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article IX or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Section 7.1) shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee shall sign all supplemental indentures, except that the Trustee need not sign any supplemental indenture that adversely affects its rights.

ARTICLE X.

MISCELLANEOUS

Section 10.1. Trust Indenture Act Controls.

If any provision of this Indenture limits, qualifies, or conflicts with another provision which is required or deemed to be included in this Indenture by the TIA, such required or deemed provision shall control.

Section 10.2. Notices.

Any notice or communication by the Company or the Trustee to the other is duly given if in writing and delivered in person or mailed by firstclass mail (registered or certified, return receipt requested), telecopier or overnight air courier guaranteeing next day delivery, to the other's address:

if to the Company:

Wave Life Sciences Ltd. 733 Concord Avenue Cambridge, MA 02138 USA Phone: +617-949-2900 Fax: +617-949-2901 Attention: Chief Financial Officer

if to the Trustee:

Fax:

The Company or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication to a Securityholder shall be mailed by first-class mail, certified or registered, return receipt requested, or by overnight courier guaranteeing next day delivery to his or her address shown on the register kept by the Registrar and, if any Bearer Securities are outstanding, published in an Authorized Newspaper. Failure to mail a notice or communication to a Securityholder of any Series or any defect in it shall not affect its sufficiency with respect to other Securityholders of that or any other Series.

If a notice or communication is mailed, personally delivered or published in the manner provided above, within the time prescribed, it is duly given, whether or not the Securityholder receives it.

If the Company mails a notice or communication to Securityholders, it shall mail a copy to the Trustee and each Agent at the same time.

Section 10.3. Communication by Holders with Other Holders.

Securityholders of any Series may communicate pursuant to TIA Section 312(b) with other Securityholders of that Series or any other Series with respect to their rights under this Indenture or the Securities of that Series or all Series. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA Section 312(c).

Section 10.4. Certificate and Opinion as to Conditions Precedent.

Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

(a) an Officers' Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and

(b) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

Section 10.5. Statements Required in Certificate or Opinion.

Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than a certificate provided pursuant to TIA Section 314(a)(4)) shall comply with the provisions of TIA Section 314(e) and shall include:

(a) a statement that the person making such certificate or opinion has read such covenant or condition;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(c) a statement that, in the opinion of such person, he has made such examination or investigation as is necessary to enable him to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(d) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Section 10.6. Rules by Trustee and Agents.

The Trustee may make reasonable rules for action by or a meeting of Securityholders of one or more Series. Any Agent may make reasonable rules and set reasonable requirements for its functions.

Section 10.7. Legal Holidays.

Unless otherwise provided by Board Resolution, Officers' Certificate or supplemental indenture for a particular Series, a "Legal Holiday" is any day that is not a Business Day. If a payment date is a Legal Holiday at a place of payment, payment may be made at that place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period.



Section 10.8. No Recourse Against Others.

A director, officer, employee or stockholder, as such, of the Company shall not have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities, All Securities, including Global Securities, shall bear a legend in a form substantially setting forth the foregoing statements in this Section 10.8.

Section 10.9. Counterparts.

This Indenture may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

Section 10.10. Governing Laws.

THIS INDENTURE AND THE SECURITIES SHALL BE GOVERNED BY THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO AGREEMENTS MADE AND TO BE PERFORMED IN SUCH STATE, WITHOUT REGARD TO THE CONFLICT OF LAWS PROVISIONS THEREOF THAT WOULD DEFER TO THE LAWS OF ANOTHER JURISDICTION.

Section 10.11. No Adverse Interpretation of Other Agreements.

This Indenture may not be used to interpret another indenture, loan or debt agreement of the Company or a Subsidiary. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

Section 10.12. Successors.

All agreements of the Company in this Indenture and the Securities shall bind its successor. All agreements of the Trustee in this Indenture shall bind its successor.

Section 10.13. Severability.

In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 10.14. Table of Contents, Headings, Etc.

The Table of Contents, Cross Reference Table, and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

ARTICLE XI.

SINKING FUNDS

Section 11.1. Applicability of Article.

The provisions of this Article XI shall be applicable to any sinking fund for the retirement of the Securities of a Series, except as otherwise permitted or required by any form of Security of such Series issued pursuant to this Indenture.

The minimum amount of any sinking fund payment provided for by the terms of the Securities of any Series is herein referred to as a "mandatory sinking fund payment" and any other amount provided for by the terms of Securities of such Series is herein referred to as an "optional sinking fund payment." If provided for by the terms of Securities of any Series, the cash amount of any sinking fund payment may be subject to reduction as provided in Section 11.2. Each sinking fund payment shall be applied to the redemption of Securities of any Series as provided for by the terms of the Securities of such Series.

Section 11.2. Satisfaction of Sinking Fund Payments with Securities.

The Company may, in satisfaction of all or any part of any sinking fund payment with respect to the Securities of any Series to be made pursuant to the terms of such Securities (1) deliver outstanding Securities of such Series to which such sinking fund payment is applicable (other than any of such Securities previously called for mandatory

sinking fund redemption) and (2) apply as a credit Securities of such Series to which such sinking fund payment is applicable and which have been redeemed either at the election of the Company pursuant to the terms of such Series of Securities (except pursuant to any mandatory sinking fund) or through the application of permitted optional sinking fund payments or other optional redemptions pursuant to the terms of such Securities, provided that such Securities have not been previously so credited. Such Securities shall be received by the Trustee, together with an Officers' Certificate with respect thereto, not later than 15 days prior to the date on which the Trustee begins the process of selecting Securities for redemption, and shall be credited for such purpose by the Trustee at the price specified in such Securities for redemption through operation of the sinking fund and the amount of such sinking fund payment shall be reduced accordingly. If as a result of the delivery or credit of Securities in lieu of cash payments pursuant to this Section 11.2. The principal amount of Securities of such Series to be redeemed in order to exhaust the aforesaid cash payment shall be less than \$100,000, the Trustee need not call Securities of such Series for redemption, except upon receipt of a Company Order that such action be taken, and such cash payment shall be held by the Trustee or a Paying Agent and applied to the next succeeding sinking fund payment, provided, however, that the Trustee or such Paying Agent shall from time to time upon receipt of a Company Order pay over and deliver to the Company any cash payment so being held by the Trustee or such Paying Agent upon delivery by the Company to the Trustee of Securities of that Series purchased by the Company having an unpaid principal amount equal to the cash payment required to be released to the Company.

Section 11.3. Redemption of Securities for Sinking Fund.

Not less than 45 days (unless otherwise indicated in the Board Resolution, supplemental indenture hereto or Officers' Certificate in respect of a particular Series of Securities) prior to each sinking fund payment date for any Series of Securities, the Company will deliver to the Trustee an Officers' Certificate specifying the amount of the next ensuing mandatory sinking fund payment for that Series pursuant to the terms of that Series, the portion thereof, if any, which is to be satisfied by payment of cash and the portion thereof, if any, which is to be satisfied by delivering and crediting of Securities of that Series pursuant to Section 11.2. and the optional amount, if any, to be added in cash to the next ensuing mandatory sinking fund payment, and the Company shall thereupon be obligated to pay the amount therein specified. Not less than 30 days (unless otherwise indicated in the Board Resolution, Officers' Certificate or supplemental indenture in respect of a particular Series of Securities) before each such sinking fund payment date the Trustee shall select the Securities to be redeemed upon such sinking fund payment date in the manner specified in Section 3.2 and cause notice of the redemption thereof to be given in the name of and at the expense of the Company in the manner provided in Section 3.3. Such notice having been duly given, the redemption of such Securities shall be made upon the terms and in the manner stated in Sections 3.4, 3.5 and 3.6.

ARTICLE XII.

SUBORDINATION OF SECURITIES

Section 12.1. Agreement of Subordination.

The Company covenants and agrees, and each Holder of Securities issued hereunder by his or her acceptance thereof likewise covenants and agrees, that all Securities shall be issued subject to the provisions of this Article XII; and each Person holding any Security, whether upon original issue or upon transfer, assignment or exchange thereof, accepts and agrees to be bound by such provisions.

The payment of the principal of, premium, if any, and interest on all Securities (including, but not limited to, the redemption price with respect to the Securities called for redemption in accordance with Article 3 as provided in the Indenture) issued hereunder shall, to the extent and in the manner hereinafter set forth, be subordinated and subject in right of payment to the prior payment in full of all Senior Indebtedness, whether outstanding at the date of this Indenture or thereafter incurred.

No provision of this Article XII shall prevent the occurrence of any Default or Event of Default hereunder.

Section 12.2. Payments to Holders.

No payment shall be made with respect to the principal of, or premium, if any, or interest on the Securities (including, but not limited to, the redemption price with respect to the Securities to be called for redemption in accordance with Article III as provided in the Indenture), except payments and distributions made by the Trustee as permitted by the first or second paragraph of Section 12.5, if:

(i) a default in the payment of principal, premium, interest or other obligations due on any Senior Indebtedness occurs and is continuing (or, in the case of Senior Indebtedness for which there is a period of grace, in the event of such a default that continues beyond the period of grace, if any, specified in the instrument or lease evidencing such Senior Indebtedness), unless and until such default shall have been cured or waived or shall have ceased to exist; or

(ii) a default, other than a payment default, on a Designated Senior Indebtedness occurs and is continuing that then permits holders of such Designated Senior Indebtedness to accelerate its maturity and the Trustee receives a notice of the default (a "Payment Blockage Notice") from a Representative or the Company.

If the Trustee receives any Payment Blockage Notice pursuant to clause (ii) above, no subsequent Payment Blockage Notice shall be effective for purposes of this Section 12.1 unless and until (A) at least 365 days shall have elapsed since the initial effectiveness of the immediately prior Payment Blockage Notice, and (B) all scheduled payments of principal, premium, if any, and interest on the Securities that have come due have been paid in full in cash. No nonpayment default that existed or was continuing on the date of delivery of any Payment Blockage Notice to the Trustee shall be, or be made, the basis for a subsequent Payment Blockage Notice.

The Company may and shall resume payments on and distributions in respect of the Securities upon the earlier of:

(1) the date upon which the default is cured or waived or ceases to exist, or

(2) in the case of a default referred to in clause (ii) above, 179 days after notice is received if the maturity of such Designated Senior Indebtedness has not been accelerated, unless this Article XII otherwise prohibits the payment or distribution at the time of such payment or distribution.

Upon any payment by the Company, or distribution of assets of the Company of any kind or character, whether in cash, property or securities, to creditors upon any dissolution or winding-up or liquidation or reorganization of the Company, whether voluntary or involuntary or in bankruptcy, insolvency, receivership or other proceedings, all amounts due or to become due upon all Senior Indebtedness shall first be paid in full in cash or other payment satisfactory to the holders of such Senior Indebtedness, or payment thereof in accordance with its terms provided for in cash or other payment satisfactory to the holders of such Senior Indebtedness, before any payment is made on account of the principal of, premium, if any, or interest on the Securities (except payments made pursuant to Article VI from monies deposited with the Trustee pursuant thereto prior to commencement of proceedings for such dissolution, winding-up, liquidation or reorganization); and upon any such dissolution or winding-up or liquidation or reorganization of the Company or bankruptcy, insolvency, receivership or other proceeding, any payment by the Company, or distribution of assets of the Company of any kind or character, whether in cash, property or securities, to which the Holders of the Securities or the Trustee would be entitled, except for the provision of this Article XII, shall (except as aforesaid) be paid by the Company or by any receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, or by the Holders of the Securities or by the Trustee under this Indenture if received by them or it, directly to the holders of Senior Indebtedness (pro rata to such holders on the basis of the respective amounts of Senior Indebtedness held by such holders, or as otherwise required by law or a court order) or their representative or representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any Senior Indebtedness may have been issued, as their respective interests may appear, to the extent necessary to pay all Senior Indebtedness in full, in cash or other payment satisfactory to the holders of such Senior Indebtedness, after giving effect to any concurrent payment or distribution to or for the holders of Senior Indebtedness, before any payment or distribution or provision therefor is made to the Holders of the Securities or to the Trustee.

For purposes of this Article XII, the words, "cash, property or securities" shall not be deemed to include shares of stock of the Company as reorganized or readjusted, or securities of the Company or any other corporation provided for by a plan of reorganization or readjustment, the payment of which is subordinated at least to the extent provided in this Article XII with respect to the Securities to the payment of all Senior Indebtedness which may at the time be outstanding; provided that (i) the Senior Indebtedness is assumed by the new corporation, if any, resulting from any reorganization or readjustment, and (ii) the rights of the holders of Senior Indebtedness (other than leases which are not assumed by the Company or the new corporation, as the case may be) are not, without the consent of such holders, altered by such reorganization or readjustment. The consolidation of the Company with, or the merger of the Company into, another corporation or the liquidation or dissolution of the Company following the conveyance or transfer of its property as an entirety, or substantially as an entirety, to another corporation upon the terms and

conditions provided for in Article V shall not be deemed a dissolution, winding-up, liquidation or reorganization for the purposes of this Section 12.2 if such other corporation shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions stated in Article V.

In the event of the acceleration of the Securities because of an Event of Default, no payment or distribution shall be made to the Trustee or any Holder of Securities in respect of the principal of, premium, if any, or interest on the Securities (including, but not limited to, the redemption price with respect to the Securities called for redemption in accordance with Article III as provided in the Indenture), except payments and distributions made by the Trustee as permitted by the first or second paragraph of Section 12.5, until all Senior Indebtedness has been paid in full in cash or other payment satisfactory to the holders of Senior Indebtedness or such acceleration is rescinded in accordance with the terms of this Indenture. If payment of the Securities is accelerated because of an Event of Default, the Company shall promptly notify holders of Senior Indebtedness of the acceleration.

In the event that, notwithstanding the foregoing provisions, any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities (including, without limitation, by way of setoff or otherwise), prohibited by the foregoing, shall be received by the Trustee or the Holders of the Securities before all Senior Indebtedness is paid in full in cash or other payment satisfactory to the holders of such Senior Indebtedness, or provision is made for such payment thereof in accordance with its terms in cash or other payment satisfactory to the holders of such Senior Indebtedness, such payment or distribution shall be held in trust for the benefit of and shall be paid over or delivered to the holders of Senior Indebtedness or their representative or representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any Senior Indebtedness may have been issued, as their respective interests may appear, as calculated by the Company, for application to the payment of all Senior Indebtedness remaining unpaid to the extent necessary to pay all Senior Indebtedness in full in cash or other payment satisfactory to the holders.

Nothing in this Section 12.2 shall apply to claims of, or payments to, the Trustee under or pursuant to Section 7.7. This Section 12.2 shall be subject to the further provisions of Section 12.5.

Section 12.3. Subrogation of Securities.

Subject to the payment in full of all Senior Indebtedness, the rights of the Holders of the Securities shall be subrogated to the extent of the payments or distributions made to the holders of such Senior Indebtedness pursuant to the provisions of this Article XII (equally and ratably with the holders of all indebtedness of the Company which by its express terms is subordinated to other indebtedness of the Company to substantially the same extent as the Securities are subordinated and is entitled to like rights of subrogation) to the rights of the holders of Senior Indebtedness to receive payments or distributions of cash, property or securities of the Company applicable to the Senior Indebtedness until the principal, premium, if any, and interest on the Securities shall be paid in full; and, for the purposes of such subrogation, no payments or distributions to the holders of the Senior Indebtedness of the Senior Indebtedness by Holders of the Securities or the Trustee, shall, as between the Company, its creditors other than holders of Senior Indebtedness, and the Holders of the Securities to or for the benefit of the Holders of the Securities pursuant to the subrogation provisions of this Article XII, which would otherwise have been paid to the holders of Senior Indebtedness shall be deemed to be a payment by the Company to or on account of the Senior Indebtedness; and no payments or distributions of cash, property or securities pursuant to the subrogation provisions of this Article XII, which would otherwise have been paid to the holders of Senior Indebtedness shall be deemed to be a payment by the Company to or on account of the Senior Indebtedness; and no payments or distributions of cash, property or securities pursuant to the subrogation provisions of this Article XII, which would otherwise have been paid to the holders of Senior Indebtedness shall be deemed to be a payment by the Company to or on account of the Senior Indebtedness; and no payments or distributions of cash, property or securities pursuant

Nothing contained in this Article XII or elsewhere in this Indenture or in the Securities is intended to or shall impair, as among the Company, its creditors other than the holders of Senior Indebtedness, and the Holders of the Securities, the obligation of the Company, which is absolute and unconditional, to pay to the Holders of the Securities the principal of (and premium, if any) and interest on the Securities as and when the same shall become due and payable in accordance with their terms, or is intended to or shall affect the relative rights of the Holders of the Securities and creditors of the Company other than the holders of the Senior Indebtedness, nor shall anything herein or therein prevent the Trustee or the Holder of any Security from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the rights, if any, under this Article XII of the holders of Senior Indebtedness in respect of cash, property or securities of the Company received upon the exercise of any such remedy.

Upon any payment or distribution of assets of the Company referred to in this Article XII, the Trustee, subject to the provisions of Section 7.1, and the Holders of the Securities shall be entitled to rely upon any order or decree made by any court of competent jurisdiction in which such bankruptcy, dissolution, winding-up, liquidation or reorganization proceedings are pending, or a certificate of the receiver, trustee in bankruptcy, liquidating trustee, agent or other person making such payment or distribution, delivered to the Trustee or to the Holders of the Securities, for the purpose of ascertaining the persons entitled to participate in such distribution, the holders of the Senior Indebtedness and other indebtedness of the Company, the amount thereof or payable thereon and all other facts pertinent thereto or to this Article XII.

Section 12.4. Authorization to Effect Subordination.

Each Holder of a Security by the Holder's acceptance thereof authorizes and directs the Trustee on the Holder's behalf to take such action as may be necessary or appropriate to effectuate the subordination as provided in this Article XII and appoints the Trustee to act as the Holder's attorney-in-fact for any and all such purposes. If the Trustee does not file a proper proof of claim or proof of debt in the form required in any proceeding referred to in Section 6.3 hereof at least 30 days before the expiration of the time to file such claim, the holders of any Senior Indebtedness or their representatives are hereby authorized to file an appropriate claim for and on behalf of the Holders of the Securities.

Section 12.5. Notice to Trustee.

The Company shall give prompt written notice in the form of an Officers' Certificate to a Responsible Officer of the Trustee and to any Paying Agent of any fact known to the Company which would prohibit the making of any payment of monies to or by the Trustee or any Paying Agent in respect of the Securities pursuant to the provisions of this Article XII. Notwithstanding the provisions of this Article XII or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts which would prohibit the making of any payment of monies to or by the Trustee in respect of the Securities pursuant to the provisions of this Article XII, unless and until a Responsible Officer of the Trustee shall have received written notice thereof at the Corporate Trust Office from the Company (in the form of an Officers' Certificate) or a Representative or a holder or holders of Senior Indebtedness or from any trustee thereof; and before the receipt of any such written notice, the Trustee, subject to the provisions of Section 7.1, shall be entitled in all respects to assume that no such facts exist; provided that if on a date not fewer than two Business Days prior to the date upon which by the terms hereof any such monies may become payable for any purpose (including, without limitation, the payment of the principal of, or premium, if any, or interest on any Security) the Trustee shall not have received, with respect to such monies, the notice provided for in this Section 12.5, then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to receive such monies and to apply the same to the purpose for which they were received, and shall not be affected by any notice to the contrary which may be received by it on or after such prior date.

Notwithstanding anything in this Article XII to the contrary, nothing shall prevent any payment by the Trustee to the Holders of monies deposited with it pursuant to Section 8.1, and any such payment shall not be subject to the provisions of Section 12.1 or 12.2.

The Trustee, subject to the provisions of Section 7.1, shall be entitled to rely on the delivery to it of a written notice by a Representative or a person representing himself to be a holder of Senior Indebtedness (or a trustee on behalf of such holder) to establish that such notice has been given by a Representative or a holder of Senior Indebtedness or a trustee on behalf of any such holder or holders. In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any person as a holder of Senior Indebtedness to participate in any payment or distribution pursuant to this Article XII, the Trustee may request such person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Indebtedness held by such person, the extent to which such person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such person under this Article XII, and if such evidence is not furnished the Trustee may defer any payment to such person pending judicial determination as to the right of such person to receive such payment.

Section 12.6. Trustee's Relation to Senior Indebtedness.

The Trustee in its individual capacity shall be entitled to all the rights set forth in this Article XII in respect of any Senior Indebtedness at any time held by it, to the same extent as any other holder of Senior Indebtedness, and nothing in Section 7.11 or elsewhere in this Indenture shall deprive the Trustee of any of its rights as such holder.

With respect to the holders of Senior Indebtedness, the Trustee undertakes to perform or to observe only such of its covenants and obligations as are specifically set forth in this Article XII, and no implied covenants or obligations with respect to the holders of Senior Indebtedness shall be read into this Indenture against the Trustee. The Trustee shall not be deemed to owe any fiduciary duty to the holders of Senior Indebtedness and, subject to the provisions of Section 7.1, the Trustee shall not be liable to any holder of Senior Indebtedness if it shall pay over or deliver to Holders of Securities, the Company or any other person money or assets to which any holder of Senior Indebtedness shall be entitled by virtue of this Article XII or otherwise.

Section 12.7. No Impairment of Subordination.

No right of any present or future holder of any Senior Indebtedness to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of the Company or by any act or failure to act, in good faith, by any such holder, or by any noncompliance by the Company with the terms, provisions and covenants of this Indenture, regardless of any knowledge thereof which any such holder may have or otherwise be charged with.

Section 12.8. Article Applicable to Paying Agents.

If at any time any Paying Agent other than the Trustee shall have been appointed by the Company and be then acting hereunder, the term "Trustee" as used in this Article XII shall (unless the context otherwise requires) be construed as extending to and including such Paying Agent within its meaning as fully for all intents and purposes as if such Paying Agent were named in this Article XII in addition to or in place of the Trustee; provided, however, that the first paragraph of Section 12.5 shall not apply to the Company or any Affiliate of the Company if it or such Affiliate acts as Paying Agent.

Section 12.9. Senior Indebtedness Entitled to Rely.

The holders of Senior Indebtedness (including, without limitation, Designated Senior Indebtedness) shall have the right to rely upon this Article XII, and no amendment or modification of the provisions contained herein shall diminish the rights of such holders unless such holders shall have agreed in writing thereto.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of the day and year first above written.

WAVE LIFE SCIENCES LTD.

By: Title:

[TRUSTEE]

By: Title:



Date: 10 May 2019

The Board of Directors Wave Life Sciences Ltd. c/o 733 Concord Avenue Cambridge, MA 02138 United States of America WongPartnership LLP 12 Marina Boulevard Level 28 Marina Bay Financial Centre Tower 3 Singapore 018982 T +65 6416 8000

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Dear Sirs

WAVE LIFE SCIENCES LTD. (THE "<u>COMPANY</u>") – AUTOMATIC SHELF REGISTRATION STATEMENT ON FORM S-3

A. Introduction

1. We have acted as legal advisers to the Company, a company incorporated under the laws of Singapore, as to Singapore law in connection with the filing of an automatic shelf registration statement on Form S-3 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Act"), with the Securities and Exchange Commission (the "Commission") on or about 10 May 2019 in connection with the authorisation of the issuance and sale from time to time, on a delayed basis, of (i) ordinary shares of the Company (the "Shares"), (ii) one or more series of debt securities of the Company (the "Debt Securities") to be issued pursuant to a senior indenture or subordinated indenture in the forms attached as Exhibit 4.8 or, as the case may be, Exhibit 4.9 to the Registration Statement (each, an "Indenture"), between the Company and the trustee (the "Trustee") to be named therein in such Indenture, and one or more supplements thereto, in each case establishing the terms of each such series, (iii) warrants to purchase Shares or Debt Securities (the "Warrants"), (iv) rights to purchase Shares or any other Securities (as defined below) (the "Rights"), and (v) units of Shares, Debt Securities, Warrants or Rights, in any combination (the "Units"), in each case as contemplated by the Registration Statement. The Shares, Debt Securities, Warrants, Rights and Units are collectively referred to herein as the "Securities". The Warrants may be issued under one or more warrant agreements (each, a "Warrant Agreement") between the Company and a third party to be identified therein as warrant agent. The Rights may be issued under one or more rights agreements (each, a "Rights Agreement") between the Company and a third party to be identified therein as rights agent. The Units may be issued under one or more unit agreements (each, a "Unit Agreement") between the Company and a third party to be identified therein as unit agent. The Indentures, the Warrant Agreements, the Rights Agreements and the Unit Agreements are herein collectively called the "Agreements".

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2. We do not express nor imply any opinion with respect to the effect of any law other than the laws of Singapore as of the date of this opinion, and have made no investigation of any other laws which may be relevant to the documents submitted to us or opinions given by us, nor do we express or imply any opinion on matters relating to tax. This opinion is to be governed by and construed in accordance with the laws of Singapore as applied by the courts of Singapore as of the date of this opinion. We are not obliged to update this opinion to reflect any legal or legislative developments, or other changes to law or fact, arising after the date of this opinion. We have taken instructions solely from the Company.

B. Documents

- 3. In rendering the opinions set out below, we have examined:
 - 3.1 an electronic copy (in Adobe Acrobat form) of the certificate of incorporation of the Company dated 24 July 2012 issued by the Accounting and Corporate Regulatory Authority of Singapore ("<u>ACRA</u>");
 - 3.2 an electronic copy (in Adobe Acrobat form) of the certificate confirming incorporation upon conversion of the Company dated 6 November 2015 issued by ACRA confirming the Company's conversion to a public company;
 - 3.3 an electronic copy (in Adobe Acrobat form) of the constitution of the Company, as amended as of 9 November 2015 (the "<u>Constitutive</u> <u>Documents</u>");
 - 3.4 an electronic copy (in Adobe Acrobat form) of the resolutions in writing of the board of directors of the Company (the "**Board**") dated 9 May 2019 (the "**Resolutions**");
 - 3.5 an electronic copy (in Adobe Acrobat form) of the Registration Statement; and
 - 3.6 such other documents as we may have considered necessary or desirable to examine in order that we may render this opinion.
- 4. This opinion is being rendered to you in connection with the filing of the Registration Statement. Save as expressly provided in paragraph 6 of this opinion, we express no opinion whatsoever with respect to any document described in paragraph 3 herein.

C. Assumptions

- 5. We have assumed (without enquiry and with your consent):
 - 5.1 that each of the parties to the Agreements (other than the Company) has been duly incorporated, established or constituted, and is validly existing under the laws of its jurisdiction of incorporation, establishment or constitution, as the case may be;
 - 5.2 the genuineness of all signatures on all documents and that each such signature is that of a person duly authorised to affix the same and execute the relevant documents, and the completeness, and the conformity to original documents, of all copies submitted to us;
 - 5.3 that each of the documents submitted or made available to us for examination is true, complete and up-to-date and has not been revoked, repudiated, terminated, amended or superseded, and all representations, warranties, assumptions and factual statements contained in all documents listed in paragraph 3 are true and accurate;
 - 5.4 that the Resolutions were duly passed at properly convened meetings of duly appointed directors of the Company, or as the case may be, duly passed in the form of circulating resolutions in writing, in accordance with the provisions of the Constitutive Documents and the Companies Act, Chapter 50 of Singapore (the "<u>Companies Act</u>");

- 5.5 that the approvals conferred by the copies of the Resolutions submitted to us have not been revoked, rescinded, superseded or amended and are in full force and effect, and that no other resolution or other action has been passed or taken which could affect the validity of any or all of the Resolutions;
- 5.6 that the directors of the Company:
 - (i) have been duly appointed in accordance with the provisions of the Companies Act and the constitution of the Company in force at that time;
 - (ii) have acted and will act in good faith and in the best interests of the Company in approving the preparation, execution and filing of the Registration Statement with the Commission, the entry into the transactions contemplated in the Registration Statement, and the execution of, and entry into, the Agreements, and without intention to defraud any of the creditors of the Company; and
 - (iii) have each disclosed and will disclose any interest which he may have in the transactions contemplated in the Registration Statement and the Agreements in accordance with the provisions of the Companies Act and the constitution of the Company in force at that time and none of the directors of the Company has or will have any interest in such transactions except to the extent permitted by the Companies Act and the constitution of the Company in force at that time;
- 5.7 that all relevant documents have been provided to us by the officers of the Company for inspection for the purposes of this opinion;
- 5.8 that the Shares to be issued will be duly registered in the names of the persons who subscribe for or purchase the Shares in the Register of Members of the Company, or in the name of the Depository Trust Company or its nominee, as the case may be, and the certificates for the Shares will be duly issued and delivered;
- 5.9 that:
 - (i) the results of the electronic instant information search made by us on 10 May 2019 at 9:53 a.m. (Singapore time) of the public records of the Company maintained by ACRA at https://www.acra.gov.sg (the "<u>ACRA Search</u>") at ACRA; and
 - (ii) the results of the electronic searches made by us on 10 May 2019 at 9:51 a.m. (Singapore time) for the period of 1 January 2016 to 10 May 2019 (as at 9:51 a.m.) (both dates inclusive) of: (i) the Company, obtained from the search modules Insolvency (including Judicial Management) (Supreme Court) and Appeals Cases (Supreme Court), Appeals Cases (State Courts), Enforcement (Supreme Courts) and Enforcement (State Courts), and (ii) the directors of the Company, obtained from the search module Bankruptcy (Supreme Court), of the Cause Book Search function of the eLitigation system at https://www.elitigation.sg (the "Court Searches"),

are true, complete and accurate, and remain correct up to the date of this opinion and that:

(a) such information has not since the relevant time on which the ACRA Search or Court Searches, as the case may be, were conducted, been altered; and

- (b) the ACRA Search and Court Searches, as the case may be, did not fail to disclose any information which has been lodged, registered or filed but did not appear on the public records available for such electronic searches at the time of such searches, and all matters which ought to have been lodged, registered, or filed with ACRA or the relevant court, as the case may be, have been duly lodged, registered, or filed;
- 5.10 the definitive terms of each class or series of Securities shall have been or will be established in accordance with resolutions duly adopted by the Board (or an authorised committee thereof);
- 5.11 that any Securities issuable upon conversion, exchange or exercise of any other Security will have been authorised and reserved for issuance, in each case within the limits of the then remaining authorised but unreserved and unissued amounts of such Securities;
- 5.12 that any Securities (including any Securities issuable upon conversion, exchange or exercise of any other Security) will be issued in accordance with the terms and subject to the conditions set out in the relevant duly passed corporate resolutions and Agreements, if any;
- 5.13 the absence of fraud, bad faith, undue influence, coercion, duress, mistake or misrepresentation on the part of any party to the Agreements and its respective officers, employees, agents and advisers;
- 5.14 with respect to any Debt Securities, that:
 - (i) any Indenture relating to such Debt Securities shall have been duly authorised, executed and delivered on behalf of the Company;
 - (ii) all terms of Debt Securities shall be established in accordance with the provisions of the Indenture;
 - (iii) such Debt Securities shall have been duly executed, authenticated, issued and delivered in accordance with the provisions of such Indenture;
 - (iv) such Debt Securities, as executed and delivered, do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company; and
 - (v) such Debt Securities, as executed and delivered, comply with all requirements and restrictions, if any, applicable to the Company, in any case whether imposed by any court or governmental or regulatory body having jurisdiction over the Company;
- 5.15 with respect to any Warrants, that:
 - (i) any Warrant Agreement relating to such Warrants shall have been duly authorised, executed and delivered on behalf of the Company;
 - (ii) all terms of such Warrants shall have been established in accordance with the provisions of such Warrant Agreement(s);
 - (iii) such Warrants shall have been duly executed, issued and delivered in accordance with the provisions of such Warrant Agreement(s);

- (iv) such Warrants and the related Warrant Agreement(s), as executed and delivered, do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company; and
- such Warrants and the related Warrant Agreement(s), as executed and delivered, comply with all requirements and restrictions, if any, applicable to the Company, in any case whether imposed by any court or governmental or regulatory body having jurisdiction over the Company;
- 5.16 with respect to any Rights, that:
 - (i) any Rights Agreement and Rights certificate relating to such Rights shall have been duly issued, authorised, executed and delivered on behalf of the Company;
 - (ii) all terms of such Rights shall have been established in accordance with the provisions of such Rights Agreement(s);
 - (iii) such Rights shall have been duly executed, issued and delivered in accordance with the provisions of such Rights Agreement(s);
 - (iv) such Rights and the related Rights Agreement(s), as executed and delivered, do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company; and
 - such Rights and the related Rights Agreement(s), as executed and delivered, comply with all requirements and restrictions, if any, applicable to the Company, in any case whether imposed by any court or governmental or regulatory body having jurisdiction over the Company;
- 5.17 with respect to any Units, that:
 - (i) any Unit Agreement relating to such Units shall have been duly authorised, executed and delivered on behalf of the Company;
 - (ii) all terms of such Units shall have been established in accordance with the provisions of such Unit Agreement(s);
 - (iii) such Units shall have been duly executed, issued and delivered in accordance with the provisions of such Unit Agreement(s);
 - (iv) such Units and the related Unit Agreement(s), as executed and delivered, do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company; and
 - such Units and the related Unit Agreement(s), as executed and delivered, comply with all requirements and restrictions, if any, applicable to the Company, in any case whether imposed by any court or governmental or regulatory body having jurisdiction over the Company;
- 5.18 that the Company will have obtained, at the time of each grant and issuance of the Shares (including any Shares duly issued: (i) upon the exercise of any duly issued Warrants exercisable for Shares, (ii) upon the exercise of any duly issued Rights exercisable for Shares, (iii) upon the exchange or conversion of Debt Securities which are exchangeable or convertible into Shares, or (iv) as a component of a Unit), upon issuance and delivery of certificates (or

book-entry notation if uncertificated), a mandate from the shareholders of the Company to issue such Shares pursuant to Section 161 of the Companies Act (the "<u>Share Issue Mandate</u>") and such Share Issue Mandate will not have expired in accordance with its terms or been previously revoked or varied by the Company in a general meeting;

- 5.19 that at each time of issuance and sale of the Securities, the Company will be validly existing under the laws of Singapore, with the requisite capacity, power and authority to issue and sell the Securities;
- 5.20 (i) that the Agreements and the Securities are within the capacity and powers of, and will be duly authorised, executed and delivered by, the parties thereto other than the Company, (ii) that the Agreements and the Securities will constitute legal, valid and binding obligations of the parties thereto other than the Company, enforceable against each of them in accordance with their respective terms, and (iii) that the status of the Agreements and the Securities as legal, valid and binding obligations of the parties will not be affected by any (a) breaches of, or defaults under, agreements or instruments, (b) violations of statutes, rules, regulations or court or governmental orders, or (c) failures to obtain required consents, approvals or authorisations from, or to make required registrations, declarations or filings with, governmental authorities;
- 5.21 that in exercising the respective powers of each party to the Agreements to enter into the relevant Agreement, each party (and in the case where the party is a corporation or a trust, the directors or trustees of such party) to the Agreements will be acting in good faith and in furtherance of the respective substantive objects and for the legitimate purpose of such party to the Agreements, and that the entry into the relevant Agreement by each of the parties thereto may reasonably be considered to have been in the interests, and for the commercial benefit, of such party to the relevant Agreement;
- 5.22 that each of the parties to the Agreements will not be seeking to conduct any relevant transaction or any associated activity in a manner or for a purpose not evident on the face of the relevant Agreement to which it is a party which might render any of them or any relevant transaction or associated activity illegal, void or voidable;
- 5.23 that all acts, conditions or things required to be fulfilled, performed or effected in connection with the Agreements under the laws of any jurisdiction will be duly fulfilled, performed and complied with;
- 5.24 that valid consideration, if required, will be furnished for the entry into the Agreements;
- 5.25 that the Agreements will constitute legal, valid, binding and enforceable obligations of the parties thereto for all purposes under the laws of all relevant jurisdictions (other than the laws of Singapore in respect of the matters set out in paragraph 6 of this opinion);
- 5.26 that no consent, approval, authorisation or order of or qualification with any governmental body or agency is required for the performance by each of the parties (other than the Company in Singapore) to the Agreements of its respective obligations under the Agreements to which it is a party;
- 5.27 all applicable consents, approvals, authorisations, licences, exemptions or orders required from any applicable governmental or other regulatory authorities and all other requirements for the legality, validity and enforceability of the Agreements (other than any required under the laws of Singapore in respect of the matters set out in paragraph 6 of this opinion) have been (and have not been withdrawn) or will be duly obtained or fulfilled, and in full force and effect, and that any conditions to which they are subject have been (or will be) satisfied;

- 5.28 that the execution of the Agreements, the performance of the obligations under the Agreements, and the delivery of, and the performance of the obligations, where applicable, under, the Securities will be in compliance with (i) applicable laws and regulations in Singapore, and (ii) the provisions of the constitution of the Company in force at the time;
- 5.29 that there are no agreements, documents, arrangements or transactions to which the Company is a party that may in any way prohibit or restrict the issue of the Securities;
- 5.30 that there are no agreements, documents, arrangements or transactions to which each party to the Agreements has entered into that may in any way prohibit or restrict its right to enter into the relevant Agreement or perform its obligations under the relevant Agreement;
- 5.31 that there will be no amendments to the Constitutive Documents or the laws applicable to the Company that would have the effect of rendering any of our opinions in paragraph 6 inaccurate;
- 5.32 that nothing in the Agreements and/or such other documents entered into by the Company would have the effect of rendering any of our opinions in paragraph 6 inaccurate;
- 5.33 that no foreign law is relevant to or affects the conclusions stated in this opinion and none of the opinions expressed herein will be affected by the laws (including, without limitation, the public policy) of any jurisdiction outside Singapore, and insofar as the laws of any jurisdiction outside Singapore may be relevant, such laws have been or will be complied with;
- 5.34 that no Securities will be offered in Singapore in connection with the Registration Statement; and
- 5.35 that none of the Registration Statement, Agreements nor any of the transactions contemplated respectively thereunder constitutes or will constitute a sham.

D. Opinion

- 6. Based on the foregoing, and subject to the assumptions, limitations and qualifications set forth herein and having regard to such legal considerations as we have deemed relevant and subject to any matters not disclosed to us, we are of the opinion that:
 - 6.1 the Shares (including any Shares duly issued: (i) upon the exercise of any duly issued Warrants exercisable for Shares, (ii) upon the exercise of any duly issued Rights exercisable for Shares, (iii) upon the exchange or conversion of Debt Securities which are exchangeable or convertible into Shares, or (iv) as a component of a Unit), upon payment of such lawful consideration as the Board (or a duly authorised committee thereof) may determine, will be validly issued, fully paid and non-assessable;
 - 6.2 the Warrants (including any Warrants duly issued as a component of a Unit) upon issuance and delivery of the Warrant certificates and bookentry notation for such Warrants, and against payment therefor of such lawful consideration as the Board (or a duly authorised committee thereof) may determine, will be validly issued and constitute legal, valid and binding obligations of the Company, enforceable in accordance with their terms;
 - 6.3 the Rights (including any Rights duly issued as a component of a Unit) upon due issuance and delivery of the Rights certificates and bookentry notation for such Rights, will be validly issued and constitute legal, valid and binding obligations of the Company, enforceable in accordance with their terms; and

6.4 the Units, upon receipt by the Company of such lawful consideration therefor as the Board (or an authorised committee thereof) may determine, will constitute legal, valid and binding obligations of the Company, enforceable in accordance with their terms.

E. Qualifications

- 7. For the purposes of this opinion, we have assumed that the term "**non-assessable**" (a term which has no recognised meaning under Singapore law) in relation to the Shares (including any Shares duly issued: (i) upon the exercise of any duly issued Warrants exercisable for Shares, (ii) upon the exercise of any duly issued Rights exercisable for Shares, (iii) upon the exchange or conversion of Debt Securities which are exchangeable or convertible into Shares, or (iv) as a component of a Unit) to be issued means that holders of such Shares, having fully paid up all amounts due on such Shares, are under no further personal liability to make payments to the Company or its creditors or contribute to the assets or liabilities of the Company in their capacities purely as holders of such Shares.
- 8. The term "**enforceable**" as used above means that the obligations assumed or to be assumed by the Company under each of the Agreements and the Constitutive Documents are of a type which the Singapore courts enforce. It does not mean, and should not be construed as meaning, that those obligations will necessarily be enforced in all circumstances in accordance with their terms. In particular:
 - 8.1 this opinion is not to be taken to imply that a court in Singapore will necessarily grant any remedy, the availability of which is subject to equitable considerations or which is otherwise in the discretion of the court;
 - 8.2 enforcement may be limited by prescription or lapse of time, bankruptcy, insolvency, liquidation, administration, reorganisation and other laws of general application relating to or affecting the rights of creditors;
 - 8.3 enforcement may be limited by general principles of equity for example, equitable remedies may not be available where damages are considered to be an adequate remedy;
 - 8.4 where, under the Constitutive Documents, the Agreements and/or, where applicable, any Security is vested with a discretion or may determine a matter in its opinion, the laws of Singapore may require that such discretion is exercised in good faith, reasonably, for a proper purpose, and/or that such opinion is based on reasonable grounds;
 - 8.5 enforcement may be limited by the provisions of the laws of Singapore applicable to agreements held to have been frustrated by events happening after their execution which are beyond the control of the parties to the agreements and make contractual performance illegal or impossible or radically different from that originally contemplated;
 - 8.6 the power of the Singapore courts to grant equitable remedies such as injunctions and specific performance is discretionary and accordingly, a court of Singapore may make an award of damages where an equitable remedy is sought;
 - 8.7 claims may become barred under the Limitation Act, Chapter 163 of Singapore and/or the Foreign Limitation Periods Act, Chapter 111A of Singapore, or may be or become subject to defences of set-off or counterclaim, and a failure to exercise the right to commence an action within the prescribed time frames may amount to a waiver of such right;

- 8.8 a party to a contract may be able to avoid its obligations under that contract (and may have other remedies) where it has been induced to enter into that contract by misrepresentation or other vitiating factors and the courts of Singapore will generally not enforce an obligation if there has been fraud;
- 8.9 any provision in any of the Agreements or, where applicable, any Security which purports to excuse or protect any party against its own negligence or misconduct or which purports to apply notwithstanding the negligence or misconduct of any party, or excusing a party from a liability or duty otherwise owed, may be limited by law or may not be given effect by the courts of Singapore;
- 8.10 the effectiveness of any provisions exculpating a party from liability or a duty otherwise owed may be limited by law;
- 8.11 a court in Singapore has power to give judgments in a currency other than Singapore dollars, if, subject to the terms of the contract, it is the currency which most truly expresses the plaintiff's loss;
- 8.12 where obligations are to be performed in a jurisdiction outside Singapore, they may not be enforceable in Singapore to the extent that performance would be illegal or contrary to public policy under the laws of that jurisdiction and a court in Singapore may take into account the law of the place of performance in relation to the manner of performance and to the steps to be taken in the event of defective performance;
- 8.13 it is uncertain whether the parties can agree in advance the governing law of claims connected with the contract but which are not claims on the contract, such as a claim in tort;
- 8.14 any provision in any of the Agreements which provides that any calculations, determinations and/or certifications will be final, conclusive and/or binding (i) may in certain circumstances be held by a court or tribunal not to be final, conclusive and/or binding, for example, if such calculations, determinations and/or certifications are fraudulent, unreasonable, arbitrary or contain any manifest errors, and (ii) will not necessarily prevent judicial enquiry into the merits of any claim by an aggrieved party, for example, a court in Singapore may regard such certification, determination or calculation as no more than *prima facie* evidence;
- 8.15 any provision in any of the Agreements which provides for, or which has the effect of providing for, the payment of a fixed or an increased amount, the withholding, forfeiture or retention of monies or assets already paid, transferred or otherwise due (as the case may be), or the transfer or re-transfer of assets, may not be enforceable in a Singapore court if it is construed as a penalty;
- 8.16 provisions in any of the Agreements, if any, restricting competition or trade may not be enforceable as contrary to public policy in Singapore unless a Singapore court considers that such provisions are reasonably necessary for the protection of a legitimate business interest;
- 8.17 any provision in any of the Agreements as to severability may not be binding under the laws of Singapore and the question of whether or not provisions which are illegal, invalid or unenforceable may be severed from other provisions in order to save such other provisions depends on the nature of the illegality, invalidity or unenforceability in question, and would be determined by a Singapore court at its discretion;
- 8.18 indemnity provisions in the Agreements may not be binding under the laws of Singapore to the extent that performance would be illegal or contrary to public policy under the laws of Singapore;

- 8.19 a provision which states that amendments to or waivers of any provisions thereof or defaults thereunder are only effective if made in writing and signed by certain parties may not be given effect by the Singapore courts. A provision of an Agreement may be amended or waived orally or by the conduct of the parties thereto notwithstanding provisions to the contrary in the Agreement;
- 8.20 to the extent that any matter is expressed to be determined by future agreement or negotiation, the relevant provision in an Agreement may be unenforceable or void for uncertainty;
- 8.21 any provision of an Agreement stating that a failure or delay, on the part of any party, in exercising any right or remedy under the Agreement shall not operate as a waiver of such right or remedy may not always be effective;
- 8.22 the rate of interest recoverable (on judgment debt and costs) after judgment in the Singapore courts is limited to 5.33% per annum or:
 - (i) such other rate fixed by the Chief Justice of Singapore;
 - (ii) such lower rate as may be directed by the High Court; or
 - (iii) such rate that the parties to the litigation have agreed otherwise;
- 8.23 a Singapore court may refuse to give effect to clauses in an Agreement in respect of the costs of litigation brought before a Singapore court to be paid by an unsuccessful litigant or where the court has itself made an order for costs;
- 8.24 a Singapore court may stay proceedings if concurrent proceedings are brought elsewhere and/or if there is another clearly more appropriate forum than Singapore to hear the proceedings. A court in Singapore may also decline to accept jurisdiction in certain cases;
- 8.25 where it is necessary to initiate any legal proceedings in Singapore by serving a writ or other originating process outside the jurisdiction, the leave of court (as to which the court has a discretion) may have to be obtained;
- 8.26 the courts of Singapore are bound to follow judicial precedents laid down by the superior courts of Singapore, however, the Court of Appeal (which is the highest court in Singapore) has power to depart from such precedents where adherence will cause injustice in a particular case or constrain the development of law in conformity with the circumstances of Singapore;
- 8.27 a court in Singapore will not automatically be bound to stay proceedings brought in its jurisdiction despite the existence of an exclusive jurisdiction provision in an agreement naming the foreign jurisdiction where the proceedings should be brought. The Singapore courts have the discretion as to whether or not to grant an application for a stay notwithstanding such an exclusive jurisdiction clause;
- 8.28 it is possible that a court in Singapore would hold that any decision, judgment award or order (whether in Singapore or elsewhere) given in relation to an Agreement supersedes the specific provisions of such an Agreement for all intents and purposes, with the effect that any obligations imposed upon each of the parties under an Agreement, which are expressed to apply both before and after such decision, judgment award or order;

- 8.29 in any question concerning a valid choice of law of an agreement in any action in the courts of Singapore, the laws of Singapore that are expressed to be mandatory in nature will continue to apply regardless of the choice of the governing law of that agreement;
- 8.30 certain laws, directives, orders and other regulations (whether relating to United Nations sanctions or otherwise) have in the past been and may from time to time be enacted, passed or issued, the effect of which as a matter of Singapore law might be to restrict the making of any payment and/or the performance of any other obligation under the Agreements;
- 8.31 any provision requiring the performance by any of the parties of any act or thing under such provision in violation of, contrary to or inconsistent with any laws or regulations promulgated in Singapore after the date of this opinion may be regarded as being against public policy or constituting an illegality and may be unenforceable or void in Singapore; and
- 8.32 except as may be provided under the Contracts (Rights of Third Parties) Act, Chapter 53B of Singapore, under general principles of Singapore law, a person who is not a contracting party to an agreement is not entitled to the benefits of the agreement and may not enforce the agreement.
- 9. We have not investigated or verified the accuracy or completeness of the facts and information, including any statements of foreign law, or the reasonableness of any assumptions, statements of opinion or intention, contained in the Agreements and the documents referred to in paragraph 3 of this opinion. We do not express any opinion as to any matters of fact generally, including statements of foreign law, or the reasonableness of any statements of opinion, contained in the documents described in paragraph 3. In addition, we are not responsible for investigating or verifying whether any material fact has been omitted from such documents.
- 10. For the ACRA Search and the Court Searches, we have relied on electronic searches of publicly available records and the records disclosed by such searches may not be complete or up-to-date.
- 11. We express no opinion as to the validity, binding effect or enforceability of any provision in the Agreements or, where applicable, the Securities by reference to a law other than that of Singapore, or as to the availability in Singapore of remedies which are available in other jurisdictions.
- 12. With respect to matters of fact material to this opinion, we have relied on the statements of the responsible officers of the Company.
- 13. This opinion is strictly limited to matters stated in this opinion and is not to be construed as extending (by implication or otherwise) to all the documents listed in paragraph 3 of this opinion, or to any other matter or document in connection with, or referred to, contemplated by or incorporated by reference, in such documents.
- 14. We hereby consent to the use of our opinion as herein set forth as an exhibit to the Registration Statement and to the use of our name under the caption "Legal Matters" in the prospectus forming a part of the Registration Statement. In giving this consent, we do not hereby admit and shall not be deemed to admit that we come within the category of persons whose consent is required under Sections 7 and 11 of the Act or to the rules and regulations of the Commission thereunder.
- 15. This opinion is only for the benefit of the person to whom it is addressed, subject to the condition that such person accepts and acknowledges that this opinion may not be appropriate or sufficient for such person's purposes, and is strictly limited to the matters stated in this opinion and is not to be read as extending by implication to any other matter in connection with the Registration Statement or otherwise. Further, except for the filing of this opinion with the Commission as an exhibit to the Registration Statement, this opinion is not to be circulated or disclosed to, or relied upon by, any other person (other

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than persons entitled to rely on it pursuant to applicable provisions of federal securities law in the United States of America, if any), nor is it to be used or relied upon for any other purpose, or quoted or referred to in any public document or filed with any governmental body or agency without our prior written consent.

Yours faithfully

/s/ WongPartnership LLP

WONGPARTNERSHIP LLP



Date: 10 May 2019

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Dear Sirs

WAVE LIFE SCIENCES LTD. (THE "<u>COMPANY</u>") – SALES AGREEMENT PROSPECTUS (THE "<u>SALES AGREEMENT</u> <u>PROSPECTUS</u>") CONTAINED IN THE AUTOMATIC SHELF REGISTRATION STATEMENT ON FORM S-3 (THE "<u>REGISTRATION</u> <u>STATEMENT</u>") FILED BY THE COMPANY WITH THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION (THE "<u>COMMISSION</u>") UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "<u>ACT</u>"), IN RESPECT OF THE OFFER AND SALE FROM TIME TO TIME OF ORDINARY SHARES, NO PAR VALUE, IN THE ISSUED AND PAID-UP CAPITAL OF THE COMPANY HAVING AN AGGREGATE OFFERING PRICE OF UP TO US\$250,000,000 (COLLECTIVELY, THE "<u>OFFERING SHARES</u>") THROUGH JEFFERIES LLC ("JEFFERIES"), ACTING AS AGENT (THE "<u>OFFERING</u>")

A. Introduction

- 1. We have acted as legal advisers to the Company, a company incorporated under the laws of Singapore, as to Singapore law in connection with the Offering.
- 2. The Company entered into an open market sale agreement (the "<u>Sales Agreement</u>") dated 10 May 2019 with Jefferies, under which the Company may offer and sell the Offering Shares from time to time through Jefferies, acting as agent, on the Nasdaq Global Market at sale prices and such other sales as agreed upon by the Company. Upon the terms and subject to the conditions of the Sales Agreement, the Company may, from time to time, request an issuance of the Offering Shares by delivering to Jefferies a written notice (the "<u>Issuance Notice</u>") setting out, among other things, the total sales price for the Offering Shares, the selling period and the floor price limitation per Offering Share, and Jefferies, upon receipt of an Issuance Notice, will use its commercially reasonable efforts consistent with its normal sales and trading practices to place such Offering Shares in accordance with the information specified in the Issuance Notice.
- 3. The Offering Shares will be offered and sold by the Company pursuant to the Sales Agreement Prospectus filed by the Company with the Commission on or about the date hereof that forms a part of the Company's Registration Statement that was filed on 10 May 2019 by the Company with the Commission pursuant to the Act, relating to the offering by the Company of an indeterminate amount of any combination of securities of the types specified therein. The Registration Statement became effective under the Act upon filing on 10 May 2019.

WongPartnership LLP (UEN: T08LL0003B) is a limited liability law partnership registered in Singapore under the Limited Liability Partnerships Act (Chapter 163A).



- 4. This opinion is supplemental to our opinion dated 10 May 2019 and included as Exhibit 5.1 to the Registration Statement. We do not express nor imply any opinion with respect to the effect of any law other than the laws of Singapore as of the date of this opinion, and have made no investigation of any other laws which may be relevant to the documents submitted to us or opinions given by us, nor do we express or imply any opinion on matters relating to tax. This opinion is to be governed by and construed in accordance with the laws of Singapore as applied by the courts of Singapore as of the date of this opinion. We are not obliged to update this opinion to reflect, or notify any addressee of this opinion or any other person of, any legal or legislative developments, or other changes to law or fact, arising after the date of this opinion. We have taken instructions solely from the Company.
- 5. In respect of the Sales Agreement, the Registration Statement, the Sales Agreement Prospectus and the Issuance Notice(s), we have assumed due compliance with all matters concerning the laws of the United States of America and all other relevant jurisdictions (other than in Singapore in respect of the matters set out in paragraph 9 of this opinion).

B. Documents

- 6. In rendering the opinions set out below, we have examined:
 - 6.1 an electronic copy (in Adobe Acrobat form) of the executed Sales Agreement;
 - 6.2 an electronic copy (in Adobe Acrobat form) of the Registration Statement and the Sales Agreement Prospectus;
 - 6.3 an electronic copy (in Adobe Acrobat form) of the certificate of incorporation of the Company dated 24 July 2012 issued by the Accounting and Corporate Regulatory Authority of Singapore ("<u>ACRA</u>");
 - 6.4 an electronic copy (in Adobe Acrobat form) of the certificate confirming incorporation upon conversion of the Company dated 6 November 2015 issued by ACRA confirming the Company's conversion to a public company;
 - 6.5 an electronic copy (in Adobe Acrobat form) of the constitution of the Company, as amended on 9 November 2015 (the "<u>Constitutive</u> <u>Documents</u>");
 - 6.6 an electronic copy (in Adobe Acrobat form) of the minutes dated 13 August 2018 of the annual general meeting of the Company held on 7 August 2018 (the "**Shareholders' Resolutions**");
 - 6.7 an electronic copy (in Adobe Acrobat form) of the resolutions in writing of the Board of Directors of the Company (the "**Board**") dated 9 May 2019 (the "**Board Resolutions**" and, together with the Shareholders' Resolutions, the "**Resolutions**"); and
 - 6.8 such other documents as we may have considered necessary or desirable to examine in order that we may render this opinion.
- 7. This opinion is being rendered to you in connection with the filing of the Sales Agreement Prospectus. Except as expressly provided in paragraph 9 of this opinion, we express no opinion whatsoever with respect to any document described in paragraph 6 of this opinion.

C. Assumptions

- 8. We have assumed (without enquiry and with your consent):
 - 8.1 that each of the parties to the Sales Agreement (other than the Company) has been duly incorporated, established or constituted, and is validly existing under the laws of its jurisdiction of incorporation, establishment or constitution, as the case may be;
 - 8.2 the genuineness of all signatures on all documents and that each such signature is that of a person duly authorised to affix the same and execute the relevant documents, and the completeness, and the conformity to original documents, of all copies submitted to us;
 - 8.3 that each of the documents submitted or made available to us for examination is true, complete and up-to-date and has not been revoked, repudiated, terminated or amended or superseded, and all representations, warranties, assumptions and factual statements contained in all documents listed in paragraph 6 are true and accurate;
 - 8.4 that the Resolutions and any corporate resolutions (the "**Future Authorisations**") which may, from time to time, be passed in respect of the Offering (including, but not limited to, any Share Issue Mandate (as defined below) and any resolution relating to the issuance and delivery of an Issuance Notice and the Offering Shares thereunder) were or, as the case may be, will be:
 - (a) duly passed at properly convened meetings of duly appointed directors or the shareholders of the Company, or a duly constituted committee of the Board, or as the case may be, duly passed in the form of circulating resolutions in writing, in accordance with the provisions of the Constitutive Documents; and
 - (b) duly passed in accordance with the provisions of the Companies Act, Chapter 50 of Singapore (the "Companies Act"), if any;
 - 8.5 that the approvals conferred by the copies of the Resolutions and the Future Authorisations have not been and, as the case may be, will not be revoked, rescinded, superseded or amended and are and, as the case may be, will be in full force and effect, and that no other resolution or other action has been passed or taken which could affect the validity of any or all of the Resolutions and the Future Authorisations;
 - 8.6 that the directors of the Company:
 - (a) have been duly appointed in accordance with the provisions of the Companies Act and the constitution of the Company in force at that time;
 - (b) have acted and will act in good faith and in the best interests of the Company in approving the preparation, execution and filing of the Registration Statement and the Sales Agreement Prospectus with the Commission, the entry into the transactions contemplated in the Sales Agreement Prospectus, and the execution of, and entry into, the Sales Agreement, and without intention to defraud any of the creditors of the Company; and
 - (c) have each disclosed and will disclose any interest which he may have in the transactions contemplated in the Registration Statement, the Sales Agreement Prospectus and the Sales Agreement in accordance with the provisions of the Companies Act and the Constitutive Documents and none of the directors of the Company has or will have any interest in such transactions except to the extent permitted by the Companies Act and the Constitutive Documents;

- 8.7 that all relevant documents have been provided to us by the officers of the Company for inspection for the purposes of this opinion;
- 8.8 that the Company will have obtained, at the time of each issuance of the Offering Shares, a mandate from the shareholders of the Company to issue such Offering Shares pursuant to Section 161 of the Companies Act (the "<u>Share Issue Mandate</u>") and such Share Issue Mandate will not have expired in accordance with its terms or been previously revoked or varied by the Company in a general meeting;
- 8.9 that the Offering Share(s) will be issued in accordance with the terms and subject to the conditions in the Resolutions, the Future Authorisations and/or the instructions of the person(s) acting pursuant to authority properly delegated to such person by the Board of Directors or any committee of the Board of Directors;
- 8.10 that at each time of issuance, sale and/or delivery of the Issuance Notice(s) and Offering Shares(s):
 - (a) the issuance, sale and/or delivery of the Issuance Notice(s) and the Offering Share(s) will be duly authorised by, as the case may be, the Resolutions, the Future Authorisations and/or the person(s) acting pursuant to authority properly delegated to such person by the Board of Directors or any committee of the Board of Directors; and
 - (b) the Company will be validly existing under the laws of Singapore, with the requisite capacity, power and authority to issue, sell and/or deliver the Issuance Notice(s) and Offering Share(s);
- 8.11 that the Offering Shares to be issued in connection with the Offering will be duly registered in the names of the persons who subscribe for or purchase the Offering Shares in the Register of Members of the Company, or in the name of the Depository Trust Company or its nominee, as the case may be, and the certificates for the Offering Shares will be duly issued and delivered;
- 8.12 that:
 - (a) the results of the electronic instant information search made by us on 10 May 2019 at 9:53 a.m. (Singapore time) of the public records of the Company maintained by ACRA at https://www.acra.gov.sg (the "<u>ACRA Search</u>") at ACRA; and
 - (b) the results of the electronic searches made by us on 10 May 2019 at 9:51 a.m. (Singapore time) for the period of 1 January 2016 to 10 May 2019 (as at 9:51 a.m.) (both dates inclusive) of: (i) the Company, obtained from the search modules Insolvency (including Judicial Management) (Supreme Court) and Appeals Cases (Supreme Court), Appeals Cases (State Courts), Enforcement (Supreme Courts) and Enforcement (State Courts), and (ii) the directors of the Company, obtained from the search module Bankruptcy (Supreme Court), of the Cause Book Search function of the eLitigation system at https://www.elitigation.sg (the "Court Searches"),

are true, complete and accurate, and remain correct up to the date of this opinion and that:

(i) such information has not since the relevant time on which the ACRA Search or Court Searches, as the case may be, were conducted, been altered; and

- (ii) the ACRA Search and Court Searches, as the case may be, did not fail to disclose any information which has been lodged, registered or filed but did not appear on the public records available for such electronic searches at the time of such searches, and all matters which ought to have been lodged, registered, or filed with ACRA or the relevant court, as the case may be, have been duly lodged, registered, or filed;
- 8.13 that no law (including, without limitation, any public policy) of any jurisdiction outside Singapore is relevant to or affects the opinions expressed or conclusions stated in this opinion;
- 8.14 that the Company has validly entered into the Sales Agreement and the Issuance Notice(s) will be validly issued and delivered by the Company in accordance terms and subject to the conditions of the Sales Agreement;
- 8.15 that the Sales Agreement and the Issuance Notice(s) issued and delivered thereunder constitutes and, as the case may be, will constitute legal, valid, binding and enforceable obligations of the parties thereto for all purposes under the laws of all relevant jurisdictions and that, upon receipt of an Issuance Notice, Jefferies will place the Offering Shares in accordance with the terms and subject to the conditions of the Sales Agreement and the Issuance Notice;
- 8.16 that there are no agreements, documents, arrangements or transactions to which the Company is a party that may in any way prohibit or restrict the issue of the Offering Shares;
- 8.17 that there will be no amendments to the Constitutive Documents or the laws applicable to the Company that would have the effect of rendering any of our opinions in paragraph 9 inaccurate;
- 8.18 that no foreign law is relevant to or affects the opinions expressed, or conclusions stated in this opinion, and none of the opinions expressed herein will be affected by the laws (including, without limitation, the public policy) of any jurisdiction outside Singapore, and insofar as the laws of any jurisdiction outside Singapore may be relevant, such laws have been or will be complied with; and
- 8.19 that none of the Registration Statement, the Sales Agreement Prospectus and the Sales Agreement nor any of the transactions contemplated respectively thereunder constitutes or will constitute a sham.

D. Opinion

9. Based on the foregoing, and subject to the assumptions, limitations and qualifications set forth herein and having regard to such legal considerations as we have deemed relevant and subject to any matters not disclosed to us, we are of the opinion that the Offering Shares, when issued and delivered by the Company in accordance with the Constitutive Documents and the terms of the Sales Agreement, and pursuant to the laws of Singapore against payment of the issuance price of each Offering Share placed by Jefferies, will be validly issued, fully paid and non-assessable.

E. Qualifications

- 10. This opinion is subject to the following qualifications:
 - 10.1 for the purposes of this opinion, we have assumed that the term "**<u>non-assessable</u>**" (a term which has no recognised meaning under the laws of Singapore) in relation to the Offering Shares means that holders of such shares, having fully paid up all amounts due on such shares, are under no further personal liability to make payments to the Company or its creditors or contribute to the assets or liabilities of the Company in their capacities purely as holders of such shares;

- 10.2 we have not investigated or verified the accuracy or completeness of the facts and information, including any statements of foreign law, or the reasonableness of any assumptions, statements of opinion or intention, contained in the Sales Agreement and the documents referred to in paragraph 6 of this opinion. We do not express any opinion as to any matters of fact generally, including statements of foreign law, or the reasonableness of any statements of opinion, contained in the documents described in paragraph 6. In addition, we are not responsible for investigating or verifying whether any material fact has been omitted from such documents;
- 10.3 for the ACRA Search and the Court Searches, we have relied on electronic searches of publicly available records and the records disclosed by such searches may not be complete or up-to-date;
- 10.4 we express no opinion as to the validity, binding effect or enforceability of any provision in the Sales Agreement and the Issuance Notice(s) or, as to the availability in Singapore of remedies which are available in our jurisdictions; and
- 10.5 this opinion is strictly limited to matters stated in this opinion and is not to be construed as extending (by implication or otherwise) to all the documents listed in paragraph 6 of this opinion, or to any other matter or document in connection with, referred to, contemplated by or incorporated by reference, in such documents.
- 11. With respect to matters of fact material to this opinion, we have relied on the statements of the responsible officers of the Company.
- 12. We hereby consent to the use of our opinion as herein set forth as an exhibit to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Sales Agreement Prospectus. In giving this consent, we do not hereby admit and shall not be deemed to admit that we come within the category of persons whose consent is required under Sections 7 and 11 of the Act or to the rules and regulations of the Commission thereunder.
- 13. This opinion is only for the benefit of the person to whom it is addressed, subject to the condition that such person accepts and acknowledges that this opinion may not be appropriate or sufficient for such person's purposes, and is strictly limited to the matters stated in this opinion and is not to be read as extending by implication to any other matter in connection with the Offering, the Registration Statement, the Sales Agreement Prospectus, the Sales Agreement or otherwise. Further, save for the filing of this opinion with the Commission as an exhibit to the Registration Statement, this opinion is not to be circulated or disclosed to, or relied upon by, any other person (other than persons entitled to rely on it pursuant to applicable provisions of federal securities law in the United States of America, if any), nor is it to be used or relied upon for any other purpose, or quoted or referred to in any public document or filed with any governmental body or agency without our prior written consent.

Yours faithfully

/s/ WongPartnership LLP
WONGPARTNERSHIP LLP



One Financial Center Boston, MA 02111 617 542 6000 mintz.com

May 10, 2019

Wave Life Sciences Ltd. 7 Straits View #12-00, Marina One East Tower Singapore, 018936

Ladies and Gentlemen:

We have acted as U.S. counsel to Wave Life Sciences Ltd., a company incorporated under the laws of Singapore (the "<u>Company</u>"), in connection with the preparation and filing with the Securities and Exchange Commission (the "<u>Commission</u>") of a Registration Statement on Form S-3 (the "<u>Registration Statement</u>"), pursuant to which the Company is registering under the Securities Act of 1933, as amended (the "<u>Securities Act</u>"), certain securities (the "<u>Securities</u>"), including the following:

- senior debt securities, in one or more series (the "<u>Senior Debt Securities</u>"), which may be issued pursuant to an indenture to be dated on or about the date of the first issuance of Senior Debt Securities thereunder, by and between the Company and a trustee to be selected by the Company, in the form attached as Exhibit 4.8 to the Registration Statement, as such indenture may be amended or supplemented from time to time (the "<u>Senior Indenture</u>"); and
- (ii) subordinated debt securities, in one or more series (the "<u>Subordinated Debt Securities</u>" and, together with the Senior Debt Securities, the "<u>Debt Securities</u>"), which may be issued pursuant to an indenture to be dated on or about the date of the first issuance of Subordinated Debt Securities thereunder, by and between the Company and a trustee to be selected by the Company, in the form attached as Exhibit 4.9 to the Registration Statement, as such indenture may be amended or supplemented from time to time (the "<u>Subordinated Indenture</u>").

The Securities are being registered for offering and sale from time to time on a delayed or continuous basis pursuant to Rule 415 under the Securities Act.

For purposes of this opinion, we have assumed that proceedings taken and proposed to be taken by the Company in connection with the authorization and issuance of the Debt Securities that have not yet been completed will be timely and properly completed, in accordance with all requirements of applicable laws. We have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or facsimile copies and the authenticity of the originals of such copies.

Members of our firm are admitted to the Bar of the Commonwealth of Massachusetts and the State of New York, and we do not express any opinion other than as to the Debt Securities constituting valid and legally binding obligations of the Company under the laws of the State of New York. No opinion is expressed herein with respect to (i) the qualification of the Securities under the securities or blue sky laws of any state or any foreign jurisdiction or (ii) the compliance with any federal or state law, rule or regulation relating to securities, or to the sale or issuance thereof. The Securities may be offered and sold from time to time on a delayed or continuous basis, but this opinion is limited to the laws, including the rules and regulations thereunder, as in effect on the date hereof.

BOSTONLONDONLOS ANGELESNEW YORKSANDIEGOSAN FRANCISCOWASHINGTON

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.

MINTZ





Based upon the foregoing and in reliance thereon, and subject to the qualifications herein stated, we are of the opinion that:

With respect to the Debt Securities, when (i) specifically authorized for issuance by the Company's Board of Directors or an authorized 1. committee thereof (the "Authorizing Resolutions"), (ii) the Registration Statement, as finally amended (including all post-effective amendments), has become effective under the Securities Act, (iii) an appropriate prospectus supplement with respect to the applicable Debt Securities has been prepared, delivered and filed in compliance with the Securities Act and the applicable rules and regulations thereunder, (iv) if the applicable Debt Securities are to be sold pursuant to an Underwriting Agreement, such Underwriting Agreement with respect to the applicable Debt Securities in the form filed as an exhibit to the Registration Statement, any post-effective amendment thereto or to a Current Report on Form 8-K, has been duly authorized, executed and delivered by the Company and the other parties thereto, (v) the terms of the Debt Securities and of their issuance and sale have been duly established in conformity with the Senior Indenture or the Subordinated Indenture, whichever the case may be, and do not violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company, (vi) such Debt Securities have been duly executed and authenticated in accordance with the Senior Indenture or the Subordinated Indenture, whichever the case may be, and issued and sold as contemplated in the Registration Statement and the prospectus included therein, (vii) the Senior Indenture or the Subordinated Indenture, whichever the case may be, relating to the Debt Securities has been qualified under the Trust Indenture Act of 1939, as amended, and (viii) the Company has received the consideration provided for in the Authorizing Resolutions and, if applicable, the Underwriting Agreement, such Debt Securities will constitute valid and legally binding obligations of the Company.

The opinions set forth above are subject to the following exceptions, limitations and qualifications: (i) the effect of bankruptcy, insolvency, reorganization, fraudulent conveyance, moratorium or other similar laws now or hereafter in effect relating to or affecting the rights and remedies of creditors; (ii) the effect of general principles of equity, whether enforcement is considered in a proceeding in equity or at law, and the discretion of the court before which any proceeding therefor may be brought; (iii) the unenforceability under certain circumstances under law or court decisions of provisions providing for the indemnification of, or contribution to, a party with respect to a liability where such indemnification or contribution is contrary to public policy; (iv) we express no opinion concerning the enforceability of any waiver of rights or defenses with respect to stay, extension or usury laws; and (v) we express no opinion with respect to whether acceleration of any Debt Securities may affect the ability to collect any portion of the stated principal amount thereof which might be determined to constitute unearned interest thereon.

We have relied as to certain matters on information obtained from public officials, officers of the Company, and other sources believed by us to be responsible and we have assumed that the Senior Indenture and the Subordinated Indenture will be duly authorized, executed, and delivered by the respective trustees thereunder.

MINTZ

May 10, 2019 Page 3



Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of this Firm's name therein and in the prospectus included therein under the caption "Legal Matters." In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

The Board of Directors Wave Life Sciences Ltd.:

We consent to the use of our reports dated March 1, 2019, with respect to the consolidated balance sheets of Wave Life Sciences Ltd. as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss, Series A preferred shares and shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the "consolidated financial statements"), and the effectiveness of internal control over financial reporting as of December 31, 2018, incorporated herein by reference and to the reference to our firm under the heading "Experts" in the prospectus.

/s/ KPMG LLP Cambridge, Massachusetts May 10, 2019