
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM F-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Pharvaris N.V.

(Exact Name of Registrant as Specified in Its Charter)

Not Applicable
(Translation of Registrant's name into English)

Netherlands
(State or Other Jurisdiction of
Incorporation or Organization)

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

J.H. Oortweg 21,
2333 CH Leiden, The Netherlands
+31 (0)71 203 6410
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Berndt Modig
Pharvaris N.V.
J.H. Oortweg 21
2333 CH Leiden
The Netherlands
+31 (0)71 203 6410
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

Copies to:

Sophia Hudson, P.C.
Kirkland & Ellis LLP
601 Lexington Avenue
New York, NY 10022
(212) 446-4800

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.

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

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

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

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

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933. Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, 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 the Securities Act.

† The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

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

EXPLANATORY NOTE

This registration statement contains two prospectuses:

- a base prospectus which covers the offering, issuance and sale of up an unspecified amount of the registrant's ordinary shares, debt securities, warrants, purchase contracts and units; and
- a sales agreement prospectus supplement covering the offering, issuance and sale of up to \$75,000,000 of the registrant's ordinary shares that may be issued and sold under the Sales Agreement between the registrant and SVB Securities 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 sales agreement prospectus supplement immediately follows the base prospectus.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. The prospectus is not an offer to sell these securities nor a solicitation of an offer to buy these securities in any jurisdiction where the offer and sale is not permitted.

Subject to completion, dated March 1, 2022

PROSPECTUS

Ordinary shares, Debt Securities, Warrants, Purchase Contracts and Units

PHARVARIS

Pharvaris N.V.

(incorporated in the Netherlands)

We may offer, from time to time, in one or more offerings, ordinary shares, senior debt securities, subordinated debt securities, warrants, purchase contracts or units, which we collectively refer to as the “securities.” The aggregate initial offering price of the securities that we may offer and sell under this prospectus will not exceed \$350,000,000. We may offer and sell any combination of the securities described in this prospectus in different series, at times, in amounts, at prices and on terms to be determined at or prior to the time of each offering. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in 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 prospectus. You should read this prospectus and any applicable prospectus supplement before you invest.

The securities covered by this prospectus may be offered through one or more underwriters, dealers and agents, or directly to purchasers. The names of any underwriters, dealers or agents, if any, will be included in a supplement to this prospectus. For general information about the distribution of securities offered, please see “Plan of Distribution” beginning on page 33 of this prospectus.

YOU SHOULD READ THIS PROSPECTUS AND ANY SUPPLEMENT TO THIS PROSPECTUS CAREFULLY BEFORE YOU INVEST.

Our ordinary shares are listed on The Nasdaq Global Select Market under the symbol “PHVS.” On February 28, 2022, the last sale price of our ordinary shares as reported by The Nasdaq Global Select Market was \$17.10 per ordinary share.

We are an “emerging growth company” and a “foreign private issuer” as defined under the U.S. Securities and Exchange Commission and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus supplement and future filings. Please see “Pharvaris N.V.—Implications of Being an “Emerging Growth Company” and a Foreign Private Issuer.”

Neither the U.S. 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.

Investing in our securities involves risks. See “[Risk Factors](#)” beginning on page 7 of this prospectus. In addition, please review any additional risk factors in the accompanying prospectus supplement, any free writing prospectus and any documents we incorporate by reference.

The date of this prospectus is _____, 2022.

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We have not authorized anyone to provide any information other than that contained in or incorporated by reference in this prospectus and any related prospectus supplement we provide to you. We have not authorized anyone to provide you with different or additional information. We are not making an offer of securities in any jurisdiction where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus is accurate as of any date other than the date on the front of this prospectus. Unless otherwise noted or the context otherwise requires, references in this prospectus to “Pharvaris” “the Company,” “our company,” “we,” “us” or “our” refer to Pharvaris N.V. and its subsidiaries.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a “shelf” registration process. Under this shelf process, we may sell up to \$350,000,000 in 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 sell securities pursuant to this prospectus, we will provide a prospectus supplement and/or free writing prospectus that will contain specific information about the terms of that offering, including amounts, prices and terms of the securities being offered. The prospectus supplement and/or free writing prospectus may also add, update or change information contained in this prospectus. Any statement made in this prospectus will be modified or superseded by any inconsistent statement made in a prospectus supplement and/or free writing prospectus. If there is any inconsistency between the information in this prospectus and the information in the prospectus supplement or free writing prospectus, you should rely on the information in the prospectus supplement or free writing prospectus, as the case may be. This prospectus may not be used to sell any securities unless accompanied by a prospectus supplement or free writing prospectus.

We have filed or incorporated by reference exhibits to the registration statement of which this prospectus forms a part. You should read the exhibits carefully for provisions that may be important to you.

You should read this prospectus, any prospectus supplement and free writing prospectus together with the additional information described herein under the heading “Where You Can Find More Information and “Incorporation of Certain Information by Reference.” We have not authorized any person to provide you with different information and we take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

You should not assume that the information in this prospectus, any accompanying prospectus supplement or free writing prospectus or any documents we incorporate by reference in this prospectus, any prospectus supplement and free writing prospectus is accurate as of any date other than the date on the front of those documents. Our business, financial condition, results of operations and prospects may have changed since that date.

You should not assume that the information contained in this prospectus is accurate as of any other date.

WHERE YOU CAN FIND MORE INFORMATION

We file annual reports on Form 20-F, reports on Form 6-K, and other information with the SEC under the Securities Exchange Act of 1934, as amended, or the Exchange Act. You may read and copy this information at the following location of the SEC: Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549.

You may obtain information on the operation of the SEC's Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports and other information about issuers like us who file electronically with the SEC. The address of the site is <http://www.sec.gov>.

As a foreign private issuer, we are exempt under the Exchange Act from, among other things, the rules prescribing the furnishing and content of proxy statements, and our managing directors and supervisory directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we are not required under the Exchange Act to file periodic reports and financial statements with the SEC as frequently or as promptly as U.S. companies whose securities are registered under the Exchange Act.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the financial statements and other documents incorporated by reference in this prospectus contain forward-looking statements, including statements concerning our industry, our operations, our anticipated financial performance and financial condition, and our business plans and growth strategy and product development efforts. These statements constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. Many of the forward-looking statements contained in this prospectus can be identified by the use of forward-looking words such as “anticipate,” “believe,” “could,” “expect,” “should,” “plan,” “intend,” “estimate” and “potential,” among others. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates. These forward-looking statements are based on estimates and assumptions by our management that, although we believe to be reasonable, are inherently uncertain and subject to a number of risks and uncertainties.

The following represent some, but not necessarily all, of the factors that could cause actual results to differ from historical results or those anticipated or predicted by our forward-looking statements:

- the expected timing, progress or success of our clinical development programs, especially for PHVS416 and PHVS719, which are in early-stage clinical trials;
- risks associated with the COVID-19 pandemic, which may adversely impact our business, preclinical studies and clinical trials, the timing of regulatory approvals and the value of our ordinary shares;
- the timing, costs and other limitations involved in obtaining regulatory approval for our product candidates PHVS416 and PHVS719 or any other product candidate that we may develop in the future;
- our ability to market, commercialize and achieve market acceptance for our product candidates PHVS416 and PHVS719 or any of our other product candidates that we may develop in the future, if approved;
- our ability to establish commercial capabilities or enter into agreements with third parties to market, sell and distribute our product candidates;
- our dependence on third parties to perform critical activities related to the research, development and manufacturing of our product candidates;
- disruptions at the FDA and other government agencies;
- the expense, time and uncertainty involved in the development and consistent manufacturing and supply of our product candidates, some or all of which may never reach the regulatory approval stage;
- our ability to raise capital when needed and on acceptable terms;
- our ability to enter into any new licensing agreements or to maintain any licensing agreements with respect to our product candidates;
- our reliance on collaboration partners and licensees, whose actions we cannot control;
- the willingness of private insurers and other payors to provide reimbursement for our products;
- regulatory developments in the United States, the European Union and other jurisdictions;
- the outcome and timing of price negotiations with governmental authorities;
- our ability to compete in the pharmaceutical industry and with competitive generic products;
- our ability to protect our intellectual property and know-how and operate our business without infringing the intellectual property rights or regulatory exclusivity of others;
- side effects or adverse events associated with the use of our product candidates;

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- our ability to defend against costly and damaging liability claims resulting from the testing of our product candidates in the clinic or, if approved, any commercial sales;
- a loss of any of our key personnel;
- our estimates of market sizes and anticipated uses of our product candidates;
- our estimates of future performance;
- our estimates regarding anticipated operating losses, future revenues, expenses, capital requirements and our needs for additional financing;
- our ability to comply with existing or future laws and regulations in a cost-efficient manner;
- our ability to manage negative consequences from changes in applicable laws and regulations, including tax laws;
- our ability to successfully remediate the material weaknesses in our internal control over financial reporting and to maintain an effective system of internal control over financial reporting;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act or a foreign private issuer;
- changes in general market, political and economic conditions;
- the length and severity of the COVID-19 outbreak and its impact on our business, including our supply chain, clinical trials and operations; and
- other risk factors discussed herein under “Risk Factors” or incorporated herein by reference.

Our actual results or performance could differ materially from those expressed in, or implied by, any forward-looking statements relating to those matters. Accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do, what impact they will have on our results of operations, cash flows or financial condition. Additionally, some of the risks and uncertainties identified above may be amplified by the COVID-19 pandemic. It is not possible to predict or identify all such risks. There may be additional risks that we consider immaterial or which are unknown. Except as required by law, we are under no obligation, and expressly disclaim any obligation, to update, alter or otherwise revise any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future events or otherwise.

PHARVARIS N.V.

Our Business

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of innovative therapies for rare diseases with significant unmet need, initially focused on angioedema and other bradykinin-mediated diseases. Our first molecule, PHA121, is a novel, small molecule bradykinin B2-receptor antagonist for the treatment of hereditary angioedema, or HAE. Bradykinin-B2-receptor inhibition is a clinically validated mechanism for the treatment of HAE, as demonstrated by icatibant, which is a bradykinin B2-receptor antagonist approved in Europe in 2008 and in the United States in 2011 (as FIRAZYR). We designed PHA121 to improve upon the therapeutic profile of existing therapies and, through oral delivery, to provide patients with quality of life and convenience that is superior to current standard-of-care HAE treatments, which are injectables. We believe PHA121 has the potential to provide a safe, effective and convenient option for both acute and prophylactic treatments of HAE, in the form of our PHVS416 on-demand rapid exposure product candidate, and for prophylaxis of HAE, in the form of our PHVS719 small daily dose extended-release product candidate. We believe that our product candidates may address a broader range of angioedema attacks than other available treatments since PHA121 blocks the actual signal that leads to angioedema (the interaction of bradykinin, or BK, with the bradykinin B2 receptor), rather than an upstream signal. By blocking the action of bradykinin, we can prevent its aberrant signaling regardless of the pathway that generates it. In our completed Phase 1 trials to-date, we have observed that PHA121 was orally bioavailable and well tolerated at all doses studied, with approximately dose-proportional exposure. We also have successfully demonstrated proof-of-mechanism through a clinical pharmacodynamics, or PD, assessment with the bradykinin challenge, which had been utilized as a validated surrogate assessment for dose selection in the icatibant development program. The data also allowed us to compare the projected therapeutic performance of PHA121 with that of icatibant, but we do not yet have data from the PHA121 Phase 2 study. We plan to efficiently progress PHA121 through clinical development for on-demand and prophylactic use with our on-demand product candidate, PHVS416, and extended release product candidate, PHVS719, respectively. We commenced our RAPIDe-1 Phase 2 clinical trial of PHVS416 in February 2021 and expect to have Phase 2 data for the acute treatment of patients with HAE attacks in the fourth quarter of 2022. We also commenced a Phase 2 clinical trial for prophylaxis in 2021 using twice-daily dosing of the PHVS416 soft capsules. Our primary objective with this trial is to assess the safety profile of PHVS416 dose regimens for prophylactic treatments in HAE patients. We also initiated a Phase 1 clinical trial with PHVS719 in 2021 to assess pharmacokinetics of the extended-release formulation.

Corporate Information

The offices of Pharvaris N.V. are located at J.H. Oortweg 21, 2333 CH Leiden, The Netherlands. Our telephone number is +31 (0)71 203 6410. Investors should contact us for any inquiries at the address and telephone number of our principal executive office. Our principal website is www.pharvaris.com. The information contained on our website is not a part of this prospectus.

Implications of Being an “Emerging Growth Company” and a Foreign Private Issuer

We qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of relief from certain reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act.

We may take advantage of these provisions until such time that we cease to qualify as an emerging growth company. We would cease to qualify as an emerging growth company upon the earliest of: (i) the last day of the fiscal year (A) in which we had more than \$1.07 billion in annual revenue, (B) we are deemed to be a “large accelerated filer” under the rules of the SEC, or (C) following the fifth anniversary of the date of the completion

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of our initial public offering (ii) the date on which we issue more than \$1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced reporting requirements. To the extent that we take advantage of these reduced reporting requirements, the information that we provide shareholders may be different than the information you might obtain from other public companies in which you hold equity interests.

We also report under the Securities Exchange Act of 1934, as amended, or the Exchange Act, as a non-U.S. company with foreign private issuer status. Even after we no longer qualify as an emerging growth company, as long as we qualify as a foreign private issuer under the Exchange Act we will continue to be exempt from certain provisions of the Exchange Act that are applicable to U.S. domestic public companies, including, but not limited to:

- the rules under the Exchange Act requiring domestic filers to issue financial statements prepared under U.S. GAAP;
- the sections of the Exchange Act regulating the solicitation of proxies, consents or authorizations in respect of a security registered under the Exchange Act;
- the sections of the Exchange Act requiring insiders to file public reports of their stock ownership and trading activities and liability for insiders who profit from trades made in a short period of time; and
- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q containing unaudited financial and other specific information, or current reports on Form 8-K, upon the occurrence of specified significant events.

We may take advantage of these exemptions until such time as we are no longer a foreign private issuer. We would cease to be a foreign private issuer at such time as (i) more than 50% of our outstanding voting securities are held by U.S. residents and (ii) any of the following three circumstances applies: (A) the majority of our executive officers or directors are U.S. citizens or residents, (B) more than 50% of our assets are located in the United States or (C) our business is administered principally in the United States.

Both foreign private issuers and emerging growth companies are also exempt from certain more stringent executive compensation disclosure rules. Thus, even if we no longer qualify as an emerging growth company but remain a foreign private issuer, we will continue to be exempt from the more stringent compensation disclosures required of companies that are not emerging growth companies and will continue to be permitted to follow our home country practice on such matters.

RISK FACTORS

Investing in our securities involves risks. Before making a decision to invest in our securities, you should carefully consider the risks described under “Risk Factors” in the applicable prospectus supplement, as well as those risks and uncertainties identified in the documents incorporated by reference herein, including our most recent Annual Report on Form 20-F, and in any updates to those risk factors in our reports on Form 6-K incorporated herein, together with all of the other information appearing or incorporated by reference in this prospectus and any applicable prospectus supplement, before making an investment in our securities in light of your particular investment objectives and financial circumstances.

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, the net proceeds from our sale of the securities will be used for general corporate purposes and other business opportunities.

DESCRIPTION OF SHARE CAPITAL AND ARTICLES OF ASSOCIATION

General

Our legal and commercial name is Pharvaris N.V. In connection with our initial public offering in the first quarter of 2021, we converted the legal form of our company under Dutch law from a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*) to a public company with limited liability (*naamloze vennootschap*) and changed our name from Pharvaris B.V. to Pharvaris N.V. Pharvaris B.V. was founded on September 30, 2015 in Leiden, The Netherlands.

We are registered with the Chamber of Commerce (*handelsregister van de Kamer van Koophandel*) under number 64239411. Our corporate seat is in Leiden, the Netherlands, and our registered office is also in Leiden, the Netherlands.

Our authorized share capital is €14,100,000, divided into 58,750,000 ordinary shares, each with a nominal value of €0.12, and 58,750,000 preferred shares, each with a nominal value of €0.12. Our issued share capital was €3,978,225.72 as of December 31, 2021.

Under Dutch law, our authorized share capital is the maximum capital that we may issue without amending our Articles of Association. An amendment of our Articles of Association would require a resolution of the general meeting of shareholders upon proposal by our board of directors (the “Board”).

Initial settlement of any ordinary shares to be issued pursuant to this prospectus will take place through The Depository Trust Company, or DTC, in accordance with its customary settlement procedures for equity securities. Each person owning ordinary shares held through DTC must rely on the procedures thereof and on institutions that have accounts therewith to exercise any rights of a holder of the ordinary shares.

Stock Exchange Listing

Our ordinary shares are listed on The Nasdaq Global Select Market, or Nasdaq, under the symbol “PHVS”.

Articles of Association and Dutch Law

Set forth below is a summary of relevant information concerning our share capital and material provisions of our Articles of Association and applicable Dutch law. This summary does not constitute legal advice regarding those matters and should not be regarded as such.

Company’s Shareholders’ Register

Pursuant to Dutch law and the Articles of Association, we must keep our shareholders’ register accurate and up-to-date. The Board keeps our shareholders’ register and records names and addresses of all holders of shares, showing the date on which the shares were acquired, the date of the acknowledgement by or notification of us as well as the amount paid on each share. The register also includes the names and addresses of those with a right of usufruct (*vruchtgebruik*) in shares belonging to another or a pledge (*pandrecht*) in respect of such shares. Any ordinary shares to be issued pursuant to this prospectus will be held through DTC, therefore DTC or its nominee will be recorded in the shareholders’ register as the holder of the ordinary shares.

Our ordinary shares and preferred shares, if any, shall be in registered form (*op naam*). We may issue share certificates (*aandeelbewijzen*) for registered shares in such form as may be approved by our Board.

Corporate Objectives

Pursuant to the Articles of Association, our corporate objectives are:

- to discover, develop and commercialize treatments, including for hereditary angioedema;

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- to engage, in any way whatsoever, in trading activities (retail and wholesale), the import, export, purchase, sale and distribution of products, including, but not limited to, pharmaceutical products, and other related (raw material) products and to render operational and supporting services to its group companies in connection herewith;
- to incorporate, participate in, finance or hold any other interest in and to conduct the management or supervision of other entities, companies, partnerships and businesses;
- to acquire, to manage, to invest, to exploit, to encumber and to dispose of assets and liabilities;
- to furnish guarantees, to provide security, to warrant performance in any other way and to assume liability, whether jointly and severally or otherwise, in respect of obligations of group companies or other parties; and
- to do anything which, in the widest sense, is connected with or may be conducive to the objects described above.

Limitations on the Rights to Own Ordinary Shares

Our ordinary shares may be issued to individuals, corporations, trusts, estates of deceased individuals, partnerships and unincorporated associations of persons. Our Articles of Association contain no limitation on the rights to own our ordinary shares and no limitation on the rights of nonresidents of the Netherlands or foreign shareholders to hold or exercise voting rights. Our preferred shares shall only be issued to the protective foundation, if and when incorporated.

Limitation on Liability and Indemnification Matters

Under Dutch law, directors may be held liable for damages in the event of improper or negligent performance of their duties. They may be held jointly and severally liable for damages to the Company and to third parties for infringement of the Articles of Association or of certain provisions of Dutch law. In certain circumstances, they may also incur other specific civil and criminal liabilities. Subject to certain exceptions, our Articles of Association provide for indemnification of our current and former directors (and other current and former officers and employees as designated by our Board). No indemnification shall be given to an indemnified person:

- if a competent court or arbitral tribunal has established, without having (or no longer having) the possibility for appeal, that the acts or omissions of such indemnified person that led to the financial losses, damages, expenses, suit, claim, action or legal proceedings as described above are of an unlawful nature (including acts or omissions which are considered to constitute malice, gross negligence, intentional recklessness and/or serious culpability attributable to such indemnified person);
- to the extent that his or her financial losses, damages and expenses are covered under insurance and the relevant insurer has settled, or has provided reimbursement for, these financial losses, damages and expenses (or has irrevocably undertaken to do so);
- in relation to proceedings brought by such indemnified person against the Company, except for proceedings brought to enforce indemnification to which he is entitled pursuant to our Articles of Association, pursuant to an agreement between such indemnified person and the Company which has been approved by the Board or pursuant to insurance taken out by the Company for the benefit of such indemnified person; or
- for any financial losses, damages or expenses incurred in connection with a settlement of any proceedings effected without the Company's prior consent.

Under our Articles of Association, our Board may stipulate additional terms, conditions and restrictions in relation to the indemnification described above.

Shareholders' Meetings and Consents

General Meeting

General meetings must be held in the Netherlands, in any of the locations specified in our articles of association. The annual general meeting must be held within six months of the end of each financial year. Additional extraordinary general meetings may also be held, whenever considered appropriate by the Board and shall be held within three months after our Board has considered it to be likely that our shareholders' equity (*eigen vermogen*) has decreased to an amount equal to or lower than half of our paid-in and called-up share capital, in order to discuss the measures to be taken if so required.

Pursuant to Dutch law, one or more shareholders or others with meeting rights under Dutch law who jointly represent at least one-tenth of our issued share capital may request us to convene a general meeting, setting out in detail the matters to be discussed. If our Board has not taken the steps necessary to ensure that such meeting can be held within six weeks after the request, proponent(s) may, on their application, be authorized by the competent Dutch court in preliminary relief proceedings to convene a general meeting. The court shall disallow the application if it does not appear that the proponent(s) has/have previously requested our Board to convene a general meeting and our Board has not taken the necessary steps so that the general meeting could be held within six weeks after the request. The application shall also be disallowed if the proponent(s) has/have not demonstrated to have a reasonable interest in the convening of the general meeting.

General meetings must be convened by an announcement published in a Dutch daily newspaper with national distribution. The notice must state the agenda, the time and place of the meeting, the record date (if any), the procedure for participating in the general meeting by proxy, as well as other information as required by Dutch law. The notice must be given at least 15 calendar days prior to the day of the meeting. The agenda for the annual general meeting shall include, among other things, the adoption of our statutory annual accounts, appropriation of our profits and proposals relating to the composition of the Board, including the filling of any vacancies in the Board. In addition, the agenda shall include such items as have been included therein by the Board. The agenda shall also include such items requested by one or more shareholders or others with meeting rights under Dutch law representing at least 3% of our issued share capital. These requests must be made in writing or by electronic means and received by the Board at least 60 days before the day of the meeting. No resolutions shall be adopted on items other than those that have been included in the agenda.

In accordance with the Dutch Corporate Governance Code, shareholders who have the right to put an item on the agenda for our general meeting or to request the convening of a general meeting shall not exercise such rights until after they have consulted our Board. If exercising such rights may result in a change in our strategy (for example, through the dismissal of one or more of our directors), our Board must be given the opportunity to invoke a reasonable period of up to 180 days to respond to the shareholders' intentions. If invoked, our Board must use such response period for further deliberation and constructive consultation, in any event with the shareholder(s) concerned and exploring alternatives. At the end of the response time, our board of directors shall report on this consultation and the exploration of alternatives to our general meeting. The response period may be invoked only once for any given general meeting and shall not apply (i) in respect of a matter for which a response period has been previously invoked or (ii) if a shareholder holds at least 75% of our issued share capital as a consequence of a successful public bid.

Moreover, our Board can invoke a cooling-off period of up to 250 days when shareholders, using their right to have items added to the agenda for a general meeting or their right to request a general meeting, propose an agenda item for our general meeting to dismiss, suspend or appoint one or more directors (or to amend any provision in our articles of association dealing with those matters) or when a public offer for our company is made or announced without our support, provided, in each case, that our Board believes that such proposal or offer materially conflicts with the interests of our company and its business. During a cooling-off period, our general meeting cannot dismiss, suspend or appoint directors (or amend the provisions in our articles of association dealing with those matters) except at the proposal of our board of directors.

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The general meeting is presided over by the chairperson of the Board. If no chairperson has been elected or if he or she is not present at the meeting, the general meeting shall be presided over by the vice-chairperson. If no vice-chairperson has been elected or if he or she is not present at the meeting, the general meeting shall be presided over by another person designated in accordance with our articles of association. Our directors may always attend a general meeting. In these meetings, they have an advisory vote. The chairperson of the meeting may decide at his or her discretion to admit other persons to the meeting.

All shareholders and others with meeting rights under Dutch law are authorized to attend the general meeting, to address the meeting and, in so far as they have such right, to vote pro rata to his or her shareholding. Shareholders may exercise these rights, if they are the holders of shares on the record date, if any, as required by Dutch law, which is currently the 28th day before the day of the general meeting. Under our Articles of Association, shareholders and others with meeting rights under Dutch law must notify us in writing or by electronic means of their identity and intention to attend the general meeting. This notice must be received by us ultimately on the seventh day prior to the general meeting, unless indicated otherwise when such meeting is convened.

Quorum and Voting Requirements

Each ordinary share and each preferred share, if any are outstanding, confers the right on the holder to cast one vote at the general meeting. Shareholders may vote by proxy. No votes may be cast at a general meeting on shares held by us or our subsidiaries or on shares for which we or our subsidiaries hold depository receipts. Nonetheless, the holders of a right of usufruct (*vruchtgebruik*) and the holders of a right of pledge (*pandrecht*) in respect of shares held by us or our subsidiaries in our share capital are not excluded from the right to vote on such shares, if the right of usufruct (*vruchtgebruik*) or the right of pledge (*pandrecht*) was granted prior to the time such shares were acquired by us or any of our subsidiaries. Neither we nor any of our subsidiaries may cast votes in respect of a share on which we or such subsidiary holds a right of usufruct (*vruchtgebruik*) or a right of pledge (*pandrecht*). Shares which are not entitled to voting rights pursuant to the preceding sentences will not be taken into account for the purpose of determining the number of shareholders that vote and that are present or represented, or the amount of the share capital that is provided or that is represented at a general meeting.

Decisions of the general meeting are taken by a simple majority of votes cast, except where Dutch law or our Articles of Association provide for a qualified majority or unanimity.

Directors

Appointment of Directors

Under our Articles of Association, the directors are appointed by the general meeting upon binding nomination by our Board, on a recommendation of our nomination and corporate governance committee. However, the general meeting may at all times overrule the binding nomination by a resolution adopted by at least a two-thirds majority of the votes cast, provided such majority represents more than half of the issued share capital. If the general meeting overrules the binding nomination, the Board shall make a new nomination.

At a general meeting, a resolution to appoint a director can only be passed in respect of candidates whose names are stated for that purpose in the agenda of that general meeting or in the explanatory notes thereto. Upon the appointment of a person as a director, the general meeting shall determine whether that person is appointed as executive director or as non-executive director.

Duties and Liabilities of Directors

Under Dutch law, our Board is charged with the management of the Company, which includes setting the Company's policies and strategy, subject to the restrictions contained in our Articles of Association. The

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executive directors manage our day-to-day business and operations and implement our strategy. The non-executive directors focus on the supervision on the policy and functioning of the performance of the duties of all of our directors, and our general state of affairs. Our directors may divide their tasks among themselves in or pursuant to internal rules. Each director has a statutory duty to act in the corporate interest of the Company and its business. Under Dutch law, the corporate interest extends to the interests of all corporate stakeholders, such as shareholders, creditors, employees, customers and suppliers. The duty to act in the corporate interest of the Company also applies in the event of a proposed sale or break-up of the Company, provided that the circumstances generally dictate how such duty is to be applied and how the respective interests of various groups of stakeholders should be weighed. Any resolution of the Board regarding a material change in our identity or character requires approval of the general meeting.

Our Board is entitled to represent our Company. The power to represent our Company also vests in our chief executive officer, as well in any two executive director acting jointly.

Dividends and Other Distributions

Amount Available for Distribution

Under Dutch law, we may only pay dividends and other distributions from our reserves to the extent our shareholders' equity (*eigen vermogen*) exceeds the sum of our paid-in and called-up share capital plus the reserves we must maintain under Dutch law or our Articles of Association and (if it concerns a distribution of profits) after adoption of our statutory annual accounts by our general meeting from which it appears that such dividend distribution is allowed.

Under our articles of association, if any preferred shares are or have been outstanding, a dividend is first paid out of our profits, if available for distribution, to the holders or former holders, as applicable, of those preferred shares to the extent they are entitled to such distribution under our Articles of Association, which we refer to as our preferred dividend. Thereafter, our Board may decide that all or part of the remaining profits shown in our adopted statutory annual accounts will be added to our reserves. After reservation of any such profits, any remaining profits will be at the disposal of the general meeting at the proposal of our Board for distribution on our ordinary shares, subject to applicable restrictions of Dutch law. Our Board is permitted, subject to certain requirements and applicable restrictions of Dutch law, to declare interim dividends without the approval of our general meeting. Dividends and other distributions shall be made payable no later than a date determined by us. Claims to dividends and other distributions not made within five years from the date that such dividends or distributions became payable will lapse and any such amounts will be considered to have been forfeited to us (*verjaring*).

Exchange Controls

Under Dutch law, there are no exchange controls applicable to the transfer to persons outside of the Netherlands of dividends or other distributions with respect to, or of the proceeds from the sale of, shares of a Dutch company, subject to applicable restrictions under sanctions and measures, including those concerning export control, pursuant to European Union regulations, the Sanctions Act 1977 (*Sanctiewet 1977*) or other legislation, applicable anti-boycott regulations, applicable anti-money-laundering regulations and similar rules and provided that, under certain circumstances, payments of such dividends or other distributions must be reported to the Dutch Central Bank at their request for statistical purposes. There are no special restrictions in our Articles of Association or Dutch law that limit the right of shareholders who are not citizens or residents of the Netherlands to hold or vote shares.

Squeeze-out Procedures

A shareholder who holds at least 95% of our issued share capital for his or her own account, alone or together with group companies, may initiate proceedings against the other shareholders jointly for the transfer of

their shares to such shareholder. The proceedings are held before the Enterprise Chamber, and can be instituted by means of a writ of summons served upon each of the other shareholders in accordance with the provisions of the Dutch Code of Civil Procedure (*Wetboek van Burgerlijke Rechtsvordering*). The Enterprise Chamber may grant the claim for squeeze-out in relation to the other shareholders and will determine the price to be paid for the shares, if necessary after appointment of one or three experts who will offer an opinion to the Enterprise Chamber on the value to be paid for the shares of the other shareholders. Once the order to transfer becomes final before the Enterprise Chamber, the person acquiring the shares shall give written notice of the date and place of payment and the price to the holders of the shares to be acquired whose addresses are known to him. Unless the addresses of all of them are known to the acquiring person, such person is required to publish the same in a daily newspaper with a national circulation.

Dissolution and Liquidation

Under our Articles of Association, we may be dissolved by a resolution of the general meeting, subject to a proposal of the Board. In the event of a dissolution, the liquidation shall be effected by the Board, unless the general meeting decides otherwise. During liquidation, the provisions of our Articles of Association will remain in force as far as possible. To the extent that any assets remain after payment of all debts, if any preferred shares are or have been outstanding, a liquidation distribution equal to the preferred dividend is first paid out to the holders or former holders of those preferred shares (to the extent they are entitled to such distribution under our Articles of Association). Thereafter, any remaining assets shall be distributed to the holders of ordinary shares in proportion to their ordinary shares.

Dutch Financial Reporting Supervision Act

On the basis of the Dutch Financial Reporting Supervision Act (*Wet toezicht financiële verslaggeving*), or the FRSA, the Dutch Authority for the Financial Markets (*Stichting Autoriteit Financiële Markten*), or AFM, supervises the application of financial reporting standards by Dutch companies whose securities are listed on a Dutch or foreign stock exchange.

Pursuant to the FRSA, the AFM has an independent right to (i) request an explanation from us regarding our application of the applicable financial reporting standards if, based on publicly known facts or circumstances, it has reason to doubt that our financial reporting meets such standards and (ii) recommend to us the making available of further explanations. If we do not comply with such a request or recommendation, the AFM may request that the Enterprise Chamber order us to (i) make available further explanations as recommended by the AFM, (ii) provide an explanation of the way we have applied the applicable financial reporting standards to our financial reports or (iii) prepare or restate our financial reports in accordance with the Enterprise Chamber's orders.

COMPARISON OF DUTCH LAW AND OUR ARTICLES OF ASSOCIATION AND U.S. CORPORATE LAW

The following comparison between Dutch corporate law, which applies to us, and Delaware corporation law, the law under which many publicly listed corporations in the United States are incorporated, discusses additional matters not otherwise described in this prospectus. Although we believe this summary is materially accurate, the summary is subject to Dutch law, including Book 2 of the Dutch Civil Code and the DCGC and Delaware corporation law, including the Delaware General Corporation Law.

Dutch Corporate Governance Code

As a listed Dutch public company with limited liability (*naamloze vennootschap*), we are subject to the DCGC. The DCGC contains principles and best practice provisions on corporate governance that regulate relations between the board of directors and the general meeting and matters in respect of financial reporting, auditors, disclosure, compliance and enforcement standards. The DCGC is based on a “comply or explain” principle. Accordingly, companies must disclose in their statutory annual reports whether they comply with the provisions of the DCGC. If a company subject to the DCGC does not comply with those provisions, that company would be required to give the reasons for such non-compliance. We do not comply with all best practice provisions of the DCGC. As of the date of this prospectus, our main deviations from the DCGC are summarized below, but we cannot exclude the possibility of deviating from additional provisions of the DCGC after the date of this prospectus, including in order to follow market practice or governance practices in the United States.

Under our Articles of Association, directors are to be appointed on the basis of a binding nomination prepared by the Board. This means that the nominee will be appointed to the Board, unless the general meeting removes the binding nature of the nomination (in which case a new nomination will be prepared for a subsequent general meeting). Our Articles of Association provide that the general meeting can only pass such resolution by at least a two-thirds majority of the votes cast, representing more than half of the issued share capital. However, the DCGC recommends that the general meeting can pass such a resolution by simple majority, representing no more than one-third of the issued share capital.

Under the Articles of Association, directors can only be dismissed by the general meeting by simple majority, provided that the Board proposes the dismissal. In other cases, the general meeting can only pass such resolution by a two-thirds majority representing more than half of the issued share capital. The DCGC recommends that the general meeting can pass a resolution to dismiss a director by simple majority, representing no more than one-third of the issued share capital.

The DCGC recommends against providing equity awards as part of the compensation of a non-executive director. However, consistent with U.S. market practice, we have granted equity awards to our non-executive directors.

Our Plan allows us to set the terms and conditions of equity awards granted thereunder. Under the Plan, we may grant ordinary shares that are not subject to a lock-up period of at least five years after the date of grant, and we may grant options without restricting the exercisability of those options during the first three years after the date of grant. In those cases, this would cause additional deviations from the DCGC.

Corporate Governance

Duties of directors

The Netherlands. We have a one-tier board structure consisting of a board of directors comprising executive and non-executive directors..

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Under Dutch law, our Board is charged with the management of the company, which includes setting the company's policies and strategy, subject to the restrictions contained in our Articles of Association. Our executive directors manage our day-to-day business and operations and implement our strategy. Our non-executive directors focus on the supervision on the policy and functioning of the performance of the duties of all of our directors and our general state of affairs. Our directors may divide their tasks among themselves in or pursuant to internal rules. Each directors has a statutory duty to act in the corporate interest of our company and its business. Under Dutch law, the corporate interest extends to the interests of all corporate stakeholders, such as shareholders, creditors, employees, customers and suppliers. The duty to act in the corporate interest of our company also applies in the event of a proposed sale or break-up of our company, provided that the circumstances generally dictate how such duty is to be applied and how the respective interests of various groups of stakeholders should be weighed.

Our Board is entitled to represent our company. The power to represent our company also vests in our chief executive officer, as well as in any other two executive directors acting jointly.

Any resolution of our Board regarding a material change in our identity or character requires approval of the general meeting. The absence of the approval of the general meeting shall result in the relevant resolution being null and void but shall not affect the powers of representation of the Board or of the executive directors.

Delaware. The board of directors bears the ultimate responsibility for managing the business and affairs of a corporation. In discharging this function, directors of a Delaware corporation owe fiduciary duties of care and loyalty to the corporation and to its stockholders. Delaware courts have decided that the directors of a Delaware corporation are required to exercise informed business judgment in the performance of their duties. Informed business judgment means that the directors have informed themselves of all material information reasonably available to them. The duty of loyalty may be summarized as the duty to act in good faith, not out of self-interest, and in a manner that the director reasonably believes to be in the best interests of the stockholders. Under certain circumstances (such as defensive actions in response to a change of control), Delaware courts may also impose more rigorous standards of conduct upon directors of a Delaware corporation.

Director terms

The Netherlands. The DCGC provides the following best practice recommendations on the terms for tenure of our directors:

- executive directors should be appointed for a maximum period of four years, without limiting the number of consecutive terms they may serve; and
- non-executive directors should be appointed for two consecutive periods of no more than four years. Thereafter, non-executive directors may be reappointed for a maximum of two consecutive periods of no more than two years, provided that the reasons for any reappointment after an eight-year term of office should be disclosed in the Company's statutory annual report.

The general meeting shall at all times be entitled to suspend or dismiss a director. Under our Articles of Association, the general meeting may only adopt a resolution to suspend or dismiss a director by at least a two-thirds majority of the votes cast, provided that such majority represents more than half of the issued share capital, unless the resolution is passed at the proposal of the board of directors, in which latter case a simple majority of the votes cast is sufficient. If a director is suspended and the general meeting does not resolve to dismiss him or her within three months from the date of such suspension, the suspension shall lapse.

Delaware. The Delaware General Corporation Law generally provides for a one-year term for directors, but permits directorships to be divided into up to three classes with up to three-year terms, with the years for each class expiring in different years, if permitted by the certificate of incorporation, an initial bylaw or a bylaw adopted by the stockholders. A director elected to serve a term on a "classified" board may not be removed by stockholders without cause. There is no limit in the number of terms a director may serve.

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Director vacancies

The Netherlands. Our Board can temporarily fill vacancies in its midst caused by temporary absence or incapacity of directors without requiring a shareholder vote. If all of our directors are absent or incapacitated, our management shall be attributed to the person who most recently ceased to hold office as the chairperson of our Board, provided that if such former chairperson is unwilling or unable to accept that position, our management shall be attributed to the person who most recently ceased to hold office as our chief executive officer. If such former chief executive officer would also be unwilling or unable to accept that position, our management shall be attributed to one or more persons whom the general meeting has designated for that purpose. The person(s) charged with our management in this manner may designate one or more persons to be charged with our management instead of, or together with, such person(s).

Under Dutch law, directors are appointed and re-appointed by the general meeting. Under our Articles of Association, directors are appointed by the general meeting upon the binding nomination by our Board. However, the general meeting may at all times overrule a binding nomination by a resolution adopted by at least a two-thirds majority of the votes cast, provided such majority represents more than half of the issued share capital. If the general meeting overrules a binding nomination, the Board shall make a new nomination.

Delaware. The Delaware General Corporation Law provides that vacancies and newly created directorships may be filled by a majority of the directors then in office (even though less than a quorum) unless (i) otherwise provided in the certificate of incorporation or bylaws of the corporation or (ii) the certificate of incorporation directs that a particular class of stock is to elect such director, in which case any other directors elected by such class, or a sole remaining director elected by such class, will fill such vacancy.

Conflict-of-interest transactions

The Netherlands. Under Dutch law and our Articles of Association, our directors shall not take part in any discussion or decision-making that involves a subject or transaction in relation to which he or she has a direct or indirect personal conflict of interest with us. Such a conflict of interest would generally arise if the director concerned is unable to serve our interests and the business connected with it with the required level of integrity and objectivity due to the existence of the conflicting personal interest. Our Articles of Association provide that if as a result of conflicts of interests no resolution of the Board can be adopted, the resolution may nonetheless be adopted by the Board as if none of the directors had a conflict of interest. In that latter case, each director is entitled to participate in the discussion and decision-making process and to cast a vote.

The DCGC provides the following best practice recommendations in relation to conflicts of interests in respect of directors:

- a director should report any potential conflict of interest in a transaction that is of material significance to the Company and/or to such director to the other directors without delay, providing all relevant information in relation to the conflict;
- the board of directors should decide, outside the presence of the director concerned, whether there is a conflict of interest;
- transactions in which there is a conflict of interest with a director should be agreed on arms' length terms; and
- a decision to enter into such a transaction in which there is a conflict of interest with a director that is of material significance to the Company and/or to such director shall require the approval of the board of directors, and such transactions should be disclosed in the Company's annual board report.

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Delaware. Under the Delaware General Corporation Law transactions involving a Delaware corporation and an interested director of that corporation would not be voidable if:

- the material facts as to the director's relationship or interest are disclosed or known to the board of directors and the board in good faith authorizes the transaction by the affirmative vote of a majority of the disinterested directors;
- the material facts are disclosed or known as to the director's relationship or interest and the transaction is specifically approved in good faith by vote of the majority of shares entitled to vote thereon; or
- the transaction is fair to the corporation at the time it is authorized by the board of directors, a committee of the board of directors or the stockholders.

Proxy voting by directors

The Netherlands. An absent director may issue a proxy for a specific board meeting but only to another director in writing or by electronic means.

Delaware. A director of a Delaware corporation may not issue a proxy representing the director's voting rights as a director.

Shareholder rights

Voting rights

The Netherlands. In accordance with Dutch law and our Articles of Association, each issued ordinary share and each issued preferred share, if any are outstanding, confers the right to cast one vote at the general meeting. No votes may be cast at a general meeting on shares held by us or our subsidiaries or on shares for which we or our subsidiaries hold depository receipts. Nonetheless, the holders of a right of usufruct (*vruchtgebruik*) and the holders of a right of pledge (*pandrecht*) in respect of shares held by us or our subsidiaries in our share capital are not excluded from the right to vote on such shares, if the right of usufruct (*vruchtgebruik*) or the right of pledge (*pandrecht*) was granted prior to the time such shares were acquired by us or any of our subsidiaries. Neither we nor any of our subsidiaries may cast votes in respect of a share on which we or such subsidiary holds a right of usufruct (*vruchtgebruik*) or a right of pledge (*pandrecht*). Shares which are not entitled to voting rights pursuant to the preceding sentences will not be taken into account for the purpose of determining the number of shareholders that vote and that are present or represented, or the amount of the share capital that is provided or that is represented at a general meeting.

For each general meeting, the Board may determine that a record date will be applied in order to establish which shareholders are entitled to attend and vote at the general meeting. Such record date shall be the 28th day prior to the day of the general meeting. The record date and the manner in which shareholders can register and exercise their rights will be set out in the notice of the meeting which must be published in a Dutch daily newspaper with national distribution at least 15 calendar days prior to the meeting (and such notice may therefore be published after the record date for such meeting). Under our Articles of Association, shareholders and others with meeting rights under Dutch law must notify us in writing or by electronic means of their identity and intention to attend the general meeting. This notice must be received by us ultimately on the seventh day prior to the general meeting, unless indicated otherwise when such meeting is convened.

Delaware. Under the Delaware General Corporation Law, each stockholder is entitled to one vote per share of stock, unless the certificate of incorporation provides otherwise. In addition, the certificate of incorporation may provide for cumulative voting at all elections of directors of the corporation, or at elections held under specified circumstances. Either the certificate of incorporation or the bylaws may specify the number of shares and/or the amount of other securities that must be represented at a meeting in order to constitute a quorum, but in no event will a quorum consist of less than one-third of the shares entitled to vote at a meeting.

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Stockholders as of the record date for the meeting are entitled to vote at the meeting, and the board of directors may fix a record date that is no more than 60 nor less than 10 days before the date of the meeting, and if no record date is set then the record date is the close of business on the day next preceding the day on which notice is given, or if notice is waived then the record date is the close of business on the day next preceding the day on which the meeting is held. The determination of the stockholders of record entitled to notice or to vote at a meeting of stockholders shall apply to any adjournment of the meeting, but the board of directors may fix a new record date for the adjourned meeting.

Shareholder proposals

The Netherlands. Pursuant to Dutch law, one or more shareholders or others with meeting rights under Dutch law who jointly represent at least one-tenth of our issued share capital may request us to convene a general meeting, setting out in detail the matters to be discussed. If we have not taken the steps necessary to ensure that such meeting can be held within six weeks after the request, the proponent(s) may, on their application, be authorized by the competent Dutch court in preliminary relief proceedings to convene a general meeting. The court shall disallow the application if it does not appear that the proponent(s) has/have previously requested our Board to convene a general meeting and our Board has not taken the necessary steps so that the general meeting could be held within six weeks after the request. The application shall also be disallowed if the proponent(s) has/have not demonstrated to have a reasonable interest in the convening of the general meeting.

The agenda for our general meetings shall also include such items requested by one or more shareholders or others with meeting rights under Dutch law representing at least 3% of our issued share capital. These requests must be made in writing or by electronic means and received by us at least 60 days before the day of the meeting. No resolutions shall be adopted on items other than those that have been included in the agenda.

In accordance with the Dutch Corporate Governance Code, or DCGC, shareholders who have the right to put an item on the agenda for our general meeting or to request the convening of a general meeting shall not exercise such rights until after they have consulted our board of directors. If exercising such rights may result in a change in our strategy (for example, through the dismissal of one or more of our directors), our Board must be given the opportunity to invoke a reasonable period of up to 180 days to respond to the shareholders' intentions. If invoked, our Board must use such response period for further deliberation and constructive consultation, in any event with the shareholder(s) concerned and exploring alternatives. At the end of the response time, our Board shall report on this consultation and the exploration of alternatives to our general meeting. The response period may be invoked only once for any given general meeting and shall not apply (i) in respect of a matter for which a response period has been previously invoked or (ii) if a shareholder holds at least 75% of our issued share capital as a consequence of a successful public bid.

Moreover, our Board can invoke a cooling-off period of up to 250 days when shareholders, using their right to have items added to the agenda for a general meeting or their right to request a general meeting, propose an agenda item for our general meeting to dismiss, suspend or appoint one or more directors (or to amend any provision in our articles of association dealing with those matters) or when a public offer for our company is made or announced without our support, provided, in each case, that our board of directors believes that such proposal or offer materially conflicts with the interests of our company and its business. During a cooling-off period, our general meeting cannot dismiss, suspend or appoint directors (or amend the provisions in our articles of association dealing with those matters) except at the proposal of our Board. During a cooling-off period, our Board must gather all relevant information necessary for a careful decision-making process and at least consult with shareholders representing 3% or more of our issued share capital at the time the cooling-off period was invoked, as well as with our Dutch works council (if we or, under certain circumstances, any of our subsidiaries would have one). Formal statements expressed by these stakeholders during such consultations must be published on our website to the extent these stakeholders have approved that publication. Ultimately one week following the last day of the cooling-off period, our Board must publish a report in respect of its policy and conduct of affairs during the cooling-off period on our website. This report must remain available for inspection by

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shareholders and others with meeting rights under Dutch law at our office and must be tabled for discussion at the next general meeting. Shareholders representing at least 3% of our issued share capital may request the Enterprise Chamber for early termination of the cooling-off period. The Enterprise Chamber must rule in favor of the request if the shareholders can demonstrate that:

- our Board, in light of the circumstances at hand when the cooling-off period was invoked, could not reasonably have concluded that the relevant proposal or hostile offer constituted a material conflict with the interests of our company and its business;
- our Board cannot reasonably believe that a continuation of the cooling-off period would contribute to careful policy-making; or
- other defensive measures, having the same purpose, nature and scope as the cooling-off period, have been activated during the cooling-off period and have not since been terminated or suspended within a reasonable period at the relevant shareholders' request (i.e., no 'stacking' of defensive measures).

Delaware. Delaware law does not specifically grant stockholders the right to bring business before an annual or special meeting. Delaware law provides that stockholders have the right to put any proposal before the annual meeting of stockholders, so long as it complies with the notice provisions in the corporation's governing documents. In addition, if a Delaware corporation is subject to the SEC's proxy rules, a stockholder who satisfies certain specified criteria with respect to the amount and length of ownership of the corporation's securities, such stockholder may be eligible to have its proposal included in the corporation's proxy statement for consideration by all of the corporation's shareholders.

Action by written consent

The Netherlands. Under Dutch law, shareholders' resolutions may be adopted in writing without holding a meeting of shareholders, provided that (i) the Articles of Association allow such action by written consent, (ii) the Company has not issued bearer shares or, with its cooperation, depository receipts for shares in its capital, and (iii) the resolution is adopted unanimously by all shareholders that are entitled to vote. Although our Articles of Association allow for shareholders' resolutions to be adopted in writing, the requirement of unanimity renders the adoption of shareholder resolutions without holding a meeting not feasible for us as a publicly traded Company.

Delaware. Although permitted by Delaware law, publicly listed companies do not typically permit stockholders of a corporation to take action by written consent.

Appraisal rights

The Netherlands. Subject to certain exceptions, Dutch law does not recognize the concept of appraisal or dissenters' rights. However, Dutch law does provide for squeeze-out procedures as described under "—Dividends and Other Distributions—Squeeze-out procedures." Also, Dutch law provides for cash exit rights in certain situations for dissenting shareholders of a company organized under Dutch law entering into certain types of mergers. In those situations, a dissenting shareholder may file a claim with the Dutch company for compensation. Such compensation shall then be determined by one or more independent experts. The shares of such shareholder that are subject to such claim will cease to exist as of the moment of entry into effect of the merger.

Delaware. The Delaware General Corporation Law provides for stockholder appraisal rights, or the right to demand payment in cash of the judicially determined fair value of the stockholder's shares, in connection with certain mergers and consolidations.

Shareholder suits

The Netherlands. In the event a third-party is liable to a Dutch company, only the Company itself can bring a civil action against that party. The individual shareholders do not have the right to bring an action on behalf of

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the Company. Only in the event that the cause for the liability of a third-party to the Company also constitutes a tortious act directly against a shareholder does that shareholder have an individual right of action against such third-party in its own name. Dutch law provides for the possibility to initiate such actions collectively, in which a foundation or an association can act as a class representative and has standing to commence proceedings and claim damages if certain criteria are met. The court will first determine if those criteria are met. If so, the case will go forward as a class action on the merits after a period allowing class members to opt out from the case has lapsed. All members of the class who are residents of the Netherlands and who did not opt-out will be bound to the outcome of the case. Residents of other countries must actively opt in in order to be able to benefit from the class action. The defendant is not required to file defenses on the merits prior to the merits phase having commenced. It is possible for the parties to reach a settlement during the merits phase. Such a settlement can be approved by the court, which approval will then bind the members of the class, subject to a second opt-out. This new regime applies to claims brought after January 1, 2020 and which relate to certain events that occurred prior to that date. For other matters, the old Dutch class actions regime will apply. Under the old regime, no monetary damages can be sought. Also, a judgment rendered under the old regime will not always bind all individual class members. Even though Dutch law does not provide for derivative suits, our directors and officers can still be subject to liability under U.S. securities laws.

Our Articles of Association provide that the sole and exclusive forum for any complaint asserting a cause of action arising under the U.S. Securities Act of 1933, as amended, to the fullest extent permitted by applicable law, shall be the U.S. federal district courts.

Delaware. 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 and other similarly situated stockholders where the requirements for maintaining a class action under Delaware law have been met. A person may institute and maintain such a suit only if that person was a stockholder at the time of the transaction which is the subject of the suit. In addition, under Delaware case law, the plaintiff normally must be a stockholder at the time of the transaction that is the subject of the suit and throughout the duration of the derivative suit. Delaware 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 in court, unless such a demand would be futile.

Repurchase of shares

The Netherlands. Under Dutch law, when issuing shares, a public company such as ours may not subscribe for newly issued shares in its own capital. Such company may, however, subject to certain restrictions of Dutch law and its Articles of Association, acquire shares in its own capital. A listed public company such as ours may acquire fully paid shares in its own capital at any time for no valuable consideration. Furthermore, subject to certain provisions of Dutch law and its Articles of Association, such company may repurchase fully paid shares in its own capital if (i) the company's shareholders' equity (*eigen vermogen*) less the payment required to make the acquisition does not fall below the sum of paid-in and called-up share capital plus any reserves required by Dutch law or its Articles of Association and (ii) the aggregate nominal value of shares of the company which the company acquires, holds or on which the company holds a pledge (*pandrecht*) or which are held by a subsidiary of the company, would not exceed 50% of its then-current issued share capital. Such company may only acquire its own shares if its general meeting has granted the board of directors the authority to effect such acquisitions.

An acquisition by us of shares in our capital for a consideration must be authorized by our general meeting. Such authorization may be granted for a maximum period of 18 months and must specify the number of shares that may be acquired, the manner in which shares may be acquired and the price limits within which ordinary shares may be acquired. The actual acquisition may only be effected pursuant to a resolution of our Board. On February 1, 2021, our general meeting adopted a resolution pursuant to which our Board is authorized, for a period of 18 months following February 9, 2021, to cause the repurchase of ordinary shares (or depositary receipts for ordinary shares) by us of up to 10% of our issued share capital, for a price per share not exceeding

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110% of the average market price of our ordinary shares on Nasdaq (such average market price being the average of the closing prices on each of the five consecutive trading days preceding the date the acquisition is agreed upon by us). These shares may be used to deliver shares underlying awards granted pursuant to our equity-based compensation plans. No authorization of the general meeting is required if fully paid ordinary shares are acquired by us with the intention of transferring such ordinary shares to our employees under an applicable employee stock purchase plan.

Delaware. Under the Delaware General Corporation Law, a corporation may generally purchase or redeem its own shares unless the capital of the corporation is impaired or the purchase or redemption would cause an impairment of the capital of the corporation. A Delaware corporation may, however, purchase or redeem out of capital any of its own shares which are entitled upon any distribution of its assets to a preference over another class or series of its stock, or if no shares entitled to such a preference are outstanding, any of its own shares, if such shares will be retired upon acquisition and the capital of the corporation will be reduced in accordance with specified limitations.

Anti-Takeover Provisions

The Netherlands. Under Dutch law, various protective measures are possible and permissible within the boundaries set by Dutch law and Dutch case law. In this respect, certain provisions of our articles of association may make it more difficult for a third-party to acquire control of us or effect a change in the composition of our Board. These include:

- the authorization of a class of preferred shares that may be issued to a protective foundation pursuant to a call option to that effect and in such a manner as to dilute the interest of any potential acquirer or shareholder activist;
- a provision that our directors may only be dismissed at the general meeting by a two-thirds majority of votes cast representing more than half of our issued share capital, unless the dismissal is proposed by our Board in which latter case a simple majority of the votes cast would be sufficient ;
- a provision that our directors being appointed on the basis of a binding nomination prepared by our Board, which can only be overruled by the general meeting by a resolution adopted by a two-thirds majority of the votes cast representing more than half of the issued share capital (in which case the Board shall make a new nomination);
- a provision which allows the former chairperson of our Board or our former chief executive officer to be charged with our management if all of our directors are absent or incapacitated; and
- a requirement that certain matters, including an amendment of our Articles of Association, may only be resolved upon by our general meeting if proposed by our Board.

Dutch law also allows for staggered multi-year terms of our directors, as a result of which only part of our directors may be subject to appointment or re-appointment in any given year.

Furthermore, our board of directors may, under certain circumstances invoke a reasonable period of up to 180 days to respond to certain shareholder proposals or a statutory cooling-off period of up to 250 days to respond to certain shareholder proposals or a hostile bid. See above under “Shareholder Proposals.”

Delaware. In addition to other aspects of Delaware law governing fiduciary duties of directors during a potential takeover, the Delaware General Corporation Law also contains provisions that protect Delaware companies from hostile takeovers and from actions following the takeover by prohibiting some transactions once an acquirer has gained a significant holding in the corporation.

Section 203 of the Delaware General Corporation Law prohibits “business combinations,” including mergers, sales and leases of assets, issuances of securities and similar transactions with an “interested

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stockholder” (which could include a shareholder that beneficially owns 15% or more of a corporation’s voting stock) for a period of three years following the time that such person becomes an interested stockholder, unless:

- prior to such time the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- after the completion of the transaction in which the person becomes an interested stockholder, the interested stockholder holds at least 85% of the voting stock of the corporation not including shares owned by persons who are directors and officers of interested stockholders and shares owned by specified employee benefit plans; or
- after the person becomes an interested stockholder, the business combination is approved by the board of directors of the corporation and holders of at least 66.67% of the outstanding voting stock, excluding shares held by the interested stockholder.

A Delaware corporation may elect not to be governed by Section 203 by a provision contained in the original certificate of incorporation of the corporation or an amendment to the original certificate of incorporation or to the bylaws of the Company, which amendment must be approved by a majority of the shares entitled to vote and may not be further amended by the board of directors of the corporation. In most cases, such an amendment is not effective until 12 months following its adoption.

Inspection of Books and Records

The Netherlands. The Board must provide the general meeting all information that it requires, unless this would be contrary to an overriding interest of our Company. If the Board invokes such an overriding interest, it must give reasons.

Delaware. Under the Delaware General Corporation Law, any stockholder may inspect for any proper purpose certain of the corporation’s books and records during the corporation’s usual hours of business.

Dismissal of Directors

The Netherlands. Under our articles of association, our directors can only be dismissed by the general meeting by simple majority, provided that our board of directors proposes the dismissal. In other cases, the general meeting can only pass such resolution by a two-thirds majority representing more than half of the issued share capital. The DCGC recommends that the general meeting can pass a resolution to dismiss a director by simple majority, representing no more than one-third of the issued share capital.

Under our Articles of Association, our directors can only be dismissed by the general meeting by simple majority, provided that our board of directors proposes the dismissal. In other cases, the general meeting can only pass such by a two-thirds majority representing more than half of the issued share capital. The DCGC recommends that the general meeting can pass a resolution to dismiss a director by simple majority, representing no more than one-third of the issued share capital.

Delaware. Under the Delaware General Corporation Law, any director or the entire board of directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors, except (i) unless the certificate of incorporation provides otherwise, in the case of a corporation whose board is classified, stockholders may effect such removal only for cause, or (ii) in the case of a corporation having cumulative voting, if less than the entire board is to be removed, no director may be removed without cause if the votes cast against such director’s removal would be sufficient to elect such director if then cumulatively voted at an election of the entire board of directors, or, if there are classes of directors, at an election of the class of directors of which he is a part.

Issuance of Shares

The Netherlands. Under Dutch law, a company's general meeting is the corporate body authorized to resolve on the issuance of shares and the granting of rights to subscribe for shares. The general meeting can delegate such authority to another corporate body of the company for a period not exceeding five years; this authorization may only be extended from time to time for a maximum period of five years.

On February 1, 2021, our general meeting adopted a resolution pursuant to which our Board is authorized, for a period of five years following February 5, 2021, to issue shares or grant rights to subscribe for shares up to our authorized share capital from time to time. We may not subscribe for our own shares on issue.

Delaware. The issuance of shares requires the board of directors to adopt a resolution or resolutions, authorizing the issuance, pursuant to authority expressly vested in the board of directors by the provisions of the Company's certificate of incorporation.

Pre-emption Rights

The Netherlands. Under Dutch law, in the event of an issuance of ordinary shares, each shareholder will have a pro rata pre-emption right in proportion to the aggregate nominal value of the ordinary shares held by such holder (except in the case of an issue of ordinary shares to employees, or against a contribution other than in cash or pursuant to the exercise of a previously acquired right to subscribe for shares). Under our Articles of Association, the pre-emption rights in respect of newly issued ordinary shares may be restricted or excluded by a resolution of the general meeting upon proposal of the board of directors. Our preferred shares carry no pre-emption rights.

Another corporate body may restrict or exclude the pre-emption rights in respect of newly issued ordinary shares if it has been designated as the authorized body to do so by the general meeting. Such designation can be granted for a period not exceeding five years. A resolution of the general meeting to restrict or exclude the pre-emption rights or to designate another corporate body as the authorized body to do so requires a majority of not less than two-thirds of the votes cast, if less than one-half of our issued share capital is represented at the meeting.

On February 1, 2021, our general meeting authorized our Board, for a period of five years following February 5, 2021 to limit or exclude pre-emption rights in relation to an issuance of shares or a grant of rights to subscribe for shares that the Board is authorized to resolve upon.

Delaware. Under the Delaware General Corporation Law, stockholders have no preemptive rights to subscribe for additional issues of stock or to any security convertible into such stock unless, and to the extent that, such rights are expressly provided for in the certificate of incorporation.

Dividends

The Netherlands. Under Dutch law, we may only pay dividends and other distributions from our reserves to the extent our shareholders' equity (*eigen vermogen*) exceeds the sum of our paid-in and called-up share capital plus the reserves we must maintain under Dutch law or our Articles of Association and (if it concerns a distribution of profits) after adoption of our statutory annual accounts by our general meeting from which it appears that such dividend distribution is allowed. Subject to those restrictions, any future determination to pay dividends or other distributions from our reserves will be at the discretion of our Board and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors we deem relevant.

Under our Articles of Association, if any preferred shares are or have been outstanding, a dividend is first paid out of our profits, if available for distribution, to the holders or former holders, as applicable, of those

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preferred shares to the extent they are entitled to such distribution under our articles of association, which we refer to as our preferred dividend. Thereafter, our Board may decide that all or part of the remaining profits shown in our adopted statutory annual accounts will be added to our reserves. After reservation of any such profits, any remaining profits will be at the disposal of the general meeting at the proposal of our Board for distribution on our ordinary shares, subject to applicable restrictions of Dutch law. Our Board of directors is permitted, subject to certain requirements and applicable restrictions of Dutch law, to declare interim dividends without the approval of our general meeting. Dividends and other distributions shall be made payable no later than a date determined by us. Claims to dividends and other distributions not made within five years from the date that such dividends or distributions became payable will lapse and any such amounts will be considered to have been forfeited to us (*verjaring*).

Delaware. Under the Delaware General Corporation Law, subject to any restrictions contained in the corporation's certificate of incorporation, a Delaware corporation may pay dividends out of its surplus (the excess of net assets over capital), or in case there is no surplus, out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year (provided that the amount of the capital of the corporation 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). Dividends may be paid in the form of shares of the corporation's capital stock, property or cash.

Shareholder Vote on Certain Reorganizations

The Netherlands. Under Dutch law, the general meeting must approve resolutions of the board of directors relating to a significant change in the identity or the character of the Company or the business of the Company, which includes:

- a transfer of the business or virtually the entire business to a third-party;
- the entry into or termination of a long-term cooperation of the company or a subsidiary with another legal entity or company or as a fully liable partner in a limited partnership or general partnership, if such cooperation or termination is of a far-reaching significance for the company; and
- the acquisition or divestment by the company or a subsidiary of a participating interest in the capital of a company having a value of at least one-third of the amount of its assets according to its balance sheet and explanatory notes or, if the company prepares a consolidated balance sheet, according to its consolidated balance sheet and explanatory notes in the last adopted annual accounts of the company.

The absence of such approval shall result in the relevant resolution being null and void but shall not affect the powers or representation of the Board.

Delaware. Under the Delaware General Corporation Law, the vote of a majority of the outstanding shares of capital stock entitled to vote thereon generally is necessary to approve a merger or consolidation or the sale of all or substantially all of the assets of a corporation. The Delaware General Corporation Law permits a corporation to include in its certificate of incorporation a provision requiring for any corporate action the vote of a larger portion of the stock or of any class or series of stock than would otherwise be required.

Under the Delaware General Corporation Law, no vote of the stockholders of a surviving corporation to a merger is needed, however, unless required by the certificate of incorporation, if (i) the agreement of merger does not amend in any respect the certificate of incorporation of the surviving corporation, (ii) the shares of stock of the surviving corporation are not changed in the merger, and (iii) the number of shares of common stock of the surviving corporation into which any other shares, securities or obligations to be issued in the merger may be converted does not exceed 20% of the surviving corporation's common stock outstanding immediately prior to the effective date of the merger. In addition, stockholders may not be entitled to vote in certain mergers with other corporations that own 90% or more of the outstanding shares of each class of stock of such corporation, but the stockholders will be entitled to appraisal rights.

Remuneration of Directors

The Netherlands. Dutch law does not provide for limitations with respect to the aggregate annual compensation paid to our directors, provided that such compensation is consistent with our compensation policy. Our compensation policy has been adopted by the general meeting with effect from February 5, 2021. Changes to the compensation policy will require a vote of our general meeting by simple majority of the votes cast. The Board determines the remuneration of individual directors with due observance of the compensation policy. A proposal with respect to remuneration schemes in the form of shares or rights to shares in which directors may participate is subject to approval by our general meeting by simple majority of votes cast. Such a proposal must set out at least the maximum number of shares or rights to subscribe for shares to be granted to our directors and the criteria for granting or amendment.

Delaware. Under the Delaware General Corporation Law, the stockholders do not generally have the right to approve the compensation policy for directors or the senior management of the corporation, although certain aspects of executive compensation may be subject to stockholder vote due to the provisions of U.S. federal securities and tax law, as well as exchange requirements.

DESCRIPTION OF DEBT SECURITIES

The debt securities will be our direct general obligations. The debt securities will be either senior debt securities or subordinated debt securities and may be secured or unsecured and may be convertible into other securities, including our ordinary shares. The debt securities will be issued under one or more separate indentures between our company and a financial institution that will act as trustee. Senior debt securities will be issued under a senior indenture. Subordinated debt securities will be issued under a subordinated indenture. Each of the senior indenture and the subordinated indenture is referred to individually as an indenture and collectively as the indentures. Each of the senior debt trustee and the subordinated debt trustee is referred to individually as a trustee and collectively as the trustees. The material terms of any indenture will be set forth in the applicable prospectus supplement.

We have summarized certain terms and provisions of the indentures. The summary is not complete. The indentures are subject to and governed by the Trust Indenture Act of 1939, as amended. The senior indenture and subordinated indenture are substantially identical, except for the provisions relating to subordination.

Neither indenture will limit the amount of debt securities that we may issue. We may issue debt securities up to an aggregate principal amount as we may authorize from time to time. The applicable prospectus supplement will describe the terms of any debt securities being offered. These terms will include some or all of the following:

- classification as senior or subordinated debt securities;
- ranking of the specific series of debt securities relative to other outstanding indebtedness, including subsidiaries' debt;
- if the debt securities are subordinated, the aggregate amount of outstanding indebtedness, as of a recent date, that is senior to the subordinated securities, and any limitation on the issuance of additional senior indebtedness;
- the designation, aggregate principal amount and authorized denominations;
- the date or dates on which the principal of the debt securities may be payable;
- the rate or rates (which may be fixed or variable) per annum at which the debt securities shall bear interest, if any;
- the date or dates from which such interest shall accrue, on which such interest shall be payable, and on which a record shall be taken for the determination of holders of the debt securities to whom interest is payable;
- the place or places where the principal and interest shall be payable;
- our right, if any, to redeem the debt securities, in whole or in part, at our option and the period or periods within which, the price or prices at which and any terms and conditions upon which such debt securities may be so redeemed, pursuant to any sinking fund or otherwise;
- our obligation, if any, of the Company to redeem, purchase or repay any debt securities pursuant to any mandatory redemption, sinking fund or other provisions or at the option of a holder of the debt securities;
- if other than denominations of \$2,000 and any higher integral multiple of \$1,000, the denominations in which the debt securities will be issuable;
- if other than the currency of the United States, the currency or currencies, in which payment of the principal and interest shall be payable;
- whether the debt securities will be issued in the form of global securities;

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- provisions, if any, for the defeasance of the debt securities;
- any material U.S. federal income tax consequences; and
- other specific terms, including any deletions from, modifications of or additions to the events of default or covenants described below or in the applicable indenture.

Senior Debt

We may issue under the senior indenture the debt securities that will constitute part of our senior debt. These senior debt securities will rank equally and pari passu with all our other unsecured and unsubordinated debt.

Subordinated Debt

We may issue under the subordinated indenture the debt securities that will constitute part of our subordinated debt. These subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner set forth in the subordinated indenture, to all our “senior indebtedness.” “Senior indebtedness” is defined in the subordinated indenture and generally includes obligations of, or guaranteed by, us for borrowed money, or as evidenced by bonds, debentures, notes or other similar instruments, or in respect of letters of credit or other similar instruments, or to pay the deferred purchase price of property or services, or as a lessee under capital leases, or as secured by a lien on any asset of ours. “Senior indebtedness” does not include the subordinated debt securities or any other obligations specifically designated as being subordinate in right of payment to, or pari passu with, the subordinated debt securities. In general, the holders of all senior indebtedness are first entitled to receive payment in full of such senior indebtedness before the holders of any of the subordinated debt securities are entitled to receive a payment on account of the principal or interest on the indebtedness evidenced by the subordinated debt securities in certain events. These events include:

- subject to Dutch law, any insolvency or bankruptcy proceedings, or any receivership, dissolution, winding up, total or partial liquidation, reorganization or other similar proceedings in respect of us or a substantial part of our property, whether voluntary or involuntary;
- (i) a default having occurred with respect to the payment of principal or interest on or other monetary amounts due and payable with respect to any senior indebtedness or (ii) an event of default (other than a default described in clause (i) above) having occurred with respect to any senior indebtedness that permits the holder or holders of such senior indebtedness to accelerate the maturity of such senior indebtedness. Such a default or event of default must have continued beyond the period of grace, if any, provided in respect of such default or event of default, and such a default or event of default shall not have been cured or waived or shall not have ceased to exist; and
- the principal of, and accrued interest on, any series of the subordinated debt securities having been declared due and payable upon an event of default pursuant to the subordinated indenture. This declaration must not have been rescinded and annulled as provided in the subordinated indenture.

Authentication and Delivery

We will deliver the debt securities to the trustee for authentication, and the trustee will authenticate and deliver the debt securities upon our written order.

Events of Default

When we use the term “Event of Default” in the indentures with respect to the debt securities of any series, set forth below are some examples of what we mean:

- (1) default in the payment of the principal on the debt securities when it becomes due and payable at maturity or otherwise;

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- (2) default in the payment of interest on the debt securities when it becomes due and payable, and such default continues for a period of 30 days;
- (3) default in the performance, or breach, of any covenant in the indenture (other than defaults specified in clauses (1) or (2) above) and the default or breach continues for a period of 90 consecutive days or more after written notice to us by the trustee or to us and the trustee by the holders of 25% or more in aggregate principal amount of the outstanding debt securities of all series affected thereby;
- (4) the occurrence of certain events of bankruptcy, insolvency, or similar proceedings with respect to us or any substantial part of our property; or
- (5) any other Events of Default that may be set forth in the applicable prospectus supplement.

If an Event of Default (other than an Event of Default specified in clause (4) above) with respect to the debt securities of any series then outstanding occurs and is continuing, then either the trustee or the holders of not less than 25% in principal amount of the securities of all such series then outstanding in respect of which an Event of Default has occurred may by notice in writing to us declare the entire principal amount of all debt securities of the affected series, and accrued interest, if any, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable.

If an Event of Default described in clause (4) above occurs and is continuing, then the principal amount of all the debt securities then outstanding and accrued interest shall be and become due immediately and payable without any declaration, notice or other action by any holder of the debt securities or the trustee.

The trustee will, within 90 days after the occurrence of any default actually known to it, give notice of the default to the holders of the debt securities of that series, unless the default was already cured or waived. Unless there is a default in paying principal or interest when due, the trustee can withhold giving notice to the holders if it determines in good faith that the withholding of notice is in the interest of the holders.

Satisfaction, Discharge and Defeasance

We may discharge our obligations under each indenture, except as to:

- the rights of registration of transfer and exchange of debt securities, and our right of optional redemption, if any;
- substitution of mutilated, defaced, destroyed, lost or stolen debt securities;
- the rights of holders of the debt securities to receive payments of principal and interest;
- the rights, obligations and immunities of the trustee; and
- the rights of the holders of the debt securities as beneficiaries with respect to the property deposited with the trustee payable to them (as described below);

when:

- either:
 - all debt securities of any series issued that have been authenticated and delivered have been delivered by us to the trustee for cancellation; or
 - all the debt securities of any series issued that have not been delivered by us to the trustee for cancellation have become due and payable or will 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 by such trustee in our name and at our expense, and we have irrevocably deposited or caused to be deposited with the trustee as trust funds the entire amount

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sufficient to pay at maturity or upon redemption all debt securities of such series not delivered to the trustee for cancellation, including principal and interest due or to become due on or prior to such date of maturity or redemption;

- we have paid or caused to be paid all other sums then due and payable under such indenture; and
- we have delivered to the trustee an officers' certificate and an opinion of counsel, each stating that all conditions precedent under such indenture relating to the satisfaction and discharge of such indenture have been complied with.

In addition, unless the applicable prospectus supplement and supplemental indenture otherwise provide, we may elect either (i) to have our obligations under each indenture discharged with respect to the outstanding debt securities of any series ("legal defeasance") or (ii) to be released from our obligations under each indenture with respect to certain covenants applicable to the outstanding debt securities of any series ("covenant defeasance"). Legal defeasance means that we will be deemed to have paid and discharged the entire indebtedness represented by the outstanding debt securities of such series under such indenture and covenant defeasance means that we will no longer be required to comply with the obligations with respect to such covenants (and an omission to comply with such obligations will not constitute a default or event of default).

In order to exercise legal defeasance or covenant defeasance with respect to outstanding debt securities of any series:

- we must irrevocably have deposited or caused to be deposited with the trustee as trust funds in trust for the purpose of making the following payments, specifically pledged as security for, and dedicated solely to the benefits of the holders of the debt securities of a series:
 - money in an amount;
 - U.S. government obligations; or
 - a combination of money and U.S. government obligations,

in each case sufficient without reinvestment, in the written opinion of a nationally recognized firm of independent public accountants, to pay and discharge, and which shall be applied by the trustee to pay and discharge, all of the principal and interest at due date or maturity or if we have made irrevocable arrangements satisfactory to the trustee for the giving of notice of redemption by the trustee, the redemption date;

- we have delivered to the trustee an opinion of counsel stating that, under then applicable U.S. federal income tax law, the holders of the debt securities of that series will not recognize gain or loss for U.S. federal income tax purposes as a result of the defeasance and will be subject to the same federal income tax as would be the case if the defeasance did not occur;
- no default relating to bankruptcy or insolvency and, in the case of a covenant defeasance, no other default has occurred and is continuing at any time;
- if at such time the debt securities of such series are listed on a national securities exchange, we have delivered to the trustee an opinion of counsel to the effect that the debt securities of such series will not be delisted as a result of such defeasance; and
- we have delivered to the trustee an officers' certificate and an opinion of counsel stating that all conditions precedent with respect to the defeasance have been complied with.

We are required to furnish to each trustee an annual statement as to compliance with all conditions and covenants under the indenture.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase debt securities, ordinary shares or other securities. We may issue warrants independently or together with other securities. Warrants sold with other securities may be attached to or separate from the other securities. We will issue warrants under one or more warrant agreements between our company and a warrant agent that we will name in the applicable prospectus supplement.

The prospectus supplement relating to any warrants we offer will include specific terms relating to the offering. These terms will include some or all of the following:

- the title of the warrants;
- the aggregate number of warrants offered;
- the designation, number and terms of the debt securities, ordinary shares or other securities purchasable upon exercise of the warrants and procedures by which those numbers may be adjusted;
- the exercise price of the warrants;
- the dates or periods during which the warrants are exercisable;
- the designation and terms of any securities with which the warrants are issued;
- if the warrants are issued as a unit with another security, the date on and after which the warrants and the other security will be separately transferable;
- if the exercise price is not payable in U.S. dollars, the foreign currency, currency unit or composite currency in which the exercise price is denominated;
- any minimum or maximum amount of warrants that may be exercised at any one time;
- any terms relating to the modification of the warrants;
- any terms, procedures and limitations relating to the transferability, exchange or exercise of the warrants; and
- any other specific terms of the warrants.

The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

DESCRIPTION OF PURCHASE CONTRACTS

We may issue purchase contracts for the purchase or sale of debt or equity securities issued by us or securities of third parties, a basket of such securities, an index or indices of such securities or any combination of the above as specified in the applicable prospectus supplement.

Each purchase contract will entitle the holder thereof to purchase or sell, and obligate us to sell or purchase, on specified dates, such securities at a specified purchase price, which may be based on a formula, all as set forth in the applicable prospectus supplement. A purchase by us or any of our subsidiaries of ordinary shares pursuant to any such purchase contract shall be subject to certain restrictions under Dutch law that generally apply to a repurchase of shares. We may, however, satisfy our obligations, if any, with respect to any purchase contract by delivering the cash value of such purchase contract or the cash value of the property otherwise deliverable as set forth in the applicable prospectus supplement. The applicable prospectus supplement will also specify the methods by which the holders may purchase or sell such securities and any acceleration, cancellation or termination provisions or other provisions relating to the settlement of a purchase contract.

The purchase contracts may require us to make periodic payments to the holders thereof or vice versa, which payments may be deferred to the extent set forth in the applicable prospectus supplement, and those payments may be unsecured or prefunded on some basis. The purchase contracts may require the holders thereof to secure their obligations in a specified manner to be described in the applicable prospectus supplement. Alternatively, purchase contracts may require holders to satisfy their obligations thereunder when the purchase contracts are issued. Our obligation to settle such pre-paid purchase contracts on the relevant settlement date may constitute indebtedness. Accordingly, pre-paid purchase contracts will be issued under either the senior indenture or the subordinated indenture.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of one or more ordinary shares, debt securities, warrants, purchase contracts or any combination of such securities. The applicable prospectus supplement will describe:

- the terms of the units and of the ordinary shares, debt securities, warrants and/ or purchase contracts comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- a description of the terms of any unit agreement governing the units; and
- a description of the provisions for the payment, settlement, transfer or exchange of the units.

FORMS OF SECURITIES

Each debt security, warrant and unit will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the debt securities, warrants or units represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Registered Global Securities

We may issue registered debt securities, warrants and units in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depositary for the registered global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a registered global security, the depositary will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary, or its nominee, is the registered owner of a registered global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture, warrant agreement or unit agreement. Except as described below, owners of beneficial interests in a registered global security will not be entitled to have the securities represented by the registered global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture, warrant agreement or unit agreement. Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, warrant agreement or unit agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security

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desires to give or take any action that a holder is entitled to give or take under the applicable indenture, warrant agreement or unit agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Principal, premium, if any, and interest payments on debt securities, and any payments to holders with respect to warrants or units, represented by a registered global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of Pharvaris N.V., its affiliates, the trustees, the warrant agents, the unit agents or any other agent of Pharvaris N.V., agent of the trustees or agent of the warrant agents or unit agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other distribution of underlying securities or other property to holders on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of those participants.

If the depositary for any of these securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depositary gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary.

PLAN OF DISTRIBUTION

We may sell the securities in one or more of the following ways (or in any combination) from time to time:

- through underwriters or dealers;
- directly to a limited number of purchasers or to a single purchaser;
- in “at-the-market” offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market on an exchange or otherwise;
- through agents; or
- through any other method permitted by applicable law and described in the applicable prospectus supplement.

The prospectus supplement will state the terms of the offering of the securities, including:

- the name or names of any underwriters, dealers or agents;
- the purchase price of such securities and the proceeds to be received by us, if any;
- any underwriting discounts or agency fees and other items constituting underwriters’ or agents’ compensation;
- any public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchanges on which the securities may be listed.

Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

If underwriters are used in the sale, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including:

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

Unless otherwise stated in a prospectus supplement, the obligations of the underwriters to purchase any securities will be conditioned on customary closing conditions and the underwriters will be obligated to purchase all of such series of securities, if any are purchased.

The securities may be sold through agents from time to time. The prospectus supplement will name any agent involved in the offer or sale of the securities and any commissions paid to them. Generally, any agent will be acting on commercially reasonable efforts basis for the period of its appointment.

Sales to or through one or more underwriters or agents in at-the-market offerings will be made pursuant to the terms of a distribution agreement with the underwriters or agents. Such underwriters or agents may act on an agency basis or on a principal basis. During the term of any such agreement, shares may be sold on a daily basis on any stock exchange, market or trading facility on which the ordinary shares are traded, in privately negotiated transactions or otherwise as agreed with the underwriters or agents. The distribution agreement will provide that

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any ordinary share sold will be sold at negotiated prices or at prices related to the then prevailing market prices for our ordinary shares. Therefore, exact figures regarding proceeds that will be raised or commissions to be paid cannot be determined at this time and will be described in a prospectus supplement. Pursuant to the terms of the distribution agreement, we may also agree to sell, and the relevant underwriters or agents may agree to solicit offers to purchase, blocks of our ordinary shares or other securities. The terms of each such distribution agreement will be described in a prospectus supplement.

We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the securities at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions paid for solicitation of these contracts.

Underwriters and agents may be entitled under agreements entered into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the underwriters or agents may be required to make.

The prospectus supplement may also set forth whether or not underwriters may over-allot or effect transactions that stabilize, maintain or otherwise affect the market price of the securities at levels above those that might otherwise prevail in the open market, including, for example, by entering stabilizing bids, effecting syndicate covering transactions or imposing penalty bids.

Underwriters and agents may be customers of, engage in transactions with, or perform services for us and our affiliates in the ordinary course of business.

Each series of securities will be a new issue of securities and will have no established trading market, other than our ordinary shares, which are listed on The Nasdaq Global Select Market. Any underwriters to whom securities are sold for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities, other than our ordinary shares, may or may not be listed on a national securities exchange.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference information into this document. This 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 considered to be a part of this document, except for any information superseded by information that is included directly in this prospectus or incorporated by reference subsequent to the date of this prospectus.

We incorporate by reference the following documents or information that we have filed with the SEC:

- Our Annual Report on Form 20-F for the fiscal year ended December 31, 2020 filed on [April 29, 2021](#);
- Our Forms 6-K filed on [May 12, 2021](#), [May 26, 2021](#) (other than exhibit 99.1), [July 1, 2021](#), [July 30, 2021](#) (other than exhibit 99.1), [November 10, 2021](#) (other than exhibit 99.1), [December 7, 2021](#), [December 22, 2021](#) and [January 10, 2022](#); and
- The description of our ordinary shares contained in our registration statement on Form 8-A filed with the SEC on [February 4, 2021](#), as updated by the description of our ordinary shares filed as [Exhibit 2.1](#) to our Annual Report on Form 20-F for the fiscal year ended December 31, 2020.

All annual reports we file with the SEC pursuant to the Exchange Act on Form 20-F after the date of this prospectus and prior to termination or expiration of this registration statement shall be deemed incorporated by reference into this prospectus and to be part hereof from the date of filing of such documents. We may incorporate by reference any Form 6-K subsequently submitted to the SEC by identifying in such Form 6-K that it is being incorporated by reference into this prospectus.

Documents incorporated by reference in this prospectus are available from us without charge upon written or oral request, excluding any exhibits to those documents that are not specifically incorporated by reference into those documents. You can obtain documents incorporated by reference in this document by requesting them from us in writing at J.H. Oortweg 21, 2333 CH Leiden, The Netherlands or via telephone at +31 (0)71 203 6410.

ENFORCEMENT OF JUDGMENTS

The ability of shareholders in certain countries other than the Netherlands, in particular in the United States, to bring an action against us may be limited under Dutch law. We are incorporated under the laws of the Netherlands and have our statutory seat (*statutaire zetel*) in Leiden, the Netherlands.

The majority of the members of the Board are resident of countries other than the United States. All or a substantial proportion of the assets of these individuals are located outside the United States. Our assets are predominantly located outside the United States. As a result, it may not be possible for investors to effect service of process within the United States upon such persons, or to enforce against them or us in U.S. courts, including judgments predicated upon the civil liability provisions of the federal securities laws of the United States.

There is currently no treaty between the United States and the Netherlands for the mutual recognition and enforcement of judgments (other than arbitration awards) in civil and commercial matters. Therefore, 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 U.S. federal securities laws, would not be enforceable in the Netherlands unless the underlying claim is relitigated before a Dutch court of competent jurisdiction. Under current practice, however, a Dutch court will generally, subject to compliance with certain procedural requirements, grant the same judgment without a review of the merits of the underlying claim if such judgment (i) is a final judgment and has been rendered by a court, which has established its jurisdiction vis-à-vis the relevant Dutch companies or Dutch company, as the case may be, on the basis of internationally accepted grounds of jurisdiction, (ii) has not been rendered in violation of principles of proper procedure (*behoorlijke rechtspleging*), (iii) is not contrary to the public policy of the Netherlands, and (iv) is not incompatible with (a) a prior judgment of a Dutch court rendered in a dispute between the same parties or (b) a prior judgment of a foreign court rendered in a dispute between the same parties, concerning the same subject matter and based on the same cause of action, provided that such prior judgment is capable of being recognized in the Netherlands and except to the extent that the foreign judgment contravenes Dutch public policy (*openbare orde*). Dutch courts may deny the recognition and enforcement of punitive damages or other awards. Moreover, a Dutch court may reduce the amount of damages granted by a U.S. court and recognize damages only to the extent that they are necessary to compensate actual losses or damages. Enforcement and recognition of judgments of U.S. courts in the Netherlands are solely governed by the provisions of the Dutch Code of Civil Procedure (*Wetboek van Burgerlijke Rechtsvordering*). Based on the foregoing, there can be no assurance that U.S. investors will be able to enforce any judgments obtained in U.S. courts in civil and commercial matters, including judgments under the U.S. federal securities laws.

EXPENSES

The following table sets forth the expenses (other than underwriting discounts and commissions or agency fees and other items constituting underwriters' or agents' compensation, if any) expected to be incurred by us in connection with a possible offering of securities registered under this registration statement.

	Amount To Be Paid
Securities and Exchange Commission Registration Fee	\$ 32,445
FINRA filing fee	53,000
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Miscellaneous	*
Total	\$ *

* To be provided by a prospectus supplement or a Report on Form 6-K that is incorporated by reference into this prospectus.

LEGAL MATTERS

The validity of the ordinary shares and certain other matters of Dutch law will be passed upon for us by NautaDutilh N.V. Certain matters of U.S. federal and New York State law will be passed upon for us by Kirkland & Ellis LLP, New York, New York.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 20-F for the year ended December 31, 2020 have been so incorporated in reliance on the report of PricewaterhouseCoopers Accountants N.V., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Pharvaris N.V.

Ordinary shares
Debt Securities
Warrants
Purchase Contracts
Units

PROSPECTUS

The information in this prospectus supplement is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus supplement is not an offer to sell these securities nor a solicitation of an offer to buy these securities in any jurisdiction where the offer and sale is not permitted.

Subject to completion, dated March 1, 2022

PROSPECTUS SUPPLEMENT
(To Prospectus dated _____, 2022)

Up to \$75,000,000

PHARVARIS

Ordinary shares

We have entered into a sales agreement, with SVB Securities LLC, or SVB Leerink, dated March 1, 2022 (the “Sales Agreement”), relating to the sale of our ordinary shares offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the Sales Agreement, under this prospectus supplement we may offer and sell our ordinary shares, nominal value €0.12 per share, having an aggregate offering price of up to \$75,000,000 from time to time through SVB Leerink, acting as our agent.

Sales of our ordinary shares, if any, under this prospectus supplement will be made by any method permitted that is deemed an “at the market offering” as defined in Rule 415 under the Securities Act of 1933, as amended, or the Securities Act, including sales made directly on or through The Nasdaq Global Select Market, or Nasdaq, the existing trading market for our ordinary shares, sales made to or through a market maker other than on an exchange or otherwise, and/or any other method permitted by law. SVB Leerink is not required to sell any specific amount, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

SVB Leerink will be entitled to compensation at a commission rate of up to 3.0% of the gross sales price per share sold under the Sales Agreement. See “Plan of Distribution” beginning on page S-18 for additional information regarding the compensation to be paid to SVB Leerink.

In connection with the sale of the ordinary shares on our behalf, SVB Leerink may be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of SVB Leerink may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to SVB Leerink with respect to certain liabilities, including liabilities under the Securities Act.

Our ordinary shares trade on The Nasdaq Global Select Market, or Nasdaq, under the trading symbol “PHVS.” On February 28, 2022, the last sale price of our ordinary shares as reported on Nasdaq was \$17.10 per share.

We are an “emerging growth company” and a “foreign private issuer” as defined under the U.S. Securities and Exchange Commission and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus supplement and future filings. Please see “Pharvaris N.V.—Implications of Being an “Emerging Growth Company” and a Foreign Private Issuer” in the accompanying prospectus.

Investing in our ordinary shares involves a high degree of risk. See “[Risk Factors](#)” beginning on page S-3 of this prospectus supplement and in the documents incorporated by reference herein.

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

SVB Leerink

The date of this prospectus supplement is _____, 2022.

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PROSPECTUS

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PRESENTATION OF FINANCIAL INFORMATION

We report under International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board, or the IASB. None of the financial statements incorporated by reference herein were prepared in accordance with generally accepted accounting principles in the United States. We present our consolidated financial statements in euros and in accordance with IFRS as issued by the IASB. We have made rounding adjustments to some of the figures included in this prospectus supplement. Accordingly, numerical figures shown as totals in some tables may not be an arithmetic aggregation of the figures that preceded them.

Unless otherwise indicated, all references in this prospectus supplement to “€,” “euro,” “EUR” or “cents” are to the currency introduced at the start of the third stage of the European Economic and Monetary Union pursuant to the treaty establishing the European Community, as amended. All references to “\$,” “US\$” or “U.S. dollars” are to the lawful currency of the United States.

Solely for the convenience of the reader, certain euro amounts herein have been translated into U.S. dollars at the rate of €1.00 to \$1.1827, the average exchange rate quoted as of December 31, 2021 by the European Central Bank for the year 2021. These translations should not be considered representations that any such amounts have been, could have been or could be converted into U.S. dollars at that or any other exchange rate as at that or any other date.

TRADEMARKS

All trademarks, trade names and service marks appearing in this prospectus supplement are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus supplement are referred to without the symbols ® and ™, but such references should not be construed as any indication that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend to use or display other companies’ trademarks or trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

ABOUT THIS PROSPECTUS SUPPLEMENT

This document consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part is the accompanying prospectus, which is part of a registration statement that we filed with the SEC using a “shelf” registration process. The accompanying prospectus describes more general information, some of which may not apply to this offering. Under this shelf registration process, we may from time to time sell our ordinary shares under a prospectus supplement at prices and on terms to be determined by market conditions at the time of the offering.

Before buying any of the ordinary shares that we are offering, we urge you to carefully read both this prospectus supplement and the accompanying prospectus together with all of the information incorporated by reference herein, as well as the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference.” These documents contain important information that you should consider when making your investment decision.

To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference in this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in this prospectus supplement—the statement in the document having the later date modifies or supersedes the earlier statement.

We have not authorized anyone to provide any information other than that contained in or incorporated by reference in this prospectus supplement and any related free writing prospectus filed by us with the SEC. We have not, and SVB Leerink has not, authorized anyone to provide you with different information. We take no responsibility for, and can provide no assurance as to the reliability of any other information that others may give you. This prospectus supplement does not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless otherwise indicated or the context otherwise requires, all references in this prospectus supplement to “Pharvaris N.V.,” “Pharvaris,” the “Company,” “we,” “our,” “ours,” “us” or similar terms refer to Pharvaris N.V.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the financial statements and other documents incorporated by reference in this prospectus supplement contain forward-looking statements, including statements concerning our industry, our operations, our anticipated financial performance and financial condition, and our business plans and growth strategy and product development efforts. These statements constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. Many of the forward-looking statements contained in this prospectus supplement can be identified by the use of forward-looking words such as “anticipate,” “believe,” “could,” “expect,” “should,” “plan,” “intend,” “estimate” and “potential,” among others. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates. These forward-looking statements are based on estimates and assumptions by our management that, although we believe to be reasonable, are inherently uncertain and subject to a number of risks and uncertainties.

The following represent some, but not necessarily all, of the factors that could cause actual results to differ from historical results or those anticipated or predicted by our forward-looking statements:

- the expected timing, progress or success of our clinical development programs, especially for PHVS416 and PHVS719, which are in early-stage clinical trials;
- risks associated with the COVID-19 pandemic, which may adversely impact our business, preclinical studies and clinical trials, the timing of regulatory approvals and the value of our ordinary shares;
- the timing, costs and other limitations involved in obtaining regulatory approval for our product candidates PHVS416 and PHVS719 or any other product candidate that we may develop in the future;
- our ability to market, commercialize and achieve market acceptance for our product candidates PHVS416 and PHVS719 or any of our other product candidates that we may develop in the future, if approved;
- our ability to establish commercial capabilities or enter into agreements with third parties to market, sell and distribute our product candidates;
- our dependence on third parties to perform critical activities related to the research, development and manufacturing of our product candidates;
- disruptions at the FDA and other government agencies;
- the expense, time and uncertainty involved in the development and consistent manufacturing and supply of our product candidates, some or all of which may never reach the regulatory approval stage;
- our ability to raise capital when needed and on acceptable terms;
- our ability to enter into any new licensing agreements or to maintain any licensing agreements with respect to our product candidates;
- our reliance on collaboration partners and licensees, whose actions we cannot control;
- the willingness of private insurers and other payors to provide reimbursement for our products;
- regulatory developments in the United States, the European Union and other jurisdictions;
- the outcome and timing of price negotiations with governmental authorities;
- our ability to compete in the pharmaceutical industry and with competitive generic products;
- our ability to protect our intellectual property and know-how and operate our business without infringing the intellectual property rights or regulatory exclusivity of others;
- side effects or adverse events associated with the use of our product candidates;

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- our ability to defend against costly and damaging liability claims resulting from the testing of our product candidates in the clinic or, if approved, any commercial sales;
- a loss of any of our key personnel;
- our estimates of market sizes and anticipated uses of our product candidates;
- our estimates of future performance;
- our estimates regarding anticipated operating losses, future revenues, expenses, capital requirements and our needs for additional financing;
- our ability to comply with existing or future laws and regulations in a cost-efficient manner;
- our ability to manage negative consequences from changes in applicable laws and regulations, including tax laws;
- our ability to successfully remediate the material weaknesses in our internal control over financial reporting and to maintain an effective system of internal control over financial reporting;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act or a foreign private issuer;
- changes in general market, political and economic conditions;
- the length and severity of the COVID-19 outbreak and its impact on our business, including our supply chain, clinical trials and operations; and
- other risk factors discussed herein under “Risk Factors” or incorporated herein by reference.

Our actual results or performance could differ materially from those expressed in, or implied by, any forward-looking statements relating to those matters. Accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do, what impact they will have on our results of operations, cash flows or financial condition. Additionally, some of the risks and uncertainties identified above may be amplified by the COVID-19 pandemic. It is not possible to predict or identify all such risks. There may be additional risks that we consider immaterial or which are unknown. Except as required by law, we are under no obligation, and expressly disclaim any obligation, to update, alter or otherwise revise any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future events or otherwise.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement and the accompanying prospectus and in the documents we incorporate by reference. This summary does not contain all of the information you should consider before making an investment decision. You should read this entire prospectus supplement carefully, especially the risks related to this offering discussed under “Risk Factors” beginning on page S-3 of this prospectus supplement, along with the other risk factors, our consolidated financial statements and notes to those consolidated financial statements and the other information incorporated by reference in this prospectus supplement.

Pharvaris N.V.

Our Business

We are a clinical-stage biopharmaceutical company focused on the development and commercialization of innovative therapies for rare diseases with significant unmet need, initially focused on angioedema and other bradykinin-mediated diseases. Our first molecule, PHA121, is a novel, small molecule bradykinin B2-receptor antagonist for the treatment of hereditary angioedema, or HAE. Bradykinin-B2-receptor inhibition is a clinically validated mechanism for the treatment of HAE, as demonstrated by icatibant, which is a bradykinin B2-receptor antagonist approved in Europe in 2008 and in the United States in 2011 (as FIRAZYR). We designed PHA121 to improve upon the therapeutic profile of existing therapies and, through oral delivery, to provide patients with quality of life and convenience that is superior to current standard-of-care HAE treatments, which are injectables. We believe PHA121 has the potential to provide a safe, effective and convenient option for both acute and prophylactic treatments of HAE, in the form of our PHVS416 on-demand rapid exposure product candidate, and for prophylaxis of HAE, in the form of our PHVS719 small daily dose extended-release product candidate. We believe that our product candidates may address a broader range of angioedema attacks than other available treatments since PHA121 blocks the actual signal that leads to angioedema (the interaction of bradykinin, or BK, with the bradykinin B2 receptor), rather than an upstream signal. By blocking the action of bradykinin, we can prevent its aberrant signaling regardless of the pathway that generates it. In our completed Phase 1 trials to-date, we have observed that PHA121 was orally bioavailable and well tolerated at all doses studied, with approximately dose-proportional exposure. We also have successfully demonstrated proof-of-mechanism through a clinical pharmacodynamics, or PD, assessment with the bradykinin challenge, which had been utilized as a validated surrogate assessment for dose selection in the icatibant development program. The data also allowed us to compare the projected therapeutic performance of PHA121 with that of icatibant, but we do not yet have data from the PHA121 Phase 2 study. We plan to efficiently progress PHA121 through clinical development for on-demand and prophylactic use with our on-demand product candidate, PHVS416, and extended release product candidate, PHVS719, respectively. We commenced our RAPIDE-1 Phase 2 clinical trial of PHVS416 in February 2021 and expect to have Phase 2 data for the acute treatment of patients with HAE attacks in the fourth quarter of 2022. We also commenced a Phase 2 clinical trial for prophylaxis in 2021 using twice-daily dosing of the PHVS416 soft capsules. Our primary objective with this trial is to assess the safety profile of PHVS416 dose regimens for prophylactic treatments in HAE patients. We also initiated a Phase 1 clinical trial with PHVS719 in 2021 to assess pharmacokinetics of the extended-release formulation.

Corporate Information

The offices of Pharvaris N.V. are located at J.H. Oortweg 21, 2333 CH Leiden, The Netherlands. Our telephone number is +31 (0)71 203 6410. Investors should contact us for any inquiries at the address and telephone number of our principal executive office. Our principal website is www.pharvaris.com. The information contained on our website is not a part of this prospectus supplement.

THE OFFERING

Ordinary shares offered by us	Ordinary shares having an aggregate offering price of up to \$75,000,000.
Manner of Offering	“At the market” offering that may be made from time to time through our sales agent, SVB Leerink. See “Plan of Distribution.”
Use of Proceeds	We anticipate that we will use our existing liquidity and the net proceeds of this offering primarily to fund research and development and product discovery expenses for our clinical and preclinical research and development activities and for working capital and general corporate purposes. See “Use of Proceeds.”
Risk Factors	You should read the “Risk Factors” section of this prospectus supplement, as well as those risks and uncertainties identified in the documents incorporated by reference herein, including our most recent Annual Report on Form 20-F, for a discussion of factors to consider carefully before deciding to purchase our ordinary shares.
The Nasdaq Global Select Market Symbol	“PHVS.”

RISK FACTORS

You should carefully consider the risks and uncertainties described below, as well as those risks and uncertainties identified in the documents incorporated by reference herein, including our most recent Annual Report on Form 20-F, before making an investment in our ordinary shares. Our business, financial condition or results of operations could be materially and adversely affected if any of these risks occurs, and as a result, the market price of our ordinary shares could decline and you could lose all or part of your investment. This prospectus supplement also contains forward-looking statements that involve risks and uncertainties. See “Special Note Regarding Forward-Looking Statements.” Our actual results could differ materially and adversely from those anticipated in these forward-looking statements as a result of certain factors.

Risks Related to this Offering

Future sales, or the possibility of future sales, of a substantial number of our ordinary shares could adversely affect the price of the shares and dilute shareholders.

Future sales of a substantial number of our ordinary shares, or the perception that such sales will occur, could cause a decline in the market price of our ordinary shares. Pursuant to the at-the-market program, and potentially other offerings, we plan to continue to raise money to fund our operations through the issuance of our equity securities. If our existing shareholders sell substantial amounts of ordinary shares in the public market, or the market perceives that such sales may occur, the market price of our ordinary shares and our ability to raise capital through an issue of equity securities in the future could be adversely affected. In addition, we have registered on a Form S-8 registration statement all ordinary shares that we may issue under our equity compensation plans. As a result, these shares can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates.

If we sell ordinary shares, convertible securities or other equity securities, existing shareholders may be diluted by such sales, and in certain cases new investors could gain rights superior to our existing shareholders. Any sales of our ordinary shares, or the perception that such sales could occur, could have a negative impact on the trading price of our 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 may exceed the as adjusted net tangible book value per ordinary share. Therefore, if you purchase ordinary shares in this offering, you may pay a price per ordinary share that substantially exceeds our as adjusted net tangible book value per ordinary share after this offering. To the extent outstanding options or warrants are exercised, you will incur further dilution.

Assuming that an aggregate of 4,385,965 of our ordinary shares are sold at a price of \$17.10 per share pursuant to this prospectus supplement, which was the last reported sale price of our ordinary shares on Nasdaq on February 28, 2022, for aggregate gross proceeds of \$75,000,000, after deducting commissions and estimated aggregate offering expenses payable by us, you would experience immediate dilution of \$8.37 per ordinary share, representing the difference between our as adjusted net tangible book value per ordinary share as of September 30, 2021, after giving effect to this offering and the assumed offering price.

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

Under the United States Internal Revenue Code of 1986, as amended, or the Code, we will be a PFIC for any taxable year in which, after the application of certain look-through rules with respect to subsidiaries, either (i) 75% or more of our gross income consists of “passive income,” or (ii) 50% or more of the average quarterly value of our assets consists of assets that produce, or are held for the production of, “passive income.” Passive

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income generally includes dividends, interest, certain non-active rents and royalties, and capital gains. Based on the nature of our business, our financial statements, our expectations about the nature and amount of our income, assets and activities and the expected price of our ordinary shares in this offering, we do not believe we were a PFIC in 2021 and we do not expect to be a PFIC for our current taxable year or in the foreseeable future. In addition, we may, directly or indirectly, hold equity interests in other PFICs. Whether we or any of our subsidiaries will be a PFIC in 2022 or any future year is a factual determination that must be made annually at the close of each taxable year, and, thus, is subject to significant uncertainty; because a determination of whether a company is a PFIC must be made annually after the end of each taxable year and will depend on the composition of our income and assets and the market value of our assets from time to time, we cannot assure you that we will not be a PFIC for the current or any future taxable year. Accordingly, there can be no assurance that we will not be a PFIC in 2022 or any future taxable year.

If we are a PFIC for any taxable year during which a U.S. Holder (as defined in “Material United States and Dutch Income Tax Considerations—Material U.S. Federal Income Tax Considerations to U.S. Holders”) holds our ordinary shares, we generally would continue to be treated as a PFIC with respect to that U.S. investor for all succeeding years during which the U.S. Holder holds our ordinary shares even if we ceased to meet the threshold requirements for PFIC status, unless certain exceptions apply. Such a U.S. Holder may be subject to adverse U.S. federal income tax consequences, including (i) the treatment of all or a portion of any gain on disposition as ordinary income, (ii) the application of a deferred interest charge on such gain and the receipt of certain dividends and (iii) compliance with certain reporting requirements. There is no assurance that we will provide information that will enable investors to make a qualified electing fund election, also known as a QEF Election, which could mitigate the adverse U.S. federal income tax consequences should we be classified as a PFIC.

For further discussion, see “Material United States and Dutch Tax Considerations—Material U.S. Federal Income Tax Considerations to U.S. Holders.”

The ordinary shares offered in this offering will be sold in “at the market offerings.” Investors who purchase our ordinary shares in this offering at different times will likely pay different prices.

Investors who purchase our ordinary shares in this offering at different times will likely pay different prices, and so may experience different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices and numbers of ordinary shares sold, and subject to certain limitations in the sales agreement, there is no minimum or maximum sales price. Investors may experience a decline in the value of their ordinary shares and dilution as a result of sales made at prices lower than the prices they paid.

We have broad discretion in the use of the net proceeds from this offering, and we may not use them effectively.

We currently intend to use the net proceeds from this offering as described in “Use of Proceeds.” However, our board of directors and our management retain broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our ordinary shares. Our failure to apply these funds effectively could result in financial losses, which could have a material adverse effect on our business, results of operations, financial condition and prospects.

It is not possible to predict the aggregate proceeds resulting from sales made under the Sales Agreement.

Subject to certain limitations in the sales agreement and compliance with applicable law, we have the discretion to deliver a placement notice to SVB Leerink at any time throughout the term of the Sales Agreement. The number of ordinary shares that are sold through SVB Leerink after delivering a placement notice will fluctuate based on a number of factors, including the market price of our ordinary shares during the sales period, any limits we may set with SVB Leerink in any applicable placement notice and the demand for our ordinary shares. Because the price per share of each share sold pursuant to the Sales Agreement will fluctuate over time, it is not currently possible to predict the aggregate proceeds to be raised in connection with sales under the sales agreement.

USE OF PROCEEDS

We may issue and sell our ordinary shares 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.

As of December 31, 2021, we had cash and cash equivalents of €209.4 million. We anticipate that we will use our existing liquidity and the net proceeds of this offering primarily to fund research and development and product discovery expenses for our clinical and preclinical research and development activities and for working capital and general corporate purposes.

Our expected use of the net proceeds from this offering represents our current intentions based upon our present plans and business conditions, which could change in the future as our plans and business conditions evolve. We cannot predict with certainty all of the particular uses for the net proceeds to be received upon the consummation of this offering or the amounts that we will actually spend on the uses set forth above. For example, we may use a portion of the net proceeds to in-license, acquire or invest in complementary technologies, products or assets. However, we have no current plan, commitments or obligations to do so. There is a risk that our development of our product candidates or any other future clinical development or product discovery program may not result in marketing approval. To the extent that we fail to obtain approval to market our product candidates or any other clinical development or product discovery program in a timely manner and have to continue clinical trials over a longer period of time, our research and development expenses may further increase. The amounts and timing of our actual expenditures and the extent of clinical development may vary significantly depending on numerous factors, including the progress, timing and completion of our development efforts, the status of and results from our ongoing clinical trials or any preclinical studies or other clinical trials we may commence in the future, the time and costs involved in obtaining regulatory approval for our product candidates or any other future clinical development or product discovery program, as well as maintaining our existing collaborations and any collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs. As a result, our board of directors (“Board”) will have broad discretion in applying the net proceeds of this offering, and investors will be relying on our judgment regarding the application of the net proceeds of this offering.

Based on our current cash and current financial assets, we believe that our existing liquidity will enable us to fund our business through at least the next 18 months. The net proceeds of this offering, if we issue and sell our ordinary shares with maximum aggregate sales proceeds of \$75,000,000 as specified in this prospectus supplement, would extend our financial reach, assuming that the plans for our clinical and preclinical activities remain unchanged. We have based these estimates on assumptions that may prove to be incorrect, and we could use our available capital resources sooner than we currently expect.

Pending their use, we might plan to invest a portion of the net proceeds from this offering in short- and intermediate-term interest-bearing financial assets and certificates of deposit.

DIVIDEND POLICY

We have never declared or paid any dividends on our ordinary shares. We expect to retain all earnings, if any, generated by our operations for the development and growth of our business and do not anticipate paying any dividends to our shareholders in the foreseeable future. Under Dutch law, we may only pay dividends and other distributions from our reserves to the extent our shareholders' equity (*eigen vermogen*) exceeds the sum of the paid-in and called-up share capital plus the reserves required to be maintained by Dutch law or our Articles of Association and (if it concerns a distribution of profits) after adoption of our statutory annual accounts by our general meeting from which it appears that such dividend distribution is allowed. Subject to those restrictions, any future determination to pay dividends or other distributions from our reserves will be at the discretion of the Board and will depend upon a number of factors, including our results of operations, earnings, cash flow, financial condition, future prospects, contractual restrictions, capital investment requirements, restrictions imposed by applicable law and other factors considered relevant by the Board.

Under our Articles of Association, if any preferred shares are or have been outstanding, the preferred dividend is first paid out of our profits, if available for distribution, to the holders or former holders, as applicable, of those preferred shares to the extent they are entitled to such distribution under our Articles of Association, which we refer to as our preferred dividend. Thereafter, our Board may decide that all or part of our remaining profits shown in our adopted statutory annual accounts will be added to our reserves. After such reservation of any such profits, any remaining profits will be at the disposal of the general meeting at the proposal of our Board for distribution on our ordinary shares, subject to the applicable restrictions of Dutch law. Our Board is permitted, subject to certain requirements, and applicable restrictions of Dutch law, to declare interim dividends without the approval of the general meeting. Dividends and other distributions shall be made payable no later than the date determined by the Board. Claims to dividends and other distributions not made within five years from the date that such dividends or distributions became payable will lapse and any such amounts will be considered to have been forfeited to us (*verjaring*).

DILUTION

If you invest in our ordinary shares in this offering, your ownership interest will be diluted immediately to the extent of the difference between the price you pay in this offering and the net tangible book value per ordinary share after this offering.

Our net tangible book value as of September 30, 2021 was \$254.8 million (€215.4 million), or \$7.69 per ordinary share (€6.50 per ordinary share), based on 33,128,593 ordinary shares then outstanding. Net tangible book value per share represents the amount of our total assets less our total liabilities, excluding intangible assets, divided by 33,128,593, the total number of our ordinary shares issued and outstanding at September 30, 2021.

After giving effect to the assumed sale by us of our ordinary shares in the aggregate amount of \$75 million at an assumed public offering price of \$17.10 per share (the last sale price of our ordinary shares on February 28, 2022 as reported on Nasdaq), less the estimated commissions and estimated offering expenses payable by us, our net tangible book value at September 30, 2021 would have been \$327.4 million, or \$8.73 per ordinary share. This represents an immediate increase in net tangible book value of \$1.04 per share to existing shareholders and an immediate dilution of \$8.37 per share to investors in this offering. The following table illustrates this per share dilution. The as adjusted information is illustrative only and will adjust based on the actual price to the public, the actual number of shares sold and other terms of the offering determined at the time our ordinary shares are sold pursuant to this prospectus supplement. The shares sold in this offering, if any, will be sold from time to time at various prices.

Assumed public offering price per share	\$17.10
Net tangible book value per share as of September 30, 2021	\$ 7.69
Increase per share attributable to new investors purchasing shares in this offering	\$ 1.04
As adjusted net tangible book value per share after giving effect to this offering	\$ 8.73
Dilution per share to new investors	\$ 8.37

The above discussion and table are based on our actual ordinary shares outstanding as of September 30, 2021 and excludes:

- 2.5 million of our ordinary shares issuable upon the exercise of options outstanding as of September 30, 2021, at a weighted-average exercise price of \$10.86 per ordinary share (€9.18 per ordinary share);
- 1.9 million ordinary shares covered by additional option awards available for issuance under our equity incentive plan as of September 30, 2021; and
- 0.27 million restricted stock units held by Senior Management and other employees as of September 30, 2021.

To the extent that outstanding options are exercised, 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 such securities may result in further dilution to our shareholders.

MATERIAL UNITED STATES AND DUTCH TAX CONSIDERATIONS

The information presented under the caption “—Material U.S. Federal Income Tax Considerations to U.S. Holders” below is a discussion of material U.S. federal income tax considerations to a U.S. Holder (as defined below) of owning and disposing of our ordinary shares. The information presented under the caption “—Material Dutch Tax Considerations” is a discussion of material Dutch tax considerations of owning and disposing of our ordinary shares.

You should consult your tax advisor regarding the applicable tax consequences to you of investing in our ordinary shares under the laws of the United States (federal, state and local), the Netherlands, and any other applicable jurisdiction.

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

The following is a discussion of the material U.S. federal income tax consequences to the U.S. Holders, as defined below, of owning and disposing of our ordinary shares. It does not describe all tax considerations that may be relevant to a particular person’s decision to acquire our ordinary shares. This discussion applies only to a U.S. Holder that purchases our ordinary shares in connection with this offering and holds such ordinary shares as capital assets within the meaning of Section 1221 of the Code for U.S. federal income tax purposes, and this discussion applies only to such ordinary shares. This discussion is general in nature and it does not describe all of the U.S. federal income tax consequences that may be relevant in light of the U.S. Holder’s particular circumstances, including the potential application of the Medicare contribution tax, estate or gift tax consequences, any tax consequences other than U.S. federal income tax consequences, and tax consequences applicable to U.S. Holders subject to special rules, such as:

- certain financial institutions;
- corporations that accumulate earnings to avoid U.S. federal income tax, or expatriated entities subject to Section 7874 of the Code;
- dealers or traders in securities who use a mark-to-market method of tax accounting;
- persons holding ordinary shares as part of a hedging transaction, straddle, wash sale, conversion transaction or other integrated transaction or persons entering into a constructive sale with respect to the ordinary shares;
- persons whose functional currency for U.S. federal income tax purposes is not the U.S. dollar;
- entities or arrangements classified as partnerships for U.S. federal income tax purposes;
- tax-exempt entities;
- “individual retirement accounts,” “Roth IRAs” or other tax-deferred accounts;
- any persons that acquire ordinary shares directly or indirectly in connection with the performance of services;
- persons who are subject to Section 451(b) of the Code;
- persons that own or are deemed to own ten percent or more of our shares (by vote or value);
- S corporations and any investors therein, regulated investment companies, real estate investment trusts, real estate mortgage investment conduits; or
- persons holding ordinary shares in connection with a trade or business conducted outside of the United States.

If an entity that is classified as a partnership for U.S. federal income tax purposes holds ordinary shares, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities

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of the partner and the partnership. Partnerships holding ordinary shares and partners in such partnerships should consult their tax advisers as to the particular U.S. federal income tax consequences of owning and disposing of ordinary shares.

This discussion is based on the Code, administrative pronouncements, judicial decisions, final, temporary and proposed Treasury regulations, and the income tax treaty between the Netherlands and the United States, or the Treaty, all as of the date hereof, any of which is subject to change or differing interpretations, possibly with retroactive effect, so as to result in U.S. federal income tax consequences different from those discussed below. We have not sought, and do not expect to seek, any ruling from the U.S. Internal Revenue Service, or the Service or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the Service or a court would agree with our statements and conclusions or that a court would not sustain any challenge by the Service in the event of litigation.

A “U.S. Holder” is a holder who, for U.S. federal income tax purposes, is a beneficial owner of ordinary shares, who is eligible for the benefits of the Treaty and who is:

- a citizen or individual 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 therein 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 if either (1) a court within the U.S. is able to exercise primary jurisdiction over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (2) the trust has a valid election in effect under applicable Treasury regulations to be treated as a U.S. person.

THIS SUMMARY IS FOR GENERAL INFORMATION PURPOSES ONLY, AND IS NOT INTENDED TO BE, AND SHOULD NOT BE CONSTRUED TO BE, LEGAL OR TAX ADVICE TO ANY PARTICULAR HOLDER. PROSPECTIVE INVESTORS ARE URGED TO CONSULT THEIR TAX ADVISORS WITH REGARD TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS, AS WELL AS THE APPLICATION OF U.S. NON-INCOME TAX LAWS AND THE LAWS OF ANY STATE, LOCAL OR NON-U.S. JURISDICTION, IN LIGHT OF THEIR PARTICULAR SITUATION.

Taxation of Distributions

As discussed above under “Dividend Policy,” we do not expect to make distributions on our ordinary shares in the near future. In the event that we do make distributions of cash or other property, subject to the PFIC rules described below, distributions paid on our ordinary shares will generally be treated as dividends to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Because we do not maintain calculations of our earnings and profits under U.S. federal income tax principles, we expect that distributions generally will be reported to U.S. Holders as dividends. If and for so long as our ordinary shares are listed on the Nasdaq or another established securities market in the United States or if and for so long as we are eligible for benefits under the Treaty, dividends paid to certain non-corporate U.S. Holders may be eligible for taxation as “qualified dividend income” if we are not treated as a PFIC with respect to the U.S. Holder and were not treated as a PFIC with respect to the U.S. Holder in the preceding taxable year, and if certain other requirements are met. Therefore, subject to applicable limitations, dividends paid to certain non-corporate U.S. Holders may be taxable at rates not in excess of the long-term capital gain rate applicable to such U.S. Holders. U.S. Holders should consult their tax advisers regarding the availability of the reduced tax rate on dividends in their particular circumstances. The amount of a dividend will include any amounts withheld by us in respect of Dutch income taxes. Subject to the PFIC rules described below, the amount of the dividend will be treated as foreign-source dividend income to U.S. Holders and will not be eligible for the dividends-received deduction generally available to U.S. corporations under the United States Internal Revenue Code.

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Subject to the PFIC rules described below, dividends will be included in a U.S. Holder's income on the date of the U.S. Holder's receipt of the dividend. The amount of any dividend income paid in euros will be the U.S. dollar amount calculated by reference to the exchange rate in effect on the date of actual or constructive receipt, regardless of whether the payment is in fact converted into U.S. dollars at that time. If the dividend is converted into U.S. dollars on the date of receipt, a U.S. Holder should not be required to recognize foreign currency gain or loss in respect of the dividend income. A U.S. Holder may have foreign currency gain or loss if the dividend is converted into U.S. dollars after the date of receipt.

Subject to applicable limitations, some of which vary depending upon the U.S. Holder's particular circumstances, Dutch income taxes withheld from dividends on our ordinary shares at a rate not exceeding the rate provided by the Treaty will be creditable against the U.S. Holder's U.S. federal income tax liability. Dutch taxes withheld in excess of the rate applicable under the Treaty will not be eligible for credit against a U.S. Holder's U.S. federal income tax liability. The rules governing foreign tax credits are complex, and U.S. Holders should consult their tax advisers regarding the creditability of foreign taxes in their particular circumstances. In lieu of claiming a foreign tax credit, U.S. Holders may, at their election, deduct foreign taxes, including any Dutch income tax, in computing their taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all foreign taxes paid or accrued in the taxable year. The rules governing foreign tax credits are complex and U.S. Holders should consult their tax advisers regarding the creditability of foreign taxes in their particular circumstances. In lieu of claiming a foreign tax credit, U.S. Holders may deduct foreign taxes, including any Dutch withholding tax, in computing their taxable income, subject to generally applicable limitations under U.S. law. An election to deduct foreign taxes instead of claiming foreign tax credits applies to all foreign taxes paid or accrued in the taxable year.

Sale or Other Disposition of Ordinary Shares

Subject to the PFIC rules described below, gain or loss realized on the sale or other disposition of ordinary shares will be capital gain or loss and will be long-term capital gain or loss if the U.S. Holder held the ordinary shares for more than one year. The amount of the gain or loss will equal the difference between the U.S. Holder's tax basis in the ordinary shares disposed of and the amount realized on the disposition, in each case as determined in U.S. dollars. This gain or loss will generally be U.S.-source gain or loss for foreign tax credit purposes. The deductibility of capital losses is subject to various limitations.

Passive Foreign Investment Company Rules

Under the Code, we will be a PFIC for any taxable year in which, after the application of certain "look-through" rules with respect to subsidiaries, either (i) 75% or more of our gross income consists of "passive income," or (ii) 50% or more of the average quarterly value of our assets consist of assets that produce, or are held for the production of, "passive income." For purposes of the above calculations, we will be treated as if we hold our proportionate share of the assets of, and receive directly our proportionate share of the income of, any other corporation in which we directly or indirectly own at least 25%, by value, of the shares of such corporation. Passive income generally includes dividends, interest, rents, certain non-active royalties and capital gains. Based on the nature of our business, our financial statements, our expectations about the nature and amount of our income, assets and activities and the expected price of our ordinary shares in this offering, we do not believe we were a PFIC in 2021 and we do not expect to be a PFIC for our current taxable year or in the foreseeable future. In addition, we may, directly or indirectly, hold equity interests in other PFICs, or Lower-tier PFICs. Whether we or any of our subsidiaries will be a PFIC in 2022 or any future year is a factual determination that must be made annually at the close of each taxable year, and, thus, is subject to significant uncertainty; because among other things (i) a determination of whether a company is a PFIC must be made annually after the end of each taxable year and will depend on the composition of our income and assets and the market value of our assets from time to time and (ii) we will hold a substantial amount of cash following this offering, we cannot assure you that we will not be a PFIC for the current or any future taxable year. Accordingly, there can be no assurance that we will not be a PFIC in 2022 or any future taxable year. If we are a PFIC for any year during which a U.S. Holder holds

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or is deemed to hold ordinary shares, we generally would continue to be treated as a PFIC with respect to that U.S. Holder for all succeeding years during which the U.S. Holder holds or is deemed to hold ordinary shares, even if we ceased to meet the threshold requirements for PFIC status, unless under certain circumstances the U.S. Holder makes a valid deemed sale or deemed dividend election under the applicable Treasury regulations with respect to its ordinary shares.

Under certain attribution rules, assuming we are a PFIC, U.S. Holders will be deemed to own their proportionate shares of any Lower-tier PFICs and will be subject to U.S. federal income tax according to the rules described in the following paragraphs on (i) certain distributions by a Lower-tier PFIC and (ii) a disposition of shares of a Lower-tier PFIC, in each case as if the U.S. Holder held such shares directly, even if the U.S. Holder has not received the proceeds of those distributions or dispositions.

Generally, if we were a PFIC for any taxable year during which a U.S. Holder held or is deemed to have held ordinary shares, gain recognized by a U.S. Holder on a sale or other disposition (including certain pledges) of such ordinary shares, or an indirect disposition of shares of a Lower-tier PFIC, would be allocated ratably over the U.S. Holder's holding period for such ordinary shares. The amounts allocated to the taxable year of the sale or other disposition and to any year before we became a PFIC would be taxed as ordinary income. The amount allocated to each other taxable year would be subject to tax at the highest rate in effect for individuals or corporations, as appropriate, for that taxable year, and an interest charge would be imposed on the amount allocated to that taxable year. Further, to the extent that any distribution received by a U.S. Holder with respect to its ordinary shares (or a distribution by a Lower-tier PFIC to its shareholder that is deemed to be received by a U.S. Holder) exceeds 125% of the average of the annual distributions on the ordinary shares received during the preceding three years or the U.S. Holder's holding period, whichever is shorter, that distribution would be subject to taxation in the same manner as gain, described immediately above.

A U.S. Holder can avoid certain of the adverse rules described above by making a mark-to-market election with respect to its ordinary shares, provided that the ordinary shares are "marketable." Ordinary shares will be marketable if they are "regularly traded" on a "qualified exchange" or other market within the meaning of applicable Treasury regulations. If a U.S. Holder makes the mark-to-market election, it generally will recognize as ordinary income any excess of the fair market value of the ordinary shares at the end of each taxable year over their adjusted tax basis, and will recognize an ordinary loss in respect of any excess of the adjusted tax basis of the ordinary shares over their fair market value at the end of the taxable year (but only to the extent of the net amount of income previously included as a result of the mark-to-market election). If a U.S. Holder makes the election, the U.S. Holder's tax basis in the ordinary shares will be adjusted to reflect the income or loss amounts recognized. Any gain recognized on the sale or other disposition of ordinary shares, as applicable, in a year when we are a PFIC will be treated as ordinary income and any loss will be treated as an ordinary loss (but only to the extent of the net amount of income previously included as a result of the mark-to-market election). A mark-to-market election generally cannot be made for equity interests in any Lower-tier PFIC unless shares of such Lower-tier PFIC are themselves "marketable." As a result, if a U.S. Holder makes a mark-to-market election with respect to our ordinary shares, the U.S. Holder would nevertheless be subject to the PFIC rules described above with respect to its indirect interest in any Lower-tier PFIC unless the U.S. Holder makes a QEF Election with respect to such Lower-tier PFIC, as discussed below. U.S. Holders should consult their tax advisers regarding the availability and advisability of making a mark-to-market election in their particular circumstances.

In addition, in order to avoid the application of the foregoing rules, a United States person that owns stock in a PFIC for U.S. federal income tax purposes may make a QEF Election with respect to such PFIC, and each PFIC in which the PFIC holds equity interests, if the PFIC provides the information necessary for such election to be made. In order to make such an election, a United States person would be required to make the QEF Election for each PFIC by attaching a separate properly completed IRS Form 8621 for each PFIC to the United States person's timely filed U.S. federal income tax return generally for the first taxable year that the entity is treated as a PFIC with respect to the United States person. A U.S. Holder generally may make a separate election to defer payment of taxes on the undistributed income inclusion under the QEF rules, but if deferred, any such taxes are

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subject to an interest charge. If a United States person makes a QEF Election with respect to a PFIC, the United States person will be currently taxable on its pro rata share of the PFIC's ordinary earnings and net capital gain (at ordinary income and capital gain rates, respectively) for each taxable year that the entity is classified as a PFIC and will not be required to include such amounts in income when actually distributed by the PFIC. There is no assurance that we will provide information necessary for U.S. Holders to make QEF Elections. If a U.S. Holder makes a QEF Election with respect to us, any distributions paid by us out of our earnings and profits that were previously included in the U.S. Holder's income under the QEF Election will not be taxable to the U.S. Holder. A U.S. Holder will increase its tax basis in its ordinary shares by an amount equal to any income included under the QEF Election and will decrease its tax basis by any amount distributed, if any, on the ordinary shares that is not included in its income. In addition, a U.S. Holder will recognize capital gain or loss on the disposition of ordinary shares in an amount equal to the difference between the amount realized and its adjusted tax basis in our ordinary shares. U.S. Holders should note that if they make QEF Elections with respect to us and Lower-tier PFICs, if any, they may be required to pay U.S. federal income tax with respect to their ordinary shares for any taxable year significantly in excess of any cash distributions, if any, received on the ordinary shares, as applicable, for such taxable year. If we determine that any of our subsidiaries is a Lower-tier PFIC for any taxable year, there is no assurance that we will provide information necessary for U.S. Holders to make a QEF Election with respect to such Lower-tier PFIC. U.S. Holders should consult their tax advisers regarding making QEF Elections in their particular circumstances.

In addition, if we were a PFIC or, with respect to a particular U.S. Holder, were treated as a PFIC for the taxable year in which we paid a dividend or for the prior taxable year, the preferential dividend rates discussed above with respect to dividends paid to certain non-corporate U.S. Holders would not apply.

If a U.S. Holder owns ordinary shares during any year in which we are a PFIC, the U.S. Holder generally must file annual reports, containing such information as the U.S. Treasury may require on IRS Form 8621 (or any successor form) with respect to us, generally with the U.S. Holder's federal income tax return for that year, unless otherwise specified in the instructions with respect to such form.

U.S. Holders should consult their tax advisors concerning our potential PFIC status and the potential application of the PFIC rules. The U.S. federal income tax rules relating to PFICs are very complex. U.S. Holders are strongly urged to consult their tax advisors with respect to the impact of PFIC status on the purchase, ownership and disposition of our ordinary shares, as applicable, the consequences to them of an investment in a PFIC (and any Lower-tier PFICs), any elections available with respect to the ordinary shares and the IRS information reporting obligations with respect to the purchase, ownership and disposition of ordinary shares of a PFIC.

Information Reporting with Respect to Foreign Financial Assets

Payments of dividends and sales proceeds that are made within the United States or through certain U.S.-related financial intermediaries generally are subject to information reporting, and may be subject to backup withholding, unless (i) the U.S. Holder is a corporation or other exempt recipient or (ii) in the case of backup withholding, the U.S. Holder provides a correct taxpayer identification number and certifies that it is not subject to backup withholding.

The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely furnished to the IRS.

Information Reporting and Backup Withholding

Certain U.S. Holders who are individuals and certain entities 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

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in accounts maintained by certain U.S. financial institutions). U.S. Holders should consult their tax advisers regarding whether or not they are obligated to report information relating to their ownership and disposition of ordinary shares.

Material Dutch Tax Considerations

Scope of Discussion

To the extent this section consists of a statement as to matters of Dutch tax law, this section is the opinion of our Dutch counsel, NautaDutilh N.V., and outlines certain material Dutch tax consequences of the acquisition, holding and disposal of our ordinary shares. It does not purport to describe all possible tax considerations or consequences that may be relevant to a holder or prospective holder of our ordinary shares and does not purport to deal with the tax consequences applicable to all categories of investors, some of which (such as trusts or similar arrangements) may be subject to special rules. In view of its general nature, this section should be treated with corresponding caution.

This section is based on the tax laws of the Netherlands, published regulations thereunder and published authoritative case law, all as in effect on the date hereof, and all of which are subject to change, possibly with retroactive effect. Where this section refers to “the Netherlands” or “Dutch” it refers only to the part of the Kingdom of the Netherlands located in Europe.

THIS DISCUSSION IS FOR GENERAL INFORMATION PURPOSES ONLY AND IS NOT DUTCH TAX ADVICE OR A COMPLETE DESCRIPTION OF ALL DUTCH TAX CONSEQUENCES RELATING TO THE ACQUISITION, HOLDING AND DISPOSAL OF OUR ORDINARY SHARES. HOLDERS OR PROSPECTIVE HOLDERS OF OUR ORDINARY SHARES SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE DUTCH TAX CONSEQUENCES RELATING TO THE ACQUISITION, HOLDING AND DISPOSAL OF THE ORDINARY SHARES IN LIGHT OF THEIR PARTICULAR CIRCUMSTANCES.

Please note that this section does not describe the Dutch tax consequences for:

- (i) a holder of our ordinary shares if such holder has a substantial interest (*aanmerkelijk belang*) or deemed substantial interest (*fictief aanmerkelijk belang*) in us under the Dutch Income Tax Act 2001 (*Wet inkomstenbelasting 2001*). Generally, a holder of securities in a company is considered to hold a substantial interest in such company, if such holder alone or, in the case of an individual, together with such holder’s partner for Dutch income tax purposes, or any relatives by blood or marriage in the direct line (including foster children), directly or indirectly, holds (i) an interest of 5% or more of the total issued and outstanding capital of that company or of 5% or more of the issued and outstanding capital of a certain class of shares of that company; or (ii) rights to acquire, directly or indirectly, such interest; or (iii) certain profit sharing rights in that company that relate to 5% or more of the company’s annual profits or to 5% or more of the company’s liquidation proceeds. A deemed substantial interest may arise if a substantial interest (or part thereof) in a company has been disposed of, or is deemed to have been disposed of, on a non-recognition basis;
- (ii) a holder of our ordinary shares, if the ordinary shares held by such holder qualify or qualified as a participation (*deelneming*) for purposes of the Dutch Corporate Income Tax Act 1969 (*Wet op de vennootschapsbelasting 1969*). Generally, a holder’s shareholding of 5% or more in a company’s nominal paid-up share capital qualifies as a participation. A holder may also have a participation if such holder does not have a shareholding of 5% or more but a related entity (statutorily defined term) has a participation or if the company in which the shares are held is a related entity (statutorily defined term);
- (iii) pension funds, investment institutions (*fiscale beleggingsinstellingen*), exempt investment institutions (*vrijgestelde beleggingsinstellingen*) (each as defined in the Dutch Corporate Income Tax Act 1969)

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and other entities that are, in whole or in part, not subject to or exempt from Dutch corporate income tax as well as entities that are exempt from corporate income tax in their country of residence, such country of residence being another state of the European Union, Norway, Liechtenstein, Iceland or any other state with which the Netherlands has agreed to exchange information in line with international standards; and

- (iv) a holder of our ordinary shares if such holder is an individual for whom the ordinary shares or any benefit derived from the ordinary shares are a remuneration or deemed to be a remuneration for (employment) activities performed by such holder or certain individuals related to such holder (as defined in the Dutch Income Tax Act 2001).

Dividend Withholding Tax

General

Dividends distributed by us generally are subject to Dutch dividend withholding tax at a rate of 15%. Generally, we are responsible for the withholding of such dividend withholding tax at source; the Dutch dividend withholding tax is for the account of the holder of our ordinary shares.

The expression “dividends distributed” includes, among other things:

- distributions in cash or in kind, deemed and constructive distributions and repayments of paid-in capital not recognized for Dutch dividend withholding tax purposes;
- liquidation proceeds, proceeds of redemption of our ordinary shares, or proceeds of the repurchase of ordinary shares (other than as temporary portfolio investment; *tijdelijke belegging*) by us or one of our subsidiaries or other affiliated entities, in each case to the extent such proceeds exceed the average paid-in capital of those ordinary shares as recognized for purposes of Dutch dividend withholding tax;
- an amount equal to the par value of our ordinary shares issued or an increase of the par value of ordinary shares, to the extent that it does not appear that a contribution, recognized for purposes of Dutch dividend withholding tax, has been made or will be made; and
- partial repayment of the paid-in capital, recognized for purposes of Dutch dividend withholding tax, if and to the extent that we have net profits (*zuivere winst*), unless (i) the general meeting has resolved in advance to make such repayment and (ii) the par value of the ordinary shares concerned has been reduced by an equal amount by way of an amendment of the Articles of Association. The term “net profits” includes anticipated profits that have yet to be realized.

Individuals and corporate legal entities who are resident or deemed to be resident of the Netherlands for Dutch tax purposes, generally are entitled to an exemption of or a credit for any Dutch dividend withholding tax against their Dutch (corporate) income tax liability. The same generally applies to holders of ordinary shares that are neither resident nor deemed to be resident of the Netherlands if the ordinary shares are attributable to a Dutch permanent establishment of such non-resident holder.

A holder of our ordinary shares resident of a country other than the Netherlands may, depending on such holder’s specific circumstances, be entitled to exemptions from, reductions of, or full or partial refunds of, Dutch dividend withholding tax under Dutch national tax legislation, EU law, or treaties for the avoidance of double taxation in effect between the Netherlands and such other country.

Remittance to the Dutch tax authorities

Under certain circumstances, we may not be required to remit all amounts withheld as Dutch dividend withholding tax to the Dutch tax authorities, if we have received a profit distribution from a qualifying foreign

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subsidiary (as described in the Dutch Dividend Withholding Tax Act 1965; *Wet op de dividendbelasting 1965*) which distribution (i) is exempt from Dutch corporate income tax and (ii) has been subject to a foreign withholding tax of at least 5%. The amount that does not have to be remitted to the Dutch tax authorities can generally not exceed the lesser of:

- 3% of the dividends distributed by us subject to Dutch dividend withholding tax; and
- 3% of the dividends and profit distributions, before deduction of foreign withholding taxes, received by us from qualifying foreign subsidiaries in the calendar year in which we distribute the dividends (up to the date of the distribution by us) and the two preceding calendar years, as far as such dividends and profit distributions have not yet been taken into account for purposes of establishing the above mentioned reduction.

Although this reduction reduces the amount of Dutch dividend withholding tax that we are required to remit to the Dutch tax authorities, it does not reduce the amount of Dutch dividend withholding tax that we are required to withhold on dividends distributed by us.

Dividend stripping

Pursuant to legislation to counteract “dividend stripping”, a reduction, exemption, credit or refund of Dutch dividend withholding tax is denied if the recipient of the dividend is not the beneficial owner (as described in the Dutch Dividend Withholding Tax Act 1965 (*Wet op de dividendbelasting 1965*)). This legislation generally targets situations in which a shareholder retains its economic interest in shares but reduces the withholding tax costs on dividends by a transaction with another party. It is not required for these rules to apply that the recipient of the dividends is aware that a dividend stripping transaction took place. The Dutch State Secretary of Finance takes the position that the definition of beneficial ownership introduced by this legislation will also be applied in the context of a double taxation convention.

Conditional withholding tax on dividends (as of January 1, 2024)

As of January 1, 2024, a Dutch conditional withholding tax will be imposed on dividends distributed by us to entities related (*gelieerd*) to us (within the meaning of the Dutch Withholding Tax Act 2021; *Wet bronbelasting 2021*), if such related entity:

- i. is considered to be resident (*gevestigd*) in a jurisdiction that is listed in the yearly updated Dutch Regulation on low-taxing states and non-cooperative jurisdictions for tax purposes (*Regeling laagbelastende staten en niet-coöperatieve rechtsgebieden voor belastingdoeleinden*) (a “Listed Jurisdiction”); or
- ii. has a permanent establishment located in a Listed Jurisdiction to which the ordinary shares are attributable; or
- iii. holds the ordinary shares for the main purpose or one of the main purposes to avoid taxation for another person or entity and there is an artificial arrangement or transaction or a series of artificial arrangements or transactions; or
- iv. is not considered to be the beneficial owner of the ordinary shares in its jurisdiction of residence because such jurisdiction treats another entity as the beneficial owner of the ordinary shares (a hybrid mismatch); or
- v. is not resident in any jurisdiction (also a hybrid mismatch); or
- vi. is a reverse hybrid (within the meaning of Article 2(12) of the Dutch Corporate Income Tax Act 1969), if and to the extent (x) there is a participant in the reverse hybrid which is related (*gelieerd*) to the reverse hybrid, (y) the jurisdiction of residence of such participant treats the reverse hybrid as transparent for tax purposes and (z) such participant would have been subject to the Dutch conditional withholding tax in respect of dividends distributed by us without the interposition of the reverse hybrid, all within the meaning of the Dutch Withholding Tax Act 2021.

The Dutch conditional withholding tax on dividends will be imposed at the highest Dutch corporate income tax rate in effect at the time of the distribution (currently 25.8%). The Dutch conditional withholding tax on dividends will be reduced, but not below zero, by any regular Dutch dividend withholding tax withheld in respect of the same dividend distribution. As such, based on the currently applicable rates, the overall effective tax rate of withholding the regular Dutch dividend withholding tax (as described above) and the Dutch conditional withholding tax on dividends will not exceed the highest corporate income tax rate in effect at the time of the distribution (currently 25.8%).

Taxes on Income and Capital Gains

Dutch Resident Entities

Generally, if the holder of ordinary shares is an entity resident or deemed to be resident of the Netherlands for Dutch corporate income tax purposes (a “Dutch Resident Entity”), any income derived or deemed to be derived from the ordinary shares or any capital gains realized on the disposal or deemed disposal of the ordinary shares is subject to Dutch corporate income tax at a rate of 15% with respect to taxable profits up to €395,000 and 25.8% with respect to taxable profits in excess of that amount (rates and brackets for 2022).

Dutch Resident Individuals

If the holder of our ordinary shares is an individual resident or deemed to be resident of the Netherlands for Dutch income tax purposes (a “Dutch Resident Individual”), any income derived or deemed to be derived from the ordinary shares or any capital gains realized on the disposal or deemed disposal of the ordinary shares is subject to Dutch income tax at the progressive rates (with a maximum of 49.50% in 2022), if:

- i. the ordinary shares are attributable to an enterprise from which the holder of ordinary shares derives a share of the profit, whether as an entrepreneur (*ondernemer*) or as a person who has a co-entitlement to the net worth (*medegerechtigd tot het vermogen*) of such enterprise without being a shareholder (as defined in the Dutch Income Tax Act 2001); or
- ii. the holder of ordinary shares is considered to perform activities with respect to the ordinary shares that go beyond ordinary asset management (*normaal, actief vermogensbeheer*) or otherwise derives benefits from the ordinary shares that are taxable as benefits from miscellaneous activities (*resultaat uit overige werkzaamheden*).

If the above-mentioned conditions (i) and (ii) do not apply to the Dutch Resident Individual, the Dutch Resident Individual’s net investment assets (*rendementsgrondslag*) for the year will be subject to an annual Dutch income tax on a deemed return (with a maximum of 5.53% in 2022) under the regime for savings and investments (*inkomen uit sparen en beleggen*), insofar the Dutch Resident Individual’s net investment assets for the year exceed a statutory threshold (*heffingvrij vermogen*). The net investment assets for the year are the fair market value of the investment assets less the allowable liabilities on January 1 of the relevant calendar year. Our ordinary shares are included as investment assets. For the net investment assets on January 1, 2022, the deemed return ranges from 1.82% up to 5.53% (depending on the aggregate amount of the net investment assets of the Dutch Resident Individual on January 1, 2022). The deemed return will be adjusted annually on the basis of historic market yields.

The deemed return on the Dutch Resident Individual’s net investment assets for the year is taxed at a flat rate of 31% (rate for 2022). Actual income or capital gains realized in respect of the ordinary shares are as such not subject to Dutch income tax.

On December 24, 2021, the Dutch Supreme Court ruled that the Dutch income tax levy on savings and investments, in 2017 and 2018, violated the European Convention on Human Rights. The tax consequences of the Dutch Supreme Court are not immediately clear. The new Dutch Government intends to start calculating the

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taxation on savings and investments on actual returns realized from savings and investments (instead of on a deemed return) starting in 2025. The Supreme Court ruling could make the Dutch Government move faster on the issue. Prospective investors should carefully consider the tax consequences of this Supreme Court ruling and consult their own tax adviser about their own tax situation.

Non-residents of the Netherlands

A holder of our ordinary shares that is neither a Dutch Resident Entity nor a Dutch Resident Individual will not be subject to Dutch (corporate) income tax in respect of income derived or deemed to be derived from our ordinary shares or in respect of capital gains realized on the disposal or deemed disposal of the ordinary shares, provided that:

- i. such holder does not have interest in an enterprise or deemed enterprise (as defined in the Dutch Income Tax Act 2001 and the Dutch Corporate Income Tax Act 1969) which, in whole or in part, is either effectively managed in the Netherlands or carried on through a permanent establishment, a deemed permanent establishment or a permanent representative in the Netherlands and to which enterprise or part of an enterprise the ordinary shares are attributable; and
- ii. in the event the holder is an individual, such holder does not carry out any activities in the Netherlands with respect to the ordinary shares that go beyond ordinary asset management and does not derive benefits from the ordinary shares that are taxable as benefits from miscellaneous activities in the Netherlands.

Gift and Inheritance Taxes

Residents of the Netherlands

Gift or inheritance taxes will arise in the Netherlands with respect to a transfer of ordinary shares by way of a gift by, or on the death of, a holder of such ordinary shares who is resident or deemed resident of the Netherlands at the time of the gift or the holder's death.

Non-residents of the Netherlands

No gift or inheritance taxes will arise in the Netherlands with respect to a transfer of our ordinary shares by way of gift by, or on the death of, a holder of ordinary shares who is neither resident nor deemed to be resident of the Netherlands, unless:

- i. in the case of a gift of our ordinary shares by an individual who at the date of the gift was neither resident nor deemed to be resident of the Netherlands, such individual dies within 180 days after the date of the gift, while being resident or deemed to be resident of the Netherlands; or
- ii. in the case of a gift of our ordinary shares made under a condition precedent, the holder of ordinary shares is resident or deemed to be resident of the Netherlands at the time the condition is fulfilled; or
- iii. the transfer is otherwise construed as a gift or inheritance made by, or on behalf of, a person who, at the time of the gift or death, is or is deemed to be resident of the Netherlands.

For purposes of Dutch gift and inheritance taxes, amongst others, a person that holds the Dutch nationality will be deemed to be resident of the Netherlands if such person has been resident in the Netherlands at any time during the ten years preceding the date of the gift or such person's death. Additionally, for purposes of Dutch gift tax, amongst others, a person not holding the Dutch nationality will be deemed to be resident of the Netherlands if such person has been resident in the Netherlands at any time during the twelve months preceding the date of the gift. Applicable tax treaties may override deemed residency.

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Value Added Tax (VAT)

No Dutch value added tax will be payable by a holder of our ordinary shares in respect of any payment in consideration for the holding or disposal of our ordinary shares.

Other Taxes and Duties

No Dutch registration tax, transfer tax, stamp duty or any other similar documentary tax or duty will be payable by a holder of our ordinary shares in respect of any payment in consideration for the holding or disposal of our ordinary shares.

PLAN OF DISTRIBUTION

We have entered into the Sales Agreement with SVB Leerink, relating to the sale of our ordinary shares offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the Sales Agreement, we may offer and sell our ordinary shares, nominal value €0.12 per share, having an aggregate offering price of up to \$75,000,000 from time to time through SVB Leerink, acting as our agent.

Sales of our ordinary shares, if any, under this prospectus supplement will be made by any method permitted that is deemed an “at the market offering” as defined in Rule 415 under the Securities Act, including sales made directly on or through Nasdaq, the existing trading market for our ordinary shares, sales made to or through a market maker other than on an exchange or otherwise, and/or any other method permitted by law. If authorized by us in writing, SVB Leerink may purchase our ordinary shares as principal or in block transactions.

SVB Leerink will offer our ordinary shares subject to the terms and conditions of the Sales Agreement on a daily basis or as otherwise agreed upon by us and SVB Leerink. We will designate the maximum number or amount of ordinary shares to be sold through SVB Leerink on a daily basis or otherwise determine such maximum number or amount together with SVB Leerink. Subject to the terms and conditions of the Sales Agreement, SVB Leerink will use commercially reasonable efforts to sell on our behalf all of the ordinary shares requested to be sold by us. SVB Leerink or we may suspend the offering of our ordinary shares being made through SVB Leerink under the Sales Agreement upon proper notice to the other party. SVB Leerink and we each have the right, by giving written notice as specified in the Sales Agreement, to terminate the Sales Agreement in each party’s sole discretion at any time. The offering of our ordinary shares pursuant to the Sales Agreement will otherwise terminate upon the termination of the Sales Agreement as provided therein.

SVB Leerink will be entitled to compensation at a commission rate of up to 3.0% of the gross sales price per share sold under the Sales Agreement. We have also agreed to reimburse SVB Leerink for outside legal expenses incurred by SVB Leerink in connection with this offering, including SVB Leerink’s counsel fees in an amount up to \$75,000 in connection with the filing of this prospectus supplement and up to \$15,000 each quarter thereafter. In accordance with FINRA Rule 5510, these reimbursed fees and expenses are deemed sales compensation to SVB Leerink in connection with this offering. We estimate that the total expenses of the offering payable by us, excluding any commissions or expense reimbursement payable to SVB Leerink under the Sales Agreement, will be approximately \$150,000.

The remaining sale proceeds, after deducting any commissions and expense reimbursement payable to SVB Leerink and any other transaction fees and expenses payable by us, will equal our net proceeds from the sale of such ordinary shares.

SVB Leerink will provide written confirmation to us before the open on Nasdaq on the day following each day on which our ordinary shares are sold through it as sales agent under the Sales Agreement. Each confirmation will include the number of ordinary shares sold through it as sales agent on that day, the volume-weighted average price of the ordinary shares sold, the percentage of the daily trading volume and the net proceeds to us.

Settlement for sales of ordinary shares will occur, unless the parties agree otherwise, on the second business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will report at least quarterly the number of ordinary shares sold through SVB Leerink under the Sales Agreement, the net proceeds to us and the compensation payable to SVB Leerink in connection with the sales of ordinary shares during the relevant period.

In connection with the sale of our ordinary shares on our behalf, SVB Leerink may be deemed to be an “underwriter” within the meaning of the Securities Act, and the compensation paid SVB Leerink may be deemed

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to be underwriting commissions or discounts. We have agreed in the Sales Agreement to provide indemnification and contribution to SVB Leerink against certain civil liabilities, including liabilities under the Securities Act. As sales agent, SVB Leerink will not engage in any transactions that stabilize our ordinary shares.

SVB Leerink and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services they have received, and may in the future receive, customary fees.

LEGAL MATTERS

The validity of the ordinary shares and certain other matters of Dutch law will be passed upon for us by NautaDutilh N.V. Certain matters of U.S. federal and New York State law will be passed upon for us by Kirkland & Ellis LLP, New York, New York. Sidley Austin LLP, San Francisco, California, is counsel to SVB Leerink in connection with this offering.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 20-F for the year ended December 31, 2020 have been so incorporated in reliance on the report of PricewaterhouseCoopers Accountants N.V., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the U.S. Securities and Exchange Commission a registration statement (including amendments and exhibits to the registration statement) on Form F-3 under the Securities Act. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at <http://www.pharvaris.com>. Our website is not a part of this prospectus supplement and is not incorporated by reference in this prospectus supplement.

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus supplement concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference information into this document. This 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 considered to be a part of this document, except for any information superseded by information that is included directly in this prospectus supplement or incorporated by reference subsequent to the date of this prospectus supplement.

We incorporate by reference the following documents or information that we have filed with the SEC:

- Our Annual Report on Form 20-F for the fiscal year ended December 31, 2020 filed on [April 29, 2021](#);
- Our Forms 6-K filed on [May 12, 2021](#), [May 26, 2021](#) (other than exhibit 99.1), [July 1, 2021](#), [July 30, 2021](#) (other than exhibit 99.1), [November 10, 2021](#) (other than exhibit 99.1), [December 7, 2021](#), [December 22, 2021](#) and [January 10, 2022](#); and
- The description of our ordinary shares contained in our registration statement on Form 8-A filed with the SEC on [February 4, 2021](#), as updated by the description of our ordinary shares filed as [Exhibit 2.1](#) to our Annual Report on Form 20-F for the fiscal year ended December 31, 2020.

All annual reports we file with the SEC pursuant to the Exchange Act on Form 20-F after the date of this prospectus supplement and prior to termination or expiration of this registration statement shall be deemed incorporated by reference into this prospectus supplement and to be part hereof from the date of filing of such documents. We may incorporate by reference any Form 6-K subsequently submitted to the SEC by identifying in such Form 6-K that it is being incorporated by reference into this prospectus supplement.

Documents incorporated by reference in this prospectus supplement are available from us without charge upon written or oral request, excluding any exhibits to those documents that are not specifically incorporated by reference into those documents. You can obtain documents incorporated by reference in this document by requesting them from us in writing at J.H. Oortweg 21, 2333 CH Leiden, The Netherlands or via telephone at +31 (0)71 203 6410.

\$75,000,000

PHARVARIS

Ordinary Shares

Prospectus Supplement

SVB Leerink

PART II – INFORMATION NOT REQUIRED IN PROSPECTUS

INDEMNIFICATION OF OFFICERS AND DIRECTORS

Under Dutch law, members of the Board may be liable for damages in the event of improper or negligent performance of their duties. They may be jointly and severally liable for damages to the Company and to third parties for infringement of the Articles of Association or of certain provisions of Dutch law. In certain circumstances, they may also incur additional specific civil and criminal liabilities. Members of the Board and Senior Management and certain other officers of the Company and certain subsidiaries are insured under an insurance policy against damages resulting from their conduct when acting in the capacities as such members or officers.

The Articles of Association provide for an indemnity for current and former members of the Board and such current and former officers and employees of the Company as designated by the Board (collectively, the “Indemnified Persons”). The Company shall indemnify all Indemnified Persons against any financial losses or damages incurred by such person and any expense reasonably paid or incurred by such person in connection with any threatened, pending or completed suit, claim, action or legal proceedings of a civil, criminal, administrative or other nature, formal or informal, in which such person becomes involved to the extent this relates to his current or former position with the Company and/or a group company and in each case to the extent permitted by applicable law. No indemnification shall be given to an Indemnified Person: (a) if a competent court or arbitral tribunal has established, without having (or no longer having) the possibility for appeal, that the acts or omissions of such Indemnified Person that led to the financial losses, damages, expenses, suit, claim, action or legal proceedings are of an unlawful nature (including acts or omissions which are considered to constitute malice, gross negligence, intentional recklessness and/or serious culpability attributable to such Indemnified Person); (b) to the extent that the Indemnified Person’s financial losses, damages and expenses are covered under insurance and the relevant insurer has settled, or has provided reimbursement for, these financial losses, damages and expenses (or has irrevocably undertaken to do so); (c) in relation to proceedings brought by such Indemnified Person against the Company, except for proceedings brought to enforce indemnification to which the Indemnified Person is entitled pursuant to the Articles of Association of the Company, any indemnification agreement entered into with such Indemnified Person which has been approved by the Board, or pursuant to insurance taken out by the Company for the benefit of such Indemnified Person; or (d) for any financial losses, damages, or expenses incurred in connection with a settlement of any proceedings effected without the Company’s prior consent.

EXHIBITS

The following documents are filed as part of this registration statement:

- 1.1* Form of Underwriting Agreement
- 1.2 [Sales Agreement, dated as of March 1, 2022, between Pharvaris N.V. and SVB Securities LLC](#)
- 4.1 [Articles of Association of Pharvaris N.V. \(English Translation\) \(incorporated herein by reference to Exhibit 3.1 to the Company’s Registration Statement on Form S-8 \(File No. 333- 252897\) filed with the SEC on February 9, 2021\)](#)
- 4.2 [Form of Senior Indenture](#)
- 4.3 [Form of Subordinated Indenture](#)
- 4.4* Form of Senior Note
- 4.5* Form of Subordinated Note
- 4.6* Form of Warrant Agreement

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4.7*	Form of Purchase Contract
4.8*	Form of Unit Agreement
5.1	Opinion of NautaDutilh N.V.
5.2	Opinion of Kirkland & Ellis LLP
23.1	Consent of PricewaterhouseCoopers Accountants N.V.
23.2	Consent of NautaDutilh N.V. (included in Exhibit 5.1)
23.3	Consent of Kirkland & Ellis LLP (included in Exhibit 5.2)
24.1	Powers of Attorney (included on signature page to the registration statement)
25.1*	Statement of Eligibility on Form T-1 for Senior Indenture
25.2*	Statement of Eligibility on Form T-1 for Subordinated Indenture
107	Filing Fee Exhibit

* To be filed, if necessary, either by amendment to this registration statement or as an exhibit to a document to be incorporated by reference in this registration statement.

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) (§ 230.424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (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:

- (A) Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-1 (§ 239.11 of this chapter), Form S-3 (§ 239.13 of this chapter), Form SF-3 (§ 239.45 of this chapter) or Form F-3 (§ 239.33 of this chapter) and 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) (§ 230.424(b) of this chapter) that is part of the registration statement.

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- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) To file a post-effective amendment to the registration statement to include any financial statements required by Item 8.A of Form 20-F (§ 249.220f of this chapter) at the start of any delayed offering or throughout a continuous offering. Financial statements and information otherwise required by Section 10(a)(3) of the Act (15 U.S.C. 77j(a)(3)) need not be furnished, provided that the registrant includes in the prospectus, by means of a post-effective amendment, financial statements required pursuant to this paragraph (a)(4) and other information necessary to ensure that all other information in the prospectus is at least as current as the date of those financial statements. Notwithstanding the foregoing, with respect to registration statements on Form F-3 (§ 239.33 of this chapter), a post-effective amendment need not be filed to include financial statements and information required by Section 10(a)(3) of the Act or Item 8.A of Form 20-F if such financial statements and information are contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the Form F-3.
- (5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or
- (6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

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

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

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- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
- (d) The undersigned registrant hereby undertakes that:
 - (1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
 - (2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (e) 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form F-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Amsterdam, The Netherlands on March 1, 2022.

Pharvaris N.V.

By: /s/ Berndt Modig
Name: Berndt Modig
Title: Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Berndt Modig as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead in any and all capacities, in connection with this registration statement, including to sign in the name and on behalf of the undersigned, this registration statement and any and all amendments thereto, including post-effective amendments and registrations filed pursuant to Rule 462 under the U.S. Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto such attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and 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 his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons on March 1, 2022 in the capacities indicated:

<u>Name</u>	<u>Title</u>
<u>/s/ Berndt Modig</u> Berndt Modig	Chief Executive Officer (principal executive officer)
<u>/s/ Anna Nijdam</u> Anna Nijdam	Head of Finance and Principal Accounting Officer (principal financial officer and principal accounting officer)
<u>/s/ Elisabeth Björk</u> Elisabeth Björk	Director
<u>/s/ Robert Glassman</u> Robert Glassman	Director
<u>/s/ David Meeker</u> David Meeker	Director
<u>/s/ Vivian Monges</u> Vivian Monges	Director
<u>/s/ Hans Schikan</u> Hans Schikan	Director

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<u>Name</u>	<u>Title</u>
<hr/> <u>/s/ Anne Marie de Jonge Schuermans</u> Anne Marie de Jonge Schuermans	Director
<hr/> <u>/s/ Morgan Conn</u> Morgan Conn	Authorized Representative in the United States

PHARVARIS N.V.
Ordinary Shares
(nominal value of €0.12 per share)

SALES AGREEMENT

March 1, 2022

SVB SECURITIES LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019

Ladies and Gentlemen:

Pharvaris N.V., a public limited liability company (naamloze vennootschap) (the “**Company**”), confirms its agreement (this “**Agreement**”) with SVB Securities LLC (the “**Agent**”), as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through the Agent up to \$75,000,000 of the Company’s ordinary shares, nominal value €0.12 per share, of the Company (the “**Ordinary Shares**”), subject to the limitations set forth in Section 5(c) (the “**Placement Shares**”). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitation set forth in this Section 1 on the aggregate gross sales price of Placement Shares that may be issued and sold under this Agreement from time to time shall be the sole responsibility of the Company, and that the Agent shall have no obligation in connection with such compliance. The issuance and sale of Placement Shares through the Agent will be effected pursuant to the Registration Statement (as defined below) to be filed by the Company with the Securities and Exchange Commission (the “**Commission**”) on March 1, 2022 and to be declared effective by the Commission, although nothing in this Agreement shall be construed as requiring the Company to issue any Placement Shares.

The Company has prepared and will file, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the “**Securities Act**”), with the Commission a registration statement on Form F-3, including (a) a base prospectus, relating to certain securities, including the Ordinary Shares, 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 Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the “**Exchange Act**”), and (b) a prospectus supplement specifically relating to the Placement Shares to be issued from time to time pursuant to this Agreement (the “**Prospectus Supplement**”) to the base prospectus included as part of such registration statement. The Company will furnish to the Agent, for use by the Agent, copies of the base prospectus included as part of such registration statement at the time it becomes effective, as supplemented by the Prospectus Supplement. Except where the context otherwise requires, such registration statement, including any amendment thereto and all documents filed as part thereof or incorporated by reference therein, 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 a part of such registration statement

pursuant to Rule 430B or Rule 462(b) under the Securities Act, is herein called the “**Registration Statement**.” The base prospectus, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented by the Prospectus Supplement, in the form in which such prospectus and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any “issuer free writing prospectus” (as used herein, as defined in Rule 433 under the Securities Act (“**Rule 433**”)), relating to the Placement Shares that (i) is required to be filed with the Commission by the Company or (ii) is exempt from filing pursuant to Rule 433(d)(5)(i), in each case, in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g), is herein called the “**Prospectus**.”

Any reference herein to the Registration Statement, the Prospectus Supplement, the Prospectus or any issuer free writing prospectus shall be deemed to refer to and include the documents, if any, that are or are deemed to be incorporated by reference therein (the “**Incorporated Documents**”), including, unless the context otherwise requires, the documents, if any, filed as exhibits to such Incorporated Documents. Any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement, the Prospectus Supplement, the Prospectus or any issuer free writing prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act on or after the most-recent effective date of the Registration Statement, or the respective dates of the Prospectus Supplement, Prospectus or such issuer free writing prospectus, as the case may be, and incorporated therein by reference. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to include the most recent copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval System or, if applicable, the Interactive Data Electronic Application system when used by the Commission (collectively, “**EDGAR**”).

2. **Placements.** Each time that the Company wishes to issue and sell any Placement Shares through the Agent hereunder (each, a “**Placement**”), it will notify the Agent by email notice (or other method mutually agreed to in writing by the parties) (each such notice, a “**Placement Notice**”) containing the parameters in accordance with which it desires such Placement Shares to be sold, which at a minimum shall include the maximum number or amount of Placement Shares to be sold, the time period during which sales are requested to be made, any limitation on the number or amount of Placement Shares that may be sold in any one Trading Day (as defined in Section 3) and any minimum price below which sales may not be made (provided that the Company shall ensure that the minimum sales price must always be such that sales of Placement Shares cannot result in Net Proceeds (as defined below) being less than the aggregate nominal value of such Placement Shares), a form of which containing such minimum sales parameters is attached hereto as **Schedule 1**. The Placement Notice must originate from one of the individuals authorized to act on behalf of the Company and set forth on **Schedule 2** (with a copy to each of the other individuals from the Company listed on such **Schedule 2**), and shall be addressed to each of the recipients from the Agent set forth on **Schedule 2**, as such **Schedule 2** may be updated by either party from time to time by sending a written notice containing a revised **Schedule 2** to the other party in the manner provided in Section 12 (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply). The Placement Notice shall be effective upon receipt by the Agent unless and until (i) in accordance with the notice requirements set forth in Section 4, the Agent declines to accept the terms contained therein for any reason, in its sole discretion, within two Trading Days of the date the Agent receives the Placement Notice, (ii) in accordance with the notice requirements set forth in Section 4, the Agent suspends sales under the Placement Notice for any reason in its sole discretion, (iii) the entire amount of the Placement Shares has been sold pursuant to this Agreement, (iv) in accordance with the notice requirements set forth in Section 4, the Company suspends sales under or terminates the Placement Notice for any reason in its sole

discretion, (v) the Company issues a subsequent Placement Notice and explicitly indicates that its parameters supersede those contained in the earlier dated Placement Notice or (vi) this Agreement has been terminated pursuant to the provisions of Section 11. The amount of any discount, commission or other compensation to be paid by the Company to the Agent in connection with the sale of the Placement Shares effected through the Agent shall be calculated in accordance with the terms set forth in **Schedule 3**. It is expressly acknowledged and agreed that neither the Company nor the Agent will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Agent and the Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control with respect to the matters covered thereby.

3. **Sale of Placement Shares by the Agent.** On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, including Section 5(c), upon the Agent's acceptance of the terms of a Placement Notice as provided in Section 2, and unless the sale of the Placement Shares described therein has been declined, suspended or otherwise terminated in accordance with the terms of this Agreement, the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the Nasdaq Global Select Market ("**Nasdaq**") to sell such Placement Shares up to the number or amount specified in, and otherwise in accordance with the terms of, such Placement Notice. The Agent will provide written confirmation to the Company (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number or amount of Placement Shares sold on such Trading Day, the volume-weighted average price of the Placement Shares sold and the Net Proceeds (as defined below) payable to the Company. Unless otherwise specified by the Company in a Placement Notice, the Agent may sell Placement Shares by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415 of the Securities Act, including sales made directly on or through Nasdaq, on or through any other existing trading market for the Ordinary Shares or to or through a market maker. If expressly authorized by the Company (including in a Placement Notice), the Agent may also sell Placement Shares in negotiated transactions or in block transactions. Notwithstanding the provisions of Section 6(rr), except as may be otherwise agreed by the Company and the Agent, the Agent shall not purchase Placement Shares on a principal basis pursuant to this Agreement unless the Company and the Agent enter into a separate written agreement setting forth the terms of such sale. The Company acknowledges and agrees that (i) there can be no assurance that the Agent will be successful in selling Placement Shares, (ii) the Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of Nasdaq to sell such Placement Shares as required under this Agreement and (iii) the Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement unless the Company and the Agent enter into a separate written agreement setting forth the terms of such sale. For the purposes hereof, "**Trading Day**" means any day on which the Ordinary Shares are purchased and sold on Nasdaq.

4. **Suspension of Sales.**

(a) The Company or the Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**), if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by email correspondence to each of the individuals of the other party set forth on

Schedule 2), suspend any sale of Placement Shares; *provided, however*, that such suspension shall not affect or impair either party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. Each of the parties agrees that no such notice under this Section 4 shall be effective against the other party unless notice is sent by one of the individuals named on **Schedule 2** hereto to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply).

(b) Notwithstanding any other provision of this Agreement, during any period in which the Company is in possession of material non-public information, the Company and the Agent agree that (i) no sale of Placement Shares will take place, (ii) the Company shall not request the sale of any Placement Shares and shall cancel any effective Placement Notices instructing the Agent to make any sales and (iii) the Agent shall not be obligated to sell or offer to sell any Placement Shares.

5. Settlement and Delivery of the Placement Shares.

(a) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second Trading Day (or such earlier day as is industry practice or as is required for regular-way trading) following the date on which such sales are made (each, a "**Settlement Date**"). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the "**Net Proceeds**") will be equal to the aggregate gross sales price received by the Agent at which such Placement Shares were sold (provided that the Company shall ensure that the minimum sales price must always be such that sales of Placement Shares cannot result in Net Proceeds being less than the aggregate nominal value of such Placement Shares), after deduction of the (i) Agent's commission, discount or other compensation for such sales payable by the Company pursuant to Section 2 hereof, (ii) any other amounts due and payable by the Company to the Agent hereunder pursuant to Section 7(g) hereof and (iii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(b) Delivery of Placement Shares. On or before each Settlement Date, subject to the delivery of the related Net Proceeds by the Agent to the Company, the Company will issue the Placement Shares being sold on such date to its transfer agent pursuant to a deed of issue (each, a "Deed of Issue") and will cause its transfer agent to electronically transfer such Placement Shares by crediting the Agent's or its designee's account (provided the Agent shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System ("**DWAC**") or by such other means of delivery as may be mutually agreed upon by the parties hereto, which in all cases shall be duly authorized, freely tradeable, transferable, registered Placement Shares in good deliverable form. Subject to the Company's execution and delivery of any additional documentation that the Agent reasonably and in good faith requests pursuant to Section 7(dd) hereto in order to facilitate one or more settlements pursuant to this Agreement, on or before each Settlement Date and in any event before the execution by the Company of the applicable Deed of Issue, the Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on or prior to the Settlement Date. The Agent shall be responsible for providing DWAC instructions or other instructions for delivery by other means with regard to the transfer of the Placement Shares being sold. In addition to and in no way limiting the rights and obligations set forth in Section 9(a) hereto, the Company agrees that if the Company or its transfer agent (if applicable) defaults in its obligation to deliver duly authorized, freely tradeable, transferable, registered Placement Shares in good deliverable form by 2:30 P.M., New York City time, on a Settlement Date (other than as a result of a failure by the Agent to provide instructions for delivery), the Company will (i) take all necessary action to cause the full amount of any Net Proceeds that were delivered to the Company's account with respect to such settlement, together with any costs incurred by the Agent and/or its clearing firm in connection with recovering such Net Proceeds, to be immediately returned to the Agent or its clearing firm no later than 5:00 P.M., New York City time, on such Settlement Date, by wire transfer of immediately available funds to an account designated by the Agent or its clearing firm, (ii) indemnify and hold the Agent and its clearing firm harmless against any loss, claim, damage, or reasonable and documented expense (including reasonable and documented legal fees and expenses), as incurred, arising out of or in connection with such default by the Company (or its transfer agent (if applicable)) and (iii) pay to the Agent (without duplication) any commission, discount or other compensation to which it would otherwise have been entitled absent such default.

(c) Limitations on Offering Size. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate number or gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of: (i) the number or dollar amount of Ordinary Shares registered pursuant to, and available for offer and sale under, the Registration Statement pursuant to which the offering of Placement Shares is being made, (ii) the number of Ordinary Shares that remain available for issuance under the

authorized share capital of the Company (maatschappelijk kapitaal) included in its articles of association from time to time (less Ordinary Shares issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company's authorized share capital, including pursuant to the Company's equity incentive plans), (iii) the number or dollar amount of Ordinary Shares permitted to be offered and sold by the Company under Form F-3 (including General Instruction I.B.5. thereof, if such instruction is applicable), (iv) the number or dollar amount of Ordinary Shares that the Company's board of directors or a duly authorized committee thereof is authorized to issue and sell from time to time, in accordance with the Company's articles of association, applicable resolutions of the Company's shareholders and applicable Dutch law, and notified to the Agent in writing, or (v) the dollar amount of Ordinary Shares for which the Company has filed the Prospectus Supplement. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors or a duly authorized committee thereof, and notified to the Agent in writing (provided that the Company shall ensure that the minimum sales price must always be such that sales of Placement Shares cannot result in Net Proceeds being less than the aggregate nominal value of such Placement Shares). Notwithstanding anything to the contrary contained herein, the parties hereto acknowledge and agree that compliance with the limitations set forth in this Section 5(c) on the number or dollar amount of Placement Shares that may be issued and sold under this Agreement from time to time shall be the sole responsibility of the Company, and that the Agent shall have no obligation in connection with such compliance.

6. **Representations and Warranties of the Company.** The Company represents and warrants to, and agrees with, the Agent that as of the date of this Agreement (except for those representations, warranties and agreements that speak solely as of a specific date or time, in which case as of such date or time), and as of (i) each Representation Date (as defined in Section 7(m)), (ii) each date on which a Placement Notice is given, (iii) the date and time of each sale of any Placement Shares pursuant to this Agreement and (iv) each Settlement Date (each such time or date referred to in clauses (i) through (iv), an "**Applicable Time**"):

- (a) The Company and the transactions contemplated by this Agreement meet the requirements for, and comply with the conditions for the use of, Form F-3 (including General Instructions I.A and I.B.1.) under the Securities Act. The Registration Statement will be filed with the Commission and will be declared effective by the Commission under the Securities Act prior to the issuance of any Placement Notices by the Company. At the time the Registration Statement was declared effective by the Commission and at the time the Company's most-recent Annual Report on Form 20-F was filed with the Commission, the Company met the then-applicable requirements for use of Form F-3 (including General Instructions I.A and I.B.1.) under the Securities Act. The Registration Statement meets, and the offering and sale of Placement Shares as contemplated hereby comply with, the requirements of Rule 415(a)(1)(x) under the Securities Act. The Agent is named as the agent engaged by the Company in the section entitled "Plan of Distribution" in the Prospectus Supplement. The Company has not received, and has no notice from the Commission of, any notice pursuant to Rule 401(g)(1) under the Securities Act objecting to the use of the shelf registration statement form. No stop order of the Commission preventing or suspending the use of the base prospectus, the Prospectus Supplement or the Prospectus, or the effectiveness of the Registration Statement, has been issued, and no proceedings for such purpose are pending before or, to the knowledge of the Company, threatened by the Commission. At the time of the initial filing of the Registration Statement, the Company paid the required Commission filing fees relating to the securities covered by the Registration Statement, including the Placement Shares that may be sold pursuant to this Agreement, in accordance with Rule 457(o) under the Securities Act. Copies of the Registration Statement, the Prospectus, any such amendments or supplements to any of the foregoing and all Incorporated Documents that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to the Agent and its counsel.

- (b) Each of the Registration Statement and any amendment thereto, at the time it became or becomes effective, at each deemed effective date with respect to the Agent pursuant to Rule 430B(f)(2) under the Securities Act and as of each Applicable Time, complied, complies and will comply in all material respects with the requirements of the Securities Act and did not, does 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 in order to make the statements therein not misleading, except that the representations and warranties set forth in this sentence do not apply to Agent's Information (as defined below). The Prospectus and any amendment or supplement thereto, when so filed with the Commission under Rule 424(b) under the Securities Act, complied, complies and as of each Applicable Time will comply in all material respects with the requirements of the Securities Act, and each Prospectus Supplement, Prospectus or issuer free writing prospectus (or any amendments or supplements to any of the foregoing) furnished to the Agent for use in connection with the offering of the Placement Shares was identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T. Neither the Prospectus nor any amendment or supplement thereto, as of its date and as of each Applicable Time, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this sentence do not apply to Agent's Information. Each Incorporated Document heretofore filed, when it was filed (or, if any amendment with respect to any such document was filed, when such amendment was filed), conformed in all material respects with the requirements of the Exchange Act and were filed on a timely basis with the Commission, and any further Incorporated Documents so filed and incorporated after the date of this Agreement will be filed on a timely basis and, when so filed, will conform in all material respects with the requirements of the Exchange Act; no such Incorporated Document when it was filed (or, if an amendment with respect to any such document was filed, when such amendment was filed), contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and no such Incorporated Document, when it is filed, will contain an untrue statement of a material fact or will omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.
- (c) Except as disclosed in the Registration Statement and the Prospectus, the Company is and has been an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "Emerging Growth Company").
- (d) Each issuer free writing prospectus, as of its issue date and as of each Applicable Time, 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, including any Incorporated Document deemed to be a part thereof that has not been superseded or modified. Each issuer free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433 or that was prepared by or on behalf of or used by the Company complies or will comply in all material respects with the requirements of the Securities Act.

- (e) The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the Agent's distribution of the Placement Shares under this Agreement, will not distribute any offering material in connection with the offering and sale of the Placement Shares other than the Registration Statement, the Prospectus or any Permitted Free Writing Prospectus (as defined below).
- (f) The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.
- (g) The Company is subject to and in compliance in all material respects with the reporting requirements of Section 13 or Section 15(d) of the Exchange Act. The Ordinary Shares are registered pursuant to Section 12(b) of the Exchange Act and are listed on Nasdaq, and the Company has taken no action designed to, or reasonably likely to have the effect of, terminating the registration of the Ordinary Shares under the Exchange Act or delisting the Ordinary Shares from Nasdaq, nor has the Company received any notification that the Commission or Nasdaq is contemplating terminating such registration or listing. The Company is in compliance in all material respects with the current listing standards of Nasdaq. The Company has filed or will file a Notification of Listing of Additional Shares with Nasdaq with respect to the Placement Shares.
- (h) No person (as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act) has the right to act as an underwriter, agent or as a financial advisor to the Company in connection with the offer and sale of the Placement Shares hereunder, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Placement Shares as contemplated hereby or otherwise. Except for the Agent, there is no broker, finder or other party that is entitled to receive from the Company or any of its Subsidiaries (as defined below) any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.
- (i) The Company has been duly incorporated and is currently a validly existing public company with limited liability (*naamloze vennootschap*) under the laws of the Netherlands and has the corporate power and authority to own or lease its property and to conduct its business as described in each of the Registration Statement and the Prospectus and is duly qualified to transact business in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.
- (j) Each subsidiary of the Company has been duly incorporated, organized or formed, is validly existing as a corporation or other business entity in good standing (to the extent the concept of good standing is applicable in such jurisdiction) under the laws of the jurisdiction of its incorporation, organization or formation, as applicable, has the corporate or other business entity power and authority to own or lease its property and to conduct its business as described in each of the Registration Statement and the Prospectus and is duly qualified to transact business and is in good standing (to the extent the concept of good standing is applicable in such jurisdiction) in each jurisdiction in which

the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing (to the extent the concept of good standing is applicable in such jurisdiction) would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole; all of the issued shares of capital stock or other equity interests of each subsidiary of the Company have been duly and validly authorized and issued, are fully paid and non-assessable (to the extent such concepts are applicable under relevant law) and are owned directly or indirectly by the Company, free and clear of all liens, encumbrances, equities or claims.

- (k) This Agreement has been duly authorized, executed and delivered by the Company.
- (l) The authorized, issued and outstanding share capital of the Company conforms in all material respects as to legal matters to the description thereof contained in each of the Registration Statement and the Prospectus.
- (m) The Ordinary Shares in the capital of the Company issued and outstanding have been duly authorized and are validly issued, fully paid and non-assessable (meaning that the holders of the Ordinary Shares will not by reason of merely being such a holder, be subject to assessment or calls by the Company or its creditors for further payment on such Ordinary Shares).
- (n) The Placement Shares have been duly authorized and, when issued, delivered and paid for in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable (meaning that the holders of the Ordinary Shares will not by reason of merely being such a holder, be subject to assessment or calls by the Company or its creditors for further payment on such Ordinary Shares), and any preemptive or similar rights with respect to the issuance of the Placement Shares are validly excluded.
- (o) The execution and delivery by the Company of, and the performance by the Company of its obligations under, this Agreement will not contravene any provision of (i) applicable law or any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company or any subsidiary, (ii) the articles of association or by-laws or analogous governing instruments, as applicable) of the Company or (iii) any agreement or other instrument binding upon the Company or any of its subsidiaries that is material to the Company and its subsidiaries, taken as a whole, except in the cases (i) and (iii) for such contraventions that would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole. No consent, approval, authorization or order of, or qualification with, any governmental body, agency or court is required for the performance by the Company of its obligations under this Agreement, except such as has previously been obtained and such as may be required by the securities or Blue Sky laws of the various states or the rules and regulations of the Financial Industry Regulatory Authority (“**FINRA**”) in connection with the offer and sale of the Placement Shares.
- (p) There are no legal or governmental proceedings pending or, to the Company’s knowledge, threatened to which the Company or any of its subsidiaries is a party or to which any of the properties of the Company or any of its subsidiaries is subject (i) other than proceedings accurately described in all material respects in each of the Registration Statement and the Prospectus and proceedings that would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole, or a

material adverse effect on the power or ability of the Company to perform its obligations under this Agreement or to consummate the transactions contemplated by each of the Registration Statement and the Prospectus or (ii) that are required to be described in the Registration Statement and the Prospectus and are not so described in all material respects; and there are no statutes, regulations, contracts or other documents to which the Company or any of its subsidiaries is subject or by which the Company or any of its subsidiaries is bound that are required to be described in the Registration Statement and the Prospectus or to be filed as exhibits to the Registration Statement that are not described in all material respects or filed as required.

- (q) The Company is not, and after giving effect to the offering and sale of the Placement Shares and the application of the proceeds thereof as described in each of the Registration Statement and the Prospectus will not be, required to register as an “investment company” as such term is defined in the Investment Company Act of 1940, as amended.
- (r) Except as would not singly or in the aggregate have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the Company and each of its subsidiaries (w) are in compliance with any and all applicable foreign, federal, state and local laws and rules, regulations, requirements, decisions, orders, decrees, consents and other legally enforceable requirements relating to the protection of the environment, hazardous or toxic substances, wastes, pollutants, chemicals, or contaminants (“**Hazardous Materials**”) or human health and safety (collectively, “**Environmental Laws**”), (x) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses, (y) are in compliance with all terms and conditions of any such permit, license or approval, and (z) have not received notice of any actual or potential violation, liability or obligation, and there are no pending or to the Company’s knowledge, threatened complaint, action, suit, proceeding investigation or claim, under or relating to Environmental Laws, and (ii) there are no costs, obligations or liabilities associated with or arising under Environmental Laws of or relating to the Company or its subsidiaries.
- (s) There are no costs or liabilities associated with Environmental Laws (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) which would, singly or in the aggregate, reasonably be expected to have a material adverse effect on the Company and its subsidiaries, taken as a whole.
- (t) Except as described in each of the Registration Statement or 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 or to require the Company to include such securities with the Ordinary Shares registered pursuant to the Registration Statement.
- (u) (i) None of the Company or any of its subsidiaries or controlled affiliates, or any director, officer, or employee thereof, or, to the Company’s knowledge, any agent or representative of the Company or of any of its subsidiaries or controlled affiliates, has taken or will take any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment, giving or receipt of money, property, gifts or anything else of value, directly or indirectly, to any government official (including any

officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) (“**Government Official**”) in order to influence official action, or to any person in violation of any applicable anti-corruption laws; (ii) the Company and each of its subsidiaries and controlled affiliates have conducted their businesses in compliance with applicable anti-corruption laws and have instituted and maintained and will continue to maintain policies and procedures reasonably designed to promote and achieve compliance with such laws and with the representations and warranties contained herein; and (iii) neither the Company nor any of its subsidiaries will use, directly or indirectly, the proceeds of the offering in furtherance of an offer, payment, promise to pay, or authorization of the payment or giving of money, or anything else of value, to any person in violation of any applicable anti-corruption laws.

- (v) The operations of the Company and each of its subsidiaries are and have been conducted at all times in material 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), and the applicable anti-money laundering statutes of jurisdictions where the Company and each of its subsidiaries conduct business, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Anti-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 Anti-Money Laundering Laws is pending or, to the knowledge of the Company, threatened.
- (w) None of the Company, any of its subsidiaries, or any director, officer, or employee thereof, or, to the Company’s knowledge, any agent, affiliate or representative of the Company or any of its subsidiaries, is an individual or entity (“**Person**”) that is, or is owned or controlled by one or more Persons that are:
 - i. the subject of any sanctions administered or enforced by the U.S. Department of the Treasury’s Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty’s Treasury, or other relevant sanctions authority (collectively, “**Sanctions**”), or
 - ii. located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, to the extent applicable, the region of Crimea, the so-called Donetsk People’s Republic, the so-called Luhansk People’s Republic, Cuba, Iran, North Korea and Syria).
- (x) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person:
 - iii. to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

- iv. in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as agent, advisor, investor or otherwise).
- (y) The Company and each of its subsidiaries have not knowingly engaged in, are not now knowingly engaged in, and will not knowingly engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.
- (z) Subsequent to the respective dates as of which information is given in each of the Registration Statement and the Prospectus, (i) the Company and its subsidiaries, taken as a whole, have not incurred any material liability or obligation, direct or contingent, nor entered into any material transaction; (ii) the Company has not purchased any of its outstanding share capital, nor declared, paid or otherwise made any dividend or distribution of any kind on its share capital other than ordinary and customary dividends; and (iii) there has not been any material change in the share capital, short-term debt or long-term debt of the Company and its subsidiaries, taken as a whole, other than in connection with (i) the exercise or forfeiture of equity awards outstanding on such respective dates as of which information is given in each of the Registration Statement and the Prospectus.
- (aa) The Company and each of its subsidiaries have good and marketable title to all real property and good and marketable title to all personal property owned by them which is material to the business of the Company and its subsidiaries, taken as a whole, in each case free and clear of all liens, encumbrances and defects except such as do not have a material adverse effect on the Company and its subsidiaries taken as a whole and except for the bank accounts of the Company to which standard bank conditions apply; and any real property and buildings held under lease by the Company and its subsidiaries are held by them under valid, subsisting and enforceable leases, except as would not have a material adverse effect on the Company and its subsidiaries taken as a whole.
- (bb) (i) Except as would not have a material adverse effect on the Company and its subsidiaries taken as a whole, the Company and its subsidiaries solely and exclusively own or have a valid, enforceable and exclusive license to all patents, inventions, copyrights, know how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information or procedures), trademarks, service marks, trade names and all other intellectual property and similar proprietary rights (including all registrations and applications for registration of, and all goodwill associated with, any of the foregoing, as applicable) (collectively, “**Intellectual Property Rights**”) required for the conduct of their businesses as presently conducted or as currently anticipated to be conducted; (ii) except as would not have a material adverse effect on the Company and its subsidiaries taken as a whole, the Intellectual Property Rights owned by the Company or any of its subsidiaries and, to the Company’s knowledge, the Intellectual Property Rights licensed to the Company or any of its subsidiaries, are valid, subsisting and enforceable, and there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity, scope or enforceability of any such Intellectual Property Rights; (iii) neither the Company nor any of its subsidiaries has received any written notice alleging any infringement, misappropriation or other violation of Intellectual Property Rights by the Company or any of its subsidiaries which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse effect on the Company and its

- subsidiaries, taken as a whole; (iv) except as would not have a material adverse effect on the Company and its subsidiaries taken as a whole, to the Company's knowledge, no third party is infringing, misappropriating or otherwise violating, or has infringed, misappropriated or otherwise violated, any Intellectual Property Rights owned or controlled by the Company or any of its subsidiaries; (v) to the Company's knowledge, neither the Company nor any of its subsidiaries infringes, misappropriates or otherwise violates, or has infringed, misappropriated or otherwise violated, any valid Intellectual Property Rights of any third party; (vi) all employees or contractors engaged in the development of Intellectual Property Rights on behalf of the Company or any subsidiary of the Company have executed an invention assignment agreement whereby such employees or contractors presently assign all of their right, title and interest in and to such Intellectual Property Rights to the Company or any of its subsidiaries, and to the Company's knowledge no such agreement has been breached or violated; and (vii) the Company and its subsidiaries use, and have used, commercially reasonable efforts to appropriately maintain all information intended to be maintained as a trade secret.
- (cc) Any statistical and market-related data included in the Registration Statement or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate in all material respects and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.
- (dd) Except as would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) to the Company's knowledge, the Company and each of its subsidiaries have complied and are presently in compliance with all internal and external privacy policies, contractual obligations, industry standards, applicable laws, statutes, judgments, orders, rules and regulations of any court or arbitrator or other governmental or regulatory authority and any other legal obligations, in each case, relating to the collection, use, transfer, import, export, storage, protection, disposal and disclosure by the Company or any of its subsidiaries of personal, personally identifiable, household, sensitive, confidential or regulated data ("**Data Security Obligations**", and such data, "**Data**"); (ii) neither the Company nor any of its subsidiaries has received any notification of or complaint regarding, or is otherwise aware of any other facts that, individually or in the aggregate, would reasonably indicate non-compliance with any Data Security Obligation; and (iii) there is no action, suit, or proceeding by or before any court or governmental agency, authority or body pending or, to the Company's knowledge, threatened against the Company or any of its subsidiaries alleging non-compliance with any Data Security Obligation.
- (ee) To the Company's knowledge, the Company's and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, internet websites, applications and data and databases (including those maintained on behalf of the Company and its subsidiaries by third party vendors) (collectively, "**IT Systems**") are adequate for, and operate and perform in all material respects as required in all material respects in connection with, the operation of the business of the Company and its subsidiaries, as it is currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and each of its subsidiaries have taken all commercially reasonable technical and organizational measures reasonably necessary to protect the IT Systems and Data used in connection with the operation of the Company's and its subsidiaries' businesses. Without limiting the foregoing, the Company and its subsidiaries have used reasonable efforts to

establish and maintain, and have established, maintained, implemented and complied with, reasonable information technology, information security, cyber security, data protection and business continuity/disaster recovery controls, policies and procedures, that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any IT Systems or Data used in connection with the operation of the Company's and its subsidiaries' businesses and any other data security incident or data breach as defined by Data Security Obligations ("**Breach**"). To the Company's knowledge, there has been no such Breach, and the Company and its subsidiaries have not been notified in writing of and have no knowledge of any event or condition that would reasonably be expected to result in, any such Breach.

- (ff) No material labor dispute with the employees of the Company or any of its subsidiaries exists, or, to the knowledge of the Company, is imminent; and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that could, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.
- (gg) The Company and each of its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as the Company believes are prudent and customary in the businesses in which they are engaged, except where the failure to be insured would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole; neither the Company nor any of its subsidiaries has been refused any insurance coverage sought or applied for; and neither the Company nor any of its subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.
- (hh) Except as would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, the Company and each of its subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses as currently conducted. Neither the Company nor any of its subsidiaries has received any written notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse effect on the Company and its subsidiaries, taken as a whole.
- (ii) The Company and its subsidiaries have operated at all times and are currently in compliance in all material respects with all applicable Health Care Laws (as defined herein), including all statutes, rules, regulations and policies administered by the U.S. Food and Drug Administration (the "**FDA**") and comparable foreign regulatory authorities, including the European Medicines Agency and the UK Medicines & Healthcare products Regulatory Agency (collectively, the "**Regulatory Authorities**") and all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company or its subsidiaries and the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product under development, manufactured or distributed by the Company ("**Health Care Laws**").

- (jj) Except as would not have a material adverse effect on the Company and its subsidiaries, taken as a whole, (i) the studies, tests and preclinical and clinical trials conducted by or on behalf of or sponsored by the Company or its subsidiaries or in which the Company or its subsidiaries have participated, that are described in the Registration Statement and the Prospectus, or the results of which are referred to in the Registration Statement and the Prospectus, as applicable, were, and if still pending are, being conducted in accordance with standard medical and experimental protocols, procedures and controls pursuant to accepted professional scientific research standards and procedures, and all applicable Health Care Laws, the rules and regulations of the Regulatory Authorities and applicable good clinical practices and good laboratory practices; (ii) the descriptions of the results of such studies and trials contained in the Registration Statement or the Prospectus are accurate and complete in all material respects and fairly present the data derived from such trials and studies; (iii) the Company has no knowledge of any other studies or trials not described in the Registration Statement and the Prospectus, the results of which are inconsistent with or call into question the results described or referred to in the Registration Statement and the Prospectus; (iv) the Company has provided the Agent with all substantive written notices and correspondence provided to the Company or its subsidiaries from the Regulatory Authorities; and (v) neither the Company nor any of its subsidiaries have received any written notices, correspondence or other communications from the Regulatory Authorities requiring or threatening the termination, modification or suspension of any pre-clinical studies or clinical trials that are described in the Registration Statement and the Prospectus or the results of which are referred to in the Registration Statement and the Prospectus, other than ordinary course communications with respect to modifications in connection with the design and implementation of such studies or trials, and, to the Company's knowledge, there are no reasonable grounds for the same.
- (kk) (i) Neither the Company nor any of 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 Regulatory Authority, other governmental entity or third party alleging that any Company or product operation or activity is in violation of any Health Care Laws, including, without limitation, any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any comparable communication from any other Regulatory Authority or governmental entity, nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened; (ii) neither the Company nor any of its subsidiaries are a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any Regulatory Authority or other governmental entity; and (iv) 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 an inquiry, investigation, proceeding or other similar action by a Regulatory Authority or other governmental entity that could reasonably be expected to result in debarment, suspension, or exclusion.
- (ll) The financial statements included in each of the Registration Statement and the Prospectus, together with the related schedules and notes thereto, comply as to form in all material respects with the applicable accounting requirements of the Securities Act and present fairly in all material respects the consolidated financial position of the Company and its subsidiaries as of the dates shown and its results of operations and cash flows for

the periods shown, and such financial statements have been prepared in conformity with international financial reporting standards (“IFRS”) applied on a consistent basis throughout the periods covered thereby except for any normal year-end adjustments in the Company’s quarterly financial statements. The other financial information included in each of the Registration Statement and the Prospectus has been derived from the accounting records of the Company and its consolidated subsidiaries and presents fairly in all material respects the information shown thereby.

- (mm) The accountants who have certified certain financial statements of the Company and its subsidiaries and delivered its report with respect to the audited consolidated financial statements filed with the Commission as part of the Registration Statement and included in each of the Registration Statement and the Prospectus, is an independent registered public accounting firm with respect to the Company within the meaning of the Securities Act and the applicable rules and regulations thereunder adopted by the Commission and the Public Company Accounting Oversight Board (United States).
- (nn) The Company and its subsidiaries on a consolidated basis 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 authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with IFRS, as issued by the International Accounting Standard Board (“IASB”) and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Since the end of the Company’s most recent audited fiscal year, except as disclosed in the Registration Statement and Prospectus, there has been (i) no material weakness in the Company’s internal control over financial reporting (whether or not remediated) and (ii) no change in the Company’s internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company’s internal control over financial reporting.
- (oo) Neither the Company nor, to the Company’s knowledge, any of its affiliates (within the meaning of Rule 144 under the Securities Act) has, prior to the date hereof, made any offer or sale of any securities which could be “integrated” (within the meaning of the Securities Act) with the offer and sale of the Placement Shares hereunder.
- (pp) Neither the issuance, sale and delivery of the Placement Shares nor the application of the proceeds thereof by the Company as described in the Registration Statement and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.
- (qq) The Company and each of its subsidiaries have filed all federal, state, local and foreign tax returns required to be filed through the date of this Agreement or have requested extensions thereof (except where the failure to file would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole) and have paid all taxes required to be paid thereon (except for cases in which the failure to pay would not, singly or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole, or, except as currently being contested in good faith and for which reserves required by IFRS (as issued by IASB) have been

created in the financial statements of the Company), and no tax deficiency has been determined adversely to the Company or any of its subsidiaries which, singly or in the aggregate, has had (nor has the Company nor any of its subsidiaries received any written notice of any unpaid tax deficiency which could reasonably be expected to be determined adversely to the Company or its subsidiaries and which could reasonably be expected to have) a material adverse effect on the Company and its subsidiaries, taken as a whole.

- (rr) The Company acknowledges and agrees that the Agent has informed the Company that the Agent may, to the extent permitted under the Securities Act and the Exchange Act, purchase and sell Ordinary Shares for its own account while this Agreement is in effect; provided, that (i) no such purchase or sales shall take place while a Placement Notice is in effect (except to the extent the Agent may engage in sales of Placement Shares purchased or deemed purchased from the Company as a “riskless principal” or in a similar capacity) and (ii) the Company shall not be deemed to have authorized or consented to any such purchases or sales by the Agent, except as may be otherwise agreed by the Company and the Agent.
- (ss) The Company is not a party to any agreement with an agent or underwriter for any other “at the market” or continuous equity transaction.
- (tt) Neither the Company nor any of its subsidiaries has any securities rated by any “nationally recognized statistical rating organization,” as such term is defined in Section 3(a)(62) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).
- (uu) No stamp, documentary, issuance, registration, transfer, or other similar documentary taxes or duties are payable by or on behalf of the Agent, the Company or any of its subsidiaries in the Netherlands or to any taxing authority thereof or therein having power to tax in connection with (i) the execution, delivery or consummation of this Agreement, (ii) the creation, allotment and issuance of the Placement Shares, (iii) the issuance, sale and delivery of the Placement Shares to the Agent or purchasers procured by the Agent, or (iv) the resale and delivery of the Placement Shares by the Agent, each in the manner contemplated herein.
- (vv) All payments to be made by the Company to the Agent under this Agreement may be made free and clear of, and without withholding or deduction for, or on account of any taxes, duties, assessments or governmental charges by or on behalf of the Netherlands or any political subdivision or authority thereof or therein having power to tax.
- (ww) The Company does not believe that it was a “passive foreign investment company” (“**PFIC**”) for U.S. federal income tax purposes in the previous fiscal year for which the information is available, and, subject to the assumptions and qualifications set forth in the Registration Statement and the Prospectus, it does not expect to be a PFIC for its current taxable year or in the foreseeable future.
- (xx) It is not necessary under the laws of the Netherlands (i) to enable the Agent to enforce their rights under this Agreement provided that they are not otherwise engaged in business in the Netherlands, or (ii) solely by reason of the execution, delivery or consummation of this Agreement, for the Agent to be qualified or entitled to carry out business in the Netherlands except that any Agent offering Placement Shares or investment services or performing investment activities in or from the Netherlands, should be licensed, excepted or exempted under or pursuant to the Dutch Financial Supervision Act (*Wet op het Financieel Toezicht*) (“**DFSA**”).

- (yy) This Agreement is in proper form under the laws of the Netherlands for the enforcement thereof against the Company, and to ensure the legality, validity, enforceability or admissibility into evidence in Netherlands of this Agreement.
- (zz) The Company is a “foreign private issuer” as defined in Rule 405 of the Securities Act.
- (aaa) No action has been taken or is contemplated to dissolve or liquidate the Company or any of its subsidiaries, and, to the knowledge of the Company no insolvency proceedings have been proposed, commenced or threatened against the Company or any of its subsidiaries and no judgment has been made or is pending declaring the Company or any of its subsidiaries insolvent. No voluntary arrangement has been proposed between the Company or a subsidiary and its creditors and no compromise or arrangement with creditors has been proposed, agreed or sanctioned in respect of the Company or its subsidiaries. Neither the Company nor any of its subsidiaries has, by reason of actual or anticipated financial difficulties, commenced discussions with any third party including any governmental agency to obtain stand-by or emergency funding or has commenced negotiations with its creditors or any class of its creditors with a view to rescheduling any of its indebtedness.
- (bbb) Neither the Company nor any of its subsidiaries nor any of its or their properties or assets has any immunity from the jurisdiction of any court or from any legal process (whether through service or notice, attachment prior to judgment, attachment in aid of execution or otherwise) under the laws of the Netherlands. The irrevocable and unconditional waiver and agreement of the Company contained in Section 24(a) not to plead or claim any such immunity in any legal action, suit or proceeding based on this Agreement is valid and binding under the laws of the Netherlands, *provided* that such waiver may not be effective in relation to assets located in the Netherlands that are destined for the public service (*goederen bestemd voor de openbare dienst*).
- (ccc) The choice of law of the State of New York as the governing law of this Agreement is a valid choice of law under the laws of the Netherlands and will be recognized by the courts of the Netherlands. The Company has the power to submit, and pursuant to Section 24(a) has, to the extent permitted by law, legally, validly, effectively and irrevocably submitted, to the jurisdiction of the Specified Courts (as defined in Section 24(a)), and has the power to designate, appoint and empower, and pursuant to Section 24(b), has legally, validly and effectively designated, appointed and empowered an agent for service of process in any suit or proceeding based on or arising under this Agreement in any of the Specified Courts.

7. Covenants of the Company. The Company covenants and agrees with the Agent that:

- (a) Registration Statement Amendments. After the date of this Agreement and during any period in which the Prospectus relating to any Placement Shares is required to be delivered by the Agent under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule); (i) the Company will notify the Agent promptly of the time when any subsequent amendment to the Registration Statement, other than Incorporated Documents, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus, other than Incorporated Documents, has been filed and of any request by

the Commission for any amendment or supplement to the Registration Statement or Prospectus related to the Placement Shares or for additional information related to the Placement Shares; (ii) the Company will prepare and file with the Commission, promptly upon the Agent's request, any amendments or supplements to the Registration Statement or Prospectus that, in the Agent's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Agent (provided, however, that the failure of the Agent to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy the Agent shall have with respect to the failure by the Company to make such filing (but without limiting the Agent's rights under Section 9 hereof) will be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus, other than Incorporated Documents, relating to the Placement Shares or a security convertible into or exchangeable or exercisable for the Placement Shares unless a copy thereof has been submitted to the Agent within a reasonable period of time before the filing and the Agent has not reasonably objected thereto (provided, however, that the failure of the Agent to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and the Company shall have no obligation to provide the Agent any advance copy of such filing or to provide the Agent an opportunity to object to such filing if the filing (i) is not an amendment or supplement to the Prospectus Supplement and (ii) does not name the Agent or does not relate to the Placement Shares or the transactions contemplated by this Agreement; and provided, further, that the only remedy the Agent shall have with respect to the Company's making such filing notwithstanding the Agent's objection (but without limiting the Agent's rights under Section 9 hereof) will be to cease making sales under this Agreement) and the Company will furnish to the Agent at the time of filing thereof a copy of any Incorporated Document, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus, other than Incorporated Documents, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act and, in the case of any Incorporated Document, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed.

(b) Notice of Commission Stop Orders. The Company will advise the Agent, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. The Company will advise the Agent promptly after it receives any request by the Commission for any amendments to the Registration Statement related to the Placement Shares or any amendment or supplements to the Prospectus or for additional information related to the offering of the Placement Shares or for additional information related to the Registration Statement with respect to the Placement Shares or the Prospectus.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule), the Company will comply in all material respects with all requirements imposed upon it by the Securities Act, as from time to time in force, and will file on or before their respective due dates (taking into account any extensions available under the Exchange Act) all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If during such period any event occurs 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 a material fact necessary in order to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify the Agent to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance. If the Company has omitted any information from the Registration Statement pursuant to Rule 430B under the Securities Act, it will use its best efforts to comply with the provisions thereof and make all requisite filings with the Commission pursuant to said Rule 430B and to notify the Agent promptly of all such filings if not available on EDGAR.

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act or a similar rule), the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on Nasdaq. The Company will timely file with Nasdaq all material documents and notices required by Nasdaq of companies that have or will issue securities that are traded on Nasdaq.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Agent and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all Incorporated Documents) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which the Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all Incorporated Documents filed with the Commission during such period), in each case as soon as reasonably practicable and in such quantities as the Agent may from time to time reasonably request and, at the Agent's request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus) to the Agent to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders and to the Agent as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement covering a 12-month period that satisfies the provisions of Section 11(a) of and Rule 158 under the Securities Act.

(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated in accordance with the provisions of Section 11 hereunder, will pay all expenses incident to the performance of its obligations hereunder, including expenses relating to (i) the preparation, printing and filing of the Registration Statement and each amendment and supplement thereto, of the Prospectus and of each amendment and supplement thereto and of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (ii) the preparation, issuance, sale and delivery of the Placement Shares and any taxes due or payable in connection therewith, (iii) the qualification of the Placement Shares under securities laws in accordance with the provisions of Section 7(w) of this Agreement, including filing fees (provided, however, that any fees or disbursements of counsel for the Agent in connection therewith shall be paid by the Agent except as set forth in clauses (vii) and (viii) below), (iv) the printing and delivery to the Agent and its counsel of copies of the Prospectus and any amendments or supplements thereto, and of this Agreement, (v) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on Nasdaq, (vi) the filing

fees and expenses, if any, owed to the Commission or FINRA and the fees and expenses of any transfer agent or registrar for the Placement Shares, (vii) the fees and associated expenses of the Agent's outside legal counsel for filings with the FINRA Corporate Financing Department in an amount not to exceed \$15,000 (excluding FINRA filing fees referred to in clause (vi) above and in addition to the fees and disbursements referred to in clause (viii) below), and (viii) the reasonable and documented fees and disbursements of the Agent's outside legal counsel (A) in an amount not to exceed \$75,000 arising out of executing this Agreement and the Company's delivery of the initial certificate pursuant to Section 7(m) and (B) in an amount not to exceed \$15,000 in connection with each Representation Date (as defined below) on which the Company is required to provide a certificate pursuant to Section 7(m) (in addition to the fees and associated expenses referred to in clause (vii) above).

(h) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(i) Notice of Other Sales. Without the prior 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 (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable or exercisable for Ordinary Shares, 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 Placement Notice is delivered to Agent hereunder and ending on the second Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the date of such suspension or termination); and will not directly or indirectly in any other "at the market offering" or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Ordinary Shares (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable or exercisable for Ordinary Shares, warrants or any rights to purchase or acquire, Ordinary Shares prior to the later of the termination of this Agreement and the thirtieth day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice; *provided, however*, that such restrictions will not be required in connection with the Company's issuance or sale of (i) Ordinary Shares, options to purchase Ordinary Shares, other securities under the Company's equity incentive plans, or Ordinary Shares issuable upon the exercise of options or vesting of other securities, pursuant to any employee or director share option or benefits plan, share ownership plan or dividend reinvestment plan (but not Ordinary Shares subject to a waiver to exceed plan limits in its dividend reinvestment plan) of the Company whether now in effect or hereafter implemented, (ii) Ordinary Shares issuable upon conversion of securities or the exercise of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing to the Agent and (iii) Ordinary Shares or securities convertible into or exchangeable for Ordinary Shares as consideration for mergers, acquisitions, other business combinations or strategic alliances occurring after the date of this Agreement which are not issued for capital raising purposes.

(j) Change of Circumstances. The Company will, at any time during a fiscal quarter in which the Company intends to tender a Placement Notice or sell Placement Shares, advise the Agent promptly after it shall have received notice or obtained knowledge of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document provided or required to be provided to the Agent pursuant to this Agreement.

(k) Due Diligence Cooperation. During the term of this Agreement, the Company will cooperate with any reasonable due diligence review conducted by the Agent, its affiliates agents and counsel from time to time in connection with the transactions contemplated hereby, including providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as the Agent may reasonably request.

(l) Required Filings Relating to Placement of Placement Shares. The Company agrees that on or prior to such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act, which prospectus supplement will set forth, within the relevant period, the number or amount of

Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Agent with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market; *provided*, that, unless a prospectus supplement containing such information is required to be filed under the Securities Act, the requirement of this Section 7(l) may be satisfied by Company's inclusion in the Company's Form 20-F or Form 6-K, as applicable, of the number or amount of Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Agent with respect to such Placement Shares during the relevant period.

(m) Representation Dates; Certificate. On or prior to the date on which the Company first delivers a Placement Notice pursuant to this agreement (the "**First Placement Notice Date**") and each time the Company:

(i) amends or supplements the Registration Statement or the Prospectus relating to the Placement Shares (other than a prospectus supplement relating solely to an offering of securities other than the Placement Shares) by means of a post-effective amendment, sticker or supplement but not by means of incorporation of document(s) by reference into the Registration Statement or the Prospectus relating to the Placement Shares;

(ii) files an annual report on Form 20-F under the Exchange Act (including any Form 20-F/A containing amended financial information or a material amendment to the previously filed Form 20-F);

(iii) files a report on Form 6-K under the Exchange Act containing quarterly financial information (other than an earnings release that is "furnished") that is incorporated by reference into the Registration Statement and Prospectus; or

(iv) files a report on Form 6-K under the Exchange Act containing amended financial information (other than an earnings release that is "furnished") that is incorporated by reference into the Registration Statement and Prospectus (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "**Representation Date**"), the Company shall furnish the Agent (but in the case of clause (iv) above only if (1) a Placement Notice is pending or in effect and (2) the Agent requests such certificate within three Business Days after the filing of such Form 6-K with the Commission) with a certificate, in the form attached hereto as **Exhibit 7(m)** (modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented), within two Trading Days of any Representation Date. The requirement to provide a certificate under this Section 7(m) shall be waived for any Representation Date occurring at a time at which no Placement Notice is pending or in effect, which waiver shall continue until the earlier to occur of (1) the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date) and (2) the next occurring Representation Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date on which the Company relied on the waiver referred to in the previous sentence and did not provide the Agent with a certificate under this Section 7(m), then before the Company delivers a Placement Notice or the Agent sells any Placement Shares pursuant thereto, the Company shall provide the Agent with a certificate, in the form attached hereto as **Exhibit 7(m)**, dated the date of such Placement Notice. Within two Trading Days of each Representation Date, the Company shall have furnished to the Agent such further information, certificates and documents as the Agent may reasonably request.

(n) Legal Opinions. On or prior to the First Placement Notice Date and on any date which the Company is obligated to deliver a certificate pursuant to Section 7(m) for

which no waiver is applicable, the Company shall cause to be furnished to the Agent the written opinion and negative assurance letter of Kirkland & Ellis LLP, U.S. counsel to the Company, and the written opinion of NautaDutilh N.V., Dutch counsel to the Company, or, in either case, such other counsel satisfactory to the Agent (collectively, “**Company Counsel**”), each in form and substance satisfactory to the Agent and its counsel, dated the date that the opinion and negative assurance letter are required to be delivered, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, that in lieu of such opinion and negative assurance letter for subsequent Representation Dates, Company Counsel may furnish the Agent with a letter to the effect that the Agent may rely on a prior opinion or negative assurance letter delivered by such counsel under this Section 7(n) to the same extent as if it were dated the date of such letter (except that statements in such prior opinion or negative assurance letter shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented at such Representation Date).

(o) **Intellectual Property Opinion.** On or prior to the First Placement Notice Date and on any date which the Company is obligated to deliver a certificate pursuant to Section 7(m)(ii) for which no waiver is applicable, the Company shall cause to be furnished to the Agent the written opinion of Paustian & Partner, counsel for the Company with respect to intellectual property matters, or such other intellectual property counsel satisfactory to the Agent (“**Intellectual Property Counsel**”), in form and substance satisfactory to the Agent and its counsel, dated the date that the opinion letter is required to be delivered, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented.

(p) **Comfort Letter.** On or prior to the First Placement Notice Date and on any date which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable, the Company shall cause its independent registered public accounting firm (and any other independent accountants whose report is included in the Registration Statement or the Prospectus) to furnish the Agent letters (the “**Comfort Letters**”), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(p); *provided*, that if requested by the Agent, the Company shall cause a Comfort Letter to be furnished to the Agent within 10 Trading Days of the occurrence of any material transaction or event that necessitates the filing of additional, pro forma, amended or revised financial statements (including any restatement of previously issued financial statements). Each Comfort Letter shall be in form and substance satisfactory to the Agent and each Comfort Letter from the Company’s independent registered public accounting firm shall (i) confirm that they are an independent registered public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) state, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants’ “comfort letters” to underwriters in connection with registered public offerings (the first such letter, the “**Initial Comfort Letter**”) and (iii) update the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(q) **Market Activities.** The Company will not, directly or indirectly, and will cause its officers, directors and Subsidiaries not to (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of Ordinary Shares or (ii) sell, bid for, or purchase Ordinary Shares in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agent; *provided, however*, that the Company may bid for and purchase Ordinary Shares in accordance with Rule 10b-18 under the Exchange Act.

(r) Insurance. The Company and its Subsidiaries shall maintain, or cause to be maintained, insurance in such amounts and covering such risks as is reasonable and customary for the business for which it is engaged.

(s) Compliance with Laws. The Company and each of its Subsidiaries shall maintain, or cause to be maintained, all material environmental certificates, authorizations or permits required by federal, state and local law in order to conduct their businesses as described in the Prospectus (collectively, “**Permits**”), and the Company and each of its Subsidiaries shall conduct their businesses, or cause their businesses to be conducted, in substantial compliance with such Permits and with applicable Environmental Laws, except where the failure to maintain or be in compliance with such Permits could not reasonably be expected to result in a material adverse effect.

(t) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor any of its Subsidiaries will be or become, at any time prior to the termination of this Agreement, an “investment company,” as such term is defined in the Investment Company Act.

(u) Securities Act and Exchange Act. The Company will use its best efforts to comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the sales of, or dealings in, the Placement Shares as contemplated by the provisions hereof and the Prospectus.

(v) No Offer to Sell. Other than a free writing prospectus (as defined in Rule 405 under the Securities Act) approved in advance by the Company and the Agent, neither the Agent nor the Company (including its agents and representatives, other than the Agent in its capacity as agent) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder.

(w) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with the Agent, to qualify the Placement Shares for offering and sale, or to obtain an exemption for the Placement Shares to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Agent may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement); *provided, however*, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Placement Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement).

(x) Sarbanes-Oxley Act. The Company will maintain and keep accurate books and records reflecting its assets and maintain internal accounting controls in a manner designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS and including those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company’s financial statements in accordance with IFRS, (iii) that receipts and expenditures of the Company are being made only in accordance with

management's and the Company's directors' authorization, and (iv) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on its financial statements. The Company will maintain such controls and other procedures, including, without limitation, those required by Sections 302 and 906 of the Sarbanes-Oxley Act, and the applicable regulations thereunder that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure and to ensure that material information relating to the Company is made known to it by others within the Company, particularly during the period in which such periodic reports are being prepared.

(y) Emerging Growth Company. The Company will promptly notify the Agent if the company ceases to be an Emerging Growth Company at any time prior to the completion of the Agent's distribution of the Placement Shares pursuant to this Agreement.

(z) Renewal of Registration Statement. If, immediately prior to the third anniversary of the initial effective date of the Registration Statement (the "Renewal Date"), any of the Placement Shares remain unsold and this Agreement has not been terminated, the Company will, prior to the Renewal Date, file a new shelf registration statement or, if applicable, an automatic shelf registration statement relating to the Ordinary Shares that may be offered and sold pursuant to this Agreement (which shall include a prospectus reflecting the number or amount of Placement Shares that may be offered and sold pursuant to this Agreement), in a form reasonably satisfactory to the Agent and its counsel, and, if such registration statement is not an automatic shelf registration statement, will use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Date. The Company will take all other reasonable actions necessary or appropriate to permit the public offer and sale of the Placement Shares to continue as contemplated in the expired registration statement and this Agreement. From and after the effective date thereof, references herein to the "Registration Statement" shall include such new shelf registration statement or such new automatic shelf registration statement, as the case may be.

(aa) General Instruction I.B.5. of Form F-3. If, from and after the date of this Agreement, the Company is no longer eligible to use Form F-3 (including pursuant to General Instruction I.B.5.) at the time it files with the Commission an annual report on Form 20-F or any post-effective amendment to the Registration Statement, then it shall promptly notify the Agent and, within two Business Days after the date of filing of such annual report on Form 20-F or amendment to the Registration Statement, the Company shall file a new prospectus supplement with the Commission reflecting the number of Ordinary Shares available to be offered and sold by the Company under this Agreement pursuant to General Instruction I.B.5. of Form F-3; *provided, however*, that the Company may delay the filing of any such prospectus supplement for up to 30 days if, in the reasonable judgment of the Company, it is in the best interest of the Company to do so, provided that no Placement Notice is in effect or pending during such time. Until such time as the Company shall have corrected such misstatement or omission or effected such compliance, the Company shall not notify the Agent to resume the offering of Placement Shares.

(bb) Tax Indemnity. The Company will indemnify and hold harmless the Agent against any documentary, stamp or similar issue tax, including any interest and penalties, on the issue and sale of the Placement Shares.

(cc) Transfer Agent. The Company has engaged and will maintain, at its sole expense, a transfer agent and registrar for the Ordinary Shares.

(dd) Settlement Documents. The Company hereby agrees to execute and deliver any additional document that the Agent reasonably and in good faith requests in order to facilitate one or more settlements pursuant to this Agreement.

8. Conditions to the Agent's Obligations. The obligations of the Agent hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, to the completion by the Agent of a due diligence review satisfactory to the Agent in its reasonable judgment, and to the continuing satisfaction (or waiver by the Agent in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for all offers and sales of Placement Shares (i) that have been issued pursuant to all prior Placement Notices and (ii) that will be issued pursuant to any Placement Notice.

(b) Prospectus Supplement. The Company shall have filed with the Commission the Prospectus Supplement pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second Business Day following the date of this Agreement.

(c) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company or any of its Subsidiaries of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company or any of its Subsidiaries of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material Incorporated Document untrue in any material respect or that requires the making of any material changes in the Registration Statement, the Prospectus or Incorporated Documents so that, in the case of the Registration Statement, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein not misleading and, in the case of the Prospectus, so that it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) No Misstatement or Material Omission. The Agent shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of a fact that in the Agent's opinion is material, or omits to state a fact that in the Agent's opinion is material and is required to be stated therein or is necessary in order to make the statements therein not misleading.

(e) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized share capital of the Company or any material adverse effect or any development that could reasonably be expected to result in a material adverse effect, or any downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities), if any, by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), if any, the effect of which, in the judgment of the Agent (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(f) Company Counsel Legal Opinions. The Agent shall have received the opinions and negative assurance letters, as applicable, of Company Counsel and Intellectual Property Counsel required to be delivered pursuant to Section 7(n) and Section 7(o), as applicable, on or before the date on which such delivery of such opinions and negative assurance letters are required pursuant to Section 7(n) and Section 7(o), as applicable.

(g) Agent's Counsel Legal Opinion. The Agent shall have received from Sidley Austin, LLP, counsel for the Agent, such opinion or opinions, on or before the date on which the delivery of the Company Counsel legal opinion is required pursuant to Section 7(n), with respect to such matters as the Agent may reasonably require, and the Company shall have furnished to such counsel such documents as they may request to enable them to pass upon such matters.

(h) Comfort Letter. The Agent shall have received the Comfort Letter required to be delivered pursuant to Section 7(p) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(p).

(i) Representation Certificate. The Agent shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(j) Secretary's Certificate. On or prior to the First Placement Notice Date, the Agent shall have received a certificate, signed on behalf of the Company by the Secretary of the Company and attested to by an executive officer of the Company, dated as of such date and in form and substance satisfactory to the Agent and its counsel, certifying as to (i) the articles of association of the Company, (ii) the resolutions of the board of directors of the Company or duly authorized committee thereof authorizing the execution, delivery and performance of this Agreement and the issuance and sale of the Placement Shares and (iii) the incumbency of the officers of the Company duly authorized to execute this Agreement and the other documents contemplated by this Agreement (including each of the officers set forth on Schedule 2).

(k) CFO Certificate. On or prior to the First Placement Notice Date, the Agent shall have received a certificate in form and substance reasonably satisfactory to the Agent, from the Finance Director and Principal Accounting Officer of the Company as to the accuracy of certain financial and other information included in the Registration Statement and the Prospectus;

(l) No Suspension. The Ordinary Shares shall be duly listed, and admitted and authorized for trading, subject to official notice of issuance, on Nasdaq. Trading in the Ordinary Shares shall not have been suspended on, and the Ordinary Shares shall not have been delisted from, Nasdaq.

(m) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to the Agent such appropriate further information, opinions, certificates, letters and other documents as the Agent may have reasonably requested. All such information, opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company shall have furnished the Agent with conformed copies of such opinions, certificates, letters and other documents as the Agent may have reasonably requested.

(n) Securities Act Filings Made. All filings with the Commission required by Rule 424(b) or Rule 433 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424(b) (without reliance on Rule 424(b)(8) of the Securities Act) or Rule 433, as applicable.

(o) Approval for Listing. Either (i) the Placement Shares shall have been approved for listing on Nasdaq, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on Nasdaq at, or prior to, the First Placement Notice Date and Nasdaq shall have reviewed such application and not provided any objections thereto.

(p) FINRA. FINRA shall have raised no objection to the terms of the offering contemplated hereby and the amount of compensation allowable or payable to the Agent as described in the Prospectus.

(q) Stamp Taxes. (i) The Company shall pay, and shall indemnify and hold the Agent harmless against, any stamp, issue, registration, transfer, or other similar documentary taxes or duties (other than taxes or duties imposed on the net income of the Agent) imposed under the laws of the Netherlands or any political sub-division or taxing authority thereof or therein having the power to tax that is payable in connection with (x) the execution, delivery, consummation or enforcement of this Agreement, (y) the creation, allotment and issuance of the Placement Shares, and (z) the sale and delivery of the Placement Shares

(ii) All sums payable by the Company to the Agent under this Agreement shall be paid free and clear of and without deductions or withholdings of any present or future taxes or duties, unless the deduction or withholding is required by law, in which case the Company shall pay such additional amount as will result in the receipt by the Agent of the full amount that would have been received had no deduction or withholding been made.

(iii) All sums payable to the Agent shall be considered exclusive of any value added or similar taxes unless otherwise provided in this Agreement. Where the Company is obliged to pay value added or similar tax on any amount payable hereunder to the Agent, the Company shall in addition to the sum payable hereunder pay upon receipt of a proper value added tax invoice issued by the relevant Agent an amount equal to any applicable value added or similar tax to the extent the Company has not otherwise made such payment of value added or similar taxes directly.

(r) No Termination Event. There shall not have occurred any event that would permit the Agent to terminate this Agreement pursuant to Section 11(a).

9. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Agent, its affiliates and their respective partners, members, directors, officers, employees and agents, and each person, if any, who (i) controls the Agent within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Agent, in each case from and against any and all losses, claims, liabilities, expenses and damages (including any and all investigative, legal and other expenses reasonably incurred in connection with, and any and all amounts paid in settlement (in accordance with this Section 9), any action, suit, investigation or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party (including any governmental or self-regulatory authority, or otherwise, or any claim asserted or threatened), as and when incurred, to which the Agent, or any such other person may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus (or any amendment or supplement to the Registration Statement or the Prospectus) or in any free writing prospectus or in any application or other document executed by or on behalf of the Company or based on written information furnished by or on behalf of the Company filed in any jurisdiction in order to qualify the Ordinary Shares under the securities laws thereof or filed with the Commission, (y) the omission or alleged omission to state in any such document a material fact required to be stated therein or necessary to make the statements therein (solely with respect to the Prospectus, in light of the circumstances under which they were made) not misleading or (z) any breach by any of the indemnifying parties of any of their respective representations, warranties or agreements contained in this Agreement; provided, however, that this indemnity agreement shall not apply to the extent that such loss, claim, liability, expense or damage arises from the sale of the Placement Shares pursuant to this Agreement and is caused, directly or indirectly, by an untrue statement or omission, or alleged untrue statement or omission, made in reliance upon and in conformity with the Agent's Information. This indemnity agreement will be in addition to any liability that the Company might otherwise have.

(b) Agent Indemnification. The Agent agrees to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 9(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Agent's Information.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 9 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 9, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 9 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses

by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any other legal expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm (plus local counsel) admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly after the indemnifying party receives a written invoice relating to such fees, disbursements and other charges in reasonable detail. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 9 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party, in form and substance reasonably satisfactory to such indemnified party, from all liability arising out of such claim, action or proceeding and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Settlement Without Consent if Failure to Reimburse. If an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for reasonable fees and expenses of counsel for which it is entitled to be reimbursed under this Section 9, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 9(a) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(e) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 9 is applicable in accordance with its terms but for any reason is held to be unavailable or insufficient from the Company or the Agent, the Company and the Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit, investigation or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Agent, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and the Agent may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Agent on the other hand. The relative benefits received by the Company on the one hand and the Agent on the other hand shall be deemed to be in the same proportion as the total Net Proceeds from the sale of the Placement Shares

(before deducting expenses) received by the Company bear to the total compensation received by the Agent from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action, suit, investigation or proceeding in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the 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 or the Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Agent agree that it would not be just and equitable if contributions pursuant to this Section 9(e) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense or damage, or action, suit, investigation or proceeding in respect thereof, referred to above in this Section 9(e) shall be deemed to include, for the purpose of this Section 9(e), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action, suit, investigation, proceeding or claim to the extent consistent with this Section 9. Notwithstanding the foregoing provisions of this Section 9(e), the Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 9(e), any person who controls a party to this Agreement within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, any affiliates of the Agent, any partners, members, directors, officers, employees and agents of the Agent and each person that is controlled by or under common control with the Agent will have the same rights to contribution as that party, and each officer of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 9(e), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 9(e) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 9(c) hereof or pursuant to Section 9(d) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 9(c) hereof.

10. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 9 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of the Agent, any controlling persons, or the Company (or any of their respective officers, directors, employees or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

11. Termination.

(a) The Agent shall have the right, by giving notice as hereinafter specified, at any time to terminate this Agreement if (i) any material adverse effect, or any development that could reasonably be expected to result in a material adverse effect, has occurred that, in the judgment of the Agent, may materially impair the ability of the Agent to sell the Placement Shares hereunder, (ii) the Company shall have failed, refused or been unable to perform any agreement on its part to be performed hereunder; *provided, however*, in the case of any failure of the Company to deliver (or cause another person to deliver) any certification, opinion or letter required under Section 7(m), Section 7(n), Section 7(o) or Section 7(p), the Agent's right to terminate shall not arise unless such failure to deliver (or cause to be delivered) continues for more than 15 calendar days from the date such delivery was required, (iii) any

other condition of the Agent's obligations hereunder is not fulfilled, (iv) any suspension or limitation of trading in the Placement Shares or in securities generally on Nasdaq shall have occurred, (v) a general banking moratorium shall have been declared by any of United States federal or New York authorities, or (vi) 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 that, in the judgment of the Agent, may materially impair the ability of the Agent to sell the Placement Shares hereunder or to enforce contracts for the sale of securities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination. If the Agent elects to terminate this Agreement as provided in this Section 11(a), the Agent shall provide the required notice as specified in Section 12.

(b) The Company shall have the right, by giving 10 days' prior notice as hereinafter specified, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(c) The Agent shall have the right, by giving 10 days' prior notice as hereinafter specified, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 11, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through the Agent on the terms and subject to the conditions set forth herein; *provided* that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 11(a), (b), (c), or (d) above or otherwise by mutual agreement of the parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement. Upon termination of this Agreement, the Company shall not be required to pay to the Agent any discount or commission with respect to any Placement Shares not otherwise sold by the Agent under this Agreement; *provided, however*, that the Company shall remain obligated to reimburse the Agent's expenses pursuant to Section 7(g).

12. **Notices.** All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified in this Agreement, and if sent to the Agent, shall be delivered to:

SVB Securities LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019
Attention: Peter M. Fry
E-mail: peter.fry@svbleerink.com

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

SVB Securities LLC
1301 Avenue of the Americas, 12th Floor
New York, New York 10019
Attention: Stuart R. Nayman, Esq.
E-mail: stuart.nayman@svbleerink.com

and if to the Company, shall be delivered to:

J.H. Oortweg 21
2333 CH Leiden
The Netherlands
Attention: Chief Executive Officer
E-mail: Berndt.modig@pharvaris.com

with copies (which shall not constitute notice) to:

Kirkland & Ellis LLP
601 Lexington Avenue
New York, New York 10022
Attention: Sophia Hudson, P.C.; Jennifer Lee
E-mail: Sophia.hudson@kirkland.com; Jennifer.lee@kirkland.com

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally on or before 4:30 P.M., New York City time, on a Business Day, or, if such day is not a Business Day, on the next succeeding Business Day, (ii) by Electronic Notice as set forth in the next paragraph, (iii) on the next Business Day after timely delivery to a nationally-recognized overnight courier or (iv) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Nasdaq and commercial banks in the City of New York are open for business.

An electronic communication ("**Electronic Notice**") shall be deemed written notice for purposes of this Section 12 if sent to the electronic mail address specified by the receiving party in Section 12. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives actual acknowledgment of receipt from the person whom the notice is sent, other than via auto-reply. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("**Nonelectronic Notice**"), which shall be sent to the requesting party within 10 days of receipt of the written request for Nonelectronic Notice.

13. **Successors and Assigns.** This Agreement shall inure to the benefit of and be binding upon the Company and the Agent and their respective successors and the affiliates, controlling persons,

officers, directors and other persons referred to in Section 9 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of each such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto, the persons referred to in the preceding sentence and their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that the Agent may assign its rights and obligations hereunder to an affiliate of the Agent without obtaining the Company's consent, so long as such affiliate is a registered broker-dealer.

14. **Adjustments for Share Splits.** The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any share split, share dividend or similar event effected with respect to the Ordinary Shares.

15. **Entire Agreement; Amendment; Severability; Waiver.** This Agreement (including all schedules (as amended pursuant to this Agreement) and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Agent; *provided, however*, that **Schedule 2** of this Agreement may be amended by either party from time to time by sending a notice containing a revised **Schedule 2** to the other party in the manner provided in Section 12 and, upon such amendment, all references herein to **Schedule 2** shall automatically be deemed to refer to such amended **Schedule 2**. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement. No implied waiver by a party shall arise in the absence of a waiver in writing signed by such party. No failure or delay in exercising any right, power, or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power, or privilege hereunder.

16. **GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.**

17. **Construction.**

(a) The section and exhibit headings herein are for convenience only and shall not affect the construction hereof.

(b) Words defined in the singular shall have a comparable meaning when used in the plural, and vice versa.

(c) The words “hereof,” “hereto,” “herein” and “hereunder” and words of similar import, when used in this Agreement, shall refer to this Agreement as a whole and not to any particular provision of this Agreement.

(d) Wherever the word “include,” “includes” or “including” is used in this Agreement, it shall be deemed to be followed by the words “without limitation.”

(e) References herein to any gender shall include each other gender.

(f) References herein to any law, statute, ordinance, code, regulation, rule or other requirement of any governmental authority shall be deemed to refer to such law, statute, ordinance, code, regulation, rule or other requirement of any governmental authority as amended, reenacted, supplemented or superseded in whole or in part and in effect from time to time and also to all rules and regulations promulgated thereunder.

18. Permitted Free Writing Prospectuses. Each of the Company and the Agent represents, warrants and agrees that, unless it obtains the prior written consent of the other party, which consent shall not be unreasonably withheld, conditioned or delayed, it has not made and will not make any offer relating to the Placement Shares that would constitute an issuer free writing prospectus, or that would otherwise constitute a free writing prospectus (as defined in Rule 405), required to be filed with the Commission. Any such free writing prospectus consented to by the Agent or by the Company, as the case may be, is hereinafter referred to as a “**Permitted Free Writing Prospectus**.” The Company represents and warrants that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an issuer free writing prospectus, and that it has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping.

19. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) the Agent has been retained to act as sales agent in connection with the sale of the Placement Shares, the Agent has acted at arms’ length and no fiduciary or advisory relationship between the Company or any of its respective affiliates, shareholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Agent has advised or is advising the Company on other matters and the Agent has no duties or obligations to the Company with respect to the transactions contemplated by this Agreement except the obligations expressly set forth herein;

(b) the Company is capable of evaluating, and understanding and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) neither the Agent nor its affiliates have provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) the Company has been advised and is aware that the Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Agent and its affiliates have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) the Company waives, to the fullest extent permitted by law, any claims it may have against the Agent or its affiliates for breach of fiduciary duty or alleged breach of fiduciary duty in connection with the transactions contemplated by this Agreement and agrees that the Agent and its affiliates shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including shareholders (or other equity holders), creditors or employees of the Company.

20. **Recognition of the U.S. Special Resolution Regimes.** In the event that the Agent is a Covered Entity and becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from the Agent of this Agreement, 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 and the Agent or a BHC Act Affiliate of the Agent becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under 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 Agreement, (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); (B) “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. § 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); (C) “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; and (D) “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.

21. **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile or electronic transmission. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

22. **Use of Information.** The Agent may not provide any information gained in connection with this Agreement and the transactions contemplated by this Agreement, including due diligence, to any third party other than its legal counsel advising it on this Agreement and the transactions contemplated by this Agreement unless expressly approved by the Company in writing.

23. **Agent’s Information.** As used in this Agreement, “**Agent’s Information**” means solely the following information in the Registration Statement and the Prospectus: the last sentence of the eighth paragraph and the ninth paragraph under the heading “Plan of Distribution” in the Prospectus Supplement.

24. Consent to Jurisdiction; Appointment of Agents for Service. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection with any of the transactions contemplated hereby, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum, or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy (certified or registered mail, return receipt requested) to such party at the address in effect for notices under Section 12 of this Agreement and agrees that such service shall constitute good and sufficient notice of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. To the extent that the Company has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding.

The Company hereby irrevocably appoints Morgan Conn, with offices at PO Box 121, Buckingham, PA 18912 as its agent for service of process in any proceeding relating to this Agreement and agrees that service of process may be made upon it at the office of such agent. The Company waives, to the fullest extent permitted by law, any other requirements of or objections to personal jurisdiction with respect thereto. The Company represents and warrants that such agent has agreed to act as the Company's agent for service of process, and the Company agrees to take any and all action, including the filing of any and all documents and instruments, that may be necessary to continue such appointment in full force and effect.

25. Judgment Currency. If for the purposes of obtaining judgment in any court it is necessary to convert a sum due hereunder into any currency other than United States dollars, the parties hereto agree, to the fullest extent permitted by law, that the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Agent could purchase United States dollars with such other currency in The City of New York on the business day preceding that on which final judgment is given. The obligation of the Company with respect to any sum due from it to the Agent or any person controlling the Agent shall, notwithstanding any judgment in a currency other than United States dollars, not be discharged until the first business day following receipt by the Agent or controlling person of any sum in such other currency, and only to the extent that the Agent or controlling person may in accordance with normal banking procedures purchase United States dollars with such other currency. If the United States dollars so purchased are less than the sum originally due to the Agent or controlling person hereunder, the Company agrees as a separate obligation and notwithstanding any such judgment, to indemnify the Agent or controlling person against such loss. If the United States dollars so purchased are greater than the sum originally due to the Agent or controlling person hereunder, the Agent or controlling person agrees to pay to the Company an amount equal to the excess of the dollars so purchased over the sum originally due to the Agent or controlling person hereunder.

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR. All references in this Agreement to financial statements and schedules and other information that is "contained," "included" or "stated" in 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 that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

All references in this Agreement to “supplements” to the Prospectus shall include any supplements, “wrappers” or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by the Agent outside of the United States.

[Remainder of Page Intentionally Blank]

If the foregoing correctly sets forth the understanding between the Company and the Agent, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and the Agent.

Very truly yours,

PHARVARIS N.V.

By: /s/ Berndt Modig

Name: Berndt Modig

Title: Chief Executive Officer

ACCEPTED as of the date first-above written:

SVB SECURITIES LLC

By: /s/ Peter M. Fry

Name: Peter M. Fry

Title: Senior Managing Director - Head of
Alternative Equities

FORM OF PLACEMENT NOTICE

From: []
[TITLE]
[COMPANY NAME]
Cc: []
To: SVB Securities LLC
Subject: SVB Securities—At the Market Offering—Placement Notice

Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement, dated March 1, 2022 (the “**Agreement**”), by and between Pharvaris N.V., a public limited liability company (naamloze vennootschap) under Dutch law (the “**Company**”), and SVB Securities LLC (“**SVB Securities**”), I hereby request on behalf of the Company that SVB Securities sell up to [] Ordinary Shares, nominal value, €0.12 par value per share, of the Company (the “**Shares**”), at a minimum market price of \$ per share[; *provided* that no more than [] Shares shall be sold in any one Trading Day (as such term is defined in Section 3 of the Agreement)]. Sales should begin [on the date of this Placement Notice] and end on [DATE] [until all Shares that are the subject of this Placement Notice are sold].

The Company.

Berndt Modig
Anna Nijdam

SVB Securities

Gabriel Cavazos
Brian Swanson
atm@svbleerink.com

Compensation

The Company shall pay SVB Securities LLC compensation in cash equal to 3% of the gross proceeds from the sales of Placement Shares pursuant to the terms of the Sales Agreement of which this **Schedule 3** forms a part.

REPRESENTATION DATE CERTIFICATE
[DATE]

Each of _____, the duly qualified and elected Chief Executive Officer of Pharvaris N.V., a public limited liability (the "**Company**"), and _____, the duly qualified and elected Head of Finance and Principal Accounting Officer of the Company, does hereby certify in his respective capacity and on behalf of the Company, pursuant to Section 7(m) of the Sales Agreement, dated March 1, 2022 (the "**Sales Agreement**"), by and between the Company and SVB Securities LLC, that, after due inquiry, to the best of the knowledge of the undersigned:

(i) The representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or material adverse effect, are true and correct on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions relating to materiality or material adverse effect, are true and correct in all material respects as of the date hereof as if made on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date.

(ii) The Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof.

(iii) As of the date hereof, (A) the Registration Statement complies in all material respects with the requirements of the Securities Act and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading, (B) the Prospectus complies in all material respects with the requirements of the Securities Act and does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading and (C) no event has occurred as a result of which it is necessary to amend or supplement the Registration Statement or the Prospectus in order to make the statements therein not untrue or misleading or for clauses (A) and (B) above, to be true and correct.

(iv) There has been no material adverse change, or any development that could reasonably be expected to result in a material adverse change, in the condition (financial or otherwise), earnings, results of operations, business, properties, operations, assets, liabilities or prospects of the Company and its Subsidiaries, taken as a whole, whether or not arising from transactions in the ordinary course of business, since the date as of which information is given in the Prospectus, as amended or supplemented to the date hereof.

(v) The Company does not possess any material non-public information.

(vi) The maximum amount of Placement Shares that may be sold pursuant to the Sales Agreement has been duly authorized by the Company's board of directors or a duly authorized committee thereof pursuant to a resolution or unanimous written consent in accordance with the Company's amended and restated articles of association and applicable law.

Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Sales Agreement.

IN WITNESS WHEREOF, each of the undersigned, in such individual's respective capacity as Chief Executive Officer or Head of Finance and Principal Accounting Officer of the Company, has executed this Officers' Certificate on behalf of the Company on the date first written above.

By: _____
Name:
Title: Chief Executive Officer
Date:

By: _____
Name:
Title: Head of Finance and Principal Accounting
Officer
Date:

[Company Signature Page to Officers' Certificate]

Pharvaris N.V.

as the Company

and

[]

as Trustee

Senior Indenture

Dated as of [], []

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SENIOR INDENTURE, dated as of [], between Pharvaris N.V., a Dutch public company with limited liability (*naamloze vennootschap*), as the Company, and [], as Trustee.

RECITALS OF THE COMPANY

WHEREAS, the Company has duly authorized the issue from time to time of its senior debentures, notes or other evidences of indebtedness to be issued in one or more series (the “**Securities**”) up to such principal amount or amounts as may from time to time be authorized in accordance with the terms of this Indenture and to provide, among other things, for the authentication, delivery and administration thereof, the Company has duly authorized the execution and delivery of this Indenture; and 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 or of any and all series thereof as follows:

ARTICLE 1

DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.01. *Definitions.*

“**Affiliate**” of any Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such Person. For the purposes of this definition, “control” (including, with correlative meanings, the terms “controlling”, “controlled by” and “under common control with”) when used with respect to any Person means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

“**Agent**” means any Registrar, Paying Agent, transfer agent or Authenticating Agent.

“**Board Resolution**” means one or more resolutions of the board of directors of the Company or any authorized committee thereof, certified by the secretary or an assistant secretary to have been duly adopted and to be in full force and effect on the date of certification, and delivered to the Trustee.

“**Business Day**” means any day, other than a Saturday or Sunday, that is neither a legal holiday nor a day on which banking institutions are authorized or required by law or regulation to close (i) with respect to any Security the interest on which is based on the offered quotations in the interbank Eurodollar market for dollar deposits in London or in The City of New York or (ii) with respect to Securities denominated in a specified currency other than United States dollars, in the principal financial center of the country of the specified currency.

“**Commission**” means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act or, if at any time after the execution of this instrument such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

“**Company**” means the party named as such in the first paragraph of this Indenture until a successor replaces it pursuant to Article 5 of this Indenture and thereafter means the successor.

“**Corporate Trust Office**” means the office of the Trustee at which the corporate trust business of the Trustee shall, at any particular time, be administered, which office is, at the date of this Indenture, located at [].

“**Default**” means any event that is, or after notice or passage of time or both would be, an Event of Default.

“**Depository**” means, with respect to the Securities of any series issuable or issued in the form of one or more Registered Global Securities, the Person designated as Depository by the Company pursuant to Section 2.03 until a successor Depository shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “**Depository**” shall mean or include each Person who is then a Depository hereunder, and if at any time there is more than one such Person, “**Depository**” as used with respect to the Securities of any such series shall mean the Depository with respect to the Registered Global Securities of that series.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

“**Holder**” or “**Securityholder**” means the registered holder of any Security.

“**IFRS**” means International Financial Reporting Standards as issued by the International Accounting Standards Board, as in effect as of the date hereof.

“**Indenture**” means this Indenture as originally executed and delivered or as it may be amended or supplemented from time to time by one or more indentures supplemental to this Indenture entered into pursuant to the applicable provisions of this Indenture and shall include the forms and terms of the Securities of each series established as contemplated pursuant to Sections 2.01 and 2.03.

“**Officer**” means, with respect to the Company, the chairman of the board of directors, the president or chief executive officer, any executive vice president, any senior vice president, any vice president, the chief financial officer, the treasurer or any assistant treasurer, or the secretary or any assistant secretary.

“**Officers’ Certificate**” means a certificate signed in the name of the Company (i) by the chairman of the board of directors, president or chief executive officer, an executive vice president, a senior vice president or a vice president, and (ii) by the chief financial officer, the treasurer or any assistant treasurer, or the secretary or any assistant secretary, and delivered to the Trustee. Each such certificate shall comply with Section 314 of the Trust Indenture Act, if applicable, and include (except as otherwise expressly provided in this Indenture) the statements provided in Section 10.04, if applicable.

“Opinion of Counsel” means a written opinion signed by legal counsel, who may be an employee of or counsel to the Company, satisfactory to the Trustee. Each such opinion shall comply with Section 314 of the Trust Indenture Act, if applicable, and include the statements provided in Section 10.04, if and to the extent required thereby.

“original issue date” of any Security (or portion thereof) means the earlier of (a) the date of authentication of such Security or (b) the date of any Security (or portion thereof) for which such Security was issued (directly or indirectly) on registration of transfer, exchange or substitution.

“Original Issue Discount Security” means any Security that provides for an amount less than the Principal amount thereof to be due and payable upon a declaration of acceleration of the maturity thereof pursuant to Section 6.02.

“Periodic Offering” means an offering of Securities of a series from time to time, the specific terms of which Securities, including, without limitation, the rate or rates of interest, if any, thereon, the stated maturity or maturities thereof and the redemption provisions, if any, with respect thereto, are to be determined by the Company or its agents upon the issuance of such Securities.

“Person” means an individual, a corporation, a partnership, a limited liability company, an association, a trust or any other entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

“Principal” of a Security means the principal amount of, and, unless the context indicates otherwise, includes any premium payable on, the Security.

“Registered Global Security” means a Security evidencing all or a part of a series of Securities, issued to the Depository for such series in accordance with Section 2.02, and bearing the legend prescribed in Section 2.02.

“Responsible Officer” when used with respect to the Trustee, shall mean an officer of the Trustee in the Corporate Trust Office, having direct responsibility for the administration of this Indenture, and also, with respect to a particular matter, any other officer to whom such matter is referred because of such officer’s knowledge of and familiarity with the particular subject.

“Securities” means any of the securities, as defined in the first paragraph of the recitals hereof, that are authenticated and delivered under this Indenture.

“Securities Act” means the Securities Act of 1933, as amended.

“Subsidiary” means, with respect to any Person, any corporation, association or other business entity of which a majority of the capital stock or other ownership interests having ordinary voting power to elect a majority of the board of directors or other persons performing similar functions are at the time directly or indirectly owned by such Person.

“**Trustee**” means the party named as such in the first paragraph of this Indenture until a successor replaces it in accordance with the provisions of Article 7 and thereafter 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.

“**Trust Indenture Act**” means the Trust Indenture Act of 1939, as amended (15 U.S. Code §§ 77aaa-77bbb), as it may be amended from time to time.

“**U.S. Government 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 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, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt.

“**Yield to Maturity**” means, as the context may require, the yield to maturity (i) on a series of Securities or (ii) if the Securities of a series are issuable from time to time, on a Security of such series, calculated at the time of issuance of such series in the case of clause (i) or at the time of issuance of such Security of such series in the case of clause (ii), or, if applicable, at the most recent redetermination of interest on such series or on such Security, and calculated in accordance with the constant interest method or such other accepted financial practice as is specified in the terms of such Security.

Section 1.02. *Other Definitions.* Each of the following terms is defined in the section set forth opposite such term:

<u>Term</u>	<u>Section</u>
Authenticating Agent	2.02
cash transaction	7.03
Event of Default	6.01
Judgment Currency	10.15(a)
mandatory sinking fund payment	3.05
optional sinking fund payment	3.05
Paying Agent	2.05
record date	2.04
Registrar	2.05
Required Currency	10.15(a)
Security Register	2.05
self-liquidating paper	7.03
sinking fund payment date	3.05
Surviving Entity	5.01(a)
tranche	2.14

Section 1.03. *Incorporation by Reference of Trust Indenture Act.* Whenever this Indenture refers to a provision of the Trust Indenture Act, the provision is incorporated by reference in and made a part of this Indenture. The following terms used in this Indenture that are defined by the Trust Indenture Act have the following meanings:

“**indenture securities**” means the Securities;

“**indenture security holder**” means a Holder or a Securityholder;

“indenture to be qualified” means this Indenture;

“**indenture trustee**” or “**institutional trustee**” means the Trustee; and “**obligor**” on the indenture securities means the Company or any other obligor on the Securities.

All other terms used in this Indenture that are defined by the Trust Indenture Act, defined by reference in the Trust Indenture Act to another statute or defined by a rule of the Commission and not otherwise defined herein have the meanings assigned to them therein.

Section 1.04. *Rules of Construction.* Unless the context otherwise requires:

(a) an accounting term not otherwise defined has the meaning assigned to it in accordance with IFRS;

(b) words in the singular include the plural, and words in the plural include the singular;

(c) “herein,” “hereof” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision;

(d) all references to Sections or Articles refer to Sections or Articles of this Indenture unless otherwise indicated; and

(e) use of masculine, feminine or neuter pronouns should not be deemed a limitation, and the use of any such pronouns should be construed to include, where appropriate, the other pronouns.

ARTICLE 2 THE SECURITIES

Section 2.01. *Form and Dating.* The Securities of each series shall be substantially in such form or forms (not inconsistent with this Indenture) as shall be established by or pursuant to one or more Board Resolutions or in one or more 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 imprinted or otherwise reproduced thereon such legend or legends or endorsements, not inconsistent with the provisions of this Indenture, as may be required to comply with any law, or with any rules of any securities exchange or usage, all as may be determined by the Officers executing such Securities as evidenced by their execution of the Securities.

Section 2.02. *Execution and Authentication.* Two Officers shall execute the Securities for the Company by facsimile or manual signature in the name and on behalf of the Company. 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.

The Trustee, at the expense of the Company, may appoint an authenticating agent (the “**Authenticating Agent**”) to authenticate Securities. The 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 Authenticating Agent.

A Security shall not be valid until the Trustee or Authenticating Agent signs, manually or by facsimile, the certificate of authentication on the Security. The signature shall be conclusive evidence that the Security has been authenticated under 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 the applicable documents referred to below in this Section, and the Trustee shall thereupon authenticate and deliver such Securities to or upon the written order of the Company. In authenticating any Securities of a series, the Trustee shall be entitled to receive prior to the authentication of any Securities of such series, and (subject to Article 7) shall be fully protected in relying upon, unless and until such documents have been superseded or revoked:

(a) any Board Resolution and/or executed supplemental indenture referred to in Sections 2.01 and 2.03 by or pursuant to which the forms and terms of the Securities of that series were established;

(b) an Officers’ Certificate setting forth the form or forms and terms of the Securities, stating that the form or forms and terms of the Securities of such series have been, or, in the case of a Periodic Offering, will be when established in accordance with such procedures as shall be referred to therein, established in compliance with this Indenture; and

(c) an Opinion of Counsel substantially to the effect that the form or forms and terms of the Securities of such series have been, or, in the case of a Periodic Offering, will be when established in accordance with such procedures as shall be referred to therein, established in compliance with this Indenture and that the supplemental indenture, to the extent applicable, and Securities have been duly authorized and, if executed and authenticated in accordance with the provisions of the Indenture and delivered to and duly paid for by the purchasers thereof on the date of such opinion, would be entitled to the benefits of the Indenture and would be valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, subject to bankruptcy, insolvency, reorganization, receivership, moratorium and other similar laws affecting creditors’ rights generally, general principles of equity, and covering such other matters as shall be specified therein and as shall be reasonably requested by the Trustee.

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 which is not reasonably acceptable to the Trustee.

Notwithstanding the provisions of Sections 2.01 and 2.02, if, in connection with a Periodic Offering, all Securities of a series are not to be originally issued at one time, it shall not be necessary to deliver the Board Resolution otherwise required pursuant to Section 2.01 or the written order, Officers' Certificate and Opinion of Counsel otherwise required pursuant to Section 2.02 at or prior to the authentication of each Security of such series if such documents are delivered at or prior to the authentication upon original issuance of the first Security of such series to be issued.

With respect to Securities of a series offered in a Periodic Offering, the Trustee may rely, as to the authorization by the Company of any of such Securities, the forms and terms thereof and the legality, validity, binding effect and enforceability thereof, upon the Opinion of Counsel and the other documents delivered pursuant to Sections 2.01 and 2.02, as applicable, in connection with the first authentication of Securities of such series.

If the Company shall establish pursuant to Section 2.03 that the Securities of a series or a portion thereof are to be issued in the form of one or more Registered Global Securities, then the Company shall execute and the Trustee shall authenticate and deliver one or more Registered Global Securities that (i) shall represent and shall be denominated in an amount equal to the aggregate Principal amount of all of the Securities of such series issued in such form and not yet cancelled, (ii) shall be registered in the name of the Depository for such Registered Global Security or Securities or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or its custodian or pursuant to such Depository's instructions and (iv) shall (unless provided otherwise in the form of such Security) bear a legend substantially to the following effect: "Unless and until it is exchanged in whole or in part for Securities in definitive registered form, this Security may not be transferred except as a whole by the Depository to the nominee of the Depository or by a nominee of the Depository to 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 successor Depository."

Section 2.03. *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 and each such series shall rank equally and *pari passu* with all other unsecured and unsubordinated debt of the Company. There shall be established in or pursuant to a Board Resolution or one or more indentures supplemental hereto, prior to the initial issuance of Securities of any series, subject to the last sentence of this Section 2.03,

(a) the designation of the Securities of the series, which shall distinguish the Securities of the series from the Securities of all other series;

(b) any limit upon the aggregate Principal amount of the Securities of the series that may be authenticated and delivered under this Indenture and any limitation on the ability of the Company to increase such aggregate Principal amount after the initial issuance of the Securities of that series (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, or upon redemption of, other Securities of the series pursuant hereto);

- (c) the date or dates on which the Principal of the Securities of the series is payable (which date or dates may be fixed or extendible);
- (d) the rate or rates (which may be fixed or variable) per annum at which the Securities of the series shall bear interest, if any, the date or dates from which such interest shall accrue, on which such interest shall be payable and on which a record shall be taken for the determination of Holders to whom interest is payable and/or the method by which such rate or rates or date or dates shall be determined;
- (e) if other than as provided in Section 4.02, the place or places where the Principal of and any interest on Securities of the series shall be payable, any 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;
- (f) the right, if any, of the Company to redeem Securities of the series, in whole or in part, at its option and the period or periods within which, the price or prices at which and any terms and conditions upon which Securities of the series may be so redeemed, pursuant to any sinking fund or otherwise;
- (g) the obligation, if any, of the Company to redeem, purchase or repay Securities of the series pursuant to any mandatory redemption, sinking fund or analogous provisions or at the option of a Holder thereof and the price or prices at which and the period or periods within which and any of the terms and conditions upon which Securities of the series shall be redeemed, purchased or repaid, in whole or in part, pursuant to such obligation;
- (h) if other than denominations of \$2,000 and any higher integral multiple of \$1,000, the denominations in which Securities of the series shall be issuable;
- (i) 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;
- (j) if other than the coin or currency in which the Securities of the series are denominated, the coin or currency in which payment of the Principal of or interest on the Securities of the series shall be payable or if the amount of payments of principal of and/or interest on the Securities of the series may be determined with reference to an index based on a coin or currency other than that in which the Securities of the series are denominated, the manner in which such amounts shall be determined;
- (k) if other than the currency of the United States of America, the currency or currencies, including composite currencies, in which payment of the Principal of and interest on the Securities of the series shall be payable, and the manner in which any such currencies shall be valued against other currencies in which any other Securities shall be payable;

- (l) whether the Securities of the series or any portion thereof will be issuable as Registered Global Securities;
- (m) whether the Securities of the series may be exchangeable for and/or convertible into the common stock of the Company or any other security;
- (n) whether and under what circumstances the Company will pay additional amounts on the Securities of the series held by a person who is not a U.S. person in respect of any tax, assessment or governmental charge withheld or deducted and, if so, whether the Company will have the option to redeem such Securities rather than pay such additional amounts;
- (o) if the Securities of the series are to be issuable in definitive form (whether upon original issue or upon exchange of a temporary Security of such series) only upon receipt of certain certificates or other documents or satisfaction of other conditions, the form and terms of such certificates, documents or conditions;
- (p) any trustees, depositaries, authenticating or paying agents, transfer agents or the registrar or any other agents with respect to the Securities of the series;
- (q) provisions, if any, for the defeasance of the Securities of the series (including provisions permitting defeasance of less than all Securities of the series), which provisions may be in addition to, in substitution for, or in modification of (or any combination of the foregoing) the provisions of Article 8;
- (r) if the Securities of the series are issuable in whole or in part as one or more Registered Global Securities, the identity of the Depositary or common Depositary for such Registered Global Security or Securities;
- (s) any other or alternative Events of Default or covenants with respect to the Securities of the series; and
- (t) any other terms of the Securities of the series.

All Securities of any one series shall be substantially identical, except as to date and denomination, except in the case of any Periodic Offering and except as may otherwise be provided by or pursuant to the Board Resolution referred to above or as set forth in any such indenture supplemental hereto. 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 such Board Resolution or in any such indenture supplemental hereto and any forms and terms of Securities to be issued from time to time may be completed and established from time to time prior to the issuance thereof by procedures described in such Board Resolution or supplemental indenture.

Unless otherwise expressly provided with respect to a series of Securities, the aggregate principal amount of a series of Securities may be increased and additional Securities of such series may be issued up to the maximum aggregate principal amount authorized with respect to such series as increased.

Section 2.04. *Denomination and Date of Securities; Payments of Interest.* The Securities of each series shall be issuable in denominations established as contemplated by Section 2.03 or, if not so established with respect to Securities of any series, in denominations of \$2,000 and any higher integral multiple of \$1,000. The Securities of each series shall be numbered, lettered or otherwise distinguished in such manner or in accordance with such plan as the Officers of the Company executing the same may determine, as evidenced by their execution thereof.

Unless otherwise specified with respect to a series of Securities, each Security shall be dated the date of its authentication. The Securities of each series shall bear interest, if any, from the date, and such interest shall be payable on the dates, established as contemplated by Section 2.03.

The person in whose name any Security of any series is registered at the close of business on any record date applicable to a particular series with respect to any interest payment date for such series shall be entitled to receive the interest, if any, payable on such interest payment date notwithstanding any transfer or exchange of such Security subsequent to the record date and prior to such interest payment date, except if and to the extent the Company shall default in the payment of the interest due on such interest payment date for such series, in which case the provisions of Section 2.13 shall apply. The term “record date” as used with respect to any interest payment date (except a date for payment of defaulted interest) for the Securities of any series shall mean the date specified as such in the terms of the Securities of such series established as contemplated by Section 2.03, or, if no such date is so established, the fifteenth day next preceding such interest payment date, whether or not such record date is a Business Day.

Section 2.05. *Registrar and Paying Agent; Agents Generally.* The Company shall maintain an office or agency where Securities may be presented for registration, registration of transfer or for exchange (the “**Registrar**”) and an office or agency where Securities may be presented for payment (the “**Paying Agent**”), which shall be in the United States of America. The Company shall cause the Registrar to keep a register of the Securities and of their registration, transfer and exchange (the “**Security Register**”). The Company may have one or more additional Paying Agents or transfer agents with respect to any series.

The Company shall enter into an appropriate agency agreement with any Agent not a party to this Indenture. The agreement shall implement the provisions of this Indenture and the Trust Indenture Act that relate to such Agent. The Company shall give prompt written notice to the Trustee of the name and address of any Agent and any change in the name or address of an Agent. If the Company fails to maintain a Registrar or Paying Agent, the Trustee shall act as such. The Company may remove any Agent upon written notice to such Agent and the Trustee; *provided* that no such removal shall become effective until (i) the acceptance of an appointment by a successor Agent to such Agent as evidenced by an appropriate agency agreement entered into by the Company and such successor Agent and delivered to the Trustee or (ii) notification to the Trustee that the Trustee shall serve as such Agent until the appointment of a successor Agent in accordance with clause (i) of this proviso. The Company or any Affiliate of the Company may act as Paying Agent or Registrar; *provided* that neither the Company nor an Affiliate of the Company shall act as Paying Agent in connection with the defeasance of the Securities or the discharge of this Indenture under Article 8.

The Company initially appoints the Trustee as Registrar, Paying Agent and Authenticating Agent. If, at any time, the Trustee is not the Registrar, the Registrar shall make available to the Trustee ten days prior to each interest payment date and at such other times as the Trustee may reasonably request the names and addresses of the Holders as they appear in the Security Register.

Section 2.06. *Paying Agent to Hold Money in Trust.* Not later than 10:00 a.m. New York City time on each due date of any Principal or interest on any Securities, the Company shall deposit with the Paying Agent money in immediately available funds sufficient to pay such Principal or interest. The Company shall require each Paying Agent other than the Trustee to agree in writing that such Paying Agent shall hold in trust for the benefit of the Holders of such Securities or the Trustee all money held by the Paying Agent for the payment of Principal of and interest on such Securities and shall promptly notify the Trustee of any default by the Company in making any such payment. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee and account for any funds disbursed, and the Trustee may at any time during the continuance of any payment default, upon written request to a Paying Agent, require such Paying Agent to pay all money held by it to the Trustee and to account for any funds disbursed. Upon doing so, the Paying Agent shall have no further liability for the money so paid over to the Trustee. If the Company or any affiliate of the Company acts as Paying Agent, it will, on or before each due date of any Principal of or interest on any Securities, segregate and hold in a separate trust fund for the benefit of the Holders thereof a sum of money sufficient to pay such Principal or interest so becoming due until such sum of money shall be paid to such Holders or otherwise disposed of as provided in this Indenture, and will promptly notify the Trustee in writing of its action or failure to act as required by this Section.

Section 2.07. *Transfer and Exchange.* At the option of the Holder thereof, Securities of any series (other than a Registered Global Security, except as set forth below) may be exchanged for a Security or Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Securities to be exchanged at the agency of the Company that shall be maintained for such purpose in accordance with Section 2.05 and upon payment, if the Company shall so require, of the charges hereinafter provided. 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.

Upon surrender for registration of transfer of any Security of a series at the agency of the Company that shall be maintained for that purpose in accordance with Section 2.05 and upon payment, if the Company shall so require, of the charges hereinafter provided, 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 the same series, of any authorized denominations and of like tenor and aggregate Principal amount.

All Securities presented for registration of transfer, exchange, redemption or payment shall be duly endorsed by, or be accompanied by a written instrument or instruments of transfer in form satisfactory to the Company and the Trustee duly executed by, the holder or his attorney duly authorized in writing.

The Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any exchange or registration of transfer of Securities. No service charge shall be made for any such transaction.

Notwithstanding any other provision of this Section 2.07, unless and until it is exchanged in whole or in part for Securities in definitive registered form, a Registered Global Security representing all or a portion of the Securities of a series may not be transferred except as a whole by the Depositary for such series to a nominee of such Depositary or by a nominee of such Depositary to such Depositary or another nominee of such Depositary or by such Depositary or any such nominee to a successor Depositary for such series or a nominee of such successor Depositary.

If at any time the Depositary for any Registered Global Securities of any series notifies the Company that it is unwilling or unable to continue as Depositary for such Registered Global Securities or if at any time the Depositary for such Registered Global Securities shall no longer be eligible under applicable law, the Company shall appoint a successor Depositary eligible under applicable law with respect to such Registered Global Securities. If a successor Depositary eligible under applicable law for such Registered Global Securities is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such ineligibility, the Company will execute, and the Trustee, upon receipt of the Company's order for the authentication and delivery of definitive Securities of such series and tenor, will authenticate and deliver certificated Securities of such series and tenor, in any authorized denominations, in an aggregate Principal amount equal to the Principal amount of such Registered Global Securities, in exchange for such Registered Global Securities.

The Company may at any time and in its sole discretion and subject to the procedures of the Depositary determine that any Registered Global Securities of any series shall no longer be maintained in global form. In such event the Company will execute, and the Trustee, upon receipt of the Company's order for the authentication and delivery of definitive Securities of such series and tenor, will authenticate and deliver, certificated Securities of such series and tenor in any authorized denominations, in an aggregate Principal amount equal to the Principal amount of such Registered Global Securities, in exchange for such Registered Global Securities.

Any time the Securities of any series are not in the form of Registered Global Securities pursuant to the preceding two paragraphs, the Company agrees to supply the Trustee with a reasonable supply of certificated Securities without the legend required by Section 2.02 and the Trustee agrees to hold such Securities in safekeeping until authenticated and delivered pursuant to the terms of this Indenture.

If established by the Company pursuant to Section 2.03 with respect to any Registered Global Security, the Depositary for such Registered Global Security may surrender such Registered Global Security in exchange in whole or in part for Securities of the same series and tenor in definitive registered form on such terms as are acceptable to the Company and such Depositary. Thereupon, the Company shall execute, and the Trustee shall authenticate and deliver, without service charge,

(a) to the Person specified by such Depository new certificated Securities of the same series and tenor, of any authorized denominations as requested by such Person, in an aggregate Principal amount equal to and in exchange for such Person's beneficial interest in the Registered Global Security; and

(b) to such Depository a new Registered Global Security in a denomination equal to the difference, if any, between the Principal amount of the surrendered Registered Global Security and the aggregate Principal amount of certificated Securities authenticated and delivered pursuant to clause (a) above.

Certificated Securities issued in exchange for a Registered Global Security pursuant to this Section 2.07 shall be registered in such names and in such authorized denominations as the Depository for such Registered Global Security, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee or an agent of the Company or the Trustee. The Trustee or such agent shall deliver such Securities to or as directed by the Persons in whose names such Securities are so registered.

All Securities issued upon any transfer or exchange of Securities shall be valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such transfer or exchange.

The Registrar shall not be required (i) to issue, authenticate, register the transfer of or exchange Securities of any series for a period of 15 days before a selection of such Securities to be redeemed or (ii) to register the transfer of or exchange any Security selected for redemption in whole or in part.

Section 2.08. *Replacement Securities.* If any mutilated Security is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver, in exchange for such mutilated Security, 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 any 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 the Trustee shall authenticate and deliver, 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 (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 may be required by them to save each of them and any agent of any of them harmless, and in the case of destruction, loss or theft, evidence satisfactory to the Company and the Trustee and any agent of them of the destruction, loss or theft of such Security and the ownership thereof.

Upon the issuance of any new Security under this Section, the Company may require 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 or in exchange for any mutilated Security shall constitute an original additional contractual obligation of the Company, whether or not the mutilated, destroyed, lost or stolen Security shall be at any time enforceable by anyone, and any such new Security 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) any other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

Section 2.09. *Outstanding Securities.* Securities outstanding at any time are all Securities that have been authenticated by the Trustee except for those cancelled by it, those delivered to it for cancellation, those described in this Section as not outstanding and those that have been defeased pursuant to Section 8.05.

If a Security is replaced pursuant to Section 2.08, it ceases to be outstanding unless and until the Trustee and the Company receive proof satisfactory to them that the replaced Security is held by a holder in due course.

If the Paying Agent (other than the Company or an affiliate of the Company) holds on the maturity date or any redemption date or date for repurchase of the Securities money sufficient to pay Securities payable or to be redeemed or repurchased on that date, then on and after that date such Securities cease to be outstanding and interest on them shall cease to accrue.

A Security does not cease to be outstanding because the Company or one of its affiliates holds such Security, *provided, however*, that, in determining whether the Holders of the requisite Principal amount of the outstanding Securities have given any request, demand, authorization, direction, notice, consent or waiver hereunder, Securities owned by the Company or any affiliate of the Company shall be disregarded and deemed not to be outstanding, except that, in determining whether the Trustee shall be protected in relying upon any such request, demand, authorization, direction, notice, consent or waiver, only Securities as to which a Responsible Officer of the Trustee has received written notice to be so owned shall be so disregarded. Any Securities so owned which are pledged by the Company, or by any affiliate of the Company, as security for loans or other obligations, otherwise than to another such affiliate of the Company, shall be deemed to be outstanding, if the pledgee is entitled pursuant to the terms of its pledge agreement and is free to exercise in its or his discretion the right to vote such securities, uncontrolled by the Company or by any such affiliate.

Section 2.10. *Temporary Securities.* Until definitive Securities of any series are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities of such series. Temporary Securities of any series shall be substantially in the form of definitive Securities of such series but may have insertions, substitutions, omissions and other variations determined to be appropriate by the Officers executing the temporary Securities, as evidenced by their execution of such temporary Securities. If temporary Securities of any series are issued, the Company will cause definitive Securities of such series to be prepared without unreasonable delay. After the preparation of definitive Securities of any series, the temporary Securities of such series shall be exchangeable for definitive Securities of such series and tenor upon surrender of such temporary Securities at the office or agency of the Company designated for such purpose pursuant to Section 4.02, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Securities of any series the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a like Principal amount of definitive Securities of such series and tenor and authorized denominations. Until so exchanged, the temporary Securities of any series shall be entitled to the same benefits under this Indenture as definitive Securities of such series.

Section 2.11. *Cancellation.* The Company at any time may deliver to the Trustee for cancellation any Securities previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever, and may deliver to the Trustee for cancellation any Securities previously authenticated hereunder which the Company has not issued and sold. The Registrar, any transfer agent and the Paying Agent shall forward to the Trustee any Securities surrendered to them for transfer, exchange or payment. The Trustee shall cancel and dispose of in accordance with its customary procedures all Securities surrendered for transfer, exchange, payment or cancellation and shall deliver a certificate of disposition to the Company. The Company may not issue new Securities to replace Securities it has paid in full or delivered to the Trustee for cancellation.

Section 2.12. *CUSIP Numbers.* The Company in issuing the Securities may use “CUSIP,” “ISIN” and/or “CINS” numbers (if then generally in use), and the Trustee shall use CUSIP numbers, ISIN numbers or CINS numbers, as the case may be, in notices of redemption or exchange as a convenience to Holders and no representation shall be made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of redemption or exchange.

Section 2.13. *Defaulted Interest.* If the Company defaults in a payment of interest on the Securities, it shall pay, or shall deposit with the Paying Agent money in immediately available funds sufficient to pay, the defaulted interest plus (to the extent lawful) any interest payable on the defaulted interest (as may be specified in the terms thereof, established pursuant to Section 2.03) to the Persons who are Holders on a subsequent special record date, which shall mean the 15th day next preceding the date fixed by the Company for the payment of defaulted interest, whether or not such day is a Business Day. At least 15 days before such special record date, the Company shall mail to each Holder of such Securities and to the Trustee a notice that states the special record date, the payment date and the amount of defaulted interest to be paid.

Section 2.14. *Series May Include Tranches.* A series of Securities may include one or more tranches (each a “**tranche**”) of Securities, including Securities issued in a Periodic Offering. The Securities of different tranches may have one or more different terms, including authentication dates and public offering prices, but all the Securities within each such tranche shall have identical terms, including authentication date and public offering price.

Notwithstanding any other provision of this Indenture, with respect to Sections 2.02 (other than the fourth, sixth and seventh paragraphs thereof) through 2.04, 2.07, 2.08, 2.10, 3.01 through 3.05, 4.02, 6.01 through 6.14, 8.01 through 8.07, 9.02 and 10.07, if any series of Securities includes more than one tranche, all provisions of such sections applicable to any series of Securities shall be deemed equally applicable to each tranche of any series of Securities in the same manner as though originally designated a series unless otherwise provided with respect to such series or tranche pursuant to Section 2.03. In particular, and without limiting the scope of the next preceding sentence, any of the provisions of such sections which provide for or permit action to be taken with respect to a series of Securities shall also be deemed to provide for and permit such action to be taken instead only with respect to Securities of one or more tranches within that series (and such provisions shall be deemed satisfied thereby), even if no comparable action is taken with respect to Securities in the remaining tranches of that series.

ARTICLE 3 REDEMPTION

Section 3.01. *Applicability of Article.* The provisions of this Article shall be applicable to the Securities of any series that are redeemable before their maturity or to any sinking fund for the retirement of Securities of a series except as otherwise specified as contemplated by Section 2.03 for Securities of such series.

Section 3.02. *Notice of Redemption; Partial Redemptions.* Notice of redemption to the Holders of Securities of any series to be redeemed as a whole or in part at the option of the Company shall be given by mailing notice of such redemption by first class mail, postage prepaid, at least 30 days and not more than 60 days prior to the date fixed for redemption to such Holders of Securities of such series at their last addresses as they shall appear upon the Security Register. Any notice which is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the Holder receives the notice. Failure to give notice by mail, or any defect in the notice to the Holder of any Security of a series designated for redemption as a whole or in part, shall not affect the validity of the proceedings for the redemption of any other Security of such series.

The notice of redemption to each such Holder shall specify the Principal amount of each Security of such series held by such Holder to be redeemed, the CUSIP numbers of the Securities to be redeemed, the date fixed for redemption, the redemption price, or if not then ascertainable, the manner of calculation thereof, the place or places of payment, that payment will be made upon presentation and surrender of such Securities, that such redemption is pursuant to the mandatory or optional sinking fund, or both, if such be the case, that interest accrued to the date fixed for redemption will be paid as specified in such notice and that on and after said date interest thereon or on the portions thereof to be redeemed will cease to accrue. In case any Security of a series is to be redeemed in part only, the notice of redemption shall state the portion of the Principal amount thereof to be redeemed and shall state that on and after the date fixed for redemption, upon surrender of such Security, a new Security or Securities of such series and tenor in Principal amount equal to the unredeemed portion thereof will be issued.

The notice of redemption of Securities of any series to be redeemed at the option of the Company shall be given by the Company or, at the Company's request, by the Trustee in the name and at the expense of the Company.

On or before 10:00 a.m. New York City time on the redemption date specified in the notice of redemption given as provided in this Section, the Company will deposit with the Trustee or with one or more Paying Agents (or, if the Company is acting as its own Paying Agent, set aside, segregate and hold in trust as provided in Section 2.06) an amount of money sufficient to redeem on the redemption date all the Securities of such series so called for redemption at the appropriate redemption price, together with accrued interest to the date fixed for redemption. If all of the outstanding Securities of a series are to be redeemed, the Company will deliver to the Trustee at least 10 days prior to the last date on which notice of redemption may be given to Holders pursuant to the first paragraph of this Section 3.02 (or such shorter period as shall be acceptable to the Trustee) an Officers' Certificate stating that all such Securities are to be redeemed. If less than all the outstanding Securities of a series are to be redeemed, the Company will deliver to the Trustee at least 15 days prior to the last date on which notice of redemption may be given to Holders pursuant to the first paragraph of this Section 3.02 (or such shorter period as shall be acceptable to the Trustee) an Officers' Certificate stating the aggregate Principal amount of such Securities to be redeemed. In the case of any redemption of Securities (a) prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, or (b) pursuant to an election of the Company which is subject to a condition specified in the terms of such Securities or elsewhere in this Indenture, the Company shall deliver to the Trustee, prior to the giving of any notice of redemption to Holders pursuant to this Section, an Officers' Certificate evidencing compliance with such restriction or condition.

If less than all the Securities of a series are to be redeemed, the Trustee shall select, pro rata, by lot or in such manner as it shall deem appropriate and fair, Securities of such series to be redeemed in whole or in part. Securities may be redeemed in part in Principal amounts equal to authorized denominations for Securities of such series. The Trustee shall promptly notify the Company in writing of the Securities of such series selected for redemption and, in the case of any Securities of such series selected for partial redemption, the Principal amount thereof to be redeemed. For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Securities shall relate, in the case of any Security redeemed or to be redeemed only in part, to the portion of the Principal amount of such Security which has been or is to be redeemed.

Section 3.03. *Payment of Securities Called for Redemption.* If notice of redemption has been given as above provided, the Securities or portions of Securities 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 on and after such date (unless the Company shall default in the payment of such Securities at the redemption price, together with interest accrued to such date) interest on the Securities or portions of Securities so called for redemption shall cease to accrue, and, except as provided in Sections 7.12 and 8.02, such Securities shall cease from and after the date fixed for redemption to be entitled to any benefit under this Indenture, and the Holders thereof shall have no right in respect of such Securities except the right to receive the redemption price thereof and unpaid

interest to the date fixed for redemption. On presentation and surrender of such Securities at a place of payment specified in said notice, said Securities or the specified portions thereof shall be paid and redeemed by the Company at the applicable redemption price, together with interest accrued thereon to the date fixed for redemption; provided that payment of interest becoming due on or prior to the date fixed for redemption shall be payable to the Holders registered as such on the relevant record date subject to the terms and provisions of Sections 2.04 and 2.13 hereof.

If any Security called for redemption shall not be so paid upon surrender thereof for redemption, the principal shall, until paid or duly provided for, bear interest from the date fixed for redemption at the rate of interest or Yield to Maturity (in the case of an Original Issue Discount Security) borne by such Security.

Upon presentation of any Security of any series redeemed in part only, the Company shall execute and the Trustee shall authenticate and deliver to or on the order of the Holder thereof, at the expense of the Company, a new Security or Securities of such series and tenor, of authorized denominations, in Principal amount equal to the unredeemed portion of the Security so presented.

Section 3.04. *Exclusion of Certain Securities from Eligibility for Selection for Redemption.* Unless otherwise provided with respect to any series of Securities, Securities shall be excluded from eligibility for selection for redemption if they are identified by registration and certificate number in a written statement signed by an authorized Officer of the Company and delivered to the Trustee at least 40 days prior to the last date on which notice of redemption may be given as being owned of record and beneficially by, and not pledged or hypothecated by, either (a) the Company or (b) an entity specifically identified in such written statement as directly or indirectly controlling or controlled by or under direct or indirect common control with the Company.

Section 3.05. *Mandatory and Optional Sinking Funds.* 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 the Securities of any series is herein referred to as an “optional sinking fund payment.” The date on which a sinking fund payment is to be made is herein referred to as the “sinking fund payment date.”

In lieu of making all or any part of any mandatory sinking fund payment with respect to any series of Securities in cash, the Company may at its option (a) deliver to the Trustee Securities of such series theretofore purchased or otherwise acquired (except through a mandatory sinking fund payment) by the Company or receive credit for Securities of such series (not previously so credited) theretofore purchased or otherwise acquired (except as aforesaid) by the Company and delivered to the Trustee for cancellation pursuant to Section 2.11, (b) receive credit for optional sinking fund payments (not previously so credited) made pursuant to this Section, or (c) receive credit for Securities of such series (not previously so credited) redeemed by the Company at the option of the Company pursuant to the terms of such Securities or through any optional sinking fund payment. Securities so delivered or credited shall be received or credited by the Trustee at the sinking fund redemption price specified in such Securities.

On or before the sixtieth day next preceding each sinking fund payment date for any series, or such shorter period as shall be acceptable to the Trustee, the Company will deliver to the Trustee an Officers' Certificate (a) specifying the portion of the mandatory sinking fund payment to be satisfied by payment of cash and the portion to be satisfied by credit of specified Securities of such series and the basis for such credit, (b) stating that none of the specified Securities of such series has theretofore been so credited, (c) stating that no defaults in the payment of interest or Events of Default with respect to such series have occurred (which have not been waived or cured) and are continuing and (d) stating whether or not the Company intends to exercise its right to make an optional sinking fund payment with respect to such series and, if so, specifying the amount of such optional sinking fund payment which the Company intends to pay on or before the next succeeding sinking fund payment date. Any Securities of such series to be credited and required to be delivered to the Trustee in order for the Company to be entitled to credit therefor as aforesaid which have not theretofore been delivered to the Trustee shall be delivered for cancellation pursuant to Section 2.11 to the Trustee with such Officers' Certificate (or reasonably promptly thereafter if acceptable to the Trustee). Such Officers' Certificate shall be irrevocable and upon its receipt by the Trustee the Company shall become unconditionally obligated to make all the cash payments or delivery of Securities therein referred to, if any, on or before the next succeeding sinking fund payment date. Failure of the Company, on or before any such sixtieth day, to deliver such Officer's Certificate and Securities specified in this paragraph, if any, shall not constitute a default but shall constitute, on and as of such date, the irrevocable election of the Company (i) that the mandatory sinking fund payment for such series due on the next succeeding sinking fund payment date shall be paid entirely in cash without the option to deliver or credit Securities of such series in respect thereof and (ii) that the Company will make no optional sinking fund payment with respect to such series as provided in this Section.

If the sinking fund payment or payments (mandatory or optional or both) to be made in cash on the next succeeding sinking fund payment date plus any unused balance of any preceding sinking fund payments made in cash shall exceed \$50,000 (or a lesser sum if the Company shall so request with respect to the Securities of any series), such cash shall be applied on the next succeeding sinking fund payment date to the redemption of Securities of such series at the sinking fund redemption price thereof together with accrued interest thereon to the date fixed for redemption. If such amount shall be \$50,000 (or such lesser sum) or less and the Company makes no such request then it shall be carried over until a sum in excess of \$50,000 (or such lesser sum) is available. The Trustee shall select, in the manner provided in Section 3.02, for redemption on such sinking fund payment date a sufficient Principal amount of Securities of such series to absorb said cash, as nearly as may be, and shall (if requested in writing by the Company) inform the Company of the serial numbers of the Securities of such series (or portions thereof) so selected. Securities shall be excluded from eligibility for redemption under this Section if they are identified by registration and certificate number in an Officers' Certificate delivered to the Trustee at least 60 days prior to the sinking fund payment date as being owned of record and beneficially by, and not pledged or hypothecated by either (a) the Company or (b) an entity specifically identified in such Officers' Certificate as directly or indirectly controlling or controlled by or under direct or indirect common control with the Company. The Trustee, in the name and at the expense of the Company (or the Company, if it shall so request the Trustee in writing) shall cause notice of redemption of the Securities of such series to be given in substantially the manner provided in Section 3.02 (and with the effect provided in Section 3.03) for the redemption of Securities of such series in part at the option of the Company. The amount

of any sinking fund payments not so applied or allocated to the redemption of Securities of such series shall be added to the next cash sinking fund payment for such series and, together with such payment, shall be applied in accordance with the provisions of this Section. Any and all sinking fund moneys held on the stated maturity date of the Securities of any particular series (or earlier, if such maturity is accelerated), which are not held for the payment or redemption of particular Securities of such series shall be applied, together with other moneys, if necessary, sufficient for the purpose, to the payment of the Principal of, and interest on, the Securities of such series at maturity.

On or before 10:00 a.m. New York City time on each sinking fund payment date, the Company shall pay to the Trustee in cash or shall otherwise provide for the payment of all interest accrued to the date fixed for redemption on Securities to be redeemed on the next following sinking fund payment date.

The Trustee shall not redeem or cause to be redeemed any Securities of a series with sinking fund moneys or mail any notice of redemption of Securities of such series by operation of the sinking fund during the continuance of a Default in payment of interest on such Securities or of any Event of Default except that, where the mailing of notice of redemption of any Securities shall theretofore have been made, the Trustee shall redeem or cause to be redeemed such Securities, provided that it shall have received from the Company a sum sufficient for such redemption. Except as aforesaid, any moneys in the sinking fund for such series at the time when any such Default or Event of Default shall occur, and any moneys thereafter paid into the sinking fund, shall, during the continuance of such Default or Event of Default, be deemed to have been collected under Article 6 and held for the payment of all such Securities. In case such Event of Default shall have been waived as provided in Section 6.04 or the Default cured on or before the sixtieth day preceding the sinking fund payment date in any year, such moneys shall thereafter be applied on the next succeeding sinking fund payment date in accordance with this Section to the redemption of such Securities.

ARTICLE 4 COVENANTS

Section 4.01. *Payment of Securities.* The Company shall pay the Principal of and interest on the Securities on the dates and in the manner provided in the Securities and this Indenture. The interest on Securities (together with any additional amounts payable pursuant to the terms of such Securities) shall be payable only to the Holders thereof (subject to Section 2.04) and at the option of the Company may be paid by mailing checks for such interest payable to or upon the written order of such Holders at their last addresses as they appear on the Security Register of the Company.

Notwithstanding any provisions of this Indenture and the Securities of any series to the contrary, if the Company and a Holder of any Security so agree, payments of interest on, and any portion of the Principal of, such Holder's Security (other than interest payable at maturity or on any redemption or repayment date or the final payment of Principal on such Security) shall be made by the Paying Agent, upon receipt from the Company of immediately available funds by 11:00 A.M., New York City time (or such other time as may be agreed to between the Company and the Paying Agent), directly to the Holder of such Security (by Federal funds wire transfer or

otherwise) if the Holder has delivered written instructions to the Trustee 15 days prior to such payment date requesting that such payment will be so made and designating the bank account to which such payments shall be so made and in the case of payments of Principal, surrenders the same to the Trustee in exchange for a Security or Securities aggregating the same Principal amount as the unredeemed Principal amount of the Securities surrendered. The Trustee shall be entitled to rely on the last instruction delivered by the Holder pursuant to this Section 4.01 unless a new instruction is delivered 15 days prior to a payment date. The Company will indemnify and hold each of the Trustee and any Paying Agent harmless against any loss, liability or expense (including attorneys' fees) resulting from any act or omission to act on the part of the Company or any such Holder in connection with any such agreement or from making any payment in accordance with any such agreement.

The Company shall pay interest on overdue Principal, and interest on overdue installments of interest, to the extent lawful, at the rate per annum specified in the Securities.

Section 4.02. *Maintenance of Office or Agency.* The Company will maintain in the United States of America, an office or agency where Securities may be surrendered for registration of transfer or exchange or for presentation for payment and where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served. The Company hereby initially designates [], as such office or agency of the Company. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency. 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, surrenders, notices and demands may be made or served at the address of the Trustee set forth in Section 10.02.

The Company may also from time to time designate one or more other offices or agencies where the Securities of any series may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in the United States of America 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 location of any such other office or agency.

Section 4.03. *Securityholders' Lists.* The Company will furnish or cause to be furnished to the Trustee a list in such form as the Trustee may reasonably require of the names and addresses of the holders of the Securities pursuant to Section 312 of the Trust Indenture Act (a) semi-annually not more than 15 days after each record date for the payment of semi-annual interest on the Securities, as hereinabove specified, as of such record date, and (b) at such other times as the Trustee may request in writing, within thirty days after receipt by the Company of any such request as of a date not more than 15 days prior to the time such information is furnished.

Section 4.04. *Certificate to Trustee.* The Company will furnish to the Trustee annually, on or before a date not more than four months after the end of its fiscal year (which, on the date hereof, is a calendar year), a brief certificate (which need not contain the statements required by Section 10.04) from its principal executive, financial or accounting officer as to his or her knowledge of the compliance of the Company with all conditions and covenants under this Indenture (such compliance to be determined without regard to any period of grace or requirement of notice provided under this Indenture) which certificate shall comply with the requirements of the Trust Indenture Act.

Section 4.05. *Reports by the Company.* The Company covenants to file with the Trustee, within 15 days after the Company files the same with the Commission, copies of the annual reports and of the information, documents, and other reports which the Company may be required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act.

Section 4.06. *Additional Amounts.* If the Securities of a series provide for the payment of additional amounts, at least 10 days prior to the first interest payment date with respect to that series of Securities and at least 10 days prior to each date of payment of Principal of or interest on the Securities of that series if there has been a change with respect to the matters set forth in the below-mentioned Officers' Certificate, the Company shall furnish to the Trustee and the principal paying agent, if other than the Trustee, an Officers' Certificate instructing the Trustee and such paying agent whether such payment of Principal of or interest on the Securities of that series shall be made to Holders of the Securities of that series without withholding or deduction for or on account of any tax, assessment or other governmental charge described in the Securities of that series. If any such withholding or deduction shall be required, then such Officers' Certificate shall specify by country the amount, if any, required to be withheld or deducted on such payments to such Holders and shall certify the fact that additional amounts will be payable and the amounts so payable to each Holder, and the Company shall pay to the Trustee or such paying agent the additional amounts required to be paid by this Section. The Company covenants to indemnify the Trustee and any paying agent for, and to hold them harmless against, any loss, liability or expense reasonably incurred without negligence or bad faith on their part arising out of or in connection with actions taken or omitted by any of them in reliance on any Officers' Certificate furnished pursuant to this Section.

Whenever in this Indenture there is mentioned, in any context, the payment of the Principal of or interest or any other amounts on, or in respect of, any Security of any series, such mention shall be deemed to include mention of the payment of additional amounts provided by the terms of such series established hereby or pursuant hereto to the extent that, in such context, additional amounts are, were or would be payable in respect thereof pursuant to such terms, and express mention of the payment of additional amounts (if applicable) in any provision hereof shall not be construed as excluding the payment of additional amounts in those provisions hereof where such express mention is not made.

ARTICLE 5 SUCCESSOR CORPORATION

Section 5.01. *When Company May Merge, Etc.* Unless otherwise provided pursuant to Section 2.03 in connection with the establishment of a series, the Company shall not consolidate or combine with, merge with or into, directly or indirectly, or sell, assign, convey, transfer, lease or otherwise dispose of all or substantially all of its property and assets to any Person or Persons in a single transaction or through a series of transactions unless:

(a) the Company shall be the continuing Person or, if the Company is not the continuing Person, the resulting, surviving or transferee Person (the “**Surviving Entity**”) is a company organized and existing under the laws of any member state of the European Union or the United States of America or any State or territory thereof;

(b) the Surviving Entity shall expressly assume all of the Company’s obligations under the Securities and this Indenture, and shall, if required by law to effectuate the assumption, execute supplemental indentures which shall be delivered to the Trustee and shall be in form and substance reasonably satisfactory to the Trustee;

(c) immediately after giving effect to such transaction or series of transactions on a pro forma basis, no Default has occurred and is continuing; and

(d) the Company or the Surviving Entity shall have delivered to the Trustee an Officers’ Certificate and Opinion of Counsel stating that (x) the transaction or series of transactions and such supplemental indenture, if any, complies with this Section 5.01, (y) such supplemental indenture (if any) constitutes the legal, valid and binding obligation of the Company and such Surviving Entity enforceable against such Surviving Entity in accordance with its terms, subject to customary exceptions and (z) all conditions precedent in this Indenture relating to the transaction or series of transactions have been satisfied.

Section 5.02. *Successor Substituted.* Upon any consolidation, combination or merger, or any sale, assignment, conveyance, transfer, lease or other disposition of all or substantially all of the property and assets of the Company in accordance with Section 5.01 of this Indenture, the Surviving Entity 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 Surviving Entity had been named as the Company herein and thereafter the predecessor Person, except in the case of (x) a lease or (y) any sale, assignment, conveyance, transfer, lease or other disposition to one or more Subsidiaries of the Company, shall be discharged from all obligations and covenants under this Indenture and the Securities.

ARTICLE 6 DEFAULT AND REMEDIES

Section 6.01. *Events of Default.* An “**Event of Default**” shall occur with respect to the Securities of any series if:

(a) the Company defaults in the payment of the Principal of any Security of such series when the same becomes due and payable at maturity, upon acceleration, redemption or mandatory repurchase, including as a sinking fund installment, or otherwise;

(b) the Company defaults in the payment of interest on any Security of such series when the same becomes due and payable, and such default continues for a period of 30 days;

(c) the Company defaults in the performance of or breaches any other covenant or agreement of the Company in this Indenture with respect to any Security of such series or in the Securities of such series (other than a covenant or agreement in respect of which noncompliance by the Company would otherwise be an Event of Default) and such default or breach continues for a period of 90 consecutive days or more after written notice to the Company by the Trustee or to the Company and the Trustee by the Holders of 25% or more in aggregate Principal amount of the Securities of all series affected thereby specifying such default or breach and requiring it to be remedied and stating that such notice is a “Notice of Default” hereunder;

(d) a court having jurisdiction in the premises shall enter a decree or order for relief in respect of the Company in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of the Company or for any substantial part of its property or ordering the winding up or liquidation of its affairs, and such decree or order shall remain unstayed and in effect for a period of 60 consecutive days;

(e) the Company (i) commences a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consents to the entry of an order for relief in an involuntary case under any such law, (ii) consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company or for all or substantially all of the property and assets of the Company or (iii) effects any general assignment for the benefit of creditors; or

(f) any other Event of Default established pursuant to Section 2.03 with respect to the Securities of such series occurs.

Section 6.02. *Acceleration.* (a) If an Event of Default other than as described in clauses (d) or (e) of Section 6.01 with respect to the Securities of any series then outstanding occurs and is continuing, then, and in each and every such case, except for any series of Securities the Principal of which 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 all such series then outstanding hereunder in respect of which an Event of Default has occurred (all such series voting together as a single class) by notice in writing to the Company (and to the Trustee if given by Securityholders), may declare the entire Principal (or, if the Securities of any such series are Original Issue Discount Securities, such portion of the Principal amount as may be specified in the terms of such series established pursuant to Section 2.03) of all Securities of the affected series, and the interest accrued thereon, if any, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable.

(b) If an Event of Default described in clause (d) or (e) of Section 6.01 occurs and is continuing, then the Principal amount (or, if any Securities are Original Issue Discount Securities, such portion of the Principal as may be specified in the terms thereof established pursuant to Section 2.03) of all the Securities then outstanding and interest accrued thereon, if any, shall be and become immediately due and payable, without any declaration, notice or other action by any Holder or the Trustee, to the full extent permitted by applicable law.

The foregoing provisions, however, are subject to the condition that if, at any time after the Principal (or, if the Securities are Original Issue Discount Securities, such portion of the Principal as may be specified in the terms thereof established pursuant to Section 2.03) of the Securities of any series (or of all the Securities, as the case may be) shall have been so declared or become 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 Company shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of each such series (or of all the Securities, as the case may be) and the Principal of any and all Securities of each such series (or of all the Securities, as the case may be) which shall have become due otherwise than by acceleration (with interest upon such Principal and, to the extent that payment of such interest is enforceable under applicable law, on overdue installments of interest, at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of each such series to the date of such payment or deposit) and such amount as shall be sufficient to cover all amounts owing the Trustee under Section 7.07, and if any and all Events of Default under the Indenture, other than the non-payment of the Principal of and interest on Securities which shall have become due by acceleration, shall have been cured, waived or otherwise remedied as provided herein, then and in every such case the Holders of a majority in aggregate Principal amount of all the then outstanding Securities of all such series that have been accelerated (voting as a single class), by written notice to the Company and to the Trustee, may waive all defaults with respect to all such series (or with respect to all the Securities, as the case may be) and rescind and annul such declaration and its consequences, but no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or shall impair any right consequent thereon.

For all purposes under this Indenture, if a portion of the Principal of any Original Issue Discount Securities shall have been accelerated and declared or become due and payable pursuant to the provisions hereof, then, from and after such declaration, unless such declaration has been rescinded and annulled, the Principal amount of such Original Issue Discount Securities shall be deemed, for all purposes hereunder, to be such portion of the Principal thereof as shall be due and payable as a result of such acceleration, and payment of such portion of the Principal thereof as shall be due and payable as a result of such acceleration, together with interest, if any, thereon and all other amounts owing thereunder, shall constitute payment in full of such Original Issue Discount Securities.

Section 6.03. *Other Remedies.* If a payment default or an Event of Default with respect to the Securities of any series occurs and is continuing, the Trustee may pursue, in its own name or as trustee of an express trust, any available remedy by proceeding at law or in equity to collect the payment of Principal of and interest on the Securities of such series or to enforce the performance of any provision of the Securities of such series or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Securities or does not produce any of them in the proceeding.

Section 6.04. *Waiver of Past Defaults.* Subject to Sections 6.02, 6.07 and 9.02, the Holders of at least a majority in Principal amount (or, if the Securities are Original Issue Discount Securities, such portion of the Principal as is then accelerable under Section 6.02) of the outstanding Securities of all series affected (voting as a single class), by notice to the Trustee, may waive an existing Default or Event of Default with respect to the Securities of such series and its consequences, except a Default in the payment of Principal of or interest on any Security as specified in clauses (a) or (b) of Section 6.01 or in respect of a covenant or provision of this Indenture which cannot be modified or amended without the consent of the Holder of each outstanding Security affected. Upon any such waiver, such Default shall cease to exist, and any Event of Default with respect to the Securities of such series arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other Default or Event of Default or impair any right consequent thereto.

Section 6.05. *Control by Majority.* Subject to Sections 7.01 and 7.02(e), the Holders of at least a majority in aggregate Principal amount (or, if any Securities are Original Issue Discount Securities, such portion of the Principal as is then accelerable under Section 6.02) of the outstanding Securities of all series affected (voting as a single class) may 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 by this Indenture; *provided*, that the Trustee may refuse to follow any direction that conflicts with law or this Indenture, that may involve the Trustee in personal liability or that the Trustee determines in good faith may be unduly prejudicial to the rights of Holders not joining in the giving of such direction; and provided further, that the Trustee may take any other action it deems proper that is not inconsistent with any directions received from Holders of Securities pursuant to this Section 6.05.

Section 6.06. *Limitation on Suits.* No Holder of any Security of any series may institute any proceeding, judicial or otherwise, with respect to this Indenture or the Securities of such series, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless:

- (a) such Holder has previously given to the Trustee written notice of a continuing Event of Default with respect to the Securities of such series;
- (b) the Holders of at least 25% in aggregate Principal amount of outstanding Securities of all such series affected 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 indemnity or security reasonably satisfactory to it against any costs, liabilities or expenses to be incurred in compliance with such request;
- (d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and
- (e) during such 60-day period, the Holders of a majority in aggregate Principal amount of the outstanding Securities of all such affected series have not given the Trustee a direction that is inconsistent with such written request.

A Holder may not use this Indenture to prejudice the rights of another Holder or to obtain a preference or priority over such other Holder.

Section 6.07. *Rights of Holders to Receive Payment.* Notwithstanding any other provision of this Indenture, the right of any Holder of a Security to receive payment of Principal of or interest, if any, on such Holder's Security on or after the respective due dates expressed on such Security, or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

Section 6.08. *Collection Suit by Trustee.* If an Event of Default with respect to the Securities of any series in payment of Principal or interest specified in clause (a) or (b) of Section 6.01 occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Company for the whole amount (or such portion thereof as specified in the terms established pursuant to Section 2.03 of Original Issue Discount Securities) of Principal of, and accrued interest remaining unpaid on, together with interest on overdue Principal of, and, to the extent that payment of such interest is lawful, interest on overdue installments of interest on, the Securities of such series, in each case at the rate or Yield to Maturity (in the case of Original Issue Discount Securities) specified in such Securities, and such further amount as shall be sufficient to cover all amounts owing the Trustee under Section 7.07.

Section 6.09. *Trustee May File Proofs of Claim.* The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for amounts due the Trustee under Section 7.07) and the Holders allowed in any judicial proceedings relative to the Company (or any other obligor on the Securities), its creditors or its property and shall be entitled and empowered to collect and receive any moneys, securities or other property payable or deliverable upon conversion or exchange of the Securities or upon 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 to it under Section 7.07. Nothing herein contained shall be deemed to empower 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 6.10. *Application of Proceeds.* Any moneys collected by the Trustee pursuant to this Article in respect of the Securities of any series 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 interest, upon presentation of the several Securities in respect of which moneys have been collected and noting thereon the payment, or issuing Securities of such series and tenor in reduced Principal amounts in exchange for the presented Securities of such series and tenor if only partially paid, or upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 7.07 applicable to the Securities of such series in respect of which moneys have been collected;

SECOND: In case the Principal of the Securities of such series in respect of which moneys have been collected shall not have become and be then due and payable, to the payment of interest on the Securities of such series in default in the order of the maturity of the installments of such interest, with interest (to the extent that such interest has been collected by the Trustee) upon the overdue installments of interest at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in such Securities, such payments to be made ratably to the persons entitled thereto, without discrimination or preference;

THIRD: In case the Principal of the Securities of such series in respect of which moneys have been collected shall have become and shall be then due and payable, to the payment of the whole amount then owing and unpaid upon all the Securities of such series for Principal and interest, with interest upon the overdue Principal, and (to the extent that such interest has been collected by the Trustee) upon overdue installments of interest at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of such series; and in case such moneys shall be insufficient to pay in full the whole amount so due and unpaid upon the Securities of such series, then to the payment of such Principal and interest or Yield to Maturity, without preference or priority of Principal over interest or Yield to Maturity, or of interest or Yield to Maturity over Principal, or of any installment of interest over any other installment of interest, or of any Security of such series over any other Security of such series, ratably to the aggregate of such Principal and accrued and unpaid interest or Yield to Maturity; and FOURTH: To the payment of the remainder, if any, to the Company or any other person lawfully entitled thereto.

Section 6.11. *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 to their former positions hereunder and thereafter all rights and remedies of the Company, Trustee and the Holders shall continue as though no such proceeding had been instituted.

Section 6.12. *Undertaking for Costs.* 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, in either case in respect to the Securities of any series, a court may require any party litigant in such suit (other than the Trustee) to file an undertaking to pay the costs of the suit, and the court may assess reasonable costs, including reasonable attorneys' fees, against any party litigant (other than the Trustee) in the suit having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section 6.12 does not apply to a suit by a Holder pursuant to Section 6.07, a suit instituted by the Trustee or a suit by Holders of more than 10% in Principal amount of the outstanding Securities of such series.

Section 6.13. *Rights and Remedies Cumulative.* Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or wrongfully taken Securities in Section 2.08, 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 6.14. *Delay or Omission not Waiver.* No delay or omission of the Trustee or of any Holder 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 6 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.

ARTICLE 7
TRUSTEE

Section 7.01. *General.* The duties and responsibilities of the Trustee shall be as provided by the Trust Indenture Act and as set forth herein. Notwithstanding the foregoing, no provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, unless it receives indemnity satisfactory to it against any loss, liability or expense. Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Article 7.

Section 7.02. *Certain Rights of Trustee.* Subject to Trust Indenture Act Sections 315(a) through (d):

(a) the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, Officers' Certificate, Opinion of Counsel (or both), statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document believed by it to be genuine and to have been signed or presented by the proper person or persons. The Trustee need not investigate any fact or matter stated in the document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit;

(b) before the Trustee acts or refrains from acting, it may require an Officers' Certificate and/or an Opinion of Counsel, which shall conform to Section 10.04 and shall cover such other matters as the Trustee may reasonably request. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such certificate or opinion. Subject to Sections 7.01 and 7.02, whenever in the administration of the trusts 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 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 by it under the provisions of this Indenture upon the faith thereof;

(c) the Trustee may act through its attorneys and agents not regularly in its employ and shall not be responsible for the misconduct or negligence of any agent or attorney appointed with due care;

(d) any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by an Officers' Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any Board Resolution may be evidenced to the Trustee by a copy thereof certified by the Secretary or an Assistant Secretary of the Company;

(e) 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 Holders, unless such Holders shall have offered to the Trustee security or indemnity reasonably satisfactory to it against any costs, expenses or liabilities that might be incurred by it in compliance with such request or direction;

(f) the Trustee shall not be liable for any action it takes or omits to take in good faith that it believes to be authorized or within its rights or powers or for any action it takes or omits to take in accordance with the direction of the Holders in accordance with Section 6.05 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;

(g) 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, suffered or omitted by it hereunder in good faith and in reliance thereon; and

(h) prior to the occurrence of an Event of Default hereunder and after the curing or waiving of all Events of Default, the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, Officers' Certificate, Opinion of Counsel, Board Resolution, statement, instrument, opinion, report, notice, request, consent, order, approval, appraisal, bond, debenture, note, coupon, security, or other paper or document unless requested in writing so to do by the Holders of not less than a majority in aggregate Principal amount of the Securities of all series affected then outstanding; provided 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 expenses or liabilities as a condition to proceeding.

Section 7.03. *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 its Affiliates with the same rights it would have if it were not the Trustee. Any Agent may do the same with like rights. However, the Trustee is subject to Trust Indenture Act Sections 310(b) and 311. For purposes of Trust Indenture Act Section 311(b)(4) and (6), the following terms shall mean:

(a) "**cash transaction**" means any transaction in which full payment for goods or securities sold is made within seven days after delivery of the goods or securities in currency or in checks or other orders drawn upon banks or bankers and payable upon demand; and

(b) "**self-liquidating paper**" means any draft, bill of exchange, acceptance or obligation which is made, drawn, negotiated or incurred by the Company for the purpose of financing the purchase, processing, manufacturing, shipment, storage or sale of goods, wares or merchandise and which is secured by documents evidencing title to, possession of, or a lien upon, the goods, wares or merchandise or the receivables or proceeds arising from the sale of the goods, wares or merchandise previously constituting the security, provided the security is received by the Trustee simultaneously with the creation of the creditor relationship with the Company arising from the making, drawing, negotiating or incurring of the draft, bill of exchange, acceptance or obligation.

Section 7.04. *Trustee's Disclaimer.* The recitals contained herein and in the Securities (except the Trustee's certificate of authentication) shall be taken as statements of the Company and not of the Trustee and the Trustee assumes no responsibility for the correctness of the same. Neither the Trustee nor any of its agents (a) makes any representation as to the validity or adequacy of this Indenture or the Securities and (b) shall be accountable for the Company's use or application of the proceeds from the Securities.

Section 7.05. *Notice of Default.* If any Default with respect to the Securities of any series occurs and is continuing and if such Default is known to the actual knowledge of a Responsible Officer with the Corporate Trust Office of the Trustee, the Trustee shall give to each Holder of Securities of such series notice of such Default within 90 days after it occurs to all Holders of Securities of such series in the manner and to the extent provided in Section 313(a) of the Trust Indenture Act, unless such Default shall have been cured or waived before the mailing of such notice; *provided, however,* that, except in the case of a Default in the payment of the Principal of or interest on any Security, the Trustee shall be protected in withholding such notice if the Trustee in good faith determines that the withholding of such notice is in the interests of the Holders.

Section 7.06. *Reports by Trustee to Holders.* The Trustee shall transmit to Holders such reports concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto. If required by Section 313(a) of the Trust Indenture Act, the Trustee shall, within 60 days after each May 15 following the date of this Indenture, deliver to Holders a brief report, dated as of such May 15, which complies with the provisions of such Section 313(a).

A copy of each such report shall, at the time of such transmission to Holders, be filed by the Trustee with each stock exchange upon which any Securities are listed, with the Commission and with the Company. The Company will promptly notify the Trustee when any Securities are listed on any stock exchange.

Section 7.07. *Compensation and Indemnity.* The Company shall pay to the Trustee such compensation as shall be agreed upon in writing from time to time for its services. The compensation of the Trustee shall not be limited by any law on compensation of a Trustee of an express trust. The Company shall reimburse the Trustee and any predecessor Trustee upon request for all reasonable out-of-pocket expenses, disbursements and advances incurred or made by the Trustee or such predecessor Trustee. Such expenses shall include the reasonable compensation and expenses of the Trustee's or such predecessor Trustee's agents, counsel and other persons not regularly in their employ.

The Company shall indemnify the Trustee and any predecessor Trustee for, and hold them harmless against, any loss or liability or expense incurred by them without negligence or bad faith on their part arising out of or in connection with the acceptance or administration of this Indenture and the Securities or the issuance of the Securities or of series thereof or the trusts hereunder and the performance of duties under this Indenture and the Securities, including the costs and expenses of defending themselves against or investigating any claim or liability and of complying with any process served upon them or any of their officers in connection with the exercise or performance of any of their powers or duties under this Indenture and the Securities.

To secure the Company's payment obligations in this Section 7.07, the Trustee shall have a lien prior to the Securities on all money or property held or collected by the Trustee, in its capacity as Trustee, except money or property held in trust to pay Principal of, and interest on particular Securities.

The obligations of the Company under this Section to compensate and indemnify the Trustee and each predecessor Trustee and to pay or reimburse the Trustee and each predecessor Trustee for expenses, disbursements and advances shall constitute additional indebtedness hereunder and shall survive the satisfaction and discharge of this Indenture or the rejection or termination of this Indenture under bankruptcy law. Such additional indebtedness shall be a senior claim 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, and the Securities are hereby subordinated to such senior claim. Without prejudice to any other rights available to the Trustee under applicable law, if the Trustee renders services and incurs expenses following an Event of Default under Section 6.01(d) or Section 6.01(e) hereof, the parties hereto and the holders by their acceptance of the Securities hereby agree that such expenses are intended to constitute expenses of administration under any bankruptcy law.

Section 7.08. *Replacement of Trustee.* A resignation or removal of the Trustee as Trustee with respect to the Securities of any series and appointment of a successor Trustee as Trustee with respect to the Securities of any series shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section 7.08.

The Trustee may resign as Trustee with respect to the Securities of any series at any time by so notifying the Company in writing. The Holders of a majority in Principal amount of the outstanding Securities of any series may remove the Trustee as Trustee with respect to the Securities of such series by so notifying the Trustee in writing and may appoint a successor Trustee with respect thereto with the consent of the Company. The Company may remove the Trustee as Trustee with respect to the Securities of any series if: (i) the Trustee is no longer eligible under Section 7.11 of this Indenture; (ii) the Trustee is adjudged a bankrupt or insolvent; (iii) a receiver or other public officer takes charge of the Trustee or its property; or (iv) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed as Trustee with respect to the Securities of any series, or if a vacancy exists in the office of Trustee with respect to the Securities of any series for any reason, the Company shall promptly appoint a successor Trustee with respect thereto. Within one year after the successor Trustee takes office, the Holders of a majority in Principal amount of the outstanding Securities of such series may appoint a successor Trustee in respect of such Securities to replace the successor Trustee appointed by the Company. If the successor Trustee with respect to the Securities of any series does not deliver its written acceptance required by Section 7.09 within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Holders of a majority in Principal amount of the outstanding Securities of such series may petition any court of competent jurisdiction for the appointment of a successor Trustee with respect thereto.

The Company shall give notice of any resignation and any removal of the Trustee with respect to the Securities of any series and each appointment of a successor Trustee in respect of the Securities of such series to all Holders of Securities of such series. Each notice shall include the name of the successor Trustee and the address of its Corporate Trust Office.

Notwithstanding replacement of the Trustee with respect to the Securities of any series pursuant to this Section 7.08 and Section 7.09, the Company's obligations under Section 7.07 shall continue for the benefit of the retiring Trustee.

Section 7.09. Acceptance of Appointment by Successor. 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 and subject to the lien provided for in Section 7.07, 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.

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) if the retiring Trustee is not retiring with respect to all Securities, 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 and 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 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 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 all 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.

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 the first or second preceding paragraph, as the case may be.

No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be eligible under this Article and qualified under Section 310(b) of the Trust Indenture Act.

Section 7.10. *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 or national banking association, the resulting, surviving or transferee corporation or national banking association without any further act shall be the successor Trustee with the same effect as if the successor Trustee had been named as the Trustee herein.

Section 7.11. *Eligibility.* This Indenture shall always have a Trustee who satisfies the requirements of Trust Indenture Act Section 310(a). The Trustee shall have a combined capital and surplus of at least \$25,000,000 as set forth in its most recent published annual report of condition.

Section 7.12. *Money Held in Trust.* 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 and except for money held in trust under Article 8 of this Indenture.

ARTICLE 8

SATISFACTION AND DISCHARGE OF INDENTURE; UNCLAIMED MONEYS

Section 8.01. *Satisfaction and Discharge of Indenture.* If at any time (a) (i) all Securities of any series issued that have been authenticated and delivered have been delivered by the Company to the Trustee for cancellation (other than Securities of such series which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 2.08); or (ii) all the Securities of any series issued that have not been delivered by the Company 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 by such Trustee in the Company's name and at the Company's expense, the Company shall have irrevocably deposited or caused to be deposited with the Trustee as trust funds the entire amount in cash (other than moneys repaid by the Trustee or any paying agent to the Company in accordance with Section 8.04) or U.S. Government Obligations, maturing as to principal and interest in such amounts and at such times as will insure (without consideration of the reinvestment of such interest) the availability of cash, or a combination thereof, sufficient to pay at maturity or upon redemption all Securities of such series (other than any Securities of such series which shall have been destroyed, lost or stolen and which shall have been replaced or paid as provided in Section

2.08) not theretofore delivered to the Trustee for cancellation, including Principal and interest due or to become due on or prior to such date of maturity or redemption as the case may be; (b) the Company has paid or caused to be paid all other sums then due and payable under this Indenture; and (c) the Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent under this Indenture relating to the satisfaction and discharge of this Indenture pursuant to this Section 8.01 have been complied with, then this Indenture shall cease to be of further effect with respect to Securities of such series (except as to (i) rights of registration of transfer and exchange of securities of such series, and the Company's right of optional redemption, if any, (ii) substitution of mutilated, defaced, destroyed, lost or stolen Securities, (iii) rights of holders to receive payments of Principal thereof and interest thereon, upon the original stated due dates therefor (but not upon acceleration) and remaining rights of the holders to receive mandatory sinking fund payments, if any, (iv) the rights, obligations and immunities of the Trustee hereunder and (v) the rights of the Securityholders of such series as beneficiaries hereof with respect to the property so deposited with the Trustee payable to all or any of them), and the Trustee, on demand of the Company accompanied by an Officers' Certificate and an Opinion of Counsel and at the cost and expense of the Company, shall execute proper instruments acknowledging such satisfaction of and discharging this Indenture with respect to such series; provided that the rights of Holders of the Securities to receive amounts in respect of Principal of and interest on the Securities held by them shall not be delayed longer than required by then-applicable mandatory rules or policies of any securities exchange upon which the Securities are listed. The Company agrees to reimburse the Trustee for any costs or expenses thereafter reasonably and properly incurred and to compensate the Trustee for any services thereafter reasonably and properly rendered by the Trustee in connection with this Indenture or the Securities of such series.

Section 8.02. Application by Trustee of Funds Deposited for Payment of Securities. Subject to Section 8.04, all moneys (including U.S. Government Obligations and the proceeds thereof) deposited with the Trustee pursuant to Section 8.01, Section 8.05 or Section 8.06 shall be held in trust and applied by it to the payment, either directly or through any paying agent to the Holders of the particular Securities of such series for the payment or redemption of which such moneys have been deposited with the Trustee, of all sums due and to become due thereon for Principal and interest; but such money need not be segregated from other funds except to the extent required by law.

Section 8.03. Repayment of Moneys Held by Paying Agent. In connection with the satisfaction and discharge of this Indenture with respect to Securities of any series, all moneys then held by any paying agent under the provisions of this Indenture with respect to such series of Securities shall, upon demand of the Company, be repaid to it or paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys.

Section 8.04. Return of Moneys Held by Trustee and Paying Agent Unclaimed for Two Years. Any moneys deposited with or paid to the Trustee or any paying agent for the payment of the Principal of or interest on any Security of any series and not applied but remaining unclaimed for two years after the date upon which such Principal or interest shall have become due and payable, shall, upon the written request of the Company and unless otherwise required by mandatory provisions of applicable escheat or abandoned or unclaimed property law, be repaid

to the Company by the Trustee for such series or such paying agent, and the Holder of the Security of such series shall, unless otherwise required by mandatory provisions of applicable escheat or abandoned or unclaimed property laws, thereafter look only to the Company for any payment which such Holder may be entitled to collect, and all liability of the Trustee or any paying agent with respect to such moneys shall thereupon cease.

Section 8.05. *Defeasance and Discharge of Indenture.* The Company shall be deemed to have paid and shall be discharged from any and all obligations in respect of the Securities of any series, after the deposit referred to in clause (i) hereof has been made, and the provisions of this Indenture shall no longer be in effect with respect to the Securities of such series (and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging the same), except as to: (a) rights of Holders of the Securities of such series to receive payments of Principal thereof, premium thereto, and interest thereon, upon the original stated due dates therefor, (b) the Company's obligations with respect to the issuance of temporary Securities and the registration of transfer with respect to the Securities of such series, the Company's right of optional redemption, substitution of mutilated, defaced, destroyed, lost or stolen Securities of such series and the maintenance of an office or agency for payment for security payments held in trust pursuant to clause (i) hereof, (c) the rights, obligations and immunities of the Trustee hereunder, and (d) the defeasance provisions contained in Article 8 of this Indenture; provided that the following conditions shall have been satisfied:

(i) with reference to this Section 8.05 the Company irrevocably has deposited or caused to be deposited with the Trustee (or another qualifying trustee satisfying the requirements of Section 7.11) as trust funds in trust, for the purposes of making the following payments, specifically pledged as security for, and dedicated solely to, the benefit of the Holders of the Securities of such series, (A) money in an amount, (B) U.S. Government Obligations which through the payment of interest and principal in respect thereof in accordance with their terms will provide not later than one day before the due date of any payment referred to in subclause (x) or (y) of this clause (i), or (C) a combination thereof, in each case sufficient, in the written opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay and discharge, without consideration of reinvestment and after payment of all federal, state and local taxes or other charges and assessments in respect thereof, and which shall be applied by the Trustee to pay and discharge (x) all of the Principal of, premium, if any, and each installment of interest on the outstanding Securities of such series on the maturity or due dates thereof or if the Company has made irrevocable arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee, the redemption date, as the case may be, and (y) any mandatory sinking fund payments or analogous 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 Securities of such series and the Indenture with respect to the Securities of such series;

(ii) the Company has delivered to the Trustee an Opinion of Counsel to the effect that, under then applicable U.S. federal income tax law, Holders of Securities of such series will not recognize gain or loss for U.S. federal income tax purposes as a result of the Company's exercise of its option under this Section 8.05 and will be subject to U.S. 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;

(iii) no Default under either clause (d) or clause (e) of Section 6.01 shall have occurred and be continuing at such time;

(iv) if at such time the Securities of such series are listed on a national securities exchange, the Company has delivered to the Trustee an Opinion of Counsel to the effect that the Securities of such series will not be delisted as a result of such deposit, defeasance and discharge;

(v) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent to the defeasance and discharge under this Section 8.05 have been complied with; and (vi) if the Securities of such series are to be redeemed prior to the final maturity thereof (other than from mandatory sinking fund payments or analogous payments), notice of such redemption shall have been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee shall have been made.

Section 8.06. *Defeasance of Certain Obligations.* The Company may omit to comply with any term, provision or condition set forth in, and this Indenture will no longer be in effect with respect to, any covenant established pursuant to Section 2.03(s) and clause (c) and clause (f) (with respect to any covenants established pursuant to Section 2.03(s)) of Section 6.01 shall be deemed not to constitute a Default or an Event of Default with respect to Securities of any series, if:

(a) with reference to this Section 8.06, the Company has irrevocably deposited or caused to be deposited with the Trustee (or another qualifying trustee satisfying the requirements of Section 7.11) as trust funds in trust, for the purposes of making the following payments, specifically pledged as security for, and dedicated solely to, the benefits of the Holders of the Securities of such series, (i) money in an amount, (ii) U.S. Government Obligations which through the payment of interest and principal in respect thereof in accordance with their terms will provide not later than one day before the due date of any payment referred to in subclause (x) or (y) of this clause (a), or (iii) a combination thereof, in each case sufficient, in the written opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay and discharge, without consideration of reinvestment and after payment of all federal, state and local taxes or other charges and assessments in respect thereof, and which shall be applied by the Trustee to pay and discharge (x) all of the Principal of, premium, if any, and each installment of interest on the outstanding Securities of such series on the maturity or due dates thereof or if the Company has made irrevocable arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee, the redemption date, as the case may be, and (y) any mandatory sinking fund payments or analogous 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 the Securities of such series and the Indenture with respect to the Securities of such series;

(b) the Company has delivered to the Trustee an Opinion of Counsel to the effect that Holders of Securities of such series will not recognize gain or loss for U.S. federal income tax purposes as a result of the Company's exercise of its option under this Section 8.06 and will be subject to U.S. 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 and defeasance had not occurred;

(c) no Default with respect to the outstanding Securities of such series shall have occurred and be continuing at the time of such deposit immediately after giving effect to such deposit;

(d) if at such time the Securities of such series are listed on a national securities exchange, the Company has delivered to the Trustee an Opinion of Counsel to the effect that the Securities of such series will not be delisted as a result of such deposit, defeasance and discharge;

(e) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent to the defeasance under this Section have been complied with; and

(f) if the Securities of such series are to be redeemed prior to the final maturity thereof (other than from mandatory sinking fund payments or analogous payments), notice of such redemption shall have been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee shall have been made.

Section 8.07. *Reinstatement.* If the Trustee or paying agent is unable to apply any monies or U.S. Government Obligations in accordance with Article 8 by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Company's obligations under this Indenture and the Securities shall be revived and reinstated as though no deposit had occurred pursuant to this Article until such time as the Trustee or paying agent is permitted to apply all such monies or U.S. Government Obligations in accordance with Article 8; *provided, however,* that if the Company has made any payment of Principal of or interest on any Securities because of the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Securities to receive such payment from the monies or U.S. Government Obligations held by the Trustee or paying agent.

Section 8.08. *Indemnity.* The Company shall pay and indemnify the Trustee (or other qualifying trustee, collectively for purposes of this Section 8.08 and Section 8.02, the "**Trustee**") against any tax, fee or other charge, imposed on or assessed against the U.S. Government Obligations deposited pursuant to Section 8.01, 8.05 or 8.06 or the principal or interest received in respect thereof other than any such tax, fee or other charge which by law is for the account of the Holders of the Securities.

Section 8.09. *Excess Funds.* Anything in this Article 8 to the contrary notwithstanding, the Trustee shall deliver or pay to the Company from time to time upon request of the Company, any money or U.S. Government Obligations (or other property and any proceeds therefrom) held by it as provided in Section 8.01, 8.05 or 8.06 which, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, are in excess of the amount thereof which would then be required to be deposited to effect a discharge or defeasance, as applicable, in accordance with this Article 8.

Section 8.10. *Qualifying Trustee.* Any trustee appointed pursuant to Section 8.05 or 8.06 for the purpose of holding money or U.S. Government Obligations deposited pursuant to such Sections shall be appointed under an agreement in form acceptable to the Trustee and shall provide to the Trustee a certificate, upon which certificate the Trustee shall be entitled to conclusively rely, that all conditions precedent provided for herein to the related defeasance have been complied with. In no event shall the Trustee be liable for any acts or omissions of said trustee.

ARTICLE 9

AMENDMENTS, SUPPLEMENTS AND WAIVERS

Section 9.01. *Without Consent of Holders.* The Company and the Trustee may amend or supplement this Indenture or the Securities of any series without notice to or the consent of any Holder:

(a) to cure any ambiguity, defect or inconsistency in this Indenture;

(b) to comply with Article 5;

(c) to maintain the qualification of this Indenture under the Trust Indenture Act;

(d) to evidence and provide for the acceptance of appointment hereunder with respect to the Securities of any or all series by a successor Trustee 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 7.09;

(e) to establish the form or forms or terms of Securities of any series as permitted by Section 2.03;

(f) to provide for uncertificated Securities and to make all appropriate changes for such purpose;

(g) to conform any provision to the applicable corresponding provision set forth in the offering document for the offering of such series of Securities; and

(h) to make any change that does not materially and adversely affect the rights of any Holder.

Section 9.02. *With Consent of Holders.* Subject to Sections 6.04 and 6.07, without prior notice to any Holders, the Company and the Trustee may amend this Indenture and the Securities of any series with the written consent of the Holders of a majority in Principal amount of the outstanding Securities of each series affected by such amendment (all such series voting together as a single class), and the Holders of a majority in Principal amount of the outstanding Securities of each series affected thereby (all such series voting together as a single class) by written notice to the Trustee may waive future compliance by the Company with any provision of this Indenture or the Securities of such series.

Notwithstanding the provisions of this Section 9.02, without the consent of each Holder affected thereby, an amendment or waiver, including a waiver pursuant to Section 6.04, may not:

- (a) change the stated maturity of the Principal of, or any sinking fund obligation or any installment of interest on, such Holder's Security,
- (b) reduce the Principal amount thereof or the rate of interest thereon (including any amount in respect of original issue discount);
- (c) reduce the above stated percentage of outstanding Securities the consent of whose holders is necessary to modify or amend the Indenture with respect to the Securities of the relevant series; and
- (d) reduce the percentage in Principal amount of outstanding Securities of the relevant series the consent of whose Holders is required for any supplemental indenture or for any waiver of compliance with certain provisions of this Indenture or certain Defaults and their consequences provided for in this Indenture.

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 Holders of Securities of such series with respect to such covenant or provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series.

It shall not be necessary for the consent of any Holder under this Section 9.02 to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if such consent approves the substance thereof.

After an amendment, supplement or waiver under this Section 9.02 becomes effective, the Company shall give to the Holders affected thereby a notice briefly describing the amendment, supplement or waiver. The Company will mail supplemental indentures to Holders upon request. Any failure of the Company to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Section 9.03. Revocation and Effect of Consent. Until an amendment or waiver becomes effective, a consent to it by a Holder 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 Security of the consenting Holder, 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 its Security or portion of its Security. Such revocation shall be effective only if the Trustee receives the notice of revocation before the date the amendment, supplement or waiver becomes effective. An amendment, supplement or waiver shall become effective with respect to any Securities affected thereby on receipt by the Trustee of written consents from the requisite Holders of outstanding Securities affected thereby.

The Company may, but shall not be obligated to, fix a record date (which may be not less than five nor more than 60 days prior to the solicitation of consents) for the purpose of determining the Holders of the Securities of any series affected entitled to consent to any amendment, supplement or waiver. If a record date is fixed, then, notwithstanding the immediately preceding paragraph, those Persons who were such Holders at such record date (or their duly designated proxies) and only those Persons shall be entitled to consent to such amendment, supplement or waiver or to revoke any consent previously given, whether or not such Persons continue to be such Holders after such record date. No such consent shall be valid or effective for more than 90 days after such record date.

After an amendment, supplement or waiver becomes effective with respect to the Securities of any series affected thereby, it shall bind every Holder of such Securities unless it is of the type described in any of clauses (a) through (d) of Section 9.02. In case of an amendment or waiver of the type described in clauses (a) through (d) of Section 9.02, the amendment or waiver shall bind each such Holder who has consented to it and every subsequent Holder of a Security that evidences the same indebtedness as the Security of the consenting Holder.

Section 9.04. *Notation on or Exchange of Securities.* If an amendment, supplement or waiver changes the terms of any Security, the Trustee may require the Holder thereof to deliver it to the Trustee. The Trustee may place an appropriate notation on the Security about the changed terms and return it to the Holder and the Trustee may place an appropriate notation on any Security of such series thereafter authenticated. Alternatively, if the Company or the Trustee so determines, the Company in exchange for the Security shall issue and the Trustee shall authenticate a new Security of the same series and tenor that reflects the changed terms.

Section 9.05. *Trustee to Sign Amendments, Etc.* The Trustee shall be entitled to receive, and shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of any amendment, supplement or waiver authorized pursuant to this Article 9 is authorized or permitted by this Indenture, stating that all requisite consents have been obtained or that no consents are required and stating that such supplemental indenture constitutes the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, subject to customary exceptions. The Trustee may, but shall not be obligated to, execute any such amendment, supplement or waiver that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Section 9.06. *Conformity with Trust Indenture Act.* Every supplemental indenture executed pursuant to this Article 9 shall conform to the requirements of the Trust Indenture Act as then in effect.

ARTICLE 10 MISCELLANEOUS

Section 10.01. *Trust Indenture Act of 1939.* This Indenture shall incorporate and be governed by the provisions of the Trust Indenture Act that are required to be part of and to govern indentures qualified under the Trust Indenture Act.

Section 10.02. *Notices.* Any notice or communication shall be sufficiently given if written and (a) if delivered in person, when received or (b) if mailed by first class mail, 5 days after mailing, or (c) as between the Company and the Trustee if sent by facsimile transmission, when transmission is confirmed, in each case addressed as follows:

if to the Company:

Pharvaris N.V.
J.H. Oortweg 21
2333 CH Leiden, The Netherlands
Facsimile: [•]
Attention: [•]

if to the Trustee:

[•]
[•]
[•]
Facsimile: [•]
Attention: [•]

The Company or the Trustee by written notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication shall be sufficiently given to Holders by mailing to such Holders at their addresses as they shall appear on the Security Register. Notice mailed shall be sufficiently given if so mailed within the time prescribed. Copies of any such communication or notice to a Holder shall also be mailed to the Trustee and each Agent at the same time.

Failure to mail a notice or communication to a Holder or any defect in it shall not affect its sufficiency with respect to other Holders. Except as otherwise provided in this Indenture, if a notice or communication is mailed in the manner provided in this Section 10.02, it is duly given, whether or not the addressee receives it.

Where this Indenture provides for notice in any manner, such notice may be waived in writing by the Person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

In case it shall be impracticable to give notice as herein contemplated, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose hereunder.

Section 10.03. *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 10.04. *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 the certificate required by Section 4.04) shall include:

- (a) a statement that each person signing such certificate or opinion has read such covenant or condition and the definitions herein relating thereto;
- (b) a brief statement as to the nature and scope of the examination or investigation upon which the statement or opinion contained in such certificate or opinion is based;
- (c) a statement that, in the opinion of each 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 each such person, such condition or covenant has been complied with; *provided, however,* that, with respect to matters of fact, an Opinion of Counsel may rely on an Officers' Certificate or certificates of public officials.

Section 10.05. *Evidence of Ownership.* The Company, the Trustee and any agent of the Company or the Trustee may deem and treat the person in whose name any Security shall be registered upon the Security Register for such series as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notation of ownership or other writing thereon) for the purpose of receiving payment of or on account of the Principal of and, subject to the provisions of this Indenture, interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any agent of the Company or the Trustee shall be affected by any notice to the contrary.

Section 10.06. *Rules by Trustee, Paying Agent or Registrar.* The Trustee may make reasonable rules for action by or at a meeting of Holders. The Paying Agent or Registrar may make reasonable rules for its functions.

Section 10.07. *Payment Date Other Than a Business Day.* Except as otherwise provided with respect to a series of Securities, if any date for payment of Principal or interest on any Security shall not be a Business Day at any place of payment, then payment of Principal of or interest on such Security, as the case may be, need not be made on such date, but may be made on the next succeeding Business Day at any place of payment with the same force and effect as if made on such date and no interest shall accrue in respect of such payment for the period from and after such date.

Section 10.08. *Governing Law.* The laws of the State of New York shall govern this Indenture and the Securities.

Section 10.09. *No Adverse Interpretation of Other Agreements.* This Indenture may not be used to interpret another indenture or loan or debt agreement of the Company or any Subsidiary of the Company. Any such indenture or agreement may not be used to interpret this Indenture.

Section 10.10. *Successors.* All agreements of the Company in this Indenture and the Securities shall bind its successors. All agreements of the Trustee in this Indenture shall bind its successors.

Section 10.11. *Duplicate Originals.* The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

Section 10.12. *Separability.* 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 10.13. *Table of Contents, Headings, Etc.* The Table of Contents 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 and provisions hereof.

Section 10.14. *Incorporators, Stockholders, Officers and Directors of Company Exempt from Individual Liability.* No recourse under or upon any obligation, covenant or agreement contained in this Indenture or any indenture supplemental hereto, or in any Security, or because of any indebtedness evidenced thereby, shall be had against any incorporator, as such or against any past, present or future stockholder, officer, director or employee, as such, of the Company or of any successor, either directly or through the Company or any successor, under any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise, all such liability being expressly waived and released by the acceptance of the Securities by the holders thereof and as part of the consideration for the issue of the Securities.

Section 10.15. *Judgment Currency.* The Company agrees, to the fullest extent that it may effectively do so under applicable law, that (a) if for the purpose of obtaining judgment in any court it is necessary to convert the sum due in respect of the Principal of or interest on the Securities of any series (the “**Required Currency**”) into a currency in which a judgment will be rendered (the “**Judgment Currency**”), the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the day on which final unappealable judgment is entered, unless such day is not a Business Day, then, to the extent permitted by applicable law, the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the Business Day preceding the day on which final unappealable judgment is entered and (b) its obligations under this Indenture to make payments in the Required Currency (i) shall not be discharged or satisfied by any tender, or any recovery pursuant to any judgment (whether or not entered in accordance with subsection (a)), in any currency other than the Required Currency, except to the extent that such tender or recovery shall result in the actual receipt, by the payee, of the full amount of the Required Currency expressed to be payable in respect of such payments, (ii) shall be enforceable as an alternative or additional cause of action for the purpose of recovering in the Required Currency the amount, if any, by which such actual receipt shall fall short of the full amount of the Required Currency so expressed to be payable and (iii) shall not be affected by judgment being obtained for any other sum due under this Indenture.

Section 10.16. *Waiver of Jury Trial.* EACH OF THE COMPANY AND THE TRUSTEE IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS INDENTURE, THE SECURITIES OR THE TRANSACTIONS CONTEMPLATED HEREBY.

Section 10.17. *Force Majeure.* In no event shall the Trustee be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, accidents, acts of war or terrorism, civil or military disturbances, nuclear or natural catastrophes or acts of God, and interruptions, loss or malfunctions of utilities, communications or computer (software and hardware) services; it being understood that the Trustee shall use reasonable efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

SIGNATURES

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed, all as of the date first written above.

PHARVARIS N.V.
as the Company

By: _____

Name:

Title:

Name:

Title:

[]
as the Trustee

By: _____

Name:

Title:

Pharvaris N.V.

as the Company

and

[]

as Trustee

Subordinated Indenture

Dated as of [], []

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SUBORDINATED INDENTURE, dated as of [], between Pharvaris N.V., a Dutch public company with limited liability (*naamloze vennootschap*), as the Company, and [], as Trustee.

RECITALS OF THE COMPANY

WHEREAS, the Company has duly authorized the issue from time to time of its subordinated debentures, notes or other evidences of indebtedness to be issued in one or more series (the “**Securities**”) up to such principal amount or amounts as may from time to time be authorized in accordance with the terms of this Indenture and to provide, among other things, for the authentication, delivery and administration thereof, the Company has duly authorized the execution and delivery of this Indenture; and 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 or of any and all series thereof as follows:

ARTICLE 1

DEFINITIONS AND INCORPORATION BY REFERENCE

Section 1.01. *Definitions.*

“**Affiliate**” of any Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such Person. For the purposes of this definition, “control” (including, with correlative meanings, the terms “controlling”, “controlled by” and “under common control with”) when used with respect to any Person means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

“**Agent**” means any Registrar, Paying Agent, transfer agent or Authenticating Agent.

“**Board Resolution**” means one or more resolutions of the board of directors of the Company or any authorized committee thereof, certified by the secretary or an assistant secretary to have been duly adopted and to be in full force and effect on the date of certification, and delivered to the Trustee.

“**Business Day**” means any day, other than a Saturday or Sunday, that is neither a legal holiday nor a day on which banking institutions are authorized or required by law or regulation to close (i) with respect to any Security the interest on which is based on the offered quotations in the interbank Eurodollar market for dollar deposits in London or in The City of New York or (ii) with respect to Securities denominated in a specified currency other than United States dollars, in the principal financial center of the country of the specified currency.

“**Commission**” means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act or, if at any time after the execution of this instrument such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

“**Company**” means the party named as such in the first paragraph of this Indenture until a successor replaces it pursuant to Article 5 of this Indenture and thereafter means the successor.

“**Corporate Trust Office**” means the office of the Trustee at which the corporate trust business of the Trustee shall, at any particular time, be administered, which office is, at the date of this Indenture, located at [].

“**Default**” means any event that is, or after notice or passage of time or both would be, an Event of Default.

“**Depository**” means, with respect to the Securities of any series issuable or issued in the form of one or more Registered Global Securities, the Person designated as Depository by the Company pursuant to Section 2.03 until a successor Depository shall have become such pursuant to the applicable provisions of this Indenture, and thereafter “**Depository**” shall mean or include each Person who is then a Depository hereunder, and if at any time there is more than one such Person, “**Depository**” as used with respect to the Securities of any such series shall mean the Depository with respect to the Registered Global Securities of that series.

“**Exchange Act**” means the Securities Exchange Act of 1934, as amended.

“**Guarantee**” by any Person means any obligation, contingent or otherwise, of such Person directly or indirectly guaranteeing any Indebtedness or other obligation of any other Person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such Person (i) to purchase or pay (or advance or supply funds for the purchase or payment of) such Indebtedness or other obligation (whether arising by virtue of partnership arrangements, by agreement to keep-well, to purchase assets, goods, securities or services, to take-or-pay, or to maintain financial statement conditions or otherwise) or (ii) entered into for the purpose of assuring in any other manner the obligee of such Indebtedness or other obligation of the payment thereof or to protect such obligee against loss in respect thereof (in whole or in part), provided that the term Guarantee shall not include endorsements for collection or deposit in the ordinary course of business. The term “Guarantee” when used as a verb has a corresponding meaning.

“**Holder**” or “**Securityholder**” means the registered holder of any Security.

“**Indebtedness**” of any Person means at any date, without duplication (i) all obligations of such Person for borrowed money, (ii) all obligations of such Person evidenced by bonds, debentures, notes or similar instruments, (iii) all obligations of such Person in respect of letters of credit or other similar instruments (or reimbursement obligations with respect thereto), (iv) all obligations of such Person to pay the deferred purchase price of property or services, except Trade Payables, (v) all obligations of such Person as a lessee under capital leases, (vi) all Indebtedness of others secured by a lien on any asset of such Person, whether or not such Indebtedness is assumed by such Person, (vii) all Indebtedness of others Guaranteed by such Person.

“IFRS” means International Financial Reporting Standards as issued by the International Accounting Standards Board, as in effect as of the date hereof.

“Indenture” means this Indenture as originally executed and delivered or as it may be amended or supplemented from time to time by one or more indentures supplemental to this Indenture entered into pursuant to the applicable provisions of this Indenture and shall include the forms and terms of the Securities of each series established as contemplated pursuant to Sections 2.01 and 2.03.

“Officer” means, with respect to the Company, the chairman of the board of directors, the president or chief executive officer, any executive vice president, any senior vice president, any vice president, the chief financial officer, the treasurer or any assistant treasurer, or the secretary or any assistant secretary.

“Officers’ Certificate” means a certificate signed in the name of the Company (i) by the chairman of the board of directors, president or chief executive officer, an executive vice president, a senior vice president or a vice president, and (ii) by the chief financial officer, the treasurer or any assistant treasurer, or the secretary or any assistant secretary, and delivered to the Trustee. Each such certificate shall comply with Section 314 of the Trust Indenture Act, if applicable, and include (except as otherwise expressly provided in this Indenture) the statements provided in Section 10.04, if applicable.

“Opinion of Counsel” means a written opinion signed by legal counsel, who may be an employee of or counsel to the Company, satisfactory to the Trustee. Each such opinion shall comply with Section 314 of the Trust Indenture Act, if applicable, and include the statements provided in Section 10.04, if and to the extent required thereby.

“original issue date” of any Security (or portion thereof) means the earlier of (a) the date of authentication of such Security or (b) the date of any Security (or portion thereof) for which such Security was issued (directly or indirectly) on registration of transfer, exchange or substitution.

“Original Issue Discount Security” means any Security that provides for an amount less than the Principal amount thereof to be due and payable upon a declaration of acceleration of the maturity thereof pursuant to Section 6.02.

“Periodic Offering” means an offering of Securities of a series from time to time, the specific terms of which Securities, including, without limitation, the rate or rates of interest, if any, thereon, the stated maturity or maturities thereof and the redemption provisions, if any, with respect thereto, are to be determined by the Company or its agents upon the issuance of such Securities.

“Person” means an individual, a corporation, a partnership, a limited liability company, an association, a trust or any other entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

“**Principal**” of a Security means the principal amount of, and, unless the context indicates otherwise, includes any premium payable on, the Security.

“**Registered Global Security**” means a Security evidencing all or a part of a series of Securities, issued to the Depositary for such series in accordance with Section 2.02, and bearing the legend prescribed in Section 2.02.

“**Responsible Officer**” when used with respect to the Trustee, shall mean an officer of the Trustee in the Corporate Trust Office, having direct responsibility for the administration of this Indenture, and also, with respect to a particular matter, any other officer to whom such matter is referred because of such officer’s knowledge of and familiarity with the particular subject.

“**Securities**” means any of the securities, as defined in the first paragraph of the recitals hereof, that are authenticated and delivered under this Indenture.

“**Securities Act**” means the Securities Act of 1933, as amended.

“**Senior Indebtedness**” means all Indebtedness of the Company (other than the Securities) including principal and interest (including, without limitation, any interest that would accrue but for the filing of a petition initiating any proceeding referred to in Section 11.02 hereof) on such Indebtedness, created, incurred or assumed on or after the date of the first issuance of any Securities, unless such Indebtedness, but its terms or the terms of the instrument creating or evidencing it, is subordinate in right of payment to, or pari passu with, the Securities; provided, that the term Senior Indebtedness shall not include (a) any Indebtedness of the Company which, when incurred and without respect to any election under Section 111(b) of Title II, United States Code, with or without recourse to the Company, (b) any Indebtedness of the Company to a Subsidiary, (c) Indebtedness to any employee of the Company and (d) Trade Payables.

“**Subsidiary**” means, with respect to any Person, any corporation, association or other business entity of which a majority of the capital stock or other ownership interests having ordinary voting power to elect a majority of the board of directors or other persons performing similar functions are at the time directly or indirectly owned by such Person.

“**Trade Payables**” means accounts payable for any other indebtedness or monetary obligations to trade creditors created or assumed by the Company or any subsidiary of the Company in the ordinary course of business in connection with the obtaining of materials or services.

“**Trustee**” means the party named as such in the first paragraph of this Indenture until a successor replaces it in accordance with the provisions of Article 7 and thereafter 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.

“**Trust Indenture Act**” means the Trust Indenture Act of 1939, as amended (15 U.S. Code §§ 77aaa-77bbb), as it may be amended from time to time.

“U.S. Government 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 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, and shall also include a depository receipt issued by a bank or trust company as custodian with respect to any such U.S. Government Obligation or a specific payment of interest on or principal of any such U.S. Government Obligation held by such custodian for the account of the holder of a depository receipt.

“Yield to Maturity” means, as the context may require, the yield to maturity (i) on a series of Securities or (ii) if the Securities of a series are issuable from time to time, on a Security of such series, calculated at the time of issuance of such series in the case of clause (i) or at the time of issuance of such Security of such series in the case of clause (ii), or, if applicable, at the most recent redetermination of interest on such series or on such Security, and calculated in accordance with the constant interest method or such other accepted financial practice as is specified in the terms of such Security.

Section 1.02. *Other Definitions.* Each of the following terms is defined in the section set forth opposite such term:

<u>Term</u>	<u>Section</u>
Authenticating Agent	2.02
cash transaction	7.03
Event of Default	6.01
Judgment Currency	10.15(a)
mandatory sinking fund payment	3.05
optional sinking fund payment	3.05
Paying Agent	2.05
record date	2.04
Registrar	2.05
Required Currency	10.15(a)
Security Register	2.05
self-liquidating paper	7.03
sinking fund payment date	3.05
Surviving Entity	5.01(a)
tranche	2.14

Section 1.03. *Incorporation by Reference of Trust Indenture Act.* Whenever this Indenture refers to a provision of the Trust Indenture Act, the provision is incorporated by reference in and made a part of this Indenture. The following terms used in this Indenture that are defined by the Trust Indenture Act have the following meanings:

“**indenture securities**” means the Securities;

“**indenture security holder**” means a Holder or a Securityholder;

“indenture to be qualified” means this Indenture;

“**indenture trustee**” or “**institutional trustee**” means the Trustee; and “**obligor**” on the indenture securities means the Company or any other obligor on the Securities.

All other terms used in this Indenture that are defined by the Trust Indenture Act, defined by reference in the Trust Indenture Act to another statute or defined by a rule of the Commission and not otherwise defined herein have the meanings assigned to them therein.

Section 1.04. *Rules of Construction.* Unless the context otherwise requires:

(a) an accounting term not otherwise defined has the meaning assigned to it in accordance with IFRS;

(b) words in the singular include the plural, and words in the plural include the singular;

(c) “herein,” “hereof” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision;

(d) all references to Sections or Articles refer to Sections or Articles of this Indenture unless otherwise indicated; and

(e) use of masculine, feminine or neuter pronouns should not be deemed a limitation, and the use of any such pronouns should be construed to include, where appropriate, the other pronouns.

ARTICLE 2 THE SECURITIES

Section 2.01. *Form and Dating.* The Securities of each series shall be substantially in such form or forms (not inconsistent with this Indenture) as shall be established by or pursuant to one or more Board Resolutions or in one or more 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 imprinted or otherwise reproduced thereon such legend or legends or endorsements, not inconsistent with the provisions of this Indenture, as may be required to comply with any law, or with any rules of any securities exchange or usage, all as may be determined by the Officers executing such Securities as evidenced by their execution of the Securities.

Section 2.02. *Execution and Authentication.* Two Officers shall execute the Securities for the Company by facsimile or manual signature in the name and on behalf of the Company. 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.

The Trustee, at the expense of the Company, may appoint an authenticating agent (the "Authenticating Agent") to authenticate Securities. The 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 Authenticating Agent.

A Security shall not be valid until the Trustee or Authenticating Agent signs, manually or by facsimile, the certificate of authentication on the Security. The signature shall be conclusive evidence that the Security has been authenticated under 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 the applicable documents referred to below in this Section, and the Trustee shall thereupon authenticate and deliver such Securities to or upon the written order of the Company. In authenticating any Securities of a series, the Trustee shall be entitled to receive prior to the authentication of any Securities of such series, and (subject to Article 7) shall be fully protected in relying upon, unless and until such documents have been superseded or revoked:

(a) any Board Resolution and/or executed supplemental indenture referred to in Sections 2.01 and 2.03 by or pursuant to which the forms and terms of the Securities of that series were established;

(b) an Officers' Certificate setting forth the form or forms and terms of the Securities, stating that the form or forms and terms of the Securities of such series have been, or, in the case of a Periodic Offering, will be when established in accordance with such procedures as shall be referred to therein, established in compliance with this Indenture; and

(c) an Opinion of Counsel substantially to the effect that the form or forms and terms of the Securities of such series have been, or, in the case of a Periodic Offering, will be when established in accordance with such procedures as shall be referred to therein, established in compliance with this Indenture and that the supplemental indenture, to the extent applicable, and Securities have been duly authorized and, if executed and authenticated in accordance with the provisions of the Indenture and delivered to and duly paid for by the purchasers thereof on the date of such opinion, would be entitled to the benefits of the Indenture and would be valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, subject to bankruptcy, insolvency, reorganization, receivership, moratorium and other similar laws affecting creditors' rights generally, general principles of equity, and covering such other matters as shall be specified therein and as shall be reasonably requested by the Trustee.

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 which is not reasonably acceptable to the Trustee.

Notwithstanding the provisions of Sections 2.01 and 2.02, if, in connection with a Periodic Offering, all Securities of a series are not to be originally issued at one time, it shall not be necessary to deliver the Board Resolution otherwise required pursuant to Section 2.01 or the written order, Officers' Certificate and Opinion of Counsel otherwise required pursuant to Section 2.02 at or prior to the authentication of each Security of such series if such documents are delivered at or prior to the authentication upon original issuance of the first Security of such series to be issued.

With respect to Securities of a series offered in a Periodic Offering, the Trustee may rely, as to the authorization by the Company of any of such Securities, the forms and terms thereof and the legality, validity, binding effect and enforceability thereof, upon the Opinion of Counsel and the other documents delivered pursuant to Sections 2.01 and 2.02, as applicable, in connection with the first authentication of Securities of such series.

If the Company shall establish pursuant to Section 2.03 that the Securities of a series or a portion thereof are to be issued in the form of one or more Registered Global Securities, then the Company shall execute and the Trustee shall authenticate and deliver one or more Registered Global Securities that (i) shall represent and shall be denominated in an amount equal to the aggregate Principal amount of all of the Securities of such series issued in such form and not yet cancelled, (ii) shall be registered in the name of the Depository for such Registered Global Security or Securities or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or its custodian or pursuant to such Depository's instructions and (iv) shall (unless provided otherwise in the form of such Security) bear a legend substantially to the following effect: "Unless and until it is exchanged in whole or in part for Securities in definitive registered form, this Security may not be transferred except as a whole by the Depository to the nominee of the Depository or by a nominee of the Depository to 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 successor Depository."

Section 2.03. *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 and each such series shall rank equally and pari passu with the Securities of each other series, but all Securities hereunder shall be subordinate and junior in right of payment, to the extent and manner set forth in Article 11, to all Senior Indebtedness. There shall be established in or pursuant to a Board Resolution or one or more indentures supplemental hereto, prior to the initial issuance of Securities of any series, subject to the last sentence of this Section 2.03,

(a) the designation of the Securities of the series, which shall distinguish the Securities of the series from the Securities of all other series;

(b) any limit upon the aggregate Principal amount of the Securities of the series that may be authenticated and delivered under this Indenture and any limitation on the ability of the Company to increase such aggregate Principal amount after the initial issuance of the Securities of that series (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, or upon redemption of, other Securities of the series pursuant hereto);

(c) the date or dates on which the Principal of the Securities of the series is payable (which date or dates may be fixed or extendible);

(d) the rate or rates (which may be fixed or variable) per annum at which the Securities of the series shall bear interest, if any, the date or dates from which such interest shall accrue, on which such interest shall be payable and on which a record shall be taken for the determination of Holders to whom interest is payable and/or the method by which such rate or rates or date or dates shall be determined;

(e) if other than as provided in Section 4.02, the place or places where the Principal of and any interest on Securities of the series shall be payable, any 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;

(f) the right, if any, of the Company to redeem Securities of the series, in whole or in part, at its option and the period or periods within which, the price or prices at which and any terms and conditions upon which Securities of the series may be so redeemed, pursuant to any sinking fund or otherwise;

(g) the obligation, if any, of the Company to redeem, purchase or repay Securities of the series pursuant to any mandatory redemption, sinking fund or analogous provisions or at the option of a Holder thereof and the price or prices at which and the period or periods within which and any of the terms and conditions upon which Securities of the series shall be redeemed, purchased or repaid, in whole or in part, pursuant to such obligation;

(h) if other than denominations of \$2,000 and any higher integral multiple of \$1,000, the denominations in which Securities of the series shall be issuable;

(i) 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;

(j) if other than the coin or currency in which the Securities of the series are denominated, the coin or currency in which payment of the Principal of or interest on the Securities of the series shall be payable or if the amount of payments of principal of and/or interest on the Securities of the series may be determined with reference to an index based on a coin or currency other than that in which the Securities of the series are denominated, the manner in which such amounts shall be determined;

(k) if other than the currency of the United States of America, the currency or currencies, including composite currencies, in which payment of the Principal of and interest on the Securities of the series shall be payable, and the manner in which any such currencies shall be valued against other currencies in which any other Securities shall be payable;

- (l) whether the Securities of the series or any portion thereof will be issuable as Registered Global Securities;
- (m) whether the Securities of the series may be exchangeable for and/or convertible into the common stock of the Company or any other security;
- (n) whether and under what circumstances the Company will pay additional amounts on the Securities of the series held by a person who is not a U.S. person in respect of any tax, assessment or governmental charge withheld or deducted and, if so, whether the Company will have the option to redeem such Securities rather than pay such additional amounts;
- (o) if the Securities of the series are to be issuable in definitive form (whether upon original issue or upon exchange of a temporary Security of such series) only upon receipt of certain certificates or other documents or satisfaction of other conditions, the form and terms of such certificates, documents or conditions;
- (p) any trustees, depositaries, authenticating or paying agents, transfer agents or the registrar or any other agents with respect to the Securities of the series;
- (q) provisions, if any, for the defeasance of the Securities of the series (including provisions permitting defeasance of less than all Securities of the series), which provisions may be in addition to, in substitution for, or in modification of (or any combination of the foregoing) the provisions of Article 8;
- (r) if the Securities of the series are issuable in whole or in part as one or more Registered Global Securities, the identity of the Depositary or common Depositary for such Registered Global Security or Securities;
- (s) any other or alternative Events of Default or covenants with respect to the Securities of the series; and
- (t) any other terms of the Securities of the series.

All Securities of any one series shall be substantially identical, except as to date and denomination, except in the case of any Periodic Offering and except as may otherwise be provided by or pursuant to the Board Resolution referred to above or as set forth in any such indenture supplemental hereto. 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 such Board Resolution or in any such indenture supplemental hereto and any forms and terms of Securities to be issued from time to time may be completed and established from time to time prior to the issuance thereof by procedures described in such Board Resolution or supplemental indenture.

Unless otherwise expressly provided with respect to a series of Securities, the aggregate principal amount of a series of Securities may be increased and additional Securities of such series may be issued up to the maximum aggregate principal amount authorized with respect to such series as increased.

Section 2.04. *Denomination and Date of Securities; Payments of Interest.* The Securities of each series shall be issuable in denominations established as contemplated by Section 2.03 or, if not so established with respect to Securities of any series, in denominations of \$2,000 and any higher integral multiple of \$1,000. The Securities of each series shall be numbered, lettered or otherwise distinguished in such manner or in accordance with such plan as the Officers of the Company executing the same may determine, as evidenced by their execution thereof.

Unless otherwise specified with respect to a series of Securities, each Security shall be dated the date of its authentication. The Securities of each series shall bear interest, if any, from the date, and such interest shall be payable on the dates, established as contemplated by Section 2.03.

The person in whose name any Security of any series is registered at the close of business on any record date applicable to a particular series with respect to any interest payment date for such series shall be entitled to receive the interest, if any, payable on such interest payment date notwithstanding any transfer or exchange of such Security subsequent to the record date and prior to such interest payment date, except if and to the extent the Company shall default in the payment of the interest due on such interest payment date for such series, in which case the provisions of Section 2.13 shall apply. The term “**record date**” as used with respect to any interest payment date (except a date for payment of defaulted interest) for the Securities of any series shall mean the date specified as such in the terms of the Securities of such series established as contemplated by Section 2.03, or, if no such date is so established, the fifteenth day next preceding such interest payment date, whether or not such record date is a Business Day.

Section 2.05. *Registrar and Paying Agent; Agents Generally.* The Company shall maintain an office or agency where Securities may be presented for registration, registration of transfer or for exchange (the “**Registrar**”) and an office or agency where Securities may be presented for payment (the “**Paying Agent**”), which shall be in the United States of America. The Company shall cause the Registrar to keep a register of the Securities and of their registration, transfer and exchange (the “**Security Register**”). The Company may have one or more additional Paying Agents or transfer agents with respect to any series.

The Company shall enter into an appropriate agency agreement with any Agent not a party to this Indenture. The agreement shall implement the provisions of this Indenture and the Trust Indenture Act that relate to such Agent. The Company shall give prompt written notice to the Trustee of the name and address of any Agent and any change in the name or address of an Agent. If the Company fails to maintain a Registrar or Paying Agent, the Trustee shall act as such. The Company may remove any Agent upon written notice to such Agent and the Trustee; provided that no such removal shall become effective until (i) the acceptance of an appointment by a successor Agent to such Agent as evidenced by an appropriate agency agreement entered into by the Company and such successor Agent and delivered to the Trustee or (ii) notification to the Trustee that the Trustee shall serve as such Agent until the appointment of a successor Agent in accordance with clause (i) of this proviso. The Company or any Affiliate of the Company may act as Paying Agent or Registrar; provided that neither the Company nor an Affiliate of the Company shall act as Paying Agent in connection with the defeasance of the Securities or the discharge of this Indenture under Article 8.

The Company initially appoints the Trustee as Registrar, Paying Agent and Authenticating Agent. If, at any time, the Trustee is not the Registrar, the Registrar shall make available to the Trustee ten days prior to each interest payment date and at such other times as the Trustee may reasonably request the names and addresses of the Holders as they appear in the Security Register.

Section 2.06. *Paying Agent to Hold Money in Trust.* Not later than 10:00 a.m. New York City time on each due date of any Principal or interest on any Securities, the Company shall deposit with the Paying Agent money in immediately available funds sufficient to pay such Principal or interest. The Company shall require each Paying Agent other than the Trustee to agree in writing that such Paying Agent shall hold in trust for the benefit of the Holders of such Securities or the Trustee all money held by the Paying Agent for the payment of Principal of and interest on such Securities and shall promptly notify the Trustee of any default by the Company in making any such payment. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee and account for any funds disbursed, and the Trustee may at any time during the continuance of any payment default, upon written request to a Paying Agent, require such Paying Agent to pay all money held by it to the Trustee and to account for any funds disbursed. Upon doing so, the Paying Agent shall have no further liability for the money so paid over to the Trustee. If the Company or any affiliate of the Company acts as Paying Agent, it will, on or before each due date of any Principal of or interest on any Securities, segregate and hold in a separate trust fund for the benefit of the Holders thereof a sum of money sufficient to pay such Principal or interest so becoming due until such sum of money shall be paid to such Holders or otherwise disposed of as provided in this Indenture, and will promptly notify the Trustee in writing of its action or failure to act as required by this Section.

Section 2.07. *Transfer and Exchange.* At the option of the Holder thereof, Securities of any series (other than a Registered Global Security, except as set forth below) may be exchanged for a Security or Securities of such series and tenor having authorized denominations and an equal aggregate Principal amount, upon surrender of such Securities to be exchanged at the agency of the Company that shall be maintained for such purpose in accordance with Section 2.05 and upon payment, if the Company shall so require, of the charges hereinafter provided. 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. Upon surrender for registration of transfer of any Security of a series at the agency of the Company that shall be maintained for that purpose in accordance with Section 2.05 and upon payment, if the Company shall so require, of the charges hereinafter provided, 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 the same series, of any authorized denominations and of like tenor and aggregate Principal amount.

All Securities presented for registration of transfer, exchange, redemption or payment shall be duly endorsed by, or be accompanied by a written instrument or instruments of transfer in form satisfactory to the Company and the Trustee duly executed by, the holder or his attorney duly authorized in writing.

The Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any exchange or registration of transfer of Securities. No service charge shall be made for any such transaction.

Notwithstanding any other provision of this Section 2.07, unless and until it is exchanged in whole or in part for Securities in definitive registered form, a Registered Global Security representing all or a portion of the Securities of a series may not be transferred except as a whole by the Depositary for such series to a nominee of such Depositary or by a nominee of such Depositary to such Depositary or another nominee of such Depositary or by such Depositary or any such nominee to a successor Depositary for such series or a nominee of such successor Depositary.

If at any time the Depositary for any Registered Global Securities of any series notifies the Company that it is unwilling or unable to continue as Depositary for such Registered Global Securities or if at any time the Depositary for such Registered Global Securities shall no longer be eligible under applicable law, the Company shall appoint a successor Depositary eligible under applicable law with respect to such Registered Global Securities. If a successor Depositary eligible under applicable law for such Registered Global Securities is not appointed by the Company within 90 days after the Company receives such notice or becomes aware of such ineligibility, the Company will execute, and the Trustee, upon receipt of the Company's order for the authentication and delivery of definitive Securities of such series and tenor, will authenticate and deliver certificated Securities of such series and tenor, in any authorized denominations, in an aggregate Principal amount equal to the Principal amount of such Registered Global Securities, in exchange for such Registered Global Securities.

The Company may at any time and in its sole discretion and subject to the procedures of the Depositary determine that any Registered Global Securities of any series shall no longer be maintained in global form. In such event the Company will execute, and the Trustee, upon receipt of the Company's order for the authentication and delivery of definitive Securities of such series and tenor, will authenticate and deliver, certificated Securities of such series and tenor in any authorized denominations, in an aggregate Principal amount equal to the Principal amount of such Registered Global Securities, in exchange for such Registered Global Securities.

Any time the Securities of any series are not in the form of Registered Global Securities pursuant to the preceding two paragraphs, the Company agrees to supply the Trustee with a reasonable supply of certificated Securities without the legend required by Section 2.02 and the Trustee agrees to hold such Securities in safekeeping until authenticated and delivered pursuant to the terms of this Indenture.

If established by the Company pursuant to Section 2.03 with respect to any Registered Global Security, the Depositary for such Registered Global Security may surrender such Registered Global Security in exchange in whole or in part for Securities of the same series and tenor in definitive registered form on such terms as are acceptable to the Company and such Depositary. Thereupon, the Company shall execute, and the Trustee shall authenticate and deliver, without service charge,

(a) to the Person specified by such Depository new certificated Securities of the same series and tenor, of any authorized denominations as requested by such Person, in an aggregate Principal amount equal to and in exchange for such Person's beneficial interest in the Registered Global Security; and

(b) to such Depository a new Registered Global Security in a denomination equal to the difference, if any, between the Principal amount of the surrendered Registered Global Security and the aggregate Principal amount of certificated Securities authenticated and delivered pursuant to clause (a) above.

Certificated Securities issued in exchange for a Registered Global Security pursuant to this Section 2.07 shall be registered in such names and in such authorized denominations as the Depository for such Registered Global Security, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee or an agent of the Company or the Trustee. The Trustee or such agent shall deliver such Securities to or as directed by the Persons in whose names such Securities are so registered.

All Securities issued upon any transfer or exchange of Securities shall be valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such transfer or exchange.

The Registrar shall not be required (i) to issue, authenticate, register the transfer of or exchange Securities of any series for a period of 15 days before a selection of such Securities to be redeemed or (ii) to register the transfer of or exchange any Security selected for redemption in whole or in part.

Section 2.08. *Replacement Securities.* If any mutilated Security is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver, in exchange for such mutilated Security, 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 any 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 the Trustee shall authenticate and deliver, 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 (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 may be required by them to save each of them and any agent of any of them harmless, and in the case of destruction, loss or theft, evidence satisfactory to the Company and the Trustee and any agent of them of the destruction, loss or theft of such Security and the ownership thereof.

Upon the issuance of any new Security under this Section, the Company may require 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 or in exchange for any mutilated Security shall constitute an original additional contractual obligation of the Company, whether or not the mutilated, destroyed, lost or stolen Security shall be at any time enforceable by anyone, and any such new Security 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) any other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or stolen Securities.

Section 2.09. *Outstanding Securities.* Securities outstanding at any time are all Securities that have been authenticated by the Trustee except for those cancelled by it, those delivered to it for cancellation, those described in this Section as not outstanding and those that have been defeased pursuant to Section 8.05. If a Security is replaced pursuant to Section 2.08, it ceases to be outstanding unless and until the Trustee and the Company receive proof satisfactory to them that the replaced Security is held by a holder in due course.

If the Paying Agent (other than the Company or an affiliate of the Company) holds on the maturity date or any redemption date or date for repurchase of the Securities money sufficient to pay Securities payable or to be redeemed or repurchased on that date, then on and after that date such Securities cease to be outstanding and interest on them shall cease to accrue.

A Security does not cease to be outstanding because the Company or one of its affiliates holds such Security, *provided, however,* that, in determining whether the Holders of the requisite Principal amount of the outstanding Securities have given any request, demand, authorization, direction, notice, consent or waiver hereunder, Securities owned by the Company or any affiliate of the Company shall be disregarded and deemed not to be outstanding, except that, in determining whether the Trustee shall be protected in relying upon any such request, demand, authorization, direction, notice, consent or waiver, only Securities as to which a Responsible Officer of the Trustee has received written notice to be so owned shall be so disregarded. Any Securities so owned which are pledged by the Company, or by any affiliate of the Company, as security for loans or other obligations, otherwise than to another such affiliate of the Company, shall be deemed to be outstanding, if the pledgee is entitled pursuant to the terms of its pledge agreement and is free to exercise in its or his discretion the right to vote such securities, uncontrolled by the Company or by any such affiliate.

Section 2.10. *Temporary Securities.* Until definitive Securities of any series are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities of such series. Temporary Securities of any series shall be substantially in the form of definitive Securities of such series but may have insertions, substitutions, omissions and other variations determined to be appropriate by the Officers executing the temporary Securities, as evidenced by

their execution of such temporary Securities. If temporary Securities of any series are issued, the Company will cause definitive Securities of such series to be prepared without unreasonable delay. After the preparation of definitive Securities of any series, the temporary Securities of such series shall be exchangeable for definitive Securities of such series and tenor upon surrender of such temporary Securities at the office or agency of the Company designated for such purpose pursuant to Section 4.02, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Securities of any series the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a like Principal amount of definitive Securities of such series and tenor and authorized denominations. Until so exchanged, the temporary Securities of any series shall be entitled to the same benefits under this Indenture as definitive Securities of such series.

Section 2.11. *Cancellation.* The Company at any time may deliver to the Trustee for cancellation any Securities previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever, and may deliver to the Trustee for cancellation any Securities previously authenticated hereunder which the Company has not issued and sold. The Registrar, any transfer agent and the Paying Agent shall forward to the Trustee any Securities surrendered to them for transfer, exchange or payment. The Trustee shall cancel and dispose of in accordance with its customary procedures all Securities surrendered for transfer, exchange, payment or cancellation and shall deliver a certificate of disposition to the Company. The Company may not issue new Securities to replace Securities it has paid in full or delivered to the Trustee for cancellation.

Section 2.12. *CUSIP Numbers.* The Company in issuing the Securities may use “CUSIP,” “ISIN” and/or “CINS” numbers (if then generally in use), and the Trustee shall use CUSIP numbers, ISIN numbers or CINS numbers, as the case may be, in notices of redemption or exchange as a convenience to Holders and no representation shall be made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of redemption or exchange.

Section 2.13. *Defaulted Interest.* If the Company defaults in a payment of interest on the Securities, it shall pay, or shall deposit with the Paying Agent money in immediately available funds sufficient to pay, the defaulted interest plus (to the extent lawful) any interest payable on the defaulted interest (as may be specified in the terms thereof, established pursuant to Section 2.03) to the Persons who are Holders on a subsequent special record date, which shall mean the 15th day next preceding the date fixed by the Company for the payment of defaulted interest, whether or not such day is a Business Day. At least 15 days before such special record date, the Company shall mail to each Holder of such Securities and to the Trustee a notice that states the special record date, the payment date and the amount of defaulted interest to be paid.

Section 2.14. *Series May Include Tranches.* A series of Securities may include one or more tranches (each a “**tranche**”) of Securities, including Securities issued in a Periodic Offering. The Securities of different tranches may have one or more different terms, including authentication dates and public offering prices, but all the Securities within each such tranche shall have identical terms, including authentication date and public offering price. Notwithstanding any other provision of this Indenture, with respect to Sections 2.02 (other than the fourth, sixth and seventh paragraphs thereof) through 2.04, 2.07, 2.08, 2.10, 3.01 through

3.05, 4.02, 6.01 through 6.14, 8.01 through 8.07, 9.02 and 10.07, if any series of Securities includes more than one tranche, all provisions of such sections applicable to any series of Securities shall be deemed equally applicable to each tranche of any series of Securities in the same manner as though originally designated a series unless otherwise provided with respect to such series or tranche pursuant to Section 2.03. In particular, and without limiting the scope of the next preceding sentence, any of the provisions of such sections which provide for or permit action to be taken with respect to a series of Securities shall also be deemed to provide for and permit such action to be taken instead only with respect to Securities of one or more tranches within that series (and such provisions shall be deemed satisfied thereby), even if no comparable action is taken with respect to Securities in the remaining tranches of that series.

ARTICLE 3
REDEMPTION

Section 3.01. *Applicability of Article.* The provisions of this Article shall be applicable to the Securities of any series that are redeemable before their maturity or to any sinking fund for the retirement of Securities of a series except as otherwise specified as contemplated by Section 2.03 for Securities of such series.

Section 3.02. *Notice of Redemption; Partial Redemptions.* Notice of redemption to the Holders of Securities of any series to be redeemed as a whole or in part at the option of the Company shall be given by mailing notice of such redemption by first class mail, postage prepaid, at least 30 days and not more than 60 days prior to the date fixed for redemption to such Holders of Securities of such series at their last addresses as they shall appear upon the Security Register. Any notice which is mailed in the manner herein provided shall be conclusively presumed to have been duly given, whether or not the Holder receives the notice. Failure to give notice by mail, or any defect in the notice to the Holder of any Security of a series designated for redemption as a whole or in part, shall not affect the validity of the proceedings for the redemption of any other Security of such series.

The notice of redemption to each such Holder shall specify the Principal amount of each Security of such series held by such Holder to be redeemed, the CUSIP numbers of the Securities to be redeemed, the date fixed for redemption, the redemption price, or if not then ascertainable, the manner of calculation thereof, the place or places of payment, that payment will be made upon presentation and surrender of such Securities, that such redemption is pursuant to the mandatory or optional sinking fund, or both, if such be the case, that interest accrued to the date fixed for redemption will be paid as specified in such notice and that on and after said date interest thereon or on the portions thereof to be redeemed will cease to accrue. In case any Security of a series is to be redeemed in part only, the notice of redemption shall state the portion of the Principal amount thereof to be redeemed and shall state that on and after the date fixed for redemption, upon surrender of such Security, a new Security or Securities of such series and tenor in Principal amount equal to the unredeemed portion thereof will be issued.

The notice of redemption of Securities of any series to be redeemed at the option of the Company shall be given by the Company or, at the Company's request, by the Trustee in the name and at the expense of the Company.

On or before 10:00 a.m. New York City time on the redemption date specified in the notice of redemption given as provided in this Section, the Company will deposit with the Trustee or with one or more Paying Agents (or, if the Company is acting as its own Paying Agent, set aside, segregate and hold in trust as provided in Section 2.06) an amount of money sufficient to redeem on the redemption date all the Securities of such series so called for redemption at the appropriate redemption price, together with accrued interest to the date fixed for redemption. If all of the outstanding Securities of a series are to be redeemed, the Company will deliver to the Trustee at least 10 days prior to the last date on which notice of redemption may be given to Holders pursuant to the first paragraph of this Section 3.02 (or such shorter period as shall be acceptable to the Trustee) an Officers' Certificate stating that all such Securities are to be redeemed. If less than all the outstanding Securities of a series are to be redeemed, the Company will deliver to the Trustee at least 15 days prior to the last date on which notice of redemption may be given to Holders pursuant to the first paragraph of this Section 3.02 (or such shorter period as shall be acceptable to the Trustee) an Officers' Certificate stating the aggregate Principal amount of such Securities to be redeemed. In the case of any redemption of Securities (a) prior to the expiration of any restriction on such redemption provided in the terms of such Securities or elsewhere in this Indenture, or (b) pursuant to an election of the Company which is subject to a condition specified in the terms of such Securities or elsewhere in this Indenture, the Company shall deliver to the Trustee, prior to the giving of any notice of redemption to Holders pursuant to this Section, an Officers' Certificate evidencing compliance with such restriction or condition.

If less than all the Securities of a series are to be redeemed, the Trustee shall select, pro rata, by lot or in such manner as it shall deem appropriate and fair, Securities of such series to be redeemed in whole or in part. Securities may be redeemed in part in Principal amounts equal to authorized denominations for Securities of such series. The Trustee shall promptly notify the Company in writing of the Securities of such series selected for redemption and, in the case of any Securities of such series selected for partial redemption, the Principal amount thereof to be redeemed. For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Securities shall relate, in the case of any Security redeemed or to be redeemed only in part, to the portion of the Principal amount of such Security which has been or is to be redeemed.

Section 3.03. *Payment of Securities Called for Redemption.* If notice of redemption has been given as above provided, the Securities or portions of Securities 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 on and after such date (unless the Company shall default in the payment of such Securities at the redemption price, together with interest accrued to such date) interest on the Securities or portions of Securities so called for redemption shall cease to accrue, and, except as provided in Sections 7.12 and 8.02, such Securities shall cease from and after the date fixed for redemption to be entitled to any benefit under this Indenture, and the Holders thereof shall have no right in respect of such Securities except the right to receive the redemption price thereof and unpaid interest to the date fixed for redemption. On presentation and surrender of such Securities at a place of payment specified in said notice, said Securities or the specified portions thereof shall be paid and redeemed by the Company at the applicable redemption price, together with interest accrued thereon to the date fixed for redemption; provided that payment of interest becoming due on or prior to the date fixed for redemption shall be payable to the Holders registered as such on the relevant record date subject to the terms and provisions of Sections 2.04 and 2.13 hereof.

If any Security called for redemption shall not be so paid upon surrender thereof for redemption, the principal shall, until paid or duly provided for, bear interest from the date fixed for redemption at the rate of interest or Yield to Maturity (in the case of an Original Issue Discount Security) borne by such Security.

Upon presentation of any Security of any series redeemed in part only, the Company shall execute and the Trustee shall authenticate and deliver to or on the order of the Holder thereof, at the expense of the Company, a new Security or Securities of such series and tenor, of authorized denominations, in Principal amount equal to the unredeemed portion of the Security so presented.

Section 3.04. *Exclusion of Certain Securities from Eligibility for Selection for Redemption.* Unless otherwise provided with respect to any series of Securities, Securities shall be excluded from eligibility for selection for redemption if they are identified by registration and certificate number in a written statement signed by an authorized Officer of the Company and delivered to the Trustee at least 40 days prior to the last date on which notice of redemption may be given as being owned of record and beneficially by, and not pledged or hypothecated by, either (a) the Company or (b) an entity specifically identified in such written statement as directly or indirectly controlling or controlled by or under direct or indirect common control with the Company.

Section 3.05. *Mandatory and Optional Sinking Funds.* 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 the Securities of any series is herein referred to as an “**optional sinking fund payment**.” The date on which a sinking fund payment is to be made is herein referred to as the “**sinking fund payment date**.”

In lieu of making all or any part of any mandatory sinking fund payment with respect to any series of Securities in cash, the Company may at its option (a) deliver to the Trustee Securities of such series theretofore purchased or otherwise acquired (except through a mandatory sinking fund payment) by the Company or receive credit for Securities of such series (not previously so credited) theretofore purchased or otherwise acquired (except as aforesaid) by the Company and delivered to the Trustee for cancellation pursuant to Section 2.11, (b) receive credit for optional sinking fund payments (not previously so credited) made pursuant to this Section, or (c) receive credit for Securities of such series (not previously so credited) redeemed by the Company at the option of the Company pursuant to the terms of such Securities or through any optional sinking fund payment. Securities so delivered or credited shall be received or credited by the Trustee at the sinking fund redemption price specified in such Securities.

On or before the sixtieth day next preceding each sinking fund payment date for any series, or such shorter period as shall be acceptable to the Trustee, the Company will deliver to the Trustee an Officers' Certificate (a) specifying the portion of the mandatory sinking fund payment to be satisfied by payment of cash and the portion to be satisfied by credit of specified Securities of such series and the basis for such credit, (b) stating that none of the specified Securities of such series has theretofore been so credited, (c) stating that no defaults in the payment of interest or Events of Default with respect to such series have occurred (which have not been waived or cured) and are continuing and (d) stating whether or not the Company intends to exercise its right to make an optional sinking fund payment with respect to such series and, if so, specifying the amount of such optional sinking fund payment which the Company intends to pay on or before the next succeeding sinking fund payment date. Any Securities of such series to be credited and required to be delivered to the Trustee in order for the Company to be entitled to credit therefor as aforesaid which have not theretofore been delivered to the Trustee shall be delivered for cancellation pursuant to Section 2.11 to the Trustee with such Officers' Certificate (or reasonably promptly thereafter if acceptable to the Trustee). Such Officers' Certificate shall be irrevocable and upon its receipt by the Trustee the Company shall become unconditionally obligated to make all the cash payments or delivery of Securities therein referred to, if any, on or before the next succeeding sinking fund payment date. Failure of the Company, on or before any such sixtieth day, to deliver such Officer's Certificate and Securities specified in this paragraph, if any, shall not constitute a default but shall constitute, on and as of such date, the irrevocable election of the Company (i) that the mandatory sinking fund payment for such series due on the next succeeding sinking fund payment date shall be paid entirely in cash without the option to deliver or credit Securities of such series in respect thereof and (ii) that the Company will make no optional sinking fund payment with respect to such series as provided in this Section.

If the sinking fund payment or payments (mandatory or optional or both) to be made in cash on the next succeeding sinking fund payment date plus any unused balance of any preceding sinking fund payments made in cash shall exceed \$50,000 (or a lesser sum if the Company shall so request with respect to the Securities of any series), such cash shall be applied on the next succeeding sinking fund payment date to the redemption of Securities of such series at the sinking fund redemption price thereof together with accrued interest thereon to the date fixed for redemption. If such amount shall be \$50,000 (or such lesser sum) or less and the Company makes no such request then it shall be carried over until a sum in excess of \$50,000 (or such lesser sum) is available. The Trustee shall select, in the manner provided in Section 3.02, for redemption on such sinking fund payment date a sufficient Principal amount of Securities of such series to absorb said cash, as nearly as may be, and shall (if requested in writing by the Company) inform the Company of the serial numbers of the Securities of such series (or portions thereof) so selected. Securities shall be excluded from eligibility for redemption under this Section if they are identified by registration and certificate number in an Officers' Certificate delivered to the Trustee at least 60 days prior to the sinking fund payment date as being owned of record and beneficially by, and not pledged or hypothecated by either (a) the Company or (b) an entity specifically identified in such Officers' Certificate as directly or indirectly controlling or controlled by or under direct or indirect common control with the Company. The Trustee, in the name and at the expense of the Company (or the Company, if it shall so request the Trustee in writing) shall cause notice of redemption of the Securities of such series to be given in substantially the manner provided in Section 3.02 (and with the effect provided in Section 3.03) for the redemption of Securities of such series in part at the option of the Company. The amount of any sinking fund payments not so applied or allocated to the redemption of Securities of such series shall be added to the next cash sinking fund payment for such series and, together with such payment, shall be applied in accordance with the provisions of this Section. Any and all sinking fund moneys held on the stated maturity date of the Securities of any particular series (or earlier, if such maturity is accelerated), which are not held for the payment or redemption of particular Securities of such series shall be applied, together with other moneys, if necessary, sufficient for the purpose, to the payment of the Principal of, and interest on, the Securities of such series at maturity.

On or before 10:00 a.m. New York City time on each sinking fund payment date, the Company shall pay to the Trustee in cash or shall otherwise provide for the payment of all interest accrued to the date fixed for redemption on Securities to be redeemed on the next following sinking fund payment date.

The Trustee shall not redeem or cause to be redeemed any Securities of a series with sinking fund moneys or mail any notice of redemption of Securities of such series by operation of the sinking fund during the continuance of a Default in payment of interest on such Securities or of any Event of Default except that, where the mailing of notice of redemption of any Securities shall theretofore have been made, the Trustee shall redeem or cause to be redeemed such Securities, provided that it shall have received from the Company a sum sufficient for such redemption. Except as aforesaid, any moneys in the sinking fund for such series at the time when any such Default or Event of Default shall occur, and any moneys thereafter paid into the sinking fund, shall, during the continuance of such Default or Event of Default, be deemed to have been collected under Article 6 and held for the payment of all such Securities. In case such Event of Default shall have been waived as provided in Section 6.04 or the Default cured on or before the sixtieth day preceding the sinking fund payment date in any year, such moneys shall thereafter be applied on the next succeeding sinking fund payment date in accordance with this Section to the redemption of such Securities.

ARTICLE 4 COVENANTS

Section 4.01. *Payment of Securities.* The Company shall pay the Principal of and interest on the Securities on the dates and in the manner provided in the Securities and this Indenture. The interest on Securities (together with any additional amounts payable pursuant to the terms of such Securities) shall be payable only to the Holders thereof (subject to Section 2.04) and at the option of the Company may be paid by mailing checks for such interest payable to or upon the written order of such Holders at their last addresses as they appear on the Security Register of the Company.

Notwithstanding any provisions of this Indenture and the Securities of any series to the contrary, if the Company and a Holder of any Security so agree, payments of interest on, and any portion of the Principal of, such Holder's Security (other than interest payable at maturity or on any redemption or repayment date or the final payment of Principal on such Security) shall be made by the Paying Agent, upon receipt from the Company of immediately available funds by 11:00 A.M., New York City time (or such other time as may be agreed to between the Company and the Paying Agent), directly to the Holder of such Security (by Federal funds wire transfer or otherwise) if the Holder has delivered written instructions to the Trustee 15 days prior to such payment date requesting that such payment will be so made and designating the bank account to which such payments shall be so made and in the case of payments of Principal, surrenders the same to the Trustee in exchange for a Security or Securities aggregating the same Principal

amount as the unredeemed Principal amount of the Securities surrendered. The Trustee shall be entitled to rely on the last instruction delivered by the Holder pursuant to this Section 4.01 unless a new instruction is delivered 15 days prior to a payment date. The Company will indemnify and hold each of the Trustee and any Paying Agent harmless against any loss, liability or expense (including attorneys' fees) resulting from any act or omission to act on the part of the Company or any such Holder in connection with any such agreement or from making any payment in accordance with any such agreement.

The Company shall pay interest on overdue Principal, and interest on overdue installments of interest, to the extent lawful, at the rate per annum specified in the Securities.

Section 4.02. *Maintenance of Office or Agency.* The Company will maintain in the United States of America, an office or agency where Securities may be surrendered for registration of transfer or exchange or for presentation for payment and where notices and demands to or upon the Company in respect of the Securities and this Indenture may be served. The Company hereby initially designates [], as such office or agency of the Company. The Company will give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency. 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, surrenders, notices and demands may be made or served at the address of the Trustee set forth in Section 10.02.

The Company may also from time to time designate one or more other offices or agencies where the Securities of any series may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency in the United States of America 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 location of any such other office or agency.

Section 4.03. *Securityholders' Lists.* The Company will furnish or cause to be furnished to the Trustee a list in such form as the Trustee may reasonably require of the names and addresses of the holders of the Securities pursuant to Section 312 of the Trust Indenture Act (a) semi-annually not more than 15 days after each record date for the payment of semi-annual interest on the Securities, as hereinabove specified, as of such record date, and (b) at such other times as the Trustee may request in writing, within thirty days after receipt by the Company of any such request as of a date not more than 15 days prior to the time such information is furnished.

Section 4.04. *Certificate to Trustee.* The Company will furnish to the Trustee annually, on or before a date not more than four months after the end of its fiscal year (which, on the date hereof, is a calendar year), a brief certificate (which need not contain the statements required by Section 10.04) from its principal executive, financial or accounting officer as to his or her knowledge of the compliance of the Company with all conditions and covenants under this Indenture (such compliance to be determined without regard to any period of grace or requirement of notice provided under this Indenture) which certificate shall comply with the requirements of the Trust Indenture Act.

Section 4.05. *Reports by the Company.* The Company covenants to file with the Trustee, within 15 days after the Company files the same with the Commission, copies of the annual reports and of the information, documents, and other reports which the Company may be required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act.

Section 4.06. *Additional Amounts.* If the Securities of a series provide for the payment of additional amounts, at least 10 days prior to the first interest payment date with respect to that series of Securities and at least 10 days prior to each date of payment of Principal of or interest on the Securities of that series if there has been a change with respect to the matters set forth in the below-mentioned Officers' Certificate, the Company shall furnish to the Trustee and the principal paying agent, if other than the Trustee, an Officers' Certificate instructing the Trustee and such paying agent whether such payment of Principal of or interest on the Securities of that series shall be made to Holders of the Securities of that series without withholding or deduction for or on account of any tax, assessment or other governmental charge described in the Securities of that series. If any such withholding or deduction shall be required, then such Officers' Certificate shall specify by country the amount, if any, required to be withheld or deducted on such payments to such Holders and shall certify the fact that additional amounts will be payable and the amounts so payable to each Holder, and the Company shall pay to the Trustee or such paying agent the additional amounts required to be paid by this Section. The Company covenants to indemnify the Trustee and any paying agent for, and to hold them harmless against, any loss, liability or expense reasonably incurred without negligence or bad faith on their part arising out of or in connection with actions taken or omitted by any of them in reliance on any Officers' Certificate furnished pursuant to this Section.

Whenever in this Indenture there is mentioned, in any context, the payment of the Principal of or interest or any other amounts on, or in respect of, any Security of any series, such mention shall be deemed to include mention of the payment of additional amounts provided by the terms of such series established hereby or pursuant hereto to the extent that, in such context, additional amounts are, were or would be payable in respect thereof pursuant to such terms, and express mention of the payment of additional amounts (if applicable) in any provision hereof shall not be construed as excluding the payment of additional amounts in those provisions hereof where such express mention is not made.

ARTICLE 5 SUCCESSOR CORPORATION

Section 5.01. *When Company May Merge, Etc.* Unless otherwise provided pursuant to Section 2.03 in connection with the establishment of a series, the Company shall not consolidate or combine with, merge with or into, directly or indirectly, or sell, assign, convey, transfer, lease or otherwise dispose of all or substantially all of its property and assets to any Person or Persons in a single transaction or through a series of transactions unless:

(a) the Company shall be the continuing Person or, if the Company is not the continuing Person, the resulting, surviving or transferee Person (the "**Surviving Entity**") is a company organized and existing under the laws of any member state of the European Union or the United States of America or any State or territory thereof;

(b) the Surviving Entity shall expressly assume all of the Company's obligations under the Securities and this Indenture, and shall, if required by law to effectuate the assumption, execute supplemental indentures which shall be delivered to the Trustee and shall be in form and substance reasonably satisfactory to the Trustee;

(c) immediately after giving effect to such transaction or series of transactions on a pro forma basis, no Default has occurred and is continuing; and

(d) the Company or the Surviving Entity shall have delivered to the Trustee an Officers' Certificate and Opinion of Counsel stating that (x) the transaction or series of transactions and such supplemental indenture, if any, complies with this Section 5.01, (y) such supplemental indenture (if any) constitutes the legal, valid and binding obligation of the Company and such Surviving Entity enforceable against such Surviving Entity in accordance with its terms, subject to customary exceptions and (z) all conditions precedent in this Indenture relating to the transaction or series of transactions have been satisfied.

Section 5.02. *Successor Substituted.* Upon any consolidation, combination or merger, or any sale, assignment, conveyance, transfer, lease or other disposition of all or substantially all of the property and assets of the Company in accordance with Section 5.01 of this Indenture, the Surviving Entity 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 Surviving Entity had been named as the Company herein and thereafter the predecessor Person, except in the case of (x) a lease or (y) any sale, assignment, conveyance, transfer, lease or other disposition to one or more Subsidiaries of the Company, shall be discharged from all obligations and covenants under this Indenture and the Securities.

ARTICLE 6 DEFAULT AND REMEDIES

Section 6.01. *Events of Default.* An "**Event of Default**" shall occur with respect to the Securities of any series if:

(a) the Company defaults in the payment of the Principal of any Security of such series when the same becomes due and payable at maturity, upon acceleration, redemption or mandatory repurchase, including as a sinking fund installment, or otherwise;

(b) the Company defaults in the payment of interest on any Security of such series when the same becomes due and payable, and such default continues for a period of 30 days;

(c) the Company defaults in the performance of or breaches any other covenant or agreement of the Company in this Indenture with respect to any Security of such series or in the Securities of such series (other than a covenant or agreement in respect of which noncompliance by the Company would otherwise be an Event of Default) and such default or breach continues for a period of 90 consecutive days or more after written notice to the Company by the Trustee or to the Company and the Trustee by the Holders of 25% or more in aggregate Principal amount of the Securities of all series affected thereby specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" hereunder;

(d) a court having jurisdiction in the premises shall enter a decree or order for relief in respect of the Company in an involuntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or appointing a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of the Company or for any substantial part of its property or ordering the winding up or liquidation of its affairs, and such decree or order shall remain unstayed and in effect for a period of 60 consecutive days;

(e) the Company (i) commences a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consents to the entry of an order for relief in an involuntary case under any such law, (ii) consents to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company or for all or substantially all of the property and assets of the Company or (iii) effects any general assignment for the benefit of creditors; or

(f) any other Event of Default established pursuant to Section 2.03 with respect to the Securities of such series occurs.

Section 6.02. *Acceleration.* (a) If an Event of Default other than as described in clauses (d) or (e) of Section 6.01 with respect to the Securities of any series then outstanding occurs and is continuing, then, and in each and every such case, except for any series of Securities the Principal of which 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 all such series then outstanding hereunder in respect of which an Event of Default has occurred (all such series voting together as a single class) by notice in writing to the Company (and to the Trustee if given by Securityholders), may declare the entire Principal (or, if the Securities of any such series are Original Issue Discount Securities, such portion of the Principal amount as may be specified in the terms of such series established pursuant to Section 2.03) of all Securities of the affected series, and the interest accrued thereon, if any, to be due and payable immediately, and upon any such declaration the same shall become immediately due and payable.

(a) If an Event of Default described in clause (d) or (e) of Section 6.01 occurs and is continuing, then the Principal amount (or, if any Securities are Original Issue Discount Securities, such portion of the Principal as may be specified in the terms thereof established pursuant to Section 2.03) of all the Securities then outstanding and interest accrued thereon, if any, shall be and become immediately due and payable, without any declaration, notice or other action by any Holder or the Trustee, to the full extent permitted by applicable law.

The foregoing provisions, however, are subject to the condition that if, at any time after the Principal (or, if the Securities are Original Issue Discount Securities, such portion of the Principal as may be specified in the terms thereof established pursuant to Section 2.03) of the Securities of any series (or of all the Securities, as the case may be) shall have been so declared or become 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 Company shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of each such series (or of all the Securities, as the case may be) and the Principal of any and all Securities of each such series (or of all the Securities, as the case may be) which shall have become due otherwise than by acceleration (with interest upon such Principal and, to the

extent that payment of such interest is enforceable under applicable law, on overdue installments of interest, at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of each such series to the date of such payment or deposit) and such amount as shall be sufficient to cover all amounts owing the Trustee under Section 7.07, and if any and all Events of Default under the Indenture, other than the non-payment of the Principal of and interest on Securities which shall have become due by acceleration, shall have been cured, waived or otherwise remedied as provided herein, then and in every such case the Holders of a majority in aggregate Principal amount of all the then outstanding Securities of all such series that have been accelerated (voting as a single class), by written notice to the Company and to the Trustee, may waive all defaults with respect to all such series (or with respect to all the Securities, as the case may be) and rescind and annul such declaration and its consequences, but no such waiver or rescission and annulment shall extend to or shall affect any subsequent default or shall impair any right consequent thereon.

For all purposes under this Indenture, if a portion of the Principal of any Original Issue Discount Securities shall have been accelerated and declared or become due and payable pursuant to the provisions hereof, then, from and after such declaration, unless such declaration has been rescinded and annulled, the Principal amount of such Original Issue Discount Securities shall be deemed, for all purposes hereunder, to be such portion of the Principal thereof as shall be due and payable as a result of such acceleration, and payment of such portion of the Principal thereof as shall be due and payable as a result of such acceleration, together with interest, if any, thereon and all other amounts owing thereunder, shall constitute payment in full of such Original Issue Discount Securities.

Section 6.03. *Other Remedies.* If a payment default or an Event of Default with respect to the Securities of any series occurs and is continuing, the Trustee may pursue, in its own name or as trustee of an express trust, any available remedy by proceeding at law or in equity to collect the payment of Principal of and interest on the Securities of such series or to enforce the performance of any provision of the Securities of such series or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Securities or does not produce any of them in the proceeding.

Section 6.04. *Waiver of Past Defaults.* Subject to Sections 6.02, 6.07 and 9.02, the Holders of at least a majority in Principal amount (or, if the Securities are Original Issue Discount Securities, such portion of the Principal as is then accelerable under Section 6.02) of the outstanding Securities of all series affected (voting as a single class), by notice to the Trustee, may waive an existing Default or Event of Default with respect to the Securities of such series and its consequences, except a Default in the payment of Principal of or interest on any Security as specified in clauses (a) or (b) of Section 6.01 or in respect of a covenant or provision of this Indenture which cannot be modified or amended without the consent of the Holder of each outstanding Security affected. Upon any such waiver, such Default shall cease to exist, and any Event of Default with respect to the Securities of such series arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other Default or Event of Default or impair any right consequent thereto.

Section 6.05. *Control by Majority.* Subject to Sections 7.01 and 7.02(e), the Holders of at least a majority in aggregate Principal amount (or, if any Securities are Original Issue Discount Securities, such portion of the Principal as is then accelerable under Section 6.02) of the outstanding Securities of all series affected (voting as a single class) may 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 by this Indenture; provided, that the Trustee may refuse to follow any direction that conflicts with law or this Indenture, that may involve the Trustee in personal liability or that the Trustee determines in good faith may be unduly prejudicial to the rights of Holders not joining in the giving of such direction; and provided further, that the Trustee may take any other action it deems proper that is not inconsistent with any directions received from Holders of Securities pursuant to this Section 6.05.

Section 6.06. *Limitation on Suits.* No Holder of any Security of any series may institute any proceeding, judicial or otherwise, with respect to this Indenture or the Securities of such series, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless:

(a) such Holder has previously given to the Trustee written notice of a continuing Event of Default with respect to the Securities of such series;

(b) the Holders of at least 25% in aggregate Principal amount of outstanding Securities of all such series affected 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 indemnity or security reasonably satisfactory to it against any costs, liabilities or expenses to be incurred in compliance with such request;

(d) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity has failed to institute any such proceeding; and

(e) during such 60-day period, the Holders of a majority in aggregate Principal amount of the outstanding Securities of all such affected series have not given the Trustee a direction that is inconsistent with such written request.

A Holder may not use this Indenture to prejudice the rights of another Holder or to obtain a preference or priority over such other Holder.

Section 6.07. *Rights of Holders to Receive Payment.* Notwithstanding any other provision of this Indenture, the right of any Holder of a Security to receive payment of Principal or interest, if any, on such Holder's Security on or after the respective due dates expressed on such Security, or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of such Holder.

Section 6.08. *Collection Suit by Trustee.* If an Event of Default with respect to the Securities of any series in payment of Principal or interest specified in clause (a) or (b) of Section 6.01 occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Company for the whole amount (or such portion thereof as

specified in the terms established pursuant to Section 2.03 of Original Issue Discount Securities) of Principal of, and accrued interest remaining unpaid on, together with interest on overdue Principal of, and, to the extent that payment of such interest is lawful, interest on overdue installments of interest on, the Securities of such series, in each case at the rate or Yield to Maturity (in the case of Original Issue Discount Securities) specified in such Securities, and such further amount as shall be sufficient to cover all amounts owing the Trustee under Section 7.07.

Section 6.09. *Trustee May File Proofs of Claim.* The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for amounts due the Trustee under Section 7.07) and the Holders allowed in any judicial proceedings relative to the Company (or any other obligor on the Securities), its creditors or its property and shall be entitled and empowered to collect and receive any moneys, securities or other property payable or deliverable upon conversion or exchange of the Securities or upon 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 to it under Section 7.07. Nothing herein contained shall be deemed to empower 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 6.10. *Application of Proceeds.* Any moneys collected by the Trustee pursuant to this Article in respect of the Securities of any series 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 interest, upon presentation of the several Securities in respect of which moneys have been collected and noting thereon the payment, or issuing Securities of such series and tenor in reduced Principal amounts in exchange for the presented Securities of such series and tenor if only partially paid, or upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 7.07 applicable to the Securities of such series in respect of which moneys have been collected;

SECOND: In case the Principal of the Securities of such series in respect of which moneys have been collected shall not have become and be then due and payable, to the payment of interest on the Securities of such series in default in the order of the maturity of the installments of such interest, with interest (to the extent that such interest has been collected by the Trustee) upon the overdue installments of interest at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in such Securities, such payments to be made ratably to the persons entitled thereto, without discrimination or preference;

THIRD: In case the Principal of the Securities of such series in respect of which moneys have been collected shall have become and shall be then due and payable, to the payment of the whole amount then owing and unpaid upon all the Securities of such series for Principal and interest, with interest upon the overdue Principal, and (to the extent that such interest has been

collected by the Trustee) upon overdue installments of interest at the same rate as the rate of interest or Yield to Maturity (in the case of Original Issue Discount Securities) specified in the Securities of such series; and in case such moneys shall be insufficient to pay in full the whole amount so due and unpaid upon the Securities of such series, then to the payment of such Principal and interest or Yield to Maturity, without preference or priority of Principal over interest or Yield to Maturity, or of interest or Yield to Maturity over Principal, or of any installment of interest over any other installment of interest, or of any Security of such series over any other Security of such series, ratably to the aggregate of such Principal and accrued and unpaid interest or Yield to Maturity; and FOURTH: To the payment of the remainder, if any, to the Company or any other person lawfully entitled thereto.

Section 6.11. *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 to their former positions hereunder and thereafter all rights and remedies of the Company, Trustee and the Holders shall continue as though no such proceeding had been instituted.

Section 6.12. *Undertaking for Costs.* 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, in either case in respect to the Securities of any series, a court may require any party litigant in such suit (other than the Trustee) to file an undertaking to pay the costs of the suit, and the court may assess reasonable costs, including reasonable attorneys' fees, against any party litigant (other than the Trustee) in the suit having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section 6.12 does not apply to a suit by a Holder pursuant to Section 6.07, a suit instituted by the Trustee or a suit by Holders of more than 10% in Principal amount of the outstanding Securities of such series.

Section 6.13. *Rights and Remedies Cumulative.* Except as otherwise provided with respect to the replacement or payment of mutilated, destroyed, lost or wrongfully taken Securities in Section 2.08, 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 6.14. *Delay or Omission not Waiver.* No delay or omission of the Trustee or of any Holder 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 6 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.

ARTICLE 7
TRUSTEE

Section 7.01. *General.* The duties and responsibilities of the Trustee shall be as provided by the Trust Indenture Act and as set forth herein. Notwithstanding the foregoing, no provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, unless it receives indemnity satisfactory to it against any loss, liability or expense. Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Article 7.

Section 7.02. *Certain Rights of Trustee.* Subject to Trust Indenture Act Sections 315(a) through (d):

(a) the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, Officers' Certificate, Opinion of Counsel (or both), statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document believed by it to be genuine and to have been signed or presented by the proper person or persons. The Trustee need not investigate any fact or matter stated in the document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit;

(b) before the Trustee acts or refrains from acting, it may require an Officers' Certificate and/or an Opinion of Counsel, which shall conform to Section 10.04 and shall cover such other matters as the Trustee may reasonably request. The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such certificate or opinion. Subject to Sections 7.01 and 7.02, whenever in the administration of the trusts 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 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 by it under the provisions of this Indenture upon the faith thereof;

(c) the Trustee may act through its attorneys and agents not regularly in its employ and shall not be responsible for the misconduct or negligence of any agent or attorney appointed with due care;

(d) any request, direction, order or demand of the Company mentioned herein shall be sufficiently evidenced by an Officers' Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any Board Resolution may be evidenced to the Trustee by a copy thereof certified by the Secretary or an Assistant Secretary of the Company;

(e) 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 Holders, unless such Holders shall have offered to the Trustee security or indemnity reasonably satisfactory to it against any costs, expenses or liabilities that might be incurred by it in compliance with such request or direction;

(f) the Trustee shall not be liable for any action it takes or omits to take in good faith that it believes to be authorized or within its rights or powers or for any action it takes or omits to take in accordance with the direction of the Holders in accordance with Section 6.05 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;

(g) 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, suffered or omitted by it hereunder in good faith and in reliance thereon; and

(h) prior to the occurrence of an Event of Default hereunder and after the curing or waiving of all Events of Default, the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, Officers' Certificate, Opinion of Counsel, Board Resolution, statement, instrument, opinion, report, notice, request, consent, order, approval, appraisal, bond, debenture, note, coupon, security, or other paper or document unless requested in writing so to do by the Holders of not less than a majority in aggregate Principal amount of the Securities of all series affected then outstanding; provided 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 expenses or liabilities as a condition to proceeding.

Section 7.03. *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 its Affiliates with the same rights it would have if it were not the Trustee. Any Agent may do the same with like rights. However, the Trustee is subject to Trust Indenture Act Sections 310(b) and 311. For purposes of Trust Indenture Act Section 311(b)(4) and (6), the following terms shall mean:

(a) “**cash transaction**” means any transaction in which full payment for goods or securities sold is made within seven days after delivery of the goods or securities in currency or in checks or other orders drawn upon banks or bankers and payable upon demand; and

(b) “**self-liquidating paper**” means any draft, bill of exchange, acceptance or obligation which is made, drawn, negotiated or incurred by the Company for the purpose of financing the purchase, processing, manufacturing, shipment, storage or sale of goods, wares or merchandise and which is secured by documents evidencing title to, possession of, or a lien upon, the goods, wares or merchandise or the receivables or proceeds arising from the sale of the goods, wares or merchandise previously constituting the security, provided the security is received by the Trustee simultaneously with the creation of the creditor relationship with the Company arising from the making, drawing, negotiating or incurring of the draft, bill of exchange, acceptance or obligation.

Section 7.04. *Trustee's Disclaimer.* The recitals contained herein and in the Securities (except the Trustee's certificate of authentication) shall be taken as statements of the Company and not of the Trustee and the Trustee assumes no responsibility for the correctness of the same. Neither the Trustee nor any of its agents (a) makes any representation as to the validity or adequacy of this Indenture or the Securities and (b) shall be accountable for the Company's use or application of the proceeds from the Securities.

Section 7.05. *Notice of Default.* If any Default with respect to the Securities of any series occurs and is continuing and if such Default is known to the actual knowledge of a Responsible Officer with the Corporate Trust Office of the Trustee, the Trustee shall give to each Holder of Securities of such series notice of such Default within 90 days after it occurs to all Holders of Securities of such series in the manner and to the extent provided in Section 313(a) of the Trust Indenture Act, unless such Default shall have been cured or waived before the mailing of such notice; provided, however, that, except in the case of a Default in the payment of the Principal of or interest on any Security, the Trustee shall be protected in withholding such notice if the Trustee in good faith determines that the withholding of such notice is in the interests of the Holders.

Section 7.06. *Reports by Trustee to Holders.* The Trustee shall transmit to Holders such reports concerning the Trustee and its actions under this Indenture as may be required pursuant to the Trust Indenture Act at the times and in the manner provided pursuant thereto. If required by Section 313(a) of the Trust Indenture Act, the Trustee shall, within 60 days after each May 15 following the date of this Indenture, deliver to Holders a brief report, dated as of such May 15, which complies with the provisions of such Section 313(a).

A copy of each such report shall, at the time of such transmission to Holders, be filed by the Trustee with each stock exchange upon which any Securities are listed, with the Commission and with the Company. The Company will promptly notify the Trustee when any Securities are listed on any stock exchange.

Section 7.07. *Compensation and Indemnity.* The Company shall pay to the Trustee such compensation as shall be agreed upon in writing from time to time for its services. The compensation of the Trustee shall not be limited by any law on compensation of a Trustee of an express trust. The Company shall reimburse the Trustee and any predecessor Trustee upon request for all reasonable out-of-pocket expenses, disbursements and advances incurred or made by the Trustee or such predecessor Trustee. Such expenses shall include the reasonable compensation and expenses of the Trustee's or such predecessor Trustee's agents, counsel and other persons not regularly in their employ.

The Company shall indemnify the Trustee and any predecessor Trustee for, and hold them harmless against, any loss or liability or expense incurred by them without negligence or bad faith on their part arising out of or in connection with the acceptance or administration of this Indenture and the Securities or the issuance of the Securities or of series thereof or the trusts hereunder and the performance of duties under this Indenture and the Securities, including the costs and expenses of defending themselves against or investigating any claim or liability and of complying with any process served upon them or any of their officers in connection with the exercise or performance of any of their powers or duties under this Indenture and the Securities.

To secure the Company's payment obligations in this Section 7.07, the Trustee shall have a lien prior to the Securities on all money or property held or collected by the Trustee, in its capacity as Trustee, except money or property held in trust to pay Principal of, and interest on particular Securities.

The obligations of the Company under this Section to compensate and indemnify the Trustee and each predecessor Trustee and to pay or reimburse the Trustee and each predecessor Trustee for expenses, disbursements and advances shall constitute additional indebtedness hereunder and shall survive the satisfaction and discharge of this Indenture or the rejection or termination of this Indenture under bankruptcy law. Such additional indebtedness shall be a senior claim 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, and the Securities are hereby subordinated to such senior claim. Without prejudice to any other rights available to the Trustee under applicable law, if the Trustee renders services and incurs expenses following an Event of Default under Section 6.01(d) or Section 6.01(e) hereof, the parties hereto and the holders by their acceptance of the Securities hereby agree that such expenses are intended to constitute expenses of administration under any bankruptcy law.

Section 7.08. *Replacement of Trustee.* A resignation or removal of the Trustee as Trustee with respect to the Securities of any series and appointment of a successor Trustee as Trustee with respect to the Securities of any series shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section 7.08.

The Trustee may resign as Trustee with respect to the Securities of any series at any time by so notifying the Company in writing. The Holders of a majority in Principal amount of the outstanding Securities of any series may remove the Trustee as Trustee with respect to the Securities of such series by so notifying the Trustee in writing and may appoint a successor Trustee with respect thereto with the consent of the Company. The Company may remove the Trustee as Trustee with respect to the Securities of any series if: (i) the Trustee is no longer eligible under Section 7.11 of this Indenture; (ii) the Trustee is adjudged a bankrupt or insolvent; (iii) a receiver or other public officer takes charge of the Trustee or its property; or (iv) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed as Trustee with respect to the Securities of any series, or if a vacancy exists in the office of Trustee with respect to the Securities of any series for any reason, the Company shall promptly appoint a successor Trustee with respect thereto. Within one year after the successor Trustee takes office, the Holders of a majority in Principal amount of the outstanding Securities of such series may appoint a successor Trustee in respect of such Securities to replace the successor Trustee appointed by the Company. If the successor Trustee with respect to the Securities of any series does not deliver its written acceptance required by Section 7.09 within 30 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Holders of a majority in Principal amount of the outstanding Securities of such series may petition any court of competent jurisdiction for the appointment of a successor Trustee with respect thereto.

The Company shall give notice of any resignation and any removal of the Trustee with respect to the Securities of any series and each appointment of a successor Trustee in respect of the Securities of such series to all Holders of Securities of such series. Each notice shall include the name of the successor Trustee and the address of its Corporate Trust Office.

Notwithstanding replacement of the Trustee with respect to the Securities of any series pursuant to this Section 7.08 and Section 7.09, the Company's obligations under Section 7.07 shall continue for the benefit of the retiring Trustee.

Section 7.09. Acceptance of Appointment by Successor. 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 and subject to the lien provided for in Section 7.07, 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.

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) if the retiring Trustee is not retiring with respect to all Securities, 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 and 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 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 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 all 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.

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 the first or second preceding paragraph, as the case may be.

No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be eligible under this Article and qualified under Section 310(b) of the Trust Indenture Act.

Section 7.10. *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 or national banking association, the resulting, surviving or transferee corporation or national banking association without any further act shall be the successor Trustee with the same effect as if the successor Trustee had been named as the Trustee herein.

Section 7.11. *Eligibility.* This Indenture shall always have a Trustee who satisfies the requirements of Trust Indenture Act Section 310(a). The Trustee shall have a combined capital and surplus of at least \$25,000,000 as set forth in its most recent published annual report of condition.

Section 7.12. *Money Held in Trust.* 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 and except for money held in trust under Article 8 of this Indenture.

ARTICLE 8

SATISFACTION AND DISCHARGE OF INDENTURE; UNCLAIMED MONEYS

Section 8.01. *Satisfaction and Discharge of Indenture.* If at any time (a) (i) all Securities of any series issued that have been authenticated and delivered have been delivered by the Company to the Trustee for cancellation (other than Securities of such series which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 2.08); or (ii) all the Securities of any series issued that have not been delivered by the Company 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 by such Trustee in the Company's name and at the Company's expense, the Company shall have irrevocably deposited or caused to be deposited with the Trustee as trust funds the entire amount in cash (other than moneys repaid by the Trustee or any paying agent to the Company in accordance with Section 8.04) or U.S. Government Obligations, maturing as to principal and interest in such amounts and at such times as will insure (without consideration of the reinvestment of such interest) the availability of cash, or a combination thereof, sufficient to pay at maturity or upon redemption all Securities of such series (other than any Securities of such series which shall have been destroyed, lost or stolen and which shall have been replaced or paid as provided in Section 2.08) not theretofore delivered to the Trustee for cancellation, including Principal and interest due or to become due on or prior to such date of maturity or redemption as the case may be; (b) the Company has paid or caused to be paid all other sums then due and payable under this Indenture; and (c) the Company has delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent under this Indenture relating to the

satisfaction and discharge of this Indenture pursuant to this Section 8.01 have been complied with, then this Indenture shall cease to be of further effect with respect to Securities of such series (except as to (i) rights of registration of transfer and exchange of securities of such series, and the Company's right of optional redemption, if any, (ii) substitution of mutilated, defaced, destroyed, lost or stolen Securities, (iii) rights of holders to receive payments of Principal thereof and interest thereon, upon the original stated due dates therefor (but not upon acceleration) and remaining rights of the holders to receive mandatory sinking fund payments, if any, (iv) the rights, obligations and immunities of the Trustee hereunder and (v) the rights of the Securityholders of such series as beneficiaries hereof with respect to the property so deposited with the Trustee payable to all or any of them), and the Trustee, on demand of the Company accompanied by an Officers' Certificate and an Opinion of Counsel and at the cost and expense of the Company, shall execute proper instruments acknowledging such satisfaction of and discharging this Indenture with respect to such series; provided that the rights of Holders of the Securities to receive amounts in respect of Principal of and interest on the Securities held by them shall not be delayed longer than required by then-applicable mandatory rules or policies of any securities exchange upon which the Securities are listed. The Company agrees to reimburse the Trustee for any costs or expenses thereafter reasonably and properly incurred and to compensate the Trustee for any services thereafter reasonably and properly rendered by the Trustee in connection with this Indenture or the Securities of such series.

Section 8.02. *Application by Trustee of Funds Deposited for Payment of Securities.* Subject to Section 8.04, all moneys (including U.S. Government Obligations and the proceeds thereof) deposited with the Trustee pursuant to Section 8.01, Section 8.05 or Section 8.06 shall be held in trust and applied by it to the payment, either directly or through any paying agent to the Holders of the particular Securities of such series for the payment or redemption of which such moneys have been deposited with the Trustee, of all sums due and to become due thereon for Principal and interest; but such money need not be segregated from other funds except to the extent required by law.

Section 8.03. *Repayment of Moneys Held by Paying Agent.* In connection with the satisfaction and discharge of this Indenture with respect to Securities of any series, all moneys then held by any paying agent under the provisions of this Indenture with respect to such series of Securities shall, upon demand of the Company, be repaid to it or paid to the Trustee and thereupon such paying agent shall be released from all further liability with respect to such moneys.

Section 8.04. *Return of Moneys Held by Trustee and Paying Agent Unclaimed for Two Years.* Any moneys deposited with or paid to the Trustee or any paying agent for the payment of the Principal of or interest on any Security of any series and not applied but remaining unclaimed for two years after the date upon which such Principal or interest shall have become due and payable, shall, upon the written request of the Company and unless otherwise required by mandatory provisions of applicable escheat or abandoned or unclaimed property law, be repaid to the Company by the Trustee for such series or such paying agent, and the Holder of the Security of such series shall, unless otherwise required by mandatory provisions of applicable escheat or abandoned or unclaimed property laws, thereafter look only to the Company for any payment which such Holder may be entitled to collect, and all liability of the Trustee or any paying agent with respect to such moneys shall thereupon cease.

Section 8.05. *Defeasance and Discharge of Indenture.* The Company shall be deemed to have paid and shall be discharged from any and all obligations in respect of the Securities of any series, after the deposit referred to in clause (i) hereof has been made, and the provisions of this Indenture shall no longer be in effect with respect to the Securities of such series (and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging the same), except as to: (a) rights of Holders of the Securities of such series to receive payments of Principal thereof, premium thereto, and interest thereon, upon the original stated due dates therefor, (b) the Company's obligations with respect to the issuance of temporary Securities and the registration of transfer with respect to the Securities of such series, the Company's right of optional redemption, substitution of mutilated, defaced, destroyed, lost or stolen Securities of such series and the maintenance of an office or agency for payment for security payments held in trust pursuant to clause (i) hereof, (c) the rights, obligations and immunities of the Trustee hereunder, and (d) the defeasance provisions contained in Article 8 of this Indenture; *provided* that the following conditions shall have been satisfied:

(i) with reference to this Section 8.05 the Company irrevocably has deposited or caused to be deposited with the Trustee (or another qualifying trustee satisfying the requirements of Section 7.11) as trust funds in trust, for the purposes of making the following payments, specifically pledged as security for, and dedicated solely to, the benefit of the Holders of the Securities of such series, (A) money in an amount, (B) U.S. Government Obligations which through the payment of interest and principal in respect thereof in accordance with their terms will provide not later than one day before the due date of any payment referred to in subclause (x) or (y) of this clause (i), or (C) a combination thereof, in each case sufficient, in the written opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay and discharge, without consideration of reinvestment and after payment of all federal, state and local taxes or other charges and assessments in respect thereof, and which shall be applied by the Trustee to pay and discharge (x) all of the Principal of, premium, if any, and each installment of interest on the outstanding Securities of such series on the maturity or due dates thereof or if the Company has made irrevocable arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee, the redemption date, as the case may be, and (y) any mandatory sinking fund payments or analogous 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 Securities of such series and the Indenture with respect to the Securities of such series;

(ii) the Company has delivered to the Trustee an Opinion of Counsel to the effect that, under then applicable U.S. federal income tax law, Holders of Securities of such series will not recognize gain or loss for U.S. federal income tax purposes as a result of the Company's exercise of its option under this Section 8.05 and will be subject to U.S. 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;

(iii) no Default under either clause (d) or clause (e) of Section 6.01 shall have occurred and be continuing at such time;

(iv) if at such time the Securities of such series are listed on a national securities exchange, the Company has delivered to the Trustee an Opinion of Counsel to the effect that the Securities of such series will not be delisted as a result of such deposit, defeasance and discharge;

(v) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent to the defeasance and discharge under this Section 8.05 have been complied with; and (vi) if the Securities of such series are to be redeemed prior to the final maturity thereof (other than from mandatory sinking fund payments or analogous payments), notice of such redemption shall have been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee shall have been made.

Section 8.06. *Defeasance of Certain Obligations.* The Company may omit to comply with any term, provision or condition set forth in, and this Indenture will no longer be in effect with respect to, any covenant established pursuant to Section 2.03(s) and clause (c) and clause (f) (with respect to any covenants established pursuant to Section 2.03(s) of Section 6.01 shall be deemed not to constitute a Default or an Event of Default with respect to Securities of any series, if:

(a) with reference to this Section 8.06, the Company has irrevocably deposited or caused to be deposited with the Trustee (or another qualifying trustee satisfying the requirements of Section 7.11) as trust funds in trust, for the purposes of making the following payments, specifically pledged as security for, and dedicated solely to, the benefits of the Holders of the Securities of such series, (i) money in an amount, (ii) U.S. Government Obligations which through the payment of interest and principal in respect thereof in accordance with their terms will provide not later than one day before the due date of any payment referred to in subclause (x) or (y) of this clause (a), or (iii) a combination thereof, in each case sufficient, in the written opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay and discharge, without consideration of reinvestment and after payment of all federal, state and local taxes or other charges and assessments in respect thereof, and which shall be applied by the Trustee to pay and discharge (x) all of the Principal of, premium, if any, and each installment of interest on the outstanding Securities of such series on the maturity or due dates thereof or if the Company has made irrevocable arrangements satisfactory to the Trustee for the giving of notice of redemption by the Trustee, the redemption date, as the case may be, and (y) any mandatory sinking fund payments or analogous 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 the Securities of such series and the Indenture with respect to the Securities of such series;

(b) the Company has delivered to the Trustee an Opinion of Counsel to the effect that Holders of Securities of such series will not recognize gain or loss for U.S. federal income tax purposes as a result of the Company's exercise of its option under this Section 8.06 and will be subject to U.S. 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 and defeasance had not occurred;

(c) no Default with respect to the outstanding Securities of such series shall have occurred and be continuing at the time of such deposit immediately after giving effect to such deposit;

(d) if at such time the Securities of such series are listed on a national securities exchange, the Company has delivered to the Trustee an Opinion of Counsel to the effect that the Securities of such series will not be delisted as a result of such deposit, defeasance and discharge;

(e) the Company shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that all conditions precedent to the defeasance under this Section have been complied with; and

(f) if the Securities of such series are to be redeemed prior to the final maturity thereof (other than from mandatory sinking fund payments or analogous payments), notice of such redemption shall have been duly given pursuant to this Indenture or provision therefor satisfactory to the Trustee shall have been made.

Section 8.07. *Reinstatement.* If the Trustee or paying agent is unable to apply any monies or U.S. Government Obligations in accordance with Article 8 by reason of any legal proceeding or by reason of any order or judgment of any court or governmental authority enjoining, restraining or otherwise prohibiting such application, the Company's obligations under this Indenture and the Securities shall be revived and reinstated as though no deposit had occurred pursuant to this Article until such time as the Trustee or paying agent is permitted to apply all such monies or U.S. Government Obligations in accordance with Article 8; provided, however, that if the Company has made any payment of Principal of or interest on any Securities because of the reinstatement of its obligations, the Company shall be subrogated to the rights of the Holders of such Securities to receive such payment from the monies or U.S. Government Obligations held by the Trustee or paying agent.

Section 8.08. *Indemnity.* The Company shall pay and indemnify the Trustee (or other qualifying trustee, collectively for purposes of this Section 8.08 and Section 8.02, the "Trustee") against any tax, fee or other charge, imposed on or assessed against the U.S. Government Obligations deposited pursuant to Section 8.01, 8.05 or 8.06 or the principal or interest received in respect thereof other than any such tax, fee or other charge which by law is for the account of the Holders of the Securities.

Section 8.09. *Excess Funds.* Anything in this Article 8 to the contrary notwithstanding, the Trustee shall deliver or pay to the Company from time to time upon request of the Company, any money or U.S. Government Obligations (or other property and any proceeds therefrom) held by it as provided in Section 8.01, 8.05 or 8.06 which, in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, are in excess of the amount thereof which would then be required to be deposited to effect a discharge or defeasance, as applicable, in accordance with this Article 8.

Section 8.10. *Qualifying Trustee.* Any trustee appointed pursuant to Section 8.05 or 8.06 for the purpose of holding money or U.S. Government Obligations deposited pursuant to such Sections shall be appointed under an agreement in form acceptable to the Trustee and shall provide to the Trustee a certificate, upon which certificate the Trustee shall be entitled to conclusively rely, that all conditions precedent provided for herein to the related defeasance have been complied with. In no event shall the Trustee be liable for any acts or omissions of said trustee.

ARTICLE 9
AMENDMENTS, SUPPLEMENTS AND WAIVERS

Section 9.01. *Without Consent of Holders.* The Company and the Trustee may amend or supplement this Indenture or the Securities of any series without notice to or the consent of any Holder:

(a) to cure any ambiguity, defect or inconsistency in this Indenture;

(b) to comply with Article 5;

(c) to maintain the qualification of this Indenture under the Trust Indenture Act;

(d) to evidence and provide for the acceptance of appointment hereunder with respect to the Securities of any or all series by a successor Trustee 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 7.09;

(e) to establish the form or forms or terms of Securities of any series as permitted by Section 2.03;

(f) to provide for uncertificated Securities and to make all appropriate changes for such purpose;

(g) to conform any provision to the applicable corresponding provision set forth in the offering document for the offering of such series of Securities; and

(h) to make any change that does not materially and adversely affect the rights of any Holder.

Section 9.02. *With Consent of Holders.* Subject to Sections 6.04 and 6.07, without prior notice to any Holders, the Company and the Trustee may amend this Indenture and the Securities of any series with the written consent of the Holders of a majority in Principal amount of the outstanding Securities of each series affected by such amendment (all such series voting together as a single class), and the Holders of a majority in Principal amount of the outstanding Securities of each series affected thereby (all such series voting together as a single class) by written notice to the Trustee may waive future compliance by the Company with any provision of this Indenture or the Securities of such series.

Notwithstanding the provisions of this Section 9.02, without the consent of each Holder affected thereby, an amendment or waiver, including a waiver pursuant to Section 6.04, may not:

(a) change the stated maturity of the Principal of, or any sinking fund obligation or any installment of interest on, such Holder's Security,

(b) reduce the Principal amount thereof or the rate of interest thereon (including any amount in respect of original issue discount);

(c) reduce the above stated percentage of outstanding Securities the consent of whose holders is necessary to modify or amend the Indenture with respect to the Securities of the relevant series; and

(d) reduce the percentage in Principal amount of outstanding Securities of the relevant series the consent of whose Holders is required for any supplemental indenture or for any waiver of compliance with certain provisions of this Indenture or certain Defaults and their consequences provided for in this Indenture.

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 Holders of Securities of such series with respect to such covenant or provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series.

It shall not be necessary for the consent of any Holder under this Section 9.02 to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if such consent approves the substance thereof.

After an amendment, supplement or waiver under this Section 9.02 becomes effective, the Company shall give to the Holders affected thereby a notice briefly describing the amendment, supplement or waiver. The Company will mail supplemental indentures to Holders upon request. Any failure of the Company to mail such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture or waiver.

Section 9.03. Revocation and Effect of Consent. Until an amendment or waiver becomes effective, a consent to it by a Holder 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 Security of the consenting Holder, 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 its Security or portion of its Security. Such revocation shall be effective only if the Trustee receives the notice of revocation before the date the amendment, supplement or waiver becomes effective. An amendment, supplement or waiver shall become effective with respect to any Securities affected thereby on receipt by the Trustee of written consents from the requisite Holders of outstanding Securities affected thereby.

The Company may, but shall not be obligated to, fix a record date (which may be not less than five nor more than 60 days prior to the solicitation of consents) for the purpose of determining the Holders of the Securities of any series affected entitled to consent to any amendment, supplement or waiver. If a record date is fixed, then, notwithstanding the immediately preceding paragraph, those Persons who were such Holders at such record date (or their duly designated proxies) and only those Persons shall be entitled to consent to such amendment, supplement or waiver or to revoke any consent previously given, whether or not such Persons continue to be such Holders after such record date. No such consent shall be valid or effective for more than 90 days after such record date.

After an amendment, supplement or waiver becomes effective with respect to the Securities of any series affected thereby, it shall bind every Holder of such Securities unless it is of the type described in any of clauses (a) through (d) of Section 9.02. In case of an amendment or waiver of the type described in clauses (a) through (d) of Section 9.02, the amendment or waiver shall bind each such Holder who has consented to it and every subsequent Holder of a Security that evidences the same indebtedness as the Security of the consenting Holder.

Section 9.04. *Notation on or Exchange of Securities.* If an amendment, supplement or waiver changes the terms of any Security, the Trustee may require the Holder thereof to deliver it to the Trustee. The Trustee may place an appropriate notation on the Security about the changed terms and return it to the Holder and the Trustee may place an appropriate notation on any Security of such series thereafter authenticated. Alternatively, if the Company or the Trustee so determines, the Company in exchange for the Security shall issue and the Trustee shall authenticate a new Security of the same series and tenor that reflects the changed terms.

Section 9.05. *Trustee to Sign Amendments, Etc.* The Trustee shall be entitled to receive, and shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of any amendment, supplement or waiver authorized pursuant to this Article 9 is authorized or permitted by this Indenture, stating that all requisite consents have been obtained or that no consents are required and stating that such supplemental indenture constitutes the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, subject to customary exceptions. The Trustee may, but shall not be obligated to, execute any such amendment, supplement or waiver that affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Section 9.06. *Conformity with Trust Indenture Act.* Every supplemental indenture executed pursuant to this Article 9 shall conform to the requirements of the Trust Indenture Act as then in effect.

ARTICLE 10 MISCELLANEOUS

Section 10.01. *Trust Indenture Act of 1939.* This Indenture shall incorporate and be governed by the provisions of the Trust Indenture Act that are required to be part of and to govern indentures qualified under the Trust Indenture Act.

Section 10.02. *Notices.* Any notice or communication shall be sufficiently given if written and (a) if delivered in person, when received or (b) if mailed by first class mail, 5 days after mailing, or (c) as between the Company and the Trustee if sent by facsimile transmission, when transmission is confirmed, in each case addressed as follows:

if to the Company:

Pharvaris N.V.
J.H. Oortweg 21
2333 CH Leiden, The Netherlands
Facsimile: [•]
Attention: [•]

if to the Trustee:

[•]

[•]

[•]

Facsimile: [•]

Attention: [•]

The Company or the Trustee by written notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication shall be sufficiently given to Holders by mailing to such Holders at their addresses as they shall appear on the Security Register. Notice mailed shall be sufficiently given if so mailed within the time prescribed. Copies of any such communication or notice to a Holder shall also be mailed to the Trustee and each Agent at the same time.

Failure to mail a notice or communication to a Holder or any defect in it shall not affect its sufficiency with respect to other Holders. Except as otherwise provided in this Indenture, if a notice or communication is mailed in the manner provided in this Section 10.02, it is duly given, whether or not the addressee receives it.

Where this Indenture provides for notice in any manner, such notice may be waived in writing by the Person entitled to receive such notice, either before or after the event, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

In case it shall be impracticable to give notice as herein contemplated, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose hereunder.

Section 10.03. *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 10.04. *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 the certificate required by Section 4.04) shall include:

(a) a statement that each person signing such certificate or opinion has read such covenant or condition and the definitions herein relating thereto;

(b) a brief statement as to the nature and scope of the examination or investigation upon which the statement or opinion contained in such certificate or opinion is based;

(c) a statement that, in the opinion of each 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 each such person, such condition or covenant has been complied with; *provided, however,* that, with respect to matters of fact, an Opinion of Counsel may rely on an Officers' Certificate or certificates of public officials.

Section 10.05. *Evidence of Ownership.* The Company, the Trustee and any agent of the Company or the Trustee may deem and treat the person in whose name any Security shall be registered upon the Security Register for such series as the absolute owner of such Security (whether or not such Security shall be overdue and notwithstanding any notation of ownership or other writing thereon) for the purpose of receiving payment of or on account of the Principal of and, subject to the provisions of this Indenture, interest on such Security and for all other purposes; and neither the Company nor the Trustee nor any agent of the Company or the Trustee shall be affected by any notice to the contrary.

Section 10.06. *Rules by Trustee, Paying Agent or Registrar.* The Trustee may make reasonable rules for action by or at a meeting of Holders. The Paying Agent or Registrar may make reasonable rules for its functions.

Section 10.07. *Payment Date Other Than a Business Day.* Except as otherwise provided with respect to a series of Securities, if any date for payment of Principal or interest on any Security shall not be a Business Day at any place of payment, then payment of Principal of or interest on such Security, as the case may be, need not be made on such date, but may be made on the next succeeding Business Day at any place of payment with the same force and effect as if made on such date and no interest shall accrue in respect of such payment for the period from and after such date.

Section 10.08. *Governing Law.* The laws of the State of New York shall govern this Indenture and the Securities.

Section 10.09. *No Adverse Interpretation of Other Agreements.* This Indenture may not be used to interpret another indenture or loan or debt agreement of the Company or any Subsidiary of the Company. Any such indenture or agreement may not be used to interpret this Indenture.

Section 10.10. *Successors*. All agreements of the Company in this Indenture and the Securities shall bind its successors. All agreements of the Trustee in this Indenture shall bind its successors.

Section 10.11. *Duplicate Originals*. The parties may sign any number of copies of this Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

Section 10.12. *Separability*. 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 10.13. *Table of Contents, Headings, Etc.* The Table of Contents 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 and provisions hereof.

Section 10.14. *Incorporators, Stockholders, Officers and Directors of Company Exempt from Individual Liability*. No recourse under or upon any obligation, covenant or agreement contained in this Indenture or any indenture supplemental hereto, or in any Security, or because of any indebtedness evidenced thereby, shall be had against any incorporator, as such or against any past, present or future stockholder, officer, director or employee, as such, of the Company or of any successor, either directly or through the Company or any successor, under any rule of law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise, all such liability being expressly waived and released by the acceptance of the Securities by the holders thereof and as part of the consideration for the issue of the Securities.

Section 10.15. *Judgment Currency*. The Company agrees, to the fullest extent that it may effectively do so under applicable law, that (a) if for the purpose of obtaining judgment in any court it is necessary to convert the sum due in respect of the Principal of or interest on the Securities of any series (the “**Required Currency**”) into a currency in which a judgment will be rendered (the “**Judgment Currency**”), the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the day on which final unappealable judgment is entered, unless such day is not a Business Day, then, to the extent permitted by applicable law, the rate of exchange used shall be the rate at which in accordance with normal banking procedures the Trustee could purchase in The City of New York the Required Currency with the Judgment Currency on the Business Day preceding the day on which final unappealable judgment is entered and (b) its obligations under this Indenture to make payments in the Required Currency (i) shall not be discharged or satisfied by any tender, or any recovery pursuant to any judgment (whether or not entered in accordance with subsection (a)), in any currency other than the Required Currency, except to the extent that such tender or recovery shall result in the actual receipt, by the payee, of the full amount of the Required Currency expressed to be payable in respect of such payments, (ii) shall be enforceable as an alternative or additional cause of action for the purpose of recovering in the Required Currency the amount, if any, by which such actual receipt shall fall short of the full amount of the Required Currency so expressed to be payable and (iii) shall not be affected by judgment being obtained for any other sum due under this Indenture.

Section 10.16. *Waiver of Jury Trial.* EACH OF THE COMPANY AND THE TRUSTEE IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS INDENTURE, THE SECURITIES OR THE TRANSACTIONS CONTEMPLATED HEREBY.

Section 10.17. *Force Majeure.* In no event shall the Trustee be responsible or liable for any failure or delay in the performance of its obligations hereunder arising out of or caused by, directly or indirectly, forces beyond its control, including, without limitation, strikes, work stoppages, accidents, acts of war or terrorism, civil or military disturbances, nuclear or natural catastrophes or acts of God, and interruptions, loss or malfunctions of utilities, communications or computer (software and hardware) services; it being understood that the Trustee shall use reasonable efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

ARTICLE 11 SUBORDINATION

Section 11.01. *Agreement to Subordinate.* The Company covenants and agrees, and each Holder of a Security issued hereunder, by his acceptance thereof, likewise covenants and agrees, that all Securities shall be issued subject to the provisions of this Article; and each Person holding any Security, whether upon original issue or upon transfer, assignment or exchange thereof, accepts and agrees that the principal of and interest on all Securities issued hereunder shall, to the extent and in the manner herein set forth, be subordinated and subject in right of payment to the prior payment in full of all Senior Indebtedness, and that the subordination is for the benefit of the holders of the Senior Indebtedness.

Section 11.02. *Payments to Securityholders.* As to each series of Securities, if any, issued hereunder, in the event (a) of any insolvency or bankruptcy proceedings, or any receivership, dissolution, winding-up, total or partial liquidation, reorganization or other similar proceedings in respect of the Company or a substantial part of its property, whether voluntary or involuntary, or (b) that (i) a default shall have occurred with respect to the payment of principal of or interest on or other monetary amounts due and payable with respect to any Senior Indebtedness, or (ii) there shall have occurred an event of default (other than a default in the payment of principal or interest or other monetary amounts due and payable) in respect of any Senior Indebtedness, as defined in such Senior Indebtedness or in the instrument under which the same is outstanding, permitting the holder or holders thereof to accelerate the maturity thereof, and such default or event of default shall not be cured or was continued beyond the period of grace, if any, in respect thereof, and such default or event of default shall not have been waived or shall not have ceased to exist, or (c) separately with respect to each series of Securities, that the principal of and accrued interest on such Securities shall have been declared due and payable pursuant to Section 6.01 and such declaration shall not have been rescinded and annulled as provided in Section 6.01, then the holders of all Senior Indebtedness shall first be entitled to receive payment in full of all amounts due or to become due thereon, or provision shall be made, in accordance with the

terms of such Senior Indebtedness, for such payment in money or money's worth, before the Holders of such series of Securities are entitled to receive a payment on account of the principal of or interest on the indebtedness evidenced by such series of Securities, including, without limitation, any payments made pursuant to Article 3, or any cash payments to purchase such series of Securities at the option of the Holders thereof.

Upon any such insolvency or bankruptcy proceeding, receivership, dissolution, winding-up, total or partial liquidation, reorganization, or other similar proceeding referred to in clause (a) of the immediately preceding paragraph, any payment 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 under this Indenture would be entitled, except for the provisions hereof, shall be paid by the Company or by any receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution or, to the extent required by the next succeeding paragraph, by the Holders of the Securities or the Trustee, 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 their respective representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any of such Senior Indebtedness may have been issued, as their respective interests may appear, to the extent necessary to pay all Senior Indebtedness in full after giving effect to any concurrent payment or distribution to or for the holders of Senior Indebtedness, before any payment or distribution is made to the Holders of the indebtedness evidenced by the Securities (including any cash payments to repurchase such Securities at the option of the Holders thereof) or to the Trustee under this Indenture.

In the event that, notwithstanding the foregoing, any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities, prohibited by the foregoing provisions of this Section, shall be received by the Trustee under this Indenture or the Holders of the Securities before all Senior Indebtedness is paid in full or provision is made for such payment in accordance with its terms, and if such fact shall, at or prior to the time of such payment or distribution, have been known to the Trustee, then such payment or distribution shall be held in trust for the benefit of and shall be paid over or delivered to the holders of such Senior Indebtedness or their respective representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any of such Senior Indebtedness may have been issued, as their respective interests may appear, for application to the payment of all Senior Indebtedness remaining unpaid until all such Senior Indebtedness shall have been paid in full in accordance with its terms, after giving effect to any concurrent payment or distribution to or for the holders of such Senior Indebtedness.

For purposes of this Article only, 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 arrangement, reorganization or readjustment, the payment of which is subordinated (at least to the extent provided in this Article 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 such arrangement, reorganization or readjustment, and (ii) the rights of the holders of the Senior Indebtedness are not, without the consent of such holders, altered by such arrangement, reorganization or readjustment. The consolidation of the Company with, or

the merger of the Company with or into, another corporation or the liquidation or dissolution of the Company following the conveyance or transfer of all or substantially all of its assets to another corporation upon the terms and conditions provided in Article 5 shall not be deemed a dissolution, winding-up, liquidation or reorganization for the purposes of this Section if such other corporation shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions stated in Article 5. Nothing in this Section shall apply to claims of, or payments to, the Trustee under or pursuant to Article 7, except as expressly provided therein. This Section shall be subject to the further provisions of Section 11.05.

Section 11.03. *Subrogation.* Subject to the payment in full of all Senior Indebtedness, the Holders of the Securities subject to the provisions of Section 11.02 shall be subrogated (equally and ratably with the holders of all obligations of the Company which by their express terms are subordinated to Senior Indebtedness of the Company to the same extent as the Securities are subordinated and which are 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 of and interest on such Securities shall be paid in full; and, for the purpose of such subrogation, no payments or distributions to the holders of the Senior Indebtedness of any cash, property or securities to which the Holders of such Securities or the Trustee on their behalf would be entitled except for the provisions of this Article, and no payment over pursuant to the provisions of this Article to the holders of Senior Indebtedness by Holders of such Securities or the Trustee on their behalf shall, as between the Company, its creditors other than holders of Senior Indebtedness and the Holders of such Securities, 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 to or for the benefit of the Holders of the Securities pursuant to the subrogation provision of this Article, which would otherwise have been paid to the holders of Senior Indebtedness, shall be deemed to be a payment by the Company to or for the account of such Securities. The provisions of this Article are intended solely for the purpose of defining the relative rights of the Holders of the Securities, on the one hand, and the holders of the Senior Indebtedness, on the other hand.

Nothing contained in this Article or elsewhere in this Indenture or in the Securities is intended to or shall impair, as between the issuer, 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 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 against the Company of the Holders of the Securities and creditors of the Company other than the holders of Senior Indebtedness, nor shall anything herein or therein prevent the Holder of any Security or the Trustee on his behalf from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the rights, if any, under this Article 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, the Trustee, subject to the provisions of Section 7.01 and Section 7.02, 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 insolvency, bankruptcy, dissolution, winding-up, liquidation, arrangement 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, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article.

Section 11.04. *Authorization by Securityholders.* Each Holder of a Security by his acceptance thereof authorizes the Trustee on his behalf to take such action as may be necessary or appropriate to effectuate the subordination provided in this Article and appoints the Trustee his attorney-in-fact for any and all such purposes.

Section 11.05. *Notice to Trustee.* The Company shall give prompt written notice to 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. Regardless of anything to the contrary contained in this Article or elsewhere in this Indenture, the Trustee shall not be charged with knowledge of the existence of any Senior Indebtedness or of any default or event of default with respect to any Senior Indebtedness or of any other facts which would prohibit the making of any payment of monies to or by the Trustee in respect of the Securities, unless and until the Trustee shall have received notice in writing (which may be by telegram, teletype or other similar writing) at its Corporate Trust Office to that effect signed by an officer of the Company, or by a holder or agent of a holder of Senior Indebtedness who shall have been certified by the Company or otherwise established to the reasonable satisfaction of the Trustee to be such holder or agent, or by the trustee under any indenture pursuant to which Senior Indebtedness shall be outstanding, and, prior to the receipt of any such written notice, the Trustee shall, subject to Section 7.01 and Section 7.02, be entitled to assume that no such facts exist; provided that if on a date at least two Business Days prior to the date upon which by the terms hereof any such monies shall become payable for any purpose (including, without limitation, the payment of the principal of or interest on any Security) the Trustee shall not have received with respect to such monies the notice provided for in this Section, then, regardless of anything herein to the contrary, 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.

Regardless of anything to the contrary herein (but subject, in the case of clause (a) of this paragraph, to the second paragraph of Section 11.02), nothing shall prevent (a) any payment by the Company or the Trustee to the Securityholders of amounts in connection with a redemption of Securities if (i) notice of such redemption has been given pursuant to Article 3 prior to the receipt by the Trustee of written notice as aforesaid, and (ii) such notice of redemption is given not earlier than 60 days before any redemption date, or (b) any payment by the Trustee to the Securityholders of amounts deposited with it pursuant to Section 8.01, provided, that, in the case of Section 8.05, the applicable Securities are deemed to have been paid and discharged, and in the case of Section 8.01, the Trustee shall not have received, by at least two Business Days prior to the date of execution of instruments acknowledging the satisfaction of and discharge of this Indenture with respect to the applicable Securities, the notice provided in the preceding paragraph.

Subject to Section 7.01 and Section 7.02, the Trustee shall be entitled to rely on the delivery to it of a written notice by 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 holder of Senior Indebtedness or a trustee on behalf of any such holder. 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, 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, 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 11.06. *Trustee's Relation to Senior Indebtedness.* The Trustee and any agent of the Company or the Trustee shall be entitled to all the rights set forth in this Article with respect to any Senior Indebtedness which may at any time be held by it in its individual or any other capacity to the same extent as any other holder of Senior Indebtedness and nothing in the second paragraph of Section 2.02 or elsewhere in this Indenture shall deprive the Trustee or any such agent of any of its rights as such holder. Nothing in this Article shall apply to claims of, or payments to, the Trustee under or pursuant to Section 7.07.

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, 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 7.01 and Section 7.02, the Trustee shall not be liable to any holder of Senior Indebtedness if it shall in good faith pay over or deliver to Holders of Securities, the Company or any other Person monies or assets to which any holder of Senior Indebtedness shall be entitled by virtue of this Article or otherwise.

Section 11.07. *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.

SIGNATURES

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed, all as of the date first written above.

PHARVARIS N.V.
as the Company

By: _____

Name:

Title:

Name:

Title:

[]
as the Trustee

By: _____

Name:

Title:



Draft dated 28 February 2022

Amsterdam, March 1, 2022.

To the Company

P.O. Box 7113
1007 JC Amsterdam
Beethovenstraat 400
1082 PR Amsterdam
T +31 20 71 71 000
F +31 20 71 71 111

Ladies and Gentlemen:

We have acted as legal counsel as to Dutch law to the Company in connection with the filing of the Registration Statement with the SEC. This opinion letter is rendered to you in order to be filed with the SEC as an exhibit to the Registration Statement.

Capitalised terms used in this opinion letter have the meanings set forth in Exhibit A to this opinion letter. The section headings used in this opinion letter are for convenience of reference only and are not to affect its construction or to be taken into consideration in its interpretation.

This opinion letter is strictly limited to the matters stated in it and may not be read as extending by implication to any matters not specifically referred to in it. Nothing in this opinion letter should be taken as expressing an opinion in respect of any representations or warranties, or other information, contained in any document reviewed by us in connection with this opinion letter.

In rendering the opinions expressed in this opinion letter, we have reviewed and relied upon draft of the Registration Statement and the Prospectus Supplement and pdf copies of the other Corporate Documents and we have assumed that any issuance of Registered Securities shall be effected for bona fide commercial reasons. We have not investigated or verified any factual matter disclosed to us in the course of our review.

This opinion letter sets out our opinion on certain matters of the laws with general applicability of the Netherlands, and, insofar as they are directly applicable in the Netherlands, of the European Union, as at today's date and as presently interpreted under published authoritative case law of the Dutch courts, the General Court and the Court of Justice of the European Union. We do not express any opinion on Dutch or European competition law, data protection law, tax law, securitisation law or regulatory law. No undertaking is assumed on our part to revise, update or amend this opinion letter in connection with or to notify or inform you of, any developments and/or changes of Dutch law subsequent to today's date. We do not purport to opine on the consequences of amendments to the Corporate Documents subsequent to the date of this opinion letter.

Amsterdam
Brussels
London
Luxemburg
New York
Rotterdam

This communication is confidential and may be subject to professional privilege. All legal relationships are subject to NautaDutilh N.V.'s general terms and conditions (see <https://www.nautadutilh.com/terms>), which apply mutatis mutandis to our relationship with third parties relying on statements of NautaDutilh N.V., include a limitation of liability clause, have been filed with the Rotterdam District Court and will be provided free of charge upon request. NautaDutilh N.V.; corporate seat Rotterdam; trade register no. 24338323.

The opinions expressed in this opinion letter are to be construed and interpreted in accordance with Dutch law. The competent courts at Amsterdam, the Netherlands, have exclusive jurisdiction to settle any issues of interpretation or liability arising out of or in connection with this opinion letter. Any legal relationship arising out of or in connection with this opinion letter (whether contractual or non-contractual), including the above submission to jurisdiction, is governed by Dutch law and shall be subject to the general terms and conditions of NautaDutilh. Any liability arising out of or in connection with this opinion letter shall be limited to the amount which is paid out under NautaDutilh's insurance policy in the matter concerned. No person other than NautaDutilh may be held liable in connection with this opinion letter.

In this opinion letter, legal concepts are expressed in English terms. The Dutch legal concepts concerned may not be identical in meaning to the concepts described by the English terms as they exist under the law of other jurisdictions. In the event of a conflict or inconsistency, the relevant expression shall be deemed to refer only to the Dutch legal concepts described by the English terms.

For the purposes of this opinion letter, we have assumed that:

- a. each copy of a document conforms to the original, each original is authentic, and each signature is the genuine signature of the individual purported to have placed that signature;
- b. if any signature under any document is an electronic signature (as opposed to a handwritten ("wet ink") signature) only, it is either a qualified electronic signature within the meaning of the eIDAS Regulation, or the method used for signing is otherwise sufficiently reliable;
- c. the Registration Statement has been declared effective by the SEC and the Prospectus Supplement has been filed with the SEC, in each case in the form reviewed by us;
- d. the Deed of Incorporation is a valid notarial deed;
- e. the Current Articles are the Articles of Association currently in force and as they will be in force at each Relevant Moment;
- f. the authorised share capital (*maatschappelijk kapitaal*) of the Company shall allow for the Registered Shares;
- g. at each Relevant Moment, the Company will not have (i) been dissolved (*ontbonden*), (ii) ceased to exist pursuant to a merger (*fusie*) or a division (*splitsing*), (iii) been converted (*omgezet*) into another legal form, either national or foreign, (iv) had its assets placed under administration (*onder bewind gesteld*), (v) been declared bankrupt (*failliet verklaard*), (vi) been

granted a suspension of payments (*surseance van betaling verleend*), (vii) started or become subject to statutory proceedings for the restructuring of its debts (*akkoordprocedure*) or (viii) been made subject to similar proceedings in any jurisdiction or otherwise been limited in its power to dispose of its assets;

- h. any Registered Securities shall be issued, and any pre-emption rights in connection therewith shall have been excluded, pursuant to resolutions validly passed by the corporate body (*orgaan*) of the Company duly authorised to do so;
- i. the issue price for any Registered Shares shall at least equal the aggregate nominal value thereof, any conversion, exchange or exercise price of other Registered Securities shall at least equal the aggregate nominal value of the underlying Registered Shares, and any such issue, conversion, exchange or exercise price shall have been satisfied in cash and shall have been received and accepted by the Company ultimately upon the issuance of the relevant Registered Shares and, where relevant, the Company shall have consented to payment in a currency other than Euro;
- j. any Registered Shares issued in connection with the conversion, exchange or exercise of other Registered Securities shall be issued pursuant to a valid conversion, exchange or exercise of such Registered Securities in accordance with their respective terms;
- k. any offering of Registered Securities, to the extent made in the Netherlands, shall be made only in conformity with the Prospectus Regulation and the rules promulgated thereunder; and
- l. at each Relevant Moment, each of the assumptions made in this opinion letter will be correct in all aspects by reference to the facts and circumstances then existing.

Based upon and subject to the foregoing and subject to the qualifications set forth in this opinion letter and to any matters, documents or events not disclosed to us, we express the following opinions:

Corporate Status

- 1. The Company has been duly incorporated as a *besloten vennootschap met beperkte aansprakelijkheid* and is validly existing as a *naamloze vennootschap*.

Registered Shares

2. The Registered Shares, when issued by the Company and accepted by the acquiror(s) of such Registered Shares, shall be validly issued, fully paid and non-assessable.

The opinions expressed above are subject to the following qualifications:

- A. Opinion 1 must not be read to imply that the Company cannot be dissolved (*ontbonden*). A company such as the Company may be dissolved, inter alia by the competent court at the request of the company's board of directors, any interested party (*belanghebbende*) or the public prosecution office in certain circumstances, such as when there are certain defects in the incorporation of the company. Any such dissolution will not have retro-active effect.
- B. Pursuant to Section 2:7 DCC, any transaction entered into by a legal entity may be nullified by the legal entity itself or its liquidator in bankruptcy proceedings (*curator*) if the objects of that entity were transgressed by the transaction and the other party to the transaction knew or should have known this without independent investigation (*wist of zonder eigen onderzoek moest weten*). The Dutch Supreme Court (*Hoge Raad der Nederlanden*) has ruled that in determining whether the objects of a legal entity are transgressed, not only the description of the objects in that legal entity's articles of association (*statuten*) is decisive, but all (relevant) circumstances must be taken into account, in particular whether the interests of the legal entity were served by the transaction. Based on the objects clause contained in the Current Articles, we have no reason to believe that, by issuing Registered Securities, the Company would transgress the description of the objects contained in its Articles of Association. However, we cannot assess whether there are other relevant circumstances that must be taken into account, in particular whether the interests of the Company are served by issuing Registered Securities since this is a matter of fact.
- C. Pursuant to Section 2:98c DCC, a *naamloze vennootschap* may grant loans (*leningen verstrekken*) only in accordance with the restrictions set out in Section 2:98c DCC, and may not provide security (*zekerheid stellen*), give a price guarantee (*koersgarantie geven*) or otherwise bind itself, whether jointly and severally or otherwise with or for third parties (*zich op andere wijze sterk maken of zich hoofdelijk of anderszins naast of voor anderen verbinden*) with a view to (*met het oog op*) the subscription or acquisition by third parties of shares in its share capital or depository receipts. This prohibition also applies to its subsidiaries (*dochtervennootschappen*). It is generally assumed that a transaction entered into in violation of Section 2:98c DCC is null and void (*nietig*).

- D. The opinions expressed in this opinion letter may be limited or affected by:
- a. rules relating to Insolvency Proceedings or similar proceedings under a foreign law and other rules affecting creditors' rights generally;
 - b. the provisions of fraudulent preference and fraudulent conveyance (*Actio Pauliana*) and similar rights available in other jurisdictions to insolvency practitioners and insolvency office holders in bankruptcy proceedings or creditors;
 - c. claims based on tort (*onrechtmatige daad*);
 - d. sanctions and measures, including but not limited to those concerning export control, pursuant to European Union regulations, under the Sanctions Act 1977 (*Sanctiewet 1977*) or other legislation;
 - e. the Anti-Boycott Regulation, Anti Money Laundering Laws and related legislation;
 - f. any intervention, recovery or resolution measure by any regulatory or other authority or governmental body in relation to financial enterprises or their affiliated entities; and
 - g. the rules of force majeure (*niet toerekenbare tekortkoming*), reasonableness and fairness (*redelijkheid en billijkheid*), suspension (*opschorting*), dissolution (*ontbinding*), unforeseen circumstances (*onvoorziene omstandigheden*) and vitiated consent (i.e., duress (*bedreiging*), fraud (*bedrog*), abuse of circumstances (*misbruik van omstandigheden*) and error (*dwaling*)) or a difference of intention (*wil*) and declaration (*verklaring*).
- E. The term “non-assessable” has no equivalent in the Dutch language and for purposes of this opinion letter such term should be interpreted to mean that a holder of an Ordinary Share shall not by reason of merely being such a holder be subject to assessment or calls by the Company or its creditors for further payment on such Ordinary Share.
- F. This opinion letter does not purport to express any opinion or view on the operational rules and procedures of any clearing or settlement system or agency.

We consent to the filing of this opinion letter as an exhibit to the Registration Statement and also consent to the reference to NautaDutilh in the Registration Statement under the caption “Legal Matters”. In giving this consent we do not admit or imply that we are a person whose consent is required under Section 7 of the United States Securities Act of 1933, as amended, or any rules and regulations promulgated thereunder.

Sincerely yours,

/s/ NautaDutilh N.V.

EXHIBIT A**LIST OF DEFINITIONS**

“Anti Money Laundering Laws”	The European Anti-Money Laundering Directives, as implemented in the Netherlands in the Money Laundering and Terrorist Financing Prevention Act (<i>Wet ter voorkoming van witwassen en financieren van terrorisme</i>) and the Dutch Criminal Code (<i>Wetboek van Strafrecht</i>).
“Anti-Boycott Regulation”	The Council Regulation (EC) No 2271/96 of 22 November 1996 on protecting against the effects of the extra-territorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom.
“Articles of Association”	The Company’s articles of association (<i>statuten</i>) as they read from time to time.
“ATM Shares”	Up to USD 75,000,000 Ordinary Shares issuable pursuant to the Sales Agreement.
“Bankruptcy Code”	The Dutch Bankruptcy Code (<i>Faillissementswet</i>).
“Commercial Register”	The Dutch Commercial Register (<i>handelsregister</i>).
“Company”	Pharvaris N.V., registered with the Commercial Register under number 64239411.
“Corporate Documents”	The Deed of Incorporation, the Deed of Conversion and the Current Articles, the Resolutions, the Registration Statement and the Prospectus Supplement.
“Current Articles”	The Articles of Association as contained in the Deed of Conversion.
“DCC”	The Dutch Civil Code (<i>Burgerlijk Wetboek</i>).
“Debt Securities”	One or more series of debt securities issuable by the Company and registered pursuant to the Registration Statement.

“Deed of Conversion”	The deed of conversion and amendment to the Articles of Association dated dated 5 February 2021.
“Deed of Incorporation”	The Company’s deed of incorporation (<i>akte van oprichting</i>) dated 30 September 2015.
“eIDAS Regulation”	Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.
“Insolvency Proceedings”	Any insolvency proceedings within the meaning of Regulation (EU) 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (recast), as amended by Regulation (EU) 2021/2260 of the European Parliament and of the Council of 15 December 2021, listed in Annex A thereto and any statutory proceedings for the restructuring of debts (<i>akkoordprocedure</i>) pursuant to the Bankruptcy Code.
“NautaDutilh”	NautaDutilh N.V.
“the Netherlands”	The European territory of the Kingdom of the Netherlands.
“Ordinary Shares”	Ordinary shares in the Company’s capital, with a nominal value of EUR 0.12 each.
“Prospectus Regulation”	Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, and repealing Directive 2003/71/EC.

“Prospectus Supplement”	the prospectus supplement in relation to the ATM Shares, supplementing the prospectus forming part of the Registration Statement, as filed by the Company with the SEC on March 1, 2022.
“Purchase Contracts”	One or more series of purchase contracts issuable by the Company and registered pursuant to the Registration Statement, for the purchase of Debt Securities, equity securities or other securities as specified in the applicable prospectus supplement.
“Registered Securities”	The Debt Securities, Registered Shares, Units, Purchase Contracts and Warrants.
“Registered Shares”	The following Ordinary Shares: <ol style="list-style-type: none">the Ordinary Shares registered pursuant to the Registration Statement, including the ATM Shares; andthe Ordinary Shares issuable pursuant to the conversion, exchange or exercise of other Registered Securities.
“Registration Statement”	The Company’s registration statement on Form F-3 filed or to be filed with the SEC in the form reviewed by us.
“Relevant Moment”	Each time when one or more Registered Securities are issued by the Company.
“Sales Agreement”	The Sales Agreement entered into or to be entered into between the Company and SVB Securities LLC in the form reviewed by us.
“SEC”	The United States Securities and Exchange Commission.
“Units”	One or more series of units issuable by the Company and registered pursuant to the Registration Statement consisting of one or more Debt Securities, Registered Shares, Warrants, Purchase Contracts or any combination of such securities as specified in the applicable prospectus supplement.

“Warrants”

One or more series of warrants issuable by the Company and registered pursuant to the Registration Statement for the purchase of Debt Securities, Ordinary Shares or other securities as specified in the applicable prospectus supplement.

KIRKLAND & ELLIS LLP

AND AFFILIATED PARTNERSHIPS

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New York, NY 10022
United States

+1 212 446 4800

www.kirkland.com

March 1, 2022

Pharvaris N.V.
J.H. Oortweg 21
2333 CH Leiden, The Netherlands

Re: Registration Statement on Form F-3

Ladies and Gentlemen:

We are issuing this opinion letter in our capacity as special U.S. counsel to Pharvaris N.V., a Dutch public company with limited liability (*naamloze vennootschap*) (the “Company”), in connection with the Registration Statement on Form F-3 (the “Registration Statement”), to be filed with Securities and Exchange Commission (the “Commission”) by the Company, to register the offer and sale by the Company, of up to \$75,000,000 in initial offering price or number of (i) ordinary shares, nominal value €0.12 per share (the “Ordinary Shares”), of the Company; (ii) senior debt securities (the “Senior Debt Securities”), which may be issued pursuant to an indenture (the “Senior Indenture”) to be executed by the Company and the trustee to be named therein; and subordinated debt securities (the “Subordinated Debt Securities” and, together with the Senior Debt Securities, the “Debt Securities”), which may be issued pursuant to an indenture (the “Subordinated Indenture” and, together with the Senior Indenture, the “Indentures”) to be executed by the Company and the trustee to be named therein; (iii) warrants or other rights to purchase or otherwise acquire Ordinary Shares or Debt Securities of the Company (the “Warrants”); (iv) purchase contracts (the “Purchase Contracts”) for the purchase or sale of the Company’s securities or securities of third parties, a basket of such securities, an index or indices of such securities or any combination of the above; and (v) units (the “Units”) consisting of one or more Ordinary Shares, Debt Securities, Warrants, Purchase Contracts, or any combination of such securities.

For purposes of the opinions hereinafter expressed, we have examined the Registration Statement, copies of the forms of the Indentures and originals or copies, certified and otherwise identified to our satisfaction, of such other documents, corporate or limited liability company records, certificates of public officials and other instruments as we have deemed necessary as a basis for the opinions expressed herein. Insofar as the opinions expressed herein involve factual matters, we have relied (without independent factual investigation), to the extent we deemed proper or necessary, upon certificates of, and other communications with, officers and employees of the Company and upon certificates of public officials.

In connection with this opinion, we have assumed that (a) the Registration Statement will have become effective under the Securities Act of 1933, as amended (the “Act”); (b) a prospectus supplement will have been prepared and filed with the Commission describing the securities offered thereby; (c) all offered securities will be issued and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement and the applicable prospectus supplement; (d) a definitive purchase, underwriting, sales agency or similar agreement with respect to the offered securities will have been duly authorized and validly executed and delivered by the Company and the other parties thereto; (e) any applicable indenture and indenture trustee will have been qualified under the Trust Indenture Act of 1939, as amended; and (f) with respect to any Units, consisting of one or more Ordinary Shares, Debt Securities, Warrants, Purchase Contracts, or any combination of such securities, such Units will be authorized, validly issued, fully paid and nonassessable (to the extent applicable).

Austin Bay Area Beijing Boston Brussels Chicago Dallas Hong Kong Houston London Los Angeles Munich Paris Salt Lake City Shanghai Washington, D.C.

Based on the foregoing, and having regard for such legal considerations as we have deemed relevant, we advise you that:

1. When the Debt Securities and the applicable Indenture have been authorized by appropriate corporate authorization, the applicable Indenture has been duly executed by the parties thereto, and the Debt Securities have been executed, authenticated and delivered in accordance with the applicable Indenture against payment therefor, the Debt Securities will be validly issued and the Debt Securities will constitute binding obligations of the Company in accordance with their terms and the terms of the applicable Indenture.

2. When the Warrants and the related warrant agreement have been duly authorized by appropriate corporate authorization, the warrant agreement has been duly executed by the parties thereto, and the Warrants have been executed, countersigned, and delivered in accordance with the warrant agreement against payment therefor, the Warrants will be validly issued and will constitute binding obligations of the Company.

3. When the Purchase Contracts and the related purchase contract agreement have been duly authorized by appropriate corporate authorization, and the Purchase Contracts have been duly executed and issued in accordance with the related purchase contract agreement, the Purchase Contracts will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

4. When the Units and the related unit agreement have been duly authorized by appropriate corporate authorization, and the Units have been duly executed and issued in accordance with the related unit agreement, the Units will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

Each opinion (an “enforceability opinion”) in this letter that any security is a valid and binding obligation or is enforceable in accordance with its terms is subject to: (i) the effect of bankruptcy, insolvency, fraudulent conveyance and other similar laws and judicially developed doctrines in this area such as substantive consolidation and equitable subordination; (ii) the effect of general principles of equity; and (iii) other commonly recognized statutory and judicial constraints on enforceability including statutes of limitations. In addition, we do not express any opinion as to the enforceability of any rights to contribution or indemnification which may be violative of public policy underlying any law, rule or regulation (including any federal or state securities law, rule or regulation). “General principles of equity” include, but are not limited to: principles limiting the availability of specific performance and injunctive relief; principles which limit the availability of a remedy under certain circumstances where another remedy has been elected; principles requiring reasonableness, good faith and fair dealing in the performance and enforcement of an agreement by the party seeking enforcement; principles which may permit a party to cure a material failure to perform its obligations; and principles affording equitable defenses such as waiver, laches and estoppel. We express no opinion with respect to the enforceability of any provision which purports to waive the benefit of usury laws. It is possible that terms in a particular contract covered by our enforceability opinion may not prove enforceable for reasons other than those explicitly cited in this letter should an actual enforcement action be brought, but (subject to all the exceptions, qualifications, exclusions and other limitations contained in this letter) such unenforceability would not in our opinion prevent the party entitled to enforce that contract from realizing the principal benefits purported to be provided to that party by the terms in that contract which are covered by our enforceability opinion.

This opinion does not cover the law of any jurisdiction other than the law of the State of New York. We did not find it necessary for the purposes of this opinion, and accordingly we do not purport to cover herein, the application of the securities or “Blue Sky” laws of the various states. We undertake no responsibility to update or supplement this opinion in response to changes in law or future events or other circumstances. We have assumed the indentures, purchase contract agreement, warrant agreement and unit agreement referenced in the numbered paragraphs above will be governed by the law of the State of New York.

KIRKLAND & ELLIS LLP

Pharvaris N.V.
March 1, 2022
Page 3

This opinion is furnished to you in connection with the filing of the Registration Statement and is not to be used, circulated, quoted or otherwise relied upon or otherwise referred to by any other person for any other purpose.

This opinion is being furnished in accordance with the requirements of Item 601 of Regulation S-K promulgated under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the heading "Legal Matters" in the Registration Statement. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission.

Yours very truly,

/s/ KIRKLAND & ELLIS LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form F-3 of Pharvaris N.V. of our report dated April 29, 2021 relating to the financial statements, which appears in Pharvaris N.V.'s Annual Report on Form 20-F for the year ended December 31, 2020. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ R.M.N. Admiraal RA

PricewaterhouseCoopers Accountants N.V.
Eindhoven, the Netherlands

March 1, 2022

Calculation of Filing Fee Tables

Form F-3
(Form Type)Pharvaris N.V.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price(3)	Fee Rate	Amount of Registration Fee(2)	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to Be Paid	Equity	Ordinary Shares, nominal value €0.12 per share										
Fees to Be Paid	Debt	Debt Securities(4)										
Fees to Be Paid	Other	Warrants										
Fees to Be Paid	Other	Purchase Contracts										
Fees to Be Paid	Other Unallocated (Universal) Shelf	Units	Rule 457(o)	(1)	(2)	\$350,000,000	\$92.70	\$32,445				
Fees Previously Paid												
Carry Forward Securities												
Carry Forward Securities												
	Total Offering Amounts					\$350,000,000		\$32,445				
	Total Fees Previously Paid							\$0				
	Total Fee Offsets							\$0				
	Net Fee Due							\$32,445				

- (1) There are being registered hereunder such indeterminate number of the securities of each identified class being registered as may be sold by the registrant from time to time at indeterminate prices, with the maximum aggregate public offering price not to exceed \$350,000,000. Also includes such indeterminate number of securities of the registrant as may be issued upon exercise, conversion or exchange of these securities. Separate consideration may or may not be received for securities that are issuable upon exercise, conversion or exchange of other securities.
- (2) The proposed maximum aggregate price per unit of each class of securities will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of securities pursuant to the General Instruction II.C. of Form F-3 under the Securities Act of 1933, as amended, or the Securities Act.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act with respect to the securities to be sold by the registrant. In no event will the aggregate offering price of all securities sold by the registrant from time to time pursuant to this registration statement exceed \$350,000,000.
- (4) If any debt securities are issued at an original issue discount, then the offering price of such debt securities shall be in such greater principal amount as shall result in a maximum aggregate offering price not to exceed \$350,000,000, less the aggregate dollar amount of all securities previously issued hereunder.