

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

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

AKEBIA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-8756903
(I.R.S. Employer
Identification Number)

245 First Street
Cambridge, MA 02142
(617) 871-2098

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

John P. Butler
President and Chief Executive Officer
Akebia Therapeutics, Inc.
245 First Street
Cambridge, MA 02142
(617) 871-2098

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

With copies to:

Stuart Falber
Caroline Dotolo
Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, MA 02109
(617) 526-6000

Carolyn Rucci
Senior Vice President,
Legal, General Counsel and Secretary
Akebia Therapeutics, Inc.
245 First Street
Cambridge, MA 02142
(617) 871-2098

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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

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

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.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

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

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the 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 by us of up to \$250,000,000 of the securities described therein from time to time in one or more offerings; and
- a sales agreement prospectus that covers the offering, issuance and sale by us of up to a maximum aggregate offering price of up to \$75,000,000 of our common stock that may be issued and sold from time to time under a sales agreement with Jefferies LLC.

The base prospectus immediately follows this explanatory note. The specific terms of any securities to be offered pursuant to the base prospectus will be specified in a prospectus supplement to the base prospectus. The sales agreement prospectus immediately follows the base prospectus. The \$75,000,000 of our common stock that may be offered, issued and sold under the sales agreement prospectus is included in the \$250,000,000 of securities that may be offered, issued and sold by us under 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. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated September 3, 2024

PROSPECTUS



Akebia Therapeutics, Inc.

\$250,000,000
of
Debt Securities
Common Stock
Preferred Stock
Warrants
Units

We may offer and sell up to \$250,000,000 in the aggregate of securities from time to time in one or more offerings. 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 or incorporated by reference in this document. You should read this prospectus and any applicable prospectus supplement before you invest.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is listed on The Nasdaq Capital Market under the symbol "AKBA."

Investing in these securities involves significant risks. See the information included under "[Risk Factors](#)" on page 8 of this prospectus and in any accompanying prospectus supplement, and under similar headings in the documents incorporated by reference in this prospectus or any prospectus supplement, for a discussion of the factors you should carefully consider before deciding to purchase these securities.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. We urge you to read the entire prospectus, any amendments or supplements, any free writing prospectuses, and any documents incorporated by reference carefully before you make your investment decision.

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

The date of this prospectus is _____, 2024

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the “SEC,” utilizing a “shelf” registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate initial offering price of up to \$250,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any accompanying prospectus supplement together with the additional information described under the heading “Where You Can Find More Information” and “Incorporation by Reference,” each beginning on page [2](#) of this prospectus.

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus or such accompanying 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, any 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.

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

Unless otherwise stated or the context otherwise requires, references to “Akebia,” “we,” “us,” “our,” “the Company,” and similar references refer to Akebia Therapeutics, Inc. and, where appropriate, its subsidiaries.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. 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 www.akebia.com. Our website is not a part of this prospectus and the information contained on, or accessible through, our website is not incorporated by reference in this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

This prospectus is part of a registration statement we filed with the SEC. This prospectus 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 about us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus 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 and the exhibits attached thereto. You should review the complete document to evaluate these statements.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-36352) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, as filed with the SEC on March 14, 2024, or the 2023 Annual Report, including the information specifically incorporated by reference into the 2023 Annual Report from our [definitive proxy statement](#) for the 2024 Annual Meeting of Stockholders, as filed with the SEC on April 25, 2024;
- Quarterly Reports on Form 10-Q for the quarterly periods ended [March 31, 2024](#) and [June 30, 2024](#), as filed with the SEC on May 9, 2024 and August 8, 2024, respectively;
- Current Reports on Form 8-K filed with the SEC on [January 8, 2024](#), [January 30, 2024](#), [February 13, 2024](#), [March 15, 2024](#), [March 28, 2024](#) (other than Items 7.01 and 9.01), [April 16, 2024](#), [April 23, 2024](#), [June 10, 2024](#), [June 24, 2024](#) and [July 11, 2024](#); and
- The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on [March 12, 2014](#), as the description therein has been updated and superseded by the description of our capital stock contained in [Exhibit 4.6](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, as filed with the SEC on [February 25, 2021](#), and including any amendments and reports filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by writing or calling us at the following address or telephone number:

Investor Relations
Akebia Therapeutics, Inc.
245 First Street
Cambridge, Massachusetts 02142
(617) 871-2098

FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. All statements contained in this prospectus and the information incorporated by reference herein, other than statements of historical fact, are forward-looking statements. These forward-looking statements may be accompanied by words such as “anticipate,” “believe,” “build,” “can,” “contemplate,” “continue,” “could,” “should,” “designed,” “estimate,” “project,” “expect,” “forecast,” “future,” “goal,” “intend,” “likely,” “may,” “plan,” “possible,” “potential,” “predict,” “strategy,” “seek,” “target,” “will,” “would,” and other words and terms of similar meaning, but the absence of these words does not necessarily mean that a statement is not forward-looking. These forward-looking statements include, but are not limited to, statements about:

- our ability to execute a successful commercial launch of Vafseo® (vadadustat), and our plans with respect to commercializing Vafseo and label expansion opportunities currently under evaluation for Vafseo;
- our ability to contract with dialysis organizations in a timely manner, or at all, for the sale of Auryxia® (ferric citrate) and Vafseo in the U.S.;
- the potential therapeutic benefits, safety profile, and effectiveness of Vafseo;
- our pipeline and portfolio, including its potential, and our related research and development activities;
- the timing, investment and associated activities involved in continued commercialization of Auryxia, its growth opportunities and our ability to execute thereon;
- the potential indications, demand and market opportunity, potential and acceptance of Auryxia and Vafseo, including the size of eligible patient populations;
- the potential therapeutic applications of the hypoxia inducible factor pathway;
- our competitive position, including estimates, developments and projections relating to our competitors and their products and product candidates, and our industry;
- our expectations, projections and estimates regarding our capital requirements, need for additional capital, financing our future cash needs, costs, expenses, revenues, capital resources, cash flows, financial performance, profitability, tax obligations, liquidity, growth, contractual obligations and the period of time our cash resources will fund our current operating plan, estimates with respect to our ability to operate as a going concern, our internal control over financial reporting and disclosure controls and procedures, and any future deficiencies or material weaknesses in our internal controls and procedures;
- delivering value broadly to the kidney community, as well as others who may benefit from our medicines, will result in delivering value for stockholders;
- the direct or indirect impacts of the recent COVID-19 pandemic on our business, operations and the markets and communities in which we and our partners, collaborators, vendors, and customers operate;
- our manufacturing, supply and quality matters and any recalls, write-downs, impairments or other related consequences or potential consequences;
- estimates, beliefs and judgments related to the valuation of intangible asset, goodwill, debt and other assets and liabilities, including classification of expenses, assets and liabilities, our impairment analyses and our methodology and assumptions regarding fair value measurements;
- the timing of the availability and disclosure of clinical trial data and results;
- the designs of our studies, and the type of information and data expected from our studies and the expected benefits thereof;

- our and our collaborators' strategy, plans and expectations with respect to the development, manufacturing, supply, commercialization, launch, marketing and sale of Auryxia and Vafseo and the associated timing thereof;
- our ability to maintain any marketing authorizations we currently hold or will obtain, including our marketing authorizations for Auryxia and our ability to complete post-marketing requirements with respect thereto;
- our ability to negotiate, secure and maintain adequate pricing, coverage and reimbursement terms and processes on a timely basis, or at all, with third-party payors for Auryxia and Vafseo;
- the timing of initiation of our clinical trials and plans to conduct preclinical studies and clinical trials in the future;
- the timing and amounts of payments from or to our collaborators and licensees, and the anticipated arrangements and benefits under our collaboration and license agreements, including with respect to milestones and royalties;
- our intellectual property position, including obtaining and maintaining patents, and the timing, outcome and impact of administrative, regulatory, legal and other proceedings relating to our patents and other proprietary and intellectual property rights, patent infringement suits that we have filed or may file, or other actions that we may take against companies, and the timing and resolution thereof;
- expected ongoing reliance on third parties, including with respect to the development, manufacturing, supply and commercialization of Auryxia and Vafseo;
- accounting standards and estimates, their impact, and their expected timing of completion;
- estimated periods of performance of key contracts;
- our facilities, lease commitments, and future availability of facilities;
- cybersecurity;
- insurance coverage;
- management of personnel, including our management team, and our employees, including employee compensation, employee relations, and our ability to attract, train and retain high quality employees;
- the implementation of our business model, current operating plan, and strategic plans for our business, product candidates and technology, and business development opportunities including potential collaborations, alliances, mergers, acquisitions or licensing of assets;
- additional costs we may incur due to events associated with or resulting from our prior workforce reductions or other operating expenses, including additional costs related to vadadustat and selling, general and administrative expenses; and
- the timing, outcome and impact of current and any future legal proceedings.

Any or all of these forward-looking statements in this prospectus and the information incorporated by reference herein may turn out to be inaccurate. These forward-looking statements involve risks and uncertainties, including those that are discussed in this prospectus under the heading "Risk Factors" and the "Risk Factors" section of our 2023 Annual Report, any subsequent Quarterly Reports on Form 10-Q and in our Securities and Exchange Commission reports filed after this prospectus, that could cause our actual results, financial condition, performance or achievements to be materially different from those indicated in these forward-looking statements. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. Unless otherwise stated, our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. You should not rely upon forward-looking statements as predictions of future events. Unless required by law, we will not undertake and we specifically disclaim any obligation to release publicly the result of any revisions that may be made to any forward-looking statements to reflect events or circumstances after the date of such statements or to reflect the occurrence of events, whether or not anticipated. In that respect, we wish to caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made.

This prospectus and the information incorporated by reference herein also contain estimates and other information concerning our industry and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Unless otherwise expressly stated, we obtained this industry, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

ABOUT AKEBIA THERAPEUTICS, INC.

We are a fully integrated commercial-stage biopharmaceutical company committed to addressing patients' unmet needs. Our purpose is to better the life of each person impacted by kidney disease.

We have two products approved by the Food and Drug Administration in the United States, or U.S. Vafseo® (vadadustat) is an oral hypoxia-inducible factor prolyl hydroxylase inhibitor. Vafseo (vadadustat) Tablets were approved in the U.S. on March 27, 2024 for the treatment of anemia due to chronic kidney disease, or CKD, in adults who have been receiving dialysis for at least three months. We are launching Vafseo in the U.S. Auryxia® (ferric citrate) is marketed for two indications: (i) the control of serum phosphorus levels in adult patients with dialysis dependent chronic kidney disease, or DD-CKD, and (ii) the treatment of iron deficiency anemia, or IDA, in adult patients with non-dialysis dependent chronic kidney disease, or NDD-CKD. Auryxia will lose exclusivity in the U.S. in March 2025.

Vafseo is also approved for the treatment of symptomatic anemia associated with CKD in the European Economic Area, the United Kingdom, Switzerland, Australia, South Korea and Taiwan in adult patients on chronic maintenance dialysis and in Japan for adult dialysis-dependent and non-dialysis patients. Vafseo is marketed and sold by our collaboration partners in certain countries.

Ferric citrate is also approved in Japan, and is marketed and sold by our collaboration partner, as an oral treatment for the improvement of hyperphosphatemia in patients with CKD, including DD-CKD and NDD-CKD, and for the treatment of adult patients with IDA under the trade name Riona (ferric citrate hydrate).

Our principal executive offices are located at 245 First Street, Cambridge, Massachusetts, 02142. Our telephone number is (617) 871-2098 and our website address is www.akebia.com. The information contained in, and that can be accessed through, our website is not incorporated into and does not form a part of this prospectus.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading “Risk Factors” contained in this prospectus, any accompanying prospectus supplement and any related free writing prospectus, and under similar headings in our Annual Report on Form 10-K for the year ended December 31, 2023 and in our most recent Quarterly Report on Form 10-Q, as updated by our subsequent filings, which are incorporated by reference into this prospectus, before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, results of operations, financial condition and cash flows, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes unless otherwise indicated in the applicable prospectus supplement. General corporate purposes may include research and development expenditures, commercial expenditures, intellectual property protection and enforcement, potential strategic collaborations such as acquisitions or in-licenses of products, product candidates or technologies, acquisitions of companies or businesses, repayment and refinancing of debt, working capital and capital expenditures. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds, if any, we receive in connection with securities offered pursuant to this prospectus for any purpose.

DESCRIPTION OF DEBT SECURITIES

The following description summarizes the general terms and provisions of the debt securities that Akebia Therapeutics, Inc. may offer and sell from time to time. We will describe in a prospectus supplement the specific terms of the debt securities offered through that prospectus supplement, as well as any general terms and provisions described in this section that will not apply to those debt securities. As used in this “Description of Debt Securities,” the term “debt securities” means the senior and subordinated debt securities that we issue and the trustee authenticates and delivers under the applicable indenture. When we refer to “the Company,” “we,” “our,” and “us” in this section, we mean Akebia Therapeutics, Inc. excluding, unless the context otherwise requires or as otherwise expressly stated, its subsidiaries.

We may issue senior debt securities from time to time, in one or more series under a senior indenture to be entered into between us and a senior trustee to be named in a prospectus supplement, which we refer to as the senior trustee. We may issue subordinated debt securities from time to time, in one or more series under a subordinated indenture to be entered into between us and a subordinated trustee to be named in a prospectus supplement, which we refer to as the subordinated trustee. The forms of senior indenture and subordinated indenture are filed as exhibits to the registration statement of which this prospectus forms a part. The senior indenture and the subordinated indenture are referred to individually as an indenture and together as the indentures and the senior trustee and the subordinated trustee are referred to individually as a trustee and together as the trustees. This section summarizes some of the provisions of the indentures and is qualified in its entirety by the specific text of the indentures, including definitions of terms used in the indentures. Wherever we refer to particular sections of, or defined terms in, the indentures, those sections or defined terms are incorporated by reference in this prospectus or the applicable prospectus supplement. You should review the indentures that are filed as exhibits to the registration statement of which this prospectus forms a part for additional information.

Neither indenture will limit the amount of debt securities that we may issue. The applicable indenture will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by us and may be payable in any currency or currency unit designated by us or in amounts determined by reference to an index.

General

The senior debt securities will constitute our unsecured and unsubordinated general obligations and will rank equally in right of payment with our other unsecured and unsubordinated obligations. The subordinated debt securities will constitute our unsecured and subordinated general obligations and will be junior in right of payment to our senior indebtedness (including senior debt securities), as described under the heading “—Certain Terms of the Subordinated Debt Securities—Subordination.” The debt securities will be structurally subordinated to all existing and future indebtedness and other liabilities of our subsidiaries unless such subsidiaries expressly guarantee such debt securities.

The debt securities will be our unsecured obligations. Any secured debt or other secured obligations will be effectively senior to the debt securities to the extent of the value of the assets securing such debt or other obligations. Unless otherwise indicated in the applicable prospectus supplement, the debt securities will not be guaranteed by any of our subsidiaries.

The applicable prospectus supplement and/or free writing prospectus will include any additional or different terms of the debt securities of any series being offered, including the following terms:

- the title and type of the debt securities;
- whether the debt securities will be senior or subordinated debt securities, and, with respect to any subordinated debt securities the terms on which they are subordinated;
- the initial aggregate principal amount of the debt securities;
- the price or prices at which we will sell the debt securities;

- the maturity date or dates of the debt securities and the right, if any, to extend such date or dates;
- the rate or rates, if any, at which the debt securities will bear interest, or the method of determining such rate or rates;
- the date or dates from which such interest will accrue, the interest payment dates on which such interest will be payable or the method of determination of such dates;
- the right, if any, to extend the interest payment periods and the duration of that extension;
- the manner of paying principal and interest and the place or places where principal and interest will be payable;
- the denominations of the debt securities if other than \$2,000 or multiples of \$1,000;
- provisions for a sinking fund, purchase fund or other analogous fund, if any;
- any redemption dates, prices, obligations and restrictions on the debt securities;
- the currency, currencies or currency units in which the debt securities will be denominated and the currency, currencies or currency units in which principal and interest, if any, on the debt securities may be payable;
- any conversion or exchange features of the debt securities;
- whether the debt securities will be subject to the defeasance provisions in the indenture;
- whether the debt securities will be issued in definitive or global form or in definitive form only upon satisfaction of certain conditions;
- whether the debt securities will be guaranteed as to payment or performance;
- any special tax implications of the debt securities;
- any events of defaults or covenants in addition to or in lieu of those set forth in the indenture; and
- any other material terms of the debt securities.

When we refer to “principal” in this section with reference to the debt securities, we are also referring to “premium, if any.”

We may from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series in all respects (or in all respects other than (1) the payment of interest accruing prior to the issue date of such further debt securities or (2) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

You may present debt securities for exchange and you may present debt securities for transfer in the manner, at the places and subject to the restrictions set forth in the debt securities and the applicable prospectus supplement. We will provide you those services without charge, although you may have to pay any tax or other governmental charge payable in connection with any exchange or transfer, as set forth in the indenture.

Debt securities may bear interest at a fixed rate or a floating rate. Debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate (original issue discount securities) may be sold at a discount below their stated principal amount. U.S. federal income tax considerations applicable to any such discounted debt securities or to certain debt securities issued at par which are treated as having been issued at a discount for U.S. federal income tax purposes will be described in the applicable prospectus supplement.

We may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices. You may receive a payment of principal on any principal payment date, or a payment of interest on any interest payment date, that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending on the value on such dates of the applicable currency, security or basket of securities, commodity or index. Information as to the methods for determining the amount of principal or interest payable on any date, the currencies, securities or baskets of securities, commodities or indices to which the amount payable on such date is linked and certain related tax considerations will be set forth in the applicable prospectus supplement.

Certain Terms of the Senior Debt Securities

Covenants. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the senior debt securities will not contain any financial or restrictive covenants, including covenants restricting either us or any of our subsidiaries from incurring, issuing, assuming or guaranteeing any indebtedness secured by a lien on any of our or our subsidiaries' property or capital stock, or restricting either us or any of our subsidiaries from entering into sale and leaseback transactions.

Consolidation, Merger and Sale of Assets. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to any person, in either case, unless:

- the successor entity, if any, is a U.S. corporation, limited liability company, partnership or trust;
- the successor entity assumes our obligations on the senior debt securities and under the senior indenture;
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- we have delivered to the senior trustee an officer's certificate and an opinion of counsel, each stating that the consolidation, merger, conveyance, transfer or lease and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture, comply with the senior indenture and all conditions precedent provided for in the senior indenture relating to such transaction have been complied with.

The restrictions described in the bullets above do not apply (1) to our consolidation with or merging into one of our affiliates, if our Board of Directors determines in good faith that the purpose of the consolidation or merger is principally to change our state of incorporation or our form of organization to another form or (2) if we merge with or into a single direct or indirect wholly-owned subsidiary of ours.

The surviving business entity will succeed to, and be substituted for, us under the senior indenture and the senior debt securities and, except in the case of a lease, we shall be released from all obligations under the senior indenture and the senior debt securities.

No Protection in the Event of a Change in Control. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the senior debt securities will not contain any provisions that may afford holders of the senior debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control).

Events of Default. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the following are events of default under the senior indenture with respect to senior debt securities of each series:

- failure to pay interest on any senior debt securities of such series when due and payable, if that default continues for a period of 30 days (or such other period as may be specified for such series);

- failure to pay principal on the senior debt securities of such series when due and payable whether at maturity, upon redemption, by declaration or otherwise (and, if specified for such series, the continuance of such failure for a specified period);
- default in the performance of or breach of any of our covenants or agreements in the senior indenture applicable to senior debt securities of such series, other than a covenant breach which is specifically dealt with elsewhere in the senior indenture, and that default or breach continues for a period of 90 days after we receive written notice from the trustee or from the holders of 25% or more in aggregate principal amount of the senior debt securities of such series;
- certain events of bankruptcy or insolvency, whether or not voluntary; and
- any other event of default provided for in such series of senior debt securities as may be specified in the applicable prospectus supplement.

Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the default by us under any other debt, including any other series of our debt securities, is not a default under the senior indenture.

If an event of default other than an event of default specified in the fourth bullet point above occurs with respect to a series of senior debt securities and is continuing under the senior indenture, then, and in each such case, either the trustee or the holders of not less than 25% in aggregate principal amount of such series then outstanding under the senior indenture (each such series voting as a separate class) by written notice to us and to the trustee, if such notice is given by the holders, may, and the trustee at the request of such holders shall, declare the principal amount of and accrued interest on such series of senior debt securities to be immediately due and payable, and upon this declaration, the same shall become immediately due and payable.

If an event of default specified in the fourth bullet point above occurs and is continuing, the entire principal amount of and accrued interest on each series of senior debt securities then outstanding shall automatically become immediately due and payable.

Unless otherwise specified in the prospectus supplement relating to a series of senior debt securities originally issued at a discount, the amount due upon acceleration shall include only the original issue price of the senior debt securities, the amount of original issue discount accrued to the date of acceleration and accrued interest, if any.

Upon certain conditions, declarations of acceleration may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of all the senior debt securities of such series affected by the default, each series voting as a separate class. Furthermore, subject to various provisions in the senior indenture, the holders of a majority in aggregate principal amount of a series of senior debt securities, by notice to the trustee, may waive a continuing default or event of default with respect to such senior debt securities and its consequences, except a default in the payment of principal of or interest on such senior debt securities (other than any such default in payment resulting solely from an acceleration of the senior debt securities) or in respect of a covenant or provision of the senior indenture which cannot be modified or amended without the consent of the holders of each such senior debt security. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such senior debt securities shall be deemed to have been cured, for every purpose of the senior indenture; but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto.

The holders of a majority in aggregate principal amount of a series of senior debt securities 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 such senior debt securities. However, the trustee may refuse to follow any direction that conflicts with law or the senior 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 of such series of senior debt securities not joining in the giving of such direction and may take any other action it deems proper that is not

inconsistent with any such direction received from holders of such series of senior debt securities. A holder may not pursue any remedy with respect to the senior indenture or any series of senior debt securities unless:

- the holder gives the trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of such series of senior debt securities make a written request to the trustee to pursue the remedy in respect of such event of default;
- the requesting holder or holders offer the trustee indemnity satisfactory to the trustee against any costs, liability or expense;
- the trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- during such 60-day period, the holders of a majority in aggregate principal amount of such series of senior debt securities do not give the trustee a direction that is inconsistent with the request.

These limitations, however, do not apply to the right of any holder of a senior debt security of any affected series to receive payment of the principal of and interest on such senior debt security in accordance with the terms of such debt security, or to bring suit for the enforcement of any such payment in accordance with the terms of such debt security, on or after the due date for the senior debt securities, which right shall not be impaired or affected without the consent of the holder.

The senior indenture requires certain of our officers to certify, on or before a fixed date in each year in which any senior debt security is outstanding, as to their knowledge of our compliance with all covenants, agreements and conditions under the senior indenture.

Satisfaction and Discharge. We can satisfy and discharge our obligations to holders of any series of debt securities if:

- we have paid or caused to be paid the principal of and interest on all senior debt securities of such series (with certain limited exceptions) when due and payable;
- we deliver to the senior trustee for cancellation all senior debt securities of such series theretofore authenticated under the senior indenture (with certain limited exceptions); or
- all senior debt securities of such series 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 senior trustee) and we deposit in trust an amount of cash or a combination of cash and U.S. government or U.S. government agency obligations (or in the case of senior debt securities denominated in a foreign currency, foreign government securities or foreign government agency securities) sufficient to make interest, principal and any other payments on the debt securities of that series on their various due dates;

and if, in any such case, we also pay or cause to be paid all other sums payable under the senior indenture, as and when the same shall be due and payable and we deliver to the senior trustee an officer's certificate and an opinion of counsel, each stating that these conditions have been satisfied.

Under current U.S. federal income tax law, the deposit and our legal release from the debt securities would be treated as though we took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to us. Purchasers of the debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. federal income tax law.

Defeasance. Unless the applicable prospectus supplement provides otherwise, the following discussion of legal defeasance and covenant defeasance will apply to any series of debt securities issued under the indentures.

Legal Defeasance. We can legally release ourselves from any payment or other obligations on the debt securities of any series (called “legal defeasance”) if certain conditions are met, including the following:

- We deposit in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series cash or a combination of cash and U.S. government or U.S. government agency obligations (or, in the case of senior debt securities denominated in a foreign currency, foreign government or foreign government agency obligations) that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates.
- There is a change in current U.S. federal income tax law or an IRS ruling that lets us make the above deposit without causing you to be taxed on the debt securities any differently than if we did not make the deposit and instead repaid the debt securities ourselves when due. Under current U.S. federal income tax law, the deposit and our legal release from the debt securities would be treated as though we took back your debt securities and gave you your share of the cash and debt securities or bonds deposited in trust. In that event, you could recognize gain or loss on the debt securities you give back to us.
- We deliver to the trustee a legal opinion of our counsel confirming the tax law change or ruling described above.

If we accomplish legal defeasance, as described above, you would have to rely solely on the trust deposit for repayment of the debt securities. You could not look to us for repayment in the event of any shortfall.

Covenant Defeasance. Without any change in current U.S. federal tax law, we can make the same type of deposit described above and be released from some of the covenants in the debt securities (called “covenant defeasance”). In that event, you would lose the protection of those covenants but would gain the protection of having money and securities set aside in trust to repay the debt securities. In order to achieve covenant defeasance, we must do the following (among other things):

- deposit in trust for your benefit and the benefit of all other direct holders of the debt securities of the same series cash or a combination of cash and U.S. government or U.S. government agency obligations (or, in the case of senior debt securities denominated in a foreign currency, foreign government or foreign government agency obligations) that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates; and
- deliver to the trustee a legal opinion of our counsel confirming that under current U.S. federal income tax law we may make the above deposit without causing you to be taxed on the debt securities any differently than if we did not make the deposit and instead repaid the debt securities ourselves when due.

If we accomplish covenant defeasance, you could still look to us for repayment of the debt securities if there were a shortfall in the trust deposit. In fact, if one of the events of default occurred (such as our bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. Depending on the events causing the default, you may not be able to obtain payment of the shortfall.

Modification and Waiver. We and the trustee may amend or supplement the senior indenture or the senior debt securities of any series without the consent of any holder:

- to convey, transfer, assign, mortgage or pledge any assets as security for the senior debt securities of one or more series;
- to evidence the succession of a corporation, limited liability company, partnership or trust to us, and the assumption by such successor of our covenants, agreements and obligations under the senior indenture or to otherwise comply with the covenant relating to mergers, consolidations and sales of assets;
- to comply with the requirements of the SEC in order to effect or maintain the qualification of the senior indenture under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act;

- to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default;
- to cure any ambiguity, defect or inconsistency in the senior indenture or in any supplemental indenture or to conform the senior indenture or the senior debt securities to the description of senior debt securities of such series set forth in this prospectus or any applicable prospectus supplement;
- to provide for or add guarantors with respect to the senior debt securities of any series;
- to establish the form or forms or terms of the senior debt securities as permitted by the senior indenture;
- to evidence and provide for the acceptance of appointment under the senior indenture by a successor trustee, or to make such changes as shall be necessary to provide for or facilitate the administration of the trusts in the senior indenture by more than one trustee;
- to add to, change or eliminate any of the provisions of the senior indenture in respect of one or more series of senior debt securities, provided that any such addition, change or elimination shall (a) neither (1) apply to any senior debt security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (2) modify the rights of the holder of any such senior debt security with respect to such provision or (b) become effective only when there is no senior debt security described in clause (a)(1) outstanding;
- to make any change to the senior debt securities of any series so long as no senior debt securities of such series are outstanding; or
- to make any change that does not adversely affect the rights of any holder in any material respect.

Other amendments and modifications of the senior indenture or the senior debt securities issued may be made, and our compliance with any provision of the senior indenture with respect to any series of senior debt securities may be waived, with the consent of the holders of a majority of the aggregate principal amount of the outstanding senior debt securities of each series affected by the amendment or modification (voting as separate series); provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- extends the final maturity of any senior debt securities of such series;
- reduces the principal amount of any senior debt securities of such series;
- reduces the rate, or extends the time for payment of, interest on any senior debt securities of such series;
- reduces the amount payable upon the redemption of any senior debt securities of such series;
- changes the currency of payment of principal of or interest on any senior debt securities of such series;
- reduces the principal amount of original issue discount securities payable upon acceleration of maturity or the amount provable in bankruptcy;
- waives a continuing default in the payment of principal of or interest on the senior debt securities (other than any such default in payment resulting solely from an acceleration of the senior debt securities);
- changes the provisions relating to the waiver of past defaults or impairs the right of holders to receive payment or to institute suit for the enforcement of any payment or conversion of any senior debt securities of such series on or after the due date therefor;
- modifies any of the provisions of these restrictions on amendments and modifications, except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the holder of each senior debt security of such series affected by the modification;

- adversely affects the right to convert or exchange senior debt securities into common stock, other securities or property in accordance with the terms of the senior debt securities; or
- reduces the above-stated percentage of outstanding senior debt securities of such series whose holders must consent to a supplemental indenture or modifies or amends or waives certain provisions of or defaults under the senior indenture.

It shall not be necessary for the holders to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if the holders' consent approves the substance thereof. After an amendment, supplement or waiver of the senior indenture in accordance with the provisions described in this section becomes effective, the trustee must give to the holders affected thereby certain notice briefly describing the amendment, supplement or waiver. Any failure by the trustee to give such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such amendment, supplemental indenture or waiver.

Notice of Redemption. Notice of any redemption of senior debt securities will be mailed at least 10 days but not more than 60 days before the redemption date to each holder of senior debt securities of a series to be redeemed. Any notice may, at our discretion, be subject to the satisfaction or waiver of one or more conditions precedent. In that case, such notice shall state the nature of such condition precedent. If we elect to redeem a portion but not all of such senior debt securities, the trustee will select the senior debt securities to be redeemed in a manner that complies with applicable legal and stock exchange requirements, if any. Interest on such debt securities or portions of senior debt securities will cease to accrue on and after the date fixed for redemption, unless we default in the payment of such redemption price and accrued interest with respect to any such senior debt security or portion thereof.

If any date of redemption of any senior debt security is not a business day, then payment of principal and interest may be made on the next succeeding business day with the same force and effect as if made on the nominal date of redemption and no interest will accrue for the period after such nominal date.

Conversion Rights. We will describe the terms upon which senior debt securities may be convertible into our common stock or other securities in a prospectus supplement. These terms will include the type of securities the senior debt securities are convertible into, the conversion price or manner of calculation thereof, the conversion period, provisions as to whether conversion will be at our option or the option of the holders, the events requiring an adjustment of the conversion price and provisions affecting conversion in the event of the redemption of the senior debt securities and any restrictions on conversion. They may also include provisions adjusting the number of shares of our common stock or other securities issuable upon conversion.

No Personal Liability of Incorporators, Stockholders, Officers or Directors. The senior indenture provides that no recourse shall be had under any obligation, covenant or agreement of ours in the senior indenture or any supplemental indenture, or in any of the senior debt securities or because of the creation of any indebtedness represented thereby, against any of our incorporators, stockholders, officers or directors, past, present or future, or of any predecessor or successor entity thereof under any law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. Each holder, by accepting the senior debt securities, waives and releases all such liability.

Concerning the Trustee. The senior indenture provides that, except during the continuance of an event of default, the trustee will not be liable except for the performance of such duties as are specifically set forth in the senior indenture. If an event of default has occurred and is continuing, the trustee will exercise such rights and powers vested in it under the senior indenture and will use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The senior indenture and the provisions of the Trust Indenture Act incorporated by reference therein contain limitations on the rights of the trustee thereunder, should it become a creditor of ours or any of our subsidiaries, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claims, as security or otherwise. The trustee is permitted to engage in other transactions, provided that if it acquires any conflicting interest (as defined in the Trust Indenture Act), it must eliminate such conflict or resign.

We may have normal banking relationships with the senior trustee in the ordinary course of business.

Unclaimed Funds. All funds deposited with the trustee or any paying agent for the payment of principal, premium, interest or additional amounts in respect of the senior debt securities that remain unclaimed for two years after the date upon which such amounts became due and payable will be repaid to us. Thereafter, any right of any holder of senior debt securities to such funds shall be enforceable only against us, and the trustee and paying agents will have no liability therefor.

Governing Law. The senior indenture and the senior debt securities will be governed by, and construed in accordance with, the internal laws of the State of New York.

Certain Terms of the Subordinated Debt Securities

Other than the terms of the subordinated indenture and subordinated debt securities relating to subordination or otherwise as described in the prospectus supplement relating to a particular series of subordinated debt securities, the terms of the subordinated indenture and subordinated debt securities are identical in all material respects to the terms of the senior indenture and senior debt securities.

Additional or different subordination terms may be specified in the prospectus supplement applicable to a particular series.

Subordination. The indebtedness evidenced by the subordinated debt securities is subordinate to the prior payment in full of all of our senior indebtedness, as defined in the subordinated indenture. During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of our senior indebtedness, we may not make any payment of principal or interest on the subordinated debt securities (except for certain sinking fund payments). In addition, upon any payment or distribution of our assets upon any dissolution, winding-up, liquidation or reorganization, the payment of the principal of and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all our senior indebtedness. Because of this subordination, if we dissolve or otherwise liquidate, holders of our subordinated debt securities may receive less, ratably, than holders of our senior indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

The term “senior indebtedness” of a person means with respect to such person the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding on the date of the subordinated indenture or incurred by that person in the future:

- all of the indebtedness of that person for money borrowed;
- all of the indebtedness of that person evidenced by notes, debentures, bonds or other securities sold by that person for money;
- all of the lease obligations that are capitalized on the books of that person in accordance with generally accepted accounting principles;
- all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet point above that the person, in any manner, assumes or guarantees or that the person in effect guarantees through an agreement to purchase, whether that agreement is contingent or otherwise; and
- all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above;

unless, in the case of any particular indebtedness, renewal, extension or refunding, the instrument creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, renewal, extension or refunding is not superior in right of payment to the subordinated debt securities. Our senior debt securities constitute senior indebtedness for purposes of the subordinated indenture.

DESCRIPTION OF CAPITAL STOCK

General

The following description of certain terms of our capital stock is intended as a summary only and is qualified in its entirety by reference to our Ninth Amended and Restated Certificate of Incorporation, as amended, our Second Amended and Restated Bylaws, and to the applicable provisions of the Delaware General Corporation Law, or the DGCL. We refer in this section to our Ninth Amended and Restated Certificate of Incorporation, as amended, as our certificate of incorporation, and we refer to our Second Amended and Restated Bylaws as our bylaws.

Our authorized capital stock consists of 350,000,000 shares of our common stock, par value \$0.00001 per share, and 25,000,000 shares of undesignated preferred stock, par value \$0.00001 per share.

Common Stock

Dividend Rights. Subject to preferences that may apply to shares of preferred stock outstanding at the time, holders of outstanding shares of common stock are entitled to receive dividends out of assets legally available at the times and in the amounts as the Board of Directors may from time to time determine.

Voting Rights. Each outstanding share of common stock is entitled to one vote on all matters submitted to a vote of stockholders. Holders of shares of our common stock shall have no cumulative voting rights.

Conversion or Redemption Rights. Our common stock is neither convertible nor redeemable.

Liquidation Rights. Upon our liquidation, dissolution or winding up, the holders of our common stock will be entitled to receive pro rata our assets which are legally available for distribution, after payment of all debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences. Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Transfer Agent and Registrar. American Stock Transfer & Trust Company, LLC is transfer agent and registrar for the common stock.

Listing. Our common stock has been listed on The Nasdaq Capital Market under the symbol "AKBA."

Preferred Stock

We are authorized to issue "blank check" preferred stock, which may be issued in one or more series upon authorization of our Board of Directors. Our Board of Directors is authorized to fix the designations, powers, preferences and the relative, participating, optional or other special rights and any qualifications, limitations and restrictions of the shares of each series of preferred stock. The authorized shares of our preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange on which our securities may be listed. If the approval of our stockholders is not required for the issuance of shares of our preferred stock, our board may determine not to seek stockholder approval. The specific terms of any series of preferred stock offered pursuant to this prospectus will be described in the prospectus supplement relating to that series of preferred stock.

A series of our preferred stock could, depending on the terms of such series, impede the completion of a merger, tender offer or other takeover attempt. Our Board of Directors will make any determination to issue preferred shares based upon its judgment as to the best interests of our stockholders. Our directors, in so acting, could issue preferred stock having terms that could discourage an acquisition attempt through which an acquirer may be able to change the composition of our Board of Directors, including a tender offer or other transaction that some, or a majority, of

our stockholders might believe to be in their best interests or in which stockholders might receive a premium for their stock over the then-current market price of the stock.

The preferred stock has the terms described below unless otherwise provided in the prospectus supplement relating to a particular series of preferred stock. You should read the prospectus supplement relating to the particular series of preferred stock being offered for specific terms, including:

- the designation and stated value per share of the preferred stock and the number of shares offered;
- the amount of liquidation preference per share;
- the price at which the preferred stock will be issued;
- the dividend rate, or method of calculation of dividends, the dates on which dividends will be payable, whether dividends will be cumulative or noncumulative and, if cumulative, the dates from which dividends will commence to accumulate;
- any redemption or sinking fund provisions;
- if other than the currency of the United States, the currency or currencies including composite currencies in which the preferred stock is denominated and/or in which payments will or may be payable;
- any conversion provisions; and
- any other rights, preferences, privileges, limitations and restrictions on the preferred stock.

The preferred stock will, when issued, be fully paid and non-assessable. Unless otherwise specified in the prospectus supplement, each series of preferred stock will rank equally as to dividends and liquidation rights in all respects with each other series of preferred stock. The rights of holders of shares of each series of preferred stock will be subordinate to those of our general creditors.

Rank. Unless otherwise specified in the prospectus supplement, the preferred stock will, with respect to dividend rights and rights upon our liquidation, dissolution or winding up of our affairs, rank:

- senior to our common stock and to all equity securities ranking junior to such preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs;
- on a parity with all equity securities issued by us, the terms of which specifically provide that such equity securities rank on a parity with the preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs; and
- junior to all equity securities issued by us, the terms of which specifically provide that such equity securities rank senior to the preferred stock with respect to dividend rights or rights upon our liquidation, dissolution or winding up of our affairs.

The term “equity securities” does not include convertible debt securities.

Dividends. Holders of the preferred stock of each series will be entitled to receive, when, as and if declared by our Board of Directors, cash dividends at such rates and on such dates described in the prospectus supplement. Different series of preferred stock may be entitled to dividends at different rates or based on different methods of calculation. The dividend rate may be fixed or variable or both. Dividends will be payable to the holders of record as they appear on our stock books on record dates fixed by our Board of Directors, as specified in the applicable prospectus supplement.

Dividends on any series of preferred stock may be cumulative or noncumulative, as described in the applicable prospectus supplement. If our Board of Directors does not declare a dividend payable on a dividend payment date on any series of noncumulative preferred stock, then the holders of that noncumulative preferred stock will have no right to receive a dividend for that dividend payment date, and we will have no obligation to pay the dividend

accrued for that period, whether or not dividends on that series are declared payable on any future dividend payment dates. Dividends on any series of cumulative preferred stock will accrue from the date we initially issue shares of such series or such other date specified in the applicable prospectus supplement.

No dividends may be declared or paid or funds set apart for the payment of any dividends on any parity securities unless full dividends have been paid or set apart for payment on the preferred stock. If full dividends are not paid, the preferred stock will share dividends pro rata with the parity securities.

No dividends may be declared or paid or funds set apart for the payment of dividends on any junior securities unless full dividends for all dividend periods terminating on or prior to the date of the declaration or payment will have been paid or declared and a sum sufficient for the payment set apart for payment on the preferred stock.

Liquidation Preference. Upon any voluntary or involuntary liquidation, dissolution or winding up of our affairs, then, before we make any distribution or payment to the holders of any common stock or any other class or series of our capital stock ranking junior to the preferred stock in the distribution of assets upon any liquidation, dissolution or winding up of our affairs, the holders of each series of preferred stock shall be entitled to receive out of assets legally available for distribution to stockholders, liquidating distributions in the amount of the liquidation preference per share set forth in the prospectus supplement, plus any accrued and unpaid dividends thereon. Such dividends will not include any accumulation in respect of unpaid noncumulative dividends for prior dividend periods. Unless otherwise specified in the prospectus supplement, after payment of the full amount of their liquidating distributions, the holders of preferred stock will have no right or claim to any of our remaining assets. Upon any such voluntary or involuntary liquidation, dissolution or winding up, if our available assets are insufficient to pay the amount of the liquidating distributions on all outstanding preferred stock and the corresponding amounts payable on all other classes or series of our capital stock ranking on parity with the preferred stock and all other such classes or series of shares of capital stock ranking on parity with the preferred stock in the distribution of assets, then the holders of the preferred stock and all other such classes or series of capital stock ranking on parity with the preferred stock will share ratably in any such distribution of assets in proportion to the full liquidating distributions to which they would otherwise be entitled.

Upon any such liquidation, dissolution or winding up and if we have made liquidating distributions in full to all holders of preferred stock, we will distribute our remaining assets among the holders of any other classes or series of capital stock ranking junior to the preferred stock according to their respective rights and preferences and, in each case, according to their respective number of shares. For such purposes, our consolidation or merger with or into any other corporation, trust or entity, or the sale, lease or conveyance of all or substantially all of our property or assets will not be deemed to constitute a liquidation, dissolution or winding up of our affairs.

Redemption. If so provided in the applicable prospectus supplement, the preferred stock will be subject to mandatory redemption or redemption at our option, as a whole or in part, in each case upon the terms, at the times and at the redemption prices set forth in such prospectus supplement.

The prospectus supplement relating to a series of preferred stock that is subject to mandatory redemption will specify the number of shares of preferred stock that shall be redeemed by us in each year commencing after a date to be specified, at a redemption price per share to be specified, together with an amount equal to all accrued and unpaid dividends thereon to the date of redemption. Unless the shares have a cumulative dividend, such accrued dividends will not include any accumulation in respect of unpaid dividends for prior dividend periods. We may pay the redemption price in cash or other property, as specified in the applicable prospectus supplement. If the redemption price for preferred stock of any series is payable only from the net proceeds of the issuance of shares of our capital stock, the terms of such preferred stock may provide that, if no such shares of our capital stock shall have been issued or to the extent the net proceeds from any issuance are insufficient to pay in full the aggregate redemption price then due, such preferred stock shall automatically and mandatorily be converted into the applicable shares of

our capital stock pursuant to conversion provisions specified in the applicable prospectus supplement. Notwithstanding the foregoing, we will not redeem any preferred stock of a series unless:

- if that series of preferred stock has a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full cumulative dividends on the preferred stock for all past dividend periods and the then current dividend period; or
- if such series of preferred stock does not have a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full dividends for the then current dividend period.

In addition, we will not acquire any preferred stock of a series unless:

- if that series of preferred stock has a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full cumulative dividends on all outstanding shares of such series of preferred stock for all past dividend periods and the then current dividend period; or
- if that series of preferred stock does not have a cumulative dividend, we have declared and paid or contemporaneously declare and pay or set aside funds to pay full dividends on the preferred stock of such series for the then current dividend period.

However, at any time we may purchase or acquire preferred stock of that series (1) pursuant to a purchase or exchange offer made on the same terms to holders of all outstanding preferred stock of such series or (2) by conversion into or exchange for shares of our capital stock ranking junior to the preferred stock of such series as to dividends and upon liquidation.

If fewer than all of the outstanding shares of preferred stock of any series are to be redeemed, we will determine the number of shares that may be redeemed pro rata from the holders of record of such shares in proportion to the number of such shares held or for which redemption is requested by such holder or by any other equitable manner that we determine. Such determination will reflect adjustments to avoid redemption of fractional shares.

Unless otherwise specified in the prospectus supplement, we will mail notice of redemption at least 10 days but not more than 60 days before the redemption date to each holder of record of preferred stock to be redeemed at the address shown on our stock transfer books. Each notice shall state:

- the redemption date;
- the number of shares and series of preferred stock to be redeemed;
- the redemption price;
- the place or places where certificates for such preferred stock are to be surrendered for payment of the redemption price;
- that dividends on the shares to be redeemed will cease to accrue on such redemption date;
- the date on which the holder's conversion rights, if any, as to such shares shall terminate; and
- the specific number of shares to be redeemed from each such holder if fewer than all the shares of any series are to be redeemed.

If notice of redemption has been given and we have set aside the funds necessary for such redemption in trust for the benefit of the holders of any shares called for redemption, then from and after the redemption date, dividends will cease to accrue on such shares, and all rights of the holders of such shares will terminate, except the right to receive the redemption price.

Voting Rights. Holders of preferred stock will not have any voting rights, except as required by law or as indicated in the applicable prospectus supplement.

Unless otherwise provided for under the terms of any series of preferred stock, no consent or vote of the holders of shares of preferred stock or any series thereof shall be required for any amendment to our certificate of incorporation that would increase the number of authorized shares of preferred stock or the number of authorized shares of any series thereof or decrease the number of authorized shares of preferred stock or the number of authorized shares of any series thereof (but not below the number of authorized shares of preferred stock or such series, as the case may be, then outstanding).

Conversion Rights. The terms and conditions, if any, upon which any series of preferred stock is convertible into shares of our common stock will be set forth in the applicable prospectus supplement relating thereto. Such terms will include the number of shares of common stock into which the shares of preferred stock are convertible, the conversion price, rate or manner of calculation thereof, the conversion period, provisions as to whether conversion will be at our option or at the option of the holders of the preferred stock, the events requiring an adjustment of the conversion price and provisions affecting conversion in the event of the redemption.

Transfer Agent and Registrar. The transfer agent and registrar for the preferred stock will be set forth in the applicable prospectus supplement.

Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law That May Have Anti-Takeover Effects

Our certificate of incorporation and bylaws contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the Board of Directors and which may have the effect of delaying, deferring or preventing a future takeover or change in control of our company unless such takeover or change in control is approved by the Board of Directors.

These provisions include:

Classified Board. Our certificate of incorporation provides that, subject to the special rights of the holders of any series of preferred stock to elect directors, our Board of Directors is divided into three classes of directors, with the classes as nearly equal in number as possible. As a result, approximately one-third of our Board of Directors is elected each year. The classification of directors has the effect of making it more difficult for stockholders to change the composition of our Board. Our certificate of incorporation also provides that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors shall be fixed exclusively pursuant to a resolution adopted by our Board of Directors.

Action by Written Consent; Special Meetings of Stockholders. Our certificate of incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting. Our certificate of incorporation and the bylaws also provide that, except as otherwise required by law, special meetings of the stockholders can be called only by or at the direction of the Board of Directors pursuant to a resolution adopted by a majority of the total number of directors. Stockholders are not permitted to call a special meeting or to require the Board of Directors to call a special meeting.

Removal of Directors. Subject to the special rights of the holders of any series of preferred stock to elect directors, our certificate of incorporation provides that our directors may be removed only for cause by the affirmative vote of at least 75% of the votes that all our stockholders would be entitled to cast in an annual election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose. This requirement of a supermajority vote to remove directors could enable a minority of our stockholders to prevent a change in the composition of our Board.

Advance Notice Procedures. Our bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the Board of Directors. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board of Directors or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the bylaws do not give the Board of Directors the power to approve or disapprove

stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of our company.

Super Majority Approval Requirements. The DGCL generally provides that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless either a corporation's certificate of incorporation or bylaws requires a greater percentage. A majority vote of our Board of Directors or the affirmative vote of holders of at least 75% of the total votes of the outstanding shares of capital stock of our company entitled to vote with respect thereto, voting together as a single class, are required to amend, alter, change or repeal the bylaws. In addition, the affirmative vote of the holders of at least 85% of the total votes of the outstanding shares of capital stock of our company entitled to vote with respect thereto, voting together as a single class, are required to amend, alter, change or repeal, or to adopt any provisions inconsistent with, any of the provisions in our certificate of incorporation relating to decreasing the number of authorized shares of common stock, issuing or changing the number of authorized shares of preferred stock, the Board of Directors, limitation of director liability, meetings of stockholders, exclusive jurisdiction for certain actions and amendments to our certificate of incorporation and bylaws. This requirement of a supermajority vote to approve amendments to our bylaws and certificate of incorporation could enable a minority of our stockholders to exercise veto power over any such amendments.

Authorized but Unissued Shares. Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital and corporate acquisitions. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum. The certificate of incorporation provides that, subject to limited exceptions, and to the fullest extent permitted by law, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (iii) any action asserting a claim against us arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws, or (iv) any other action asserting a claim against us that is governed by the internal affairs doctrine. Under our certificate of incorporation, this exclusive forum provision will not apply to claims which are vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery of the State of Delaware, or for which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. For instance, the provision would not apply to actions arising under federal securities laws, including suits brought to enforce any liability or duty created by the Exchange Act or the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our certificate of incorporation described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law and federal securities laws for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with one or more actions or proceedings described above, a court could find the choice of forum provisions contained in our certificate of incorporation to be inapplicable or unenforceable.

Delaware Business Combination Statute. We are subject to Section 203 of the DGCL, or Section 203, which prohibits a Delaware corporation from engaging in business combinations with an interested stockholder. An interested stockholder is generally defined as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or any entity or person affiliated with or controlling or controlled by such entity or person, or an interested stockholder. Section 203 provides that an interested stockholder may not

engage in business combinations with the corporation for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the Board of Directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the Board of Directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $\frac{2}{3}$ % of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combinations to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, transfer, pledge or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

DESCRIPTION OF WARRANTS

General

We may issue warrants to purchase common stock, preferred stock, or debt securities. We may offer warrants separately or together with one or more additional warrants, common stock, preferred stock, or debt securities, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the accompanying prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

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

Pre-Funded Warrants

We may also issue pre-funded warrants to purchase common stock. A pre-funded warrant is a type of warrant that allows the holder to purchase a specified number of shares of common stock at a nominal exercise price, generally equal to the par value of the underlying common stock. The pre-funded warrants may be issued as individual warrant agreements to the holders. In addition to the terms described in the bullets above, the applicable prospectus supplement will describe the following terms of any pre-funded warrants:

- the date on which the right to exercise the pre-funded warrants will begin, generally on the date of issuance, and the date on which that right will expire, generally when the pre-funded warrant is exercised in full;
- whether the warrant may only be exercised pursuant to a cashless exercise procedure;
- certain beneficial ownership limitations, such that a holder will not be entitled to exercise any portion of any pre-funded warrant that, upon giving effect to (or immediately prior to) such exercise, would cause the holder's beneficial ownership to exceed a specified threshold, typically 4.99% or 9.99%, of the number of shares of our outstanding common stock or the combined voting power of all of our securities, which threshold may be subject to increase or decrease at the option of the holder, subject to a maximum ownership threshold, typically 9.99% or 19.99%, and compliance with a notice period;
- in the event of a fundamental transaction (generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our assets, our consolidation or merger with or into another person in which we are not the surviving entity, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of more than 50% of the voting power of our outstanding common stock), the right of the holder to receive, upon exercise of the pre-funded warrants, the same kind and amount of securities, cash or other property that such holder would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction, without regard to any limitations on exercise contained in the pre-funded warrants; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange or exercise of the warrants.

DESCRIPTION OF UNITS

We may issue units consisting of one or more of the other securities described in this prospectus in any combination, as described in the applicable prospectus supplement. We may issue units in one or more series, which will be described in the applicable prospectus supplement. The applicable prospectus supplement will also describe the following terms of any units:

- the designation and the terms of the units and of the securities constituting the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- the identity of any unit agent for the units, if applicable, and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- any additional terms of the governing unit agreement, if applicable;
- any additional provisions for the issuance, payment, settlement, transfer or exchange of the units or of the debt securities, common stock, preferred stock or warrants constituting the units; and
- any applicable material U.S. federal income tax consequences.

FORMS OF SECURITIES

Each debt security, unit and warrant 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. Unless the applicable prospectus supplement provides otherwise, certificated securities will be issued 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.

Global Securities

We may issue the debt securities of a particular series, 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 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 global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a global security may not be transferred except as a whole by and among the depositary for the 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 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 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 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 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 global securities.

So long as the depositary, or its nominee, is the registered owner of a 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 global security for all purposes under the applicable indenture, warrant agreement or unit agreement. Except as described below, owners of beneficial interests in a global security will not be entitled to have the securities represented by the 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 global security must rely on the procedures of the depositary for that 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 global security 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 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 global security registered in the name of a depository or its nominee will be made to the depository or its nominee, as the case may be, as the registered owner of the global security. None of us, or any trustee, warrant agent, unit agent or other agent of ours, or any agent of any trustee, warrant agent or unit agent will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depository for any of the securities represented by a global security, upon receipt of any payment to holders of principal, premium, interest or other distribution of underlying securities or other property on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that global security as shown on the records of the depository. We also expect that payments by participants to owners of beneficial interests in a 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 or registered in "street name," and will be the responsibility of those participants.

If the depository for any of the securities represented by a global security is at any time unwilling or unable to continue as depository or ceases to be a clearing agency registered under the Exchange Act, and a successor depository 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 global security that had been held by the depository. Any securities issued in definitive form in exchange for a global security will be registered in the name or names that the depository gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depository's instructions will be based upon directions received by the depository from participants with respect to ownership of beneficial interests in the global security that had been held by the depository.

PLAN OF DISTRIBUTION

We may sell securities:

- through underwriters;
- through dealers;
- through agents;
- directly to purchasers; or
- through a combination of any of these methods of sale.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

We may directly solicit offers to purchase securities, or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act, and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis.

The distribution of the securities may be effected from time to time in one or more transactions:

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

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

- the name of the agent or any underwriters;
- the public offering or purchase price and the proceeds we will receive from the sale of the securities;
- any discounts and commissions to be allowed or re-allowed or paid to the agent or underwriters;
- all other items constituting underwriting compensation;
- any discounts and commissions to be allowed or re-allowed or paid to dealers; and
- any exchanges on which the securities will be listed.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

Remarketing firms, agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

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

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, and/or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in one business day, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than one scheduled business day after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the first business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than one scheduled business day after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. The securities may or may not be listed on a national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities in respect of which this prospectus is being delivered will be passed upon by Wilmer Cutler Pickering Hale and Dorr LLP.

EXPERTS

The consolidated financial statements of Akebia Therapeutics, Inc. appearing in Akebia Therapeutics, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2023, and the effectiveness of Akebia Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2023, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in its reports thereon, which conclude, among other things, that Akebia Therapeutics, Inc. did not maintain effective internal control over financial reporting as of December 31, 2023, based on Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), because of the effects of the material weakness described therein, included therein, and incorporated herein by reference. Such consolidated financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the reports of Ernst & Young LLP pertaining to such financial statements and the effectiveness of our internal control over financial reporting as of the respective dates (to the extent covered by consents filed with the Securities and Exchange Commission) given on the authority of such firm as experts in accounting and auditing.



\$250,000,000
of
Debt Securities
Common Stock
Preferred Stock
Warrants
Units

PROSPECTUS

, 2024

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. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated September 3, 2024

PROSPECTUS



Up to \$75,000,000

Common Stock

We entered into an Open Market Sale AgreementSM, dated April 7, 2022, with Jefferies LLC, or Jefferies, which was amended and restated on September 3, 2024, or the sales agreement, relating to the sale of shares of our common stock offered by this prospectus. In accordance with the terms of the sales agreement, under this prospectus we may offer and sell shares of our common stock, \$0.00001 par value per share, having an aggregate offering price of up to \$75,000,000 from time to time through Jefferies, acting as our agent.

Sales of our common stock, if any, under this prospectus may be made by any method permitted by law that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, or the Securities Act. Jefferies is not required to sell any specific amount of our shares of common stock, 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 an escrow, trust or similar arrangement.

Jefferies will be entitled to compensation at a commission rate of up to 3.0% of the gross proceeds of the shares of common stock sold under the sales agreement. In connection with the sale of the common stock on our behalf, Jefferies will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Jefferies will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Jefferies with respect to certain liabilities, including civil liabilities under the Securities Act. See “[Plan of Distribution](#)” beginning on page [SA-15](#) for additional information regarding the compensation to be paid to Jefferies.

Our common stock is listed on The Nasdaq Capital Market under the symbol “AKBA.” The last reported sale price of our common stock on The Nasdaq Capital Market on August 28, 2024 was \$1.53 per share.

Investing in our common stock involves significant risks. See “[Risk Factors](#)” beginning on page [SA-7](#) of this prospectus and under similar headings in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase our common stock.

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

Jefferies

, 2024.

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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 registration process, we may from time to time sell shares of our common stock having an aggregate offering price of up to \$250,000,000. Under this prospectus, we may from time to time sell shares of our common stock having an aggregate offering price of up to \$75,000,000, at prices and on terms to be determined by market conditions at the time of the offering. The \$75,000,000 of shares of our common stock that may be sold under this prospectus are included in the \$250,000,000 of shares of common stock that may be sold under the registration statement.

Before buying any of the common stock that we are offering, we urge you to carefully read this prospectus and all of the documents incorporated by reference herein, as well as the additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Documents 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, on the one hand, and the information contained in any document incorporated by reference in this prospectus, on the other hand, you should rely on the information in this prospectus, 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—the statement in the document having the later date modifies or supersedes the earlier statement.

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

We have not, and Jefferies has not, authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus or any accompanying prospectus supplement or related free writing prospectus to which we have referred you. We and Jefferies take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus 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 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, any 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.

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

Unless otherwise stated or the context otherwise requires, references to “Akebia,” “we,” “us,” “our,” “the Company,” and similar references refer to Akebia Therapeutics, Inc. and, where appropriate, its subsidiaries.

FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. All statements contained in this prospectus and the information incorporated by reference herein, other than statements of historical fact, are forward-looking statements. These forward-looking statements may be accompanied by words such as “anticipate,” “believe,” “build,” “can,” “contemplate,” “continue,” “could,” “should,” “designed,” “estimate,” “project,” “expect,” “forecast,” “future,” “goal,” “intend,” “likely,” “may,” “plan,” “possible,” “potential,” “predict,” “strategy,” “seek,” “target,” “will,” “would,” and other words and terms of similar meaning, but the absence of these words does not necessarily mean that a statement is not forward-looking. These forward-looking statements include, but are not limited to, statements about:

- our ability to execute a successful commercial launch of Vafseo® (vadadustat), and our plans with respect to commercializing Vafseo and label expansion opportunities currently under evaluation for Vafseo;
- our ability to contract with dialysis organizations in a timely manner, or at all, for the sale of Auryxia® (ferric citrate) and Vafseo in the U.S.;
- the potential therapeutic benefits, safety profile, and effectiveness of Vafseo;
- our pipeline and portfolio, including its potential, and our related research and development activities;
- the timing, investment and associated activities involved in continued commercialization of Auryxia, its growth opportunities and our ability to execute thereon;
- the potential indications, demand and market opportunity, potential and acceptance of Auryxia and Vafseo, including the size of eligible patient populations;
- the potential therapeutic applications of the hypoxia inducible factor pathway;
- our competitive position, including estimates, developments and projections relating to our competitors and their products and product candidates, and our industry;
- our expectations, projections and estimates regarding our capital requirements, need for additional capital, financing our future cash needs, costs, expenses, revenues, capital resources, cash flows, financial performance, profitability, tax obligations, liquidity, growth, contractual obligations and the period of time our cash resources will fund our current operating plan, estimates with respect to our ability to operate as a going concern, our internal control over financial reporting and disclosure controls and procedures, and any future deficiencies or material weaknesses in our internal controls and procedures;
- delivering value broadly to the kidney community, as well as others who may benefit from our medicines, will result in delivering value for stockholders;
- the direct or indirect impacts of the recent COVID-19 pandemic on our business, operations and the markets and communities in which we and our partners, collaborators, vendors, and customers operate;
- our manufacturing, supply and quality matters and any recalls, write-downs, impairments or other related consequences or potential consequences;
- estimates, beliefs and judgments related to the valuation of intangible asset, goodwill, debt and other assets and liabilities, including classification of expenses, assets and liabilities, our impairment analyses and our methodology and assumptions regarding fair value measurements;
- the timing of the availability and disclosure of clinical trial data and results;
- the designs of our studies, and the type of information and data expected from our studies and the expected benefits thereof;

- our and our collaborators' strategy, plans and expectations with respect to the development, manufacturing, supply, commercialization, launch, marketing and sale of Auryxia and Vafseo and the associated timing thereof;
- our ability to maintain any marketing authorizations we currently hold or will obtain, including our marketing authorizations for Auryxia and our ability to complete post-marketing requirements with respect thereto;
- our ability to negotiate, secure and maintain adequate pricing, coverage and reimbursement terms and processes on a timely basis, or at all, with third-party payors for Auryxia and Vafseo;
- the timing of initiation of our clinical trials and plans to conduct preclinical studies and clinical trials in the future;
- the timing and amounts of payments from or to our collaborators and licensees, and the anticipated arrangements and benefits under our collaboration and license agreements, including with respect to milestones and royalties;
- our intellectual property position, including obtaining and maintaining patents, and the timing, outcome and impact of administrative, regulatory, legal and other proceedings relating to our patents and other proprietary and intellectual property rights, patent infringement suits that we have filed or may file, or other actions that we may take against companies, and the timing and resolution thereof;
- expected ongoing reliance on third parties, including with respect to the development, manufacturing, supply and commercialization of Auryxia and Vafseo;
- accounting standards and estimates, their impact, and their expected timing of completion;
- estimated periods of performance of key contracts;
- our facilities, lease commitments, and future availability of facilities;
- cybersecurity;
- insurance coverage;
- management of personnel, including our management team, and our employees, including employee compensation, employee relations, and our ability to attract, train and retain high quality employees;
- the implementation of our business model, current operating plan, and strategic plans for our business, product candidates and technology, and business development opportunities including potential collaborations, alliances, mergers, acquisitions or licensing of assets;
- additional costs we may incur due to events associated with or resulting from our prior workforce reductions or other operating expenses, including additional costs related to vadadustat and selling, general and administrative expenses; and
- the timing, outcome and impact of current and any future legal proceedings.

Any or all of these forward-looking statements in this prospectus and the information incorporated by reference herein may turn out to be inaccurate. These forward-looking statements involve risks and uncertainties, including those that are discussed in this prospectus under the heading "Risk Factors" and the "Risk Factors" section of our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, as filed with the SEC on March 14, 2024, or the 2023 Annual Report, any subsequent Quarterly Reports on Form 10-Q and in our Securities and Exchange Commission reports filed after this prospectus, that could cause our actual results, financial condition, performance or achievements to be materially different from those indicated in these forward-looking statements. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements.

Unless otherwise stated, our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make.

Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. You should not rely upon forward-looking statements as predictions of future events. Unless required by law, we will not undertake and we specifically disclaim any obligation to release publicly the result of any revisions that may be made to any forward-looking statements to reflect events or circumstances after the date of such statements or to reflect the occurrence of events, whether or not anticipated. In that respect, we wish to caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made.

This prospectus and the information incorporated by reference herein also contain estimates and other information concerning our industry and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Unless otherwise expressly stated, we obtained this industry, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

PROSPECTUS SUMMARY

This summary highlights selected information included or incorporated by reference in this prospectus and the documents incorporated by reference herein, and does not contain all of the information that may be important to you. You should carefully review this entire prospectus and the documents incorporated by reference, including the risks of investing in our common stock discussed under “[Risk Factors](#)” beginning on page [SA-7](#) of this prospectus and under “Risk Factors” in our most recent Annual Report on Form 10-K, any subsequent Quarterly Reports on Form 10-Q and in our filings we make from time to time with the SEC, and the consolidated financial statements and notes to those consolidated financial statements incorporated by reference in this prospectus, before making your investment decision.

OUR BUSINESS

We are a fully integrated commercial-stage biopharmaceutical company committed to addressing patients' unmet needs. Our purpose is to better the life of each person impacted by kidney disease.

We have two products approved by the Food and Drug Administration in the United States, or U.S. Vafseo® (vadadustat) is an oral hypoxia-inducible factor prolyl hydroxylase inhibitor. Vafseo (vadadustat) Tablets were approved in the U.S. on March 27, 2024 for the treatment of anemia due to chronic kidney disease, or CKD, in adults who have been receiving dialysis for at least three months. We are launching Vafseo in the U.S. Auryxia® (ferric citrate) is marketed for two indications: (i) the control of serum phosphorus levels in adult patients with dialysis dependent chronic kidney disease, or DD-CKD, and (ii) the treatment of iron deficiency anemia, or IDA, in adult patients with non-dialysis dependent chronic kidney disease, or NDD-CKD. Auryxia will lose exclusivity in the U.S. in March 2025.

Vafseo is also approved for the treatment of symptomatic anemia associated with CKD in the European Economic Area, the United Kingdom, Switzerland, Australia, South Korea and Taiwan in adult patients on chronic maintenance dialysis and in Japan for adult dialysis-dependent and non-dialysis patients. Vafseo is marketed and sold by our collaboration partners in certain countries.

Ferric citrate is also approved in Japan, and is marketed and sold by our collaboration partner, as an oral treatment for the improvement of hyperphosphatemia in patients with CKD, including DD-CKD and NDD-CKD, and for the treatment of adult patients with IDA under the trade name Riona (ferric citrate hydrate).

Our principal executive offices are located at 245 First Street, Cambridge, Massachusetts, 02142. Our telephone number is (617) 871-2098 and our website address is www.akebia.com. The information contained in, and that can be accessed through, our website is not incorporated into and does not form a part of this prospectus.

THE OFFERING

The following summary contains basic information about our common stock and the offering and is not intended to be complete. It does not contain all the information that may be important to you. For a more complete understanding of our common stock, you should read this prospectus and the documents referred to herein.

Common Stock Offered by Us	Shares of our common stock having an aggregate offering price of up to \$75,000,000.
Common Stock to be Outstanding Immediately After This Offering	Up to 258,948,752 shares, assuming sales of 49,019,607 shares of our common stock in this offering at an assumed public offering price of \$1.53 per share, which was the last reported sale price of our common stock on The Nasdaq Capital Market on August 28, 2024. The actual number of shares issued will vary depending on the sales price under this offering.
Plan of Distribution	“At the market offering,” as defined in Rule 415(a)(4) under the Securities Act, that may be made from time to time through our sales agent, Jefferies LLC. See “ Plan of Distribution ” beginning on page SA-15 of this prospectus for more information.
Use of Proceeds	We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes. Although we have not yet identified specific uses for these proceeds, we currently anticipate using the proceeds for some or all of the following purposes: research and development expenditures, commercial expenditures, intellectual property protection and enforcement, potential strategic collaborations such as acquisitions or in-licenses of products, product candidates or technologies, acquisitions of companies or businesses, repayment and refinancing of debt, working capital and capital expenditures. See “ Use of Proceeds ” beginning on page SA-9 of this prospectus.
Risk Factors	Your investment in shares of our common stock involves substantial risks. You should consider the matters referred to under the heading “Risk Factors” in this prospectus, including the risk factors incorporated by reference herein from our filings with the SEC.
Nasdaq Capital Market Symbol	“AKBA.”

The number of shares of our common stock that will be outstanding immediately after this offering as shown above is based on 209,929,145 shares of our common stock issued and outstanding as of June 30, 2024, and excludes:

- 17,278,820 shares of our common stock issuable upon exercise of stock options outstanding as of June 30, 2024, at a weighted average exercise price of \$3.42 per share;
- 5,963,769 shares of our common stock issuable upon vesting of outstanding restricted stock units as of June 30, 2024;
- 3,076,923 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2024, at a weighted average exercise price of \$1.30 per share;
- 10,853,589 shares of our common stock available for future issuance, as of June 30, 2024, under our 2023 Stock Incentive Plan; and
- 4,545,480 shares of our common stock available for future issuance, as of June 30, 2024, under our Amended and Restated 2014 Employee Stock Purchase Plan.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this prospectus and the risk factors in our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and in our other filings with the SEC that we make from time to time, which are incorporated by reference in this prospectus, together with other information in this prospectus, the information and documents incorporated by reference in this prospectus, and in any prospectus supplement or free writing prospectus that we authorize for use in connection with this offering. If any of the following risks actually occur, our business, prospects, operating results and financial condition could suffer materially. In such event, the trading price of our common stock could decline and you might lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations.

Risks Related to This Offering

You may incur immediate and substantial dilution as a result of this offering.

The offering price per share of our common stock in this offering may exceed the net tangible book value per share of our common stock outstanding prior to this offering. Assuming that an aggregate of 49,019,607 shares of our common stock are sold at a price of \$1.53 per share, the last reported sale price of our common stock on The Nasdaq Capital Market on August 28, 2024, for aggregate gross proceeds of \$75,000,000 and after deducting commissions and estimated offering expenses payable by us, you would experience immediate dilution of \$1.67 per share, representing the difference between our as adjusted net tangible book value per share as of June 30, 2024 after giving effect to this offering and the assumed offering price. The exercise of outstanding stock options and warrants could result in further dilution of your investment. See “[Dilution](#)” beginning on page [SA-10](#) of this prospectus for a more detailed description of the dilution to new investors in this offering.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future transactions may be higher or lower than the price per share paid by any investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders.

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

Our management will have 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 common stock. The failure by our management to apply these funds effectively could result in financial losses that could cause the price of our common stock to decline and affect the commercialization of our products or delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or loses value.

It is not possible to predict the price per share at which shares may be sold, the actual number of shares we will issue or 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 Jefferies at any time throughout the term of the sales agreement. The price per share and the number of shares that are sold through Jefferies after delivering a placement notice will fluctuate based on a number of factors, including the market price of our common stock during the sales period, any limits we may set with Jefferies in any applicable placement notice and the demand for our common stock. As such, it is not possible to predict the price per share at which shares may be sold or the number of shares to be sold pursuant to the sales agreement. 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, although the aggregate proceeds will not exceed \$75,000,000, subject to any change disclosed in a prospectus supplement after the date hereof.

The common stock offered hereby will be sold in “at the market offerings,” and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and accordingly may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand and the terms of the sales agreement, to vary the timing, prices and number of shares sold in this offering. In addition, subject to the final determination by our Board of Directors (or any committee thereof) or any restrictions we may place in any applicable placement notice, there is no minimum or maximum sales price for shares to be sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate gross sales proceeds of up to \$75,000,000 from time to time. Because there is no minimum offering amount required pursuant to the sales agreement with Jefferies, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time.

We intend to use the net proceeds from the sale of any shares of common stock offered under this prospectus for general corporate purposes. Although we have not yet identified specific uses for these proceeds, we currently anticipate using the proceeds for some or all of the following purposes: research and development expenditures, commercial expenditures, intellectual property protection and enforcement, potential strategic collaborations such as acquisitions or in-licenses of products, product candidates or technologies, acquisitions of companies or businesses, repayment and refinancing of debt, working capital and capital expenditures.

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

Pending the use of proceeds described above, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

DILUTION

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

Our net tangible book value of our common stock as of June 30, 2024 was approximately \$(110.8) million, or approximately \$(0.53) per share of common stock, based upon 209,929,145 shares outstanding as of June 30, 2024. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares outstanding as of June 30, 2024.

After giving effect to the assumed sale of 49,019,607 shares of our common stock by us in this offering at an assumed public offering price of \$1.53 per share, which was the last reported sale price of our common stock on The Nasdaq Capital Market on August 28, 2024, less the estimated commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2024 would have been \$(37.5) million, or \$(0.14) per share. This would represent an immediate increase in net tangible book value per share of \$0.38 to existing stockholders and immediate dilution of \$1.67 in net tangible book value per share to new investors purchasing common stock in this offering at the assumed offering price.

The following table illustrates this dilution on a per share basis.

Assumed public offering price per share		\$	1.53
Net tangible book value per share as of June 30, 2024		\$	(0.53)
Increase in net tangible book value per share attributable to the offering		\$	0.38
As adjusted net tangible book value per share after giving effect to the offering		\$	(0.14)
Dilution in net tangible book value per share to new investors in the offering		\$	1.67

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 shares of our common stock are sold pursuant to this prospectus. The shares sold in this offering, if any, will be sold from time to time at various prices.

The above discussion and table are based on 209,929,145 shares of our common stock issued and outstanding as of June 30, 2024 and exclude the following:

- 17,278,820 shares of our common stock issuable upon exercise of stock options outstanding as of June 30, 2024, at a weighted average exercise price of \$3.42 per share;
- 5,963,769 shares of our common stock issuable upon vesting of outstanding restricted stock units as of June 30, 2024;
- 3,076,923 shares of our common stock issuable upon the exercise of warrants outstanding as of June 30, 2024, at a weighted average exercise price of \$1.30 per share;
- 10,853,589 shares of our common stock available for future issuance, as of June 30, 2024, under our 2023 Stock Incentive Plan; and
- 4,545,480 shares of our common stock available for future issuance, as of June 30, 2024, under our Amended and Restated 2014 Employee Stock Purchase Plan.

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 securities convertible into common stock, the issuance of these securities could result in further dilution to our stockholders, including investors purchasing shares of common stock in this offering.

DESCRIPTION OF CAPITAL STOCK

General

The following description of certain terms of our capital stock is intended as a summary only and is qualified in its entirety by reference to our Ninth Amended and Restated Certificate of Incorporation, as amended, our Second Amended and Restated Bylaws, and to the applicable provisions of the Delaware General Corporation Law, or the DGCL. We refer in this section to our Ninth Amended and Restated Certificate of Incorporation, as amended, as our certificate of incorporation, and we refer to our Second Amended and Restated Bylaws as our bylaws.

Our authorized capital stock consists of 350,000,000 shares of our common stock, par value \$0.00001 per share, and 25,000,000 shares of undesignated preferred stock, par value \$0.00001 per share.

Common Stock

Dividend Rights. Subject to preferences that may apply to shares of preferred stock outstanding at the time, holders of outstanding shares of common stock are entitled to receive dividends out of assets legally available at the times and in the amounts as the Board of Directors may from time to time determine.

Voting Rights. Each outstanding share of common stock is entitled to one vote on all matters submitted to a vote of stockholders. Holders of shares of our common stock shall have no cumulative voting rights.

Conversion or Redemption Rights. Our common stock is neither convertible nor redeemable.

Liquidation Rights. Upon our liquidation, dissolution or winding up, the holders of our common stock will be entitled to receive pro rata our assets which are legally available for distribution, after payment of all debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences. Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Transfer Agent and Registrar. American Stock Transfer & Trust Company, LLC is transfer agent and registrar for the common stock.

Listing. Our common stock has been listed on The Nasdaq Capital Market under the symbol "AKBA."

Preferred Stock

We are authorized to issue "blank check" preferred stock, which may be issued in one or more series upon authorization of our Board of Directors. Our Board of Directors is authorized to fix the designations, powers, preferences and the relative, participating, optional or other special rights and any qualifications, limitations and restrictions of the shares of each series of preferred stock.

Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law That May Have Anti-Takeover Effects

Our certificate of incorporation and bylaws contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the Board of Directors and which may have the effect of delaying, deferring or preventing a future takeover or change in control of our company unless such takeover or change in control is approved by the Board of Directors.

These provisions include:

Classified Board. Our certificate of incorporation provides that, subject to the special rights of the holders of any series of preferred stock to elect directors, our Board of Directors is divided into three classes of directors, with

the classes as nearly equal in number as possible. As a result, approximately one-third of our Board of Directors is elected each year. The classification of directors has the effect of making it more difficult for stockholders to change the composition of our Board. Our certificate of incorporation also provides that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors shall be fixed exclusively pursuant to a resolution adopted by our Board of Directors.

Action by Written Consent; Special Meetings of Stockholders. Our certificate of incorporation provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting. Our certificate of incorporation and the bylaws also provide that, except as otherwise required by law, special meetings of the stockholders can be called only by or at the direction of the Board of Directors pursuant to a resolution adopted by a majority of the total number of directors. Stockholders are not permitted to call a special meeting or to require the Board of Directors to call a special meeting.

Removal of Directors. Subject to the special rights of the holders of any series of preferred stock to elect directors, our certificate of incorporation provides that our directors may be removed only for cause by the affirmative vote of at least 75% of the votes that all our stockholders would be entitled to cast in an annual election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose. This requirement of a supermajority vote to remove directors could enable a minority of our stockholders to prevent a change in the composition of our Board.

Advance Notice Procedures. Our bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the Board of Directors. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board of Directors or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the bylaws do not give the Board of Directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of our company.

Super Majority Approval Requirements. The DGCL generally provides that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless either a corporation's certificate of incorporation or bylaws requires a greater percentage. A majority vote of our Board of Directors or the affirmative vote of holders of at least 75% of the total votes of the outstanding shares of capital stock of our company entitled to vote with respect thereto, voting together as a single class, are required to amend, alter, change or repeal the bylaws. In addition, the affirmative vote of the holders of at least 85% of the total votes of the outstanding shares of capital stock of our company entitled to vote with respect thereto, voting together as a single class, are required to amend, alter, change or repeal, or to adopt any provisions inconsistent with, any of the provisions in our certificate of incorporation relating to decreasing the number of authorized shares of common stock, issuing or changing the number of authorized shares of preferred stock, the Board of Directors, limitation of director liability, meetings of stockholders, exclusive jurisdiction for certain actions and amendments to our certificate of incorporation and bylaws. This requirement of a supermajority vote to approve amendments to our bylaws and certificate of incorporation could enable a minority of our stockholders to exercise veto power over any such amendments.

Authorized but Unissued Shares. Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital and corporate acquisitions. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum. The certificate of incorporation provides that, subject to limited exceptions, and to the fullest extent permitted by law, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our shareholders, (iii) any action asserting a claim against us arising pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws, or (iv) any other action asserting a claim against us that is governed by the internal affairs doctrine. Under our certificate of incorporation, this exclusive forum provision will not apply to claims which are vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery of the State of Delaware, or for which the Court of Chancery of the State of Delaware does not have subject matter jurisdiction. For instance, the provision would not apply to actions arising under federal securities laws, including suits brought to enforce any liability or duty created by the Exchange Act or the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our certificate of incorporation described above. Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law and federal securities laws for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against our directors and officers. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with one or more actions or proceedings described above, a court could find the choice of forum provisions contained in our certificate of incorporation to be inapplicable or unenforceable.

Delaware Business Combination Statute. We are subject to Section 203 of the DGCL, or Section 203, which prohibits a Delaware corporation from engaging in business combinations with an interested stockholder. An interested stockholder is generally defined as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or any entity or person affiliated with or controlling or controlled by such entity or person, or an interested stockholder. Section 203 provides that an interested stockholder may not engage in business combinations with the corporation for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the Board of Directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the Board of Directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combinations to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, transfer, pledge or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

PLAN OF DISTRIBUTION

We entered into an Open Market Sale AgreementSM with Jefferies LLC, or Jefferies, which was amended and restated on September 3, 2024, under which we may offer and sell up to \$75,000,000 of our shares of common stock from time to time through Jefferies acting as agent. Sales of our shares of common stock, if any, under this prospectus will be made by any method that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act.

Each time we wish to issue and sell our shares of common stock under the sales agreement, we will notify Jefferies of the number of shares to be issued, the dates on which such sales are anticipated to be made, any limitation on the number of shares to be sold in any one day and any minimum price below which sales may not be made. Once we have so instructed Jefferies, unless Jefferies declines to accept the terms of such notice, Jefferies has agreed to use its commercially reasonable efforts consistent with its normal trading and sales practices to sell such shares up to the amount specified on such terms. The obligations of Jefferies under the sales agreement to sell our shares of common stock are subject to a number of conditions that we must meet.

The settlement of sales of shares between us and Jefferies is generally anticipated to occur on the first trading day following the date on which the sale was made. Sales of our shares of common stock as contemplated in this prospectus will be settled through the facilities of The Depository Trust Company or by such other means as we and Jefferies may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

We will pay Jefferies a commission of up to 3.0% of the aggregate gross proceeds we receive from each sale of our shares of common stock. 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. In addition, we have agreed to reimburse Jefferies for the fees and disbursements of its counsel, payable upon execution of the sales agreement, in an amount not to exceed \$75,000, in addition to certain ongoing disbursements of its legal counsel not to exceed \$15,000 in connection with each diligence bring-down thereafter. We estimate that the total expenses for the offering, excluding any commissions or expense reimbursement payable to Jefferies under the terms of the sales agreement, will be approximately \$200,000. The remaining sale proceeds, after deducting any other transaction fees, will equal our net proceeds from the sale of such shares.

Jefferies will provide written confirmation to us before the open on The Nasdaq Capital Market on the day following each day on which shares of our common stock are sold under the sales agreement. Each confirmation will include the number of shares sold on that day, the aggregate gross proceeds of such sales and the proceeds to us.

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

The offering of our shares of common stock pursuant to the sales agreement will terminate upon the earlier of (1) the sale of all shares of common stock subject to the sales agreement and (2) the termination of the sales agreement as permitted therein. We and Jefferies may each terminate the sales agreement at any time upon ten days’ prior notice.

This summary of the material provisions of the sales agreement does not purport to be a complete statement of its terms and conditions. A copy of the sales agreement is filed as an exhibit to our registration statement on Form S-3 of which this prospectus is a part.

Jefferies and its affiliates may in the future provide various investment banking, commercial banking, financial advisory and other financial services for us and our affiliates, for which services they may in the future receive customary fees. In the course of its business, Jefferies may actively trade our securities for its own account or for the accounts of customers, and, accordingly, Jefferies may at any time hold long or short positions in such securities.

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

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Wilmer Cutler Pickering Hale and Dorr LLP. Certain legal matters will be passed upon for Jefferies by Latham & Watkins LLP.

EXPERTS

The consolidated financial statements of Akebia Therapeutics, Inc. appearing in Akebia Therapeutics, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2023, and the effectiveness of Akebia Therapeutics, Inc.'s internal control over financial reporting as of December 31, 2023, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in its reports thereon, which conclude, among other things, that Akebia Therapeutics, Inc. did not maintain effective internal control over financial reporting as of December 31, 2023, based on Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), because of the effects of the material weakness described therein, included therein, and incorporated herein by reference. Such consolidated financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the reports of Ernst & Young LLP pertaining to such financial statements and the effectiveness of our internal control over financial reporting as of the respective dates (to the extent covered by consents filed with the Securities and Exchange Commission) given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 we have filed with the SEC for the shares of common stock offered by this prospectus. This prospectus, including the information incorporated by reference, does not include all of the information contained in the registration statement. You should refer to the registration statement and its exhibits for additional information. Statements in this prospectus 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 and the exhibits attached thereto. You should review the complete document to evaluate these statements.

We are required to file annual and quarterly reports, current reports, proxy statements, and other information with the SEC. We make these documents publicly available, free of charge, on our website at www.akebia.com after filing such documents with the SEC. The information contained on, or accessible through, our website is not part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference. The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at <http://www.sec.gov>. You can read our SEC filings, including the registration statement, on the SEC's website.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Any statement in a document incorporated by reference is an important part of this prospectus. Any statement in a document incorporated by reference in this prospectus will be deemed to be modified or superseded to the extent a statement contained in this prospectus or any subsequently filed document that is incorporated by reference in this prospectus modifies or supersedes such statement. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference herein have been modified or superseded.

We incorporate by reference in this prospectus the documents set forth below that have been previously filed with the SEC and any future filings we make with the SEC, under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the termination or completion of the offering of the shares of common stock to which this prospectus relates:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, as filed with the SEC on March 14, 2024, or the 2023 Annual Report, including the information specifically incorporated by reference into the 2023 Annual Report from our [definitive proxy statement](#) for the 2024 Annual Meeting of Stockholders, as filed with the SEC on April 25, 2024;
- Quarterly Reports on Form 10-Q for the quarterly periods ended [March 31, 2024](#) and [June 30, 2024](#), as filed with the SEC on May 9, 2024 and August 8, 2024, respectively;
- Current Reports on Form 8-K filed with the SEC on [January 8, 2024](#), [January 30, 2024](#), [February 13, 2024](#), [March 15, 2024](#), [March 28, 2024](#) (other than Items 7.01 and 9.01), [April 16, 2024](#), [April 23, 2024](#), [June 10, 2024](#), [June 24, 2024](#) and [July 11, 2024](#); and
- The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on [March 12, 2014](#), as the description therein has been updated and superseded by the description of our capital stock contained in [Exhibit 4.6](#) to our Annual Report on Form 10-K for the fiscal year ended December 31, 2020, as filed with the SEC on [February 25, 2021](#), and including any amendments and reports filed for the purpose of updating such description.

We will provide without charge to each person, including beneficial owners, to whom a copy of this prospectus is delivered, upon the written or oral request of such person, a copy of any or all of the documents incorporated by reference (other than exhibits to those documents, unless the exhibits are specifically incorporated by reference into those documents). Requests should be directed to Investor Relations, Akebia Therapeutics, Inc., 245 First Street, Cambridge, Massachusetts 02142 or may be made by phone by calling (617) 871-2098.

Up to \$75,000,000



Common Stock

Prospectus

Jefferies

, 2024

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

Set forth below are estimates (except in the case of the SEC registration fee) of the amount of fees and expenses to be incurred in connection with the issuance and distribution of the offered securities, other than underwriting discounts and commissions.

SEC registration fee ⁽²⁾	\$	36,900	(1)
Printing and engraving			(1)
Accounting services			(1)
Legal fees of registrant's counsel			(1)
Transfer agent's, trustee's and depository's fees and expenses			(1)
Miscellaneous			(1)
Total	\$		(1)

(1) These fees and expenses are calculated based on the securities offered and the number of issuances and accordingly are not estimated at this time and will be reflected in the applicable prospectus supplement.

(2) This amount does not reflect the SEC registration fee offset pursuant to Rule 457(p).

Item 15. Indemnification of Directors and Officers.

The following summary is qualified in its entirety by reference to the complete Delaware General Corporation Law, or the DGCL, and the registrant's certificate of incorporation and bylaws.

The registrant's Ninth Amended and Restated Certificate of Incorporation, as amended, or the Certificate of Incorporation, contains provisions that eliminate, to the maximum extent permitted by the DGCL the personal liability of directors for monetary damages for breach of their fiduciary duties as a director. The registrant's Certificate of Incorporation and amended and restated bylaws provide that the registrant shall indemnify its directors and executive officers and may indemnify its employees and other agents to the fullest extent permitted by the DGCL.

Section 145 of the DGCL empowers a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the rights of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person. The statute provides that it is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

Section 102(b)(7) of the DGCL permits a corporation to provide in its charter that a director or officer of the corporation will not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director or officer, except for liability (1) for any breach of the director's or officer's duty of loyalty to the corporation or its stockholders, (2) for a director's or officer's acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for a director, for payments of unlawful dividends or unlawful stock purchases or redemptions, (4) for any transaction from which the director or officer derived an improper personal benefit or (5) for an officer, in any action by or in the right of the corporation.

The registrant has entered into indemnification agreements with each of its directors and officers, in addition to the indemnification provided for in the registrant's Certificate of Incorporation and amended and restated bylaws.

The registrant maintains insurance on behalf of any person who is or was a director or officer of the registrant against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

Item 16. Exhibits.

Exhibit No.	Description
1.1*	Form of Underwriting Agreement
1.2	Amended and Restated Open Market Sale Agreement, dated September 3, 2024, by and between the Registrant and Jefferies LLC
2.1	Agreement and Plan of Merger, dated as of June 28, 2018, by and among Akebia Therapeutics, Inc., Alpha Therapeutics Merger Sub, Inc., and Keryx Biopharmaceuticals, Inc. (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, filed on June 28, 2018)
2.2	First Amendment to Agreement and Plan of Merger, dated as of October 1, 2018, by and among Akebia Therapeutics, Inc., Alpha Therapeutics Merger Sub, Inc., and Keryx Biopharmaceuticals, Inc. (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form 8-K, filed on October 1, 2018)
4.1	Ninth Amended and Restated Certificate of Incorporation of Akebia Therapeutics, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed on March 28, 2014)
4.2	Certificate of Amendment of Ninth Amended and Restated Certificate of Incorporation of Akebia Therapeutics, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed on June 9, 2020)
4.3	Second Amended and Restated Bylaws of Akebia Therapeutics, Inc. (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed on April 28, 2023)
4.4	Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1/A (333-193969), filed on March 4, 2014)
4.5	Fourth Amended and Restated Investors' Rights Agreement, dated March 5, 2014 (incorporated by reference to Exhibit 4.4 to the Company's 10-K for the year ending December 31, 2014 and filed on March 4, 2015)
4.6	Amendment No. 1 to Fourth Amended and Restated Investors' Rights Agreement, dated June 28, 2017 (incorporated by reference to Exhibit 4.3 to the Registrant's Registration Statement Form S-3ASR (333-223585), filed on March 12, 2018)
4.7	Form of Senior Indenture
4.8	Form of Subordinated Indenture
4.9	Form of Senior Note
4.10	Form of Subordinated Note
4.11*	Form of Warrant Agreement
4.12*	Form of Pre-Funded Warrant
4.13*	Form of Unit Agreement
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP
23.1	Consent of Ernst & Young LLP, independent registered public accounting firm for Akebia Therapeutics, Inc.
23.2	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)
24.1	Powers of Attorney (included on the signature page to the Registration Statement)
25.1**	Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of the Trustee under the Senior Indenture
25.2**	Statement of Eligibility on Form T-1 under the Trust Indenture Act of 1939, as amended, of the Trustee under the Subordinated Indenture
107	Filing Fee Table

* To be filed by amendment to this registration statement or by a Current Report on Form 8-K.

** To be filed pursuant to Section 305(b)(2) of the Trust Indenture Act of 1939, as amended.

Item 17. Undertakings.

a) The undersigned Registrant hereby undertakes:

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

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

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

statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- 5) That, for the purpose of determining liability of the Registrant under the Securities Act 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;
 - 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.
- 6) That, for purposes of determining any liability under the Securities Act:
 - i) the information omitted from the form of prospectus filed as part of the registration statement in reliance upon Rule 430A and contained in the 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 the registration statement as of the time it was declared effective; and
 - ii) 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.
- b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this 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) 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 in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act.
- d) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions described herein, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities 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 Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on September 3, 2024.

AKEBIA THERAPEUTICS, INC.

By: /s/ John P. Butler
Name: John P. Butler
Title: President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Akebia Therapeutics, Inc. hereby severally constitute and appoint John P. Butler and Erik Ostrowski, and each of them singly, our true and lawful attorneys-in-fact with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments (including post-effective amendments) to said Registration Statement, and any registration statement filed pursuant to Rule 462 under the Securities Act of 1933, as amended, in connection with said Registration Statement, and to file or cause to be filed the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, and generally to do all such things in our name and on our behalf in our capacities as officers and directors to enable Akebia Therapeutics, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys, and each of them, or their substitute or substitutes, shall 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 in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Adrian Adams</u> Adrian Adams	Chairperson and Director	September 3, 2024
<u>/s/ John P. Butler</u> John P. Butler	Director, President and Chief Executive Officer (Principal Executive Officer)	September 3, 2024
<u>/s/ Erik J. Ostrowski</u> Erik J. Ostrowski	Senior Vice President, Chief Financial Officer, Chief Business Officer and Treasurer (Principal Financial Officer)	September 3, 2024
<u>/s/ Richard C. Malabre</u> Richard C. Malabre	Chief Accounting Officer (Principal Accounting Officer)	September 3, 2024
<u>/s/ Ron Frieson</u> Ron Frieson	Director	September 3, 2024
<u>/s/ Steven C. Gilman</u> Steven C. Gilman	Director	September 3, 2024
<u>/s/ Michael Rogers</u> Michael Rogers	Director	September 3, 2024
<u>/s/ Cynthia Smith</u> Cynthia Smith	Director	September 3, 2024
<u>/s/ Myles Wolf</u> Myles Wolf	Director	September 3, 2024
<u>/s/ LeAnne M. Zumwalt</u> LeAnne M. Zumwalt	Director	September 3, 2024

Calculation of Filing Fee Tables
Form S-3
(Form Type)

Akebia Therapeutics, Inc.
(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	Fee Rate	Amount of Registration Fee	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	Debt	Debt Securities	(1)	(1)	(1)	(1)	(1)	(1)	-	-	-	-
Fees to Be Paid	Equity	Common Stock, \$0.00001 par value per share	(1)	(1)	(1)	(1)	(1)	(1)	-	-	-	-
Fees to Be Paid	Equity	Preferred Stock, \$0.00001 par value per share	(1)	(1)	(1)	(1)	(1)	(1)	-	-	-	-
Fees to Be Paid	Other	Warrants(2)	(1)	(1)	(1)	(1)	(1)	(1)	-	-	-	-
Fees to Be Paid	Other	Units(3)	(1)	(1)	(1)	(1)	(1)	(1)	-	-	-	-
Fees to Be Paid	Unallocated (Universal) Shelf	Unallocated (Universal) Shelf	457(o)	(1)	(1)	\$250,000,000(1)(4)	0.00014760	\$36,900.00	-	-	-	-
Fees Previously Paid	-	-	-	-	-	-	-	-	-	-	-	-
Carry Forward Securities												
Carry Forward Securities	-	-	-	-	-	-	-	-	-	-	-	-
Total Offering Amounts						\$250,000,000(1)(4)		\$36,900.00				
Total Fees Previously Paid								-				
Total Fee Offsets(4)								\$25,399.80				
Net Fee Due								\$11,500.20				

Table 2: Fee Offset Claims and Sources

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rule 457(p)											
Fee Offset Claims	Akebia Therapeutics, Inc.	S-3	333-253539	February 25, 2021	-	\$25,399.80(4)	Unallocated (Universal) Shelf	Unallocated (Universal) Shelf	Unallocated (Universal) Shelf	\$274,000,000(4)	—
Fee Offset Sources	Akebia Therapeutics, Inc.	S-3	333-253539	-	February 25, 2021	-	-	-	-	-	\$25,399.80(4)

- (1) Pursuant to Instruction 2.A(iii)(b) of Item 16(b) of Form S-3, this information is not required to be included. An indeterminate amount of the securities of each identified class is being registered as may from time to time be offered under this registration statement at indeterminate prices, along with an indeterminate number of securities that may be issued upon exercise, settlement, exchange or conversion of securities offered or sold under this registration statement, as shall have an aggregate initial offering price up to \$250,000,000. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or pursuant to anti-dilution provisions of any of the securities. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of other securities. In addition, the total amount to be registered and the proposed maximum aggregate offering price are estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act.
- (2) The warrants covered by this registration statement may be warrants to purchase common stock, preferred stock or debt securities.
- (3) Units may be issued under a unit agreement and will represent an interest in one or more securities registered under this registration statement including shares of common stock or preferred stock, debt securities or warrants, in any combination, which may or may not be separable from one another.
- (4) Pursuant to Rule 457(p) under the Securities Act, the registration fee applicable to the \$250,000,000 of securities of the registrant being registered hereby in the amount of \$36,900.00 is offset by \$25,399.80, which represents the registration fee previously paid with respect to \$274,000,000 of unsold securities under the registrant’s Registration Statement on Form S-3 (File No. 333-253539) that became effective upon filing with the Securities and Exchange Commission (the “SEC”) on February 25, 2021, as amended by Post-Effective Amendment No. 1 thereto that became effective upon filing with the SEC on March 1, 2022 and by Post-Effective Amendment No. 2 thereto, which was declared effective by the SEC on April 28, 2022. All offerings of the unsold securities associated with the claimed fee offset pursuant to Rule 457(p) have been completed or terminated.

AMENDED & RESTATED
OPEN MARKET SALE AGREEMENTSM

September 3, 2024

JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

Akebia Therapeutics, Inc., a Delaware corporation (the “**Company**”), proposes, subject to the terms and conditions stated herein, to issue and sell from time to time through Jefferies LLC, as sales agent and/or principal (the “**Agent**”), shares of the Company’s common stock, par value \$0.00001 per share (the “**Common Shares**”), on the terms set forth in this amended and restated agreement (this “**Agreement**”).

WHEREAS, the Agent and the Company are parties to that certain Open Market Sales AgreementSM dated as of April 7, 2022 (the “**Original Agreement**”); and

WHEREAS, the Agent and the Company desire to amend and restate the Original Agreement on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual promises herein contained, the Agent and the Company agree as follows:

Section 1. DEFINITIONS

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

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

SM “Open Market Sale Agreement” is a service mark of Jefferies LLC

“**Agency Period**” means the period commencing on the date of this Agreement and expiring on the earliest to occur of (x) the date on which the Agent shall have placed the Maximum Program Amount pursuant to this Agreement and (y) the date this Agreement is terminated pursuant to Section 7.

“**Commission**” means the U.S. Securities and Exchange Commission.

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

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

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

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

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

“**Issuance Price**” means the Sales Price less the Selling Commission.

“**Maximum Program Amount**” means Common Shares with an aggregate Sales Price of the lesser of (a) the number or dollar amount of Common Shares registered under the effective Registration Statement (as defined below) pursuant to which the offering is being made, (b) the number of authorized but unissued Common Shares (less Common Shares issuable upon exercise, conversion or exchange of any outstanding securities of the Company or otherwise reserved from the Company’s authorized capital stock), (c) the number or dollar amount of Common Shares permitted to be sold under Form S-3 (including General Instruction I.B.6 thereof, if applicable), or (d) the number or dollar amount of Common Shares for which the Company has filed a Prospectus (as defined below).

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

“**Principal Market**” means the Nasdaq Capital Market or such other national securities exchange on which the Common Shares, including any Shares, are then listed.

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

“**Securities Act**” means the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder.

“**Selling Commission**” means up to three percent (3.0%) of the gross proceeds of Shares sold pursuant to this Agreement, or as otherwise agreed between the Company and the Agent with respect to any Shares sold pursuant to this Agreement.

“**Settlement Date**” means the first business day, or such other time period as required by the Exchange Act or the rules promulgated thereunder, following each Trading Day during the period set forth in the applicable Issuance Notice on which Shares are sold pursuant to this Agreement, when the Company shall deliver to the Agent the amount of Shares sold on such Trading Day and the Agent shall deliver to the Company the Issuance Price received on such sales.

“**Shares**” means the Company’s Common Shares issued or issuable pursuant to this Agreement.

“**Trading Day**” means any day on which the Principal Market is open for trading.

Section 2. REPRESENTATIONS AND WARRANTIES OF THE COMPANY

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

(a) Registration Statement. The Company has prepared and will file with the Commission a shelf registration statement on Form S-3 that contains a base prospectus. Such registration statement registers the issuance and sale by the Company of the Shares under the Securities Act. The Company may file one or more additional registration statements from time to time that will contain a base prospectus and related prospectus or prospectus supplement, if applicable, with respect to the Shares. Except where the context otherwise requires, such registration statement(s), including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, including all financial statements, exhibits and schedules thereto and all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act as from time to time amended or supplemented, is herein referred to as the “**Registration Statement**,” and the prospectus constituting a part of such registration statement(s), together with any prospectus supplement filed with the Commission pursuant to Rule 424(b) under the Securities Act relating to a particular issuance of

the Shares, including all documents incorporated or deemed to be incorporated therein by reference pursuant to Item 12 of Form S-3 under the Securities Act, in each case, as from time to time amended or supplemented, is referred to herein as the “**Prospectus**,” except that if any revised prospectus is provided to the Agent by the Company for use in connection with the offering of the Shares that is not required to be filed by the Company pursuant to Rule 424(b) under the Securities Act, the term “**Prospectus**” shall refer to such revised prospectus from and after the time it is first provided to the Agent for such use. The Registration Statement at the time it originally became effective is herein called the “**Original Registration Statement**.” As used in this Agreement, the terms “amendment” or “supplement” when applied to the Registration Statement or the Prospectus shall be deemed to include the filing by the Company with the Commission of any document under the Exchange Act after the date hereof that is or is deemed to be incorporated therein by reference.

All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date; and all references in this Agreement to amendments or supplements to the Registration Statement or the Prospectus shall be deemed to mean and include, without limitation, the filing of any document under the Exchange Act which is or is deemed to be incorporated by reference in or otherwise deemed under the Securities Act to be a part of or included in the Registration Statement or the Prospectus, as the case may be, as of any specified date. The Company’s obligations under this Agreement to furnish, provide, deliver or make available (and all other similar references) copies of any report or statement shall be deemed satisfied if the same is filed with the Commission through its Electronic Data Gathering, Analysis and Retrieval system (“**EDGAR**”).

At the time the Registration Statement was or will be originally declared or automatically became effective and at the time the Company’s most recent annual report on Form 10-K was filed with the Commission, if later, the Company met the then-applicable requirements for use of Form S-3 under the Securities Act. During the Agency Period, each time the Company files an annual report on Form 10-K with the Commission, the Company will meet the then-applicable requirements for use of Form S-3 under the Securities Act.

(b) Compliance with Registration Requirements. The Original Registration Statement and any Rule 462(b) Registration Statement have been or will be declared effective by the Commission under the Securities Act. The Company has complied or will comply to the Commission’s satisfaction with all requests of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated or threatened by the Commission.

The Prospectus when filed complied or will comply in all material respects with the Securities Act and, if filed with the Commission through EDGAR (except as may be permitted by Regulation S-T under the Securities Act), was identical to the copy thereof delivered to the Agent for use in connection with the issuance and sale of the Shares. Each of the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective and at each Representation Date, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the date of this Agreement, the Prospectus and any Free Writing Prospectus (as defined below) considered together (collectively, the “**Time of Sale Information**”) did not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The Prospectus, as amended or supplemented, as of its date and at each Representation Date, did not and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to the Agent furnished to the Company in writing by the Agent expressly for use therein, it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information described in Section 6 below. There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required. The Registration Statement and the offer and sale of the Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said rule.

(c) Incorporated Documents. The documents incorporated or deemed to be incorporated by reference in the Registration Statement and the Prospectus, at the time they were filed with the Commission, complied in all material respects with the requirements of the Exchange Act, as applicable, and, when read together with the other information in the Prospectus, do not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

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

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

(f) Financial Information. The consolidated financial statements of the Company included or incorporated by reference in the Registration Statement, the Prospectus and the Free Writing Prospectuses, if any, together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company and the Subsidiaries (as defined below) as of the dates indicated and the consolidated results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified (subject to normal year-end audit adjustments for interim financial statements) and have been prepared in compliance with the requirements of the Securities Act and Exchange Act and in conformity with GAAP (as defined below) applied on a consistent basis during the periods involved; the other financial and statistical data with respect to the Company and the Subsidiaries (as defined below) contained or incorporated by reference in the Registration Statement, the Prospectus and the Free Writing Prospectuses, if any, are accurately and fairly presented in all material respects and prepared on a basis consistent, in all material respects, with the financial statements and books and records of the Company; there are no financial statements (historical or pro forma) that are required to be included or incorporated by reference in the Registration Statement, or the Prospectus that are not included or incorporated by reference as required; the Company and the Subsidiaries (as defined below) do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations), not described in the Registration Statement (excluding the exhibits thereto), and the Prospectus; and all disclosures contained or incorporated by reference in the Registration Statement, the Prospectus and the Free Writing Prospectuses, if any, regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act, to the extent applicable. Any pro forma financial statements and any related notes thereto incorporated by reference in the Registration Statement and the Prospectus present fairly in all material respects the information shown therein, have been prepared in accordance with the Commission's rules and guidelines with respect to pro forma financial statements and have been properly compiled on the bases described therein, and the assumptions used in the preparation thereof are reasonable and the adjustments used therein are appropriate to give effect to the transactions and circumstances referred to therein. 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) Conformity with EDGAR Filing. The Prospectus delivered to the Agent for use in connection with the sale of the Shares pursuant to this Agreement will be identical to the versions of the Prospectus created to be transmitted to the Commission for filing via EDGAR, except to the extent permitted by Regulation S-T.

(h) Organization. The Company and the Subsidiaries (as defined below) are, and will be, duly organized, validly existing as a corporation and in good standing under the laws of their respective jurisdictions of organization. The Company and the Subsidiaries (as defined below) are each duly licensed or qualified as a foreign corporation for transaction of business and in good standing under the laws of each other jurisdiction in which their respective ownership or lease of property or the conduct of their respective businesses requires such license or qualification, and have all corporate power and authority necessary to own or hold their respective properties and to conduct their respective businesses as described in the Registration Statement and the Prospectus, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect on or affecting the assets, business, operations, earnings, properties, condition (financial or otherwise), stockholders' equity or results of operations of the Company and the Subsidiaries (as defined below) taken as a whole, or prevent or materially interfere with consummation of the transactions contemplated hereby (a "**Material Adverse Effect**").

(i) Subsidiaries. The subsidiaries set forth on Exhibit 21.1 to the Company's most recent Annual Report on Form 10-K (the "**Subsidiaries**") are the only subsidiaries of the Company. The Company has no significant subsidiaries (as such term is defined in Rule 1-02 of Regulation S-X promulgated by the Commission) other than Keryx Biopharmaceuticals, Inc. ("**Keryx**"). Other than as disclosed in the Registration Statement and the Prospectus or in the documents incorporated by reference therein, the Company owns, directly or indirectly, all of the equity interests of the Subsidiaries free and clear of any lien, charge, security interest, encumbrance, right of first refusal or other restriction, and all the equity interests of the Subsidiaries are validly issued and are fully paid, nonassessable and free of preemptive and similar rights. Except for (1) the restrictions set forth in (i) the Agreement for the Provision of a Loan Facility, dated January 29, 2024, by and between Kreos Capital VII (UK) Limited and the Company, as amended from time to time (the "**Loan Facility**"), and (ii) the Guarantee and Collateral Agreement, dated January 29, 2024, by and among the Loan Parties (as defined in the Loan Facility) and Kreos Capital VII (UK) Limited, as amended from time to time, and (2) the restrictions imposed on Akebia Therapeutics Securities Corporation under Massachusetts law as a result of its status as a Massachusetts securities corporation, no Subsidiary is currently prohibited, directly or indirectly, from paying any dividends to the Company, from making any other distribution on such Subsidiary's capital stock, from repaying to the Company any loans or advances to such Subsidiary from the Company or from transferring any of such Subsidiary's property or assets to the Company or any other Subsidiary of the Company.

(j) No Violation or Default. Neither the Company nor its Subsidiaries are (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or its Subsidiaries are a party or by which the Company or its Subsidiaries are bound or to which any of the property or assets of the Company or its Subsidiaries are subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of each of clauses (ii) and (iii) above,

for any such violation or default that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. To the Company's knowledge, no other party under any material contract or other agreement to which it or its Subsidiaries are a party is in default in any respect thereunder where such default would have a Material Adverse Effect.

(k) No Material Adverse Effect. Subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus and the Free Writing Prospectuses, if any, there has not been (i) any Material Adverse Effect or the occurrence of any development that the Company reasonably expects will result in a Material Adverse Effect, (ii) any transaction which is material to the Company and its Subsidiaries taken as a whole, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company or its Subsidiaries, which is material to the Company and its Subsidiaries taken as a whole, (iv) any material change in the capital stock or outstanding long-term indebtedness of the Company or its Subsidiaries (other than (a) as a result of the sale of Shares, (b) the issuance of equity awards under the Company's existing equity incentive plans or (c) changes in the number of shares of outstanding Common Stock of the Company due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, shares of Common Stock (including warrants) outstanding on the date hereof, or the vesting of restricted stock units outstanding on the date hereof) or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company or the Subsidiaries, other than in each case above in the ordinary course of business or as otherwise disclosed in the Registration Statement or Prospectus (including any document deemed incorporated by reference therein).

(l) Capitalization. The issued and outstanding shares of capital stock of the Company have been validly issued, are fully paid and nonassessable and, other than as disclosed in the Registration Statement or the Prospectus, are not subject to any preemptive rights, rights of first refusal or similar rights. The Company has an authorized, issued and outstanding capitalization as set forth in the Registration Statement and the Prospectus as of the dates referred to therein (other than the grant of additional options or other equity awards pursuant to the Company's existing equity incentive plans, or changes in the number of outstanding shares of Common Stock of the Company due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, Common Stock outstanding on the date hereof, or the vesting of restricted stock units outstanding on the date hereof) and such authorized capital stock conforms in all material respects to the description thereof set forth in the Registration Statement and the Prospectus. The description of the common stock of the Company in the Registration Statement and the Prospectus is complete and accurate in all material respects. Except as disclosed in or contemplated by the Registration Statement or the Prospectus, as of the date referred to therein, the Company does not have outstanding any options to purchase, or any rights or warrants to subscribe for, or any securities or obligations convertible into, or exchangeable for, or any contracts or commitments to issue or sell, any shares of capital stock or other securities.

(m) Authorization; Enforceability. The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and is a legal,

valid and binding agreement of the Company enforceable in accordance with its terms, except to the extent that enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles.

(n) Authorization of Shares. The Shares, when issued and delivered pursuant to the terms approved by the board of directors of the Company or a duly authorized committee thereof, or a duly authorized executive or executive committee, against payment therefor as provided herein, will be duly and validly authorized and issued and fully paid and nonassessable, free and clear of any pledge, lien, encumbrance, security interest or other claim (other than any pledge, lien, encumbrance, security interest or other claim arising from an act or omission of the Agent or a purchaser), including any statutory or contractual preemptive rights, resale rights, rights of first refusal or other similar rights, except in each case as have been waived, and will be registered pursuant to Section 12 of the Exchange Act. The Shares, when issued, will conform in all material respects to the description thereof set forth in or incorporated into the Prospectus.

(o) No Consents Required. No consent, approval, authorization, order, registration or qualification of or with any court or arbitrator or governmental or regulatory authority is required for the execution, delivery and performance by the Company of this Agreement or the issuance and sale by the Company of the Shares, except for such consents, approvals, authorizations, orders and registrations or qualifications as may be required under applicable state securities laws or by the by-laws and rules of the Financial Industry Regulatory Authority (“**FINRA**”) or the Exchange in connection with the sale of the Shares by the Agent.

(p) No Preferential Rights. Except as set forth in the Registration Statement and the Prospectus and except for such rights as have been waived, (i) no person, as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act (each, a “**Person**”), has the right, contractual or otherwise, to cause the Company to issue or sell to such Person any Common Stock or shares of any other capital stock or other securities of the Company (other than outstanding options or warrants to purchase Common Stock or options or other equity securities that may be granted from time to time under the Company's equity incentive plans which are disclosed in the Registration Statement and Prospectus), (ii) no Person has any preemptive rights, resale rights, rights of first refusal, rights of co-sale or any other rights (whether pursuant to a “poison pill” provision or otherwise) to purchase any Common Stock or shares of any other capital stock or other securities of the Company, (iii) no Person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Common Stock, and (iv) no Person has the right, contractual or otherwise, to require the Company to register under the Securities Act any Common Stock or shares of any other capital stock or other securities of the Company, or to include any such shares or other securities in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Shares as contemplated thereby or otherwise.

(q) Independent Public Accounting Firm. Ernst & Young LLP (the “**Accountant**”), whose report on the consolidated financial statements of the Company is filed with the

Commission as part of the Company's most recent Annual Report on Form 10-K filed with the Commission and incorporated by reference into the Registration Statement and the Prospectus, are and, during the periods covered by their report, were an independent registered public accounting firm within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States). To the Company's knowledge, the Accountant is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (the "**Sarbanes-Oxley Act**") with respect to the Company.

(r) Enforceability of Agreements. All agreements between the Company and third parties expressly referenced in the Prospectus, other than such agreements that have expired by their terms or whose termination is disclosed in the Registration Statement and the Prospectus, are legal, valid and binding obligations of the Company enforceable in accordance with their respective terms, except to the extent that (i) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles and (ii) the indemnification provisions of certain agreements may be limited by federal or state securities laws or public policy considerations in respect thereof, except for any unenforceability that, individually or in the aggregate, would not have a Material Adverse Effect.

(s) No Litigation. Except as set forth in the Registration Statement or the Prospectus, there are no legal, governmental or regulatory actions, suits or proceedings pending, nor, to the Company's knowledge, any legal, governmental or regulatory audits or investigations, to which the Company or its Subsidiaries are a party or to which any property of the Company or its Subsidiaries are the subject that, individually or in the aggregate, if determined adversely to the Company or its Subsidiaries, would reasonably be expected to have a Material Adverse Effect; to the Company's knowledge, no such actions, suits or proceedings are threatened or contemplated by any governmental or regulatory authority or threatened by others; and (i) there are no current or pending legal, governmental or regulatory audits or investigations, actions, suits or proceedings that are required under the Securities Act to be described in the Prospectus that are not so described; and (ii) there are no contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement that are not so filed.

(t) Consents and Permits. Except as disclosed in the Registration Statement and the Prospectus, the Company and its Subsidiaries have made all filings, applications and submissions required by, and possesses and is operating in compliance with, all approvals, licenses, certificates, certifications, clearances, consents, grants, exemptions, marks, notifications, orders, permits, registrations, and other authorizations issued by, the appropriate federal, state or foreign governmental or regulatory authorities (including, without limitation, the United States Food and Drug Administration (the "**FDA**"), the United States Drug Enforcement Administration or any other foreign, federal, state, provincial, court or local government or regulatory authorities including self-regulatory organizations engaged in the regulation of clinical trials, pharmaceuticals, biologics or biohazardous substances or materials) necessary for the ownership or lease of their respective properties or to conduct its businesses as described in the Registration Statement and the Prospectus (collectively, "**Permits**"), except for such Permits the failure of which to possess, obtain or make the same would not reasonably be expected to have a Material

Adverse Effect; the Company and its Subsidiaries are in compliance with the terms and conditions of all such Permits, except where the failure to be in compliance would not reasonably be expected to have a Material Adverse Effect; all of the Permits are valid and in full force and effect, except where any invalidity, individually or in the aggregate, would not be reasonably expected to have a Material Adverse Effect; and neither the Company nor its Subsidiaries have received any written notice of proceedings relating to the limitation, revocation, cancellation, suspension, modification or non-renewal of any such Permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to have a Material Adverse Effect, or has any reason to believe that any such license, certificate, permit or authorization will not be renewed in the ordinary course. To the extent required by applicable laws and regulations of the FDA, the Company or the applicable Subsidiaries have submitted to the FDA an Investigational New Drug Application or amendment or supplement thereto for each clinical trial it has conducted or sponsored or is conducting or sponsoring in the United States; all such submissions were in material compliance with applicable laws and rules and regulations when submitted and no material deficiencies have been asserted by the FDA with respect to any such submissions.

(u) Regulatory Filings. Except as disclosed in the Registration Statement and the Prospectus, neither the Company nor its Subsidiaries have failed to file with the applicable regulatory authorities (including, without limitation, the FDA, or any foreign, federal, state, provincial or local governmental or regulatory authority performing functions similar to those performed by the FDA) any required filing, declaration, listing, registration, report or submission, except for such failures that, individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect; except as disclosed in the Registration Statement and the Prospectus, all such filings, declarations, listings, registrations, reports or submissions were in compliance in all material respects with applicable laws when filed and no deficiencies have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions, except for any deficiencies that, individually or in the aggregate, would not have a Material Adverse Effect. The Company has operated and currently is, in all material respects, in compliance with the United States Federal Food, Drug, and Cosmetic Act, all applicable rules and regulations of the FDA and other federal, state, local and foreign governmental bodies exercising comparable authority.

(v) Intellectual Property. Except as disclosed in the Registration Statement and the Prospectus, the Company and its Subsidiaries own, possess, license or have other rights to use all foreign and domestic patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, Internet domain names, know-how and other intellectual property (collectively, the “**Intellectual Property**”), necessary for the conduct of their respective businesses as now conducted except to the extent that the failure to own, possess, license or otherwise hold adequate rights to use such Intellectual Property would not, individually or in the aggregate, have a Material Adverse Effect. Except as disclosed in the Registration Statement and the Prospectus (i) to the Company’s knowledge, there are no rights of third parties to any such Intellectual Property owned by the Company and its Subsidiaries other than any co-owner of any patent or patent application constituting Intellectual Property who is listed as such on the records of the U.S. Patent and

Trademark Office; (ii) to the Company's knowledge, there is no infringement by third parties of any such Intellectual Property; (iii) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the Company's and its Subsidiaries' rights in or to any such Intellectual Property, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; (iv) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property; (v) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company and its Subsidiaries infringe or otherwise violate any patent, trademark, copyright, trade secret or other proprietary rights of others; (vi) to the Company's knowledge, there is no third-party U.S. patent or published U.S. patent application which contains claims for which an Interference Proceeding (as defined in 35 U.S.C. § 135) has been commenced against any patent or patent application described in the Prospectus as being owned by or licensed to the Company; and (vii) the Company and its Subsidiaries have complied with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or its Subsidiaries, and all such agreements are in full force and effect (except for agreements that have been terminated), except, in the case of any of clauses (i)-(vii) above, for any such infringement by third parties or any such pending or threatened suit, action, proceeding or claim as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(w) Clinical Studies. The preclinical studies and tests and clinical trials described in the Registration Statement and the Prospectus being conducted by or on behalf of the Company were, and, if still pending, are being conducted in all material respects in accordance with the experimental protocols, procedures and controls pursuant to, where applicable, accepted medical and scientific standards for products or product candidates comparable to those being developed by the Company and all applicable laws; the descriptions of such studies, tests and trials, and the results thereof, contained in the Prospectus are accurate and complete in all material respects; the Company is not aware of any tests, studies or trials not described in the Prospectus, the results of which reasonably call into question the results of the tests, studies and trials described in the Prospectus; and the Company has not received any written notice or correspondence from the FDA or any foreign, state or local governmental body exercising comparable authority (performing functions similar to those performed by the FDA) or any institutional review board or comparable authority requiring the termination, suspension, clinical hold or material modification of any tests, studies or trials that are described or referred to in the Registration Statement and the Prospectus.

(x) Market Capitalization. At the time the Registration Statement initially became or was originally declared effective, and at the time the Company's most recent Annual Report on Form 10-K (commencing with the Annual Report on Form 10-K for the year ended December 31, 2024) was filed with the Commission, the Company met or will meet the then applicable requirements for the use of Form S-3 under the Securities Act, including but not limited to Instruction I.B.1 of Form S-3. The aggregate market value of the outstanding voting and non-voting common equity (as defined in Securities Act Rule 405) of the Company held by persons other than Affiliates of the Company (pursuant to Securities Act Rule 144, those that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common

control with, the Company) (the “**Non-Affiliate Shares**”), was greater than \$75 million (calculated by multiplying (x) the highest price at which the common equity of the Company closed on the Exchange within 60 days of the date of the filing of the Registration Statement times (y) the number of Non-Affiliate Shares). The Company is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months previously and if it has been a shell company at any time previously, has filed current Form 10 information (as defined in Instruction I.B.6 of Form S-3) with the Commission at least 12 calendar months previously reflecting its status as an entity that is not a shell company.

(y) No Material Defaults. Neither the Company nor its Subsidiaries have defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

(z) Certain Market Activities. Neither the Company, nor its Subsidiaries, nor any of their respective directors, officers or controlling persons have taken, directly or indirectly, any action designed, or that has constituted or would reasonably be expected to cause or result in, under the Exchange Act or otherwise, the stabilization or manipulation of the price of the Common Shares or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) with respect to the Common Shares, whether to facilitate the sale or resale of the Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(aa) Broker/Dealer Relationships. Neither the Company nor its Subsidiaries (i) are required to register as a “broker” or “dealer” in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, control or are a “person associated with a member” or “associated person of a member” (within the meaning set forth in the FINRA Manual).

(bb) No Reliance. The Company has not relied upon the Agent or legal counsel for the Agent for any legal, tax or accounting advice in connection with the offering and sale of the Shares.

(cc) Taxes. The Company and its Subsidiaries have filed all federal, state, local and foreign tax returns which have been required to be filed and paid all taxes shown thereon through the date hereof, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to so file or pay would not have a Material Adverse Effect. Except as otherwise disclosed in or contemplated by the Registration Statement or the Prospectus, no tax deficiency has been determined adversely to the Company or its Subsidiaries that has had, or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state or other

governmental tax deficiency, penalty or assessment that has been or might be asserted or threatened against it which would have a Material Adverse Effect.

(dd) Title to Real and Personal Property. Except as set forth in the Registration Statement or the Prospectus, the Company and its Subsidiaries have good and marketable title in fee simple to all items of real property owned by them, good and valid title to all personal property described in the Registration Statement or Prospectus as being owned by them that are material to the businesses of the Company or its Subsidiaries, in each case free and clear of all liens, encumbrances and claims, except those matters that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and its Subsidiaries or (ii) would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. Any real or personal property described in the Registration Statement or Prospectus as being leased by the Company and its Subsidiaries is held by them under valid, existing and enforceable leases, except those that (A) do not materially interfere with the use made or proposed to be made of such property by the Company or its Subsidiaries or (B) would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect. Each of the properties of the Company and its Subsidiaries complies with all applicable codes, laws and regulations (including, without limitation, building and zoning codes, laws and regulations and laws relating to access to such properties), except to the extent disclosed in the Registration Statement or Prospectus or except for such failures to comply that would not, individually or in the aggregate, reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company and its Subsidiaries or otherwise have a Material Adverse Effect. None of the Company or its Subsidiaries has received from any governmental or regulatory authorities any notice of any condemnation of, or zoning change affecting, the properties of the Company and its Subsidiaries, and the Company knows of no such condemnation or zoning change which is threatened, except for such that would not reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company and its Subsidiaries or otherwise have a Material Adverse Effect, individually or in the aggregate.

(ee) Environmental Laws. Except as set forth in the Registration Statement or the Prospectus, the Company and its Subsidiaries (i) are in compliance with any and all applicable federal, state, local and foreign laws, rules, regulations, decisions and orders relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, “**Environmental Laws**”); (ii) have received and are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses as described in the Registration Statement and the Prospectus; and (iii) have not received notice of any actual or potential liability for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except, in the case of any of clauses (i), (ii) or (iii) above, for any such failure to comply or failure to receive required permits, licenses, other approvals or liability as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(ff) Disclosure Controls. The Company maintains a consolidated 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 generally accepted accounting principles ("GAAP") and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Except as disclosed in the Registration Statement and the Prospectus, as of the end of the Company's most recently completed fiscal year, the Company's internal control over financial reporting was effective and as of the end of the most recently completed fiscal year, the Company is not aware of any material weaknesses in its internal control over financial reporting (other than as set forth in the Prospectus). Since the date of the latest audited financial statements of the Company included in the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting (other than as set forth in the Prospectus). The Company has established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 and 15d-15) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company and its Subsidiaries is made known to the certifying officers by others within those entities, particularly during the period in which the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as the case may be, is being prepared. The Company's certifying officers have evaluated the effectiveness of the Company's controls and procedures as of a date within 90 days prior to the filing date of the Form 10-K for the fiscal year most recently ended (such date, the "**Evaluation Date**"). The Company presented in its Form 10-K for the fiscal year most recently ended the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date and, except as disclosed in the Registration Statement and the Prospectus, the disclosure controls and procedures were effective. Since the Evaluation Date, there have been no significant changes in the Company's internal controls (as such term is defined in Item 307(b) of Regulation S-K under the Securities Act) or, to the Company's knowledge, in other factors that could significantly affect the Company's internal controls.

(gg) Sarbanes-Oxley. There is and has been no failure on the part of the Company or, to the Company's knowledge, any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any applicable provisions of the Sarbanes-Oxley Act and the rules and regulations promulgated thereunder. Each of the principal executive officer and the principal financial officer of the Company (or each former principal executive officer of the Company and each former principal financial officer of the Company as applicable) has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act with respect to all reports, schedules, forms, statements and other documents required to be filed by it or furnished by it to the Commission. For purposes of the preceding sentence, "principal executive

officer” and “principal financial officer” shall have the meanings given to such terms in the Sarbanes-Oxley Act.

(hh) Finder’s Fees. Neither the Company nor its Subsidiaries have incurred any liability for any finder’s fees, brokerage commissions or similar payments in connection with the transactions herein contemplated, except as may otherwise exist with respect to the Agent pursuant to this Agreement.

(ii) Labor Disputes. No labor disturbance by or dispute with employees of the Company or its Subsidiaries exist or, to the knowledge of the Company, are threatened which would reasonably be expected to result in a Material Adverse Effect.

(jj) Investment Company Act. Neither the Company nor its Subsidiaries are or, after giving effect to the offering and sale of the Shares, will be an “investment company” or an entity “controlled” by an “investment company,” as such terms are defined in the Investment Company Act of 1940, as amended (the “**Investment Company Act**”).

(kk) Operations. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions to which the Company or its Subsidiaries are subject, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “**Money Laundering Laws**”), except as would not reasonably be expected to result in a Material Adverse Effect; and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or its Subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(ll) Off-Balance Sheet Arrangements. There are no transactions, arrangements and other relationships between and/or among the Company, and/or, to the knowledge of the Company, any of its Affiliates and any unconsolidated entity, including, but not limited to, any structural finance, special purpose or limited purpose entity (each, an “**Off Balance Sheet Transaction**”) that could reasonably be expected to affect materially the Company’s liquidity or the availability of or requirements for its capital resources, including those Off Balance Sheet Transactions described in the Commission’s Statement about Management’s Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8056; 34-45321; FR-61), required to be described in the Prospectus which have not been described as required.

(mm) Underwriter Agreements. The Company is not a party to any agreement with an agent or underwriter for any other “at-the-market” or continuous equity transaction.

(nn) ERISA. To the knowledge of the Company, each material employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”), that is maintained, administered or contributed to by the Company or its Subsidiaries for employees or former employees of the Company and its Subsidiaries have been maintained in material compliance with its terms and the requirements of any applicable statutes,

orders, rules and regulations, including but not limited to ERISA and the Internal Revenue Code of 1986, as amended (the “Code”); no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred which would result in a material liability to the Company with respect to any such plan excluding transactions effected pursuant to a statutory or administrative exemption; and for each such plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no “accumulated funding deficiency” as defined in Section 412 of the Code has been incurred, whether or not waived, and the fair market value of the assets of each such plan (excluding for these purposes accrued but unpaid contributions) exceeds the present value of all benefits accrued under such plan determined using reasonable actuarial assumptions.

(oo) Forward Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) (a “**Forward Looking Statement**”) contained in the Registration Statement and the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(pp) Agent Purchases. 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 Common Stock for its own account while this Agreement is in effect, provided, that (i) no such purchase or sales shall take place while an Issuance Notice is in effect (except to the extent the Agent may engage in sales of 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.

(qq) Margin Rules. Neither the issuance, sale and delivery of the 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.

(rr) Insurance. The Company and its Subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as the Company and its Subsidiaries reasonably believe are adequate for the conduct of their properties and as is customary for companies engaged in similar businesses in similar industries.

(ss) No Improper Practices. (i) Neither the Company nor any Subsidiary, nor, to the Company’s knowledge, any director or officer of the Company or any Subsidiary nor, to the Company’s knowledge, any agent, Affiliate, employee or other person acting on behalf of the Company or any Subsidiary has, in the past five years, made any unlawful contributions to any candidate for any political office (or failed fully to disclose any contribution in violation of law) or made any contribution or other payment to any official of, or candidate for, any federal, state, municipal, or foreign office or other person charged with similar public or quasi-public duty in violation of any law or of the character required to be disclosed in the Prospectus; (ii) no relationship, direct or indirect, exists between or among the Company or, any Subsidiary or any Affiliate of any of them, on the one hand, and the directors, officers and stockholders of the Company or any Subsidiary, on the other hand, that is required by the Securities Act to be

described in the Registration Statement and the Prospectus that is not so described; (iii) no relationship, direct or indirect, exists between or among the Company or any Subsidiary or any Affiliate of them, on the one hand, and the directors, officers, or stockholders of the Company or any Subsidiary, on the other hand, that is required by the rules of FINRA to be described in the Registration Statement and the Prospectus that is not so described; (iv) except as described in the Prospectus, there are no material outstanding loans or advances or material guarantees of indebtedness by the Company or any Subsidiary to or for the benefit of any of their respective officers or directors or any of the members of the families of any of them; (v) the Company has not offered, or caused any placement agent to offer, Common Stock to any person with the intent to influence unlawfully (A) a customer or supplier of the Company or the Subsidiaries to alter the customer's or supplier's level or type of business with the Company or the Subsidiaries or (B) a trade journalist or publication to write or publish favorable information about the Company or the Subsidiaries or any of their respective products or services, and, (vi) neither the Company nor any Subsidiary nor, to the Company's knowledge, any director or officer of the Company or any Subsidiary nor, to the Company's knowledge, any agent, Affiliate, employee or other person acting on behalf of the Company or any Subsidiary has (A) violated or is in violation of any applicable provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, or any other applicable anti-bribery or anti-corruption law (collectively, "**Anti-Corruption Laws**"), (B) promised, offered, provided, attempted to provide or authorized the provision of anything of value, directly or indirectly, to any person for the purpose of obtaining or retaining business, influencing any act or decision of the recipient, or securing any improper advantage; or (C) made any payment of funds of the Company or the Subsidiaries or received or retained any funds in violation of any Anti-Corruption Laws.

(tt) Status Under the Securities Act. The Company was not and is not an ineligible issuer as defined in Rule 405 under the Securities Act at the times specified in Rules 164 and 433 under the Securities Act in connection with the offering of the Shares.

(uu) No Misstatement or Omission in a Free Writing Prospectus. Each Free Writing Prospectus, as of its issue date and as of each Triggering Event Date and Time of Sale, 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 that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Agent specifically for use therein.

(vv) No Conflicts. Neither the execution of this Agreement, nor the issuance, offering or sale of the Shares, nor the consummation of any of the transactions contemplated herein and therein, nor the compliance by the Company with the terms and provisions hereof and thereof will conflict with, or will result in a breach of, any of the terms and provisions of, or has constituted or will constitute a default under, or has resulted in or will result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any contract or other agreement to which the Company may be bound or to which any of the property or assets of the Company is subject, except (i) such conflicts,

breaches or defaults as may have been waived and (ii) such conflicts, breaches and defaults that would not have a Material Adverse Effect; nor will such action result (x) in any violation of the provisions of the organizational or governing documents of the Company, or (y) in any material violation of the provisions of any statute or any order, rule or regulation applicable to the Company or of any court or of any federal, state or other regulatory authority or other government body having jurisdiction over the Company.

(ww) Sanctions. (i) The Company represents that, neither the Company nor any of its Subsidiaries (collectively, the “**Entity**”), nor, to the Company’s knowledge, any director, officer or employee of the Entity, is a government, individual, or entity (in this paragraph (ww), “**Person**”) that is, or is owned or controlled by a Person that is:

(A) the subject of any sanctions administered or enforced by the U.S. Department of Treasury’s Office of Foreign Assets Control, the United Nations Security Council, the European Union, His Majesty’s Treasury, or other relevant sanctions authority (collectively, “**Sanctions**”), nor

(B) located, organized or resident in a country or territory that is the subject of Sanctions (currently the so-called Donetsk People’s Republic, the so-called Luhansk People’s Republic, the Crimea , Kherson and Zaporizhzhia Regions of Ukraine, Cuba, Iran, North Korea and Syria).

(ii) The Entity represents and covenants that it 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:

(A) to fund or facilitate any activities or business of or with any Person or in any country or territory in violation of any Sanction; or

(B) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) The Entity represents and covenants that, except as detailed in the Registration Statement and the Prospectus, for the past 10 years, it has not knowingly engaged in, is not now knowingly engaged in, and will not knowingly engage in, any dealings or transactions with any Person, or in any country or territory in violation of any Sanctions.

(xx) Stock Transfer Taxes. On each Settlement Date, all stock transfer or other taxes (other than income taxes) which are required to be paid in connection with the sale and transfer of the Shares to be sold hereunder will be, or will have been, fully paid or provided for by the Company and all laws imposing such taxes will be or will have been fully complied with.

(yy) Compliance with Laws. The Company and its Subsidiaries, and to the Company’s knowledge, their respective directors, officers, employees, agents, Affiliates and representatives, are, and at all times have been, in compliance in all material respects with all

healthcare laws and regulations applicable to the Company or its subsidiaries or any of their respective products or activities, including all Applicable Laws as defined below. Each of the Company and its Subsidiaries: (A) have not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any other governmental authority alleging or asserting noncompliance with any Applicable Laws or any Permits; (B) have not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Permits and has no knowledge that any such governmental authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding. “Applicable Laws” means all statutes, rules, or regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company or its Subsidiaries, and includes, without limitation, the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the Anti-Inducement Law (42 U.S.C. § 1320a-7a(a)(5)), the civil False Claims Act (31 U.S.C. §§3729 et seq.), the administrative False Claims Law (42 U.S.C. § 1320a-7b(a)), the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et seq.), as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. §§ 17921 et seq.), the exclusion laws (42 U.S.C. § 1320a-7), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), the Federal Food, Drug, and Cosmetic Act (21 U.S.C. § 301 et seq.), the Public Health Service Act (42 U.S.C. § 201 et seq.), any similar local, state or federal laws, and the regulations promulgated pursuant to such laws, and has not engaged in activities which are, as applicable, prohibited or cause for civil penalties or mandatory or permissive exclusion from Medicare, Medicaid, or any other state health care program or federal health care program. The Company and its subsidiaries have not received any notification, correspondence or any other written or oral communication, including, without limitation, notification of any pending or threatened claim, suit, proceeding, hearing, enforcement, investigation, arbitration or other action, from any governmental authority of potential or actual non-compliance by, or liability of, the Company or its subsidiaries under any Applicable Laws. Additionally, neither the Company nor, to the Company’s knowledge, any of its Subsidiaries nor, to the Company’s knowledge, any of their respective employees, officers, directors, agents or contractors has been excluded, suspended or debarred from participation in any federal health care program or, to the knowledge of Company and its Subsidiaries, is subject to an inquiry, investigation, proceeding, or other similar matter that could subject the Company, any of its Subsidiaries, or any of their respective employees, officers, directors, agents or contractors to exclusion, suspension or debarment. The Company and its subsidiaries are not a party to or have any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any governmental authority.

(zz) Statistical and Market-Related Data. The statistical, demographic and market-related data included in the Registration Statement and Prospectus are based on or derived from sources that the Company believes to be reliable and accurate or represent the Company’s good faith estimates that are made on the basis of data derived from such sources.

(aaa) Cyber Security. Except as may be included or incorporated by reference in the Registration Statement and the Prospectus, (x) to the Company's knowledge, there has been no material security breach or other material compromise of or relating to any of the Company's information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology (collectively, "**IT Systems and Data**") and (y) the Company has not been notified of, and has no knowledge of any event or condition that would reasonably be expected to result in, any material security breach or other material compromise to their IT Systems and Data; (ii) the Company is presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (ii), individually or in the aggregate, result in a Material Adverse Effect; and (iii) the Company has implemented backup and disaster recovery technology consistent with industry standards and practices.

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

(ccc) Related Party Transactions. There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or, to the knowledge of the Company, any other person required to be described in the Registration Statement or the Prospectus which have not been described as required.

(ddd) FINRA Matters. All of the information provided to the Agent or to counsel for the Agent by the Company, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Shares is true, complete, correct and compliant with Financial Industry Regulatory Authority, Inc.'s ("**FINRA**") rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules is true, complete and correct.

(eee) Dividend Restrictions. Except as disclosed in the Registration Statement or the Prospectus, no subsidiary of the Company is prohibited or restricted, directly or indirectly, from paying dividends to the Company, or from making any other distribution with respect to such subsidiary's equity securities or from repaying to the Company or any other subsidiary of the Company any amounts that may from time to time become due under any loans or advances to such subsidiary from the Company or from transferring any property or assets to the Company or to any other subsidiary.

(fff) Compliance with Data Privacy Laws. The Company and its subsidiaries are, and at all prior times were, in material compliance with all applicable state and federal data privacy and security laws and regulations, including without limitation the Health Insurance Portability and Accountability Act of 1996 (“**HIPAA**”) as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (“**HITECH**”), and the Company and its subsidiaries have taken commercially reasonable actions to prepare to comply with, and since May 25, 2018, have been and currently are in compliance with, the European Union General Data Protection Regulation (“**GDPR**”) (EU 2016/679) (collectively, the “**Privacy Laws**”). To ensure compliance with the Privacy Laws, the Company and its subsidiaries have in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (as defined below) (the “**Policies**”). The Company and its subsidiaries have at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and none of such disclosures made or contained in any Policy have, to the knowledge of the Company, been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any material respect. The Company further certifies that neither it nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law. “**Personal Data**” means (i) a natural person’s name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver’s license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as “personally identifying information” under the Federal Trade Commission Act, as amended; (iii) “personal data” as defined by GDPR and (iv) any information which would qualify as “protected health information” under HIPAA, as amended by HITECH.

Any certificate signed by any officer or representative of the Company or any of its subsidiaries and delivered to the Agent or counsel for the Agent in connection with an issuance of Shares shall be deemed a representation and warranty by the Company to the Agent as to the matters covered thereby as of the date or dates indicated in such certificate.

The Company acknowledges that the Agent and, for purposes of the opinions to be delivered pursuant to Section 4(p) hereof, counsel to the Company and counsel to the Agent, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

Section 3. ISSUANCE AND SALE OF COMMON SHARES

(a) Sale of Securities. On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company and the Agent agree that the Company may from time to time seek to sell Shares through the Agent,

acting as sales agent, or directly to the Agent, acting as principal, as follows, with an aggregate Sales Price of up to the Maximum Program Amount, based on and in accordance with Issuance Notices as the Company may deliver, during the Agency Period.

(b) Mechanics of Issuances.

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

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

(iii) Method of Offer and Sale. The Shares may be offered and sold (A) in privately negotiated transactions with the consent of the Company; (B) as block transactions; or (C) by any other method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act, including sales made directly on the Principal Market or sales made into any other existing trading market of the Common Shares. Nothing in this Agreement shall be deemed to require either party to agree to the method of offer and sale specified in the preceding sentence (except as specified in clause (A) of the preceding sentence), and (except as specified in clauses (A) and (B) of the preceding sentence) the method of placement of any Shares by the Agent shall be at the Agent’s discretion.

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

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

(vi) Suspension or Termination of Sales. Consistent with standard market settlement practices, the Company or the Agent may, upon notice to the other party hereto in writing or by telephone (confirmed immediately by verifiable email), suspend any sale of Shares, and the period set forth in an Issuance Notice shall immediately terminate; *provided, however*, that (A) such suspension and termination shall not affect or impair either party's obligations with respect to any Shares placed or sold hereunder prior to the receipt of such notice; (B) if the Company suspends or terminates any sale of Shares after the Agent confirms such sale to the Company, the Company shall still be obligated to comply with Section 3(b)(v) with respect to such Shares; and (C) if the Company defaults in its obligation to deliver Shares on a Settlement Date, the Company agrees that it will hold the Agent harmless against any loss, claim, damage or expense (including, without limitation, penalties, interest and reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company. The parties hereto acknowledge and agree that, in performing its obligations under this Agreement, the Agent may borrow Common Shares from stock lenders in the event that the Company has not delivered Shares to settle sales as required by subsection (v) above, and may use the Shares to settle or close out such borrowings. The Company agrees that no such notice shall be effective against the Agent unless it is made to the notice parties set forth in Schedule A attached hereto or identified in writing by the Agent pursuant to Section 3(b)(i).

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

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

(c) Fees. As compensation for services rendered, the Company shall pay to the Agent, on the applicable Settlement Date, the Selling Commission for the applicable Issuance

Amount (including with respect to any suspended or terminated sale pursuant to Section 3(b)(vi)) by the Agent deducting the Selling Commission from the applicable Issuance Amount. For the avoidance of doubt, the Company shall not be required to pay to the Agent any Selling Commission with respect to any Issuance Notice, except to the extent Shares are placed pursuant thereto.

(d) Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Shares (including all printing and engraving costs); (ii) all fees and expenses of the registrar and transfer agent of the Shares; (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Shares; (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors; (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Prospectus, any Free Writing Prospectus prepared by or on behalf of, used by, or referred to by the Company, and all amendments and supplements thereto, and this Agreement; (vi) all filing fees, attorneys' fees and expenses incurred by the Company or the Agent in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Shares for offer and sale under the state securities or blue sky laws or the provincial securities laws of Canada, and, if requested by the Agent, preparing and printing a "**Blue Sky Survey**" or memorandum and a "Canadian wrapper," and any supplements thereto, advising the Agent of such qualifications, registrations, determinations and exemptions; (vii) the reasonable and documented fees and disbursements of the Agent's counsel, including the reasonable and documented fees and expenses of counsel for the Agent in connection with, FINRA review, if any, and approval of the Agent's participation in the offering and distribution of the Shares; (viii) the filing fees incident to FINRA review, if any; (ix) all fees, expenses and disbursements relating to background checks of the Company's directors, director nominees and executive officers; (x) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Shares, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives, employees and officers of the Company and of the Agent and any such consultants, and the cost of any aircraft chartered in connection with the road show; and (xi) the fees and expenses associated with listing the Shares on the Principal Market. The fees and disbursements of Agent's counsel pursuant to subsections (vi) and (vii) of the preceding sentence shall not exceed (A) \$75,000 in connection with entering into this Agreement and (B) \$15,000 in connection with each Triggering Event Date (as defined below) on which the Company is required to provide a certificate pursuant to Section 4(p).

Section 4. ADDITIONAL COVENANTS

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

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

(b) Securities Act Compliance. After the date of this Agreement, the Company shall promptly advise the Agent in writing (i) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission relating to the Registration Statement or Prospectus; (ii) of the time and date of any filing of any post-effective amendment to the Registration Statement, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus, or any Free Writing Prospectus; (iii) of the time and date that any post-effective amendment to the Registration Statement or any Rule 462(b) Registration Statement becomes effective; and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto, any Rule 462(b) Registration Statement or any amendment or supplement to the Prospectus or of any order preventing or suspending the use of any Free Writing Prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use its commercially reasonable efforts to obtain the lifting of such order as soon as reasonably practicable. Additionally, the Company agrees that it shall comply with the provisions of Rule 424(b) and Rule 433, as applicable, under the Securities Act and will use its commercially reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) or Rule 433 were filed in a timely manner with the Commission.

(c) Amendments and Supplements to the Prospectus and Other Securities Act Matters. If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances when the Prospectus is delivered to a purchaser, not misleading, or if in the opinion of the Agent or counsel for the Agent it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, including the Securities Act, the

Company agrees (subject to Sections 4(d) and 4(f)) to promptly prepare, file with the Commission and furnish at its own expense to the Agent, amendments or supplements to the Prospectus (including by filing a document incorporated by reference therein) so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances when the Prospectus is delivered to a purchaser, not be misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law including the Securities Act. Neither the Agent's consent to, or delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Sections 4(d) and 4(f). Notwithstanding the foregoing, the Company shall not be required to file such amendment or supplement if there is no pending Issuance Notice and the Company believes that it is in its best interest not to file such amendment or supplement; however, the Company agrees not to provide an Issuance Notice or otherwise sell under this Agreement until such amendment or supplement is filed.

(d) Agent's Review of Proposed Amendments and Supplements. Prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act, but excluding (i) the filing under the Exchange Act of documents incorporated by reference into the Registration Statement that either (A) do not name the Agent and do not relate to the transactions contemplated by this Agreement or (B) include disclosure naming the Agent and regarding the transactions contemplated by this Agreement that is limited to disclosure of periodic sales pursuant to this Agreement, and (ii) amendments or supplements that do not name the Agent and do not relate to the transactions contemplated by this Agreement) or the Prospectus (excluding any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each such proposed amendment or supplement, and the Company shall not file or use any such proposed amendment or supplement without the Agent's prior consent, which shall not be unreasonably withheld, conditioned or delayed. The Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

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

(f) Free Writing Prospectuses. The Company shall furnish to the Agent for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed Free Writing Prospectus or any amendment or supplement thereto to be prepared by or on behalf of, used by, or referred to by the Company and the Company shall not file, use or refer to any proposed Free Writing Prospectus or any amendment or supplement thereto without the Agent's consent, which shall not be unreasonably withheld, conditioned or delayed. The

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

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

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

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

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

(j) Earnings Statement. As soon as reasonably practicable, the Company will make generally available to its security holders and to the Agent an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the date of this Agreement which shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act, which requirement may be satisfied by publicly filing the required information on EDGAR.

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

(l) Listing; Reservation of Shares. (i) The Company will use its reasonable best efforts to maintain the listing of the Shares on the Principal Market; and (ii) the Company will reserve and keep available at all times, free of preemptive rights, Shares for the purpose of enabling the Company to satisfy its obligations pursuant to any outstanding Issuance Notice under this Agreement.

(m) Transfer Agent. The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

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

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

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

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

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

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

(any such event, a "**Triggering Event Date**"), the Company shall furnish the Agent (but in the case of clause (C) above only if the Agent reasonably determines that the information contained in such current report on Form 8-K of the Company is material) with a certificate as of the Triggering Event Date, in the form and substance satisfactory to the Agent and its counsel,

substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as amended or supplemented, (A) confirming that the representations and warranties of the Company contained in this Agreement are true and correct, (B) confirming that the Company has performed all of its obligations hereunder to be performed on or prior to the date of such certificate and as to the matters set forth in Section 5(a)(iii) hereof, and (C) containing any other certification that the Agent shall reasonably request. The requirement to provide a certificate under this Section 4(p) shall be waived for any Triggering Event Date occurring at a time when no Issuance Notice is pending or a suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers an Issuance Notice with instructions for the sale of Shares hereunder (which for such calendar quarter shall be considered a Triggering Event Date) and the next occurring Triggering Event Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Shares following a Triggering Event Date when a suspension was in effect and did not provide the Agent with a certificate under this Section 4(p), then before the Company delivers an Issuance Notice with instructions for the sale of Shares or the Agent sells any Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 4(p) dated as of the date that the instructions for the sale of Shares are issued to the Agent.

(q) Legal Opinions. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(p) for which no waiver is applicable and excluding the date of this Agreement, a negative assurances letter and the written legal opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Company, Latham & Watkins LLP, counsel to the Agent, and Proskauer Rose LLP intellectual property counsel to the Company, shall be delivered to the Agent, each dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented. In lieu of such opinions for subsequent periodic filings, in the discretion of the Agent, the Company may furnish a reliance letter from such counsel to the Agent, permitting the Agent to rely on a previously delivered opinion letter, modified as appropriate for any passage of time or Triggering Event Date (except that statements in such prior opinion shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of such Triggering Event Date).

(r) Comfort Letter. On or prior to the date of the first Issuance Notice and on or prior to each Triggering Event Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 4(p) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause Ernst & Young LLP, the independent registered public accounting firm who has audited the financial statements included or incorporated by reference in the Registration Statement, to furnish the Agent a comfort letter, dated the date of delivery, in form and substance reasonably satisfactory to the Agent and its counsel, substantially similar to the form previously provided to the Agent and its counsel; provided, however, that any such comfort letter will only be required on the Triggering Event Date specified to the extent that it contains financial statements filed with the Commission under the Exchange Act and

incorporated or deemed to be incorporated by reference into the Prospectus. At any time when an Issuance Notice is outstanding, if requested by the Agent, the Company shall also cause a comfort letter to be furnished to the Agent on the date of occurrence of any material transaction or event requiring the filing of a current report on Form 8-K containing material amended financial information of the Company, including the restatement of the Company's financial statements. The Company shall be required to furnish no more than one comfort letter hereunder for each of the following filings by the Company: annual report on Form 10-K, annual report on Form 10-K/A, quarterly report on Form 10-Q and quarterly report on Form 10-Q/A.

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

(t) Agent's Own Account; Clients' Account. The Company consents to the Agent trading, in compliance with applicable law, in the Common Shares for the Agent's own account and for the account of its clients at the same time as sales of the Shares occur pursuant to this Agreement.

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

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

(w) Notice of Other Sale. Without the written consent of the Agent, the Company will not, directly or indirectly, (i) offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Shares or securities convertible into or exchangeable for Common Shares (other than Shares hereunder), warrants or any rights to purchase or acquire Common Shares, or effect a reverse stock split, recapitalization, share consolidation, reclassification or similar transaction affecting the outstanding Common Shares, during the period beginning on the third Trading Day immediately prior to the date on which any Issuance Notice is delivered to the Agent hereunder and ending on the earlier of (A) the third Trading Day immediately following the Settlement Date with respect to Shares sold pursuant to such Issuance Notice and (B) the date such Issuance Notice is cancelled if no Shares have been sold pursuant to such Issuance Notice; or (ii) enter into any other “at the market” or continuous equity transaction to offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Shares (other than the Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Shares, warrants or any rights to purchase or acquire, Common Shares prior to the termination of this Agreement; provided, however, that such restrictions will not be applicable in connection with the Company’s (i) issuance or sale of Common Shares, options to purchase Common Shares or Common Shares issuable upon the exercise of options or other equity awards pursuant to any employee or director share option, incentive or benefit plan, share purchase or ownership plan, long-term incentive plan, dividend reinvestment plan, inducement award under the rules of the Principal Market or other compensation plan of the Company or its subsidiaries that is disclosed in the Registration Statement and Prospectus, (ii) issuance or sale of Common Shares issuable upon exchange, conversion or redemption of securities or the exercise or vesting of warrants, options or other equity awards outstanding at the date of this Agreement, (iii) issuance or sale of Common Shares or securities convertible into or exchangeable for Common Shares as consideration for mergers, acquisitions, other business combinations, joint ventures or strategic alliances occurring after the date of this Agreement which are not used for capital raising purposes, provided that the aggregate number of Common Shares issued or sold under this subsection (iii) shall not exceed 5% of the number of Common Shares outstanding immediately prior to giving effect to such sale of issuance, (iv) modification of any outstanding options, warrants or any rights to purchase or acquire Common Shares and (v) issuance of a warrant to purchase Common Stock of the Company to Kreos Capital VII (UK) Limited pursuant to the Loan Facility.

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

(a) Conditions Precedent to the Right of the Company to Deliver an Issuance Notice and the Obligation of the Agent to Sell Shares. The right of the Company to deliver an Issuance Notice hereunder is subject to the satisfaction, on the date of delivery of such Issuance Notice, and the obligation of the Agent to use its commercially reasonable efforts to place Shares during the applicable period set forth in the Issuance Notice is subject to the satisfaction, on each Trading Day during the applicable period set forth in the Issuance Notice, of each of the following conditions:

- (i) Accuracy of the Company’s Representations and Warranties; Performance by the Company. The Company shall have delivered the certificate required to be delivered pursuant to Section 4(p) on or before the date on which delivery of such certificate is required pursuant to Section 4(p). The Company shall have performed, satisfied and complied with all covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by the

Company at or prior to such date, including, but not limited to, the covenants contained in Section 4(q), Section 4(r) and Section 4(s).

- (ii) No Injunction. No statute, rule, regulation, executive order, decree, ruling or injunction shall have been enacted, entered, promulgated or endorsed by any court or governmental authority of competent jurisdiction or any self-regulatory organization having authority over the matters contemplated hereby that prohibits or directly and materially adversely affects any of the transactions contemplated by this Agreement, and no proceeding shall have been commenced that may have the effect of prohibiting or materially adversely affecting any of the transactions contemplated by this Agreement.
- (iii) Material Adverse Effects. Except as disclosed in the Prospectus and the Time of Sale Information, (a) in the judgment of the Agent there shall not have occurred any Material Adverse Effect; and (b) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any “nationally recognized statistical rating organization” as such term is defined for purposes of Section 3(a)(62) of the Exchange Act.
- (iv) No Suspension of Trading in or Delisting of Common Shares; Other Events. The trading of the Common Shares (including without limitation the Shares) shall not have been suspended by the Commission, the Principal Market or FINRA and the Common Shares (including without limitation the Shares) shall have been approved for listing or quotation on and shall not have been delisted from the Principal Market or any of its constituent markets. There shall not have occurred (and be continuing in the case of occurrences under clauses (i) and (ii) below) any of the following: (i) trading or quotation in any of the Company’s securities shall have been suspended or limited by the Commission or by the Principal Market or trading in securities generally on the Principal Market shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges by the Commission or FINRA; (ii) a general banking moratorium shall have been declared by any federal or New York authorities; or (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States’ or international political, financial or economic conditions, as in the judgment of the Agent is material and adverse and makes it impracticable to market the Shares in the manner and on the terms described in the Prospectus or to enforce contracts for the sale of securities.

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

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

(d) Agent Counsel Legal Opinion. The Agent shall have received from Latham & Watkins 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 4(p), with respect to such matters as the Agent may reasonably require.

Section 6. INDEMNIFICATION AND CONTRIBUTION

(a) Indemnification of the Agent. The Company agrees to indemnify and hold harmless the Agent, its officers and employees, and each person, if any, who controls the Agent within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Agent or such officer, employee or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, and to reimburse the Agent and each such officer, employee and controlling person for any and all expenses (including the reasonable and documented fees and disbursements of counsel chosen by the Agent) as such expenses are reasonably incurred by the Agent or such officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying

any such loss, claim, damage, liability, expense or action; provided, however, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information described in subsection (b) below. The indemnity agreement set forth in this Section 6(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) Indemnification of the Company, its Directors and Officers. The Agent agrees to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which the Company or any such director, officer or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430B under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact contained in any Free Writing Prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; but, for each of (i) and (ii) above, only to the extent arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement, any such Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information furnished by the Agent to the Company consists of the information set forth in the first sentence of the ninth paragraph under the caption “Plan of Distribution” in the Prospectus, and to reimburse the Company and each such director, officer and controlling person for any and all expenses (including the fees and disbursements of one counsel chosen by the Company) as such expenses are reasonably incurred by the Company or such officer, director or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The indemnity agreement set forth in this Section 6(b) shall be in addition to any liabilities that the Agent or the Company may otherwise have.

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

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

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

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

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

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

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

Section 7. TERMINATION & SURVIVAL

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

(b) Termination; Survival Following Termination.

- (i) Either party may terminate this Agreement prior to the end of the Agency Period, by giving written notice as required by this Agreement, upon ten (10) Trading Days' prior written notice to the other party; provided that, (A) if the Company terminates this Agreement after the Agent confirms to the Company any sale of Shares, the Company shall remain obligated to comply with Section 3(b)(v) with respect to such Shares and (B) Section 2, Section 6, Section 7 and Section 8 shall survive termination of this Agreement. If termination shall occur prior to the Settlement Date for any sale of Shares, such sale shall nevertheless settle in accordance with the terms of this Agreement. Upon termination of this Agreement, the Company shall not have any liability to the Agent for any discount, commission or other compensation with respect to any Shares not otherwise sold by the Agent under this Agreement.
- (ii) In addition to the survival provision of Section 7(b)(i), the respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the Agent set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of the Agent or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Shares sold hereunder and any termination of this Agreement.

Section 8. MISCELLANEOUS

(a) Press Releases and Disclosure. The Company may issue a press release describing the material terms of the transactions contemplated hereby as soon as practicable following the date of this Agreement, and may file with the Commission a Current Report on Form 8-K or other report obligated to be filed under the Exchange Act, with this Agreement attached as an exhibit thereto, describing the material terms of the transactions contemplated hereby, and the Company shall consult with the Agent prior to making such disclosures, and the parties hereto shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosures that is reasonably satisfactory to all parties hereto. No party hereto shall issue thereafter any press release or like public statement (including, without limitation, any disclosure required in reports filed with the Commission pursuant to the Exchange Act) related to this Agreement or any of the transactions contemplated hereby without the prior written approval of the other party hereto, except as may be necessary or appropriate in the reasonable opinion of the party seeking to make disclosure to comply with the requirements of applicable law or stock exchange rules. In the case of any such press release or like public statement, other than a press release or like public statement by the Company that includes disclosure solely related to sales made pursuant to this Agreement and the proceeds thereof for which no notice or consultation with the Agent shall be required, the party making such disclosure shall consult with the other party prior to making such disclosure, and the parties shall use all commercially reasonable efforts, acting in good faith, to agree upon a text for such disclosure that is reasonably satisfactory to all parties hereto.

(b) No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (i) the transactions contemplated by this Agreement, including the determination of any fees, are arm's-length commercial transactions between the Company and the Agent, and do not constitute a recommendation, investment advice, or solicitation of any action by the Agent, (ii) when acting as a principal under this Agreement, the Agent is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its stockholders, creditors, employees or any other party, (iii) the Agent has not assumed nor will assume an advisory or fiduciary responsibility in favor of the Company with respect to the transactions contemplated hereby or the process leading thereto (irrespective of whether the Agent has advised or is currently advising the Company on other matters) and the Agent does not have any obligation to the Company with respect to the transactions contemplated hereby except the obligations expressly set forth in this Agreement, (iv) the Agent and its Affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, (v) the Agent has not provided any legal, accounting, financial, regulatory, investment or tax advice with respect to the transactions contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate, and (vi) none of the activities of the Agent in connection with the transactions contemplated herein constitutes a recommendation, investment advice or solicitation of any action by the Agent with respect to any entity or natural person.

(c) Research Analyst Independence. The Company acknowledges that the Agent's research analysts and research departments are required to and should be independent from their

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

(d) Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied (or, if to the Company, emailed) and confirmed to the parties hereto as follows:

If to the Agent:

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

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

Latham & Watkins LLP
12670 High Bluff Drive
San Diego, CA 92130
Facsimile: (858) 523-5450
Attention: Michael E. Sullivan, Esq.

If to the Company:

Akebia Therapeutics, Inc.
245 First Street, Suite 1400
Cambridge, MA 02142
Attention: Erik Ostrowski and Carolyn Rucci, Esq.
E-mail: [**] and [**]

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

Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, MA 02109
Attention: Stuart Falber, Esq. and Caroline Dotolo, Esq.
E-Mail: Stuart.Falber@wilmerhale.com; Caroline.Dotolo@wilmerhale.com

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

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

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

(g) Governing Law Provisions. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located in the Borough of Manhattan in the City of New York (collectively, the “**Specified Courts**”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

(h) General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This

Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and may be delivered by facsimile transmission or by electronic delivery of a portable document format (PDF) file (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). This Agreement may not be amended or modified unless agreed to in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Article and Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

[Signature Page Immediately Follows]

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

Very truly yours,

AKEBIA THERAPEUTICS, INC.

By: /s/ Erik J. Ostrowski

Name: Erik J. Ostrowski

Title: Senior Vice President, Chief Financial Officer, Chief Business Officer and Treasurer

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

JEFFERIES LLC

By: /s/ Michael Magarro

Name: Michael Magarro

Title: Managing Director

[Signature Page to Sales Agreement]

EXHIBIT A
ISSUANCE NOTICE

[Date]

Jefferies LLC
520 Madison Avenue
New York, New York 10022

Attn: [_____]

Reference is made to the Amended & Restated Open Market Sale Agreement between Akebia Therapeutics, Inc. (the “**Company**”) and Jefferies LLC (the “**Agent**”) dated as of September 3, 2024. The Company confirms that all conditions to the delivery of this Issuance Notice are satisfied as of the date hereof.

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

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

\$ _____

Number of days in selling period: _____

First date of selling period: _____

Last date of selling period: _____

Settlement Date(s) if other than standard T+1 settlement:

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

Comments: _____

By: _____
Name:
Title:

Schedule A
Notice Parties

The Company

John P. Butler

Erik Ostrowski

Carolyn Rucci

The Agent

Michael Magarro

HealthcareATM@jefferies.com

AKEBIA THERAPEUTICS, INC.

and

Trustee

INDENTURE

Dated as of _____

SENIOR DEBT SECURITIES

CROSS-REFERENCE TABLE¹

Section of Trust Indenture Act of 1939, as amended	Section of Indenture
310(a)	6.09
310(b)	6.08
	6.10
310(c)	Inapplicable
311(a)	6.13
311(b)	6.13
311(c)	Inapplicable
312(a)	4.01
	4.04
312(b)	4.04(c)
312(c)	4.04(c)
313(a)	4.03
313(b)	4.03
313(c)	4.03
313(d)	4.03
314(a)	4.02
314(b)	Inapplicable
314(c)	2.04
	8.04
	9.01(c)
	10.01(b)
	11.05
314(d)	Inapplicable
314(e)	11.05
314(f)	Inapplicable
315(a)	6.01
	6.02
315(b)	5.11
315(c)	6.01
315(d)	6.01
	6.02
315(e)	5.12
316(a)	5.09
	5.10
	7.04
316(b)	5.06
	5.10
316(c)	7.02
317(a)	5.04
317(b)	3.04
318(a)	11.07

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

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THIS INDENTURE, dated as of _____ between Akebia Therapeutics, Inc., a Delaware corporation (the “**Issuer**”) and _____, a _____ (the “**Trustee**”),

W I T N E S S E T H :

WHEREAS, the Issuer may from time to time duly authorize the issue of its unsecured 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;

WHEREAS, the Issuer has duly authorized the execution and delivery of this Indenture to provide, among other things, for the authentication, delivery and administration of the Securities; 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 Issuer and the Trustee mutually covenant and agree for the equal and proportionate benefit of the respective holders from time to time of the Securities as follows:

ARTICLE 1
DEFINITIONS

Section 1.01 *Certain Terms Defined.* The following terms (except as otherwise expressly provided or unless the context otherwise clearly requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section. All other terms used in this Indenture that are defined in the Trust Indenture Act or the definitions of which in the Securities Act are referred to in the Trust Indenture Act, including terms defined therein by reference to the Securities Act (except as herein otherwise expressly provided or unless the context otherwise clearly requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of this Indenture. All accounting terms used herein and not expressly defined shall have the meanings assigned to such terms in accordance with generally accepted accounting principles, and the term “**generally accepted accounting principles**” means such accounting principles as are generally accepted in the United States at the time of any computation. The words “herein”, “hereof” and “hereunder” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision. The terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular.

“**Additional Amounts**” means any additional amounts that are required by this Indenture or by any Security, under circumstances specified herein or therein, to be paid by the Issuer in respect of certain taxes, assessments or other governmental charges imposed on Holders specified therein and which are owing to such Holders.

“**Applicable Procedures**” means, with respect to a Depository, as to any matter at any time, the policies and procedures of such Depository, if any, that are applicable to such matter at such time.

“**Board of Directors**” means either the Board of Directors of the Issuer or any committee of such Board duly authorized to act on its behalf.

“**Board Resolution**” means a copy of one or more resolutions, certified by the secretary or an assistant secretary of the Issuer to have been duly adopted by the Board of Directors and to be in full force and effect, and delivered to the Trustee.

“**Business Day**” means, with respect to any Security, a day that in the city (or in any of the cities, if more than one) in which amounts are payable, as specified in the form of such Security, is not a day on which banking institutions are authorized or required by law or regulation to close.

“**Capital Stock**” means (a) in the case of a corporation, corporate stock; (b) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock; (c) in the case of a partnership or limited liability company, partnership interests (whether general or limited) or membership interests; and (d) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person, but excluding from all of the foregoing any Debt securities convertible into Capital Stock, whether or not such Debt securities include any right of participation with Capital Stock.

“**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 and delivery of this Indenture such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties on such date.

“**Common Stock**” means shares of common stock, par value \$0.00001 per share, of the Issuer as the same exists at the date of execution and delivery of this Indenture or as such stock may be reconstituted from time to time.

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

“**Debt**” of any Person means any debt for money borrowed which is created, assumed, incurred or guaranteed in any manner by such Person or for which such Person is otherwise responsible or liable, and shall expressly include any such guaranty thereof by such Person. For the purpose of computing the amount of the Debt of any Person there shall be excluded all Debt of such Person for the payment or redemption or satisfaction of which money or securities (or evidences of such Debt, if permitted under the terms of the instrument creating such Debt) in the necessary amount shall have been deposited in trust with the proper depository, whether upon or prior to the maturity or the date fixed for redemption of such Debt; and, in any instance where

Debt is so excluded, for the purpose of computing the assets of such Person there shall be excluded the money, securities or evidences of Debt deposited by such Person in trust for the purpose of paying or satisfying such Debt.

“**Depository**” means, with respect to the Securities of any series issuable or issued in the form of one or more Global Securities, the Person designated as Depository by the Issuer pursuant to Section 2.04 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 Global Securities of that series.

“**Dollar**” means the currency of the United States of America as at the time of payment is legal tender for the payment of public and private debts.

“**Event of Default**” means any event or condition specified as such in Section 5.01.

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

“**Foreign Currency**” means a currency issued by the government of a country other than the United States.

“**Foreign Government Obligation**” means (a) a direct obligation of the government of a country other than the United States of America, backed by the full faith and credit of such government, (b) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of such government, the payment of which is unconditionally guaranteed as a full faith and credit obligation by such government or (c) any depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act) as custodian with respect to any Foreign Government Obligation which is specified in clause (a) and held by such bank for the account of the holder of such depositary receipt, or with respect to any specific payment of principal of or interest on any such Foreign Government Obligation which is so specified and held, provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Foreign Government Obligation or the specific payment of principal or interest evidenced by such depositary receipt.

“**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 2.04, and bearing the legend prescribed in Section 2.04.

“**Holder**”, “**holder**”, “**holder of Securities**”, “**Securityholder**” or other similar terms mean the Person in whose name such Security is registered in the Security register kept by the Issuer for that purpose in accordance with the terms hereof.

“**Indenture**” means this instrument as originally executed and delivered or, if amended or supplemented as herein provided, as so amended or supplemented or both, and shall include the forms and terms of particular series of Securities established as contemplated hereunder.

“**interest**”, unless the context otherwise requires, refers to interest, and when used with respect to non-interest bearing Securities, refers to interest payable after maturity, if any.

“**Interest Payment Date**”, with respect to any Security, means the Stated Maturity of an installment of interest on such Security.

“**Issuer**” means Akebia Therapeutics, Inc., a Delaware corporation, and, subject to Article 9, its successors and assigns.

“**Issuer Order**” means a written statement, request or order of the Issuer signed in its name by the chairman of the Board of Directors, the president or any vice president of the Issuer.

“**Notice of Default**” shall have the meaning set forth in Section 5.01(c).

“**Officer’s Certificate**” means a certificate signed by the chairman of the Board of Directors, the president, any vice president, the treasurer, the secretary or any assistant secretary of the Issuer and delivered to the Trustee. Each such certificate shall comply with Section 314 of the Trust Indenture Act and, except to the extent provided herein, shall include the statements provided for in Section 11.05.

“**Opinion of Counsel**” means an opinion in writing signed by the general corporate counsel or such other legal counsel who may be an employee of or counsel to the Issuer and who shall be satisfactory to the Trustee. Each such opinion shall comply with Section 314 of the Trust Indenture Act and shall include the statements provided for in Section 11.05, if and to the extent required hereby.

“**original issue date**” of any Security (or portion thereof) means the earlier of (a) the date 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 5.01.

“**Outstanding**”, when used with reference to Securities, shall, subject to the provisions of Section 7.04, mean, as of any particular time, all Securities authenticated and delivered by the Trustee under this Indenture, except

- (a) Securities theretofore cancelled by the Trustee or delivered to the Trustee for cancellation;
- (b) Securities, or portions thereof, for the payment or redemption of which cash, U.S. Government Obligations or Foreign Government Obligations

(as provided for in Section 10.01(a) and Section 10.01(b)) in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Issuer) or shall have been set aside, segregated and held in trust by the Issuer for the Holders of such Securities (if the Issuer shall act as its own paying agent); *provided*, that if such Securities, or portions thereof, are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as herein provided, or provision satisfactory to the Trustee shall have been made for giving such notice;

- (c) Securities as to which Legal Defeasance shall have been effected pursuant to Section 10.01(b);
- (d) Securities in substitution for which other Securities shall have been authenticated and delivered, or which shall have been paid, pursuant to the terms of Section 2.09 (except with respect to any such Security as to which proof satisfactory to the Trustee is presented that such Security is held by a Person in whose hands such Security is a legal, valid and binding obligation of the Issuer), Securities converted into Common Stock pursuant hereto and Securities not deemed outstanding pursuant to Section 12.02; and
- (e) Securities as to which any property deliverable upon conversion thereof has been delivered (or such delivery has been made available), or as to which any other particular conditions have been satisfied, in each case as may be provided for such Securities as contemplated in Section 2.03.

In determining whether the Holders of the requisite principal amount of Outstanding Securities of any or all series have given any request, demand, authorization, direction, notice, consent or waiver hereunder, (A) the principal amount of an Original Issue Discount Security that shall be deemed to be Outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the maturity thereof pursuant to Section 5.01, (B) if, as of such date, the principal amount payable at the Stated Maturity of a Security is not determinable, the principal amount of such Security which shall be deemed to be Outstanding shall be the amount as specified or determined as contemplated by Section 2.03, and (C) the principal amount of a Security denominated in one or more foreign currencies, composite currencies or currency units which shall be deemed to be Outstanding shall be the U.S. dollar equivalent, determined as of such date in the manner provided as contemplated by Section 2.03, of the principal amount of such Security (or, in the case of a Security described in clause (A) or (B) above, of the amount determined as provided in such clause).

“**Person**” means any individual, corporation, partnership, limited partnership, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

“**principal**” whenever used with reference to the Securities or any Security or any portion thereof, shall be deemed to include “and premium, if any”.

“**record date**” shall have the meaning set forth in Section 2.07.

“**Responsible Officer**”, when used with respect to the Trustee, means the chairman of the board of directors, any vice chairman of the board of directors, the chairman of the trust committee, the chairman of the executive committee, any vice chairman of the executive committee, the president, any vice president, the cashier, the secretary, the treasurer, any trust officer, any assistant trust officer, any assistant vice president, any assistant cashier, any assistant secretary, any assistant treasurer, or any other officer or assistant officer of the Trustee customarily performing functions similar to those performed by the persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with the particular subject.

“**Security**” or “**Securities**” has the meaning stated in the first recital of this Indenture, or, as the case may be, Securities that have been authenticated and delivered under this Indenture.

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

“**Security Registrar**” shall have the meaning set forth in Section 4.01(b).

“**Stated Maturity**”, with respect to any Security or any installment of principal thereof or interest thereon or any Additional Amounts with respect thereto, means the date established by or pursuant to this Indenture or such Security as the fixed date on which the principal of such Security or such installment of principal or interest is, or such Additional Amounts are, due and payable.

“**Subsidiary**” means any corporation or other entity (including, without limitation, partnerships, limited liability companies, joint ventures and associations) of which at least a majority of the outstanding Capital Stock having by the terms thereof (without regard to the occurrence or any contingency) ordinary voting power for the election of directors (or persons performing similar functions) of such corporation or other entity (irrespective of whether or not at the time the Capital Stock of any other class or classes of such corporation or other entity shall have or might have voting power by reason of the occurrence of any such contingency) is at the time directly or indirectly owned by the Issuer, or by one or more Subsidiaries of the Issuer, or by the Issuer and one or more other Subsidiaries of the Issuer.

“**Trust Indenture Act**” (except as otherwise provided in Sections 8.01 and 8.02) means the Trust Indenture Act of 1939, as amended, as in force at the date as of which this Indenture was originally executed.

“**Trustee**” means the Person identified as “**Trustee**” in the first paragraph hereof and, subject to the provisions of Article 6, shall also include any successor trustee. “**Trustee**” shall also 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 the Securities of such series.

“**U.S. Government Obligation**” means (a) a direct obligation of the United States of America, backed by its full faith and credit, or (b) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America.

“**vice president**”, when used with respect to the Issuer or the Trustee, means any vice president, whether or not designated by a number or a word or words added before or after the title of “vice president”.

“**Yield to Maturity**” means the yield to maturity on a series of securities, calculated at the time of issuance of such series, or, if applicable, at the most recent redetermination of interest on such series, and calculated in accordance with accepted financial practice.

ARTICLE 2 SECURITIES

Section 2.01 *Forms Generally*. The Securities of each series shall be substantially in such form (not inconsistent with this Indenture) as shall be established by or pursuant to one or more Board Resolutions (as set forth in a Board Resolution or, to the extent established pursuant to (rather than set forth in) a Board Resolution, an Officer’s Certificate detailing such establishment) 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 or regulations pursuant thereto, or with any rules of any securities exchange or to conform to general usage, all as may be determined by the officers executing such Securities as evidenced by their execution of such Securities.

The definitive Securities shall be printed, lithographed or engraved on steel engraved borders or may be produced in any other manner, all as determined by the officers executing such Securities as evidenced by their execution of such Securities.

Section 2.02 *Form of Trustee's Certificate of Authentication*. The Trustee's certificate of authentication on all Securities shall be in substantially the following form:

This is one of the Securities of the series designated herein and referred to in the within-mentioned Indenture.

as Trustee

By: _____
Authorized Officer

Section 2.03 *Amount Unlimited; Issuable in Series*. The aggregate principal amount of Securities which may be authenticated and delivered under this Indenture is unlimited.

The Securities may be issued in one or more series. The terms of a series of Securities shall be established prior to the initial issuance thereof in or pursuant to one or more Board Resolutions, or, to the extent established pursuant to (rather than set forth in) a Board Resolution, in an Officer's Certificate detailing such establishment and/or established in one or more indentures supplemental hereto. The terms of such series reflected in such Board Resolution, Officer's Certificate, or supplemental indenture may include the following or any additional or different terms:

- (a) the designation of the Securities of the series (which may be part of a series of Securities previously issued);
- (b) any limit upon the aggregate principal amount of the Securities of the series that may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 2.08, 2.09, 2.11, 8.05 or 12.03);
- (c) the date or dates on which the principal of the Securities of the series is payable or the method used to determine those dates and the right, if any, to extend such date or dates;
- (d) the rate or rates at which the Securities of the series shall bear interest, if any or the method by which such rate or rates shall be determined; the record date or dates for the determination of holders to whom interest is payable; the date or dates from which such interest shall accrue and on which such interest shall be payable, or the method by which such date or dates shall be determined; the right, if any, to extend the interest payment periods and the duration of that extension; and the basis upon which

interest shall be calculated if other than that of a 360-day year of twelve 30-day months;

- (e) the place or places where the principal of and any interest on Securities of the series shall be payable (if other than as provided in Section 3.02);
- (f) the obligation or the right, if any, of the Issuer 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 terms and conditions upon which Securities of the series shall be redeemed, purchased or repaid, in whole or in part, pursuant to such obligation or right;
- (g) if other than denominations of \$2,000 and any integral multiple of \$1,000 in excess thereof, the denominations in which Securities of the series shall be issuable;
- (h) 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;
- (i) if other than Dollars, the currency, currencies or currency units in which the Securities of the series are denominated;
- (j) if other than the currency in which the Securities of the series are denominated, the currency in which payment of the principal of or interest on the Securities of such series shall be payable;
- (k) if the principal of or interest on the Securities of the series is to be payable, at the election of the Issuer or a Holder thereof, in a currency other than that in which the Securities are denominated, the period or periods within which, and the terms and conditions upon which, such election may be made;
- (l) if the amount of payments of principal of and interest on the Securities of the series may be determined by reference to an index based on a currency other than that in which the Securities of the series are denominated, or by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices, the manner in which such amounts shall be determined;
- (m) the terms and conditions, if applicable, upon which conversion or exchange of the Securities into Common Stock will be effected, including the initial conversion or exchange price or rate and any adjustments

thereto, the conversion or exchange period and other provisions in addition to or in lieu of those described herein;

- (n) if the Securities of the series may be issued in exchange for surrendered Securities of another series, or for other securities of the Issuer, pursuant to the terms of such Securities or securities or of any agreement entered into by the Issuer, the ratio of the principal amount of the Securities of the series to be issued to the principal amount of the Securities or securities to be surrendered in exchange, and any other material terms of the exchange;
- (o) if Sections 10.01(b) or 10.01(c) are inapplicable to Securities of such series;
- (p) whether and under what circumstances the Issuer will pay Additional Amounts on the Securities and, if so, whether the Issuer will have the option to redeem such Securities rather than pay such additional amounts;
- (q) if the Securities of such 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, then the form and terms of such certificates, documents or conditions;
- (r) any trustees, authenticating or paying agents, transfer agents or registrars or any other agents with respect to the Securities of such series;
- (s) any other events of default or covenants with respect to the Securities of such series in addition to or in lieu of those contained in this Indenture; and
- (t) any other terms of the series.

The Issuer may from time to time, without notice to or the consent of the holders of any series of Securities, create and issue further Securities of any such series ranking equally with the Securities of such series in all respects (or in all respects other than (1) the payment of interest accruing prior to the issue date of such further Securities or (2) the first payment of interest following the issue date of such further Securities). Such further Securities may be consolidated and form a single series with the Securities of such series and have the same terms as to status, redemption or otherwise as the Securities of such series.

Section 2.04 *Authentication and Delivery of Securities*. The Issuer may deliver Securities of any series executed by the Issuer 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 order of the Issuer (contained in the Issuer Order referred to below in this Section) or pursuant to such procedures acceptable to the Trustee and to such recipients as may be specified from time to time by an Issuer Order. The maturity

date, original issue date, interest rate and any other terms of the Securities of such series shall be determined by or pursuant to such Issuer Order and procedures. If provided for in such procedures, such Issuer Order may authorize authentication and delivery pursuant to oral instructions from the Issuer or its duly authorized agent, which instructions shall be promptly confirmed in writing. In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, and (subject to Section 6.01) shall be fully protected in relying upon:

- (a) an Issuer Order requesting such authentication and setting forth delivery instructions if the Securities are not to be delivered to the Issuer;
- (b) any Board Resolution, Officer's Certificate 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 were established;
- (c) an Officer's Certificate setting forth the form or forms and terms of the Securities stating that the form or forms and terms of the Securities have been established pursuant to Sections 2.01 and 2.03 and comply with this Indenture, and covering such other matters as the Trustee may reasonably request; and
- (d) an Opinion of Counsel to the effect that:
 - (i) the form or forms and terms of such Securities have been established pursuant to Sections 2.01 and 2.03 and comply with this Indenture,
 - (ii) the authentication and delivery of such Securities by the Trustee are authorized under the provisions of this Indenture, and
 - (iii) such Securities when authenticated and delivered by the Trustee and issued by the Issuer in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and binding obligations of the Issuer,

and covering such other matters as the Trustee may reasonably request.

The Trustee shall have the right to decline to authenticate and deliver any Securities under this Section if the Trustee, being advised by counsel, determines that such action may not lawfully be taken by the Issuer or if the Trustee in good faith by its board of directors or board of trustees, executive committee, or a trust committee of directors or trustees or Responsible Officers shall determine that such action would expose the Trustee to personal liability to existing Holders or would affect the Trustee's own rights, duties or immunities under the Securities, this Indenture or otherwise.

The Issuer shall execute and the Trustee shall, in accordance with this Section with respect to the Securities of a series, authenticate and deliver one or more 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 and not yet cancelled, (ii) shall be registered in the name of the Depository for such Global Security or Securities or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or pursuant to such Depository's instructions and (iv) shall 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 DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY.”

Each Depository designated pursuant to this Section must, at the time of its designation and at all times while it serves as Depository, be a clearing agency registered under the Exchange Act and any other applicable statute or regulation.

Section 2.05 *Execution of Securities.* The Securities shall be signed on behalf of the Issuer by the chairman of its Board of Directors, any vice chairman of its Board of Directors, its chief executive officer, its principal financial officer, its president, any vice president or its treasurer. Such signatures may be the manual or facsimile signatures of the present or any future such officers. Typographical and other minor errors or defects in any such reproduction of any such signature shall not affect the validity or enforceability of any Security that has been duly authenticated and delivered by the Trustee.

In case any officer of the Issuer who shall have signed any of the Securities shall cease to be such officer before the Security so signed shall be authenticated and delivered by the Trustee or disposed of by the Issuer, such Security nevertheless may be authenticated and delivered or disposed of as though the person who signed such Security had not ceased to be such officer of the Issuer; and any Security may be signed on behalf of the Issuer by such persons as, at the actual date of the execution of such Security, shall be the proper officers of the Issuer, although at the date of the execution and delivery of this Indenture any such person was not such an officer.

Section 2.06 *Certificate of Authentication.* Only such Securities as shall bear thereon a certificate of authentication substantially in the form hereinbefore recited, executed by the Trustee by the manual signature of one of its authorized officers, shall be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. The execution of such certificate by the Trustee upon any Security executed by the Issuer shall be conclusive evidence that the Security so authenticated has been duly authenticated and delivered hereunder and that the Holder is entitled to the benefits of this Indenture.

Section 2.07 *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, in denominations of \$2,000 and any integral multiple of \$1,000 thereof. 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 Issuer executing the same may determine with the approval of the Trustee, as evidenced by the execution and authentication thereof. Unless otherwise indicated in a Board Resolution, Officer's Certificate or supplemental indenture for a particular series, interest will be calculated on the basis of a 360-day year of twelve 30-day months.

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, exchange or conversion of such Security subsequent to the record date and prior to such Interest Payment Date, except if and to the extent the Issuer shall default in the payment of the interest due on such Interest Payment Date for such series, in which case such defaulted interest shall be paid to the Persons in whose names Outstanding Securities for such series are registered at the close of business on a subsequent record date (which shall be not less than five Business Days prior to the date of payment of such defaulted interest) established by notice given by or on behalf of the Issuer to the Holders of Securities not less than 15 days preceding such subsequent record date. 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 specified, if such Interest Payment Date is the first day of a calendar month, the 15th day of the immediately preceding calendar month or, if such Interest Payment Date is the 15th day of a calendar month, the first day of such calendar month, whether or not such record date is a Business Day.

Section 2.08 *Registration, Transfer and Exchange.* The Issuer will keep at each office or agency to be maintained for the purpose as provided in Section 3.02 for each series of Securities a register or registers in which, subject to such reasonable regulations as it may prescribe, it will provide for the registration of Securities of such series and the registration of transfer of Securities of such series. Such register shall be in written form in the English language or in any other form capable of being converted into such form within a reasonable time. At all reasonable times such register or registers shall be open for inspection by the Trustee.

Upon due presentation for registration of transfer of any Security of any series at any such office or agency to be maintained for the purpose as provided in Section 3.02, the Issuer shall execute and the Trustee shall authenticate and deliver in the name of the transferee or

transferees a new Security or Securities of the same series, maturity date, interest rate and original issue date in authorized denominations for a like aggregate principal amount.

At the option of the Holder thereof, Securities of any series (except a Global Security) may be exchanged for a Security or Securities of such series having authorized denominations and an equal aggregate principal amount, upon surrender of such Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. Whenever any Securities are so surrendered for exchange, the Issuer shall execute, and the Trustee shall authenticate and deliver, the Securities which the Holder making the exchange is entitled to receive. All Securities surrendered upon any exchange or transfer provided for in this Indenture shall be promptly cancelled and disposed of by the Trustee and the Trustee will deliver a certificate of disposition thereof to the Issuer.

All Securities presented for registration of transfer, exchange, redemption or payment shall (if so required by the Issuer or the Trustee) be duly endorsed by, or be accompanied by a written instrument or instruments of transfer in form satisfactory to the Issuer and the Trustee duly executed by, the Holder or his or her attorney duly authorized in writing.

The Issuer may require payment of a sum sufficient to cover any stamp or other 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.

The Issuer shall not be required to exchange or register a transfer of (a) any Securities of any series for a period of 15 days immediately preceding the first delivery of notice of redemption of Securities of such series to be redeemed or (b) any Securities selected, called or being called for redemption, in whole or in part, except, in the case of any Security to be redeemed in part, the portion thereof not so to be redeemed.

Notwithstanding any other provision of this Section 2.08, unless and until it is exchanged in whole or in part for Securities in definitive registered form, a 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 the Securities of a series notifies the Issuer that it is unwilling or unable to continue as Depositary for the Securities of such series or if at any time the Depositary for the Securities of a series shall no longer be eligible under Section 2.04, the Issuer shall appoint a successor Depositary with respect to the Securities of such series. If a successor Depositary for the Securities of such series is not appointed by the Issuer within 90 days after the Issuer receives such notice or becomes aware of such ineligibility, the Issuer's determination pursuant to Section 2.03 that the Securities of such series be represented by a Global Security shall no longer be effective and the Issuer will execute, and the Trustee, upon receipt of an Officer's Certificate for the authentication and delivery of definitive Securities of such series, will authenticate and deliver, Securities of such series in definitive registered form,

in any authorized denominations, in an aggregate principal amount equal to the principal amount of the Global Security or Securities representing the Securities of such series, in exchange for such Global Security or Securities.

The Issuer may at any time and in its sole discretion determine that the Securities of any series issued in the form of one or more Global Securities shall no longer be represented by a Global Security or Securities. In such event the Issuer will execute, and the Trustee, upon receipt of an Officer's Certificate for the authentication and delivery of definitive Securities of such series, will authenticate and deliver, Securities of such series in definitive registered form, in any authorized denominations, in an aggregate principal amount equal to the principal amount of the Global Security or Securities representing such series, in exchange for such Global Security or Securities.

The Depositary for such Global Security may surrender such Global Security in exchange in whole or in part for Securities of the same series in definitive registered form in accordance with the two preceding paragraphs or on such other terms as are acceptable to the Issuer and such Depositary. Thereupon, the Issuer shall execute, and the Trustee shall authenticate and deliver, without service charge,

- (i) to the Person specified by such Depositary a new Security or Securities of the same series, 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 Global Security; and
- (ii) to such Depositary a new Global Security in a denomination equal to the difference, if any, between the principal amount of the surrendered Global Security and the aggregate principal amount of Securities authenticated and delivered pursuant to clause (i) above.

Upon the exchange of a Global Security for Securities in definitive registered form, in authorized denominations, such Global Security shall be cancelled by the Trustee. Securities in definitive registered form issued in exchange for a Global Security pursuant to this Section 2.08 shall be registered in such names and in such authorized denominations as the Depositary for such Global Security, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee 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 Issuer, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such transfer or exchange.

Section 2.09 *Mutilated, Defaced, Destroyed, Lost and Stolen Securities.* In case any temporary or definitive Security shall become mutilated or defaced or be destroyed, lost or stolen, the Issuer in its discretion may execute, and upon the written request of any officer of the Issuer, the Trustee shall authenticate and deliver a new Security of the same series, maturity date,

interest rate and original issue date, bearing a number or other distinguishing symbol not contemporaneously outstanding, in exchange and substitution for the mutilated or defaced Security, or in lieu of and substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substitute Security shall furnish to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or indemnity as may be required by them to indemnify and defend and to save each of them harmless and, in every case of destruction, loss or theft, evidence to their satisfaction of the destruction, loss or theft of such Security and of the ownership thereof and in the case of mutilation or defacement shall surrender the Security to the Trustee.

Upon the issuance of any substitute Security, the Issuer may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith. In case any Security which has matured or is about to mature or has been called for redemption in full, or is being surrendered for conversion in full, shall become mutilated or defaced or be destroyed, lost or stolen, the Issuer may, instead of issuing a substitute Security (with the Holder's consent, in the case of convertible Securities), pay or authorize the payment of the same or convert, or authorize conversion of the same (without surrender thereof except in the case of a mutilated or defaced Security), if the applicant for such payment shall furnish to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or indemnity as any of them may require to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Issuer and the Trustee and any agent of the Issuer or the Trustee evidence to their satisfaction of the destruction, loss or theft of such Security and of the ownership thereof.

Every substitute Security of any series issued pursuant to the provisions of this Section by virtue of the fact that any such Security is destroyed, lost or stolen shall constitute an additional contractual obligation of the Issuer, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone and shall be entitled to all the benefits of (but shall be subject to all the limitations of rights set forth in) this Indenture equally and proportionately with any and all other Securities of such series duly authenticated and delivered hereunder. All Securities shall be held and owned upon the express condition that, to the extent permitted by law, the foregoing provisions are exclusive with respect to the replacement or payment or conversion of mutilated, defaced or destroyed, lost or stolen Securities and shall preclude any and all other rights or remedies notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

Section 2.10 *Cancellation of Securities; Destruction Thereof.* All Securities surrendered for exchange for Securities of the same series or for payment, redemption, registration of transfer or conversion or for credit against any payment in respect of a sinking or analogous fund, if surrendered to the Issuer or any agent of the Issuer or the Trustee, shall be delivered to the Trustee for cancellation or, if surrendered to the Trustee, shall be cancelled by it; and no Securities shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Trustee shall dispose of cancelled Securities held by it and

deliver a certificate of disposition to the Issuer. If the Issuer shall acquire any of the Securities, such acquisition shall not operate as a redemption or satisfaction of the Debt represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

Section 2.11 *Temporary Securities*. Pending the preparation of definitive Securities for any series, the Issuer may execute and the Trustee shall authenticate and deliver temporary Securities for such series (printed, lithographed, typewritten or otherwise reproduced, in each case in form satisfactory to the Trustee). Temporary Securities of any series shall be issuable in any authorized denomination, and substantially in the form of the definitive Securities of such series but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Issuer with the concurrence of the Trustee as evidenced by the execution and authentication thereof. Temporary Securities may contain such reference to any provisions of this Indenture as may be appropriate. Every temporary Security shall be executed by the Issuer and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities. Without unreasonable delay the Issuer shall execute and shall furnish definitive Securities of such series and thereupon temporary Securities of such series may be surrendered in exchange therefor without charge at each office or agency to be maintained by the Issuer for that purpose pursuant to Section 3.02 and the Trustee shall authenticate and deliver in exchange for such temporary Securities of such series an equal aggregate principal amount of definitive Securities of the same series having 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, unless the benefits of the temporary Securities are limited pursuant to Section 2.03.

Section 2.12 *CUSIP Numbers*. The Issuer in issuing the Securities may use “CUSIP” numbers if then generally in use and, if so, the Trustee may use “CUSIP” numbers in notices of redemption as a convenience to Holders. Any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Securities. No such redemption shall be affected by any defect in or omission of such numbers.

ARTICLE 3 COVENANTS OF THE ISSUER

Section 3.01 *Payment of Principal and Interest*. The Issuer covenants and agrees for the benefit of each series of Securities that it will duly and punctually pay or cause to be paid the principal of, and interest on, each of the Securities of such series (together with any additional amounts payable pursuant to the terms of such Securities) at the place or places, at the respective times and in the manner provided in such Securities and in this Indenture. The interest on Securities (together with any additional amounts payable pursuant to the terms of such Securities) shall be payable only to or upon the written order of the Holders thereof and at the option of the Issuer 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 Issuer.

Section 3.02 *Offices for Payments, Etc.* The Issuer will maintain (i) in _____, an agency where the Securities of each series may be presented for payment, an agency where the Securities of each series may be presented for exchange and conversion, if applicable, as provided in this Indenture and an agency where the Securities of each series may be presented for registration of transfer as in this Indenture provided and (ii) such further agencies in such places as may be determined for the Securities of such series pursuant to Section 2.03.

The Issuer will maintain in _____, an agency where notices and demands to or upon the Issuer in respect of the Securities of any series or this Indenture may be served.

The Issuer will give to the Trustee written notice of the location of each such agency and of any change of location thereof. In case the Issuer shall fail to maintain any agency required by this Section to be located in _____, or shall fail to give such notice of the location or of any change in the location of any of the above agencies, presentations and demands may be made and notices may be served at the Corporate Trust Office of the Trustee.

The Issuer may from time to time designate one or more additional agencies where the Securities of a series may be presented for payment, where the Securities of that series may be presented for exchange or conversion, if applicable, as provided in this Indenture and pursuant to Section 2.03 and where the Securities of that series may be presented for registration of transfer as in this Indenture provided, and the Issuer may from time to time rescind any such designation, as the Issuer may deem desirable or expedient; *provided, however*, that no such designation or rescission shall in any manner relieve the Issuer of its obligation to maintain the agencies provided for in this Section. The Issuer will give to the Trustee prompt written notice of any such designation or rescission thereof.

Section 3.03 *Appointment to Fill a Vacancy in Office of Trustee.* The Issuer, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 6.10, a Trustee, so that there shall at all times be a Trustee with respect to each series of Securities hereunder.

Section 3.04 *Paying Agents.* Whenever the Issuer shall appoint a paying agent other than the Trustee with respect to the Securities of any series, it will cause such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section,

- (a) that it will hold all sums received by it as such agent for the payment of the principal of or interest on the Securities of such series (whether such sums have been paid to it by the Issuer or by any other obligor on the Securities of such series) in trust for the benefit of the Holders of the Securities of such series or of the Trustee,
- (b) that it will give the Trustee notice of any failure by the Issuer (or by any other obligor on the Securities of such series) to make any payment of the principal of or interest on the Securities of such series when the same shall be due and payable, and

- (c) that at any time during the continuance of any such failure, upon the written request of the Trustee, it will forthwith pay to the Trustee all sums so held in trust by such paying agent.

The Issuer will, on or prior to each due date of the principal of or interest on the Securities of such series, deposit with the paying agent a sum sufficient to pay such principal or interest so becoming due, and (unless such paying agent is the Trustee) the Issuer will promptly notify the Trustee of any failure to take such action.

If the Issuer shall act as its own paying agent with respect to the Securities of any series, it will, on or before each due date of the principal of or interest on the Securities of such series, set aside, segregate and hold in trust for the benefit of the Holders of the Securities of such series a sum sufficient to pay such principal or interest so becoming due. The Issuer will promptly notify the Trustee of any failure to take such action.

Anything in this Section to the contrary notwithstanding, but subject to Section 10.01, the Issuer may at any time, for the purpose of obtaining a satisfaction and discharge with respect to one or more or all series of Securities hereunder, or for any other reason, pay or cause to be paid to the Trustee all sums held in trust for any such series by the Issuer or any paying agent hereunder, as required by this Section, such sums to be held by the Trustee upon the trusts herein contained.

Anything in this Section to the contrary notwithstanding, the agreement to hold sums in trust as provided in this Section is subject to the provisions of Sections 10.03 and 10.04.

Section 3.05 *Written Statement to Trustee.* So long as any Securities are Outstanding hereunder, the Issuer will deliver to the Trustee, within 120 days after the end of each fiscal year of the Issuer ending after the date hereof, a written certificate covering the previous fiscal year, (which need not comply with Section 11.05), signed by its principal executive officer, principal financial officer or principal accounting officer, stating whether or not, to the best knowledge of such officer, the Issuer is in default in the performance and observance of any of the terms, provisions and conditions of this Indenture (without regard to any period of grace or requirement of notice provided hereunder) and, if the Issuer shall be in default, specifying all such defaults and the nature and status thereof of which they may have knowledge.

ARTICLE 4 SECURITYHOLDERS LISTS AND REPORTS BY THE ISSUER AND THE TRUSTEE

Section 4.01 *Issuer to Furnish Trustee Information as to Names and Addresses of Securityholders.* The Issuer covenants and agrees that it 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 of each series pursuant to Section 312 of the Trust Indenture Act:

- (a) semiannually and not more than 15 days after each record date for the payment of interest on such Securities, as hereinabove specified, as of

such record date and on dates to be determined pursuant to Section 2.03 for non-interest bearing Securities in each year, and

- (b) at such other times as the Trustee may request in writing, within 30 days after receipt by the Issuer of any such request as of a date not more than 15 days prior to the time such information is furnished, *provided*, that, if and so long as the Trustee shall be the Security registrar (the “**Security Registrar**”) for such series, such list shall not be required to be furnished.

Section 4.02 *Reports by the Issuer.* The Issuer covenants to comply with Section 314(a) of the Trust Indenture Act insofar as it relates to information, documentation and other reports which the Issuer may be required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act.

Section 4.03 *Reports by the Trustee.* Any Trustee’s report required under Section 313(a) of the Trust Indenture Act shall be transmitted on or before _____ in each year following the date hereof, so long as any Securities are Outstanding hereunder, and shall be dated as of a date convenient to the Trustee but no more than 60 nor less than 45 days prior thereto. The Trustee shall comply with Sections 313(b), 313(c) and 313(d) of the Trust Indenture Act.

Section 4.04 *Preservation of Information; Communication with Securityholders.* (a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the Holders of Securities contained in the most recent list furnished to it as provided in Section 4.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity).

- (b) The Trustee may destroy any list furnished to it as provided in Section 4.01 upon receipt of a new list so furnished.
- (c) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities. The Issuer, the Trustee, the Security Registrar and any other Person shall have the protection of Section 312(c) of the Trust Indenture Act.

ARTICLE 5

REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT

Section 5.01 *Event of Default Defined; Acceleration of Maturity; Waiver of Default.* “**Event of Default**”, with respect to Securities of any series wherever used herein, means any one of the following events which shall have occurred and be continuing (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by

operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body):

- (a) default in the payment of any installment of interest upon any of the Securities of such series as and when the same shall become due and payable, and continuance of such default for a period of 30 days (or such other period as may be established for the Securities of such series as contemplated by Section 2.03); or
- (b) default in the payment of all or any part of the principal on any of the Securities of such series as and when the same shall become due and payable either at maturity, upon redemption, by declaration or otherwise (and, if established for the Securities of such series as contemplated by Section 2.03, the continuance of such default for a specified period); or
- (c) default in the performance, or breach, of any covenant or agreement of the Issuer in respect of the Securities of such series (other than a covenant or agreement in respect of the Securities of such series a default in the performance or breach of which is elsewhere in this Section specifically dealt with), and continuance of such default or breach for a period of 90 days after there has been given, by registered or certified mail, to the Issuer by the Trustee or to the Issuer and the Trustee by the Holders of at least 25% in principal amount of the Outstanding Securities of such series, a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a “**Notice of Default**” hereunder; or
- (d) a court having jurisdiction in the premises shall enter a decree or order for relief in respect of the Issuer 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 or sequestrator (or similar official) of the Issuer or for all or substantially all of its property and assets 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 90 consecutive days; or
- (e) the Issuer shall commence a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law, or consent to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of its property and assets, or make any general assignment for the benefit of creditors; or
- (f) any other Event of Default provided for in such series of Securities.

If an Event of Default described in clauses (a), (b), (c) or (f) occurs and is continuing, then, and in each and every such case, unless the principal of all of the Securities of such series shall have already become due and payable, either the Trustee or the Holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding hereunder (each such series voting as a separate class) by notice in writing to the Issuer (and also to the Trustee if given by Securityholders), may declare the entire principal (or, if the Securities of such series are Original Issue Discount Securities, such portion of the principal amount as may be specified in the terms of such series) of all Securities of such 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. If an Event of Default described in clauses (d) or (e) occurs and is continuing, then and in each and every such case, the entire principal (or, if any Securities are Original Issue Discount Securities, such portion of the principal as may be specified in the terms thereof) of all the Securities then Outstanding and interest accrued thereon, if any, shall automatically become immediately due and payable.

The foregoing provisions, however, are subject to the condition that if, at any time after the principal of the Securities of any series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the Issuer shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of such series and the principal of any and all Securities of such series 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 specified in the Securities of such series to the date of such payment or deposit) and such amount as shall be sufficient to cover reasonable compensation to the Trustee, its agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee except as a result of negligence or bad faith, and if any and all Events of Default under the Indenture with respect to such series, other than the non-payment of the principal of Securities of such series which shall have become due solely by such 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 Securities of such series then Outstanding, by written notice to the Issuer and to the Trustee, may waive all defaults with respect to such series 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.

Unless otherwise indicated in the Board Resolution, Officer's Certificate or supplemental indenture for a series of Original Issue Discount Securities, for all purposes under this Indenture, if a portion of the principal of any Original Issue Discount Securities shall have been accelerated and declared 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 5.02 *Collection of Debt by Trustee; Trustee May Prove Debt.* The Issuer covenants that (a) in case default shall be made in the payment of any installment of interest on any of the Securities of any series when such interest shall have become due and payable, and such default shall have continued for a period of 30 days or (b) in case default shall be made in the payment of all or any part of the principal of any of the Securities of any series when the same shall have become due and payable, whether upon maturity of the Securities of such series or upon any redemption or by declaration or otherwise, then, upon demand of the Trustee, the Issuer will pay to the Trustee for the benefit of the Holders of the Securities of such series the whole amount that then shall have become due and payable on all Securities of such series for principal or interest, as the case may be (with interest to the date of such payment upon the overdue 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 such series); and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable compensation to the Trustee and each predecessor trustee, their respective agents, attorneys and counsel, and any expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor trustee except as a result of its negligence or bad faith.

In case the Issuer shall fail forthwith to pay such amounts upon such demand, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any action or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceedings to judgment or final decree, and may enforce any such judgment or final decree against the Issuer or other obligor upon such Securities and collect in the manner provided by law out of the property of the Issuer or other obligor upon such Securities, wherever situated, the moneys adjudged or decreed to be payable.

In case there shall be pending proceedings relative to the Issuer or any other obligor upon the Securities under Title 11 of the United States Code or any other applicable Federal or state bankruptcy, insolvency or other similar law, or in case a receiver, assignee or trustee in bankruptcy or reorganization, liquidator, sequestrator or similar official shall have been appointed for or taken possession of the Issuer or its property or such other obligor or its property, or in case of any other comparable judicial proceedings relative to the Issuer or other obligor upon the Securities of any series, or to the creditors or property of the Issuer or such other obligor, the Trustee, irrespective of whether the principal of any Securities shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand pursuant to the provisions of this Section, shall be entitled and empowered, by intervention in such proceedings or otherwise:

- (i) to file and prove a claim or claims for the whole amount of principal and interest (or, if the Securities of any series are Original Issue Discount Securities, such portion of the principal amount as

may be specified in the terms of such series) owing and unpaid in respect of the Securities of any series, and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for reasonable compensation to the Trustee and each predecessor trustee, and their respective agents, attorneys and counsel, and for reimbursement of all expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor trustee, except as a result of negligence or bad faith) and of the Securityholders allowed in any judicial proceedings relative to the Issuer or other obligor upon the Securities of any series, or to the creditors or property of the Issuer or such other obligor,

- (ii) unless prohibited by applicable law and regulations, to vote on behalf of the Holders of the Securities of any series in any election of a trustee or a standby trustee in arrangement, reorganization, liquidation or other bankruptcy or insolvency proceedings or person performing similar functions in comparable proceedings, and
- (iii) to collect and receive any moneys or other property payable or deliverable on any such claims, and to distribute all amounts received with respect to the claims of the Securityholders and of the Trustee on their behalf; and any trustee, receiver or liquidator, custodian or other similar official is hereby authorized by each of the Securityholders to make payments to the Trustee, and, in the event that the Trustee shall consent to the making of payments directly to the Securityholders, to pay to the Trustee such amounts as shall be sufficient to cover reasonable compensation to the Trustee, each predecessor trustee and their respective agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor trustee except as a result of negligence or bad faith and all other amounts due to the Trustee or any predecessor trustee pursuant to Section 6.06.

Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or vote for or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of any series or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Securityholder in any such proceeding except, as aforesaid, to vote for the election of a trustee in bankruptcy or similar person.

All rights of action and of asserting claims under this Indenture, or under any of the Securities of any series, may be enforced by the Trustee without the possession of any of the

Securities of such series or the production thereof on any trial or other proceedings relative thereto, and any such action or proceedings instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment, subject to the payment of the expenses, disbursements and compensation of the Trustee, each predecessor trustee and their respective agents and attorneys, shall be for the ratable benefit of the Holders of the Securities in respect of which such action was taken.

In any proceedings brought by the Trustee (and also any proceedings involving the interpretation of any provision of this Indenture to which the Trustee shall be a party), the Trustee shall be held to represent all the Holders of the Securities in respect to which such action was taken, and it shall not be necessary to make any Holders of such Securities parties to any such proceedings.

Section 5.03 *Application of Proceeds*. Any moneys collected by the Trustee pursuant to this Article in respect 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 monies have been collected and stamping (or otherwise noting) thereon the payment, or issuing Securities of such series in reduced principal amounts in exchange for the presented Securities of like series if only partially paid, or upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due to the Trustee or any predecessor trustee pursuant to Section 6.06;

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, to the extent permitted by applicable law, 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, to the extent permitted by applicable law, 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, without preference or priority of principal over interest, or of interest 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; and

FOURTH: To the payment of the remainder, if any, to the Issuer or any other Person lawfully entitled thereto.

Section 5.04 *Suits for Enforcement*. In case an Event of Default has occurred, has not been waived and is continuing, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

Section 5.05 *Restoration of Rights on Abandonment of Proceedings*. In case the Trustee shall have proceeded to enforce any right under this Indenture and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, then and in every such case (subject to any determination in such proceeding) the Issuer and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Issuer, the Trustee and the Securityholders shall continue as though no such proceedings had been taken.

Section 5.06 *Limitations on Suits by Securityholders*. No Holder of any Security of any series shall have any right by virtue, or by availing itself, of any provision of this Indenture to institute any action or proceeding at law or in equity or in bankruptcy or otherwise upon or under or with respect to this Indenture, or for the appointment of a trustee, receiver, liquidator, custodian or other similar official or for any other remedy hereunder, unless such Holder previously shall have given to the Trustee written notice of default and of the continuance thereof, as hereinbefore provided, and unless also the Holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding shall have made written request upon the Trustee to institute such action or proceedings in its own name as trustee hereunder and shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby and the Trustee for 60 days after its receipt of such notice, request and offer of indemnity shall have failed to institute any such action or proceeding and no direction inconsistent with such written request shall have been given to the Trustee pursuant to Section 5.09; it being understood and intended, and being expressly covenanted by the Holder of every Security of a particular series with every other Holder of Securities of such series and the Trustee, that no one or more Holders of Securities of any series shall have any right in any manner whatever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other such Holder of Securities of such series, or to obtain or seek to obtain priority over or preference to any other such Holder of such series or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all Holders of Securities of the applicable series. For the protection and enforcement of the provisions of this Section, each and every

Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Section 5.07 *Unconditional Right of Securityholders to Institute Certain Suits*. Notwithstanding any other provision in this Indenture and any provision of any Security, the right of any Holder of any Security to receive payment of the principal of and interest on such Security on or after the respective due dates expressed in such Security in accordance with the terms hereof and thereof, or to institute 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; it being understood and intended, and being expressly covenanted by the Holder of every Security of a particular series with every other Holder of Securities of such Series and the Trustee, that no one or more Holders of Securities of any series shall have any right in any manner whatever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other such Holder of Securities of such series, or to obtain or seek to obtain priority over or preference to any other such Holder of Securities of such series or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all Holders of Securities of the applicable series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Section 5.08 *Powers and Remedies Cumulative; Delay or Omission Not Waiver of Default*. Except as provided in Section 5.06, no right or remedy herein conferred upon or reserved to the Trustee or to the Holders of Securities 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.

No delay or omission of the Trustee or of any Holder of Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power or shall be construed to be a waiver of any such Event of Default or an acquiescence therein; and, subject to Section 5.06, every power and remedy given by this Indenture or by law to the Trustee or to the Holders of Securities may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Holders of Securities.

Section 5.09 *Control by Holders of Securities*. The Holders of a majority in aggregate principal amount of the Securities of each series affected (with each series voting as a separate class) at the time Outstanding shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee with respect to the Securities of such series by this Indenture; *provided*, that such direction shall not be otherwise than in accordance with law and the provisions of this Indenture and provided, further, that (subject to the provisions of Section 6.01) the Trustee shall have the right to decline to follow any such direction if the Trustee, being advised by counsel, shall determine that the action or proceeding so directed may not lawfully be

taken or if the Trustee in good faith by its board of directors, the executive committee, or a trust committee of directors or Responsible Officers of the Trustee shall determine that the action or proceedings so directed would involve the Trustee in personal liability or if the Trustee in good faith shall so determine that the actions or forbearances specified in or pursuant to such direction would be unduly prejudicial to the interests of Holders of the Securities of all series so affected not joining in the giving of said direction, it being understood that (subject to Section 6.01) the Trustee shall have no duty to ascertain whether or not such actions or forbearances are unduly prejudicial to such Holders.

Nothing in this Indenture shall impair the right of the Trustee in its discretion to take any action deemed proper by the Trustee and which is not inconsistent with such direction or directions by Securityholders.

Section 5.10 *Waiver of Past Defaults*. The Holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, by notice to the Trustee, may on behalf of the Holders of all the Securities of such series waive any existing default in the performance of any of the covenants contained herein or established pursuant to Section 2.03 with respect to such series and its consequences, except an uncured default in the payment of the principal of, or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities; and may rescind an acceleration and its consequences, including any related payment default that resulted from such acceleration. In the case of any such waiver, the Issuer, the Trustee and the Holders of the Securities of such series shall be restored to their former positions and rights hereunder, respectively, such default shall cease to exist and be deemed to have been cured and not to have occurred, and any Event of Default arising therefrom shall be deemed to have been cured, and not to have occurred 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 thereon.

Section 5.11 *Trustee to Give Notice of Default*. The Trustee shall, within 90 days after the occurrence of a default with respect to the Securities of any series, give notice of all defaults with respect to that series known to the Trustee to all Holders of Securities of such series in the manner and to the extent provided in Sections 4.03 and 11.04, unless in each case such defaults shall have been cured before the giving of such notice (the term “**defaults**” for the purpose of this Section being hereby defined to mean any event or condition which is, or with notice or lapse of time or both would become, an Event of Default); *provided*, that, except in the case of default in the payment of the principal of or interest on any of the Securities of such series, or in the payment of any sinking fund installment on such series, the Trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee, or a trust committee of directors or trustees and/or Responsible Officers of the Trustee in good faith determines that the withholding of such notice is in the interests of the Securityholders of such series.

Section 5.12 *Right of Court to Require Filing of Undertaking to Pay Costs*. All parties to this Indenture agree, and each Holder of any Security by his or her acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the

enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Trustee, to any suit instituted by any Securityholder or group of Securityholders of any series holding in the aggregate more than 10% in aggregate principal amount of the Securities of such series, or to any suit instituted by any Securityholder for the enforcement of the payment of the principal of or interest on any Security of such series, on or after the respective due dates expressed in such Security or established pursuant to this Indenture.

ARTICLE 6 CONCERNING THE TRUSTEE

Section 6.01 *Duties and Responsibilities of the Trustee; During Default; Prior to Default.* With respect to the Holders of any series of Securities issued hereunder, the Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a particular series and after the curing or waiving of all Events of Default which may have occurred with respect to such series, undertakes to perform such duties and only such duties as are specifically set forth in this Indenture. In case an Event of Default with respect to the Securities of a series has occurred (and has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his or her own affairs.

No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act or its own willful misconduct.

Section 6.02 *Certain Rights of the Trustee.* In furtherance of and subject to the Trust Indenture Act and subject to Section 6.01:

- (a) in the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any statements, certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but, in the case of any such statements, certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture;
- (b) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts;

- (c) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the Holders pursuant to Section 5.09 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;
- (d) none of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers if there shall be reasonable ground for believing that the repayment of such funds or adequate indemnity against such liability is not reasonably assured to it;
- (e) the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, Officer's Certificate or any other certificate, statement, instrument, opinion, report, notice, request, consent, order, bond, debenture, note, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;
- (f) any request, direction, order or demand of the Issuer mentioned herein shall be sufficiently evidenced by an Officer's Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any resolution of the Board of Directors may be evidenced to the Trustee by a copy thereof certified by the secretary or an assistant secretary of the Issuer;
- (g) the Trustee may consult with counsel and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted to be taken by it hereunder in good faith and in accordance with such advice or Opinion of Counsel;
- (h) the Trustee shall be under no obligation to exercise any of the trusts or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities that might be incurred therein or thereby;
- (i) the Trustee shall not be liable for any action taken or omitted by it in good faith and believed by it to be authorized or within the discretion, rights or powers conferred upon it by this Indenture;
- (j) 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, statement, instrument, opinion, report, notice, request, consent, order, approval, appraisal, bond, debenture, note, 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; the reasonable expenses of every such investigation shall be paid by the Issuer or, if paid by the Trustee or any predecessor trustee, shall be repaid by the Issuer upon demand; and

- (k) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys not regularly in its employ and the Trustee shall not be responsible for any misconduct or negligence on the part of any such agent or attorney appointed with due care by it hereunder.

Section 6.03 *Trustee Not Responsible for Recitals, Disposition of Securities or Application of Proceeds Thereof.* The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Issuer, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representation as to the validity or sufficiency of this Indenture or of the Securities. The Trustee shall not be accountable for the use or application by the Issuer of any of the Securities or of the proceeds thereof.

Section 6.04 *Trustee and Agents May Hold Securities; Collections, Etc.* The Trustee or any agent of the Issuer or the Trustee, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not the Trustee or such agent and may otherwise deal with the Issuer and receive, collect, hold and retain collections from the Issuer with the same rights it would have if it were not the Trustee or such agent.

Section 6.05 *Moneys Held by Trustee.* Subject to the provisions of Section 10.04 hereof, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by mandatory provisions of law. Neither the Trustee nor any agent of the Issuer or the Trustee shall be under any liability for interest on any moneys received by it hereunder.

Section 6.06 *Compensation and Indemnification of Trustee and Its Prior Claim.* The Issuer covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, such reasonable compensation (which shall not be limited by any provision of law in

regard to the compensation of a trustee of an express trust) as the Issuer and the Trustee may from time to time agree in writing and, except as otherwise expressly provided herein, the Issuer covenants and agrees to pay or reimburse the Trustee and each predecessor trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by or on behalf of it in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all agents and other persons not regularly in its employ) except any such expense, disbursement or advance as may arise from its negligence or bad faith. The Issuer also covenants to indemnify the Trustee and each predecessor trustee for, and to hold it harmless against, any loss, liability or expense incurred without negligence or bad faith on its part, arising out of or in connection with the acceptance or administration of this Indenture or the trusts hereunder and its duties hereunder, including the costs and expenses of defending itself against or investigating any claim of liability in the premises. The obligations of the Issuer 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. 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.

Section 6.07 *Right of Trustee to Rely on Officer's Certificate, Etc.* Subject to Sections 6.01 and 6.02, 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 Officer's 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.

Section 6.08 *Disqualification; Conflicting Interests.* If the Trustee has or shall acquire any "conflicting interest" within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Issuer shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

Section 6.09 *Persons Eligible for Appointment as Trustee.* The Trustee for each series of Securities hereunder shall at all times be a corporation having a combined capital and surplus of at least \$50,000,000 and shall be eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of a Federal, State or District of Columbia supervising or examining authority, then, for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published.

Section 6.10 *Resignation and Removal; Appointment of Successor Trustee.* (a) The Trustee, or any trustee or trustees hereafter appointed, may at any time resign with respect to one or more or all series of Securities by giving written notice of resignation to the Issuer and by delivering notice of such resignation to the Holders of then Outstanding Securities of each series affected at their addresses as they shall appear on the Security register. Upon receiving such notice of resignation, the Issuer shall promptly appoint a successor trustee or trustees with respect to the applicable series by written instrument in duplicate, executed by authority of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee or trustees. If no successor trustee shall have been so appointed with respect to any series and have accepted appointment within 30 days after the delivery of such notice of resignation, the resigning trustee may petition any court of competent jurisdiction for the appointment of a successor trustee, or any Securityholder who has been a bona fide Holder of a Security or Securities of the applicable series for at least six months may, on behalf of himself or herself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any of the following shall occur:

- (i) the Trustee shall fail to comply with the provisions of Section 310(b) of the Trust Indenture Act with respect to any series of Securities after written request therefor by the Issuer or by any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months; or
- (ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act and shall fail to resign after written request therefor by the Issuer or by any Securityholder; or
- (iii) the Trustee shall become incapable of acting with respect to any series of Securities, or shall be adjudged bankrupt or insolvent, or a receiver or liquidator of the Trustee or of its property shall be appointed, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation;

then, in any such case, (A) the Issuer may remove the Trustee with respect to the applicable series of Securities and appoint a successor trustee for such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or, (B) subject to Section 315(e) of the Trust Indenture Act, any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months may on behalf of itself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor

trustee with respect to such series. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

- (c) The Holders of a majority in aggregate principal amount of the Securities of each series at the time Outstanding may at any time remove the Trustee with respect to Securities of such series and, with the consent of the Issuer, appoint a successor trustee with respect to the Securities of such series by delivering to the Trustee so removed, to the successor trustee so appointed and to the Issuer the evidence provided for in Section 7.01 of the action in that regard taken by the Securityholders.
- (d) Any resignation or removal of the Trustee with respect to any series and any appointment of a successor trustee with respect to such series pursuant to any of the provisions of this Section 6.10 shall become effective upon acceptance of appointment by the successor trustee as provided in Section 6.11.

Section 6.11 *Acceptance of Appointment by Successor Trustee.* Any successor trustee appointed as provided in Section 6.10 shall execute and deliver to the Issuer and to its predecessor trustee an instrument accepting such appointment hereunder, and thereupon the resignation or removal of the predecessor trustee with respect to all or any applicable series shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all rights, powers, duties and obligations with respect to such series of its predecessor hereunder, with like effect as if originally named as trustee for such series hereunder; but, nevertheless, on the written request of the Issuer or of the successor trustee, upon payment of its charges then unpaid, the trustee ceasing to act shall, subject to Section 10.04, pay over to the successor trustee all moneys at the time held by it hereunder and shall execute and deliver an instrument transferring to such successor trustee all such rights, powers, duties and obligations. Upon request of any such successor trustee, the Issuer shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor trustee all such rights and powers. Any trustee ceasing to act shall, nevertheless, retain a prior claim upon all property or funds held or collected by such trustee to secure any amounts then due it pursuant to the provisions of Section 6.06.

If a successor trustee is appointed with respect to the Securities of one or more (but not all) series, the Issuer, the predecessor trustee and each successor trustee with respect to the Securities of any applicable series shall execute and deliver an indenture supplemental hereto which shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the predecessor trustee with respect to the Securities of any series as to which the predecessor trustee is not retiring shall continue to be vested in the predecessor trustee, and 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 under separate indentures.

No successor trustee with respect to any series of Securities shall accept appointment as provided in this Section 6.11 unless at the time of such acceptance such successor trustee shall be qualified under the provisions of Section 310(b) of the Trust Indenture Act and eligible under the provisions of Section 310(a) of the Trust Indenture Act.

Upon acceptance of appointment by any successor trustee as provided in this Section 6.11, the Issuer shall deliver notice thereof to the Holders of Securities of each series affected, by delivering such notice to such Holders at their addresses as they shall appear on the Security register. If the acceptance of appointment is substantially contemporaneous with the resignation, then the notice called for by the preceding sentence may be combined with the notice called for by Section 6.10. If the Issuer fails to deliver such notice within ten days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be given at the expense of the Issuer.

Section 6.12 *Merger, Conversion, Consolidation or Succession to Business of Trustee.* Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder; *provided*, that such corporation shall be qualified under the provisions of Section 310(b) of the Trust Indenture Act and eligible under the provisions of Section 310(a) of the Trust Indenture Act, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding.

In case, at the time such successor to the Trustee shall succeed to the trusts created by this Indenture, any of the Securities of any series shall have been authenticated but not delivered, any such successor to the Trustee may adopt the certificate of authentication of any predecessor trustee and deliver such Securities so authenticated; and, in case at that time any of the Securities of any series shall not have been authenticated, any successor to the Trustee may authenticate such Securities either in the name of any predecessor hereunder or in the name of the successor trustee; and in all such cases such certificate shall have the full force which it is anywhere in the Securities of such series or in this Indenture provided that the certificate of the Trustee shall have; *provided*, that the right to adopt the certificate of authentication of any predecessor trustee or to authenticate Securities of any series in the name of any predecessor trustee shall apply only to its successor or successors by merger, conversion or consolidation.

Section 6.13 *Preferential Collection of Claims Against the Issuer.* The Trustee shall comply with Section 311(a) of the Trust Indenture Act, excluding any creditor relationship described in Section 311(b) of the Trust Indenture Act. A Trustee who has resigned or been removed shall be subject to Section 311(a) of the Trust Indenture Act to the extent included therein.

ARTICLE 7
CONCERNING THE SECURITYHOLDERS

Section 7.01 *Evidence of Action Taken by Securityholders.* Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by a specified percentage in principal amount of the Securityholders of any or all series may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such specified percentage of Securityholders in person or by agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee. Proof of execution of any instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and (subject to Sections 6.01 and 6.02) conclusive in favor of the Trustee and the Issuer, if made in the manner provided in this Article.

Section 7.02 *Proof of Execution of Instruments and of Holding of Securities.* Subject to Sections 6.01 and 6.02, the execution of any instrument by a Holder or his agent or proxy may be proved in accordance with such reasonable rules and regulations as may be prescribed by the Trustee or in such manner as shall be satisfactory to the Trustee. The holding of Securities shall be proved by the Security register or by a certificate of the registrar thereof. The Issuer may set a record date for purposes of determining the identity of Holders of any series entitled to vote or consent to any action referred to in Section 7.01, which record date may be set at any time or from time to time by notice to the Trustee, for any date or dates (in the case of any adjournment or reconsideration) not more than 60 days nor less than five days prior to the proposed date of such vote or consent, and thereafter, notwithstanding any other provisions hereof, only Holders of such series of record on such record date shall be entitled to so vote or give such consent or revoke such vote or consent. Notice of such record date may be given before or after any request for any action referred to in Section 7.01 is made by the Issuer.

Section 7.03 *Holders to Be Treated as Owners.* The Issuer, the Trustee and any agent of the Issuer or of 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 Issuer nor the Trustee nor any agent of the Issuer or the Trustee shall be affected by any notice to the contrary. All such payments so made to any such Person, or upon his or her order, shall be valid, and, to the extent of the sum or sums so paid, effectual to satisfy and discharge the liability for moneys payable.

Section 7.04 *Securities Owned by Issuer Deemed Not Outstanding.* In determining whether the Holders of the requisite aggregate principal amount of Outstanding Securities of any or all series have concurred in any direction, consent or waiver under this Indenture, Securities that are owned by the Issuer or any other obligor on the Securities with respect to which such determination is being made or by any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities

with respect to which such determination is being made shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that, for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver, only Securities which the Trustee knows are so owned shall be so disregarded. Securities so owned which have been pledged in good faith may be regarded as Outstanding if the pledgee establishes to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not the Issuer or any other obligor upon the Securities or any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities. In case of a dispute as to such right, the advice of counsel shall be full protection in respect of any decision made by the Trustee in accordance with such advice.

Section 7.05 *Right of Revocation of Action Taken.* At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 7.01, of the taking of any action by the Holders of the percentage in aggregate principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action, any Holder of a Security the serial number of which is shown by the evidence to be included among the serial numbers of the Securities the Holders of which have consented to such action may, by filing written notice at the Corporate Trust Office and upon proof of holding as provided in this Article, revoke such action so far as concerns such Security. Except as aforesaid, any such action taken by the Holder of any Security shall be conclusive and binding upon such Holder and upon all future Holders and owners of such Security and of any Securities issued in exchange or substitution therefor or on registration of transfer thereof, irrespective of whether or not any notation in regard thereto is made upon any such Security. Any action taken by the Holders of the percentage in aggregate principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action shall be conclusively binding upon the Issuer, the Trustee and the Holders of all the Securities affected by such action.

ARTICLE 8 SUPPLEMENTAL INDENTURES

Section 8.01 *Supplemental Indentures Without Consent of Securityholders.* The Issuer, when authorized by a resolution of its Board of Directors and the Trustee may from time to time and at any time, without the consent of any of the Securityholders, enter into an indenture or indentures supplemental hereto in form satisfactory to the Trustee for one or more of the following purposes:

- (a) to convey, transfer, assign, mortgage or pledge to the Trustee as security for the Securities of one or more series any property or assets;
- (b) to evidence the succession of another Person to the Issuer, or successive successions, and the assumption by such successor of the covenants, agreements and obligations of the Issuer pursuant to, or to otherwise comply with, Article 9;

- (c) to comply with the requirements of the Commission in order to effect or maintain the qualification of this Indenture under the Trust Indenture Act;
- (d) to add to the covenants of the Issuer such further covenants, restrictions, conditions or provisions as its Board of Directors and the Trustee shall consider to be for the protection of the Holders of Securities, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default permitting the enforcement of all or any of the several remedies provided in this Indenture as herein set forth; *provided*, that in respect of any such additional covenant, restriction, condition or provision such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such an Event of Default or may limit the remedies available to the Trustee upon such an Event of Default or may limit the right of the Holders of a majority in aggregate principal amount of the Securities of such series to waive such an Event of Default;
- (e) to cure any ambiguity, defect or inconsistency, or to conform this Indenture or any supplemental indenture to the description of the Securities set forth in any prospectus, prospectus supplement or offering memorandum related to such series of Securities;
- (f) to provide for or add guarantors for the Securities of one or more series;
- (g) to establish the form or terms of Securities of any series as permitted by Sections 2.01 and 2.03;
- (h) to evidence and provide for the acceptance of appointment hereunder by a successor trustee with respect to the Securities of one or more series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one trustee, pursuant to the requirements of Section 6.11;
- (i) to add to, change or eliminate any of the provisions of this Indenture in respect of one or more series of Securities; provided that any such addition, change or elimination shall (A) not (i) apply to any Security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the rights of the Holder of any such Security with respect to such provision or (B) shall become effective only when there is no Security described in clause (A)(i) Outstanding;

- (j) to make any change to the Securities of any series so long as no Securities of such series are Outstanding; and
- (k) to make any other change that does not adversely affect the interests of the Holders of the Securities in any material respect.

The Trustee shall join with the Issuer in the execution of any such supplemental indenture, to make any further appropriate agreements and stipulations which may be therein contained and to accept the conveyance, transfer, assignment, mortgage or pledge of any property thereunder, but the Trustee shall not be obligated to enter into any such supplemental indenture which affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section may be executed without the consent of the Holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 8.02.

Section 8.02 *Supplemental Indentures With Consent of Securityholders.* With the consent (evidenced as provided in Article 7) of the Holders of not less than a majority in aggregate principal amount of the Securities at the time Outstanding of one or more series affected by such supplemental indenture (voting as separate series), the Issuer, when authorized by a resolution of the Board of Directors and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Holders of the Securities of each such consenting series; *provided*, that no such supplemental indenture shall, without the consent of the Holder of each Security so affected, (a) extend the final maturity of any Security, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any amount payable on redemption thereof, or make the principal thereof (including any amount in respect of original issue discount) or interest thereon payable in any currency other than that provided in the Securities or in accordance with the terms thereof, or reduce the amount of the principal of an Original Issue Discount Security that would be due and payable upon an acceleration of the maturity thereof pursuant to Section 5.01 or the amount thereof provable in bankruptcy pursuant to Section 5.02, or (b) waive a continuing default in the payment of principal of any Security or interest thereon, other than any such default in payment that resulted solely from such acceleration, or change a provision related to the waiver of past defaults or impair the right of any Securityholder to institute suit for the enforcement of any such payment on or after the Stated Maturity or the date of redemption or conversion of any Security or, if the Securities provide therefor, any right of repayment at the option of the Securityholder, or (c) modify any of the provisions of this section except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the Holder of each Security so affected, or (d) make any change that adversely affects the right to convert or exchange any Security into or for Common Stock or other securities, cash or other property in accordance with the terms of such Security or (e) reduce the aforesaid percentage of Securities of any series, the consent of the Holders of which is

required for any such supplemental indenture or the consent of Holders of which is required for any modification, amendment or waiver of compliance with certain provisions of this Indenture or certain defaults hereunder and their consequences provided for in this Indenture.

A supplemental indenture which changes or eliminates any covenant, Event of Default or other provision of this Indenture (1) that has been expressly included solely for the benefit of one or more particular series of Securities, if any, or (2) which modifies the rights of Holders of Securities of one or more series with respect to any covenant, Event of Default or provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series with respect to which such covenant, Event of Default or other provision has not been included or so modified.

Upon the request of the Issuer, accompanied by a Board Resolution authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders as aforesaid and other documents, if any, required by Section 7.01, the Trustee shall join with the Issuer in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such supplemental indenture.

It shall not be necessary for the consent of the Securityholders under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

Promptly after the execution by the Issuer and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Trustee shall give a notice thereof to the Holders of then Outstanding Securities of each series affected thereby, by delivering a notice thereof, and in each case such notice shall set forth in general terms the substance of such supplemental indenture. Any failure of the Trustee to deliver such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

Section 8.03 *Effect of Supplemental Indenture.* Upon the execution of any supplemental indenture pursuant to the provisions hereof, this Indenture shall be and be deemed to be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Issuer and the Holders of Securities of each series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

Section 8.04 *Documents to Be Given to Trustee.* The Trustee, subject to the provisions of Sections 6.01 and 6.02, may receive an Officer's Certificate and an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article 8 complies with the applicable provisions of this Indenture.

Section 8.05 *Notation on Securities in Respect of Supplemental Indentures.* Securities of any series authenticated and delivered after the execution of any supplemental indenture pursuant to the provisions of this Article may bear a notation in form approved by the Trustee for such series as to any matter provided for by such supplemental indenture or as to any action taken by Securityholders. If the Issuer or the Trustee shall so determine, new Securities of any series so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Issuer, authenticated by the Trustee and delivered in exchange for the Securities of such series then Outstanding.

ARTICLE 9 CONSOLIDATION, MERGER, SALE OR CONVEYANCE

Section 9.01 *Issuer May Consolidate, Etc., on Certain Terms.* The Issuer shall not consolidate with or merge into any other Person (in a transaction in which the Issuer is not the surviving corporation) or convey, transfer or lease its properties and assets substantially as an entirety to any Person, unless (a) the Person formed by such consolidation or into which the Issuer is merged or the Person which acquires by conveyance or transfer, or which leases, the properties and assets of the Issuer substantially as an entirety (i) shall be a corporation, limited liability company, partnership or trust, (ii) shall be organized and validly existing under the laws of the United States of America, any State thereof or the District of Columbia and (iii) shall expressly assume, by an indenture supplemental hereto, executed and delivered to the Trustee, in form satisfactory to the Trustee, the due and punctual payment of the principal, interest on and any Additional Amounts with respect to all the Securities and the performance or observance of every covenant of this Indenture on the part of the Issuer to be performed, by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee, by the Person formed by such consolidation or into which the Issuer shall have been merged or by the Person which shall have acquired the Issuer's assets; (b) immediately after giving effect to such transaction, no Event of Default, and no event which, after notice or lapse of time or both, would become an Event of Default, shall have happened and be continuing; and (c) the Issuer has delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that such consolidation, merger, conveyance, transfer or lease and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture comply with this Article and that all conditions precedent herein provided for relating to such transaction have been complied with.

The restrictions in this Section 9.01 shall not apply to (i) the merger or consolidation of the Issuer with one of its affiliates, if the Board of Directors determines in good faith that the purpose of such transaction is principally to change the Issuer's State of incorporation or convert the Issuer's form of organization to another form, or (ii) the merger of the Issuer with or into a single direct or indirect wholly owned Subsidiary.

Section 9.02 *Successor Issuer Substituted.* Upon any consolidation of the Issuer with, or merger of the Issuer into, any other Person or any conveyance, transfer or lease of the properties and assets of the Issuer substantially as an entirety in accordance with Section 9.01,

the successor Person formed by such consolidation or into which the Issuer is merged or to which such conveyance, transfer or lease is made shall succeed to, and be substituted for, and may exercise every right and power of, the Issuer under this Indenture with the same effect as if such successor Person had been named as the Issuer herein, and thereafter, except in the case of a lease, the predecessor Person shall be relieved of all obligations and covenants under this Indenture and the Securities.

In case of any such consolidation, merger, sale, lease or conveyance, such changes in phraseology and form (but not in substance) may be made in the Securities thereafter to be issued as may be appropriate.

ARTICLE 10
SATISFACTION AND DISCHARGE OF INDENTURE; DEFEASANCE; UNCLAIMED MONEYS

Section 10.01 *Satisfaction and Discharge of Indenture; Defeasance.* (a) If at any time

- (i) the Issuer shall have paid or caused to be paid the principal of and interest on and any Additional Amounts with respect to all the Securities of any series Outstanding hereunder (other than Securities of such series which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 2.09) as and when the same shall have become due and payable, or
- (ii) the Issuer shall have delivered to the Trustee for cancellation all Securities of any series theretofore authenticated (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 2.09); or
- (iii) in the case of any series of Securities the exact amount (including the currency of payment) of principal of and interest and Additional Amounts due on which on the dates referred to in clause (B) below can be determined at the time of making the deposit referred to in such clause,
 - (A) all the Securities of such series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year in accordance with their terms under arrangements satisfactory to the Trustee for the giving of notice of redemption, and
 - (B) the Issuer shall have irrevocably deposited or caused to be deposited with the Trustee as trust funds the entire amount

(i) in the case of any series of Securities the payments on which may only be made in Dollars, in Dollars (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or U.S. Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, or (ii) in the case of any series of Securities the payments on which may only be made in a Foreign Currency, in such Foreign Currency (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or Foreign Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, in each case sufficient to pay on any subsequent Interest Payment Date all interest due on such Interest Payment Date on the Securities of such series and to pay at maturity or upon redemption all Securities of such series (in each case 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 2.09) not theretofore delivered to the Trustee for cancellation, including principal, interest and Additional Amounts due or to become due to such date of maturity, as the case may be,

and if, in a case described in Section 10.01(a)(iii)(B), the Issuer shall also pay or cause to be paid all other sums payable hereunder by the Issuer, including amounts due the Trustee pursuant to Section 6.06, with respect to Securities of such series, then this Indenture shall cease to be of further effect with respect to Securities of such series (except as to (1) rights of registration of transfer, conversion and exchange of Securities of such series and the Issuer's right of optional redemption, (2) substitution of mutilated, defaced, destroyed, lost or stolen Securities, (3) rights of Holders of Securities to receive, solely from the trust fund described in Section 10.01(a)(iii)(B), 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, solely from the trust fund described in Section 10.01(a)(iii)(B), sinking fund payments, if any, (4) the rights (including the Trustee's rights under Section 10.05) and immunities of the Trustee hereunder and the Trustee's obligations under Sections 10.02 and 10.04 and (5) the obligations of the Issuer under Section 3.02), and the Trustee, on demand of the Issuer accompanied by an Officer's Certificate and an Opinion of Counsel which complies with Section 11.05 and at the cost and expense of the Issuer, shall execute proper instruments acknowledging such satisfaction of and discharging this Indenture with respect to such series. The Issuer 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.

- (b) The following subsection shall apply to the Securities of each series unless specifically otherwise provided in a Board Resolution, Officer's Certificate or indenture supplemental hereto pursuant to Section 2.03. In addition to the right to discharge of the Indenture pursuant to subsection (a) above, the Issuer, at its option and at any time, by written notice by an officer delivered to the Trustee, may elect to have all of its obligations with respect to all Outstanding Securities of a series discharged ("**Legal Defeasance**"), such discharge to be effective on the date that the conditions set forth in clauses (i) through (iv) and (vi) of Section 10.01(d) are satisfied, and thereafter the Issuer shall be deemed to have paid and discharged the entire Debt on all the Securities of such series, and satisfied all its other obligations under such Securities and this Indenture insofar as such Securities are concerned and this Indenture shall cease to be of further effect with respect to Securities of such series (except as to (1) rights of registration of transfer, conversion and exchange of Securities of such series, (2) substitution of apparently mutilated, defaced, destroyed, lost or stolen Securities, (3) rights of Holders of Securities to receive, solely from the trust fund described in Section 10.01(d)(i), payments of principal thereof, interest thereon and any Additional Amounts, upon the original Stated Maturities therefor (but not upon acceleration) and remaining rights of the Holders to receive, solely from the trust fund described in Section 10.01(d)(i), sinking fund payments, if any, (4) the rights (including the Trustee's rights under Section 10.05) and immunities of the Trustee hereunder and the Trustee's obligations with respect to the Securities of such series under Sections 10.02 and 10.04 and (5) the obligations of the Issuer under Section 3.02).
- (c) The following subsection shall apply to the Securities of each series unless specifically otherwise provided in a Board Resolution, Officer's Certificate or indenture supplemental hereto provided pursuant to Section 2.03. In addition to the right to discharge of the Indenture pursuant to subsection (a) and to Legal Defeasance pursuant to subsection (b), above, the Issuer, at its option and at any time, by written notice executed by an officer delivered to the Trustee, may elect to have its obligations under any covenant contained in this Indenture or in the Board Resolution or supplemental indenture relating to such series pursuant to Section 2.03 discharged with respect to all Outstanding Securities of a series, this Indenture and any indentures supplemental to this Indenture with respect to such series ("**Covenant Defeasance**"), such discharge to be effective on the date the conditions set forth in clauses (i) through (iii) and (v) through (vi) of Section 10.01(d) are satisfied, and such Securities shall thereafter be deemed to be not "Outstanding" for the purposes of any direction,

waiver, consent or declaration of Securityholders (and any consequences thereof) in connection with such covenants, but shall continue to be “Outstanding” for all other purposes under this Indenture. For this purpose, such Covenant Defeasance means that, with respect to the Outstanding Securities of a series, the Issuer may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such covenant, whether directly or indirectly, by reason of any reference elsewhere herein to any such covenant or by reason of reference in any such covenant to any other provision herein or in any other document and such omission to comply shall not constitute an Event of Default under Section 5.01(c) or otherwise, but except as specified in this Section 10.01(c), the remainder of the Issuer’s obligations under the Securities of such series, this Indenture, and any indentures supplemental to this Indenture with respect to such series shall be unaffected thereby.

- (d) The following shall be the conditions to the application of Legal Defeasance (to the extent set forth in subsection (b)), or Covenant Defeasance (to the extent set forth in subsection (c)) to the Securities of the applicable series:
 - (i) the Issuer irrevocably deposits or causes to be deposited in trust with the Trustee or, at the option of the Trustee, with a trustee satisfactory to the Trustee and the Company under the terms of an irrevocable trust agreement in form and substance satisfactory to the Trustee, (i) in the case of any series of Securities the payments on which may only be made in Dollars, Dollars (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or U.S. Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, or (ii) in the case of any series of Securities the payments on which may only be made in a Foreign Currency, such Foreign Currency (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or Foreign Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, in each case sufficient to pay on any subsequent Interest Payment Date all interest due on such Interest Payment Date on the Securities of such series and to pay at maturity or upon redemption all Securities of such series (in each case 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 2.09) not theretofore delivered to the Trustee for cancellation, including principal, interest and

Additional Amounts due or to become due to such date of maturity, as the case may be;

- (ii) the Issuer delivers to the Trustee an Officer's Certificate stating that all conditions precedent specified herein relating to Legal Defeasance or Covenant Defeasance, as the case may be, have been complied with, and an Opinion of Counsel to the same effect;
- (iii) no Event of Default under subsection (a), (b), (d) or (e) of Section 5.01 shall have occurred and be continuing, and no event which with notice or lapse of time or both would become such an Event of Default shall have occurred and be continuing, on the date of such deposit;
- (iv) in the event of an election for Legal Defeasance under subsection (b), the Issuer shall have delivered to the Trustee an Opinion of Counsel stating that (A) the Issuer has received from, or there has been published by, the Internal Revenue Service a ruling or (B) since the date of this instrument, there has been a change in the applicable Federal income tax law, in either case (A) or (B) to the effect that, and based thereon such opinion shall confirm that, the Holders of such Securities will not recognize gain or loss for Federal income tax purposes as a result of the deposit, defeasance and discharge to be effected with respect to such Securities and will be subject to Federal income tax on the same amounts, in the same manner and at the same times as would be the case if such deposit, defeasance and discharge were not to occur;
- (v) in the event of an election for Covenant Defeasance under subsection (c), the Issuer shall have delivered to the Trustee an Opinion of Counsel to the effect that the Holders of such Securities will not recognize gain or loss for Federal income tax purposes as a result of the deposit and Covenant Defeasance to be effected with respect to such Securities and will be subject to Federal income tax on the same amount, in the same manner and at the same times as would be the case if such deposit and Covenant Defeasance were not to occur; and
- (vi) notwithstanding any other provisions of this subsection (d), such defeasance shall be effected in compliance with any additional or substitute terms, conditions or limitations that may be imposed on the Issuer pursuant to Section 2.03.

After such irrevocable deposit made pursuant to this Section 10.01(d) and satisfaction of the other applicable conditions set forth in this subsection (d), the Trustee upon request shall execute

proper instruments acknowledging the discharge of the Issuer's obligations pursuant to this Section 10.01.

Section 10.02 *Application by Trustee of Funds Deposited for Payment of Securities.* Subject to Section 10.04, all moneys deposited with the Trustee (or other trustee) pursuant to Section 10.01 shall be held in trust and applied by it to the payment, either directly or through any paying agent (including the Issuer acting as its own 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 10.03 *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 Issuer, 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 10.04 *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, interest on or additional amounts in respect of any Security of any series and not applied but remaining unclaimed for two years after the date upon which such principal, interest or additional amount shall have become due and payable, shall be repaid to the Issuer by the Trustee for such series or such paying agent, and the Holder of the Securities of such series shall thereafter look only to the Issuer 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 10.05 *Indemnity for U.S. Government Obligations and Foreign Government Obligations.* The Issuer shall pay and indemnify the Trustee against any tax, fee or other charge imposed on or assessed against the U.S. Government Obligations or Foreign Government Obligations deposited pursuant to Section 10.01 or the principal or interest received in respect of such obligations.

ARTICLE 11 MISCELLANEOUS PROVISIONS

Section 11.01 *No Recourse.* No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Issuer or of any predecessor or successor corporation, either directly or through the Issuer or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate obligations, and that no such personal liability whatever shall attach to, or is

or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Issuer or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom; and that any and all such personal liability of every name and nature, either at common law or in equity or by constitution or statute, of, and any and all such rights and claims against, every such incorporator, stockholder, officer or director as such, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom, are hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issuance of such Securities.

Section 11.02 *Provisions of Indenture for the Sole Benefit of Parties and Holders of Securities.* Nothing in this Indenture or in the Securities, expressed or implied, shall give or be construed to give to any person, firm or corporation, other than the parties hereto and their successors and the Holders of the Securities any legal or equitable right, remedy or claim under this Indenture or under any covenant or provision herein contained, all such covenants and provisions being for the sole benefit of the parties hereto and their successors and of the Holders of the Securities.

Section 11.03 *Successors and Assigns of Issuer Bound by Indenture.* All the covenants, stipulations, promises and agreements contained in this Indenture by or on behalf of the Issuer shall bind its successors and assigns, whether so expressed or not.

Section 11.04 *Notices and Demands on Issuer, Trustee and Holders of Securities.* Any notice or demand which by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the Holders of Securities to or on the Issuer may be delivered, given or served by being deposited postage prepaid, first-class mail (except as otherwise specifically provided herein) addressed (until another address of the Issuer is filed by the Issuer with the Trustee) to Akebia Therapeutics, Inc., 245 First Street, Cambridge, Massachusetts 02142, Attn: Chief Financial Officer. Any notice, direction, request or demand by the Issuer or any Holder of Securities to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made at _____, _____, Attn: _____.

Where this Indenture provides for notice to Holders of Securities, such notice shall be sufficiently given (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, to each Holder entitled thereto, at his, her or its last address as it appears in the Security register. In case, by reason of the suspension of or irregularities in regular mail service, it shall be impracticable to mail notice of any event to Holders of Securities when said notice is required to be given pursuant to any provision of this Indenture or of the Securities, then any manner of giving such notice as shall be satisfactory to the Trustee shall be deemed to be a sufficient giving of such notice.

In case, by reason of the suspension of or irregularities in regular mail service, it shall be impracticable to mail notice to the Issuer when such notice is required to be given pursuant to

any provision of this Indenture, then any manner of giving such notice as shall be satisfactory to the Trustee shall be deemed to be a sufficient giving of such notice.

Where this Indenture provides for notice of any event to a Holder of a Global Security, such notice shall be sufficiently given if given to the Depository for such Security (or its designee), pursuant to the Applicable Procedures of the Depository, not later than the latest date, if any, and not earlier than the earliest date, if any, prescribed for the giving of such notice.

Neither the failure to give notice, nor any defect in any notice so given, to any particular Holder of a Security shall affect the sufficiency of such notice with respect to other Holders of Securities given as provided above.

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.

Section 11.05 *Officer's Certificates and Opinions of Counsel; Statements to Be Contained Therein.* Upon any application or demand by the Issuer to the Trustee to take any action under any of the provisions of this Indenture, the Issuer shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant provided for in this Indenture shall include (a) a statement that the person making such certificate or opinion has read such covenant or condition, (b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based, (c) a statement that, in the opinion of such person, he or she has made such examination or investigation as is necessary to enable him or her to express an informed opinion as to whether or not such covenant or condition has been complied with and (d) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Any certificate, statement or opinion of an officer of the Issuer may be based, insofar as it relates to legal matters, upon a certificate or opinion of or representations by counsel, unless such officer knows that the certificate or opinion or representations with respect to the matters upon which his or her certificate, statement or opinion may be based as aforesaid are erroneous, or in the exercise of reasonable care should know that the same are erroneous. Any certificate, statement or opinion of counsel may be based, insofar as it relates to factual matters, information with respect to which is in the possession of the Issuer, upon the certificate, statement or opinion of or representations by an officer or officers of the Issuer, unless such counsel knows that the

certificate, statement or opinion or representations with respect to the matters upon which his or her certificate, statement or opinion may be based as aforesaid are erroneous, or in the exercise of reasonable care should know that the same are erroneous.

Any certificate, statement or opinion of an officer of the Issuer or of counsel may be based, insofar as it relates to accounting matters, upon a certificate or opinion of or representations by an accountant or firm of accountants in the employ of the Issuer, unless such officer or counsel, as the case may be, knows that the certificate or opinion or representations with respect to the accounting matters upon which his or her certificate, statement or opinion may be based as aforesaid are erroneous, or in the exercise of reasonable care should know that the same are erroneous.

Any certificate or opinion of any independent firm of public accountants filed with and directed to the Trustee shall contain a statement that such firm is independent.

Section 11.06 *Payments Due on Saturdays, Sundays and Holidays.* If the date of maturity of interest on or principal of the Securities of any series or the date fixed for redemption or repayment of any such Security, or the last day on which a Holder has the right to convert any Security, shall not be a Business Day, then payment of interest or principal, or any conversion, need not be made on such date, but may be made on the next succeeding Business Day with the same force and effect as if made on the date of maturity or the date fixed for redemption or on such last day for conversion, and no interest shall accrue for the period after such date.

Section 11.07 *Conflict of Any Provision of Indenture With Trust Indenture Act.* If and to the extent that any provision of this Indenture limits, qualifies or conflicts with another provision included in this Indenture by operation of Sections 310 to 317, inclusive, of the Trust Indenture Act, such incorporated provision shall control.

Section 11.08 *New York Law to Govern.* This Indenture and each Security shall be deemed to be a contract under the laws of the State of New York, and for all purposes shall be governed by and construed in accordance with the laws of such State without regard to any principle of conflict of laws that would require or permit the application of the laws of any other jurisdiction, except as may otherwise be required by mandatory provisions of law.

Section 11.09 *Counterparts.* This Indenture may be executed in any number of counterparts, each of which shall be an original; but such counterparts shall together constitute but one and the same instrument.

Section 11.10 *Effect of Headings.* The Article and Section headings herein and the Table of Contents are for convenience only and shall not affect the construction hereof.

Section 11.11 *Actions by Successor.* Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board of directors or its equivalent, committee or officer of the Issuer shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Issuer.

Section 11.12 *Severability*. In case any one or more of the provisions contained in this Indenture or in the Securities of any series shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Indenture or of such Securities, but this Indenture and such Securities shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein or therein.

ARTICLE 12 REDEMPTION OF SECURITIES AND SINKING FUNDS

Section 12.01 *Applicability of Article*. The provisions of this Article shall be applicable to the Securities of any series which 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 12.02 *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 Issuer shall be given by providing notice of such redemption at least 10 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 given 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 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 date fixed for redemption, the redemption price, 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 and shall also specify, if applicable, the conversion price then in effect and the date on which the right to convert such Securities or the portions thereof to be redeemed will expire. 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 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 Issuer shall be given by the Issuer or, at the Issuer's request, by the Trustee in the name and at the expense of the Issuer.

On or before the redemption date specified in the notice of redemption given as provided in this Section, the Issuer will deposit with the Trustee or with one or more paying agents (or, if the Issuer is acting as its own paying agent, set aside, segregate and hold in trust as provided in

Section 3.04) an amount of money sufficient to redeem on the redemption date all the Securities of such series so called for redemption (other than those Securities theretofore surrendered for conversion into Common Stock in accordance with their terms) at the appropriate redemption price, together with accrued interest to the date fixed for redemption. If any Security called for redemption is converted pursuant hereto and in accordance with the terms thereof, any money deposited with the Trustee or any paying agent or so segregated and held in trust for the redemption of such Security shall be paid to the Issuer upon the Issuer's request, or, if then held by the Issuer, shall be discharged from such trust. The Issuer will deliver to the Trustee at least 10 days prior to the date the notice required to be delivered to the Holders is to be sent (unless a shorter time period shall be acceptable to the Trustee) an Officer's Certificate (which need not comply with Section 11.05) stating the aggregate principal amount of Securities to be redeemed. In case of a redemption at the election of the Issuer prior to the expiration of any restriction on such redemption, the Issuer shall deliver to the Trustee, prior to the giving of any notice of redemption to Holders pursuant to this Section, an Officer's Certificate stating that such restriction has been complied with.

If less than all the Securities of a series are to be redeemed, the Trustee shall select, 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 multiples equal to the minimum authorized denomination for Securities of such series or any multiple thereof. The Trustee shall promptly notify the Issuer 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 of any series 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. If any Security selected for partial redemption is surrendered for conversion after such selection, the converted portion of such Security shall be deemed (so far as may be possible) to be the portion selected for redemption.

Section 12.03 *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 said date (unless the Issuer shall default in the payment of such Securities at the redemption price, together with interest accrued to said date) interest on the Securities or portions of Securities so called for redemption shall cease to accrue, and such Securities shall cease from and after the date fixed for redemption to be convertible into Common Stock (to the extent otherwise convertible in accordance with their terms), if applicable, and cease to be entitled to any benefit or security under this Indenture, and except as provided in the paragraph below, 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 Issuer 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 of such Securities registered as such on the relevant record date subject to the terms and provisions of Sections 2.03 and 2.07 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 and, if applicable, such Security shall remain convertible into Common Stock until the principal of such Security shall have been paid or duly provided for.

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

Section 12.04 *Exclusion of Certain Securities from Eligibility for Selection for Redemption.* Securities shall be excluded from eligibility for selection for redemption if they are identified by registration and certificate number in an Officer's Certificate 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 Issuer 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 Issuer.

Section 12.05 *Mandatory and Optional Sinking Funds.* The minimum amount of any sinking fund payment provided for by the terms of the Securities of any series is herein referred to as a "**mandatory sinking fund payment**", and any 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 Issuer may at its option (a) deliver to the Trustee Securities of such series theretofore purchased or otherwise acquired (except upon redemption pursuant to the mandatory sinking fund) by the Issuer or receive credit for Securities of such series (not previously so credited) theretofore purchased or otherwise acquired (except as aforesaid) by the Issuer and delivered to the Trustee for cancellation pursuant to Section 2.10 and, if applicable, receive credit for Securities (not previously so credited) converted into Common Stock and so delivered to the Trustee for cancellation, (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 Issuer through any optional redemption provision contained in the terms of such series. 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 60th day next preceding each sinking fund payment date for any series, the Issuer will deliver to the Trustee an Officer's Certificate (which need not contain the

statements required by Section 11.05) (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 Securities of such series and the basis for such credit, (b) stating that none of the Securities of such series for which credit will be taken 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 Issuer 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 Issuer 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 Issuer 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 2.10 to the Trustee with such Officer's Certificate (or reasonably promptly thereafter if acceptable to the Trustee). Such Officer's Certificate shall be irrevocable and upon its receipt by the Trustee the Issuer shall become unconditionally obligated to make all the cash payments or payments therein referred to, if any, on or before the next succeeding sinking fund payment date. Failure of the Issuer, on or before any such 60th 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 Issuer 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.

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 the equivalent thereof in any Foreign Currency or a lesser sum in Dollars or in any Foreign Currency if the Issuer shall so request) with respect to the Securities of any particular 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 together with accrued interest to the date fixed for redemption. If such amount shall be \$50,000 (or the equivalent thereof in any Foreign Currency) or less and the Issuer makes no such request then it shall be carried over until a sum in excess of \$50,000 (or the equivalent thereof in any Foreign Currency) is available, which delay in accordance with this paragraph shall not be a default or breach of the obligation to make such payment. The Trustee shall select, in the manner provided in Section 12.02, for redemption on such sinking fund payment date a sufficient principal amount of Securities of such series to which such cash may be applied, as nearly as may be, and shall (if requested in writing by the Issuer) inform the Issuer of the serial numbers of the Securities of such series (or portions thereof) so selected. The Trustee, in the name and at the expense of the Issuer (or the Issuer, 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 12.02 (and with the effect provided in Section 12.03) for the redemption of Securities of such series in part at the option of the Issuer. 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. The Issuer's obligation to make a mandatory or optional sinking fund payment shall automatically be reduced by an amount equal to the sinking fund redemption price allocable to any Securities or portions thereof called for redemption pursuant to the preceding paragraph on any sinking fund payment date and converted into Common Stock in accordance with the terms of such Securities; *provided that*, if the Trustee is not the conversion agent for the Securities, the Issuer or such conversion agent shall give the Trustee written notice on or prior to the date fixed for redemption of the principal amount of Securities or portions thereof so converted.

On or before each sinking fund payment date, the Issuer 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 such sinking fund payment date.

The Trustee shall not redeem or cause to be redeemed any Securities of a series with sinking fund moneys or give any notice of redemption of Securities for 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 providing 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 Issuer 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 5 and held for the payment of all such Securities. In case such Event of Default shall have been waived as provided in Section 5.10, or the default cured on or before the 60th day preceding the sinking fund payment date in any year, such moneys shall thereafter be applied on such sinking fund payment date in accordance with this Section to the redemption of such Securities.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of _____.

AKEBIA THERAPEUTICS, INC.

By: _____
Name:
Title:

Attest:

By: _____
Name:
Title:

_____, Trustee

By: _____
Name:
Title:

AKEBIA THERAPEUTICS, INC.

and

Trustee

INDENTURE

Dated as of _____

SUBORDINATED DEBT SECURITIES

CROSS-REFERENCE TABLE ¹

Section of Trust Indenture Act of 1939, as amended	Section of Indenture
310(a)	6.09
310(b)	6.08 6.10
310(c)	Inapplicable
311(a)	6.13
311(b)	6.13
311(c)	Inapplicable
312(a)	4.01 4.04
312(b)	4.04(c)
312(c)	4.04(c)
313(a)	4.03
313(b)	4.03
313(c)	4.03
313(d)	4.03
314(a)	4.02
314(b)	Inapplicable
314(c)	2.04 8.04 9.01(c) 10.01(b) 11.05
314(d)	Inapplicable
314(e)	11.05
314(f)	Inapplicable
315(a)	6.01 6.02
315(b)	5.11
315(c)	6.01
315(d)	6.01 6.02
315(e)	5.12
316(a)	5.09 5.10 7.04
316(b)	5.06 5.10
316(c)	7.02
317(a)	5.04
317(b)	3.04
318(a)	11.07

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

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THIS INDENTURE, dated as of _____ between Akebia Therapeutics, Inc., a Delaware corporation (the “**Issuer**”), and _____, a _____ (the “**Trustee**”),

W I T N E S S E T H:

WHEREAS, the Issuer may from time to time duly authorize the issue of its unsecured 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;

WHEREAS, the Issuer has duly authorized the execution and delivery of this Indenture to provide, among other things, for the authentication, delivery and administration of the Securities; 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 Issuer and the Trustee mutually covenant and agree for the equal and proportionate benefit of the respective holders from time to time of the Securities as follows:

ARTICLE 1
DEFINITIONS

Section 1.01 *Certain Terms Defined.* The following terms (except as otherwise expressly provided or unless the context otherwise clearly requires) for all purposes of this Indenture and of any indenture supplemental hereto shall have the respective meanings specified in this Section. All other terms used in this Indenture that are defined in the Trust Indenture Act or the definitions of which in the Securities Act are referred to in the Trust Indenture Act, including terms defined therein by reference to the Securities Act (except as herein otherwise expressly provided or unless the context otherwise clearly requires), shall have the meanings assigned to such terms in said Trust Indenture Act and in said Securities Act as in force at the date of this Indenture. All accounting terms used herein and not expressly defined shall have the meanings assigned to such terms in accordance with generally accepted accounting principles, and the term “**generally accepted accounting principles**” means such accounting principles as are generally accepted in the United States at the time of any computation. The words “herein”, “hereof” and “hereunder” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision. The terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular.

“**Additional Amounts**” means any additional amounts that are required by this Indenture or by any Security, under circumstances specified herein or therein, to be paid by the Issuer in respect of certain taxes, assessments or other governmental charges imposed on Holders specified therein and which are owing to such Holders.

“**Applicable Procedures**” means, with respect to a Depository, as to any matter at any time, the policies and procedures of such Depository, if any, that are applicable to such matter at such time.

“**Board of Directors**” means either the Board of Directors of the Issuer or any committee of such Board duly authorized to act on its behalf.

“**Board Resolution**” means a copy of one or more resolutions, certified by the secretary or an assistant secretary of the Issuer to have been duly adopted by the Board of Directors and to be in full force and effect, and delivered to the Trustee.

“**Business Day**” means, with respect to any Security, a day that in the city (or in any of the cities, if more than one) in which amounts are payable, as specified in the form of such Security, is not a day on which banking institutions are authorized or required by law or regulation to close.

“**Capital Stock**” means (a) in the case of a corporation, corporate stock; (b) in the case of an association or business entity, any and all shares, interests, participations, rights or other equivalents (however designated) of corporate stock; (c) in the case of a partnership or limited liability company, partnership interests (whether general or limited) or membership interests; and (d) any other interest or participation that confers on a Person the right to receive a share of the profits and losses of, or distributions of assets of, the issuing Person, but excluding from all of the foregoing any Debt securities convertible into Capital Stock, whether or not such Debt securities include any right of participation with Capital Stock.

“**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 and delivery of this Indenture such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties on such date.

“**Common Stock**” means shares of common stock, par value \$0.00001 per share, of the Issuer as the same exists at the date of execution and delivery of this Indenture or as such stock may be reconstituted from time to time.

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

“**Debt**” of any Person means any debt for money borrowed which is created, assumed, incurred or guaranteed in any manner by such Person or for which such Person is otherwise responsible or liable, and shall expressly include any such guaranty thereof by such Person. For the purpose of computing the amount of the Debt of any Person there shall be excluded all Debt of such Person for the payment or redemption or satisfaction of which money or securities (or evidences of such Debt, if permitted under the terms of the instrument creating such Debt) in the necessary amount shall have been deposited in trust with the proper depository, whether upon or prior to the maturity or the date fixed for redemption of such Debt; and, in any instance where

Debt is so excluded, for the purpose of computing the assets of such Person there shall be excluded the money, securities or evidences of Debt deposited by such Person in trust for the purpose of paying or satisfying such Debt.

“**Depository**” means, with respect to the Securities of any series issuable or issued in the form of one or more Global Securities, the Person designated as Depository by the Issuer pursuant to Section 2.04 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 Global Securities of that series.

“**Dollar**” means the currency of the United States of America as at the time of payment is legal tender for the payment of public and private debts.

“**Event of Default**” means any event or condition specified as such in Section 5.01.

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

“**Foreign Currency**” means a currency issued by the government of a country other than the United States.

“**Foreign Government Obligation**” means (a) a direct obligation of the government of a country other than the United States of America, backed by the full faith and credit of such government, (b) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of such government, the payment of which is unconditionally guaranteed as a full faith and credit obligation by such government or (c) any depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act) as custodian with respect to any Foreign Government Obligation which is specified in clause (a) and held by such bank for the account of the holder of such depositary receipt, or with respect to any specific payment of principal of or interest on any such Foreign Government Obligation which is so specified and held, provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the Foreign Government Obligation or the specific payment of principal or interest evidenced by such depositary receipt.

“**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 2.04, and bearing the legend prescribed in Section 2.04.

“**Holder**”, “**holder**”, “**holder of Securities**”, “**Securityholder**” or other similar terms mean the Person in whose name such Security is registered in the Security register kept by the Issuer for that purpose in accordance with the terms hereof.

“**Indenture**” means this instrument as originally executed and delivered or, if amended or supplemented as herein provided, as so amended or supplemented or both, and shall include the forms and terms of particular series of Securities established as contemplated hereunder.

“**interest**”, unless the context otherwise requires, refers to interest, and when used with respect to non-interest bearing Securities, refers to interest payable after maturity, if any.

“**Interest Payment Date**”, with respect to any Security, means the Stated Maturity of an installment of interest on such Security.

“**Issuer**” means Akebia Therapeutics, Inc., a Delaware corporation, and, subject to Article 9, its successors and assigns.

“**Issuer Order**” means a written statement, request or order of the Issuer signed in its name by the chairman of the Board of Directors, the president or any vice president of the Issuer.

“**Notice of Default**” shall have the meaning set forth in Section 5.01(c).

“**Officer’s Certificate**” means a certificate signed by the chairman of the Board of Directors, the president, any vice president, the treasurer, the secretary or any assistant secretary of the Issuer and delivered to the Trustee. Each such certificate shall comply with Section 314 of the Trust Indenture Act and, except to the extent provided herein, shall include the statements provided for in Section 11.05.

“**Opinion of Counsel**” means an opinion in writing signed by the general corporate counsel or such other legal counsel who may be an employee of or counsel to the Issuer and who shall be satisfactory to the Trustee. Each such opinion shall comply with Section 314 of the Trust Indenture Act and shall include the statements provided for in Section 11.05, if and to the extent required hereby.

“**original issue date**” of any Security (or portion thereof) means the earlier of (a) the date 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 5.01.

“**Outstanding**”, when used with reference to Securities, shall, subject to the provisions of Section 7.04, mean, as of any particular time, all Securities authenticated and delivered by the Trustee under this Indenture, except

(a) Securities theretofore cancelled by the Trustee or delivered to the Trustee for cancellation;

(b) Securities, or portions thereof, for the payment or redemption of which cash, U.S. Government Obligations or Foreign Government Obligations (as provided for in

Section 10.01(a) and Section 10.01(b)) in the necessary amount shall have been deposited in trust with the Trustee or with any paying agent (other than the Issuer) or shall have been set aside, segregated and held in trust by the Issuer for the Holders of such Securities (if the Issuer shall act as its own paying agent); *provided*, that if such Securities, or portions thereof, are to be redeemed prior to the maturity thereof, notice of such redemption shall have been given as herein provided, or provision satisfactory to the Trustee shall have been made for giving such notice;

(c) Securities as to which Legal Defeasance shall have been effected pursuant to Section 10.01(b);

(d) Securities in substitution for which other Securities shall have been authenticated and delivered, or which shall have been paid, pursuant to the terms of Section 2.09 (except with respect to any such Security as to which proof satisfactory to the Trustee is presented that such Security is held by a Person in whose hands such Security is a legal, valid and binding obligation of the Issuer), Securities converted into Common Stock pursuant hereto and Securities not deemed outstanding pursuant to Section 12.02; and

(e) Securities as to which any property deliverable upon conversion thereof has been delivered (or such delivery has been made available), or as to which any other particular conditions have been satisfied, in each case as may be provided for such Securities as contemplated in Section 2.03.

In determining whether the Holders of the requisite principal amount of Outstanding Securities of any or all series have given any request, demand, authorization, direction, notice, consent or waiver hereunder, (A) the principal amount of an Original Issue Discount Security that shall be deemed to be Outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the maturity thereof pursuant to Section 5.01, (B) if, as of such date, the principal amount payable at the Stated Maturity of a Security is not determinable, the principal amount of such Security which shall be deemed to be Outstanding shall be the amount as specified or determined as contemplated by Section 2.03, and (C) the principal amount of a Security denominated in one or more foreign currencies, composite currencies or currency units which shall be deemed to be Outstanding shall be the U.S. dollar equivalent, determined as of such date in the manner provided as contemplated by Section 2.03, of the principal amount of such Security (or, in the case of a Security described in clause (A) or (B) above, of the amount determined as provided in such clause).

“**Person**” means any individual, corporation, partnership, limited partnership, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

“**principal**” whenever used with reference to the Securities or any Security or any portion thereof, shall be deemed to include “and premium, if any”.

“**record date**” shall have the meaning set forth in Section 2.07.

“**Responsible Officer**”, when used with respect to the Trustee, means the chairman of the board of directors, any vice chairman of the board of directors, the chairman of the trust committee, the chairman of the executive committee, any vice chairman of the executive committee, the president, any vice president, the cashier, the secretary, the treasurer, any trust officer, any assistant trust officer, any assistant vice president, any assistant cashier, any assistant secretary, any assistant treasurer, or any other officer or assistant officer of the Trustee customarily performing functions similar to those performed by the persons who at the time shall be such officers, respectively, or to whom any corporate trust matter is referred because of his or her knowledge of and familiarity with the particular subject.

“**Security**” or “**Securities**” has the meaning stated in the first recital of this Indenture, or, as the case may be, Securities that have been authenticated and delivered under this Indenture.

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

“**Security Registrar**” shall have the meaning set forth in Section 4.01(b).

“**Senior Indebtedness**” of a Person means the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding at the date hereof or hereafter incurred or created:

(a) all of the indebtedness of that Person for money borrowed;

(b) all of the indebtedness of that Person evidenced by notes, debentures, bonds or other securities sold by that Person for money;

(c) all of the lease obligations which are capitalized on the books of that Person in accordance with generally accepted accounting principles;

(d) all indebtedness of others of the kinds described in either of the preceding clauses (a) or (b) above and all lease obligations of others of the kind described in the preceding clause (c) above that the Person, in any manner, assumes or guarantees or that the Person in effect guarantees through an agreement to purchase, whether that agreement is contingent or otherwise; and

(e) all renewals, extensions or refundings of indebtedness of the kinds described in any of the preceding clauses (a), (b) and (d) and all renewals or extensions of leases of the kinds described in either of the preceding clauses (c) or (d) above;

unless, in the case of any particular indebtedness, lease, renewal, extension or refunding, the instrument or lease creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, lease, renewal, extension or refunding is not superior in right of payment to the Securities.

“**Stated Maturity**”, with respect to any Security or any installment of principal thereof or interest thereon or any Additional Amounts with respect thereto, means the date established by or pursuant to this Indenture or such Security as the fixed date on which the principal of such

Security or such installment of principal or interest is, or such Additional Amounts are, due and payable.

“**Subsidiary**” means any corporation or other entity (including, without limitation, partnerships, limited liability companies, joint ventures and associations) of which at least a majority of the outstanding Capital Stock having by the terms thereof (without regard to the occurrence or any contingency) ordinary voting power for the election of directors (or persons performing similar functions) of such corporation or other entity (irrespective of whether or not at the time the Capital Stock of any other class or classes of such corporation or other entity shall have or might have voting power by reason of the occurrence of any such contingency) is at the time directly or indirectly owned by the Issuer, or by one or more Subsidiaries of the Issuer, or by the Issuer and one or more other Subsidiaries of the Issuer.

“**Trust Indenture Act**” (except as otherwise provided in Sections 8.01 and 8.02) means the Trust Indenture Act of 1939, as amended, as in force at the date as of which this Indenture was originally executed.

“**Trustee**” means the Person identified as “**Trustee**” in the first paragraph hereof and, subject to the provisions of Article 6, shall also include any successor trustee. “**Trustee**” shall also 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 the Securities of such series.

“**U.S. Government Obligation**” means (a) a direct obligation of the United States of America, backed by its full faith and credit, or (b) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America, the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America.

“**vice president**”, when used with respect to the Issuer or the Trustee, means any vice president, whether or not designated by a number or a word or words added before or after the title of “vice president”.

“**Yield to Maturity**” means the yield to maturity on a series of securities, calculated at the time of issuance of such series, or, if applicable, at the most recent redetermination of interest on such series, and calculated in accordance with accepted financial practice.

ARTICLE 2 SECURITIES

Section 2.01 *Forms Generally*. The Securities of each series shall be substantially in such form (not inconsistent with this Indenture) as shall be established by or pursuant to one or more Board Resolutions (as set forth in a Board Resolution or, to the extent established pursuant to (rather than set forth in) a Board Resolution, an Officer’s Certificate detailing such establishment) 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 or regulations pursuant thereto, or with any rules of any securities exchange or to conform to general usage, all as may be determined by the officers executing such Securities as evidenced by their execution of such Securities.

The definitive Securities shall be printed, lithographed or engraved on steel engraved borders or may be produced in any other manner, all as determined by the officers executing such Securities as evidenced by their execution of such Securities.

Section 2.02 *Form of Trustee's Certificate of Authentication.* The Trustee's certificate of authentication on all Securities shall be in substantially the following form:

This is one of the Securities of the series designated herein and referred to in the within-mentioned Indenture.

as Trustee

By: _____
Authorized Officer

Section 2.03 *Amount Unlimited; Issuable in Series.* The aggregate principal amount of Securities which may be authenticated and delivered under this Indenture is unlimited.

The Securities may be issued in one or more series. The terms of a series of Securities shall be established prior to the initial issuance thereof in or pursuant to one or more Board Resolutions, or, to the extent established pursuant to (rather than set forth in) a Board Resolution, in an Officer's Certificate detailing such establishment and/or established in one or more indentures supplemental hereto. The terms of such series reflected in such Board Resolution, Officer's Certificate, or supplemental indenture may include the following or any additional or different terms:

(a) the designation of the Securities of the series (which may be part of a series of Securities previously issued);

(b) any limit upon the aggregate principal amount of the Securities of the series that may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Securities of the series pursuant to Section 2.08, 2.09, 2.11, 8.05 or 12.03);

(c) the date or dates on which the principal of the Securities of the series is payable or the method used to determine those dates and the right, if any, to extend such date or dates;

(d) the rate or rates at which the Securities of the series shall bear interest, if any or the method by which such rate or rates shall be determined; the record date or dates for the determination of holders to whom interest is payable; the date or dates from which such interest shall accrue and on which such interest shall be payable, or the method by which such date or dates shall be determined; the right, if any, to extend the interest payment periods and the duration of that extension; and the basis upon which interest shall be calculated if other than that of a 360-day year of twelve 30-day months;

(e) the place or places where the principal of and any interest on Securities of the series shall be payable (if other than as provided in Section 3.02);

(f) the obligation or the right, if any, of the Issuer 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 terms and conditions upon which Securities of the series shall be redeemed, purchased or repaid, in whole or in part, pursuant to such obligation or right;

(g) if other than denominations of \$2,000 and any integral multiple of \$1,000 in excess thereof, the denominations in which Securities of the series shall be issuable;

(h) 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;

(i) if other than Dollars, the currency, currencies or currency units in which the Securities of the series are denominated;

(j) if other than the currency in which the Securities of the series are denominated, the currency in which payment of the principal of or interest on the Securities of such series shall be payable;

(k) if the principal of or interest on the Securities of the series is to be payable, at the election of the Issuer or a Holder thereof, in a currency other than that in which the Securities are denominated, the period or periods within which, and the terms and conditions upon which, such election may be made;

(l) if the amount of payments of principal of and interest on the Securities of the series may be determined by reference to an index based on a currency other than that in which the Securities of the series are denominated, or by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices, the manner in which such amounts shall be determined;

(m) the terms and conditions, if applicable, upon which conversion or exchange of the Securities into Common Stock will be effected, including the initial conversion or exchange price or rate and any adjustments thereto, the conversion or exchange period and other provisions in addition to or in lieu of those described herein;

(n) if the Securities of the series may be issued in exchange for surrendered Securities of another series, or for other securities of the Issuer, pursuant to the terms of such Securities or securities or of any agreement entered into by the Issuer, the ratio of the principal amount of the Securities of the series to be issued to the principal amount of the Securities or securities to be surrendered in exchange, and any other material terms of the exchange;

(o) if Sections 10.01(b) or 10.01(c) are inapplicable to Securities of such series;

(p) whether and under what circumstances the Issuer will pay Additional Amounts on the Securities and, if so, whether the Issuer will have the option to redeem such Securities rather than pay such additional amounts;

(q) if the Securities of such 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, then the form and terms of such certificates, documents or conditions;

(r) any trustees, authenticating or paying agents, transfer agents or registrars or any other agents with respect to the Securities of such series;

(s) any other events of default or covenants with respect to the Securities of such series in addition to or in lieu of those contained in this Indenture;

(t) the extent to which payments on the Securities will be subordinated to the payment of Senior Indebtedness of the Issuer; and

(u) any other terms of the series.

The Issuer may from time to time, without notice to or the consent of the holders of any series of Securities, create and issue further Securities of any such series ranking equally with the Securities of such series in all respects (or in all respects other than (1) the payment of interest accruing prior to the issue date of such further Securities or (2) the first payment of interest following the issue date of such further Securities). Such further Securities may be consolidated and form a single series with the Securities of such series and have the same terms as to status, redemption or otherwise as the Securities of such series.

Section 2.04 *Authentication and Delivery of Securities*. The Issuer may deliver Securities of any series executed by the Issuer 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 order of the Issuer (contained in the Issuer

Order referred to below in this Section) or pursuant to such procedures acceptable to the Trustee and to such recipients as may be specified from time to time by an Issuer Order. The maturity date, original issue date, interest rate and any other terms of the Securities of such series shall be determined by or pursuant to such Issuer Order and procedures. If provided for in such procedures, such Issuer Order may authorize authentication and delivery pursuant to oral instructions from the Issuer or its duly authorized agent, which instructions shall be promptly confirmed in writing. In authenticating such Securities and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall be entitled to receive, and (subject to Section 6.01) shall be fully protected in relying upon:

(a) an Issuer Order requesting such authentication and setting forth delivery instructions if the Securities are not to be delivered to the Issuer;

(b) any Board Resolution, Officer's Certificate 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 were established;

(c) an Officer's Certificate setting forth the form or forms and terms of the Securities stating that the form or forms and terms of the Securities have been established pursuant to Sections 2.01 and 2.03 and comply with this Indenture, and covering such other matters as the Trustee may reasonably request; and

(d) an Opinion of Counsel to the effect that:

(i) the form or forms and terms of such Securities have been established pursuant to Sections 2.01 and 2.03 and comply with this Indenture,

(ii) the authentication and delivery of such Securities by the Trustee are authorized under the provisions of this Indenture, and

(iii) such Securities when authenticated and delivered by the Trustee and issued by the Issuer in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and binding obligations of the Issuer,

and covering such other matters as the Trustee may reasonably request.

The Trustee shall have the right to decline to authenticate and deliver any Securities under this Section if the Trustee, being advised by counsel, determines that such action may not lawfully be taken by the Issuer or if the Trustee in good faith by its board of directors or board of trustees, executive committee, or a trust committee of directors or trustees or Responsible Officers shall determine that such action would expose the Trustee to personal liability to existing Holders or would affect the Trustee's own rights, duties or immunities under the Securities, this Indenture or otherwise.

The Issuer shall execute and the Trustee shall, in accordance with this Section with respect to the Securities of a series, authenticate and deliver one or more 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 and not yet cancelled, (ii) shall be registered in the name of the Depository for such Global Security or Securities or the nominee of such Depository, (iii) shall be delivered by the Trustee to such Depository or pursuant to such Depository's instructions and (iv) shall 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 DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY.”

Each Depository designated pursuant to this Section must, at the time of its designation and at all times while it serves as Depository, be a clearing agency registered under the Exchange Act and any other applicable statute or regulation.

Section 2.05 *Execution of Securities.* The Securities shall be signed on behalf of the Issuer by the chairman of its Board of Directors, any vice chairman of its Board of Directors, its chief executive officer, its principal financial officer, its president, any vice president or its treasurer. Such signatures may be the manual or facsimile signatures of the present or any future such officers. Typographical and other minor errors or defects in any such reproduction of any such signature shall not affect the validity or enforceability of any Security that has been duly authenticated and delivered by the Trustee.

In case any officer of the Issuer who shall have signed any of the Securities shall cease to be such officer before the Security so signed shall be authenticated and delivered by the Trustee or disposed of by the Issuer, such Security nevertheless may be authenticated and delivered or disposed of as though the person who signed such Security had not ceased to be such officer of the Issuer; and any Security may be signed on behalf of the Issuer by such persons as, at the actual date of the execution of such Security, shall be the proper officers of the Issuer, although at the date of the execution and delivery of this Indenture any such person was not such an officer.

Section 2.06 *Certificate of Authentication.* Only such Securities as shall bear thereon a certificate of authentication substantially in the form hereinbefore recited, executed by the Trustee by the manual signature of one of its authorized officers, shall be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. The execution of such certificate by the Trustee upon any Security executed by the Issuer shall be conclusive evidence that the Security so authenticated has been duly authenticated and delivered hereunder and that the Holder is entitled to the benefits of this Indenture.

Section 2.07 *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, in denominations of \$2,000 and any integral multiple of \$1,000 thereof. 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 Issuer executing the same may determine with the approval of the Trustee, as evidenced by the execution and authentication thereof. Unless otherwise indicated in a Board Resolution, Officer's Certificate or supplemental indenture for a particular series, interest will be calculated on the basis of a 360-day year of twelve 30-day months.

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, exchange or conversion of such Security subsequent to the record date and prior to such Interest Payment Date, except if and to the extent the Issuer shall default in the payment of the interest due on such Interest Payment Date for such series, in which case such defaulted interest shall be paid to the Persons in whose names Outstanding Securities for such series are registered at the close of business on a subsequent record date (which shall be not less than five Business Days prior to the date of payment of such defaulted interest) established by notice given by or on behalf of the Issuer to the Holders of Securities not less than 15 days preceding such subsequent record date. 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 specified, if such Interest Payment Date is the first day of a calendar month, the 15th day of the immediately preceding calendar month or, if such Interest Payment Date is the 15th day of a calendar month, the first day of such calendar month, whether or not such record date is a Business Day.

Section 2.08 *Registration, Transfer and Exchange.* The Issuer will keep at each office or agency to be maintained for the purpose as provided in Section 3.02 for each series of Securities a register or registers in which, subject to such reasonable regulations as it may prescribe, it will provide for the registration of Securities of such series and the registration of transfer of Securities of such series. Such register shall be in written form in the English language or in any other form capable of being converted into such form within a reasonable time. At all reasonable times such register or registers shall be open for inspection by the Trustee.

Upon due presentation for registration of transfer of any Security of any series at any such office or agency to be maintained for the purpose as provided in Section 3.02, the Issuer shall execute and the Trustee shall authenticate and deliver in the name of the transferee or

transferees a new Security or Securities of the same series, maturity date, interest rate and original issue date in authorized denominations for a like aggregate principal amount.

At the option of the Holder thereof, Securities of any series (except a Global Security) may be exchanged for a Security or Securities of such series having authorized denominations and an equal aggregate principal amount, upon surrender of such Securities to be exchanged at the agency of the Issuer that shall be maintained for such purpose in accordance with Section 3.02 and upon payment, if the Issuer shall so require, of the charges hereinafter provided. Whenever any Securities are so surrendered for exchange, the Issuer shall execute, and the Trustee shall authenticate and deliver, the Securities which the Holder making the exchange is entitled to receive. All Securities surrendered upon any exchange or transfer provided for in this Indenture shall be promptly cancelled and disposed of by the Trustee and the Trustee will deliver a certificate of disposition thereof to the Issuer.

All Securities presented for registration of transfer, exchange, redemption or payment shall (if so required by the Issuer or the Trustee) be duly endorsed by, or be accompanied by a written instrument or instruments of transfer in form satisfactory to the Issuer and the Trustee duly executed by, the Holder or his or her attorney duly authorized in writing.

The Issuer may require payment of a sum sufficient to cover any stamp or other 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.

The Issuer shall not be required to exchange or register a transfer of (a) any Securities of any series for a period of 15 days immediately preceding the first delivery of notice of redemption of Securities of such series to be redeemed or (b) any Securities selected, called or being called for redemption, in whole or in part, except, in the case of any Security to be redeemed in part, the portion thereof not so to be redeemed.

Notwithstanding any other provision of this Section 2.08, unless and until it is exchanged in whole or in part for Securities in definitive registered form, a 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 the Securities of a series notifies the Issuer that it is unwilling or unable to continue as Depositary for the Securities of such series or if at any time the Depositary for the Securities of a series shall no longer be eligible under Section 2.04, the Issuer shall appoint a successor Depositary with respect to the Securities of such series. If a successor Depositary for the Securities of such series is not appointed by the Issuer within 90 days after the Issuer receives such notice or becomes aware of such ineligibility, the Issuer's determination pursuant to Section 2.03 that the Securities of such series be represented by a Global Security shall no longer be effective and the Issuer will execute, and the Trustee, upon receipt of an Officer's Certificate for the authentication and delivery of definitive Securities of such series, will authenticate and deliver, Securities of such series in definitive registered form,

in any authorized denominations, in an aggregate principal amount equal to the principal amount of the Global Security or Securities representing the Securities of such series, in exchange for such Global Security or Securities.

The Issuer may at any time and in its sole discretion determine that the Securities of any series issued in the form of one or more Global Securities shall no longer be represented by a Global Security or Securities. In such event the Issuer will execute, and the Trustee, upon receipt of an Officer's Certificate for the authentication and delivery of definitive Securities of such series, will authenticate and deliver, Securities of such series in definitive registered form, in any authorized denominations, in an aggregate principal amount equal to the principal amount of the Global Security or Securities representing such series, in exchange for such Global Security or Securities.

The Depositary for such Global Security may surrender such Global Security in exchange in whole or in part for Securities of the same series in definitive registered form in accordance with the two preceding paragraphs or on such other terms as are acceptable to the Issuer and such Depositary. Thereupon, the Issuer shall execute, and the Trustee shall authenticate and deliver, without service charge,

(i) to the Person specified by such Depositary a new Security or Securities of the same series, 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 Global Security; and

(ii) to such Depositary a new Global Security in a denomination equal to the difference, if any, between the principal amount of the surrendered Global Security and the aggregate principal amount of Securities authenticated and delivered pursuant to clause (i) above.

Upon the exchange of a Global Security for Securities in definitive registered form, in authorized denominations, such Global Security shall be cancelled by the Trustee. Securities in definitive registered form issued in exchange for a Global Security pursuant to this Section 2.08 shall be registered in such names and in such authorized denominations as the Depositary for such Global Security, pursuant to instructions from its direct or indirect participants or otherwise, shall instruct the Trustee. The Trustee 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 Issuer, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such transfer or exchange.

Section 2.09 *Mutilated, Defaced, Destroyed, Lost and Stolen Securities.* In case any temporary or definitive Security shall become mutilated or defaced or be destroyed, lost or stolen, the Issuer in its discretion may execute, and upon the written request of any officer of the Issuer, the Trustee shall authenticate and deliver a new Security of the same series, maturity date, interest rate and original issue date, bearing a number or other distinguishing symbol not

contemporaneously outstanding, in exchange and substitution for the mutilated or defaced Security, or in lieu of and substitution for the Security so destroyed, lost or stolen. In every case the applicant for a substitute Security shall furnish to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or indemnity as may be required by them to indemnify and defend and to save each of them harmless and, in every case of destruction, loss or theft, evidence to their satisfaction of the destruction, loss or theft of such Security and of the ownership thereof and in the case of mutilation or defacement shall surrender the Security to the Trustee.

Upon the issuance of any substitute Security, the Issuer may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith. In case any Security which has matured or is about to mature or has been called for redemption in full, or is being surrendered for conversion in full, shall become mutilated or defaced or be destroyed, lost or stolen, the Issuer may, instead of issuing a substitute Security (with the Holder's consent, in the case of convertible Securities), pay or authorize the payment of the same or convert, or authorize conversion of the same (without surrender thereof except in the case of a mutilated or defaced Security), if the applicant for such payment shall furnish to the Issuer and to the Trustee and any agent of the Issuer or the Trustee such security or indemnity as any of them may require to save each of them harmless, and, in every case of destruction, loss or theft, the applicant shall also furnish to the Issuer and the Trustee and any agent of the Issuer or the Trustee evidence to their satisfaction of the destruction, loss or theft of such Security and of the ownership thereof.

Every substitute Security of any series issued pursuant to the provisions of this Section by virtue of the fact that any such Security is destroyed, lost or stolen shall constitute an additional contractual obligation of the Issuer, whether or not the destroyed, lost or stolen Security shall be at any time enforceable by anyone and shall be entitled to all the benefits of (but shall be subject to all the limitations of rights set forth in) this Indenture equally and proportionately with any and all other Securities of such series duly authenticated and delivered hereunder. All Securities shall be held and owned upon the express condition that, to the extent permitted by law, the foregoing provisions are exclusive with respect to the replacement or payment or conversion of mutilated, defaced or destroyed, lost or stolen Securities and shall preclude any and all other rights or remedies notwithstanding any law or statute existing or hereafter enacted to the contrary with respect to the replacement or payment of negotiable instruments or other securities without their surrender.

Section 2.10 *Cancellation of Securities; Destruction Thereof.* All Securities surrendered for exchange for Securities of the same series or for payment, redemption, registration of transfer or conversion or for credit against any payment in respect of a sinking or analogous fund, if surrendered to the Issuer or any agent of the Issuer or the Trustee, shall be delivered to the Trustee for cancellation or, if surrendered to the Trustee, shall be cancelled by it; and no Securities shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Indenture. The Trustee shall dispose of cancelled Securities held by it and deliver a certificate of disposition to the Issuer. If the Issuer shall acquire any of the Securities,

such acquisition shall not operate as a redemption or satisfaction of the Debt represented by such Securities unless and until the same are delivered to the Trustee for cancellation.

Section 2.11 *Temporary Securities*. Pending the preparation of definitive Securities for any series, the Issuer may execute and the Trustee shall authenticate and deliver temporary Securities for such series (printed, lithographed, typewritten or otherwise reproduced, in each case in form satisfactory to the Trustee). Temporary Securities of any series shall be issuable in any authorized denomination, and substantially in the form of the definitive Securities of such series but with such omissions, insertions and variations as may be appropriate for temporary Securities, all as may be determined by the Issuer with the concurrence of the Trustee as evidenced by the execution and authentication thereof. Temporary Securities may contain such reference to any provisions of this Indenture as may be appropriate. Every temporary Security shall be executed by the Issuer and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities. Without unreasonable delay the Issuer shall execute and shall furnish definitive Securities of such series and thereupon temporary Securities of such series may be surrendered in exchange therefor without charge at each office or agency to be maintained by the Issuer for that purpose pursuant to Section 3.02 and the Trustee shall authenticate and deliver in exchange for such temporary Securities of such series an equal aggregate principal amount of definitive Securities of the same series having 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, unless the benefits of the temporary Securities are limited pursuant to Section 2.03.

Section 2.12 *CUSIP Numbers*. The Issuer in issuing the Securities may use “CUSIP” numbers if then generally in use and, if so, the Trustee may use “CUSIP” numbers in notices of redemption as a convenience to Holders. Any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed on the Securities. No such redemption shall be affected by any defect in or omission of such numbers.

ARTICLE 3 COVENANTS OF THE ISSUER

Section 3.01 *Payment of Principal and Interest*. The Issuer covenants and agrees for the benefit of each series of Securities that it will duly and punctually pay or cause to be paid the principal of, and interest on, each of the Securities of such series (together with any additional amounts payable pursuant to the terms of such Securities) at the place or places, at the respective times and in the manner provided in such Securities and in this Indenture. The interest on Securities (together with any additional amounts payable pursuant to the terms of such Securities) shall be payable only to or upon the written order of the Holders thereof and at the option of the Issuer 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 Issuer.

Section 3.02 *Offices for Payments, Etc.* The Issuer will maintain (i) in _____, an agency where the Securities of each series may be presented for payment, an agency where the Securities of each series may be presented for exchange and conversion, if applicable, as provided in this Indenture and an agency where the Securities of each series may be presented for registration of transfer as in this Indenture provided and (ii) such further agencies in such places as may be determined for the Securities of such series pursuant to Section 2.03.

The Issuer will maintain in _____, an agency where notices and demands to or upon the Issuer in respect of the Securities of any series or this Indenture may be served.

The Issuer will give to the Trustee written notice of the location of each such agency and of any change of location thereof. In case the Issuer shall fail to maintain any agency required by this Section to be located in _____, or shall fail to give such notice of the location or of any change in the location of any of the above agencies, presentations and demands may be made and notices may be served at the Corporate Trust Office of the Trustee.

The Issuer may from time to time designate one or more additional agencies where the Securities of a series may be presented for payment, where the Securities of that series may be presented for exchange or conversion, if applicable, as provided in this Indenture and pursuant to Section 2.03 and where the Securities of that series may be presented for registration of transfer as in this Indenture provided, and the Issuer may from time to time rescind any such designation, as the Issuer may deem desirable or expedient; *provided, however*, that no such designation or rescission shall in any manner relieve the Issuer of its obligation to maintain the agencies provided for in this Section. The Issuer will give to the Trustee prompt written notice of any such designation or rescission thereof.

Section 3.03 *Appointment to Fill a Vacancy in Office of Trustee.* The Issuer, whenever necessary to avoid or fill a vacancy in the office of Trustee, will appoint, in the manner provided in Section 6.10, a Trustee, so that there shall at all times be a Trustee with respect to each series of Securities hereunder.

Section 3.04 *Paying Agents.* Whenever the Issuer shall appoint a paying agent other than the Trustee with respect to the Securities of any series, it will cause such paying agent to execute and deliver to the Trustee an instrument in which such agent shall agree with the Trustee, subject to the provisions of this Section,

(a) that it will hold all sums received by it as such agent for the payment of the principal of or interest on the Securities of such series (whether such sums have been paid to it by the Issuer or by any other obligor on the Securities of such series) in trust for the benefit of the Holders of the Securities of such series or of the Trustee,

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

(c) that at any time during the continuance of any such failure, upon the written request of the Trustee, it will forthwith pay to the Trustee all sums so held in trust by such paying agent.

The Issuer will, on or prior to each due date of the principal of or interest on the Securities of such series, deposit with the paying agent a sum sufficient to pay such principal or interest so becoming due, and (unless such paying agent is the Trustee) the Issuer will promptly notify the Trustee of any failure to take such action.

If the Issuer shall act as its own paying agent with respect to the Securities of any series, it will, on or before each due date of the principal of or interest on the Securities of such series, set aside, segregate and hold in trust for the benefit of the Holders of the Securities of such series a sum sufficient to pay such principal or interest so becoming due. The Issuer will promptly notify the Trustee of any failure to take such action.

Anything in this Section to the contrary notwithstanding, but subject to Section 10.01, the Issuer may at any time, for the purpose of obtaining a satisfaction and discharge with respect to one or more or all series of Securities hereunder, or for any other reason, pay or cause to be paid to the Trustee all sums held in trust for any such series by the Issuer or any paying agent hereunder, as required by this Section, such sums to be held by the Trustee upon the trusts herein contained.

Anything in this Section to the contrary notwithstanding, the agreement to hold sums in trust as provided in this Section is subject to the provisions of Sections 10.03 and 10.04.

Section 3.05 *Written Statement to Trustee.* So long as any Securities are Outstanding hereunder, the Issuer will deliver to the Trustee, within 120 days after the end of each fiscal year of the Issuer ending after the date hereof, a written certificate covering the previous fiscal year, (which need not comply with Section 11.05), signed by its principal executive officer, principal financial officer or principal accounting officer, stating whether or not, to the best knowledge of such officer, the Issuer is in default in the performance and observance of any of the terms, provisions and conditions of this Indenture (without regard to any period of grace or requirement of notice provided hereunder) and, if the Issuer shall be in default, specifying all such defaults and the nature and status thereof of which they may have knowledge.

ARTICLE 4 SECURITYHOLDERS LISTS AND REPORTS BY THE ISSUER AND THE TRUSTEE

Section 4.01 *Issuer to Furnish Trustee Information as to Names and Addresses of Securityholders.* The Issuer covenants and agrees that it 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 of each series pursuant to Section 312 of the Trust Indenture Act:

(a) semiannually and not more than 15 days after each record date for the payment of interest on such Securities, as hereinabove specified, as of such record date and on

dates to be determined pursuant to Section 2.03 for non-interest bearing Securities in each year, and

(b) at such other times as the Trustee may request in writing, within 30 days after receipt by the Issuer of any such request as of a date not more than 15 days prior to the time such information is furnished, *provided*, that, if and so long as the Trustee shall be the Security registrar (the “**Security Registrar**”) for such series, such list shall not be required to be furnished.

Section 4.02 *Reports by the Issuer.* The Issuer covenants to comply with Section 314(a) of the Trust Indenture Act insofar as it relates to information, documentation and other reports which the Issuer may be required to file with the Commission pursuant to Section 13 or Section 15(d) of the Exchange Act.

Section 4.03 *Reports by the Trustee.* Any Trustee’s report required under Section 313(a) of the Trust Indenture Act shall be transmitted on or before _____ in each year following the date hereof, so long as any Securities are Outstanding hereunder, and shall be dated as of a date convenient to the Trustee but no more than 60 nor less than 45 days prior thereto. The Trustee shall comply with Sections 313(b), 313(c) and 313(d) of the Trust Indenture Act.

Section 4.04 *Preservation of Information; Communication with Securityholders.* (a) The Trustee shall preserve, in as current a form as is reasonably practicable, all information as to the names and addresses of the Holders of Securities contained in the most recent list furnished to it as provided in Section 4.01 and as to the names and addresses of holders of Securities received by the Trustee in its capacity as Security Registrar (if acting in such capacity).

- (b) The Trustee may destroy any list furnished to it as provided in Section 4.01 upon receipt of a new list so furnished.
- (c) Securityholders may communicate as provided in Section 312(b) of the Trust Indenture Act with other Securityholders with respect to their rights under this Indenture or under the Securities. The Issuer, the Trustee, the Security Registrar and any other Person shall have the protection of Section 312(c) of the Trust Indenture Act.

ARTICLE 5

REMEDIES OF THE TRUSTEE AND SECURITYHOLDERS ON EVENT OF DEFAULT

Section 5.01 *Event of Default Defined; Acceleration of Maturity; Waiver of Default.* “**Event of Default**”, with respect to Securities of any series wherever used herein, means any one of the following events which shall have occurred and be continuing (whatever the reason for such Event of Default and whether it shall be voluntary or involuntary or be effected by

operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body):

(a) default in the payment of any installment of interest upon any of the Securities of such series as and when the same shall become due and payable, and continuance of such default for a period of 30 days (or such other period as may be established for the Securities of such series as contemplated by Section 2.03); or

(b) default in the payment of all or any part of the principal on any of the Securities of such series as and when the same shall become due and payable either at maturity, upon redemption, by declaration or otherwise (and, if established for the Securities of such series as contemplated by Section 2.03, the continuance of such default for a specified period); or

(c) default in the performance, or breach, of any covenant or agreement of the Issuer in respect of the Securities of such series (other than a covenant or agreement in respect of the Securities of such series a default in the performance or breach of which is elsewhere in this Section specifically dealt with), and continuance of such default or breach for a period of 90 days after there has been given, by registered or certified mail, to the Issuer by the Trustee or to the Issuer and the Trustee by the Holders of at least 25% in principal amount of the Outstanding Securities of such series, a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a “**Notice of Default**” hereunder; or

(d) a court having jurisdiction in the premises shall enter a decree or order for relief in respect of the Issuer 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 or sequestrator (or similar official) of the Issuer or for all or substantially all of its property and assets 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 90 consecutive days; or

(e) the Issuer shall commence a voluntary case under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consent to the entry of an order for relief in an involuntary case under any such law, or consent to the appointment of or taking possession by a receiver, liquidator, assignee, custodian, trustee or sequestrator (or similar official) of the Issuer or for any substantial part of its property and assets, or make any general assignment for the benefit of creditors; or

(f) any other Event of Default provided for in such series of Securities.

If an Event of Default described in clauses (a), (b), (c) or (f) occurs and is continuing, then, and in each and every such case, unless the principal of all of the Securities of such series shall have already become due and payable, either the Trustee or the Holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding hereunder (each such series voting as a separate class) by notice in writing to the Issuer (and also to the Trustee if given by Securityholders), may declare the entire principal (or, if the Securities of such series are Original Issue Discount Securities, such portion of the principal amount as may be specified in the terms of such series) of all Securities of such 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. If an Event of Default described in clauses (d) or (e) occurs and is continuing, then and in each and every such case, the entire principal (or, if any Securities are Original Issue Discount Securities, such portion of the principal as may be specified in the terms thereof) of all the Securities then Outstanding and interest accrued thereon, if any, shall automatically become immediately due and payable.

The foregoing provisions, however, are subject to the condition that if, at any time after the principal of the Securities of any series shall have been so declared due and payable, and before any judgment or decree for the payment of the moneys due shall have been obtained or entered as hereinafter provided, the Issuer shall pay or shall deposit with the Trustee a sum sufficient to pay all matured installments of interest upon all the Securities of such series and the principal of any and all Securities of such series 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 specified in the Securities of such series to the date of such payment or deposit) and such amount as shall be sufficient to cover reasonable compensation to the Trustee, its agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee except as a result of negligence or bad faith, and if any and all Events of Default under the Indenture with respect to such series, other than the non-payment of the principal of Securities of such series which shall have become due solely by such 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 Securities of such series then Outstanding, by written notice to the Issuer and to the Trustee, may waive all defaults with respect to such series 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.

Unless otherwise indicated in the Board Resolution, Officer's Certificate or supplemental indenture for a series of Original Issue Discount Securities, for all purposes under this Indenture, if a portion of the principal of any Original Issue Discount Securities shall have been accelerated and declared 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 5.02 *Collection of Debt by Trustee; Trustee May Prove Debt.* The Issuer covenants that (a) in case default shall be made in the payment of any installment of interest on any of the Securities of any series when such interest shall have become due and payable, and such default shall have continued for a period of 30 days or (b) in case default shall be made in the payment of all or any part of the principal of any of the Securities of any series when the same shall have become due and payable, whether upon maturity of the Securities of such series

or upon any redemption or by declaration or otherwise, then, upon demand of the Trustee, the Issuer will pay to the Trustee for the benefit of the Holders of the Securities of such series the whole amount that then shall have become due and payable on all Securities of such series for principal or interest, as the case may be (with interest to the date of such payment upon the overdue 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 such series); and, in addition thereto, such further amount as shall be sufficient to cover the costs and expenses of collection, including reasonable compensation to the Trustee and each predecessor trustee, their respective agents, attorneys and counsel, and any expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor trustee except as a result of its negligence or bad faith.

In case the Issuer shall fail forthwith to pay such amounts upon such demand, the Trustee, in its own name and as trustee of an express trust, shall be entitled and empowered to institute any action or proceedings at law or in equity for the collection of the sums so due and unpaid, and may prosecute any such action or proceedings to judgment or final decree, and may enforce any such judgment or final decree against the Issuer or other obligor upon such Securities and collect in the manner provided by law out of the property of the Issuer or other obligor upon such Securities, wherever situated, the moneys adjudged or decreed to be payable.

In case there shall be pending proceedings relative to the Issuer or any other obligor upon the Securities under Title 11 of the United States Code or any other applicable Federal or state bankruptcy, insolvency or other similar law, or in case a receiver, assignee or trustee in bankruptcy or reorganization, liquidator, sequestrator or similar official shall have been appointed for or taken possession of the Issuer or its property or such other obligor or its property, or in case of any other comparable judicial proceedings relative to the Issuer or other obligor upon the Securities of any series, or to the creditors or property of the Issuer or such other obligor, the Trustee, irrespective of whether the principal of any Securities shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand pursuant to the provisions of this Section, shall be entitled and empowered, by intervention in such proceedings or otherwise:

(i) to file and prove a claim or claims for the whole amount of principal and interest (or, if the Securities of any series are Original Issue Discount Securities, such portion of the principal amount as may be specified in the terms of such series) owing and unpaid in respect of the Securities of any series, and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for reasonable compensation to the Trustee and each predecessor trustee, and their respective agents, attorneys and counsel, and for reimbursement of all expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor trustee, except as a result of negligence or bad faith) and of the Securityholders allowed in any judicial proceedings relative to the Issuer or other

obligor upon the Securities of any series, or to the creditors or property of the Issuer or such other obligor,

(ii) unless prohibited by applicable law and regulations, to vote on behalf of the Holders of the Securities of any series in any election of a trustee or a standby trustee in arrangement, reorganization, liquidation or other bankruptcy or insolvency proceedings or person performing similar functions in comparable proceedings, and

(iii) to collect and receive any moneys or other property payable or deliverable on any such claims, and to distribute all amounts received with respect to the claims of the Securityholders and of the Trustee on their behalf; and any trustee, receiver or liquidator, custodian or other similar official is hereby authorized by each of the Securityholders to make payments to the Trustee, and, in the event that the Trustee shall consent to the making of payments directly to the Securityholders, to pay to the Trustee such amounts as shall be sufficient to cover reasonable compensation to the Trustee, each predecessor trustee and their respective agents, attorneys and counsel, and all other expenses and liabilities incurred, and all advances made, by the Trustee and each predecessor trustee except as a result of negligence or bad faith and all other amounts due to the Trustee or any predecessor trustee pursuant to Section 6.06.

Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or vote for or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities of any series or the rights of any Holder thereof, or to authorize the Trustee to vote in respect of the claim of any Securityholder in any such proceeding except, as aforesaid, to vote for the election of a trustee in bankruptcy or similar person.

All rights of action and of asserting claims under this Indenture, or under any of the Securities of any series, may be enforced by the Trustee without the possession of any of the Securities of such series or the production thereof on any trial or other proceedings relative thereto, and any such action or proceedings instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment, subject to the payment of the expenses, disbursements and compensation of the Trustee, each predecessor trustee and their respective agents and attorneys, shall be for the ratable benefit of the Holders of the Securities in respect of which such action was taken.

In any proceedings brought by the Trustee (and also any proceedings involving the interpretation of any provision of this Indenture to which the Trustee shall be a party), the Trustee shall be held to represent all the Holders of the Securities in respect to which such action was taken, and it shall not be necessary to make any Holders of such Securities parties to any such proceedings.

Section 5.03 *Application of Proceeds*. Any moneys collected by the Trustee pursuant to this Article in respect 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 monies have been collected and stamping (or otherwise noting) thereon the payment, or issuing Securities of such series in reduced principal amounts in exchange for the presented Securities of like series if only partially paid, or upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due to the Trustee or any predecessor trustee pursuant to Section 6.06;

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, to the extent permitted by applicable law, 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, to the extent permitted by applicable law, 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, without preference or priority of principal over interest, or of interest 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; and

FOURTH: To the payment of the remainder, if any, to the Issuer or any other Person lawfully entitled thereto.

Section 5.04 *Suits for Enforcement*. In case an Event of Default has occurred, has not been waived and is continuing, the Trustee may in its discretion proceed to protect and enforce the rights vested in it by this Indenture by such appropriate judicial proceedings as the Trustee shall deem most effectual to protect and enforce any such rights, either at law or in equity or in bankruptcy or otherwise, whether for the specific enforcement of any covenant or agreement contained in this Indenture or in aid of the exercise of any power granted in this Indenture or to enforce any other legal or equitable right vested in the Trustee by this Indenture or by law.

Section 5.05 *Restoration of Rights on Abandonment of Proceedings*. In case the Trustee shall have proceeded to enforce any right under this Indenture and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, then and in every such case (subject to any determination in such

proceeding) the Issuer and the Trustee shall be restored respectively to their former positions and rights hereunder, and all rights, remedies and powers of the Issuer, the Trustee and the Securityholders shall continue as though no such proceedings had been taken.

Section 5.06 *Limitations on Suits by Securityholders.* No Holder of any Security of any series shall have any right by virtue, or by availing itself, of any provision of this Indenture to institute any action or proceeding at law or in equity or in bankruptcy or otherwise upon or under or with respect to this Indenture, or for the appointment of a trustee, receiver, liquidator, custodian or other similar official or for any other remedy hereunder, unless such Holder previously shall have given to the Trustee written notice of default and of the continuance thereof, as hereinbefore provided, and unless also the Holders of not less than 25% in aggregate principal amount of the Securities of such series then Outstanding shall have made written request upon the Trustee to institute such action or proceedings in its own name as trustee hereunder and shall have offered to the Trustee such reasonable indemnity as it may require against the costs, expenses and liabilities to be incurred therein or thereby and the Trustee for 60 days after its receipt of such notice, request and offer of indemnity shall have failed to institute any such action or proceeding and no direction inconsistent with such written request shall have been given to the Trustee pursuant to Section 5.09; it being understood and intended, and being expressly covenanted by the Holder of every Security of a particular series with every other Holder of Securities of such series and the Trustee, that no one or more Holders of Securities of any series shall have any right in any manner whatever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other such Holder of Securities of such series, or to obtain or seek to obtain priority over or preference to any other such Holder of such series or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all Holders of Securities of the applicable series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Section 5.07 *Unconditional Right of Securityholders to Institute Certain Suits.* Notwithstanding any other provision in this Indenture and any provision of any Security, the right of any Holder of any Security to receive payment of the principal of and interest on such Security on or after the respective due dates expressed in such Security in accordance with the terms hereof and thereof, or to institute 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; it being understood and intended, and being expressly covenanted by the Holder of every Security of a particular series with every other Holder of Securities of such Series and the Trustee, that no one or more Holders of Securities of any series shall have any right in any manner whatever by virtue or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other such Holder of Securities of such series, or to obtain or seek to obtain priority over or preference to any other such Holder of Securities of such series or to enforce any right under this Indenture, except in the manner herein provided and for the equal, ratable and common benefit of all Holders of Securities of the applicable series. For the protection and enforcement of the provisions of this Section, each and every Securityholder and the Trustee shall be entitled to such relief as can be given either at law or in equity.

Section 5.08 *Powers and Remedies Cumulative; Delay or Omission Not Waiver of Default.* Except as provided in Section 5.06, no right or remedy herein conferred upon or reserved to the Trustee or to the Holders of Securities 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.

No delay or omission of the Trustee or of any Holder of Securities to exercise any right or power accruing upon any Event of Default occurring and continuing as aforesaid shall impair any such right or power or shall be construed to be a waiver of any such Event of Default or an acquiescence therein; and, subject to Section 5.06, every power and remedy given by this Indenture or by law to the Trustee or to the Holders of Securities may be exercised from time to time, and as often as shall be deemed expedient, by the Trustee or by the Holders of Securities.

Section 5.09 *Control by Holders of Securities.* The Holders of a majority in aggregate principal amount of the Securities of each series affected (with each series voting as a separate class) at the time Outstanding shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee with respect to the Securities of such series by this Indenture; *provided*, that such direction shall not be otherwise than in accordance with law and the provisions of this Indenture and provided, further, that (subject to the provisions of Section 6.01) the Trustee shall have the right to decline to follow any such direction if the Trustee, being advised by counsel, shall determine that the action or proceeding so directed may not lawfully be taken or if the Trustee in good faith by its board of directors, the executive committee, or a trust committee of directors or Responsible Officers of the Trustee shall determine that the action or proceedings so directed would involve the Trustee in personal liability or if the Trustee in good faith shall so determine that the actions or forbearances specified in or pursuant to such direction would be unduly prejudicial to the interests of Holders of the Securities of all series so affected not joining in the giving of said direction, it being understood that (subject to Section 6.01) the Trustee shall have no duty to ascertain whether or not such actions or forbearances are unduly prejudicial to such Holders.

Nothing in this Indenture shall impair the right of the Trustee in its discretion to take any action deemed proper by the Trustee and which is not inconsistent with such direction or directions by Securityholders.

Section 5.10 *Waiver of Past Defaults.* The Holders of a majority in aggregate principal amount of the Securities of any series at the time Outstanding, by notice to the Trustee, may on behalf of the Holders of all the Securities of such series waive any existing default in the performance of any of the covenants contained herein or established pursuant to Section 2.03 with respect to such series and its consequences, except an uncured default in the payment of the principal of, or interest on, any of the Securities of that series as and when the same shall become due by the terms of such Securities; and may rescind an acceleration and its consequences,

including any related payment default that resulted from such acceleration. In the case of any such waiver, the Issuer, the Trustee and the Holders of the Securities of such series shall be restored to their former positions and rights hereunder, respectively, such default shall cease to exist and be deemed to have been cured and not to have occurred, and any Event of Default arising therefrom shall be deemed to have been cured, and not to have occurred 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 thereon.

Section 5.11 *Trustee to Give Notice of Default.* The Trustee shall, within 90 days after the occurrence of a default with respect to the Securities of any series, give notice of all defaults with respect to that series known to the Trustee to all Holders of Securities of such series in the manner and to the extent provided in Sections 4.03 and 11.04, unless in each case such defaults shall have been cured before the giving of such notice (the term “**defaults**” for the purpose of this Section being hereby defined to mean any event or condition which is, or with notice or lapse of time or both would become, an Event of Default); *provided*, that, except in the case of default in the payment of the principal of or interest on any of the Securities of such series, or in the payment of any sinking fund installment on such series, the Trustee shall be protected in withholding such notice if and so long as the board of directors, the executive committee, or a trust committee of directors or trustees and/or Responsible Officers of the Trustee in good faith determines that the withholding of such notice is in the interests of the Securityholders of such series.

Section 5.12 *Right of Court to Require Filing of Undertaking to Pay Costs.* All parties to this Indenture agree, and each Holder of any Security by his or her acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys’ fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Trustee, to any suit instituted by any Securityholder or group of Securityholders of any series holding in the aggregate more than 10% in aggregate principal amount of the Securities of such series, or to any suit instituted by any Securityholder for the enforcement of the payment of the principal of or interest on any Security of such series, on or after the respective due dates expressed in such Security or established pursuant to this Indenture.

ARTICLE 6 CONCERNING THE TRUSTEE

Section 6.01 *Duties and Responsibilities of the Trustee; During Default; Prior to Default.* With respect to the Holders of any series of Securities issued hereunder, the Trustee, prior to the occurrence of an Event of Default with respect to the Securities of a particular series and after the curing or waiving of all Events of Default which may have occurred with respect to such series, undertakes to perform such duties and only such duties as are specifically set forth in

this Indenture. In case an Event of Default with respect to the Securities of a series has occurred (and has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent person would exercise or use under the circumstances in the conduct of his or her own affairs.

No provision of this Indenture shall be construed to relieve the Trustee from liability for its own negligent action, its own negligent failure to act or its own willful misconduct.

Section 6.02 *Certain Rights of the Trustee*. In furtherance of and subject to the Trust Indenture Act and subject to Section 6.01:

(a) in the absence of bad faith on the part of the Trustee, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon any statements, certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture; but, in the case of any such statements, certificates or opinions which by any provision hereof are specifically required to be furnished to the Trustee, the Trustee shall be under a duty to examine the same to determine whether or not they conform to the requirements of this Indenture;

(b) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer or Responsible Officers of the Trustee, unless it shall be proved that the Trustee was negligent in ascertaining the pertinent facts;

(c) the Trustee shall not be liable with respect to any action taken or omitted to be taken by it in good faith in accordance with the direction of the Holders pursuant to Section 5.09 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;

(d) none of the provisions contained in this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur personal financial liability in the performance of any of its duties or in the exercise of any of its rights or powers if there shall be reasonable ground for believing that the repayment of such funds or adequate indemnity against such liability is not reasonably assured to it;

(e) the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, Officer's Certificate or any other certificate, statement, instrument, opinion, report, notice, request, consent, order, bond, debenture, note, security or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(f) any request, direction, order or demand of the Issuer mentioned herein shall be sufficiently evidenced by an Officer's Certificate (unless other evidence in respect thereof be herein specifically prescribed); and any resolution of the Board of Directors may be

evidenced to the Trustee by a copy thereof certified by the secretary or an assistant secretary of the Issuer;

(g) the Trustee may consult with counsel and any advice or Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted to be taken by it hereunder in good faith and in accordance with such advice or Opinion of Counsel;

(h) the Trustee shall be under no obligation to exercise any of the trusts or powers vested in it by this Indenture at the request, order or direction of any of the Securityholders pursuant to the provisions of this Indenture, unless such Securityholders shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities that might be incurred therein or thereby;

(i) the Trustee shall not be liable for any action taken or omitted by it in good faith and believed by it to be authorized or within the discretion, rights or powers conferred upon it by this Indenture;

(j) 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, statement, instrument, opinion, report, notice, request, consent, order, approval, appraisal, bond, debenture, note, 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; the reasonable expenses of every such investigation shall be paid by the Issuer or, if paid by the Trustee or any predecessor trustee, shall be repaid by the Issuer upon demand; and

(k) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys not regularly in its employ and the Trustee shall not be responsible for any misconduct or negligence on the part of any such agent or attorney appointed with due care by it hereunder.

Section 6.03 *Trustee Not Responsible for Recitals, Disposition of Securities or Application of Proceeds Thereof.* The recitals contained herein and in the Securities, except the Trustee's certificates of authentication, shall be taken as the statements of the Issuer, and the Trustee assumes no responsibility for the correctness of the same. The Trustee makes no representation as to the validity or sufficiency of this Indenture or of the Securities. The Trustee shall not be accountable for the use or application by the Issuer of any of the Securities or of the proceeds thereof.

Section 6.04 *Trustee and Agents May Hold Securities; Collections, Etc.* The Trustee or any agent of the Issuer or the Trustee, in its individual or any other capacity, may become the owner or pledgee of Securities with the same rights it would have if it were not the Trustee or such agent and may otherwise deal with the Issuer and receive, collect, hold and retain collections from the Issuer with the same rights it would have if it were not the Trustee or such agent.

Section 6.05 *Moneys Held by Trustee.* Subject to the provisions of Section 10.04 hereof, all moneys received by the Trustee shall, until used or applied as herein provided, be held in trust for the purposes for which they were received, but need not be segregated from other funds except to the extent required by mandatory provisions of law. Neither the Trustee nor any agent of the Issuer or the Trustee shall be under any liability for interest on any moneys received by it hereunder.

Section 6.06 *Compensation and Indemnification of Trustee and Its Prior Claim.* The Issuer covenants and agrees to pay to the Trustee from time to time, and the Trustee shall be entitled to, such reasonable compensation (which shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust) as the Issuer and the Trustee may from time to time agree in writing and, except as otherwise expressly provided herein, the Issuer covenants and agrees to pay or reimburse the Trustee and each predecessor trustee upon its request for all reasonable expenses, disbursements and advances incurred or made by or on behalf of it in accordance with any of the provisions of this Indenture (including the reasonable compensation and the expenses and disbursements of its counsel and of all agents and other persons not regularly in its employ) except any such expense, disbursement or advance as may arise from its negligence or bad faith. The Issuer also covenants to indemnify the Trustee and each predecessor trustee for, and to hold it harmless against, any loss, liability or expense incurred without negligence or bad faith on its part, arising out of or in connection with the acceptance or administration of this Indenture or the trusts hereunder and its duties hereunder, including the costs and expenses of defending itself against or investigating any claim of liability in the premises. The obligations of the Issuer 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. 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.

Section 6.07 *Right of Trustee to Rely on Officer's Certificate, Etc.* Subject to Sections 6.01 and 6.02, 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 Officer's 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.

Section 6.08 *Disqualification; Conflicting Interests.* If the Trustee has or shall acquire any "conflicting interest" within the meaning of Section 310(b) of the Trust Indenture Act, the Trustee and the Issuer shall in all respects comply with the provisions of Section 310(b) of the Trust Indenture Act.

Section 6.09 *Persons Eligible for Appointment as Trustee.* The Trustee for each series of Securities hereunder shall at all times be a corporation having a combined capital and surplus of at least \$50,000,000 and shall be eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of a Federal, State or District of Columbia supervising or examining authority, then, for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published.

Section 6.10 *Resignation and Removal; Appointment of Successor Trustee.* (a) The Trustee, or any trustee or trustees hereafter appointed, may at any time resign with respect to one or more or all series of Securities by giving written notice of resignation to the Issuer and by delivering notice of such resignation to the Holders of then Outstanding Securities of each series affected at their addresses as they shall appear on the Security register. Upon receiving such notice of resignation, the Issuer shall promptly appoint a successor trustee or trustees with respect to the applicable series by written instrument in duplicate, executed by authority of the Board of Directors, one copy of which instrument shall be delivered to the resigning Trustee and one copy to the successor trustee or trustees. If no successor trustee shall have been so appointed with respect to any series and have accepted appointment within 30 days after the delivery of such notice of resignation, the resigning trustee may petition any court of competent jurisdiction for the appointment of a successor trustee, or any Securityholder who has been a bona fide Holder of a Security or Securities of the applicable series for at least six months may, on behalf of himself or herself and all others similarly situated, petition any such court for the appointment of a successor trustee. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, appoint a successor trustee.

(b) In case at any time any of the following shall occur:

(i) the Trustee shall fail to comply with the provisions of Section 310(b) of the Trust Indenture Act with respect to any series of Securities after written request therefor by the Issuer or by any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months; or

(ii) the Trustee shall cease to be eligible in accordance with the provisions of Section 310(a) of the Trust Indenture Act and shall fail to resign after written request therefor by the Issuer or by any Securityholder; or

(iii) the Trustee shall become incapable of acting with respect to any series of Securities, or shall be adjudged bankrupt or insolvent, or a receiver or liquidator of the Trustee or of its property shall be appointed, or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation;

then, in any such case, (A) the Issuer may remove the Trustee with respect to the applicable series of Securities and appoint a successor trustee for such series by written instrument, in duplicate, executed by order of the Board of Directors, one copy of which instrument shall be delivered to the Trustee so removed and one copy to the successor trustee, or, (B) subject to Section 315(e) of the Trust Indenture Act, any Securityholder who has been a bona fide Holder of a Security or Securities of such series for at least six months may on behalf of itself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor trustee with respect to such series. Such court may thereupon, after such notice, if any, as it may deem proper and prescribe, remove the Trustee and appoint a successor trustee.

(c) The Holders of a majority in aggregate principal amount of the Securities of each series at the time Outstanding may at any time remove the Trustee with respect to Securities of such series and, with the consent of the Issuer, appoint a successor trustee with respect to the Securities of such series by delivering to the Trustee so removed, to the successor trustee so appointed and to the Issuer the evidence provided for in Section 7.01 of the action in that regard taken by the Securityholders.

(d) Any resignation or removal of the Trustee with respect to any series and any appointment of a successor trustee with respect to such series pursuant to any of the provisions of this Section 6.10 shall become effective upon acceptance of appointment by the successor trustee as provided in Section 6.11.

Section 6.11 *Acceptance of Appointment by Successor Trustee.* Any successor trustee appointed as provided in Section 6.10 shall execute and deliver to the Issuer and to its predecessor trustee an instrument accepting such appointment hereunder, and thereupon the resignation or removal of the predecessor trustee with respect to all or any applicable series shall become effective and such successor trustee, without any further act, deed or conveyance, shall become vested with all rights, powers, duties and obligations with respect to such series of its predecessor hereunder, with like effect as if originally named as trustee for such series hereunder; but, nevertheless, on the written request of the Issuer or of the successor trustee, upon payment of its charges then unpaid, the trustee ceasing to act shall, subject to Section 10.04, pay over to the successor trustee all moneys at the time held by it hereunder and shall execute and deliver an instrument transferring to such successor trustee all such rights, powers, duties and obligations. Upon request of any such successor trustee, the Issuer shall execute any and all instruments in writing for more fully and certainly vesting in and confirming to such successor trustee all such rights and powers. Any trustee ceasing to act shall, nevertheless, retain a prior claim upon all property or funds held or collected by such trustee to secure any amounts then due it pursuant to the provisions of Section 6.06.

If a successor trustee is appointed with respect to the Securities of one or more (but not all) series, the Issuer, the predecessor trustee and each successor trustee with respect to the Securities of any applicable series shall execute and deliver an indenture supplemental hereto which shall contain such provisions as shall be deemed necessary or desirable to confirm that all the rights, powers, trusts and duties of the predecessor trustee with respect to the Securities of any series as to which the predecessor trustee is not retiring shall continue to be vested in the predecessor trustee, and 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 under separate indentures.

No successor trustee with respect to any series of Securities shall accept appointment as provided in this Section 6.11 unless at the time of such acceptance such successor trustee shall be qualified under the provisions of Section 310(b) of the Trust Indenture Act and eligible under the provisions of Section 310(a) of the Trust Indenture Act.

Upon acceptance of appointment by any successor trustee as provided in this Section 6.11, the Issuer shall deliver notice thereof to the Holders of Securities of each series affected, by delivering such notice to such Holders at their addresses as they shall appear on the Security register. If the acceptance of appointment is substantially contemporaneous with the resignation, then the notice called for by the preceding sentence may be combined with the notice called for by Section 6.10. If the Issuer fails to deliver such notice within ten days after acceptance of appointment by the successor trustee, the successor trustee shall cause such notice to be given at the expense of the Issuer.

Section 6.12 *Merger, Conversion, Consolidation or Succession to Business of Trustee.* Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder; *provided*, that such corporation shall be qualified under the provisions of Section 310(b) of the Trust Indenture Act and eligible under the provisions of Section 310(a) of the Trust Indenture Act, without the execution or filing of any paper or any further act on the part of any of the parties hereto, anything herein to the contrary notwithstanding.

In case, at the time such successor to the Trustee shall succeed to the trusts created by this Indenture, any of the Securities of any series shall have been authenticated but not delivered, any such successor to the Trustee may adopt the certificate of authentication of any predecessor trustee and deliver such Securities so authenticated; and, in case at that time any of the Securities of any series shall not have been authenticated, any successor to the Trustee may authenticate such Securities either in the name of any predecessor hereunder or in the name of the successor trustee; and in all such cases such certificate shall have the full force which it is anywhere in the Securities of such series or in this Indenture provided that the certificate of the Trustee shall have; *provided*, that the right to adopt the certificate of authentication of any predecessor trustee

or to authenticate Securities of any series in the name of any predecessor trustee shall apply only to its successor or successors by merger, conversion or consolidation.

Section 6.13 *Preferential Collection of Claims Against the Issuer.* The Trustee shall comply with Section 311(a) of the Trust Indenture Act, excluding any creditor relationship described in Section 311(b) of the Trust Indenture Act. A Trustee who has resigned or been removed shall be subject to Section 311(a) of the Trust Indenture Act to the extent included therein.

ARTICLE 7 CONCERNING THE SECURITYHOLDERS

Section 7.01 *Evidence of Action Taken by Securityholders.* Any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be given or taken by a specified percentage in principal amount of the Securityholders of any or all series may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such specified percentage of Securityholders in person or by agent duly appointed in writing; and, except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments are delivered to the Trustee. Proof of execution of any instrument or of a writing appointing any such agent shall be sufficient for any purpose of this Indenture and (subject to Sections 6.01 and 6.02) conclusive in favor of the Trustee and the Issuer, if made in the manner provided in this Article.

Section 7.02 *Proof of Execution of Instruments and of Holding of Securities.* Subject to Sections 6.01 and 6.02, the execution of any instrument by a Holder or his agent or proxy may be proved in accordance with such reasonable rules and regulations as may be prescribed by the Trustee or in such manner as shall be satisfactory to the Trustee. The holding of Securities shall be proved by the Security register or by a certificate of the registrar thereof. The Issuer may set a record date for purposes of determining the identity of Holders of any series entitled to vote or consent to any action referred to in Section 7.01, which record date may be set at any time or from time to time by notice to the Trustee, for any date or dates (in the case of any adjournment or reconsideration) not more than 60 days nor less than five days prior to the proposed date of such vote or consent, and thereafter, notwithstanding any other provisions hereof, only Holders of such series of record on such record date shall be entitled to so vote or give such consent or revoke such vote or consent. Notice of such record date may be given before or after any request for any action referred to in Section 7.01 is made by the Issuer.

Section 7.03 *Holders to Be Treated as Owners.* The Issuer, the Trustee and any agent of the Issuer or of 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 Issuer nor the Trustee nor any agent of the Issuer or the Trustee shall be affected by any notice to the contrary. All such payments so made to any such Person, or upon

his or her order, shall be valid, and, to the extent of the sum or sums so paid, effectual to satisfy and discharge the liability for moneys payable.

Section 7.04 *Securities Owned by Issuer Deemed Not Outstanding.* In determining whether the Holders of the requisite aggregate principal amount of Outstanding Securities of any or all series have concurred in any direction, consent or waiver under this Indenture, Securities that are owned by the Issuer or any other obligor on the Securities with respect to which such determination is being made or by any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities with respect to which such determination is being made shall be disregarded and deemed not to be Outstanding for the purpose of any such determination, except that, for the purpose of determining whether the Trustee shall be protected in relying on any such direction, consent or waiver, only Securities which the Trustee knows are so owned shall be so disregarded. Securities so owned which have been pledged in good faith may be regarded as Outstanding if the pledgee establishes to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not the Issuer or any other obligor upon the Securities or any Person directly or indirectly controlling or controlled by or under direct or indirect common control with the Issuer or any other obligor on the Securities. In case of a dispute as to such right, the advice of counsel shall be full protection in respect of any decision made by the Trustee in accordance with such advice.

Section 7.05 *Right of Revocation of Action Taken.* At any time prior to (but not after) the evidencing to the Trustee, as provided in Section 7.01, of the taking of any action by the Holders of the percentage in aggregate principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action, any Holder of a Security the serial number of which is shown by the evidence to be included among the serial numbers of the Securities the Holders of which have consented to such action may, by filing written notice at the Corporate Trust Office and upon proof of holding as provided in this Article, revoke such action so far as concerns such Security. Except as aforesaid, any such action taken by the Holder of any Security shall be conclusive and binding upon such Holder and upon all future Holders and owners of such Security and of any Securities issued in exchange or substitution therefor or on registration of transfer thereof, irrespective of whether or not any notation in regard thereto is made upon any such Security. Any action taken by the Holders of the percentage in aggregate principal amount of the Securities of any or all series, as the case may be, specified in this Indenture in connection with such action shall be conclusively binding upon the Issuer, the Trustee and the Holders of all the Securities affected by such action.

ARTICLE 8 SUPPLEMENTAL INDENTURES

Section 8.01 *Supplemental Indentures Without Consent of Securityholders.* The Issuer, when authorized by a resolution of its Board of Directors, and the Trustee may from time to time and at any time, without the consent of any of the Securityholders, enter into an indenture or

indentures supplemental hereto in form satisfactory to the Trustee for one or more of the following purposes:

- (a) to convey, transfer, assign, mortgage or pledge to the Trustee as security for the Securities of one or more series any property or assets;
- (b) to evidence the succession of another Person to the Issuer, or successive successions, and the assumption by such successor of the covenants, agreements and obligations of the Issuer pursuant to, or to otherwise comply with, Article 9;
- (c) to comply with the requirements of the Commission in order to effect or maintain the qualification of this Indenture under the Trust Indenture Act;
- (d) to add to the covenants of the Issuer such further covenants, restrictions, conditions or provisions as its Board of Directors and the Trustee shall consider to be for the protection of the Holders of Securities, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an Event of Default permitting the enforcement of all or any of the several remedies provided in this Indenture as herein set forth; *provided*, that in respect of any such additional covenant, restriction, condition or provision such supplemental indenture may provide for a particular period of grace after default (which period may be shorter or longer than that allowed in the case of other defaults) or may provide for an immediate enforcement upon such an Event of Default or may limit the remedies available to the Trustee upon such an Event of Default or may limit the right of the Holders of a majority in aggregate principal amount of the Securities of such series to waive such an Event of Default;
- (e) to cure any ambiguity, defect or inconsistency, or to conform this Indenture or any supplemental indenture to the description of the Securities set forth in any prospectus, prospectus supplement or offering memorandum related to such series of Securities;
- (f) to provide for or add guarantors for the Securities of one or more series;
- (g) to establish the form or terms of Securities of any series as permitted by Sections 2.01 and 2.03;
- (h) to evidence and provide for the acceptance of appointment hereunder by a successor trustee with respect to the Securities of one or more series and to add to or change any of the provisions of this Indenture as shall be necessary to provide for or facilitate the administration of the trusts hereunder by more than one trustee, pursuant to the requirements of Section 6.11;
- (i) to add to, change or eliminate any of the provisions of this Indenture in respect of one or more series of Securities; provided that any such addition, change or elimination shall (A) not (i) apply to any Security of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor (ii) modify the

rights of the Holder of any such Security with respect to such provision or (B) shall become effective only when there is no Security described in clause (A)(i) Outstanding;

(j) to make any change to the Securities of any series so long as no Securities of such series are Outstanding; and

(k) to make any other change that does not adversely affect the interests of the Holders of the Securities in any material respect.

The Trustee shall join with the Issuer in the execution of any such supplemental indenture, to make any further appropriate agreements and stipulations which may be therein contained and to accept the conveyance, transfer, assignment, mortgage or pledge of any property thereunder, but the Trustee shall not be obligated to enter into any such supplemental indenture which affects the Trustee's own rights, duties or immunities under this Indenture or otherwise.

Any supplemental indenture authorized by the provisions of this Section may be executed without the consent of the Holders of any of the Securities at the time Outstanding, notwithstanding any of the provisions of Section 8.02.

Section 8.02 *Supplemental Indentures With Consent of Securityholders.* With the consent (evidenced as provided in Article 7) of the Holders of not less than a majority in aggregate principal amount of the Securities at the time Outstanding of one or more series affected by such supplemental indenture (voting as separate series), the Issuer, when authorized by a resolution of the Board of Directors and the Trustee may, from time to time and at any time, enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Indenture or of any supplemental indenture or of modifying in any manner the rights of the Holders of the Securities of each such consenting series; *provided*, that no such supplemental indenture shall, without the consent of the Holder of each Security so affected, (a) extend the final maturity of any Security, or reduce the principal amount thereof, or reduce the rate or extend the time of payment of interest thereon, or reduce any amount payable on redemption thereof, or make the principal thereof (including any amount in respect of original issue discount) or interest thereon payable in any currency other than that provided in the Securities or in accordance with the terms thereof, or reduce the amount of the principal of an Original Issue Discount Security that would be due and payable upon an acceleration of the maturity thereof pursuant to Section 5.01 or the amount thereof provable in bankruptcy pursuant to Section 5.02, or (b) waive a continuing default in the payment of principal of any Security or interest thereon, other than any such default in payment that resulted solely from such acceleration, or change a provision related to the waiver of past defaults or impair the right of any Securityholder to institute suit for the enforcement of any such payment on or after the Stated Maturity or the date of redemption or conversion of any Security or, if the Securities provide therefor, any right of repayment at the option of the Securityholder, or (c) modify any of the provisions of this section except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the Holder of each Security so affected, or (d) make any change that adversely affects the right to convert or exchange any Security into or for Common Stock or

other securities, cash or other property in accordance with the terms of such Security or (e) reduce the aforesaid percentage of Securities of any series, the consent of the Holders of which is required for any such supplemental indenture or the consent of Holders of which is required for any modification, amendment or waiver of compliance with certain provisions of this Indenture or certain defaults hereunder and their consequences provided for in this Indenture.

A supplemental indenture which changes or eliminates any covenant, Event of Default or other provision of this Indenture (1) that has been expressly included solely for the benefit of one or more particular series of Securities, if any, or (2) which modifies the rights of Holders of Securities of one or more series with respect to any covenant, Event of Default or provision, shall be deemed not to affect the rights under this Indenture of the Holders of Securities of any other series with respect to which such covenant, Event of Default or other provision has not been included or so modified.

Upon the request of the Issuer, accompanied by a Board Resolution authorizing the execution of any such supplemental indenture, and upon the filing with the Trustee of evidence of the consent of Securityholders as aforesaid and other documents, if any, required by Section 7.01, the Trustee shall join with the Issuer in the execution of such supplemental indenture unless such supplemental indenture affects the Trustee's own rights, duties or immunities under this Indenture or otherwise, in which case the Trustee may in its discretion, but shall not be obligated to, enter into such supplemental indenture.

It shall not be necessary for the consent of the Securityholders under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such consent shall approve the substance thereof.

Promptly after the execution by the Issuer and the Trustee of any supplemental indenture pursuant to the provisions of this Section, the Trustee shall give a notice thereof to the Holders of then Outstanding Securities of each series affected thereby, by delivering a notice thereof, and in each case such notice shall set forth in general terms the substance of such supplemental indenture. Any failure of the Trustee to deliver such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such supplemental indenture.

Section 8.03 *Effect of Supplemental Indenture.* Upon the execution of any supplemental indenture pursuant to the provisions hereof, this Indenture shall be and be deemed to be modified and amended in accordance therewith and the respective rights, limitations of rights, obligations, duties and immunities under this Indenture of the Trustee, the Issuer and the Holders of Securities of each series affected thereby shall thereafter be determined, exercised and enforced hereunder subject in all respects to such modifications and amendments, and all the terms and conditions of any such supplemental indenture shall be and be deemed to be part of the terms and conditions of this Indenture for any and all purposes.

Section 8.04 *Documents to Be Given to Trustee.* The Trustee, subject to the provisions of Sections 6.01 and 6.02, may receive an Officer's Certificate and an Opinion of Counsel as conclusive evidence that any supplemental indenture executed pursuant to this Article 8 complies with the applicable provisions of this Indenture.

Section 8.05 *Notation on Securities in Respect of Supplemental Indentures.* Securities of any series authenticated and delivered after the execution of any supplemental indenture pursuant to the provisions of this Article may bear a notation in form approved by the Trustee for such series as to any matter provided for by such supplemental indenture or as to any action taken by Securityholders. If the Issuer or the Trustee shall so determine, new Securities of any series so modified as to conform, in the opinion of the Trustee and the Board of Directors, to any modification of this Indenture contained in any such supplemental indenture may be prepared by the Issuer, authenticated by the Trustee and delivered in exchange for the Securities of such series then Outstanding.

ARTICLE 9 CONSOLIDATION, MERGER, SALE OR CONVEYANCE

Section 9.01 *Issuer May Consolidate, Etc., on Certain Terms.* The Issuer shall not consolidate with or merge into any other Person (in a transaction in which the Issuer is not the surviving corporation) or convey, transfer or lease its properties and assets substantially as an entirety to any Person, unless (a) the Person formed by such consolidation or into which the Issuer is merged or the Person which acquires by conveyance or transfer, or which leases, the properties and assets of the Issuer substantially as an entirety (i) shall be a corporation, limited liability company, partnership or trust, (ii) shall be organized and validly existing under the laws of the United States of America, any State thereof or the District of Columbia and (iii) shall expressly assume, by an indenture supplemental hereto, executed and delivered to the Trustee, in form satisfactory to the Trustee, the due and punctual payment of the principal, interest on and any Additional Amounts with respect to all the Securities and the performance or observance of every covenant of this Indenture on the part of the Issuer to be performed, by supplemental indenture satisfactory in form to the Trustee, executed and delivered to the Trustee, by the Person formed by such consolidation or into which the Issuer shall have been merged or by the Person which shall have acquired the Issuer's assets; (b) immediately after giving effect to such transaction, no Event of Default, and no event which, after notice or lapse of time or both, would become an Event of Default, shall have happened and be continuing; and (c) the Issuer has delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that such consolidation, merger, conveyance, transfer or lease and, if a supplemental indenture is required in connection with such transaction, such supplemental indenture comply with this Article and that all conditions precedent herein provided for relating to such transaction have been complied with.

The restrictions in this Section 9.01 shall not apply to (i) the merger or consolidation of the Issuer with one of its affiliates, if the Board of Directors determines in good faith that the purpose of such transaction is principally to change the Issuer's State of incorporation or convert the Issuer's form of organization to another form, or (ii) the merger of the Issuer with or into a single direct or indirect wholly owned Subsidiary.

Section 9.02 *Successor Issuer Substituted.* Upon any consolidation of the Issuer with, or merger of the Issuer into, any other Person or any conveyance, transfer or lease of the properties and assets of the Issuer substantially as an entirety in accordance with Section 9.01,

the successor Person formed by such consolidation or into which the Issuer is merged or to which such conveyance, transfer or lease is made shall succeed to, and be substituted for, and may exercise every right and power of, the Issuer under this Indenture with the same effect as if such successor Person had been named as the Issuer herein, and thereafter, except in the case of a lease, the predecessor Person shall be relieved of all obligations and covenants under this Indenture and the Securities.

In case of any such consolidation, merger, sale, lease or conveyance, such changes in phraseology and form (but not in substance) may be made in the Securities thereafter to be issued as may be appropriate.

ARTICLE 10
SATISFACTION AND DISCHARGE OF INDENTURE; DEFEASANCE;
UNCLAIMED MONEYS

Section 10.01 *Satisfaction and Discharge of Indenture; Defeasance.* (a) If at any time

(i) the Issuer shall have paid or caused to be paid the principal of and interest on and any Additional Amounts with respect to all the Securities of any series Outstanding hereunder (other than Securities of such series which have been destroyed, lost or stolen and which have been replaced or paid as provided in Section 2.09) as and when the same shall have become due and payable, or

(ii) the Issuer shall have delivered to the Trustee for cancellation all Securities of any series theretofore authenticated (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 2.09); or

(iii) in the case of any series of Securities the exact amount (including the currency of payment) of principal of and interest and Additional Amounts due on which on the dates referred to in clause (B) below can be determined at the time of making the deposit referred to in such clause,

(A) all the Securities of such series not theretofore delivered to the Trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year in accordance with their terms under arrangements satisfactory to the Trustee for the giving of notice of redemption, and

(B) the Issuer shall have irrevocably deposited or caused to be deposited with the Trustee as trust funds the entire amount (i) in the case of any series of Securities the payments on which may only be made in Dollars, in Dollars (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or U.S. Government Obligations maturing as to principal and interest in such

amounts and at such times as will insure the availability of cash in such currency, or (ii) in the case of any series of Securities the payments on which may only be made in a Foreign Currency, in such Foreign Currency (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or Foreign Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, in each case sufficient to pay on any subsequent Interest Payment Date all interest due on such Interest Payment Date on the Securities of such series and to pay at maturity or upon redemption all Securities of such series (in each case 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 2.09) not theretofore delivered to the Trustee for cancellation, including principal, interest and Additional Amounts due or to become due to such date of maturity, as the case may be,

and if, in a case described in Section 10.01(a)(iii)(B), the Issuer shall also pay or cause to be paid all other sums payable hereunder by the Issuer, including amounts due the Trustee pursuant to Section 6.06, with respect to Securities of such series, then this Indenture shall cease to be of further effect with respect to Securities of such series (except as to (1) rights of registration of transfer, conversion and exchange of Securities of such series and the Issuer's right of optional redemption, (2) substitution of mutilated, defaced, destroyed, lost or stolen Securities, (3) rights of Holders of Securities to receive, solely from the trust fund described in Section 10.01(a)(iii)(B), 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, solely from the trust fund described in Section 10.01(a)(iii)(B), sinking fund payments, if any, (4) the rights (including the Trustee's rights under Section 10.05) and immunities of the Trustee hereunder and the Trustee's obligations under Sections 10.02 and 10.04 and (5) the obligations of the Issuer under Section 3.02), and the Trustee, on demand of the Issuer accompanied by an Officer's Certificate and an Opinion of Counsel which complies with Section 11.05 and at the cost and expense of the Issuer, shall execute proper instruments acknowledging such satisfaction of and discharging this Indenture with respect to such series. The Issuer 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.

(b) The following subsection shall apply to the Securities of each series unless specifically otherwise provided in a Board Resolution, Officer's Certificate or indenture supplemental hereto pursuant to Section 2.03. In addition to the right to discharge of the Indenture pursuant to subsection (a) above, the Issuer, at its option and at any time, by written notice by an officer delivered to the Trustee, may elect to have all of its obligations with respect to all Outstanding Securities of a series discharged ("**Legal Defeasance**"), such discharge to be effective on the date that the conditions set forth in clauses (i) through (iv) and (vi) of Section 10.01(d) are satisfied, and thereafter the Issuer shall be deemed to have paid and discharged the entire Debt on all the Securities of such series, and satisfied all its other obligations under such

Securities and this Indenture insofar as such Securities are concerned and this Indenture shall cease to be of further effect with respect to Securities of such series (except as to (1) rights of registration of transfer, conversion and exchange of Securities of such series, (2) substitution of apparently mutilated, defaced, destroyed, lost or stolen Securities, (3) rights of Holders of Securities to receive, solely from the trust fund described in Section 10.01(d)(i), payments of principal thereof, interest thereon and any Additional Amounts, upon the original Stated Maturities therefor (but not upon acceleration) and remaining rights of the Holders to receive, solely from the trust fund described in Section 10.01(d)(i), sinking fund payments, if any, (4) the rights (including the Trustee's rights under Section 10.05) and immunities of the Trustee hereunder and the Trustee's obligations with respect to the Securities of such series under Sections 10.02 and 10.04 and (5) the obligations of the Issuer under Section 3.02).

(c) The following subsection shall apply to the Securities of each series unless specifically otherwise provided in a Board Resolution, Officer's Certificate or indenture supplemental hereto provided pursuant to Section 2.03. In addition to the right to discharge of the Indenture pursuant to subsection (a) and to Legal Defeasance pursuant to subsection (b), above, the Issuer, at its option and at any time, by written notice executed by an officer delivered to the Trustee, may elect to have its obligations under any covenant contained in this Indenture or in the Board Resolution or supplemental indenture relating to such series pursuant to Section 2.03 discharged with respect to all Outstanding Securities of a series, this Indenture and any indentures supplemental to this Indenture with respect to such series ("**Covenant Defeasance**"), such discharge to be effective on the date the conditions set forth in clauses (i) through (iii) and (v) through (vi) of Section 10.01(d) are satisfied, and such Securities shall thereafter be deemed to be not "Outstanding" for the purposes of any direction, waiver, consent or declaration of Securityholders (and any consequences thereof) in connection with such covenants, but shall continue to be "Outstanding" for all other purposes under this Indenture. For this purpose, such Covenant Defeasance means that, with respect to the Outstanding Securities of a series, the Issuer may omit to comply with and shall have no liability in respect of any term, condition or limitation set forth in any such covenant, whether directly or indirectly, by reason of any reference elsewhere herein to any such covenant or by reason of reference in any such covenant to any other provision herein or in any other document and such omission to comply shall not constitute an Event of Default under Section 5.01(c) or otherwise, but except as specified in this Section 10.01(c), the remainder of the Issuer's obligations under the Securities of such series, this Indenture, and any indentures supplemental to this Indenture with respect to such series shall be unaffected thereby.

(d) The following shall be the conditions to the application of Legal Defeasance (to the extent set forth in subsection (b)), or Covenant Defeasance (to the extent set forth in subsection (c)) to the Securities of the applicable series:

(i) the Issuer irrevocably deposits or causes to be deposited in trust with the Trustee or, at the option of the Trustee, with a trustee satisfactory to the Trustee and the Company under the terms of an irrevocable trust agreement in form and substance satisfactory to the Trustee, (i) in the case of any series of Securities the payments on which may only be made in Dollars, Dollars (other

than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or U.S. Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, or (ii) in the case of any series of Securities the payments on which may only be made in a Foreign Currency, such Foreign Currency (other than moneys repaid by the Trustee or any paying agent to the Issuer in accordance with Section 10.04) and/or Foreign Government Obligations maturing as to principal and interest in such amounts and at such times as will insure the availability of cash in such currency, in each case sufficient to pay on any subsequent Interest Payment Date all interest due on such Interest Payment Date on the Securities of such series and to pay at maturity or upon redemption all Securities of such series (in each case 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 2.09) not theretofore delivered to the Trustee for cancellation, including principal, interest and Additional Amounts due or to become due to such date of maturity, as the case may be;

(ii) the Issuer delivers to the Trustee an Officer's Certificate stating that all conditions precedent specified herein relating to Legal Defeasance or Covenant Defeasance, as the case may be, have been complied with, and an Opinion of Counsel to the same effect;

(iii) no Event of Default under subsection (a), (b), (d) or (e) of Section 5.01 shall have occurred and be continuing, and no event which with notice or lapse of time or both would become such an Event of Default shall have occurred and be continuing, on the date of such deposit;

(iv) in the event of an election for Legal Defeasance under subsection (b), the Issuer shall have delivered to the Trustee an Opinion of Counsel stating that (A) the Issuer has received from, or there has been published by, the Internal Revenue Service a ruling or (B) since the date of this instrument, there has been a change in the applicable Federal income tax law, in either case (A) or (B) to the effect that, and based thereon such opinion shall confirm that, the Holders of such Securities will not recognize gain or loss for Federal income tax purposes as a result of the deposit, defeasance and discharge to be effected with respect to such Securities and will be subject to Federal income tax on the same amounts, in the same manner and at the same times as would be the case if such deposit, defeasance and discharge were not to occur;

(v) in the event of an election for Covenant Defeasance under subsection (c), the Issuer shall have delivered to the Trustee an Opinion of Counsel to the effect that the Holders of such Securities will not recognize gain or loss for Federal income tax purposes as a result of the deposit and Covenant Defeasance to be effected with respect to such Securities and will be subject to Federal income tax on the same amount, in the same manner and at the same

times as would be the case if such deposit and Covenant Defeasance were not to occur; and

(vi) notwithstanding any other provisions of this subsection (d), such defeasance shall be effected in compliance with any additional or substitute terms, conditions or limitations that may be imposed on the Issuer pursuant to Section 2.03.

After such irrevocable deposit made pursuant to this Section 10.01(d) and satisfaction of the other applicable conditions set forth in this subsection (d), the Trustee upon request shall execute proper instruments acknowledging the discharge of the Issuer's obligations pursuant to this Section 10.01.

Section 10.02 Application by Trustee of Funds Deposited for Payment of Securities. Subject to Section 10.04, all moneys deposited with the Trustee (or other trustee) pursuant to Section 10.01 shall be held in trust and applied by it to the payment, either directly or through any paying agent (including the Issuer acting as its own 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 10.03 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 Issuer, 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 10.04 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, interest on or additional amounts in respect of any Security of any series and not applied but remaining unclaimed for two years after the date upon which such principal, interest or additional amount shall have become due and payable, shall be repaid to the Issuer by the Trustee for such series or such paying agent, and the Holder of the Securities of such series shall thereafter look only to the Issuer 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 10.05 Indemnity for U.S. Government Obligations and Foreign Government Obligations. The Issuer shall pay and indemnify the Trustee against any tax, fee or other charge imposed on or assessed against the U.S. Government Obligations or Foreign Government Obligations deposited pursuant to Section 10.01 or the principal or interest received in respect of such obligations.

ARTICLE 11
MISCELLANEOUS PROVISIONS

Section 11.01 *No Recourse*. No recourse under or upon any obligation, covenant or agreement of this Indenture, or of any Security, or for any claim based thereon or otherwise in respect thereof, shall be had against any incorporator, stockholder, officer or director, past, present or future as such, of the Issuer or of any predecessor or successor corporation, either directly or through the Issuer or any such predecessor or successor corporation, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly understood that this Indenture and the obligations issued hereunder are solely corporate obligations, and that no such personal liability whatever shall attach to, or is or shall be incurred by, the incorporators, stockholders, officers or directors as such, of the Issuer or of any predecessor or successor corporation, or any of them, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom; and that any and all such personal liability of every name and nature, either at common law or in equity or by constitution or statute, of, and any and all such rights and claims against, every such incorporator, stockholder, officer or director as such, because of the creation of the indebtedness hereby authorized, or under or by reason of the obligations, covenants or agreements contained in this Indenture or in any of the Securities or implied therefrom, are hereby expressly waived and released as a condition of, and as a consideration for, the execution of this Indenture and the issuance of such Securities.

Section 11.02 *Provisions of Indenture for the Sole Benefit of Parties and Holders of Securities*. Nothing in this Indenture or in the Securities, expressed or implied, shall give or be construed to give to any person, firm or corporation, other than the parties hereto and their successors and the Holders of the Securities any legal or equitable right, remedy or claim under this Indenture or under any covenant or provision herein contained, all such covenants and provisions being for the sole benefit of the parties hereto and their successors and of the Holders of the Securities.

Section 11.03 *Successors and Assigns of Issuer Bound by Indenture*. All the covenants, stipulations, promises and agreements contained in this Indenture by or on behalf of the Issuer shall bind its successors and assigns, whether so expressed or not.

Section 11.04 *Notices and Demands on Issuer, Trustee and Holders of Securities*. Any notice or demand which by any provision of this Indenture is required or permitted to be given or served by the Trustee or by the Holders of Securities to or on the Issuer may be delivered, given or served by being deposited postage prepaid, first-class mail (except as otherwise specifically provided herein) addressed (until another address of the Issuer is filed by the Issuer with the Trustee) to Akebia Therapeutics, Inc., 245 First Street, Cambridge, Massachusetts 02142, Attn: Chief Financial Officer. Any notice, direction, request or demand by the Issuer or any Holder of Securities to or upon the Trustee shall be deemed to have been sufficiently given or made, for all purposes, if given or made at _____, _____, Attn: _____.

Where this Indenture provides for notice to Holders of Securities, such notice shall be sufficiently given (unless otherwise herein expressly provided) if in writing and mailed, first-class postage prepaid, to each Holder entitled thereto, at his, her or its last address as it appears in the Security register. In case, by reason of the suspension of or irregularities in regular mail service, it shall be impracticable to mail notice of any event to Holders of Securities when said notice is required to be given pursuant to any provision of this Indenture or of the Securities, then any manner of giving such notice as shall be satisfactory to the Trustee shall be deemed to be a sufficient giving of such notice.

In case, by reason of the suspension of or irregularities in regular mail service, it shall be impracticable to mail notice to the Issuer when such notice is required to be given pursuant to any provision of this Indenture, then any manner of giving such notice as shall be satisfactory to the Trustee shall be deemed to be a sufficient giving of such notice.

Where this Indenture provides for notice of any event to a Holder of a Global Security, such notice shall be sufficiently given if given to the Depositary for such Security (or its designee), pursuant to the Applicable Procedures of the Depositary, not later than the latest date, if any, and not earlier than the earliest date, if any, prescribed for the giving of such notice.

Neither the failure to give notice, nor any defect in any notice so given, to any particular Holder of a Security shall affect the sufficiency of such notice with respect to other Holders of Securities given as provided above.

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.

Section 11.05 *Officer's Certificates and Opinions of Counsel; Statements to Be Contained Therein.* Upon any application or demand by the Issuer to the Trustee to take any action under any of the provisions of this Indenture, the Issuer shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent have been complied with, except that in the case of any such application or demand as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or demand, no additional certificate or opinion need be furnished.

Each certificate or opinion provided for in this Indenture and delivered to the Trustee with respect to compliance with a condition or covenant provided for in this Indenture shall include (a) a statement that the person making such certificate or opinion has read such covenant or condition, (b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based, (c) a statement that, in the opinion of such person, he or she has made such examination or investigation as is necessary to enable him or her to express an informed opinion as to whether or

not such covenant or condition has been complied with and (d) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

Any certificate, statement or opinion of an officer of the Issuer may be based, insofar as it relates to legal matters, upon a certificate or opinion of or representations by counsel, unless such officer knows that the certificate or opinion or representations with respect to the matters upon which his or her certificate, statement or opinion may be based as aforesaid are erroneous, or in the exercise of reasonable care should know that the same are erroneous. Any certificate, statement or opinion of counsel may be based, insofar as it relates to factual matters, information with respect to which is in the possession of the Issuer, upon the certificate, statement or opinion of or representations by an officer or officers of the Issuer, unless such counsel knows that the certificate, statement or opinion or representations with respect to the matters upon which his or her certificate, statement or opinion may be based as aforesaid are erroneous, or in the exercise of reasonable care should know that the same are erroneous.

Any certificate, statement or opinion of an officer of the Issuer or of counsel may be based, insofar as it relates to accounting matters, upon a certificate or opinion of or representations by an accountant or firm of accountants in the employ of the Issuer, unless such officer or counsel, as the case may be, knows that the certificate or opinion or representations with respect to the accounting matters upon which his or her certificate, statement or opinion may be based as aforesaid are erroneous, or in the exercise of reasonable care should know that the same are erroneous.

Any certificate or opinion of any independent firm of public accountants filed with and directed to the Trustee shall contain a statement that such firm is independent.

Section 11.06 *Payments Due on Saturdays, Sundays and Holidays.* If the date of maturity of interest on or principal of the Securities of any series or the date fixed for redemption or repayment of any such Security, or the last day on which a Holder has the right to convert any Security, shall not be a Business Day, then payment of interest or principal, or any conversion, need not be made on such date, but may be made on the next succeeding Business Day with the same force and effect as if made on the date of maturity or the date fixed for redemption or on such last day for conversion, and no interest shall accrue for the period after such date.

Section 11.07 *Conflict of Any Provision of Indenture With Trust Indenture Act.* If and to the extent that any provision of this Indenture limits, qualifies or conflicts with another provision included in this Indenture by operation of Sections 310 to 317, inclusive, of the Trust Indenture Act, such incorporated provision shall control.

Section 11.08 *New York Law to Govern.* This Indenture and each Security shall be deemed to be a contract under the laws of the State of New York, and for all purposes shall be governed by and construed in accordance with the laws of such State without regard to any principle of conflict of laws that would require or permit the application of the laws of any other jurisdiction, except as may otherwise be required by mandatory provisions of law.

Section 11.09 *Counterparts*. This Indenture may be executed in any number of counterparts, each of which shall be an original; but such counterparts shall together constitute but one and the same instrument.

Section 11.10 *Effect of Headings*. The Article and Section headings herein and the Table of Contents are for convenience only and shall not affect the construction hereof.

Section 11.11 *Actions by Successor*. Any act or proceeding by any provision of this Indenture authorized or required to be done or performed by any board of directors or its equivalent, committee or officer of the Issuer shall and may be done and performed with like force and effect by the corresponding board, committee or officer of any corporation that shall at the time be the lawful successor of the Issuer.

Section 11.12 *Severability*. In case any one or more of the provisions contained in this Indenture or in the Securities of any series shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Indenture or of such Securities, but this Indenture and such Securities shall be construed as if such invalid or illegal or unenforceable provision had never been contained herein or therein.

ARTICLE 12 REDEMPTION OF SECURITIES AND SINKING FUNDS

Section 12.01 *Applicability of Article*. The provisions of this Article shall be applicable to the Securities of any series which 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 12.02 *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 Issuer shall be given by providing notice of such redemption at least 10 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 given 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 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 date fixed for redemption, the redemption price, 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 and shall also specify, if applicable, the conversion price then in effect and the date on which the right to convert such Securities or the

portions thereof to be redeemed will expire. 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 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 Issuer shall be given by the Issuer or, at the Issuer's request, by the Trustee in the name and at the expense of the Issuer.

On or before the redemption date specified in the notice of redemption given as provided in this Section, the Issuer will deposit with the Trustee or with one or more paying agents (or, if the Issuer is acting as its own paying agent, set aside, segregate and hold in trust as provided in Section 3.04) an amount of money sufficient to redeem on the redemption date all the Securities of such series so called for redemption (other than those Securities theretofore surrendered for conversion into Common Stock in accordance with their terms) at the appropriate redemption price, together with accrued interest to the date fixed for redemption. If any Security called for redemption is converted pursuant hereto and in accordance with the terms thereof, any money deposited with the Trustee or any paying agent or so segregated and held in trust for the redemption of such Security shall be paid to the Issuer upon the Issuer's request, or, if then held by the Issuer, shall be discharged from such trust. The Issuer will deliver to the Trustee at least 10 days prior to the date the notice required to be delivered to the Holders is to be sent (unless a shorter time period shall be acceptable to the Trustee) an Officer's Certificate (which need not comply with Section 11.05) stating the aggregate principal amount of Securities to be redeemed. In case of a redemption at the election of the Issuer prior to the expiration of any restriction on such redemption, the Issuer shall deliver to the Trustee, prior to the giving of any notice of redemption to Holders pursuant to this Section, an Officer's Certificate stating that such restriction has been complied with.

If less than all the Securities of a series are to be redeemed, the Trustee shall select, 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 multiples equal to the minimum authorized denomination for Securities of such series or any multiple thereof. The Trustee shall promptly notify the Issuer 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 of any series 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. If any Security selected for partial redemption is surrendered for conversion after such selection, the converted portion of such Security shall be deemed (so far as may be possible) to be the portion selected for redemption.

Section 12.03 *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 said date (unless the Issuer shall default in the payment of such Securities at the redemption price, together with interest accrued to said date) interest on the Securities or portions of Securities so called for redemption shall cease to accrue, and such Securities shall cease from and after the date fixed for redemption to be convertible into Common Stock (to the extent otherwise convertible in accordance with their terms), if applicable, and cease to be entitled to any benefit or security under this Indenture, and except as provided in the paragraph below, 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 Issuer 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 of such Securities registered as such on the relevant record date subject to the terms and provisions of Sections 2.03 and 2.07 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 and, if applicable, such Security shall remain convertible into Common Stock until the principal of such Security shall have been paid or duly provided for.

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

Section 12.04 *Exclusion of Certain Securities from Eligibility for Selection for Redemption.* Securities shall be excluded from eligibility for selection for redemption if they are identified by registration and certificate number in an Officer's Certificate 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 Issuer 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 Issuer.

Section 12.05 *Mandatory and Optional Sinking Funds.* The minimum amount of any sinking fund payment provided for by the terms of the Securities of any series is herein referred to as a "**mandatory sinking fund payment**", and any 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 Issuer may at its option (a) deliver to the Trustee Securities of such series theretofore purchased or otherwise acquired (except upon redemption pursuant to the

mandatory sinking fund) by the Issuer or receive credit for Securities of such series (not previously so credited) theretofore purchased or otherwise acquired (except as aforesaid) by the Issuer and delivered to the Trustee for cancellation pursuant to Section 2.10 and, if applicable, receive credit for Securities (not previously so credited) converted into Common Stock and so delivered to the Trustee for cancellation, (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 Issuer through any optional redemption provision contained in the terms of such series. 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 60th day next preceding each sinking fund payment date for any series, the Issuer will deliver to the Trustee an Officer's Certificate (which need not contain the statements required by Section 11.05) (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 Securities of such series and the basis for such credit, (b) stating that none of the Securities of such series for which credit will be taken 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 Issuer 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 Issuer 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 Issuer 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 2.10 to the Trustee with such Officer's Certificate (or reasonably promptly thereafter if acceptable to the Trustee). Such Officer's Certificate shall be irrevocable and upon its receipt by the Trustee the Issuer shall become unconditionally obligated to make all the cash payments or payments therein referred to, if any, on or before the next succeeding sinking fund payment date. Failure of the Issuer, on or before any such 60th 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 Issuer 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.

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 the equivalent thereof in any Foreign Currency or a lesser sum in Dollars or in any Foreign Currency if the Issuer shall so request) with respect to the Securities of any particular 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 together with accrued interest to the date fixed for redemption. If such amount shall be \$50,000 (or the equivalent thereof in any Foreign Currency) or less and the Issuer makes no such request then it shall be carried over until a sum in excess of \$50,000 (or the equivalent thereof in any Foreign Currency) is available, which delay in accordance with this

paragraph shall not be a default or breach of the obligation to make such payment. The Trustee shall select, in the manner provided in Section 12.02, for redemption on such sinking fund payment date a sufficient principal amount of Securities of such series to which such cash may be applied, as nearly as may be, and shall (if requested in writing by the Issuer) inform the Issuer of the serial numbers of the Securities of such series (or portions thereof) so selected. The Trustee, in the name and at the expense of the Issuer (or the Issuer, 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 12.02 (and with the effect provided in Section 12.03) for the redemption of Securities of such series in part at the option of the Issuer. 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. The Issuer's obligation to make a mandatory or optional sinking fund payment shall automatically be reduced by an amount equal to the sinking fund redemption price allocable to any Securities or portions thereof called for redemption pursuant to the preceding paragraph on any sinking fund payment date and converted into Common Stock in accordance with the terms of such Securities; *provided that*, if the Trustee is not the conversion agent for the Securities, the Issuer or such conversion agent shall give the Trustee written notice on or prior to the date fixed for redemption of the principal amount of Securities or portions thereof so converted.

On or before each sinking fund payment date, the Issuer 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 such sinking fund payment date.

The Trustee shall not redeem or cause to be redeemed any Securities of a series with sinking fund moneys or give any notice of redemption of Securities for 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 providing 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 Issuer 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 5 and held for the payment of all such Securities. In case such Event of Default shall have been waived as provided in Section 5.10, or the default cured on or before the 60th day preceding the sinking fund payment date in any year, such moneys shall thereafter be applied on such sinking fund payment date in accordance with this Section to the redemption of such Securities.

ARTICLE 13
SUBORDINATION OF SECURITIES

Section 13.01 *Agreement of Subordination.* The Issuer covenants and agrees, and each holder of Securities issued hereunder by its acceptance thereof likewise covenants and agrees, that all Securities shall be issued subject to the provisions of this Article 13; and each Securityholder, whether upon original issue or upon transfer or assignment thereof, accepts and agrees to be bound by such provisions.

The payment of the principal of and interest on all Securities issued hereunder shall, to the extent and in the manner hereinafter set forth, be subordinated and subject in right of payment to the prior payment in full of all Senior Indebtedness of the Issuer, whether outstanding at the date of this Indenture or thereafter incurred.

The provisions of this Article 13 define the subordination of the Securities, as obligations of the Issuer, with respect to Senior Indebtedness of the Issuer.

No provision of this Article 13 shall prevent the occurrence of any default or Event of Default hereunder.

Section 13.02 *Payments to Securityholders.* In the event and during the continuation of any default in the payment of principal, premium, interest or any other payment due on any Senior Indebtedness of the Issuer continuing beyond the period of grace, if any, specified in the instrument or lease evidencing such Senior Indebtedness of the Issuer, then, unless and until such default shall have been cured or waived or shall have ceased to exist, no payment shall be made by the Issuer with respect to the principal of or interest on the Securities, except sinking fund obligations satisfied by credit of acquired Securities under Section 12.05 prior to the happening of such default and payments made pursuant to Article 10 hereof from monies deposited with the Trustee pursuant thereto prior to the happening of such default.

Upon any payment by the Issuer, or distribution of assets of the Issuer of any kind or character, whether in cash, property or securities, to creditors upon any dissolution or winding-up or liquidation or reorganization of the Issuer, whether voluntary or involuntary or in bankruptcy, insolvency, receivership or other proceedings, all amounts due or to become due upon all Senior Indebtedness of the Issuer shall first be paid in full, or payment thereof provided for in money in accordance with its terms, before any payment is made on account of the principal or interest on the Securities (except payments made pursuant to Article 10 hereof from monies deposited with the Trustee pursuant thereto prior to the happening of such dissolution, winding-up, liquidation or reorganization); and upon any such dissolution or winding-up or liquidation or reorganization any payment by the Issuer, or distribution of assets of the Issuer of any kind or character, whether in cash, property or securities, to which the holders of the Securities or the Trustee would be entitled, except for the provisions of this Article 13, shall (except as aforesaid) be paid by the Issuer or by any receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, or by the holders of the Securities or by the Trustee under this Indenture if received by them or it, directly to the holders of Senior Indebtedness of the Issuer (pro rata to such holders on the basis of the respective amounts of Senior Indebtedness of

the Issuer held by such holders, as calculated by the Issuer) or their representative or representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any Senior Indebtedness of the Issuer may have been issued, as their respective interests may appear, to the extent necessary to pay all Senior Indebtedness of the Issuer in full, in money or money's worth, after giving effect to any concurrent payment or distribution to or for the holders of Senior Indebtedness of the Issuer, before any payment or distribution is made to the holders of the Securities or to the Trustee.

In the event that, notwithstanding the foregoing, any payment or distribution of assets of the Issuer of any kind or character, whether in cash, property or securities, prohibited by the foregoing, shall be received by the Trustee or the holders of the Securities before all Senior Indebtedness of the Issuer is paid in full, or provision is made for such payment in money in accordance with its terms, such payment or distribution shall be held in trust for the benefit of and shall be paid over or delivered to the holders of Senior Indebtedness of the Issuer or their representative or representatives, or to the trustee or trustees under any indenture pursuant to which any instruments evidencing any Senior Indebtedness of the Issuer may have been issued, as their respective interests may appear, as calculated by the Issuer, for application to the payment of all Senior Indebtedness of the Issuer remaining unpaid to the extent necessary to pay all Senior Indebtedness of the Issuer in full in money 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 13, the words, "cash, property or securities" shall not be deemed to include shares of stock of the Issuer as reorganized or readjusted, or securities of the Issuer or any other corporation provided for by a plan of reorganization or readjustment, the payment of which is subordinated at least to the extent provided in this Article 13 with respect to the Securities to the payment of all Senior Indebtedness of the Issuer which may at the time be outstanding; provided that (i) the Senior Indebtedness of the Issuer is assumed by the new corporation, if any, resulting from any such reorganization or readjustment, and (ii) the rights of the holders of the Senior Indebtedness of the Issuer (other than leases) and of leases which are assumed are not, without the consent of such holders, altered by such reorganization or readjustment.

The consolidation of the Issuer with, or the merger of the Issuer into, another Person or the liquidation or dissolution of the Issuer following the conveyance or transfer of its property as an entirety, or substantially as an entirety, to another Person upon the terms and conditions provided for in Article 9 hereof shall not be deemed a dissolution, winding-up, liquidation or reorganization for the purposes of this Section 13.02 if such other Person shall, as a part of such consolidation, merger, conveyance or transfer, comply with the conditions stated in Article 9 hereof.

Section 13.03 *Subrogation of Securities.* Subject to the payment in full of all Senior Indebtedness of the Issuer, the rights of the holders of the Securities shall be subrogated to the rights of the holders of Senior Indebtedness of the Issuer to receive payments or distributions of cash, property or securities of the Issuer applicable to the Senior Indebtedness of the Issuer until

the principal of and interest on the Securities shall be paid in full; and, for the purposes of such subrogation, no payments or distributions to or for the benefit of the holders of the Senior Indebtedness of the Issuer or the Trustee of any cash, property or securities to which the holders of the Securities or the Trustee would be entitled except for the provisions of this Article 13, shall, as between the Issuer, its creditors other than holders of Senior Indebtedness of the Issuer, and the holders of the Securities, be deemed to be a payment by the Issuer to or on account of the Senior Indebtedness of the Issuer. It is understood that the provisions of this Article 13 are and 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 of the Issuer, on the other hand.

Nothing contained in this Article 13 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 its Senior Indebtedness, and the holders of the Securities, the obligation of the Issuer, 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 of the holders of the Securities and creditors of the Issuer other than the holders of its Senior Indebtedness, nor shall anything herein or therein prevent the Trustee or the holder of any Security from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the rights, if any, under this Article 13 of the holders of Senior Indebtedness of the Issuer in respect of cash, property or securities of the Issuer received upon the exercise of any such remedy.

Upon any payment or distribution of assets of the Issuer referred to in this Article 13, the Trustee, subject to the provisions of Section 6.01, 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 dissolution, winding-up, liquidation or reorganization proceedings are pending, or a certificate of the receiver, trustee in bankruptcy, liquidating trustee, agent or other Person making such payment or distribution, delivered to the Trustee or to the holders of the Securities, for the purpose of ascertaining the Persons entitled to participate in such distribution, the holders of the Senior Indebtedness and other indebtedness of the Issuer, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article 13.

Section 13.04 *Authorization by Securityholders.* Each holder of a Security by its acceptance thereof authorizes and directs the Trustee on its behalf to take such action as may be necessary or appropriate to effectuate the subordination provided in this Article 13 appoints the Trustee its attorney-in-fact for any and all such purposes.

Section 13.05 *Notice to Trustee.* The Issuer shall give prompt written notice to a Responsible Officer of the Trustee of any fact known to the Issuer which would prohibit the making of any payment of monies to or by the Trustee in respect of the Securities pursuant to the provisions of this Article 13. Notwithstanding the provisions of this Article 13 or any other provision of this Indenture, the Trustee shall not be charged with knowledge of the existence of any facts which would prohibit the making of any payment of monies to or by the Trustee in respect of the Securities pursuant to the provisions of this Article 13, unless and until a

Responsible Officer of the Trustee shall have received written notice thereof at the Corporate Trust Office of the Trustee from the Issuer or a holder or holders of Senior Indebtedness of the Issuer or from any trustee therefor; and before the receipt of any such written notice, the Trustee, subject to the provisions of Section 6.01, shall be entitled in all respects to assume that no such facts exist; *provided* that if on a date not fewer than three Business Days prior to the date upon which by the terms hereof any such monies may become payable for any purpose (including, without limitation, the payment of the principal of or interest on any Security) the Trustee shall not have received, with respect to such monies, the notice provided for in this Section 13.05, then, anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to receive such monies and to apply the same to the purpose for which they were received, and shall not be affected by any notice to the contrary which may be received by it on or after such prior date.

The Trustee conclusively 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 of the Issuer (or a trustee on behalf of such holder) to establish that such notice has been given by a holder of Senior Indebtedness of the Issuer or a trustee on behalf of any such holder or holders. In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any Person as a holder of Senior Indebtedness of the Issuer to participate in any payment or distribution pursuant to this Article 13, the Trustee may request such Person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Indebtedness of the Issuer 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 13, 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 13.06 *Trustee's Relation to Senior Indebtedness.* The Trustee in its individual capacity shall be entitled to all the rights set forth in this Article 13 in respect of any Senior Indebtedness of the Issuer at any time held by it, to the same extent as any other holder of Senior Indebtedness of the Issuer and nothing elsewhere in this Indenture shall deprive the Trustee of any of its rights as such holder.

With respect to the holders of Senior Indebtedness of the Issuer, the Trustee undertakes to perform or to observe only such of its covenants and obligations as are specifically set forth in this Article 13, and no implied covenants or obligations with respect to the holders of Senior Indebtedness of the Issuer 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 of the Issuer and the Trustee shall not be liable to any holder of Senior Indebtedness of the Issuer if it shall pay over or deliver to holders of Securities, the Issuer or any other Person money or assets to which any holder of Senior Indebtedness of the Issuer shall be entitled by virtue of this Article 13 or otherwise.

Section 13.07 *No Impairment of Subordination.* No right of any present or future holder of any Senior Indebtedness of the Issuer 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 Issuer or

by any act or failure to act, in good faith, by any such holder, or by any noncompliance by the Issuer with the terms, provisions and covenants of this Indenture, regardless of any knowledge thereof which any such holder may have or otherwise be charged with.

Section 13.08 *Rights of Trustee*. Nothing in this Article 13 shall apply to claims of or payments to, the Trustee pursuant to Section 6.06.

[Signature pages follow]

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed as of _____.

AKEBIA THERAPEUTICS, INC.

By: _____
Name:
Title:

Attest:

By: _____
Name:
Title:

_____, Trustee

By: _____
Name:
Title:

Form of Senior Note**(FACE OF SECURITY)**

[Each Global Security shall bear substantially the following legend:

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 DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY. UNLESS THIS SECURITY IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY TRUST COMPANY, A NEW YORK CORPORATION ("DTC"), TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY SECURITY ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.]

[If the Security has original issue discount for U.S. federal income tax purposes, insert tax legend:

[FOR PURPOSES OF SECTIONS 1272, 1273 AND 1275 OF THE INTERNAL REVENUE CODE OF 1986, AS AMENDED, AND THE RULES AND REGULATIONS THEREUNDER, THIS NOTE IS BEING ISSUED WITH ORIGINAL ISSUE DISCOUNT; PLEASE CONTACT [NAME OF CFO OR TAX DIRECTOR], [TITLE], [ISSUER], [ISSUER ADDRESS], TELEPHONE: [###], TO OBTAIN INFORMATION REGARDING THE ISSUE PRICE, THE ISSUE DATE, THE AMOUNT OF ORIGINAL ISSUE DISCOUNT AND THE YIELD TO MATURITY.]

AKEBIA THERAPEUTICS, INC.
[Title of Security]

No. []

CUSIP No.: []
[Common Code][ISIN]: []
[\$]

Akebia Therapeutics, Inc., a Delaware corporation (the “Issuer”, which term includes any successor corporation), for value received promises to pay to [If the Security is a Global Security – Cede & Co.][If the Security is not a Global Security -- _____] or registered assigns, the principal sum of _____ on _____, _____ (the “Maturity Date”) [If the Security is to bear interest prior to maturity, insert--], and to pay interest thereon from _____ or from the most recent interest payment date to which interest has been paid or duly provided for, [semiannually in arrears on _____ and _____ in each year], commencing _____, _____ (each, an “Interest Payment Date”) at the rate of [___% per annum], until the principal hereof is paid or made available for payment [If applicable insert--], and (to the extent that the payment of such interest shall be legally enforceable) at the rate of ___% per annum on any overdue principal and on any overdue installment of interest]. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in the Indenture (as defined below), be paid to the Holder in whose name this Security (or one or more predecessor Securities) is registered at the close of business on the record date for such interest, which shall be the _____ or _____ (whether or not a Business Day), as the case may be, next preceding such Interest Payment Date (each, an “Interest Record Date”). Interest will be computed on the basis of [a 360-day year of twelve 30-day months].]

[If the Security is not to bear interest prior to maturity, insert--The principal of this Security shall not bear interest except in the case of a default in payment of principal upon acceleration, upon redemption or at maturity and, in each such case, the overdue principal of this Security shall bear interest at the rate of ___% per annum (to the extent that the payment of such interest shall be legally enforceable), which shall accrue from the date of such default in payment to the date payment of such principal has been made or duly provided for. Interest on any overdue principal shall be payable on demand.]

Reference is made to the further provisions set forth on the reverse of this Security contained herein, which will for all purposes have the same effect as if set forth at this place.

IN WITNESS WHEREOF, the Issuer has caused this Security to be signed manually or by facsimile by its duly authorized officer under its corporate seal.

AKEBIA THERAPEUTICS, INC.

By: _____
Name: _____
Title: _____

Attest:

By: _____
Name: _____
Title: _____

This is one of the Securities of the series designated herein and referred to in the within-mentioned Indenture.

Dated: []

_____, as Trustee

By: _____
Title: _____

(REVERSE OF SECURITY)

AKEBIA THERAPEUTICS, INC.

[Title of Security]

1. Indenture

This Security is one of a duly authorized issue of debentures, notes or other evidence of indebtedness (hereinafter called the "Securities") of the Issuer of the series hereinafter specified, which series is initially limited in aggregate principal amount to [\$]_____, all of such Securities issued and to be issued under an Indenture dated as of _____, _____ (the "Indenture") between the Issuer and _____ as trustee (the "Trustee"). Capitalized terms herein are used as defined in the Indenture unless otherwise indicated. The terms of the Securities include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939, as in effect on the date of the Indenture. The Securities are subject to all such terms, and Holders are referred to the Indenture and the Trust Indenture Act of 1939 for a statement of all such terms. To the extent permitted by applicable law, in the event of any inconsistency between the terms of this Security and the terms of the Indenture, the terms of the Indenture shall control.

This Security is one of a series of Securities designated pursuant to the Indenture [and a [*Supplemental Indenture*] dated _____, _____, issued pursuant to Section 2.01 and Section 2.03 thereof (the "Supplemental Indenture")] as _____. The Securities are general unsecured obligations of the Issuer. The Issuer may, subject to the provisions of the Indenture and applicable law, issue additional Securities of any series under the Indenture.

2. Method of Payment.

The Issuer shall pay interest on the Securities (except defaulted interest) to the persons who are the registered Holders at the close of business on the Interest Record Date immediately preceding the Interest Payment Date notwithstanding any transfer or exchange of such Security subsequent to such Interest Record Date and prior to such Interest Payment Date. Holders must surrender Securities to the Trustee to collect principal payments. The Issuer shall pay Principal and interest in money of [*the United States*] that at the time of payment is legal tender for payment of public and private debts. [However, the payments of interest, and any portion of the Principal (other than interest payable at maturity or on any redemption or repayment date or the final payment of Principal) shall be made by the Paying Agent, upon receipt from the Issuer of immediately available funds by _____ [*a.p.m.*], New York City time (or such other time as may be agreed to between the Issuer and the Paying Agent or the Issuer), directly to a Holder (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.]

3. Redemption.

[The Securities of this series may be redeemed at any time [on or after _____, _____], as a whole or in part, at the option of the Issuer, upon mailing notice of such redemption not less than 10 and not more than 60 days to the Holders of such Securities, at a redemption price equal to _____.]

4. Paying Agent and Security Registrar

Initially, [the Trustee] will act as Paying Agent and Security Registrar. The Issuer may change any Paying Agent or Security Registrar without notice to the Holders.

5. Denominations; Transfer; Exchange.

The Securities are in registered form, without coupons, in denominations of [\$2,000] and multiples of [\$1,000]. A Holder shall register the transfer of or exchange Securities in accordance with the Indenture. The Issuer may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and to pay certain transfer taxes or similar governmental charges payable in connection therewith as permitted by the Indenture. *[The Issuer need not register the transfer of or exchange (a) any Securities for a period of fifteen (15) days preceding the first notice that such Securities are to be redeemed, or (b) any Securities selected, called or being called for redemption in whole or in part, except, in the case of any Security to be redeemed in part, the portion thereof not to be so redeemed.]*

6. Persons Deemed Owners.

The registered Holder of a Security shall be treated as the owner of it for all purposes.

7. Unclaimed Funds.

If funds for the payment of principal or interest remain unclaimed for two years, the Trustee and the Paying Agent will repay the funds to the Issuer. After that, all liability of the Trustee and such Paying Agent with respect to such funds shall cease.

8. Defeasance.

The Indenture *[as amended by the Supplemental Indenture]* contains provisions for defeasance at any time of (a) the entire indebtedness of the Issuer on this Security and (b) certain restrictive covenants and the related Events of Default, upon compliance by the Issuer with certain conditions set forth therein, which provisions *[apply]* to this Security.

9. Amendment; Supplement; Waiver.

Subject to certain exceptions, the Securities of this series, [the Supplemental Indenture] and the provisions of the Indenture relating to the Securities of this series may be amended or supplemented with the written consent of the Holders of at least a majority in aggregate principal amount of the Securities of this series then outstanding, and any existing Default or Event of

Default, other than the non-payment of the principal amount of or interest on the Securities of this series, or compliance with certain provisions may be waived with the consent of the Holders of a majority in aggregate principal amount of all the Securities of this series then outstanding. Without notice to or consent of any Holder, the parties thereto may amend or supplement the Indenture and the Securities to, among other things, cure any ambiguity, defect or inconsistency, provide for uncertificated Securities in addition to or in place of certificated Securities, or make any other change that does not adversely affect the rights of any Holder of a Security.

10. Defaults and Remedies.

If an Event of Default (other than certain bankruptcy Events of Default with respect to the Issuer) occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate principal amount of Securities of this series then outstanding (voting as a separate class) by notice in writing to the Issuer (and also to the Trustee if such notice is given by the Holders) may declare [*the entire principal*] of the Securities of this series and the interest accrued thereon, if any, to be due and payable immediately in the manner and with the effect provided in the Indenture. If a bankruptcy Event of Default with respect to the Issuer occurs and is continuing, then [*the entire principal*] of the Securities then outstanding and interest accrued thereon, if any, shall become automatically due and payable immediately in the manner and with the effect provided in the Indenture. Holders of Securities may not enforce the Indenture or the Securities except as provided in the Indenture. The Trustee is not obligated to enforce the Indenture or the Securities unless it has received indemnity satisfactory to it. The Indenture permits, subject to certain limitations therein provided, Holders of a majority in aggregate principal amount of the Securities then outstanding to direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of Securities notice of certain continuing Defaults or Events of Default if it determines that withholding notice is in their interest.

11. Trustee Dealings with Issuer.

The Trustee under the Indenture, in its individual or any other capacity, may become the owner or pledgee of Securities and may otherwise deal with the Issuer as if it were not the Trustee.

12. No Recourse Against Others.

No stockholder, director, officer, employee or incorporator, past, present or future as such, of the Issuer or any predecessor or successor corporation thereof shall have any liability for any obligation under the Securities or the Indenture or for any claim based on, in respect of or by reason of, such obligations or their creation. Each Holder of a Security by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Securities.

13. Authentication.

This Security shall not be valid until the Trustee manually signs the certificate of authentication on this Security.

14. Abbreviations and Defined Terms.

Customary abbreviations may be used in the name of a Holder of a Security or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (= Uniform Gifts to Minors Act).

15. CUSIP Numbers.

Pursuant to a recommendation promulgated by the Committee on Uniform Security Identification Procedures, the Issuer has caused CUSIP numbers to be printed on the Securities as a convenience to the Holders of the Securities. No representation is made as to the accuracy of such numbers as printed on the Securities and reliance may be placed only on the other identification numbers printed hereon.

16. Governing Law.

The laws of the State of New York shall govern the Indenture and this Security thereof, and for all purposes this Security shall be governed by and construed in accordance with the laws of such State without regard to any principle of conflict of laws that would require or permit the application of the laws of any other jurisdiction, except as may otherwise be required by mandatory provisions of law.

ASSIGNMENT FORM

I or we assign and transfer this Security to

(Print or type name, address and zip code of assignee or transferee)

(Insert Social Security or other identifying number of assignee or transferee)

and irrevocably appoint

_____ agent to transfer this Security on the books of the Issuer. The agent may substitute another to act for him.

Dated: _____

Signed: _____
(Signed exactly as name appears on the other side of this Security)

Signature
Guarantee:

Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor program reasonably acceptable to the Trustee)

Form of Subordinated Note**(FACE OF SECURITY)**

[Each Global Security shall bear substantially the following legend:

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 DEPOSITARY TO A NOMINEE OF THE DEPOSITARY OR BY A NOMINEE OF THE DEPOSITARY TO THE DEPOSITARY OR ANOTHER NOMINEE OF THE DEPOSITARY OR BY THE DEPOSITARY OR ANY SUCH NOMINEE TO A SUCCESSOR DEPOSITARY OR A NOMINEE OF SUCH SUCCESSOR DEPOSITARY. UNLESS THIS SECURITY IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITARY TRUST COMPANY, A NEW YORK CORPORATION ("DTC"), TO THE ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY SECURITY ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.]

[If the Security has original issue discount for U.S. federal income tax purposes, insert tax legend:

[FOR PURPOSES OF SECTIONS 1272, 1273 AND 1275 OF THE INTERNAL REVENUE CODE OF 1986, AS AMENDED, AND THE RULES AND REGULATIONS THEREUNDER, THIS NOTE IS BEING ISSUED WITH ORIGINAL ISSUE DISCOUNT; PLEASE CONTACT [NAME OF CFO OR TAX DIRECTOR], [TITLE], [ISSUER], [ISSUER ADDRESS], TELEPHONE: [###], TO OBTAIN INFORMATION REGARDING THE ISSUE PRICE, THE ISSUE DATE, THE AMOUNT OF ORIGINAL ISSUE DISCOUNT AND THE YIELD TO MATURITY.]

AKEBIA THERAPEUTICS, INC.
[Title of Security]

No. []

CUSIP No.: []
[Common Code][ISIN]: []
[\$]

Akebia Therapeutics, Inc., a Delaware corporation (the “Issuer”, which term includes any successor corporation), for value received promises to pay to [If the Security is a Global Security – Cede & Co.][If the Security is not a Global Security -- _____] or registered assigns, the principal sum of _____ on _____, ____ (the “Maturity Date”) [If the Security is to bear interest prior to maturity, insert--], and to pay interest thereon from _____ or from the most recent interest payment date to which interest has been paid or duly provided for, [semiannually in arrears on _____ and _____ in each year], commencing _____, ____ (each, an “Interest Payment Date”) at the rate of [__% per annum], until the principal hereof is paid or made available for payment [If applicable insert--], and (to the extent that the payment of such interest shall be legally enforceable) at the rate of __% per annum on any overdue principal and on any overdue installment of interest]. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in the Indenture (as defined below), be paid to the Holder in whose name this Security (or one or more predecessor Securities) is registered at the close of business on the record date for such interest, which shall be the _____ or _____ (whether or not a Business Day), as the case may be, next preceding such Interest Payment Date (each, an “Interest Record Date”). Interest will be computed on the basis of [a 360-day year of twelve 30-day months].]

[If the Security is not to bear interest prior to maturity, insert--The principal of this Security shall not bear interest except in the case of a default in payment of principal upon acceleration, upon redemption or at maturity and, in each such case, the overdue principal of this Security shall bear interest at the rate of __% per annum (to the extent that the payment of such interest shall be legally enforceable), which shall accrue from the date of such default in payment to the date payment of such principal has been made or duly provided for. Interest on any overdue principal shall be payable on demand.]

Reference is made to the further provisions set forth on the reverse of this Security contained herein, which will for all purposes have the same effect as if set forth at this place.

IN WITNESS WHEREOF, the Issuer has caused this Security to be signed manually or by facsimile by its duly authorized officer under its corporate seal.

AKEBIA THERAPEUTICS, INC.

By: _____
Name: _____
Title: _____

Attest:

By: _____
Name: _____
Title: _____

This is one of the Securities of the series designated herein and referred to in the within-mentioned Indenture.

Dated: []

_____, as Trustee

By: _____
Title: _____

(REVERSE OF SECURITY)

AKEBIA THERAPEUTICS, INC.

[Title of Security]

1. Indenture

This Security is one of a duly authorized issue of debentures, notes or other evidence of indebtedness (hereinafter called the "Securities") of the Issuer of the series hereinafter specified, which series is initially limited in aggregate principal amount to [\$]_____, all of such Securities issued and to be issued under an Indenture dated as of _____, _____ (the "Indenture") between the Issuer and _____ as trustee (the "Trustee"). Capitalized terms herein are used as defined in the Indenture unless otherwise indicated. The terms of the Securities include those stated in the Indenture and those made part of the Indenture by reference to the Trust Indenture Act of 1939, as in effect on the date of the Indenture. The Securities are subject to all such terms, and Holders are referred to the Indenture and the Trust Indenture Act of 1939 for a statement of all such terms. To the extent permitted by applicable law, in the event of any inconsistency between the terms of this Security and the terms of the Indenture, the terms of the Indenture shall control.

This Security is one of a series of Securities designated pursuant to the Indenture [and a [*Supplemental Indenture*] dated _____, _____, issued pursuant to Section 2.01 and Section 2.03 thereof (the "Supplemental Indenture")] as _____. The Securities are general unsecured obligations of the Issuer. The Issuer may, subject to the provisions of the Indenture and applicable law, issue additional Securities of any series under the Indenture.

2. Method of Payment.

The Issuer shall pay interest on the Securities (except defaulted interest) to the persons who are the registered Holders at the close of business on the Interest Record Date immediately preceding the Interest Payment Date notwithstanding any transfer or exchange of such Security subsequent to such Interest Record Date and prior to such Interest Payment Date. Holders must surrender Securities to the Trustee to collect principal payments. The Issuer shall pay Principal and interest in money of [*the United States*] that at the time of payment is legal tender for payment of public and private debts. [However, the payments of interest, and any portion of the Principal (other than interest payable at maturity or on any redemption or repayment date or the final payment of Principal) shall be made by the Paying Agent, upon receipt from the Issuer of immediately available funds by _____ [*a.p.m.*], New York City time (or such other time as may be agreed to between the Issuer and the Paying Agent or the Issuer), directly to a Holder (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.]

3. Redemption.

[The Securities of this series may be redeemed at any time [on or after _____, _____], as a whole or in part, at the option of the Issuer, upon mailing notice of such redemption not less than 10 and not more than 60 days to the Holders of such Securities, at a redemption price equal to _____.]

4. Paying Agent and Security Registrar

Initially, [the Trustee] will act as Paying Agent and Security Registrar. The Issuer may change any Paying Agent or Security Registrar without notice to the Holders.

5. Denominations; Transfer; Exchange.

The Securities are in registered form, without coupons, in denominations of [\$2,000] and multiples of [\$1,000]. A Holder shall register the transfer of or exchange Securities in accordance with the Indenture. The Issuer may require a Holder, among other things, to furnish appropriate endorsements and transfer documents and to pay certain transfer taxes or similar governmental charges payable in connection therewith as permitted by the Indenture. *[The Issuer need not register the transfer of or exchange (a) any Securities for a period of fifteen (15) days preceding the first notice that such Securities are to be redeemed, or (b) any Securities selected, called or being called for redemption in whole or in part, except, in the case of any Security to be redeemed in part, the portion thereof not to be so redeemed.]*

6. Persons Deemed Owners.

The registered Holder of a Security shall be treated as the owner of it for all purposes.

7. Unclaimed Funds.

If funds for the payment of principal or interest remain unclaimed for two years, the Trustee and the Paying Agent will repay the funds to the Issuer. After that, all liability of the Trustee and such Paying Agent with respect to such funds shall cease.

8. Defeasance.

The Indenture *[as amended by the Supplemental Indenture]* contains provisions for defeasance at any time of (a) the entire indebtedness of the Issuer on this Security and (b) certain restrictive covenants and the related Events of Default, upon compliance by the Issuer with certain conditions set forth therein, which provisions *[apply]* to this Security.

9. Amendment; Supplement; Waiver.

Subject to certain exceptions, the Securities of this series, [the Supplemental Indenture] and the provisions of the Indenture relating to the Securities of this series may be amended or supplemented with the written consent of the Holders of at least a majority in aggregate principal amount of the Securities of this series then outstanding, and any existing Default or Event of

Default, other than the non-payment of the principal amount of or interest on the Securities of this series, or compliance with certain provisions may be waived with the consent of the Holders of a majority in aggregate principal amount of all the Securities of this series, then outstanding. Without notice to or consent of any Holder, the parties thereto may amend or supplement the Indenture and the Securities to, among other things, cure any ambiguity, defect or inconsistency, provide for uncertificated Securities in addition to or in place of certificated Securities, or make any other change that does not adversely affect the rights of any Holder of a Security.

10. Defaults and Remedies.

If an Event of Default (other than certain bankruptcy Events of Default with respect to the Issuer) occurs and is continuing, the Trustee or the Holders of at least 25% in aggregate principal amount of Securities of this series then outstanding (voting as a separate class) by notice in writing to the Issuer (and also to the Trustee if such notice is given by the Holders) may declare [*the entire principal*] of the Securities of this series and the interest accrued thereon, if any, to be due and payable immediately in the manner and with the effect provided in the Indenture. If a bankruptcy Event of Default with respect to the Issuer occurs and is continuing, then [*the entire principal*] of the Securities then outstanding and interest accrued thereon, if any, shall become automatically due and payable immediately in the manner and with the effect provided in the Indenture. Holders of Securities may not enforce the Indenture or the Securities except as provided in the Indenture. The Trustee is not obligated to enforce the Indenture or the Securities unless it has received indemnity satisfactory to it. The Indenture permits, subject to certain limitations therein provided, Holders of a majority in aggregate principal amount of the Securities then outstanding to direct the Trustee in its exercise of any trust or power. The Trustee may withhold from Holders of Securities notice of certain continuing Defaults or Events of Default if it determines that withholding notice is in their interest.

11. Subordination.

Reference is made to the Indenture, including, without limitation, provisions subordinating the payment of principal of and premium, if any, and interest on the Securities to the prior payment in full of all Senior Indebtedness as defined in the Indenture. Such further provisions shall for all purposes have the same effect as though fully set forth at this place.

12. Trustee Dealings with Issuer.

The Trustee under the Indenture, in its individual or any other capacity, may become the owner or pledgee of Securities and may otherwise deal with the Issuer as if it were not the Trustee.

13. No Recourse Against Others.

No stockholder, director, officer, employee or incorporator, past, present or future as such, of the Issuer or any predecessor or successor corporation thereof shall have any liability for any obligation under the Securities or the Indenture or for any claim based on, in respect of or by reason of, such obligations or their creation. Each Holder of a Security by accepting a Security

waives and releases all such liability. The waiver and release are part of the consideration for the issuance of the Securities.

14. Authentication.

This Security shall not be valid until the Trustee manually signs the certificate of authentication on this Security.

15. Abbreviations and Defined Terms.

Customary abbreviations may be used in the name of a Holder of a Security or an assignee, such as: TEN COM (= tenants in common), TEN ENT (= tenants by the entireties), JT TEN (= joint tenants with right of survivorship and not as tenants in common), CUST (= Custodian), and U/G/M/A (= Uniform Gifts to Minors Act).

16. CUSIP Numbers.

Pursuant to a recommendation promulgated by the Committee on Uniform Security Identification Procedures, the Issuer has caused CUSIP numbers to be printed on the Securities as a convenience to the Holders of the Securities. No representation is made as to the accuracy of such numbers as printed on the Securities and reliance may be placed only on the other identification numbers printed hereon.

17. Governing Law.

The laws of the State of New York shall govern the Indenture and this Security thereof, and for all purposes this Security shall be governed by and construed in accordance with the laws of such State without regard to any principle of conflict of laws that would require or permit the application of the laws of any other jurisdiction, except as may otherwise be required by mandatory provisions of law.

ASSIGNMENT FORM

I or we assign and transfer this Security to

(Print or type name, address and zip code of assignee or transferee)

(Insert Social Security or other identifying number of assignee or transferee)

and irrevocably appoint

_____ agent to transfer this Security on the books of the Issuer. The agent may substitute another to act for him.

Dated: _____

Signed: _____
(Signed exactly as name appears on the other side of this Security)

Signature
Guarantee:

Participant in a recognized Signature Guarantee Medallion Program (or other signature guarantor program reasonably acceptable to the Trustee)

September 3, 2024

Akebia Therapeutics, Inc.
245 First Street
Cambridge, MA 02142

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with a Registration Statement on Form S-3 (the “Registration Statement”) to be filed by Akebia Therapeutics, Inc., a Delaware corporation (the “Company”), with the Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”), for the registration of the following securities of the Company (the “Securities”):

- i. senior debt securities (the “Senior Debt Securities”);
- ii. subordinated debt securities (the “Subordinated Debt Securities” and, together with the Senior Debt Securities, the “Debt Securities”);
- iii. common stock, par value \$0.00001 per share (the “Common Stock”);
- iv. preferred stock, par value \$0.00001 per share (the “Preferred Stock”);
- v. units, consisting of one or more securities, including Common Stock, Preferred Stock, Debt Securities, or any other securities (the “Units”); and
- vi. warrants to purchase Debt Securities, Common Stock or Preferred Stock (the “Warrants”);

all of which may be issued from time to time on a delayed or continuous basis pursuant to Rule 415 under the Securities Act with an aggregate offering price of up to \$250,000,000, as set forth in the Registration Statement, the base prospectus contained therein (the “Prospectus”) and any amendments or supplements thereto.

We are acting as counsel for the Company in connection with the filing of the Registration Statement. The Senior Debt Securities may be issued pursuant to a senior indenture (together with any supplemental indentures relating to the Senior Debt Securities, the “Senior Indenture”) to be entered into between the Company and a trustee to be named in the Senior Indenture, as trustee (the “Senior Trustee”) and duly qualified under the Trust Indenture Act of 1939, as amended (the “Trust Indenture Act”). The Subordinated Debt Securities may be issued

Akebia Therapeutics, Inc.
September 3, 2024
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pursuant to a subordinated indenture (together with any supplemental indentures relating to the Subordinated Debt Securities, the “Subordinated Indenture,” and together with the Senior Indenture, the “Indentures,” and each individually, an “Indenture”) to be entered into between the Company and a trustee to be named in the Subordinated Indenture, as trustee (the “Subordinated Trustee” and together with the Senior Trustee, the “Trustees,” and each individually, a “Trustee”) and duly qualified under the Trust Indenture Act. The preferences, limitations and relative rights of shares of any series of Preferred Stock will be set forth in a Certificate of Designation (a “Certificate of Designation”). The Units may be issued pursuant to a Unit Agreement (the “Unit Agreement”) to be entered into between the Company and a bank or trust company to be named, as unit agent. The Warrants may be issued pursuant to a warrant agreement (the “Warrant Agreement”) to be entered into between the Company and a bank or trust company to be named, as warrant agent.

We are also acting as counsel for the Company in connection with the sales agreement prospectus included in the Registration Statement (the “Sales Agreement Prospectus”) relating to the issuance and sale of shares of Common Stock having an aggregate offering price of up to \$75,000,000 (the “Sales Agreement Shares”) under an Amended and Restated Open Market Sale Agreement, dated September 3, 2024, by and between the Company and Jefferies LLC (the “Sales Agreement”).

We have examined and relied upon signed copies of the Registration Statement to be filed with the Commission, including the exhibits thereto. We have also examined and relied upon the Sales Agreement, the Ninth Amended and Restated Certificate of Incorporation of the Company (as amended or restated from time to time, the “Certificate of Incorporation”), the Second Amended and Restated Bylaws of the Company (as amended or restated from time to time, the “Bylaws”) and minutes of meetings of the stockholders and the Board of Directors of the Company, including duly authorized committees thereof, as provided to us by the Company.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the legal capacity of all signatories, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of such original documents and the completeness and accuracy of the corporate minute books of the Company.

We have relied as to certain matters on information obtained from public officials and officers of the Company and we have assumed (i) the Registration Statement will be effective and will comply with all applicable laws at the time Securities are offered or issued as contemplated by the Registration Statement; (ii) other than for the Sales Agreement Shares, one or more prospectus supplements and term sheets, as applicable will have been prepared and filed with the Commission describing the Securities offered thereby; (iii) all Securities will be issued

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto San Francisco Washington

and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement, the Prospectus, the Sales Agreement Prospectus, if applicable, and any applicable prospectus supplement; (iv) in the case of Debt Securities, (a) the applicable Indenture will be duly authorized, executed and delivered by the applicable Trustee in substantially the form filed as Exhibit 4.7 or Exhibit 4.8 to the Registration Statement, (b) the applicable Trustee will be duly eligible to serve as trustee, and (c) the Debt Securities will be duly authenticated by the Trustee named in the applicable Indenture; (v) any Unit Agreement or Warrant Agreement, as applicable, will be duly authorized, executed and delivered by all parties thereto other than the Company; (vi) other than for the Sales Agreement Shares, a definitive purchase, underwriting or similar agreement with respect to any Securities offered will be duly authorized, executed and delivered by all parties thereto other than the Company; (vii) any Securities issuable upon conversion, exchange or exercise of any Security being offered will be duly authorized, created and, if appropriate, reserved for issuance upon such conversion, exchange or exercise; (viii) with respect to shares of Common Stock or Preferred Stock offered, there will be sufficient shares of Common Stock or Preferred Stock authorized under the Certificate of Incorporation and not otherwise reserved for issuance; (ix) if issued in uncertificated form, valid book-entry notations for the issuance of the Common Stock or the Preferred Stock will have been duly made in the share register of the Company; (x) at the time of the issuance and sale of the Securities, the Company will be validly existing as a corporation and in good standing under the laws of the State of Delaware; and (xi) any Unit Agreement or Warrant Agreement will be governed by the laws of the State of New York or Delaware.

We are expressing no opinion herein as to the application of any federal or state law or regulation to the power, authority or competence of any party to any agreement with respect to any of the Securities other than the Company. We have assumed that such agreements are, or will be, the valid and binding obligations of each party thereto other than the Company, and enforceable against each such other party in accordance with their respective terms.

We have assumed for purposes of our opinions below that no authorization, approval or other action by, and no notice to or filing with, any governmental authority or regulatory body or any other third party is required for the due execution, delivery or performance by the Company, or, if any such authorization, approval, consent, action, notice or filing is required, it will have been duly obtained, taken, given or made and will be in full force and effect. We have also assumed that there will not have occurred, prior to the date of issuance of the Securities, any change in law affecting the validity or enforceability of such Securities and that at the time of the issuance and sale of such Securities, the Board of Directors of the Company (or any committee of such Board of Directors or any person acting pursuant to authority properly delegated to such person by the Board of Directors of the Company or any committee of such Board of Directors) shall not have taken any action to rescind or otherwise reduce its prior authorization of the issuance of such Securities.

Our opinions below are qualified to the extent that they may be subject to or affected by (i) applicable bankruptcy, insolvency, reorganization, receivership, moratorium, usury, fraudulent conveyance, fraudulent transfer or similar laws relating to or affecting the rights or remedies of creditors generally, (ii) duties and standards imposed on creditors and parties to contracts, including, without limitation, requirements of materiality, good faith, reasonableness and fair dealing, (iii) general equitable principles, and (iv) acceleration of the Debt Securities which may affect the collectability of that portion of the stated principal amount thereof that might be determined to constitute unearned interest thereon. Furthermore, we express no opinion as to the availability of any equitable or specific remedy upon any breach of any of the agreements as to which we are opining herein, or any of the agreements, documents or obligations referred to therein, or to the successful assertion of any equitable defenses, inasmuch as the availability of such remedies or the success of any equitable defenses may be subject to the discretion of a court. We also express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the State of New York and the General Corporation Law of the State of Delaware. We also express no opinion herein with respect to compliance by the Company with the securities or “blue sky” laws of any state or other jurisdiction of the United States or of any foreign jurisdiction. We express no opinion and make no statement herein with respect to the antifraud laws of any jurisdiction.

We also express no opinion herein as to any provision of any agreement (i) that may be deemed to or construed to waive any right, defense or counterclaim of the Company, (ii) to the effect that rights and remedies are not exclusive, that every right or remedy is cumulative and may be exercised in addition to or with any other right or remedy and does not preclude recourse to one or more other rights or remedies, (iii) relating to the effect of invalidity or unenforceability of any provision of any agreement on the validity or enforceability of any other provision thereof, (iv) that is in violation of public policy, (v) relating to indemnification and contribution with respect to securities law matters, (vi) that provides that the terms of any agreement may not be waived or modified except in writing, (vii) purporting to indemnify any person against his, her or its own negligence or intentional misconduct, (viii) requiring the payment of penalties, consequential damages or liquidated damages or limiting a party’s recovery of certain damages or losses, (ix) purporting to establish evidentiary standards or regarding standards for exercising rights and remedies or (x) relating to choice of law or consent to jurisdiction.

Based upon and subject to the foregoing, we are of the opinion that:

1. With respect to the Debt Securities, when (i) specifically authorized for issuance by proper action of the Board of Directors of the Company or an authorized committee thereof (the “Authorizing Resolutions”), (ii) the applicable Indenture has been duly authorized, executed and delivered by the Company, (iii) the terms of the Debt Securities and of their issuance and sale have been duly established in conformity with the applicable Indenture and the Authorizing

Resolutions and assuming such terms and sale do not violate any applicable law or result in a default under or breach of any agreement or instrument binding upon the Company and comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company, (iv) such Debt Securities have been duly executed by the Company and authenticated by the applicable Trustee in accordance with the applicable Indenture and delivered and sold as contemplated by the Registration Statement, the Prospectus and any applicable prospectus supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (v) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement, such Debt Securities will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

2. With respect to shares of Common Stock (other than the Sales Agreement Shares), when (i) specifically authorized for issuance by Authorizing Resolutions, (ii) the terms of the issuance and sale of the Common Stock have been duly established in conformity with the Certificate of Incorporation, Bylaws and Authorizing Resolutions, (iii) the shares of Common Stock have been issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable prospectus supplement in accordance with the applicable underwriting or other purchase agreement or upon conversion or exercise of any Security offered under the Registration Statement against payment therefor, and (iv) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement and such consideration per share is not less than the par value per share of the Common Stock, the Common Stock will be validly issued, fully paid and non-assessable.

3. With respect to shares of any series of Preferred Stock, when (i) the Authorizing Resolutions have specifically authorized the issuance and terms of the shares of the series, the terms of the offering thereof and related matters, including resolutions establishing and designating the series and fixing and determining the preferences, limitations and relative rights thereof and the filing of a Certificate of Designation with respect to the series with the Secretary of State of the State of Delaware, (ii) such Certificate of Designation has been duly filed with the Secretary of State of the State of Delaware, (iii) the terms of the issuance and sale of the series of Preferred Stock have been duly established in conformity with the Certificate of Incorporation, Bylaws and Authorizing Resolutions, (iv) the shares of the series of Preferred Stock have been issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable prospectus supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (v) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement and such consideration per share is not less than the par

value per share of the Preferred Stock, the shares of such series of Preferred Stock will be validly issued, fully paid and non-assessable.

4. With respect to the Units, when (i) specifically authorized for issuance by Authorizing Resolutions, (ii) any applicable Unit Agreement has been duly authorized, executed and delivered, (iii) the terms of the Units and of their issuance and sale have been duly established in conformity with any applicable Unit Agreement and the Authorizing Resolutions, (iv) the Units have been duly executed and delivered in accordance with any applicable Unit Agreement and issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable prospectus supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (v) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement, such Units will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

5. With respect to the Warrants, when (i) specifically authorized for issuance by the Authorizing Resolutions, (ii) any applicable Warrant Agreement relating to the Warrants has been duly authorized, executed and delivered by the Company, (iii) the terms of the Warrants and of their issuance and sale have been duly established in conformity with any applicable Warrant Agreement and the Authorizing Resolutions, (iv) the Warrants have been duly executed by the Company and countersigned in accordance with any Warrant Agreement and Authorizing Resolutions and issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable prospectus supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (v) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement, such Warrants will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

6. With respect to the Sales Agreement Shares, such Sales Agreement Shares have been duly authorized for issuance and, when (i) the Registration Statement has become effective under the Securities Act and (ii) the Sales Agreement Shares have been issued and paid for in accordance with the terms and conditions of the Sales Agreement, the Sales Agreement Shares will be validly issued, fully paid and non-assessable.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of

Akebia Therapeutics, Inc.
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any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of our name therein and in the related Prospectus, the Sales Agreement Prospectus and in any prospectus supplement under the caption “Legal Matters.” In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109

Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto San Francisco Washington

Very truly yours,

/s/ Wilmer Cutler Pickering Hale and Dorr LLP
WILMER CUTLER PICKERING
HALE AND DORR LLP

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3) and related Prospectus of Akebia Therapeutics, Inc. for the registration of shares of its debt securities, common stock, preferred stock, warrants, and units and to the incorporation by reference therein of our reports dated March 14, 2024, with respect to the consolidated financial statements of Akebia Therapeutics, Inc., and the effectiveness of internal control over financial reporting of Akebia Therapeutics, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts

September 3, 2024